

Consultation Document – Alignment Selection

Kintore to Tealing 400 kV Overhead Line

REF: LT455

September 2024



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PREFACE

This Consultation Document has been prepared by Land Use Consultants (LUC), on behalf of Scottish and Southern Electricity Networks Transmission (SSEN Transmission) to seek comments from all interested parties on the Potential Alignment¹ and alignment options (referred to as Alternative Alignments) for the proposed Kintore to Tealing 400 kV Overhead Line (OHL). The proposed new 400 kV OHL will connect the existing Kintore Substation northwest of Aberdeen with a proposed new 400 kV substation known as Hurlie, in Fetteresso Forest in Aberdeenshire, and to a proposed new 400 kV substation known as Emmock, near Tealing in Angus.

This Consultation Document presents information on the design development for an OHL alignment which has been progressed in Sections A to F of the Proposed Route including describing where alternative alignments have been identified, reviewed and appraised in arriving at a Potential Alignment. The design has been developed through a process of multi-disciplinary design workshops, site visits, consideration of consultation feedback and analysis of environmental and technical constraints.

This Consultation Document is available online at the project website: <https://www.ssen-transmission.co.uk/tkup>

Over the coming months SSEN Transmission will continue active engagement with statutory consultees and stakeholders to further understand constraints and identify potential opportunities to inform the design of the OHL. Public consultation events detailing the proposals described in this document will be held at the following times and locations:

Monday 23 September 2024 1.30-6.30pm Tealing Village Hall	Monday 30 September 2024 2-7pm Menmuir Hall, Brechin	Monday 7 October 2024 2-7pm Drumlithie Village Hall
Tuesday 24 September 2024 2-7pm Royal Hotel, Forfar	Tuesday 1 October 2024 1.30-6.30pm Kintore Public Hall	Tuesday 8 October 2024 2-7pm Stonehaven Town Hall
Wednesday 25 September 2024 2-7pm Memus Community Hall, Forfar	Wednesday 2 October 2024 2-7pm Echt Hall	Wednesday 9 October 2024 2-7pm Dickson Memorial Hall, Laurencekirk
Thursday 26 September 2024 2-7pm Brechin City Hall	Thursday 3 October 2024 2-7pm Drumoak, Durris & Crathes Bowling Club, Drumoak	Thursday 10 October 2024 2-7pm Durris Kirkton Hall, Banchory

If you are unable to attend any of the planned in-person events, all the material that will be on display can also be downloaded from the project documents section of the dedicated project website at the start of the consultation period.

Comments on this Consultation Document should be sent to:

Rob Whytock
Community Liaison Manager

TKUP@sse.com

Scottish and Southern Electricity Networks Transmission
200 Dunkeld Road
Perth
PH1 3GH

All comments are requested by **21 November 2024**.

¹ The option which the Applicant has identified as the best balance of technical and environmental constraints identified through initial appraisal. The Potential Alignment is then subject to consultation with stakeholders, where local and previously unknown considerations may confirm or alter the initial preference. Once confirmed, this becomes the Proposed Alignment to take forward to the next stage of project development.

EXECUTIVE SUMMARY

Scottish and Southern Electricity Networks Transmission (SSEN Transmission) operating under licence held by Scottish Hydro Electric Transmission plc, is proposing to establish a network of 400 kilovolt (kV) electricity transmission infrastructure across the northeast of Scotland. This is needed to provide greater capacity and flexibility for the transmission of electricity generated in the north of Scotland, in particular from the increasing number of offshore wind farms, and to help meet the Scottish and UK Government's energy security and net zero targets.

A key part of the infrastructure upgrade is the construction of a new 400 kV overhead transmission line (OHL) between the existing substation at Kintore (northwest of Aberdeen) and a proposed new substation, known as Emmock, to be built near Tealing in Angus, just north of Dundee. The OHL would also connect to a proposed new substation known as Hurlie, located in Fetteresso Forest, near Stonehaven in Aberdeenshire. The OHL project, known as the Kintore to Tealing 400 kV OHL, would involve the construction of approximately 106 kilometres (km) of new overhead line. Due to the length of the OHL, for the purposes of the development and assessment of the project, the line has been split into six sections, namely Sections A to F.

This Consultation Document has been prepared to invite all interested parties to comment on the Potential Alignment² which has been identified for the proposed Kintore to Tealing 400 kV OHL which has included consideration of a series of alternative alignments for the OHL. The Potential Alignment is shown on **Figure 1.1** in **Appendix K**. Consultation has previously been undertaken by SSEN Transmission which has confirmed a Proposed Corridor and a Proposed Route within which an OHL alignment could be developed.

This document sets out the Potential Alignment for the new OHL and explains the key environmental and technical constraints which have been identified and addressed in design development of the OHL alignment. It sets out information on localised alignments considered in design development in each section of the Proposed Route. This document also presents the key findings of detailed comparative appraisals undertaken of eight substantive alternative alignments identified in discrete locations within Sections A, B, E and F of the Proposed Route (known as 'locations'). The Potential Alignment represents the outcome of the appraisal of environmental, technical, and cost constraints before consultation, and which is considered by SSEN Transmission to be the best balance of the constraints identified. The approach to the identification of the Potential Alignment and appraisal of the alternative alignments has followed SSEN Transmission's Guidance 'Procedures for Routeing Overhead Lines and Underground Cables of 132 kV and above'³ which provides an industry-standard methodology for multi-criteria options appraisal for OHL corridors, routes and alignments.

The alternative alignment(s) are a section of an alignment where there are different ways to avoid or minimise interaction with localised constraints. The principal findings of the environmental and technical appraisal of alternative alignments in each of the eight locations are set out in **Chapter 6**. The Alternative Alignments are in the following locations:

- Location 1: Hayston Hill Alternative Alignments 1a and 1b
- Location 2: Padanaram Alternative Alignments 2a and 2b
- Location 3: Justinhaugh Alternative Alignments 3a and 3b
- Location 4: Careston Alternative Alignments 4a, 4b, 4c, 4d and 4e
- Location 5: Durris Alternative Alignments 5a and 5b
- Location 6: North of Drumoak Alternative Alignments 6a, 6b and 6c
- Location 7: Schoolhill Alternative Alignments 7a, 7b and 7c
- Location 8: Echt Alternative Alignments 8a, 8b and 8c

² The option which the Applicant has identified as the best balance of technical and environmental constraints identified through initial appraisal. The Potential Alignment is then subject to consultation with stakeholders, where local and previously unknown considerations may confirm or alter the initial preference. Once confirmed, this becomes the Proposed Alignment to take forward to the next stage of project development.

³ SSEN Transmission (September 2020) Procedures for Routeing Overhead Lines of 132kV and above. PR-NET-ENV-501.

Together with the Potential Alignment, the findings of the appraisal of alternative alignments presented in this document will be reviewed, taking account of feedback from key stakeholders and from the public consultation. Following the outcome of the consultation, SSEN Transmission will confirm the Proposed Alignment for the OHL project. The Proposed Alignment will then be taken forward into the consenting process and an application for consent under Section 37 of the Electricity Act 1989 (“the Electricity Act”) will be submitted to the Scottish Government’s Energy Consents Unit (ECU) for the proposed OHL and supporting infrastructure.

All comments on the proposals are requested by **21 November 2024**.

When providing comments and feedback on the proposals, SSEN Transmission would be grateful for consideration of the questions noted in **Section 7.2** of this Report (Questions for consideration by Consultees). Please note that comments made to SSEN Transmission during this consultation are not representations to the Scottish Ministers and if SSEN Transmission submits a Section 37 application there will be an opportunity to make representations on that application directly to the Scottish Ministers.

A Report on Consultation (RoC) will be published after the consultation period has ended, which will document the consultation responses received, how these responses have been considered, and the decisions made in light of these responses.

1. INTRODUCTION

1.1 Purpose of the Consultation Document

This Consultation Document has been prepared by Land Use Consultants Ltd (LUC) on behalf of Scottish and Southern Electricity Networks Transmission (SSEN Transmission). SSEN Transmission, operating under licence held by Scottish Hydro Electric Transmission plc, owns, operates and develops the high voltage electricity transmission system in the north of Scotland and remote islands.

This Consultation Document invites comments from all interested parties on the Potential Alignment for the proposed new Kintore to Tealing 400 kV overhead line (OHL) as well as the alignment options (referred to as alternative alignments) which have been identified to provide alternatives for the alignment to follow in eight discrete locations across Sections A, B, E and F of the Proposed Route as shown on **Figure 1.1** in **Appendix K**.

This Consultation Document describes the process of OHL design development of the Potential Alignment, which has been developed in the Proposed Route and it presents information on the key constraints which have been taken into account in the development and the appraisal of the alternative alignments. Comparative appraisal has focused on the alternative alignments, taking account of environmental, technical and cost considerations to identify a Potential Alignment of least overall technical, cost and environmental constraint. Comments are now sought from statutory consultees, key stakeholders, elected representatives and the public on the alignment selection process, the alternative alignments and the Potential Alignment which has been identified.

All feedback received in relation to the Potential Alignment and the alternative alignments will be reviewed and a Report on Consultation (RoC) will be produced that provides SSEN Transmission's response to the feedback received.

Sections 1.2 and **1.3** of this chapter provide the context for this Consultation Document by summarising the OHL and related substation consultations held in 2023 and earlier in 2024 and confirming the Proposed Routes within which alignment development has been undertaken. **Section 1.4** explains the contents and structure of this Consultation Document and **Section 1.5** outlines the next steps following the alignment consultation.

1.2 Previous Consultation May 2023

In May 2023, a combined Corridor and Route consultation for the Kintore to Tealing 400 kV OHL project was undertaken, (See **Section 2.1** for further details on project background and need). The consultation sought feedback from all interested parties on the Preferred Corridor and the Preferred Route for the proposed new OHL, to connect the existing Kintore Substation with a proposed new 400 kV substation near Fiddes, in Aberdeenshire and continuing south to connect to a proposed new 400 kV substation near Tealing, in Angus. The Corridor Consultation Document and the Route Selection Consultation Documents can be found on the project website here: <https://www.ssen-transmission.co.uk/projects/project-map/kintore-tealing-400kv-ohl-connection/>.

The consultation also sought feedback for each of the new proposed 400 kV substations at Tealing and Fiddes.

Following this consultation, three Reports on Consultation (RoCs) were produced, one for each project, which provide a summary of the consultation process and events, the key feedback received from consultees and stakeholders and SSEN Transmission's response to the information received. These reports, published in November 2023, can be found on the project websites here:

- Kintore to Tealing 400 kV Overhead Line Report on Consultation: <https://www.ssen-transmission.co.uk/globalassets/projects/rocs/ktup-ohl/report-on-consultation---kintore-to-tealing-400kv-ohl.pdf>
- Fiddes 400 kV Substation Report on Consultation: <https://www.ssen-transmission.co.uk/globalassets/projects/rocs/fiddes/report-on-consultation---fiddes-400kv-substation.pdf>
- Tealing 400 kV Substation Report on Consultation: <https://www.ssen-transmission.co.uk/globalassets/projects/rocs/tealing/report-on-consultation---tealing-400kv-substation.pdf>

Following the outcome of the May 2023 consultation, a decision was made by SSEN Transmission to revisit and extend the substation site selection exercise, widening the area of search with a view to seeking alternative substation site options to those previously presented for Fiddes. New candidate sites were identified and appraised and following detailed assessment of

environmental, technical and cost factors, a new location for the potential substation site was selected in Fetteresso Forest approximately 7 km west of Stonehaven, in Aberdeenshire. The proposed substation site is known as Hurlie.

The change in potential substation site necessitated a revised OHL routing exercise to be implemented in Section D and in part of Section E of the Proposed Corridor. Four new routes were identified to provide options for the connection of the proposed Kintore to Tealing 400 kV OHL with the proposed new Hurlie substation (Routes D4, D5, E2 and E3) (see **Section 1.3**).

1.3 Previous Consultation March 2024

In March 2024, an additional consultation was held with all interested parties on the Preferred Route for the proposed new OHL to connect with the proposed new Hurlie 400 kV substation in Aberdeenshire following the change in substation location from Fiddes, which resulted in the new route options referred to above (Routes D4, D5, E2 and E3) being developed in Sections D and E. The consultation also presented a new route option in Section F (F1.3)⁴. Additionally, the consultation confirmed the Proposed Route to be taken forward by SSEN Transmission in Sections A (Route A1), B (Route B1.1, a change from previous Route B1), C (Route C1), part of E (Route E1) and part of F (Route F2).

The consultation also provided updates regarding 'Refined Routes', whereby the existing routes were refined to approximately 500 m wide routes within which an optimal alignment for the OHL could be developed. Refined Routes were developed for Routes A1, B1.1, C1, the northern part of E1 and the northern part of F2. These Refined Routes included the widening of Route B1.1 at Padanaram and near Careston and widening of Route F2 at Schoolhill, in response to community and landowner feedback and further information from field surveys. Stakeholders were advised they could also provide feedback on the Refined Routes as part of the consultation. The documents to support the consultation events can be found on the project website here: <https://www.ssen-transmission.co.uk/projects/project-map/kintore-tealing-400kv-ohl-connection/>

During the March 2024 OHL Consultation, SSEN Transmission also consulted on proposals for the two new 400 kV substations, one at the new location in Fetteresso Forest in Aberdeenshire (named Hurlie) and the other near Tealing in Angus (named Emmock). Consultation Documents for these substation projects can be found on the project websites here:

- New Hurlie 400 kV substation: <https://www.ssen-transmission.co.uk/projects/project-map/hurlie-400kv-substation/>
- New Emmock 400 kV substation: <https://www.ssen-transmission.co.uk/projects/project-map/emmock-400kv-substation/>

The consultation feedback from the March 2024 events for both substations was presented in the June 2024 Public Consultation Booklets as part of the Pre-Application Consultation (PAC) process and can be accessed on the substation projects' websites here:

- Emmock 400 kV substation PAC feedback event: <https://www.ssen-transmission.co.uk/globalassets/projects/emmock-400kv-substation-downloads/june-2024-public-events/june-2024-public-consultation-booklet-final.pdf>
- Hurlie 400 kV substation PAC feedback event: <https://www.ssen-transmission.co.uk/globalassets/projects/hurlie-400kv-substation-downloads/june-2024-event-docs/ssen---hurlie-pac-2---booklet---28491---artwork-june-24-digital-spreads.pdf>

Following the additional route consultation in March 2024, a RoC was produced for the OHL which provides a summary of the consultation process and events, the key feedback received from consultees and stakeholders and SSEN Transmission's response to the information received. The report, published in August 2024, can be found on the project website here: <https://www.ssen-transmission.co.uk/globalassets/projects/rocs/tkup-ohl-august-24/report-on-consultation-august-2024.pdf>

From the route options presented at the March 2024 consultation, Routes D4, E2 and F1.3 were confirmed to be taken forward for alignment design development following the appraisal of constraints and consultation feedback. An additional option was introduced in response to feedback on various environmental and community sensitivities in the Drumoak area, identified following a review of stakeholder feedback and further information from field surveys. Route F3 was identified in Section F to the west of the village of Drumoak, primarily located within the southern section of the previous Route F2.1. To provide a connection to Route F3, Route E4 was introduced which connected Route F3 with Route E2 to the north of Fetteresso Forest, and which runs parallel to an existing 275 kV OHL through Durris Forest. The alternative alignment developed within Route

⁴ SSEN Transmission (2024). Consultation Document: Kintore to Tealing 400 kV Overhead Line. REF: LT455. New Overhead Line Routes. Available [online]: <https://www.ssen-transmission.co.uk/globalassets/projects/kintore---tealing-400kv-ohl-downloads/march-2024-consultation-docs/kintore-to-tealing-consultation-document-new-route-selection-february-2024.pdf>

E4/F3 has been appraised and compared with the alternative alignment within Route E1/F1.3 and the findings are presented as part of this Consultation Document.

The RoC also confirmed further updates to Refined Routes A1, B1.1, C1 and F2 including some widening of Route B1.1 at Justinhaugh and north of Careston and widening of Route F2 east of Echt village. This provided greater flexibility for the consideration and development of an OHL alignment in these areas. Please refer to **Chapter 6** for the appraisal of alternative alignments within these areas.

1.4 Report Structure

This Consultation Document is comprised of seven chapters as follows:

1. Introduction – setting out the purpose of the Consultation Document, providing a summary of previous consultation and presenting the report structure.
2. The Proposals – describing the need for the OHL project, the technology options considered, the proposed technology solution and outlining the typical anticipated construction methods.
3. Alignment Selection Process – setting out the process for identification of an OHL alignment, the alignment design development (including alternatives), the approach to appraisal of the alternative alignments and the approach to development of an access strategy and OHL tie-in connections with the substations and associated works.
4. Description of Potential Alignment – describing the Potential Alignment identified for the Proposed Route and the associated key land use and environmental constraints.
5. Alignment Design Development and Appraisal – Description of the locations and constraints where alternative alignment options in the Proposed Route were explored for more detailed appraisal.
6. Alternative Alignment Appraisal - presenting the appraisal of the alternative alignments against a series of environmental, technical and cost criteria, comparing the analyses and identifying the Potential Alignment in these sections of the Proposed Route.
7. Consultation on the Proposals – inviting comments on the alignment selection process and the identification of the Potential Alignment.

The main body of this report is supported by a series of figures and technical appendices which are included at the end of the document. Details of the key environmental constraints in the Potential Alignment for Sections A to F of the OHL are presented in **Appendix A** and the detailed environmental appraisal tables for the alternative alignments in each of the eight locations (across Sections A, B, E and F of the Proposed Route) are set out in **Appendices B to I**. Other areas of constraint where possible OHL alignments were considered but not progressed further with development of an alternative alignment option or for detailed appraisal are included in **Appendix J** and Figures are included in **Appendix K**.

1.5 Next Steps

As part of the September/October 2024 consultation exercise, comments are sought from members of the public, statutory consultees and other key stakeholders on the development of the Potential Alignment and the development and appraisal of alternative alignments.

All comments are requested by **21 November 2024** (six weeks after the last consultation event).

Following completion of the September/October 2024 consultation, a RoC will be produced which will provide a summary of the consultation process and events, the key feedback received from consultees and stakeholders and SSEN Transmission's response to the information received. The RoC will also confirm the Proposed Alignment to be taken forward to detailed design and the application for Section 37 consent.

2. THE PROPOSALS

2.1 The Need for the Project

Scottish and Southern Electricity Networks Transmission (SSEN Transmission) operating under licence held by Scottish Hydro Electric Transmission plc has a statutory duty under Schedule 9 of the Electricity Act to develop and maintain an efficient, co-ordinated and economical electrical transmission system in its licence area. Where there is a requirement to extend, upgrade or reinforce its transmission network, SSEN Transmission's aim is to provide an environmentally aware, technically feasible and economically viable solution which would cause the least disturbance to the environment and to people who use it.

In July 2022, National Grid, the Electricity System Operator (ESO), published the Pathway to 2030 Holistic Network Design (HND)⁵, setting out the blueprint for the onshore and offshore electricity transmission network infrastructure required to enable the forecasted growth in renewable electricity across Great Britain, including the UK and Scottish Government's 2030 respective offshore wind targets of 50 GW and 11 GW.

For the north of Scotland, this confirms the need for a significant and strategic increase in the capacity of the onshore electricity transmission infrastructure to deliver 2030 targets and to support a pathway to net zero. Identified elements of the network reinforcement to deliver this capacity require accelerated development and delivery to meet 2030 connection dates and the Kintore to Tealing 400 kV projects require to be progressed accordingly. The need for these reinforcements has been further underlined within the recent British Energy Security Strategy⁶. This sets out the UK Government's plans to accelerate homegrown power for greater energy independence.

The extensive studies completed to inform the ESO's Pathway to 2030 HND confirmed the requirement to increase the power transfer capacity of the onshore corridor from Kintore to Tealing. This requires a 400 kV connection between these sites to enable the significant power transfer capability needed to take power from onshore and large scale offshore renewable generation which is proposed to connect at onshore locations on the east coast of Scotland before then being transported to areas of demand. Further information on SSEN Transmission Pathway to 2030 can be found at the following address:

<https://www.ssen-transmission.co.uk/projects/2030-projects/2030-need/>

2.2 Technology Options Considered

2.2.1 Introduction

In the initial identification of the requirement for this project, onshore and offshore reinforcement options were assessed by the ESO in the HND study⁵. The HND includes proposals to construct offshore transmission infrastructure and the onshore works essential to facilitate the connection of the initial 10 GW of offshore wind generation and consequently the network needed to transport the electricity around the country. The ESO led on the offshore transmission network optioneering and design, exploring both radial⁷ and coordinated⁸ approaches for the connection of new offshore wind schemes, aiming to balance the needs of consumers, developers, communities and the environment. The Kintore to Tealing 400 kV projects were deemed to be required in addition to the proposed offshore cables from the Peterhead area (in Aberdeenshire) to locations on the east coast of England. The HND identified the need to provide additional onshore capacity between Tealing and Kintore. There were limited alternative options identified that provided the required onshore capacity.

2.2.2 Reduced Build Alternative

Alternative SSEN Transmission option(s) considered included an alternative East Coast Onshore Phase 2 Reinforcement (TKU2)⁹. This was a non-build solution that looked at maximising capacity from the existing Kintore – Tealing 275 kV OHL by

⁵ National Grid ESO (July 2022). Pathway to 2030: A holistic network design to support offshore wind deployment for net zero. Available [online]: <https://www.nationalgrideso.com/future-energy/the-pathway-2030-holistic-network-design>

⁶ UK Government (April 2022). British Energy Security Strategy. Available [online]: <https://www.gov.uk/government/publications/british-energy-security-strategy/british-energy-security-strategy>

⁷ Radial – offshore wind generation is connected directly to shore.

⁸ Co-ordinated – offshore wind generation zones are interconnected via offshore links.

⁹ National Grid ESO (July 2022). Network Options Assessment 20221/22 Refresh. Available [online]: <https://www.nationalgrideso.com/future-energy/the-pathway-2030-holistic-network-design>

operating it at a higher temperature. This did not include constructing a new 400 kV OHL from Kintore to Tealing. TKU2 was not progressed as it did not provide the necessary capacity uplift required.

2.2.3 Onshore Underground Cable

Undergrounding cables over a significant length can have additional risk to the electricity transmission network in the event of cable failure and consequent outages. Environmental, technical, and operational constraints associated with undergrounding cables at 400 kV voltage include:

- **Technical Limitations:** Underground cables need specific ground conditions, and they can present challenges for maintenance and power restoration, especially if faults occur.
- **Environmental Impact:** Undergrounding can have lasting environmental effects, for example impacts on habitats and hydrology, and the area required for laying cables needs to be clear (and kept clear) of built development, other infrastructure or vegetation for easy access during construction and repairs.
- **Terrain:** It is more challenging to install and find a suitable route for underground cables on undulating terrain and steep slopes such as those associated with upland areas.
- **Infrastructure Needs:** For underground cables longer than 1-2 km, additional substation infrastructure would be needed, enlarging a project's infrastructure footprint.
- **Operational Needs:** Restoring power in the event of a cable fault can take significantly longer than for an overhead line. Faults on overhead electricity lines can typically take a few hours to a few days to repair and are generally easy to locate. Underground cable faults often require extensive works, specialist resource, tools and equipment to locate the fault, followed by significant civils work to expose the damage, replace the damaged section and carry out the repairs which can take up to a month. This presents significant risks to security of supply and network reliability. It also impacts on SSEN Transmission's ability to meet its licence obligations of maintaining an efficient transmission network.
- **Cost:** Underground cables at 400 kV are estimated to be between five and ten times more expensive than overhead lines, and since these costs are reflected in consumer bills, it is a factor that needs to be considered.

In terms of undergrounding, the use of High Voltage Direct Current (HVDC) systems is a technology that SSEN Transmission have deployed on their network in an offshore capacity to assist with the transfer of electricity over distance: the Caithness-Moray HVDC Link is operational, the Shetland HVDC link is on track for energisation this year, as well as planned links from Spittal-Peterhead, the Western Isles-Beaulieu in addition to two links leaving Peterhead to connect to National Grid's Transmission area which all form part of the proposed "Pathway to 2030 Projects".

In progressing the use of HVDC technology, SSEN Transmission's current proposed HVDC subsea links have been considered in conjunction with the use of onshore (High Voltage Alternating Current (HVAC)) Overhead Line technology via the assessments and recommendations set out in the Pathway to 2030 Holistic Network Design run by the ESO to determine the most economic and efficient manner to transport significant volumes of renewable electricity and provide value to the end consumer. This has determined that both HVAC and HVDC technologies are required to achieve the increase in network capacity required for 2030 to support the connection of ScotWind, with these investments also independently assessed and approved by the energy regulator, Ofgem, as part of a single, integrated GB wide strategic network plan.

The selection of HVAC for use onshore in conjunction with offshore HVDC technology has been driven by a number of factors including:

- The current capacity of HVDC technology is 2 GW, whereas the equivalent HVAC technology operating at 400 kV is approximately 6 GW, offering close to three times the capacity. Therefore, to achieve the capacity of one 400 kV OHL, three HVDC systems would be required, with substantial Converter Stations required at either end of the system.
- The use of HVDC to achieve the same capacity would result in more substation infrastructure than HVAC with each system requiring its own Converter Station (footprint of approximately 93,000 m²), resulting in the need for three converter stations at either end of the cable route, as opposed to one substation site required for HVAC technology. This would result in more converter stations with a larger number of buildings to house the equipment. The HVDC technology still requires to be connected to the AC network and so the use of HVDC does not remove the need for AC substations and could lead to larger substations to enable the three HVDC systems to connect to the AC system. The HVDC converter stations would be required in addition to the current proposed AC substations.

- The current cost of HVDC systems is significantly higher than that of the equivalent HVAC OHL, therefore in addition to having substantially less capacity than HVAC there would be additional cost to the end consumer to install this technology to achieve the same capacity, resulting in higher energy bills.
- The onshore system within SSEN Transmission's network operates on HVAC with the system being interconnected across the different voltages to allow connections of generators to the system as well as to supply businesses and houses via connections to the Distribution Network. With an HVDC system, additional Converter Stations would be required at any point along the routes required to connect the system back to the existing network to either supply the Distribution Network or allow Generators or large Demand users to connect. These drive additional costs to the consumer (again increasing bills) to construct this additional infrastructure to allow connection to the existing HVAC network, as well as requiring additional land take on the routes to construct these and local impacts on where these are located.
- Whilst HVDC underground cable takes up a smaller footprint than equivalent HVAC underground cable when considered on an individual basis, with the number of HVDC cables required to achieve the equivalent capacity, the required widths become similar for the temporary construction works taking up a wider cable corridor. In particular, it may not represent the best solution for landowners due to the greater footprint and associated impact on agricultural land, the same issues with regards to operation and maintenance apply to the use of HVDC underground cables (UGC) as to HVAC. In the event of a fault on the network, it is significantly quicker to locate and repair a fault on an OHL than an UGC, which can take months to locate, identify the issue and conduct the required repair. Given the critical nature of the circuits being progressed it is important that operations can be restored in as short a time as possible to avoid wider issues across the network and ensure security of supply for communities on the network.

SSEN Transmission's Pathway to 2030 Projects will progress both HVAC and HVDC projects in line with the assessments and recommendations from the Holistic Network Design. As the Network continues to develop post 2030, we will continue to work with the ESO and wider stakeholders to identify the most suitable technologies to deploy across the network to meet the needs of the Transmission Network.

More detailed information on the undergrounding of cables can be found on SSEN Transmission's website here:

- <https://www.ssen-transmission.co.uk/projects/2030-projects/2030-faqs/>
- <https://www.ssen-transmission.co.uk/globalassets/projects/2030-projects/2030-project-documents/2030-challenges-doc.pdf>

2.3 Proposal Overview

To meet the required reinforcements of SSEN Transmission's onshore infrastructure, the construction of approximately 106 km of new 400 kV double circuit OHL between Kintore and Tealing is required (the Project).

The Project would comprise a series of steel lattice towers erected to support a number of electrical conductors (wires) which make up the circuits for the OHL ("the ASTI SSE400 tower suite"). The average height for the ASTI SSE400 tower suite is approximately 57 m. There will be a maximum vertical Limit of Deviation (LoD), likely to be 9 m, with no tower being above an overall height of 70 m. The vertical LoD will be confirmed when final tower positions are identified.

The size of towers and span lengths¹⁰ is generally dependent on three main factors: altitude; weather; and the topography. The average span between towers is typically around 350 m, however, towers are typically closer together at high altitudes to withstand the effects of greater exposure to high winds, ice and other weather events. Higher towers may also be required in certain locations to maintain the required ground clearance heights, such as at road, river and rail crossings, or on steep topography.

The ASTI SSE400 tower suite would support six conductor bundles (three wires per bundle) on six cross-arms (three on each side) and an earth wire between the peaks. Typical tower designs of the ASTI SSE400 tower suite can be seen in **Plate 2.1**¹¹ and a schematic of the proposed ASTI SSE400 steel lattice towers is shown in **Plate 2.2**.

¹⁰ The span length is the distance between adjacent towers. This can vary depending on factors such as topography, altitude and climate.

¹¹ The existing SSE400 tower suite design is currently being modified to provide stronger tower structures. The final tower design and appearance may differ slightly from the existing SSE400 tower suite shown in **Plate 2.1**.



Plate 2.1 – Existing SSE400 Steel Lattice Tower Design

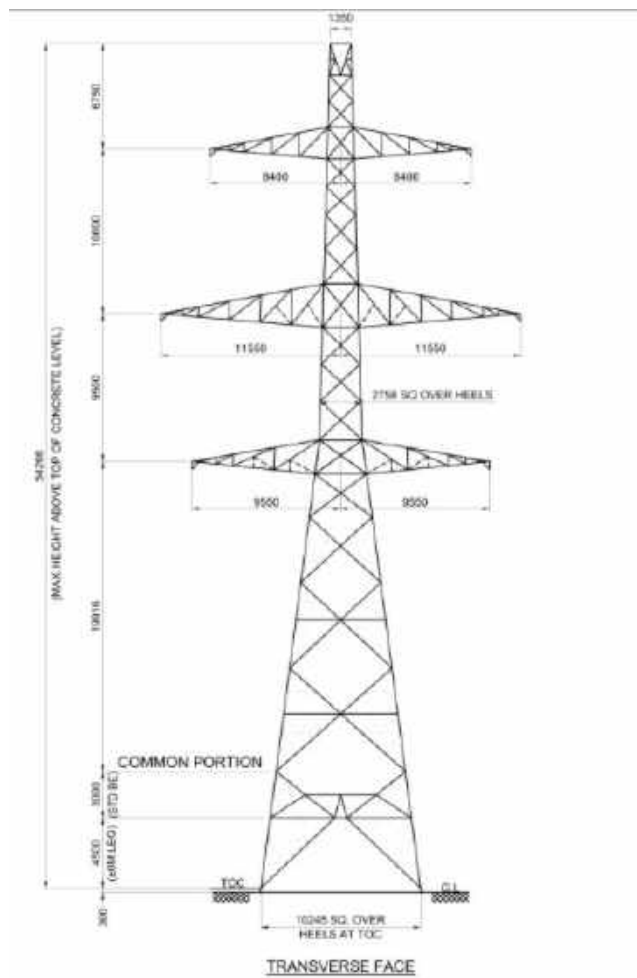


Plate 2.2 – Proposed ASTI SSE400 Steel Lattice Tower Typical Schematic

The Project also includes modifications and crossings of the existing transmission network. See **Section 3.5 Connections, Tie-Ins and Additional Works** for more information.

The location of the proposed new Hurlie and Emmock substations, into which the OHL will connect, has been informed by separate site selection studies and consultation with stakeholders and the public. The substation developments and associated tie-in arrangements are being progressed separately and do not form part of this OHL Project or the OHL alignment consultation. In addition, two of the existing 275kV OHLs out of the existing Tealing substation to Alyth and Westfield require upgrades to 400kV operation and to be connected to the proposed new Emmock 400kV site. These projects are also being progressed separately and do not form part of this OHL Project or the OHL alignment consultation. See **Section 3.5** for more information.

2.3.1 Construction Activities

The proposed Kintore to Tealing 400 kV OHL project will comprise the construction of approximately 105 km of new 400 kV double circuit OHL between the existing Kintore 400 kV Substation, the proposed new Hurlie 400 kV substation and the proposed new Emmock 400 kV substation.

High voltage OHL construction typically follows a standard sequence of activities as follows:

- Phase 1 – enabling works;
- Phase 2 – OHL construction;
- Phase 3 – OHL commissioning; and
- Phase 4 – reinstatement.

To connect the proposed Kintore to Tealing 400 kV OHL with the substations at Kintore, Fetteresso Forest (Hurlie) and Tealing (Emmock), some of the existing lower voltage OHLs around the existing substations at Kintore and Tealing may need to be permanently or temporarily diverted or, in some cases, undergrounded to enable the new Kintore to Tealing 400 kV OHL connections to be completed. Further discussion on proposed OHL connection and tie-in arrangements is presented in **Section 3.5**.

The main activities for the construction of the OHL are anticipated to include:

- enabling works (e.g. forestry clearance, establishment of temporary construction compound(s), laydown areas, borrow pits, conductor pulling positions and any temporary / permanent access tracks);
- delivery of components and materials to site for towers and access tracks;
- establish temporary and permanent access tracks;
- creation of tower working areas and excavation and construction of tower foundations;
- erection of towers;
- approximately 105 km of 400 kV double circuit conductor stringing (including construction of temporary scaffolding);
- localised undergrounding of distribution overhead lines that cross or are in close proximity to the alignment;
- undergrounding or realigning of existing transmission 132 kV, 275 kV and 400 kV OHLs where required to make space for the Project;
- establish temporary diversions of existing OHLs where necessary to enable undergrounding or realignment;
- dismantling and removal of redundant infrastructure;
- inspections and OHL commissioning; and
- removal of temporary works and site reinstatement.

All construction activities will be undertaken in accordance with a Construction Environmental Management Plan (CEMP) which will define specific methods for environmental survey, monitoring, mitigation and management throughout construction. A CEMP will be produced by the Principal Contractor and agreed with statutory consultees prior to the commencement of construction. These documents, together with other relevant environmental mitigation measures will be set out as commitments within the future Environmental Impact Assessment (EIA) Report that is required to be submitted with the Section 37 application for the Project.

2.3.2 Access

The routes over which construction access will be taken, will be from existing public roads and private means of access (where agreed) wherever possible to minimise the need to create new accesses. There will be a requirement in some places for public road improvements such as localised road widening, passing places, bridge reinforcements or installations of new junctions (bell mouths) for construction traffic and compounds.

The approach to development of access track design is discussed further in **Section 3.4 Access Strategy**.

2.3.3 Forestry Removal

Some sections of the proposed OHL would need to cross through woodlands including some areas of commercial forestry where it has not been possible to avoid these areas in the routeing and alignment selection process. In these locations, trees would need to be felled to create a construction and maintenance operational corridor¹² (OC) for the OHL. In some areas, extended areas of management felling will also be required to achieve windfirm edges.

This requirement is discussed and appraised further in **Chapter 5: Alignment Design Development** and **Chapter 6: Appraisal of Alternative Alignments**, and **Appendices B to I**, as relevant.

2.3.4 Programme

Subject to gaining the necessary consents, it is anticipated that construction of the proposed Kintore to Tealing 400 kV OHL project would commence in 2026. The project has a proposed energisation date of late 2030.

The project timeline is set out in **Plate 2.3**.



Plate 2.3 - Project Timeline

¹² An operational corridor comprises a 45 m clearance either side of the alignment centre line. This may be reduced in some locations if constraints justify reducing and there are no concerns that operability will be compromised.

3. ALIGNMENT SELECTION PROCESS

3.1 Overall Approach and Guidance Followed

The approach to alignment selection was informed by SSEN Transmission's Guidance 'Procedures for Routeing Overhead Lines and Underground Cables of 132 kV and above'¹³ (hereafter referred to as SSEN Transmission's Routeing Guidance).

SSEN Transmission's Routeing Guidance sets out the approach to selecting a corridor, route or alignment for an OHL following an objective and industry-standard methodology for options appraisal ensuring environmental, technical and cost considerations are identified and appraised at each stage of the optioneering process. This document helps SSEN Transmission to meet its obligations under Schedule 9 of the *Electricity Act 1989*, which requires transmission licence holders:

- to have regard to the desirability of preserving natural beauty, of conserving flora, fauna and geological or physiographical features of special interest and of protecting sites, buildings and objects of architectural, historic or archaeological interests; and
- to do what they reasonably can to mitigate any effect that the proposals would have on the natural beauty of the countryside or on any such flora, fauna, features, sites, buildings or objects.

The guidance sets out a process which aims to balance these environmental considerations with technical and cost considerations throughout the optioneering process which informs identification of options which on balance represent the least constrained alternative alignment across the broad range of criteria considered.

The guidance provides a number of stages for overhead line routeing as follows:

- Stage 0: Routeing Strategy Development;
- Stage 1: Corridor Selection;
- Stage 2: Route Selection;
- Stage 3: Alignment Selection; and
- Stage 4: Environmental Impact Assessment (EIA) and consenting.

Each stage is iterative and typically increases in detail and resolution, bringing cost, technical and environmental considerations together in a way which seeks the best balance at each stage. The stages that are carried out can vary depending on the type, nature and size of a project and consultation can be carried out at each stage of the process.

Stage 1: Corridor Selection and Stage 2: Route Selection have already been completed and were reported on as part of the previous May 2023 (Combined Corridor and Route) and March 2024 (New Routes) consultation events.

SSEN Transmission are now completing Stage 3: Alignment Selection which seeks to identify a Potential Alignment within the Proposed Route following the completion of Stage 2 and to define the access strategy which will be adopted in terms of, for example, the nature and extent of temporary and/or permanent access tracks and possible road improvements.

This Consultation Document provides the details of SSEN Transmission's development of an alignment and appraisal of alternative alignments which were considered at eight locations (across Sections A, B, E and F) as part of Stage 3: Alignment Selection to identify a Potential Alignment for the OHL to be sited for the proposed Kintore to Tealing 400 kV OHL. The alternative alignments have been appraised through consideration of a Red, Amber, Green (RAG) Rating approach which assigns the findings of the appraisal of potential environmental and technical constraints for each relevant criteria in SSEN Transmission's Routeing Guidance on a high (Red), intermediate (Amber) or low (Green) level.

¹³ SSEN Transmission (September 2020) Procedures for Routeing Overhead Lines of 132kV and above. PR-NET-ENV-501.

3.2 Alignment Design Development

3.2.1 Approach to Alignment Design Development

The alignment selection has been completed with the aim of developing a Potential Alignment within the Proposed Route (and Proposed Corridor), which is technically feasible and economically viable, and which causes the least disturbance to the environment wherever possible; and to those living, working, visiting or using it for recreational purposes.

Following the route options appraisals undertaken as an outcome of the May 2023 and March 2024 consultations (as described in **Chapter 1**), a 500 m wide Refined Route was established within Proposed Routes A1, B1.1, C1, D4, E2 and F1.3 and used as the starting point for developing an alignment within those Sections of the OHL Route.

An iterative design development process was implemented by SSEN Transmission's OHL Design Contractors in developing an alignment. In some locations the proximity of land use, population or environmental constraints required the consideration of possible localised alignments which could better avoid identified environmental, land use or technical constraints. At locations where there was an obvious preference for either of the possible alignments explored around these constraints, this alignment was taken forward as the Potential Alignment. A narrative on the design development process is presented in **Appendix J: Design Development Locations**. In some locations, where more significant, lengthy or competing/complex constraints were identified and a preference could not be easily identified, the alignment options were defined as Alternative Alignments¹⁴ and taken forward for more comprehensive appraisal in order to select the Potential Alignment (see **Sections 3.2.2** and **3.3**).

The overall process of identification and development of an alignment involved the following tasks:

- Desk-based review and targeted site survey by project landscape architects, ecologists, ornithologists, archaeologists, geologists and hydrologists to review alignments and provide advice on micro-siting opportunities for positioning of OHL towers and indicative construction access and to inform consideration of where alternative alignment options were required due to constraints;
- Targeted phase 1 / NVC habitat and protected species surveys to supplement existing desk-based data;
- Review of ornithological survey data and records for the area, including requests for data held by RSPB, and targeted bird surveys to supplement existing field survey information;
- Review of comments received from stakeholders (including landowners) following publication of the Kintore to Tealing 400 kV OHL Project Consultation Documents for Combined Corridor¹⁵ and Route Selection¹⁶ and New OHL Route Selection¹⁷;
- Workshops with the SSEN Transmission Project Team comprising representatives from Project Management, Engineering, Land, Forestry and Environment and Consents; the OHL Design Contractors; and project environmental consultants to review alignment design and alternative alignment options; and
- Site reconnaissance visits by the SSEN Transmission project and engineering team, the OHL Design Construction Contractors and environmental consultants to review alignment options in the field.
- Consideration of issues raised by SSEN Transmission's Project Management and Land Team who provided feedback from consultation and meetings held with potentially impacted communities and landowners.

¹⁴ An Alternative Alignment is a section of the alignment where there are different ways to avoid or minimise interaction with localised constraints.

¹⁵ SSEN Transmission (May 2023). Consultation Document – Corridor Selection. Project: Kintore – Fiddes – Tealing 400 kV Overhead Line Connection. Available [online]: <https://www.ssen-transmission.co.uk/globalassets/projects/east-coast-phase-2-may-2023-docs/ohl-consultation-doc/consultation-document-corridor-selection---kintore-fiddes-tealing-400kv-ohl-connection-090523.pdf>

¹⁶ SSEN Transmission (May 2023). Consultation Document – Route Selection. Project: Kintore – Fiddes – Tealing 400 kV Overhead Line Connection. Available [online]: <https://www.ssen-transmission.co.uk/globalassets/projects/east-coast-phase-2-may-2023-docs/ohl-consultation-doc/consultation-document---route-selection-may-2023.pdf>

¹⁷ SSEN Transmission (February 2024). Consultation Document. Kintore to Tealing 400 kV Overhead Line – New Overhead Line Routes. Available [online]: <https://www.ssen-transmission.co.uk/globalassets/projects/kintore---tealing-400kv-ohl-downloads/march-2024-consultation-docs/kintore-to-tealing-consultation-document-new-route-selection-february-2024.pdf>

The steps outlined in the Holford Rules¹⁸ and SSEN Transmission's Routeing Guidance have been taken into account as far as is practicable in establishing an OHL alignment and the alternative alignments. These are:

- Avoid if possible major areas of highest amenity value (including those covered by national and international designations and other sensitive landscapes).
- Avoid by deviation, smaller areas of high amenity value.
- Try to avoid sharp changes of direction and reduce the number of larger angle towers required.
- Avoid skylining in key views and where necessary, cross ridges obliquely where a dip in the ridge provides an opportunity.
- Target the alignment towards open valleys and woods where the scale of towers will be reduced, and views broken by trees (avoid slicing through landscape types and try to keep to edges and landscape transitions).
- Consider the appearance of other lines in the landscape to avoid a dominating or confusing wirescape effect.
- Approach urban areas through industrial zones and consider the use of undergrounding in residential and valued recreational areas.

The alignment comprises both a horizontal and vertical LoD. The LoD comprises an area which defines the practical limits within which micrositing of the OHL infrastructure and access tracks can occur within the terms of the Section 37 consent. The purpose of the LoD is to allow flexibility within a Section 37 consent for the final micrositing of individual towers/poles or access tracks to respond to localised ground conditions, topography, engineering, and environmental constraints. The vertical LoD is required as ground levels may change following a horizontal tower move, and in order to ensure safe ground clearance distances, tower heights may need to be increased. At this stage in the development the vertical LoD has not been confirmed as the tower positions are indicative, and the LoD will be determined once final tower positions, and therefore, tower heights, are confirmed. The maximum LoD is likely to be 9 m, with no tower being above an overall height of 70 m. Any Section 37 consent would be based on an LoD which then provides flexibility for construction and later stage micrositing to avoid constraints. The horizontal LoD applied to the Potential Alignment and Alternative Alignments is an indicative 100 m either side of the indicative centreline of the OHL. The width of the LoD may increase or decrease in different locations along the proposed alignment based on environmental and technical constraints (e.g. the LoD would avoid properties and their curtilage and designated site boundaries). The identification and reporting of key environmental constraints for the alignment in this report is based on the assumed LoD around the alignment and the appraisal of alternative alignments has taken account of the 'buffer' area provided by the LoD so that potential constraints to the development of the OHL are not over-estimated in the appraisal and subsequent comparison of alternative alignments across the key criteria considered.

Appendix A presents the key environmental constraints which have been identified for the alignment design development in Sections A to F of the Proposed Route following the environmental criteria used in SSEN Transmission's Routeing Guidance.

3.2.2 Alternative Alignment Design Development

Throughout the process of developing the alignment, multiple alignment options were developed as an alternative means of avoiding important or complex constraints in some locations (see **Section 3.2.1**). This included consideration of conflicting constraints (for example, alternative alignments defined to avoid the principal constraint may then encounter different constraints as a result of following different courses), outcomes of consultation, landowner feedback, additional field surveys and site-based verification of constraints.

Further and more in-depth desk-based assessment, site walkovers and (where required) environmental surveying were carried out in these constrained locations to determine a possible alignment and to understand the respective constraints of the alternative being considered.

The overall objective throughout the appraisal of alternative alignments has been to take full consideration of all key factors to minimise any potential adverse impacts on the environment, whilst taking into account technical and cost considerations and stakeholder feedback. In some cases, by exception due to the extent and/or complexity of spatial constraints, alternative alignments have been proposed outwith the area encompassed by the Proposed Route. Further surveying and landowner

¹⁸ SSEN Transmission Procedures for Routeing Overhead Lines and Underground Cables of 132kV and above PR-NET-ENV-501 Rev 2 Annex 1 Holford Rules: Guidelines for the Routeing of New High Voltage Overhead Transmission Lines with NGC 1992 and SHETL 2003 Notes

consultation has been carried out in these potential locations, with the majority of these areas presented as part of the Refined Routes at the March 2024 consultation¹⁷.

Eight locations across the Proposed Route (in Section A, B, E and F) as shown on **Figure 1.1** in **Appendix K** have been developed with alternative alignments for further consideration to ensure there is an alignment of least constraint taken forward. These locations are:

- Section A Route A1 (one location):
 - Location 1: Hayston Hill
- Section B Route B1.1 (three locations):
 - Location 2: Padanaram
 - Location 3: Justinhaugh
 - Location 4: Careston
- Section E (one location covering the northern part of Section E and southern part of Section F where an additional alternative alignment was identified following the 2024 route option consultations - Route E2/E4/F3 and Route E2/E1/F1.3):
 - Location 5: Durris
- Section F Route F1.3 and Route F2 (three locations):
 - Location 6: North of Drumoak
 - Location 7: Schoolhill
 - Location 8: Echt

Commentary on the findings of the comparative appraisals of the alternative alignments in these locations is provided within the narratives for Sections A to F within **Chapter 6**. Detailed environmental appraisal tables for the alternatives appraised in each location are presented in **Appendices B to I**.

3.3 Alternative Alignment Appraisal

3.3.1 Overview

The alternative alignments have been comparatively appraised in order to identify a preference which takes account of all environmental, technical and cost constraints.

3.3.2 Environmental Criteria

The appraisal of the alternative alignments has involved systematic consideration against a series of environmental topic areas and criteria. **Appendices B to I** present the key environmental and land use constraints and the findings of the detailed appraisal of environmental considerations in line with SSEN Transmission's Routeing Guidance at the eight locations identified in Sections A, B, E and F of the Proposed Route.

Environmental considerations refer to the physical, natural and built environmental features as referred to in Schedule 9 of the *Electricity Act 1989* and to features of amenity as referred to in the Holford Rules (see **Section 3.2.1**).

A series of alternative alignment appraisals (comprising desk-based review and analysis informed with information from site work) were carried out by experienced professionally qualified teams in the various specialist fields, to enable an informed combined opinion on the potential environmental effects of the alternative alignments drawing on key baseline constraints studies and survey information.

During the appraisal process, if a topic area or criteria was deemed not to be a significant constraint or where constraints would not be compromised by the alignment and there is no material difference between the alternative alignments, they have been scoped out from the appraisal. These criteria and their justification for scoping out are included in the environmental appraisal tables presented in **Appendices B to I**.

Appraisal of the level of environmental constraint associated with the alternative alignments involved systematic consideration against the following environmental topic areas and criteria derived from SSEN Transmission's Routeing Guidance:

- Natural Heritage – designations, protected species, habitats, ornithology, hydrology, geology and hydrogeology and consideration of Biodiversity Net Gain (BNG);
- Cultural Heritage – designations and cultural heritage assets;
- People – proximity to dwellings;
- Landscape and Visual – designations, landscape character and visual;
- Land Use – agriculture, forestry and recreation; and
- Planning – proposals.

For each topic and criteria, the key environmental constraints present within the alignment LoD (See **Section 3.2.1**) were considered and an appraisal of the extent to which these constrain the OHL development was undertaken, with a 'RAG Rating' allocated based on the constraint appraised and following the approach in SSEN Transmission's Routeing Guidance.

Natural Heritage

The level of natural heritage constraint in each alternative alignment was considered with respect to the potential to compromise the conservation status of designated sites, protected species, Annex 1 habitats and ornithological interests. The appraisal also considered the potential for constraints to compromise the integrity of important wetland areas, and with respect to the quality or quantity of surface water or groundwater of regional or local importance and which provide a public supply. The following topics and criteria were appraised:

- Designations:
 - International, European or National Designations. These included Special Areas of Conservation (SAC), Special Protection Areas (SPA), Ramsar Sites, National Parks, Sites of Special Scientific Interest (SSSI) and Ancient Woodland (guided by the Ancient Woodland Inventory (AWI) as either Ancient Woodland or Long-Established Woodlands of Plantation Origin (LEPO)).
 - Regional Designations. These included Local Nature Reserves (LNR), Wildlife Sites and Regionally Important Geological and Geomorphological Sites (RIGS).
- Protected Species:
 - European Protected Species (EPS).
 - UK Biodiversity Action Plan (BAP) species (Red / Amber List).
 - Other Protected and Notable Species.
- Habitats:
 - Annex 1 Habitats.
 - Groundwater Dependent Terrestrial Ecosystems (GWDTE).
 - Biodiversity. Consideration of Biodiversity Net Gain (BNG) through quantitative measures (evaluation of biodiversity units of existing habitats) and qualitative commentary.
- Ornithology:
 - Schedule 1 Birds.
 - Birds of Conservation Concern (BoCC).
- Hydrology / Geology / Hydrogeology:
 - Surface and Groundwater Drinking Water Protected Areas (DWPAs) (over 10m³ per day or supplies for over 50 people). This criteria related to the assessment for the potential impact upon public water supplies.
 - Aquifers providing regional / local resources. For example, abstractions for small public or private water supply or hydrological supply to GWDTE.
 - Surface waters or aquifers providing water for agricultural or industrial use (local importance).

In appraising the Natural Heritage constraints, consideration has been given to the ecological designations present and the implication for the assessment of BNG. The relative number, density and proportion of habitats considered irreplaceable in BNG terms, such as internationally and nationally designated sites, and Ancient Woodland, has been considered and taken into account when assigning the Natural Heritage RAG Ratings to each alternative alignment. The BNG considerations have also

been informed by a quantitative analysis of the biodiversity units (BUs) in each alternative alignment¹⁹ following SSEN's Biodiversity Toolkit approach²⁰.

Cultural Heritage

Designations were assessed for the potential for the alternative alignments to compromise the designating feature or their setting of the following designations and sites:

- World Heritage Sites (WHS), Scheduled Monuments (SM), Inventory Gardens and Designed Landscapes (GDL), and Inventory Battlefields.
- Sites and Monument Record Entries.
 - Cultural Heritage Assets were assessed for the potential for the alternative alignments to disturb and compromise Listed Buildings (Category A, B and C), Non-Inventory GDL and Conservation Areas.

People

Proximity to dwellings. This included consideration of the level of constraint of alternative alignments represented by individual and groups of residential properties and other sensitive receptors such as schools or hospitals and taking account of the potential for an OHL alignment to be developed which could avoid these sensitive receptors.

Proximity to settlements was also given consideration under this topic to take account of the extensive community feedback raised to date by affected communities which are in closer proximity to the route and alignment options presented.

Landscape and Visual

The assessment for this topic considered the potential for the alternative alignments to compromise: the special qualities of any specific landscape designations, the characteristic elements of the landscape (landscape character), and the view or visual amenity at a given location. Landscape and visual constraint was appraised with respect to the following criteria:

- Designations:
 - National or Regional designations including National Parks, National Scenic Areas (NSA), GDL and Wild Land Areas (WLA).
 - Local Designations including Regional Scenic Areas (RSA) and Special Landscape Areas (SLA).
- Landscape Character as defined in published character assessments (e.g. NatureScot national assessments) and informed by field surveys to determine local landscape features and constraints.
- Visual. Constraints identified through changes in visual amenity for settlements and residential properties, key transportation and recreational routes utilised by tourists and visitors to an area, vantage points and tourist destinations from where views and landscape appreciation is important.

Land Use

This topic included appraisal of land use constraints for each alternative alignment with respect to: the agricultural use / viability of the land as an agricultural resource, the commercial viability of a forestry operation, and usage of identified recreational facilities. The principal criteria appraised were:

- Agriculture: review of prime agricultural land located within the alternative alignment LoDs as defined in the Agricultural Land Classification (ALC) mapping.
- Forestry: appraisal of the presence of commercial forestry areas and the constraint this may have from future OHL development including from changes to forestry management/operation.
- Recreation: appraisal of constraint associated with the following criteria within each alternative alignment LoD:
- Recreational use of Public Footpaths (with a specific focus on Core Paths), National Cycle Networks (NCN) and Scottish Great Trails.

¹⁹ Biodiversity Net Gain Optioneering Report Kintore-Fiddes-Tealing 400kV OHL Connection Project Quantitative BNG Assessment

²⁰ SSEN Biodiversity Net Gain Toolkit User Guide (TG-NET-ENG-526)

- Commercial Highland Sports, including fishing, stalking, shooting etc. For the purposes of this alignment appraisal, only commercial viability of fishing was assessed due to the generally lowland nature of the Study Area.

Some consideration was also given to constraints from the presence of other key tourism facilities, where these were identified.

Planning

Analysis of alternative alignment constraints associated with planning were addressed in relation to development proposals. This involved a review of the potential for interaction of the alternative alignments with relevant projects already known to the planning system (planning applications and consents for developments larger than domestic scale).

3.3.3 Technical Criteria

The appraisal of alternative alignments also involved systematic consideration against a series of technical (engineering) topic areas and criteria.

Technical considerations refer to the capacity and voltage of the OHL circuit, as a minimum, which will dictate the choice of the cable or conductor and tower suite, which may inform tower foundation requirements, span lengths, angle points, and constructability requirements.

A series of alternative alignment appraisals (comprising desk-based review informed by site visits) were carried out by experienced SSEN Transmission Engineers, to enable an informed opinion on the potential technical constraints of the alternative alignments. Appraisal of the alternative alignments involved systematic consideration against the following technical criteria:

- Infrastructure Crossing:
 - Major crossings which included 132 kV OHLs, 275 kV OHLs, railway lines, watercourses more than 200 m wide, navigable canals, and gas or hydro pipelines.
 - Road crossings.
- Ground Conditions:
 - Terrain. Appraisal of the gradient of slopes present within the alternative alignment LoD and the characteristics of the terrain, e.g. steep and mountainous or open and flat.
 - Peat. This appraisal considered the percentage of the length of the alternative alignment with over 50% of the width of the alternative alignment which traversed through an area of peat.
- Construction and Maintenance:
 - Access: consideration of the network of existing tracks and the quantity of the alternative alignment within a 1 km distance from the existing public road network.
 - Angle towers: consideration of locations where key deviations in the line of the OHL may be required.

The technical appraisal also considered 'Proximity' with reference to the distance of the following sub-topics to the alternative alignments: clearance distance, windfarms, communication masts, urban environments and metallic pipelines.

3.3.4 Cost Criteria

The appraisal of alternative alignments has also involved systematic consideration against a number of cost criteria.

Cost is a function of the quantum of assets required (cables, conductors, support structure, reactive compensation), the length of new infrastructure, the extent of construction as well as access works to address aspects such as altitude, slope and ground conditions and the nature and extent of operational maintenance required.

A high-level appraisal was carried out by SSEN Transmission to enable an informed opinion on the potential costs of development and operation of an OHL for each of the alternative alignments. Appraisal of the alternative alignments has involved systematic consideration against the following criteria:

- Capital – construction diversions, public road improvements, tree felling, land assembly and consent mitigations.
- Operational – inspections and maintenance costs.

3.3.5 Comparative Appraisal

The purpose of the comparative appraisal is to distinguish between alternative alignments to allow a preference to be expressed based on the level of constraint appraised for each alternative alignment across the environmental, technical and cost criteria. The comparison appraisal comprises two steps:

Step 1: Allocation of RAG Rating

Each topic within the environmental, technical and cost categories was considered in terms of the potential for the development to be constrained and a Red/Amber/Green (RAG) Rating applied as appropriate, drawing on the guidance and the approach to appraisal of constraint described in **Sections 3.3.2 to 3.3.4**.

A high-level convention based on a three-point scale to assign RAG Ratings was applied as follows:

Performance	Comparative Appraisal
Most Potential	Low potential for the development to be constrained
	Intermediate potential for the development to be constrained
Least Potential	High potential for the development to be constrained

The RAG Rating applied to each topic takes account of opportunities and standard working practices including established environmental mitigation that, if implemented, could overcome the identified constraint. This helped to ensure that the most likely outcome was identified as opposed to the 'worst case'.

Comparison of Alternative Alignments

In the comparative appraisal, the RAG ratings identified for each topic and within each of the environmental, technical and cost categories were used to examine differentiators between the alternative alignments being considered. The appraisal compared the wider implications of each alternative alignment on those topics (both individually and combined) to reach a reasoned conclusion, on balance across all topics, as to the Potential Alignment.

The comparative appraisal has also been informed by consultation feedback (as reported in the post consultation, Reports on Consultation (RoC)) and has been considered in the comparative appraisals for the Potential Alignment and Alternative Alignment options.

3.3.6 Identification of a Potential Alignment

A comparative appraisal has been carried out of the alternative alignments to arrive at a Potential Alignment. The overall objective throughout the appraisal of alternative alignments is to take full consideration of all environmental factors to minimise any potential adverse effects on the environment whilst taking into account technical and cost considerations. The Potential Alignment therefore represents the option which is considered on balance to have the least level of overall constraint.

The findings of the appraisals undertaken for the alternative alignments and the selection of the Potential Alignment is set out in **Chapters 4 to 6** of this Consultation Document.

3.3.7 Consultation on the Potential Alignment

SSEN Transmission are now undertaking consultation on the Potential Alignment and Alternative Alignments, as outlined in this Consultation Document. This Consultation Document is issued to statutory and non-statutory consultees and is available to the public. It is supported via a series of public events and a consultation booklet. This Consultation Document and the booklet are publicly available at the following link: <https://www.ssen-transmission.co.uk/projects/project-map/kintore-tealing-400kv-ohl-connection/>

The consultation feedback and SSEN Transmission's response to the feedback will be collated, analysed and reported in a RoC document which will be made publicly available. Its purpose is to record the stakeholder feedback received during the consultation process; explain how SSEN Transmission has responded, and how it has informed the selection of the Potential Alignment and how it may be used to help inform project design. If the consultation responses do not result in any changes to the alignment, the reasons for this will be explained in the RoC.

3.4 Access Strategy

The project will require new permanent and temporary access tracks for use at several stages of the project. The table below explains the different types of tracks that are typically considered and what they are required for.

Table 3.1 Types of access tracks.

Type of Access	What does it mean?
Construction access	During construction, stone tracks would typically be used to gain access to each of the tower locations. This would normally be temporary except in locations where it needs to be retained to maintain safe access for future operational and maintenance requirements. There are different types of construction access tracks, these include cut tracks, surface tracks and floated roads. Each provide different benefits depending on the ground conditions in the area. A typical access track would be of a minimum 4 m in width however this could be wider in areas where heavy plant require access.
Statutory inspection and general maintenance access	When designing the overhead lines, we need to consider how our operational teams will get back to the locations in the future to carry out routine inspections and maintenance. Operational access would normally consist of an off-road 4x4 vehicle with a trailer being able to reach each tower. If we consider it may not be possible for a 4x4 to be capable of doing this, we would need to consider alternative access either by identifying a route where temporary panelling can be installed as and when required or through construction of a permanent track. In open fields with fair ground conditions and generally accessible terrain no additional permanent access would normally be required.
Heavy maintenance access	Where future refurbishment or modifications would be required for the line, we have to consider the locations where heavy plant would need access and to plan how they would get to these locations. Typically, the main focus here is access to the angle towers. At angle towers the overhead line conductors get pulled onto the towers so additional access and space is needed during construction to carry this out. Where these locations cannot be easily accessed, we would look to retain permanent access so that if a conductor needed replacing in the future this could be carried out safely whilst minimising the timeframes required to perform the maintenance.
Demolition access	This is required from a health and safety perspective so that safe access could be afforded in the event that tower demolition was required. This would not require access to every location to be able to dismantle the towers, but it should consider how access is taken and what additional roads or panelling would be required if necessary.

In developing the access track strategy for the project, we will aim to minimise potential for environmental impacts and disruption to land management activities. We look to minimise the length of required new access tracks (and particularly permanent tracks) through adoption and upgrading of existing tracks and by minimising the number of new watercourse crossings required. Whilst we consider access as part of our appraisal process, the access track designs will be developed once a Proposed Alignment has been identified and tower positions confirmed.

3.5 Connections, Tie-Ins and Additional Works

In addition to the new double circuit overhead line and towers, the project will require a number of additional works. These are currently expected to include:

Existing Kintore Substation:

The existing Kintore Substation is operational with a number of OHLs entering the site. To create space for the new Kintore to Tealing OHL some of these existing OHL circuits require to be modified. This includes:

- Undergrounding of the existing single circuit 132 kV OHL - approximately 1.5 km in length.
- Realignment of the existing double circuit 275 kV OHL.
- Removal of redundant towers.

These works are shown on the **Plate 3.1** below.

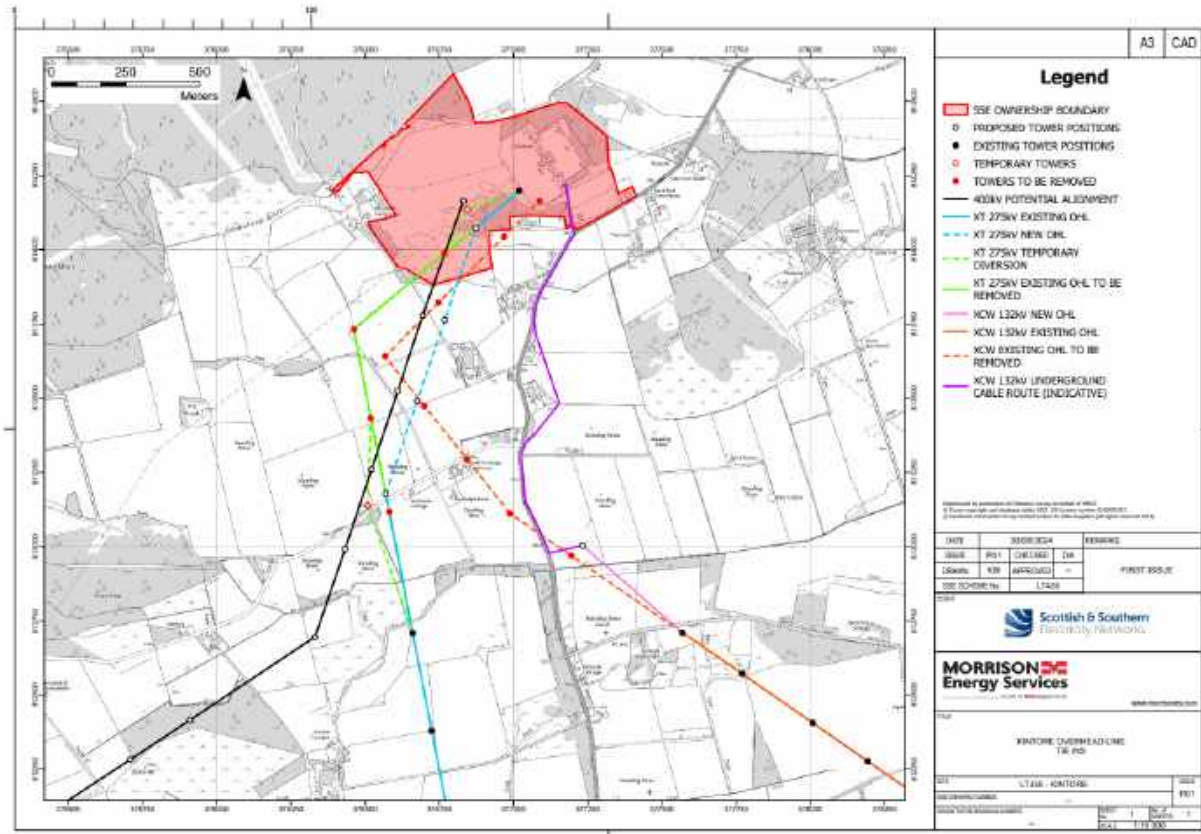


Plate 3.1 - Additional works for existing Kintore substation.

Proposed Hurlie substation:

The proposed Hurlie 400 kV substation is in Fetteresso forest. There are no additional works and/or tie-ins associated with Hurlie for this project other than the proposed Kintore to Tealing 400 kV OHL.

Proposed Emmock substation:

The proposed Emmock 400 kV substation is near to the existing Tealing 275 kV substation. Both modification of the existing infrastructure and new infrastructure is required. This includes:

- The connection of the refurbished Alyth - Tealing OHL, renamed Alyth - Emmock, ready for 400 kV operation. The refurbishment of this existing line is being carried out under a separate project²¹ with a separate Section 37 application under the *Electricity Act 1989* to Scottish Ministers (ECU case reference number: ECU00005167).
- The connection of the refurbished Tealing - Westfield OHL, renamed Emmock - Westfield, ready for 400 kV operation. The refurbishment of this existing line is being carried out under a separate project²² with a separate Section 37 application under the *Electricity Act 1989* to Scottish Ministers (Energy Consents Unit (ECU) Case Reference: ECU00005168).
- The tie-back OHL connections between the proposed Emmock and the existing Tealing substations. Consent for this work will be applied for via a separate Section 37 application under the *Electricity Act 1989* to Scottish Ministers (Energy Consents Unit (ECU) Case Reference: ECU00005204).
- The diversion (tie-in) of short sections of the Alyth to Tealing and Tealing to Westfield 275 kV OHLs, which currently connect at their eastern extent with the existing Tealing 275 kV substation, to connect with the proposed Emmock 400 kV substation. Consent for this work will be applied for via the separate Section 37 application (as detailed in the above bullet point) under the *Electricity Act 1989* to Scottish Ministers.
- Removal of redundant towers.

²¹ Alyth to Tealing OHL 400kV Upgrade (reconductoring). Available at: <https://www.ssen-transmission.co.uk/projects/project-map/alyth---tealing-overhead-line-upgrade/>

²² Tealing to Westfield 400kV Upgrade (reconductoring). Available at: <https://www.ssen-transmission.co.uk/projects/project-map/tealing---westfield-overhead-line-upgrade/>

Plate 3.2 below shows more detail on the proposed tie-ins and tie-backs at Emmock and Tealing.

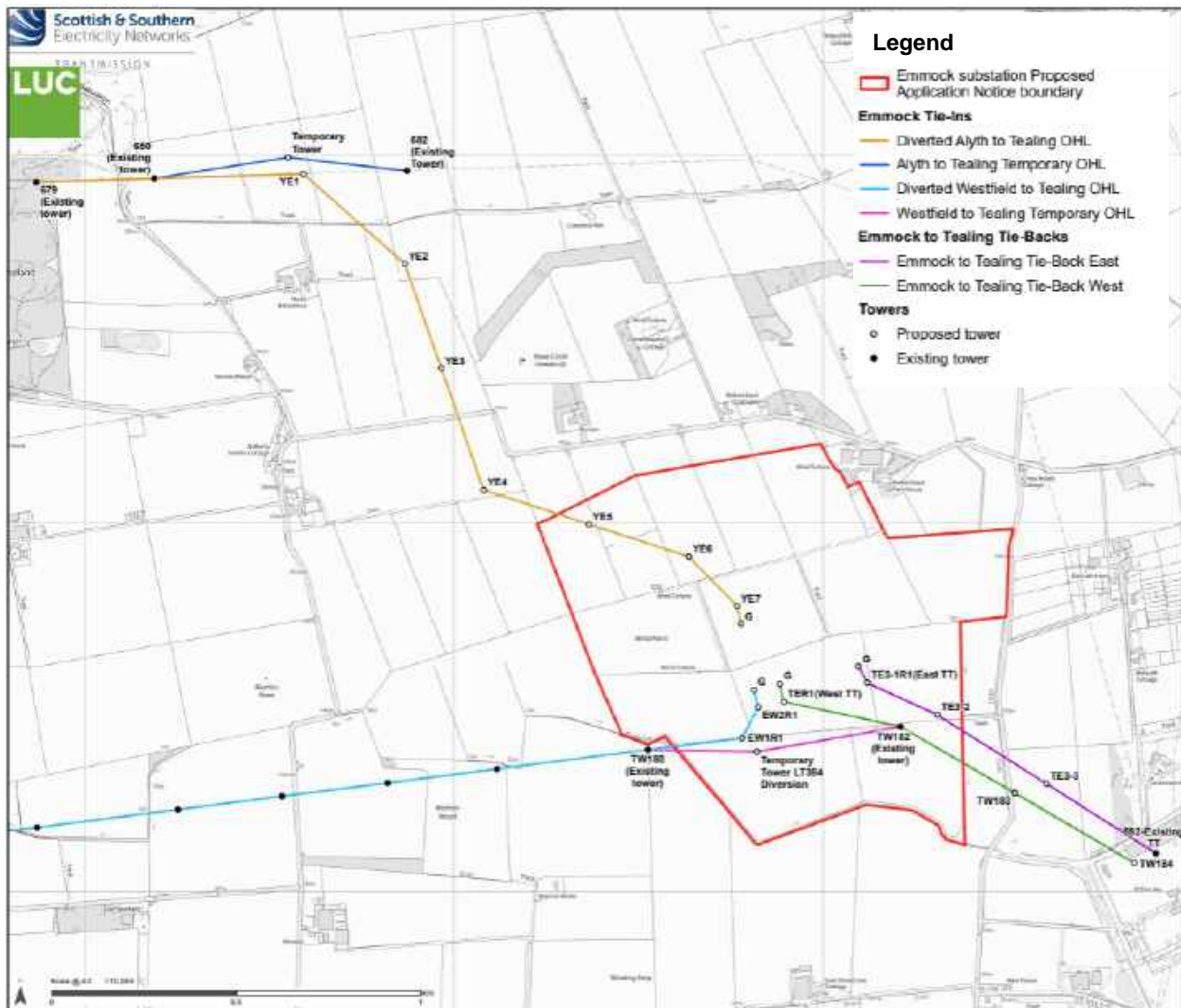


Plate 3.2 - Emmock and Tealing Proposed Tie-ins and Tie-backs

Other OHL Works:

- Permanent realignment of a short section of the existing OHL between Kintore and Fetteresso, near Kirkton of Durris, to allow provision for the new proposed 400 kV OHL (should the Potential Alignment be taken forward).
A crossing of the existing 132 kV overhead line south of Echt (which may potentially be undergrounded). For more information on OHL crossings please see Tower Crossings leaflet here: <https://www.ssen-transmission.co.uk/globalassets/projects/2030-projects/2030-project-documents/pathway-to-2030---tower-crossings---may-24.pdf>
- Temporary overhead line diversions at a number of locations including near Emmock substation, south of Echt, south and west of Kirkton of Durris (should the Potential Alignment be taken forward) and near Kintore substation.

4. DESCRIPTION OF POTENTIAL ALIGNMENT

4.1 Introduction

This Chapter describes the Potential Alignment developed across the Proposed Route in Sections A to F as shown on **Figures 4.1 to 4.6** in **Appendix K** and outlines the key land use and environmental constraints identified for each Section.

Figures 4.1-4.6 also identify the locations where alternative alignments have been developed. Alternative alignments were identified during the alignment development process (see **Chapter 3**) in locations with particularly challenging constraints in eight locations: one location in Section A (Location 1: Hayston Hill), three locations in Section B (Location 2: Padanaram, Location 3: Justinhaugh and Location 4: Careston), one location across the north of Section E and south of Section F (Location 5: Durriss) and three locations in Section F (Location 6: North of Drumoak, Location 7: Schoolhill and Location 8: Echt). The alternative alignments at these locations have been appraised against a series of environmental, technical and cost criteria and the appraisal findings are discussed further in **Chapters 5 and 6**.

This Chapter should also be read in conjunction with **Appendix A: Key Constraints for Sections A to F** which provides further details on designations and other environmental constraints identified within and in proximity to the Potential Alignment (including its LoD) across Sections A to F of the Proposed Route.

4.2 Section A – Emmock 400 kV Substation to Forfar

4.2.1 Potential Alignment Description

The Potential Alignment in Section A (within Route A1) starts from the new proposed Emmock 400 kV substation near Tealing, initially passing in a northwestern direction past the scattered properties around Balkemback and Balluderon before heading northeast over rising hill ground to the east of Craigowl Hill. The alignment then crosses the A928 Glamis to Petterden public road to the west of Finlarg Hill remaining in an upland area before returning to lower ground as it passes west of Hayston Hill. The Potential Alignment then follows a northerly course, crossing the A94 public road to the east of Hunters Hill and the village of Glamis and to the west of the small settlement of Douglastown. The final three kilometres (km) of the Potential Alignment in Section A cross low-lying agricultural land to the west of Forfar.

There is one location where alternative alignments have been developed in Section A; at Location 1 Hayston Hill, please see **Section 5.2.1** and **Figure 4.1** in **Appendix K** for further detail.

4.2.2 Overview of Key Constraints

The key environmental constraints in Section A with respect to the design development of the Potential Alignment are summarised in this section. The constraints are set out in the order of criteria as they appear in SSEN Transmission's Routeing Guidance. Please refer to **Appendix A: Key Constraints for Sections A to F** for further details of the environmental constraints. **Figures 4.7 to 4.11** in **Appendix K** show key environmental constraints in Section A.

Natural Heritage

The Potential Alignment²³ intersects with the River Tay Special Area of Conservation (SAC), a statutory European designated site, in two locations where it crosses tributaries to the River Tay; both in the northern part of the section, at the Kerbet Water to the northwest of the small settlement of Douglastown and the Dean Water, to the southwest of Forfar. The Potential Alignment is constrained where it intersects with one area of Long-Established Woodland of Plantation Origin (LEPO) as classified on the Ancient Woodland Inventory (AWI), located to the north of Hayston Hill.

The Potential Alignment intersects with habitats that have the potential to support European Protected Species (EPS), species listed on the UK Biodiversity Action Plan (UKBAP) as well as other protected species. Annex 1 Habitats form constraints where some areas of dry heath habitat (European dry heaths) are present in upland areas around Hayston Hill, Finlarg Hill and Ironside

²³ Reference to the 'alignment' in this section includes constraints considered within the 200 m wide Limits of Deviation (LoD) for the Potential Alignment. Where measurements are specified, these have been taken from the boundary of the Potential Alignment LoD unless otherwise stated.

Hill in locations intersected by the Potential Alignment. The LoD also intersects with some limited pockets of potential Ground Water Dependent Terrestrial Ecosystems (GWDTE) including marshy grasslands and upland acid flushes.

The Potential Alignment is located within connectivity distance for birds foraging from key statutory designated sites for ornithology including those at the Firth of Tay and Eden Estuary Special Protection Area (SPA) located approximately 8.4 km to the south, the Outer Firth of Forth and St. Andrew's Bay Complex SPA approximately 8.2 km to the southeast, Loch of Kinnordy SPA approximately 6 km to the northwest and Lintrathen Loch SPA approximately 13 km northwest. The northernmost part of this section of the alignment crosses land that supports some breeding Schedule 1 bird species as well as species listed as UK Red List species in the 5th Birds of Conservation Concern (BoCC) review.

Aquifers which are intersected by the Potential Alignment are mainly classified as moderate productivity (Class 2B). The Potential Alignment may intersect a number of aquifers which provide a regional or local resource. Five watercourses are crossed by the Potential Alignment, including the upstream extent of the Tealing Burn, the upstream section of the Kilmundie Burn, an unnamed tributary of the Glen Ogilvie Burn, the Kerbet Water between Glamis Castle and Douglstown, and the Dean Water/Treacle Burn between Glamis Castle and Forfar. Wide flood extents up to 570 m associated with the Dean Water and Kerbet Water are also crossed by the Potential Alignment.

Cultural Heritage

The Potential Alignment is constrained in some locations due to the proximity of a number of designated cultural heritage assets, with one Garden and Designed Landscape (GDL) and six Scheduled Monuments (SM) identified within 1 km. From the cultural heritage assets identified, key constraints include: Glamis Castle GDL which lies approximately 1.1 km to the west of the Potential Alignment and two Scheduled Monuments; Balkemback Cottages Stone Circle (SM 2868), located approximately 20 m from the Potential Alignment and Arniefoul Cairn (SM 389), located approximately 380 m from the Potential Alignment. The Potential Alignment also intersects five sites of archaeological and cultural heritage interest that were identified on the Angus Council Sites and Monuments Records (SMR). Additionally, 24 Listed Buildings were identified within 1 km of the Potential Alignment, a key constraint being the Category B Listed Brighton House (LB 12074), located approximately 1.3 km from the Potential Alignment.

People

A number of settlements, including Tealing, Glamis and Douglstown from south to north, are passed by the Potential Alignment and the settlement of Forfar is located approximately 3 km to the northeast. There are some areas where there is a higher density of residential properties which form key constraints to the Potential Alignment, including around Balkemback and South Balluderon, around Hillside of Prieston and Coldstream, to the east of Glamis around Upper Hayston and Wester Foffarty, and around Jericho and Douglstown.

Landscape and Visual

The landscape crossed by the Potential Alignment is mostly rural in character, characterised by a series of lowland hills and ridges in the southern section, consisting of the Sidlaw Hills, including Ironside Hill, Finlarg Hill and Hayston Hill, and agricultural lowlands in the northern section. The alignment intersects four Landscape Character Types (LCTs) whereby key characteristics which define the LCTs form a constraint: the southern section crosses the Dipslope Farmland LCT and then the Lowland Hill Ranges LCT between Hill of Prieston and Glamis, and the northern section crosses both the Low Moorland Hills and Broad Valley Lowlands – Tayside LCTs. Angus Council are proposing to designate a number of Local Landscape Areas (LLAs), the closest of which would be located approximately 300 m to the west of the Potential Alignment near Balluderon Hill. The Potential Alignment is also constrained by visual receptors from settlements including Tealing, Glamis and Douglstown as well as scattered properties throughout the alignment. Other visual receptors include: users of core paths around North Balluderon, Hillside of Prieston and near Jericho; users of road networks including the A928, particularly around Lumley Den, the A94 and other B class and minor roads; promoted viewpoints such as at Windy Gates Cairns on Balkello Hill; and visitors to attractions such as Glamis Castle.

Land Use

Approximately 5 km of the Potential Alignment intersects with areas of prime agricultural land (Class 2 and Class 3.1). The Potential Alignment intersects a small number of woodland areas, including an area of coniferous plantation woodland to the northwest of Balkemback and an area of coniferous plantation woodland to the west and northwest of Hayston Hill. The

Potential Alignment spans three core paths and also crosses two fishing beats; one on the Kerbet Water and another on the Dean Water.

Planning

One planning application has also been identified that forms a constraint to the development, with a Proposal of Application Notice (PAN) for the proposed 400 kV substation 'Emmock' near Tealing (Emmock substation, Angus Council planning reference 24/00058/PAN).

4.3 Section B – Forfar to Brechin

4.3.1 Potential Alignment Description

The Potential Alignment in Section B (within Route B1,1) starts to the west of Forfar and initially passes in a northeast direction to the west of Padanaram, crossing the A926 and B957 public road and then the River South Esk and to the west of Justinhaugh. The alignment follows a northeasterly direction to the west of Tannadice and crosses the Noran Water to the west of Wellford and Vayne Castle. The Potential Alignment continues northeast to the north of Roughmount Wood, Weiris Wood and intersecting Lochty Wood, continuing in a northeasterly direction to Nether Belliehill into Section C.

There are three locations where alternative alignments have been developed within Section B; at Location 2: Padanaram, Location 3: Justinhaugh, and Location 4: Careston. Please see **Section 5.2.2** and **Figure 4.2** in **Appendix K** for further detail.

4.3.2 Overview of Key Constraints

The key environmental constraints in Section B with respect to the design development of the Potential Alignment are summarised in this section. Please refer to **Appendix A: Key Constraints for Sections A to F** for further details of the environmental constraints. **Figures 4.12 to 4.16** in **Appendix K** show key environmental constraints in Section B.

Natural Heritage

The River South Esk SAC, a statutory European designated site, is intersected by the Potential Alignment in two locations: at the River South Esk between Tannadice and Inshewan in the southern section, and the Noran Water (a tributary of the River South Esk) between Wellford and Noranside in the northern section. The Potential Alignment intersects one statutory national designated site comprising a strip of riparian woodland classified as being of semi-natural origin on the AWI, located along the Noran Water to the west of Wellford. The Potential Alignment is constrained in five locations where it intersects with areas of LEPO woodland as classified on the AWI, located to the near to Mossie of Ballinshoe, to the north of Woodside, near to Knowehead, at Boggie Wood near Fern, at Duns Wood located near to Menmuir and at Lochty Wood near to Lochty. The Potential Alignment also intersects with one regionally designated site; Woodside Local Nature Conservation Site (LNCS), located to the northwest of Forfar in the southern section.

The Potential Alignment intersects with habitats that have the potential to support EPS species listed on the UKBAP as well as other protected species. The Potential Alignment is constrained by the potential presence of some pockets of Annex 1 habitats, particularly where there are remnant extents of semi-natural woodland, such as an area of LEPO woodland located at Knowehead which has the potential to qualify as the Annex 1 habitat 'Old sessile oak woods with *Ilex* and *Blechnum* in the British Isles'²⁴. The presence of limited pockets of potential GWDTE constrains the Potential Alignment in a few areas, such as the marshy grassland and wet woodland habitats located in Duns Wood. Extents of wet woodland were also noted from surveys where the Potential Alignment intersects Lochty Wood, with the potential to be GWDTE.

The Potential Alignment is located within connectivity distance for birds foraging from key statutory designated sites for ornithology including the Loch of Kinnordy SPA located approximately 5.7 km to the west, Loch of Lintrathen SPA approximately 13.7 km to the west, Dun's Dish Site of Special Scientific Interest (SSSI) which is part of the Montrose Basin SPA which are located approximately 7.6 km and 10.4 km respectively to the east, and the Firth of Tay and Eden Estuary SPA approximately 19.2 km to the south. The Potential Alignment crosses land that supports some breeding Schedule 1 bird species, as well as species that are listed as Red list species in the 5th BoCC review.

²⁴ The Annex 1 habitat 'Old sessile oak woods with *Ilex* and *Blechnum* in the British Isles' comprises a range of woodland types, dominated by mixtures of oak and birch.

The aquifers intersected by the Potential Alignment are mainly classified as moderate productivity (Class 2B). The Potential Alignment is constrained by aquifers which may provide a regional or local resource. There are seven watercourses crossed by the Potential Alignment: two small tributaries named Black Burn and King Burn between Forestmuir Wood and the A90 by Quilkoe; the River South Esk between Craigeassie and Inshewan; the Bog Burn between Baldoukie and Tannadice; the Noran Water between Vayne Castle and Noranside; the Cruick Water between Little Brechin and Nether Belliehill and Willies Mill Burn. Several flood risk areas are also crossed by the Potential Alignment; the widest flood risk extent is associated with the River South Esk which is between 200 m and 470 m wide.

Cultural Heritage

The Potential Alignment is constrained by the proximity of a number of designated cultural heritage assets, with 14 SMs of national importance and of high sensitivity identified within 1 km. From the identified cultural heritage assets, key constraints include: Ballinshoe Castle (SM 162), Battledykes Roman Camp (SM 2308), Law of Baldoukie, Barrow (SM 6314), Wellford Enclosure (SM 6390), Belliehill, Unenclosed Settlement (SM 6514), Mill of Balrownie Ring Ditch (SM 6472), , and the Caterthun Hillforts (SM 90069), the latter of which lies approximately 3.1 km to the north of the Potential Alignment. The alignment also intersects with 11 sites of archaeological and cultural heritage interest listed on the Angus Council SMR. Additionally, one Category A Listed Building, 17 Category B Listed Buildings and 14 Category C Listed Buildings were identified within 1 km of the Potential Alignment; two key constraints are the Category B Listed Ballindarg House (LB 11689), located approximately 280 m to the west of the Potential Alignment, and Noranside House (LB 17705) located approximately 700 m to the north of the Potential Alignment. One Conservation Area, Tannadice (CA 539) also lies approximately 550 m to the southeast of the LoD, and one Non-Inventory Designed Landscape (NIDL), Inshewan House NIDL (NO45NW0072), is intersected by the Potential Alignment.

People

A number of larger settlements, including Forfar, Kirriemuir, Tannadice and Brechin, are passed by the OHL alignment. There are some areas where there is a higher density of residential properties which form key constraints to the Potential Alignment, including around Ballinshoe between Redford and Barnsdale, around Foreside of Cairn, Craigeassie and Murthill, to the northwest of Tannadice, between Boggie and Balmaditty, and around Montboy, Lochty and Hoodston.

Landscape and Visual

The landscape crossed by the Potential Alignment is mostly rural in character, characterised by gentle rolling agricultural lowlands with generally open fields, ranging from medium to large scale, with some smooth, undulating landforms and low ridgelines between Hilton of Fern and Peathill. The Potential Alignment intersects one LCT, the Broad Valley Lowlands – Tayside LCT, whereby key characteristics which define the LCT form a constraint. Angus Council are proposing to designate a number of Local Landscape Areas (LLAs), of which the Potential Alignment would intersect the proposed River South Esk and Aberlemno LLA to the west of Finavon near Justinhaugh and is located approximately 700 m south of the proposed Angus Glens LLA. The Potential Alignment is also constrained by visual receptors from settlements including Forfar, Kirriemuir, Tannadice and Brechin and from scattered residential properties. Other visual receptors include: users of core paths near Nether Drumgley and Padanaram in the southern section, around Tannadice in the central section, and near Barrelwell and Pittendriech in the northern section; as well as people travelling on road networks including the A926, A90 and other B class and minor roads.

Land Use

The majority of the Potential Alignment crosses through areas of prime agricultural land (Class 2 and Class 3.1). The Potential Alignment intersects with seven areas of woodland with some commercial forestry areas present, including in areas to the west of Craigeassie, west of Battledykes, southeast of Fern as well as woodland areas to the north and northeast of Careston. The alignment also crosses one core path at Tannadice, and a fishing beat (Inshewan) is intersected by the Potential Alignment, located on the River South Esk near the Inshewan Weir.

4.4 Section C – Brechin to Laurencekirk

4.4.1 Potential Alignment Description

The Potential Alignment in Section C (within Route C1) starts to the northwest of Brechin, initially passing in a northeastern direction between Belliehill Wood and Little Brechin Wood to Auchenreoch where the alignment crosses the West Water.

South of Edzell Wood, the alignment continues in an eastern direction, crossing the B966 public road and then follows a northeastern path across open agricultural land. The alignment then crosses the River North Esk to the southeast of the settlement of Edzell, skirting the edges of woodland areas at Capo Plantation and Inverury Wood and passing the former Edzell Airfield site located to the north of the alignment. The alignment follows a northeastern course through gently rising agricultural land then crosses the B974 public road and through the northern edge of mixed woodland at Lady Jane's Plantation, continuing in an eastern direction to the south of Greenbottom Wood and then in a northeastern direction to the northwest of the town of Laurencekirk.

Following the confirmation of the proposed route C1 in the November 2023 Report on Consultation (RoC) (Kintore to Tealing OHL RoC November 2023), work began to identify an alignment and possible alternative alignments within Route C1. During the alignment development work, no alternative alignments were identified, and a Potential Alignment was designed taking account of the varying technical, land use and environmental constraints throughout Section C. The alignment proposed in Route C1 offers a technically feasible option and avoids or limits interactions with environmental and community constraints. Areas where alignments were considered during design development but not taken forward as alternative alignments or for detailed appraisal are discussed in **Appendix J: Design Development Locations**.

4.4.2 Overview of Key Constraints

The key environmental constraints in Section C with respect to the design development of the Potential Alignment are summarised in this section. Please refer to **Appendix A: Key Constraints for Sections A to F** for further details of the environmental constraints. **Figures 4.17 to 4.21 in Appendix K** show key environmental constraints in Section C.

Natural Heritage

The Potential Alignment is constrained where it intersects with seven woodland areas classified as LEPO on the AWI, including: Little Brechin Wood, Belliehill Wood, Bankhead Wood, woodland at Inveriscandye, Capo Plantation, Inverury Wood and Drumhendry Plantation, Lady Jane's Plantation and Greenbottom Wood.

The OHL alignment intersects with habitats that have the potential to support European Protected Species (EPS), species listed on the UK Biodiversity Action Plan (UKBAP) as well as other protected species. The presence of limited pockets of potential GWDTE slightly constrains the OHL alignment, such as marshy grassland and wet woodland habitats associated with a farm pond at Haughhead.

The Potential Alignment is located within connectivity distance for birds foraging from key statutory designated sites for ornithology including those at Montrose Basin SPA and Dun's Dish SSSI which is part of the Montrose Basin SPA, located approximately 9 km and 6 km southeast respectively. The Potential Alignment crosses land that has the potential to support populations of Schedule 1 bird species, as well as species that are Red List species on the 5th BoCC review.

The Potential Alignment is constrained by the Buttery Burn Surface Drinking Water Protected Area (DWPA), located at Mill of Balrownie to the north of the Potential Alignment, which is associated with a 6.25 km reach of the Buttery Burn and its associated surface water catchment area. There are ten watercourses which are crossed by the Potential Alignment: the Cruick Water, two large unnamed drains between Cruick Water and West Water, the West Water, the River North Esk, the Black Burn, the Sauchie Burn, Dowrie Burn and Devilly Burn. The Potential Alignment also crosses several flood risk areas; the widest flood risk extent is associated with the West Water / River North Esk crossing with a width of approximately 1400 m.

Cultural Heritage

The Potential Alignment is constrained by a number of designated cultural heritage assets due to the proximity with nine SMs of national importance and of high sensitivity located within 1 km. From the identified cultural heritage assets, key constraints include: Capo Plantation, Long Barrow (SM 4444), Witch Hillock, Burial Mound and Stone Setting (SM 4823), Stracathro Roman Camp (SM 2829), Inchbare Cursus (SM 6373 & SM 6374), Westside Barrows (SM 6367), Westside, Unenclosed Settlement (SM 6368), and the Caterthuns Hillforts (SM 90069), the latter of which is located approximately 4 km from the Potential Alignment. The alignment also intersects with 15 sites of archaeological and cultural heritage interest and two entries for archaeological interest identified on the Aberdeenshire Council and Angus Council SMR. Additionally, the Auchenreoch House Non-Inventory Designed Landscape (NIDL) (NO66NW0173) is intersected by the Potential Alignment in the southern section and is a key constraint. Of the 24 Listed Buildings identified within 1 km of the Potential Alignment, the key constraints include

the Category A Listed Building Stracathro House (LB 17804) and the Category B Listed Building, Thornton Castle (LB 16295) located approximately 1.1 km and 850 m to the south of the Potential Alignment respectively.

People

A number of settlements are passed by the Potential Alignment, including Brechin, Little Brechin, Inchbare, Edzell, North Water Bridge, Luthermuir, Fettercairn and Laurencekirk. There are some areas where there is a higher density of residential properties which form key constraints to the Potential Alignment, including to the west of Little Brechin between Parkside and Langhaugh, between Inchbare and Westside, to the northwest of North Water Bridge between Northgate and Steelstrath, to the northwest of Luthermuir between Primrosehill and Mains of Drumhendry, to the south of Fettercairn around Lady Jane's Plantation, and to the southeast of Greenbottom Wood around Haughhead.

Landscape and Visual

The landscape crossed by the Potential Alignment is mostly rural in character, characterised by gentle rolling agricultural lowlands with open fields ranging from medium to large scale and scattered pockets and lines of broadleaved and mixed woodland/trees which form characteristic features. The Potential Alignment intersects two LCTs, the southern section crosses the Broad Valley Lowlands – Tayside LCT and the northern section crosses the Broad Valley Lowlands – Aberdeenshire LCT, whereby characteristic features of the LCTs forms constraints. The Potential Alignment is also constrained by visual receptors from settlements, including Brechin, Little Brechin, Inchbare, Edzell, North Water Bridge, Luthermuir, Fettercairn and Laurencekirk and from scattered properties. Other visual receptors include: users of core paths around Brechin in the southwestern section and around Luthermuir near to the central section; users of road networks including the A90, B966, B974 and other B class and minor roads; and people on slopes and summits of hills including those visiting the Caterthun Hillforts.

Land Use

The Potential Alignment crosses several areas of prime agricultural land (Class 2 and Class 3.1) between West Hill and Nether Belliehill, and Auchenreoch to the River North Esk in the southern section, and between Luthermuir and Pitnamoon in the northern section. A number of woodlands consisting of commercial forestry are intersected by the Potential Alignment, including at Brechin Wood and Lady Jane's Plantation. The Potential Alignment also spans a fishing beat located on the River North Esk.

Planning

A number of planning applications were identified that form a constraint to the Potential Alignment including: a consented application for the installation of two biomass facilities at Clearie Moor Sawmill (APP/2022/1464 and APP/2022/2074), and a consented planning application for the installation of a solar panel array onto an existing shed roof at Clearie Moor Sawmill (APP/2022/1468) which can be avoided through micrositing the Potential Alignment.

4.5 Section D – Laurencekirk to Hurlie 400 kV Substation

4.5.1 Potential Alignment Description

The Potential Alignment in Section D (within Route D4) starts to the northwest of the town of Laurencekirk, initially passing through gently undulating farmland and crossing a number of minor roads in a generally northeastern direction where it passes between the settlement of Fordoun to the southeast and the village of Auchenblae to the northwest. The alignment then crosses the B966 public road close to the location of commercial sites on land formerly used for a military airfield. It continues in a northern direction over more undulating topography past the settlement of Monboddo, crossing the Bervie Water in a valley to the west of Glenbervie village and then passing northwards over steeply rising ground following the southern and eastern slopes of Droop Hill. At Cotbank, the alignment then follows a northeastern direction through an undulating landscape with several wind turbines then uphill towards the site of the new proposed 400 kV substation at Hurlie in Fetteresso Forest.

Following the identification of route option D4 in the November 2023 Report on Consultation (RoC) (Kintore to Tealing OHL RoC November 2023), work began to identify an alignment and possible alternative alignments within route D4 (and route option D5). During the alignment development work, no alternative alignments were identified, and a Potential Alignment was designed taking account of the varying technical, land use and environmental constraints throughout Section D. The alignment proposed in D4 offers a technically feasible option and avoids or limits interactions with environmental and community

constraints. Areas where alignments were considered during design development but not taken forward as alternative alignments of for detailed appraisal are discussed in **Appendix J: Design Development Locations**.

4.5.2 Overview of Key Constraints

The key environmental constraints in Section D with respect to the design development of the Potential Alignment are summarised in this section. Please refer to **Appendix A: Key Constraints for Sections A to F** for further details of the environmental constraints. **Figures 4.22 to 4.26 in Appendix K** show key environmental constraints in Section D.

Natural Heritage

There are four areas of woodland classified as LEPO on the AWI that are intersected by the Potential Alignment and form a constraint which are located at Cammackmuir Plantation, Woods of Redhall, Den Wood, and three areas of LEPO woodland to the north of Glenbervie, including Jacksbank Wood and two blocks near to Cotbank. The LoD intersects with habitats that have the potential to support EPS species listed on the UKBAP as well as other protected species. The Potential Alignment intersects with land that has the potential to support Annex 1 habitats where there are remaining extents of semi-natural grassland, as well as the potential to be classified as GWDTE habitats, for example small areas of wet woodland and marshy grassland.

The OHL alignment is located within connectivity distance for birds foraging from key statutory designated sites for ornithology including the Montrose Basin SPA located approximately 10.1 km to the south, Dun's Dish SSSI approximately 6.7 km to the south which is part of the Montrose Basin SPA and Fowlsheugh SPA approximately 8.4 km to the east. The Potential Alignment also crosses land that has the potential to support populations of Schedule 1 bird species, as well as species that are listed as Red list species in the 5th BoCC review.

The Potential Alignment intersects with a number of PWS which form a constraint. It crosses six watercourses: the Ducat Water, Luther Water, the Bervie Water, the Carron Water as well as two unnamed tributaries of the Carron Water. One large flood risk area at Luther Water to the south of Auchenblae is crossed by the Potential Alignment.

Cultural Heritage

The Potential Alignment is constrained by a number of designated cultural heritage assets due to the proximity, with two SMs and one GDL located within 1 km. From the identified cultural heritage assets, the key constraints include Droop Hill Cairns (SM 4778) located approximately 300 m to the north of the Potential Alignment, and Glenbervie House GDL (GDL 194) located approximately 620 m southeast of the Potential Alignment. Seventeen sites of archaeological and cultural heritage interest were also identified on the Aberdeenshire Council SMR that are intersected by the Potential Alignment. Additionally, within 1 km of the Potential Alignment, 17 Listed Buildings were identified. The key Listed Building constraints are: Category B Listed Redhall House (LB 9652) which lies approximately 80 m to the east, and Category B Listed Monboddoo House (LB 9643) which is located approximately 230 m to the east of the Potential Alignment.

People

A number of settlements are passed by the Potential Alignment, including Fordoun, Monboddoo and Glenbervie (from south to north). There are two particular areas where there is a higher density of residential properties which constrain the Potential Alignment, located to the northwest of Fordoun between Red Hall and Pittengardner, and to the east of Auchenblae around Monboddoo.

Landscape and Visual

The landscape crossed by the Potential Alignment near Fordoun and the A90 trunk road is largely low-lying and flat farmland, continuing into more elevated land between Auchenblae and Fetteresso Forest where it intersects with Knock Hill, Droop Hill and elevated land at Jacksbank. Although the Potential Alignment does not intersect any designated landscapes, the Braes of the Mearns Special Landscape Area (SLA) is located approximately 1 km to the northwest. The southern section of the Potential Alignment intersects the Broad Valley Lowland LCT, and the northern section intersects with the Coastal Farmed Ridges and Hills LCT. The Potential Alignment is also constrained by visual receptors from settlements including Fordoun, Auchenblae and Glenbervie and from scattered residential properties particularly in the southern section. Other visual receptors include: users of core paths located to the north of Fordoun; users of road networks including the A90, the B9120, B966 and other B class and minor roads; as well as people travelling along the East Coast Main Line Railway which is approximately 1.1 km to the east of the Potential Alignment at its closest point.

Land Use

The Potential Alignment intersects with some areas of land classed as prime agricultural (Class 2 and Class 3.1), predominantly located in the southern section of the section between Pitnamoon and Monboddo. The Potential Alignment intersects with two areas of woodland comprised of commercial forestry, including: Fetteresso Forest (part of the National Forest Estate (NFE) managed by Forestry and Land Scotland (FLS)) at the northern end of the Potential Alignment, as well as coniferous woodland located to the south of Auchenblae (south-west of Fordoun House). The Potential Alignment crosses one core path between Fordoun and Auchenblae and spans a fishing beat located on the Bervie Water.

Land Use

Two planning applications were identified that form a constraint to the development: a consented ground mounted solar array at Fordoun Sawmill (APP/2021/0050) and a Proposal of Application Notice (PAN) for the proposed 400 kV substation 'Hurlie' in Fetteresso Forest (Hurlie substation, Aberdeenshire Council planning reference ENQ/2024/0146).

4.6 Section E – Hurlie 400 kV Substation to River Dee

4.6.1 Potential Alignment Description

The Potential Alignment in Section E begins at the proposed Hurlie 400 kV substation site near Elf Hill in Fetteresso Forest (within Route E2) passing in a northern direction through Fetteresso Forest and following the eastern side slope of Craigneil Hill and continuing in a northerly direction through Durris Forest following the line of the existing Kintore to Fetteresso 275 kV OHL to the immediate west of the alignment (within Route E4). The alignment then continues in a general northerly direction to the west of the village of Kirkton of Durris before crossing the River Dee and the A93 public road between West Park and Nether Park, where it joins Section F (Route F3).

There is one long alternative alignment developed in Section E (Alternative Alignment 5b) that extends from the northern part of Section E, at the proposed new Hurlie substation (Routes E2 and E1) up to the southern part of Section F, south of Drumoak (Route F1.3). The alignment generally follows in a northerly direction to the east of Craigneil Hill and Meikle Carewe Hill towards the River Dee at Craiglug. Please see **Section 5.2.5** and **Figure 4.5** in **Appendix K** for further detail.

4.6.2 Overview of Key Constraints

The key environmental constraints in Section E with respect to the design development of the Potential Alignment are summarised in this section. The constraints are set out in order of criteria as they appear in SSEN Transmission's Routeing Guidance. Please refer to **Appendix A: Key Constraints for Sections A to F** for further detail regarding the environmental constraints. **Figures 4.27 to 4.31** in **Appendix K** show key environmental constraints in Section E.

Natural Heritage

The River Dee SAC, a statutory European designation, is intersected by the Potential Alignment in three locations; the Burn of Sheeoch (tributary of the River Dee) and Strathie Burn (which flows into the Burn of Sheeoch) are crossed to the east of Meikledams, and the River Dee is crossed near Wester Durris. The River Dee is also regionally designated as an LNCS.

Two areas of woodland classified as Ancient Woodland (of semi-natural origin) on the AWI are intersected by the Potential Alignment: a narrow belt of trees located to the south of the Slug Road (A957) to the north of Fetteresso Forest, and a strip of riparian woodland at Free Church Wood to the east of Meikledams. The Potential Alignment also intersects with two areas of woodland classified as LEPO on the AWI; one woodland area is adjacent and west of the Ancient Woodland in the southern section located to the northwest of Mergie, and the other is an area of woodland at Free Church Wood in the northern section to the east of Meikledams.

The Potential Alignment intersects with habitats that have the potential to support EPS, species listed on the UKBAP as well as other protected species. The Potential Alignment also intersects with land that has the potential to qualify as Annex 1 habitats in the upland area around Craigneil, north of Slug Road. Limited pockets of potential GWDTE habitats are likely to constrain the Potential Alignment, for example, marshy grasslands, wet woodland and wet heath.

The OHL alignment is located within connectivity distance for birds foraging from key statutory designated sites for ornithology including Fowlsheugh SPA and the Loch of Skene SPA, which are located approximately 8.6 km to the southeast and 9.1 km to

the northeast from the Potential Alignment respectively. The Potential Alignment crosses land that has the potential to support populations of Schedule 1 bird species, as well as species that are Red list species in the 5th BoCC review.

The Potential Alignment is located between two surface water DWPA: the River Dee at Banchory DWPA is located over 10 km upstream and west of the Potential Alignment, and the River Dee near Peterculter DWPA is located approximately 3 km downstream and east of the Potential Alignment. The Potential Alignment is constrained by one Regulated PWS (Type A) at Fetteresso Substation located approximately 500 m to the west of the LoD, and there are a number of small PWS (Type B) within 200 m of the Potential Alignment. The Potential Alignment crosses five watercourses including the Cowie Water, the Black Burn, Cowton Burn, the Strathie Burn, Sheeoch Burn and the River Dee. There is one large fluvial flood risk area associated with the River Dee crossing, where the future floodplain is approximately 480 m wide.

Cultural Heritage

Designated cultural heritage assets are a constraint in some areas where they are proximate to the Potential Alignment. Within 1 km of the alignment, there are two SMs and one GDL of national importance and of high sensitivity. Those that are key constraints include: Park House GDL (GDL 309) and Cairn-Mon-Earn cairn (SM 4892), located approximately 60 m east and 800 m west of the Potential Alignment respectively. Also, 11 sites of archaeological and cultural heritage interest were noted on the Aberdeenshire Council SMR that are intersected by the Potential Alignment. 15 Listed Buildings were identified within 1 km of the Potential Alignment, although due to their localised settings, they are not considered to be significant constraints.

People

The majority of the Potential Alignment is located in sparsely populated areas. It passes around a few scattered residential properties and some small settlements including Kirkton of Durriss. Areas with a higher density of residential properties that constrain the Potential Alignment are located between Mergie and Mill Haugh to the south of the A957 as well as the western edge of Kirkton of Durriss and West Park.

Landscape and Visual

The northern edge of the Potential Alignment crosses into the Dee Valley SLA which is a designated landscape. The Potential Alignment intersects two LCTs: the southern section on the higher land associated with Fetteresso Forest crosses the Summits and Plateaux LCT and the northern section crosses the Broad Wooded and Farmed Valley LCT. The Potential Alignment is constrained by visual considerations in relation to sensitive receptors from settlements including near Kirkton of Durriss as well as from scattered residential properties. Other visual receptors include users of road networks such as the A957 and surrounding minor roads and people engaging in outdoor recreation within the area such as in Durriss Forest.

Land Use

Commercial forestry identified as forming part of the National Forest Estate (NFE), which is managed by Forest and Land Scotland (FLS), is intersected by the Potential Alignment at Fetteresso Forest in the southern section, as well as Durriss Forest in the central section and Kirkton Wood and Free Church Wood in the northern section. Smaller woodlands comprising commercial forestry are also intersected by the alignment, in areas located to the north of the River Dee. The Potential Alignment crosses one core path to the north of the River Dee (the Deeside Way) between Drumoak and Banchory. The Potential Alignment also spans three fishing beats: one located on the Cowie Water in the southern section, and two on the River Dee; the Lower Crathes / West Durriss fishing beat and the Park fishing beat.

Planning

The following planning applications were identified that form a constraint to the Potential Alignment:

- Planning permission for 10 turbines at Fetteresso Forest (Fetteresso Wind Farm) was approved upon appeal in 2022. The Potential Alignment intersects with the proposed access track within the Red Line Boundary where it would connect with Slug Road in the southern section of the alignment (APP/2019/1341, case reference: WIN-110-1);
- The consented application for an 11-turbine windfarm at Craigniel Wind Farm to the northwest of Rickarton (APP/2018/0993). A PAN was submitted to the Aberdeenshire Council in June 2024 with an updated design layout of seven turbines with an increased height and capacity;
- The Proposal of Application Notice (PAN) for the proposed 400 kV substation known as Hurlie, near Fetteresso (ENQ/2024/0146);

- The Potential Alignment intersects with three planning applications for the prior approval of the formation of a private way (forestry) in Durris Forest at NGR NO 79168 91447 (APP/2024/0287), NGR NO 79179 91912 (APP/2024/0545) and NGR NO 79221 92644 (APP/2024/0333); and
- An approved planning application to permit the continued extraction of sand gravel for a further 10 years at Netherpark Quarry, is located to the north of the River Dee and is intersected by the Potential Alignment (APP/2016/0257).

4.7 Section F – North of the River Dee to Kintore Substation

4.7.1 Potential Alignment Description

After crossing the River Dee north of Wester Durris and the A93 Aberdeen to Banchory public road between West Park and Upper Park, the Potential Alignment in Section F (within Route F3) follows a northerly course over gently rising ground to the west of the settlement of Drumoak at Upper Park and continues in a northerly direction adjacent to the Loch of Park SSSI (which would be avoided to the west of the alignment) and continuing through to Coldstream Plantation. The Potential Alignment then follows a course in a north-northwestern direction crossing the B9125 public road to the west of the settlement of Schoolhill and passing to the east of the village of Echt, where it crosses the B9119 public road (within Route F2). The Potential Alignment then follows a generally northeastern direction to the east of the prominent high ground of Barmekin Hill with its summit hilltop, which is a scheduled monument. The Potential Alignment crosses the A944 Westhill to Alford public road on undulating ground to the west of Dunecht village and passes through an open agricultural landscape with occasional commercial forestry for 5 km before connecting with the existing Kintore Substation at the northern end.

There are three locations in Section F where alternative alignments have been developed: Location 6: North of Drumoak; Location 7: Schoolhill; and Location 8: Echt. Please see **Section 5.2.6** and **Figure 4.6** in **Appendix K** for further detail.

It is noted that the alternative alignments appraised for Location 6: North of Drumoak are only relevant to the Alternative Alignment 5b and not to the Potential Alignment presented for Section F. Alternative Alignment 5b is located across Sections E and F of the Proposed Route and the northern part is located within Route F1.3. The alternative alignments appraised at Location 6: North of Drumoak were developed to ensure that an alignment of least environmental and technical constraint could be located further from the village of Drumoak should Alternative Alignment 5b be progressed instead of Alternative Alignment 5a (Potential Alignment).

4.7.2 Overview of Key Constraints

The key environmental constraints in Section F with respect to the design development of the Potential Alignment are summarised in this section. The constraints are set out in the order of criteria as they appear in SSEN Transmission's Routing Guidance. Please refer to **Appendix A: Key Constraints for Sections A to F** for further details regarding the environmental constraints. **Figures 4.32 to 4.36** in **Appendix K** show key environmental constraints in Section F.

Natural Heritage

The Potential Alignment intersects the eastern edge of the Loch of Park SSSI northeast of Lochside. The Loch of Park LNCS extends outwith the Loch of Park SSSI boundary and is intersected by the Potential Alignment in two locations: to the northwest of Drumoak near Lochside and at Collonach Plantation.

A number of woodlands classified as LEPO on the AWI are intersected by the Potential Alignment. These include: Coldstream Plantation, Collonach Plantation, Backstrip Wood and North Kirkton Wood, Myriewell Wood, Scaur Wood, Tillyfoddle Wood, Tillybrig Wood and Corskie Wood.

The Potential Alignment intersects with habitats that have the potential to support European Protected Species (EPS), species listed on the UK Biodiversity Action Plan (UKBAP) as well as other protected species. The Potential Alignment intersects with land that has the potential to qualify as Annex 1 habitats, particularly where there are remnant extents of semi-natural woodland. Limited pockets of potential GWDTE habitats are likely to constrain the Potential Alignment, for example, wet woodland at Loch of Park, and purple moor grass and rush pastures located to the west of Skene Moss in the northern part of the Potential Alignment.

The OHL alignment is located within connectivity distance for birds foraging from key statutory designated sites including the Loch of Skene SPA which is located approximately 3.4 km to the east of the LoD at its closest point. The Potential Alignment

crosses land that supports some populations of Schedule 1 bird species, as well as the potential to support species listed as Red list species in the 5th BoCC review.

The Potential Alignment is constrained by five Regulated PWS (Type A) and at least 30 small PWS (Type B). The Potential Alignment crosses six watercourses including: the Gormack Burn, a large unnamed tributary to the Gormack Burn, Kinnernie Burn, Bogendinny Burn, and the Park Burn. There are several flood risk areas that are crossed by the Potential Alignment associated with the Gormack Burn and the Kinnernie Burn with flood extents ranging from 60 m to 400 m and 200 m and 280 m respectively.

Cultural Heritage

A number of designated cultural heritage assets form a constraint due to their proximity to the Potential Alignment. Within 1 km of the Potential Alignment, there are six SMs and one GDLs of national importance of high sensitivity, of which, the key constraints identified include:

- Five Scheduled Monuments: Barmekin Hillfort (SM 57), New Wester Echt Circle (SM 6074), South Leylodge Stone Circle (SM 12350), East Finnercy Cairn (SM 6076), Tillyorn Moated Homestead (SM 12161), the closest of which, the South Leylodge Stone Circle (SM 12350) lies approximately 30 m from the Potential Alignment; and
- One GDL: Dunecht House (GDL 513), which the Potential Alignment intersects with the southwestern corner.

The Potential Alignment is further constrained by proximity to two Listed Buildings; Category A Listed Dunecht House (LB 3133) and Category A Park House (LB 3103), which are located approximately 1.1 km to the east and 700 m to the southeast of the Potential Alignment respectively. Additionally, the Aberdeenshire Council SMR holds records for 21 sites of archaeological and cultural heritage interest and one entry for an archaeological investigation that are intersected by the Potential Alignment.

People

A number of settlements are passed by the OHL alignment, including the villages of Drumoak, Echt and Dunecht from south to north. There are a number of areas where there is a higher density of residential properties which form key constraints to the Potential Alignment. These are located: to the east of Upper Park, south of the B9125 near Milton of Cullerlie and Schoolhill, and to the east of the village of Echt.

Landscape and Visual

The landscape crossed by the Potential Alignment is generally undulating with frequent characteristic broadleaved and mixed woodlands, passing to the east of the Hill of Fare and Barmekin Hill. Approximately 2 km of the southern section of the Potential Alignment crosses the Dee Valley SLA. The Potential Alignment also intersects two LCTs the southern section crosses the Broad Wooded and Farmed Valley LCT with the majority of the Potential Alignment crossing the Wooded Estates LCT. The Potential Alignment is constrained by visual considerations in relation to sensitive receptors from scattered residential properties and settlements including those at Drumoak, Echt and Dunecht. Other visual receptors include: users of core paths within the Dee Valley; users of NCN routes, particularly Route 195; people travelling on road networks including the A93, A944 and several B class roads and other minor roads; as well as visitors to key locations or upland viewpoints such as Barmekin Hill.

Land Use

The Potential Alignment intersects with two small strips of prime agricultural land located between the Loch of Park and Drumoak but predominantly crosses areas of non-prime agricultural land. The Potential Alignment is constrained by a number of woodland areas comprised of commercial forestry located to the north of the River Dee, at Collonach Plantation, at Coldstream Plantation, Backstrip Wood, North Kirkton Wood, Myriewell Wood, Scaur Wood, Tillyfoddie Wood, Tillybrig Wood, Corskie Wood, and two small coniferous woodland areas to the west and northwest of Lyne of Skene.

Planning

Three planning applications were identified which form a constraint to the Potential Alignment:

- a consented application for an agricultural building to the north of Coldstream Plantation (APP/2020/1789);
- a Proposal of Application Notice (PAN) was submitted in March 2024 for the erection of a large facility for the production of hydrogen located to the south of the existing Kintore Substation; and
- a proposal for a battery energy storage system (BESS) with an installed capacity of 49.9 MW to the south of Kintore Substation (APP/2022/2022).

5. ALIGNMENT DESIGN DEVELOPMENT

5.1 Introduction

This chapter provides an overview of the findings of the alignment design development process, confirming the areas within each Section of the Proposed Route where significant or extensive constraints led to the consideration of alternative alignments. This chapter focuses on the areas where more complex alternative alignments were devised and taken forward for more detailed appraisal. Other design development areas that were considered but not taken forward as alternative alignments are discussed further in **Appendix J: Design Development Locations**.

This chapter should be read in conjunction with **Chapter 6 Appraisal of Alternative Alignments** which provides the summaries of the comparative appraisals and the outcome of the assessments of the alternative alignments in order to reach the Potential Alignment.

5.2 Alignment Design Development

Design development for the alignment in Sections A to F of the Proposed Route focused on a review of environmental and land use constraints in several localised locations potentially suitable for alternative alignments to be developed. The key constraints and the findings of the design development for each of the locations where alternative alignments have been identified are described further below.

5.2.1 Section A

Location 1: Hayston Hill

In Section A, Route A1, from Hayston Hill to Upper Hayston, it was identified that an alignment developed through this area would have the potential to impact on areas of land managed for agriculture in the area east of Arniefoul. Avoiding this prime agricultural land would require crossing the west flank of Hayston Hill at higher elevations and a steeper gradient. Two alternative alignments were developed in this area to manage both sets of constraints and were taken forward for more detailed appraisal (see **Plate 5.1** and **Figures 5.1 to 5.3** in **Appendix K**). The alternative alignments are:

- Alternative Alignment 1a (the Potential Alignment): follows a more westerly course between Nether Arniefoul and Upper Hayston to the east of Hunters Hill through generally lower lying land which is extensively managed for agriculture.
- Alternative Alignment 1b: lies to the east of Alternative Alignment 1a between Upper Hayston and Wester Foffarty and crosses the western flanks of Hayston Hill in an upland area predominantly managed as a grouse moorland.



Plate 5.1 - Location 1: Hayston Hill Alternative Alignments

Alternative Alignment 1a (the Potential Alignment) skirts the lower slopes of the western side of Hayston Hill, reducing the prominence of towers along the skyline compared with the more elevated alternative alignment to the east. Towers would be sited on the edge of prime agricultural land where possible to minimise compromising agricultural production. Whilst Alternative Alignment 1a would pass near to the Scheduled Monument at Arniefoul Cairn on the southwestern side of Hayston Hill, it would not be visible from the cairn itself in this location, reducing the potential for adverse impact on its setting. The land in this area is relatively flat, which would reduce the need for cut and fill requirements associated with access track construction. However, Alternative Alignment 1a would need to cross some side slopes of Hayston Hill with the potential for visibility for residential receptors between Glamis and Hayston Hill. It would also be located in close proximity to a number of watercourses, some of which may need to be crossed (using culverts) to enable access for OHL construction and maintenance.

Alternative Alignment 1b crosses the higher slopes of the western side of Hayston Hill and would come into close proximity to the Scheduled Monument at Arniefoul Cairn, potentially compromising views to and from the cairn, and affecting the intervisibility between a contemporary burial cairn on Carlunie Hill to the southwest. Where the OHL would cross near the peak of the hill, towers would be prominent in the landscape, potentially impacting visual amenity and landscape characteristics. Alternative Alignment 1b passes through the edge of a parcel of LEPO woodland in the area, which would require some felling for an operational corridor. A large portion of the woodland would remain however which may act to screen the alignment and minimise visibility from the west of the alignment looking up on the slopes of Hayston Hill. Alternative Alignment 1b would be positioned further from small local settlements in comparison to Alternative Alignment 1a. Alternative Alignment 1b is also located in an area of a former and disused quarry with existing quarry accesses still present, however, as it traverses over the hillside, earthworks would still be required for new access track construction and for tower work areas due to the steep side slopes.

As Alternative Alignment 1b is more constrained by Arniefoul Cairn, and visually more prominent along the peak of the hill, Alternative Alignment 1a was identified as being less constrained with respect to environmental criteria.

Further information on the findings of the detailed environmental, technical and cost appraisal of these alternative alignments informing the selection of the Potential Alignment are presented in **Section 6.2**.

5.2.2 Section B

Location 2: Padanaram

In Section B, Route B1.1, northwest of the village of Padanaram, it was identified that several constraints including high-pressure gas pipelines, Scheduled Monuments, hydrological constraints (including floodplains and number of watercourses and field drains located in the area) and a proposed solar array constrained the development of an alignment in the area. Avoiding these would require aligning an OHL closer to the village of Padanaram. Two alternative alignments were developed in this area to manage the constraints and were taken forward for more detailed appraisal (see **Plate 5.2** and **Figures 5.4-5.6** in **Appendix K**). The alternative alignments are:

- Alternative Alignment 2a (the Potential Alignment): follows the southern section of the refined route (B1.1) that diverts around the north-western side of the settlement of Padanaram. Alternative Alignment 2a crosses the dismantled railway track south of Mains of Ballindarg and then crosses a minor B public road and the A926 public road to the west of Padanaram. Alternative Alignment 2a then continues in a northeasterly direction past properties at Woodhead of Ballinshoe and the edge of some broadleaved woodland at Mossie of Ballinshoe and traversing over more sloping terrain to the east of Forestmuir Wood and Woodside LNCS.
- Alternative Alignment 2b: follows the northern section of the refined route (B1.1) in a north-northeasterly direction crossing the dismantled railway track near Mains of Ballindarg and then the A926 public road. Alternative Alignment 2b then continues in a northeasterly direction with Balinshoe Castle located to the west of the alignment and continuing through a small linear area of LEPO woodland (which has been felled) at Haughs of Ballinshoe, a minor public road and the Black Burn to the east of Forestmuir Wood and Woodside LNCS.



Plate 5.2 - Location 2: Padanaram Alternative Alignments

Alternative Alignment 2a (the Potential Alignment) would require more angle towers to navigate the constraints, resulting in the need for some high towers with the potential for greater landscape and visual impact. Alternative Alignment 2a would also oversail a planned solar array development near Woodside of Ballinshoe; although tower micro-siting would mitigate any potential impact on energy generation.

Alternative Alignment 2b intersects with small groups of properties west and north of the more concentrated properties in the village of Padanaram. Alternative Alignment 2b would maintain low angles throughout which minimises the need for larger towers. Whilst positioned approximately 1.2 km west of the properties at Padanaram, Alternative Alignment 2b is located in close proximity to the Scheduled Monuments Ballinshoe Castle and Fletcherfield Enclosure. Although the alignment would not directly interact with these designated assets, it could compromise their setting. Additionally, this alignment passes nearer to an area where there are a number of small watercourses which are located within the floodplain area of the Black Burn.

Alternative Alignment 2a was identified as being less technically constrained as it has less interaction with high-pressure gas pipelines and avoids the floodplain associated with the Black Burn. Alternative Alignment 2a is also located further from the Scheduled Monument Ballinshoe Castle and Fletcherfield Enclosure and so has less potential to compromise the setting of the Scheduled Monuments than Alternative Alignment 2b.

Further information on the findings of the detailed appraisal of these alternative alignments leading to the selection of the Potential Alignment are presented in **Section 6.3**.

Location 3: Justinhaugh

The crossing of the River South Esk constrained the development of the alignment in this location as it was particularly sensitive in regard to protected species and salmon spawning habitats. A pinch point of residential properties to navigate around Justinhaugh and Craigeassie further constrained a feasible path for an OHL alignment, with undulating topography contributing to some constructability and visual constraints. Two alternative alignments were developed in this area to manage these constraints and were taken forward for more detailed appraisal (see **Plate 5.3** and **Figures 5.7 to 5.9** in **Appendix K**). The alternative alignments are:

- Alternative Alignment 3a (the Potential Alignment): follows a northern trajectory from the north of King’s Seat towards Foreside of Cairn, crossing the River South Esk to the east of Inshewan and passing across the northwest of Craigeassie.
- Alternative Alignment 3b: from the north of the King’s Seat, the alignment heads northeast through the pinch point of residential properties between Wolflaw and Battledykes, crossing complex, undulating landform to the northwest as it crosses the River South Esk northeast of Craigeassie

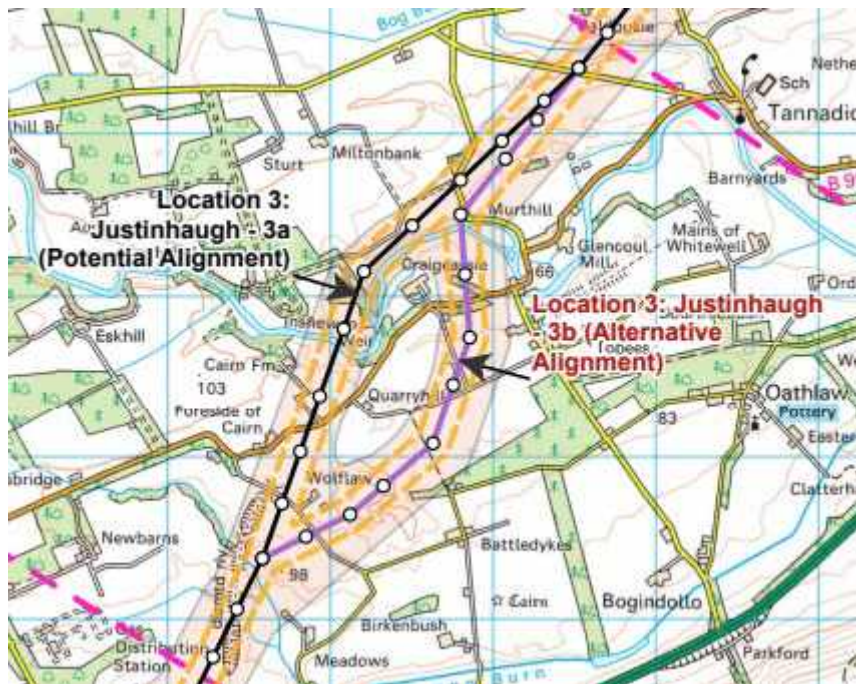


Plate 5.3 - Location 3: Justinhaugh Alternative Alignments

Alternative Alignment 3a (the Potential Alignment) would require fewer angle towers to navigate the residential properties at Wolflaw and Foreside of Cairn. The alignment passes in front of residential properties at Foreside of Cairn, as such towers would be prominent from these properties, although some garden and roadside vegetation is likely to obscure views towards an OHL. Alternative Alignment 3a crosses the River South Esk to the east of Inshewan, following the meander of the river. This alignment would require more towers to be sited closer to the banks of the river and it parallels the meander here as it passes northwest of Craigeassie.

As Alternative Alignment 3b crosses undulating landforms, passing the pinch point of property constraints between Craigeassie and Justinhaugh, it would likely be prominent in the skyline crossing these local hillocks. There is a steep embankment south of the B957 where an OHL would have to cross the level change and drop down as it approaches the river. This alignment would require several angle towers to weave north and northwest through the property buffer zones at Wolflaw, Justinhaugh and south of Murthill before crossing the River South Esk.

Alternative Alignment 3a (the Potential Alignment) would be more technically feasible, with fewer angle towers required, and avoids higher, more visually prominent areas.

Further information on the findings of the detailed environmental, technical and cost appraisal of these alternative alignments informing the selection of the Potential Alignment are presented in **Section 6.4**.

Location 4: Careston

The development of an alignment in the area from Baldoukie to Nether Belliehill encountered a variety of constraints that have restricted the design of a single optimal alignment for the OHL in this section. Consultation responses regarding the proximity of the southern edge of the route (B1.1) boundary encouraged alternative alignments to be explored further north than the proposed route section, which would provide greater separation of the OHL from community areas. Alongside cultural heritage constraints presented by scheduled monuments at Wayne Castle, Careston Castle and Windsor Cairn, key issues which constrained identification of a single feasible alignment included agricultural and agri-tech operations, residential properties (especially those at the Careston settlement), wet woodland, semi-natural woodland and commercial forestry areas, complex hydrology and an LNCS. Five alternative alignments were developed in this area to manage these constraints and were taken forward for more detailed appraisal (see **Plate 5.4** and **Figures 5.10 to 5.12** in **Appendix K**). The alternative alignments are briefly described below.

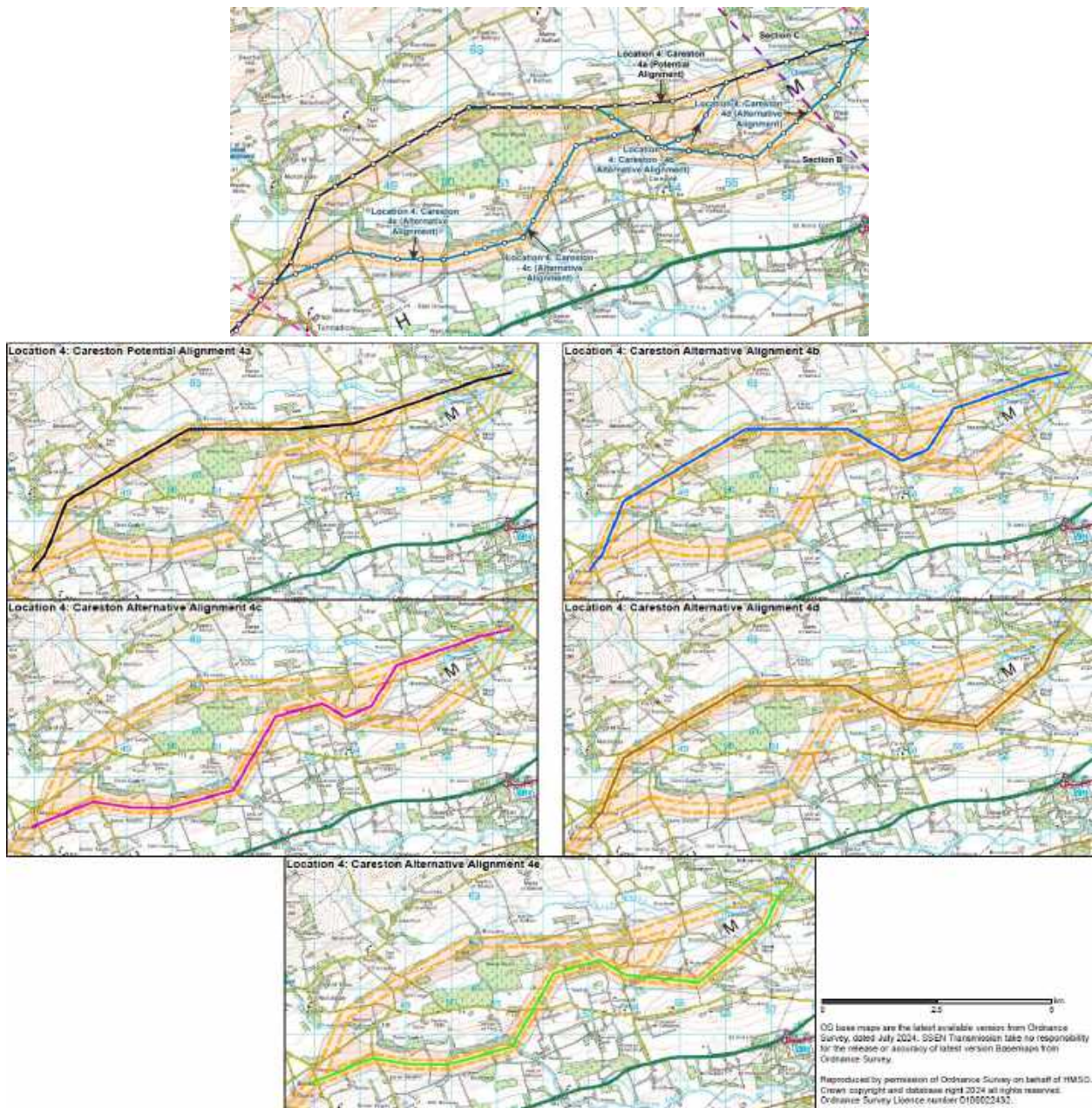


Plate 5.4 - Location 4: Careston Alternative Alignments

Alternative Alignment 4a starts with a northeasterly course from Baldoukie. This alignment passes over the northern side of Wellford as it crosses the Noran Water, avoiding the forest blocks to the south near Fern Lodge, passing north across Boggie Wood, which would likely require a corner of the LEPO woodland to be clipped to form an operational corridor for the OHL. North of the alignment, there are two PWS or aquifers providing regional/local resources in close proximity to this alignment. This alignment would avoid interaction with a publicly funded agri-tech business to the south as well as the expanses of commercial forestry including plantation woodland at Roughmount Wood and Weiris Wood where there is evidence of healthy bog habitat through parts of the wooded area. The alignment follows a straight path avoiding North Wood to the south, through Lochty Wood, with the OHL continuing straight across and to the north of Findowrie and Hoodston. Lochty Wood would constrain this alignment as it is likely to have biodiversity value and is identified as containing habitats which have potential to be GWDTE and would require some felling for an operational corridor for the OHL.

Alternative Alignment 4b follows the same path from Baldoukie to North Wood as Alternative Alignment 4a. Once the alignment intersects North Wood, the OHL routes in a southerly direction, passing west of Findowrie and around the properties at Hoodston and Mill of Cruick entering into Section C west of Little Brechin Wood. However, the OHL in Alternative Alignment 4b requires larger angle towers to navigate property constraints at Montboy and Findowrie in comparison to Alternative

Alignment 4a. This alignment also brings the OHL close to a high-pressure gas pipeline. Further along the alignment, north of Hoodston and Langhaugh, the alignment also intersects potential floodplains and a complex area of small watercourses.

Alternative Alignment 4c was identified to the south of the route boundary, following a more south-southeasterly course than Alternative Alignments 4a and 4b, running parallel with the Noran Water from north of Noranbank to northwest of Waterston Ford. It crosses the Noran Water in a northeasterly direction between Law of Windsor and Hillhead of Careston and over relatively steep ground associated with the pronounced ridge to the north of the watercourse. The alignment intersects areas of LEPO on either side of the Noran Water and to the northeast of Noranbank, which would require felling for an operational corridor for the OHL. Although the alignment would pass near to Scheduled Monuments at Vayne Castle and Vayne Standing Stone, the topography and woodland would likely screen most views of the OHL, although it would likely still be visible from Law of Windsor Cairn. After crossing the Noran Water, the alignment would cut across a section of the southwestern corner of land managed for an agri-tech business at Hilton of Fern; a development which has been publicly funded by the Angus Tay Cities Deal. Once the alignment intersects North Wood, it follows the same path as described above for Alternative Alignment 4b.

Alternative Alignment 4d initially follows the more northern path as for Alternative Alignments 4a and 4b. As the alignment passes through North Wood, it follows a southerly trajectory to the south of a group of residential properties at Montboy and Findowrie before continuing north of West Muir, to join the beginning of Route Section C near West Muir. In addition to the high likelihood of towers being positioned on prime agricultural land, the alignment crosses multiple lower voltage distribution OHLs which would need undergrounding in order to construct the 400 kV OHL.

Alternative Alignment 4e follows the initial southerly path common with Alternative Alignment 4c, before following the same path as Alternative Alignment 4d once it intersects North Wood.

Alternative Alignment 4a was identified as being a technical preference, being the straightest and shortest route, however Alternative Alignment 4d was identified as being slightly less constrained with respect to environmental criteria.

Further information on the findings of the detailed environmental, technical and cost appraisal of these alternative alignments informing the selection of the Potential Alignment are presented in **Section 6.5**.

5.2.3 Section C

There are no alternative alignments in Section C as the Potential Alignment is considered to be the least constrained option overall from an environmental, technical and cost perspective in all areas.

Locations where alignments were considered to avoid localised land use, environmental and technical constraints during the design development process, but which were not taken forward for further detailed appraisal are discussed further in **Appendix J: Design Development Locations**.

5.2.4 Section D

There are no alternative alignments in Section D as the Potential Alignment is considered to be the least constrained option overall from an environmental, technical and cost perspective in all areas.

Locations where alignments were considered to avoid localised land use, environmental and technical constraints during the design development process, but which were not taken forward for further detailed appraisal are discussed further in **Appendix J: Design Development Locations**.

5.2.5 Section E

Location 5: Durris

The number and density of residential properties at the settlement of Drumoak (including Drumoak Primary School) constrained the development of alternative alignments in this area. Following review of the feedback received at the New Routes consultation (in March 2024), as well as ongoing landowner and community engagement, two alternative alignments were developed in this area to consider consultation feedback alongside environmental and technical constraints and were taken forward for more detailed appraisal. The first alternative was identified through the Proposed Route E2, E1 and F1.3, and a second alternative broadly following the line of the existing 275 kV Kintore to Fetteresso OHL through Durris Forest as a new

option E4, in which joins Section F with new option F3 which is primarily located within the previously consulted F2 route (see **Plate 5.5** and **Figures 5.13 to 5.15** in **Appendix K**). The alternative alignments are:

- Alternative Alignment 5a (the Potential Alignment): starts from the common point for both alternative alignments just north of the proposed Hurlie 400 kV substation. The alignment then follows the existing 275 kV OHL in a northerly course passing through the northeast edge of Fetteresso Forest and then through Durris Forest. The alignment then passes to the west of the settlement of Kirkton of Durris, crosses over the River Dee near Wester Durris and then proceeds north to join the Potential Alignment at Coldstream Plantation northwest of Drumoak in Section F.
- Alternative Alignment 5b: starts from the common point for both alternative alignments just north of the proposed Hurlie substation. As it passes Mergie, it heads in a northeasterly direction towards Rumbleyond, before heading in a northern direction to pass along the western slopes of Meikle Carewe Hill. The alignment follows a northerly path for approximately 5 km across undulating upland grazing and agricultural land before crossing the River Dee near Craiglug. It then weaves through residential properties in a northwesterly direction after crossing the Cairnie Burn towards Drumoak, where it passes the east and northern sides of the village, south of Drum Castle GDL in Section F.

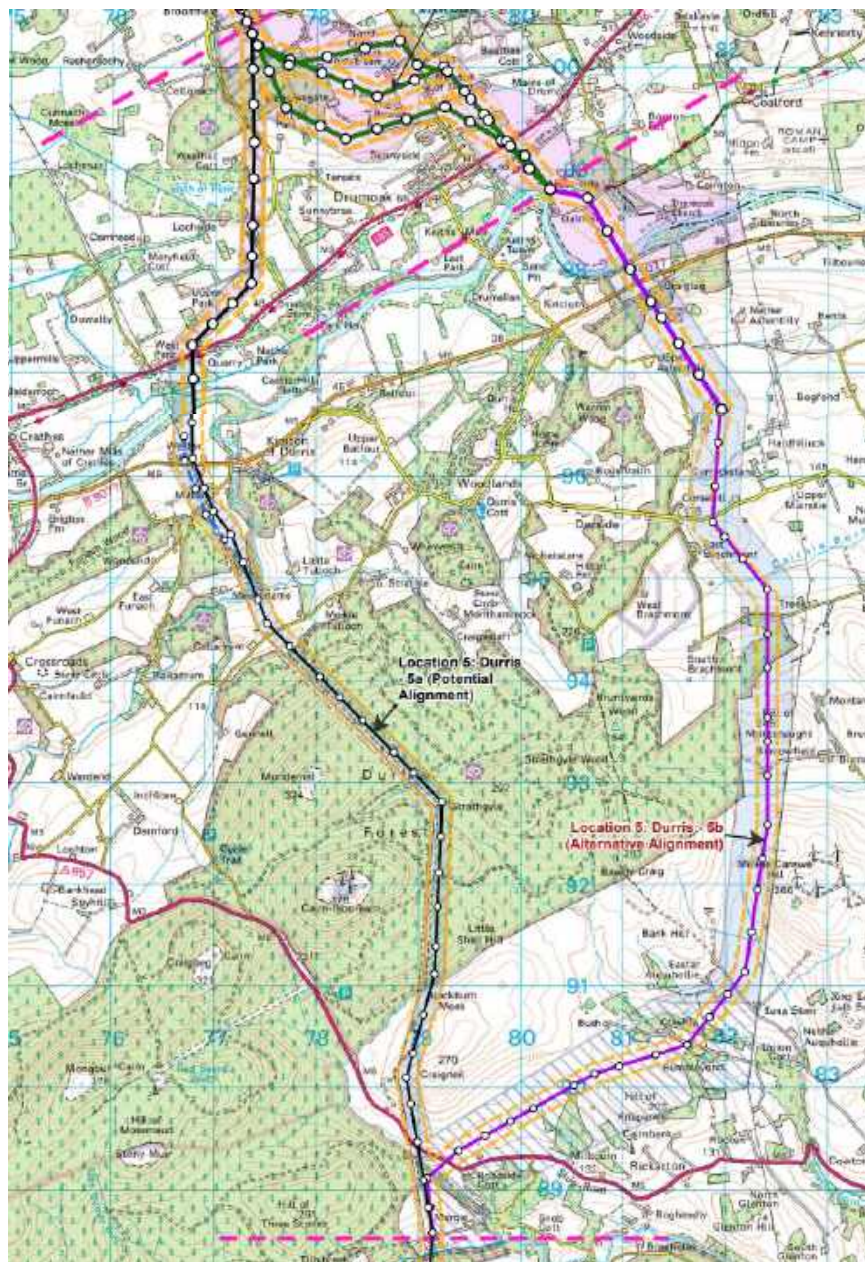


Plate 5.5 - Location 5: Durris Alternative Alignments

In the path of Alternative Alignment 5a (the Potential Alignment), around properties located to the west of Kirkton of Durris; Wester Durris and Milton, the OHL towers would be placed within the path of the existing OHL which would be required to be diverted westward. This places towers potentially within 170 m of the properties. There is opportunity for this alignment (including the diverted line) to be microsited further westward to mitigate the proximity to properties. Outward views from the settlement at Kirkton of Durris are likely to be relatively screened due to surrounding mixed woodland. A crossing of the River Dee is required at a point where the flood plain is relatively wide (480 m). The alignment would cross an elevated ridge to the north of its crossing of the River Dee, resulting in the OHL likely being prominent along the skyline in some views from the southern side of the river. The alignment would then pass through a scenic, characterful and small-scale area of landscape to the east of Loch of Park (a designated SSSI), with an edge of a broadleaved woodland (also partly listed as LEPO on the AWI), likely requiring felling to form an operational corridor for the OHL.

As Alternative Alignment 5b passes along the slopes of Meikle Carewe Hill, the OHL would be located on an elevated area of landform, causing visual constraint. There is a complexity of watercourses to navigate in the area on the west side of the hill, with boggy areas constraining tower siting. The alignment spans the River Dee at a location with a narrower floodplain than Alignment Alternative 5a. However, due to residential property constraints on the north side of the river, towers are likely to be required near a steep and eroded slope of the riverbank alongside the bend near Moss-side. As the alignment heads towards and around the village of Drumoak, severe angles and large towers would be required in proximity to a high density of residential dwellings in order to navigate the difficult pinch point of properties. The OHL would also be visible from the Category A listed building at Drum Castle where it crosses the Dee Valley. The alignment joins the Potential Alignment at the northern edge of Coldstream Plantation in Section F.

Alternative Alignment 5a takes the OHL further from the high density of properties in and close to the village of Drumoak than Alternative Alignment 5b and is the technical preference.

Further information on the findings of the detailed environmental, technical and cost appraisal of these alternative alignments informing the selection of the Potential Alignment are presented in **Section 6.6**.

5.2.6 Section F

Location 6: North of Drumoak

The alignment section north of Drumoak is highly constrained by proximity to residential properties. A longer alternative alignment was developed to the west (see Alternative Alignments developed for Location 5: Durris in **Section 5.2.5** above) however, additional sub-options were also reviewed to specifically manage and attempt to mitigate the residential property constraints (including Drumoak Primary School) at and around the village of Drumoak associated with Alternative Alignment 5b. Three alternative alignments were developed and taken forward for more detailed appraisal (see **Plate 5.6** and **Figures 5.16 to 5.18** in **Appendix K**). The alternative alignments are:

- Alternative Alignment 6a (the Potential Alignment): is located to the north of Drumoak and follows a northerly direction passing between properties northeast of the Bowery, crossing the eastern extent of Coldstream Plantation to the north of Barrowgate House before joining the rest of the Potential Alignment to the north of Coldstream Plantation.
- Alternative Alignment 6b: passes directly north of Drumoak (closer to the settlement edge than Alternative Alignment 6a) over relatively steeply sloping land, between the properties east of Sunnyside and southeast of the Bowery, then following north from Barrowgate through to Coldstream Plantation.
- Alternative Alignment 6c is located north of Alternative Alignment 6a and would follow the southern edge of the Drum Castle GDL boundary before turning westwards, passing north of the property at South Coldstream, crossing the northeastern edge of Coldstream Plantation to rejoin the Potential Alignment.

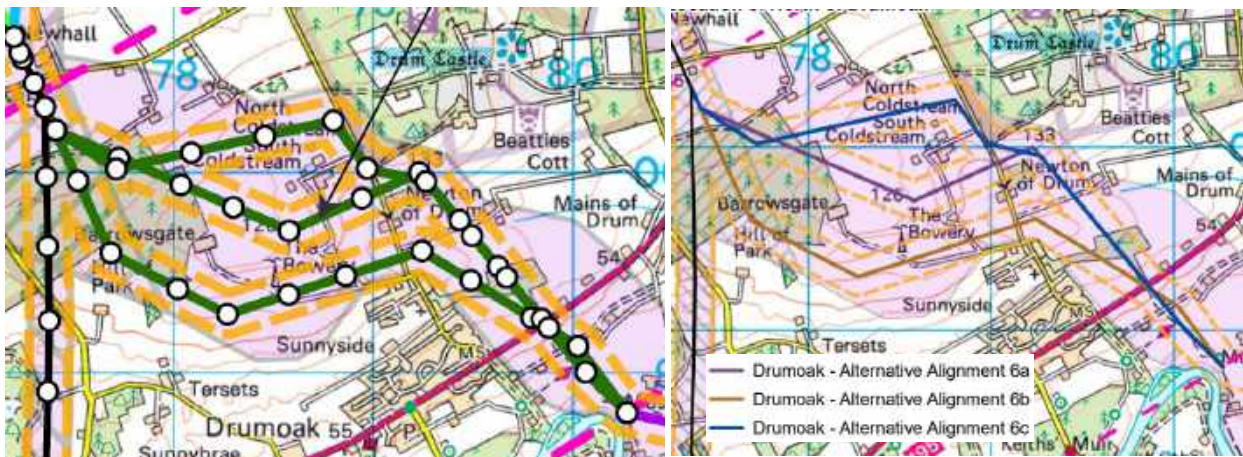


Plate 5.6 - Location 6: North of Drumoak Alternative Alignments

It is noted that the alternative alignments developed at Location 6: North of Drumoak (6a, 6b and 6c) are only relevant to the Alternative Alignment 5b which covers Section E and part of Section F of the Proposed Route (see above). Whilst one option has been identified as the Potential Alignment for this location, it is only applicable to the path of Alternative Alignment 5b. Alternative Alignment 6a would only be taken forward as part of the Potential Alignment should Alternative Alignment 5b proceed as part of the Potential Alignment instead of Alternative Alignment 5a.

Alternative Alignment 6a (the Potential Alignment) introduces a number of challenging angles for changes of direction of an OHL, with towers likely to be visible in the landscape from parts of Drumoak and intruding into views from Drum Castle. Further along the line as the OHL crosses the gas pipeline into Coldstream Plantation, approximately 600 m of felling of commercial forestry would be required for an operational corridor.

In order to cross a high-pressure gas pipeline with a technically feasible angle, Alternative Alignment 6b would be located within 170 m of residential properties around Drumoak, and within approximately 250 m of Drumoak Primary School. However, as the alignment sits in a valley, the topography could provide some screening from visual receptors. Further northwest, approximately 500 m of felling would be required through Coldstream Plantation to create an operational corridor for the OHL.

Although it is unlikely towers would be sited within 170 m of residential properties in Alternative Alignment 6c, it is possible that conductors may be within this buffer zone. This alignment and its associated LoD cuts across the southwest corner of the Drum Castle GDL and has potential to require felling of broadleaved woodland. Crossing higher ground at the edge of the GDL, the OHL would likely be visible in key views of, and from, the Castle. As the alignment intersects Coldstream Plantation, approximately 450 m of felling would be required for an operational corridor for the OHL.

Alternative Alignment 6a takes the alignment furthest from the town of Drumoak and is not directly constrained by the boundary of Drum House GDL.

Further details of the findings of this appraisal and the selection of the Potential Alignment are presented in **Section 6.7**.

Location 7: Schoolhill

The area to the north and northeast of Schoolhill also presented challenges aligning an OHL that avoids close proximity to residential properties. To address these constraints, three alternative alignments were developed and taken forward for more detailed appraisal (see **Plate 5.7** and **Figures 5.19 to 5.21** in **Appendix K**). The alternative alignments are:

- Alternative Alignment 7a (the Potential Alignment): continues from the section of the Potential Alignment to the immediate south, following an almost directly northward course towards Quiddies Mill Croft and to the west of the settlement of Schoolhill.
- Alternative Alignment 7b lies to the west of Alternative Alignment 7a; located between Candyglirach LNCS and properties at Lower Candyglirach and Schoolhill, before heading northeast to the north of Westerton.
- Alternative Alignment 7c lies to the east of the Potential Alignment between Quartains Moss and properties at Murphiehowe and Schoolhill, crossing the Gormack Burn, before turning northwest to the northeast of properties at West Cullery.



Plate 5.7 - Location 7: Schoolhill Alternative Alignments

While Alternative Alignment 7a (the Potential Alignment) traverses a less constrained area when crossing the floodplain of the Gormack Burn than the other alternative alignments, the required angle towers would weave through the residential dwellings around Quiddies Mill and Milton of Cullerlie and may bring OHL conductors in close proximity to properties.

Alternative Alignment 7b crosses a complex area of small watercourses and a larger part of the floodplain area associated with the Gormack Burn, however, it maintains a distance of at least 170 m from residential properties. The OHL along this alignment would be closer to the Scheduled Monuments at Tillyorn Moated Homestead and East Finnercy Cairn, with large scale towers likely to dominate their setting. A small area of Candygirach LNCS near Greendams may also be intersected by this alignment, with felling required for an operational corridor for the OHL.

Alternative Alignment 7c would also take the OHL further from residential properties than Alternative Alignment 7a but intersects two areas of commercial forestry; west of Forest of Drum and north of Schoolhill. Tree felling for an operational corridor through these commercial forestry areas would be required for the OHL. Based on the required tower siting to avoid other constraints, Alternative Alignment 7c would also be unable to completely span the flood risk areas and watercourses associated with the Gormack Burn and its tributaries.

Alternative Alignment 7a is sited slightly closer to residential properties than the other alternatives, however, it is less constrained in relation to potential interaction with cultural heritage and hydrology constraints.

Further information on the findings of the detailed environmental, technical and cost appraisal of these alternative alignments informing the selection of the Potential Alignment are presented in **Section 6.8**.

Location 8: Echt

The area northeast of Echt is constrained by residential properties located in and around the village of Echt and east towards South Monecht. A new development of 25 dwellings on the northeast edge of Echt currently has planning permission, which further constrains this area and narrows the less constrained path available to develop an OHL alignment. Further south, blocks of LEPO woodland constrain the area between Milton of Finnercy and the B9119 public road, and undulating landforms north of the road pose landscape and visual constraints for tower siting. Dunecht House GDL located to the northeast of Echt also constrains alignments between the village and the southwestern side of the GDL designation. To address these constraints, three alternative alignments were developed and taken forward for more detailed appraisal (see **Plate 5.8** and **Figures 5.22 to 5.24** in **Appendix K**). The alternative alignments are:

- Alternative Alignment 8a (the Potential Alignment): the central of the three alternatives follows a course north of Landerberry through North Kirkton Wood to join Alternative Alignment 8b north of South Monecht.
- Alternative Alignment 8b: follows a westerly direction around the northern side of Milton of Finnercy and Landerberry, before continuing in a straight, north-westerly path past the eastern edge of the village of Echt towards Upper Mains.
- Alternative Alignment 8c: heads in a more northerly direction from Little Finnercy than the other two alignment alternatives. It passes through Braigiewell Wood and Stellars Moss before diverting on a north-westerly course after crossing the B9119 road.



Plate 5.8 - Location 8: Eicht Alternative Alignments

Alternative Alignment 8a (the Potential Alignment) would pass within the property buffer of two residential properties, as well as intersecting a large section of LEPO woodland that would require felling works to form a wayleave for the OHL. This alignment would also have a higher number of angle towers, with the angles being harsher in nature than the other alternative alignments, requiring larger towers, but takes the alignment further from the settlement and proposed residential

The OHL in Alternative Alignment 8b contains fewer angle structures and follows the shortest path of all three alignment alternatives, passing along generally lower lying, flat landform. However, it would interact with a proposed residential development for 25 dwellings on the eastern edge of Eicht, as well as being close and prominent in views from residential properties at the eastern and northern sides of Eicht.

Alternative Alignment 8c would cross a locally prominent undulation in the landform near Meanecht and Monecht, placing towers at a high point in the landscape. Although the alignment is located further from the settlement at Eicht than Alignment Alternative 8b, the towers would appear elevated and out of scale with the landform of the local hill area for some visual receptors from Eicht and when viewed from along the B9119 near South Monecht.

Alternative Alignment 8a passes close to two residential properties but is considered to take the alignment further from clusters of properties and further from the village of Eicht.

Further information on the findings of the detailed environmental, technical and cost appraisal of these alternative alignments informing the selection of the Potential Alignment are presented in **Section 6.9**.

6. APPRAISAL OF ALTERNATIVE ALIGNMENTS

6.1 Introduction

This Chapter provides a summary of the findings of the comparative appraisal undertaken at the eight locations (in Sections A, B, E and F of the Proposed Route) where alternative alignments were identified, as described in **Chapter 5**. In each location the selection of the Potential Alignment has been informed using the results of the comparative appraisals which have followed the methodology set out in **Chapter 3**. The sub-sections of this chapter set out a tabulated summary of the appraisal (RAG) findings for the environmental, technical and cost criteria considered with reference to SSEN Transmission's Routeing Guidance. A summary of the main findings of the appraisal comparing the alternative alignments considered in each case is then presented below each table.

This Chapter should be read in conjunction with **Appendices B to I** which provide the detailed evaluation and findings of the appraisals of the alternative alignments presented in tables against a series of environmental criteria. The technical and cost appraisals are presented in the text below.

6.2 Section A, Location 1: Appraisal of Alternative Alignments at Hayston Hill

This section provides a summary of the key considerations and findings of the two alternative alignments appraised at Location 1: Hayston Hill (See **Plate 5.1**) from an environmental, technical and cost perspective. The findings of the appraisals have informed the selection of the Potential Alignment in this location (see **Section 5.2.1**).

6.2.1 Environmental Appraisal

Figures 5.1 to 5.3 in Appendix K illustrate the environmental constraints for the two alternative alignments which have been appraised at Location 1: Hayston Hill. The figures are presented as: Ecology and Cultural Heritage constraints; Hydrology Constraints; and Land Use and Land Capability Constraints. **Appendix B** presents the completed environmental appraisal tables.

Table 6.1 summarises the RAG rating findings from the detailed environmental appraisal in **Appendix B**. A summary of the environmental constraints and/or differences in RAG rating of environmental criteria that have influenced the identification of the Potential Alignment is explained in more detail below **Table 6.1**.

Table 6.1 – Summary of the Environmental Appraisal for Alternative Alignments at Location 1: Hayston Hill²⁵

Topic	Criteria	Sub-Criteria	Alternative 1a (Potential)	Alternative 1b	
Natural Heritage	Designations	International, European or National	A	A	
	Habitats	Annex 1	G	A	
		Biodiversity	G	G	
		Ornithology	Designations	A	A
	Hydrology, Hydrogeology	Aquifer providing regional / local resources	Schedule 1 Species	A	A
			BoCC	A	A
				A	G
Cultural Heritage	Designated Heritage Assets	WHS, SMs, GDLs	A	R	
	Non-designated Heritage Assets	Listed Buildings, NIDLs, Conservation Areas	G	G	
People	Proximity to Dwellings	Residential Properties	A	A	
Landscape and Visual	Landscape Character	Landscape character in published character assessments	A	A	
			A	A	
	Visual Amenity	Properties, transport and recreational routes, vantage points	A	A	
Land Use	Agriculture	Agricultural Land Capability	A	A	
	Forestry	Commercial Forestry	G	A	

²⁵ If a topic area or criteria was deemed not to be a significant constraint or where constraints would not be compromised by the alignment and there is no material difference between the alternative alignments, they have been scoped out from the appraisal.

Although the RAG ratings are Amber for Alternative Alignment 1a (the Potential Alignment) and Alternative Alignment 1b in relation to Natural Heritage Designations, the commercial forestry designated as LEPO near Upper Hayston within Alternative Alignment 1b is of lower ecological value than the broadleaved LEPO woodland which extends into Alternative Alignment 1a. Tree felling to form a clearance corridor would likely be required in Alternative Alignment 1b whereas felling might be avoided in Alternative Alignment 1a through micro-siting of the OHL. Felling of commercial forestry may offer some potential to deliver enhancements for biodiversity through the introduction of more varied habitats along an alignment through this area but on balance it would be preferable to avoid woodland loss. Alternative Alignment 1b has greater potential for Annex 1 habitats as it comprises extensive areas of upland heathland in comparison with Alternative Alignment 1a where limited potential of these habitats exists.

Alternative Alignment 1a has greater potential, without mitigation, to compromise the quality or quantity of surface or groundwaters of regional importance as there is a groundwater spring which is likely to form an abstraction source within the alignment. However, it is considered that there is sufficient flexibility within the alignment LoD to locate OHL towers at sufficient distance to reduce the likelihood of potentially impacting the spring or its recharge source, in comparison to Alternative Alignment 1b.

Alternative Alignment 1b is more constrained by the potential for significant adverse impacts on the settings of designated cultural heritage sites due to the proximity to the Scheduled Monuments at Arniefoul Cairn and at Nether Arniefoul Unenclosed Settlement, located approximately 400 m west and 200 m southeast of the edge of the alignment respectively. There are long views gained from the burial cairn out in all directions and this is a key aspect of its setting. Alternative Alignment 1b would interrupt these views, affecting views in an arc from the northwest to the southwest, and would interrupt key views to Arniefoul Cairn from a contemporary burial cairn on Carlunie Hill to the southwest. As a result, an OHL following Alternative Alignment 1b would compromise the setting of the Scheduled Monuments.

Although the alignments are considered to be similarly constrained for landscape character, Alternative Alignment 1a avoids the highest point of Hayston Hill, with the landform of the hill to the east providing opportunity to back-cloth the lower parts of the OHL from some viewpoints. The alignment generally follows the grain of the landscape reducing the extent of visual constraint compared with Alternative Alignment 1b. Similarly for the visual amenity assessment, the OHL's prominence along the skyline in Alternative Alignment 1b would be increased in views from surrounding visual receptors. However, the slopes of Hayston Hill to the east of Alternative Alignment 1a may back-cloth the lower parts of the OHL, reducing the visual prominence of some of the infrastructure.

Alternative Alignment 1b is also more likely to compromise the commercial returns of forestry operations compared to Alternative Alignment 1a as the alignment passes along the edge of several areas of commercial forestry southwest of Hayston Hill and on the hill's northern slopes. At these points, tree clearance for an operational corridor within these commercial forestry areas have some potential to interact with woodland management and may compromise commercial returns from these enterprises as some felling and/or re-design of planting may be required to accommodate the OHL.

No material differences in constraints between the alternative alignments for the other environmental criteria presented in the table above have been identified. Overall Alternative Alignment 1a is considered to be the less constrained option in relation to environmental criteria.

6.2.2 Technical Appraisal

Table 6.2 presents the RAG rating findings from the detailed technical appraisal of the alternative alignments. A summary of the technical constraints and/or differences in RAG rating of technical criteria that have influenced the identification of the Potential Alignment is explained in more detail below **Table 6.2**.

Table 6.2 – Summary of the Technical Appraisal for Alternative Alignments at Location 1: Hayston Hill

Topic	Criteria	Alternative 1a (Potential)	Alternative 1b
Infrastructure crossings	Major crossings (132 kV, 275 kV, Rail, 200+m wide river, navigable canal, gas or hydro pipeline)	G	G
	Road crossings	G	G
Environmental Design	Elevation	G	R
	Atmospheric Pollution	G	G
	Contaminated Land	G	G

Topic	Criteria	Alternative 1a (Potential)	Alternative 1b
Ground Conditions	Flooding	G	G
	Terrain	G	A
	Peat	G	G
Construction/ Maintenance	Access	G	G
	Angle towers	G	G
Proximity	Clearance distance	G	G
	Windfarms	G	G
	Communication masts	G	G
	Urban environments	G	G
	Metallic pipelines	G	G

There is a marginal preference for Alternative Alignment 1a (the Potential Alignment) over Alternative Alignment 1b, with both having some differing technical constraints. Alternative Alignment 1b has a higher number of towers situated above 200 m Above Ordnance Datum (AOD) which, whilst achievable, is less optimal than situating towers on the lower ground elevations of Alternative Alignment 1a, where they are easier to construct and maintain. There is a quarry in the vicinity of Alternative Alignment 1b which would require ground investigation to confirm if there is any contaminated land, although based on desktop studies and due to the distance from the alignment this is considered a low risk. The terrain for Alternative Alignment 1b is considered to be a higher risk for OHL design and constructability in comparison to Alternative Alignment 1a due to the slopes encountered and more earthworks therefore being required to both access the site and then to create the construction compound for the tower.

Alternative Alignment 1b is likely to require more cut and fill for construction, as well as more severe side slopes for tower placement. However, this alignment does reduce the number of towers and is in proximity to fewer properties in comparison to Alternative Alignment 1a. Alternative Alignment 1a generally follows flatter topography than Alternative Alignment 1b and is therefore likely to have less civil works required. However, Alternative Alignment 1a needs to span more watercourses and runs in proximity to more properties.

6.2.3 Cost Appraisal

Table 6.3 presents the RAG rating findings from the cost appraisal. A summary of the cost constraints and/or differences in RAG rating of cost criteria that have influenced the identification of the Potential Alignment is explained in more detail below **Table 6.3**.

Table 6.3 – Summary of the Cost Appraisal for Alternative Alignments at Location 1: Hayston Hill

Topic	Criteria	Alternative 1a (Potential)	Alternative 1b
Cost	Capital	G	G
	Operational	G	G

Alternative Alignment 1b represents the lowest cost alignment but is still within 5% of the estimated costs of Alternative Alignment 1a (the Potential Alignment). This is primarily due to the overall length of Alternative Alignment 1b being slightly shorter and requiring fewer towers. Unlike Alternative Alignment 1a, Alternative Alignment 1b does require felling of commercial forestry, compensatory planting, and local management for future operational corridors.

The topography of Alternative Alignment 1b is more challenging, as it involves OHL installation at a higher altitude (above 200 m AOD) than Alternative Alignment 1a. Additionally, there is a potential for Alternative Alignment 1b to incur marginally increased capital and operational costs due to its higher altitude position and the potential contamination risk associated with a former quarry at Hayston Hill.

6.2.4 Summary of Potential Alignment

The Potential Alignment (Alternative Alignment 1a) was chosen to be taken forward over Alternative Alignment 1b as although it is slightly higher in cost, it is considered marginally less complex and risky for constructability. The Potential Alignment (Alternative Alignment 1a) would have less potential to impact on the setting of cultural heritage assets, reduces the need for felling through ecologically valuable LEPO woodland and avoids interaction with Annex 1 habitat types and is preferred on environmental criteria to Alternative Alignment 1b.

6.3 Section B, Location 2: Appraisal of Alternative Alignments at Padanaram

This section provides a summary of the key considerations of two alternative alignments appraised at Location 2: Padanaram (see **Plate 5.2**) from an environmental, technical and cost perspective, and provides a summary which presents the findings of the comparative appraisal of each alignment. This has informed selection of an overall Potential Alignment in this location.

6.3.1 Environmental Appraisal

Figures 5.4 to 5.6 in Appendix K illustrate the environmental constraints for the two alternative alignments at Location 2: Padanaram. The figures are presented as: Ecology and Cultural Heritage constraints; Hydrology constraints; and Land Use and Land Capability Constraints. **Appendix C** presents the constraints and the findings of the environmental appraisal.

Table 6.4 summarises the RAG rating findings from the detailed environmental appraisal in **Appendix C**. A summary of the environmental constraints and/or differences in RAG rating of environmental criteria that have influenced the identification of the Potential Alignment is explained in more detail below **Table 6.4**.

Table 6.4 - Summary of the Environmental Appraisal for Alternative Alignments at Location 2: Padanaram

Topic	Criteria	Sub-Criteria	Alternative 2a (Potential)	Alternative 2b
Natural Heritage	Designations	International, European or National Designations	A	G
		Regional	A	A
	Habitats	Biodiversity	G	G
	Ornithology	Designations	A	A
	Geology, Hydrology, Hydrogeology	Surface Waters or Aquifer Providing Water for Agricultural or Industrial Use	A	A
Cultural Heritage	Designated Heritage Assets	WHS, SMs, GDLs	A	R
		SMR Entries	G	G
	Non-designated Heritage Assets	Listed Buildings, NIDLs, Conservation Areas	G	G
People	Proximity to Dwellings	Residential Properties	A	A
Landscape and Visual	Visual Amenity	Properties, transport and recreational routes, vantage points	A	A
Land Use	Agriculture	Agricultural Land Capability	A	A
	Forestry	Commercial Forestry	G	A

Both alternatives are constrained by their proximity to Woodside LNCS. Alternative Alignment 2a (the Potential Alignment) is more likely to be able to minimise felling in the LNCS as the canopy cover of the woodland is less extensive within the LoD in comparison to Alternative Alignment 2b. However, Alternative Alignment 2a intersects a small area of LEPO woodland near Mosside of Ballinshoe, which may be of relatively high ecological value. Felling may be required through this LEPO woodland to form an operational corridor up to approximately 100 m in length. Alternative Alignment 2b, in comparison, provides more opportunity for micrositing from LEPO woodland, with those areas potentially intersected likely to be of a lower ecological value.

Multiple watercourses would be spanned by both alignments, however, the wide floodplain associated with the Gairie Burn/Dean Water could not be avoided or fully spanned and there is therefore some potential for both alignments to compromise the quality and/or the quantity of surface or groundwaters of local importance.

Although both alignments avoid direct interaction with designated cultural heritage assets, Alternative Alignment 2b is more constrained due to the closer proximity and potential for adverse impacts on the settings of the Scheduled Monuments at Ballinshoe Castle and Fletcherfield Enclosure. Whilst Alternative Alignment 2a is located further from Ballinshoe Castle than Alternative Alignment 2b, it has some potential to compromise the setting of the Scheduled Monument. The OHL in Alternative Alignment 2b, in comparison, would introduce new towers within the immediate surroundings of Ballinshoe Castle, being large in scale and prominent in key views from and to the Castle, with the potential to adversely impact upon its setting.

Both alignments cross some small areas of woodland, however Alternative Alignment 2b crosses an area of coniferous plantation woodland near Haughs of Ballinshoe which appears to be managed commercially, in comparison to Alternative Alignment 2a that avoids interaction with areas of commercial forestry.

No material differences in constraints between the alternative alignments for the other environmental criteria presented in the table above have been identified. Overall Alternative Alignment 2a is considered to be the less constrained option in relation to environmental criteria.

6.3.2 Technical Appraisal

Table 6.5 summarises the RAG rating findings from the detailed technical appraisal. A summary of the technical constraints and/or differences in RAG rating of technical criteria that have influenced the identification of the Potential Alignment is explained in more detail below **Table 6.5**.

Table 6.5 - Summary of the Technical Appraisal for Alternative Alignments at Location 2: Padanaram

Topic	Criteria	Alternative 2a (Potential)	Alternative 2b
Infrastructure crossings	Major crossings (132 kV, 275 kV, Rail, 200+m wide river, navigable canal, gas or hydro pipeline)	G	G
	Road crossings	G	G
Environmental Design	Elevation	G	G
	Atmospheric Pollution	G	G
	Contaminated Land	G	G
	Flooding	A	A
Ground Conditions	Terrain	G	G
	Peat	A	A
Construction/ Maintenance	Access	G	G
	Angle towers	G	G
Proximity	Clearance distance	G	G
	Windfarms	G	G
	Communication masts	G	G
	Urban environments	G	G
	Metallic pipelines	A	A

Both alignment alternatives would have towers situated in a 200-year plus climate change fluvial floodplain, however Alternative Alignment 2a (Potential alignment) represents a slightly higher risk due to towers being situated in surface water floodplains which is not the case for Alternative Alignment 2b. Both alignments have an intermediate (amber) RAG scoring for peat based on desktop studies, with the potential for towers to be situated in peat. However, there is the opportunity for micro-siting these towers drawing on the findings of site peat probing surveys in order to avoid areas of deep peat. Peat probing surveys so far have not detailed any areas of deep peat that would constrain the tower placement.

Alternative Alignment 2b maintains low angles throughout but runs in parallel to an existing high pressure gas pipeline for a longer length in comparison to Alternative Alignment 2a. This is likely to require more mitigation due to OHLs having the potential to cause interference through induced voltage. However, Alternative Alignment 2a oversails a planned solar farm for one span and therefore larger angle towers would be required in this area to support changes in direction of the OHL to minimise this interface. Design mitigation would reduce any residual constraint from the OHL on the solar farm activities.

Overall Alternative Alignment 2a is considered to be the least constrained option in relation to technical criteria.

6.3.3 Cost Appraisal

Table 6.6 summarises the RAG rating findings from the detailed cost appraisal. A summary of the constraints and/or differences in RAG rating of cost criteria that have influenced the identification of the Potential Alignment is explained in more detail below **Table 6.6**.

Table 6.6 – Summary of the Cost Appraisal for Alternative Alignments at Location 2: Padanaram

Topic	Criteria	Alternative 2a (Potential)	Alternative 2b
Cost	Capital	G	G
	Operational	G	G

Alternative Alignment 2a (the Potential Alignment) represents the lowest cost alignment but is within 5% of the costs of Alternative Alignment 2b. This is primarily due to the overall length being shorter and requiring fewer towers, although this is partially offset by the need for some greater/heavier angle towers. Unlike Alternative Alignment 2b, Alternative Alignment 2a

requires some felling of broadleaved woodland, compensatory planting, and local management for future operational corridors.

Both alignments have comparable technical constraints which influences the operational cost, with Alternative Alignment 2b running parallel to an existing high-pressure gas pipeline, and Alternative Alignment 2a oversailing a planned solar farm.

6.3.4 Summary of Potential Alignment

The Potential Alignment (Alternative Alignment 2a) was chosen to be taken forward over Alternative Alignment 2b as it is slightly preferred on environmental criteria. It limits interaction with cultural heritage assets and the LNCS of Woodside. It does not interact with commercial forestry and offers slightly greater flexibility to place the OHL further from property constraints. Despite the similar technical RAG ratings, Alternative Alignment 2a represents the lower flood risk and reduces gas pipeline interaction. It also represents the marginally lower cost alignment.

6.4 Section B, Location 3: Appraisal of Alternative Alignment at Justinhaugh

This section provides a summary of the key considerations of the two alternative alignments appraised at Location 3: Justinhaugh (see **Plate 5.3**) from an environmental, technical and cost perspective, and provides a summary which presents the findings of the comparative appraisal. This has informed selection of an overall Potential Alignment in this location.

6.4.1 Environmental Appraisal

Figures 5.7 to 5.9 in Appendix K illustrate the environmental constraints for the two alternative alignments. The figures are presented as: Ecology and Cultural Heritage constraints; Hydrology constraints; and Land Use and Land Capability Constraints. **Appendix D** presents the key constraints and the completed environmental appraisal tables.

Table 6.7 summarises the RAG rating findings from the detailed environmental appraisals in **Appendix D**. A summary of the environmental constraints and/or differences in RAG rating of environmental criteria that have influenced the identification of the Potential Alignment is explained in more detail below **Table 6.7**.

Table 6.7 - Summary of the Environmental Appraisal of Alternative Alignments at Location 3: Justinhaugh

Topic	Criteria	Sub-Criteria	Alternative 3a (Potential)	Alternative 3b
Natural Heritage	Designations	International, European or National	A	A
	Habitats	Biodiversity	A	G
	Ornithology	Designations	A	A
	Geology, Hydrology, Hydrogeology	Aquifer providing regional / local resources	G	G
		Surface waters or aquifer providing water for agricultural or industrial use	G	A
Cultural Heritage	Designated Heritage Assets	WHS, SMs, GDLs	A	A
		SMR Entries	G	G
	Non-designated Heritage Assets	Listed Buildings, NIDLs, Conservation Areas	G	G
People	Proximity to Dwellings	Residential Properties	A	A
Landscape and Visual	Landscape Character	Landscape character in published character assessments	A	A
	Visual Amenity	Properties, transport and recreational routes, vantage points	A	A
Land Use	Agriculture	Prime agricultural land	A	A
	Forestry	Commercial Forestry	G	G
	Recreation	Fishing	G	G

Both alternative alignments cross the River South Esk SAC, however, in Alternative Alignment 3a (the Potential Alignment) tower sizing and micrositing are considered to provide greater potential to mitigate both the ecological risks to the river from construction, as well as minimising tree felling required of the riparian LEPO woodland along the river. However, Alternative Alignment 3a has a higher baseline biodiversity value than Alternative Alignment 3b and is therefore slightly more constrained by sensitive habitat.

Although Alternative Alignment 3b cannot avoid the 200-year future flood extent of the River South Esk, there is potential to relocate tower positions to site them in dry ‘islands’ outwith the floodplain. In comparison, OHL towers for Alternative Alignment 3a could be located to avoid the flood risk areas allowing for a clear span of the river and reducing the risk of impacting on surface and groundwaters during tower construction.

The Listed Buildings and Conservation Areas in the vicinity of Alternative Alignment 3b have generally localised settings and are unlikely to be compromised by an alignment through this path. In comparison, the southwestern edge of the alignment through Alternative Alignment 3a intersects a NIDL; Inshewan House. However, the alignment would not intrude into key views from the House to the southwest, nor would it affect the relationship between the House and other key elements of the designed landscape or intrude into any key views to Inshewan House from approach drives or from surrounding public roads. Alternative Alignment 3a is also located at a greater distance than Alternative Alignment 3b from the Scheduled Monument at Battledykes Roman Camp.

Despite the similar RAG ratings, Alternative Alignment 3b has slightly more flexibility within the LoD to site the alignment more than two times the tower height from residential properties. Through Alternative Alignment 3a, the properties at Wolfaw and the un-named property south of Cairnhill form a pinch point which constrain the LoD as their respective locations do not offer space to achieve distances of more than four times the nominal tower height. In comparison, the gap between the properties at Newmill Cottage and The Old Hotel in Alternative Alignment 3b is slightly larger, offering greater flexibility within the LoD to locate towers further from properties.

Both alternative alignments are located within the Broad Valley Lowlands – Tayside LCT, and cross a smaller scale, more intimate landscape formed by the floodplain of the River South Esk, which contributes to local landscape character, and constraints both alternative alignments. However, Alternative Alignment 3b, also crosses a localised area of elevated undulating landform to the northwest of Battledykes that would increase the prominence of the OHL in the wider landscape. Due to the small scale of this area of undulating landform, it is likely to be over scaled by the size of the OHL infrastructure, however, the slightly constrained nature of the area is likely to reduce the prominence of the OHL in the wider landscape. In comparison, Alternative Alignment 3a is constrained by the small scale and intimate character of the landscape surrounding the floodplain at Craigeassie, with the OHL likely to compromise the wooded character of the River South Esk. Micrositing and sizing of towers will reduce the felling required along the riverbanks and mitigate the constraint on the wooded character.

No material differences in constraints between the alternative alignments for the other environmental criteria presented in the table above have been identified. Overall Alternative Alignment 3a is considered to be the slightly less constrained option in relation to environmental criteria.

6.4.2 Technical Appraisal

Table 6.8 summarises the RAG rating findings from the detailed technical appraisal. A summary of the technical constraints and/or differences in RAG rating of technical criteria that have influenced the identification of the Potential Alignment is explained in more detail below **Table 6.8**.

Table 6.8 - Summary of the Technical Appraisal of Alternative Alignments at Location 3: Justinhaugh

Topic	Criteria	Alternative 3a (Potential)	Alternative 3b
Infrastructure crossings	Major crossings (132 kV, 275 kV, Rail, 200+m wide river, navigable canal, gas or hydro pipeline)	G	R
	Road crossings	A	G
Environmental Design	Elevation	G	G
	Atmospheric Pollution	G	G
	Contaminated Land	G	G
	Flooding	A	A
Ground Conditions	Terrain	R	A
	Peat	G	G
Construction/Maintenance	Access	G	G
	Angle towers	G	R
Proximity	Clearance distance	G	G
	Windfarms	G	G
	Communication masts	G	G
	Urban environments	G	G
	Metallic pipelines	G	G

Alternative Alignment 3b has a higher number of angle structures, which results in a technically more challenging alignment in terms of construction and operation, as well as a higher land take per tower. Alternative Alignment 3b also has more challenging crossing points with existing infrastructure and environmental aspects when considering the river and roads in the area, which would result in the requirement for special working methods to cross all of these constraints safely, as well as more temporary works procedures to complete the works such as scaffolding or other protective measures. Both alternative alignments cross and come in close proximity to the River South Esk, which also has an associated flood risk, adding complexity to the constructability. Towers in both options have been micro-sited where possible to avoid towers in floodplains. Alternative 3b has one tower situated within the floodplain and is therefore considered a slightly higher risk.

Alternative Alignment 3b crosses a National Gas high pressure pipeline twice and runs in parallel with this pipeline for a longer distance than Alternative Alignment 3a, which will likely increase the mitigation required to interference through induced voltage. Alternative Alignment 3a, in comparison, avoids both these pipeline crossings and due to its increased distance will have a lower impact on the pipeline network overall. There are some steep slopes associated with Alternative Alignment 3a which require further on-site review prior to constructability for micro-siting the towers and may increase the risk of constructability.

Overall Alternative Alignment 3a is considered to be the least constrained option in relation to technical criteria.

6.4.3 Cost Appraisal

Table 6.9 summarises the RAG rating findings from the detailed cost appraisal. A summary of the cost constraints and/or differences in RAG rating of cost criteria that have influenced the identification of the Potential Alignment is explained in more detail below **Table 6.9**.

Table 6.9 – Summary of the Cost Appraisal for Alternative Alignments at Location 3: Justinhaugh

Topic	Criteria	Alternative 3a (Potential)	Alternative 3b
Cost	Capital	G	G
	Operational	G	G

Both alternative alignments are comparable in length due to the topography, access to existing highway and natural crossings (e.g. River South Esk). Alternative Alignment 3b has additional towers due to navigating existing terrain.

Both alternative alignments are comparable in terms of their felling management, compensation planting and local management for future operational corridor requirements.

There is a possibility that Alternative Alignment 3b would incur marginally increased capital and operational costs compared with Alternative Alignment 3a due to crossing an existing high pressure pipeline which will require mitigation.

There is no clear preference in relation to the cost estimate for these alternative alignments.

6.4.4 Summary of Potential Alignment

Alternative Alignment 3a was taken forward as the Potential Alignment over Alternative Alignment 3b as it is technically less challenging due to Alternative Alignment 3b having additional angles and pipeline crossings. Alternative Alignment 3a is also marginally preferred on environmental criteria as it is able to avoid flood risk areas and minimise riparian tree felling, as well as taking the OHL further from the Scheduled Monument at Battledykes Roman Camp.

6.5 Section B, Location 4: Appraisal of Alternative Alignments at Careston

This section provides a summary of the key considerations of each alternative alignment appraised at Location 4: Careston (see **Plate 5.4**) from an environmental, technical and cost perspective, and provides a summary which presents the findings of the comparative appraisal. This has informed selection of an overall Potential Alignment in this location.

6.5.1 Environmental Appraisal

Figures 5.10 to 5.12 in Appendix K illustrate the environmental constraints for the five alternative alignments. The figures are presented as: Ecology and Cultural Heritage constraints; Hydrology constraints; and Land Use and Land Capability Constraints. Appendix E presents the key constraints and the completed environmental appraisal tables.

Table 6.10 summarises the RAG rating findings from the detailed environmental appraisals in Appendix E. A summary of the environmental constraints and/or differences in RAG rating of environmental criteria that have influenced the identification of the Potential Alignment is explained in more detail below Table 6.10.

Table 6.10 - Summary of the Environmental Appraisal of Alternative Alignments at Location 4: Careston

Topic	Criteria	Sub-Criteria	Alternative 4a (Potential)	Alternative 4b	Alternative 4c	Alternative 4d	Alternative 4e	
Natural Heritage	Designations	International, European or National	A	A	A	A	A	
		Regional	G	G	G	A	A	
		GWDTE	A	A	G	A	G	
		Biodiversity	G	G	G	G	G	
	Ornithology	Designations	A	A	A	A	A	
	Geology, Hydrology, Hydrogeology	Surface and Groundwater Drinking Water Protected Area (DWPA)		G	G	G	G	G
			Aquifer providing regional / local resources	A	A	G	A	G
Surface waters or aquifer providing water for agricultural or industrial use			A	A	A	A	A	
Cultural Heritage	Designated Heritage Assets	WHS, SMs, GDs	A	A	A	A	A	
		SMR Entries	G	G	G	G	G	
	Non-designated Heritage Assets	Listed Buildings, NIDLs, Conservation Areas	G	G	G	G	G	
People	Proximity to Dwellings	Residential Properties	A	A	A	A	A	
Landscape and Visual	Landscape Designations	National, regional or local	G	G	A	G	A	
		Landscape Character	Landscape character in published character assessments	A	A	R	A	R
	Visual Amenity	Properties, transport and recreational routes, vantage points	A	A	R	A	R	
Land Use	Agriculture	Prime agricultural land	A	A	A	A	A	
	Forestry	Commercial Forestry	A	A	A	A	A	
	Recreation	Paths and Trails	G	G	G	G	G	

Although Alternative Alignment 4a (the Potential Alignment), 4b and 4d intersect a strip of Ancient Woodland of semi-natural origin where they cross the Noran Water, it is considered that tower micro-siting would help to mitigate felling required for the OHL, preserving the riparian woodland in this location. Alternative Alignment 4a also intersects Lochty Wood, an area of mature broadleaved LEPO woodland with some wet woodland potential GWDTE, which would not be possible to avoid. It would be possible to avoid the potential GWDTE habitats at Lochty Wood with the flexibility within the LoD of Alternative Alignment 4d and Alternative Alignment 4b. Alternative Alignments 4c and 4e are unlikely to compromise the integrity of Annex I or potential GWDTE habitats. Alternative Alignments 4a, 4b and 4c intersect LEPO at Belliehill Wood. An operational corridor for the OHL would be required through these LEPO woodlands where they span the full width of the alignment.

Although Alternative Alignments 4d and 4e partially intersect Barrelwell Bog LNCS, surveys have identified that the habitats for which the LNCS is designated are not present where the OHL may oversail it. There is flexibility within the LoD for these options

to avoid placing towers or other infrastructure in the LNCS. Surveys have identified extents of lowland mixed deciduous woodland²⁶ at Belliehill Wood, which is an SBL priority habitat.

There are no private water supplies, groundwater features or aquifers providing local/regional resources in close proximity to Alternative Alignments 4c and 4e. In comparison there are two PWS in close proximity to Alternative Alignment 4a, and one in close proximity to Alternative Alignment 4b and 4d. These abstraction sources could potentially be impacted by installation of an OHL alignment through the areas of Alternative Alignments 4a, 4b and 4d, and may compromise the quality or quantity of surface or groundwater of regional importance. With implementation of appropriate mitigation during tower construction these constraints would be unlikely to give rise to significant impacts on hydrological resources.

Alternative Alignments 4c and 4e pass in close proximity to the Scheduled Monument, Law of Windsor Cairn, whilst Alternative Alignments 4a, 4b and 4d are in close proximity to the Scheduled Monument at Wellford Enclosure. Despite the similar RAG ratings, Alternative Alignments 4c and 4e are more constrained and would likely compromise the setting of the burial Cairn, whereas the Alternative Alignments 4a, 4b and 4d have flexibility within the LoD to provide further separation of the OHL from Wellford Enclosure, reducing the level of constraint posed by this Scheduled Monument.

Alternative Alignments 4c and 4e would cross a locally prominent ridgeline at Hilton of Fern and are considered to compromise landscape character for these alignments. The ridgeline forms the edge of a notably elevated area within a landscape that is generally low lying, increasing the prominence of an OHL in this area. The constraint from this feature would also compromise the visual amenity experienced from some receptors in the wider landscape context for an OHL associated with Alternative Alignments 4c and 4e. The Alternative Alignments intersect the Broad Valley Lowlands – Tayside LCT, with Alternative Alignment 4a intersecting Lochty Wood and Duns Wood (which is also intersected by Alignment 4b). Despite a general lack of woodland in the LCT, some areas of mature trees through these woodlands are noted within the key characteristics of the LCT. Tree loss in Lochty Wood and Duns Wood would be unavoidable for Alternative Alignments 4a and 4b and parts of these characterful woodlands, which are partly listed as LEPO on the AWI, would be lost, compromising local landscape character.

Despite the similar RAG ratings for visual criteria for Alternative Alignments 4a, 4b and 4d, Alternative Alignment 4b is the most visually constrained alignment option due to the wrapping effect of the alignment on the properties at Montboy and associated implications for visual amenity. Alternative Alignments 4c and 4e are the most constrained in relation to visual amenity as they cross an area of elevated landform. An OHL across this area would result in the infrastructure being visible in close proximity views by people in nearby residential properties, or in the wider context of the OHL. Alternative Alignment 4a is constrained by marginally more properties (11 versus 10) than the other alternative alignments. However, it provides the opportunity to maintain a greater distance between the OHL and residential properties, particularly around the collection of properties in the area of Careston.

No material differences in constraints between the alternative alignments for the other environmental criteria presented in the table above have been identified. Overall Alternative Alignment 4d is considered to be the least constrained option in relation to environmental criteria.

6.5.2 Technical Appraisal

Table 6.11 summarises the RAG rating findings from the detailed technical appraisal. A summary of the technical constraints and/or differences in RAG rating of technical criteria that have influenced the identification of the Potential Alignment is explained in more detail below **Table 6.11**.

Table 6.11 - Summary of the Technical Appraisal of Alternative Alignments at Location 4: Careston

Topic	Criteria	Alternative 4a (Potential)	Alternative 4b	Alternative 4c	Alternative 4d	Alternative 4e
Infrastructure crossings	Major crossings (132 kV, 275 kV, Rail, 200+m wide river, navigable canal, gas or hydro pipeline)	G	A	R	A	R
	Road crossings	A	A	A	A	G

²⁶ As defined by the UK Biodiversity Action Plan Description. Available at: <https://data.jncc.gov.uk/data/2829ce47-1ca5-41e7-bc1a-871c1cc0b3ae/UKBAP-BAPHabitats-30-LowlandMixedDecWood.pdf>

Topic	Criteria	Alternative 4a (Potential)	Alternative 4b	Alternative 4c	Alternative 4d	Alternative 4e
Environmental Design	Elevation	G	G	G	G	G
	Atmospheric Pollution	G	G	G	G	G
	Contaminated Land	G	G	G	G	G
	Flooding	A	A	A	A	A
Ground Conditions	Terrain	A	A	A	A	A
	Peat	A	A	G	A	A
Construction/Maintenance	Access	G	G	G	G	G
	Angle towers	G	A	R	A	R
Proximity	Clearance distance	G	G	G	G	G
	Windfarms	G	G	G	G	G
	Communication masts	G	G	G	G	G
	Urban environments	G	G	G	G	G
	Metallic pipelines	A	R	R	G	A

Alternative Alignment 4a (the Potential Alignment) has the fewest angle structures of all the alternative alignments and overall follows the shortest route. Alternative Alignment 4a has no gas pipeline crossings, however, in the eastern part of the alignment it parallels a gas pipeline which would require mitigation for interference due to induced voltage.

Alternative Alignment 4b is the longest overall alignment and has a relatively large number of angle towers. Alternative Alignment 4b also runs in parallel to the high-pressure gas pipeline for the longest distance and is therefore the most likely to require mitigation for interference due to induced voltage.

Alternative Alignment 4c has the greatest number of angle towers, alongside Alternative Alignment 4e, and has the highest number of gas pipeline crossings. It also parallels the gas pipeline for a long section of the alignment resulting in a high-risk rating due to the mitigation required for interference due to induced voltage.

Alternative Alignment 4d would require more angle towers than Alternative Alignment 4a, however it minimises the interaction with the gas pipeline by crossing at more favourable angles and reducing the distance it would run in parallel. This alignment is considered the lowest risk for mitigation which would be required due to induced voltage, taking account of the length it runs parallel to the pipeline as well as the number and angle of required crossings.

Alternative Alignment 4e also has the least number of road crossings. It also crosses the gas pipeline multiple times; however, a lot of these crossings are at high enough angles that interference risk is lower than Alternative Alignment 4b and 4c.

Based on desktop assessment all the alternative alignments have a similar risk rating in terms of flooding. Similarly, the terrain for all alternative alignments is considered comparable. For Alternative Alignments 4a, 4b and 4d, the crossing of the Noran Water has steep gradients and Alternative Alignments 4c and 4e need to traverse steeper ground than the other alternatives associated with a ridge in the landform. Based on the findings of peat probing surveys in at risk locations, none of the tower locations in any of the Alternative Alignments are constrained by peat.

Overall Alternative Alignment 4a is considered to be the least constrained option in relation to technical criteria.

6.5.3 Cost Appraisal

Table 6.12 summarises the RAG rating findings from the detailed cost appraisal. A summary of the cost constraints and/or differences in RAG rating of cost criteria that have influenced the identification of the Potential Alignment is explained in more detail below **Table 6.12**.

Table 6.12 – Summary of the Cost Appraisal for Alternative Alignments at Location 4: Careston

Topic	Criteria	Alternative 4a (Potential)	Alternative 4b	Alternative 4c	Alternative 4d	Alternative 4e
Cost	Capital	G	G	G	G	G
	Operational	G	G	G	G	G

Alternative Alignment 4a (the Potential Alignment) is the lowest cost alignment with the other four alignments being within 5% of the lowest cost alignment. Alternative Alignment 4a is the shortest and Alternative Alignment 4b is the longest.

The terrain in all alternative alignments is comparable with similar topography and natural infrastructure crossings and are within close proximity to existing public highways. All alternative alignments have similar felling requirements except for

Alternative Alignment 4a which is likely to have the highest felling management, compensation planting and local management for future operational corridor requirements.

Alternative Alignments 4b, 4c and 4e would incur marginally increased capital and operational costs than Alternative Alignments 4a and 4d due to running parallel and crossing existing high pressure pipelines which will require mitigation for interference due to induced voltage.

Alternative Alignment 4a is the preferred alignment from a cost perspective as it is the lowest cost with the lowest number of towers, shorter distance and reduced interface with high pressure pipelines. Alternative Alignments 4b and 4e are the highest cost alignments primarily due to their overall length and greater number of angle towers with higher interface/crossing with high pressure pipelines which would require mitigation.

6.5.4 Summary of Potential Alignment

Although Alternative Alignment 4d is marginally preferred on environmental criteria, the Potential Alignment (Alternative Alignment 4a) was chosen to be taken forward over Alternative Alignments 4b, 4c, 4d and 4e as it was technically least constrained, being the shortest and straightest option, and the lowest cost alignment. Opportunities to mitigate environmental effects will be progressed through the detailed design and EIA.

6.6 Section E/F, Location 5: Appraisal of Alternative Alignments at Durris

This section provides a summary of the key considerations of two alternative alignments appraised at Location 5: Durris (see **Plate 5.5**) from an environmental, technical and cost perspective, and provides a summary which presents the findings of the comparative appraisal. This has informed selection of an overall Potential Alignment in this location.

It is noted that the appraisal of the eastern Alternative Alignment 5b also includes what is referred to as the Potential Alignment for Location 6: North of Drumoak. Three alternative alignments were appraised to the north of the village of Drumoak to ensure an OHL alignment of least constraint in this area could be selected. The Potential Alignment identified for Location 6: North of Drumoak therefore forms part of the complete Alternative Alignment 5b and not part of the overall Potential Alignment. Please refer to **Section 6.7** for the appraisal of alternative alignments at Location 6 North of Drumoak.

6.6.1 Environmental Appraisal

Figures 5.13 to 5.15 in **Appendix K** illustrate the environmental constraints for the two alternative alignments. The figures are presented as: Ecology and Cultural Heritage constraints; Hydrology constraints; and Land Use and Land Capability Constraints. **Appendix F** presents the key constraints and the completed environmental appraisal tables.

Table 6.13 summarises the RAG rating findings from the detailed environmental appraisals in **Appendix F**. A summary of the environmental constraints and/or differences in RAG rating of environmental criteria that have influenced the identification of the Potential Alignment is explained in more detail below **Table 6.13**.

Table 6.13 - Summary of the Environmental Appraisal of Alternative Alignments at Location 5: Durris

Topic	Criteria	Sub-Criteria	Alternative 5a (Potential)	Alternative 5b
Natural Heritage	Designations	International, European or National	A	A
		Regional	A	A
	Protected Species	EPS	A	G
		UKBAP	A	A
		Other protected and notable	A	A
	Habitats	Annex 1	A	A
		GWDTE	A	A
		Biodiversity	R	G
	Ornithology	Designations	A	A
		Schedule 1 Birds	A	A
		BoCC	G	G
	Geology, Hydrology, Hydrogeology	Surface and Groundwater Drinking Water Protected Area (DWPA)	A	G
		Aquifer providing regional / local resources	A	A
		Surface waters or aquifer providing water for agricultural or industrial use	A	G

Topic	Criteria	Sub-Criteria	Alternative 5a (Potential)	Alternative 5b
Cultural Heritage	Designated Heritage Assets	WHS, SMs, GDls	A	A
		SMR Entries	G	G
	Non-designated Heritage Assets	Listed Buildings, NIDLs, Conservation Areas	A	A
People	Proximity to Dwellings	Residential Properties	A	A
Landscape and Visual	Landscape Designations	National or Regional	A	A
	Landscape Character	Landscape character in published character assessments	A	A
	Visual Amenity	Properties, transport and recreational routes, vantage points	R	R
Land Use	Agriculture	Prime agricultural land	G	G
	Forestry	Commercial Forestry	A	A
	Recreation	Commercial Highland Sports (Fishing)	G	G
Planning	Proposals		R	R

Field surveys of Alternative Alignment 5a have identified habitats with potential to support a range of protected and notable species (EPS), more so than for the habitats present in Alternative Alignment 5b. The commercial forestry habitat throughout Alternative Alignment 5a is likely utilised by a range of species including otter, bats, red squirrel, pine marten and badger, and there is some limited potential for wildcat, although the forest is unlikely to form a core part of a territory. Mitigation measures would be implemented where these species are present, with the opportunity to enhance the woodland within the operational corridor.

Although the RAG ratings are Amber for Alternative Alignment 5a (the Potential Alignment) and Alternative Alignment 5b in relation to Internationally designated sites in that both cross the River Dee SAC, Loch of Park SSSI is nationally designated and supports potential GWDTE habitats, discussed further below.

An operational corridor would require to be created in three of the four LEPO woodlands within Alternative Alignment 5b, however felling within Coldstream Plantation would be limited due to recent forestry activities and given the baseline values of the unnamed woodland immediately east of Drumoak, and Craiglug Wood near Craiglug, there may be enhancement opportunities available through new planting and sensitive management. Alternative Alignment 5a is constrained by a number of ancient semi-natural origin and LEPO woodlands. Avoiding the semi-natural origin Ancient Woodland near Mergie would result in a wayleave through the neighbouring LEPO which is coniferous woodland plantation and while this would cause fragmentation to the woodland habitat, there are also opportunities to enhance habitats through new planting and sensitive management. Similarly to Alternative Alignment 5b, felling requirements through Coldstream Plantation would be minimal due to recent felling activities, while micro-siting could minimise the need for felling in Collonach Plantation.

Both alternative alignments have notable potential for Annex 1 and GWDTE habitats; Alternative Alignment 5a at Loch of Park and Craigneil, north of the A957 (Slug Road), and Alternative Alignment 5b within the alignment LoD at Little Carewe Gill and an area of blanket bog at Little Carer Hill. However, there is some flexibility within the LoD to avoid directly intersecting these areas for Alternative Alignment 5b, in comparison to Alternative Alignment 5a, where there may be extents of GWDTE that cannot be avoided. Alternative Alignment 5b also has a lower baseline biodiversity value than Alternative Alignment 5a and is therefore less constrained by sensitive habitats.

Although the alternative alignments have the same RAG rating for ornithology, there is a larger extent of suitable habitat for certain birds of conservation concern (BoCC), such as waders, in Alternative Alignment 5b in comparison to Alternative Alignment 5a principally because of the extent of upland habitat crossed by Alternative Alignment 5b.

The 480 m wide floodplain extent of the River Dee cannot be fully spanned at the point that Alternative Alignment 5a crosses the watercourse, which may compromise the quality and/or quantity of surface waters of local importance from constraints associated with OHL tower placement within flood risk areas, particularly during OHL construction. In comparison, Alternative Alignment 5b has lower potential to result in water flow pathways to surface and groundwater associated with the river crossing area at the River Dee due to the shorter span required to cross the flood plain. Infrastructure sited within the floodplain in Alternative Alignment 5a will also have the potential to impact the water quality of the River Dee-Peterculter tidal

limit surface drinking water protected area (Waterbody ID 23315) which lies further downstream due to construction activities located within the 200-year future flood extent. This may compromise the quality and/or quantity of surface/ground waters which provide public supply through creation of flow pathways for run-off which may cause some disruption to abstraction quantity and/or quality.

Although Alternative Alignment 5a is located closer to Park House GDL than Alternative Alignment 5b, it is further from Drum Castle GDL and the Category A Listed Building at Drum Castle, which are key cultural heritage constraints to Alternative Alignment 5b. There are also fewer Scheduled Monuments within the 1 km study area of Alternative Alignment 5a which could have their settings compromised by installation of an OHL, in comparison to Alternative Alignment 5b.

Although Alternative Alignment 5a lies in closer proximity to residential properties at Milton and Wester Durris Farm subject to the diversion of the existing 275 kV OHL, the LoD offers some flexibility to achieve distances two to four times the nominal tower height between the OHL and these properties. Alternative Alignment 5b also has flexibility to avoid property buffer zones around the north of Drumoak, however, this would be challenging to achieve due to the distribution of clusters of residential receptors. Whilst the SSEN Procedure which forms the methodology for the appraisals focuses on proximity to property rather than the absolute numbers of properties within given distances of an OHL alignment, Alternative Alignment 5b is located closer to a larger number and density of residential properties particularly around Drumoak (including a primary school), than Alternative Alignment 5a. Alternative Alignment 5b is therefore considered to have greater potential for amenity effects on communities than Alternative Alignment 5a. There are also more sensitive visual receptors with potential views of an OHL for Alternative Alignment 5b, especially in the vicinity of Drumoak village, when compared to Alternative Alignment 5a.

Alternative Alignment 5a intersects the Dee Valley SLA for a longer length than Alternative Alignment 5b (approximately 3 km and 2 km respectively), however, the OHL still only intercepts the SLA at its eastern extent and avoids the core area of the designation which is further west. An OHL located within this part of the SLA would alter the context of the 'broad meandering river, with wooded banks...' which is a notable special quality of the SLA. Tree felling is more likely to be required in Alternative Alignment 5a to facilitate the OHL in the broadleaved woodland on the immediate banks of the river, but there is opportunity to limit tree felling requirements through tower micro-siting.

Although both alternative alignments intersect a similar number of areas of forestry, Alternative Alignment 6a intersects approximately 3.8 km of Durris Forest, which forms part of the National Forest Inventory (NFI). Although there is the potential for the alignment to be located within the operational corridor of the existing Kintore to Fetteresso 275 kV OHL, further felling would be required to widen this operational corridor and create a windfirm edge where coniferous species are present.

Overall, there is no strong preference in relation to the environmental criteria which have been appraised for these alignment alternatives.

6.6.2 Technical Appraisal

Table 6.14 summarises the RAG rating findings from the detailed technical appraisal. A summary of the technical constraints and/or differences in RAG rating of technical criteria that have influenced the identification of the Potential Alignment is explained in more detail below **Table 6.14**.

Table 6.14 - Summary of the Technical Appraisal of Alternative Alignments at Location 5: Durris

Topic	Criteria	Alternative 5a (Potential)	Alternative 5b
Infrastructure crossings	Major crossings (132 kV, 275 kV, Rail, 200+m wide river, navigable canal, gas or hydro pipeline)	R	R
	Road crossings	G	G
Environmental Design	Elevation	R	A
	Atmospheric Pollution	G	G
	Contaminated Land	G	G
	Flooding	R	A
Ground Conditions	Terrain	A	A
	Peat	G	G
Construction/ Maintenance	Access	G	G
	Angle towers	G	R
Proximity	Clearance distance	G	A
	Windfarms	A	A
	Communication masts	G	G
	Urban environments	G	G
	Metallic pipelines	G	A

Alternative Alignment 5b has a significantly higher potential for impact on gas pipelines in comparison to Alternative Alignment 5a (the Potential Alignment). This is due to the seven crossings of the pipeline along the alignment of Alternative Alignment 5b and approximately two thirds of the alignment running in parallel with gas pipelines, increasing the requirement for mitigation for interference through induced voltage. Both alternative alignments cross two A-roads and the River Dee, with similar constraints associated with these crossings. The crossing of the existing XS1/XS2 circuit (Kintore to Fetteresso OHL), currently being upgraded to 400 kV, is the most significant technical constraint associated with Alternative Alignment 5a. To maintain a minimum of 100 m and a target of at least 170 m from residential properties this crossing will require modification and realignment in the vicinity of Kirkton of Durris which is a significant engineering project.

The terrain and elevation are slightly more challenging with Alternative Alignment 5a; however, it is not expected to cause significant issues when considering the Project's structure type (AS4 steel lattice tower) and loading limits. Alternative Alignment 5a also passes through a wider area of surface and river flood risk (associated with the River Dee), however it is expected that tower micro-siting and mitigation will sufficiently manage any risks associated with tower installation in these areas.

Alternative Alignment 5b has a significantly higher number of angle structures overall, is a longer route and is proximate to a higher number of properties throughout the route than Alternative Alignment 5a.

Overall Alternative Alignment 5a is considered to be the least constrained option in relation to technical criteria.

6.6.3 Cost Appraisal

Table 6.15 summarises the RAG rating findings from the detailed cost appraisal. A summary of the cost constraints and/or differences in RAG rating of cost criteria that have influenced the identification of the Potential Alignment is explained in more detail below **Table 6.15**.

Table 6.15 – Summary of the Cost Appraisal for Alternative Alignments at Location 5: Durris

Topic	Criteria	Alternative 5a (Potential)	Alternative 5b
Cost	Capital	G	G
	Operational	G	G

Alternative Alignment 5a (the Potential Alignment) is the lower cost alignment being within c. 5% of the cost of Alternative Alignment 5b. Alternative Alignment 5a is the shorter, with Alternative Alignment 5b being approximately 29% longer.

The terrain in Alternative Alignment 5a is more challenging than in Alternative Alignment 5b and construction may be more costly due to the steeper and more undulating terrain. Alternative Alignment 5b has lower tree felling requirements than Alternative Alignment 5a which would require higher felling management, compensation planting and local management for future operational corridor requirements.

Both alternative alignments have similar crossing requirements over existing infrastructure. Alternative Alignment 5b has higher interface with running parallel and crossing high pressure gas pipelines which will require more mitigation for interference due to induced voltage and this this has higher operation and maintenance costs. Alternative Alignment 5a has a high voltage transmission diversion which will require intrusive works on the newly reconducted OHL from 275 kV to 400 kV which runs from Fetteresso to Kintore.

6.6.4 Summary of Potential Alignment

The Potential Alignment (Alternative Alignment 5a) has been taken forward over Alternative Alignment 5b as it is less constrained technically, however it would involve realignment of the existing Kintore – Fetteresso OHL (currently being uprated from 275 kV to 400 kV) which is technically complex. Alternative Alignment 5a is also the lower cost of the two alignment options considered. There is no clear overall preference across the various environmental criteria which have been appraised. Alternative Alignment 5a would be located close to fewer residential properties than Alternative Alignment 5b and is therefore less constrained in relation to proximity to dwellings, sensitive receptors, and visual amenity.

6.7 Section F, Location 6: Appraisal of Alternative Alignments North of Drumoak

This section provides a summary of the key considerations of each alternative alignment appraised at Location 6: North of Drumoak (See **Plate 5.6**) from an environmental, technical and cost perspective, and provides a summary which presents the findings of the comparative appraisal. This has informed selection of an overall Potential Alignment in this location.

6.7.1 Environmental Appraisal

Figures 5.16 to 5.18 in **Appendix K** illustrate the environmental constraints for the three alternative alignments. The figures are presented as: Ecology and Cultural Heritage constraints; Hydrology constraints; and Land Use and Land Capability Constraints. **Appendix G** presents the constraints and the findings of the environmental appraisal.

Table 6.16 summarises the RAG rating findings from the detailed environmental appraisals in **Appendix G**. A summary of the environmental constraints and/or differences in RAG rating of environmental criteria that have influenced the identification of the Potential Alignment is explained in more detail below **Table 6.16**.

Table 6.16 - Summary of the Environmental Appraisal for Alternative Alignments at Location 6: North of Drumoak

Topic	Criteria	Sub-Criteria	Alternative 6a (Potential)	Alternative 6b	Alternative 6c
Natural Heritage	Designations	International, European or National	A	A	A
	Habitats	Biodiversity	G	G	G
	Ornithology	Designations	A	A	A
		Schedule 1 Birds	A	A	A
	Geology, Hydrology, Hydrogeology	Aquifer providing regional / local resources	G	A	A
Cultural Heritage	Designated Heritage Assets	WHS, SMs, GDLs	A	A	R
		SMR Entries	G	G	G
	Non-designated Heritage Assets	Listed Buildings, NIDLs, Conservation Areas	A	A	R
People	Proximity to Dwellings	Residential Properties	A	A	A
Landscape and Visual	Landscape Character	Landscape character in published character assessments	A	A	A
	Visual Amenity	Properties, transport and recreational routes, vantage points	A	A	A
Land Use	Agriculture	Prime agricultural land	G	G	G
	Forestry	Commercial Forestry	A	A	A
Planning	Proposals		R	R	R

Alternative Alignment 6a (the Potential Alignment) does not cross any wide floodplain areas, watercourses, PWS sources or known abstractions in comparison to the Alternative Alignment 6b and 6c. Alternative Alignment 6b has a potential abstraction source at Hill of Park approximately 10 m from the alignment, and Alternative Alignment 6c has an abstraction source 40 m

from the alignment at Coldstream Farm. Alternative Alignment 6a is considered the least likely to result in surface flow pathways, with the potential to subsequently compromise the quality of surface waters of local importance.

All three alternative alignments pass in close proximity to Drum Castle GDL and within 2 km of two Scheduled Monuments to the southeast (Bogton Cairn, Field System and Trackway and Normandykes Roman Camp). However, Alternative Alignment 6c cuts across the southwest corner of Drum Castle GDL, potentially disturbing the woodland, and with the potential to adversely impact upon its setting. Although the other alternative alignments may also compromise the setting, they would be less likely to be visible in key views of the Category A listed Drum Castle in comparison to Alternative Alignment 6c. However, given the wide-open views afforded from the castle tower, Alternative Alignment 6a and Alternative Alignment 6b would likely still be visible from the castle as they cross the Dee Valley.

There are a number of locations across each of the alternative alignments where residential properties are located within approximately 200 m of the OHL. Alternative Alignment 6b has the most limited flexibility for an OHL to be located at distances of more than two to four times the nominal tower height from the closest residential receptors. This alternative alignment also intersects with the northern extent of a consented planning application for the erection of 11 houses in the northern part of Drumoak village and is closest to the northern edge of the settlement. Due to property constraints to the north and south of Alternative Alignment 6b, there is minimal flexibility to position the OHL more than two times the nominal tower height from the planning application for housing within the northern side of Drumoak.

Alternative Alignment 6c is located within the Wooded Estates – Aberdeenshire LCT and intersects with the south-western edge of an area of Ancient Woodland at Drumhill Wood. The removal of trees at the southwestern edge of Drumhill Wood would compromise this characteristic element of the landscape (also part of the Drum Castle GDL) at the local level including the ‘strong woodland structure’ of the LCT. Alternative Alignments 6a and 6b, in comparison, are considered to have less potential to compromise the characteristic elements of the LCTs that they intersect.

All three alternative alignments intersect the area of broadleaved woodland with a Tree Preservation Order (TPO) to the east of Drumoak (AC TPO 126). Felling at least part of this TPO would be required for an operational corridor for the OHL and would be contrary to national and local planning policies where there is a presumption against the removal of trees, woodlands and hedgerows.

No material differences in constraints between the alternative alignments for the other environmental criteria presented in the table above have been identified. Overall Alternative Alignment 6a is considered to be the least constrained option in relation to environmental criteria.

6.7.2 Technical Appraisal

Table 6.17 summarises the RAG rating findings from the detailed technical appraisal. A summary of the technical constraints and/or differences in RAG rating of technical criteria that have influenced the identification of the Potential Alignment is explained in more detail below **Table 6.17**.

Table 6.17 - Summary of the Technical Appraisal for Alternative Alignments at Location 6: North of Drumoak

Topic	Criteria	Alternative 6a (Potential)	Alternative 6b	Alternative 6c
Infrastructure crossings	Major crossings (132 kV, 275 kV, Rail, 200+m wide river, navigable canal, gas or hydro pipeline)	R	R	R
	Road crossings	G	G	A
Environmental Design	Elevation	G	G	G
	Atmospheric Pollution	G	G	G
	Contaminated Land	G	G	G
	Flooding	A	G	G
Ground Conditions	Terrain	G	G	G
	Peat	G	G	G
Construction/ Maintenance	Access	G	G	G
	Angle towers	R	G	R
Proximity	Clearance distance	G	A	G
	Windfarms	G	G	G
	Communication masts	G	A	G
	Urban environments	A	A	A
	Metallic pipelines	A	A	A

All alternative alignments cross a number of major gas pipelines which will require mitigation to reduce interference from induced voltages. All alternative alignments also cross public roads including the A93 public road which would require special working arrangements during construction such as scaffolding for safety precautions when stringing over the road. Alternative Alignment 6c has the highest number of total road crossings compared to the other alternative alignments.

All alternative alignments start in close proximity to the River Dee high flood risk area but are located about 60 m away from the flood risk based on desktop studies. Alternative Alignment 6a (the Potential Alignment) requires a suspension tower to be placed within an area close to Moss-side with surface flood risk. Alternative Alignment 6a and Alternative Alignment 6b both require tall angle towers in close proximity which require a larger land take for both construction and operation. Although Alternative Alignment 6b includes more towers, but with less extreme angles in comparison to Alternative Alignment 6a, it is not able to achieve the same clearance distance from residential properties.

Alternative Alignment 6b has the highest number of residential buildings located within 170 m from the centreline of the alignment and also passes in close proximity to two communications masts on the hillside above Drumoak which could cause line of sight issues which can interfere with signal levels. A line of sight assessment will be carried out with the mast operators and towers could be microsited to avoid interference with signal levels. All the alignments also pass between Drumoak and Mains of Drum and are comparable in relation to their potential for proximity to properties.

Overall Alternative Alignment 6b is considered to be the least constrained option in relation to technical criteria.

6.7.3 Cost Appraisal

Table 6.18 summarises the RAG rating findings from the detailed cost appraisal. A summary of the cost constraints and/or differences in RAG rating of cost criteria that have influenced the identification of the Potential Alignment is explained in more detail below **Table 6.18**.

Table 6.18 – Summary of the Cost Appraisal for Alternative Alignments at Location 6: North of Drumoak

Topic	Criteria	Alternative 6a (Potential)	Alternative 6b	Alternative 6c
Cost	Capital	G	G	G
	Operational	G	G	G

There is no significant cost difference between the alternative alignments. Alternative Alignment 6a (the Potential Alignment) and Alternative Alignment 6c are approximately 7% shorter in length than Alternative Alignment 6b but have additional angle tower requirements which include high angle structures.

All alternative alignments interface with woodlands and on balance have a similar level of constraint with compensatory planting and operational costs for local management of future operational corridors.

Alternative Alignment 6a and 6c have an increased interface with existing infrastructure (gas pipelines) as the alignments run parallel with this infrastructure for a greater length compared to Alternative Alignment 6b, this marginally increases the overall capital and operational costs. All alternative alignments would need to cross existing roads including the A93 to the east of Drumoak.

6.7.4 Summary of Potential Alignment

The Potential Alignment (Alternative Alignment 6a) was chosen to be taken forward over Alternative Alignments 6b and 6c as it is located at a greater distance from the settlement of Drumoak than Alternative Alignment 6b and is considered to have lower potential for changes to landscape character and woodland loss than Alternative Alignment 6c, as well as avoiding direct impacts on the setting of Drum Castle GDL. Alternative Alignment 6a does not cross or interact with any hydrological assets and avoids the Wooded Estates Aberdeenshire LCT. Although it has more harsh angles which will require larger towers, it contains fewer angles in comparison to Alternative Alignments 6b and 6c and is able to increase the separation distance of the OHL to communications masts as well as improve clearance distances to residential properties.

6.8 Section F, Location 7: Appraisal of Alternative Alignments at Schoolhill

This section provides a summary of the key considerations of each alternative alignments appraised at Location 7: Schoolhill (see **Plate 5.7**) from an environmental, technical and cost perspective, and provides a summary which presents the findings of the comparative appraisal. This has informed selection of an overall Potential Alignment in this location.

6.8.1 Environmental Appraisal

Figures 5.19 to 5.21 in **Appendix K** illustrate the environmental constraints for the three alternative alignments. The figures are presented as: Ecology and Cultural Heritage constraints; Hydrology constraints; and Land Use and Land Capability Constraints. **Appendix H** presents the constraints and the findings of the environmental appraisal.

Table 6.19 summarises the RAG rating findings from the detailed environmental appraisals in **Appendix H**. A summary of the environmental constraints and/or differences in RAG rating of environmental criteria that have influenced the identification of the Potential Alignment is explained in more detail below **Table 6.19**.

Table 6.19 - Summary of the Environmental Appraisal for Alternative Alignments at Location 7: Schoolhill

Topic	Criteria	Sub-Criteria	Alternative 7a (Potential)	Alternative 7b	Alternative 7c
Natural Heritage	Designations	Regional	G	A	G
	Habitats	GWDTE	A	A	A
		Biodiversity	G	G	G
	Ornithology	Designations	A	A	A
		Schedule 1	A	A	A
Geology, Hydrology, Hydrogeology	Surface Waters or Aquifer Providing Water for Agricultural or Industrial Use	G	G	A	
Cultural Heritage	Designated Heritage Assets	WHS, SMs, GDLs	A	R	A
		SMR Entries	G	G	G
	Non-designated Heritage Assets	Listed Buildings, NIDLs, Conservation Areas	G	G	G
People	Proximity to Dwellings	Residential Properties	A	A	A
Landscape and Visual designations	Landscape Character	Landscape character in published character assessments	G	A	G
	Visual Amenity	Properties, transport and recreational routes, vantage points	A	A	A
Land Use	Forestry	Commercial Forestry	G	A	A
Planning	Proposals		G	G	G

Alternative Alignment 7b is constrained by the presence of the Candyglirach LNCS, comprising upland birchwood habitats, within the west of the LoD. As such, some felling of this broadleaved woodland may be required within the eastern boundary of the LNCS to provide an operational corridor for the OHL. Positioning of towers near Greendams would also require careful

micrositing as it is downstream from the potential GWDEs associated with the LNCS. In comparison, Alternative Alignment 7a (the Potential Alignment) and Alternative Alignment 7c are not constrained by this LNCS or its associated woodland.

Although all the alternative alignments cross watercourses and the floodplains of the Gormack Burn, there is more opportunity in Alternative Alignment 7a to avoid the flood risk area and associated watercourses. In comparison, Alternative Alignment 7c particularly would not be able to completely span and avoid the significant flood risk area of the burn giving rise to the potential for greater hydrological impacts during tower and track construction in these areas.

All alternative alignments are constrained by the Scheduled Monument at East Finnercy Cairn; however Alternative Alignment 7b is also constrained by Tillyorn Moated Homestead. Due to the vicinity of the OHL to Tillyorn Moated Homestead, Alternative Alignment 7b would introduce new towers within the immediate surroundings of the SM being large in scale to the monument, with the potential to adversely impact upon its setting. All alternative alignments are likely to compromise key views from East Finnercy Cairn to the south due to the introduction of proposed towers in these locations.

Alternative Alignment 7b would require the removal of trees in the woodland to the east of Redmoss that contributes to the 'strong woodland structure' of the Wooded Estates Aberdeenshire LCT. Removal of trees on the eastern edge of this woodland to accommodate the OHL would compromise the characteristic element of the landscape and its contribution to the wooded nature that is strongly associated with the LCT. Alternative Alignment 7a and 7c would avoid impact to this LCT and are less constrained with respect to landscape character than Alternative Alignment 7b.

Alternative Alignment 7c intersects with several areas of commercial forestry where interaction with woodland management and operations may compromise the commercial returns from the forestry, in comparison to Alternative Alignments 7a and 7b. At these points, tree clearance for an operational corridor within these woodlands may compromise commercial returns from these enterprises.

No material differences in constraints between the alternative alignments for the other environmental criteria presented in the table above have been identified. Overall Alternative Alignment 7a is considered to be the least constrained option in relation to environmental criteria.

6.8.2 Technical Appraisal

Table 6.20 summarises the RAG rating findings from the detailed technical appraisal. A summary of the technical constraints and/or differences in RAG rating of technical criteria that have influenced the identification of the Potential Alignment is explained in more detail below **Table 6.20**.

Table 6.20 - Summary of the Technical Appraisal for Alternative Alignments at Location 7: Schoolhill

Topic	Criteria	Alternative 7a (Potential)	Alternative 7b	Alternative 7c
Infrastructure crossings	Major crossings (132 kV, 275 kV, Rail, 200+m wide river, navigable canal, gas or hydro pipeline)	R	R	A
	Road crossings	G	G	G
Environmental Design	Elevation	G	G	G
	Atmospheric Pollution	G	G	G
	Contaminated Land	G	G	G
Ground Conditions	Flooding	G	A	A
	Terrain	G	G	G
Construction/Maintenance	Peat	G	G	G
	Access	G	G	A
	Angle towers	G	G	A
Proximity	Clearance distance	A	G	G
	Windfarms	G	G	G
	Communication masts	G	G	G
	Urban environments	G	G	A
	Metallic pipelines	G	A	A

All alternative alignments cross major gas pipelines in the area; however, Alternative Alignment 7a (the Potential Alignment) and Alternative Alignment 7c run in parallel with a pipeline for extended lengths which is likely to require more mitigation for interference through induced voltage. Alternative Alignment 7a, however, represents the lowest proximity and therefore potential for interaction with this pipeline. Alternative Alignment 7b crosses the pipeline once and at an angle close to 90° in

comparison to Alternative Alignment 7c which crosses the pipeline at multiple points with angles as low as approximately 30° which increases the likelihood of interaction, and therefore mitigation would be required.

All the alternative alignments cross through flood risk zones, however Alternative Alignment 7a represents the lowest risk as it spans the floodplain, whereas Alternative Alignment 7b and 7c would require towers to be situated within the floodplain. Access is not expected to be a concern for any of the alternative alignments, however more enabling works and mitigation would be required to facilitate access to Alternative Alignment 7c. Alternative Alignment 7c also has a requirement for a higher number of sharp angle towers which is less technically preferable due to constructability and maintainability constraints.

The clearance distance to properties is most constrained on Alternative Alignment 7a with a significant pinch point at Milton of Cullerie. Alternative Alignment 7b increases the overall clearance distance from residential properties however all options maintain the minimum distance of 100m around properties.

Overall Alternative Alignment 7a is considered to be the least constrained option in relation to technical criteria.

6.8.3 Cost Appraisal

Table 6.21 summarises the RAG rating findings from the detailed cost appraisal. A summary of the cost constraints and/or differences in RAG rating of cost criteria that have influenced the identification of the Potential Alignment is explained in more detail below **Table 6.21**.

Table 6.21 – Summary of the Cost Appraisal for Alternative Alignments at Location 7: Schoolhill

Topic	Criteria	Alternative 7a (Potential)	Alternative 7b	Alternative 7c
Cost	Capital	G	R	A
	Operational	G	G	G

Alternative Alignment 7a (the Potential Alignment) presents the lowest cost due to overall length and number of tower structures. Alternative Alignment 7b is the highest cost by approximately 30% with Alternative Alignment 7c approximately 10% higher than Alternative Alignment 7a.

Alternative Alignment 7b is approximately 40% longer and Alternative Alignment 7c is approximately 15% longer in comparison to Alternative Alignment 7a, which would also require associated access tracks for construction and maintenance purposes to be longer. Alternative Alignment 7c interfaces with multiple coniferous woodlands which require felling operations, compensatory planting, and local management for future operational corridors.

Alternative Alignments 7b and 7c have increased interface with flood plains and existing infrastructure (gas pipelines) as the alignments run parallel and cross the infrastructure multiple times and for a greater length in comparison to Alternative Alignment 7a. This marginally increases the overall capital and operational costs. Additionally, all alignments are in close proximity to the existing public highway.

6.8.4 Summary of Potential Alignment

The Potential Alignment (Alternative Alignment 7a) was chosen to be taken forward over Alternative Alignments 7b and 7c as it is preferred in relation to environmental, technical and cost criteria. The Potential Alignment (7a) provides more flexibility to avoid hydrological constraints associated with the Gormack Burn, avoids felling trees characteristic to the LCT, and also avoids interaction with Candyglirach LNCS. It is able to avoid siting towers within a floodplain and reduces the amount of gas pipeline crossings and interaction in comparison to the other alignments. It is also the lowest cost of the alternative alignments.

6.9 Section F, Location 8: Appraisal of Alternative Alignments at Echt

This section provides a summary of the key considerations of each alternative alignment appraised at Location 8: Echt (see **Plate 5.8**) from an environmental, technical and cost perspective, and provides a summary which presents the findings of the comparative appraisal. This has informed selection of an overall Potential Alignment in this location.

6.9.1 Environmental Appraisal

Figures 5.22 to 5.24 in **Appendix K** illustrate the environmental constraints for the three alternative alignments. The figures are presented as: Ecology and Cultural Heritage constraints; Hydrology constraints; and Land Use and Land Capability Constraints. **Appendix I** presents the key constraints and the completed environmental appraisal tables.

Table 6.22 summarises the RAG rating findings from the detailed environmental appraisals in **Appendix I**. A summary of the environmental constraints and/or differences in RAG rating of environmental criteria that have influenced the identification of the Potential Alignment is explained in more detail below **Table 6.22**.

Table 6.22 - Summary of the Environmental Appraisal for Alternative Alignments at Location 8: Echt

Topic	Criteria	Sub-Criteria	Alternative 8a (Potential)	Alternative 8b	Alternative 8c	
Natural Heritage	Designations	International, European or National	A	G	A	
	Habitats	Biodiversity	R	G	R	
	Ornithology	Designations		A	A	A
		Schedule 1 Birds		A	A	A
	Geology, Hydrology, Hydrogeology	Surface and Groundwater Drinking Water Protected Area (DWPA)		G	G	G
		Aquifer providing regional / local resources		A	A	A
Surface waters or aquifer providing water for agricultural or industrial use			A	A	G	
Cultural Heritage	Designated Heritage Assets	WHS, SMS, GDLs	A	A	A	
		SMR Entries	G	G	G	
	Non-designated Heritage Assets	Listed Buildings, NIDLs, Conservation Areas	A	A	A	
People	Proximity to Dwellings	Residential Properties	A	A	A	
Landscape and Visual	Landscape Character	Landscape character in published character assessments	A	G	A	
	Visual Amenity	Properties, transport and recreational routes, vantage points	R	R	R	
Land Use	Forestry	Commercial Forestry	G	A	A	
	Recreation	Paths and Trails	G	G	G	
Planning	Proposals		G	A	G	

Alternative Alignment 8a (the Potential Alignment) and Alternative Alignment 8c have the potential to affect parts of three LEPO woodlands whereas Alternative Alignment 8b would be constrained by one LEPO woodland. Whilst woodland loss could be mitigated to some extent there would be greater potential for woodland loss from Alternative Alignments 8a and 8c.

The habitats present within all three alternative alignments are similar and whilst surveys have not identified the presence of particularly sensitive habitats, the level of constraint from baseline biodiversity has been appraised as being higher for Alternative Alignments 8a and 8c than for 8b. Given the distance of Alternative Alignment 8b from Loch of Skene, it is considered marginally more favourable for ornithological constraints.

All alternative alignments cross one large unnamed tributary to the Gormack Burn, which is a major area of fluvial flood risk, however Alternative Alignments 8a and 8b have two towers sited within the floodplain area. Construction activities would therefore effectively be within the watercourse during the 200-year future flood event, with potential to compromise quantity and/or quality of surface waters (and groundwater) of local importance or would require dewatering activities. In comparison, Alternative 8c can span this floodplain area.

All of the Alternative Alignments pass within close proximity to the southwestern edge of Dunecht House Garden and Designed Landscape (GDL). However, there is considered to be flexibility to position the alignments to avoid any direct impact on the designated area. Alternative Alignments 8a and 8b follow a course for a slightly greater distance than Alignment 8b to the south of the GDL.

Alternative Alignment 8b is located closer to a larger number and density of residential properties (particularly at Echt village), as well as a primary school, than Alternative Alignments 8a and 8c. Alternative Alignment 8a would however be located close to fewer residential properties than Alternative Alignment 8b and is therefore less constrained in relation to proximity to communities, sensitive receptors, and visual amenity when compared to the other two alternative alignments.

Although all alternative alignments are located within the Wooded Estates – Aberdeenshire LCT, Alternative Alignment 8b passes through a landscape that is generally simple and low lying, with the total area of woodland that would be affected by the OHL being small, and the LoD offering some flexibility to avoid woodland loss. In comparison, Alternative Alignment 8a (the Potential Alignment) and 8c require a larger extent of tree felling to accommodate the OHL, compromising local landscape

character. These alignments also pass across an area of higher landform north of the B9119 public road which is a notable local landscape feature, increasing the prominence of the OHL, resulting in the scale of the landform being overscaled by the size of the additional infrastructure in the landscape.

Despite the similar RAG ratings, the alternative alignments are constrained by visual amenity in different aspects. Alternative Alignments 8a and 8c would compromise visual amenity experienced from the wider landscape as the OHL crosses an area of elevated landform, as the OHL would sit higher in the landscape as a prominent feature across the skyline. In comparison, Alternative Alignments 8b would compromise visual amenity experienced by a large number and concentrated density of people at the settlement of Echt as the OHL would lie within close proximity views to residents and other people within this settlement.

Alternative Alignment 8b partially intersects the boundary of a planning application within Echt for 25 dwelling houses. There is limited flexibility within the LoD to avoid this constraint and provide opportunity to achieve distances of 170 m between the planned residential properties and the OHL alignment. Alternative Alignments 8a and 8c do not cross any known proposed or consented planning applications.

No material differences in constraints between the alternative alignments for the other environmental criteria presented in the table above have been identified. Overall, Alternative Alignment 8b is considered to be the least constrained option in relation to environmental criteria.

6.9.2 Technical Appraisal

Table 6.23 summarises the RAG rating findings from the detailed technical appraisal. A summary of the technical constraints and/or differences in RAG rating of technical criteria that have influenced the identification of the Potential Alignment is explained in more detail below **Table 6.23**.

Table 6.23 - Summary of the Technical Appraisal for Alternative Alignments at Location 8: Echt

Topic	Criteria	Alternative 8a (Potential)	Alternative 8b	Alternative 8c
Infrastructure crossings	Major crossings (132 kV, 275 kV, Rail, 200+m wide river, navigable canal, gas or hydro pipeline)	R	R	R
	Road crossings	G	G	G
Environmental Design	Elevation	G	G	G
	Atmospheric Pollution	G	G	G
	Contaminated Land	G	G	G
	Flooding	A	R	G
Ground Conditions	Terrain	G	G	G
	Peat	G	G	G
Construction/Maintenance	Access	G	G	G
	Angle towers	R	G	A
Proximity	Clearance distance	G	A	G
	Windfarms	G	G	G
	Communication masts	G	G	G
	Urban environments	G	G	G
	Metallic pipelines	G	G	G

All alternative alignments would need to cross the existing CLN/CLS 132kV overhead line south of Echt which would require modification to ensure both circuits are easily maintained in the future. All alternative alignments also cross the B9119 public road which would require careful management during construction. These management activities would be confirmed further into the development process but is likely to include road closures, temporary traffic lights and scaffolding.

Alternative Alignment 8b passes through the most watercourse and surface water flood risk areas when compared to Alternative Alignment 8a (the Potential Alignment) and Alternative Alignment 8c. However, it is expected that during micro-siting any towers would need to be situated within the flood risk areas.

Alternative Alignments 8a and 8b have a larger number of angle towers in total, as well as two and one D90 angle structures respectively. This is more challenging from a constructability and maintainability perspective and also has a higher visual impact when compared to straight line suspension towers.

Alternative Alignment 8b passes between the residential properties at Echt and South Monecht whereas Alternative Alignments 8a and 8c push the alignment further to the east, reducing the number of properties they would interface with.

None of the options crosses any gas pipelines, however Alternative Alignment 8c does run in parallel for approximately 1 km and this may require mitigation for interference due to reduced voltage, if selected.

There is no strong technical preference for this location, however Alternative Alignment 8a is the least preferred due to the introduction of two D90 towers.

6.9.3 Cost Appraisal

Table 6.24 summarises the RAG rating findings from the detailed cost appraisal. A summary of the cost constraints and/or differences in RAG rating of cost criteria that have influenced the identification of the Potential Alignment is explained in more detail below **Table 6.24**.

Table 6.24 – Summary of the Cost Appraisal for Alternative Alignments at Echt

Topic	Criteria	Alternative 8a (Potential)	Alternative 8b	Alternative 8c
Cost	Capital	G	G	G
	Operational	G	G	G

Alternative Alignment 8b is the lowest cost option with Alternative Alignment 8a (the Potential Alignment) being within 7% of the lowest cost option. Alternative Alignment 8b is the shortest alignment and Alternative Alignment 8c is the longest although the difference in length is marginal. All potential alignments would incur marginally increased capital and operational costs due to interface with an existing 132 kV transmission OHL and the presence of high-pressure pipelines.

Alternative Alignment 8b is the preferred option from a cost perspective as it is the lowest cost with the lowest number of towers and shorter distance. Alternative Alignments 8a and 8c are the highest and second highest cost options respectively due to their overall length and greater number of angle towers which would be required to reduce their proximity to residential buildings along the alignment.

6.9.4 Summary of Potential Alignment

The Potential Alignment (Alternative Alignment 8a) is not considered to be the least constrained option from a technical and environmental perspective across all criteria. Alternative Alignment 8a would however be located close to fewer residential properties than Alternative Alignment 8b and is therefore less constrained in relation to proximity to communities, sensitive receptors, and visual amenity. On balance, Alternative Alignment 8a has therefore been taken forward as part of the Potential Alignment. Opportunities to mitigate environmental effects will be progressed through the detailed design and EIA.

7. CONSULTATION ON THE PROPOSALS

7.1 Introduction

SSEN Transmission places great importance on, and is committed to, consultation and engagement with all parties, or stakeholders, likely to have an interest in proposals for new projects such as this. Stakeholder consultation and engagement is an essential part of an effective development process.

The period of consultation on the OHL alignment is part of an ongoing engagement process that spans the full development cycle for the project, where feedback is sought at different stages and engagement with stakeholders is continuous as SSEN Transmission refines the proposals.

7.2 Questions for consideration by Consultees

When providing your comments and feedback, SSEN Transmission would be grateful for your consideration of the questions below:

- Is there a specific section of the overhead line alignment that you are interested in?
- Has the approach taken to select the Potential Alignment in your section of interest been clearly explained?
- Do you have any specific concerns relating to the alignment options within your section of interest? If so, is there anything we could do to mitigate the impact of this?
- Is there anything you'd like to bring to our attention regarding the Potential Alignment or alternative alignments that you believe we may not have already considered?
- Do you feel, on balance, that the Potential Alignment selected is the most appropriate for further consideration at the Environmental Impact Assessment stage?

7.3 Next Steps

Consultation events will be held as detailed in the preface of this Consultation Document. The responses received from these consultation events, and those sought from statutory consultees and other key stakeholders, will be considered before the Proposed Alignment is confirmed.

Comments on this Consultation Document should be sent to:

Rob Whytock
Community Liaison Manager

TKUP@sse.com

Scottish and Southern Electricity Networks Transmission
200 Dunkeld Road
Perth
PH1 3GH

All comments are requested by **21 November 2024**.

A RoC will be published after the consultation period has ended, which will document the consultation responses received, and the decisions made by SSEN Transmission in light of these responses. At this time, SSEN Transmission will confirm the Proposed Alignment and proceed with preparing an application for consent under Section 37 of the Electricity Act 1989 to the Scottish Government's Energy Consents Unit. Please note that comments made to SSEN Transmission during this consultation are not representations to the Scottish Ministers and if SSEN Transmission submits a Section 37 application there will be an opportunity to make representations on that application directly to the Scottish Ministers.

GLOSSARY

Term	Definition
400 kV	400 kilovolt (400,000 volt) operating voltage electrical circuit.
Access Strategy	Method for provision of access to the alignment to facilitate construction e.g. the nature, indicative location and extent of temporary access tracks, permanent access tracks and road improvements.
Alignment	A centre line of an overhead line (OHL), along with location of key angle support structures.
Alternative Alignment	A section of an alignment where there are different ways to avoid or minimise interaction with localised constraints.
Amenity	The natural environment, cultural heritage, landscape and visual quality. Also includes the impact of SSEN Transmission's works on communities, such as the effects of noise and disturbance from construction activities.
Ancient Woodland	As defined by The Scottish Ancient Woodland Inventory. Ancient Woodland (categories 1a and 2a) is interpreted as semi-natural woodland from maps of 1750 (1a) or 1860 (2a) and continuously wooded to the present day. If planted with non-native species during the 20th century they are sometimes referred to as Plantations on Ancient Woodland Sites (PAWS).
Angle Tower	Support structure (tower) which allows a change in direction of the OHL.
Annex I (as listed on the EC Habitats Directive)	Annex I to the EC Habitats Directive lists the types of habitats and the animal and plant species whose conservation requires the designation of special areas of conservation. Some are defined as 'priority' habitats or species in danger of disappearing and for which there are specific rules.
AWI	The Scottish Ancient Woodland Inventory is a provisional guide to the location of Ancient Woodland. It contains three main categories of woodland, all of which are likely to be of value for their biodiversity and cultural value. These include Ancient Woodland, Long-established woodlands of plantation origin (LEPO), and other woodlands.
AOD	Above Ordnance Datum.
BoCC	Birds of Conservation Concern (BoCC) provides the status of all regularly occurring birds in the UK, Channel Islands and Isle of Man. The current version is BoCC 5. Birds of highest conservation concern will appear on the Red List.
BNG	Biodiversity Net Gain (BNG) is an approach to development that aims to leave the natural environment in a measurably better state than it was pre-development. It focuses on the change in the biodiversity value of a site, comparing the pre and post construction biodiversity values to ensure a positive effect overall.
Broadleaved Woodland	Broadleaved woodland is characterised by trees which do not have needles. Their leaves are broad and vary in shape, and most of them are deciduous. Broadleaved woodlands have 10% or less conifer in the canopy.
CEMP	Construction Environmental Management Plan is a document which defines specific methods for environmental survey, monitoring, mitigation and management throughout construction.
Centre Line	The linear connection between the central point of each support structure along the length of the OHL.
Circuit	Overhead line or underground cable consisting of multiple conductors, to carry electric current.
Class 1 and Class 2 Peatland	Class 1 – Nationally important carbon-rich soils, deep peat and priority peatland habitat. Areas likely to be of high conservation value. Class 2 – Nationally important carbon-rich soils, deep peat and priority peatland habitat. Areas of potentially high conservation value and restoration potential.
Commercial Forestry	Plantation woodlands typically dominated by conifer species and managed predominantly for timber extraction.
Communities	Those stakeholders (organisations and individuals including residents) with a particular remit or interest in the local area affected by the works.

Term	Definition
Conductor	A metallic wire strung between OHL support structure to carry electric current.
Coniferous Woodland	Woodland that has 10% or less broadleaved trees in the canopy.
Consultation	The dynamic process of dialogue between individuals or groups, based on a genuine exchange of views and, normally, with the objective of influencing decisions, policies or programmes of action.
Consultation Bodies	In terms of regulation 2(1) of the EIA Regulations, defined as meaning the planning authority, NatureScot, the Scottish Environment Protection Agency and Historic Environment Scotland.
Contaminated Land	Land contaminated by harmful substances including Unexploded Ordnance.
Corridor	A linear area which allows a continuous connection between the defined connection points. The corridor may vary in width along its length; in unconstrained areas it may be many kilometres wide. A corridor should also take into account any pinch points along its length where subsequent design development for the OHL may be subject to fundamental restrictions which may limit the eventual viability of a project or gaining consent.
Double Circuit	A double circuit transmission line comprises of two independent circuits each made up of three sets of conductors (cables).
DWPA	Drinking Water Protected Areas (DWPA). The water in ditches, streams, lochs and possibly groundwater in these areas is protected and likely to be taken to water treatment works, where it is treated and provided to the public as drinking water.
ECU	Energy Consents Unit, the department of the Scottish Government responsible for processing applications for consent under the Electricity Act 1989 on behalf of Scottish Ministers.
Effect	The change in condition of an environmental receptor (beneficial or adverse) arising as a result of a change brought about by the construction or operation of the Project.
EIA	Environmental Impact Assessment is a formal process codified by EU Directive 2011/92/EU, and subsequently amended by Directive 2014/52/EU. The national regulations are set out in The Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017 as amended. The EIA process is set out in Regulation 4(1) of the regulations and includes the preparation of an EIA Report (EIAR) by the developer to systematically identify, predict, assess and report on the likely significant environmental impacts of a proposed project or development.
Engagement	The establishment of effective relationships with individuals or groups. induce
EPZ	Equi-Potential Zone, a work zone in which the worker is protected from electric shock from differences in electric potential between objects in the work area.
ESO	National Grid is the Electricity System Operator (ESO) for Great Britain. The ESO balances electricity supply and demand to ensure the electricity supply.
FLS	Forestry and Land Scotland (FLS) is the Scottish Government agency responsible for managing Scotland's national forests and land.
GDL	Garden and Designed Landscape, as listed on the Inventory of Gardens and Designed Landscapes held by HES. These are considered by a panel of experts to be of national importance.
GWDE	Groundwater Dependent Terrestrial Ecosystems are wetlands which critically depend on groundwater flows. They are safeguarded by the Water Framework Directive (WFD) and are sensitive to hydrological and ecological changes.
Habitat	Term most accurately meaning the place in which a species lives, but also used to describe plant communities or agglomerations of plant communities.
HND	Holistic Network Design is a single, integrated coordinate plan that sets out the onshore and offshore electricity transmission infrastructure required across GB, to deliver the UK Government's 2030 targets.
Holford Rules	Principles used to inform the routing of OHLs and the siting of substations.
HVAC	High Voltage Alternating Current

Term	Definition
HVDC	High Voltage Direct Current
Impact	Physical constructions or activities that may change or disturb the surrounding environment (e.g. erection of an OHL tower may impact the landscape resource).
Kilovolt (kV)	One thousand volts.
LCT	Landscape Character Type is a distinct, recognisable and consistent pattern of elements in a landscape that differentiates the areas from each other.
LEPO	Long-established woodlands of plantation origin is a NatureScot category of the Scottish Ancient Woodland Inventory. Many of these plantation sites have developed semi-natural characteristics, especially the oldest ones, which may be as rich as Ancient Woodland.
Listed Building	Building included on the list of buildings of special architectural or historic interest and afforded statutory protection under the <i>Planning (Listed Buildings and Conservation Areas) (Scotland) Act 1997</i> and other planning legislation. Classified in three categories A, B and C(S).
LLA	Local Landscape Areas are designated by local planning authorities for sites which are considered to be of regional/local importance for their scenic qualities. Local Development Plans (LDPs) typically show the location of LLAs and associated policy. Also sometimes referred to as Special Landscape Areas (SLA), for example by Aberdeenshire Council.
LNCS	Local Nature Conservation Site is a non-statutory designation given by local authorities to areas of locally important nature. LNCS are intended to safeguard biodiversity and geodiversity of at least local importance.
LNR	Local Nature Reserves are areas of natural heritage that are locally important.
LoD	Limits of Deviation (LOD) comprise an area which defines the practical limits within which micro-siting of the OHL infrastructure and access tracks, can occur within the terms of the s37 consent. The purpose of Limits of Deviation is to allow flexibility within a s37 consent for the final micro-siting of individual towers/poles or access tracks to respond to localised ground conditions, topography, engineering, and environmental constraints.
Micro-siting	The process of positioning individual support structures (such as OHL towers) to avoid localised environmental or technical constraints.
Mitigation	Term used to indicate avoidance, remediation or alleviation of adverse environmental impacts.
Mixed Woodland	Mixed woodland is defined as having 10-90% of either broadleaved or conifer in the canopy.
National Forest Estate	The National Forest Estate includes over a third of Scotland's woodland area. Forestry and Land Scotland (FLS) manages the National Forests and Land on behalf of Scottish Ministers.
Necessary Wayleaves	A wayleave granted by The Scottish Ministers under Schedule 4 of the Electricity Act 1989 on behalf of a landowner if it is deemed expedient that such a wayleave should be granted, but only sought in circumstances where that landowner will not grant a Wayleave voluntarily.
NFI	The National Forestry Inventory is a woodland data map covering all forest and woodland areas over 0.5 hectare with a minimum of 20% canopy cover, or the potential to achieve it, and a minimum width of 20 metres.
Operational Corridor	The area either side of the OHL which needs to remain clear of trees for operational safety and maintenance.
OHL	Overhead line is an electric line installed above ground, usually supported by lattice steel towers.
Plantation Woodland	Woodland of any age that obviously originated from planting.
Potential Alignment	The option which the Applicant has identified as the best balance of technical and environmental impact considerations identified through initial appraisal. This is then subject to consultation with stakeholders, where local and previously unknown considerations may confirm or alter the initial preference. Once confirmed, this becomes the Proposed Alignment to take forward to the next stage of project development.

Term	Definition
PiC	Properties in Care are a collection of monuments, which define significant aspects of Scotland's history, brought into care for their long-term preservation and public benefit through the <i>Ancient Monuments and Archaeological Areas Act 1979</i> . They are managed by HES of behalf of Scottish Ministers.
Proposed Alignment	An alignment taken forward to consent application. It comprises a defined centre line for the overhead line and includes an indicative support structure (tower or pole) schedule, also specifying access arrangements and any associated construction facilities.
Proposed Corridor	A corridor for the OHL taken forward following stakeholder consultation to the routeing stage of the OHL process.
Proposed Route	A route taken forward following stakeholder consultation to the alignment selection stage of the OHL routeing process. The Proposed Route is the approximately 1 km wide route through sections A-F.
RAG Rating	A Red, Amber, Green rating provided to allow for a comparison between different options being appraised.
Ramsar Site	Wetlands of international importance that have been designated to reflect their representative, rare or unique wetland types or for their importance in conserving biological diversity.
Refined Route	A route approximately 500 m wide, within which we aim to identify an optimal alignment.
Route	A linear area of approximately 1 km width (although this may be narrower/wider in specific locations in response to identified constraints), which provides a continuous connection between defined connection points.
Riparian Woodland	Woodland on the banks of natural bodies of water and particularly rivers.
SAC	Special Areas of Conservation are designated under Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora (known as the Habitats Directive), to ensure that rare, endangered or vulnerable habitats or species of community interest are either maintained at or restored to a favourable conservation status.
Schedule 1 Species	Birds listed on Schedule 1/A1/1A of the Wildlife & Countryside Act 1981, for which it is an offence to intentionally or recklessly disturb at, on or near an 'active' nest. The following are included in the schedules: Schedule 1 – birds protected by special penalties; Schedule 1A – birds that may not be intentionally or recklessly harassed at any time; and Schedule A1 – birds whose habitually used nests may not be intentionally or recklessly taken, damaged, destroyed or otherwise interfered with when not in use.
Scheduled Monument	A monument which has been scheduled by the Scottish Ministers as being of national importance under the terms of the <i>Ancient Monuments and Archaeological Areas Act 1979</i> .
Section 37 application	An application for development consent under Section 37 of the <i>Electricity Act 1989</i> .
Semi-Natural Woodland	Woodland that does not obviously originate from planting. The distribution of species will generally reflect the variations in the site and the soil. Planted trees must account for less than 30% of the canopy composition.
SPA	Special Protection Area are designated under Directive 2009/147/EC on the Conservation of Wild Birds (the Birds Directive) to protect important bird habitats.
SPP	Species Protection Plan. Developed to document general procedures, legislation and requirements for ensuring protection to a variety of species.
SSSI	Sites of Special Scientific Interest are areas of national importance designated by NatureScot under the Nature Conservation (Scotland) Act 2004. The aim of the SSSI network is to maintain an adequate representation of all natural and semi-natural habitats and native species across Britain.
Stakeholders	Organisations and individuals who can affect or may be affected by SSEN Transmission works.
Study Area	A defined area for the consideration of environmental effects (including direct, indirect and cumulative) on each relevant factor listed under Regulation 4(3) of the EIA Regulations.

Term	Definition
Substation	A node on the network to allow safe control of the electricity network. This could include convergence of multiple circuits, transformation of voltage or other functions to maintain and operate the electricity network.
Suspension Tower	Support structure (tower) used on straight sections of the OHL.
The National Grid	The electricity transmission network in Great Britain.
UK BAP	The UK Biodiversity Action Plan was published in 1994 after the Convention on Biological Diversity. It summarised the most threatened species and habitats in the UK and gave detailed plans for their recovery.
UXO	Unexploded Ordnance are military ammunition or explosive device that has failed to function as intended.
Wayleave	A voluntary agreement entered into between a landowner, upon whose land an OHL is to be constructed, and SSEN Transmission. SSEN Transmission may also make an application for a 'Necessary Wayleave' to Scottish Ministers where voluntary agreement cannot be reached.
Wet Woodland	Wet woods occur on soils that are often or seasonally wet, either because of flooding, or because of the landform and soil type. They are found along streams and rivers; on floodplains and at the edges of lakes; in peaty hollows; and at the margins of fens, bogs and mires. These woodland types can occur as small pockets within larger, drier woodlands.
Woodland	Woodland is defined as vegetation dominated by trees more than 5 m high when mature, forming a distinct, although sometimes open, canopy.

APPENDIX A: KEY CONSTRAINTS FOR SECTIONS A TO F

This appendix presents the key environmental constraints and land use for the Potential Alignment design development in Sections A to F of the Proposed Route.

The tables presented in this appendix detail the baseline constraints and the findings of the appraisals based on a study area which comprises the alignment and its LoD, defined here as 100 m either side of the alignment.

Table A1. Environmental Constraints in Section A (Route A1)

Topic and Criteria	Summary of Key Constraints for the Potential Alignment
Natural Heritage	
Designations	<p>Designations</p> <p>The Potential Alignment intersects one statutory European designated site. Two tributaries which form part of the River Tay Special Area of Conservation (SAC) are crossed by the northern section of the Potential Alignment: the Kerbet Water (NGR NO 408 481) to the northwest of Douglastown, and the Dean Water (NGR NO 407 492) to the southwest of Forfar. The site is designated for otter (<i>Lutra lutra</i>), river lamprey (<i>Lampetra fluviatilis</i>), brook lamprey (<i>Lampetra planeri</i>), sea lamprey (<i>Petromyzon marinus</i>), Atlantic salmon (<i>Salmo salar</i>), and clear-water lakes or lochs with aquatic vegetation and poor to moderate nutrient levels.</p> <p>The Potential Alignment does not intersect any statutory international or national designated sites.</p> <p>There is one non-statutory national designation which is intersected by the eastern edge of the Potential Alignment. A woodland block, classified on the Ancient Woodland Inventory (AWI)¹ as Long Established Woodland of Plantation Origin (LEPO)², is located to the north of Hayston Hill (NGR NO 40562 45344). It is noted on the Native Woodland Survey of Scotland (NWSS) to include extents of upland oakwood.</p> <p>The Potential Alignment does not intersect with any regionally designated site. The closest site is Dighty Burn Local Nature Conservation Site (LNCS) (NGR NO 40006 34116), located approximately 4 km to the south of the option Potential Alignment; this LNCS is hydrologically connected to the area within the southernmost extent of the Potential Alignment LoD which drains to the Fithie Burn.</p>
Protected Species	<p>Protected Species</p> <p>The Potential Alignment intersects habitats that may be suitable to support the following European Protected Species (EPS):</p> <ul style="list-style-type: none"> • Watercourses, primarily the River Tay catchment as well as other smaller watercourses and field drains, support habitat suitable for otter and beaver. The closest record of otter within the last 15 years was located approximately 200 m east of the edge of the LoD in Douglastown in 2012. There were several records of beaver located within the LoD, notably along the Kerbet Water and Dean Water. Records show that this species is currently spreading north and east through the catchment of the River Tay. • Bats may be present roosting in the woodlands and trees intersected by the Potential Alignment and are likely to use linear features such as treelines, hedgerows and watercourses located throughout the Potential Alignment for foraging and commuting. The closest record of a bat within the last 15 years was of a soprano pipistrelle (<i>Pipistellus pygmaeus</i>) located approximately 2.1 km south of the Potential Alignment, in Bridgefoot in 2014. • The Potential Alignment intersects land that has some limited potential for great crested newt (<i>Triturus cristatus</i>) to be present in non-flowing waterbodies such as ponds. Habitat suitability in northeast Scotland is considered suboptimal³ and the distribution of this species is limited⁴. During field surveys in 2023, ponds with some limited suitability were confirmed to be present within 500 m of the Potential Alignment, including southeast of Arniefoul and at Upper Hayston. However, there are no publicly available records of great crested newt within 10 km of the Potential Alignment within the last 15 years.

¹ NatureScot (2021). A guide to understanding the Scottish Ancient Woodland Inventory (AWI). Available at: <https://www.nature.scot/doc/guide-understanding-scottish-ancient-woodland-inventory-awi>

² LEPO woodlands comprise categories 1b and 2b on the AWI. These woodlands are described by NatureScot (2021) as: "interpreted as plantation from maps of 1750 (1b) or 1860 (2b) and continuously wooded since. Many of these sites have developed semi-natural characteristics, especially the oldest ones, which may be as rich as Ancient Woodland."

³ O'Brien, D., Hall, J., Miro, A., and Wilkinson, J. (2017). Testing the validity of a commonly-used habitat suitability index at the edge of a species' range: great crested newt *Triturus cristatus* in Scotland. *Amphibia-Reptilia* 38 (2017): 265-273.

⁴ Wilkinson, J.W., Arnell, A., Driver, D. & Driver, B. (2014). Elaborating the distribution of the great crested newt in Scotland (2010-2011). Scottish Natural Heritage Commissioned Report No. 793.

Topic and Criteria	Summary of Key Constraints for the Potential Alignment
	<p>The Potential Alignment intersects habitats that may be suitable to support the following UK Biodiversity Action Plan (UKBAP)⁵ species:</p> <ul style="list-style-type: none"> • Pine marten (<i>Martes martes</i>) and red squirrel (<i>Sciurus vulgaris</i>) are likely to make use of the woodlands that are intersected by the Potential Alignment. Occasional records of pine marten were identified within 10 km of the Potential Alignment within the last 15 years, the closest publicly available record of which was located approximately 5.1 km east of the edge of the LoD at Inverarity in 2012. Saving Scotland’s Red Squirrels online map⁶ indicates there have been sightings of red squirrel within suitable woodland habitat crossed by the Potential Alignment as recently as 2024. The nearest publicly available record was located to the east of the Potential Alignment at Douglastown in 2020. Field data from surveys undertaken in 2023 confirmed the presence of red squirrel in the wider area of Potential Alignment Section A, but did not identify evidence of pine marten. • Water vole (<i>Arvicola amphibius</i>) may utilise smaller watercourses and field drains throughout the Potential Alignment, although records are scattered within the area. The nearest publicly available record of a water vole in the last 15 years was located approximately 6.6 km northwest of the Potential Alignment at Kirriemuir in 2014. The 2023 field surveys identified watercourses crossed by the Potential Alignment which are suitable for water vole but did not identify any evidence of water vole. • Species of fish listed on the UK BAP (eg brown trout (<i>Salmo trutta</i>)) are known to be present within the River Tay and are likely to be present within tributaries of the River Tay which are crossed by the Potential Alignment. • Brown hare (<i>Lepus europaeus</i>) will utilise farmland which is crossed by the Potential Alignment. The closest record within the last 15 years was identified approximately 4 km east of the edge of the LoD at Inverarity in 2017. Surveys undertaken in 2023 confirmed the presence of brown hare in the wider landscape. • Upland habitats crossed by the Potential Alignment between Tealing and Glamis may be suitable for mountain hare (<i>Lepus timidus</i>). There were no publicly available records of mountain hare within the last 15 years within 10 km of the Potential Alignment. Surveys undertaken in 2023 identified habitats suitable to support mountain hare within the landscape but did not identify any evidence of mountain hare. • Hedgehog (<i>Erinaceus europaeus</i>) is likely to be present along woodland edges and in gardens crossed by the Potential Alignment. The closest record within the last 15 years identified was approximately 8.9 km east of the edge of the LoD at Burnside of Kirkbuddo. Field surveys did not record evidence of hedgehog within the Potential Alignment but did identify habitats with the potential to support hedgehog throughout the Potential Alignment. • Reptiles such as slow worm (<i>Anguis fragilis</i>) may be present in gardens, grasslands, woodland edges and hedges crossed by the Potential Alignment. Occasional records of reptiles were identified within 10 km of the Potential Alignment within the last 15 years, the closest of which was of a common lizard approximately 5.2 km east of the edge of the LoD on Dod Hill in 2023. Field data from surveys in 2023 confirmed that reptiles, including the common lizard (<i>Zootoca vivipara</i>) were present within the landscape crossed by the Potential Alignment to the north of Finlarg Hill. • Amphibians such as common toad (<i>Bufo bufo</i>) will be present in gardens and wetland habitats crossed by the Potential Alignment. Occasional records of amphibians were identified within 10 km of the Potential Alignment within the last 15 years, the closest of which was of a common toad approximately 5.4 km northeast of the edge of the LoD at North Quilcoe in 2023. Field data from surveys in 2023 confirmed that amphibians, including the common toad were present within the landscape crossed by the Potential Alignment to the northwest of Douglastown, between the Kerbet Water and Dean Water. <p>Other protected or notable species that may be present within the habitats intersected by the Potential Alignment include:</p> <ul style="list-style-type: none"> • Badger (<i>Meles meles</i>) will utilise areas of woodland and farmland. Field data from surveys in 2023 confirmed that badger is present within the landscape crossed by the Potential Alignment.

⁵ UK BAP. Available at: <https://data.jncc.gov.uk/data/bdd8ad64-c247-4b69-ab33-19c2e0d63736/UKBAP-UKListPriorityHabitatsSpecies-V1.4-2010.xls>

⁶ Saving Scotland’s Red Squirrels Online Map (2023 Data). Available at: <https://scottishsquirrels.org.uk/squirrel-sightings/>

Topic and Criteria	Summary of Key Constraints for the Potential Alignment
Habitats	<p>Habitats</p> <p>Desk study and field survey data indicate that the habitats crossed by the Potential Alignment are dominated by farmland comprising a mix of arable with pasture, pockets of woodland, principally of commercial forestry, with some areas of upland habitats including heath.</p> <p>There are areas of Annex 1 habitats within Potential Alignment Section A; these are limited in extent to some areas of upland habitats. Field data from surveys in 2023 noted extents of dry heath habitats (H4030 European dry heaths) at Hayston Hill, Finlarg Hill and Ironside Hill, which form part of the Sidlaw Hills and are partially crossed by the Potential Alignment.</p> <p>There are some limited pockets of potential Groundwater Dependent Terrestrial Ecosystems (GWDTE), for example marshy grasslands and upland acid flushes, which are within the LoD of the Potential Alignment.</p>
Ornithology	<p>Designations</p> <p>The Potential Alignment does not coincide directly with any Special Protected Area (SPA). However, it intersects land which has connectivity with the core foraging ranges of some qualifying features, including goose species and herring gull (<i>Larus argentatus</i>), of the following SPAs:</p> <ul style="list-style-type: none"> • The Firth of Tay and Eden SPA located approximately 8.4 km to the south of the Potential Alignment. • The Outer Firth of Forth and St. Andrew’s Bay complex SPA, located approximately 8.2 km to the southeast of the Potential Alignment. • Loch of Kinnordy SPA (which is also an RSPB reserve), located approximately 6 km to the northwest of the Potential Alignment. • Lintrathen Loch SPA, located approximately 13 km to the northwest of the Potential Alignment. <p>Schedule 1 Birds</p> <p>The Potential Alignment crosses habitats including areas of woodland and open moorland/heathland, that have the potential to provide breeding/roosting opportunities for Schedule 1 birds. Breeding/roosting populations of Schedule 1 species may be sensitive to disturbance during construction, including some raptor species. During operation, some Schedule 1 raptor species may be sensitive to collision impacts.</p> <p>Birds of Conservation Concern (BoCC)</p> <p>The land crossed by the Potential Alignment is likely to support breeding habitats for BoCC red-listed birds, comprising arable, pasture and open heath/moorland. The Potential Alignment also coincides with higher levels of wader sensitive habitat and therefore has a higher relative abundance. Habitats present that are likely to support breeding populations of BoCC red-listed birds include:</p> <ul style="list-style-type: none"> • Land consisting primarily of farmland, including arable, pasture, wet grassland and hedgerows, may support red-listed waders. Farmland habitats are also likely to support farmland specialists such as grey partridge (<i>Perdix perdix</i>), as well as red-listed passerines, including skylark (<i>Alauda arvensis</i>), starling (<i>Sturnus vulgaris</i>), house sparrow (<i>Passer domesticus</i>), corn bunting (<i>Emberiza calandra</i>) and yellowhammer (<i>Emberiza citronella</i>). • Areas of woodland crossed by the Potential Alignment may support red-listed species such as the spotted flycatcher (<i>Muscicapa striata</i>) and tree sparrow (<i>Passer montanus</i>). • Wetland areas, including rivers and ditches, may support red-listed ducks and grebes. Upland moorland sites may also provide breeding and foraging areas for grouse and owls.

Topic and Criteria	Summary of Key Constraints for the Potential Alignment
<p>Hydrology / Geology / Hydrogeology</p>	<p>Surface and Groundwater Drinking Water Protected Area (DWPA)</p> <p>The entire length of the Potential Alignment is located within a groundwater DWPA. The Potential Alignment does not cross any designated surface DWPA's.</p> <p>Review of SEPA CAR licence abstraction data has not indicated the presence of any abstractions within the land crossed by the Potential Alignment LoD.</p> <p>There are no known Regulated (Type A) private water supplies (PWS) that are crossed by the Potential Alignment LoD.</p> <p>Aquifer Providing Regional / Local Resources</p> <p>Aquifers which are crossed by the Potential Alignment are mainly classified as moderate productivity (Class 2B), within which virtually all flow is through fractures and discontinuities in the bedrock. No highly productive aquifers have been identified within the Potential Alignment LoD. The remaining smaller areas are underlain by low productivity, Class 2C aquifers.</p> <p>Data derived from Angus Council, detailing the locations of private water supplies (PWS), indicates that there are four known properties that are supplied by small PWS (Type B14) which are potentially crossed by the Potential Alignment, as the exact abstraction source remains unknown. These include:</p> <ul style="list-style-type: none"> • Balkemback Farm (NGR NO 39091 38179) • Balluderon (NGR NO 37593 38675) • Templebank Farm (NGR NO 40334 46243) • Nether Arniefoul Farmhouse (NGR NO 39618 45504) <p>Lumley Den is a property which lies around 500 m east of the Potential Alignment LoD. Field investigations in 2023 showed Lumley Den was supplied by a groundwater spring fed lochan which is over 350 m east of the Potential Alignment LoD.</p> <p>Additionally, there may be some limited pockets of potential GWDTE habitats within the area of the Potential Alignment LoD, for example, marshy grasslands and upland acid flushes.</p> <p>Surface Waters or Aquifer Providing Water for Agricultural or Industrial Use</p> <p>The Potential Alignment crosses five mapped watercourses that are shown on 1:50K Ordnance Survey (OS) mapping. These are, from south to north:</p> <ul style="list-style-type: none"> • The upstream extent of the Tealing Burn, which is too small to be classified under the Water Framework Directive. • The western extent of the Potential Alignment crosses the upstream section of the Kilmundie Burn, where the Potential Alignment crosses the A928. The burn is too small to be classified by SEPA under the Water Framework Directive. • The Potential Alignment crosses an unnamed tributary of the Glen Ogilvie Burn, which is too small to be classified under the Water Framework Directive. • The northern section of the Potential Alignment, between Glamis Castle and Douglstown crosses the Kerbet Water, (Waterbody ID 6562), which was classified as overall 'Moderate ecological potential' by SEPA in 2020. • The northern section of the Potential Alignment, between Glamis Castle and Forfar, crosses the Dean Water/Treacle Burn (Forfar to Kerbet Water Confluence) (Waterbody ID 6556), which was classified as overall 'Moderate Ecological Potential by SEPA in 2020. <p>Based on SEPA Future Flood maps, there are several flood risk areas associated with watercourses crossed by the Potential Alignment. The widest flood extent is associated with the Dean Water crossing in the northern section of the Potential Alignment, which is approximately 570 m wide where the Potential Alignment crosses. The Kerbet Water also has a wide flood extent of approximately 550 m where the Potential Alignment crosses in the northern section.</p>

Topic and Criteria	Summary of Key Constraints for the Potential Alignment
	<ul style="list-style-type: none"> • Users of core paths around North Balluderon, Hillside of Prieston and near Jericho, who are likely to have open views of the surrounding landscape in open stretches of path. • Those travelling along the local road network, including the A928, particularly at Lumley Den, A94 and other B class and minor roads who experience sequential views of the surrounding landscape. • People at the promoted viewpoint at Windy Gates Cairns on Balkello Hill to the west of the Potential Alignment which has elevated panoramic views. • People visiting Glamis Castle north of Glamis.
Land Use	
Agriculture	<p>The southern section of the Potential Alignment, from south of Balkemback to west of Hillside of Prieston, crosses land used for arable and grazing. The centre of the Potential Alignment, from Hillside of Prieston to the west of Hayston Hill near Arniefoul, passes through heathland and shrub, and land used for agriculture. The northern section of the Potential Alignment, from Hayston Hill to the west of Forfar, is mainly comprised of land used for grazing, with smaller areas used for other agricultural activities and forestry. The Potential Alignment avoids larger settlements such as Douglastown in the northern section but crosses land close to several smaller settlements and individual dwellings.</p> <p>Agriculture</p> <p>The Potential Alignment intersects with several areas classed as prime agricultural land (Class 2 – land capable of producing a wide range of crops, or Class 3.1 – land capable of producing consistently high yields of a narrow range of crops and/or moderate yields of a wider range). The southern 9 km of the Potential Alignment predominantly intersects with land with lower land classifications between the proposed Emmock substation and Hayston, and the northern 5 km between Hayston and west of Nether Drumgley predominantly intersects with Class 2 and Class 3.1 land, interspersed with areas of lower land classifications which are located to the west and northwest of Ingliston.</p>
Forestry	<p>Forestry</p> <p>There are several woodland areas which are partially intersected by the Potential Alignment, from south to north:</p> <ul style="list-style-type: none"> • The eastern extent of the LoD intersects with a small conifer shelterbelt to the northwest of Balkemback (NGR NO 338082 728493) for approximately 70 m. • The LoD intersects with several small sparse mixed conifer shelterbelts to the west of Hayston Hill (NGR NO 40524 43371, NGR NO 40729 43987, NGR NO 40295 44932). • In the centre of the Potential Alignment, the eastern extent of the LoD intersects with a block of woodland with some commercial forestry (at NGR NO 40304 44971) on the northwest facing slope of Hayston Hill for approximately 200 m. <p>Other aspects of forestry including designated areas and habitats are addressed in criteria for Natural Heritage.</p>
Recreation	<p>Recreation</p> <p>There are no major recreational facilities within the Potential Alignment.</p> <p>The Potential Alignment traverses three core paths, from south to north:</p> <ul style="list-style-type: none"> • The Prieston to Glen Ogilvie path, which runs from Coldstream towards Gallow Hill, is crossed by the Potential Alignment in the southern section to the northwest of Coldstream. • The Jericho path, which runs from Jericho to Hayston Cottage is crossed by the Potential Alignment in the central section to the south of Jericho. • The Drumgley to Glamis Station path is crossed by the Potential Alignment in the northern section to the east of Haughs of Cossans.

Topic and Criteria	Summary of Key Constraints for the Potential Alignment
	The Potential Alignment crosses the Kerbet Water and the Dean Water which are trout fishing resources. The Potential Alignment spans the Kerbet Water to the northwest of Douglastown at the beat let by Strathmore Estate which extends downstream on both banks. The Potential Alignment spans the Dean Water to the southeast of Haughs of Cossans at the beat let by Strathmore Estate which extends downstream on both banks.
Planning	
Proposals	The Proposal of Application Notice (PAN) for the proposed 400 kV substation at Emmock, near Tealing was validated by Angus Council on 19 February 2024. A public consultation event was held on 7 March 2024 for this project. A further round of consultation was undertaken in June 2024 with public consultation events held on 5 June 2024 and 6 June 2024.

Table A2. Environmental Constraints in Section B of the Proposed Route (B1.1)

Topic and Criteria	Summary of Key Constraints for the Potential Alignment
Natural Heritage	
Designations	<p>Designations</p> <p>The Potential Alignment intersects with one statutory European designation. The River South Esk SAC, designated for freshwater pearl mussel and Atlantic salmon, and is crossed by the Potential Alignment in two locations:</p> <ul style="list-style-type: none"> • The central section of the Potential Alignment crosses the River South Esk between Tannadice and Inshewan. • The northern section of the Potential Alignment crosses the Noran Water between Welford and Noranside. <p>The Potential Alignment does not intersect with any other statutory international or national designated sites.</p> <p>The Potential Alignment intersects with a non-statutory national designated site comprising a block of woodland classified on the AWI as Ancient Woodland (of semi-natural origin) at NGR NO 476 602 comprising of broadleaved woodland.</p> <p>There are a number of non-statutory national designations which are intersected by the Potential Alignment, comprising blocks of woodland classified on the AWI as LEPO:</p> <ul style="list-style-type: none"> • An area of woodland near to Mosside of Ballinshoe (NGR NO 425 526) is noted on the NWSS to include extents of lowland mixed deciduous woodland. • A woodland block to the north of Woodside (NGR NO 443 550) is noted on the NWSS to comprise extents of upland birchwood. • An unnamed woodland at NGR NO 472 594, near Knowehead, classified as lowland mixed deciduous woodland during surveys conducted in 2023. • Boggie Wood at NGR NO 50476 62003, near Fern, with an extent of upland birchwood noted on the NWSS in the east. • Duns Wood, located near Menmuir, is intersected by the Potential Alignment in three locations: NGR NO 528 620, NGR NO 521 620 and NGR NO 525 619. Extents of upland birch woodland were noted during surveys in 2023. • Lochty Wood extends across the width of the LoD near Lochty in two locations: NGR NO 537 621 and NGR NO 538 621; field surveys in 2023 identified the woodland as a mosaic of upland birch and wet woodland, the latter as potential GWDTE. <p>The Potential Alignment intersects with one regionally designated site. Woodside LNCS is crossed by the Potential Alignment at NGR NO 43560 54001. The site is designated for birch woodland and semi-improved acid grassland. Observations of this site from the adjacent public road, combined with freely available aerial imagery, indicate that the site comprises an open mosaic of birch woodland and grassland.</p>
Protected Species	<p>Protected Species</p> <p>The Potential Alignment intersects habitats that may be suitable to support the following EPS:</p> <ul style="list-style-type: none"> • Watercourses, primarily the River South Esk and Noran Water (as well as other watercourses and field drains), which are crossed by the Potential Alignment support habitats suitable for otter. Occasional records of otter were identified within 10 km of the Potential Alignment within the last 15 years. The closest record was located approximately 1.5 km east of the edge of the LoD near the Lemno Burn, near Bogindollo in 2014. Field data from surveys undertaken in 2023 confirmed the presence of otter within the landscape crossed by the Potential Alignment. • Watercourses and waterbodies (as well as smaller watercourses and field drains) crossed by the Potential Alignment support habitats suitable for beaver, which is known to be present within the River Tay catchment. The closest record of beaver within the last 15 years was located approximately 200 m to the west of the Potential Alignment at Ballindarg in 2021. Records show that this species is spreading north and east through the catchment of the River Tay.

Topic and Criteria	Summary of Key Constraints for the Potential Alignment
	<ul style="list-style-type: none"> • Bats may be present roosting in the woodlands and trees crossed by the Potential Alignment and are likely to use linear features such as treelines, hedgerows and watercourses also located throughout the Potential Alignment for foraging and commuting. The closest record of a bat within the last 15 years was of a soprano pipistrelle approximately 1.6 km west of the Potential Alignment near Logie in 2015. • Scottish wildcat is unlikely to be present in the landscape crossed by the Potential Alignment given the proximity to human settlements and the lowland and intensively managed habitats present. The closest record of wildcat within the last 15 years was located approximately 4.8 km north of the Potential Alignment at Kirriemuir in 2018. Hybridisation is a major issue for the species, and the validity of this record is not known. Field surveys in 2023 did not identify evidence of wildcat, nor habitat suitable to support wildcat. • The Potential Alignment crosses land that has some limited potential for great crested newt to be present in non-flowing waterbodies such as ponds. Habitat suitability in northeast Scotland is considered suboptimal and the distribution of this species is limited. There are a small number of mapped ponds within the Potential Alignment, including northwest of Padanaram, east of Haughs of Ballinshoe, and northeast of Woodside. During field surveys in 2023, the waterbodies near Padanaram were noted to be overgrown with limited open water and evidence of waterfowl. Freely available aerial imagery indicates that the remaining mapped ponds there are likely to have limited open water. In addition, there are no publicly available records of great crested newt within 10 km of the Potential Alignment within the last 15 years. <p>The Potential Alignment intersects habitats that may be suitable to support the following UKBAP species:</p> <ul style="list-style-type: none"> • Pine marten and red squirrel are likely to utilise the woodlands that are crossed by the Potential Alignment. Occasional records of pine marten were identified within 10 km of the Potential Alignment within the last 15 years, the closest of which was located approximately 6.6 km southeast of the Potential Alignment at Inverarity in 2012. Saving Scotland's Red Squirrels online map indicates there have been numerous sightings of red squirrel in woodland crossed by the Potential Alignment. The nearest publicly available record of red squirrel was located within the LoD at Friendly Park in 2021. Field data from surveys undertaken in 2023 confirmed the presence of red squirrel in the landscape crossed by the Potential Alignment, but did not identify evidence of pine marten. • Water vole may utilise smaller watercourses and field drains that are crossed by the Potential Alignment. Records of this species are scattered within the area, with one record of water vole identified within 10 km of the Potential Alignment in the last 15 years, located approximately 5.1 km west of the Potential Alignment near Kinnordy in 2014. The 2023 field surveys identified watercourses crossed by the Potential Alignment which are suitable for water vole but did not identify any evidence of water vole. • The Potential Alignment crosses the River South Esk, Noran Water and tributaries of the River Tay, all of which are known to support species of fish listed on the UK BAP (eg brown trout). • Brown hare will utilise farmland which is crossed by the Potential Alignment. Occasional records of brown hare have been identified within 10 km of the Potential Alignment in the last 15 years, of which the closest was identified approximately 0.8 km southwest of the Potential Alignment near Bogindollo in 2014. Surveys undertaken in 2023 confirmed the presence of brown hare in the wider landscape. • Hedgehog is likely to be present along woodland edges and in gardens crossed by the Potential Alignment. There were no publicly available records of hedgehog within the last 15 years within 10 km of the Potential Alignment. Field surveys did not record evidence of hedgehog within the Potential Alignment but did identify habitats with the potential to support hedgehog throughout the Potential Alignment. • Reptiles such as slow worm may be present in gardens, grasslands, woodland edges and hedges intersected by the Potential Alignment. The closest record of a common lizard was identified approximately 4.6 km west of the Potential Alignment at Westmuir in 2022. Field surveys did not record evidence of reptiles within the Section B Potential Alignment but did identify habitats with the potential to support reptiles throughout. • Amphibians such as common frog and common toad will be present in gardens and wetland habitats intersected by the Potential Alignment. The closest record identified of a common toad within the last 15 years was approximately 0.7 km southeast of the Potential Alignment at North Quilcoe in 2023. Field data from surveys undertaken in 2023 confirmed the presence of amphibians in the landscape intersected by the Potential Alignment. Field surveys recorded common frog (<i>Rana temporaria</i>) in wetland habitats intersected by the Potential Alignment northwest of Padanaram, as well as further habitats with the potential to support amphibians throughout.

Topic and Criteria	Summary of Key Constraints for the Potential Alignment
Habitats	<p>Other protected or notable species that may be present within the habitats intersected by the Potential Alignment include:</p> <ul style="list-style-type: none"> Badger will be present within areas of woodland and farmland. Field data from surveys in 2023 confirms that badger is present within suitable habitat intersected by the Potential Alignment, such as in woodland near Careston. <p>Habitats</p> <p>Desk study and field survey data indicate that the habitats intersected by the Potential Alignment are dominated by farmland, comprising a mix of arable with pasture and some pockets of woodland, principally of commercial forestry.</p> <p>There is some potential for pockets of Annex 1 habitats to occur, particularly where there are remnant extents of semi-natural woodland. Field surveys undertaken in 2023 did not identify any large expanses of Annex 1 habitats that are intersected by the Potential Alignment. An area of LEPO woodland is located at Knowehead approximately 150 m north of the Potential Alignment; although this was noted during field surveys in 2023 to be heavily grazed and degraded, it has potential to qualify as the Annex 1 habitat H91A0 Old sessile oak woods with Ilex and Blechnum in the British Isles.</p> <p>There may be some limited pockets of GWDTE intersected by the Potential Alignment, such as marshy grasslands and wet woodland. Wet woodland was noted in Lochty Wood (NGR NO 53730 62101) which the Potential Alignment intersects with near Lochty, which was the potential to be GWDTE. Additionally, Duns Wood has the further potential to support GWDTE.</p>
Ornithology	<p>Designations</p> <p>The Potential Alignment does not coincide directly with any SPA. However, it intersects land which has connectivity with the core foraging ranges of some qualifying features, including pink-footed goose and / or greylag geese which have a core foraging range of up to 15-20 km. These SPA sites include:</p> <ul style="list-style-type: none"> The Loch of Kinnordy SPA, located approximately 5.7 km to the west of the Potential Alignment. Loch of Lintrathen SPA, located approximately 13.7 km to the west of the Potential Alignment. Dun’s Dish Site of Special Scientific Interest (SSSI), part of the Montrose Basin SPA, located approximately 7.6 km to the east of the Potential Alignment. The Firth of Tay and Eden Estuary SPA, located approximately 19.2 km to the south of the Potential Alignment. <p>Schedule 1 Birds</p> <p>The Potential Alignment crosses habitats including areas of woodland and farmland, that have the potential to provide breeding/roosting opportunities for Schedule 1 birds. Breeding/roosting populations of Schedule 1 species may be sensitive to disturbance during construction, including some raptor species. During operation, some Schedule 1 raptor species may be sensitive to collision impacts.</p> <p>Birds of Conservation Concern (BoCC)</p> <p>The land intersected by the Potential Alignment may support populations of birds listed on the red and amber lists of the BoCC, some of which are also listed as Schedule 1 species:</p> <ul style="list-style-type: none"> Land consisting primarily of farmland, including arable, pasture, wet grassland and hedgerows, may support red-listed waders and farmland specialists such as grey partridge, as well as red-listed passerines including skylark, starling, house sparrow, corn bunting and yellowhammer. Areas of woodland may support red-listed species such as the spotted flycatcher and tree sparrow. Wetland areas, including rivers and ditches, may support red-listed ducks and grebes. Farmland and wetland habitats may also support herring gulls.

Topic and Criteria	Summary of Key Constraints for the Potential Alignment
Hydrology / Geology / Hydrogeology	<p>Surface and Groundwater Drinking Water Protected Area (DWPA)</p> <p>The entire length of the Potential Alignment is located within a groundwater DWPA. The Potential Alignment does not cross any designated surface DWPAs, however, it is approximately 340 m south of the downstream extent of the Buttery Burn DWPA (Waterbody ID 23661).</p> <p>Review of SEPA CAR licence abstraction data has not indicated the presence of any abstractions within the land crossed by the Potential Alignment LoD.</p> <p>There are no known Regulated (Type A) PWS that are crossed by the Potential Alignment LoD.</p> <p>Aquifer Providing Regional / Local Resources</p> <p>The aquifers that are crossed by the Potential Alignment are classified as moderate productivity (Class 2B), within which virtually all flow is through fractures and discontinuities in the bedrock. No highly productive aquifers have been identified within the Potential Alignment LoD.</p> <p>Data derived from Angus Council detailing the locations of PWS, indicates that there are two properties that are supplied by a PWS (Type B) in close proximity to the Potential Alignment, both are located approximately 80 m north of the LoD: Balmadity Farm House (NGR NO 505 622), and Beechland (Kirkside) (NGR 538 622). Additionally, there may be some pockets of potential GWDTE habitats within the area of the Potential Alignment LoD, such as marshy grasslands and wet woodland.</p> <p>Surface Waters or Aquifer Providing Water for Agricultural or Industrial Use</p> <p>There are seven mapped watercourses that are shown on 1:50K Ordnance Survey (OS) mapping that are crossed by the Potential Alignment. There are, from south to north:</p> <ul style="list-style-type: none"> • Between Forestmuir Wood and A90 by Quilkoe, the Potential Alignment crosses two small tributaries named Black Burn and King Burn, which are too small to be classified by SEPA under the Water Framework Directive. • Between Craigeassie and Inshewan, the Potential Alignment crosses the River South Esk (White Burn Confluence to Estuary) (Waterbody ID 5799), which was classified by SEPA as overall 'Good' in 2020. • The Potential Alignment crosses Bog Burn between Baldoukie and Tannadice, which is too small to be classified by SEPA under the Water Framework Directive. • The Noran Water (Waterbody ID 5805) is crossed by the Potential Alignment between Vayne Castle and Noranside, which was classified by SEPA as overall 'Moderate' in 2020. • The Potential Alignment crosses the Cruick Water (Waterbody ID 5712) between Little Brechin and Nether Belliehill, which was classified by SEPA as overall 'Good ecological potential' in 2020. • The Potential Alignment crosses the Willies Mill Burn, which is too small to be classified by SEPA under the Water Framework Directive. <p>Based on SEPA Future Flood maps, there are several flood risk areas associated with the watercourses crossed by the Potential Alignment. The widest flood extent is associated with the crossing of the River South Esk, which is between 200 m and 470 m wide. There is another wide flood extent of approximately 310 m wide associated with the Cruick Water.</p>
Cultural Heritage	
Designations	<p>Designations</p> <p>There are no WHS or PiC within the Potential Alignment LoD, and no part of the Potential Alignment LoD intersects any GDL or Inventory Historic Battlefield.</p>

Topic and Criteria	Summary of Key Constraints for the Potential Alignment
Cultural Heritage Assets	<p>Within 1 km of the Potential Alignment, there are 13 Scheduled Monuments of national importance and of high sensitivity. The majority of the Scheduled Monuments date to the prehistoric period and include the remains of prehistoric settlements and enclosures (SM 5911, SM 6390, SM 6472 and SM 6514), Iron Age souterrains (SM 6371, SM 6315, SM 6332, SM 6408, SM 6409 and SM 6410), early prehistoric (Neolithic/ Bronze Age) burial cairns (SM 6314), a Roman Camp (SM 2308) and one medieval tower house (SM 162)). The closest Scheduled Monument, Baldoukie Souterrains (SM 6315) lies within 40 m of the Potential Alignment LoD.</p> <p>In addition, the Caterthun Hillforts (SM 90069), which are also a PiC, are located approximately 3.1 km north of the Potential Alignment LoD. These prehistoric hillforts have settings that include wide ranging views over the Mearns, and visibility from the Mearns, that contribute to their cultural significance.</p> <p>Those designated heritage assets most sensitive to the Potential Alignment (from potential effects on their settings) are either prominent landmarks and/or have long views across the landscape forming important aspects of their settings. These include hillforts, burial cairns and stone circles, or designed landscapes that have long distance views and vistas that contribute to their cultural significance. Key constraints identified include:</p> <ul style="list-style-type: none"> Scheduled Monuments: Ballinshoe Castle (SM 162), Battledykes Roman Camp (SM 2308), Law of Baldoukie, Barrow (SM 6314), Wellford Enclosure (SM 6390), and the Caterthun Hillforts (SM 90069). <p>The Angus Council SMR holds records for 13 sites of archaeological and cultural heritage interest within the Potential Alignment LoD, all are recorded as ‘standard’ entries (local heritage value and low sensitivity) within the SMR. They include four possible enclosures, a series of linear features, and the route of a former Roman Road (all surviving as cropmarks visible on aerial photographs), and a disused railway. The SMR sites are generally spread throughout the Potential Alignment LoD.</p> <p>Cultural Heritage Assets</p> <p>There are no Listed Buildings or Conservation Areas within the Potential Alignment LoD.</p> <p>Within 1 km of the Potential Alignment LoD, there are:</p> <ul style="list-style-type: none"> One Category A Listed Building, Balnamoon House, Sundial (LB 17700), of national importance and medium sensitivity. 20 Category B Listed Buildings of regional importance and medium sensitivity (the closest within 100 m of the edge of the Potential Alignment LoD). 15 Category C Listed Buildings of local importance and low sensitivity. <p>The Listed Buildings are thinly scattered within the 1 km buffer, except for a small cluster around Ballindarg (NGR NO 406 511) and in Tannadice Conservation Area (NGR NO 347 758). Most of the Listed Buildings comprise small residential properties (i.e. farmsteads and cottages), small parish churches, agricultural buildings (i.e. dovecots and corn mills) and bridges; all of which have generally localised settings and are not significant constraints. Those Listed Buildings that are most likely to be constraints to the Potential Alignment (from potential effects on their settings) are those that stand in rural, unenclosed settings, and which have key views or designed vistas (to and from their locations) across the landscape and which the Potential Alignment would intersect. Key constraints identified in regard to the Potential Alignment are Category B Listed Ballindarg House (LB 11689) and Noranside House (LB 17705).</p> <p>One Conservation Area, Tannadice (CA 539), of heritage value at the regional level and of medium sensitivity, lies approximately 550 m to the southeast of the edge of the Potential Alignment LoD. The Conservation Area is set down within the River South Esk valley, immediately north of the river and surrounded by undulating landscape. As such, it has a relatively localised river valley setting and is not considered to be a constraint on the Potential Alignment.</p> <p>There is one Non-Inventory Designed Landscape (NIDL), Inshewan House NIDL (NO45NW0072), that is intersected by the Potential Alignment. The NIDL is situated immediately north of the River South Esk. The NIDL forms the setting for Category B Inshewan House (LB 18027) and other associated Listed Buildings. It comprises largely of farmland and areas of woodland policies spread along the River South Esk. Key views from the House and the NIDL are to the southwest overlooking the River South Esk. The mixed woodland of the NIDL contributes to the surrounding scenery but there are few views into the NIDL from the surrounding roads.</p>
People	

Topic and Criteria	Summary of Key Constraints for the Potential Alignment
Proximity to dwellings	<p>The Potential Alignment extends for a length of approximately 21 km and passes around or close to a number of settlements including (from south to north) Forfar, Kirriemuir, Tannadice and Brechin. Individual residential properties and small settlements form a constraint where they are located in proximity to the edge of the Potential Alignment LoD resulting in potential for ‘pinch points’ for the OHL Potential Alignment design. There are a number of locations where concentrations and distributions of dwellings constrain the Potential Alignment, including in particular:</p> <ul style="list-style-type: none"> • Around Ballinshoe between Redford and Barnsdale in the southern section of the Potential Alignment. • Around Foreside of Cairn, Craigeassie and Murthill in the central section of the Potential Alignment. • To the northwest of Tannadice in the central section of the Potential Alignment. • Between Boggie and Balmaditty in the northern section of the Potential Alignment. • Around Montboy, Lochty and Hoodston at the northern end of the Potential Alignment.
Landscape and Visual	
Designations	<p>Designations</p> <p>The Potential Alignment does not intersect any designated landscapes and there are no designated landscapes within 1 km of the Potential Alignment.</p> <p>Angus Council are proposing to designate a number of Local Landscape Areas (LLAs) across the Angus Council region including the proposed River South Esk and Angus Glens LLA near Brechin. The central section of the Potential Alignment around Justinhaugh, crosses the River South Esk LLA for a length of approximately 2.5 km. The northern section of the Potential Alignment LoD is located approximately 700 m south of the proposed Angus Glens LLA.</p>
Landscape Character	<p>Landscape Character</p> <p>Much of the Potential Alignment LoD extends across landscape that is rural in character. This landscape intersected by the Potential Alignment LoD is characterised by gentle rolling agricultural lowlands and is generally open with large fields, ranging from medium to large scale. The landforms intersected by the Potential Alignment LoD are generally low lying and flat. However, there are some areas of smooth, undulating landforms and low ridgelines between Hilton of Fern and Peathill, where the Potential Alignment LoD intersects a low ridgeline which contributes to the character of the gently rolling agricultural landscape.</p> <p>Pockets and lines of trees characterised by deciduous and mixed woodland, are scattered across the landscape and although sparse, are characteristic features of the landscape and help to define field boundaries and the landform. Locations include Strathmore and Woodside at the southern end of the Potential Alignment, and at Roughmont Wood and Duns Wood near to the northern section of the Potential Alignment.</p> <p>The southern section of the Potential Alignment sits within the context of the A90 corridor which broadly runs parallel to the Potential Alignment between Nether Drumgley and Blairfeddon. A section of approximately 2 km of the southern part of the Potential Alignment between Nether Drumgley and Padanaram runs broadly parallel to the existing 275 kV Kintore to Tealing OHL.</p> <p>NatureScot has categorised Scotland’s landscapes into 79 areas, of which the Potential Alignment extends across the Strathmore and Mearns area. NatureScot has also categorised the landscape of Scotland to show LCTs, of which the Potential Alignment LoD intersects the Broad Valley Lowlands – Tayside LCT.</p>
Visual	<p>The Potential Alignment extends for a length of approximately 21 km and passes around or close to key areas where sensitive visual receptors are located. These visual receptors have the potential to form constraints and include:</p> <ul style="list-style-type: none"> • Those living and traveling around settlements located within the vicinity of the Potential Alignment, including (from south to north) Forfar, Kirriemuir, Tannadice and Brechin where open views to the wider surrounding landscape are available.

Topic and Criteria	Summary of Key Constraints for the Potential Alignment
	<p>There are no major recreational facilities, core paths or NCN routes within the Potential Alignment.</p> <p>There is one fishing beat intersected by the Potential Alignment. The River South Esk is an important fishing resource, and the Potential Alignment intersects one fishing beat near to the Inshewan Weir; the northern bank is managed by the Inshewan Estate and the opposite bank is managed by Kinnordy Estate and Eskhill Estate for Atlantic salmon and seatrout.</p>
Planning	
Proposals	No planning applications have been identified which intersect the Potential Alignment.

Table A3. Environmental Constraints in Section C (Route C1)

Topic and Criteria	Summary of Key Constraints for the Potential Alignment
Natural Heritage	
Designations	<p>Designations</p> <p>The Potential Alignment does not intersect any statutory international, European or national designated sites.</p> <p>There are a number of non-statutory national designations which are intersected by the Potential Alignment, comprising blocks of woodland classified on the AWI as LEPO:</p> <ul style="list-style-type: none"> • Little Brechin Wood (NGR NO 571 629) and Belliehill Wood (NGR NO 569 630) are located to the northwest of Brechin. These woodlands were noted during field surveys in 2023 to include extents of native woodland dominated by species of birch (<i>Betula</i> spp.) and oak (<i>Quercus</i> spp.). • Bankhead Wood (NGR NO 583 642), located to the northwest of Brechin, was noted during field surveys in 2023 to be dominated by a range of native broadleaved tree species. • An unnamed block of woodland (NGR NO 625 670) is located along the eastern bank of the River North Esk at Inveriscandye. Field surveys in 2023 recorded a range of native broadleaved tree species. • Capo Plantation (NGR NO 634 675) is located to the south of Edzell Airfield. Field surveys undertaken in 2023 noted that much of Capo Plantation had been felled. • Inverury Wood and Drumhendry Plantation (NGR NO 643 683) are located to the southeast of Edzell Airfield. These woodlands were noted during field surveys in 2023 to comprise a mix of birch woodland with extents of non-native conifer plantation. • Lady Jane’s Plantation (NGR NO 665 714) is located near Coldstream. Field surveys in 2023 recorded a mix of woodland types, including regenerating birch woodland, Scots pine plantations and extents of non-native Sitka spruce. • Greenbottom Wood (NGR NO 677 726) is located to the northwest of Laurencekirk. During field surveys in 2023, the area was noted to support a mix of woodland types, including regenerating birch woodland, Scots pine plantations and extents of non-native Sitka spruce. <p>The Potential Alignment does not intersect any regional designated sites.</p>
Protected Species	<p>Protected Species</p> <p>The Potential Alignment intersects habitats that may be suitable to support the following EPS:</p> <ul style="list-style-type: none"> • Watercourses, primarily the River North Esk as well as other watercourses and field drains, support habitat suitable for otter. During field surveys in 2023, otter was confirmed to be present on watercourses including the Cruick Water at Belliehill, and the West Water and River North Esk to the north of Stracathro. In addition, otter were reported by a local resident to be present on the Black Burn, which is crossed by the Potential Alignment near Haughhead. • Watercourses in the south have the potential to be used by beaver, the population of which is currently expanding eastwards and northwards from the catchment of the River Tay. There are populations recorded to the southwest, primarily at Forfar and Kirriemuir. These records are close to the upper reaches of the River South Esk catchment. This species is therefore expected to spread to within 10 km of the Potential Alignment via the River South Esk (if not already present and unrecorded) and is likely to spread further into the River North Esk in the coming years. Field surveys in 2023 did not identify evidence of beaver within the Potential Alignment LoD, but did identify habitat suitable to support beaver. • Bats are likely to be present roosting in the woodlands and trees crossed by the Potential Alignment, and to use linear features such as treelines, hedgerows and watercourses located throughout the Potential Alignment for foraging and commuting. Numerous records of bat were identified within 10 km of the Potential Alignment LoD within the last 15 years. The nearest record identified was a soprano pipistrelle in 2014 located approximately 3 km southeast of the north of the edge of the LoD in Laurencekirk.

Topic and Criteria	Summary of Key Constraints for the Potential Alignment
	<ul style="list-style-type: none"> • The Potential Alignment crosses land that has some limited potential for great crested newt to be present in non-flowing waterbodies such as ponds. Habitat suitability in northeast Scotland is considered suboptimal and the distribution of this species is limited. There are a small number of mapped ponds within the Potential Alignment, including settlement ponds associated with Capo Quarry (NO 6299 6703), surrounded by arable fields near Sauchieburn (NGR NO 6564 7073), and at Haughhead (NGR NO 6836 7267). There are no publicly available records of great crested newt within 10 km of the Potential Alignment LoD within the last 15 years. <p>The Potential Alignment intersects habitats that may be suitable to support the following UKBAP species:</p> <ul style="list-style-type: none"> • Pine marten and red squirrel are likely to utilise the woodlands located in the vicinity of the Potential Alignment. Occasional records of pine marten were identified within 10 km of the Potential Alignment LoD and within the last 15 years, the closest of which was approximately 0.9 km east of the Potential Alignment LoD near Luthermuir in 2012. Saving Scotland's Red Squirrels online map indicates there have been sightings of red squirrel in woodland in the vicinity of the Potential Alignment. Field surveys undertaken in 2023 confirmed the presence of red squirrel in the landscape crossed by the Potential Alignment, while a pine marten scat was recorded in woodland along the West Water approximately 200 m from the Potential Alignment. • There are no publicly available water vole records from the last 15 years within 10 km of the Potential Alignment LoD, although there are records of water vole further southwest towards Kirriemuir (north of the Loch Kinnordy), indicating their potential to be present in suitable habitat in the area of the Potential Alignment. The 2023 field surveys identified watercourses crossed by the Potential Alignment which are suitable for water vole but did not identify any evidence of water vole. • The Potential Alignment crosses the River North Esk which is known to support species of fish listed on the UK BAP (e.g. brown trout). • Brown hare will utilise farmland which intersects the Potential Alignment. Occasional records of brown hare have been identified within 10 km of the Potential Alignment in the last 15 years, the closest of which was approximately 1 km northeast of Stracathro near to the Potential Alignment in 2021. Surveys undertaken in 2023 confirmed the presence of brown hare in the landscape. • Hedgehog is likely to be present along woodland edges and in gardens intersected by the Potential Alignment. Occasional records of hedgehog were identified within 10 km of the Potential Alignment in the last 15 years, the closest of which was approximately 6.2 km from the edge of the LoD at Auchenblae in 2021. Field surveys did not record evidence of hedgehog within the Potential Alignment, but did identify habitats with the potential to support hedgehog throughout the Potential Alignment. • Reptiles such as slow worm may be present in gardens, grasslands, woodland edges and hedges intersected by the Potential Alignment. Occasional records of common lizard were recorded within 10 km of the Potential Alignment in the last 15 years, the closest of which was approximately 8.1 km north of the edge of the LoD close to Drumtochty Forest in 2012. One record of an adder was identified within 10km of the Potential Alignment in the last 15 years and was approximately 5.2 km north of the edge of the LoD in Clattering Bridge. Field surveys in 2023 did not identify any evidence of reptiles within the Potential Alignment, but did identify habitats with the potential to support reptiles. • Amphibians such as common toad will be present in gardens and wetland habitats. Occasional records of common toad were identified within 10 km of the Potential Alignment within the last 15 years, the closet of which was approximately 8.2 km south of the Potential Alignment close to Scotstoun in 2022. Field surveys in 2023 did not identify any evidence of amphibians within the Potential Alignment, but did identify habitats with the potential to support amphibians. <p>Other protected or notable species that may be present within the habitats crossed by the Potential Alignment include:</p> <ul style="list-style-type: none"> • Badger will utilise areas of woodland and farmland crossed by the Potential Alignment, with field data from surveys in 2023 confirming that badger is present within suitable habitat such as woodland at Haughhead. • Water shrew is a locally important species, identified by the North-East Scotland Biodiversity Partnership. No publicly available records have been identified within 10 km of the Potential Alignment within the last 15 years. Field surveys in 2023 did not identify any evidence of water shrew but did identify habitats suitable to support water shrew within the area of the Potential Alignment.

Topic and Criteria	Summary of Key Constraints for the Potential Alignment
Habitats	<p>Habitats</p> <p>Desk study and field survey data indicate that the habitats in the area of the Potential Alignment are dominated by farmland, comprising a mix of arable with pasture and some pockets of woodland, principally of commercial forestry.</p> <p>There is some potential for pockets of Annex 1 habitats to occur in the landscape in the area of the Potential Alignment, particularly where there are remnant extents of semi-natural woodland. Field surveys undertaken in 2023 did not identify any notable areas of Annex 1 habitats that intersect the Potential Alignment.</p> <p>There may be some limited pockets of GWDTE which are within the LoD of the Potential Alignment, such as marshy grasslands and wet woodland. Field surveys in 2023 have identified limited pockets of GWDTE habitat, comprising marshy grassland and wet woodland associated with a farm pond at Haughhead.</p>
Ornithology	<p>Designated Sites</p> <p>The Potential Alignment does not coincide directly with any SPA. However, the Potential Alignment does intersect land which has connectivity with the core foraging ranges of some qualifying features from two SPAs. The Potential Alignment is within 6 km of the small outlying Dun's Dish section of the Montrose Basin SPA / Ramsar Site (and SSSI) and is approximately 9 km north of the larger Montrose Basin section. The SPA designation's qualifying interests include wintering populations of greylag goose, pink-footed goose, dunlin, knot, oystercatcher, redshank, eider, shelduck, wigeon and its waterfowl assemblage. Pink-footed goose and greylag goose roost within the SPA but also feed beyond the SPA boundaries up to a distance of 20 km. The other qualifying interests do not habitually use habitats beyond the SPA boundary.</p> <p>The national conservation status of pink-footed goose and greylag goose populations is considered to be favourable but both species are sensitive to operational effects of OHLs due to the potential collision risk. As such, the Potential Alignment may affect foraging activities of the qualifying features of the Montrose Basin SPA.</p> <p>Schedule 1 Birds</p> <p>The Potential Alignment crosses habitats including areas of woodland and farmland, that have the potential to provide breeding/roosting opportunities for Schedule 1 birds. Breeding/roosting populations of Schedule 1 species may be sensitive to disturbance during construction, including some raptor species. During operation, some Schedule 1 raptor species may be sensitive to collision impacts.</p> <p>.</p> <p>Birds of Conservation Concern (BoCC)</p> <p>The land intersected by the Potential Alignment may support populations of birds listed on the red or amber lists of the BoCC, some of which are also listed as Schedule 1 species:</p> <ul style="list-style-type: none"> • Land consisting primarily of farmland, including arable, pasture, wet grassland and hedgerows, may support red-listed waders and farmland specialists such as grey partridge, as well as red-listed passerines including skylark, starling, house sparrow, corn bunting and yellowhammer. • Areas of woodland crossed by the Potential Alignment may support red-listed species such as the spotted flycatcher and tree sparrow. • Wetland areas, including rivers and ditches, may support red-listed ducks and grebes. Farmland and wetland habitats may also support herring gulls.
Hydrology / Geology / Hydrogeology	<p>Surface and Groundwater Drinking Water Protected Area (DWPA)</p> <p>The entire length of the Potential Alignment is located within a groundwater DWPA. The Buttery Burn surface DWPA (waterbody and protected area ID 23661) is located just to the north of the Potential Alignment at Mill of Balrownie (NGR NO 571 637). This DWPA is associated with a 6.25 km reach of the Buttery Burn and its associated surface water catchment area.</p> <p>Review of SEPA CAR licence abstraction data has not indicated the presence of any abstractions within the land crossed by the Potential Alignment LoD.</p>

Topic and Criteria	Summary of Key Constraints for the Potential Alignment
	<p>Based on available data, the Potential Alignment does not cross any Type A Regulated PWS.</p> <p>Aquifer Providing Regional / Local Resources</p> <p>Aquifers which are crossed by the Potential Alignment are classified as moderate productivity (Class 2B), within which virtually all flow is through fractures and discontinuities in the bedrock. No highly productive aquifers have been identified within the Potential Alignment LoD.</p> <p>Data derived from Angus and Aberdeenshire Council, detailing the locations of PWS, indicates that there are no known PWS (Type B) that are crossed by the Potential Alignment. There may be limited pockets of potential GWDTE habitats that are crossed by the Potential Alignment, such as marshy grasslands. Field surveys in 2023 have identified limited pockets of GWDTE habitat, comprising marshy grassland and wet woodland associated with a farm pond.</p> <p>Surface Waters or Aquifer Providing Water for Agricultural or Industrial Use</p> <p>There are ten mapped watercourses that are shown on 1:50K Ordnance Survey (OS) mapping that are crossed by the Potential Alignment:</p> <ul style="list-style-type: none"> • The southern section of the Potential Alignment crosses the Cruick Water (a tributary of the River North Esk entering from the south) (Waterbody ID 5712) which was classified as overall 'Good' by SEPA in 2020. • Two large unnamed drains between Cruick Water and West Water are crossed by the Potential Alignment. These are too small to be classified by SEPA under the Water Framework Directive. • The central section of the Potential Alignment crosses the West Water (Paphrie Burn to North Esk Confluence) (Waterbody ID 5713) between Edzell Woods and Incbare. The watercourse was classified as overall 'High' by SEPA in 2020. • The River North Esk (Water of Effock to Cruick Water) (Waterbody ID 5701), which was classified by SEPA as 'Good' in 2020, is crossed by the Potential Alignment between Inveriscandye and Stracathro. • The Potential Alignment crosses the Black Burn (Waterbody ID 5711) between Edzell Airfield and Inverury Wood, which was classified by SEPA as overall 'Moderate' in 2020. • There is a small watercourse named the Sauchie Burn, crossed by the Potential Alignment between Causewayend and Pitgarvie Wood, which is too small to be classified by SEPA under the Water Framework Directive. • Dowrie Burn (through Fettercairn) to the confluence with Luther Water (Waterbody ID 5707), which was classified by SEPA as 'Moderate Ecological Potential' in 2020, is crossed by the Potential Alignment to the north of Lady Jane's Plantation. • Devilly Burn (Waterbody ID 5708) which was classified by SEPA as overall 'Good' in 2020, is crossed by the Potential Alignment to the north of Greenbottom Wood. <p>Based on SEPA Future Flood maps, there are several flood risk areas associated with watercourses that are crossed by the Potential Alignment. The widest flood extent is at the West Water/ River North Esk crossing, which is approximately 1400 m wide along the Potential Alignment LOD.</p>
Cultural Heritage	
Designations Cultural Heritage Assets	<p>Designations</p> <p>There are no WHS or PIC within the Potential Alignment LOD, and no part of the Potential Alignment intersects any GDL or Inventory Historic Battlefield.</p> <p>Within 1 km of the Potential Alignment LoD there are nine Scheduled Monuments of national importance and of high sensitivity. The majority of the Scheduled Monuments date to the prehistoric period and include the remains of two cursus monuments (SM 6373 and SM 6374), two unenclosed settlements (SM 6514 and SM6368), a ring ditch (SM 6472), two barrows (SM 4444 and SM 6367) and a burial mound and stone setting (SM 4823). One site, a fort (SM 2829), dating to the Roman period is present at Stracathro. All of the</p>

Topic and Criteria	Summary of Key Constraints for the Potential Alignment
	<p>Scheduled Monuments are located towards the southern end of the Potential Alignment, and most are cropmark sites detected on aerial photographs. Three of the Scheduled Monuments, Mill of Balrownie Ring Ditch (SM 6472), Westside Barrows (SM 6367) and Westside Unenclosed Settlement (SM 6368) are just clipped by the Potential Alignment LoD. In addition, the Caterthun Hillforts (SM 90069), which are also a PIC, are located c.4 km north of the edge of the Potential Alignment LoD. These prehistoric hillforts have settings that include wide ranging views over the Mearns, and the visibility from the Mearns, that contribute to their cultural significance.</p> <p>Those designated heritage assets that are most sensitive to the Potential Alignment (from potential effects on their settings) are either prominent landmarks and/or have long views across the landscape as important aspects of their settings. These include hillforts, burial cairns and stone circles, or designed landscapes that have long distance views and vistas that contribute to their cultural significance. Key constraints identified include:</p> <ul style="list-style-type: none"> • Scheduled Monuments: Capo Plantation, Long Barrow (SM 4444), Witch Hillock, Burial Mound and Stone Setting (SM 4823), Stracathro Roman Camp (SM 2829), Inchbare Cursus (SM 6373 & SM 6374), Westside Barrows (SM 6367), Westside, Unenclosed Settlement (SM 6368), and the Caterthuns Hillforts (SM 90069). <p>The Aberdeenshire Council and Angus Council SMR holds records for 15 sites of archaeological and cultural heritage interest and two entries for archaeological investigations within the Potential Alignment LoD. One of these sites, a pit Potential Alignment (NO67SE0012) surviving as cropmarks detected on aerial photographs, is recorded in the SMR as being 'Regionally' significant and are of medium sensitivity. The additional sites are recorded as 'standard' entries (local heritage value and low sensitivity) within the SMR. They include the remains of a series of pits, linear features and a possible souterrain, four enclosures, linear features, a possible field system and ring ditch, and a pit Potential Alignment, all surviving as cropmark sites visible on aerial photographs, the site of two prehistoric burials and a burial cairn, the site of a former spinning mill, a field bank, former rig and furrow cultivation, the route of a dismantled railway, and the site of an alleged battle at Stracathro. The sites are largely clustered within the southern half of the Potential Alignment LoD.</p> <p>Cultural Heritage Assets</p> <p>There are no Listed Buildings or Conservation Areas within the Potential Alignment LoD.</p> <p>Within 1 km of the Potential Alignment LoD there are:</p> <ul style="list-style-type: none"> • Eight Category B Listed, of regional importance and medium sensitivity (the closest within 130 m of the edge of the Potential Alignment LoD). • 16 Category C Listed, of local importance and low sensitivity. <p>In addition, Category A Listed Stracathro House (LB 17804), of national importance and high sensitivity, is located 1.1 km south of the edge of the Potential Alignment LoD, close to the confluence of the West Water and the River Esk. The House stands on a ridge overlooking the West Water. The main elevation of the House is orientated northwest with views looking across the West Water and out across the Mearns with the Grampian Mountains beyond that form key aspects of its setting.</p> <p>Most of the Listed Buildings are clustered around Stracathro. Most of the Listed Buildings are small residential properties (i.e. farmhouses and former manses), agricultural buildings (i.e. dovecots and mills) or bridges, which have localised settings that do not represent significant constraints. Those Listed Buildings that are most likely to be constraints to the Potential Alignment (from potential effects on their settings) are those that stand in rural, unenclosed, settings, and which have key views or designed vistas (to and from their locations) across the landscape and which the Potential Alignment would cross. Key constraints identified in regard to the Potential Alignment are: Category A Listed Building, Stracathro House (LB 17804) and Category B Listed Building, Thornton Castle (LB 16295).</p> <p>The Potential Alignment intersects the western edge of Auchenreoch House NIDL (NO66NW0173) in the southern section of the Potential Alignment. It comprises a 19th century designed landscape (i.e. formal gardens, parkland/farmland and woodland polices) and forms the setting for Category B Listed Auchenreoch House. The NIDL is a key constraint.</p>
People	

Topic and Criteria	Summary of Key Constraints for the Potential Alignment
Proximity to dwellings	<p>The Potential Alignment extends for a length of approximately 20 km and passes around, or close to, a number of settlements including (from south to north) Brechin, Little Brechin, Inchbare, Edzell, North Water Bridge, Luthermuir, Fettercairn and Laurencekirk. Individual residential properties and small settlements form a constraint where they are located in proximity to the edge of the Potential Alignment LoD resulting in potential for ‘pinch points’ for the OHL Potential Alignment design. There are a number of locations where concentrations and distributions of dwellings constrains the Potential Alignment, including in particular:</p> <ul style="list-style-type: none"> • To the west of Little Brechin between Parkside and Langhaugh at the southern end of the Potential Alignment. • Between Inchbare and Westside in the southern section of the Potential Alignment. • To the northwest of North Water Bridge between Northgate and Steelstrath in the central section of the Potential Alignment. • To the northwest of Luthermuir between Primrosehill and Mains of Drumhendry in the central section of the Potential Alignment. • To the south of Fettercairn around Lady Jane’s Plantation in the northern section of the Potential Alignment. • To the southeast of Greenbottom Wood around Haughhead at the northern end of the Potential Alignment (this includes the caravans north of Haughhead cottages, which are occupied between March and August for seasonal workers).
Landscape and Visual	
Designations	<p>Designations</p> <p>The Potential Alignment does not intersect any designated landscapes and there are no designated landscapes within 1 km of the Potential Alignment LoD.</p>
Landscape Character	<p>Landscape Character</p> <p>Much of the land intersected by the Potential Alignment is rural in character. This landscape is characterised by gentle rolling agricultural lowlands and is generally open with large fields, ranging from medium to large scale. Pockets and lines of trees are scattered across the landscape and although sparse, are characteristic features and help to define field boundaries and the landform.</p> <p>The Potential Alignment intersects pockets of LEPO woodland, including Little Brechin Wood, located near to Nether Belliehill at the southern end of the Potential Alignment, and Capo Plantation near Northgate in the central section of the Potential Alignment. Some of these woodland areas are noted to be native woodland. There are also belts of broadleaved woodland along the West Water and River North Esk near Inchbare which are intersected by the Potential Alignment at two separate locations. The northern section of the Potential Alignment intersects plantations of mainly coniferous woodland at Lady Jane’s Plantation and Greenbottom Wood. These areas of woodland are characteristic features of the landscape.</p> <p>A short section of the southern end of the Potential Alignment, near Little Brechin, runs parallel to the existing 275 kV Kintore to Tealing OHL at a distance of approximately 1 km. Further notable vertical man-made elements in the vicinity of the Potential Alignment include a single wind turbine at Thornton Home Farm, approximately 1.2 km to the east of the northern section of the edge of the Potential Alignment LoD. Additionally, the Potential Alignment passes the disused Edzell Airfield north of Northgate, located approximately 300 m northwest of the edge of the LoD.</p> <p>NatureScot has categorised Scotland’s landscapes into 79 areas, of which the Potential Alignment crosses the Strathmore and Mearns area. NatureScot has also categorised the landscape of Scotland to show LCTs. The southern section of the Potential Alignment crosses the Broad Valley Lowlands – Tayside LCT and the northern section of the Potential Alignment crosses the Broad Valley Lowlands – Aberdeenshire LCT.</p>
Visual	<p>The Potential Alignment extends for a length of approximately 20 km and passes around or close to key areas where sensitive visual receptors are located. These visual receptors have potential to form constraints and include:</p>

Topic and Criteria	Summary of Key Constraints for the Potential Alignment
	<ul style="list-style-type: none"> • Those living and traveling around settlements located within the vicinity of the Potential Alignment, including (from south to north) Brechin, Little Brechin, Inchbare, Edzell, North Water Bridge, Luthermuir, Fettercairn and Laurencekirk where open views to the wider surrounding landscape are available. • Scattered residential properties along the entire section within close proximity of the Potential Alignment. • Users of core paths near the southwestern end of the Potential Alignment around Little Brechin, and around Luthermuir near the centre of the Potential Alignment, who are likely to have open views of the surrounding landscape in open stretches of path. • People on the slopes and summits of hills to the northwest, including those visiting White Caterthun and Brown Caterthun where elevated open views to the southeast across Strathmore are available. • Those travelling along the local road network, including the A90, B966, B974 other B class and minor roads who experience sequential views of the surrounding landscape.
Land Use	
Agriculture	<p>The Potential Alignment mainly crosses land used for agriculture and passes through some areas used for grazing and commercial forestry. The Potential Alignment avoids larger settlements such as Edzell in the central section but intersects with land close to several smaller settlements and individual dwellings.</p> <p>Agriculture</p> <p>The Potential Alignment intersects several areas classed as prime agricultural land (Class 2 – land capable of producing a wide range of crops, or Class 3.1 – land capable of producing consistently high yields of a narrow range of crops and/or moderate yields of a wider range). The southern 2 km of the Potential Alignment interacts with Class 2 and Class 3.1 land between West Hill and Nether Belliehill, and lower land classifications between Nether Belliehill and Auchenreoch. The central section of the Potential Alignment intersects prime agricultural land (Class 3.1 land) and lower land classifications from Auchenreoch to Luthermuir. The northern section of the Potential Alignment intersects with Class 2 and Class 3.1 land between Luthermuir and Pitnamoon.</p>
Forestry	<p>Forestry</p> <p>The Potential Alignment intersects with two woodlands identified as forming part of the National Forest Estate (managed by Forestry and Land Scotland) for a distance of approximately 1.4 km. The area is known as Inglismaldie and is formed of the Capo Plantation (NGR NO 63401 67481) north of Stracathro as well as Drumhendry Plantation (NGR NO 64325 68393) and Inverury Wood (NGR NO 64395 68356) north of North Water Bridge, which are located to the southeast of Edzell.</p> <p>The eastern extent of the Potential Alignment LoD intersects with Little Brechin Wood for approximately 380 m, comprising a commercial crop of conifer to the northwest of Little Brechin (NGR NO 57449 63323). The Potential Alignment intersects with Lady Jane’s Plantation for approximately 600 m, which is comprised of mature commercial forestry with coniferous and mature broadleaved amenity areas to the north of Luthermuir (NGR NO 66536 71434).</p> <p>Other aspects of forestry including designated areas and habitats are addressed in criteria for Natural Heritage.</p>
Recreation	<p>Recreation</p> <p>There are no major recreational facilities or core paths that are intersected by the Potential Alignment.</p> <p>The Potential Alignment crosses the River North Esk which is a game fishing resource. The Potential Alignment spans the river at the Lower Beat of the Edzell Water to the north of Stracathro at the beat let by Dalhousie Estate used for fly fishing.</p>
Planning	

Topic and Criteria	Summary of Key Constraints for the Potential Alignment
Proposals	<p>The following planning proposals have been identified which intersect with the Potential Alignment:</p> <ul style="list-style-type: none">• A consented planning application for the installation of two biomass CHP machines and drying floor (retrospective) at Clearie Moor Sawmill, is overlapped by the western extent of the Potential Alignment LoD (APP/2022/1464).• A consented planning application for the installation of two CHP machines, drying flood and biomass boiler (retrospective) at Clearie Moor Sawmill, is overlapped by the western extent of the Potential Alignment LoD (APP/2022/2074).• A consented planning application for the installation of 88 solar panels onto an existing shed roof at Clearie Moor Sawmill, is overlapped by the western extent of the Potential Alignment LoD (APP/2022/1468).

Table A4. Environmental Constraints in Section D (Route D4)

Topic and Criteria	Summary of Key Constraints for the Potential Alignment
Natural Heritage	
Designations	<p>Designations</p> <p>The Potential Alignment does not intersect any statutory international, European or national designated site.</p> <p>There are a number of non-statutory national designations which are intersected by the Potential Alignment, comprising blocks of woodland classified on the AWI as LEPO:</p> <ul style="list-style-type: none"> • Cammackmuir Plantation (NGR NO 708 745), located to the north of Laurencekirk, is noted to comprise extents of upland birchwood and wet woodland on the NWSS. Although the block of LEPO as mapped on the AWI extends through the Potential Alignment, this portion is no longer wooded and now comprises a field of modified grassland. As such, the extant woodland extends approximately two-thirds into the width of the western LoD. During field surveys in 2023, the woodland was noted to be dominated by downy birch (<i>Betula pubescens</i>) with a field layer that varied from relatively dry and grassy, to damp and marshy with rush species (<i>Juncus</i> spp.). • Woods of Redhall (NGR NO 742 770), located to the northwest of Fordoun, extends across the full width of the LoD. The woodland appears from aerial imagery to be a mixed plantation with evidence of windthrow. • Den Wood (NGR NO 747 779), located to the west of the Nursery Burn near Monboddo, extends approximately two thirds the width of the LoD. It is noted on the NWSS to include extents of wet woodland and lowland mixed deciduous woodland. • Three areas of woodland mapped on the AWI are located to the north of Glenberrie, two of which extend approximately half with width of the LoD. This includes Jacksbank Wood (NGR NO 770 830) and a block to the southwest near Cotbank (NGR NO 764 825); the former appears to no longer be woodland on aerial imagery, while the latter is only partially wooded such that the portion within the LoD largely comprises a grazed field. The third area near Cotbank (NGR NO 766 825) supports extant woodland and extends into the LoD by a few metres. <p>The Potential Alignment does not intersect any regional designated site.</p>
Protected Species	<p>Protected Species</p> <p>The Potential Alignment intersects habitats that may be suitable to support the following EPS:</p> <ul style="list-style-type: none"> • Watercourses, primarily the Bervie Water (as well as other watercourses and field drains), which are crossed by the Potential Alignment are suitable habitats for otter. Surveys undertaken in 2023 recorded an otter spraint under a bridge over a field drain north of Pittarow, located approximately 200 m north of the Potential Alignment. Otter are therefore likely to use all watercourses within the Potential Alignment for foraging, commuting and resting. • Bats may be present roosting in the woodlands and trees in the area of the Potential Alignment and are likely to use linear features such as treelines, hedgerows and watercourses also located throughout the area of the Potential Alignment for foraging and commuting. Numerous records of bat were identified within 10 km of the Potential Alignment within the last 15 years. The closest record of a bat within the last 15 years was a <i>Nathusius pipistrelle</i> (<i>Pipistrellus nathusii</i>) approximately 1.7 km south of the Potential Alignment, south of Fordoun in 2010. • The Potential Alignment intersects land that has some limited potential for great crested newt to be present in non-flowing waterbodies such as ponds. Habitat suitability in northeast Scotland is considered suboptimal and the distribution of this species is limited. There are a small number of mapped ponds within the Potential Alignment, including near Monboddo (NGR NO 7486 7871) and near Glenberrie (NGR NO 7564 8094). There are no publicly available records of great crested newt within 10 km of the Potential Alignment within the last 15 years. <p>The Potential Alignment intersects habitats that may be suitable to support the following UKBAP species:</p>

Topic and Criteria	Summary of Key Constraints for the Potential Alignment
	<ul style="list-style-type: none"> • Pine marten and red squirrel are likely to be present in the woodlands intersected by the Potential Alignment. Occasional records of pine marten were identified within 10 km of the Potential Alignment within the last 15 years. The nearest publicly available record of pine marten is from over 10 years ago from 2012 near East Cairnbeg, approximately 2 km northwest of the Potential Alignment at Auchenblae. Saving Scotland's Red Squirrels online map⁷ indicates there have been sightings of red squirrel in suitable woodland habitat crossed by the Potential Alignment. The most recent and closest record in 2024 to date is within the LoD and east of Tannadice in woodland along the River South Esk. The woodland in which this red squirrel was identified is intersected by the Potential Alignment (NO 5000 5983). Field data from surveys undertaken in 2023 confirmed the presence of both pine marten and red squirrel in the landscape crossed by the Potential Alignment, with signs of both species recorded in the wider extent of Fetteresso Forest. • Water vole records are scattered within this area. There are no publicly available records identified on the NBN Atlas within 10 km of the Potential Alignment, although there are records further north towards Stonehaven (north of the Bervie Water) indicating the potential for the presence of the species in suitable habitat crossed by the Potential Alignment. The 2023 field surveys identified watercourses crossed by the Potential Alignment which are suitable for water vole but did not identify any evidence of water vole. • The Potential Alignment crosses the Bervie Water and Luther Water watercourses which are known to support fish listed on the UK BAP (e.g. brown trout). • Brown hare is likely to be present in farmland which intersects the Potential Alignment. The closest record within the last 15 years was identified approximately 2 km south of the edge of the LoD in 2021. Field surveys undertaken in 2023 confirmed the presence of brown hare in the landscape. • Upland habitats crossed by the Potential Alignment may be suitable for mountain hare. The closest record within the last 15 years was identified northwest of Glenbervie in 2021 within a 10 km grid square which overlaps the Potential Alignment. • Hedgehog is likely to be present along woodland edges and in gardens crossed by the Potential Alignment. A small number of records of hedgehog were identified within 10 km of the Potential Alignment in the last 15 years, the closest of which was identified approximately 1.8 km west of the edge of the LoD in Auchenblae. Field surveys in 2023 did not record evidence of hedgehog within the Potential Alignment, but did identify habitats with the potential to support hedgehog throughout the Potential Alignment. • Reptiles such as slow worm may be present in gardens, grasslands, woodland edges and hedges that are crossed by the Potential Alignment. The closest record of an adder (<i>Vipera berus</i>) within the last 15 years was identified approximately 4.8 km northwest of the edge of the LoD at Clattering Bridge in 2020, while the closest record of a common lizard was identified approximately 2.8 km north of the edge of the LoD in Fetteresso Forest in 2021. Field surveys in 2023 did not record evidence of reptiles within the Potential Alignment but did identify habitats with the potential to support reptiles throughout the Potential Alignment. • Amphibians such as common toad will be present in gardens and wetland habitats that are crossed by the Potential Alignment. The closest record of a common toad within the last 15 years was identified approximately 2 km northwest of the edge of the LoD near Auchenblae in 2020. Field surveys identified habitats suitable for amphibians within the Potential Alignment but did not identify any evidence of amphibians. <p>Other protected or notable species that may be present within the habitats intersected by the Potential Alignment include:</p> <ul style="list-style-type: none"> • Badger will utilise areas of woodland and farmland that intersect the Potential Alignment. Records from NBN Atlas indicate that badger is present within 10 km of the Potential Alignment LoD, while field surveys recorded evidence of this species on a field boundary intersected by the Potential Alignment northeast of Haughhead. • Water shrew is a locally important species, identified by the North East Scotland Biodiversity Partnership. No publicly available records were identified on the NBN Atlas within 10 km of the Potential Alignment. The nearest available record is on the Cowie Water, west of Stonehaven. Field surveys in 2023 did not identify any evidence of water shrew but did identify habitats suitable to support water shrew within the Potential Alignment.

⁷ Saving Scotland's Red Squirrels Online Map (2023 Data): <https://scottishsquirrels.org.uk/squirrel-sightings/>

Topic and Criteria	Summary of Key Constraints for the Potential Alignment
Habitats	<p>Habitats</p> <p>Desk study and field survey data indicate that the habitats intersected by the Potential Alignment are dominated by farmland, comprising a mix of arable with pasture and pockets of woodland, principally of commercial forestry.</p> <p>There is some potential for limited pockets of Annex 1 habitats to occur along the Potential Alignment, particularly where there are remaining extents of semi-natural woodland.</p> <p>There may also be some limited pockets of GWDTE habitats, for example small areas of wet woodland and marshy grassland.</p>
Ornithology	<p>Designations</p> <p>The Potential Alignment does not coincide directly with any SPA. However, it does cross land which has connectivity with the core foraging ranges of some qualifying features of the Montrose SPA / Ramsar Site (and SSSI), located approximately 14 km to the south of the Potential Alignment, as well as the smaller outlying section of the SPA which is the Dun's Dish SSSI, located approximately 12 km to the south of the Potential Alignment. The qualifying interests of the SPA site includes: the wintering populations of greylag goose (<i>Anser anser</i>), pink-footed goose (<i>Anser brachyrhynchus</i>), dunlin (<i>Calidris alpina</i>), knot (<i>Calidris canutus</i>), oystercatcher (<i>Haematopus ostralegus</i>), redshank (<i>Tringa tetanus</i>), eider (<i>Somateria mollissima</i>), shelduck (<i>Tadorna tadorna</i>), wigeon (<i>Mareca penelope</i>) and its waterfowl assemblage.</p> <p>Approximately 8 km of the Potential Alignment LoD is located within the core foraging range of up to 20 km of the following qualifying features: pink-footed goose and greylag goose. The other qualifying interests do not habitually use habitats beyond the SPA boundary. The national conservation status of pink-footed goose and greylag goose populations is considered to be favourable but both species are sensitive to operational effects of OHLs due to potential collision.</p> <p>The northern section of the Potential Alignment LoD, at its closest point, is approximately 9 km to the west of the Fowlsheugh SPA (and SSSI) which is designated for breeding fulmar (<i>Fulmarus glacialis</i>), guillemot (<i>Uria aalge</i>), herring gull (<i>Larus argentatus</i>), kittiwake (<i>Rissa tridactyla</i>), razorbill (<i>Alca torda</i>) and its breeding seabird assemblage. At this distance, there is potential connectivity between the land crossed by the Potential Alignment and herring gull, if suitable foraging habitat is crossed by the Potential Alignment.</p> <p>Schedule 1 Birds</p> <p>The Potential Alignment crosses habitats including areas of woodland, farmland and moorland, that have the potential to provide breeding/roosting opportunities for Schedule 1 birds. Breeding/roosting populations of Schedule 1 species may be sensitive to disturbance during construction, including some raptor species. During operation, some Schedule 1 raptor species may be sensitive to collision impacts.</p> <p>Birds of Conservation Concern (BoCC)</p> <p>The land crossed by the Potential Alignment may support populations of birds listed on the red and amber lists of the (BoCC), some of which are also as Schedule 1 species:</p> <ul style="list-style-type: none"> • Land consisting primarily of farmland areas, including arable, pasture, wet grassland and hedgerows, may support red-listed waders, farmland specialists such as grey partridge (<i>Perdix perdix</i>), as well as red-listed passerines including skylark (<i>Alauda arvensis</i>), starling (<i>Sturnus vulgaris</i>), house sparrow (<i>Passer domesticus</i>), corn bunting (<i>Emberiza calandra</i>) and yellowhammer (<i>Emberiza citrinella</i>). • Areas of woodland intersected by the Potential Alignment may support red-listed species such as the spotted flycatcher (<i>Muscicapa striata</i>) and tree sparrow (<i>Passer montanus</i>). • Wetland areas, including rivers and ditches, may support red-listed ducks and grebes. Farmland and wetland habitats may also support herring gulls.
Hydrology / Geology / Hydrogeology	<p>Surface and Groundwater Drinking Water Protected Area (DWPA)</p> <p>The entire length of the Potential Alignment is located within a groundwater DWPA. The Potential Alignment does not cross any designated surface DWPAs.</p>

Topic and Criteria	Summary of Key Constraints for the Potential Alignment
	<p>Review of SEPA CAR licence abstraction data has not indicated the presence of any abstractions within the land crossed by the Potential Alignment LoD.</p> <p>Data derived from Aberdeenshire Council, detailing the locations of PWS, indicates that there is only one PWS source that is crossed by the Potential Alignment LoD at Howe of Mearns (NGR NO 70758, 74393). The source and properties served by this abstraction are unknown. Additionally, there is another PWS which supplies five properties at Cushnie Farmhouse and Cottages around 260 m east of the LOD edge (NGR NO 752 783). This source is a groundwater spring.</p> <p>Aquifer Providing Regional / Local Resources</p> <p>Aquifers which are crossed by the Potential Alignment are classified as moderate productivity (Class 2B) and low productivity aquifers, within which virtually all flow is through fractures and discontinuities in the bedrock. No highly productive aquifers are crossed by the Potential Alignment.</p> <p>There are no known properties that are supplied by small PWS (Type B)⁸ which are crossed by the Potential Alignment. There are two properties just outwith the Potential Alignment LOD including Burnhead Cottage (170 m west of LOD edge NGR NO 74578, 79228) and Waters Farm (110 m north of LOD edge NGR NO 77566, 83755). The Potential Alignment is not anticipated to cross extensive areas of GWDTE.</p> <p>Surface Waters or Aquifer Providing Water for Agricultural or Industrial Use</p> <p>There are six mapped watercourses shown on 1:50K OS mapping that are crossed by the Potential Alignment LoD:</p> <ul style="list-style-type: none"> • The southern section of the Potential Alignment crosses the Ducat Water (Waterbody ID 5709) to the north of Laurencekirk and was classified by SEPA as overall ‘Good ecological potential’ in 2020⁹. • The Luther Water (Waterbody ID 5706) is crossed by the Potential Alignment to the north of Pittarrow and was classified by SEPA as ‘Good ecological potential’ in 2020. • The Potential Alignment crosses the Bervie Water (Waterbody ID 23262) to the west of Glenbervie and was classified by SEPA as having ‘Moderate ecological potential’ in 2020. • To the west of Carmont Hill, the Carron Water (Waterbody ID 23257) is crossed by the Potential Alignment, which was classified by SEPA as having a ‘Moderate ecological potential’ in 2020. • Two tributaries of the Carron Water, which were too small to be classified by SEPA under the Water Framework Directive. <p>Based on SEPA Future Flood Maps¹⁰, the only watercourse crossed by the Potential Alignment with a large flood risk area is the Luther Water, located to the south of Auchenblae. There are several other small surface waterbodies and watercourses that are crossed by the Potential Alignment.</p>
Cultural Heritage	
Designations	Designations

⁸ Type B PWS classification relates to smaller, domestic supplies

⁹ SEPA. Water Classification Hub. Available at: <https://www.sepa.org.uk/data-visualisation/water-classification-hub/>

¹⁰ SEPA Future Flood Risk map. Available at: <https://map.sepa.org.uk/floodmaps/FloodRisk/FutureFloodMaps>

Topic and Criteria	Summary of Key Constraints for the Potential Alignment
<p>Cultural Heritage Assets</p>	<p>There are no WHS, Scheduled Monuments or PiC within the Potential Alignment LoD, and no part of the Potential Alignment LoD intersects with any GDL or Inventory Historic Battlefield.</p> <p>Within 1 km of the Potential Alignment LoD there are two Scheduled Monuments and one GDL, all of national importance and high sensitivity:</p> <ul style="list-style-type: none"> • Fordoun Homestead Moat (SM 2231) (NGR 735 770) lies c.300 m to the northwest of the Potential Alignment LoD and east of Fordoun House. The monument comprises the remains of a medieval moated settlement edged by broadleaved woodland which screen views from, and to, the monument. • Droop Hill Cairns (SM 4778) (NGR NO 771 804) is located north of the Bervie Water, c.300 m to the north of the Potential Alignment LoD. This monument comprises prehistoric settlement and a large spread of clearance cairns, which include burial cairns, extending over a large area of the summit of Droop Hill. • Glenbervie House GDL (GDL 194 (NGR NO 771 804) is located east of the Potential Alignment and c.620 m southeast of the Potential Alignment centreline. The GDL stands on the confluence of the Piketty Burn and the Bervie Water. The main views from the GDL are aligned east overlooking parkland and surrounding farmland. <p>Those designated heritage assets most sensitive to the Potential Alignment (from potential effects on their settings) are either prominent landmarks and/or have long views across the landscape as important aspects of their settings. These would include hillforts, burial cairns and stone circles, or designed landscapes that have long distance views and vistas that contribute to their cultural significance. Key constraints identified include:</p> <ul style="list-style-type: none"> • Scheduled Monument: Droop Hill Cairns (SM 4778) (NGR NO 755 815). • GDL: Glenbervie House GDL (GDL 194) (NGR NO 771 804) <p>The Aberdeenshire Council SMR holds records for 17 sites of archaeological and cultural heritage interest within the Potential Alignment LoD. Seven of these sites are recorded on the SMR as being 'Regionally' significant and are of medium sensitivity. These include the remains of a field system and stone clearance heaps at Jacksbank (NO78SE0019), an enclosure (NO77NW0024), an unenclosed settlement (NO77NW0026) several ring ditches and souterrains (NO77NE0031), an additional ring ditch (NO77NW0032) and a possible Roman Marching Camp (NO77NW0007), all visible as cropmark sites between Monboddo and Fordoun, and two cropmark sites of pit Potential Alignment (NO67SE0012) and an enclosure (NO77SW0020) to the south of the Ducat Water. The additional sites are all recorded as 'standard entries (local heritage value and low sensitivity) within the SMR. They include three linear features, surviving as cropmark sites detectable on aerial photographs, Fordoun Airfield, an old road or trackway, a mill lade, the site of a smithy, the site of a former building, and the findspots of a bronze medal and a burial cist burial, both discovered in the 19th century.</p> <p>Cultural Heritage Assets</p> <p>There are no Listed Buildings, Conservation Areas or NIDLs within the Potential Alignment LoD.</p> <p>Within 1 km of the Potential Alignment LoD there are:</p> <ul style="list-style-type: none"> • Eleven Category B Listed Buildings of regional importance and medium sensitivity (the closest within 80 m of the edge of the Potential Alignment LoD). • Six Category C Listed Buildings of local importance and low sensitivity. <p>The majority of the Listed Buildings are thinly scattered either side of the Potential Alignment, with a cluster around Glenbervie to the east of the Potential Alignment (NGR NO 767 805). They comprise largely of small residential properties (farmsteads), small parish kirks, agricultural buildings (ie dovecots and mills) and bridges, all of which have generally localised settings and are not significant constraints. Those Listed Buildings that are most likely to be constraints to the Potential Alignment (from potential effects on their settings) are those that stand in rural, unenclosed settings, and which have key views or designed vistas (to and from their locations) across the landscape and which the Potential Alignment would cross. Key constraints identified in regard to the Potential Alignment are Category B Listed Redhall House (LB 9652) (NGR NO 743 768), which lies c.80 m east of the edge of the Potential Alignment LoD, and Category B Listed Monboddo House (LB 9643) (NGR NO 744 782), which lie c.230 m to the west of the edge of the Potential Alignment LoD.</p>
<p>People</p>	

Topic and Criteria	Summary of Key Constraints for the Potential Alignment
Proximity to dwellings	<p>The Potential Alignment extends for a length of approximately 20 km and passes around or close to a number of settlements including (from south to north) Fordoun, Monboddo and Glenbervie. Individual residential properties and small settlements form a constraint where they are located in proximity to the edge of the Potential Alignment LoD resulting in potential for ‘pinch points’ for the OHL Potential Alignment design.</p> <p>There are two locations where concentrations and distribution of dwellings constrains the Potential Alignment:</p> <ul style="list-style-type: none"> to the northwest of Fordoun between Red Hall and Pittengardner in the southern section of the Potential Alignment. to the east of Auchenblae around Monboddo in the central section of the Potential Alignment.
Landscape and Visual	
Designations	<p>Designations</p> <p>The Potential Alignment does not intersect with any designated landscapes. However, the Braes of the Mearns Special Landscape Area (SLA) is located approximately 1 km to the northwest of the edge of the Potential Alignment LoD at its closest point. Aberdeenshire Council’s Local Development Plan (2022), Appendix 13: Aberdeenshire Special Landscape Area¹¹ lists the following ‘aspects and features’ (equivalent to special qualities) that are recognised through the SLA designation:</p> <ul style="list-style-type: none"> Strong contrast between the distinctive flat Howe and the dramatic ridge of the Mounth to the north. Clear expression of the Highland Boundary Fault, where Highland and Lowland Scotland meet. Intact historic farmed landscape of the Howe of the Mearns, with a strong structure of beech woodland and avenues along the foot of the slopes. Highly visible ridge viewed from across the landscape to the southeast, including from the A90, which defines the Howe of the Mearns. Cairn o’ Mount’s scenic viewpoint is a popular stopping place on the former old military road with views across the Howe and remains of Bronze Age burial cairns, which give the spot its name. There are also views inland to the Cairngorms and northwards. Strath Finella, an intimate wooded glen leading into the hills. Wooded estate landscapes including Fasque, Fettercairn and Drumtochty whose distinctive policies and tree belts give a richness and cultural diversity, which reinforces the contrast of landscape character with the simplicity of land cover of the adjacent uplands. They also have historical connections with national figures such as Gladstone. Well known literary associations of the Howe of the Mearns including the work of Lewis Grassie Gibbon.
Landscape Character	<p>Landscape Character</p> <p>The Potential Alignment intersects low lying farmland near Fordoun and the A90, and more elevated land between Auchenblae and Fetteresso Forest. Within this stretch, the Potential Alignment intersects Knock Hill, Droop Hill and elevated land at Jacksbank, all of which form high points within the landscape, and contribute to the characteristic rolling landform of the landscape. The Potential Alignment intersects the southern slopes of Fetteresso Forest which form part of the characteristic elevated backdrop of the lowland areas to the south.</p> <p>NatureScot has categorised Scotland’s landscapes into 79 areas. The southern section of the Potential Alignment intersects the Howe of the Means within the Strathmore and Mearns landscape, and the northern section of the Potential Alignment intersects the Mounth landscape area. NatureScot has also categorised the landscape of Scotland to show</p>

¹¹ Aberdeenshire Council (2022) Aberdeenshire Local Development Plan - October 2022 – Appendix 13 Aberdeenshire Special Landscape Areas. Available at: <https://online.aberdeenshire.gov.uk/ldpmedia/LDP2021/Appendix13AberdeenshireSpecialLandscapeAreas.pdf>

Topic and Criteria	Summary of Key Constraints for the Potential Alignment
	<p>LCTs. The southern section of the Potential Alignment intersects the Broad Valley Lowland LCT and the northern section of the Potential Alignment intersects the Coastal Farmed Ridges and Hills LCT.</p> <p>The Howe of the Mearns and Strathmore and Mearns are characterised by gentle rolling agricultural lowlands. The landscape is generally open with large fields, ranging from medium to large scale. Pockets and lines of trees are scattered across the landscape and although sparse, are characteristic features and help to define field boundaries and the landform.</p> <p>The landscape of the Mounth forms part of the Highland Boundary Fault at the foothills of the Grampian Mountains. This is a prominent landscape feature that forms the backdrop to the lowland areas to the south, particularly the lower lying land across Strathmore and Mearns to the southeast. This landscape also plays an important role as a transitional landscape between the low-lying Strathmore and Mearns area, and the uplands to the northwest. Although elevated and upland in nature, the area of the Mounth and Highland Boundary Fault crossed by the Potential Alignment is lower lying and less dramatic than areas of the Highland Boundary Fault to the southwest, including locations north of Fettercairn and within the Angus Glens. This, however, does not diminish the role that the Highland Boundary Fault plays at Fetteresso in forming the backdrop to the Strathmore and Mearns area.</p> <p>The landscapes of both Strathmore and Mearns and the Mounth are generally rural in character, although there are a number of notable existing vertical man-made elements within the landscape crossed by the Potential Alignment. These include:</p> <ul style="list-style-type: none"> • scattered individual and small groups of wind turbines at locations including south of Monboddo, at Droop Hill and at Jacksbank. • the existing 275 kV Fetteresso to Alyth OHL, which is currently being upgraded to 400 kV.
Visual	<p>The Potential Alignment extends for a length of approximately 17 km and passes around or close to key areas where sensitive visual receptors are located. These visual receptors have the potential to form constraints and include:</p> <ul style="list-style-type: none"> • Those living and traveling around settlements located within the vicinity of the Potential Alignment, including (from south to north) Fordoun, Auchenblae and Glenbervie where open views to the wider surrounding landscape are available. • Scattered residential properties along the entire section within close proximity of the Potential Alignment. • Users of core paths within the central section of the Potential Alignment, to the north of Fordoun, who are likely to have some open views of the surrounding landscape along open stretches of path. • Those travelling along the local road network, including the A90, B9120, B966 and other B class and minor roads, who experience sequential views of the surrounding landscape. • People travelling along the East Coast Main Line Railway located to the east of the Potential Alignment.
Land Use	
Agriculture	<p>The Potential Alignment mainly intersects land used for agriculture and passes through some small areas of forestry and land used for grazing. The Potential Alignment avoids larger settlements such as Fordoun and Auchenblae in the central section, and Glenbervie and Drumlithie in the northern section but intersects land close to several smaller settlements and individual dwellings.</p> <p>Agriculture</p> <p>The Potential Alignment intersects several areas of land classed as prime agricultural land (Class 2 – land capable of producing a wide range of crops, or Class 3.1 – land capable of producing consistently high yields of a narrow range of crops and/or moderate yields of a wider range). The southern 6 km of the Potential Alignment intersects predominantly</p>

Table A5. Environmental Constraints in Section E (Route E2/E4)

Topic and Criteria	Summary of Key Constraints for the Potential Alignment
Natural Heritage	
Designations	<p>Designations</p> <p>The Potential Alignment intersects with one statutory European designation. The River Dee SAC, designated for otter (<i>Lutra lutra</i>), freshwater pearl mussel (<i>Margaritifera margaritifera</i>) and Atlantic salmon (<i>Salmo salar</i>), and is crossed by the Potential Alignment in three locations:</p> <ul style="list-style-type: none"> • The northern section of the Potential Alignment crosses the Burn of Sheeoch to the east of Meikledams. • The northern section of the Potential Alignment crosses the Strathie Burn to the east of Meikledams, which flows into the Burn of Sheeoch. • The northern section of the Potential Alignment crosses the River Dee near Netherpark Quarry. <p>The Potential Alignment does not intersect any statutory international or national designated sites.</p> <p>The Potential Alignment intersects two non-statutory national designated sites comprising woodland classified on the AWI as Ancient Woodland (of semi-natural origin):</p> <ul style="list-style-type: none"> • A block of woodland near Mergie south of Slug Road at NGR NO 79123 89103. Surveys identified the area to be mixed woodland. • A block of woodland at Free Church Wood east of Meikledams (NGR NO 77437 95005). Field surveys identified riparian habitats comprising lowland mixed deciduous woodland. <p>There are two non-statutory national designations which are intersected by the Potential Alignment comprising woodland classified on the AWI and LEPO:</p> <ul style="list-style-type: none"> • Adjacent to the Ancient Woodland to the west at Mergie, an area of woodland is located to the south of the Slug Road (A957) to the north of Fetteresso Forest (NGR NO 79081 89059). Field surveys identified this woodland to be a coniferous plantation. • Free Church Wood is intersected by the western section of the LoD at NGR NO 77263 95122 to the east of Meikledams. Field surveys identified a Sitka spruce plantation and an operational corridor for an existing OHL through the east of the woodland. <p>The Potential Alignment intersects one regionally designated site. The River Dee LNCS is crossed in the northern section, northwest of Kirkton of Durriss and south of the A93 at NGR NO 76819 96765. The LNCS comprises the river (designated as an SAC) and a series of glacial and fluvio-glacial landforms and sediments, and contains oak, birch and wet woodland, shingle banks and species rich grasslands. The LNCS is noted to support many invertebrates and assemblages of birds.</p>
Protected Species	<p>Protected Species</p> <p>The Potential Alignment intersects with habitats that may be suitable to support the following EPS:</p> <ul style="list-style-type: none"> • Watercourses, primarily the Cowie Water (as well as other smaller watercourses and field drains), which are crossed by the Potential Alignment, provide suitable habitat for otter. A small number of records of otter were identified within 10 km of the Potential Alignment LoD and within the last 15 years. The closest record was located approximately 1.6 km west of the Potential Alignment LoD, close to Crathes in 2012. In addition, field surveys in 2023 identified signs of otter on the Cowie Water near Hill of Swanley. • Bats may be present roosting in the woodlands and trees in the area of the Potential Alignment and are likely to use linear features such as treelines, hedgerows and watercourses also located throughout the Potential Alignment LoD for foraging and commuting. The closest record of a bat was of a soprano pipistrelle approximately 4 km northwest of the edge of the LoD near Slug Wood, north of Slug Road in 2021. • The Potential Alignment intersects land that is on the boundary between lowland farmland and upland habitats which could provide suitable habitat for Scottish wildcat. The Potential Alignment intersects with a section of Durriss Forest; this extensive conifer plantation is suitable habitat for wildcat and is connected via upland areas to the wildcat priority areas of the Angus Glens, Strathbogie and Strathavon. There are no publicly available records identified of Scottish wildcat within 10 km of the Potential Alignment LoD.

Topic and Criteria	Summary of Key Constraints for the Potential Alignment
	<p>within the last 15 years. Field surveys did not identify any evidence of wildcat; however, given the highly elusive nature of this species and extremely low population size, this is to be expected as present.</p> <ul style="list-style-type: none"> The Potential Alignment intersects land that has some limited potential for great crested newt to be present in non-flowing waterbodies such as ponds. Habitat suitability in northeast Scotland is considered suboptimal and the distribution of this species is limited. Mapped ponds are present within the LoD, including in a conifer plantation west of Borrowfield (NGR NO 82460 93360), and near Currackstane (at NGR NO 81994 96102 and NGR NO 81906 96500). The condition of these ponds and their potential for great crested newts is considered to be limited due to factors such as wildfowl and acidification from adjacent conifers. In addition, there are no publicly available records of great crested newt within 10 km of the Potential Alignment LoD within the last 15 years. <p>The Potential Alignment intersects habitats that may be suitable to support the following UKBAP species:</p> <ul style="list-style-type: none"> Pine marten and red squirrel will be present in the woodlands that intersect the Potential Alignment. The nearest publicly available record of pine marten is located to the north of Slug Road in 2019 and is intersected by the Potential Alignment. Saving Scotland's Red Squirrels online map indicates there have been sightings of red squirrel in suitable woodland habitat in the area of the Potential Alignment. Field data from surveys undertaken in 2023 confirmed the presence of red squirrel and pine marten in woodlands intersected by the Potential Alignment, such as the wider extent of Fetteresso Forest. Water vole records are scattered within this area. The nearest recent record is northwest of Stonehaven near Ury, and an old record north of Hurlie Bog, near Mergie. Water vole may therefore be present within suitable habitat intersected by the Potential Alignment. The 2023 field surveys identified watercourses crossed by the Potential Alignment which are suitable for water vole but did not identify any evidence of water vole. The Potential Alignment crosses the Cowie Water and the River Dee watercourses, which are known to support fish listed on the UK BAP (e.g. brown trout). Brown hare will be present in farmland in the area of the Potential Alignment, with a small number of records of brown hare identified within 10 km of the Potential Alignment LoD in the last 15 years, the closest of which was located approximately 1.9 km east of the Potential Alignment LoD near Netherley in 2012. Surveys undertaken in 2023 confirmed the presence of brown hare in the landscape. Mountain hare may be present within upland habitats in the area of the Potential Alignment. The closest record within 10 km of the Potential Alignment LoD within the last 15 years was identified northwest of Glenbervie in 2021, located within a 10 km grid square which overlaps with the Potential Alignment. Field surveys undertaken in 2023 did not record any evidence of mountain hare in the Potential Alignment LoD, but did identify habitats suitable for mountain hare in the wider landscape. Hedgehog is likely to be present along woodland edges and in gardens in the area of the Potential Alignment. A small number of records of hedgehog were identified within 10 km of the Potential Alignment LoD in the last 15 years, the closest of which was located approximately 3.2 km east of the Potential Alignment LoD, close to Netherley in 2012. Field surveys undertaken in 2023 did not record any evidence of hedgehog in the Potential Alignment LoD, but did identify habitats suitable for hedgehog. Reptiles such as adder and slow worm may be present in gardens, grasslands, woodland edges and hedges in the area of the Potential Alignment. A small number of records of common lizard were noted within 10 km of the Potential Alignment LoD in the last 15 years, the closest of which was located in Durris Forest in 2017, the eastern part of which is intersected by the Potential Alignment. Field surveys recorded one sighting of an adder north of Slug Road, approximately 0.6 km east of the edge of the LoD. The field survey also identified habitat suitable for reptiles throughout the Potential Alignment LoD. Amphibians such as common toad will be present in gardens and wetland habitats in the area of the Potential Alignment. The closest record of a slow worm within 10 km of the Potential Alignment LoD within the last 15 years was identified approximately 8.6 km northwest of the Potential Alignment LoD at Crathes in 2011. A small number of records of common toad were identified within 10 km of the Potential Alignment LoD within the last 15 years, the closest of which was located approximately 1.3 km northeast of the Potential Alignment LoD, south of the River Dee in 2015. <p>Other protected or notable species that may be present within the habitats intersected by the Potential Alignment include:</p>

Topic and Criteria	Summary of Key Constraints for the Potential Alignment
Habitats	<ul style="list-style-type: none"> Badger will utilise areas of woodland and farmland in the area of the Potential Alignment. Field data from surveys confirms that badger is present within the landscape intersected by the Potential Alignment, including near Mergie. Water shrew is a locally important species, as identified by the North East Scotland Biodiversity Partnership. There are no publicly available records of water shrew identified on the NBN Atlas within 10 km of the Potential Alignment LoD. The nearest record is on the Cowie Water west of Stonehaven, and some records have been identified in the vicinity of Netherley, approximately 2.3 km east of the Potential Alignment LoD. <p>Habitats</p> <p>Desk study and field survey data indicate that the habitats comprise a mosaic of farmland and woodland with some heathland and grassland habitats also present.</p> <p>There is some potential for Annex 1 habitats to occur. Extents of upland heathland including Annex 1 habitats have been identified at Craigneil, north of Slug Road. There may be further limited pockets of Annex 1 habitats present, particularly where there are remnant extents of semi-natural woodland within the upland areas.</p> <p>There are some limited pockets of GWDTE habitats that are intersected by the Potential Alignment, for example in upland areas and in low-lying damp areas on the edges of fields.</p>
Ornithology	<p>Designations</p> <p>The Potential Alignment does not coincide directly with any SPA. However, it does intersect land which has connectivity with the core foraging ranges of some qualifying features from the Fowlsheugh SPA (and SSSI) and the Loch of Skene SPA.</p> <ul style="list-style-type: none"> Fowlsheugh SPA lies approximately 8.6 km to the southeast of the Potential Alignment LoD. The site is designated for breeding fulmar, guillemot, herring gull, kittiwake, razorbill and its breeding seabird assemblage. There is potential connectivity between land intersected by the Potential Alignment and herring gull, although suitable foraging habitat intersected by the Potential Alignment itself is likely to be limited, flights beyond the Potential Alignment to more favourable foraging areas may occur. The Loch of Skene SPA lies approximately 9 km to the north of the Potential Alignment LoD. The site is designated for goldeneye, goosander and greylag goose, the latter of which has a core foraging range of up to 20 km, and therefore, the land intersected by the Potential Alignment has potential connectivity with the Loch of Skene SPA. The national conservation status of the greylag goose population is favourable but is sensitive to operational effects of OHLs due to potential collision risks. <p>Schedule 1 Birds</p> <p>The Potential Alignment crosses habitats including areas of woodland, farmland and heath, that have the potential to provide breeding/roosting opportunities for Schedule 1 birds. Breeding/roosting populations of Schedule 1 species may be sensitive to disturbance during construction, including some raptor species. During operation, some Schedule 1 raptor species may be sensitive to collision impacts.</p> <p>Birds of Conservation Concern (BoCC)</p> <p>The land intersected by the Potential Alignment may support populations of birds listed on the red and amber lists of the BoCC, some of which are also listed as Schedule 1 species:</p> <ul style="list-style-type: none"> Land consisting primarily of farmland and moorland areas, including arable, pasture, heath, wet grassland and hedgerows, may support red-listed waders, farmland specialists such as grey partridge, birds of mixed upland habitat, as well as red-listed passerines including skylark, starling, house sparrow, corn bunting and yellowhammer. Areas of woodland patches may support red-listed species such as the spotted flycatcher and tree sparrow.

Topic and Criteria	Summary of Key Constraints for the Potential Alignment
	<ul style="list-style-type: none"> The Potential Alignment is largely outwith wader sensitive habitat although they are present in the northern section which may support red-listed ducks and grebes. Farmland and wetland habitats may also support herring gulls.
Hydrology / Geology / Hydrogeology	<p>Surface and Groundwater Drinking Water Protected Area (DWPA)</p> <p>The entire length of the Potential Alignment is located within a groundwater DWPA. The Potential Alignment does not cross any surface DWPA's, however, the River Dee lies upstream and downstream of two DWPA's.</p> <p>Review of SEPA CAR licence abstraction data, has not indicated the presence of any abstractions within the land crossed by the Potential Alignment LoD.</p> <p>Data derived from Aberdeenshire Council, detailing the locations of PWS, indicates that there is one Regulated (Type A) PWS that is not crossed by the Potential Alignment LOD but serve a property nearby:</p> <ul style="list-style-type: none"> One is located at Fetteresso Substation 500 m west of LOD edge (NGR NO 789 859), and the source of the PWS is surface rainwater. <p>Aquifer Providing Regional / Local Resources</p> <p>The aquifers within this Potential Alignment are classified as low productivity (Class 2C) aquifers, within which virtually all flow is through fractures and discontinuities in the bedrock. There are no highly productive aquifers within the Potential Alignment.</p> <p>Data derived from Aberdeenshire Council detailing the locations of PWS, indicate that there are no known properties that are supplied by small PWS (Type B) that are crossed by, or in close proximity to, the Potential Alignment. There may be some pockets of GWDTE habitats that are crossed by the Potential Alignment, for example in upland areas and in low-lying damp areas on the edges of fields.</p> <p>Surface Waters or Aquifer Providing Water for Agricultural or Industrial Use</p> <p>There are seven mapped watercourses shown on 1:50K OS mapping that are crossed by the Potential Alignment:</p> <ul style="list-style-type: none"> The Potential Alignment crosses the Cowie Water (Waterbody ID 23254) between Tillybreak and Millhaugh and was classified by SEPA as overall 'High' in 2020. The Black Burn, crossed by the Potential Alignment to the south of Slug Road (A957) near Mergie, is a tributary to the Cowie Water which is too small to be classified by SEPA under the Water Framework Directive. Strathie Burn, crossed by the Potential Alignment at Meikledams, is a minor watercourse too small to be classified by SEPA under the Water Framework Directive. Sheeoch Burn (Waterbody ID 23318) is crossed by the Potential Alignment to the west of Meikledams, and was classified by SEPA as overall 'Good' in 2020. The Potential Alignment crosses River Dee Banchory to Peterculter (Waterbody ID 23316) to the northwest of Kirkton of Durris) and was classified by SEPA as overall 'Moderate' in 2020. <p>Based on SEPA Future Flood maps, there is one significant fluvial flood risk area associated with the River Dee crossing. The River Dee future floodplain is approximately 480 m wide at the crossing location.</p>
Cultural Heritage	
Designations	<p>Designations</p> <p>There are no WHS, Scheduled Monuments or PIC within the Potential Alignment LoD, and no part of the Potential Alignment LoD intersects any GDL or Inventory Historic Battlefield.</p>

Topic and Criteria	Summary of Key Constraints for the Potential Alignment
Cultural Heritage Assets	<p>Within 1 km of the Potential Alignment, there are two SMs of national importance and of high sensitivity. These are Upper Balfour Cairns, House & Field System (SM 7879) and a Bronze Age burial cairn, Cairn-Mon-Earn Cairn (SM 4892). In addition, the Potential Alignment is located approximately 60 m west of Park House GDL (GDL 309), centred on NGR NO 77894 97546. The GDL forms the setting for the Category A Listed Park House (LB 3103) and key views are from the House and GDL to the south.</p> <p>Those designated heritage assets most sensitive to the Potential Alignment (from potential effects on their settings) are those that are either prominent landmarks and/or have long views across the landscape forming important aspects of their settings, these include hill forts, burial cairns and stone circles, or designed landscapes that have long distance views and vistas that contribute to their cultural significance. Key constraints include Park House GDL (GDL 309) and Cairn-Mon-Earn Cairn (SM 4892).</p> <p>The Aberdeenshire Council SMR holds records for 7 sites of archaeological and cultural heritage interest and two entries for archaeological investigations within the Potential Alignment LoD. The sites are all recorded as ‘standard’ entries (local heritage value and low sensitivity) within the SMR. Two of the records are for Mesolithic lithic scatters (N079NE0193 and N079NE0127) that were uncovered at Kirkton of Durriss to the south of the River Dee. The other records include two possible building platforms, a farmstead, the remains of a croft and two possible building platforms. They are widely spread throughout the Potential Alignment LoD.</p> <p>Cultural Heritage Assets</p> <p>There are no Listed Buildings, Conservation Areas or NIDLs within the Potential Alignment LoD.</p> <p>Within 1 km of the Potential Alignment, there are:</p> <ul style="list-style-type: none"> • One Category A Listed Building, Park House (LB 3103), of national importance and high sensitivity. • Nine Category B Listed Buildings of regional importance and medium sensitivity. • Six Category C Listed Buildings of local importance and low sensitivity. <p>The Listed Buildings are thinly scattered within the 1 km buffer. They comprise mostly small residential properties (i.e. farmsteads and crofts), bridges and small parish churches, all of which have generally localised settings and not significant constraints. Those Listed Buildings that are most likely to be constraints to the Potential Alignment (from potential effects on their settings) are those that stand in rural, unenclosed, settings, and which have key views or designed vistas (to and from their locations) across the landscape and which the Potential Alignment would cross. Key constraints identified in regard to the Potential Alignment are Category A Listed Park House (LB 3103).</p>
People	
Proximity to dwellings	<p>The Potential Alignment extends for a length of approximately 12.5 km and intersects near to a number of individual scattered dwellings and groups of dwellings. Some of these residential properties form a constraint where they are located in proximity to the edge of the Potential Alignment LoD resulting in potential for ‘pinch points’ for the OHL Potential Alignment design.</p> <p>The principal location where properties represent a greater constraint is in the area to the south of the River Dee, between Kirkton of Durriss and an existing OHL, and between West Park and Nether Park Quarry.</p>
Landscape and Visual	
Designations	<p>Designations</p> <p>The northern end of the Potential Alignment is located at the edge of the Dee Valley SLA. Aberdeenshire Council’s Local Development Plan (2022) Appendix 13: Aberdeenshire Special Landscape Areas lists the following ‘aspects and features’ (equivalent to special qualities) that are recognised through the SLA designation:</p> <ul style="list-style-type: none"> • Broad, meandering river, with wooded banks rising to moorland hills and occasional limestone outcrops.

Topic and Criteria	Summary of Key Constraints for the Potential Alignment
Landscape Character	<ul style="list-style-type: none"> • Broadleaved woodland contributes to visual diversity and habitat value all along the valley and reflect the long history of estate development. • The woodland along the Dee forms part of an intact habitat network, including policy woodland, plantations and riparian woodland, providing connectivity between the lowlands and uplands of Aberdeenshire. Mature woodland also provides diversity and richness of landscape character. • Key routes through the valley include the Royal Deeside Railway, the Deeside Tourist Route, long-distance walking, cycling and horse-riding trails. The valley is seen by large numbers of people using these routes. • A wealth of distinctive built heritage, including well known castles and mansion houses such as Crathes, Drum and Inchmarlo, and the relatively untouched granite architecture of Deeside settlements such as Kincardine O'Neil. • The granite architecture of Deeside settlements is an essential part of the character of Aboyne and Banchory, as well as smaller villages. • Deeside is representative of Aberdeenshire's identity, with its Royal connections and is a popular tourist destination, both in itself and as a link between Aberdeen and the National Park. • At its western end, increasing glimpses to the higher hills mark the approach to the National Park. • Locations along the River Dee are host to some of the most photographed places in Aberdeenshire. • The pattern of historic routeways running north to south across the Dee at strategic crossing points highlights, more than anywhere else, the connection between the highlands and the lowlands. <p>Landscape Character</p> <p>The southern section of the Potential Alignment intersects landscape that is generally elevated with a strong rural character. The Potential Alignment intersects the valley of the Cowie Water which is of a smaller scale and is a more complex and intimate landscape. Here, the landform is characterised by deep incised valley slopes with belts and pockets of commercial forestry and woodland, including some semi-natural woodland, all of which are features that contribute to local landscape character.</p> <p>The northern section of the Potential Alignment intersects landscape that is strongly rural and relatively remote, comprising rolling elevated farmland, with coniferous plantations and some moorland rough grazing. Farmland is generally pastoral, with patches of gorse and willow scrub. To the north, the land intersects the wooded and more sheltered Dee Valley. The Potential Alignment intersects the eastern part of Durris Forest, which is an extensive coniferous plantation.</p> <p>There are a number of notable vertical man-made elements in the landscape intersected by the southern section of the Potential Alignment, including the existing 275 kV Fetteresso to Alyth OHL which is currently being upgraded to 400 kV, and is intersected to the west of Kirkton of Durris.</p> <p>NatureScot has categorised Scotland's landscapes into 79 areas. The southern section of the Potential Alignment is located within the Mounth landscape area and the northern section of the Potential Alignment is located within the Aberdeen and Lower Deeside landscape area. The landscape of the Mounth forms part of the Highland Boundary Fault at the foothills of the Grampian Mountains. This is a prominent landscape feature that forms the backdrop to the lowland areas to the south. NatureScot has also categorised the landscape of Scotland to show LCTs. The southern section of the Potential Alignment is within the Summits and Plateaux LCT and the northern section of the Potential Alignment intersects the Broad Wooded and Farmed Valley LCT.</p>
Visual	<p>The Potential Alignment extends for a length of approximately 12.5 km and passes around or close to key areas where sensitive visual receptors are located. These visual receptors have potential to form constraints and include:</p> <ul style="list-style-type: none"> • Scattered residential properties along the entire section within close proximity of the Potential Alignment. • Those travelling along the local road network, including the A957 (Slug Road) and surrounding minor roads who experience sequential views of the surrounding landscape.

Topic and Criteria	Summary of Key Constraints for the Potential Alignment
	<ul style="list-style-type: none"> People engaging in outdoor recreation in the area, who are likely to have open views of the surrounding landscape from open stretches of path.
Land Use	
Agriculture	<p>The majority of the Potential Alignment intersects commercial forestry. Between Elf Hill and the A957 Slug Road, the Potential Alignment mainly intersects Fetteresso Forest, and north of Slug Road to Kirkton of Durris, the Potential Alignment mainly intersects Durris Forest. The remainder of the Potential Alignment from Kirkton of Durris to south of the River Dee mainly intersects land used for arable and grazing. The Potential Alignment avoids larger settlements but passes near to smaller settlements such as Kirkton of Durris as well as individual dwellings.</p> <p>Agriculture</p> <p>The Potential Alignment spans one area of prime agricultural land, located between the River Dee and Kirkton of Durris (Class 3.1 Land capable of producing consistently high yields of a narrow range of crops and/or moderate yields of a wider range). The majority of the Potential Alignment only intersects land with lower classifications of agricultural land capability.</p>
Forestry	<p>Forestry</p> <p>The Potential Alignment intersects woodland identified as forming part of the National Forest Estate, which is managed by Forestry and Land Scotland (FLS), in four areas. The majority of the southern section of the Potential Alignment between the new proposed Hurlie 400 kV Substation and the A957 Slug Road, intersects prime commercial forestry in Fetteresso Forest. The majority of the Potential Alignment intersects Durris Forest, which is located to the north of Slug Road and Kirkton of Durris. The Potential Alignment also intersects Kirkton Wood and Free Church Wood, both of which are part of the Durris Forest, in the northern section of the Potential Alignment, located to the south of the River Dee. One other woodland area is intersected by the Potential Alignment, located to the north of the River Dee (NGR NO 76810 96923).</p> <p>Other aspects of forestry including designated areas and habitats are addressed in criteria for Natural Heritage.</p>
Recreation	<p>Recreation</p> <p>The Potential Alignment crosses one core path (The Deeside Way) and NCN route (Route 195) to the north of the River Dee. Both the Fetteresso and Durris forests mentioned above are used informally for recreational activities including walking and mountain biking.</p> <p>The Potential Alignment spans three fishing beats:</p> <ul style="list-style-type: none"> The Cowie Water is spanned in the southern section of the Potential Alignment, which is an important salmon fishery and game fishing resource. The river would be spanned by the OHL at the Upper Cowie fishing beat between Millhaugh and Tillybreak. This beat includes fishing on both banks of the Upper Cowie from Mid Hill at the river's source, downstream through Hobseat and Swanley to the march with the Private Rickarton House beat. The western extent of the LoD overlaps with the eastern extent of the Lower Crathes/West Durris fishing beat on the River Dee to the north of the Kirkton of Durris for salmon and trout. The beat includes fishing on both banks of the Lower Dee below Banchory. Lower Crathes comprises the left bank from two-thirds of a mile above Durris Bridge to one mile below with the West Durris beat occupying the right bank from one and a half miles above the bridge to one mile below. Park fishing beat is for salmon and trout, located on the River Dee to the southwest of the Netherpark Quarry and extends for three miles on both banks from where the Lower Crathes W Durris fishing beat ends to the west.

Topic and Criteria	Summary of Key Constraints for the Potential Alignment
Planning	
Proposals	<p>The following planning proposals have been identified which intersect the Potential Alignment:</p> <ul style="list-style-type: none"> • Planning permission for 10 turbines at Fetteresso Forest was approved upon appeal in 2022. The Potential Alignment intersects with the Red Line Boundary forming part of the access track which connects to Slug Road in the southern section of the Potential Alignment (APP/2019/1341) (case reference: WIN-110-1). • The consented planning application for Craigneil Wind Farm consisting of 11 wind turbines at 135 m in height and ancillary infrastructure to the northwest of Rickarton. The proposed turbines are located outwith the Potential Alignment LoD to the northwest, although the Potential Alignment intersects the southeastern extent of the site boundary to the west and northwest of Rickarton (APP/2018/0993). A Proposal of Application Notice (PoAN) was submitted to the Aberdeenshire Council planning portal and validated at the start of June 2024 for an updated design layout of seven turbines at 180 m. No change to the boundary has been proposed (ENQ/2024/0640). • The Potential Alignment intersects with three planning applications for the prior approval of the formation of a private way (forestry) at NGR NO 79168 91447 (APP/2024/0287), NGR NO 79179 91912 (APP/2024/0545) and NGR NO 79221 92644 (APP/2024/0333). • An approved planning application to permit the continued extraction of sand gravel for a further 10 years at Netherpark Quarry, is located to the north of the River Dee and is intersected by the Potential Alignment (APP/2016/0257). • The Proposal of Application (PAN) application for the proposed 400 kV substation at Hurlie, near Fetteresso, was submitted to Aberdeenshire Council on 31 January 2024. Two public events were held on 11 and 19 March 2024 for this project. A further round of consultation was undertaken in June 2024 with public consultation events held on 10 June, 11 June and 13 June. • SSEN Transmission is working towards a submission for an application for consent to construct a proposed 132 kV OHL to connect the nearby existing Fetteresso Substation with the consented wind farm at Glendye. More information can be found at the project webpage: https://www.ssen-transmission.co.uk/projects/project-map/glendye-windfarm-connection/

Table A6. Environmental Constraints in Section F (Route F3/F2)

Topic and Criteria	Summary of Key Constraints for the Potential Alignment
Natural Heritage	
Designations	<p>Designations</p> <p>The Potential Alignment intersects one statutory national designation. The Loch of Park SSSI is intersected by the Potential Alignment in the southern section northeast of Lochside. The SSSI is designated for basin fern and wet woodland and is likely to have potential to be GWDTE.</p> <p>The Potential Alignment does not intersect any statutory international or European designations.</p> <p>There are a number of non-statutory national designations which are intersected by the Potential Alignment, comprising blocks of woodland classified on the AWI as LEPO:</p> <ul style="list-style-type: none"> • Coldstream Plantation (NGR NO 778 000) is located to the northwest of Drumoak. It is noted on the NWSS to consist of lowland mixed deciduous woodland and native pinewood. Aerial imagery indicates extensive windthrow, and field surveys undertaken in 2023 confirmed that the plantation had been felled. • Collonach Plantation (NGR NO 772 994) is adjacent to Coldstream Plantation to the west. Field surveys in 2023 noted that it was a thinned Scots pine plantation. • Three areas of woodland between Milton of Finnercy and Echt: Backstrip Wood (NGR NJ 756 043), North Kirkton Wood (NGR NJ 750 053) and Myriewell Wood (NGR NJ 749 062). These blocks of woodland are noted on the NWSS to largely comprise of upland birchwood and native pinewood. During field surveys in 2023, North Kirkton Wood was identified as a mosaic of Scots pine plantation with scattered scrub and Sitka spruce plantation. Myriewell Wood contains a line of mature broadleaved trees in the northern extent during field surveys in 2024. • Multiple woodland blocks to the west and northwest of Dunecht, including: Scaur Wood (NGR NJ 739 086), Tillyfoddle Wood (NGR NJ 739 091), Tillybrig Wood (NGR NJ 738 095) and Corskie Wood (NGR NJ 740 100). It is noted on the NWSS that these woodlands include extents of native pinewood and upland birchwood. During field surveys in 2023, Scaur Wood and Tillyfoddle Wood were noted to be dominated by plantations of Sitka spruce, Tillybrig Wood is dominated by a plantation of mature Scots pine with more limited extents of Sitka spruce, and Corskie Wood is a plantation dominated by Norway spruce and larch. <p>The Potential Alignment intersects one regionally designated site. The Loch of Park LNCS is crossed in the southern section in two locations to the northwest of Drumoak, near Lochside and at Collonach Plantation. The LNCS extends beyond the boundary of the Loch of Park SSSI. It is designated for its fen and wet woodland with acid grassland, heath, rush pasture, bog, swamp, coniferous woodland and reedbed, with a high diversity of plants including some locally important species such as coralroot orchid and lesser butterfly orchid.</p>
Protected Species	<p>Protected Species</p> <p>The Potential Alignment intersects habitats that are suitable to support the following EPS:</p> <ul style="list-style-type: none"> • Watercourses, primarily the River Dee (as well as other smaller watercourses and field drains), which are crossed by the Potential Alignment support habitats suitable for otter. Records of otter were identified within 10 km of the Potential Alignment LoD within the last 15 years with the closest record was noted in 2012 on the River Dee. The field survey identified suitable habitats for otter within the watercourses which cross the Potential Alignment, with evidence of otter recorded on the Gormack Burn. Otter will use watercourses within the area of the Potential Alignment for foraging, commuting and resting. • Bats may be present roosting in the woodlands and trees located in the vicinity of the Potential Alignment and are likely to use linear features such as treelines, hedgerows and watercourses also located throughout the Potential Alignment for foraging and commuting. Numerous records of bat were identified within 10 km of the Potential Alignment LoD within the last 15 years. Based on a 10 km grid square (NJ70), centred approximately on the settlement of Echt, 16 records of common pipistrelle, three records of brown long-eared and one record of soprano pipistrelle (2012-2021) were identified. The resolution of the data does not allow a more accurate assessment of the distance of these records from the Potential Alignment LoD. However, records of soprano pipistrelle were also identified from a 1 km square that covers Drum Castle (2009-2022), approximately 1.2 km east of the Potential Alignment LoD.

Topic and Criteria	Summary of Key Constraints for the Potential Alignment
	<ul style="list-style-type: none"> • The Potential Alignment intersects land that has some limited potential for great crested newt to be present in non-flowing waterbodies such as ponds. Habitat suitability in northeast Scotland is considered suboptimal and the distribution of this species is limited. There are no publicly available records of great crested newt within 10 km of the Potential Alignment within the last 15 years. <p>The Potential Alignment intersects habitats that may be suitable to support the following UKBAP species:</p> <ul style="list-style-type: none"> • Pine marten and red squirrel will be present within the woodlands that are crossed by the Potential Alignment. Occasional records of pine marten were identified within 10 km of the Potential Alignment within the last 15 years, the closest of which was recorded approximately 1.5 km south of the Potential Alignment at Warren Wood in 2013. There are numerous records of red squirrel identified within 10 km of the Potential Alignment within the last 15 years. Saving Scotland's Red Squirrels online map indicates there have been sightings of red squirrel in the woodlands crossed by the Potential Alignment as recently as 2024. The most recent and closest record in 2024 to date is within an unnamed strip of woodland crossed by the Potential Alignment north of Echt. Field data from surveys undertaken in 2023 confirmed the presence of both pine marten and red squirrel in the landscape crossed by the Potential Alignment. • Water vole records are limited within the area, although there are records to the east of the Potential Alignment near Cults and to the west near Drumoak, indicating the potential for presence in suitable habitat crossed by the Potential Alignment. The 2023 field surveys identified watercourses crossed by the Potential Alignment which are suitable for water vole but did not identify any evidence of water vole. • Brown hare will utilise areas of farmland in the area of the Potential Alignment. A small number of records of brown hare have been identified within 10 km of the Potential Alignment LoD in the last 15 years, the closest of which was within the Potential Alignment near Schoolhill in 2017. Surveys undertaken in 2023 confirmed the presence of brown hare in the landscape. • Hedgehog is likely to be present along woodland edges and in gardens in the area of the Potential Alignment. A small number of records of hedgehog were identified within 10 km of the Potential Alignment LoD in the last 15 years, the closest of which was approximately 1.2 km east of the edge of the Potential Alignment LoD in 2013 near Drum Castle. Field surveys did not record evidence of hedgehog within the Potential Alignment but did identify habitats with the potential to support hedgehog throughout the Potential Alignment. • Reptiles such as adder and slow worm may be present in gardens, grasslands, woodland edges and hedges in the area of the Potential Alignment. A small number of records of common lizard were recorded within 10 km of the Potential Alignment LoD in the last 15 years, the closest of which was near Peterculter to the east of the Potential Alignment in 2023. Field surveys identified habitats suitable for reptiles within the Potential Alignment, and recorded one sighting of an adder approximately 260 m west of the Potential Alignment LoD near Southward Farm. • Amphibians such as common frog and common toad will be present in gardens and wetland habitats crossed by the Potential Alignment. A small number of records of common toad were identified within 10 km of the Potential Alignment within the last 15 years. The closest record was in 2015 located near Peterculter. <p>Other protected or notable species that may be present within the habitats crossed by the Potential Alignment include:</p> <ul style="list-style-type: none"> • Badger will utilise areas of woodland and farmland in the area of the Potential Alignment. Field data from surveys in 2023 confirms that badger is present within habitats such as near Echt, Firley Moss and Leylodge. • Water shrew is a locally important species. No publicly available records of water shrew were identified on the NBN Atlas within 10 km; the nearest available records correspond to a 2 km grid square which overlaps with the north of the Potential Alignment, in the vicinity of Leylodge, southwest of Kintore. Field surveys in 2023 did not identify any evidence of water shrew but did identify habitats suitable to support water shrew within the Potential Alignment LoD.

Topic and Criteria	Summary of Key Constraints for the Potential Alignment
Habitats	<p>Habitats</p> <p>Desk study and field survey data indicate that the habitats within the area of the Potential Alignment LoD are dominated by farmland, generally comprising a mix of arable with pasture and some pockets of plantation woodland.</p> <p>There is some potential for areas of Annex 1 habitats to occur, particularly where there are remnant extents of semi-natural woodland.</p> <p>There are some limited pockets of potential GWDTE which could be crossed by the Potential Alignment. For example, habitats with the potential to be GWDTE, such as purple moor grass and rush pastures, were recorded within the Potential Alignment and west of Skene Moss.</p>
Ornithology	<p>Designations</p> <p>The Potential Alignment does not coincide directly with any SPA. However, the area within the LoD for the Potential Alignment intersects land which has connectivity with the core foraging ranges of some qualifying features of the Loch of Skene SPA, which is located approximately 3.3 km to the east of the Potential Alignment LoD. The qualifying features of the SPA include: greylag goose (which have a core foraging range of between 15-20 km from the designated area), goosander and goldeneye. The national conservation status of the greylag goose and goosander populations are considered to be favourable, whilst the status of goldeneye is considered to be unfavourable. In addition, Loch of Skene also qualifies as a SSSI with notable natural features also including common gull and pink-footed geese.</p> <p>Foraging goose surveys in early 2023 identified foraging within the Potential Alignment area in stubble and pasture fields associated with the largely agricultural lowland sections, e.g. near Westerton. Foraging was also recorded out with the Potential Alignment south of Kemnay and near Hillbray – both areas that would require flights to cross the Potential Alignment to reach. These flight lines have been subsequently identified in late 2023/early 2024 with flight activity notably high near Dunecht and Westerton, although flight lines have been recorded from across the Potential Alignment.</p> <p>Schedule 1 Birds</p> <p>The Potential Alignment crosses habitats including areas of woodland, farmland and heath, that have the potential to provide breeding/roosting opportunities for Schedule 1 birds. Breeding/roosting populations of Schedule 1 species may be sensitive to disturbance during construction, including some raptor species. During operation, some Schedule 1 raptor species may be sensitive to collision impacts.</p> <p>Birds of Conservation Concern (BoCC)</p> <p>The land intersected by the Potential Alignment supports populations of birds listed on the red and amber lists of the BoCC, some of which are also listed as Schedule 1 species:</p> <ul style="list-style-type: none"> • Land consisting primarily of farmland largely arable and pasture may support breeding waders including red-list species. In addition, farmland specialists such as grey partridge as well as red-listed passerines, including skylark, starling, house sparrow, corn bunting and yellowhammer are also likely in the Potential Alignment area. • Areas of woodland crossed by the Potential Alignment may support other red-listed species such as the spotted flycatcher and tree sparrow. • Wetland areas, including rivers and ditches, may support red-listed ducks and grebes. Farmland and wetland habitats may also support herring gulls.
Hydrology / Geology / Hydrogeology	<p>Surface and Groundwater Drinking Water Protected Area (DWPA)</p> <p>The full length of the Potential Alignment is located within an area identified as a groundwater DWPA and lies between two surface water DWPAs. DWPAs include surface water areas designated as protected for public supply, as well as groundwater abstractions which supply over 10 m³ per day and/or supply over 50 people from one source. The River Dee at Banchory DWPA (ID 23332) is located over 10 km upstream and west of the Potential Alignment LoD. The River Dee near Peterculter DWPA (ID 23315) is located approximately 3 km downstream and east of the Potential Alignment LoD.</p>

Topic and Criteria	Summary of Key Constraints for the Potential Alignment
	<p>Review of SEPA CAR licence abstraction data has not indicated the presence of any abstractions within the land crossed by the Potential Alignment LoD.</p> <p>The Potential Alignment crosses the location of five Regulated (Type A) PWS: Hill of Fare (NGR NJ 761, 022), Cowiehillock Cottage (NGR NJ 752, 040), South Finnercy Croft (NGR NJ 750, 041), Cowiehillock (NGR NJ 749, 043) and North Mains Farm (NGR NJ 742, 063).</p> <p>Aquifer Providing Regional / Local Resources</p> <p>Aquifers which are crossed by the Potential Alignment LoD are classified as low productivity (Class 2C), within which virtually all flow is through fractures and discontinuities within the bedrock. No highly productive aquifers have been identified within the area crossed by the OHL Potential Alignment.</p> <p>Data supplied by Aberdeen City Council and Aberdeenshire Council, detailing the locations of PWS, indicates that there are 30 known properties that are supplied by small PWS (Type B) which are intersected by the Potential Alignment LoD. Additionally, there may be some pockets of GWDTE habitats in the vicinity of the Potential Alignment LoD, some habitats recorded at the Skene of Moss, located to the east of the LoD, have the potential to be GWDTE (see above section on Natural Heritage (Habitats)).</p> <p>Surface Waters or Aquifer Providing Water for Agricultural or Industrial Use</p> <p>There are six mapped watercourses shown on 1:50,000 scale OS mapping that are crossed by the Potential Alignment. SEPA has characterised surface water quality status under the terms of the Water Framework Directive. Classification by SEPA considers water quality, hydromorphology, biological elements including fish, plant life and invertebrates, and specific pollutants known to be problematic. The classification grades through High, Good, Moderate, Poor, and Bad status. This provides a holistic assessment of ecological health. 1:50,000 scale OS mapped watercourses crossed and those classified by SEPA under the Water Framework Directive include:</p> <ul style="list-style-type: none"> • In the central section, between Milton of Cullerlie and Schoolhill, the Potential Alignment crosses the Gormack Burn (Waterbody ID 23320) which was classified as having overall 'Moderate ecological potential' by SEPA in 2020. • In the central section, between Milton of Finnercy and north of Echt, the Potential Alignment crosses a large unnamed tributary of the Gormack Burn, which is too small to be classified by SEPA under the Water Framework Directive. • In the northern section, between Old Kinnernie and Dunecht, the Potential Alignment crosses the Kinnernie Burn (Waterbody ID 23323) which was classified by SEPA as having overall 'Poor' ecological potential' in 2020. • Between Bogendinne and Skene of Moss, the Potential Alignment crosses the Bogendinne Burn, which is too small to be classified by SEPA under the Water Framework Directive. • At NGR 76183, 12743 the Potential Alignment crosses the Park Burn, a tributary to the nearby Tuach Burn/Tillakae Burn (Waterbody ID 23272) which was classified by SEPA as having overall 'Moderate ecological potential' in 2020. <p>Based on SEPA Future Flood maps, there are several flood risk areas associated with the watercourses crossed by the Potential Alignment. The Gormack Burn flood extents range from 60 m and 400 m within the LoD and the Kinnernie Burn flood extents range between 200 m and 280 m within the LoD.</p>
Cultural Heritage	
Designations	<p>Designations</p> <p>There are no WHS, Scheduled Monuments or PiC within the Potential Alignment LoD, and no part of the Potential Alignment crosses or intersects any Inventory Historic Battlefield.</p>

Topic and Criteria	Summary of Key Constraints for the Potential Alignment
Cultural Heritage Assets	<p>Within 1 km of the Potential Alignment LoD there are seven Scheduled Monuments of national importance and of high sensitivity. The majority of these date to the prehistoric period and include the remains of an early prehistoric (Neolithic/Bronze Age) burial cairn (SM 6076), an Iron Age hill fort (SM 57), three stone circles (SM 6074, SM 6075, SM 12350) and hut circles (SM 12190). Most of the Scheduled Monuments are located in the northern half of the Potential Alignment. One medieval site, a moated homestead (SM 12161) (NGR NO 754 802), is present at Tillyorn, just south of the B9125 public road. The closest Scheduled Monument, Leylodge Stone Circle (SM 12350), lies within 30 m of the Potential Alignment LoD boundary.</p> <p>The LoD intersects with the southwestern corner of one GDL, Dunecht House (GDL 153) (centred on NGR NO 765, 807). This GDL is situated on the northern plain of the River Dee towards the northern end of the Potential Alignment. It forms the setting for Category A Listed Dunecht House (LB 3133) and other associated Listed Buildings.</p> <p>Within 1 km of the Potential Alignment there is one additional GDL, Park House (GDL 309) (centred on NGR 778 975), located towards the southern end of the Potential Alignment. The GDL stands on the northern banks of the River Dee and forms the setting for Category A Listed Park House (LB 3103) and other associated Listed Buildings.</p> <p>Those designated heritage assets most sensitive to the Potential Alignment (from potential effects on their settings) are those that are either prominent landmarks and/or have long views across the landscape forming important aspects of their settings. These include hillforts, burial cairns and stone circles, or designed landscapes that have long distance views and vistas that contribute to their cultural significance. Key constraints identified include:</p> <ul style="list-style-type: none"> • Scheduled Monuments: Barmekin Hillfort (SM 57), New Wester Echt Circle (SM 6074), South Leylodge Stone Circle (SM 12350), East Finnercy Cairn (SM 6076), Tillyorn Moated Homestead (SM 12161); and, • GDLs: Dunecht House (GDL 153) and Park House GDL (GDL 309). <p>The Aberdeenshire Council SMR holds records for 21 sites of archaeological and cultural heritage interest and one entry for an archaeological investigation within the Potential Alignment LoD. Two of these sites, possible standing stones (NJ71SE0009 and NJ71SE0008), are recorded in the SMR as being 'Regionally' significant and are of medium sensitivity. 19 sites are recorded as 'standard' entries (local heritage value and low sensitivity) within the SMR. They relate to sites and features mainly associated with medieval/post-medieval activities, including a number of farmsteads and cottages, areas of rig and furrow cultivation, and enclosures. The SMR sites are generally spread throughout the Potential Alignment LoD.</p> <p>Cultural Heritage Assets</p> <p>There are no Listed Buildings, Conservation Areas or NIDL within the Potential Alignment LoD.</p> <p>Within 1 km of the Potential Alignment LoD there are:</p> <ul style="list-style-type: none"> • Two Category A Listed Buildings: Echt Parish Church (LB 3152) and Park House (LB 3103), of national importance and high sensitivity (the closest, Echt Parish Church (LB3152), lies within 630 m of the edge of the Potential Alignment). • 12 Category B Listed Buildings of regional importance and medium sensitivity (the closest within 150 m of the edge of the Potential Alignment LoD). • Nine Category C Listed Buildings of local importance and low sensitivity. <p>Most of the Listed Buildings are clustered around Echt village or located within Dunecht GDL (GDL 153). Most of the Listed Buildings are small residential properties (ie farmsteads, cottages), small parish kirks, or bridges, all of which have generally localised settings and are not significant constraints. Those Listed Buildings that are most likely to be constraints to the Potential Alignment (from potential effects on their settings) are those that stand in rural, unenclosed, settings, and which have key views or designed vistas (to and from their locations) across the landscape and which the Potential Alignment would cross. Key constraints identified in regard to the Potential Alignment are Category A Listed Dunecht House (LB 3133) and Category A Park House (LB 3103).</p>
People	

Topic and Criteria	Summary of Key Constraints for the Potential Alignment
Proximity to dwellings	<p>The Potential Alignment extends for a length of approximately 20 km through Section F and passes close to a number of small settlements, including (from south to north) Drumoak, Echt and Dunecht. Individual residential properties and small settlements form a constraint where they are located in proximity to the edge of the Potential Alignment LoD resulting in potential for ‘pinch points’ for the OHL Potential Alignment design. There are a number of locations where concentrations and distributions of dwellings constrain the Potential Alignment more significantly, including in particular:</p> <ul style="list-style-type: none"> • To the east of Drumoak in the southern section of the Potential Alignment around West Park and Upper Park. • South of the B9125 near Milton of Cullerlie and Schoolhill in the central section of the Potential Alignment. • To the east of the village of Echt in the central section of the Potential Alignment.
Landscape and Visual	
Designations	<p>Designations</p> <p>Approximately 2 km of the southern section of the Potential Alignment is located within the Dee Valley SLA. The Dee Valley SLA is designated for its inclusion of the River Dee, one of Aberdeenshire’s major rivers, and the surrounding valley landscape that depicts a ‘strong sense of place’ and ‘naturalness’¹³ creating a scenic setting for the river, riverside settlements and visitor attractions in the area. Aberdeenshire Council’s LDP (2022) Appendix 13: Aberdeenshire Special Landscape Areas lists the following ‘aspects and features’ (equivalent to special qualities) that are recognised through the SLA designation:</p> <ul style="list-style-type: none"> • Broad, meandering river, with wooded banks rising to moorland hills and occasional limestone outcrops. • Broadleaved woodland contributes to visual diversity and habitat value all along the valley and reflect the long history of estate development. • The woodland along the Dee forms part of an intact habitat network, including policy woodland, plantations and riparian woodland, providing connectivity between the lowlands and uplands of Aberdeenshire. Mature woodland also provides diversity and richness of landscape character. • Key routes through the valley include the Royal Deeside Railway, the Deeside Tourist Route, long-distance walking, cycling and horse-riding trails. The valley is seen by large numbers of people using these routes. • A wealth of distinctive built heritage, including well known castles and mansion houses, such as Crathes, Drum and Inchmarlo, and the relatively untouched granite architecture of Deeside settlements such as Kincardine O’Neil. • The granite architecture of Deeside settlements is an essential part of the character of Aboyne and Banchory, as well as smaller villages. • With its Royal connections, Deeside is representative of Aberdeenshire’s identity and is a popular tourist destination, both in itself and as a link between Aberdeen and the National Park. • At its western end, increasing glimpses to the higher hills mark the approach to the National Park. • Locations along the River Dee are host to some of the most photographed places in Aberdeenshire. • The pattern of historic routeways running north to south across the Dee at strategic crossing points highlights, more than anywhere else, the connection between the highlands and the lowlands.
Landscape Character	<p>Landscape Character</p> <p>The landscape is generally undulating, with frequent characteristic woodlands. These are associated with estate policies, a characteristic of the Wooded Estates LCT, in key areas closer to Park House and Dunecht House and include mixed and broadleaved woodlands and shelterbelts. The Potential Alignment LoD intersects the southwestern edge of woodland associated with the Dunecht House GDL. The Potential Alignment crosses the wooded River Dee, and small areas of further native and mixed woodlands on the lower</p>

Topic and Criteria	Summary of Key Constraints for the Potential Alignment
	<p>eastern slopes of Barmekin Hill. The landscape is settled but rural, with a mix of large arable fields and smaller areas of pasture. There are occasional low hills, and long views towards the hills to the west. The Potential Alignment crosses near to the villages of Echt and Dunecht. It crosses a 132 kV OHL in the central section and follows a 275 kV OHL further north and crosses the A93 in the Dee Valley, and the A944 near Dunecht.</p> <p>NatureScot has categorised Scotland's landscapes into 79 areas, each with a unique description, of which the Potential Alignment intersects two of these landscapes: the southern section is located within Aberdeen and Lower Deeside, and the northern section is located within Gordon and Garioch.</p> <p>NatureScot has also categorised the landscape of Scotland to show LCTs, of which the Potential Alignment intersects two LCTs: the southern section of the Potential Alignment crosses the Broad Wooded and Farmed Valley LCT, with the majority of the Potential Alignment crossing the Wooded Estates LCT.</p>
Visual	<p>The Potential Alignment extends for a length of approximately 20 km through Section F and passes around or close to key areas where sensitive visual receptors are located that have the potential to form a constraint. The principal groups and locations where receptors sensitive to changes in visual amenity have been identified as:</p> <ul style="list-style-type: none"> • Those living and moving around settlements located within the vicinity of the Potential Alignment, including (from south to north) Upper Park, Echt and Dunecht, where open views to the wider surrounding landscape are available. • Scattered residential properties along the entire section within close proximity to the Potential Alignment. • Users of core paths within the Dee Valley, who are likely to have open views of the surrounding landscape from open stretches of path. • Users of NCN Route 195 and the Dee Valley Path along the Dee Valley, who would cross the Potential Alignment. • Those travelling along the local road network, including the A93, A944, several B class roads and other minor roads, who may experience sequential views of the surrounding landscape. • People visiting key locations or upland viewpoints such as Barmekin Hill.
Land Use	
Agriculture	<p>The Potential Alignment mainly crosses agricultural land used for arable and grazing and through some areas of plantation forestry typically comprising commercial forestry. The Potential Alignment avoids larger settlements such as Drumoak near the southern section, Echt in the central section, and Dunecht in the northern section but crosses land close to several smaller clusters of residential and commercial properties and individual dwellings.</p> <p>Agriculture</p> <p>The Potential Alignment intersects with two small areas of land classed as prime agricultural land in the southern section between the Loch of Park and Drumoak (Class 3.1 – land capable of producing consistently high yields of a narrow range of crops and/or moderate yields of a wider range). The remainder of the area covered by the LoD for the OHL Potential Alignment crosses land with lower classifications of agricultural land capability (non-prime land).</p>
Forestry	<p>Forestry</p> <p>The Potential Alignment intersects, or partially intersects, a number of woodland areas characterised by commercial forestry, from south to north:</p> <ul style="list-style-type: none"> • One small unnamed woodland area located to the north of the River Dee (NGR NO 76810 96923) is intersected by the Potential Alignment. • The Potential Alignment LoD intersects with the southeastern edge of the Collonach Plantation (NGR NO 77287 99429) to the northwest of Hill of Park House.

Topic and Criteria	Summary of Key Constraints for the Potential Alignment
Recreation	<ul style="list-style-type: none"> • In its southern section of the Potential Alignment to the northwest of Drumoak, part of an area of woodland called Coldstream Plantation. Site visits confirmed that Coldstream Plantation has been extensively felled. • The eastern end of the LoD intersects the edges of a woodland blocks comprising commercial forestry, southeast of Echt, at Backstrip Wood (NGR NJ 75383 04499). • The centre of North Kirkton Wood (NGR NJ 75084 05363) is intersected by the Potential Alignment. North Kirkton wood is mainly clear felled and restocked. • A narrow strip of woodland (part of Myriewell Wood) is intersected by the Potential Alignment at NGR NJ 74938 06215 and appears to be felled upon review of aerial imagery. • The LoD overlaps with the eastern edges of several woodland blocks, located to the west of Dunecht, including Scaur Wood, Tillyfoddie Wood, Tillybrig Wood and Corskie Wood (NGR NJ 74115 08897, NGR NJ 74092 09231, NGR NJ 74052 09528, NGR NJ 74124 09766, NGR NJ 74188 10013). Tillyfoddie Wood comprises sparse open small trees. • The LoD intersects the edges of two woodland blocks comprising commercial forestry to the west and northwest of Lyne of Skene. Woodland at Bogendinnie comprises a small block of shelterbelt with little commercial value (NGR NJ 74784 10872). Woodland at Hillhead comprises small conifer at pole-stage with some commercial value (NGR NJ 75390 12035). <p>Recreation</p> <p>There are no major recreational facilities within the Potential Alignment, and the Potential Alignment does not cross any core paths, NCN routes or fishing beats.</p>
Planning	
Proposals	<p>The following planning proposals have been identified in locations which intersect the Potential Alignment:</p> <ul style="list-style-type: none"> • An approved planning application for the prior notification of the erection of an agricultural building to the north of Coldstream Plantation is overlapped by the eastern extent of the Potential Alignment LoD (APP/2020/1789). • A Proposal of Application Notice (PoAN) was submitted in March 2024 for the erection of a large facility for the production hydrogen located to the south of the existing Kintore Substation. The Potential Alignment crosses directly through the centre of the planning application (ENQ/2024/0415). • The proposal for the installation of a battery energy storage system (BESS) with installed capacity of 49.9 MW, substation and associated infrastructure located to the south of Kintore, is crossed by the Potential Alignment (APP/2022/2022).

APPENDIX B: APPRAISAL OF ALTERNATIVE ALIGNMENTS AT LOCATION 1: HAYSTON HILL

This appendix presents the baseline constraints and the findings of the appraisal of key environmental considerations for the two alternative alignments at Location 1: Hayston Hill in Section A (Route A1) of the Proposed Route and details the RAG Ratings applied to each alternative identified under each environmental topic as per SSEN Transmission's Routeing Guidance.

The environmental topics consider the following, natural heritage, cultural heritage, people, landscape and visual, land use and planning.

The tables presented in this appendix detail the baseline constraints and the findings of the appraisals based on a study area which comprises the alignment and its LoD, defined here as 100 m either side of the alignment.

Table B1. Environmental Appraisal for Alternative Alignments at Location 1: Hayston Hill in Section A

Topic	Option	Constraints	Evaluation of Constraints	RAG Score
Natural Heritage Designations, Protected Species, Habitats	Alternative Alignment 1a (Potential)	Designations: International, European or National Designations No statutory designated sites recognised at an international, European or national level for their natural heritage are intersected by the alignment LoD. The LoD of the alignment intersects with the western edge of a block of woodland located on the northern slope of Hayston Hill which is listed on the AWI as LEPO (NGR NO 40243 45199). During 2023 field surveys, this LEPO woodland was identified as a broadleaved woodland dominated by oak. This woodland extends into approximately one third of the width of the LoD of the alignment.	This alignment has been RAG rated as Amber because it may compromise the block of LEPO woodland, a non-statutory national designation located on the northern slope of Hayston Hill. The broadleaved LEPO woodland near Upper Hayston on the eastern edge of the LoD is of relatively high ecological value. As this woodland extends into the LoD, there is the potential that a limited amount of felling may be required to form an operational corridor for the OHL; however, the LoD provides some flexibility to avoid or reduce felling of the LEPO woodland through careful micro-siting of the overhead line into adjacent farmland.	A
	Alternative Alignment 1b	Designations: International, European or National Designations No statutory designated sites recognised at an international, European or national level for their natural heritage are intersected by the LoD for the alignment. The LoD of the alignment intersects with a block of woodland located on the northern slope of Hayston Hill which is listed on the AWI as LEPO (NGR NO 40698 45210). During 2023 field surveys, this LEPO woodland was identified as a coniferous woodland dominated by larch species. This woodland extends across approximately two thirds of the width of the LoD of the alternative alignment.	This alignment has been RAG rated as Amber because it may compromise the block of LEPO woodland, a non-statutory national designation, located on the northern slope of Hayston Hill. The coniferous LEPO woodland near Upper Hayston within the west of the LoD is of relatively low ecological value. As this woodland extends into the LoD, there is the potential that felling may be required to form an operational corridor; however, this offers an opportunity to deliver enhancements for biodiversity through the creation of more varied habitats along an alignment through this woodland.	A
	Alternative Alignment 1a (Potential) + Alternative Alignment 1b	Designations: Regional Designations There are no regional designations recognised for their natural heritage intersected by the either of the alternative alignment's LoDs or within 300 m, therefore this criterion has been scoped out of this appraisal.		
	Alternative Alignment 1a (Potential) + Alternative Alignment 1b	Protected Species: European Protected Species (EPS); UK Biodiversity Action Plan (BAP) Species; Other Protected and Notable Species Records of and/or habitat potential for EPS (such as otter and bats), UKBAP species (such as red squirrel, reptiles and amphibians), and other protected and notable species (such as badger) are considered to represent a similar level of baseline constraint for both alternative alignments. Both alternatives have been evaluated as having similar potential to support these species and would require a similar range of standard mitigation measures to be implemented including those in SSEN Transmission's Species Protection Plans (SPPs). These criteria have therefore been scoped out of this appraisal.		

Topic	Option	Constraints	Evaluation of Constraints	RAG Score
	Alternative Alignment 1a (Potential)	<p>Habitats: Annex 1 Habitats</p> <p>Desk study and field survey data indicate that habitats within the area of the alignment LoD predominantly comprise a mosaic of farmland and woodlands.</p> <p>Field survey data from 2023 identified a small area of mixed scattered scrub located on the western slope of Hayston Hill (NGR NO 40342 44899), comprising a mosaic of scattered dwarf shrubs and scattered bracken which extends into approximately one third of the width of the LoD. Although noted to be in poor condition, this area has potential to support Annex 1 heathland habitat.</p> <p>Outside of the area listed above, there is limited potential for pockets of Annex 1 habitats intersected by the LoD, restricted to remnant extents of semi-natural woodland, such as the oak woodland (noted on the AWI as LEPO) at Hayston Hill.</p>	<p>This alignment has been RAG rated as Green because it is unlikely to compromise any Annex 1 habitats.</p> <p>Habitats with potential to support Annex 1 habitat types intersected by the LoD are limited to the small area of mixed scattered scrub and the oak woodland, both of which are at Hayston Hill. The scrub was noted to be in poor condition, and so there is an opportunity to enhance the condition of this habitat through sensitive management. In addition, the LoD provides flexibility to avoid any felling of the oak woodland through careful micro-siting of the overhead line into adjacent farmland.</p>	G
	Alternative Alignment 1b	<p>Habitats: Annex 1 Habitats</p> <p>Desk study and field survey data indicate that habitats within the area of Alternative Alignment 1b predominantly comprise a mosaic of farmland and woodlands.</p> <p>Field survey data from 2023 identified a large area of mixed scattered scrub southeast of Glamis (NGR NO 40571 45063), comprising a mosaic of scattered dwarf shrubs and scattered bracken which extends across the full width of the LoD. Although noted to be in poor condition, this area has potential to support Annex 1 heathland habitat.</p> <p>Field survey data from 2023 also identified a large area of Annex 1 upland heathland northwest of Hayston Hill (NGR NO 40685 44897) which extends across approximately half of the width of the LoD.</p> <p>Outside of the areas listed above, there is limited potential for pockets of Annex 1 habitats intersected by the LoD, restricted to remnant extents of semi-natural woodland.</p>	<p>This alignment has been RAG rated as Amber because it may compromise an area of mixed scattered scrub and of Annex 1 upland heathland.</p> <p>A relatively large expanse of Annex 1 upland heathland has been recorded within the LoD of Alternative 1b in the northwestern area of Hayston Hill; as such, this alternative may result in the removal of extents of this habitat type. A further relatively large area of mixed scattered scrub has also been recorded within the LoD which may support similar Annex 1 heathland habitats; this area was noted to be in poor condition and so there is an opportunity to deliver enhancements for biodiversity through sensitive management.</p>	A
	Alternative Alignment 1a (Potential) + Alternative Alignment 1b	<p>Habitats: Groundwater Dependent Terrestrial Ecosystems (GWDTE)</p> <p>Both alternative alignments have limited potential for GWDTEs to be located within their LoDs. GWDTE habitat is likely to be restricted to low-lying damp areas on the edges of fields. This criterion has therefore been scoped out of this appraisal.</p>		

Topic	Option	Constraints	Evaluation of Constraints	RAG Score
	Alternative Alignment 1a (Potential)	<p>Habitats: Biodiversity</p> <p>The density of Biodiversity Units derived from habitats within the Alternative Alignment 1a (Potential) LoD is calculated to be 7.75 BU/ha.</p> <p>Irreplaceable habitats are calculated to be present at a density of 5.52 BU/ha. Watercourses are present at a density of 0.00 BU/km.</p>	<p>This alignment has been RAG rated as Green because it has been evaluated as having less than 110% of the BU density of the least biodiversity impacted alternative (see Alternative Alignment 1b).</p>	G
	Alternative Alignment 1b	<p>Habitats: Biodiversity</p> <p>The density of Biodiversity Units derived from habitats within the Alternative Alignment 1b LoD is calculated to be 7.23 BU/ha.</p> <p>Irreplaceable habitats are calculated to be present at a density of 0.60 BU/ha. Watercourses are present at a density of 0.00 BU/km.</p>	<p>This alignment has been RAG rated as Green because it has been evaluated as the alternative having the lowest biodiversity unit density.</p>	G
Natural Heritage Ornithology	Alternative Alignment 1a (Potential) + Alternative Alignment 1b	<p>Designations</p> <p>The Loch of Kinnordy SPA lies 9 km to the northwest of the alternative alignments. Loch of Lintrathen SPA and the Firth of Tay and Eden Estuary SPA lie c. 15 km to the northwest and south of Alternative Alignment 1a (Potential) and Alternative Alignment 1b, respectively.</p> <p>All of the SPAs show connectivity to the OHL due to the core foraging distances for geese which are their principal designated feature. In addition, the Outer Firth of Forth and St. Andrew's Bay complex SPA supports breeding herring gull, a species with potential connectivity to the OHL.</p>	<p>The alternative alignments have been RAG rated as Amber as they may compromise an internationally or nationally designated area and/or the conservation status of the qualifying features of the site having assumed connectivity between the Loch of Lintrathen SPA, Loch of Kinnordy SPA and Firth of Tay and Eden SPA roosts and associated foraging areas. In addition, the Outer Firth of Forth and St. Andrew's Bay complex SPA holds breeding herring gull, although the species would tend to nest on cliffs significantly to the south of the SPA in Fife and as such the SPA can be scoped out of the assessment.</p> <p>Foraging geese are likely to be present to the north or south of the potential and alternative alignments (flight activity surveys have not recorded flight activity over the alignments); the area where the alternative alignments are located does not provide foraging habitat for geese. In addition, foraging herring gull are unlikely to be present in large numbers given the habitat types present.</p> <p>The habitats present in the area of the alternative alignments and distances from the SPAs here suggest that limited qualifying feature foraging and associated flight activity is present.</p>	A
	Alternative Alignment 1a (Potential) + Alternative Alignment 1b	<p>Schedule 1 species</p> <p>Alternative Alignment 1a (Potential) and Alternative Alignment 1b include habitat that supports Schedule 1 species. The alignments support open moorland and heath with associated woodland blocks. Woodland and moorland habitats support Schedule 1 raptors.</p>	<p>The alternative alignments have been RAG rated as Amber as they have the potential to compromise the conservation status of Schedule 1 bird populations in the region or nationally. There are records of Schedule 1 species in the location in which the alternative alignments are located. There are records of Schedule 1 species in the location in which the alternative alignments are located.</p>	A

Topic	Option	Constraints	Evaluation of Constraints	RAG Score
	Alternative Alignment 1a (Potential) + Alternative Alignment 1b	Birds of Conservation Concern (BoCC) The land crossed by Alternative Alignment 1a (Potential) and Alternative Alignment 1b support populations of birds listed on the red and amber lists of the BoCC, some of which are also listed as Schedule 1 species. The alternatives pass through an area which contains habitat suitable for breeding waders. Breeding bird survey has recorded the presence of Schedule 1 and other bird species.	The alternative alignments have been RAG rated as Amber. Birds of Conservation Concern are present as breeding birds across the potential and alternative alignments; with both alternatives containing optimal upland wader breeding habitat. As such, the alternatives may compromise the conservation status of the known presence of a BoCC or habitat known to support them. Both alternatives include upland areas with good breeding wader habitat with other species also potentially breeding.	A
Natural Heritage Hydrology, Geology & Hydrogeology	Alternative Alignment 1a (Potential) + Alternative Alignment 1b	Surface and Groundwater Drinking Water Protected Area (DWPA) There are no Surface DWPAs within the area of the alternative alignments, therefore this criterion has been scoped out of appraisal.		
	Alternative Alignment 1a (Potential)	Aquifers Providing Regional / Local Resources Alternative Alignment 1a (Potential) crosses four watercourses/drains and is adjacent to two small pond features. The main watercourse crossed is a minor, but spring-fed tributary to the Glen Ogilvie Burn. The alignment LoD is not located within any 200-year (plus climate change) floodplain extent. An identified groundwater spring source is located within the LoD at NGR NO 40755 44043. At the time of writing, it is not confirmed if the springs are a Private Water Supply (PWS) source for Nether Arniefoul Farm (NGR NO 39634 45510). A separate groundwater spring source was identified at the southern end of the alignment LoD at NGR NO 40755 44043, within 100 m of the alignment centreline.	This alignment has been RAG rated as Amber as it may compromise quality or quantity of surface or groundwater of regional importance (e.g. through creation of a pathway for run-off which may cause some disruption to abstraction water flow and/or quality). There is a groundwater spring source on the downslope (west) side of the alignment within the LoD (NGR NO 40052 45325). This spring source may be the abstraction source for a PWS at Nether Arniefoul Farm, although this remains unconfirmed. The OHL would be aligned within the LoD to be located as far east as possible to reduce the likelihood of potentially impacting the spring or its recharge source. A separate groundwater spring source was also identified within the LoD in the south of the alignment (also constraining Alternative Alignment 1b), on the east side of the LoD at NGR NO 40755 44043. The OHL alignment would be located on the west side of the LoD as far as possible to reduce the likelihood of any potential impact to the spring or its recharge source.	A

Topic	Option	Constraints	Evaluation of Constraints	RAG Score
	Alternative Alignment 1b	Aquifers Providing Regional / Local Resources Alternative Alignment 1b crosses two watercourses/drains and is adjacent to one pond feature. The alignment is not located near any identified potential PWS sources. However, a groundwater spring source was identified at the southern end of the alignment, within the LoD, at NGR NO 40755 44043, 100 m northeast of the alignment centreline.	This alignment has been RAG rated as Green as it is considered unlikely to result in surface flow pathways and to subsequently compromise quality of surface waters of local importance. All identified watercourses, ponds and predicted flood extents could be avoided or spanned by an OHL alignment within the LoD and there are no known water supplies or abstractions within the alignment LoD that would represent a material constraint. A groundwater spring source was identified within the LoD in the south of the alignment (also constraining the Alternative Alignment 1a), on the east side of the LoD at NGR NO 40755 44043. The OHL alignment would be located in the west side of the LoD as far as possible to reduce the likelihood of any potential impact to the spring or its recharge source	G
	Alternative Alignment 1a (Potential) + Alternative Alignment 1b	Surface Waters or Aquifer Providing Water for Agricultural or Industrial Use The alternative alignments are unlikely to result in surface flow pathways and subsequently compromise quality and or quantity of surface waters of local importance. All watercourses, ponds and predicted flood extents can be avoided or spanned within the alignment LoD. This criterion has therefore been scoped out of appraisal		
Cultural Heritage Designations, Cultural Heritage Assets	Alternative Alignment 1a (Potential)	Designations: World Heritage Sites (WHS), Scheduled Monuments (SM), Inventory Gardens and Designed Landscapes (GDL), Inventory Battlefields Within 1 km of the edge of the Alternative Alignment 1a (Potential) LoD there are two Scheduled Monuments of national importance and high sensitivity: <ul style="list-style-type: none"> • Arniefoul, Cairn (SM 389) stands c.400 m from the eastern edge of the alignment LoD. The remains of this prehistoric burial cairn stand in an elevated position, on the northwest plateaux of Hayston Hill. The prominent topographical position of the cairn and views to and from it are key aspects of its setting. The burial cairn may have been placed to have deliberate intervisibility with another contemporary burial cairn standing on the summit of Carlunie Hill (SM 6449), within 4 km of the alignment LoD. • Nether Arniefoul Unenclosed Settlement (SM 6423) is located c.200 m to the northwest of the edge of the alignment LoD. This monument comprises the remains of a prehistoric unenclosed settlement, visible as cropmarks on aerial photographs. It is located on a northeast facing slope within 	This alignment has been RAG rated as Amber as, although it would avoid direct interaction with any designated assets, it may compromise the setting of the following designated assets that lie close to the alignment: <ul style="list-style-type: none"> • Arniefoul Cairn (SM 389): the edge of the LoD passes c.400 m to the west of the monument potentially compromising its setting due to the introduction of new OHL towers within the immediate landscape surrounding the monument and which could intrude into key views to the monument. • Nether Arniefoul Unenclosed Settlement (SM 6423), the edge of the alignment LoD passes within 200 m to the southeast of the monument, potentially compromising its setting due to the introduction of new OHL towers in the immediate landscape surrounding the monument which could intrude into key views from the monument 	A

Topic	Option	Constraints	Evaluation of Constraints	RAG Score
		<p>arable farmland to the northwest of Upper Hayston. Views from the monument to the north/northeast across Strathmore, and the relationship with Glen Oglive Burn to the southwest are important aspects of its setting.</p>		
	<p>Alternative Alignment 1b</p>	<p>Designations: World Heritage Sites (WHS), Scheduled Monuments (SM), Inventory Gardens and Designed Landscapes (GDL), Inventory Battlefields</p> <p>Within 1 km of the edge of the Alternative Alignment 1b LoD are two Scheduled Monuments of national importance and high sensitivity:</p> <ul style="list-style-type: none"> • Arniefoul Cairn (SM 389) stands c.90 m from the eastern edge of the alignment LoD. (See description of monument in row above (Potential Alignment)). • Nether Arniefoul Unenclosed Settlement (SM 6423) lies c.620 m from the western edge of the alignment LoD. (See description of monument in row above (Alternative Alignment 1a (Potential)). 	<p>This alignment has been RAG rated as Red as, although it would avoid direct interaction with any designated assets, it would compromise the setting of the following designated assets that lie close to the alignment:</p> <ul style="list-style-type: none"> • Arniefoul Cairn (SM 389): the edge of the alignment LoD passes within c.90 m to the west of the monument. The OHL would introduce new towers within the immediate surroundings of the Scheduled Monument these being large in scale to the monument, and which would dominate the setting of the monument compromising its setting. • Nether Arniefoul Unenclosed Settlement (SM 6423), the edge of the alignment LoD passes within 620 m to the southeast of the monument, potentially compromising its setting due to the introduction of new OHL towers in the landscape surrounding the monument and which could intrude into key views from the monument. 	<p>R</p>
	<p>Alternative Alignment 1a (Potential) + Alternative Alignment 1b</p>	<p>Designations: Sites and Monuments Record (SMR) Entries</p> <p>The SMR holds records for one site of archaeological and cultural heritage interest within the LoD for Alternative Alignment 1a (Potential), a flint knife which was discovered in a field at Upper Hayston Farm in the 1960s. No remains of the findspot survive in situ and this asset is not considered a constraint to the development of an OHL alignment.</p> <p>The SMR holds no records for sites of archaeological and cultural heritage interest within the LoD for Alternative Alignment 1b.</p> <p>SMR sites are not considered to form a material constraint in regards to either alternative alignment, and therefore consideration of these has been scoped out of the appraisal.</p>		
	<p>Alternative Alignment 1a (Potential)</p>	<p>Cultural Heritage Assets</p> <p>Within 1 km of the edge of the alignment LoD there are:</p> <ul style="list-style-type: none"> • Two Category B Listed Buildings of regional importance and medium sensitivity. • Seven Category C Listed Buildings of local importance and low sensitivity. <p>The Listed Buildings comprise small residential properties (cottages and farmsteads) or bridges which have localised settings and are not significant constraints.</p>	<p>This alignment has been RAG rated as Green as it would be unlikely to disturb or compromise the setting of any cultural heritage assets.</p> <p>The Listed Buildings within the immediate landscape surrounding Alternative Alignment 1a have generally localised settings and are not considered to be significant constraints.</p>	<p>G</p>

Topic	Option	Constraints	Evaluation of Constraints	RAG Score
	Alternative Alignment 1b	Cultural Heritage Assets Within 1 km of the edge of the alignment LoD there are: <ul style="list-style-type: none"> One Category B Listed Building of regional importance and medium sensitivity. Six Category C Listed Buildings of local importance and low sensitivity. The Listed Buildings comprise small residential properties (cottages and farmsteads) which have localised settings and are not significant constraints.	The alignment has been RAG rated as Green as it would be unlikely to disturb or compromise the setting of any cultural heritage assets. The Listed Buildings within the immediate landscape surrounding the alternative alignment have generally localised settings and are not considered to be significant constraints.	
People Proximity to Dwellings	Alternative Alignment 1a (Potential)	Proximity to Dwellings There are two locations along Alternative Alignment 1a where residential properties are located within approximately 200 m of the edge of the LoD. These are: <ul style="list-style-type: none"> Two residential properties at Upper Hayston which are located approximately 100 m east of the edge of the LoD in its central section. A residential property at Templebank which lies approximately 150 m northwest of the edge of the LoD in its northern section. No other properties are located within 200 m of the boundary of the alignment LoD.	This alignment has been RAG rated as Amber. The LoD provides some flexibility for an OHL alignment to be located at a distance of more than four times the nominal tower height (approx. 240 m) from residential properties. However, it is considered that the presence of other constraints in the alignment LoD may make this difficult to achieve. The OHL may require to be aligned within a distance of two to four times the nominal tower height in the vicinity of the properties identified at Upper Hayston and Templebank.	A
	Alternative Alignment 1b	Proximity to Dwellings There are two locations along the central part of Alternative Alignment 1b where residential properties are located within approximately 200 m of the edge of the LoD. These are: <ul style="list-style-type: none"> An unnamed residential property located on the minor road to the north of Hayston Hill which lies approximately 100 m east of the edge of the LoD. A residential property at Upper Hayston which is located approximately 100 m west of the edge of the LoD. No other properties are located within 200 m of the boundary of the alignment LoD.	This alignment has been RAG rated as Amber. The LoD provides some flexibility for an OHL alignment to be located a distance of more than four times the nominal tower height (approx. 240 m) from residential properties. However, it is considered that the presence of other constraints in the alignment LOD may make this difficult to achieve. The OHL may require to be aligned within a distance of two to four times the nominal tower height in the vicinity of the properties identified at and near Upper Hayston. The OHL would need to pass in a gap between these properties.	A
Landscape/ Visual	Alternative Alignment 1a (Potential) +	Landscape Designations There are no landscape designations within the areas contained by the Alternative Alignment 1a (Potential) or Alternative Alignment 1b LoDs, or within 1 km, and therefore this criterion has been scoped out of appraisal.		

Topic	Option	Constraints	Evaluation of Constraints	RAG Score
Designations, Landscape Character, Visual	Alternative Alignment 1b			
	Alternative Alignment 1a (Potential)	<p>Landscape Character</p> <p>Alternative Alignment 1a (Potential) and Alternative Alignment 1b are located within the Lowland Hill Ranges LCT. As both alternatives are located within a wider landscape defined by the same characteristics, a comparison of landscape character constraints is focused on localised features at the alignment scale. The alignment passes over the lower western slopes of Hayston Hill which forms part of the Sidlaw Hills and contributes to the landscape character defined by '<i>recognisable shapes, peaks and slopes, and ridge profiles</i>' that are '<i>emphasised by their location set within low lying agricultural landscape to the north and south</i>'¹.</p>	<p>This alignment has been RAG rated as Amber as an OHL alignment in this location may compromise key characteristics of the Lowland Hill Ranges LCT at the local scale. The lower western slopes of Hayston Hill form a constraint where the alignment crosses the hill, as the OHL's prominence in the wider landscape would be increased due to its elevated position. The alignment's location across these elevated slopes would also compromise the LCT's '<i>recognisable shapes, peaks and slopes, and ridge profiles</i>'.</p> <p>The alignment however avoids the highest point of Hayston Hill, with the higher landform of the hill to the east providing opportunity to back-cloth the lower parts of the OHL. This alignment also generally follows the grain of the landscape.</p>	A
	Alternative Alignment 1b	<p>Landscape Character</p> <p>Alternative Alignment 1a (Potential) and Alternative Alignment 1b are located within the Lowland Hill Ranges LCT. As both alternatives are located within a wider landscape defined by the same characteristics, a comparison of landscape character constraints is focused on localised features at the alignment scale. This alignment passes over the higher, and more prominent western slopes of Hayston Hill which forms part of the Sidlaw Hills and contributes to the landscape character defined by '<i>recognisable shapes, peaks and slopes, and ridge profiles</i>' that are '<i>emphasised by their location set within low lying agricultural landscape to the north and south</i>'.</p>	<p>This alignment has been RAG rated as Amber as an OHL alignment in this location may compromise key characteristics of the Lowland Hill Ranges LCT at the local scale. The higher western slopes of Hayston Hill form a constraint where the alignment crosses the hill, as the OHL's prominence in the wider landscape would be increased due to its elevated position. The alignment's location across these elevated slopes would also compromise the LCT's '<i>recognisable shapes, peaks and slopes, and ridge profiles</i>'.</p> <p>As the alignment is located on higher slopes and crosses the top of the northwestern part of the hill, the OHL would diminish the scale of this hill and its contribution to the local landscape character, as the OHL would appear out of scale with the underlying landform.</p>	A
	Alternative Alignment 1a (Potential)	<p>Visual</p> <p>Visual receptors at residential properties between Glamis and Hayston Hill, as well as people travelling along the local road and path network form a constraint.</p> <p>Residents of properties at and near Upper Hayston form a particular constraint for visual amenity due to their position and close proximity to the alignment. The area of elevated landform on</p>	<p>This alignment has been RAG rated as Amber as this OHL alignment may compromise visual amenity experienced by a number of sensitive visual receptors including people at properties between Glamis and Hayston Hill and users of the local road and path network. Residents at the properties near Upper Hayston would have close proximity views (potentially <200 m) with the OHL having the potential to form a prominent feature in views experienced by these visual receptors. The</p>	A

¹ SNH (2019). National Landscape Character Assessment. Landscape Character Type 382: Lowland Hill Ranges - <https://www.nature.scot/sites/default/files/LCA/LCT%20382%20-%20Lowland%20Hill%20Ranges%20-%20final%20pdf.pdf>

Topic	Option	Constraints	Evaluation of Constraints	RAG Score
		<p>the western side of Hayston Hill also forms a visual constraint as this is a visually prominent feature within the local topography.</p>	<p>level of visual constraint could be reduced by aligning the OHL beyond 200 m from these receptors where possible.</p> <p>Where Alternative Alignment 1a (Potential) crosses the lower western slopes of Hayston Hill, the OHL's prominence along the skyline will be increased in views from surrounding visual receptors. The higher slopes of Hayston Hill to the east of the alignment may back-cloth the lower parts of the OHL, reducing the visual prominence of some of the infrastructure.</p>	
	<p>Alternative Alignment 1b</p>	<p>Visual</p> <p>Visual receptors at residential properties between Glamis and Hayston Hill, as well as people travelling along the local road network form a constraint. People travelling along the Jericho Core Path that runs between east of Upper Hayston and Jericho, part of which is located parallel to a section of this alignment also form a constraint due to the proximity of the Core Path to the LoD (approximately 60 m at its closest point).</p> <p>Residents of properties at and near the unnamed residential property located on the minor road to the north of Hayston Hill and the northeastern residential property at Upper Hayston form a particular constraint for visual amenity due to their position and close proximity to the alignment. The area of elevated landform on the western side of Hayston Hill also forms a visual constraint as this is a visually prominent feature within the local topography.</p>	<p>This alignment has been RAG rated as Amber as this OHL alignment may compromise visual amenity experienced by a number of sensitive visual receptors including people at properties between Glamis and Hayston Hill and users of the local road network and Jericho Core Path. Residents at the unnamed residential property located on the minor road to the north of Hayston Hill and the north-eastern residential property at Upper Hayston would have close proximity views (potentially <200 m) with the OHL forming a very prominent feature in views experienced by these visual receptors. The level of visual constraint could be reduced by aligning the OHL beyond 200 m from these receptors where possible.</p> <p>Where Alternative Alignment 1b crosses the higher western slopes of Hayston Hill, the OHL's prominence along the skyline will be increased in views from surrounding visual receptors.</p>	<p>A</p>
<p>Land Use Agriculture, Forestry, Recreation</p>	<p>Alternative Alignment 1a (Potential) + Alternative Alignment 1b</p>	<p>Agriculture</p> <p>The northern section of both alternative alignments, to the north of Upper Hayston, crosses an area of prime agricultural land (Class 3.1 – land capable of producing consistently high yields of a narrow range of crops and/or moderate yields of a wider range). There is the potential for at least two towers in the northern section of each alternative alignment to require location within prime agricultural land.</p>	<p>The alternative alignments have been RAG rated as Amber as they both cross through areas of best and most versatile land (Class 3.1). The alternatives have similar potential to interact with the agricultural use or viability of the land as an agricultural resource.</p> <p>It is likely that each alternative would require towers to be sited within prime agricultural land to the north of Upper Hayston. Considering the relatively limited footprint of OHL tower foundations, the permanent loss of agricultural land for an OHL development is not expected to compromise the agricultural use or viability of the land as an agricultural resource.</p> <p>The LoD of Alternative Alignment 1a (Potential) and Alternative Alignment 1b provides some flexibility for an OHL to be aligned to avoid the prime agricultural land to the east of Nether Arniefoul. It is considered that the alternative alignments would not compromise the agricultural use or viability of the land.</p>	<p>A</p>

Topic	Option	Constraints	Evaluation of Constraints	RAG Score
	Alternative Alignment 1a (Potential)	<p>Forestry</p> <p>The LoD of Alternative Alignment 1a (Potential) intersects with two areas of woodland comprised (or partly comprised) of commercial forestry:</p> <ul style="list-style-type: none"> In the southern section of the alignment, to the southwest of Hayston Hill, the eastern extent of the LoD intersects with un-named area of commercial forestry at NGR NO 40764 43974 and the western extent of the LoD intersects with an un-named area of commercial forestry at NGR NO 40600 44051. In the centre of the alignment, the eastern extent of the LoD intersects with a block of commercial forestry (at NGR NO 40304 44971) on the northwest facing slope of Hayston Hill. <p>Other aspects of forestry including designated areas and habitats are addressed in criteria for Natural Heritage.</p>	<p>This alignment has been RAG rated as Green as the alignment is unlikely to compromise the commercial returns or viability of a forestry operation.</p> <p>The alignment is constrained to some extent by the presence of woodland areas with some commercial forestry activity likely to be present. At these points, tree clearance for an operational corridor within these woodlands has some potential to interact with woodland management but is not predicted to compromise commercial returns from these enterprises. Some felling and/or re-design of planting may be required to accommodate the OHL.</p> <p>The edges of the woodland areas to the southwest of Hayston Hill would be intersected by the alignment LoD. Approximately half of the woodland area on the slopes of Hayston Hill is crossed by the eastern extent of the LoD. Some felling may be required to create a wind firm edge where coniferous species are present. Taking account of the potential to align the OHL to avoid much of this woodland, it is considered unlikely that an OHL would compromise the commercial returns of these areas.</p>	<p>G</p>
	Alternative Alignment 1b	<p>Forestry</p> <p>The LoD of Alternative Alignment 1b intersects with two areas of woodland comprised (or partly comprised) of commercial forestry:</p> <ul style="list-style-type: none"> In the southern section of the alignment, to the southwest of Hayston Hill, the eastern extent of the LoD intersects with an un-named area of commercial forestry at NGR NO 40764 43974. In the centre section of the alignment, the western extent of the LoD intersects with a block of commercial forestry (at NGR NO 40671 45261) on the northwest facing slope of Hayston Hill. <p>Other aspects of forestry including designated areas and habitats are addressed in criteria for Natural Heritage.</p>	<p>This alignment has been RAG rated as Amber as the alignment LoD intersects the edge of, or passes close to, several areas of commercial forestry where interaction with woodland management and operations, and some loss of woodland to tree-felling/operational corridor activities, may compromise the commercial returns from the forestry.</p> <p>The alignment is constrained to some extent by the presence of woodland areas with some commercial forestry activity likely to be present. At these points, tree clearance for an operational corridor within these woodlands has some potential to interact with woodland management and may compromise commercial returns from these enterprises. Some felling and/or re-design of planting may be required to accommodate the OHL.</p> <p>The northeastern edge of the woodland area to the southwest of Hayston Hill would be intersected by the alignment LoD. Some felling may be required to create a wind firm edge where coniferous species are present. Taking account of the potential to align the OHL to avoid much of this woodland, it is considered unlikely that an OHL would compromise the commercial returns of this area.</p> <p>The majority of the woodland area on the northern slopes of Hayston Hill is intersected by the western extent of part of the LoD. There is potential to align the OHL to avoid much of this woodland, although</p>	<p>A</p>

Topic	Option	Constraints	Evaluation of Constraints	RAG Score
			some felling may be required to create a wind firm edge where coniferous species are present. The alternative alignment may have the potential to interact with the forestry operations and compromise commercial returns from the site.	
	Alternative Alignment 1a (Potential) + Alternative Alignment 1b	<p>Recreation</p> <p>Both alternative alignments avoid interaction with core paths, NCN routes, Scottish Great Trails and fishing beats. Alternative Alignment 1b runs parallel to the Jericho core path, located approximately 60 m to the east of the alignment but does not directly interact with the core path. Interaction between the alignment and recreational land use has been assessed to be similar for each of the alignments and therefore this criterion has been scoped out of the appraisal.</p>		
Planning Proposals	Alternative Alignment 1a (Potential) + Alternative Alignment 1b	<p>Planning</p> <p>Both alternative alignments avoid interaction with any consented or proposed planning applications, and therefore this criterion has been scoped out of the appraisal.</p>		

APPENDIX C: APPRAISAL OF ALTERNATIVE ALIGNMENTS AT LOCATION 2: PADANARAM

This appendix presents the baseline constraints and the findings of the appraisal of key environmental considerations for the two alternative alignments at Location 2: Padanaram in Section B (Route B1.1) of the Proposed Route and details the RAG Ratings applied to each alternative identified under each environmental topic as per SSEN Transmission's Routeing Guidance.

The environmental topics consider the following, natural heritage, cultural heritage, people, landscape and visual, land use and planning.

The tables presented in this appendix detail the baseline constraints and the findings of the appraisals based on a study area which comprises the alignment and its LoD, defined here as 100 m either side of the alignment.

Table C1. Environmental Constraints for Alternative Alignments at Location 2: Padanaram in Section B

Topic	Option	Constraints	Evaluation of Constraints	RAG Score
Natural Heritage <i>Designations, Protected Species, Habitats</i>	Alternative Alignment 2a (Potential)	Designations: International, European or National Designations There are no statutory designated sites recognised at an international, European or national level for their natural heritage importance intersected by the alignment LoD or within 600 m. The alignment LoD intersects with woodland listed on the AWI as LEPO near Mosside of Ballinshoe (NGR NO 42518 52639) in the central section of the alignment. Surveys indicate that the site comprises a mosaic of birch woodland and grassland, with a number of native tree species present. The woodland extends across approximately two thirds of the width of the LoD of this alignment.	This alignment has been RAG rated as Amber because it may compromise the LEPO woodland near Mosside of Ballinshoe, a non-statutory national designation, and may require an operational corridor of up to 100 m in length through the LEPO woodland for the OHL. This alignment is not likely to compromise the conservation status of any statutory international, European or national designation and/or the conservation status of the designated features of any site. The LoD of this alignment intersects an area of LEPO near Mosside of Ballinshoe which may be of relatively high ecological value. As this woodland extends across two thirds of the LoD, there is potential that felling may be required to form an operational corridor of approximately 100 m in length for the OHL; there is limited potential to avoid felling of the LEPO woodland through micro-siting of the overhead line due to property constraints to the southeast.	A
	Alternative Alignment 2b	Designations: International, European or National Designations There are no statutory designated sites recognised at an international, European or national level for their natural heritage importance intersected by the alignment LoD or within 600 m. The alignment LoD intersects with a block of woodland listed on the AWI as LEPO near Haughs of Ballinshoe (NGR NO 42357 53283) in the central section of the alignment. Surveys confirmed that this woodland has been recently felled. The woodland extends across the full width of the LoD of this alignment.	This alignment has been RAG rated as Green because it is unlikely to compromise any statutory or non-statutory designations. This alignment is not likely to compromise the conservation status of any statutory international, European or national designation and/or the conservation status of the designated features of any site. The LEPO woodland near Haughs of Ballinshoe, a non-statutory national designation, extends across the full width of the LoD and is of relatively low ecological value; felling requirements would be limited due to recent forestry activities. The baseline value of the woodland block has been affected by commercial forestry, and it may therefore be possible to enhance the condition of this LEPO woodland through new planting and sensitive management.	G
	Alternative Alignment 2a (Potential)	Designations: Regional Designations The LoD of this alignment intersects with Woodside LNCS, north of Over Bow (NGR NO 43560 54001). The LNCS extends across the full width of the alignment LoD. Field surveys indicated that this LEPO woodland comprises a mosaic of birch woodland with open areas of grassland.	This alignment has been RAG rated as Amber RAG because it may compromise the conservation status of the LNCS and/or the conservation status of the designated features of the site. The alignment is constrained by the presence of the Woodside LNCS, comprising birch woodland, extending across the LoD. As such, some felling of this woodland may be required within the LNCS to provide an operational corridor of up to 130 m in length for the OHL; however, as the LNCS is designated for a mosaic of woodland and open grassland habitats, it may be possible to microsite the OHL to make use of existing open areas of grassland,	A

Topic	Option	Constraints	Evaluation of Constraints	RAG Score
			and to minimise felling requirements. As the LNCS is approximately 130 m wide, micro-siting would ensure that towers are located outwith the LNCS. In addition, an alignment through the LNCS offers an opportunity to implement a sensitive management regime that may be beneficial to the conservation objectives of the LNCS.	
	Alternative Alignment 2b	<p>Designations: Regional Designations</p> <p>The LoD of this alignment intersects with Woodside LNCS, north of Over Bow (NGR NO 43560 54001). The LNCS extends across the full width of the alignment LoD. Field surveys indicated that this LEPO woodland comprises a mosaic of birch woodland with open areas of grassland.</p>	<p>This alignment has been RAG rated as Amber RAG because it may compromise the conservation status of the LNCS and/or the conservation status of the designated features of the site.</p> <p>The alignment is constrained by the presence of the Woodside LNCS, comprising birch woodland, extending across the LoD. As such, some felling of this woodland may be required within the LNCS to provide an operational corridor of up to 160 m in length for the OHL; however, as the LNCS is designated for a mosaic of woodland and open grassland habitats, it may be possible to micro-site the OHL to make use of existing open areas of grassland, and to minimise felling requirements. As the LNCS is approximately 160 m wide, micro-siting would ensure that towers are located outwith the LNCS. In addition, an alignment through the LNCS offers an opportunity to implement a sensitive management regime that may be beneficial to the conservation objectives of the LNCS.</p>	A
	Alternative Alignment 2a (Potential) + Alternative Alignment 2b	<p>Protected Species: European Protected Species (EPS); UK Biodiversity Action Plan (BAP) Species; Other Protected and Notable Species</p> <p>Records of and/or habitat potential for EPS (such as otter and bats), UKBAP species (such as pine marten, red squirrel, reptiles and amphibians), and other notable species (such as badger) are considered to represent a similar level of baseline constraint for both alternative alignments. Both alternative alignments have been evaluated as having similar potential to support these species and would require a similar range of standard mitigation measures to be implemented including those in SSEN Transmission's Species Protection Plans (SPPs). These criteria have therefore been scoped out of this appraisal.</p>		
	Alternative Alignment 2a (Potential) + Alternative Alignment 2b	<p>Habitats: Annex 1 Habitats; Groundwater Dependent Terrestrial Ecosystems (GWDTE)</p> <p>Desk study and field survey data indicate that habitats within both alternative alignments comprise a mosaic of farmland and woodlands with limited potential for pockets of Annex 1 habitats to be located within the LoD areas. Annex 1 habitats are likely to be restricted to remnant extents of semi-natural woodland. Similarly, both alternative alignments have limited potential for GWDTEs to be located within the LoD areas. GWDTE habitat is likely to be restricted to low-lying damp areas on the edges of fields.</p> <p>Due to the similarity in constraint represented by the types of habitat present and the similar level of potential for Annex 1 habitats and GWDTEs across both alternative alignments, these criteria have been scoped out of this appraisal.</p>		
	Alternative Alignment 2a (Potential)	<p>Habitats: Biodiversity</p> <p>The density of Biodiversity Units derived from habitats within the alignment LoD is calculated to be 7.27 BU/ha.</p>	This alignment has been RAG rated as Green because it has been evaluated as having the lowest biodiversity unit density.	G

Topic	Option	Constraints	Evaluation of Constraints	RAG Score
		Irreplaceable habitats are calculated to be present at a density of 0.11 BU/ha. Watercourses are present at a density of 0.99 BU/km.		
	Alternative Alignment 2b	<p>Habitats: Biodiversity</p> <p>The density of Biodiversity Units derived from habitats within the alignment LoD is calculated to be 7.29 BU/ha.</p> <p>Irreplaceable habitats are calculated to be present at a density of 0.59 BU/ha. Watercourses are present at a density of 0.15 BU/km.</p>	This alignment has been RAG rated as Green because it has been evaluated as having less than 110% of the BU density of the least biodiversity impacted alternative (see Alternative Alignment 2a (Potential)).	G
Natural Heritage Ornithology	Alternative Alignment 2a (Potential) + Alternative Alignment 2b	<p>Designations</p> <p>The Loch of Kinnordy SPA lies 4.9 km to the west of the alternative alignments with Loch of Lintrathen SPA 12.7 km west. Both of the SPAs show connectivity to both alternative alignments given that the core foraging range of their designated features coincides with the OHL here.</p> <p>Vantage point surveys to date have recorded goose species' flights that intersect with the location of both alternative alignments.</p>	<p>The alternative alignments have been RAG rated Amber as they may compromise an internationally or nationally designated area and/or the conservation status of the qualifying features of the site having assumed connectivity between the Loch of Lintrathen SPA and Loch of Kinnordy SPA roosts and associated foraging areas.</p> <p>Information on the historic distribution of feeding greylag geese from Loch of Lintrathen suggests that collision risk is a constraint for both alternative alignments due to the OHL alignment between the SPA and potential feeding fields (<i>Mitchell, 2012</i>)¹. However, <i>Mitchell (2012)</i> identifies preferred greylag geese feeding areas to the southwest of the loch and out with the alignment. Loch of Kinnordy pink-footed and greylag geese also show preferred foraging to the south and southwest of the loch. Flight activity is present across the alignment, however.</p> <p>Line-marking with bird diverters would be required in this location of the OHL as design mitigation in locations where conductors are likely to pose collision risk to susceptible birds.</p>	A
	Alternative Alignment 2a (Potential) + Alternative Alignment 2b	<p>Schedule 1 birds</p> <p>The alternative alignments include habitat that supports Schedule 1 species. Flight activity of Schedule 1 species has been recorded within the location of the alignments; however, no desk records of breeding/nesting are present for the species.</p> <p>Schedule 1 species have not been recorded breeding within the area of the alternative alignments. As such, the habitats within the area of the alternative alignments are not anticipated to support regionally significant populations of Schedule 1 birds and therefore this criterion has been scoped out from appraisal.</p>		
	Alternative Alignment 2a (Potential) +	Birds of Conservation Concern (BoCC)		

¹ Mitchell, C. 2012. Mapping the distribution of feeding Pink-footed and Iceland Greylag Geese in Scotland. Wildfowl & Wetlands Trust / Scottish Natural Heritage Report, Slimbridge. 108pp.

Topic	Option	Constraints	Evaluation of Constraints	RAG Score
	Alternative Alignment 2b	The land intersected by the OHL alternative alignments supports populations of birds listed on the red and amber lists of the BoCC, some of which are also listed as Schedule 1 species. Birds of Conservation Concern are likely present as breeding birds across the area of the alternative alignments, however the area does not represent optimal breeding wader habitat. The alignments lie within an area that is unlikely to compromise the conservation status of populations of a red or amber listed species or essential breeding, passage or wintering habitat, and therefore this criterion has been scoped out from appraisal.		
Natural Heritage Hydrology, Geology & Hydrogeology	Alternative Alignment 2a (Potential) + Alternative Alignment 2b	Surface and Groundwater Drinking Water Protected Area (DWPA) There are no Surface DWPAs within the area of the alternative alignments, therefore this criterion has been scoped out of appraisal.		
	Alternative Alignment 2a (Potential) + Alternative Alignment 2b	Aquifers Providing Regional / Local Resources There are no known PWS or abstractions within the area of the alternative alignments, therefore this criterion has been scoped out of appraisal		
	Alternative Alignment 2a (Potential)	Surface Waters or Aquifer Providing Water for Agricultural or Industrial Use The alignment crosses seven watercourses/ drains. The largest watercourse crossing within the alignment is the Black Burn. SEPA Future Flood maps indicates that there is a 330 m wide floodplain in the south of the alignment associated within the Gairie Burn/Dean Water and a 45 m wide flood extent associated with the Black Burn within the alignment LoD.	The alignment has been RAG rated as Amber as it may compromise quality and/or quantity of surface or groundwaters of local importance or would require dewatering of construction activities. All identified watercourses and predicted flood extents could be avoided or spanned by an OHL alignment within the alignment LoD, except the large floodplain associated with the Gairie Burn/Dean Water in the south of the alignment. There are no other known water supplies or abstractions within the LoD that would represent a material constraint.	A
	Alternative Alignment 2b	Surface Waters or Aquifer Providing Water for Agricultural or Industrial Use The alignment crosses six watercourses/ drains. The largest watercourse crossed within the alignment is the Black Burn. SEPA Future Flood maps indicates that there is a 240 m wide floodplain in the south of the alignment associated within the Gairie Burn/Dean Water and an 80 m wide flood extent associated with the Black Burn within the alignment LoD.	The alignment has been RAG rated as Amber as it may compromise quality and/or quantity of surface or groundwaters of local importance or would require dewatering of construction activities. All identified watercourses and predicted flood extents could be avoided or spanned by an OHL alignment within the LoD, except the large floodplain associated with the Gairie Burn/Dean Water in the south of the alignment. There are no other known water supplies or abstractions within the LoD that would represent a material constraint.	A
Cultural Heritage <i>Designations, Cultural Heritage Assets</i>	Alternative Alignment 2a (Potential)	Designations: World Heritage Sites (WHS), Scheduled Monuments (SM), Inventory Gardens and Designed Landscapes (GDL), Inventory Battlefields Within 1 km of the edge of the LoD there is one Scheduled Monument of national importance and high sensitivity:	The alignment has been RAG rated as Amber as, although it would avoid direct interaction with any designated assets, it may compromise the setting of the following designated asset that lies close to the alignment: <ul style="list-style-type: none"> Ballinshoe Castle (SM 162): the alignment passes within c.1 km to the southeast of the monument, potentially compromising its setting due to 	A

Topic	Option	Constraints	Evaluation of Constraints	RAG Score
		<ul style="list-style-type: none"> Ballinshoe Castle (SM 162) stands c.1 km to the northwest of the alignment. The ruins of this Castle stand on a slight ridge on the north side of the Vale of Strathmore. The Castle is a local landmark, visible from the Lanark House to Mosside public road on its south side. There are open views out to the south from the Castle, overlooking Strathmore. Views to and from the Castle are key aspects of its setting. 	<p>the introduction of new OHL towers in the landscape surrounding the monument and which could intrude into key views from the Castle across the Vale of Strathmore.</p>	
	Alternative Alignment 2b	<p>Designations: World Heritage Sites (WHS), Scheduled Monuments (SM), Inventory Gardens and Designed Landscapes (GDL), Inventory Battlefields</p> <p>Within 1 km of the edge of the alignment LoD there are two Scheduled Monuments of national importance and high sensitivity:</p> <ul style="list-style-type: none"> Ballinshoe Castle (SM 162) (NGR NO 417 531) stands c.170 m to the northwest of the edge of the alignment LoD. (See description of monument in row above (Alternative Alignment 2a)). Fletcherfield Enclosure (SM 5911) (NGR NO 404 522) is located c.700 m to the northwest of the edge of the alignment LoD. This monument comprises the remains of an enclosure visible as cropmarks on aerial photographs. It is located within arable farmland, just south of Fletcherfield Farm, overlooking the Vale of Strathmore. Views from the monument across Strathmore and the relationship with likely contemporary sites, including Wester Logie enclosure (SM 6313) and Redwell, enclosure (SM 6354), in the surrounding landscape, are an important part of its setting. 	<p>The alignment has been RAG rated as Red as, although it would avoid direct interaction with any designated assets, it would compromise the setting of the following designated assets that lie close to the alignment.</p> <ul style="list-style-type: none"> Ballinshoe Castle (SM 162): the edge of the LoD passes within c.170 m to the southeast of the monument. The OHL would introduce new towers within the immediate surroundings of the Scheduled Monument, those being large in scale to the monument, and which would be prominent in key views from, and to, the Castle compromising its setting. Fletcherfield Enclosure (SM 5911); the edge of the LoD passes within c.700 m southeast of the monument, potentially compromising its setting due to the introduction of new OHL towers in the farmland surrounding the monument and which could intrude into key views from the monument across the Vale of Strathmore. 	R
	Alternative Alignment 2a (Potential)	<p>Designations: Sites and Monuments (SMR) Entries</p> <p>Three recorded SMR sites of archaeological and cultural heritage interest fall within the alignment LoD.</p> <p>These comprise the remains of a former farmstead (NO45SW0079) and the route of a former Roman Road (NO45SW9913 and NO45NE9910) which survives as cropmark sites visible on aerial photographs.</p> <p>All of the assets within the alignment LoD are recorded as being of 'Standard' importance in the SMR and are assessed as being of local heritage value and of low sensitivity.</p>	<p>The alignment has been RAG rated as Green for SMR sites, as the archaeological and cultural heritage sites identified do not represent significant constraints to development by an OHL in this alignment.</p> <p>The SMR sites are thinly scattered throughout the alignment LoD. Where direct impacts on SMR sites cannot be avoided, constraints could be mitigated through a programme of works (i.e. trial trench evaluation and excavation or watching briefs) in advance of construction works to a scope agreed by the local authority.</p>	G

Topic	Option	Constraints	Evaluation of Constraints	RAG Score
	<p>Alternative Alignment 2b</p>	<p>Designations: Sites and Monuments (SMR) Entries</p> <p>Five recorded SMR sites of archaeological and cultural heritage interest fall within the alignment LoD.</p> <p>These comprise the remains of an enclosure (NO45SW0027) and a former Roman Road (NO45SW9913 and NO45NE9910), both surviving as cropmark sites visible on aerial photographs, the site of a former croft (NO45SW0049), and a disused railway (NO45NW0043).</p> <p>All of the assets within the alignment LoD are recorded as being of 'Standard' importance in the SMR and are assessed as being of local heritage value and of low sensitivity.</p>	<p>The alignment has been RAG rated as Green for SMR sites, as the archaeological and cultural heritage sites identified do not represent significant constraints to development by an OHL in this alignment.</p> <p>The majority of the SMR sites are clustered around the northern end of the alignment. Where direct impacts on SMR sites cannot be avoided, constraints could be mitigated through a programme of works (i.e. trial trench evaluation and excavation or watching briefs) in advance of construction works to a scope agreed by the local authority.</p>	<p>G</p>
	<p>Alternative Alignment 2a (Potential)</p>	<p>Cultural Heritage Assets</p> <p>Within 1 km of the edge of the alignment LoD there are eight Category B Listed Buildings of regional importance and medium sensitivity.</p> <p>The Listed Buildings comprise largely of small residential buildings, and garden features (i.e. gatepiers), which have generally localised settings and are not significant constraints.</p> <p>The asset considered to be most sensitive to change in terms of impact on its setting is Category B Listed Ballindarg House (LB 11689) (NGR NO 406 511). This country house is located at the southern end of the alignment. The main elevation of the house is orientated to the south and views from this elevation are a key aspect of its setting. Long views from the House, particularly from ground level, are generally constrained by surrounding woodland. More distant views may be afforded from the upper floors of the House.</p>	<p>The alignment has been RAG rated as Green as it would be unlikely to disturb or compromise the setting of any cultural heritage assets.</p> <p>The alignment passes to the east of Category B Listed Ballindarg House (LB 11689) and would not be visible in key views from the House to the south, therefore the House is not considered to be a significant constraint to development of an OHL.</p>	<p>G</p>
	<p>Alternative Alignment 2b</p>	<p>Cultural Heritage Assets</p> <p>Within 1 km of the edge of the alignment LoD there are nine Category B Listed Buildings of regional importance and medium sensitivity.</p> <p>The Listed Buildings comprise largely of small residential buildings, and garden features (i.e. gatepiers), which have generally localised settings and are not significant constraints.</p>	<p>The alignment has been RAG rated as Green as it would be unlikely to disturb or compromise the setting of any cultural heritage assets.</p> <p>The alignment passes to the east of Category B Listed Ballindarg House (LB 11689) and would not be visible in key views to the south from the House, therefore the House is not considered to be a significant constraint to development of an OHL.</p>	<p>G</p>

Topic	Option	Constraints	Evaluation of Constraints	RAG Score
		The asset considered to be most sensitive to change in terms of impact on its setting is Category B Listed Ballindarg House (LB 11689) (NGR NO 406 511). (See description of monument in row above (Alternative Alignment 2a)).		
People Proximity to Dwellings	Alternative Alignment 2a (Potential)	<p>Proximity to Dwellings</p> <p>There are six locations along the alignment where residential properties are located within approximately 200 m of the edge of the LoD. The properties are, from south to north:</p> <ul style="list-style-type: none"> • Paddy Schoolhouse which is located approximately 130 m northwest from the LoD at the southern end. • Woodhead of Ballinshoe which is located approximately 130 m west from the LoD at the southern end. • A proposed development of a dwelling house at Cranshade Ballinshoe located approximately 110 m southeast of the LoD². • Haughs of Ballinshoe Farm located approximately 90 m from the LoD to the west. • Barnsdale Cottage located approximately 80 m from the LoD to the west. • Three properties at Overbow Farm located between approximately 150-180 m to the east of the LoD at the northern end. <p>No other properties are located within 200 m of the boundary edge of the alignment LoD.</p>	<p>The alignment has been RAG rated as Amber. The LoD provides some flexibility for an OHL alignment to be located at a distance of more than four times the nominal tower height (approx. 240 m) from residential properties.</p> <p>The OHL may require to be aligned within a distance of two to four times the nominal tower height in the vicinity of the properties at Haughs of Ballinshoe, Barnsdale Cottage and Cranshade Ballinshoe (when constructed) which are the closest properties to the alignment. As such they offer a narrow gap where the alignment would pass through. These properties also reduce the degree of flexibility within the LoD due to their respective locations either side of the alignment, limiting the opportunity to increase the distances between the alignment and properties. The alignment would be developed wherever possible to achieve at least a 170 m separation from any individual property.</p> <p>Elsewhere, the LoD offers opportunity for the OHL to be located at a distance of more than four times the nominal tower height from Paddy Schoolhouse and Woodhead of Ballinshoe in the southern section of alignment and the properties at Overbow Farm at the northern end of the alignment. In these sections, there are no further property constraints that would prevent the OHL from being located at distances of more than four times the nominal tower from dwellings.</p>	A
	Alternative Alignment 2b	<p>Proximity to Dwellings</p> <p>There are six locations along the alignment where residential properties are located within approximately 200 m of the edge of the LoD. The properties are, from south to north:</p>	<p>The alignment has been RAG rated as Amber. The LoD provides some flexibility for an OHL alignment to be located at a distance of more than four times the nominal tower height (approx. 240 m) from residential properties.</p> <p>The OHL may require to be aligned within a distance of two to four times the nominal tower height in the vicinity of the properties at Keepers Cottage and Barnsdale Cottage and Haughs of Ballinshoe Farm where the alignment would pass through a gap between the properties. These properties also reduce the degree of flexibility within the LoD due to their respective locations either side</p>	A

² This planning application has been included in 'People: Proximity to Dwellings' to capture the constraint this development may pose to the alignment as a residential property as it is located outwith the LoD and therefore would be excluded from the 'Planning' appraisal.

Topic	Option	Constraints	Evaluation of Constraints	RAG Score
		<ul style="list-style-type: none"> One proposed development of a property to the east of Ballindarg located approximately 190 m west of the LoD in the southern section³. Ballinshoe Smithy located approximately 160 m to the east of the LoD. Lanark House located approximately 180 m from the LoD to the east. Keepers Cottage located approximately 110 m from the LoD to the northwest. Barnsdale Cottage and Haughs of Ballinshoe Farm located approximately 180 m and 200 m from the LoD respectively to the southeast. Forestmuir and Woodside Farm located approximately 120 m and 150 m respectively to the northwest of the LoD. <p>No other properties are located within 200 m of the boundary of the alignment LoD.</p>	<p>of the alignment, limiting the opportunity to increase the distances between the alignment and the properties. The alignment would be developed wherever possible to achieve at least a 170 m separation from any individual property.</p> <p>Elsewhere, the LoD offers opportunity for the OHL to be located at a distance of more than four times the nominal tower height from Ballindarg at the southern end of the alignment, Ballinshoe Smithy and Lanark House in the central section of the alignment and Forestmuir and Woodside Farm at the northern end of the alignment. In these sections, there are no further property constraints that would prevent the OHL from being located at distances of more than four times the nominal tower height from dwellings.</p>	
Landscape/ Visual Designations, Landscape Character, Visual	Alternative Alignment 2a (Potential) + Alternative Alignment 2b	Landscape Designations There are no landscape designations within the areas contained by the alternative alignments' LoDs, or within 1 km, and therefore this criterion has been scoped out of appraisal.		
	Alternative Alignment 2a (Potential) + Alternative Alignment 2b	Landscape Character Both alternative alignments are located within the Broad Valley Lowlands – Tayside LCT. Since both alternatives are located within a wider landscape defined by the same characteristics, a comparison of landscape character constraints is focused on localised features at the alignment scale. Approximately 160 m of the northern part of Alternative Alignment 2b passes through an area of broadleaved woodland at Forestmuir Wood. Approximately 160 m of the centre of the Potential Alignment passes through an area of broadleaved woodland near Mossie of Ballinshoe. These areas of woodland contribute to local landscape character, despite the recognition of limited woodland and woodland loss within the key characteristics of the Broad Valley Lowlands – Tayside LCT ⁴ . In both alternative alignments, these woodlands are located within the LoD and some felling may be required to form an operational corridor. Due to the similarity in the total area of woodland that would be affected by both alternative alignments, this criterion has been scoped out of appraisal.		

³ This planning application has been included in 'People: Proximity to Dwellings' to capture the constraint this development may pose to the alignment as a residential property as it is located outwith the LoD and therefore would be excluded from the 'Planning' appraisal.

⁴ SNH (2019). National Landscape Character Assessment. Landscape Character Type 384: Broad Valley Lowlands – Tayside - <https://www.nature.scot/sites/default/files/LCA/LCT%20384%20-%20Broad%20Valley%20Lowlands%20-%20Tayside%20-%20final%20pdf.pdf>

Topic	Option	Constraints	Evaluation of Constraints	RAG Score
	Alternative Alignment 2a (Potential)	<p>Visual</p> <p>Visual receptors at scattered residential properties and people travelling along the local road network form a constraint, particularly residents at Barnsdale Cottage which is the closest property to the alignment located approximately 80 m west of the LoD, Haughs of Ballinshoe located approximately 90 m northwest of the LoD and a proposed dwelling house at Cranshade Ballinshoe is located approximately 110 m southeast of the LoD.</p>	<p>The alignment has been RAG rated as Amber as an OHL may compromise visual amenity experienced by a number of sensitive visual receptors including people at residential properties. Visual receptors at the residential properties at Barnsdale Cottage, Haughs of Ballinshoe and the proposed dwelling at Cranshade Ballinshoe constrain the alignment in the central part of the alignment due to their distance of <200 m from the LoD and their positions on either side of the alignment. Visual receptors at these properties will have very close proximity views with the OHL forming a very prominent feature in views, and the LoD offers limited opportunity to increase the distance of views beyond 200 m. The constraint is unavoidable however the level of constraint could be reduced by ensuring towers are aligned beyond 200 m from these receptors where possible.</p>	A
	Alternative Alignment 2b	<p>Visual</p> <p>Visual receptors at scattered residential properties and people travelling along the local road network form a constraint, particularly residents at Keepers Cottage which is the closest property to the alignment, located 110 m northwest of the LoD, as well as Barnsdale Cottage and Haughs of Ballinshoe Farm located within 200 m which constrain the LoD to the southeast, on the opposite side of the alignment to Keepers Cottage.</p>	<p>The alignment has been RAG rated as Amber as an OHL may compromise visual amenity experienced by a number of sensitive visual receptors including people at residential properties. Residents at Keepers Cottage, Barnsdale Cottage and Haughs of Ballinshoe Farm will have close proximity views (potentially <200 m) and as such the OHL is likely to be prominent in views from these dwellings. Additionally, visual receptors at these properties constrain the alignment in the northern part of the alignment due to their distance of <200 m from the LoD and their positions on either side of the alignment. The constraint is unavoidable however the level of constraint could be reduced by ensuring towers are aligned beyond 200 m from these receptors where possible.</p>	A
Land Use Agriculture, Forestry, Recreation	Alternative Alignment 2a (Potential) + Alternative Alignment 2b	<p>Agriculture</p> <p>The majority of both alternative alignments intersect prime agricultural land (Class 3.1 – land capable of producing consistently high yields of a narrow range of crops and/or moderate yields of a wider range), and both alignments intersect small sections of land comprising lower land classifications.</p>	<p>Agriculture</p> <p>The alternative alignments have been RAG rated as Amber as they intersect with extensive areas of best and most versatile land (Class 3.1). Each alternative alignment has similar potential to interact with, or compromise, the agricultural use or viability of the land as an agricultural resource.</p> <p>It is likely that each alternative would require towers to be sited within prime agricultural land. Considering the relatively limited footprint of OHL tower foundations, the permanent loss of agricultural land for an OHL development is not expected to compromise the agricultural use or viability of the land as an agricultural resource.</p>	A
	Alternative Alignment 2a (Potential)	<p>Forestry</p> <p>The alignment does not intersect any woodland blocks comprised of commercial forestry.</p>	<p>Forestry</p> <p>The alignment has been RAG rated as Green as the alignment avoids interaction with areas identified of comprising any commercial forestry.</p>	G

Topic	Option	Constraints	Evaluation of Constraints	RAG Score	
		Other aspects of forestry including designated areas and habitats are addressed in the criteria for Natural Heritage .			
	Alternative Alignment 2b	<p>Forestry</p> <p>The LoD of the alignment intersects with the centre of an unnamed commercial forestry area, located to the north of Strathmore, near Haughs of Ballinshoe (NGR NO 42353 53268). Field surveys confirmed this commercial forestry area has been recently felled. Other aspects of forestry including designated areas and habitats are addressed in the criteria for Natural Heritage.</p>	<p>Forestry</p> <p>The alignment has been RAG rated as Amber as the alignment intersects an area of commercial forestry where interaction with woodland management and operations may compromise the commercial returns from the forestry. The alignment is constrained to some extent by the presence of woodland where some commercial forestry is likely to be present. At this point, tree clearance to form an operational corridor for the OHL within this woodland has the potential to interact with woodland management and may compromise commercial returns from the enterprise. Some felling and/or as re-design of planting may be required to accommodate the OHL.</p> <p>The alignment intersects the centre of the woodland near Haughs of Ballinshoe, with the potential for at least one tower to require location within the wooded area. Despite the woodland area having been felled, the OHL would have potential to interact with forestry operations and may compromise future commercial returns from the site due to required changes in planting and management.</p>	A	
	Alternative Alignment 2a (Potential) + Alternative Alignment 2b	<p>Recreation</p> <p>Both alternative alignments avoid interactions with core paths, NCN routes, Scottish Great Trails and fishing beats. Interaction between the alignment and recreational use of the land has been assessed to be similar for each of the alternative alignments, and therefore this criterion has been scoped out of the appraisal.</p>			
Planning Proposals	Alternative Alignment 2a (Potential) + Alternative Alignment 2b	Both alternative alignments avoid interaction with any consented or proposed planning applications. Interaction between the alignment and planning proposals has been assessed to be similar for each of the alternative alignments, and therefore this criterion has been scoped out of the appraisal.			

APPENDIX D: APPRAISAL OF ALTERNATIVE ALIGNMENTS AT LOCATION 3: JUSTINHAUGH

This appendix presents the baseline constraints and the findings of the appraisal of key environmental considerations for two alternative alignments at Location 3: Justinhaugh in Section B (Route B1.1) of the Proposed Route and details the RAG Ratings applied to each as per SSEN Transmission's Routeing Guidance.

The environmental topics consider the following, natural heritage, cultural heritage, people, landscape and visual, land use and planning.

The tables presented in this appendix detail the baseline constraints and the findings of the appraisals based on a study area which comprises the alignment and its LoD, defined here as 100 m either side of the alignment.

Table D1. Environmental Constraints for Alternative Alignments at Location 3: Justinhaugh in Section B

Topic and Criteria	Option	Constraints	Evaluation of Constraints	RAG Score
<p>Natural Heritage Designations Protected Species Habitats</p>	<p>Alternative Alignment 3a (Potential)</p>	<p>Designations: International, European or National Designations The alignment LoD crosses the River South Esk SAC between Inshewan and Craigeassie (NGR NO 45025 56713). The SAC is designated for freshwater pearl mussel (<i>Margaritifera margaritifera</i>) and Atlantic salmon (<i>Salmo salar</i>). Aerial imagery indicates that the riparian habitats of the SAC comprise broadleaved woodland that extends across the full width of the LoD of the alignment. There are no other statutory designated sites recognised at an international, European or national level for their natural heritage intersected by the alternative alignment LoD or within 1.5 km. The alignment LoD intersects with one block of woodland listed on the AWI as LEPO east of Miltonbank (NGR NO 45754 57795). Field surveys found that some of the woodland as mapped on the AWI has been converted to cropland. There is one small area of broadleaved plantation woodland remaining within the west of the LEPO, where it is intersected by the LoD of the alignment.</p>	<p>This alignment has been RAG rated as Amber because it may compromise the conservation status of the River South Esk SAC. The alignment intersects the River South Esk SAC; the riparian habitats comprise mature broadleaved trees which may constrain the OHL as riparian trees should be retained wherever possible. Removal of riparian vegetation has potential implications for bankside erosion. Uncontrolled construction within proximity to the SAC would pose a pollution risk, although the flood risk area is noted to be narrow at this location. The requirement to provide an operational corridor for the OHL may require felling of some trees along the River South Esk. This could be mitigated to some extent by careful micro-siting of towers and access tracks to minimise any requirement for removal of riparian vegetation. Mitigation to retain woodland through sensitive construction techniques would be applied. In addition, strict pollution prevention would be implemented during construction to protect the water environment. The LEPO woodland near Miltonbank, a non-statutory national designation, extends across approximately one quarter of the width of the alignment LoD and is of relatively low ecological value. The baseline value of the woodland block is limited as it comprises a broadleaved plantation, and it may therefore be possible to enhance the condition of this LEPO woodland through new planting and sensitive management. It would likely be possible to avoid felling this LEPO through micro-siting of the OHL.</p>	<p>A</p>
	<p>Alternative Alignment 3b</p>	<p>Designations: International, European or National Designations The alignment LoD crosses the River South Esk SAC, at a point where the river is wider than Alternative Alignment 3a (Potential), between Craigeassie and Murthill (NGR NO 45767 57403). The riparian habitats of the SAC comprise broadleaved woodland that extends across the full width of the LoD of the alignment and an islet within the River South Esk which extends approximately half the width of the LoD of the alignment. There are no other statutory designated sites recognised at an international, European or national level for their natural heritage intersected by the alternative alignment LoD or within 1.5 km. There are no ancient woodlands or LEPO within the alignment LoD.</p>	<p>This alignment has been RAG rated as Amber because it may compromise the conservation status of the River South Esk SAC. The alignment intersects the River South Esk SAC; the riparian habitats comprise mature broadleaved trees which may constrain the OHL as riparian trees should be retained wherever possible. Removal of riparian vegetation has potential implications for bankside erosion, and this is a concern noted by stakeholders due to river dynamics at this location. Uncontrolled construction within proximity to the SAC would pose a pollution risk, and the flood risk area is noted to be extensive in this location. The requirement to provide an operational corridor for the OHL may require felling of some trees along the River South Esk. This could be mitigated to some extent by careful micro-siting of towers and access</p>	

Topic and Criteria	Option	Constraints	Evaluation of Constraints	RAG Score
			tracks to minimise any requirement for removal of riparian vegetation. Mitigation to retain woodland through sensitive construction techniques would be applied. In addition, strict pollution prevention would be implemented during construction to protect the water environment.	
	Alternative Alignment 3a (Potential) + Alternative Alignment 3b	Designations: Regional Designations There are no regionally designated sites within the alignment LoD of either alternative alignment. As such, regionally designated sites have been scoped out of this appraisal.		
	Alternative Alignment 3a (Potential) + Alternative Alignment 3b	Protected Species: European Protected Species (EPS); UK Biodiversity Action Plan (BAP) Species; Other Protected and Notable Species Records of and/or habitat potential for EPS (such as otter and bats), UKBAP species (such as pine marten, red squirrel, reptiles and amphibians), and other notable species (such as badger) are considered to represent a similar level of baseline constraint for both alternative alignments. The River South Esk is designated for freshwater pearl mussel (EPS) and this species has been reported to be present in this section of the River South Esk. Both alternative alignments have been evaluated as having similar potential to support protected species and would require a similar range of standard mitigation measures to be implemented including those in SSEN Transmission's SPPs. These criteria have therefore been scoped out of this appraisal.		
	Alternative Alignment 3a (Potential) + Alternative Alignment 3b	Habitats: Annex 1 Habitats; Groundwater Dependent Terrestrial Ecosystems (GWDTE) Desk study and field survey data indicate that habitats within both alignment LoDs comprise a mosaic of farmland with some hedgerows and trees. There is therefore limited potential for Annex 1 habitats and GWDTE habitats. Survey data has not identified any Annex 1 or GWDTE habitats within either alignment LoD therefore these criteria have been scoped out of this appraisal.		
	Alternative Alignment 3a (Potential)	Habitats: Biodiversity The density of Biodiversity Units derived from habitats within the alignment LoD is calculated to be 8.28 BU/ha. Irreplaceable habitats are calculated to be present at a density of 0.003 BU/ha. Watercourses are present at a density of 0.39 BU/km.	This alignment has been assigned an Amber RAG rating because it has been evaluated as having more than 110% of the BU density of the least biodiversity impacted alternative (see Alternative Alignment 3a (Potential)).	A
	Alternative Alignment 3b	Habitats: Biodiversity The density of Biodiversity Units derived from habitats within the alignment LoD is calculated to be 7.29 BU/ha. Irreplaceable habitats are calculated to be present at a density of 0.002 BU/ha. Watercourses are present at a density of 0.10 BU/km.	This alignment has been assigned a Green RAG rating because it has been evaluated as having the lowest biodiversity unit density.	G
Natural Heritage Ornithology	Alternative Alignment 3a (Potential) +	Designations The Loch of Kinnordy SPA lies approximately 7.5 km to the west of the alternative alignments with Loch of Lintrathen SPA over 15 km west. Both of the SPAs show connectivity to both alternative alignments given	The alternative alignments have been RAG rated Amber as they may compromise an internationally or nationally designated area and/or the conservation status of the qualifying features of the site having assumed	A

Topic and Criteria	Option	Constraints	Evaluation of Constraints	RAG Score
	Alternative Alignment 3b	<p>that the core foraging range of their designated features coincides with the alignments.</p> <p>Vantage point surveys did not record goose species' flights intersecting with the location of either of the alternative alignments.</p>	<p>connectivity between the Loch of Lintrathen SPA and Loch of Kinnordy SPA roosts and associated foraging areas.</p> <p>Information on the historic distribution of feeding greylag geese from Loch of Lintrathen suggests that collision risk is a constraint for both alternatives due to the OHL alignment between the SPA and potential feeding fields (Mitchell, 2012)¹. However, Mitchell (2012) identifies preferred greylag geese feeding areas to the southwest of the loch and outwith the alignments. Loch of Kinnordy pink-footed and greylag geese also show preferred foraging to the south and southwest of the loch. Flight activity was not recorded by project specific bird surveys across the alternative alignments.</p>	
	Alternative Alignment 3a (Potential) + Alternative Alignment 3b	<p>Schedule 1 species</p> <p>The alternative alignments include habitat that supports Schedule 1 species; however, no desk records of breeding/nesting are present for Schedule 1 species. Schedule 1 species have not been recorded breeding within the area of the alternative alignments. As such, the habitats within the area of the alternative alignments are not anticipated to support regionally significant populations of Schedule 1 birds and therefore this criterion has been scoped out from this appraisal.</p>		
	Alternative Alignment 3a (Potential) + Alternative Alignment 3b	<p>Birds of Conservation Concern (BoCC)</p> <p>The land intersected by the OHL alternative alignments supports populations of birds listed on the red and amber lists of the BoCC. The alignments are located to the east of habitat described as being suitable for breeding waders.</p> <p>Birds of Conservation Concern (BoCC) are likely present as breeding birds across the area of the alternative alignments, however the area does not represent optimal breeding wader habitat. The alignments lie within an area that is unlikely to compromise the conservation status of populations of a red or amber listed species or essential breeding, passage or wintering habitat, and therefore this criterion has been scoped out from appraisal.</p>		
<p>Natural Heritage</p> <p>Hydrology / Geology / Hydrogeology</p>	Alternative Alignment 3a (Potential) + Alternative Alignment 3b	<p>Surface and Groundwater Drinking Water Protected Area</p> <p>There are no DWPAs (surface) near the alternative alignments, and therefore it is considered unlikely that OHL construction would result in surface flow pathways and subsequently compromise the quality of surface waters of local importance. This criterion has been scoped from the appraisal.</p>		
	Alternative Alignment 3a (Potential)	<p>Aquifers providing Regional/Local resources</p> <p>There are no private water supplies or aquifers providing regional/local resources in close proximity to Alternative Alignment 3a (Potential). There is one indicative PWS abstraction point at Inshewan Mansion</p>	<p>This alignment has been RAG rated as Green as it is considered unlikely to compromise quality or quantity of surface or groundwater of regional importance (e.g. through creation of a pathway for run-off which may cause some disruption to abstraction water flow and/or quality).</p>	G

¹ Mitchell, C. (2012). Mapping the distribution of feeding Pink-footed and Iceland Greylag Geese in Scotland. Wildfowl & Wetlands Trust / Scottish Natural Heritage Report, Slimbridge. 108pp

Topic and Criteria	Option	Constraints	Evaluation of Constraints	RAG Score
		House (NGR NO 44700 56922) around 380 m west of the alignment centreline.		
	Alternative Alignment 3b	Aquifers providing Regional/Local resources There are no private water supplies or aquifers providing regional/local resources in close proximity to Alternative Alignment 3b.	This alignment has been RAG rated as Green as it is considered unlikely to compromise quality or quantity of surface or groundwater of regional importance (e.g. through creation of a pathway for run-off which may cause some disruption to abstraction water flow and/or quality).	G
	Alternative Alignment 3a (Potential)	Surface Water or aquifer providing water for agricultural or industrial use The alignment crosses two watercourses which are shown on 1:50k Ordnance Survey mapping and major watercourses including: <ul style="list-style-type: none"> King's Burn a minor watercourse which is too small to be classified by SEPA under the Water Framework Directive. River South Esk (Waterbody ID 5799) was classified by SEPA as overall 'Good' in 2021 Based on SEPA Future Flood Maps there is one major area of fluvial flood risk crossed by the alignment at the River South Esk which can be easily spanned as it is only 80 m wide. There is also a 45 m wide floodplain crossed over the King's Burn.	This alignment has been RAG rated as Green as it is considered unlikely to result in water flow pathway(s) to surface and groundwater. The floodplains of both watercourses can be crossed. All watercourses and predicted flood extents can be avoided or spanned and there are no known private water supplies or abstractions within the alignment LoD that would represent a material constraint.	G
	Alternative Alignment 3b	Surface Water or aquifer providing water for agricultural or industrial use Alternative Alignment 3b crosses two watercourses which are shown on 1:50k Ordnance Survey mapping and major watercourses including: <ul style="list-style-type: none"> King's Burn - a minor watercourse which is too small to be classified by SEPA under the Water Framework Directive. River South Esk (Waterbody ID 5799) - was classified by SEPA as overall 'Good' in 2021. Based on SEPA Future Flood Maps there is one major area of fluvial flood risk crossed by the alignment at the River South Esk which is around 390 m wide and cannot be spanned without very careful siting of towers within a gap in the floodplain. Under current proposals one tower would need to be sited within floodplain.	This alignment has been RAG rated as Amber as it may compromise quality and/or quantity of surface or groundwaters of local importance or would require dewatering of construction activities. All watercourses and ponds can be avoided or spanned within the LoD of the alignment and there are no known water supplies or abstractions within the alignment LoD. However, the alignment cannot avoid the 200-year future flood extent of the River South Esk in its current design, with one tower located within the floodplain, therefore, construction activities are effectively within the watercourse during the 200-year future flood event and there is potential to compromise quality and/or quantity of surface waters (and groundwater) of local importance or would require dewatering construction activities. There is potential to slightly relocate tower positions to site this tower in dry 'islands' outwith the floodplain extent.	A
Cultural Heritage	Alternative Alignment 3a (Potential)	Designations: World Heritage Sites (WHS), Scheduled Monuments (SM), Inventory Gardens and Designed Landscapes (GDLs), Inventory Battlefields	This alignment has been RAG rated Amber as, although it would avoid direct interaction with any designated assets, it may compromise the setting of the following designated assets that lie close to the alignment.	A

Topic and Criteria	Option	Constraints	Evaluation of Constraints	RAG Score
<p>Designations Cultural Heritage Assets</p>		<p>Within 1 km of the edge of the alignment LoD there are five Scheduled Monuments of national importance and high sensitivity:</p> <ul style="list-style-type: none"> Battledykes, Roman Camp (SM 2308) Baldoukie, Souterrains (SM 6315) Law of Baldoukie, Barrow (SM 6314) East of Mains of Whitehall, Souterrains (SM 6371) Meikle Coull, Souterrains (SM 6332) <p>The closest designated heritage assets to the alignment LoD are Baldoukie, Souterrains (SM 6315) and Law of Baldoukie, Barrow (SM 6314), which lie around 330 m to the north. Most of the Scheduled Monuments survive as cropmark sites visible on aerial photographs.</p> <p>Those designated heritage assets that are likely most sensitive to the alignment (effects on their settings) are those that are either prominent landmarks and/or have long views across the landscape as important aspects of their settings. These would include hillforts, burial cairns and stone circles, or designated landscape that have long distance views and vistas that contribute to their cultural significance.</p> <p>Key constraints identified in regard to the alignment include:</p> <ul style="list-style-type: none"> Battledykes, Roman Camp (SM 2308): the remains of this large military camp and earlier Iron Age settlement lies c.650 m east of the edge of the alternative alignment LoD between the South River Esk and the Lemno Burn, and close to the confluence of the Lemno Burn with the South River Esk. The monument has evidently been sited in reference to the Lemno Burn and the South River Esk and the. Roman Camp was likely placed here to control movement along Strathmore. The relationship of the monument with the rivers and the wide views out across Strathmore are key aspects of its setting. Law of Baldoukie, Barrow (SM 6314) (NGR NO 467 588): the remains of this prehistoric barrow stand just east of Baldoukie farm and c.340 m north of the northern end of the alignment LoD. The monument stands in undulating arable farmland and appears to have been sited in reference to the South River Esk, to the south. This relationship to the river is a key aspect of its setting. 	<ul style="list-style-type: none"> Battledykes, Roman Camp (SM 2308): the edge of the alignment LoD passes within c.650 m to the northwest of the monument and the OHL towers could intrude into key views out from the monument, potentially compromising its setting. Law of Baldoukie, Barrow (SM 6314): the northern end of the alignment LoD lies within c.340 m to the south of the monument and the OHL towers could intrude into key views from the monument to the south towards the South River Esk potentially compromising its setting. <p>Potential to mitigate impact on the settings of these assets is limited, however, the LoD provides some flexibility to reduce intrusion into key views to and from the designated heritage assets through micro-siting of towers, subject to other constraints. Overall, there is some scope, through micro-siting of towers to reduce but not remove the constraints from these designated assets.</p>	

Topic and Criteria	Option	Constraints	Evaluation of Constraints	RAG Score
	<p>Alternative Alignment 3b</p>	<p>Designations: World Heritage Sites (WHS), Scheduled Monuments (SM), Inventory Gardens and Designed Landscapes (GDLs), Inventory Battlefields</p> <p>Within 1 km of the edge of the alignment LOD there are six Scheduled Monuments:</p> <ul style="list-style-type: none"> • Battledykes, Roman Camp (SM 2308) • Battledykes, Cairn (SM 7234) • Baldoukie, Souterrains (SM 6315) • Law of Baldoukie, Barrow (SM 6314) • East of Mains of Whitehall, Souterrains (SM 6371) • Meikle Coull, Souterrains (SM 6332) <p>The closest designated heritage assets to the alignment LOD is Battledykes, Roman Camp, located c.95 m to the southeast. Most of the Scheduled Monuments survive as cropmark sites visible on aerial photographs.</p> <p>Those designated heritage assets that are likely most sensitive to Alternative Alignment 3b (effects on their settings) are those that are either prominent landmarks and/or have long views across the landscape as important aspects of their settings. These would include hillforts, burial cairns and stone circles, or designated landscape that have long distance views and vistas that contribute to their cultural significance.</p> <p>Key constraints identified in regard to this alignment include:</p> <ul style="list-style-type: none"> • Battledykes, Roman Camp (SM 2308) (NGR NO 459 554): this site comprises the remains of a large Roman military camp together with earlier Iron Age settlement, surviving as cropmarks visible on aerial photographs. The monument lies c.95 m to the southeast from the edge of the alignment LoD. (See description of monument in row above (Alternative Alignment 3a)). • Battledykes, Cairn (SM 7234) (NGR NO 460 551): this Bronze Age burial cairn stands on a small area of raised ground in arable farmland within Strathmore, just north of the Lemno Burn and c.860 m southeast of the edge of the alignment LoD. The burial cairn has evidently been sited in reference to the Lemno Burn and would have been a prominent local landmark within the lower 	<p>This alignment has been RAG rated Amber as, although it would avoid direct interaction with any designated assets, it may compromise the setting of the following designated assets that lie close to the alignment.</p> <ul style="list-style-type: none"> • Battledykes, Roman Camp (SM 2308): the edge of the alignment LoD passes within c.95 m to the northwest of the monument and the OHL towers could intrude into key views out from the monument, potentially compromising its setting. • Battledykes, Cairn (SM 7234): the edge of the alignment LoD passes within c.860 m to the northwest of the monument and the OHL towers could intrude into key views out from the monument, potentially compromising its setting. • Law of Baldoukie, Barrow (SM 6314): the northern end of the alignment LoD lies within c.340 m to the south of the monument and the OHL towers could intrude into key views from the monument to the south towards the South River Esk potentially compromising its setting. <p>Potential to mitigate impact on the settings of these assets is limited, however, the LoD provides some flexibility to reduce intrusion into key views to and from the designated heritage assets through micro-siting of towers, subject to other constraints. Overall, there is some scope, through micro-siting of towers to reduce but not remove the constraints from these designated assets.</p>	<p>A</p>

Topic and Criteria	Option	Constraints	Evaluation of Constraints	RAG Score
		<p>lying plains. Its relationship with the Lemno Burn and views to and from the monument are key aspects of its setting.</p> <ul style="list-style-type: none"> • Law of Baldoukie, Barrow (SM 6314) (NGR NO 467 588): the remains of this prehistoric barrow stand just east of Baldoukie farm and c.340 m north of the northern end of the alignment LoD. (See description of monument in row above (Alternative Alignment 3a)). 		
	<p>Alternative Alignment 3a (Potential)</p>	<p>Designations: Sites and Monuments Record (SMR) Entries</p> <p>Four SMR sites of archaeology and cultural heritage interest fall within the alignment LoD. These comprise a possible enclosure (NO45NW0011) and linear features (NO45NW0028), which survive as cropmark sites visible on aerial photographs, the remains of a disused railway (NO45NW0043), and the site of a possible WWI Prisoner of War Camp (NO45NE0076) near Justinhaugh. The Prisoner of War Camp is only recorded from documentary sources and its exact location is not known.</p> <p>All of the assets within the alignment LoD are recorded as being of 'Standard' importance in the SMR and are assessed as being of local heritage value and of low sensitivity.</p>	<p>This alignment has been RAG rated as Green for SMR sites, as the archaeological and cultural heritage sites identified do not represent significant constraints to development by an OHL within the LOD for this alignment.</p> <p>The SMR sites are thinly scattered throughout the alignment LoD. Where direct impacts on SMR sites cannot be avoided, constraints could be mitigated through a programme of works (i.e. trial trench evaluation and excavation or watching briefs) in advance of construction works to a scope agreed by the local authority.</p>	<p>G</p>
	<p>Alternative Alignment 3b</p>	<p>Designations: Sites and Monuments Record (SMR) Entries</p> <p>Three SMR sites of archaeology and cultural heritage interest fall within the alignment LoD. These comprise a possible enclosure (NO45NW0011) and linear features (NO45NE0040), which survive as cropmark sites visible on aerial photographs, and the remains of a disused railway (NO45NW0043).</p> <p>All of the assets within the alignment LoD are recorded as being of 'Standard' importance in the SMR and are assessed as being of local heritage value and of low sensitivity.</p>	<p>This alignment has been RAG rated as Green for SMR sites, as the archaeological and cultural heritage sites identified do not represent significant constraints to development by an OHL within the LOD for this alignment.</p> <p>The SMR sites are thinly scattered throughout the alignment LoD. Where direct impacts on SMR sites cannot be avoided, constraints could be mitigated through a programme of works (i.e. trial trench evaluation and excavation or watching briefs) in advance of construction works to a scope agreed by the local authority.</p>	<p>G</p>
	<p>Alternative Alignment 3a (Potential)</p>	<p>Cultural Heritage Assets</p> <p>Within 1 km of the edge of the alignment LoD there are:</p> <ul style="list-style-type: none"> • Five Category B Listed Buildings of regional heritage value and medium sensitivity. • Five Category C Listed Buildings of local heritage value and of low sensitivity. • One Conservation Area, Tannadice (CA 539). 	<p>This alignment has been RAG rated as Green for cultural heritage assets. Although the alignment intersects and passes through a NIDL which would RAG rate it Amber in line with the guidance, it is considered that an alignment would be unlikely to materially compromise the character and integrity of the NIDL or compromise the settings of any other cultural heritage assets and so it has been RAG rated lower.</p> <p>The alignment LoD intersects the southeastern edge of Inshewan House NIDL (NO45NW0072). This part of the NIDL comprises open arable</p>	<p>G</p>

Topic and Criteria	Option	Constraints	Evaluation of Constraints	RAG Score
		<ul style="list-style-type: none"> One Non-Inventory Designed Garden (NIDL), Inshewan House NIDL (NO45NW0072). <p>The Listed Buildings comprise mostly of small residential properties (i.e. farmsteads and cottages), small parish kirks, bridges and a telephone kiosk, all of which have generally localised settings and are not significant constraints. Most of the Listed Buildings are clustered in Tannadice village Conservation Area and have generalised localised settings, they are not considered to be significant constraints.</p> <p>Tannadice Conservation Area (CA 539) (NGR NO 475 581) lies around 550 m northeast of the alignment LoD. The Conservation Area is set down within the River South Esk valley, immediately north of the river and surrounded by undulating landscape. As such, it has a relatively localised river valley setting.</p> <p>The alignment LoD intersects the southeastern edge of Inshewan House NIDL (NO45NW0072). The NIDL is situated immediately north of the River South Esk. The NIDL forms the setting for Category B Inshewan House (LB 18027) and other associated Listed Buildings. It comprises largely of farmland and areas of woodland policies spread along the River South Esk. Key views from the House and the NIDL are to the southwest overlooking the River South Esk. The mixed woodland of the NIDL contributes to the surrounding scenery but there are few views into the NIDL from the surrounding roads.</p>	<p>farmland and there are no designed features. The alignment would be located away from the core elements of the NIDL, including Category B Listed Inshewan House and its associated farmsteads and walled gardens. The alignment would not intrude into key views from the House to the southeast, nor would it affect the relationship between the House and other key elements of the designed landscape or intrude into any key views to Inshewan House from approach drives or from surrounding public roads. Taking this into account, it is unlikely the OHL would compromise the NIDL.</p> <p>The Listed Buildings and Conservation Area within the landscape immediately surrounding the alignment have generally localised settings where long views out to the surrounding landscape do not form key aspects of their settings and therefore the alignment is unlikely to compromise their setting.</p>	
	<p>Alternative Alignment 3b</p>	<p>Cultural Heritage Assets</p> <p>Within 1 km of the edge of the alignment LoD there are:</p> <ul style="list-style-type: none"> Three Category B Listed Buildings of regional heritage value and medium sensitivity. Five Category C Listed Buildings of local heritage value and low sensitivity. One Conservation Area, Tannadice (CA 539), of regional heritage value and medium sensitivity. <p>The Listed Buildings comprise of small residential properties (i.e. farmsteads and cottages), small parish kirks, bridges, a telephone kiosk and well stands pumps. Most of the Listed Buildings are clustered in Tannadice village Conservation Area and have generalised localised settings, they are not considered to be significant constraints.</p>	<p>This alignment has been RAG rated as Green for cultural heritage assets as it would unlikely disturb or compromise the settings of any cultural heritage assets.</p> <p>The Listed Buildings and Conservation Area within the landscape immediately surrounding the alternative alignment have generally localised settings where long views out to the surrounding landscape do not form key aspects of their settings and therefore the alignment is unlikely to compromise their setting.</p>	<p>G</p>

Topic and Criteria	Option	Constraints	Evaluation of Constraints	RAG Score
		Tannadice Conservation Area (CA 539) (NGR NO 475 581) lies around 550 m northeast of the alignment LoD. The Conservation Area is set down within the River South Esk valley, immediately north of the river and surrounded by undulating landscape. As such, it has a relatively localised river valley setting.		
People Proximity to Dwellings	Alternative Alignment 3a (Potential)	<p>There are six locations along the alignment where either individual or groups of residential properties are located within approximately 200 m of the edge of the LoD. There are, from south to north:</p> <ul style="list-style-type: none"> • Wolflaw located approximately 60 m east of the LoD. • Un-named property south of Cairnhill, approximately 150 m west of the LoD. • Three dwellings at Foreside of Cairn located between 100 m and 120 m west of the LoD. • Quarryhill located approximately 195 m east of the LoD. • Cairn Farm located approximately 135 m west of the LoD. • Craigeassie Farm (Craigeassie Estate) located approximately 165 m east of the LoD. 	<p>This alignment has been RAG rated as Amber. The LoD provides some flexibility for an OHL alignment to be located at a distance of more than four times the nominal tower height (approx. 240 m) from most residential properties.</p> <p>This would be challenging to achieve between the properties at Wolflaw and the un-named property south of Cairnhill which form a pinch point along the LoD. These properties constrain the LoD as their respective locations either side of the alignment and their distance from the LoD do not offer space to achieve distances of more than four times the nominal tower height. Distances between two to four times the nominal tower height between the alignment and these properties however can be achieved and as such the alignment would be developed to maximise the separation as far as practicable.</p> <p>Elsewhere, and subject to other constraints, the LoD offers opportunity for the OHL to be located at a distance of more than four times the nominal tower height from the three dwellings at Foreside of Cairn in the southern section of the alignment, Quarryhill and Cairn Farm in the central section of the alignment and Craigeassie Farm in the northern section of the alignment.</p>	A
	Alternative Alignment 3b	<p>There are six locations along the alignment where either individual or groups of residential properties are located within approximately 200 m of the edge of the LoD. These are, from south to north:</p> <ul style="list-style-type: none"> • Wolflaw located approximately 100 m northwest of the LoD. • Three dwellings at Battledykes Farm Cottages, located between approximately 130 m and 200 m to the southeast of the LoD. • Newmill Cottage located approximately 65 m to the west of the LoD. • Three dwellings at Craigeassie (Craigeassie Estate) located between approximately 155 m and 185 m to the west of the LoD. • The Old Hotel located approximately 180 m to the east of the LoD. 	<p>This alignment has been RAG rated as Amber. The LoD provides some flexibility for an OHL alignment to be located at a distance of more than four times the nominal tower height (approx. 240 m) from most residential properties. However, it is considered that the presence of other constraints in the alignment LoD may make this difficult to achieve in some locations.</p> <p>The OHL may require to be aligned within a distance of two to four times the nominal tower height in the vicinity of the properties at Newmill Cottage and The Old Hotel where the alignment would pass through a gap between these properties. These properties also reduce the degree of flexibility within the LoD due to their respective locations either side of the alignment, and because they are the closest properties to the alignment in this section of the LoD, south of the River South Esk. Where properties are</p>	A

Topic and Criteria	Option	Constraints	Evaluation of Constraints	RAG Score
		<ul style="list-style-type: none"> East Murthill located approximately 200 m to the southeast of the LoD. 	<p>likely to be within four times the nominal tower height, the alignment would be developed to maximise the separation as far as practicable.</p> <p>Elsewhere, the LoD offers opportunity for the OHL to be located at a distance of more than four times the nominal tower height from the remaining dwellings that are located within 200 m of the LoD, subject to other constraints.</p>	
Landscape and Visual Designations Landscape Character	Alternative Alignment 3a (Potential) + Alternative Alignment 3b	Landscape Designations A length of between 2 – 2.5 km of the alignments are located within the western part of Angus Council’s proposed River South Esk Local Landscape Area (LLA). Given that both alignment options cross a similar part and extent of the LLA, there will be a very limited difference in the level of constraint formed by the designation. As such, this criterion has been scoped out of the appraisal.		
Visual	Alternative Alignment 3a (Potential)	Landscape Character Alternative Alignment 3a (Potential) and Alternative Alignment 3b are located within the Broad Valley Lowlands – Tayside LCT. Since both alignments are located within a wider landscape defined by the same characteristics, a comparison of landscape character constraints is focused on localised features at the alignment scale. The southern end of the alignment crosses the western slopes of King’s Seat, a locally prominent hillock which forms a distinctive feature within the landscape. The LoD crosses the River South Esk and wraps round a short section of the river to the west of Craigeassie. Here the landscape is characterised by woodland belts that line the river. The wooded floodplain also creates a strong sense of smaller scale, more intimate and enclosed landscape.	This alignment has been RAG rated as Amber as the northern part of the alignment would cross a smaller scale and more intimate landscape formed by the floodplain of the River South Esk, which contributes to local landscape character. The alignment is generally unconstrained by King’s Seat as it avoids the high point of the hillock and crosses the lower western slopes of it, allowing the OHL to sit lower in the landscape and therefore less prominent and less compromising to King’s Seat. The alignment is, however, constrained by the small scale and intimate character of the landscape surrounding the floodplain at Craigeassie. The OHL infrastructure would form prominent features in this landscape and would appear out of scale with the surrounding landscape features and landform, compromising the small scale and intimate character. The OHL is also likely to compromise the wooded character of the River South Esk as tree felling along the river at three locations to the west and southwest of Craigeassie is likely to be required to accommodate the OHL.	A
	Alternative Alignment 3b	Landscape Character Alternative Alignment 3a (Potential) and Alternative Alignment 3b are located within the Broad Valley Lowlands – Tayside LCT. Since both alignments are located within a wider landscape defined by the same characteristics, a comparison of landscape character constraints is focused on localised features at the alignment scale. The southern end of the alignment crosses the western slopes of King’s Seat, a locally prominent hillock which forms a distinctive feature within the landscape. Further northeast, the alignment crosses a localised area	This alignment has been RAG rated as Amber as the southern part of the alignment would cross an area of elevated undulating landform and the northern part would cross a smaller scale and more intimate landscape formed by the floodplain of the River South Esk, which contributes to local landscape character. The alignment is constrained by the undulating landform northwest of Battledykes, where a short section of the OHL would extend across a high point within the landscape, increasing the OHL’s prominence within the wider landscape. Given that this undulating landform is generally small in scale yet locally prominent, an OHL crossing would appear out of scale	A

Topic and Criteria	Option	Constraints	Evaluation of Constraints	RAG Score
		<p>of undulating elevated landform to the northwest of Battledykes, which also forms a prominent feature within the immediate surrounding landscape, however within the wider landscape is slightly contained by surrounding gently undulating landform.</p> <p>To the southeast of Craigeassie, the LoD crosses a wooded embankment, where the landform drops by approximately 10 m from 80 m to 70 m into the floodplain of the River South Esk. The level change together with the broadleaved woodland that covers the embankment and further woodland across the river floodplain, creates a smaller scale and more intimate and enclosed character within the landscape surrounding Craigeassie. These characteristics continue north of Craigeassie, where the alignment crosses the meandering River South Esk and belts of broadleaved woodland that line the river. These landscape elements are key features that contribute to local landscape character.</p>	<p>with the localised undulations, resulting in the scale of this landform being diminished by the OHL infrastructure. The LoD does not offer opportunity to avoid this constraint, however the slightly contained nature of this area is likely to reduce the prominence of the OHL in the wider landscape to some extent.</p> <p>The alignment is also constrained further north along the LoD where it crosses an embankment south of Craigeassie and drops into the floodplain of the River South Esk. The small scale and intimate character of the landscape surrounding the floodplain at Craigeassie would be compromised by the OHL. Where the OHL crosses the embankment, the infrastructure of the OHL would appear as prominent large scale features as it drops from the higher landform south of the embankment into the lower lying landscape of the floodplain. Tree felling is likely to be required where the OHL crosses the embankment. Tree felling on the north bank of the River South Esk is also likely to be required, which would compromise the wooded character of the river.</p> <p>The alignment is generally unconstrained by King's Seat as it avoids the high point of the hillock and crosses the lower western slopes of it, allowing the OHL to sit lower in the landscape and therefore less prominent and less compromising to King's Seat.</p>	
	<p>Alternative Alignment 3a (Potential)</p>	<p>Visual</p> <p>Visual receptors at scattered residential properties and people travelling along the local road network form a constraint. Visual receptors that particularly form a constraint include residents at Wolflaw as the dwelling is likely to offer some views to the north and northwest towards the alignment, at a distance of approximately 60 m from the LoD. Residents at three dwellings at Foreside of Cairn, located between 100 m and 120 m from the LoD, form a constraint as these properties offer some filtered views south and east towards the alignment, as well as Quarryhill, located approximately 195 m from the LoD which offers some visibility northwest towards the alignment. Residents at Cairn Farm, located approximately 135 m from the LoD, form a constraint as the property offers some open views southeast towards the alignment. Residents at Craigeassie Farm located approximately 165 m from the LoD also form a constraint as the property offers filtered views to the west and north towards the alignment.</p>	<p>This alignment has been RAG rated as Amber as an OHL in this alignment may compromise visual amenity experienced by a number of people at residential properties.</p> <p>Visual receptors at the residential properties at Wolflaw, Foreside of Cairn, Quarryhill and Cairn Farm, which are some of the closest properties to the alignment with some open views, would have very close proximity views with the OHL forming a very prominent feature in these views. The constraint is generally unavoidable due to the position of properties either side of the alignment, particularly where the LoD passes the properties of Wolflaw and Foreside of Cairn as their position and proximity on either side of the LoD limits the opportunity to increase the distance between them and the OHL. Views from residents at Craigeassie Farm would also be compromised as this dwelling is also located within close proximity and the property offers some views towards the alignment. Woodland surrounding the property and along the River South Esk however is likely to partially screen the OHL in views from this property.</p>	<p>A</p>

Topic and Criteria	Option	Constraints	Evaluation of Constraints	RAG Score
	Alternative Alignment 3b	<p>Visual</p> <p>Visual receptors at scattered residential properties and people travelling along the local road network form a constraint. Visual receptors that particularly form a constraint include residents at Wolflaw as the dwelling offers open views to the south and southeast towards the alignment at a distance of approximately 100 m from the LoD, as well as residents at the northernmost property at Battledykes, located approximately 130 m from the LoD with open views to the northwest towards the alignment. Residents at Newmill Cottage located approximately 65 m from the LoD also form a constraint as the property offers open views east towards the alignment.</p> <p>The alignment crosses a localised area of undulating elevated landform to the northwest of Battledykes which, although does not directly form a visual constraint, would affect the overall visibility of the OHL.</p>	<p>This alignment has been RAG rated as Amber as an OHL in this alignment may compromise visual amenity experienced by a number of people at residential properties as well as having increased visual prominence where the alignment passes over elevated landform.</p> <p>Visual receptors at the residential properties at Wolflaw, the northernmost property at Battledykes, and Newmill Cottage constrain the alignment due to their distance of <200 m from the LoD and the availability of open views towards the alignment from these dwellings. Visual receptors at these properties would have very close proximity and open views with the OHL forming a very prominent feature in views. The level of constraint could be reduced as the LoD does offer opportunity to increase the distance in which the OHL would be seen in views from these properties.</p> <p>Where the alignment passes over a localised area of undulating elevated landform to the northwest of Battledykes, the visual prominence of the OHL and its intervisibility with the surrounding area would be increased. The infrastructure would sit higher within the landscape and would be seen as prominent features across the skyline when viewed by people, namely residents and road users, within the surrounding landscape.</p>	A
<p>Land Use</p> <p>Agriculture</p> <p>Forestry</p>	Alternative Alignment 3a (Potential) + Alternative Alignment 3b	<p>Agriculture</p> <p>The majority of both alternative alignments intersect with prime agricultural land (Class 3.1: Land capable of producing consistently high yields of a narrow range of crops and/ or moderate yields of a wider range). Both alternative alignments also intersect with small sections of land comprising lower land classifications (Class 3.2: land capable of average production though high yields of barley, oats and grass can be obtained, and Class 6.1: land capable of use as rough grazing with a high proportion of palatable plants), located generally in the southern section.</p>	<p>The alternative alignments have been RAG rated as Amber as they intersect with extensive areas of best and most versatile land (Class 3.1) and have the potential to compromise the agricultural use or viability of the land as an agricultural resource.</p> <p>Both alternative alignments would require towers to be sited within prime agricultural land. Considering the relatively limited footprint of OHL tower foundations, the permanent loss of agricultural land for an OHL development is not expected to compromise the agricultural use or viability of the land as an agricultural resource.</p>	A
	Alternative Alignment 3a (Potential)	<p>Forestry</p> <p>Alternative 3a (Potential) intersects with one small unnamed area of coniferous woodland where commercial forestry activities are likely, located to the north of the River South Esk to the west of Craigeassie (NGR NO 45148 57050). This woodland appears to be felled from review of aerial imagery.</p>	<p>This alignment has been RAG rated as Green as although it intersects and interacts with one small area of woodland, it is considered unlikely that the commercial returns from the forestry operations would be compromised.</p> <p>The alignment intersects with a small area of unnamed woodland to the west of Craigeassie. Despite the plantation being felled, the alignment would have some potential to interact with forestry operations due to required changes in planting and management. However, taking into</p>	G

Topic and Criteria	Option	Constraints	Evaluation of Constraints	RAG Score
			account the potential to align the OHL to avoid much of this woodland area, it is considered unlikely that the alignment would compromise the commercial returns.	
	Alternative Alignment 3b	Forestry Alternative Alignment 3b does not intersect with any area of forestry where commercial activities are likely to be undertaken.	This alignment has been RAG rated as Green as it avoids interaction with areas of commercial forestry.	G
Land Use Recreation	Alternative Alignment 3a (Potential) + Alternative Alignment 3b	Paths and Trails Both alternative alignments avoid interactions with core paths, NCN routes and Scottish Great Trails. Interaction between the alignments and recreational use of the land has been assessed to be similar for each of the alternative alignments, and therefore this criterion has been scoped out of the appraisal.		
	Alternative Alignment 3a (Potential)	Fishing The alignment intersects with a fishing beat located on the River South Esk to the west of Oathlaw between Inshewan and the Weir. The fishing beat is for salmon and trout managed by Kinnordy Estate and Eskhill Estate (along the southern bank) and Inshewan Estate (along the northern bank). The beat stretches for approximately 4 km on both banks from south of the Shielhill Bridge to the Inshewan Weir.	This alignment has been RAG rated as Green as although the alignment interacts with areas used for commercial highland sports (fishing), it is not considered to be a significant constraint. Although the alignment would not be able to avoid this constraint, the fishing let on this watercourse extends for a substantial length of the river, the effects would be localised and are therefore not considered to have the potential to compromise their commercial viability.	G
	Alternative Alignment 3b	Fishing The alignment avoids interaction with any known fishing beats.	This alignment has been RAG rated as Green as it avoids interaction with any area known to be used for commercial highland sports (fishing).	G
Planning Proposals	Alternative Alignment 3a (Potential) + Alternative Alignment 3b	Planning Neither alternative alignment intersects with any consented or proposed planning applications known to the planning system, and therefore this criterion has been scoped out of the appraisal.		

APPENDIX E: APPRAISAL OF ALTERNATIVE ALIGNMENTS AT LOCATION 4: CARESTON

This appendix presents the baseline constraints and the findings of the appraisal of key environmental considerations for five alternative alignments at Location 4: Careston in Section B (Route B1.1) of the Proposed Route and details the RAG Ratings applied to each alternative identified under each environmental topic as per SSEN Transmission's Routeing Guidance.

The environmental topics consider the following, natural heritage, cultural heritage, people, landscape and visual, land use and planning.

The tables presented in this appendix detail the baseline constraints and the findings of the appraisals based on a study area which comprises the alignment and its LoD, defined here as 100 m either side of the alignment.

Table E1. Environmental Constraints for Alternative Alignments at Location 4: Careston in Section B

Topic and Criteria	Option	Constraints	Evaluation of Constraints	RAG Score
<p>Natural Heritage</p> <p>Designations</p> <p>Protected Species</p> <p>Habitats</p>	<p>Alternative Alignment 4a (Potential)</p>	<p>Designations: International, European or National Designations</p> <p>The alignment LoD crosses the Noran Water, part of the River South Esk SAC, to the west of Wellford (NGR NO 47489 60164). The riparian habitats of the SAC comprise broadleaved woodland that extends across the full width of the LoD of the alignment.</p> <p>There are no other statutory designated sites recognised at an international, European or national level for their natural heritage intersected by the alternative alignment LoD or within 3 km.</p> <p>The alignment LoD intersects with a block of Ancient Woodland (of semi-natural origin) west of Wellford (NGR NO 47695 60213). Field survey has confirmed that this woodland is dominated by native broadleaved species of tree comprising lowland mixed deciduous woodland, and that it continues through the full width of the LoD.</p> <p>The alignment LoD intersects with five woodlands listed on the AWI as LEPO:</p> <ul style="list-style-type: none"> • Unnamed woodland at Knowehead (NGR NO 47200 59435). The woodland extends approximately one eighth of the width of the alignment variant LoD. Field studies in 2023 identified this woodland as lowland mixed deciduous woodland dominated by pedunculate oak and downy birch. The condition of the woodland was noted to be affected by grazing. • Boggie Wood (NGR NO 50476 62003), near Fern. The woodland extends approximately half the width of alignment variant LoD. This woodland appears from aerial imagery to comprise commercial plantation woodland in the west, with an extent of upland birchwood is noted on the NWSS in the east. • Duns Wood near Menmuir. The woodland extends the full width of the alignment variant LoD at a strip approximately 200m long south-east of Coe (NGR NO 52882 62022). Duns Wood also intersects the LoD at two further locations (NGR NO 52185 62002 and NGR NO 52580 61998) although field survey in 2023 has confirmed that these locations are not wooded. Field surveys in 2023 identified extents of upland birch woodland (NGR NO 52882 62022). 	<p>This alignment has been RAG rated as Amber because it may compromise the conservation status of the River South Esk SAC (Noran Water), and blocks of Ancient Woodland and LEPO woodland which extend the full width of the alternative alignment LoD (woodland along the Noran Water, Duns Wood, Lochty Wood, and Belliehill Wood).</p> <p>The alignment intersects the Noran Water, part of the River South Esk SAC; the riparian habitats comprise mature broadleaved trees which may constrain the OHL as riparian trees should be retained wherever possible. In addition, this woodland is Ancient Woodland. Removal of riparian vegetation has potential implications for bankside erosion. Uncontrolled construction within proximity to the SAC would pose a pollution risk, although the flood risk area is noted to be narrow at this location.</p> <p>The requirement to provide an operational corridor for the OHL may require felling of some trees in the Ancient Woodland along the Noran Water. This could be mitigated to some extent by careful micro-siting of towers to minimise any requirement for removal of riparian vegetation, including Ancient Woodland, along the Noran Water. Mitigation to retain woodland through sensitive construction techniques would be applied. The watercourse in this location is in the bottom of a deep and steep gully; as such, it is anticipated that tree-felling can be minimised whilst maintaining the necessary OHL clearance. In addition, strict pollution prevention would be implemented during construction to protect the water environment.</p> <p>The LEPO woodlands of Duns Wood, Lochty Wood, and Belliehill Wood, a non-statutory national designation, extend across the full width of the LoD. Surveys in 2023 at Lochty Wood identified upland birchwoods and wet woodland, while surveys of Belliehill Wood identified lowland mixed deciduous woodland; these are SBL priority habitats. An operational corridor for the OHL would be required through these LEPO woodlands where they span the full width of the LoD, where possible, felling will be minimised in these areas.</p> <p>The remaining blocks of LEPO woodland (the unnamed woodland near Knowehead, and Boggie Wood) constrain the alignment as they extend across part of the LoD; it would likely be possible to minimise felling of these LEPO woodlands through micro-siting of the OHL.</p>	<p>A</p>

Topic and Criteria	Option	Constraints	Evaluation of Constraints	RAG Score
		<ul style="list-style-type: none"> Lochty Wood extends across the full width of the LoD at two locations (NGR NO 53730 62101 and NGR NO 53873 62107) near Lochty. Field surveys in 2023 identified the woodland as a mosaic of upland birch and wet woodland; the latter of these has been identified as a potential GWDTE (see Habitats: GWDTEs). Belliehill Wood (NGR NO 56893 63111), near Little Brechin. The woodland extends across the full width of the alignment LoD. Field surveys in 2023 identified the woodland as lowland mixed deciduous woodland. 		
	<p>Alternative Alignment 4b</p>	<p>Designations: International, European or National Designations</p> <p>The alignment LoD crosses the Noran Water, part of the River South Esk SAC, to the west of Wellford (NGR NO 47489 60164). The riparian habitats of the SAC comprise broadleaved woodland that extends across the full width of the LoD of the alignment.</p> <p>There are no other statutory designated sites recognised at an international, European or national level for their natural heritage intersected by the alignment LoD or within 3 km.</p> <p>The alignment LoD intersects with a block of Ancient Woodland (of semi-natural origin) west of Wellford (NGR NO 47695 60213). Field survey has confirmed that this woodland is dominated by native broadleaved species of tree, and that it continues through the full width of the LoD.</p> <p>The alignment LoD intersects with four woodlands listed on the AWI as LEPO:</p> <ul style="list-style-type: none"> Unnamed woodland at Knowehead (NGR NO 47200 59435). The woodland extends approximately one eighth of the width of the alignment variant LoD. Field studies in 2023 identified this woodland as lowland mixed deciduous woodland dominated by pedunculate oak and downy birch. The condition of the woodland was noted to be affected by grazing. Boggie Wood (NGR NO 50476 62003), near Fern. The woodland extends approximately half the width of alignment variant LoD. This woodland appears from aerial imagery to comprise commercial plantation woodland in the west, with an extent of upland birchwood is noted on the NWSS in the east. Duns Wood near Menmuir. The woodland extends across the full width of the alignment variant LoD at a strip approximately 400 m 	<p>This alignment has been RAG rated as Amber because it may compromise the conservation status of the River South Esk SAC (Noran Water), and blocks of Ancient Woodland and LEPO woodland which extend the full width of the alignment LoD (woodland along the Noran Water, Duns Wood, and Belliehill Wood).</p> <p>The alignment intersects the Noran Water, part of the River South Esk SAC; the riparian habitats comprise mature broadleaved trees which may constrain the OHL as riparian trees should be retained wherever possible. Removal of riparian vegetation has potential implications for bankside erosion. Uncontrolled construction within proximity to the SAC would pose a pollution risk, although the flood risk area is noted to be narrow at this location.</p> <p>The requirement to provide an operational corridor for the OHL may require felling of some trees in the Ancient Woodland along the Noran Water. This could be mitigated to some extent by careful micro-siting of towers to minimise any requirement for removal of riparian vegetation, including Ancient Woodland, along the Noran Water. Mitigation to retain woodland through sensitive construction techniques would be applied. The watercourse in this location is in the bottom of a deep and steep gully; as such, it is anticipated that tree felling can be minimised whilst maintaining the necessary OHL clearance. In addition, strict pollution prevention would be implemented during construction to protect the water environment.</p> <p>The LEPO woodlands of Duns Wood and Belliehill Wood are intersected by the alignment LoD. An operational corridor for the OHL would be required through these LEPO woodlands where they span the full width of the LoD.</p> <p>The remaining blocks of LEPO woodland (the unnamed woodland near Knowehead, and Boggie Wood) constrain the alignment as they extend</p>	<p>A</p>

Topic and Criteria	Option	Constraints	Evaluation of Constraints	RAG Score
		<p>long southeast of Coe (NGR NO 52958 61799). Duns Wood also intersects the LoD at two further locations mapped on the AWI (NGR NO 52185 62002 and NGR NO 52580 61998), although field survey in 2023 has confirmed that these locations are not wooded.</p> <ul style="list-style-type: none"> Belliehill Wood (NGR NO 56893 63111), near Little Brechin. The woodland extends across the full width of the alignment LoD. Field surveys in 2023 identified the woodland as lowland mixed deciduous woodland. 	<p>across part of the LoD; it would likely be possible to minimise felling of these LEPO woodlands through micro-siting of the OHL.</p>	
	<p>Alternative Alignment 4c</p>	<p>Designations: International, European or National Designations</p> <p>The alignment LoD intersects with the River South Esk SAC near Mill of Marcus (NGR NO 51388 59737). In addition, the alignment is located within 100 m of the SAC at a location between Mill of Marcus and Noranbank (NGR NO 50771 59666). The riparian habitats of the SAC comprise woodland that has largely been felled within the LoD of the alignment. Freshwater pearl mussel have not been reported by consultees as being present on the Noran Water.</p> <p>There are no other statutory designated sites recognised at an international, European or national level for their natural heritage intersected by the alternative alignment LoD or within 3 km.</p> <p>The alignment LoD intersects with blocks of woodland listed on the AWI as LEPO:</p> <ul style="list-style-type: none"> Muirton Wood extends across the full width of the alignment LoD at three locations: northwest of Noranbank (NGR NO 49903 59299), northeast of Noranbank (NGR NO 50841 59573) and where the alignment crosses the Noran Water (NGR NO 51388 59737). Muirton Wood forms the riparian habitat of the River Esk SAC, with additional belts extending southwards either side of Noranbank. The woodland belts near Noranbank have been noted during nearby surveys to be dominated by mature broadleaved trees, while much of the woodland on the south bank of the Noran Water has been felled within the last 2 years. North Wood near Careston: the woodland is a complex shape in this area with one section of woodland extending two thirds the width of the alignment LoD (NGR NO 52737 61463), two sections extending approximately one third the width of the alignment LoD (NGR NO 53010 61487, and NGR NO 52956 61581) and one narrow 	<p>The alignment has been RAG rated as Amber because it may compromise the conservation status of the River South Esk SAC (Noran Water), and blocks of LEPO woodland which extend the full width of the alignment LoD (Muirton Wood, North Wood and Belliehill Wood).</p> <p>The alignment LoD intersects the Noran Water, part of the River South Esk SAC. The riparian habitat on the south of the watercourse crossing is dominated by recently felled plantation, with some remaining mature broadleaved riparian trees; these trees may constrain the OHL as they should be retained wherever possible. Removal of riparian vegetation has potential implications for bankside erosion. Uncontrolled construction within proximity to the SAC would pose a pollution risk, although the flood risk area is noted to be narrow at this location.</p> <p>The requirement to provide an operational corridor for the OHL may require felling of some trees in the LEPO along the Noran Water (part of Muirton Wood). This could be mitigated to some extent by careful micro-siting of towers to minimise any requirement for removal of riparian vegetation along the Noran Water. Mitigation to retain woodland through sensitive construction techniques would be applied. The watercourse in this location is below the level of the adjacent farmland; as such, it is anticipated that tree-felling can be minimised whilst maintaining the necessary OHL clearance. In addition, strict pollution prevention would be implemented during construction to protect the water environment.</p> <p>The LEPO woodlands of Muirton Wood, North Wood, and Belliehill Wood are all intersected by the alignment LoD. Surveys have identified extents of lowland mixed deciduous woodland at Belliehill Wood, which is an SBL priority habitat. Survey observations suggest that North Wood has the potential to constrain the alignment where it extends partially into the LoD.</p>	<p>A</p>

Topic and Criteria	Option	Constraints	Evaluation of Constraints	RAG Score
		<p>section extending the full width of the alignment LoD (NGR NO 53217 61583).</p> <ul style="list-style-type: none"> There are three further sections mapped as LEPO woodland which intersect with the alignment LoD (NGR NO 52388 61441, NGR NO 52383 61437, and NGR NO 52429 61318); however, these areas have been confirmed during field surveys to comprise fields and are no longer woodland. Field surveys in this area have recorded extents of young broadleaved plantation (NGR NO 52737 61463) surrounded by mature broadleaved trees, with further narrow strips of broadleaved woodland (NGR NO 53010 61487, and NGR NO 53217 61583). Belliehill Wood (NGR NO 56893 63111), near Little Brechin: the woodland extends across the full width of the alignment LoD. Field surveys in 2023 identified the woodland as lowland mixed deciduous woodland. 	<p>An operational corridor for the OHL would be required through these LEPO woodlands where they span the full width of the LoD. It may be possible to minimise felling of extents of North Wood through micro-siting of the OHL.</p>	
	<p>Alternative Alignment 4d</p>	<p>Designations: International, European or National Designations</p> <p>The alignment LoD crosses the Noran Water, part of the River South Esk SAC, to the west of Wellford (NGR NO 47489 60164). The riparian habitats of the SAC comprise broadleaved woodland that extends across the full width of the LoD of the alignment.</p> <p>There are no other statutory designated sites recognised at an international, European or national level for their natural heritage intersected by the alternative alignment LoD or within 3 km.</p> <p>The alignment LoD intersects with a block of Ancient Woodland (of semi-natural origin) west of Wellford (NGR NO 47695 60213). Field survey has confirmed that this woodland is dominated by native broadleaved species of tree, and that it continues through the full width of the LoD.</p> <p>The alignment LoD intersects with four blocks of woodland listed on the AWI as LEPO:</p> <ul style="list-style-type: none"> Unnamed woodland at Knowehead (NGR NO 47200 59435). The woodland extends approximately one eighth of the width of the alignment variant LoD. Field studies in 2023 identified this woodland as lowland mixed deciduous woodland dominated by pedunculate oak and downy birch. The condition of the woodland was noted to be affected by grazing. 	<p>This alignment has been RAG rated as Amber because it may compromise the conservation status of the River South Esk SAC (Noran Water), and blocks of Ancient Woodland and LEPO woodland which extend the full width of the alignment LoD (woodland along the Noran Water, Duns Wood, and Little Brechin Wood).</p> <p>The alignment intersects the Noran Water, part of the River South Esk SAC; the riparian habitats comprise mature broadleaved trees which may constrain the OHL as riparian trees should be retained wherever possible. Removal of riparian vegetation has potential implications for bankside erosion. Uncontrolled construction within proximity to the SAC would pose a pollution risk, although the flood risk area is noted to be narrow at this location.</p> <p>The requirement to provide an operational corridor for the OHL may require felling of some trees in the Ancient Woodland along the Noran Water. This could be mitigated to some extent by careful micro-siting of towers to minimise any requirement for removal of riparian vegetation, including Ancient Woodland, along the Noran Water. Mitigation to retain woodland through sensitive construction techniques would be applied. The watercourse in this location is in the bottom of a deep and steep gully; as such, it is anticipated that tree-felling can be minimised whilst maintaining the necessary OHL clearance. In addition, strict pollution prevention would be implemented during construction to protect the water environment.</p>	<p>A</p>

Topic and Criteria	Option	Constraints	Evaluation of Constraints	RAG Score
		<ul style="list-style-type: none"> Boggie Wood (NGR NO 50476 62003), near Fern. The woodland extends approximately half the width of alignment variant LoD. This woodland appears from aerial imagery to comprise commercial plantation woodland in the west, with an extent of upland birchwood is noted on the NWSS in the east. Duns Wood near Menmuir. The woodland extends across the full width of the alignment variant LoD at a strip approximately 400m long south-east of Coe (NGR NO 52958 61799). Duns Wood also intersects the LoD at two further locations mapped on the AWI (NGR NO 52185 62002 and NGR NO 52580 61998), although field survey in 2023 has confirmed that these locations are not wooded. Little Brechin Wood (NGR NO 57378 63249), near Little Brechin. The woodland extends approximately half the width of alignment variant LoD at two locations (NGR NO 57228 63061 and NGR NO 57378 63249). Field surveys in 2023 identified a mosaic of lowland mixed deciduous woodland, broadleaved woodland, and a felled conifer plantation. 	<p>The LEPO woodlands of Duns Wood and Little Brechin Wood are intersected by the alignment LoD. An operational corridor for the OHL would be required through these LEPO woodlands where they span the full width of the LoD.</p> <p>The remaining blocks of LEPO woodland (the unnamed woodland near Knowehead, Boggie Wood, and Little Brechin Wood) constrain the alignment as they extend across part of the LoD; it would likely be possible to minimise felling of these LEPO woodlands through micro-siting of the OHL.</p>	
	<p>Alternative Alignment 4e</p>	<p>Designations: International, European or National Designations</p> <p>The alignment LoD intersects with the River South Esk SAC near Mill of Marcus (NGR NO 51388 59737). In addition, the alignment is within 100 m of the SAC at a location between Millof Marcus and Noranbank (NGR NO 50771 59666). The riparian habitats of the SAC comprise woodland that has largely been felled within the LoD of the alignment. Freshwater pearl mussel have not been reported by consultees as being present on the Noran Water.</p> <p>There are no other statutory designated sites recognised at an international, European or national level for their natural heritage intersected by the alternative alignment LoD or within 3 km.</p> <p>The alternative alignment LoD intersects with blocks of woodland listed on the AWI as LEPO:</p> <ul style="list-style-type: none"> Muirton Wood extends across the full width of the alignment LoD at three locations: northwest of Noranbank (NGR NO 49903 59299), northeast of Noranbank (NGR NO 50841 59573) and where the alignment crosses the Noran Water (NGR NO 51388 59737). Muirton Wood forms the riparian habitat of the River Esk SAC, with additional belts extending southwards either side of Noranbank. The woodland belts near Noranbank have been noted during 	<p>The alignment has been RAG rated as Amber because it may compromise the conservation status of the River South Esk SAC (Noran Water), and blocks of LEPO woodland which extend the full width of the alignment LoD (Muirton Wood, and North Wood).</p> <p>The alignment LoD intersects the Noran Water, part of the River South Esk SAC. The riparian habitat on the south of the watercourse crossing is dominated by recently felled plantation, with some remaining mature broadleaved riparian trees; these trees may constrain the OHL as they should be retained wherever possible. Removal of riparian vegetation has potential implications for bankside erosion. Uncontrolled construction within proximity to the SAC would pose a pollution risk, although the flood risk area is noted to be narrow at this location.</p> <p>The requirement to provide an operational corridor for the OHL may require felling of some trees in the LEPO along the Noran Water (part of Muirton Wood). This could be mitigated to some extent by careful micro-siting of towers to minimise any requirement for removal of riparian vegetation along the Noran Water. Mitigation to retain woodland through sensitive construction techniques would be applied. The watercourse in this location is below the level of the adjacent farmland; as such, it is anticipated that tree-felling can be minimised whilst maintaining the</p>	<p>A</p>

Topic and Criteria	Option	Constraints	Evaluation of Constraints	RAG Score
		<p>surveys to be dominated by mature broadleaved trees, while much of the woodland on the south bank of the Noran Water has been felled within the last 2 years.</p> <ul style="list-style-type: none"> North Wood near Careston: the woodland is a complex shape in this area with one section of woodland extending two thirds the width of the alignment LoD (NGR NO 52737 61463), two sections extending approximately one third the width of the alignment LoD (NGR NO 53010 61487, and NGR NO 52956 61581) and one narrow section extending the full width of the alignment LoD (NGR NO 53217 61583). There are three further sections mapped as LEPO woodland which intersect with the alignment LoD (NGR NO 52388 61441, NGR NO 52383 61437, and NGR NO 52429 61318); however, these areas have been confirmed during field surveys to comprise fields and are no longer woodland. Field surveys in this area have recorded extents of young broadleaved plantation have been recorded (NGR NO 52737 61463) surrounded by mature broadleaved trees, with further narrow strips of broadleaved woodland (NGR NO 53010 61487, and NGR NO 53217 61583). Little Brechin Wood (NGR NO 57378 63249), near Little Brechin: the woodland extends approximately half the width of the alignment LoD at two locations (NGR NO 57228 63061 and NGR NO 57378 63249). Field surveys in 2023 identified a mosaic of lowland mixed deciduous woodland, broadleaved woodland (NGR NO 57228 63061) and a felled conifer plantation (NGR NO 57378 63249). 	<p>necessary OHL clearance. In addition, strict pollution prevention would be implemented during construction to protect the water environment.</p> <p>The LEPO woodlands of Muirton Wood, North Wood, and Little Brechin Wood are all intersected by the alignment LoD. Surveys have identified extents of lowland mixed deciduous woodland at Little Brechin Wood, which is an SBL priority habitat. Survey observations suggest that North Wood has the potential to constrain the alignment where it extends partially into the LoD.</p> <p>An operational corridor for the OHL would be required through these LEPO woodlands where they span the full width of the LoD. It may be possible to minimise felling of extents of North Wood and Little Brechin Wood through micro-siting of the OHL.</p>	
	Alternative Alignment 4a (Potential) + Alternative Alignment 4b + Alternative Alignment 4c	<p>Designations: Regional Designations</p> <p>There are no regionally designated sites recognised for their natural heritage intersected by the alignment LoD. The nearest LNCS is Barrelwell Bog which is located 1.1 km to 1.4 km away from the LoD of these alignments.</p>	<p>These alignments have been assigned a Green RAG rating as they are unlikely to compromise the conservation status of any regional designations and/or the conservation status of the designated features of a regionally designated site.</p>	G
	Alternative Alignment 4d + Alternative Alignment 4e	<p>Designations: Regional Designations</p> <p>Barrelwell Bog LNCS extends approximately one quarter the width across the LoD of Alternative Alignment 4d and Alternative Alignment 4e (NGR NO 55672 61247), and is designated for wet woodland, neutral grassland and marshy grassland. This site was surveyed during the 2023 survey season; the westernmost block of woodland which is within the</p>	<p>Alternative Alignment 4d and Alternative Alignment 4e have been assigned an Amber RAG rating because they may compromise the conservation status of Barrelwell Bog LNCS and/or the conservation status of the designated features of the site.</p> <p>The alignments are constrained by the presence of Barrelwell Bog LNCS which extends into the LoD. As such, some felling of woodland on the edge</p>	A

Topic and Criteria	Option	Constraints	Evaluation of Constraints	RAG Score
		LoD was noted to comprise a plantation of native and non-native broadleaved tree species with evidence of historic disposal of waste. The habitats for which the LNCS is designated lie outwith the LoD to the east.	of the LNCS may be required to form an operational corridor for the OHL; however, the westernmost stand of plantation woodland, which extends furthest into the alternative alignment LoD, was noted to be affected by ash dieback and historic disposal of waste. An operational corridor for the OHL offers an opportunity to improve the condition of the western portion of the LNCS. In addition, there is flexibility within the LoD to avoid any felling of woodland within the LNCS through careful micro-siting of the OHL within adjacent farmland.	
	Alternative Alignment 4a (Potential) + Alternative Alignment 4b + Alternative Alignment 4c + Alternative Alignment 4d + Alternative Alignment 4e	<p>Protected Species: European Protected Species (EPS); UK Biodiversity Action Plan (BAP) Species; Other Protected and Notable Species</p> <p>Records of and/or habitat potential for EPS (such as otter, bats and freshwater pearl mussel), UKBAP species (such as pine marten, red squirrel, reptiles and amphibians), and other notable species (such as badger) are considered to represent a similar level of baseline constraint for all alternative alignments. All alternative alignments have been evaluated as having similar potential to support these species and would require a similar range of standard mitigation measures to be implemented including those in SSEN Transmission's SPPs. These criteria have therefore been scoped out of this appraisal.</p>		
	Alternative Alignment 4a (Potential) + Alternative Alignment 4b + Alternative Alignment 4c + Alternative Alignment 4d + Alternative Alignment 4e	<p>Habitats: Annex 1 Habitats</p> <p>Desk study and field survey data indicate that habitats within this alignment comprise a mosaic of farmland and woodland. There is limited potential for pockets of Annex 1 habitats, restricted to remnant extents of semi-natural woodland.</p> <p>Due to the similarity in the types of habitat present and similar potential for Annex 1 habitats across all of the alternative alignments, this criterion has been scoped out of the appraisal.</p>		
	Alternative Alignment 4a (Potential)	<p>Habitats: Groundwater Dependent Terrestrial Ecosystems (GWDTE)</p> <p>The LoD of this alignment intersects with areas of wet woodland in Lochty Wood (NGR NO 53730 62101). The associated NVC community is W1 <i>Salix cinerea</i> - <i>Galium palustre</i> woodland, which has potential to be GWDTE. Additional hydrological assessment would be required to confirm the status of this woodland. In addition, surveys recently completed within Duns Wood indicate that this area supports limited</p>	<p>This alignment has been assigned an Amber RAG rating because it may compromise the integrity of a potential GWDTE habitat within Lochty Wood.</p> <p>It would not be possible to avoid intersecting the potential GWDTE habitat at Lochty Wood, and some felling of trees within the wet woodland may be required to form an operational corridor for the OHL however this will be minimised wherever possible.</p>	A

Topic and Criteria	Option	Constraints	Evaluation of Constraints	RAG Score
		extents of wet woodland and marshy grassland which are potential GWDTEs.	It would be possible to avoid intersecting the potential GWDTE habitat within Duns Wood as these habitats are outwith the alignment LoD. Potential GWDTE habitats may be affected beyond the operational corridor for the OHL due to the placement of towers and associated excavations. Hydrological assessment would be required of these habitats to confirm their status, and to ensure appropriate mitigation is identified.	
	Alternative Alignment 4b + Alternative Alignment 4d	Habitats: Groundwater Dependent Terrestrial Ecosystems (GWDTE) The eastern edge of the LoD of these alignments intersects with areas of wet woodland in Lochty Wood (NGR NO 53730 62101). The associated NVC community is W1 <i>Salix cinerea - Galium palustre</i> woodland, which has potential to be GWDTE. Additional hydrological assessment would be required to confirm the status of this woodland. In addition, surveys recently completed within Duns Wood indicate that this area supports limited extents of wet woodland and marshy grassland which are potential GWDTEs.	Alternative Alignment 4b and Alternative Alignment 4d have been assigned an Amber RAG rating because they may compromise the integrity of a potential GWDTE habitat within Lochty Wood. It would be possible to avoid intersecting the potential GWDTE habitat at Lochty Wood as the habitat is located on the eastern edge of the alignment LoD. It would be possible to avoid intersecting the potential GWDTE habitat within Duns Wood as these habitats are outwith the alignment LoD. Potential GWDTE habitats may be affected beyond the operational corridor for the OHL due to the placement of towers and associated excavations. Hydrological assessment would be required of these habitats to confirm their status, and to ensure appropriate mitigation is identified.	A
	Alternative Alignment 4c + Alternative Alignment 4e	Habitats: Groundwater Dependent Terrestrial Ecosystems (GWDTE) The LoD of these alignments does not intersect with known areas of potential GWDTE. Habitats within these alignments comprise a mosaic of farmland and woodland with limited potential for GWDTEs to be located within the LoD. GWDTE habitat is likely to be restricted to low-lying damp areas on the edges of fields.	These alignments have been assigned a Green RAG rating as they are unlikely to compromise the integrity of any potential GWDTE habitats.	G
	Alternative Alignment 4a (Potential)	Habitats: Biodiversity The density of Biodiversity Units derived from habitats within the alignment LoD is calculated to be 8.05 BU/ha. Irreplaceable habitats are calculated to be present at a density of 0.04 BU/ha. Watercourses are present at a density of 0.29 BU/km.	This alignment has been assigned a Green RAG rating because it has been evaluated as having less than 110% of the BU density of the least biodiversity impacted alternative (see Alternative Alignment 4c).	G
	Alternative Alignment 4b	Habitats: Biodiversity The density of Biodiversity Units derived from habitats within the alignment LoD is calculated to be 7.81 BU/ha. Irreplaceable habitats are calculated to be present at a density of 0.03 BU/ha. Watercourses are present at a density of 0.24 BU/km.	This alignment has been assigned a Green RAG rating because it has been evaluated as having less than 110% of the BU density of the least biodiversity impacted alternative (see Alternative Alignment 4c).	G

Topic and Criteria	Option	Constraints	Evaluation of Constraints	RAG Score
	Alternative Alignment 4c	Habitats: Biodiversity The density of Biodiversity Units derived from habitats within the alignment LoD is calculated to be 7.49 BU/ha. Irreplaceable habitats are calculated to be present at a density of 0.04 BU/ha. Watercourses are present at a density of 0.16 BU/km.	This alignment has been assigned a Green RAG rating because it has been evaluated as having the lowest biodiversity unit density.	G
	Alternative Alignment 4d	Habitats: Biodiversity The density of Biodiversity Units derived from habitats within the alignment LoD is calculated to be 7.89 BU/ha. Irreplaceable habitats are calculated to be present at a density of 0.01 BU/ha. Watercourses are present at a density of 0.19 BU/km.	This alignment has been assigned a Green RAG rating because it has been evaluated as having less than 110% of the BU density of the least biodiversity impacted alternative (see Alternative Alignment 4c).	G
	Alternative Alignment 4e	Habitats: Biodiversity The density of Biodiversity Units derived from habitats within the alignment LoD is calculated to be 7.57 BU/ha. Irreplaceable habitats are calculated to be present at a density of 0.01 BU/ha. Watercourses are present at a density of 0.10 BU/km.	This alignment has been assigned a Green RAG rating because it has been evaluated as having less than 110% of the BU density of the least biodiversity impacted alternative (see Alternative Alignment 4c).	G
Natural Heritage Ornithology	Alternative Alignment 4a (Potential) + Alternative Alignment 4b + Alternative Alignment 4c + Alternative Alignment 4d + Alternative Alignment 4e	Designations Montrose Basin SPA (Dun's Dish SSSI as part of that SPA) lies c. 7.5 km to the east of the alignment at its northernmost part. The SPA shows connectivity to the alternative alignment given that the core foraging range of their designated features coincide with the OHL here. Flight activity surveys have recorded relatively few flights across the alignment of pink-footed geese.	The alternative alignments have been RAG rated as Amber as they may compromise an internationally or nationally designated area and/or the conservation status of the qualifying features of the site having assumed connectivity between the Montrose Basin SPA and associated foraging areas (as per Section B assessment). Birds from the Montrose Basin SPA (both greylag and pink-footed geese) show preferred foraging sites to the east of the alternative alignments a-e. Flight activity of pink-footed geese has been recorded that intersects with the area where the alignments are located, although activity levels are comparatively low.	A
	Alternative Alignment 4a (Potential) + Alternative Alignment 4b + Alternative Alignment 4c + Alternative Alignment 4d +	Schedule 1 species The alternative alignments include habitat that supports Schedule 1 species. Flight activity of Schedule 1 species has been recorded within the location of the alternative alignments during the Vantage Point watches, however, no desk records of breeding/nesting have been acquired for the species here. The alternative alignments are not anticipated to support regionally significant populations of Schedule 1 species, therefore, this criterion has been scoped from appraisal.		

Topic and Criteria	Option	Constraints	Evaluation of Constraints	RAG Score
	Alternative Alignment 4e			
	Alternative Alignment 4a (Potential) + Alternative Alignment 4b + Alternative Alignment 4c + Alternative Alignment 4d + Alternative Alignment 4e	<p>Birds of Conservation Concern (BoCC)</p> <p>The land intersected by the alternative alignments supports populations of birds listed on the red and amber lists of the BoCC. The habitats present within the vicinity of the alignments are not considered optimal for breeding waders.</p> <p>Birds of Conservation Concern are likely to be present as breeding birds across the area in which the alternative alignment is located, however the area does not represent optimal breeding wader habitat. The alignment lies within an area that is unlikely to compromise the conservation status of populations of a red or amber listed species or essential breeding, passage or wintering habitat, and therefore, this criterion has been scoped out of appraisal.</p>		
Natural Heritage Hydrology / Geology / Hydrogeology	Alternative Alignment 4a (Potential) + Alternative Alignment 4e	<p>Surface and Groundwater Drinking Water Protected Area</p> <p>At its eastern extent the alignment is approximately 370 m south of the downstream extent of the Buttery Burn DWPA (Waterbody ID 23661).</p>	<p>Surface and Groundwater Drinking Water Protected Area</p> <p>This alignment has been RAG rated Green as it is considered unlikely to result in surface flow pathways and subsequently compromise the quality of surface waters of local importance.</p>	G
	Alternative Alignment 4b + Alternative Alignment 4c + Alternative Alignment 4d	<p>Surface and Groundwater Drinking Water Protected Area</p> <p>At its eastern extent the alignment is approximately 340 m south of the downstream extent of the Buttery Burn DWPA (Waterbody ID 23661).</p>	<p>Surface and Groundwater Drinking Water Protected Area</p> <p>This alignment has been RAG rated Green as it is considered unlikely to result in surface flow pathways and subsequently compromise the quality of surface waters of local importance.</p>	G
	Alternative Alignment 4c + Alternative Alignment 4e	<p>Aquifers providing Regional/Local resources</p> <p>There are no private water supplies, groundwater features or aquifers providing regional/local resources in close proximity to the alignment.</p>	<p>Aquifers providing Regional/Local resources</p> <p>This alignment has been RAG rated as Green as it is considered unlikely to compromise quality or quantity of surface or groundwater of regional importance (e.g. through creation of a pathway for run-off which may cause some disruption to abstraction water flow and/or quality).</p>	G
	Alternative Alignment 4a (Potential)	<p>Aquifers providing Regional/Local resources</p> <p>There are two private water supplies or aquifers providing regional/local resources in close proximity to the alignment. There is one indicative PWS abstraction point at Balmadity Farm House (NGR NO 50599 62210) around 180 m north of the alignment centreline and one at Beechland (Kirkside) (NGR 53828 62281) also around 180 m north of the alignment centreline.</p>	<p>Aquifers providing Regional/Local resources</p> <p>This alignment has been RAG rated as Amber as it may compromise quality or quantity of surface or groundwater of regional importance (e.g. through creation of a pathway for run-off which may cause some disruption to abstraction water flow and/or quality).</p> <p>There are several PWS abstractions nearby which are fed by groundwater springs, the abstraction sources remain unknown and therefore potentially</p>	A

Topic and Criteria	Option	Constraints	Evaluation of Constraints	RAG Score
			could be impacted by an alignment through this area. Current data indicates that two PWS sources are located 180 m north of the alignment centreline.	
	Alternative Alignment 4b + Alternative Alignment 4d	Aquifers providing Regional/Local resources There is one private water supply providing regional/local resources in close proximity to the alignment. The PWS abstraction point is indicated at Balmadity Farm House (NGR NO 50599 62210) around 180 m north of the alignment centreline.	Aquifers providing Regional/Local resources These alignments have been RAG rated as Amber as they may compromise quality or quantity of surface or groundwater of regional importance (e.g. through creation of a pathway for run-off which may cause some disruption to abstraction water flow and/or quality). There is a PWS abstraction located near the alignment centreline, the abstraction source is unknown and therefore potentially could be impacted by an alignment through this area. Current data indicates the Balmadity Farm House PWS source is 180 m north of the alignment centreline.	A
	Alternative Alignment 4a (Potential) + Alternative Alignment 4b + Alternative Alignment 4c + Alternative Alignment 4d + Alternative Alignment 4e	Surface Water or aquifer providing water for agricultural or industrial use The alignments cross three watercourses which are shown on 1:50k Ordnance Survey mapping and major watercourses including: <ul style="list-style-type: none"> Noran Water (Waterbody ID 5805) was classified by SEPA as overall 'Moderate' in 2021 Willie's Mill Burn, which was too small to be classified by SEPA under the Water framework directive Cruick Water (Waterbody ID 5712) was classified by SEPA as overall 'Good' in 2022 Based on SEPA Future Flood Maps there is one major area of fluvial flood risk crossed by the alignments at the Cruick Water which is around 310 m wide. This cannot be spanned as the alignment requires one tower to be sited within the floodplain area (due to a change in direction). The alignments also cross a minor floodplain of the Noran Water which can be spanned.	Surface Water or aquifer providing water for agricultural or industrial use These alignments have been RAG rated as Amber as they may compromise quality and/or quantity of surface or groundwaters of local importance or would require dewatering of construction activities. All of the alternative alignments have one tower sited within the indicative SEPA future flood maps extent of the Crucik Water. Alternative Alignments 4a, 4b and 4c cross the Cruick Water at an area where the floodplain is 200 m wide and can be spanned, but current proposals site a tower in the floodplain. Alternative Alignments 4d and 4e have one tower sited within the Cruick Water floodplain at a change in direction of the alignment. Here the alignment crosses over 310 m of floodplain. Therefore, construction activities are effectively within the watercourse during the 200-year future flood event and there is potential to compromise quality and/or quantity of surface waters (and groundwater) of local importance or would require dewatering construction activities.	A
Cultural Heritage Designations Cultural Heritage Assets	Alternative Alignment 4a (Potential) + Alternative Alignment 4b	Designations: World Heritage Sites (WHS), Scheduled Monuments (SM), Inventory Gardens and Designed Landscapes (GDLs), Inventory Battlefields Within 1 km of the edge of the alternative alignments LoDs there are eight (Alternative Alignment 4a (Potential)) and nine (Alternative Alignment 4b) Scheduled Monuments of national importance and high sensitivity:	The alternative alignments have been RAG rated Amber as, although they would avoid direct interaction with any designated assets, they may compromise the setting of the following designated assets that lie close to the alternative alignments: <ul style="list-style-type: none"> 1. Law of Baldoukie, Barrow (SM 6314): the southern end of the alignment LoDs lie within c.160 m to the east of the monument and the OHL towers could intrude into key views from the monument out 	A

Topic and Criteria	Option	Constraints	Evaluation of Constraints	RAG Score
		<ul style="list-style-type: none"> • Law of Baldoukie Barrow (SM 6314) • Baldoukie, Souterrain (SM 6315) • Wellford, Enclosure (SM 6390) • Shanford, Souterrains (SM 6408, SM 6409 and SM 6410) • Belliehill, Unenclosed Settlement (SM 6514) • Mill of Balrownie, Ring Ditch (SM 6472) • Craigend of Careston, Enclosure (SM 6647) (Alternative Alignment 4b only) <p>The Scheduled Monument, The Caterthun Hillforts (SM 90064), which is also a Property in Care (PiC), lies around 3.1 km north of the edge of the alignment LoDs and is considered to be especially sensitive to change on its setting.</p> <p>The closest of these designated heritage assets to the alignment LoDs are: Law of Baldoukie Barrow (SM 6314) and Baldoukie, Souterrain (SM 6315) located c.130 m west of the southern end of the alternative alignments. Most of the Scheduled Monuments survive as cropmark sites visible on aerial photographs.</p> <p>Those designated heritage assets that are likely most sensitive to the alternative alignments (effects on their settings) are those that are either prominent landmarks and/or have long views across the landscape as important aspects of their settings. These would include hillforts, burial cairns and stone circles, or designated landscape that have long distance views and vistas that contribute to their cultural significance.</p> <p>Key constraints identified in regard to the alternative alignments include:</p> <ul style="list-style-type: none"> • 1. Law of Baldoukie, Barrow (SM 6314) (NGR NO 467 588): the remains of this prehistoric barrow stand just east of Baldoukie Farm and c.160 m west of the southern end of the alignment LoDs. The monument stands in undulating arable farmland and appears to have been sited in reference to the South River Esk, to the south. This relationship to the river is a key aspect of its setting. • 2. Wellford Enclosure (SM 6390) (NGR NO 479 602): the site comprises of an enclosed prehistoric settlement surviving as cropmarks visible on aerial photographs. The site lies c.140 m to the east from the edge of the alignment LoDs immediately north of the 	<p>to the immediate surrounding farmland, potentially compromising its setting.</p> <ul style="list-style-type: none"> • 2. Wellford Enclosure (SM 6390): the edge of the alignment LoDs pass within c.140 m to the west of the monument and the OHL towers could intrude into key views from the monument, especially in regards views from the monument along the Noran Water, potentially compromising its setting. • 3. Belliehill Unenclosed Settlement (SM 6514): the edge of the alignment LoDs pass within c.540 m to the south of the monument, and the OHL towers could intrude into key views from the monument out to the immediate surrounding farmland, potentially compromising its setting. • 4. Mill of Balrownie Ring Ditch (SM 6472): the northern end of the alignment LoDs lie within c.230 m to the southwest of the monument and the OHL towers could intrude into key views from the monument out to the immediate surrounding farmland, potentially compromising its setting. • 5. The Caterthun Hillforts (SM 90064): the edge of the alignment LoDs pass within c.3.1 km to the south of the monument and the OHL towers could intrude into key views to and from the monument, potentially compromising its setting. <p>Potential to mitigate impact on the settings of these assets is limited, however, the LoD provides some flexibility to reduce intrusion into key views to and from the designated heritage assets through micrositing of towers, subject to other constraints. Overall, there is some scope, through micrositing of towers to reduce but not remove the constraints from these designated assets.</p>	

Topic and Criteria	Option	Constraints	Evaluation of Constraints	RAG Score
		<p>Noran Water and has evidently been sited in reference to the river. The relationship to the river and views along the river valley are key aspects of its settings.</p> <ul style="list-style-type: none"> 3. Belliehill, Unenclosed Settlement (SM 6514) (NGR NO 567 637): the site comprises of an unenclosed prehistoric settlement surviving as cropmarks visible on aerial photographs. The site lies c.520 m from the northern end of the edge of the alignment LoDs, immediately south of the Buttery Burn, and has evidently been sited in reference to the Burn. The quality of the surrounding land for agriculture and grazing is likely to have also been a determining consideration in its placement. The relationship of the monument with the Buttery Burn and the surrounding farming landscape are key aspects of its setting. 4. Mill of Balrownie Ring Ditch (SM 6472) (NGR NO 574 635) the site comprises the remains of a ring ditch likely representing a prehistoric round house, surviving as cropmarks visible on aerial photographs and lies c.215 m from the northern end of the edge of the alignment LoDs. The site lies immediately south of the Cruick Water and has evidently been sited in reference to the watercourse. The quality of the surrounding land for agriculture and grazing is likely to have been a determining consideration in its placement. The relationship of the monument with the Cruick Water and the surrounding farming landscape are key aspects of its setting. 5. The Caterthuns, Hillforts (SM 90069) (NGR NO 547 660): This monument comprises two substantial hillforts that occupy the summits of two adjacent hills and stand in a prominent topographical location on the southern edge of the Grampian Mountains. The hillforts are prominent landmarks and a nationally renowned visitors' site. The prominent topographical position of the hillforts and views to and from them are key aspects of their setting. 		
	<p>Alternative Alignment 4c</p>	<p>Designations: World Heritage Sites (WHS), Scheduled Monuments (SM), Inventory Gardens and Designed Landscapes (GDLs), Inventory Battlefields</p> <p>Within 1 km of the edge of the alternative alignment LoD there are ten Scheduled Monuments of national importance and high sensitivity:</p>	<p>This alignment has been RAG rated Amber as, although it would avoid direct interaction with any designated assets, it may compromise the setting of the following designated assets that lie close to the alternative alignment.</p>	<p>A</p>

Topic and Criteria	Option	Constraints	Evaluation of Constraints	RAG Score
		<p>As per Alternative Alignment 4a (except for Shanford, Souterrains), as well as:</p> <ul style="list-style-type: none"> • Vayne Castle (SM 4015) • Vayne Standing Stone (SM 135) • Noronbank Timber Hall (SM 4103) • Law of Windsor Cairn (SM 3375) • Craigend of Careston, Enclosure (SM 6647) <p>Key constraints identified in regard to the alternative alignment include 1-5 as per Alternative Alignment 4a, with the following differences:</p> <ul style="list-style-type: none"> • 2. Welford Enclosure (SM 6390) (NGR NO 479 602): lies c.690 m to the north from the edge of the alignment LoD. • 6. Vayne (Vayne Castle (SM 4015) (NGR NO 493 599) and Vayne Standing Stone (SM 135) (NGR NO 497 600) stand in farmland to the north of the Noran Water. The monuments have evidently been sited in reference to the Noran Water and their relationships with the river, and views along the river valley are key aspects of their settings. The closest, Vayne Castle (SM 4015) lies c.460 m to the north of the edge of the alignment LoD. • 7. Law of Windsor, Cairn (SM 3375) (NGR NO 512 604): this prehistoric burial cairn stands on a ridge, to the east of Hilton of Fern farm, overlooking the Noran Water to its south. The monument lies c.310 m west of the edge of the alignment LoD. The burial cairn is a prominent feature in the local landscape and is visible whilst travelling along the Vayne to Peathill public road. The relationship of the monument with the Noran Water, views along the river valley, and views towards the cairn from the local landscape are key aspects of its setting. 	<p>The evaluation of constraints is as per 1-5 as per Alternative Alignment 4a with the following differences:</p> <ul style="list-style-type: none"> • 2. Welford Enclosure (SM 6390): intervening topography and woodland would likely screen views of the alternative alignment from this monument and this monument is not considered to be a significant constraint to development of an OHL in this alternative alignment. • 6. The alternative alignment would be located to the south side of the Noran Water where it passes in proximity to Vayne Standing Stone (SM 315) and Vayne Castle (SM 4015). The closest monument, Vayne Castle, being c.460 m from the northern edge of the alignment LoD. Intervening topography and woodland would likely, at least, partly screen views of the OHL from the monuments, where it passes the monuments to the south. The introduction of new towers in the wider landscape surrounding the standing stone, particularly where the alternative alignment crosses the Noran Water to the east of the monuments may however intrude into key views from the monuments along the Noran Water valley and potentially compromising their settings. • 7. Law of Windsor Cairn (SM 3375): the edge of the alignment LoD passes within c.460 m to the east of the monument, potentially compromising its setting due to the introduction of new OHL towers in the immediate landscape surrounding the monument and which could intrude into key views from, and to, the monument, particularly in views to the monument from the Vayne to Peathill public road and in views from the monument along the Noran Water valley. <p>Potential to mitigate impact on the settings of these assets is limited, however, the LoD provides some flexibility to reduce intrusion into key views to and from the designated heritage assets through micro-siting of towers, subject to other constraints. Overall, there is some scope, through micro-siting of towers to reduce but not remove the constraints from these designated assets.</p>	
	Alternative Alignment 4d	<p>Designations: World Heritage Sites (WHS), Scheduled Monuments (SM), Inventory Gardens and Designed Landscapes (GDLs), Inventory Battlefields</p> <p>Within 1 km of the edge of the alternative alignment LoD there are ten Scheduled Monuments of national importance and high sensitivity:</p>	<p>This alignment has been RAG rated Amber as, although it would avoid direct interaction with any designated assets, it may compromise the setting of the following designated assets that lie close to the alternative alignment:</p>	A

Topic and Criteria	Option	Constraints	Evaluation of Constraints	RAG Score
		<p>As per Alternative Alignment 4a, as well as:</p> <ul style="list-style-type: none"> • Craigend of Careston, Enclosure (SM 6647) <p>Key constraints identified in regard to the alternative alignment are as per Alternative Alignment 4a with the following differences:</p> <ul style="list-style-type: none"> • 2. Belliehill, Unenclosed Settlement (SM 6514) (NGR NO 567 637): lies c.700 m from the edge of the alignment LoD. • 8. Craigend of Careston Enclosure (SM 6647) (NGR NO 548 604) lies on a south-facing ridge in arable farmland c.530 m south of the edge of the alignment LoD. The site, comprising the remains of an enclosed settlement surviving as cropmarks detected on aerial photographs, would have had extensive views, particularly to the south towards the River South Esk and across Strathmore. Views out from the monument in this direction are a key aspect of its setting. 	<p>The evaluation of constraints is as per 1- 5 as per Alternative Alignment 4a, with the following differences:</p> <ul style="list-style-type: none"> • 3. Belliehill Unenclosed Settlement (SM 6514): the edge of the alignment LoD passes within c.700 m to the southeast of the monument, and the OHL towers could intrude into key views from the monument out to the immediate surrounding farmland, potentially compromising its setting. • 4. The Caterthun Hillforts (SM 90064): the edge of the alignment LoD passes within c.3.1 km to the south of the monument and the OHL towers could intrude into key views to and from the monument, potentially compromising upon its setting. • 8. Craigend of Careston (SM 6647): the southern edge of the alignment LoD lies within 530 m to the north of the monument. Although the OHL towers would be present within the wider landscape views of the monument, the OHL would pass the monument on its northern side and would not intrude into key views from the monument to the south. As such this monument is not considered to be a significant constraint to development of an OHL in this alternative alignment. <p>Potential to mitigate impact on the settings of these assets is limited, however, the LoD provides some flexibility to reduce intrusion into key views to and from the designated heritage assets through micro-siting of towers, subject to other constraints. Overall, there is some scope, through micro-siting of towers to reduce but not remove the constraints from these designated assets.</p>	
	<p>Alternative Alignment 4e</p>	<p>Designations: World Heritage Sites (WHS), Scheduled Monuments (SM), Inventory Gardens and Designed Landscapes (GDLs), Inventory Battlefields</p> <p>Within 1 km of the edge of the alternative alignment LoD there are ten Scheduled Monuments of national importance and high sensitivity:</p> <p>As per Alternative Alignment 4a (except for Shanford, Souterrains), as well as:</p> <ul style="list-style-type: none"> • Vayne Castle (SM 4015) • Vayne Standing Stone (SM 135) • Noronbank Timber Hall (SM 4103) • Law of Windsor Cairn (SM 3375) 	<p>The alignment has been RAG rated Amber as, although it would avoid direct interaction with any designated assets, it may compromise the setting of the following designated assets that lie close to the alternative alignment.</p> <p>The evaluation of constraints is as per 1-5 as per Alternative Alignment 4a, with the following differences:</p> <ul style="list-style-type: none"> • 2. Welford Enclosure (SM 6390): intervening topography and woodland would likely screen views of the alternative alignment from this monument and this monument is not considered to be a significant constraint to development of an OHL in this alternative alignment. • 6. The alternative alignment would be located to the south side of the Noran Water where it passes in proximity to Vayne Standing Stone (SM 315) and Vayne Castle (SM 015). The closest monument, Vayne 	A

Topic and Criteria	Option	Constraints	Evaluation of Constraints	RAG Score
		<ul style="list-style-type: none"> Craigend of Careston, Enclosure (SM 6647) <p>Those designated heritage assets that are likely most sensitive to the alignment (effects on their settings) are those that are either prominent landmarks and/or have long views across the landscape as important aspects of their settings. These would include hillforts, burial cairns and stone circles, or designated landscape that have long distance views and vistas that contribute to their cultural significance.</p> <p>Key constraints identified in regard to the alignment are as per Alternative Alignment 4a, with the following differences:</p> <ul style="list-style-type: none"> 2. Wellford Enclosure (SM 6390) (NGR NO 479 602 lies c.690 m to the north from the edge of the alignment LoD. 6. Vayne (Vayne Castle (SM 4015) (NGR NO 493 599) and Vayne Standing Stone (SM 135) (NGR NO 497 600) stand in farmland to the north of the Noran Water. The closest, Vayne Castle (SM 4015) lies c.460 m to the north of the edge of the alignment LoD. See description of monuments in row above (Alternative Alignment 4c). 7. Law of Windsor, Cairn (SM 3375) (NGR NO 512 604): this prehistoric burial cairn stands lies c.310 m west of the edge of the alignment LoD. (See description of monument in row above (Alternative Alignment 4c)). 8. Craigend of Careston Enclosure (SM 6647) (NGR NO 548 604) lies on a south-facing ridge in arable farmland c.530 m south of the edge of the alignment LoD. (See description of monument in row above (Alternative Alignment 4d)). 	<p>Castle, being c.460 m from the northern edge of the alignment LoD. Intervening topography and woodland would likely, at least, partly screen views of the OHL from the monuments, where it passes the monuments to the south. The introduction of new towers in the wider landscape surrounding the standing stone, particularly where the alternative alignment crosses the Noran Water to the east of the monuments may however intrude into key views from the monuments along the Noran Water valley and potentially compromising their settings.</p> <ul style="list-style-type: none"> 7. Law of Windsor Cairn (SM 3375): the edge of the alignment LoD passes within c.460 m to the east of the monument, potentially compromising its setting due to the introduction of new OHL towers in the immediate landscape surrounding the monument and which could intrude into key views from, and to, the monument, particularly in views to the monument from the Vayne to Peathill public road and in views from the monument along the Noran Water valley. 8. Craigend of Careston (SM 6647): the southern edge of the alignment LoD lies within 530 m to the north of the monument. Although the OHL towers would be present within the wider landscape views of the monument, the OHL would pass the monument on its northern side and would not intrude into key views from the monument to the south. As such this monument is not considered to be a significant constraint to development of an OHL in this alternative alignment. <p>Potential to mitigate impact on the settings of these assets is limited, however, the LoD provides some flexibility to reduce intrusion into key views to and from the designated heritage assets through micro-siting of towers, subject to other constraints. Overall, there is some scope, through micro-siting of towers to reduce but not remove the constraints from these designated assets.</p>	
	<p>Alternative Alignment 4a (Potential) + Alternative Alignment 4b</p>	<p>Designations: Sites and Monuments Record (SMR) Entries</p> <p>Six SMR sites of archaeology and cultural heritage interest fall within the alternative alignment LoD. These comprise an unenclosed settlement (NO56SE0070), a possible enclosure (NO46SE0043), two possible buildings and former rig and furrow remains (NO45NE0053), all of which survive as cropmark sites visible on aerial photographs, the site of a former burial cairn (NO56SE0002), an area of relict rig and furrow cultivation remains (NO56SW0067) and the site of a possible WW1</p>	<p>This alignment has been RAG rated as Green for SMR sites, as the archaeological and cultural heritage sites identified do not represent significant constraints to development by an OHL in this alternative alignment.</p> <p>The SMR sites are thinly scattered throughout the alignment LoD. Where direct impacts on SMR sites cannot be avoided, constraints could be mitigated through a programme of works (i.e. trial trench evaluation and</p>	G

Topic and Criteria	Option	Constraints	Evaluation of Constraints	RAG Score
		<p>landing ground (NO56SW0077). The possible landing ground is only recorded from documentary sources and its exact location is not known.</p> <p>All of the assets within the alignment LoD are recorded as being of 'Standard' importance in the SMR and are assessed as being of local heritage value and of low sensitivity.</p>	<p>excavation or watching briefs) in advance of construction works to a scope agreed by the local authority.</p>	
	Alternative Alignment 4c	<p>Designations: Sites and Monuments Record (SMR) Entries</p> <p>Four SMR sites of archaeology and cultural heritage interest fall within the alternative alignment LoD.</p> <p>These comprise an unenclosed settlement (NO56SE0070) and two possible buildings and former rig and furrow remains (NO45NE0053), both surviving as cropmark sites visible on aerial photographs, the former site of a flax mill (NO45NE0003) and the site of a former burial cairn (NO56SE0002).</p> <p>All of the assets within the alignment LoD are recorded as being of 'Standard' importance in the SMR and are assessed as being of local heritage value and of low sensitivity.</p>	<p>This alignment has been RAG rated as Green for SMR sites, as the archaeological and cultural heritage sites identified do not represent significant constraints to development by an OHL in this alternative alignment.</p> <p>The SMR sites are thinly scattered throughout the alignment LoD. Where direct impacts on SMR sites cannot be avoided, constraints could be mitigated through a programme of works (i.e. trial trench evaluation and excavation or watching briefs) in advance of construction works to a scope agreed by the local authority.</p>	G
	Alternative Alignment 4d	<p>Designations: Sites and Monuments Record (SMR) Entries</p> <p>Six SMR sites of archaeology and cultural heritage interest fall within the alternative alignment LoD. These comprise a possible enclosure (NO46SE0043), two possible buildings and former rig and furrow remains (NO45NE0053), both of which survive as cropmark sites visible on aerial photographs, the site of a former burial cairn (NO56SE0002), an area of relict rig and furrow cultivation remains (NO56SW0067), route of an alleged Roman Road (NO56SE0073) and the site of a possible WW1 landing ground (NO56SW0077). The possible landing ground is only recorded from documentary sources and its exact location is not known.</p> <p>All of the assets within the alignment LoD are recorded as being of 'Standard' importance in the SMR and are assessed as being of local heritage value and of low sensitivity.</p>	<p>This alignment has been RAG rated as Green for SMR sites, as the archaeological and cultural heritage sites identified do not represent significant constraints to development by an OHL in this alternative alignment.</p> <p>The SMR sites are thinly scattered throughout the alignment LoD. Where direct impacts on SMR sites cannot be avoided, constraints could be mitigated through a programme of works (i.e. trial trench evaluation and excavation or watching briefs) in advance of construction works to a scope agreed by the local authority.</p>	G
	Alternative Alignment 4e	<p>Designations: Sites and Monuments Record (SMR) Entries</p> <p>Four SMR sites of archaeology and cultural heritage interest fall within the alignment LoD.</p> <p>These comprise two possible buildings and former rig and furrow remains (NO45NE0053), surviving as a cropmark site visible on aerial photographs, the former site of a flax mill (NO45NE0003), the site of a</p>	<p>The alignment has been RAG rated as Green for SMR sites, as the archaeological and cultural heritage sites identified do not represent significant constraints to development by an OHL in this alternative alignment.</p> <p>The SMR sites are thinly scattered throughout the alignment LoD. Where direct impacts on SMR sites cannot be avoided, constraints could be mitigated through a programme of works (i.e. trial trench evaluation and</p>	G

Topic and Criteria	Option	Constraints	Evaluation of Constraints	RAG Score
		<p>former burial cairn (NO56SE0002), and the route of an alleged Roman Road (NO56SE0073).</p> <p>All of the assets within the alignment LoD are recorded as being of 'Standard' importance in the SMR and are assessed as being of local heritage value and of low sensitivity.</p>	<p>excavation or watching briefs) in advance of construction works to a scope agreed by the local authority.</p>	
	<p>Alternative Alignment 4a (Potential) + Alternative Alignment 4b</p>	<p>Cultural Heritage Assets</p> <p>Within 1 km of the edge of the alternative alignment LoDs there is:</p> <ul style="list-style-type: none"> • One Category A Listed Building, Balnamoon House Sundial (LB 17700), of national heritage value and high sensitivity. • Nine Category B Listed Buildings of regional heritage value and medium sensitivity. • 16 Category C Listed Buildings of local heritage value and low sensitivity (15 for Alternative Alignment 4b). • One Conservation Area, Tannadice (CA 539) of regional heritage value and of medium sensitivity. <p>The Listed Buildings comprise mostly of small residential properties (i.e. farmsteads and cottages), small parish kirks, bridges, former corn mills, garden features (i.e. sundials and walled gardens) and a telephone kiosk, all of which have generally localised settings and are not significant constraints.</p> <p>The assets considered to be the most sensitive to change is, Category B Listed Noranside House (LB 17705).</p> <p>This country house stands on the northern edge of Strathmore, c.700 m to the north of the edge of the alignment LoD. The main elevation of the House is orientated to the south, and views from this elevation is a key aspect of its setting. Long views from the House, particularly from ground level, are generally constrained by surrounding woodland and woodland shelterbelts.</p> <p>Tannadice Conservation Area (CA 539) (NGR NO 475 581) lies around 650 m southwest of the alignment LoD. The Conservation Area is set down within the River South Esk valley, immediately north of the river and surrounded by undulating landscape. As such, it has a relatively localised river valley setting.</p>	<p>The alternative alignments have been RAG rated as Green for cultural heritage assets as they would be unlikely to disturb, or compromise the settings of, any cultural heritage assets.</p> <p>The alternative alignments pass c.700 m to the south of Category B Listed Noranside House (LB 17705), intervening woodland and shelterbelts would likely screen views of the alternative alignments from this Listed Building and it is not considered to be a significant constraint to development of an OHL in these alternative alignments.</p> <p>The other Listed Buildings and Conservation Area within the landscape immediately surrounding the alternative alignment have generally localised settings where long views out to the surrounding landscape do not form key aspects of their settings and therefore the alignment is unlikely to compromise their setting.</p>	<p>G</p>

Topic and Criteria	Option	Constraints	Evaluation of Constraints	RAG Score
	Alternative Alignment 4c	<p>Cultural Heritage Assets</p> <p>Within 1 km of the edge of the alternative alignment LoD there are:</p> <ul style="list-style-type: none"> One Category A Listed Building, Balnamoon House Sundial (LB 17700), of national heritage value and high sensitivity. Eight Category B Listed Buildings of regional heritage value and medium sensitivity. 14 Category C Listed Buildings of local heritage value and low sensitivity. One Conservation Area, Tannadice (CA 539) of regional heritage value and of medium sensitivity. <p>The Listed Buildings comprise mostly of small residential properties (i.e. farmsteads and cottages), small parish kirks, bridges, former corn mills, garden features (i.e. sundials and walled gardens) and a telephone kiosk, all of which have generally localised settings and are not significant constraints.</p> <p>Tannadice Conservation Area (CA 539) (NGR NO 475 581) lies around 650 m southwest of the alignment LoD. (See description of Conservation Area in row above (Alternative Alignment 4a)).</p>	<p>This alignment has been RAG rated as Green for cultural heritage assets as it would be unlikely to disturb, or compromise the settings of, any cultural heritage assets.</p> <p>The Listed Buildings and Conservation Area within the landscape immediately surrounding the alternative alignment have generally localised settings where long views out to the surrounding landscape do not form key aspects of their settings and therefore the alignment is unlikely to compromise their setting.</p>	G
	Alternative Alignment 4d	<p>Cultural Heritage Assets</p> <p>Within 1 km of the edge of the alternative alignment LoD there are:</p> <ul style="list-style-type: none"> Four Category B Listed Buildings of regional heritage value and medium sensitivity. 14 Category C Listed Buildings of local heritage value and low sensitivity. One Conservation Area, Tannadice (CA 539) of regional heritage value and of medium sensitivity. <p>The Listed Buildings comprise the same as Alternative Alignment 4a.</p> <p>The assets considered to be the most sensitive to change is Category B Listed Noranside House (LB 17705). (See description of Listed Building in row above (Alternative Alignment 4a)).</p> <p>Tannadice Conservation Area (CA 539) (NGR NO 475 581) lies around 650 m southwest of the alignment LoD. (See description of Conservation Area in row above (Alternative Alignment 4a)).</p>	<p>The alternative alignment has been RAG rated as Green for cultural heritage assets as it would be unlikely to disturb, or compromise the settings of, any cultural heritage assets.</p> <p>The alternative alignment passes c.700 m to the south of Category B Listed Noranside House (LB 17705), intervening woodland and shelterbelts would likely screen views of the alternative alignment from this Listed Building, and it is not considered to be a significant constraint to development of an OHL in this alternative alignment.</p> <p>The other Listed Buildings and Conservation Area within the landscape immediately surrounding the alternative alignment have generally localised settings where long views out to the surrounding landscape do not form key aspects of their settings and therefore the alignment is unlikely to compromise their setting.</p>	G

Topic and Criteria	Option	Constraints	Evaluation of Constraints	RAG Score
	Alternative Alignment 4e	<p>Cultural Heritage Assets</p> <p>Within 1 km of the edge of the alternative alignment LoD there are:</p> <ul style="list-style-type: none"> • Five Category B Listed Buildings of regional heritage value and medium sensitivity. • 14 Category C Listed Buildings of local heritage value and low sensitivity. • One Conservation Area, Tannadice (CA 539) of regional heritage value and of medium sensitivity. <p>The Listed Buildings comprise the same as Alternative Alignment 4a. Tannadice Conservation Area (CA 539) (NGR NO 475 581) lies around 650 m southwest of the alignment LoD. (See description of Conservation Area in row above (Alternative Alignment 4a)).</p>	<p>The alternative alignment has been RAG rated as Green for cultural heritage assets as it would be unlikely to disturb, or compromise the settings of, any cultural heritage assets.</p> <p>The Listed Buildings and Conservation Area within the landscape immediately surrounding the alternative alignment have generally localised settings where long views out to the surrounding landscape do not form key aspects of their settings and therefore the alignment is unlikely to compromise their setting.</p>	G
People Proximity to Dwellings	Alternative Alignment 4a (Potential)	<p>There are 11 locations along the alignment where either individual or groups of residential properties are within approximately 200 m of the edge of the LoD. These are, from west to east:</p> <ul style="list-style-type: none"> • 1. Knowehead Cottage located approximately 100 m to the west of the LoD. • 2. Boggie Farm located approximately 120 m to the south of the LoD. • 3. Balmadity Farm located approximately 80 m to the north of the LoD. • 4. Dunswood located approximately 115 m to the north of the LoD. • 5. Kirkside of Lochty located approximately 90 m to the north of the LoD. • 6. Muir of Montboy located approximately 170 m to the south of the LoD. • 7. A group of properties at Lochty Council Houses located approximately 80 m to the south of the LoD. • 8. One property at Blackhall called Little Blackhall, located approximately 190 m to the north of the LoD. • 9. Gungeon Cottage located approximately 95 m to the north of the LoD. 	<p>This alignment has been RAG rated as Amber. The majority of the LoD provides some flexibility for an OHL alignment to be located at a distance of more than four times the nominal tower height (approx. 240 m) from most residential properties. However, it is considered that the presence of other constraints in the alignment LoD may make this difficult to achieve in some locations.</p> <p>Achieving a distance of more than four times the nominal tower height from dwellings would be challenging to achieve between the properties at Kirkside of Lochty and Lochty Council Houses which form a pinch point in the central section of the LoD. These properties constrain the LoD as their respective locations either side of the alignment and their distance from the LoD do not offer the width to achieve distances of more than four times the nominal tower height. Distances between two to four times the nominal tower height however can be achieved, and as such the alignment would be developed to maximise the separation as far as practicable.</p> <p>Properties at Gungeon Cottage and Mill of Cruick, located in the eastern section of the alignment also form a pinch point along the LoD. Their respective locations either side of the alignment and their distance from the LoD are likely to prevent distances of more than four times the nominal tower height being achieved. This pinch point however is less constraining than the pinch point at Kirkside of Lochty and Lochty Council Houses, and offers more space and flexibility to maximise the separation as far as practicable within distances between two to four times the nominal tower height.</p>	A

Topic and Criteria	Option	Constraints	Evaluation of Constraints	RAG Score
		<ul style="list-style-type: none"> 10. Mill of Cruick located approximately 140 m to the south of the LoD. 11. Nether Belliehill located approximately 70 m to the north of the LoD. 	Elsewhere, the LoD offers opportunity for the OHL to be located at a distance of more than four times the nominal tower height from the remaining dwellings that are located within 200 m of the LoD, subject to other constraints.	
	Alternative Alignment 4b	<p>There are ten locations along the alignment where either individual or groups of residential properties are within approximately 200 m of the edge of the LoD. These are, from west to east:</p> <p>1 – 3 and 8-11 as per Alignment Alternative 4a, as well as:</p> <ul style="list-style-type: none"> 12. Three dwellings at Montboy located approximately 65 m to the north of the LoD. 13. Two properties at Muir Cottages located approximately 180 m to the south of the LoD. 14. One property at Blackhall called Little Blackhall, located approximately 190 m to the north of the LoD. 	<p>This alignment has been RAG rated as Amber. The majority of the LoD provides some flexibility for an OHL alignment to be located at a distance of more than four times the nominal tower height (approx. 240 m) from most residential properties. However, it is considered that the presence of other constraints in the alignment LoD may make this difficult to achieve in some locations.</p> <p>The three properties at Montboy form a constraint as the alignment encloses this small group of properties to the west and south. As a result, an OHL in this alignment would be located at close proximity to these properties in two directions, enclosing the properties with large scale infrastructure to both the west and south.</p> <p>The properties at Montboy also constrain the alignment as they form a pinch point together with the properties to the south at Muir Cottages. Although these properties are located outside of the LoD, their positions and proximity either side of the LoD are likely to reduce the flexibility to achieve distances of more than four times the nominal tower height from the OHL. Distances between two to four times the nominal tower height however can be achieved, and as such the alignment would be developed to maximise the separation as far as practicable.</p> <p>Properties at Gungeon Cottage and Mill of Cruick also form a pinch point along the LoD. Their respective locations either side of the alignment and their distance from the LoD are likely to prevent distances of more than four times the nominal tower height being achieved. This pinch point however still offers space and flexibility to maximise the separation as far as practicable within distances between two to four times the nominal tower height.</p> <p>Elsewhere, the LoD offers opportunity for the OHL to be located at a distance of more than four times the nominal tower height, as per Alternative Alignment 4a.</p>	
	Alternative Alignment 4c	There are ten locations along the alignment where either individual or groups of residential properties are within approximately 200 m of the edge of the LoD. These are, from west to east:	This alignment has been RAG rated as Amber. The majority of the LoD provides some flexibility for an OHL alignment to be located at a distance of more than four times the nominal tower height (approx. 240 m) from most residential properties. However, it is considered that the presence of other	A

Topic and Criteria	Option	Constraints	Evaluation of Constraints	RAG Score
		<p>9-14 from Alternative Alignments 4a and 4b, as well as:</p> <ul style="list-style-type: none"> • 15. Two properties at Broom Farm Cottages located approximately 85 m to the south of the LoD. • 16. Two properties at Easter Balgillo located approximately 180 m to the south of the LoD. • 17. Hilton of Fern Cottage located approximately 85 m to the east of the of the LoD. • 18. Two properties at Hillhead of Careston located approximately 180 m to the east of the LoD. 	<p>constraints in the alignment LoD may make this difficult to achieve in some locations.</p> <p>The three properties at Montboy form a constraint as the alignment encloses this small group of properties to the west and south. As a result, an OHL in this alignment would be located at close proximity to these properties in two directions, enclosing the properties with large scale infrastructure to both the west and south.</p> <p>The properties at Montboy also constrain the alignment as they form a pinch point together with the properties to the south at Muir Cottages. Although these properties are located outside of the LoD, their positions and proximity either side of the LoD are likely to reduce the flexibility to achieve distances of more than four times the nominal tower height from the OHL. Distances between two to four times the nominal tower height however can be achieved, and as such the alignment would be developed to maximise the separation as far as practicable.</p> <p>Properties at Gungeon Cottage and Mill of Cruick form the same constraint as mentioned in Alternative Alignment 4a.</p> <p>Elsewhere, the LoD offers opportunity for the OHL to be located at a distance of more than four times the nominal tower height, as per Alternative Alignment 4a.</p>	
	Alternative Alignment 4d	<p>There are ten locations along the alignment where either individual or groups of residential properties are within approximately 200 m of the edge of the LoD. These are, from west to east:</p> <p>1 - 4, as per Alternative Alignment 4a,</p> <p>12-13 as per Alternative Alignment 4b as well as:</p> <ul style="list-style-type: none"> • 19. Two properties at Findowrie located approximately 90 m to the north of the LoD. • 20. A group of properties at West Muir located between 170 m and 200 m to the southeast of the LoD. • 21. Parkside Little Brechin Fam located approximately 140 m to the southeast of the LoD. • 22. Langhaugh Farm and Langhaugh Cottage which are located approximately 173 m and 75 m respectively to the northwest of the LoD. 	<p>This alignment has been RAG rated as Amber. The majority of the LoD provides some flexibility for an OHL alignment to be located at a distance of more than four times the nominal tower height (approx. 240 m) from most residential properties. However, it is considered that the presence of other constraints in the alignment LoD may make this difficult to achieve in some locations.</p> <p>The three properties at Montboy that form a pinch point together with the properties to the south at Muir Cottages result in the same constraint as mentioned in Alternative Alignment 4b.</p> <p>Properties at Parkside Little Brechin Farm and Langhaugh Farm and Langhaugh Cottage are also a key constraint as the alignment passes through a gap between the properties. As such, and due to their proximity to the LoD, it is likely that the OHL would need to be aligned within a distance of two to four times the nominal tower height from these properties. However, the alignment would be developed to maximise the separation as far as practicable.</p>	A

Topic and Criteria	Option	Constraints	Evaluation of Constraints	RAG Score
			Elsewhere, the LoD offers opportunity for the OHL to be located at a distance of more than four times the nominal tower height, as per Alternative Alignment 4a.	
	Alternative Alignment 4e	<p>There are ten locations along the alignment where either individual or groups of residential properties are within approximately 200 m of the edge of the LoD. These are, from west to east:</p> <p>1- 4 as per Alternative Alignment 4a. 12-13 as per Alternative Alignment 4b. 19- 22 as per Alternative Alignment 4d.</p>	<p>This alignment has been RAG rated as Amber. The majority of the LoD provides some flexibility for an OHL alignment to be located at a distance of more than four times the nominal tower height (approx. 240 m) from most residential properties. However, it is considered that the presence of other constraints in the alignment LoD may make this difficult to achieve in some locations.</p> <p>The three properties at Montboy that form a pinch point together with the properties to the south at Muir Cottages result in the same constraint as mentioned in Alternative Alignment 4b.</p> <p>Properties at Parkside Little Brechin Fam and Langhaugh Farm and Langhaugh Cottages form the same constraint as mentioned in Alternative Alignment 4c.</p> <p>Elsewhere, the LoD offers opportunity for the OHL to be located at a distance of more than four times the nominal tower height, as per Alternative Alignment 4a.</p>	A
Landscape and Visual Designations Landscape Character Visual	Alternative Alignment 4a (Potential) + Alternative Alignment 4b + Alternative Alignment 4d	<p>Landscape Designations</p> <p>The LoDs for Alternative Alignments 4a, 4b and 4d are located approximately 750 m to the southeast of the proposed Angus Glens LLA at their closest point. The LoDs for Alternative Alignments 4b and 4d are also located approximately 800 m to the north of the River South Esk LLA at their closest point.</p>	These alignments have been RAG rated as Green as the alignments do not cross any landscape designations and are located at distances from the Angus Glens LLA and the River South Esk LLA whereby effects on the settings of these designations are considered not to be significant and not material.	G
	Alternative Alignment 4c + Alternative Alignment 4e	<p>Landscape Designations</p> <p>A length of approximately 1 km of Alternative Alignments 4c and 4e are located within the northern fringes of Angus Council's proposed River South Esk Local Landscape Area (LLA), where the LLA meets the Noran Water. The special qualities of the proposed LLA most relevant to this part of the designation where the alignment intersects include:</p> <ul style="list-style-type: none"> • <i>"Highly scenic."</i> • <i>Rich in Nature."</i> 	These alignments have been RAG rated as Amber as the River South Esk LLA constrains these LoDs. An OHL located within this part of the LLA would alter the "highly scenic" views available across Careston as well as perceptually alter the setting of the riparian networks within the LLA, most notably the Noran Water which contributes to the "rich nature" of the LLA.	A

Topic and Criteria	Option	Constraints	Evaluation of Constraints	RAG Score
	Alternative Alignment 4a (Potential)	<p>Landscape Character</p> <p>Alternative Alignments 4a-e are located within the Broad Valley Lowlands – Tayside LCT. Since all alignments are located within a wider landscape defined by the same characteristics, a comparison of landscape character constraints is focused on localised features at the alignment scale.</p> <p>The majority of Alternative Alignment 4a passes through a landscape that is generally simple and low lying, with minimal notable undulations or areas of elevation.</p> <p>The alignment crosses the Noran Water, to the west of Wellford, which is lined by broadleaved woodland and is a characteristic feature of the landscape. Further northeast, the alignment also crosses the northern corner of a block of LEPO woodland at Boggie Wood, which contains some semi-natural woodland. The alignment crosses two further areas of woodland at Duns Wood and Lochty Wood which are largely LEPO and contain characteristic native mature broadleaved woodland. At the eastern end of the alignment, it crosses LEPO and semi-natural woodland at Belliehill Wood and Little Brechin Wood. Each of these areas of woodland, particularly native and mature broadleaved woodland, contribute to local landscape character, despite the recognition of limited woodland and woodland loss within the key characteristics of the Broad Valley Lowlands – Tayside LCT.</p>	<p>This alignment has been RAG rated as Amber as the alignment crosses six areas of native and mature broadleaved woodland which contribute to the local landscape character within Broad Valley Lowlands – Tayside.</p> <p>Where the alignment crosses woodland along the Noran Water and at Boggie Wood, Duns Wood, Lochty Wood, Belliehill Wood and Little Brechin Wood, tree felling would be required to accommodate an OHL, and therefore would compromise the role these woodlands play in contributing to local landscape character. Despite a general lack of woodland in the LCT, areas of mature woodland are noted within the key characteristics of the LCT.</p> <p>At the Noran Water, Duns Wood and Lochty Wood however, woodland loss is unavoidable and therefore parts of these characterful semi-natural woodlands would be lost, compromising landscape character. Where possible, felling will be minimised in these areas.</p> <p>At Boggie Wood, the LoD offers flexibility to avoid woodland loss, and at Belliehill Wood and Little Brechin Wood the LoD offers opportunity to reduce the area of woodland loss that would be required.</p>	A
	Alternative Alignment 4b	<p>Landscape Character</p> <p>The majority of Alternative Alignment 4b passes through a landscape that is generally simple and low lying, with minimal notable undulations or areas of elevation.</p> <p>The alignment crosses the Noran Water, to the west of Wellford, which is lined by broadleaved woodland and is a characteristic feature of the landscape. Further northeast, the alignment also crosses the northern corner of a block of LEPO woodland at Boggie Wood, which contains some semi-natural woodland. The alignment crosses a further area of woodland at Duns Wood which is largely LEPO and contains characteristic native mature broadleaved woodland. At the eastern end of the alignment, it crosses LEPO and semi-natural woodland at Belliehill Wood and Little Brechin Wood. Each of these areas of woodland, particularly native and mature broadleaved woodland, contribute to local landscape character, despite the recognition of limited woodland</p>	<p>This alignment has been RAG rated as Amber as the alignment crosses five areas of native and mature broadleaved woodland which contribute to the local landscape character within Broad Valley Lowlands – Tayside.</p> <p>Where the alignment crosses woodland along the Noran Water and at Boggie Wood, Duns Wood, Belliehill Wood and Little Brechin Wood, tree felling would be required to accommodate an OHL, and therefore would compromise the role these woodlands play in contributing to local landscape character. Despite a general lack of woodland in the LCT, areas of mature woodland are noted within the key characteristics of the LCT.</p> <p>At the Noran Water and Duns Wood, woodland loss is unavoidable and therefore parts of these characterful semi-natural woodlands would be lost, compromising landscape character.</p> <p>At Boggie Wood, the LoD offers flexibility to avoid woodland loss, and at Belliehill Wood and Little Brechin Wood the LoD offers opportunity to reduce the area of woodland loss that would be required.</p>	A

Topic and Criteria	Option	Constraints	Evaluation of Constraints	RAG Score
		<p>and woodland loss within the key characteristics of the Broad Valley Lowlands – Tayside LCT1.</p> <p>Between Duns Wood and south of Blackhall the alignment is constrained more generally in terms of its relationship to the grain of the landscape and landscape fit.</p>	<p>Between Duns Wood and south of Blackhall, the alignment takes an angular path as it crosses the landscape at three different angles and directions, wrapping around Montboy. As a result, this section generally runs against the grain of the landscape, cutting across the natural flow of the landform. The angular nature of this section would require a greater number of angle towers in a short distance, which would form highly prominent features within the landscape.</p>	
	<p>Alternative Alignment 4c</p>	<p>Landscape Character</p> <p>To the west of Careston, the alignment crosses an area of elevated landform which forms a small scale yet prominent ridgeline at Hilton of Fern.</p> <p>This alignment crosses two narrow belts of LEPO woodland as well as a short section of the Noran Water which is lined by broadleaved and mixed woodland and is a characteristic feature of the landscape. Further northeast, the alignment crosses North Wood which comprises fragmented blocks of coniferous forestry and broadleaved woodland. At the eastern end of the alignment, it crosses LEPO and semi-natural woodland at Belliehill Wood and Little Brechin Wood. Each of these areas of woodland, particularly native and mature broadleaved woodland, contribute to local landscape character, despite the recognition of limited woodland and woodland loss within the key characteristics of the Broad Valley Lowlands – Tayside LCT1.</p>	<p>This alignment has been RAG rated as Red as an OHL in this alignment would cross a locally prominent ridgeline at Hilton of Fern and would therefore compromise landscape character.</p> <p>The ridgeline is a prominent landscape feature as it forms a notably elevated area within a landscape that is generally lower lying. As such, it forms the backdrop to the lower landscape to the north and south. Here the alignment runs against the grain of the landscape and its position across this ridgeline would increase the prominence of the OHL, as the infrastructure would sit higher in the landscape. The OHL may also appear out of scale with this relatively small scale ridgeline, resulting in the scale of this landform to be diminished by the OHL infrastructure. The LoD does not offer opportunity to avoid this constraint.</p> <p>Where the alignment crosses belts of woodland near and along the Noran Water and at North Wood, Belliehill Wood and Little Brechin Wood, tree felling would be required to accommodate an OHL, and therefore would compromise the role these woodlands play in contributing to local landscape character. Despite a general lack of woodland in the LCT, areas of mature woodland are noted within the key characteristics of the LCT. At the Noran Water, and narrow belts of woodland to the south of the river, woodland loss is unavoidable and therefore parts of these characterful woodlands would be lost, compromising landscape character. At North Wood, Belliehill Wood and Little Brechin Wood, the LoD offers some flexibility to reduce the area of woodland loss that would be required.</p> <p>Between North Wood and south of Blackhall, the alignment takes an angular path as it crosses the landscape at three different angles and directions, wrapping around Montboy. As a result, this section generally runs against the grain of the landscape, cutting across the natural flow of the landform. The angular nature of this section would require a greater number of angle towers in a short distance, which would form highly prominent features within the landscape.</p>	<p>R</p>

Topic and Criteria	Option	Constraints	Evaluation of Constraints	RAG Score
	Alternative Alignment 4d	<p>Landscape Character</p> <p>The majority of the alignment passes through a landscape that is generally simple and low lying, with minimal notable undulations or areas of elevation.</p> <p>The alignment crosses the Noran Water, to the west of Wellford, which is lined by broadleaved woodland and is a characteristic feature of the landscape. Further northeast, the northern corner of a block of LEPO woodland at Boggie Wood, which contains some semi-natural woodland. The alignment crosses a further area of woodland at Duns Wood which is largely LEPO and contains characteristic native mature broadleaved woodland. At the eastern end of the alignment, it crosses LEPO and a small area of semi-natural woodland at Little Brechin Wood. Each of these areas of woodland, particularly native and mature broadleaved woodland, contribute to local landscape character, despite the recognition of limited woodland and woodland loss within the key characteristics of the Broad Valley Lowlands – Tayside LCT1.</p>	<p>This alignment has been RAG rated as Amber as the alignment crosses four areas of native and mature broadleaved woodland which contribute to the local landscape character within Broad Valley Lowlands – Tayside.</p> <p>Where the alignment crosses woodland along the Noran Water and at Boggie Wood, Duns Wood and Little Brechin Wood, tree felling would be required to accommodate an OHL, and therefore would compromise the role these woodlands play in contributing to local landscape character. Despite a general lack of woodland in the LCT, areas of mature woodland are noted within the key characteristics of the LCT.</p> <p>At the Noran Water and Duns Wood woodland loss is unavoidable and therefore parts of these characterful semi-natural woodlands would be lost, compromising landscape character</p> <p>At Boggie Wood, the LoD offers flexibility to avoid woodland loss, and at Little Brechin Wood the LoD offers opportunity to reduce the area of woodland loss that would be required.</p>	A
	Alternative Alignment 4e	<p>Landscape Character</p> <p>To the west of Careston, the alignment crosses an area of elevated landform which forms a small scale yet prominent ridgeline at Hilton of Fern.</p> <p>This alignment crosses two narrow belts of LEPO woodland as well as a short section of the Noran Water which is lined by broadleaved and mixed woodland and is a characteristic feature of the landscape. Further northeast, the alignment crosses North Wood which comprises fragmented blocks of coniferous forestry and broadleaved woodland. At the eastern end of the alignment, it crosses LEPO and a small area of semi-natural woodland at Little Brechin Wood. Each of these areas of woodland, particularly native and mature broadleaved woodland, contribute to local landscape character, despite the recognition of limited woodland and woodland loss within the key characteristics of the Broad Valley Lowlands – Tayside LCT1.</p>	<p>This alignment has been RAG rated as Red as an OHL in this alignment would cross a locally prominent ridgeline at Hilton of Fern and would therefore compromise landscape character.</p> <p>The ridgeline is a prominent landscape feature as it forms a notably elevated area within a landscape that is generally lower lying. As such, it forms the backdrop to the lower landscape to the north and south. Here the alignment runs against the grain of the landscape and its position across this ridgeline would increase the prominence of the OHL, as the infrastructure would sit higher in the landscape. The OHL may also appear out of scale with this relatively small scale ridgeline, resulting in the scale of this landform to be diminished by the OHL infrastructure. The LoD does not offer opportunity to avoid this constraint.</p> <p>Where the alignment crosses belts of woodland near and along the Noran Water and at North Wood and Little Brechin Wood, tree felling would be required to accommodate an OHL, and therefore would compromise the role these woodlands play in contributing to local landscape character. Despite a general lack of woodland in the LCT, areas of mature woodland are noted within the key characteristics of the LCT. At the Noran Water, and narrow belts of woodland to the south of the river, woodland loss is unavoidable and therefore parts of these characterful woodlands would be lost, compromising landscape character. At North Wood and Little Brechin</p>	R

Topic and Criteria	Option	Constraints	Evaluation of Constraints	RAG Score
			Wood, the LoD offers some flexibility to reduce the area of woodland loss that would be required.	
	Alternative Alignment 4a (Potential)	Visual Visual receptors at scattered residential properties and people travelling along the local road network and recreational routes form a constraint. Visual receptors that particularly form a constraint include: <ul style="list-style-type: none"> • 1. Residents at Balmadity Farm who are likely to have open views southeast towards the alignment at a distance of approximately 80 m from the LoD. • 2. Residents at Dunswood who have open views to the south towards the alignment, at distances of approximately 115 m from the LoD, form a constraint. • 3. Residents at Kirkside of Lochty form a constraint as the property would offer open views to the south towards the alignment, at distances of approximately 90 m from the LoD, following tree felling at Lochty Wood that would be required to accommodate the OHL in this location. • 4. Residents at the row of properties at Lochty Council Houses also particularly constrain the alignment as these properties offer open and slightly elevated views north towards the alignment, at distances of approximately 80 m from the LoD. • 5. Further east along the alignment, residents at Gudgeon Cottage and Mill of Cruick also constrain the alignment as these properties offer open views towards the alignment at distances of approximately 95 m and 140 m from the LoD respectively. • 6. Residents at properties at Blackhall and Nether Belliehill are also likely to constrain the alignment as they offer some filtered views towards the alignment at distances of approximately 190 m and 70 m from the LoD respectively. 	This alignment has been RAG rated as Amber as an OHL in this alignment may compromise visual amenity experienced by a number of people at residential properties. Properties at Kirkside of Lochty and Lochty Council Houses also constrain the alignment due to their close proximity to the LoD and their respective locations on either side near Lochty Wood. These properties would have very close proximity and open views of the OHL infrastructure which would form large scale and prominent features in these views. The LoD provides limited flexibility to increase the distance between the OHL and these properties due to the pinch point that is formed by these properties. Visual receptors at the residential properties at Balmadity Farm, Dunswood, Gudgeon Cottage and Mill of Cruick constrain the alignment due to their distance of <200 m from the LoD and the availability of open views towards the alignment from these properties. Visual receptors at these properties would have close proximity and open views with the OHL forming a very prominent feature in views. Residents at Blackhall and Nether Belliehill also constrain the alignment as they would experience close proximity filtered views of the OHL where, despite being partially screened, the OHL would still be seen as a large scale feature that would alter some views from these properties. The level of constraint could be reduced from most of these properties as the LoD does offer opportunity to increase the distance in which the OHL would be seen from the properties. This however is likely to be challenging where the alignment passes through the pinch point formed by Gungeon Cottage and Mill of Cruick where their respective locations either side of the alignment limit the available width in which to increase the distance the OHL would be seen in views.	A
	Alternative Alignment 4b	Visual Visual receptors at scattered residential properties and people travelling along the local road network and recreational routes form a constraint. Visual receptors that particularly form a constraint include: 1, 5 and 6 as per Alternative Alignment 4a, as well as:	This alignment has been RAG rated as Amber as an OHL in this alignment may compromise visual amenity experienced by a number of people at residential properties. Visual receptors at the residential properties at Balmadity Farm, Montboy, Muir Cottages, Gudgeon Cottage and Mill of Cruick constrain the alignment due to their distance of <200 m from the LoD and the availability of open views towards the alignment from these properties. Visual receptors at	A

Topic and Criteria	Option	Constraints	Evaluation of Constraints	RAG Score
		<ul style="list-style-type: none"> 7. Residents at three dwellings at Montboy who have open views to the south towards the alignment at distances of approximately 65 m from the LoD form a constraint. 8. Residents at Muir Cottages also form a constraint due to the availability of some open views to the north towards the alignment at distances of approximately 180 m from the LoD. 	<p>these properties would have close proximity and open views with the OHL forming a very prominent feature in views. This is particularly constraining at the three properties at Montboy where the alignment would wrap around these properties, enclosing them to the west and south. An OHL in this alignment would therefore result in large scale infrastructure being visible in close proximity in two directions from these properties, as well as being visible in slightly longer distance views in a third direction to the east. Residents at Blackhall and Nether Belliehill constrain the alignment as they would experience close proximity filtered views of the OHL where, despite being partially screened, the OHL would still be seen as a large scale feature that would alter some views from these properties.</p> <p>The level of constraint could be reduced from most of these properties as the LoD does offer opportunity to increase the distance in which the OHL would be seen from the properties. This however is likely to be challenging where the alignment passes through pinch points, including between Montboy and Muir Cottages and a second pinch point formed by Gungeon Cottage and Mill of Cruick. At these pinch points, the respective locations of these properties either side of the alignment limit the available width in which to increase the distance the OHL would be seen in views.</p>	
	<p>Alternative Alignment 4c</p>	<p>Visual</p> <p>Visual receptors at scattered residential properties and people travelling along the local road network and recreational routes form a constraint. Visual receptors that particularly form a constraint include:</p> <p>5-6 as per Alternative Alignment 4a,</p> <p>7 as per Alternative Alignment 4b, as well as:</p> <ul style="list-style-type: none"> 9. Residents at Broom Farm Cottages who have open views northwest towards the alignment at distances of approximately 85 m from the LoD. 10. Residents at two properties at Easter Balgillo form a constraint as these properties also offer open views northwest towards the alignment at distances of approximately 180 m from the LoD. 11. Further northeast, residents at Hilton of Fern Cottage and Hillhead of Careston form a constraint as these properties offer open views to the west and northwest towards the alignment, at distances of approximately 85 m and 180 m from the LoD respectively. 	<p>This alignment has been RAG rated as Red as an OHL in this alignment would compromise visual amenity experienced by visual receptors in the wider landscape context where the alignment crosses an area of elevated landform, as well as views experienced by a number of people at residential properties within close proximity.</p> <p>Where the alignment passes over the ridgeline at Hilton of Fern, the visual prominence of the OHL and its intervisibility with the surrounding area would be increased. The infrastructure would sit higher within the landscape and would be seen as prominent features across the skyline when viewed by people both in the immediate context of the alignment, namely residents at nearby properties, as well as by people within the wider context. People that will experience the visual impact of an OHL in the wider context include road users travelling along the A90 to the south and properties along the A90, where the ridgeline forms a prominent backdrop in views to the north and north-east from the road. People at Finavon to the south-west will also experience views of the OHL crossing the ridgeline which forms a high point in views from this settlement.</p> <p>Visual receptors at the residential properties at Broom Farm Cottages, Easter Balgillo, Hilton of Fern Cottage, Hillhead of Careston, Montboy, Muir</p>	R

Topic and Criteria	Option	Constraints	Evaluation of Constraints	RAG Score
		<ul style="list-style-type: none"> 12. To the west of Careston, the alignment crosses an area of elevated landform which forms a small scale ridgeline at Hilton of Fern. Although this ridge does not directly form a visual constraint, it would affect the overall visibility of the OHL. <p>People within the wider context including the those travelling along the A90 and those at properties along this road form a constraint due to available views towards elevated areas of landform where the alignment crosses, as well as people in and around the settlement of Finavon to the south-west.</p>	<p>Cottages, Gudgeon Cottage and Mill of Cruick constrain the alignment due to their distance of <200 m from the LoD and the availability of open views towards the alignment from these properties. Visual receptors at these properties would have close proximity and open views with the OHL forming a very prominent feature in views. This is particularly constraining at the three properties at Montboy where the alignment wraps around these properties, enclosing them to the west and south. An OHL in this alignment would therefore result in large scale infrastructure being visible in close proximity in two directions from these properties, as well as being visible in slightly longer distance views in a third direction to the east.</p> <p>Residents at Blackhall and Nether Belliehill constrain the alignment as they would experience close proximity filtered views of the OHL where, despite being partially screened, the OHL would still be seen as a large scale feature that would alter some views from these properties.</p> <p>The level of constraint could be reduced from most of these properties as the LoD does offer opportunity to increase the distance in which the OHL would be seen from the properties. This however is likely to be challenging where the alignment passes through pinch points, including between Montboy and Muir Cottages and a second pinch point formed by Gungeon Cottage and Mill of Cruick. At these pinch points, the respective locations of these properties either side of the alignment limit the available width in which to increase the distance the OHL would be seen in views.</p>	
	<p>Alternative Alignment 4d</p>	<p>Visual</p> <p>Visual receptors at scattered residential properties and people travelling along the local road network and recreational routes form a constraint. Visual receptors that particularly form a constraint include:</p> <p>1, 5 and 6 as per Alternative Alignment 4a, 7-8 as per Alternative Alignment 4b, as well as:</p> <ul style="list-style-type: none"> 13. Further east, residents at the two properties at Findowrie also form a constraint as the properties offer open views southeast towards the alignment at distances of approximately 90 m from the LoD. 14. To the northeast, residents at West Muir form a constraint as some of the properties in this group offer open views to the north at distances of approximately 170 m from the LoD, as well as residents at Langhaugh Cottage who have open views southeast 	<p>This alignment has been RAG rated as Amber as an OHL in this alignment may compromise visual amenity experienced by a number of people at residential properties.</p> <p>Visual receptors at the residential properties at Balmadity Farm, Montboy, Muir Cottages, Findowrie, West Muir and Langhaugh Cottage constrain the alignment due to their distance of <200 m from the LoD and the availability of open views towards the alignment from these properties. Visual receptors at these properties would have close proximity and open views with the OHL forming a very prominent feature in views.</p> <p>The level of constraint could be reduced from most of these properties as the LoD does offer opportunity to increase the distance in which the OHL would be seen from the properties. This however is likely to be challenging where the alignment passes through pinch points, including between Montboy and Muir Cottages and a second pinch point formed by Parkside Little Brechin Farm, Langhaugh Farm and Langhaugh Cottage at the eastern end of the alignment. At these pinch points, the respective locations of</p>	A

Topic and Criteria	Option	Constraints	Evaluation of Constraints	RAG Score
		towards the alignment at distances of approximately 75 m from the LoD.	these properties either side of the alignment limit the available width in which to increase the distance the OHL would be seen in views.	
	Alternative Alignment 4e	<p>Visual</p> <p>Visual receptors at scattered residential properties and people travelling along the local road network and recreational routes form a constraint. Visual receptors that particularly form a constraint include:</p> <p>7-8 as per Alternative Alignment 4b, 9-12 as per Alternative Alignment 4c, 13-14 as per Alternative Alignment 4d</p> <p>People within the wider context including the those travelling along the A90 and those at properties along this road form a constraint due to available views towards elevated areas of landform where the alignment crosses, as well as people in and around the settlement of Finavon to the southwest.</p>	<p>This alignment has been RAG rated as Red as an OHL in this alignment would compromise visual amenity experienced by visual receptors in the wider landscape context where the alignment crosses an area of elevated landform, as well as views experienced by a number of people at residential properties within close proximity.</p> <p>Where the alignment passes over the ridgeline at Hilton of Fern, the visual prominence of the OHL and its intervisibility with the surrounding area would be increased. The infrastructure would sit higher within the landscape and would be seen as prominent features across the skyline when viewed by people both in the immediate context of the alignment, namely residents at nearby properties, as well as by people within the wider context. People that will experience the visual impact of an OHL in the wider context include road users travelling along the A90 to the south and properties along the A90, where the ridgeline forms a prominent backdrop in views to the north and north-east from the road. People at Finavon to the south-west will also experience views of the OHL crossing the ridgeline which forms a high point in views from this settlement.</p> <p>Visual receptors at the residential properties at Broom Farm Cottages, Easter Balgillo, Hilton of Fern Cottage, Hillhead of Careston, Montboy, Muir Cottages, Findowrie, West Muir and Langhaugh Cottage constrain the alignment due to their distance of <200 m from the LoD and the availability of open views towards the alignment from these properties. Visual receptors at these properties would have close proximity and open views with the OHL forming a very prominent feature in views.</p> <p>The level of constraint could be reduced from most of these properties as the LoD does offer opportunity to increase the distance in which the OHL would be seen from the properties. This however is likely to be challenging where the alignment passes through pinch points, including between Montboy and Muir Cottages and a second pinch point formed by Parkside Little Brechin Farm, Langhaugh Farm and Langhaugh Cottage at the eastern end of the alignment. At these pinch points, the respective locations of these properties either side of the alignment limit the available width in which to increase the distance the OHL would be seen in views.</p>	R
Land Use	Alternative Alignment 4a	Agriculture	Agriculture	A

Topic and Criteria	Option	Constraints	Evaluation of Constraints	RAG Score
Agriculture Forestry Recreation	(Potential) + Alternative Alignment 4b + Alternative Alignment 4c + Alternative Alignment 4d + Alternative Alignment 4e	The majority of the lengths of all alternative alignments intersect with prime agricultural land (Class 2 – land capable of producing a wide range of crops, and Class 3.1 – land capable of producing consistently high yields of a narrow range of crops and/or moderate yields of a wider range), and all alignments intersect with small areas of land comprising lower land classifications.	The alternative alignments have all been assigned a RAG rating of Amber as they intersect with extensive areas of best and most versatile land (Class 2 and 3.1). Each alternative has a similar potential to interact with, or compromise, the agricultural use or viability of the land as an agricultural resource. It is likely that each alternative would require towers to be sited within prime agricultural land. Considering the relatively limited footprint of OHL tower foundations, the permanent loss of agricultural land for an OHL development is not expected to compromise the agricultural use or viability of the land as an agricultural resource.	
	Alternative Alignment 4a (Potential)	Forestry The LoD of the alternative alignment intersects with five areas of woodland, comprising commercial forestry: <ul style="list-style-type: none"> • 1. The northwestern edge of an unnamed woodland area to the southeast of Fern at NGR NO490610 is intersected by the southern edge of the LoD, and which appears to be felled upon review of aerial imagery. • 2. The southern edge of an unnamed woodland area to the southeast of Fern at NGR NO494615 is intersected by the northern edge of the LoD, and which appears to be felled upon review of aerial imagery. • 3. Boggie Wood, located to the south of Cruick Water and located at NGR NO504619, is intersected by half of the width of the alignment LoD. The western half of this woodland areas appears to be felled upon review of aerial imagery. • 4. Duns Wood, which lies to the north of Careston. The northern section of this woodland area is intersected by the alignment at NGR NO523619. • 5. An unnamed woodland at the northern end of the alignment, to the south of Balrownie, is intersected by approximately half of the width of the LoD at NGR NO574632. This woodland is classed as ‘windblow’. 	Forestry This alignment has been RAG rated as Amber as it intersects with the edge of or passes close to commercial forestry where interaction with the forestry operations may compromise the commercial returns. The alignment is constrained to some extent by the presence of woodland areas with some commercial forestry activity likely to be present. At these points, tree clearance for an operational corridor within these woodlands may compromise commercial returns from these enterprises as some felling and/or re-design of planting may be required to accommodate the OHL. The alignment intersects with the edges of two unnamed woodland blocks to the southeast of Fern and Duns Wood to the north of Careston. There is some potential that the alignment may interact with the forestry operations as some changes to planting and management where woodland has already been felled may be required, and some felling to create a wind-firm edge may be required where coniferous woodland is present. Taking into account the potential to align the OHL to avoid much of these woodland areas, it is considered unlikely that the alignment would compromise the commercial returns of these woodland areas. Approximately two-thirds of the width of the alignment intersects with Boggie Wood. Due to the proximity of properties to the north of the LoD, the alignment would not be able to avoid intersecting the northern section of Boggie Wood. Felling would be required to create an operational corridor for the OHL and a wind firm edge where coniferous woodland is present. As such, there is the potential for the alternative alignment to compromise commercial returns of the forestry operations.	A

Topic and Criteria	Option	Constraints	Evaluation of Constraints	RAG Score
			<p>Approximately half of the width of the LoD intersects with the unnamed woodland to the south of Balrownie. There is the potential to align the OHL to avoid much of the woodland. However, despite the plantation being felled, the alignment would have some potential to interact with forestry operations and may compromise future commercial returns from the site due to required changes in planting and management.</p>	
	<p>Alternative Alignment 4b</p>	<p>Forestry</p> <p>The LoD of the alternative alignment intersects with six areas of woodland, comprising commercial forestry:</p> <p>1-5 as per Alternative Alignment 4a, as well as:</p> <ul style="list-style-type: none"> 6. A small section of the northeastern corner of unnamed block of woodland to the east of North Wood is intersected by the alignment LoD at NGR NO532615. This woodland area appears to be felled upon review of aerial imagery. 	<p>Forestry</p> <p>This alignment has been RAG rated as Amber as it intersects with the edge of or passes close to commercial forestry where interaction with the forestry operations may compromise the commercial returns.</p> <p>The alignment is constrained to some extent by the presence of woodland areas with some commercial forestry activity likely to be present. At these points, tree clearance for an operational corridor for the OHL within these woodlands may compromise commercial returns from these enterprises as some felling and/or re-design of planting may be required to accommodate the OHL.</p> <p>The two unnamed woodland blocks to the southeast of Fern, Duns Wood to the north of Careston, Boggie Wood and unnamed woodland to the south of Balrownie form the same constraint as mentioned in Alternative Alignment 4a.</p>	<p>A</p>
	<p>Alternative Alignment 4c</p>	<p>Forestry</p> <p>The LoD of the alternative alignment intersects with five areas of woodland, comprising commercial forestry:</p> <p>5 as per Alternative Alignment 4a, as well as:</p> <ul style="list-style-type: none"> 7. The southern section of an unnamed woodland area to the south of the Noran Water (NGR NO499594) is intersected by the alignment LoD, and is managed, at least in part, as commercial forestry. 8. The alignment intersects an unnamed woodland area to the northeast of Noranbank and located along the Noran Water (at NGR NO513597), and is managed at least in part, as commercial forestry. 9. An unnamed woodland to the north of North Wood (at NGR NO527615) is intersected by the alignment, and appears to be felled upon review of aerial imagery. 	<p>Forestry</p> <p>This alignment has been RAG rated as Amber as it intersects with the edge of or passes close to commercial forestry where interaction with the forestry operations may compromise the commercial returns.</p> <p>The alignment is constrained to some extent by the presence of woodland areas with some commercial forestry activity likely to be present. At these points, tree clearance for an operational corridor for the OHL within these woodlands may compromise commercial returns from these enterprises as some felling and/or re-design of planting may be required to accommodate the OHL.</p> <p>The alignment intersects with an area of woodland to the south of the Noran Water and to the east of North Wood. Some felling may occur, particularly where coniferous woodland is present to create wind firm edge. Taking into account the potential to align the OHL to avoid much of these woodland areas, it is considered unlikely that the alignment would compromise the commercial returns of the forestry operations.</p>	<p>A</p>

Topic and Criteria	Option	Constraints	Evaluation of Constraints	RAG Score
		<ul style="list-style-type: none"> 10. The northern section of an unnamed woodland to the east of North Wood (at NGR NO531614) is intersected by the alignment. 	<p>The alignment intersects through the centre of a woodland area to the northeast of Noranbank along the Noran Water. Felling would be required to create an operational corridor for the OHL to align the OHL through the woodland, and further felling may be required to create a wind firm edge where coniferous woodland is present. The alignment therefore would interact with forestry operations and may compromise the commercial returns of the forestry enterprise.</p> <p>The unnamed woodland block to the north of North Wood is located within the centre of the alignment LoD, and approximately half of the width of the LoD intersects with the unnamed woodland to the south of Balrownie. There is the potential to align the OHL to avoid much of these woodland areas. However, despite the plantation being felled, the alignment would have some potential to interact with forestry operations as the woodland areas cannot be avoided entirely and may compromise future commercial returns from the site due to required changes in planting and management.</p>	
	Alternative Alignment 4d	<p>Forestry</p> <p>The LoD of the alternative alignment intersects with six areas of woodland, comprising commercial forestry:</p> <p>1-5 as per Alternative Alignment 4a as well as:</p> <ul style="list-style-type: none"> 11. The alignment also intersects with an unnamed narrow strip of woodland to the west of Findowrie (NGR NO 54711 61194) comprising mixed mainly coniferous woodland does not appear to be commercial forestry and is therefore not considered in this section of the appraisal. 	<p>Forestry</p> <p>This alignment has been RAG rated as Amber as it intersects with the edge of or passes close to commercial forestry where interaction with the forestry operations may compromise the commercial returns.</p> <p>The alignment is constrained to some extent by the presence of woodland areas with some commercial forestry activity likely to be present. At these points, tree clearance for an operational corridor for the OHL within these woodlands may compromise commercial returns from these enterprises as some felling and/or re-design of planting may be required to accommodate the OHL.</p> <p>The two unnamed woodland blocks to the southeast of Fern, Duns Wood to the north of Careston, Boggie Wood and unnamed woodland to the south of Balrownie form the same constraint as mentioned in Alternative Alignment 4a.</p>	A
	Alternative Alignment 4e	<p>Forestry</p> <p>The LoD of the alternative alignment intersects with four areas of woodland, comprising commercial forestry:</p> <p>5 as per Alternative Alignment 4a.</p> <p>7- 10 as per Alternative Alignment 4c.</p> <p>11 as per Alternative Alignment 4d.</p>	<p>Forestry</p> <p>This alignment has been RAG rated as Amber as it intersects with the edge of or passes close to commercial forestry where interaction with the forestry operations may compromise the commercial returns.</p> <p>The alignment is constrained to some extent by the presence of woodland areas with some commercial forestry activity likely to be present. At these points, tree clearance for an operational corridor for the OHL within these woodlands may compromise commercial returns from these enterprises as</p>	A

Topic and Criteria	Option	Constraints	Evaluation of Constraints	RAG Score
			<p>some felling and/or re-design of planting may be required to accommodate the OHL.</p> <p>The woodland to the south of the Noran Water and to the east of North Wood, the area to the northeast of Noranbank along the Noran Water and unnamed woodland block to the north of North Wood form the same constraints as Alternative Alignment 4c.</p> <p>The unnamed woodland block to the north of North Wood is located within the centre of the alignment LoD, and approximately half of the width of the LoD intersects with the unnamed woodland to the south of Balrownie. There is the potential to align the OHL to avoid much of these woodland areas. However, despite the plantation being felled, the alignment would have some potential to interact with forestry operations as the woodland areas cannot be avoided entirely and may compromise future commercial returns from the site due to required changes in planting and management.</p>	
	Alternative Alignment 4a (Potential) + Alternative Alignment 4b + Alternative Alignment 4d	Recreation – Paths and Trails No alternative alignment intersects with any core path, NCN route or Scottish Great Trail.	Recreation – Paths and Trails The alternative alignments have been assigned a RAG rating of Green as they avoid interaction with public footpaths, NCN routes and Scottish Great Trails.	G
	Alternative Alignment 4c + Alternative Alignment 4e	Recreation – Paths and Trails Both alternative alignments intersect with one core path located to the north of Tannadice (Broom Farm, Tannadice).	Recreation – Paths and Trails The alternative alignments have both been assigned a RAG rating of Green as although they interact with one core path, it is not anticipated that the recreational use will be compromised. Whilst there is potential for some users to experience amenity effects (including visually) in the vicinity of this crossing, it is not considered that the recreational use of the core path would be compromised and it could be spanned.	G
	Alternative Alignment 4a (Potential) + Alternative Alignment 4b + Alternative Alignment 4c + Alternative	Recreation – Fishing No alternative alignments cross any known fishing beats. Interaction between the alignment and recreational use of the land has been assessed to be similar for each of the alternative alignments, and this criterion has therefore been scoped out of the appraisal.		

Topic and Criteria	Option	Constraints	Evaluation of Constraints	RAG Score
	Alignment 4d + Alternative Alignment 4e			
Planning Proposals	Alternative Alignment 4a (Potential) + Alternative Alignment 4b + Alternative Alignment 4c + Alternative Alignment 4d + Alternative Alignment 4e	Planning All alternative alignments avoid interaction with any consented or proposed planning applications. Interaction between the alignment and planning proposals has been assessed to be similar for each of the alternative alignments and therefore this criterion has been scoped out of the appraisal.		

APPENDIX F: APPRAISAL OF ALTERNATIVE ALIGNMENTS AT LOCATION 5: DURRIS

This appendix presents the baseline constraints and the findings of the appraisal of key environmental considerations for two alternative alignments at Location 5: Durris in Sections E (Route E4, E2 and E1) and F (Route F1.3 and F3) of the Proposed Route and details the RAG Ratings applied to each alternative identified under each environmental topic as per SSEN Transmission's Routeing Guidance.

The environmental topics consider the following, natural heritage, cultural heritage, people, landscape and visual, land use and planning.

The tables presented in this appendix detail the baseline constraints and the findings of the appraisals based on a study area which comprises the alignment and its LoD, defined here as 100 m either side of the alignment.

Table F1. Environmental Constraints for Alternative Alignments at Location 5: Durriss in Sections E and F

Topic and Criteria	Option	Constraints	Evaluation of Constraints	RAG Score
<p>Natural Heritage</p> <p>Designations</p> <p>Protected Species</p> <p>Habitats</p>	<p>Alternative 5a (Potential)</p>	<p>Designations: International, European or National Designations</p> <p>The River Dee SAC is designated for otter (<i>Lutra lutra</i>), freshwater pearl mussel and Atlantic salmon. The riparian habitats of the SAC comprise broadleaved woodland that extends across the full width of the LoD of the alignment.</p> <p>The alignment intersects with the River Dee SAC in the following two locations:</p> <ol style="list-style-type: none"> 1.The alignment crosses the River Dee near Netherpark Quarry (NGR NO 76819 96765). Aerial imagery indicates that the riparian habitats of the SAC comprise broadleaved woodland that extends across the full width of the alignment LoD on the southern bank, while the northern bank is bordered by grassland. 2. The alignment LoD crosses the Burn of Sheeoch, east of Meikledams (NGR NO 77412 94909); this watercourse forms part of the River Dee SAC. Field surveys conducted in 2024 identified riparian habitats comprising lowland mixed deciduous woodland and Sitka spruce plantation along the Burn of Sheeoch. <p>The Strathie Burn is also designated as part of the River Dee SAC and flows into the Burn of Sheeoch within the east of the alignment LoD (NGR NO 77453 94968) east of Meikledams. Field surveys conducted in 2024 identified riparian habitats comprising upland birchwood along the Strathie Burn.</p> <p>The alignment LoD intersects the Loch of Park SSSI (NGR NO 77337 98833) northeast of Lochside. The SSSI is designated for basin fen and wet woodland; these habitats are likely to have potential to be GWDTEs (see Habitats: GWDTEs). The SSSI extends almost half the width of the alignment LoD.</p> <p>There are no other statutory designated sites recognised at an international, European or national level for their natural heritage intersected by the alternative alignment LoD or within 1.6 km.</p> <p>The alignment LoD intersects with a block of ancient woodland (of semi-natural origin) near Mergie, south of Slug Road (NGR NO 79123 89103); this woodland extends approximately one half of the width of the alignment LoD. Field survey identified a mixed woodland with both</p>	<p>This alignment has been RAG rated as Amber because it may compromise the conservation status of the River Dee SAC in two places, Loch of Park SSSI, and areas of ancient semi-natural origin and LEPO woodland which extend the full width of the alternative alignment LoD (ancient woodland and LEPO woodland near Mergie, Free Church Wood ancient woodland and LEPO, and Coldstream Plantation LEPO).</p> <p>The alignment LoD intersects the River Dee SAC, including the Burn of Sheeoch and Strathie Burn; the riparian habitats comprise mature broadleaved trees which may constrain the OHL as riparian trees should be retained wherever possible. Removal of riparian vegetation has potential implications for bankside erosion. Uncontrolled construction within proximity to the SAC would pose a pollution risk, and the flood risk area is noted to be extensive either side of the River Dee.</p> <p>The requirement for an operational corridor for the OHL may require felling of some trees along the River Dee. This could be mitigated to some extent by careful micro-siting of towers to minimise any requirement for removal of riparian vegetation along the river. Mitigation to retain woodland through sensitive construction techniques would be applied. In addition, strict pollution prevention would be implemented during construction to protect the water environment.</p> <p>The alignment is constrained by the presence of the Loch of Park SSSI. The SSSI itself could be avoided through careful micro-siting; however, the habitats for which it is designated are potential GWDTEs and so there is potential for indirect effects (see Habitats: GWDTEs). Careful design and construction of the nearest OHL towers and access tracks would be required to protect the SSSI, particularly with regards to potential GWDTEs. Hydrological assessment would be required of the SSSI habitats to confirm their status, and to ensure appropriate mitigation is identified and implemented to protect the designated habitats and the groundwater environment.</p> <p>The alignment is constrained by the block of ancient woodland near Mergie, and an adjacent LEPO woodland. An operational corridor for the OHL would be required within these woodlands as they span the full width of the LoD. It would be possible to avoid the ancient woodland through careful micro-siting and construction of the nearest OHL towers. Avoiding the ancient woodland would result in an operational corridor through the LEPO</p>	<p>A</p>

Topic and Criteria	Option	Constraints	Evaluation of Constraints	RAG Score
		<p>planted and self-seeded trees present with abundant fallen deadwood within the area intersected by the alignment LoD.</p> <p>Immediately west of the block of ancient woodland is an area of LEPO woodland (NGR NO 79074 89113) which extends for the full width of the alignment LoD. Field surveys found the LEPO woodland to be a coniferous plantation. Together these two blocks of woodland extend across the full width of the alignment LoD near Mergie. Within the west of the alignment variant LoD, the LEPO woodland has an operational corridor for an existing OHL.</p> <p>The alignment LoD intersects with another block of ancient woodland (of semi-natural origin) at Free Church Wood, east of Meikledams (NRG NO 77437 95005). The woodland extends half the width of the alignment LoD and forms the riparian habitat on the west bank of the Burn of Sheeoch, part of the River Dee SAC. Field surveys conducted in 2024 identified riparian habitats comprising lowland mixed deciduous woodland.</p> <p>Within the west of the alignment LoD is Free Church Wood (NGR NO 77263 95122), a block of LEPO woodland which extends half the width of the alignment LoD. Field surveys identified a Sitka spruce plantation and an operational corridor for an existing OHL within the west of the alignment LoD. The LEPO woodland extends half the width of the alignment variant LoD for 700m, and across the width of the proposed diversion of the existing OHL. The alignment LoD intersects Coldstream Plantation (NGR NO 77312 99884), a LEPO woodland west of Barrowgate. The woodland extends the full width of the alignment variant LoD. Field surveys in 2024 identified that the coniferous plantation woodland had been largely felled recently due to windfallen trees. In addition, Collonach Plantation (NGR NO 77235 99439) extends across almost half the width of the alignment LoD and was noted during field survey in 2023 to comprise a thinned Scots pine plantation.</p>	<p>woodland immediately to the west. This new operational corridor would result in increased fragmentation of the woodland habitat as there is an existing operational corridor within the west of the alignment variant LoD. Design and mitigation measures would be implemented to protect the ancient woodland.</p> <p>The requirement for felling to produce an n operational corridor could be mitigated to some extent by targeting wherever possible the narrowest sections of woodland, considering tower siting and design, and applying mitigation to retain woodland through sensitive construction techniques. In addition, the baseline value of the LEPO woodland has been affected by commercial forestry, and it may therefore be possible to enhance the condition of this woodland through new planting and sensitive management.</p> <p>The LEPO woodland of Coldstream Plantation extends across the full width of the alignment LoD, while Collonach Plantation extends across almost half the width. An operational corridor would be required to be maintained through these LEPO woodlands; felling requirements in Coldstream Plantation would be minimal due to recent forestry activities, while micro-siting could minimise the need for felling in Collonach Plantation. The baseline value of these woodlands has been affected by commercial forestry, and it may therefore be possible to enhance the condition of the LEPO woodlands through new planting and sensitive management.</p>	
	<p>Alternative Alignment 5b</p>	<p>Designations: International, European or National Designations</p> <p>The alignment LoD crosses the River Dee SAC, northwest of Craiglug (NGR NO 81011 98140). The alignment LoD also intersects with the River Dee SAC southwest of Mosside House (NGR NO 80273 98803). The SAC is designated for otter (<i>Lutra lutra</i>), freshwater pearl mussel and Atlantic salmon. The riparian habitats of the SAC comprise</p>	<p>This alignment has been RAG rated as Amber because it may compromise the conservation status of the River Dee SAC, and blocks of ancient woodland (of semi-natural origin) and LEPO woodland which extend the full width of the alternative alignment LoD (woodland at Mergie, Craiglug Wood, woodland east of Drumoak, and Coldstream Plantation).</p> <p>The alignment LoD intersects the River Dee SAC; the riparian habitats comprise mature broadleaved trees which may constrain the OHL as riparian trees should be retained wherever possible. Removal of riparian vegetation</p>	<p>A</p>

Topic and Criteria	Option	Constraints	Evaluation of Constraints	RAG Score
		<p>broadleaved woodland that extends across the full width of the LoD of the alignment.</p> <p>There are no other statutory designated sites recognised at an international, European or national level for their natural heritage intersected by the alignment LoD or within 800 m.</p> <p>The alignment LoD intersects with a block of ancient woodland (of semi-natural origin) south of Slug Road near Mergie (NGR NO 79123 89103); this woodland extends approximately one half of the width of the alignment LoD. Field survey identified a mixed woodland with both planted and self-seeded trees present with abundant fallen deadwood within the area intersected by the alignment LoD.</p> <p>Immediately west of the block of ancient woodland is an area of LEPO woodland (NGR NO 79074 89113) which extends for almost the full width of the alignment LoD. Field surveys found the LEPO woodland to be a coniferous plantation. Together these two blocks of woodland extend across the full width of the alignment LoD at Mergie. Within the west of the alignment variant LoD, the LEPO woodland has an operational corridor for an existing OHL.</p> <p>The alignment LoD intersects with a further four blocks of woodland listed on the AWI as LEPO:</p> <ul style="list-style-type: none"> • Craiglug Wood at Craiglug (NGR NO 81256 97750): the woodland extends the full width of the alignment LoD in two locations; NGR NO 81256 97750 and NO 81055 98091. Field surveys identified this woodland as a mix of plantation woodland dominated by conifer species and beech. • Moss-side Plantation south of Mosside House (NGR NO 80667 98778): the woodland extends less than one quarter the width of the alignment LoD. Field surveys noted this area to comprise gorse scrub with scattered birch trees. • An unnamed woodland east of Drumoak (NGR NO 79562 99403): the woodland extends the full width of the alignment variant LoD. Field surveys in 2024 identified areas of lowland mixed deciduous woodland, a small area of mixed scrub, and extents of broadleaved plantation. • Coldstream Plantation (NGR NO 77497 99854), west of Barrowgate: the woodland extends the full width of the alignment 	<p>has potential implications for bankside erosion. Uncontrolled construction within proximity to the SAC would pose a pollution risk, and the flood risk area is noted to be fairly wide at this location.</p> <p>The requirement to provide an operational corridor for the OHL may require felling of some trees along the River Dee. This could be mitigated to some extent by careful micro-siting of towers to minimise any requirement for removal of riparian vegetation along the river. Mitigation to retain woodland through sensitive construction techniques would be applied. In addition, strict pollution prevention would be implemented during construction to protect the water environment</p> <p>The alignment is constrained by the block of ancient woodland near Mergie, and an adjacent LEPO woodland. An operational corridor for the OHL would be required through within these woodlands as they span the full width of the LoD. It would be possible to avoid the ancient woodland through careful micro-siting and construction of the nearest OHL towers. Avoiding the ancient woodland would result in an operational corridor through the LEPO woodland immediately to the west. This new operational corridor would result in increased fragmentation of the woodland habitat as there is an existing operational corridor within the west of the alignment variant LoD. Design and mitigation measures would be implemented to protect the ancient woodland.</p> <p>The requirement for felling to produce an operational corridor could be mitigated to some extent by targeting wherever possible the narrowest sections of woodland, considering tower siting and design, and applying mitigation to retain woodland through sensitive construction techniques. In addition, the baseline value of the LEPO woodland has been affected by commercial forestry, and it may therefore be possible to enhance the condition of this woodland through new planting and sensitive management.</p> <p>The LEPO woodlands of Craiglug Wood, the unnamed woodland immediately east of Drumoak and Coldstream Plantation each extend across the full width of the alignment LoD. Operational corridors would be required to be maintained through these LEPO woodlands where they span the full width of the LoD. Felling requirements in Coldstream Plantation would be limited due to recent forestry activities. The baseline values of these woodlands have been affected by commercial forestry, and it may therefore be possible to enhance the condition of the LEPO woodlands through new planting and sensitive management.</p>	

Topic and Criteria	Option	Constraints	Evaluation of Constraints	RAG Score
		<p>variant LoD. Field surveys in 2024 identified that the coniferous plantation woodland had been largely felled.</p>	<p>Moss-side Plantation constrains the alignment as it extends across part of the LoD; however mature trees are limited within the LoD and so it would be possible to minimise felling of this LEPO woodland through micro-siting of the OHL.</p>	
	<p>Alternative Alignment 5a (Potential)</p>	<p>Designations: Regional Designations</p> <p>River Dee LNCS extends the full width of the alignment LoD (NGR NO 76819 96765). The River Dee LNCS covers the same area as the River Dee SAC designation (see Designations: International, European or National Designations). Field surveys have not yet been conducted at the crossing of Alternative Alignment 5a (Potential).</p> <p>Loch of Park LNCS extends beyond the boundary of the SSSI (see Designations: International, European or National Designations), and therefore covers almost the full width of the alignment LoD near Lochwood Cottage (NGR NO 77337 98833), and approximately one third the width of the alignment LoD (NGR NO 77298 99424) within Collonach Plantation. The LNCS is designated for its fen and wet woodland with acid grassland, heath, rush pasture, bog, swamp, coniferous woodland and reedbed with a high diversity of plants including some locally important species such as coralroot orchid and lesser butterfly orchid.</p> <p>Field surveys of Collonach Plantation within the Loch of Park LNCS identified the area to be Scots pine plantation with a mosaic of scattered bracken. Aerial imagery suggests that t that mature trees are present within the portion of the LNCS intersected by the alignment LoD. The habitats that the LNCS is designated for include potential GWDTEs (see Habitats: GWDTEs).</p>	<p>This alignment has been assigned an Amber RAG rating because it may compromise the conservation status of the River Dee LNCS and Loch of Park LNCS, and/or the conservation status of the designated features of the sites.</p> <p>The alignment is constrained by the presence of the River Dee LNCS, with mature riparian woodland and trees extending across the LoD at the river crossing.</p> <p>The requirement to provide an operational corridor for the OHL may require felling of some trees in the LNCS along the River Dee. This could be mitigated to some extent by careful micro-siting of towers to minimise any requirement for removal of riparian vegetation. Mitigation to retain woodland through sensitive construction techniques would be applied. In addition, strict pollution prevention would be implemented during construction to protect the water environment.</p> <p>The alignment is constrained by the presence of Loch of Park LNCS which extends into the LoD in two locations. Surveys in the north have not identified habitats for which the LNCS is designated as it is a Scots pine plantation; it is likely from the LNCS description that there is the potential for other important habitats to be present. The habitats for which the LNCS is designated include potential GWDTEs and so there is potential for indirect effects (see Habitats: GWDTEs). Careful design and construction of the nearest OHL towers and access tracks would be required to protect the LNCS, particularly with regards to potential GWDTEs. Hydrological assessment would be required of the LNCS habitats to confirm their status, and to ensure appropriate mitigation is identified and implemented to protect the designated habitats and the groundwater environment.</p> <p>The requirement to provide an operational corridor for the OHL would require felling of some trees in the Loch of Park LNCS, particularly in the Collonach Plantation but potentially also near Lochwood Cottage. This could be mitigated to some extent near Lochwood Cottage by careful micro-siting of towers to minimise any requirement for removal of trees. The baseline value of the woodland block has been affected by commercial forestry, and it may therefore be possible to enhance the condition of this woodland</p>	<p>A</p>

Topic and Criteria	Option	Constraints	Evaluation of Constraints	RAG Score
			through new planting and sensitive management. Mitigation to retain woodland through sensitive construction techniques would be applied.	
	Alternative Alignment 5b	<p>Designations: Regional Designations</p> <p>River Dee LNCS extends the full width of the alignment LoD (NGR NO 81011 98140) and approximately one third the width of the alignment LoD to the north of Dalmaik (NGR NO 80210 98765). The River Dee LNCS includes slightly more land on the south bank of the River Dee than the SAC designation (see Designations: International, European or National Designations).</p> <p>The LNCS is designated for being a natural watercourse with a series of glacial and fluvio-glacial landforms and sediments, oak, birch and wet woodland, shingle banks and species rich grasslands rich in invertebrates and with a good assemblage of birds. Field surveys identified the watercourse had lowland mixed deciduous and broadleaved woodland plantation on the south bank, and a narrow line of broadleaved plantation woodland on the north bank.</p>	<p>This alignment has been assigned an Amber RAG rating because it may compromise the conservation status of the River Dee LNCS and/or the conservation status of the designated features of the site.</p> <p>The alignment is constrained by the presence of the River Dee LNCS, with mature riparian woodland and trees extending across the LoD at the river crossing, and into the west of the LoD near Dalmaik.</p> <p>The requirement to provide an operational corridor for the OHL may require felling of some trees in the LNCS along the River Dee. This could be mitigated to some extent by careful micro-siting of towers to minimise any requirement for removal of riparian vegetation. Mitigation to retain woodland through sensitive construction techniques would be applied. In addition, strict pollution prevention would be implemented during construction to protect the water environment.</p>	A
	Alternative Alignment 5a (Potential)	<p>Protected Species: European Protected Species (EPS); UK Biodiversity Action Plan (BAP) Species; Other Protected and Notable Species</p> <p>Records of protected and notable species were less common within and immediately surrounding the alignment LoD compared to Alternative Alignment 5b. This is likely to be partly the result of a recording bias resulting from a lower level of population density and human activity in the vicinity of the alignment.</p> <p>Field surveys of this alignment LoD identified habitats with the potential to support a range of protected and notable species, particularly wildcat (EPS), and pine marten and red squirrel (UK BAP species) which are likely to be present in the Durriss Forest. Otter and bats (EPS) are known to be present in woodland and on watercourses. In addition, other protected and notable species, such as badger, will be present in woodland and farmland.</p> <p>The extensive conifer plantation in Durriss Forest within this alignment LoD is suitable for wildcat; this species is an EPS and highly sensitive to disturbance. The forest is connected via upland areas to the wildcat priority areas of the Angus Glens, Strathbogie and Strathavon, although these are at a significant distance. Wildcat is particularly secretive and its presence within Durriss Forest is not confirmed. The forest is likely to be fairly disturbed by forestry and recreational activities.</p>	<p>This alignment has been assigned an Amber RAG rating as it has the potential to compromise the conservation status of protected and notable species, and/or habitat with the potential to support them.</p> <p>The commercial forestry habitat is likely utilised by a range of protected and notable species, including otter, bats, red squirrel, pine marten and badger. There is some limited potential for wildcat, although the forest is unlikely to form a core part of a territory.</p> <p>Standard mitigation measures would be implemented including those in SSEN Transmission's SPPs. In addition, it may be possible to enhance the woodland for protected species through new planting and sensitive management within the operational corridor.</p>	A

Topic and Criteria	Option	Constraints	Evaluation of Constraints	RAG Score
	Alternative Alignment 5b	<p>Protected Species: European Protected Species (EPS); UK Biodiversity Action Plan (BAP) Species; Other Protected and Notable Species</p> <p>Records of protected and notable species were more common within and immediately surrounding the alignment LoD than Alternative Alignment 5a (Potential). This is likely to be partly the result of a recording bias resulting from a greater level of population density and human activity in the vicinity of the alignment.</p> <p>Field surveys of this alignment LoD identified habitats with the potential to support a range of protected and notable species, particularly badger. There are only small areas of habitat suitable for wildcat (EPS), and pine marten and red squirrel (UK BAP species). Otter and bats (EPS) are known to be present in woodland and on watercourses.</p>	<p>This alignment has been assigned a Green RAG rating as it has limited potential to compromise the conservation status of protected and notable species, and/or habitat with the potential to support them.</p> <p>Habitats suitable for protected species broadly comprise the woodlands, uplands and edge habitats present within the alignment LoD. These habitats are relatively scattered within an LoD that otherwise includes extensive areas of lowland farmland.</p> <p>Standard mitigation measures would be implemented including those in SSEN Transmission's SPPs.</p>	<p>G</p>
	Alternative Alignment 5a (Potential)	<p>Habitats: Annex 1 Habitats; Groundwater Dependent Terrestrial Ecosystems (GWDTE)</p> <p>Desk study and field survey data indicate that habitats within this alignment comprise a mosaic of farmland and woodland, with generally limited potential for Annex 1 habitats and GWDTE habitats. However, habitat surveys are ongoing within the alignment LoD.</p> <p>Loch of Park is a notable exception as the features for which Loch of Park SSSI is designated include habitat types that have potential to be GWDTEs (see Designations: International, European or National Designations), specifically basin fen and wet woodland.</p> <p>Extents of upland heathland including Annex 1 habitats have been identified at Craigneil, north of Slug Road. There may also be extents of semi-natural woodland within the upland areas. GWDTE habitats may be present in upland areas, and also in low-lying damp areas on the edges of fields.</p>	<p>This alignment has been assigned an Amber RAG rating as it has the potential to compromise the conservation status of GWDTEs and Annex 1 habitats.</p> <p>The alignment is constrained by the presence of the Loch of Park SSSI and LNCS, and while the SSSI could be avoided through careful micro-siting, there is potential for indirect effects on GWDTEs associated with the SSSI and LNCS.</p> <p>It would not be possible to avoid intersecting the upland heathland identified at Craigneil. There may be extents of GWDTE habitats that cannot be avoided.</p> <p>In addition, potential GWDTE habitats may be affected beyond the operational corridor for the OHL due to the placement of towers and associated excavations.</p> <p>Hydrological assessment would be required of any potential GWDTEs to confirm their status, and to ensure appropriate mitigation is identified and implemented. Careful design and construction of the nearest OHL towers and access tracks would be required to protect any confirmed GWDTEs.</p>	<p>A</p>
	Alternative Alignment 5b	<p>Habitats: Annex 1 Habitats; Groundwater Dependent Terrestrial Ecosystems (GWDTE)</p> <p>Desk study and field survey data indicate that habitats within this alignment comprise a mosaic of farmland and woodland, with generally limited potential for Annex 1 habitats and GWDTE habitats.</p>	<p>This alignment has been assigned an Amber RAG rating as it has the potential to compromise the conservation status of GWDTEs and an Annex 1 habitat.</p> <p>It would be possible to avoid intersecting the potential GWDTE habitat at Little Carewe Hill as the habitat is located on the eastern edge of the alignment LoD. It would also be possible to oversail the Blanket Bog on Little</p>	<p>A</p>

Topic and Criteria	Option	Constraints	Evaluation of Constraints	RAG Score
		<p>An area of blanket bog (Annex 1 habitat) was identified at Little Carewe Hill (NGR NO 82342 92752) in 2023. In addition, there is potential for GWDTE habitat within the alignment LoD at Little Carewe Hill (NGR NO 82247 92305), where extents of purple moor grass and rush pastures were identified during field surveys in 2023.</p>	<p>Carewe Hill through careful alignment, micrositing and construction measures. Potential GWDTE habitats may be affected beyond the operational corridor for the OHL due to the placement of towers and associated excavations. Hydrological assessment would be required of these habitats to confirm their status, and to ensure appropriate mitigation is identified and implemented.</p>	
	<p>Alternative Alignment 5a (Potential)</p>	<p>Habitats: Biodiversity The density of Biodiversity Units derived from habitats within the alignment LoD is calculated to be approximately 16.40 BU/ha. Irreplaceable habitats are calculated to be present at a density of approximately 0.31 BU/ha. Watercourses are present at a density of approximately 0.09 BU/km.</p>	<p>This alignment has been assigned a Red RAG rating because it has been evaluated as having more than 120% of the BU density of the least biodiversity impacted alternative (see Alternative Alignment 5b).</p>	<p>R</p>
	<p>Alternative Alignment 5b</p>	<p>Habitats: Biodiversity The density of Biodiversity Units derived from habitats within the alignment LoD is calculated to be approximately 11.99 BU/ha. Irreplaceable habitats are calculated to be present at a density of approximately 0.06 BU/ha. Watercourses are present at a density of approximately 0.19 BU/km.</p>	<p>This alignment has been assigned a Green RAG rating because it has been evaluated as having the lowest biodiversity unit density.</p>	<p>G</p>
<p>Natural Heritage Ornithology</p>	<p>Alternative Alignment 5a (Potential)</p>	<p>Designations The alignment does not coincide directly with any Special Protected Area (SPA). However, it does intersect land which has connectivity with the core foraging ranges of some qualifying features from the Fowlsheugh SPA (and Site of Special Scientific Interest (SSSI)) and the Loch of Skene SPA and SSSI. However, the forestry habitat is less suitable for foraging SPA species in comparison to Alternative Alignment 5b (Fowlsheugh SPA – herring gull; Loch of Skene SPA – greylag geese, goldeneye and goosander; SSSI – pink-footed geese). The area north of the River Dee provides Loch of Skene SPA/SSSI goose foraging habitat. Vantage Point watch surveys (from Sept 2023 to end March 2024) recorded activity of foraging goose flights within and across the area where the alignment is located. Foraging goose surveys in early 2023 recorded geese foraging in areas c. 3 km north; however, foraging sites are subject to change across the winter and between years due to field planting/use.</p>	<p>The alignment has been RAG rated as Amber as it may compromise an internationally or nationally designated area and/or the conservation status of the qualifying features of the site having assumed connectivity between the Loch of Skene SPA roost and associated foraging areas. Herring gull from Fowlsheugh SPA may also forage in fields through the alignment OHL, however habitat is unlikely to provide concentrated foraging opportunities with most ground in rough pasture and forested areas. Alternative Alignment 5a shows increased distance from Fowlsheugh SPA in comparison to Alternative Alignment 5b with limited extent of potential foraging habitat for SPA herring gull to the west of this OHL alignment</p>	<p>A</p>

Topic and Criteria	Option	Constraints	Evaluation of Constraints	RAG Score
	Alternative Alignment 5b	<p>Designations</p> <p>The alignment does not coincide directly with any Special Protected Area (SPA). However, it does intersect land which has connectivity with the core foraging ranges of some qualifying features from the Fowlsheugh SPA (and Site of Special Scientific Interest (SSSI)) and the Loch of Skene SPA/SSSI.</p> <ul style="list-style-type: none"> Fowlsheugh SPA lies approximately 9.5 km to the southeast of the alignment LoD. The site is designated for breeding fulmar, guillemot, herring gull, kittiwake, razorbill and its breeding seabird assemblage. There is potential connectivity between land intersected by the alignment and herring gull, although suitable foraging habitat intersected by the alignment itself is likely to be limited, flights beyond the alignment to more favourable foraging areas may occur. The Loch of Skene SPA lies approximately 7 km to the north of the alignment LoD. The site is designated for goldeneye, goosander and greylag goose, the latter of which has a core foraging range of up to 20 km, and therefore, the land intersected by the alignment has potential connectivity with the Loch of Skene SPA. The national conservation status of the greylag goose population is favourable but is sensitive to operational effects of OHLs due to potential collision risks. Greylag goose flights have been recorded to the east of the alignment, although only flights of pink-footed geese (SSSI species) were recorded as intersecting the OHL alignment. 	<p>This alignment has been RAG rated as Amber as it may compromise an internationally or nationally designated area and/or the conservation status of the qualifying features of the site having assumed connectivity between the Loch of Skene SPA roost and associated foraging areas. Herring gull from Fowlsheugh SPA may forage in fields throughout suitable habitat within the alignment OHL, however habitat is unlikely to provide concentrated foraging opportunities with most ground in rough pasture and forested areas.</p>	A
	Alternative Alignment 5a (Potential)	<p>Schedule 1 Species</p> <p>The alignment intersects habitats that have the potential to support populations of Schedule 1 birds, including woodland. However, watercourses are unlikely to hold species of note.</p> <p>Breeding populations of Schedule 1 species may be sensitive to disturbance during construction, including some raptor and owl species, as well as some specialist species. During operation, some Schedule 1 raptor species may be sensitive to collision impacts.</p>	<p>This alignment has been RAG rated as Amber as there is the potential to compromise the conservation status of Schedule 1 bird populations.</p>	A
	Alternative Alignment 5b	<p>Schedule 1 Species</p> <p>The alignment intersects habitats that have the potential to support populations of Schedule 1 birds, including woodland.</p>	<p>This alignment has been RAG rated as Amber, as Schedule 1 breeding birds are present in the area local to this alignment and there is the potential to</p>	A

Topic and Criteria	Option	Constraints	Evaluation of Constraints	RAG Score
		<p>However, watercourses are unlikely to hold species of note. Breeding populations of Schedule 1 species may be sensitive to disturbance during construction, including some raptor and owl species, as well as some specialist species. During operation, some Schedule 1 raptor species may be sensitive to collision impacts.</p>	<p>compromise the conservation status of Schedule 1 bird populations in the region or nationally.</p>	
	<p>Alternative Alignment 5a (Potential)</p>	<p>Birds of Conservation Concern (BoCC)</p> <p>The land intersected by the alignment may support populations of birds listed on the red and amber lists of the BoCC, some of which are also listed as Schedule 1 species:</p> <ul style="list-style-type: none"> The alignment is largely outwith wader sensitive habitat in the southern section (however they are present in the northern section). Habitats include forestry plantation as well as sheep pasture in the south with arable in the north. Some extents of wetland were found near Cullerlie (as above in 'Habitats'). 	<p>This alignment has been RAG rated as Green as it is unlikely to compromise the conservation status of populations of a red or amber listed species or essential breeding, passage or wintering habitat.</p> <p>Potential wader (red-list species) habitat coincides with the northernmost part of the LoDs of the alignment. The farmland areas may also support other red-list species. The extent of suitable habitat is less than that in Alternative Alignment 5b.</p>	<p>G</p>
	<p>Alternative Alignment 5b</p>	<p>Birds of Conservation Concern (BoCC)</p> <p>The land intersected by the alignment may support populations of birds listed on the red and amber lists of the BoCC, some of which are also listed as Schedule 1 species:</p> <ul style="list-style-type: none"> Land consisting primarily of farmland and moorland areas, including arable, pasture, heath, wet grassland and hedgerows, may support red-listed waders, farmland specialists as well as red-listed passerines including skylark, starling, house sparrow, corn bunting and yellowhammer. Areas of woodland patches, larger gardens and hedgerows may support red-listed species such as the spotted flycatcher and tree sparrow. The alignment also coincides with higher levels of wader sensitive habitat (and related high relative abundance) which may support red-listed ducks and grebes. Farmland and wetland habitats may also support herring gulls. 	<p>Birds of Conservation Concern (BoCC)</p> <p>This alignment has been RAG rated as Green as it is unlikely to compromise the conservation status of populations of a red or amber listed species or essential breeding, passage or wintering habitat.</p> <p>Wader (red-list species) breeding habitat coincides with the alignment. Farmland areas may also support other red-list species. The extent of suitable habitat is more than that in Alternative Alignment 5a (Potential).</p>	<p>G</p>
<p>Natural Heritage</p>	<p>Alternative Alignment 5a (Potential)</p>	<p>Surface and Groundwater Drinking Water Protected Area (DWPA)</p> <p>The alignment crosses the River Dee at a location where the floodplain is too wide to be spanned (480 m), therefore infrastructure must be located within the 200-year future floodplain. Additionally, there are</p>	<p>This alignment has been RAG rated as Amber as it may compromise the quality and/or quantity of surface/ground waters which provide public supply through creation of flow pathways for run-off which may cause some disruption to abstraction water flow and/or quality.</p>	<p>A</p>

Topic and Criteria	Option	Constraints	Evaluation of Constraints	RAG Score
Hydrology / Geology / Hydrogeology		two properties served by type A PWS within 100 m of the alignment LOD. The sources of these PWS are currently unknown.	Infrastructure must be sited within the 200-year plus climate change floodplain in order to span the 480 m wide floodplain of the River Dee. There is therefore potential to impact the water quality of the River Dee - Peterculter to tidal limit (Waterbody ID 23315) which lies further downstream due to construction activities being located effectively within the watercourse during the 200-year future flood event. Additionally, there are two type A private water supplies within 100 m of the alignment LoD. The abstraction sources of these properties are unknown and could be much closer or within the alignment LoD.	
	Alternative Alignment 5b	Surface and Groundwater Drinking Water Protected Area (DWPA) The alignment crosses the River Dee at a locality which can be spanned (around 220 m wide). This section of the River Dee lies upstream and downstream of two surface DWPA's.	This alignment has been RAG rated as Green as it is considered unlikely to result in surface flow pathways and subsequently compromise the quality of surface waters of local importance	G
	Alternative Alignment 5a (Potential)	Aquifers providing Regional/Local resources The alignment is routed in close proximity to a potential PWS abstraction source at Hill of Park approximately 80 m outwith the alignment LoD at the northern end, based on data provided by Aberdeenshire Council at NGR NO 77565 99251.	This alignment has been RAG rated as Amber as it may compromise quality or quantity of surface or groundwater of regional importance (e.g. through creation of a pathway for run-off which may cause some disruption to abstraction water flow and/or quality). The alignment LoD is located within 80 m west of a potential PWS abstraction source at Hill of Park and is constrained by this abstraction as it may compromise the water quality of surface or groundwaters recharge the PWS source.	A
	Alternative Alignment 5b	Aquifers providing Regional/Local resources The alignment is in close proximity to a potential PWS abstraction source at Hill of Park just 10 m outwith the alignment LoD at the northern end, based on data provided by Aberdeenshire Council, at NGR NO 77700 99533. There is a groundwater spring located approximately 30 m east of the alignment LOD near Corsehill Farm at NGR NO 82014 95681	This alignment has been RAG rated as Amber as it may compromise quality or quantity of surface or groundwater of regional importance (e.g. through creation of a pathway for run-off which may cause some disruption to abstraction water flow and/or quality). The alignment LoD is located within 10 m north of a potential PWS abstraction source at Hill of Park and is constrained by this abstraction as it may compromise the water quality of surface or groundwaters which recharge the PWS source. There is potential for the quality/quantity of surface/groundwater which recharges the groundwater spring to be impacted by an alignment in this area, as the spring lies 30 m east of the alignment LoD.	A
	Alternative Alignment 5a (Potential)	Surface Waters or aquifer providing water for agricultural or industrial use	This alignment has been RAG rated as Amber as it may compromise quality and/or quantity of surface or groundwaters of local importance or would require dewatering of construction activities.	A

Topic and Criteria	Option	Constraints	Evaluation of Constraints	RAG Score
		<p>The alignment crosses numerous watercourses which are shown on 1:50k Ordnance Survey mapping and several major watercourses including:</p> <ul style="list-style-type: none"> • Cowie Water- Fetteresso Forest (Waterbody ID 23254) was classified as overall 'High' ecological condition by SEPA in 2020. • Black Burn, a minor watercourse was too small to be classified by SEPA under the Water Framework Directive. • Strathie Burn, a minor watercourse which is too small to be classified by SEPA under the Water Framework Directive. • Sheeoch Burn (Waterbody ID 23318) was classified as overall 'Good' ecological condition by SEPA in 2020. • River Dee-Banchory to Peterculter (Waterbody ID 23316) was classified as overall 'Moderate' condition by SEPA in 2020. <p>Based on SEPA Future Flood maps there is one large area of fluvial flood risk at the crossing of the River Dee (480 m wide) that cannot be spanned and consequently infrastructure will have to be sited within the floodplain.</p>	<p>The 480 m wide floodplain extent of the River Dee cannot be spanned at the point the alignment crosses the watercourse. Infrastructure will subsequently be sited within the 200-year plus climate change floodplain. Therefore, some construction activities (installation of towers) would be required within the watercourse during the 200-year future flood event and there is potential to compromise quality and/or quantity of surface waters (and groundwater) of local importance or would require dewatering construction activities.</p>	
	<p>Alternative Alignment 5b</p>	<p>Surface Waters or aquifer providing water for agricultural or industrial use</p> <p>The alignment crosses numerous watercourses which are shown on 1:50k Ordnance Survey mapping and several major watercourses including:</p> <ul style="list-style-type: none"> • Cowie Water- Fetteresso Forest (Waterbody ID 23254) was classified as overall 'High' ecological condition by SEPA in 2020. • Black Burn, a minor watercourse was too small to be classified by SEPA under the Water Framework Directive. • Cowton Burn (Waterbody ID 23255) was classified as overall 'Good' ecological condition by SEPA in 2020. • Small Burn, a minor watercourse which is too small to be classified by SEPA under the Water Framework Directive. • Crynoch Burn (Waterbody ID 23317) was classified as overall 'Good' ecological condition by SEPA in 2020. This is known as the Burn of Monquich within the alignment. 	<p>This alignment has been RAG rated as Green as it is considered unlikely to result in water flow pathway(s) to surface and groundwater. The floodplains of all the larger watercourses can be spanned without requiring OHL towers to be installed in the floodplain.</p>	<p>G</p>

Topic and Criteria	Option	Constraints	Evaluation of Constraints	RAG Score
		<ul style="list-style-type: none"> Cairnie Burn, a minor watercourse which is too small to be classified by SEPA under the Water Framework Directive. Tilbourise Burn, a minor watercourse which is too small to be classified by SEPA under the Water Framework Directive. River Dee- Banchory to Peterculter, a major watercourse (Waterbody ID 23316) was classified as overall 'Moderate' ecological potential by SEPA in 2020. <p>Based on SEPA Future Flood maps there are no significant flood risk areas associated with watercourses in this alignment. However, the alignment leads to a particular crossing location over the River Dee. The River Dee future floodplain is approximately 220 m wide at the crossing location.</p>		
<p>Cultural Heritage Designations</p> <p>Cultural Heritage Assets</p>	<p>Alternative Alignment 5a (Potential)</p>	<p>Designations: World Heritage Sites (WHS), Scheduled Monuments (SM), Inventory Gardens and Designed Landscapes (GDL), Inventory Battlefields</p> <p>Within 1 km of the edge of the alternative alignment LoD there is one GDL, and two Scheduled Monuments, of national importance and high sensitivity.</p> <ul style="list-style-type: none"> Park House GDL (GDL 309) Upper Balfour Cairns, House & Field System (SM 7879) Cairn-Mon-Cairn (SM 4892) <p>The closest of these designated heritage assets to the alignment LoD is: Park House GDL (GDL 309), located c.60 m east of the alignment LoD.</p> <p>Those designated heritage assets that are likely most sensitive to the alternative alignment (effects on their settings) are those that are either prominent landmarks and/or have long views across the landscape as important aspects of their settings. These would include hillforts, burial cairns and stone circles, or designed landscapes that have long distance views and vistas that contribute to their cultural significance.</p> <p>Key constraints identified in regard to the alternative alignment includes: Park House GDL (GDL 309), and Cairn-Mon-Cairn (SM 4892).</p> <ul style="list-style-type: none"> Park House GDL (GDL 309) (NGR NO 780 975): this designed landscape stands on the north bank of the River Dee, between the river and the A93. The GDL forms the setting for Category A Listed 	<p>This alignment has been RAG rated as Amber as, although it would avoid direct interaction with any designated assets, it may compromise the setting of the designated assets that lie close to the alternative alignment.</p> <ul style="list-style-type: none"> Park House GDL (GDL 309): the edge of the alignment LoD passes c.60 m to the west of the GDL. The alignment would not intrude into key views from the GDL, or House, to the south overlooking the River Dee and the hills beyond. However, the alignment could potentially compromise the setting of the GDL due to the introduction of new OHL towers in the landscape surrounding the GDL, especially where the alignment passes to the northwest which could intrude into key views of the House, from the B9077 (South Deeside Road). Cairn-Mon-Cairn (SM 4892): the edge of the alignment LoD passes within c800 m to the east of the monument and the OHL towers could intrude into key views to and from the monument, potentially compromising its setting. <p>Potential to mitigate impact on the settings of these assets is limited, however, the LoD provides some flexibility to reduce intrusion into key views to and from the designated heritage assets through micro-siting of towers, subject to other constraints. Overall, there is some scope, through micro-siting of towers to reduce but not remove the constraints from these designated assets.</p>	<p>A</p>

Topic and Criteria	Option	Constraints	Evaluation of Constraints	RAG Score
		<p>Park House (LB 3103) and other associated Listed Buildings. It comprises largely of mixed woodland policies spread along the River Dee. Key views from the House and the GDL are to the south looking across to the south bank of the River Dee and the hills beyond. Key views to and across the GDL are from the B9077 South Deeside Road, on the south side of the River Dee.</p> <ul style="list-style-type: none"> Cairn-Mon-Cairn (SM 4892) (NGR NO 782 919): this substantial Bronze Age burial cairn stands at the summit of Cairn-Mon-Earn around 800 m to the west of the alternative alignment LoD. The prominent topographical position of the cairn and views to and from it are key aspects of its setting. 		
	<p>Alternative Alignment 5b</p>	<p>Designations: World Heritage Sites (WHS), Scheduled Monuments (SM), Inventory Gardens and Designed Landscapes (GDL), Inventory Battlefields</p> <p>Within 1 km of the edge of the alignment LoD there is one Inventory Garden and Designed Landscape (GDL), and four Scheduled Monuments, all of national importance and high sensitivity:</p> <ul style="list-style-type: none"> Drum Castle GDL (GDL 141) Campstone Hill, Ring Cairns, Cairns and Field System (SM 4878) South Brachmout, Mound and Stone Setting (SM 4872) Nether Auquhollie, Inscribed Stone (SM 983) Bogton Cairn, Field System and Trackway (SM 7877) <p>The Scheduled Monument, Normandykes Roman Camp (SM 2478), which lies within 1.7 km of the edge of the alignment LoD is considered to be especially sensitive to change on its setting.</p> <p>The closest of these designated heritage assets to the alignment LoD are: Drum Castle GDL (GDL 141), of which the edge of the alignment LoD abuts the corner of the designated landscape and lies within 120 m of the GDL boundary; and Nether Auquhollie Inscribed Stone (SM 983), c.190 m to the southeast of the alignment LoD.</p> <p>Those designated heritage assets that are likely most sensitive to the potential alignment (effects on their settings) are those that are either prominent landmarks and/or have long views across the landscape as important aspects of their settings. These would include hillforts, burial cairns and stone circles, or designed landscapes that have long distance views and vistas that contribute to their cultural significance.</p>	<p>The potential alignment has been RAG rated as Amber as, although it would avoid direct interaction with any designated assets, it may compromise the setting of the designated assets that lie close to the alternative alignment.</p> <ul style="list-style-type: none"> Drum Castle (GDL 141): the edge of the alignment LoD abuts the designed landscape and the alignment passes c.120 m to the south of the GDL boundary, potentially compromising its setting due to the introduction of new OHL towers in close proximity to the GDL and which could intrude especially into panoramic views from the castle tower (see Appendix G. for Location 6. North of Drumoak where the alignment alternatives that are closer in proximity to the Drum GDL are considered in more detail). Bogton Cairn, Field System and Trackway (SM 7877): the edge of the alignment LoD passes within c.900 m to the southwest of the monument and the OHL towers could intrude into key views from the monument out to the immediate surrounding farmland, potentially compromising its setting. Normandykes Roman Camp (SM 2478): the edge of the alignment LoD passes within c.1.7 km to the west of the monument and the OHL towers could intrude into key views out from the monument, potentially compromising its setting. <p>Potential to mitigate impact on the settings of these assets is limited, however, the LoD provides some flexibility to reduce intrusion into key views to and from the designated heritage assets through micrositing of towers, subject to other constraints. Overall, there is some scope, through micrositing of towers to reduce but not remove the constraints from these designated assets.</p>	<p>A</p>

Topic and Criteria	Option	Constraints	Evaluation of Constraints	RAG Score
		<p>Key constraints identified in regard to the alignment includes: Drum Castle GDL (GDL 141), Bogton Cairn, Field System and Trackway (SM 7877) and Normandykes Roman Camp (SM 2478).</p> <ul style="list-style-type: none"> • Drum Castle (GDL 141) (NGR NJ 794 007): this designed landscape is situated on a ridge to the north of the River Dee valley. It forms the setting for Category A Listed Drum Castle (LB 3113) and other associated Listed Buildings. Wide panoramic views are afforded from the top of the castle tower to the surrounding landscape in all directions, and there are glimpses of hills to the north from the parkland around the Castle. The mixed woodland of the GDL contributes to the surrounding scenery but there are few views into the GDL from the surrounding roads. • Bogton, Cairn, Field System and Trackway (SM 7877) (NGR NO 812 996), the remains of this prehistoric field system are located c.900 m northeast of the alignment LoD in locally high ground to the north of the River Dee and surrounded by grazing land. The relationship of the monument with the immediate surrounding farming landscape of the River Dee valley is a key aspect of its setting. • The Scheduled Monument, Normandykes Roman Camp (SM 2478) (NGR NO 829 993), which lies within 1.7 km to the east of the edge of the alignment LoD, is considered especially sensitive to change on its setting. The remains of this camp lie on a broad hill above an old ford crossing the River Dee. The prominent topographical position of the camp and views across and along the River Dee are important aspects of its setting. 		
	<p>Alternative Alignment 5a (Potential)</p>	<p>Designations: Sites and Monuments Record (SMR) Entries</p> <p>Thirteen recorded SMR sites of archaeological and cultural heritage interest fall within the alternative alignment LoD.</p> <p>Three of the records are for Mesolithic lithic scatters (N079NE0195, N079NE0193, N079NE0127) that were uncovered at Kirkton of Durriss to the south of the River Dee. The other records include a consumption dyke, two areas of rig and furrow cultivation, a farmstead, the remains of a croft, a possible building platform, stone clearance and two wells.</p> <p>All of the heritage assets are recorded in the SMR as being of 'Standard' importance and are assessed as being of local heritage value and of low sensitivity.</p>	<p>This alignment has been RAG rated as Green for SMR sites, as the archaeological and cultural heritage sites identified do not represent significant constraints to development of an OHL in this alignment.</p> <p>The SMR sites are concentrated largely the centre of the alternative alignment, either side of the River Dee, and extend across the alignment LoD.</p> <p>Where direct impacts on SMR sites cannot be avoided, constraints could be mitigated through a programme of works (i.e. trial trench evaluation and excavation or watching briefs) in advance of construction works to a scope agreed by the local authority.</p>	<p>G</p>

Topic and Criteria	Option	Constraints	Evaluation of Constraints	RAG Score
	Alternative Alignment 5b	<p>Designations: Sites and Monuments Record (SMR) Entries</p> <p>Thirty-two SMR sites of archaeological and cultural heritage interest fall within the alignment LoD.</p> <p>Seven of the records are for Mesolithic lithic scatters (NO89NW0017, NO89NW0102, NO89NW0100, NO89NW0106, NO89NW0142, NO89NW0143 and NO89NW0144) that were uncovered east of Drumoak. The other records include three cairnfields, seven farmsteads, six former buildings/crofts, a former mill site, a boundary stone, a well and an area of rig and furrow cultivation.</p> <p>One record, for Mesolithic flint scatter (NO89NW017) recovered at Dalmaik Farm is recorded in the SMR as being of 'Regional' importance and assessed as being of medium sensitivity. All the other records are recorded in the SMR as being of 'Standard' importance and assessed as being of local heritage value and low sensitivity.</p>	<p>The alignment has been RAG rated as Green for SMR sites, as the archaeological and cultural heritage sites identified do not represent significant constraints to development of an OHL in this alignment.</p> <p>The SMR sites are concentrated largely at the centre of the alternative alignment, to the north of the River Dee, and extend across the alignment LoD.</p> <p>Where direct impacts on SMR sites cannot be avoided, constraints could be mitigated through a programme of works (i.e. trial trench evaluation and excavation or watching briefs) in advance of construction works to a scope agreed by the local authority.</p>	G
	Alternative Alignment 5a (Potential)	<p>Cultural Heritage Assets</p> <p>Within 1 km of the edge of the alternative alignment LoD there are:</p> <ul style="list-style-type: none"> • One Category A Listed Building, Park House (LB 3103), of national importance and high sensitivity. • Ten Category B Listed Buildings of regional importance and medium sensitivity. • Eight Category C Listed Buildings of local importance and low sensitivity. <p>The Listed Buildings comprise mostly small residential properties (i.e. farmsteads and crofts) and small parish kirks, all of which have generally localised settings and are not significant constraints.</p> <p>The asset considered to be the most sensitive to change is, Category A Listed Park House (LB 3103). This country house stands on the north banks of the River Dee within a small designed landscape (GDL 309). Key aspects of the House's setting are the mixed woodland policies in which it stands, the relationship with other Listed Buildings and designed features within the GDL, and views from and to the House. Key views from the House are to the south overlooking the south bank of the River Dee and the hills beyond. Key views to the House and the surrounding GDL are from the are from the B9077 South Deeside Road, on the south side of the River Dee.</p>	<p>This alignment has been RAG rated as Amber as, although it would avoid direct interaction with any designated assets, it may compromise the setting of the following Listed Building.</p> <ul style="list-style-type: none"> • Park House (LB 3103): the edge of the alignment LoD passes within c.900 m to the west of the House. The alignment would not intrude into key views from the House to the south overlooking the River Dee and the hills beyond. However, the alignment could, potentially compromise the setting of the House due to the introduction of new OHL towers in the landscape surrounding the GDL, especially where the alignment passes to the northwest of the GDL, and which could intrude into key views of the House, from the B9077 (South Deeside Road). <p>Potential to mitigate impact on the settings of this asset is limited, however, the LoD provides some flexibility to reduce intrusion into key views to and from the designated heritage asset through micro-siting of towers, subject to other constraints. Overall, there is some scope, through micro-siting of towers to reduce but not remove the constraints from this designated asset.</p>	A

Topic and Criteria	Option	Constraints	Evaluation of Constraints	RAG Score
	Alternative Alignment 5b	<p>Cultural Heritage Assets</p> <p>Within 1 km of the edge of the alignment LoD there are:</p> <ul style="list-style-type: none"> Two Category A Listed Buildings, Drum Castle (LB 3113) and Park Bridge (LB 45), of heritage value at the national level and high sensitivity. Nine Category B Listed Buildings of regional importance and medium sensitivity. Seven Category C Listed Buildings of local importance and low sensitivity. <p>The Listed Buildings comprise mostly small residential properties (i.e. farmsteads and crofts), small parish kirks and bridges, all of which have generally localised settings and are not significant constraints.</p> <p>The asset considered to be the most sensitive to change is, Category A Listed Drum Castle (LB 3113). This Castle stands on a ridge north of the River Dee within Drum Castle GDL (GDL 141). Key aspects of the Castle's setting are the woodland and parkland policies in which it stands, the relationship with other Listed Buildings and designed features within the GDL, and the panoramic views afforded from the top of the tower house.</p>	<p>The alignment has been RAG rated as Amber as, although it would avoid direct interaction with any designated assets, it may compromise the setting of the following Listed Building.</p> <ul style="list-style-type: none"> Drum Castle (LB 3113): the edge of the alignment LoD passes within c.510 m to the southwest of the Castle; potentially compromising its setting due to the introduction of new OHL towers in the landscape surrounding the GDL which could especially intrude into panoramic views from the castle tower. <p>Potential to mitigate impact on the settings of this asset is limited, however, the LoD provides some flexibility to reduce intrusion into key views to and from the designated heritage assets through micro-siting of towers, subject to other constraints. Overall, there is some scope, through micro-siting of towers to reduce but not remove the constraints from this designated asset.</p>	A
People Proximity to Dwellings	Alternative Alignment 5a (Potential)	<p>There are ten locations along the alignment where either individual or groups of residential properties are located within approximately 200 m of the edge of the LoD. These are, from south to north:</p> <p>South of Durriss Forest:</p> <ul style="list-style-type: none"> Mill of Mergie located approximately 35 m to the east of the LoD. Calladrum Farm located approximately 175 m to the west of the LoD. Calladrum Cottage located approximately 185 m to the east of the LoD. Meikle Dams located approximately 185 m to the west of the LoD. Millton and Wester Durriss Farm located within the LoD. West Lodge Park and New West Lodge located approximately 100 m to the southeast of the LoD. Two properties at Woodside and Upper Park West located approximately 145 m to the northwest of the LoD. 	<p>This alignment has been RAG rated as Amber. The majority of the LoD provides some flexibility for an OHL alignment to be located at a distance of more than four times the nominal tower height (approx. 240 m) from most residential properties. However, it is considered that the presence of other constraints in the alignment LoD may make this difficult to achieve in some locations. This alignment has fewer properties located within 200 m of the LoD in comparison to Alternative Alignment 5b, however this alignment would bring an OHL within very close proximity to two residential properties at Millton and Wester Durriss Farm which are located within the LoD.</p> <p>Achieving a distance of more than four times the nominal tower height would not be possible where the alignment is highly constrained by Millton and Wester Durriss Farm. These properties are located within the LoD which reduces the width in which to locate an OHL within the LoD. Due to the location of these properties within the LoD, an OHL would be located within very close proximity to these properties. However, this alignment will follow the corridor of the existing OHL, so infrastructure will be a similar distance from the property. Subject to the realignment of the existing 275 kV OHL</p>	A

Topic and Criteria	Option	Constraints	Evaluation of Constraints	RAG Score
		<ul style="list-style-type: none"> • Lochwood Cottage located approximately 85 m to the east of the LoD. • Woodbank House and Westhills Cottage located approximately 95 m and 175 m to the west of the LoD. • Three properties at Hill of Park located approximately 165 m to the east of the LoD. <p>Calladrum Farm and Meikle Dams are also located approximately 180 m to the southwest and 200 m west respectively of the existing 275 kV OHL which is required to be diverted as a result of the proposed 400 kV OHL. Millton and Wester Durris Farm are also located approximately 70m and 90 m respectively to the east of the existing 275 kV OHL.</p>	<p>however, the LoD offers opportunity to achieve distances between two to four times the nominal tower height between the OHL and the properties. The alignment would therefore be developed to maximise the separation as far as practicable. There is also the potential for temporary diversions to be closer to the property than the current or new OHL, but this would be a temporary effect.</p> <p>Properties at Woodbank House and Hill of Park also constrain the alignment as they form a pinch point along the LoD. Their respective locations either side of the alignment and their distance from the LoD are likely to prevent distances of more than four times the nominal tower height being achieved. This pinch point however still offers space and flexibility to maximise the separation as far as practicable within distances between two to four times the nominal tower height.</p> <p>Elsewhere, the LoD offers opportunity for the OHL to be located at a distance of more than four times the nominal tower height from the remaining dwellings that are located within 200 m of the LoD, subject to other constraints.</p> <p>Properties at Calladrum Farm and Meikle Dams constrain the alignment due to their distance from the diverted existing 275 kV OHL. There is some flexibility within the LoD of the existing OHL to achieve distances between two to four times the nominal tower height between these properties and the diverted existing OHL.</p>	
	<p>Alternative Alignment 5b</p>	<p>There are 24 locations along the alignment where either individual or groups of residential properties are located within approximately 200 m of the edge of the LoD. These are, from south to north:</p> <p>South of Durris Forest:</p> <ul style="list-style-type: none"> • Mill of Mergie located approximately 100 m to the east of the LoD • Roadside Cottage located approximately 125 m to the south of the LoD. • Hillside located approximately 80 m to the south of the LoD. • Cowhill located approximately 80 m to the northwest of the LoD. • Easter Auquhollie located approximately 150 m to the west of the LoD. <p>Between Durris Forest and the River Dee:</p>	<p>This alignment has been RAG rated as Amber. The majority of the LoD provides some flexibility for an OHL alignment to be located at a distance of more than four times the nominal tower height (approx. 240 m) from most residential properties. However, it is considered that the presence of other constraints in the alignment LoD may make this difficult to achieve in some locations. This alignment will affect a larger number of people, in comparison to Alternative Alignment 5a (Potential), due to the density of properties and people in the settlement of Drumoak that are within close proximity to the LoD. The number and density of people at Drumoak is therefore the key constraint for this alignment.</p> <p>The number and density of properties at Drumoak to the west and south of the LoD, and the presence of Drumoak Primary School is a key constraint as this alignment would bring an OHL closer to a larger number and concentration of people, in comparison to the Potential Alignment.</p>	<p>A</p>

Topic and Criteria	Option	Constraints	Evaluation of Constraints	RAG Score
		<ul style="list-style-type: none"> • Myrtle Mains and Myrtle Steading located approximately 100 m to the west of the LoD. • Two properties at East Brachmont located approximately 195 m to the west of the LoD. • A group of properties at Coreshill Farm located between approximately 80 m and 185 m to the east of the LoD. • Two properties at Currackstane located approximately 200 m to the west of the LoD. • Skinners Cottage located approximately 150 m to the west of the LoD. • Tillyview located approximately 160 m to the west of the LoD. • Upper Ashentilly located approximately 190 m to the west of the LoD. • A group of properties at Craiglug located between approximately 60 m and 200 m to the east of the LoD. <p>North of the River Dee:</p> <ul style="list-style-type: none"> • Hatchery Cottage located approximately 175 m to the east of the LoD. • Dalmaik Farmhouse located approximately 110 m to the west of the LoD. • Three properties at Mosside located between approximately 75 m and 95 m to the east of the LoD. • A group of properties at Greenbank located between approximately 100 m and 200 m to the southwest of the LoD, the closest of which is approximately 65 m from the LoD. • Two properties at Moss-side Cottage and Linardon located approximately 75 m and 130 m respectively to the northeast of the LoD. • Rosehall Cottage and two properties at Rosehall Farm located approximately 40 m and 180 m respectively to the northeast of the LoD. • Newton of Drum is located approximately 110 m to the northeast of the LoD and 460 m northeast of Drumoak; 	<p>A further constraint is formed by the locations and proximity of properties to the southeast of Drumoak which prevent distances of more than four times the nominal tower height from dwellings being achieved. These properties include Dalmaik Farmhouse and dwellings at Mosside to the east of the River Dee, Greenbank and Moss-side Cottage/ Linardon to the southeast of Drumoak and properties on the southeastern edge of Drumoak and Rosehall Cottage and Rosehall Farm. Their positions and proximity either side of the LoD are likely to reduce the flexibility to achieve distances of more than four times the nominal tower height from the OHL, however distances between two to four times the nominal tower height can be achieved. As such the alignment would be developed to maximise the separation as far as practicable.</p> <p>Further north, Newton of Drum and the three properties at Newton Cottage also reduce the degree of flexibility within the LoD as they are located within 200 m either side of the LoD. The three properties at Newton Cottage also constrain the LoD where it passes through a gap between these properties, The Bowery and the group of properties at South Coldstream to the north of the LoD. The location of these properties provides a narrow gap for the OHL to be aligned through however there is potential to achieve distances beyond 170 m between properties and the OHL.</p> <p>Elsewhere, the LoD offers opportunity for the OHL to be located at a distance of more than four times the nominal tower height from the remaining dwellings that are located within 200 m of the LoD, subject to other constraints.</p>	

Topic and Criteria	Option	Constraints	Evaluation of Constraints	RAG Score
		<ul style="list-style-type: none"> • Three properties at Newton Cottage which are located approximately 75 m from the LoD to the southeast, and 250 m north of Drumoak; • Five properties at South Coldstream Farm the closest of which is located 100 m to the north of the LoD, over 500 m to the north of Drumoak; • The Bowery which is located approximately 55 m from the to the south, and 270 m north of Drumoak; • Two properties at Barrowsgate which are located approximately 110 m and 130 m from the LoD to the southwest, and over 500 m northwest of Drumoak; and • Three properties at West Coldstream, the closest of which is located approximately 90 m from the LoD to the northeast, over 1 km to the northwest of Drumoak 		
<p>Landscape and Visual Designations</p> <p>Landscape Character</p> <p>Visual</p>	<p>Alternative Alignment 5a (Potential)</p>	<p>Landscape Designations</p> <p>Approximately 3 km of the northern part of the alignment intersects the Dee Valley Special Landscape Area (SLA). The special qualities of the SLA most relevant to this part of the designation where the alignment intersects include:</p> <ul style="list-style-type: none"> • <i>“Broad, meandering river, with wooded banks rising to moorland hills and occasional limestone outcrops.</i> • <i>Broadleaf woodland contributes to visual diversity and habitat value all along the valley, and reflect long history of estate development.</i> • <i>Key routes through the valley include the Royal Deeside Railway, the Deeside Tourist Route and long distance walking, cycling and horse riding trails. The valley is seen by large numbers of people using these routes.”</i> 	<p>This alignment has been RAG rated as Amber as the Dee Valley SLA constrains the LoD. An OHL located within this part of the SLA would perceptually and visually alter the context of the <i>‘broad meandering river, with wooded banks...’</i> which is a notable special quality of the SLA. An OHL through this part of the SLA would also affect the visual and perceptual experiences of people within the SLA including recreational users travelling along key routes within the designation, such as NCN route 195 and the Deeside Way core path, with such use considered as a special quality of the SLA.</p> <p>The presence of woodland, particularly along the banks and floodplain of the River Dee also contribute to the special qualities of the SLA. Tree felling is likely to be required to facilitate the OHL in the woodland on the immediate banks of the river where the LoD crossing the river.</p>	<p>A</p>
	<p>Alternative Alignment 5b</p>	<p>Landscape Designations</p> <p>Approximately 2 km of the northern part of the alignment intersects the eastern edge of the Dee Valley Special Landscape Area (SLA). The special qualities of the SLA most relevant to this part of the designation where the alignment intersects include:</p> <ul style="list-style-type: none"> • <i>“Broad, meandering river, with wooded banks rising to moorland hills and occasional limestone outcrops.</i> 	<p>This alignment has been RAG rated as Amber as the Dee Valley SLA constrains the LoD. An OHL located within this part of the SLA would perceptually and visually alter the context of the <i>‘broad meandering river, with wooded banks...’</i> which is a notable special quality of the SLA. An OHL through this part of the SLA would also affect the visual and perceptual experiences of people within the SLA including recreational users travelling along key routes within the designation, such as the National Cycle Network</p>	<p>A</p>

Topic and Criteria	Option	Constraints	Evaluation of Constraints	RAG Score
		<ul style="list-style-type: none"> <i>Broadleaf woodland contributes to visual diversity and habitat value all along the valley, and reflect long history of estate development.</i> <i>Key routes through the valley include the Royal Deeside Railway, the Deeside Tourist Route and long distance walking, cycling and horse riding trails. The valley is seen by large numbers of people using these routes."</i> 	<p>(NCN) route 195 and the Deeside Way core path, with such use considered as a special quality of the SLA.</p> <p>The presence of woodland, particularly along the banks and floodplain of the River Dee also contribute to the special qualities of the SLA. The alternative alignment however would require limited felling to woodland within this part of the SLA.</p>	
	<p>Alternative Alignment 5a (Potential)</p>	<p>Landscape Character</p> <p>This alignment crosses three landscape character types including from south to north, the Summits and Plateaux – Aberdeenshire LCT, the Broad Wooded and Farmed Valley LCT and the Wooded Estates – Aberdeenshire LCT.</p> <p>The southern end of the alignment crosses elevated landform at Fetteresso Forest, which is characterised by rolling landform and commercial forestry, and forms part of the upland and plateau landscape of the eastern end of the Highland Boundary Fault. Further north, the alignment continues to cross elevated landform as it passes through Durriss Forest. Both of these elevated areas are generally large in scale and are characterised by existing man-made influence including commercial forestry, high voltage OHLs and a number of the masts on surrounding hill summits. These areas also provide an elevated backdrop to the surrounding low-lying areas to the north and south.</p> <p>At the River Dee, the alignment crosses semi-natural broadleaved woodland along the banks of the river. Further north at Loch of Park, the alignment intersects the eastern edge of an area of semi-natural woodland as well as an area of LEPO and semi-natural woodland at Collonach Plantation and Coldstream Plantation. These woodlands are characteristics features of the landscape, particularly along the River Dee where woodland contributes to the setting of the river and at Loch of Park where woodland contributes to a sense of enclosure and a small scale, intimate landscape character.</p>	<p>This alignment has been RAG rated as Amber as the alignment would cross areas of elevated landscape and three characteristic areas of LEPO and/or broadleaved woodland, therefore compromising landscape character.</p> <p>The alignment would compromise the character of the elevated upland landscapes at Fetteresso Forest and Durriss Forest that form part of the Highland Boundary Fault and form the characteristic backdrops for the settled lowland areas to the north and south. In these areas, the OHL would sit at an elevated position within the landscape and would therefore be more prominent within the landscape. However, the larger scale and forested nature of these upland areas are likely to better accommodate an OHL than the slightly lower-lying, and more open, upland area to the east of Durriss Forest. The OHL would also be located within a landscape that has already been influenced by vertical man-made elements, including an existing 275 kV OHL which most of the alignment runs parallel to between Fetteresso Forest and the River Dee. Given that the majority of the alternative alignment would run parallel to the existing high voltage OHL, locating an OHL in this alignment would contain the effects of the development within areas of the landscape that are already affected by existing OHL development.</p> <p>Where the alignment crosses areas of broadleaved and LEPO woodland, including along the River Dee, at Loch of Park and at Collonach Plantation and Coldstream Plantation, larger areas of tree felling would be required to accommodate an OHL. The OHL offers limited opportunity to avoid felling in these woodlands and as such, the role these woodlands play in contributing to the local landscape character of the Dee Valley, would be compromised. This is particularly constraining at the River Dee and Loch of Park where semi-natural broadleaved woodland forms highly characteristic and scenic features within the landscape.</p>	<p>A</p>
	<p>Alternative Alignment 5b</p>	<p>Landscape Character</p>	<p>This alignment has been RAG rated as Amber as the alignment would cross areas of elevated landscape and three areas of characteristic areas of LEPO</p>	<p>A</p>

Topic and Criteria	Option	Constraints	Evaluation of Constraints	RAG Score
		<p>This alignment crosses four landscape character types including from south to north, the Summits and Plateaux – Aberdeenshire LCT, the Farmed Moorland Edge – Aberdeenshire LCT, the Broad Wooded and Farmed Valley LCT and the Wooded Estates – Aberdeenshire LCT.</p> <p>The southern end of the alignment crosses elevated landform at Fetteresso Forest, which is characterised by rolling landform and commercial forestry, and forms part of the upland and plateaux landscape of the eastern end of the Highland Boundary Fault. Further north, to the east of Durris Forest, the alignment continues to cross elevated landform and intersects Meikle Carewe Hill and Hill of Montsnaught. This area forms a slightly less elevated part of the prominent upland and plateaux landscape that forms the eastern end of the Highland Boundary Fault. Both of these elevated areas are generally large in scale and are characterised by existing man-made influence including commercial forestry, high voltage OHLs and the operational Meikle Carewe Wind Farm to the east of the LoD. These areas also provide an elevated backdrop to the surrounding low-lying areas to the north and south.</p> <p>Further north, the alignment descends across a steep slope at Craiglug as it drops from higher elevation down into the Dee Valley. This slope forms the southern slopes of the valley and provides the southern backdrop to the River Dee. This slope is also covered by an area of LEPO woodland, which contains some broadleaved woodland that contributes to the landscape character of the Dee Valley. Where the alignment crosses the River Dee, it also crosses narrow belts of broadleaved woodland that line the river and contribute to the character of the valley. The alignment also intersects a small area of LEPO woodland northeast of Drumoak. This area of woodland is a local feature that also contributes to landscape character.</p> <p>To the east of Drumoak, the alignment crosses rising landform and an area of slightly elevated and undulating landform to the north of Drumoak, which forms the backdrop to this settlement.</p>	<p>and/or broadleaved woodland, therefore compromising landscape character.</p> <p>The alignment would compromise the character of the elevated upland landscapes at Fetteresso Forest and to the east of Durris Forest that form part of the Highland Boundary Fault and form the characteristic backdrops the settled lowland areas to the north and south. In these areas, including around Meikle Carewe Hill and Hill of Montsnaught, the OHL would sit at an elevated position within the landscape and would therefore be more prominent within the landscape. The LoD however offers flexibility to locate the OHL on the lower slopes of Meikle Carewe Hill and Hill of Montsnaught to reduce the prominence of the OHL within the landscape. The OHL would also be located within a landscape that has already been influenced by vertical man-made elements, and for a short section at Meikle Carewe Hill, the OHL would run parallel to the existing 275 kV OHL to the east. Further north however, the alignment and existing OHL would separate. As such, a further OHL would spread and widen the effects of OHL development, introducing effects in parts of the landscape beyond the extents that are currently influenced by the existing high voltage OHL.</p> <p>At the Dee Valley, the alignment would compromise landscape character as the OHL would run against the grain of the valley and would form a prominent vertical feature as it drops from an elevated position down into the valley at Craiglug. Due to the smaller scale of the Dee Valley, the OHL is likely to appear out of scale with the valley, particularly where it crosses more intimate areas at the River Dee.</p> <p>Where the alignment crosses areas of broadleaved and LEPO woodland, including at Craiglug, along the River Dee and northeast of Drumoak, tree felling would be required to accommodate an OHL. The OHL offers limited opportunity to avoid felling in these woodlands and as such, the role these woodlands play in contributing to the local landscape character of the Dee Valley would be compromised.</p>	
	<p>Alternative Alignment 5a (Potential)</p>	<p>Visual</p> <p>Visual receptors at scattered residential properties and people travelling along recreational routes and the local road network form a constraint. Visual receptors that particularly form a constraint at the southern end of the alignment include residents at Mill of Mergie who are likely to have some open views to the west towards the alignment</p>	<p>This alignment has been RAG rated as Red as an OHL in this alignment would compromise visual amenity experienced by sensitive visual receptors at two very close proximity properties at Milton and Wester Durris Farm, both of which are located within the LoD.</p> <p>Residents at Milton and Wester Durris Farm form a key constraint along the alignment as they are located within the LoD. As a result, an OHL in this</p>	R

Topic and Criteria	Option	Constraints	Evaluation of Constraints	RAG Score
		<p>at a distance of approximately 20 m from the LoD. Residents at Calladrum Farm and Calladrum Cottage form a constraint as these properties offer open views towards the alignment at distances of 170 m and 180 m from the LoD respectively. Residents at Meikle Dams constrain the alignment as the property offers some open views east towards the OHL at distances of approximately 185 m from the LoD.</p> <p>Residents at Milton and Wester Durris Farm form a key visual constraint due to their located within the LoD and the availability of open views to the west towards the alignment from these properties. These properties also currently have close proximity views of the existing 275 kV OHL located between approximately 70 m and 90 m to the west.</p> <p>To the north of the River Dee, residents at properties at West Park constrain the alignment as the properties have some open views east towards the alignment as well as existing close proximity views of the existing 275 kV OHL that intersects the curtilage of one property at this location. Residents at Woodside and Upper Park West constrain the alignment as the properties offer open views southeast towards the alignment, at distances of approximately 145 m from the LoD. Residents at Lochwood Cottage also constrain the alignment as the property offers open views towards the alignment at distances of approximately 90 m from the LoD, as well as residents at Hill of Park who have some open views towards the alignment at distances of approximately 165 m from the LoD.</p> <p>Recreational receptors travelling within and along the Dee Valley form a visual constraint, including along NCN route 195 and the Deeside Way core path.</p> <p>The existing 275 kV OHL, which the alignment runs parallel to between Fetteresso Forest and the River Dee, forms a visual constraint as it would have cumulative visual interactions with the OHL. Properties at Milton and Wester Durris and at West Park are particularly constraining due to their location and proximity in relation to the existing OHL and the LoD.</p>	<p>alignment would be located within very close proximity to these properties and as such form a very prominent feature in views. The towers would be particularly prominent as they would be seen as large scale and very dominant structures that would compromise the view from these properties. These properties currently have views of the existing 275 kV OHL located within 100 m to the west. Commentary on likely cumulative visual impacts on these properties is provided below.</p> <p>Visual receptors at a number of further residential properties constrain the alignment due to their distance of <200 m from the LoD and the availability of open views towards the alignment. Visual receptors at these properties, including some of the closest properties to the LoD (<100 m) such as Mill of Mergie, and Lochwood Cottage, would have close proximity and open views with the OHL forming a very prominent feature in views. The level of constraint could be reduced from most of these properties as the LoD offers opportunity to increase the distance in which the OHL would be seen from the properties. This opportunity however is likely to be limited where the alignment passes through the pinch point formed by properties at Woodbank House and Hill of Park where their respective locations either side of the LoD limit the available width in which to increase the distance the OHL would be seen in views.</p> <p>Recreational receptors travelling on routes along the River Dee and that intersect the LoD would have close proximity views of the OHL where towers would appear as large scale prominent features in the landscape, particularly on the approach to the OHL.</p> <p>Cumulative visual interactions as a result of the existing 275kV OHL to the west of the alignment would be most constraining where the alignment and existing OHL pass the properties at Milton and Wester Durris and at West Park. Views to the west from Milton and Wester Durris are currently affected by the existing OHL that passes within 90 m of these properties. An OHL in this alignment would result in a second, and larger scale OHL being visible to the west, resulting in a greater number of vertical man-made features being present in close proximity views, as well as visual confusion caused by the difference in height and scale between the existing and OHLs. Properties at West Park currently have close proximity views of the existing OHL to the west, as the OHL intersects the curtilage of one of these properties. An OHL in this alignment would therefore introduce an OHL in close proximity views to the east, resulting in two view directions (east and west) being affected by OHL development. An OHL in this alignment would also contribute to wider cumulative effects on views within the Dee Valley, as this part of the Dee</p>	

Topic and Criteria	Option	Constraints	Evaluation of Constraints	RAG Score
			<p>Valley is currently intersected by two existing OHLs. A further OHL would increase the influence of OHL development and the number of man-made vertical elements visible within the valley, further compromising the wider visual amenity within the valley.</p>	
	<p>Alternative Alignment 5b</p>	<p>Visual</p> <p>Visual receptors at scattered residential properties and people travelling along recreational routes and the local road network form a constraint. Visual receptors that particularly form a constraint at the southern end of the alignment include residents at Mill of Mergie who are likely to have some open views to the west towards the alignment at a distance of approximately 100 m from the LoD. Residents at Roadside Cottage who have some open views north towards the alignment at distances of approximately 125 m from the LoD form a constraint. Residents at Cowhill and Easter Auquhollie also form a constraint as the properties offer open views to the east and southeast towards the alignment at distances of approximately 80 m and 150 m from the LoD respectively.</p> <p>Further north, residents at Myrtle Mains and two properties at East Brachmont form a constraint as these properties offer open views to the east towards the alignment at distances of approximately 100 m and 195 m from the LoD respectively. Residents at Coreshill Farm, Currackstane, Skinners Cottage and Tillyview form constraints along the alignment as these properties offer open views towards the alignment at distances between 80 m and 200 m from the LoD. Residents at some of the closer properties at Craiglug also have some open views west and north towards the alignment at distances of approximately 60 m from the LoD.</p> <p>North of the River Dee, residents at Hatchery Cottage constrain the alignment due to open views offered by the property towards the alignment to the west, at distances of approximately 175 m from the LoD. It is likely that Dalmaik Farmhouse offers open views to the northeast towards the alignment at distances of approximately 110 m from the LoD. Residents at the three properties at Mossie constrain the route as these properties offer some open views southwest towards the alignment at distances between approximately 75 m and 95 m from the LoD. Residents at Greenbank, Moss-side Cottage, Rosehall Cottage, and Rosehall Farm form constraints along the alignment as these properties offer open views towards the alignment</p>	<p>This alignment has been RAG rated as Red as an OHL in this alignment would compromise visual amenity experienced by a large number and concentrated density of people at the settlement of Drumoak.</p> <p>Where the alignment passes to the east and north of Drumoak, the OHL would be located in very close proximity to residents on the eastern and northern edges of the settlement, occupying views from properties. In these views, and from other parts of Drumoak with open views to the east and north, the OHL infrastructure will appear as large scale and highly dominant features. As such, an OHL in this alignment would compromise views and the visual setting of a higher density and concentrated group of people at Drumoak, particularly given the proximity of the OHL to the settlement.</p> <p>Visual receptors at a number of further residential properties constrain the alignment due to their distance of <200 m from the LoD and the availability of open views towards the alignment. Visual receptors at these properties, including some of the closest properties to the LoD (<100 m) such as Cowhill, Coreshill Farm, Craiglug, Mossie, Moss-side Cottage, Newton Cottage and Newcairn would have close proximity and open views with the OHL forming a very prominent feature in views.</p> <p>The level of constraint could be reduced from most of these properties as the LoD offers opportunity to increase the distance in which the OHL would be seen from them. This however is likely to be challenging where the alignment passes through the pinch point formed by properties along the northern edge of Drumoak and properties at Newton Cottage, Newcairn where their respective locations either side of the LoD limit the available width in which to increase the distance the OHL would be seen in views. This is also likely to be challenging where properties to the southeast of Drumoak form pinch points including Greenbank, Moss-side Cottage and Rosehall Cottage which are located on either side of the LoD.</p> <p>Recreational receptors travelling along routes within the Dee Valley and that intersect the LoD visually constrain the alignment as these visual receptors would have close proximity views of the OHL where towers would appear as large scale prominent features in the landscape, particularly on the approach to the OHL.</p>	<p>R</p>

Topic and Criteria	Option	Constraints	Evaluation of Constraints	RAG Score
		<p>at distances between 40 and 200 m from the LoD. Residents at properties on the eastern and northern edges of Drumoak form a constraint as this settlement forms a higher density of visual receptors, with many of these properties offering open views east and north towards the alignment at close proximity.</p> <p>Newton Cottage and Newcairn also offer open views south towards the alignment at distances of approximately 75 from the LoD, as well as five properties at South Coldstream Farm (the closest of which is located 100 m to the north of the LoD), and two properties at Barrowsgate with open views to the south towards the alignment at distances of approximately 110 m and 130 m from the LoD. Residents at three properties at West Coldstream also form a constraint as these properties are likely to offer some open views northeast towards the alignment at distances of approximately 90 m from the LoD.</p> <p>Recreational receptors travelling within and along the Dee Valley form a visual constraint, including along NCN route 195 and the Deeside Way core path near Drumoak. Visitors to Drum Castle GDL, the edge of which is abutted by the alignment, north of Drumoak, form a visual constraint.</p> <p>The local hills of Meikle Carewe Hill and Hill of Montsnaught form a constraint as their more pronounced nature would affect the overall visibility of the OHL.</p> <p>Existing vertical elements within the landscape, namely the existing 275 kV OHL to the east of the alignment and Meikle Carewe Wind Farm constrain the alignment as these developments would have cumulative visual interactions with the OHL. Properties at Rumbleyond, Corsehill, Hardhillock and Nether Ashentilly are particularly constraining due to their location between the existing OHL and the alignment.</p>	<p>Views to the south and southwest experienced by people visiting Drum Castle may be compromised by the OHL due to its close proximity to the grounds. The level of constraint is reduced by the degree of screening that is provided by broadleaved and coniferous woodland within and around the grounds of Drum Castle, which would result in partially or glimpsed visibility of the OHL.</p> <p>Where the alignment intersects the area of elevated landform at Meikle Carewe Hill and Hill of Montsnaught, the OHL may appear more prominent in views experienced by surrounding visual receptors including nearby residents, as the OHL would be seen higher along the horizon. The LoD however offers flexibility to locate the OHL on the lower slopes of these local hills to reduce the visual prominence within the landscape.</p> <p>Cumulative visual interactions as a result of the existing 275 kV OHL to the east of the alignment would be most constraining where the alignment and existing OHL sit separately north of Rickarton and further north from Hill of Montsnaught northwards. A further OHL would spread and widen the visual effects of OHL development, increasing the number of man-made vertical elements that are seen in views, or would introduce effects in parts of the landscape where views are currently unaffected by OHL development. Residents at dwellings at Rumbleyond, Corsehill, Hardhillock and Nether Ashentilly are particularly vulnerable to cumulative visual interactions as the alignment would result in these properties being enclosed by OHL development on two sides. This would result in these properties having close proximity views of OHLs on either side, with the existing OHL visible to the east and the OHL visible to the west. An OHL in this alignment would also contribute to wider cumulative effects on views within the Dee Valley, as this part of the Dee Valley is currently intersected by two existing OHLs. A further OHL would increase the influence of OHL development and the number of man-made vertical elements visible within the valley, further compromising the wider visual amenity within the valley.</p>	G
<p>Land Use Agriculture</p>	<p>Alternative Alignment 5a (Potential)</p>	<p>Agriculture</p> <p>The majority of the length of the alignment intersects with non-prime agricultural land; from Mergie to north of Durris Forest, the land is mostly Class 5.2 and 5.3 with some areas of 3.2, 4.2 and 6.3; from Durris Forest to Coldstream Plantation, the alignment crosses land consisting largely of Class 3.2 with some areas of Class 4.2</p>	<p>This alignment has been assigned a RAG rating of Green as the areas of Class 3.1 land are limited to small strips of land and could be spanned or avoided.</p> <p>The alignment has the potential to interact with these areas of land, but it is unlikely to compromise its viability as an agricultural resource. The area of land between the River Dee and Kirkton of Durris could likely be spanned as it is a narrow strip of land. The two areas of land to the north of the A93, which are overlapped by approximately half of the width of the LoD, could be avoided taking account of the potential to align the OHL to avoid much of</p>	G

Topic and Criteria	Option	Constraints	Evaluation of Constraints	RAG Score
		<p>The alignment intersects with three small areas of prime agricultural land (Class 3.1 Land capable of producing consistently high yields of a narrow range of crops and/or moderate yields of a wider range):</p> <ul style="list-style-type: none"> one small area is spanned by the alignment, located between the River Dee and Kirkton of Durris; the western extent of the LoD overlaps with part of an area of prime agricultural land to the north of the A93 at Upper Park Steading; and the eastern extent of the LoD overlaps with part of an area of prime agricultural land to the north of the A93 to the south of Upper Park Farm. 	<p>the prime agricultural land. It is likely that no towers would be located on prime agricultural land and therefore the alignment would only affect land of lower classes</p>	
	Alternative Alignment 5b	<p>Agriculture</p> <p>The majority of the length of the alignment intersects with non-prime agricultural land; from Mergie to Nether Auquhollie, the land is mostly Class 3.2 and 4.1 with some areas of 5.2 and 5.3; from Nether Auquhollie to Newlands, the land consists largely of 4.2 and 5.2; and from Newlands to north of Coldstream Plantation, the land is mostly Class 3.2 with some pockets of Class 4.1 and 5.3.</p> <p>The alignment intersects with one small area of prime agricultural land (Class 3.1 Land capable of producing consistently high yields of a narrow range of crops and/or moderate yields of a wider range) located to the southeast of Drumoak, parallel to the A93.</p>	<p>This alignment has been assigned a RAG rating of Green as the area of Class 3.1 land is limited to one small strip of land parallel to the A93 and could be spanned.</p> <p>The alignment has the potential to interact with this area of land, but it is unlikely to compromise its viability as an agricultural resource. It is likely that no towers would be located on prime agricultural land and therefore the alignment would only affect land of lower classes.</p>	G
Land Use Forestry	Alternative Alignment 5a (Potential)	<p>Forestry</p> <p>The alignment intersects with six areas of woodland comprised (or partly comprised) of commercial forestry:</p> <ul style="list-style-type: none"> Durris Forest, which forms part of the NFE and is managed by FLS is intersected by the alignment in three locations: from Blackburn Moss to Calladrum for a distance of approximately 3.8 km (NGR NO 79179 92877), west of Little Tulloch at Kirkton Wood for approximately 350 m (NGR NO 77393 95062) and southwest of Kirkton of Durris at Free Church Wood for approximately 650 m (NGR NO 76907 95644). One small unnamed woodland area located to the north of the River Dee (NGR NO 76810 96923) is intersected by the alignment. 	<p>This alignment has been RAG rated as Amber as it intersects the edge of, or passes close to and through, multiple areas of commercial forestry where interaction with woodland management and operations may compromise the commercial viability or returns from the forestry.</p> <p>The alignment is constrained to some extent by the presence of woodland areas with some commercial forestry activity likely to be present. At these points, tree clearance for an operational corridor within these woodlands may compromise commercial returns from these enterprises as some felling and/ or re-design of planting may be required to accommodate the OHL.</p> <p>Approximately 3.8 km of the length of the alignment intersects through the centre of Durris Forest, which forms part of the NFE. There is the potential for the alignment to be located within the operational corridor where an existing OHL is located within Durris Forest from Blackburn Moss to Calladrum. Further felling would be required to widen this operational</p>	R

Topic and Criteria	Option	Constraints	Evaluation of Constraints	RAG Score
		<ul style="list-style-type: none"> The alignment LoD intersects with the southeastern edge of the Collonach Plantation (NGR NO 77287 99429) to the northwest of Hill of Park House. The alignment intersects with Coldstream Plantation (NGR NO 77338 99769) to the northwest of Hill of Park House. As the alignment would require the diversion of the existing 275 kV OHL to the west of Kirkton of Durriss, this diversion would intersect with an area of woodland comprising commercial forestry. Free Church Wood is part of Durriss Forest and forms part of the NFE managed by FLS. The woodland area is already intersected by the OHL (see above) and would be further intersected by the diversion for a length of approximately 710 m (NGR NO 77020 95466). 	<p>corridor and to create a wind firm edge where coniferous woodland is present. It is considered that the alignment in this location may compromise the commercial returns of this area, due to the length of the alignment within the forest and the additional felling required</p> <p>The alignment intersects with Kirkton Wood and Free Church Wood to the south of the River Dee, which are both part of Durriss Forest. The alignment also intersects with an area of woodland located to the north of the River Dee and the southeastern edge of Collonach Plantation. Some felling may be required to create an operational corridor and a wind firm edge where coniferous woodland is present. Taking into account the potential to align the OHL to avoid much of these woodland areas, it is considered unlikely that the alignment would compromise the commercial returns of this area due to the small areas of the woodland that may require to be felled.</p> <p>As the alignment would require a diversion of the existing 275 kV OHL, the diverted OHL would intersect with approximately 710 m of Free Church Wood. Felling would be required to create an operational corridor and a wind firm edge where coniferous woodland is present. The alignment therefore would interact with forestry operations and may compromise future commercial returns from the site.</p> <p>The alignment LoD intersects the centre of Coldstream Plantation, with the potential for at least one tower to require location within the wooded area. Despite the plantation being felled, the alignment would have some potential to interact with forestry operations and may compromise future commercial returns from the site due to required changes in planting and management.</p>	
	<p>Alternative Alignment 5b</p>	<p>Forestry</p> <p>The alignment intersects with woodland comprised (or partly comprised) of commercial forestry in seven locations:</p> <ul style="list-style-type: none"> The eastern extent of the LoD intersects a woodland block comprising mainly mature commercial forestry, located to the west of Rickarton (NGR NO 80433 89901). The alignment intersects three woodland blocks comprising commercial forestry to the north of Rickarton, to the west of Auquhollie Wood (NGR NO 81662 90407, NGR NO 81711 90589, NGR NO 81850 90589). The western extent of Durriss Forest (which forms part of the National Forest Estate (NFE) and is managed by Forestry and Land 	<p>This alignment has been RAG rated as Amber as it intersects the edge of, or passes close to and through, multiple areas of commercial forestry where interaction with woodland management and operations may compromise the commercial returns from the forestry.</p> <p>The alignment is constrained to some extent by the presence of woodland areas with some commercial forestry activity likely to be present. At these points, tree clearance for an operational corridor within these woodlands may compromise commercial returns from these enterprises as some felling and/ or re-design of planting may be required to accommodate the OHL.</p> <p>The alignment LoD intersects with the edges of a woodland to the west of Rickarton, the edge of three areas of woodland to the north of Rickarton, an area of woodland to the east of Durriss Forest, as well as the southwestern</p>	<p>R</p>

Topic and Criteria	Option	Constraints	Evaluation of Constraints	RAG Score
		<p>Scotland (FLS)) is intersected by the alignment in two locations: to the north of the Hill of Montsnaught (NGR NO 82366 94328) and at Craiglug Wood, part of Durriss Forest, to the south of River Dee (NGR NO 81189 97716)</p> <ul style="list-style-type: none"> Approximately two-thirds of the LoD intersects a woodland block comprising commercial forestry to the east of the Durriss Forest and Skinner’s Cottage (NGR NO 81873 96691). One unnamed woodland block in the southern section of the alternative alignment, located to the east of Drumoak, is comprised of commercial forestry (at NGR NO 79602 99412). The LoD intersects with the southwestern corner of the woodland area. The LoD intersects with an unnamed woodland area located to the north of Drumoak, and is comprised of mixed, mainly coniferous woodland (at NGR NO 79185 99904). Coldstream Plantation (at NGR NO 77721 00052), located to the northwest of Drumoak in the northern part of the alignment, is comprised predominantly of commercial forestry. Field surveys have noted that this plantation has been extensively felled. 	<p>edge of the woodland area to the north and east of Drumoak. Some felling may be required to create an operational corridor and a wind firm edge where coniferous woodland is present. Taking into account the potential to align the OHL to avoid much of these woodland areas, it is considered unlikely that the alignment would compromise the commercial returns of this area due to the small areas of the woodland that may require to be felled.</p> <p>The alignment intersects Durriss Forest in two locations; to the north of the Hill of Montsnaught and at Craiglug Wood. Some felling would be required to create an operational corridor and a wind firm edge. Taking into account that the alignment intersects with a small area of the Durriss Forest with the vast majority of the woodland being located to the west of the alignment, it is considered unlikely that the alignment would compromise the commercial returns of this area.</p> <p>The alignment LoD intersects the centre of Coldstream Plantation, with the potential for at least one tower to require location within the wooded area. Despite the plantation being felled, the alignment would have some potential to interact with forestry operations and may compromise future commercial returns from the site due to required changes in planting and management.</p>	
<p>Land Use Recreation – Paths and Trails</p>	<p>Alternative Alignment 5a (Potential) + Alternative Alignment 5b</p>	<p>Paths and Trails</p> <p>Both alignments cross the same core path (The Deeside Way) and National Cycle Network (NCN) Route (Route 195) to the north of the River Dee; the Alternative Alignment 5b intersects the Mossie Plantation to Drumoak section of path between the settlements of Drumoak and Peterculter, whilst Alternative Alignment 5a intersects the Drumoak to Crathes section of path between the settlements of Drumoak and Crathes. Interaction between the alignment and recreational use of the land in relation to paths and trails has been assessed to be similar for each of the alignments, and therefore this criterion has been scoped out of the appraisal.</p>		
<p>Land Use Recreation - Fishing</p>	<p>Alternative Alignment 5a (Potential)</p>	<p>Fishing</p> <p>The alignment spans two identified fishing beats:</p> <ul style="list-style-type: none"> the western extent of the LoD overlaps with the eastern extent of the Lower Crathes/West Durriss fishing beat on the River Dee to the north of the Kirkton of Durriss. the alignment spans the Park fishing beat on the River Dee to the southwest of the Netherpark Quarry. This fishing beat extends for three miles on both banks and starts from where the Lower Crathes W Durriss fishing beat ends. 	<p>This alignment has been RAG rated as Green as although the alignment will interact with areas used for commercial highland sports (fishing), it is not considered to be a significant constraint.</p> <p>Although the alignment would not be able to avoid this constraint, the fishing let on this watercourse extends for a substantial length of the river, the effects would be localised and are therefore not considered to have the potential to compromise their commercial viability.</p>	G

Topic and Criteria	Option	Constraints	Evaluation of Constraints	RAG Score
	Alternative Alignment 5b	<p>Fishing</p> <p>The alignment spans one identified fishing beat on the River Dee at the Upper Drum and Lower Durris fishing beat to the east of Drumoak which extends downstream for approximately two miles on both banks.</p>	<p>This alignment has been RAG rated as Green as although the alignment will interact with areas used for commercial highland sports (fishing), it is not considered to be a significant constraint.</p> <p>Although the alignment would not be able to avoid this constraint, the fishing let on this watercourse extends for a substantial length of the river, the effects would be localised and are therefore not considered to have the potential to compromise their commercial viability.</p>	G
Planning Proposals	Alternative Alignment 5a (Potential)	<p>Planning</p> <p>The following planning applications were identified that are intersected by the alignment:</p> <ul style="list-style-type: none"> • Planning permission for 10 turbines at Fetteresso Forest was approved upon appeal in 2022. The alignment intersects with the Red Line Boundary (the access track) at Slug Road in the southern section of the alignment (APP/2019/1341) (case reference: WIN-110-1). • The consented Craigneil Wind Farm consisting of 11 wind turbines at 135 m in height lies to the west of Easter Auquhollie to the north of the Slug Road. The alignment crosses through the western area of the boundary (APP/2018/0993) (case reference: PPA-110-2420). A Proposal of Application Notice (PoAN) was submitted to the Aberdeenshire Council planning portal and validated at the start of June 2024 for an updated design layout of seven turbines at 180 m. No change to the boundary has been proposed (ENQ/2024/0640). • The alignment intersects with three planning applications for the prior approval of the formation of a private way (forestry) at NGR NO 79168 91447 (APP/2024/0287), NGR NO 79179 91912 (APP/2024/0545) and NGR NO 79221 92644 (APP/2024/0333). • An approved planning application to permit the continued extraction of sand and gravel for a further 10 years at Netherpark Quarry, is located to the north of the River Dee and is intersected by the alignment (APP/2016/0257). • An application for prior approval for the conversion of an agricultural building to form one dwellinghouse is located approximately 80 m to the east of the alignment LoD to the west of Drumoak (APP/2023/0431) 	<p>This alignment has been RAG rated as Red as it is likely to be inconsistent with already consented third party proposals supported by national or regional planning policy.</p> <p>The access track for the consented proposal for ‘Fetteresso Wind Farm’ located in Fetteresso Forest is intersected by the alignment. The wind farm is located approximately 7.4 km to the southwest of the alternative alignment. As the alignment crosses only the access track, it is unlikely to be a constraint.</p> <p>The alignment intersects with the consented planning application for the Craigneil wind farm, consisting of 11 turbines to the north of Fetteresso Forest. The eastern extent of the alignment LoD is located approximately 110 m from the two western-most turbines. The LoD intersects with the buffers associated with the turbines: a distance of two times the rotor diameter and a distance of the turbine tip with 10%. There is potential to align the OHL at a greater distance from the two western-most turbines. The potential updated wind farm layout (ENQ/2024/0640) proposes larger turbines than previously consented and although one of the western-most turbines would be removed, the other turbine remains in the same location as for the existing consent. Given the proposal to increase the height of these turbines, a larger buffer would be required which would reduce the distance available to align the OHL within the LoD to avoid overlap with this buffer area. Therefore, this planning application is considered to be a significant planning constraint.</p> <p>The alignment intersects with three planning applications for the construction of private ways (forestry) within Durris Forest. These areas cannot be avoided and may require a tower to be sited within the red line boundary. Therefore, all three planning applications are considered to be a constraint to the alignment.</p> <p>The alignment intersects with the western extent of the consented application to continue extraction at Netherpark quarry for another 10</p>	R

Topic and Criteria	Option	Constraints	Evaluation of Constraints	RAG Score
			<p>years. The application was approved in 2018 and would therefore end in 2028. The proposed construction start date of the OHL is 2026. The SSEN Transmission Land team contacted the developer of this site to gather more information. This quarry has now been worked out and is currently undergoing final reinstatement works to return the land to agricultural use. Reinstatement works are expected to be completed within the next 12 months and therefore would not coincide with the potential construction of the OHL. This planning application is not considered a constraint to the alignment.</p> <p>The proposal for the conversion of an agricultural building to a dwellinghouse is located approximately 80 m to the east of the alignment LoD and it is not considered a constraint to the alignment.</p>	
	<p>Alternative Alignment 5b</p>	<p>Planning</p> <p>The following planning applications were identified that are intersected by the alignment:</p> <ul style="list-style-type: none"> The consented Craigneil Wind Farm consisting of 11 wind turbines and ancillary infrastructure lies to the west of Easter Auquhollie to the north of the Slug Road. The alignment LoD intersects with the southernmost edge of the planning application (APP/2018/0993) (case reference: PPA-110-2420). The consented planning application for the erection of an agricultural building at Corsehill Cottage (east of Denside) is intersected by the eastern edge of the alignment LoD (APP/2023/1147). A Tree Preservation Order (TPO) for a mixed woodland (W1) is intersected by the alignment (AC TPO 126 (2020)), located to the east of Drumoak, to the north of the River Dee and A93. This woodland is also listed as LEPO woodland on the AWI (see Natural Heritage Designations). 	<p>This alignment has been RAG rated as Red as it is likely to be inconsistent with already consented third party proposals supported by national or regional planning policy.</p> <p>The alignment LoD intersects with the edges of both the planning consent and planning application at Craigneil (APP/2019/1341) and at Corsehill Cottage (APP/2023/1147). Taking into account the potential to align the OHL to avoid these planning applications, it is considered unlikely that the alignment would be inconsistent with these proposals and are not considered a constraint.</p> <p>The alignment intersects through the centre of a woodland designated as a TPO and cannot be avoided, with at least one tower likely to be sited within the woodland. Felling of this woodland area would likely be required and would be inconsistent with NPF4 Policy 6 and Aberdeenshire LDP Policies E3, PR1 and C3, where there is a presumption against the removal of trees, woodlands and hedgerows.</p>	<p>R</p>

APPENDIX G: APPRAISAL OF ALTERNATIVE ALIGNMENTS AT LOCATION 6: NORTH OF DRUMOAK

This appendix presents the baseline constraints and the findings of the appraisal of key environmental considerations for three alternative alignments at Location 6: North of Drumoak in Section F (Route F1.3) of the Proposed Route and, details the RAG Ratings applied to each alternative identified under each environmental topic as per SSEN Transmission's Routeing Guidance.

The environmental topics consider the following, natural heritage, cultural heritage, people, landscape and visual, land use and planning.

The tables presented in this appendix detail the baseline constraints and the findings of the appraisals based on a study area which comprises the alignment and its LoD, defined here as 100 m either side of the alignment.

Table G1. Environmental Constraints for Alternative Alignments at Location 6: North of Drumoak in Section F

Topic	Option	Constraints ¹⁰	Evaluation of Constraint	RAG Score
Natural Heritage <i>Designations, Protected Species, Habitats</i>	Alternative Alignment 6a (Potential Alignment)	<p>Designations: International, European or National Designations</p> <p>The LoD of the alignment intersects with the River Dee SAC at the southernmost end of the alignment, with the LoD passing between Mosside and Dalmaik close to the SAC.</p> <p>No other statutory designated sites recognised at an international or national level for their natural heritage are intersected by the LoD of this alignment, and there are no other such sites within 400 m of the alignment LoD.</p> <p>The LoD of the alignment intersects the northeast of the LEPO woodland at Coldstream Plantation (NGR NJ 77815 00035) northwest of Drumoak, and a LEPO woodland northeast of Drumoak (NGR NO 795 994). Where the LoD of this alignment intersects with woodland northeast of Drumoak, the woodland is identified on the NWSS as native pinewood and appears on online aerial imagery to have been planted, although it was not accessible during 2023 surveys. Coldstream Plantation comprises a commercial plantation which was noted during field surveys in 2023 to have been recently felled with replanting in progress.</p>	<p>This alignment has been RAG rated as Amber because it may compromise the LEPO woodland northeast of Drumoak, a non-statutory national designation, and may require an operational corridor for the OHL of up to 150 m in length through the LEPO woodland.</p> <p>This alignment is not likely to compromise the conservation status of any statutory international, European or national designation and/or the conservation status of the designated features of any site.</p> <p>The alignment LoD intersects with the edge of the River Dee SAC where it forms a marked bend in the river near Dalmaik. Careful micro-siting and construction of the nearest OHL towers and access tracks would be required to protect the SAC in this location. Design and mitigation measures would be implemented to protect the water environment.</p> <p>The LoD also intersects LEPO woodland at Coldstream Plantation; felling requirements would be limited due to recent forestry activities including felling and replanting. The baseline value of Coldstream Plantation has been affected by commercial forestry, and it may be possible to enhance the condition of this LEPO woodland through new planting and sensitive management.</p>	A
	Alternative Alignment 6b	<p>Designations: International, European or National Designations</p> <p>The LoD of the alignment intersects with the River Dee SAC at the southernmost end of the alignment, with the LoD passing between Mosside and Dalmaik close to the SAC.</p> <p>No other statutory designated sites recognised at an international or national level for their natural heritage are intersected by the LoD of this alignment, and there are no other such sites within 700 m of the alignment LoD.</p> <p>The LoD of the alignment intersects an area of woodland listed on the AWI as LEPO northeast of Drumoak (NO 795 994), and Coldstream Plantation (NO 77560 99850) northwest of Drumoak.</p> <p>The woodland northeast of Drumoak is identified as lowland mixed deciduous woodland on the NWSS, although it was not accessible during 2023 surveys. Coldstream Plantation comprises a commercial plantation which was noted during field surveys in 2023 to have been recently felled with replanting in progress.</p>	<p>This alignment has been RAG rated as Amber because it may compromise the LEPO woodland northeast of Drumoak, a non-statutory national designation, and may require an operational corridor for the OHL of up to 80 m in length through the LEPO woodland.</p> <p>This alignment is not likely to compromise the conservation status of any statutory international, European or national designation and/or the conservation status of the designated features of any site.</p> <p>The alignment LoD intersects with the edge of the River Dee SAC where it forms a marked bend in the river near Dalmaik. Careful micro-siting and construction of the nearest OHL towers and access tracks would be required to protect the SAC in this location. Design and mitigation measures would be implemented to protect the water environment.</p> <p>The LoD also intersects LEPO woodland at Coldstream Plantation; felling requirements would be minimal due to recent forestry activities including felling and replanting. The baseline value of Coldstream Plantation has been affected by commercial forestry, and it may</p>	A

Topic	Option	Constraints ¹⁰	Evaluation of Constraint	RAG Score
			therefore be possible to enhance the condition of this LEPO woodland through new planting and sensitive management.	
	Alternative Alignment 6c	<p>Designations: International, European or National Designations</p> <p>The LoD of this alignment intersects with the River Dee SAC at the southernmost end of the alignment, with the LoD passing between Mosside and Dalmaik close to the SAC.</p> <p>No other statutory designated sites recognised at an international or national level for their natural heritage are intersected by the LoD of this alignment, and there are no other such sites within 400 m of the alignment LoD.</p> <p>The LoD of this alignment intersects the northeast of the LEPO at Coldstream Plantation (NJ 77815 00035) northwest of Drumoak and a LEPO at a woodland northeast of Drumoak (NGR NO 795 994). The section of the LEPO woodland northeast of Drumoak is identified on the NWSS as native pinewood and appears on online aerial imagery to have been planted, but it was not accessible during 2023 surveys.</p> <p>In addition, an area of woodland (Drumhill Wood) listed on the AWI as Ancient Woodland (of semi-natural origin) is located within the north of the LoD of the alignment. The woodland in this area is noted on the NWSS to comprise native upland birchwood, although adjacent areas both within and outwith the LoD appear from aerial imagery to have been affected by commercial forestry.</p>	<p>This alignment has been RAG rated as Amber because it may compromise non-statutory national designations comprising the Ancient Woodland at Drumhill Wood, and the LEPO woodland northeast of Drumoak, and may require an operational corridor for the OHL of up to 150 m in length through the LEPO woodland.</p> <p>The alternative alignment is not likely to compromise the conservation status of any statutory international, European or national designation and/or the conservation status of the designated features of any site.</p> <p>The alignment LoD intersects with the edge of the River Dee SAC where it forms a marked bend in the river near Dalmaik. Careful micro-siting and construction of the nearest OHL towers and access tracks would be required to protect the SAC in this location. Design and mitigation measures would be implemented to protect the water environment.</p> <p>There is potential for the alignment to compromise the conservation status of Ancient Woodland at Drumhill Wood. Specifically, felling may be required on the edge of a stand of upland birchwood. The alignment is constrained by the presence of this woodland within the LoD, although this alignment has the potential to avoid any felling of the woodland through careful micro-siting of the overhead line into adjacent farmland. The baseline value of adjacent areas of Drumhill Wood to the north appear from aerial imagery to have been affected by commercial forestry. It may therefore be possible to mitigate any requirement for felling through enhancement of the condition of this woodland through new planting and sensitive management.</p> <p>The LoD also intersects LEPO woodland at Coldstream Plantation; felling requirements would be limited due to recent forestry activities including felling and replanting. The baseline value of Coldstream Plantation has been affected by commercial forestry, and it may be possible to enhance the condition of this LEPO woodland through new planting and sensitive management.</p>	A
	Alternative Alignment 6a (Potential) + Alternative Alignment 6b	<p>Designations: Regional Designations</p> <p>Each of the alternative alignments intersects with the River Dee LNCS at Dalmaik, with this site extending approximately 40 m into the western edge of the LoD of each alignment. There are no other areas designated at a regional level for their natural heritage within 300 m of the LoDs of the alternative alignments. The River Dee is considered in greater detail in relation to its higher European designation as an SAC, and therefore this criterion has been scoped out of this appraisal.</p>		

Topic	Option	Constraints ¹⁰	Evaluation of Constraint	RAG Score
	+ Alternative Alignment 6c			
	Alternative Alignment 6a (Potential) + Alternative Alignment 6b + Alternative Alignment 6c	Protected Species: European Protected Species (EPS); UK Biodiversity Action Plan (BAP) Species; Other Protected and Notable Species Records of and/or habitat potential for EPS (such as otter and bats), UKBAP species (such as pine marten, red squirrel, reptiles and amphibians), and other protected and notable species (such as badger) are considered to represent a similar level of baseline constraint for each of the alternative alignments. Each of the alternative alignments have been evaluated as having similar potential to support these species, and would require a similar range of standard mitigation measures to be implemented including those in SSEN Transmission's SPPs. These criteria have therefore been scoped out of this appraisal.		
	Alternative Alignment 6a (Potential) + Alternative Alignment 6b + Alternative Alignment 6c	Habitats: Annex 1 Habitats, Groundwater Dependent Terrestrial Ecosystems (GWDTE) Desk study and field survey data indicate that habitats intersected by the alternative alignments principally comprise a mosaic of farmland and woodlands. There is limited potential for small pockets of Annex 1 habitats, restricted for example to remnant extents of semi-natural woodland. Similarly, there is limited potential for GWDTEs, for example associated with areas of damp grassland. Due to the similarity in constraint represented by the types of habitat present and the similar level of potential for presence of Annex 1 habitats and GWDTEs across all alternative alignments, these criteria have been scoped of this appraisal.		
	Alternative Alignment 6a (Potential)	Habitats: Biodiversity The density of Biodiversity Units derived from habitats within the alignment is calculated to be 10.62 BU/ha. Irreplaceable habitats are calculated to be present at a density of 0 BU/ha. Watercourses are present at a density of 0 BU/km.	This alignment has been RAG rated as Green because it has been evaluated as having less than 110% of the BU density of the least biodiversity impacted alternative (see Alternative Alignment 6c)	G
	Alternative Alignment 6b	Habitats: Biodiversity The density of Biodiversity Units derived from habitats within the alignment is calculated to be 10.94 BU/ha. Irreplaceable habitats are calculated to be present at a density of 0 BU/ha. Watercourses are present at a density of 0 BU/km.	This alignment has been RAG rated as Green because it has been evaluated as having less than 110% of the BU density of the least biodiversity impacted alternative (see Alternative Alignment 6c).	G
	Alternative Alignment 6c	Habitats: Biodiversity The density of Biodiversity Units derived from habitats within the alignment is calculated to be 10.53 BU/ha. Irreplaceable habitats are calculated to be present at a density of 0 BU/ha. Watercourses are present at a density of 0 BU/km.	This alignment has been RAG rated as Green because it has been evaluated as having the lowest biodiversity unit density.	G

Topic	Option	Constraints ¹⁰	Evaluation of Constraint	RAG Score
Natural Heritage Ornithology	Alternative Alignment 6a (Potential) + Alternative Alignment 6b + Alternative Alignment 6c	Designations The alternative alignments are in an area having connectivity with the core foraging ranges of qualifying features (greylag geese, goldeneye and goosander; 15-20 km) associated with the Loch of Skene Special Protection Area (SPA) which is located approximately 8 km north of Drumoak.	The alternative alignments have been RAG rated as Amber as they may compromise an internationally or nationally designated area and/or the conservation status of the qualifying features of the site having assumed connectivity between the Loch of Skene SPA roost and associated foraging areas. Information on the historic distribution of feeding greylag geese suggests that collision risk is a constraint throughout the LoD of all the alternatives due to their locations between the SPA and feeding fields (Mitchell, 2012) ¹ .. Vantage Point watch surveys (Sept 2023 to March 2024) have recorded activity of foraging goose flights within and across the area where the alternative alignments are located. Foraging goose surveys in early 2023 recorded geese foraging in areas c. 3 km north. Foraging sites are however subject to change across the winter and between years due to field planting/use. Line-marking with bird diverters would be required in these locations of the OHL for all alternative alignments as design mitigation in locations where conductors are likely to pose collision risk to susceptible birds.	A
	Alternative Alignment 6a (Potential) + Alternative Alignment 6b + Alternative Alignment 6c	Schedule 1 Birds The alternative alignments contain habitats that have the potential to support breeding Schedule 1 raptor species.	The alternative alignments have been RAG rated as Amber as they have the potential to compromise the conservation status of Schedule 1 bird populations in the region or nationally. There are records of Schedule 1 species in the areas in which the alignments are located.	
	Alternative Alignment 6a (Potential) + Alternative Alignment 6b + Alternative Alignment 6c	Birds of Conservation Concern (BoCC) Potential wader (red-list species) habitat coincides with the northernmost part of the LoDs of all alternative alignments. The farmland areas may also support other red-list species. BTO modelling data point to the area of the alternative alignments as coinciding with potential breeding wader habitat at their northernmost extent, however, the section in which the alignments lie is unlikely to compromise the conservation status of populations of a red or amber listed species or essential breeding, passage or wintering habitat, and therefore this criterion has been scoped out of appraisal.		
	Alternative Alignment 6a	Surface and Groundwater Drinking Water Protected Area (DWPA)		

¹ Mitchell, C. 2012. Mapping the distribution of feeding Pink-footed and Iceland Greylag Geese in Scotland. Wildfowl & Wetlands Trust / Scottish Natural Heritage Report, Slimbridge. 108pp.

Topic	Option	Constraints ¹⁰	Evaluation of Constraint	RAG Score
Natural Heritage Hydrology, Geology & Hydrogeology	(Potential) + Alternative Alignment 6b + Alternative Alignment 6c	There are no Surface DWPA's within the LoD of the alternative alignments, therefore this criterion has been scoped out of appraisal.		
	Alternative Alignment 6a (Potential)	<p>Aquifers Providing Regional / Local Resources</p> <p>The LoD of the alignment crosses four minor, unnamed watercourses / drains.</p> <p>No PWS sources have been identified in close proximity to the alignment LoD.</p>	<p>The alignment has been RAG rated as Green as it is considered unlikely to result in surface flow pathways and subsequently compromise the quality of surface waters of local importance, or which provide public supply or are of regional importance for abstraction.</p> <p>All identified watercourses and predicted flood extents could be spanned or avoided by an OHL within the alignment LoD.</p> <p>The alignment does not cross any wide floodplain areas can avoid or span all watercourses within the LoD and is not near any springs, PWS sources or known abstractions.</p>	G
	Alternative Alignment 6b	<p>Aquifers Providing Regional / Local Resources</p> <p>The alignment LoD crosses three minor, unnamed watercourses / drains.</p> <p>There is a potential PWS abstraction source at Hill of Park 10 m outwith the alignment LoD at the southern end, based on data provided by Aberdeenshire Council, at NGR NO 77700, 99533.</p>	<p>This alignment has been RAG rated as Amber as it may compromise quality or quantity of surface or groundwater of regional importance (e.g. through creation of a pathway for run-off which may cause some disruption to abstraction water flow and/or quality).</p> <p>The alignment LoD is located within 10 m north of a potential PWS abstraction source at Hill of Park and is constrained by this abstraction as it may compromise the water quality of surface or groundwaters which recharge the PWS source. The OHL would be located as far northeast as possible within the LoD to reduce the likelihood of any potential impact to the PWS source.</p>	A
	Alternative Alignment 6c	<p>Aquifers Providing Regional / Local Resources</p> <p>The LoD of the alignment crosses three unnamed watercourses / drains.</p> <p>The alignment runs in close proximity to a known PWS abstraction source at Coldstream Farm.</p> <p>There is a potential PWS abstraction source at Coldstream Farm 40 m to the south of the edge of the alignment LoD, based on data provided by Aberdeenshire Council, at NGR NJ 78631 00077.</p>	<p>This alignment has been RAG rated as Amber as it may compromise quality or quantity of surface or groundwater of regional importance (e.g. through creation of a pathway for run-off which may cause some disruption to abstraction water flow and/or quality).</p> <p>There is a potential PWS abstraction source 40 m south of the alignment LoD at Coldstream Farm, at NGR NJ 78631 00077. The OHL would be located as far north as possible in the LoD to reduce the likelihood of any potential impact to the PWS source.</p>	A

Topic	Option	Constraints ¹⁰	Evaluation of Constraint	RAG Score
	Alternative Alignment 6a (Potential) + Alternative Alignment 6b + Alternative Alignment 6c	Surface Waters or Aquifer Providing Water for Agricultural or Industrial Use The alternative alignments are unlikely to result in surface flow pathways and subsequently compromise quality and or quantity of surface waters of local importance. All watercourses and predicted flood extents can be spanned or avoided within each of the alignment LoD. This criterion has therefore been scoped out of appraisal.		
Cultural Heritage <i>Designations, Cultural Heritage Assets</i>	Alternative Alignment 6a (Potential)	Designations: World Heritage Sites (WHS), Scheduled Monuments (SM), Inventory Gardens and Designed Landscapes (GDL), Inventory Battlefields Within 1 km of the edge of the alignment LoD there is one Inventory Garden and Designed Landscape (GDL) and one Scheduled Monument, both of national importance and high sensitivity. <ul style="list-style-type: none"> • Drum Castle (GDL 141): this designed landscape is abutted by the alignment LoD on its southwest corner and the alignment lies within c.120 m of the GDL boundary. The designed landscape is situated on a ridge to the north of the River Dee valley. It forms the setting for Category A Listed Drum Castle (LB 3113) and other associated Listed Buildings. Wide panoramic views are afforded from the top of the castle tower to the surrounding landscape in all directions, and there are glimpses of hills to the north from the parkland around the Castle. The mixed woodland of the GDL contributes to the surrounding scenery but there are few views into the GDL from the surrounding roads. • Bogton. Cairn, Field System and Trackway (SM 7877): the remains of this prehistoric field system lie c.1 km to the east of the edge of the LoD of the alternative alignment at its northern end. The remains of this prehistoric field system survive to the south of the North Deeside River, on locally high ground surrounded by grazing land. The relationship of the monument with the immediate surrounding farming landscape of the River Dee valley is a key aspect of its setting. • The Scheduled Monument, Normandykes Roman Camp (SM 2478), which lies within 1.7 km of the edge of the LoD of the alignment is considered to be especially sensitive to change on its setting. The remains of this camp lie on a broad hill above an old ford crossing the River Dee. The prominent 	This alignment has been RAG rated as Amber as, although it would avoid direct interaction with any designated assets, it may compromise the setting of the following designated assets that lie close to the alignment. <ul style="list-style-type: none"> • Drum Castle (GDL 141): the alternative alignment passes within c.120 m to the southwest of the GDL potentially compromising its setting due to the introduction of new OHL towers in the landscape surrounding the GDL which could intrude into views from the castle tower. • Bogton Cairn, Field System and Trackway (SM 7877): the edge of the alignment LoD passes within c.1 km to the west of the monument and the OHL towers could intrude into key views from the monument out to the immediate surrounding farmland, potentially compromising its setting. • Normandykes Roman Camp (SM 2478): the edge of the alignment LoD passes within c.1.7 km to the west of the monument and the OHL towers could intrude into key views out from the monument, potentially compromising its setting. 	A

Topic	Option	Constraints ¹⁰	Evaluation of Constraint	RAG Score
		topographical position of the camp and views across and along the River Dee are important aspects of its setting.		
	Alternative Alignment 6b	<p>Designations: World Heritage Sites (WHS), Scheduled Monuments (SM), Inventory Gardens and Designed Landscapes (GDL), Inventory Battlefields</p> <p>Within 1 km of the edge of this alternative alignment LoD there is one Inventory Garden and Designed Landscape (GDL), and one Scheduled Monument, both of national importance and high sensitivity.</p> <ul style="list-style-type: none"> • Drum Castle (GDL 141): this designed landscape is situated on a ridge to the north of the River Dee valley. (See description of GDL in row above (Alternative Alignment 6a (Potential))). • Bogton, Cairn, Field System and Trackway (SM 7877) (NGR NO 812 996), which is located c.1 km to the east of the edge of the alignment LoD. (See description of monument in row above (Alternative Alignment 6a (Potential))). • The Scheduled Monument, Normandykes Roman Camp (SM 2478) (NGR NO 829 993), which lies within 1.7 km to the east of the edge of the LoD, is considered especially sensitive to change on its setting. (See description of monument in row above (Alternative Alignment 6a (Potential))). 	<p>This alignment has been RAG rated as Amber as, although it would avoid direct interaction with any designated assets, it may compromise the setting of the following designated assets that lies close to the alignment.</p> <ul style="list-style-type: none"> • Drum Castle (GDL 141): the edge of the alignment LoD passes c.340 m to the southwest of the GDL potentially compromising its setting due to the introduction of new OHL towers in the landscape surrounding the GDL which could intrude into views from the castle tower. • Bogton Cairn, Field System and Trackway (SM 7877): the edge of the alignment LoD passes within c.1 km to the west of the monument and the OHL towers could intrude into key views from the monument out to the immediate surrounding farmland, compromising its setting. • Normandykes Roman Camp (SM 2478): the edge of the alignment LoD passes within c.1.7 km to the west of the monument and the OHL towers could intrude into key views out from the monument, potentially compromising its setting. 	A
	Alternative Alignment 6c	<p>Designations: World Heritage Sites (WHS), Scheduled Monuments (SM), Inventory Gardens and Designed Landscapes (GDL), Inventory Battlefields</p> <p>Within 1 km of the edge of this alignment LoD there is one Inventory Garden and Designed Landscape (GDL) and one Scheduled Monument, both of national importance and high sensitivity.</p> <ul style="list-style-type: none"> • Drum Castle (GDL 141): this designed landscape is clipped by the LoD of this alignment on its southwest corner and the alignment lies within c.10 m of the GDL boundary. (See description of GDL in row above (Alternative Alignment 6a)). • Bogton, Cairn, Field System and Trackway (SM 7877): the remains of this prehistoric field system lie c.1 km to the east of the edge of the alignment LoD at its northern end. (See description of monument in row above for Alternative Alignment 6a). • The Scheduled Monument, Normandykes Roman Camp (SM 2478), which lies within 1.7 km of the edge of the LoD of this 	<p>This alignment has been RAG rated as Red as, it would directly interact with one designated asset and compromise its setting.</p> <ul style="list-style-type: none"> • Drum Castle (GDL 141): The alternative alignment LoD cuts across the southwest corner of the GDL and would disturb the woodland in this part of the GDL that would lie within the alignment LoD. The alignment passes within c.10 m of the southwest corner of the GDL, on higher ground at the edge of the GDL, and would likely be visible in key views of the Castle from the GDL, compromising its setting. • Bogton Cairn, Field System and Trackway (SM 7877): the edge of the alignment LoD passes within c.1km to the west of the monument and the OHL towers could intrude into key views from the monument out to the immediate surrounding farmland, potentially compromising its setting. • Normandykes Roman Camp (SM 2478): the edge of the alignment LoD passes within c.1.7 km to the west of the 	R

Topic	Option	Constraints ¹⁰	Evaluation of Constraint	RAG Score
		alternative alignment is considered to be especially sensitive to change on its setting from the alignment. (See description of monument in row above (Alternative Alignment 6a)).	monument and the OHL towers could intrude into key views out from the monument, potentially compromising its setting.	
	Alternative Alignment 6a (Potential) + Alternative Alignment 6c	<p>Designations: Sites and Monuments Record (SMR) Entries</p> <p>Eight recorded SMR sites of archaeological and cultural heritage interest fall within the LoD of both alignments.</p> <p>Six of the records are for Mesolithic lithic scatters (NO79NE0142, NO79NE0143, NO79NE0144, NO89NW0100, NO89NW0102, and NO89NW0106) that were uncovered east of Drumoak. The other records include an area of relict rig and furrow cultivation (NO89NW0033), just north of the River Dee, and the record of a coin hoard (NO89NW0003) discovered at Dalmaik; however, the exact location of this findspot is not known.</p> <p>All of the heritage assets are recorded in the SMR as being of 'Standard' importance and are assessed as being of local heritage value and of low sensitivity.</p>	<p>The alternative alignments have been RAG rated as Green for SMR sites, as the archaeological and cultural heritage sites identified do not represent significant constraints to development of an OHL in these alignments.</p> <p>The SMR sites are concentrated largely at the southern end of the alternatives, to the north of the River Dee, and extend across the LoD of both alternative alignments.</p> <p>Where direct impacts on SMR sites cannot be avoided, constraints could be mitigated through a programme of works (i.e. trial trench evaluation and excavation or watching briefs) in advance of construction works to a scope agreed by the local authority.</p>	G
	Alternative Alignment 6b	<p>Designations: Sites and Monuments Record (SMR) Entries</p> <p>Ten recorded SMR sites of archaeological and cultural heritage interest fall within the LoD of this alternative alignment.</p> <p>Six of the records are for Mesolithic lithic scatters (NO79NE0142, NO79NE0143, NO79NE0144, NO89NW0100, NO89NW0102, and NO89NW0106) that were uncovered, east of Drumoak. The other records include the site of a former Royal Observer Corp post (NO79NE0107), at Barrowgate, a farmstead (NO79NE0063), that is still occupied, and an area of relict rig and furrow cultivation (NO89NW0033), just north of the River Dee. The SMR also records that a coin hoard (NO89NW0003) was discovered at Dalmaik; however, its exact location is not known.</p> <p>All of the heritage assets are recorded in the SMR as being of 'Standard' importance and are assessed as being of local heritage value and of low sensitivity.</p>	<p>This alignment has been RAG rated as Green for SMR sites, as the archaeological and cultural heritage sites identified do not represent significant constraints to development of an OHL in this alignment.</p> <p>The SMR sites are concentrated largely at the southern end of the alignment, to the north of the River Dee, and extend across the alignment LoD.</p> <p>Where direct impacts on SMR sites cannot be avoided, constraints could be mitigated through a programme of works (i.e. trial trench evaluation and excavation or watching briefs) in advance of construction works to a scope agreed by the local authority.</p>	G
	Alternative Alignment 6a (Potential)	<p>Cultural Heritage Assets</p> <p>Within 1 km of the edge of this alignment LoD there are:</p> <ul style="list-style-type: none"> two Category A Listed Buildings, Drum Castle (LB 3133) and Park Bridge (LB 45), of national importance and high sensitivity. 	<p>This alignment has been RAG rated as Amber as, although it would avoid direct interaction with any designated assets, it may compromise the setting of the following Listed Building that lies close to the northern end of the alignment.</p> <ul style="list-style-type: none"> Drum Castle (LB 3133): the edge of the alignment LoD passes within c.510 m to the southwest of the Castle; potentially compromising its setting due to the introduction of new OHL 	A

Topic	Option	Constraints ¹⁰	Evaluation of Constraint	RAG Score
		<ul style="list-style-type: none"> seven Category B Listed Buildings, of regional importance and medium sensitivity, and, five Category C Listed Buildings, of local importance and low sensitivity. <p>The Listed Buildings comprise mostly of small residential properties (i.e. farmsteads and crofts), small parish kirks and bridges, all of which have generally localised settings and are not significant constraints.</p> <p>The asset considered to be the most sensitive to change in terms of impact on its setting from the alignment is, Category A Listed Drum Castle (LB 3113). This Castle stands on a ridge north of the River Dee within Drum Castle GDL (GDL 141). Key aspects of the Castle's setting are the woodland and parkland policies in which it stands, the relationship with other Listed Buildings and designed features within the GDL, and the panoramic views afforded from the top of the castle tower.</p>	towers in the landscape surrounding the Castle which could intrude into views from the castle tower.	
	Alternative Alignment 6b	<p>Cultural Heritage Assets</p> <p>Within 1 km of the edge of the alignment LoD there are:</p> <ul style="list-style-type: none"> two Category A Listed Buildings, Drum Castle (LB 3133) and Park Bridge (LB 45), of national importance and high sensitivity. five Category B Listed Buildings, of regional importance and medium sensitivity. five Category C Listed Buildings, of local importance and low sensitivity. <p>The Listed Buildings comprise mostly of small residential properties (i.e. farmsteads and crofts), small parish kirks and bridges, all of which have generally localised settings and are not significant constraints.</p> <p>The asset considered to be the most sensitive to change in terms of impact on its setting is, Category A Listed Drum Castle (LB 3113). (See description of monument in row above (Alternative Alignment 6a (Potential))).</p>	<p>This alignment has been RAG rated as Amber as, although it would avoid direct interaction with any designated assets, it may compromise the setting of the following Listed Building that lies close to the northern end of the alignment.</p> <ul style="list-style-type: none"> Drum Castle (LB 3133): the edge of the alignment LoD passes within c.850 m to the southwest of the Castle; potentially compromising its setting due to the introduction of new OHL towers in the landscape surrounding the Castle which could intrude into views from the castle tower. 	A
	Alternative Alignment 6c	<p>Cultural Heritage Assets</p> <p>The baseline constraints are the same as for Alternative Alignment 6a (Potential), above.</p>	This alignment has been RAG rated as Red as, although it would avoid direct interaction with any cultural heritage assets, it would compromise the setting of the following A Listed designated asset that lies close to the alignment.	R

Topic	Option	Constraints ¹⁰	Evaluation of Constraint	RAG Score
			<ul style="list-style-type: none"> Drum Castle (LB 3133): the alignment LoD cuts across the southwest corner of the designed landscape (GDL) in which the Castle stands, and which forms the setting for the Castle and other associated Listed Buildings. The alignment being positioned on higher ground at the southwest edge of the GDL, will likely be visible in key views of the Castle from within the GDL, particularly when approaching the Castle from the main approach drive; compromising its setting. 	
People Proximity to Dwellings	Alternative Alignment 6a (Potential)	Proximity to Dwellings There are five locations along the alignment where the residential properties are located within approximately 200 m of the alignment LoD. These are, from south to north: <ul style="list-style-type: none"> Two properties at Moss-side Cottage and Linardon which are located approximately 75 m and 130 m to the northeast of the LoD, and 550 m to the east of Drumoak; A group of properties to the southeast of Drumoak at Greenbank, the closest of which is located approximately 65 m from the LoD; Rosehall Cottage and Rosehall Farm which are located approximately 40 m and 180 m respectively to the northeast of the LoD, and 450 m to the east of Drumoak; Newton of Drum is located approximately 110 m to the northeast of the LoD and 460 m northeast of Drumoak; Three properties at Newton Cottage which are located approximately 75 m from the LoD to the southeast, and 250 m north of Drumoak; Five properties at South Coldstream Farm the closest of which is located 100 m to the north of the LoD, over 500 m to the north of Drumoak; The Bowery which is located approximately 55 m to the south, and 270 m north of Drumoak; <ul style="list-style-type: none"> Two properties at Barrowsgate which are located approximately 110 m and 130 m from the LoD to the southwest, and over 500 m northwest of Drumoak; and Three properties at West Coldstream, the closest of which is located approximately 90 m from the LoD to the northeast, over 1 km to the northwest of Drumoak. 	<p>This alignment has been RAG rated as Amber. The LoD provides some flexibility for an OHL alignment to be located at distances between two and four times the nominal tower height (between approx. 120 - 240 m) from residential properties. However, it is considered that the presence of other constraints in the alignment LoD may make this difficult to achieve.</p> <p>The OHL may require to be aligned within a distance of two to four times the nominal tower height in the vicinity of properties at Moss-side Cottage, Linardon and Rosehall Cottage and at the eastern edge of Drumoak, including properties at Greenbank, in the southeastern section of the alternative alignment. Here the alignment passes through a gap between the properties. These properties reduce the degree of flexibility within the LoD due to their respective locations either side of the alignment, limiting the opportunity to avoid distances of <170 m between the OHL and properties. This constraint is unavoidable however the LoD offers opportunity for the OHL to be aligned at distances beyond two times the nominal tower height (approx. 120 m).</p> <p>Further north, Newton of Drum and the three properties at Newton Cottage reduce the degree of flexibility within the LoD as they are located within 200 m either side of the LoD. The three properties at Newton Cottage also constrain the LoD where it passes through a gap between these properties, The Bowery and the group of properties at South Coldstream to the north of the LoD. The location of these properties provides a narrow gap for the OHL to be aligned through however there is potential to achieve distances beyond 170 m between properties and the OHL.</p> <p>Elsewhere along the alignment, the OHL may require to be aligned within a distance of two to four times the nominal tower height in the vicinity of properties at Barrowsgate and West Coldstream in the northwestern section of the route. These two groups of properties do not simultaneously constrain the LoD in the same location however</p>	A

Topic	Option	Constraints ¹⁰	Evaluation of Constraint	RAG Score
			their respective locations to the southwest and northeast of the LoD, and within 130 m, may make it difficult to achieve distances beyond four times the nominal tower height.	
	Alternative Alignment 6b	<p>Proximity to Dwellings</p> <p>There are a number of locations along this alternative alignment where residential properties are located within approximately 200 m of the edge of the LoD. There are, from south to north:</p> <ul style="list-style-type: none"> • A group of properties to the southeast of Drumoak at Greenbank, the closest of which is located approximately 100 m from the edge of the LoD; • Two properties at Moss-side Cottage and Linardon which are located approximately 25 m and 80 m respectively to the northeast of the LoD, and 550 m to the east of Drumoak; • Rosehall Cottage and Rosehall Farm which are located approximately 50 m and 190 m respectively to the northeast of the LoD, and 450 m to the east of Drumoak; <p>Dwellings which are located on the eastern and northern edges of Drumoak, the closest of which is located approximately 25 m to the south of the LoD;</p> <ul style="list-style-type: none"> • Three properties at Newton Cottage which are located approximately 65 m to the north of the LoD and 250 m north of Drumoak; • The Bowery which is located approximately 55 m from the LoD to the north and 270 m north of Drumoak; • Barrowsgate House which is located approximately 180 m to the north of the LoD, over 500 m northwest of Drumoak; and • Three properties at Hill of Park, the closest of which is located approximately 145 m to the southwest of the LoD, over 1 km to the west of Drumoak. 	<p>This alignment has been RAG rated as Amber. The LoD provides limited flexibility for an OHL alignment to be located at distances of more than two times the nominal tower height (approx. 120 m) in the most constrained sections, increasing to distances of more than four times the nominal tower height (approx. 240 m) in less constrained sections.</p> <p>The OHL may require to be aligned within a distance of two to four times the nominal tower height in the vicinity of properties at Moss-side Cottage, Linardon and Rosehall Cottage and at the eastern edge of Drumoak, including properties at Greenbank, in the southeastern section of the alignment. Here the Potential Alignment passes through a gap between the properties. These properties reduce the degree of flexibility within the LoD due to their respective locations either side of the alignment, limiting scope to avoid distances of <170 m between the OHL and properties. This constraint is unavoidable however the LoD offers opportunity for the OHL to be aligned at distances beyond two times the nominal tower height (approx. 120 m).</p> <p>Dwellings located at the northern edge of Drumoak together with three properties at Newton Cottage and The Bowery in the central section of the Potential Alignment highly constrain the LoD. The location of these properties on either side of the LoD (to the north and south) and their proximity to the LoD (<100 m) provide limited flexibility to increase the distance between the OHL and these properties. This constraint is unavoidable however the LoD offers opportunity for the OHL to be aligned at distances beyond two times the nominal tower height (approx. 120 m).</p> <p>Elsewhere along the alternative alignment, the LoD offers opportunity for the OHL to be located at a distance of more than four times the nominal tower height from properties at Barrowsgate House and the three properties at Hill of Park at the northwestern end of the alignment.</p>	
	Alternative Alignment 6c	<p>Proximity to Dwellings</p> <p>There are two locations along the alignment where the residential properties are located within approximately 200 m of this alternative alignment LoD. These are, from south to north:</p>	This alignment has been RAG rated as Amber. The LoD provides some flexibility for an OHL alignment to be located at distances between two and four times the nominal tower height (between approx. 120 – 240 m) from residential properties. However, it is	A

Topic	Option	Constraints ¹⁰	Evaluation of Constraint	RAG Score
		<ul style="list-style-type: none"> Two properties at Moss-side Cottage and Linardon which are located approximately 75 m and 130 m to the northeast of the LoD, and 550 m to the east of Drumoak; A group of properties to the southeast of Drumoak at Greenbank, the closest of which is located approximately 65 m from the LoD; Rosehall Cottage and Rosehall Farm which are located approximately 40 m and 180 m respectively to the northeast of the LoD, and 450 m to the east of Drumoak; Newton of Drum is located approximately 110 m to the northeast of the LoD and 460 m northeast of Drumoak; Three properties at Newton Cottage which are located approximately 90 m at the closest distance from the LoD to the south, and 250 m north of Drumoak; A group of properties at South Coldstream which are located approximately 50 m from the LoD to the south at the closest distance, over 500 m to the north of Drumoak; A group of properties at North Coldstream which are located approximately 170 m to the north of the LoD, over 1 km to the northwest of Drumoak; and Three properties at West Coldstream which are located approximately 90 m from the LoD to the northeast, over 1 km to the northwest of Drumoak. 	<p>considered that the presence of other constraints in the alignment LoD may make this difficult to achieve.</p> <p>The OHL may require to be aligned within a distance of two to four times the nominal tower height in the vicinity of properties at Moss-side Cottage, Linardon and Rosehall Cottage and at the eastern edge of Drumoak, including properties at Greenbank, in the southeastern section of the alignment. Here the alignment passes through a gap between the properties. These properties reduce the degree of flexibility within the LoD due to their respective locations either side of the alignment, limiting the opportunity to avoid distances of <170 m between the OHL and properties. This constraint is unavoidable however the LoD offers opportunity for the OHL to be aligned at distances beyond two times the nominal tower height (approx. 120 m).</p> <p>Further north, Newton of Drum and the three properties at Newton Cottage reduce the degree of flexibility within the LoD as they are located within 200 m either side of the LoD. The group of properties at South Coldstream also constrain the alignment due to their location within 200 m of the LoD. There is limited opportunity to increase the distance between most of these properties and an OHL beyond four times the nominal tower height (approx. 240 m) due to a further environmental constraint to the northeast of the LoD in this section.</p> <p>Elsewhere along the alternative alignment, the LoD offers opportunity for the OHL to be located at a distance of more than four times the nominal tower height from properties at North Coldstream and West Coldstream at the northwestern end of the alignment.</p>	
Landscape/ Visual Designations, Landscape Character, Visual	Alternative Alignment 6a (Potential) + Alternative Alignment 6b + Alternative Alignment 6c	Landscape Designations There are no landscape designations within the alternative alignments. The Dee Valley Special Landscape Area (SLA) is located within 1 km to the south of each of the alternative alignments. Given that each of the alternative alignments deviate from Alternative Alignment 6a (Potential) that passes through the SLA further south, further effects of the alternative alignments outside of the SLA are not considered to form a material constraint. This criterion has therefore been scoped out of the appraisal.		
	Alternative Alignment 6a (Potential)	Landscape Character Alternative Alignment 6a (Potential) is located within both the Broad Wooded and Farmed Valley LCT and the Wooded Estates – Aberdeenshire LCT. This alignment passes through an area of mixed woodland northeast of Drumoak. This area of woodland is a local feature that contributes to the landscape character of the	This alignment has been RAG rated as Amber as the removal of trees within the mixed woodland northeast of Drumoak would compromise this characteristic element of the Broad Wooded and Farmed Valley LCT at the local level. Removal of trees within this woodland would also compromise its role in providing a sense of enclosure in contrast with more open views within the LCT.	A

Topic	Option	Constraints ¹⁰	Evaluation of Constraint	RAG Score
		<p>Broad Wooded and Farmed Valley LCT through its provision of a sense of enclosure that contrasts with more open views within the LCT, as noted in the key characteristics of the LCT.</p> <p>This area of woodland constrains a short section of the alignment (approximately 165 m) and as such the level of constraint is considered to be limited.</p>		
	Alternative Alignment 6b	<p>Landscape Character</p> <p>Alternative Alignment 6b is located within both the Broad Wooded and Farmed Valley LCT and the Wooded Estates – Aberdeenshire LCT. This alignment passes through an area of mixed woodland northeast of Drumoak. This alignment also passes through a small pocket of native broadleaved woodland to the northwest of Drumoak. These areas of woodland form local features that contribute to the landscape character of the Broad Wooded and Farmed Valley LCT through their provision of a sense of enclosure that contrasts with more open views within the LCT, as noted in the key characteristics of the LCT.</p> <p>These areas of woodland constrain very short sections of the alignment (approximately 180 m of the alignment in total) and as such the level of constraint is considered to be limited.</p>	<p>This alignment has been RAG rated as Amber as the removal of trees within the mixed woodland northeast of Drumoak would compromise this characteristic element of the Broad Wooded and Farmed Valley LCT at the local level. Removal of trees within this woodland would also compromise its role in providing a sense of enclosure in contrast with more open views within the LCT.</p>	A
	Alternative Alignment 6c	<p>Landscape Character</p> <p>Alternative Alignment 6c is located within the Wooded Estates – Aberdeenshire LCT. This alignment LoD intersects with the south-western edge of an area of ancient woodland at Drumhill Wood. This woodland contributes to the wooded character of the Wooded Estates – Aberdeenshire LCT, including the '<i>strong woodland structure associated with numerous estate policies</i>'. Some of this woodland however appears to have been affected by commercial forestry, reducing the value of the woodland's contribution to landscape character.</p> <p>This area of woodland constrains a very short section of the alignment (approximately 70 m) and given it has already been altered by commercial forestry the level of constraint is considered to be limited.</p>	<p>This alignment has been RAG rated as Amber as the removal of trees at the south-western edge of Drumhill Wood would compromise this characteristic element of the landscape at the local level including the '<i>strong woodland structure</i>' of the LCT.</p>	A
	Alternative Alignment 6a (Potential)	<p>Visual</p> <p>Visual receptors at scattered residential properties, and people travelling along the local road network and recreational routes form a constraint. Residents at a number of properties including Moss-</p>	<p>This alignment has been RAG rated as Amber as an OHL alignment may compromise visual amenity experienced by a number of sensitive visual receptors including people at a number of residential receptors,</p>	A

Topic	Option	Constraints ¹⁰	Evaluation of Constraint	RAG Score
		<p>side Cottage, Linardon, Rosehall Cottage and at the eastern edge of Drumoak constrain the southeastern end of this alternative alignment. Dwellings at Newton of Drum, three properties at Newton Cottage, The Bowery and the group of properties at South Coldstream within the central section of the alternative alignment also constrain the LoD due to their positions on either side of the LoD.</p> <p>The alignment passes the southwestern corner of the Drum Castle GDL. People visiting the GDL form a constraint as the castle and grounds afford glimpsed close-proximity views southwest towards the OHL.</p>	<p>users of the local road network and people visiting the Drum Castle GDL.</p> <p>Visual receptors at the residential properties at Moss-side Cottage, Linardon, Rosehall Cottage and at the eastern edge of Drumoak constrain the southeastern end of the alignment due to their distance of <200 m from the LoD and their positions on either side of the alignment. Visual receptors at residential properties at Newton of Drum, Newton Cottage, The Bowery and South Coldstream in the central section of this alternative alignment also visually constrain the alignment where the LoD passes through the gap between these properties at distances of <170 m. Visual receptors at each of these properties will have very close proximity views with the OHL forming a prominent feature in views, and the LoD offers limited opportunity to increase the distance of views beyond 170 m in the south eastern section of the alignment and beyond 200 m in the central section of the alignment. These constraints are unavoidable however the level of constraint could be reduced by ensuring towers are aligned beyond 170 m from these receptors where possible.</p> <p>Views to the southwest experienced by people visiting Drum Castle would be compromised by the OHL due to its close proximity to the grounds. The level of constraint is reduced by the degree of screening that is provided by broadleaved and coniferous woodland within and around the grounds of Drum Castle, resulting in partially or glimpsed visibility of the OHL.</p>	
	<p>Alternative Alignment 6b</p>	<p>Visual</p> <p>Visual receptors at residential properties and in Drumoak, as well as people travelling along the local road network and recreational routes to the north of Drumoak form a constraint.</p> <p>Residents at a number of properties including Moss-side Cottage, Linardon, Rosehall Cottage and at the eastern edge of Drumoak constrain the southeastern end of the Potential Alignment, as well as dwellings located at the northern edge of Drumoak, three properties at Newton Cottage and The Bowery in the central section of the Potential Alignment.</p>	<p>This alignment has been RAG rated as Amber as an OHL alignment may compromise visual amenity experienced by a number of sensitive visual receptors including people in the northern edge of Drumoak, people at a number of residential receptors and users of the local road network.</p> <p>Visual receptors at the residential properties at Moss-side Cottage, Linardon, Rosehall Cottage and at the eastern edge of Drumoak constrain the southeastern end of the alignment due to their distance of <200 m from the LoD and their positions on either side of the alignment. Visual receptors at residential properties at northern edge of Drumoak, three properties at Newton Cottage and The Bowery in the central section of the alignment also visually constrain the alignment where the LoD passes through the gap between these properties at distances of <170 m. Visual receptors at each of these properties will have very close proximity views with the OHL forming a prominent feature in views, and the LoD offers limited opportunity to</p>	<p>A</p>

Topic	Option	Constraints ¹⁰	Evaluation of Constraint	RAG Score
			<p>increase the distance of views beyond 170 m in these two sections of the alignment. These constraints are unavoidable however the level of constraint could be reduced by ensuring towers are aligned beyond 170 m from these receptors where possible.</p>	
	Alternative Alignment 6c	<p>Visual</p> <p>Visual receptors at scattered residential properties and people travelling along the local road network and recreational routes form a constraint. Residents at a number of properties including Moss-side Cottage, Linardon, Rosehall Cottage and at the eastern edge of Drumoak constrain the southeastern end of this alternative alignment. Dwellings at Newton of Drum and three properties at Newton Cottage also constrain the LoD due to their positions on either side of the LoD, as well as properties at South Coldstream in the central section of the alignment.</p> <p>The alignment passes the southwestern corner of the Drum Castle GDL. People visiting the GDL form a constraint as the castle and grounds afford glimpsed close-proximity views southwest towards the OHL.</p>	<p>This alignment has been RAG rated as Amber. An OHL alignment may compromise visual amenity experienced by a number of sensitive visual receptors including people at a number of residential receptors, users of the local road network and people visiting the Drum Castle GDL.</p> <p>Visual receptors at the residential properties at Moss-side Cottage, Linardon, Rosehall Cottage and at the eastern edge of Drumoak constrain the southeastern end of the alignment due to their distance of <200 m from the LoD and their positions on either side of the alignment. Visual receptors at residential properties at Newton of Drum, Newton Cottage and South Coldstream also form visual constraints due to their proximity of less than <200 m from the LoD. Visual receptors at each of these properties will have very close proximity views with the OHL forming a prominent feature in views, and the LoD offers limited opportunity to increase the distance of views beyond 170 m in the southeastern section of the alignment and beyond 200 m in the central section of the alignment, where a further environmental constraint is present to the northeast. These constraints are unavoidable however the level of constraint could be reduced by ensuring towers are aligned beyond 170 m from these receptors where possible.</p> <p>Views to the southwest experienced by people visiting Drum Castle would be compromised by the OHL due to its close proximity to the grounds. The level of constraint is reduced by the degree of screening that is provided by broadleaved and coniferous woodland within and around the grounds of Drum Castle, resulting in partially or glimpsed visibility of the OHL.</p>	A
Land Use Agriculture, Forestry, Recreation	Alternative Alignment 6a (Potential) + Alternative Alignment 6b + Alternative Alignment 6c	<p>Agriculture</p> <p>The majority of the length of the alternative alignments intersect non-prime agricultural land, specifically Class 3.2 (Land capable of average production though high yields of barley, oats and grass can be obtained) and Class 4.1 (Land capable of producing a narrow range of crops, primarily grassland with short arable breaks of forage crops and cereal).</p>	<p>Agriculture</p> <p>The alternative alignments have all been assigned a RAG rating of Green as the area of Class 3.1 land is limited to one strip of land parallel to the A93 and could be spanned.</p> <p>Each alignment has the potential to interact with this area of land, but they are unlikely to compromise its viability as an agricultural resource. It is not likely that any towers would be located on prime agricultural</p>	G

Topic	Option	Constraints ¹⁰	Evaluation of Constraint	RAG Score
		<p>All three alternative alignments intersect with a small area of prime agricultural land (Class 3.1 Land capable of producing consistently high yields of a narrow range of crops and/ or moderate yields of a wider range) located to the southeast of Drumoak, parallel to the A93.</p>	<p>land and therefore all alternative alignments would only affect land of lower classes.</p>	
	<p>Alternative Alignment 6a (Potential)</p>	<p>Forestry</p> <p>The alignment LoD intersects with three areas of woodland comprised (or partly comprised) of commercial forestry:</p> <ul style="list-style-type: none"> • One unnamed block of woodland is located in the southern section of the alignment, to the east of Drumoak, is intersected by the alignment (at NGR NO 79602 99412). The woodland is comprised of mixed, mainly coniferous woodland. • The LoD intersects with an unnamed woodland area located to the north of Drumoak, and is comprised of mixed, mainly coniferous woodland (at NGR NO 79185 99904). • The alignment intersects the northeastern section of Coldstream Plantation (at NGR NO 77721 00052), located to the northwest of Drumoak in the northern part of the alignment, and is comprised predominantly of commercial forestry. Site visits confirmed that this plantation has been extensively felled. <p>Other aspects of forestry including designated areas and habitats are addressed in the criteria for Natural Heritage.</p>	<p>This alignment has been RAG rated as Amber as the alignment LoD intersects the edge of, or passes close to and through, three areas of commercial forestry where interaction with woodland management and operations may compromise the commercial returns from the forestry.</p> <p>The alignment is constrained to some extent by the presence of woodland areas with some commercial forestry activity likely to be present. At these points, tree clearance for an operational corridor within these woodlands may compromise commercial returns from these enterprises as some felling and/or re-design of planting may be required to accommodate the OHL.</p> <p>The southern section of the alignment LoD would intersect with the woodland area located to the north of Drumoak. Some felling may be required to create an operational corridor and a wind firm edge where coniferous woodland is present. Taking account of the potential to align the OHL to avoid much of this woodland, it is considered unlikely that the alignment would compromise the commercial returns.</p> <p>Alternative 6a (Potential) intersects the centre of the woodland blocks located to the east of Drumoak as well as Coldstream Plantation to the northwest of Drumoak. Both areas would require towers sited within the woodland, with the potential for the former requiring at least one tower and the latter requiring at least two towers. It is considered that the alignment is likely to interact with forestry operations and as such may compromise the future commercial returns from the site due to felling and required changes in planting and management.</p>	<p>A</p>
	<p>Alternative Alignment 6b</p>	<p>Forestry</p> <p>The LoD of this alignment intersects with two areas of woodland comprised (or partly comprised) of commercial forestry:</p> <ul style="list-style-type: none"> • One unnamed woodland block in the southern section of the alignment, located to the east of Drumoak, is comprised of coniferous woodland (at NGR NO 79602 99412). The LoD intersects with the southwestern corner of the woodland area. • Coldstream Plantation (at NGR NO 77576 99837), located to the northwest of Drumoak in the northern part of the alignment, 	<p>This alignment has been RAG rated as Amber as it intersects the edge of, or passes close to and through, two areas of commercial forestry where interaction with woodland management and operations may compromise the commercial returns from the forestry.</p> <p>The alignment is constrained to some extent by the presence of woodland areas with some commercial forestry activity likely to be present. At these points, tree clearance for an operational corridor within these woodlands may compromise commercial returns from these enterprises as some felling and/or re-design of planting may be required to accommodate the OHL.</p>	<p>A</p>

Topic	Option	Constraints ¹⁰	Evaluation of Constraint	RAG Score
		<p>is comprised predominantly of commercial forestry. Site visits confirmed that this plantation has been extensively felled.</p> <p>Other aspects of forestry including designated areas and habitats are addressed in the criteria for Natural Heritage.</p>	<p>The alignment LoD intersects with the southwestern edge of the woodland area to the east of Drumoak. Some felling may be required to create an operational corridor and a wind firm edge where coniferous woodland is present. Taking account of the potential to align the OHL to avoid much of this woodland, it is considered unlikely that the alignment would compromise the commercial returns of this area due to the small area of the woodland that may require to be felled.</p> <p>The alternative alignment LoD intersects the centre of Coldstream Plantation, with the potential for at least one tower to require location within the wooded area. Despite the plantation being felled, the alignment would have some potential to interact with forestry operations and may compromise future commercial returns from the site due to required changes in planting and management.</p>	
	<p>Alternative Alignment 6c</p>	<p>Forestry</p> <p>The LoD of this alternative alignment intersects with four areas of woodland comprised (or partly comprised) of commercial forestry:</p> <ul style="list-style-type: none"> • One unnamed block of woodland is located in the southern section of the alignment, to the east of Drumoak, is intersected by the alignment (at NGR NO 79602 99412). The woodland is comprised of mixed, mainly coniferous woodland. • The LoD intersects with an unnamed woodland area located to the north of Drumoak, and is comprised of mixed, mainly coniferous woodland (at NGR NO 79185 99904). • The LoD intersects the southernmost edge of Drumhill Wood, located to the north of Drumoak, adjacent to the Forest of Drum (at NGR NJ 79028 00090). The forest is comprised mostly of coniferous woodland and appears to be partially used for commercial activities and is partially felled in the southern corner where the alignment crosses. The woodland area is managed by National Trust Scotland (NTS). • The alignment intersects the northeastern section of Coldstream Plantation (at NGR NJ 77721 00052), located to the northwest of Drumoak in the northern part of the alignment, and is comprised predominantly of commercial forestry. Site visits confirmed that this plantation has been extensively felled. <p>Other aspects of forestry including designated areas and habitats are addressed in the criteria for Natural Heritage.</p>	<p>This alignment has been RAG rated as Amber as the alignment LoD intersects the edge of, or passes close to and through, four areas of commercial forestry where interaction with woodland management operations may compromise the commercial returns from the forestry.</p> <p>The alignment is constrained to some extent by the presence of woodland areas with some commercial forestry activity present. At these points, tree clearance for an operational corridor within these woodlands may compromise commercial returns from these enterprises as some felling and/or re-design of planting may be required to accommodate the OHL.</p> <p>The southern section of the alternative alignment LoD would intersect with the woodland area located to the north of Drumoak. The alignment LoD intersects with the southeastern edge of Drumhill Wood, although the majority of the woodland area is located to the north of the alignment. Some felling may be required to create an operational corridor and a wind firm edge where coniferous woodland present in both woodland areas. Taking account of the potential to align the OHL to avoid much of this woodland, it is considered unlikely that the alignment would compromise the commercial returns of these areas.</p> <p>The alternative alignment intersects the unnamed woodland located to the east of Drumoak as well as Coldstream Plantation to the northwest of Drumoak. Both areas have the potential for at least one tower to be sited within the woodland, with the former requiring location of at least one tower and the latter requiring at least two towers. It is considered that the alignment is likely to interact with forestry operations and as</p>	<p>A</p>

Topic	Option	Constraints ¹⁰	Evaluation of Constraint	RAG Score
			such may compromise future commercial returns from the site due to felling and required changes in planting and management.	
	Alternative Alignment 6a (Potential) + Alternative Alignment 6b + Alternative Alignment 6c	<p>Recreation</p> <p>All alternative alignments cross the same core paths and one NCN route in the southern section, and approximately 150 m of the length of the westernmost section of the LoD intersects with a small area of the Upper Drum and Lower Durris fishing beat on the River Dee to the southeast of Drumoak. Interaction between the alignment and recreational use of the land has been assessed to be similar for each of the alternative alignments, and the flexibility in the LoD allows for constraints to be avoided, and therefore this criterion has been scoped out of the appraisal.</p>		
Planning Proposals	Alternative Alignment 6a (Potential) + Alternative Alignment 6c	<p>One planning proposal has been identified which may form a constraint to the alternative alignments. A Tree Preservation Order (TPO) for a mixed woodland (W1) is intersected by the alignment (AC TPO 126 (2020)), located to the east of Drumoak, to the north of the River Dee and A93. This woodland is also listed as LEPO woodland on the AWI (see Natural Heritage Designations).</p>	<p>The alternative alignments have both been RAG Rated as Red as the alignment is likely to be inconsistent with already consented third party proposals supported by national or regional planning policy.</p> <p>The alignment intersects through the centre of a woodland designated as a TPO and cannot be avoided, with at least one tower likely to be sited within the woodland. Felling of this woodland area would likely be required and would be inconsistent with NPF4 Policy 6 and Aberdeenshire LDP Policies E3, PR1 and C3, where there is a presumption against the removal of trees, woodlands and hedgerows.</p>	R
	Alternative Alignment 6b	<p>The following planning proposals have been identified which may form a constraint to the alignment.</p> <ul style="list-style-type: none"> A Tree Preservation Order (TPO) for a mixed woodland (W1) is intersected by the alignment (AC TPO 126 (2020)), located to the east of Drumoak, to the north of the River Dee and A93. This woodland is also listed as LEPO woodland on the AWI (see Natural Heritage Designations). The LoD intersects with the northern extent of a consented planning application for the erection of 11 houses in the northern part of Drumoak village (APP/2020/1955). The LoD overlaps with the boundary of a planning application for the erection of a house and garage located to the north of Drumoak (APP/2022/1230). The LoD overlaps with the access track of the proposed development. 	<p>This alignment has been RAG Rated as Red as it is likely to be inconsistent with already consented third party proposals supported by national or regional planning policy.</p> <p>The alignment intersects through the centre of a woodland designated as a TPO and cannot be avoided, with at least one tower likely to be sited within the woodland. Felling of this woodland area would likely be required and would be inconsistent with NPF4 Policy 6 and Aberdeenshire LDP Policies E3, PR1 and C3, where there is a presumption against the removal of trees, woodlands and hedgerows.</p> <p>The alignment LoD partially intersects with the boundary of the planning application within Drumoak and to the north of Drumoak, and the applications present a constraint to the alignment. Due to property constraints to the north and the south of the alignment, the degree of flexibility within the LoD is limited, limiting the opportunity to avoid distances of <170 m between the OHL and properties. This constraint is unavoidable and could result in the OHL being less than two times the nominal tower height (approximately 120 m) from the planning application within Drumoak (APP/2020/1955).</p>	R

APPENDIX H: APPRAISAL OF ALTERNATIVE ALIGNMENTS AT LOCATION 7: SCHOOLHILL

This appendix presents the baseline constraints and the findings of the appraisal of key environmental considerations for alternative alignments at Location 7: Schoolhill in Section F of the Proposed Route (Route F2) and, details the RAG Ratings applied to each alternative alignment identified under each environmental topic as per SSEN Transmission's Routeing Guidance.

The environmental topics consider the following, natural heritage, cultural heritage, people, landscape and visual, land use and planning.

The tables presented in this appendix detail the baseline constraints and the findings of the appraisals based on a study area which comprises the alignment and its LoD, defined here as 100 m either side of the alignment.

Table H1. Environmental Constraints for Alternative Alignments at Location 7: Schoolhill in Section F

Topic	Option	Constraints	Evaluation of Constraint	RAG Score
Natural Heritage <i>Designations, Protected Species, Habitats</i>	Alternative Alignment 7a (Potential) + Alternative Alignment 7b + Alternative Alignment 7c	Designations: International, European or National Designations No areas designated at an international, European or national level for their natural heritage are intersected by the LoD of the alternative alignments, and therefore these criteria have been scoped out of the appraisal.		
	Alternative Alignment 7a (Potential)	Designations: Regional Designations No regionally designated sites are intersected by the LoD of Alternative Alignment 7a (Potential).	This alignment has been RAG rated as Green because it is unlikely to compromise the conservation status of any regional designations (i.e. LNCS).	G
	Alternative Alignment 7b	Designations: Regional Designations A small area of Candyglirach LNCS near Greendams is intersected by this alternative alignment as the LNCS extends approximately 65 m into the LoD. This LNCS is noted for its extensive area of lowland raised bog, with birch woodland, conifer and wet woodland, acid grassland and rush pasture around the margins, and a good diversity of plants and invertebrates. Some of the habitats associated with this LNCS may also be GWDTE. The majority of the habitats for which the LNCS is designated are located outwith the LoD to the west; the eastern extent of the LNCS which intersects with the LoD comprises upland birchwood (based on the NWSS).	This alignment has been RAG rated as Amber because it may compromise the conservation status of the LNCS and/or the conservation status of the designated features of the site. The alignment is constrained by the presence of the Candyglirach LNCS, comprising upland birchwood, within the west of the LoD. As such, some felling of this woodland may be required within the eastern boundary of the LNCS to provide an operational corridor for the OHL; however, this alignment has the potential to avoid or reduce felling of woodland in the LNCS through careful micro-siting of the overhead line through adjacent habitats and farmland. In addition, some of the habitat types associated with the LNCS are likely to be GWDTE, such as wet woodland and rush pasture. Positioning of towers near Greendams, downstream of the LNCS, would require careful micro-siting.	A
	Alternative Alignment 7c	Designations: Regional Designations No regionally designated sites are intersected by the LoD of this alternative alignment.	This alignment has been RAG rated as Green because it is unlikely to compromise the conservation status of any regional designations (i.e. LNCS).	G
	Alternative Alignment 7a (Potential) + Alternative Alignment 7b + Alternative Alignment 7c	Protected Species: European Protected Species (EPS); UK Biodiversity Action Plan (BAP) Species; Other Protected and Notable Species Records of and/or habitat potential for EPS (such as otter and bats), UKBAP species (such as pine marten, red squirrel, reptiles and amphibians), and other notable species (such as badger) are considered to represent a similar level of baseline constraint for each of the alternative alignments. Each of the alternative alignments have been evaluated as having similar potential to support these species, and would require a similar range of standard mitigation measures to be implemented including those in SSEN Transmission's SPPs. These criteria have therefore been scoped out of the appraisal.		

Topic	Option	Constraints	Evaluation of Constraint	RAG Score
	Alternative Alignment 7a (Potential) + Alternative Alignment 7b + Alternative Alignment 7c	Habitats: Annex 1 Habitats Desk study and field survey data indicate that habitats within each of the alternative alignment LoDs comprise a mosaic of farmland and woodlands. There is limited potential for pockets of Annex 1 habitats, restricted to remnant extents of semi-natural woodland. Due to the similarity in the types of habitat present and similar potential for Annex 1 habitats across all of the alternative alignments, this criterion has been scoped out of the appraisal.		
	Alternative Alignment 7a (Potential)	Habitats: Groundwater Dependent Terrestrial Ecosystems (GWDTE) The LoD of the Alternative Alignment 7a (Potential) intersects with four areas of wetland near Little Finnercy (NJ 76305 03517, NJ 76274 03618, NJ 76402 03571 and NJ 76503 03673) comprising the SBL habitat 'Purple moor grass and rush pasture'. The associated NVC community is M23 <i>Juncus effusus/acutiflorus-Galium palustre</i> rush-pasture, which has potential to be GWDTE. Additional hydrological assessment would be required to confirm the status of these wetlands.	This alignment has been RAG rated as Amber because it may compromise the integrity of areas of potential GWDTE. It would not be possible to avoid crossing the potential GWDTE habitats near Little Finnercy, but towers would be microsited to avoid areas of potential GWDTE. It is likely a tower would be located (NGR NJ 76392 03565) approximately 15 m south of an area of M23 rush-pasture. Hydrological assessment would be required of this habitat to confirm its status, and to ensure appropriate mitigation is identified.	A
	Alternative Alignment 7b	Habitats: Groundwater Dependent Terrestrial Ecosystems (GWDTE) The LoD of this alternative alignment intersects with four areas of wetland near Little Finnercy (NJ 76305 03517, NJ 76274 03618, NJ 76402 03571 and NJ 76503 03673) comprising the SBL habitat 'Purple moor grass and rush pasture'. The associated NVC community is M23 <i>Juncus effusus/acutiflorus-Galium palustre</i> rush-pasture, which has potential to be GWDTE. Additional hydrological assessment would be required to confirm the status of these wetlands. In addition, the LoD of this alignment intersects Candyglirach LNCS near Greendams (see Designations: Regional); the LNCS supports habitats that may be GWDTE, and the alignment is located within a short distance downstream from this site.	This alignment has been RAG rated as Amber because it may compromise the integrity of areas of potential GWDTE. It would not be possible to avoid crossing the potential GWDTE habitat near Little Finnercy, but towers would be microsited to avoid areas of potential GWDTE. The OHL will pass over an area of M23 rush-pasture. Hydrological assessment would be required of this habitat to confirm its status, and to ensure appropriate mitigation is identified. Positioning of towers near Greendams will require careful micro-siting as this area is downstream from the potential GWDTEs associated with Candyglirach LNCS.	A
	Alternative Alignment 7c	Habitats: Groundwater Dependent Terrestrial Ecosystems (GWDTE) The LoD of this alternative alignment intersects four areas of wetland near Little Finnercy (NJ 76305 03517, NJ 76274 03618, NJ 76402 03571 and NJ 76503 03673) comprising the SBL habitat 'Purple moor grass and rush pasture'. The associated	This alignment has been RAG rated as Amber because it may compromise the conservation status of areas of potential GWDTE. It would not be possible to avoid crossing the potential GWDTE habitat near Little Finnercy, but towers would be microsited to avoid areas of potential GWDTE. The OHL will pass over an area of M23 rush-pasture near Little Finnercy, and further areas which may be the same habitat	A

Topic	Option	Constraints	Evaluation of Constraint	RAG Score
		<p>NVC community is M23 <i>Juncus effusus/acutiflorus-Galium palustre</i> rush-pasture, which has potential to be GWDTE. Additional hydrological assessment would be required to confirm the status of these wetlands.</p> <p>In addition, there are further areas which appear from aerial imagery likely to comprise further extents of rush pasture, for example adjacent to the Gormack Burn southeast of Schoolhill.</p>	<p>type near Schoolhill. Hydrological assessment would be required of these habitats to confirm their status, and to ensure appropriate mitigation is identified.</p>	
	Alternative Alignment 7a (Potential)	<p>Habitats: Biodiversity</p> <p>The density of Biodiversity Units derived from habitats within the alignment LoD is calculated to be 6.85 BU/ha.</p> <p>Irreplaceable habitats are calculated to be present at a density of 0.37 BU/ha. Watercourses are present at a density of 0.08 BU/km.</p>	<p>This alignment has been RAG rated as Green because it has been evaluated as the alternative alignment having the lowest biodiversity unit density.</p>	G
	Alternative Alignment 7b	<p>Habitats: Biodiversity</p> <p>The density of Biodiversity Units derived from habitats within this alternative alignment LoD is calculated to be 7.46BU/ha.</p> <p>Irreplaceable habitats are calculated to be present at a density of 0.26 BU/ha. Watercourses are present at a density of 0.21 BU/km.</p>	<p>This alignment has been RAG rated as Green because it has been evaluated as having less than 110% of the BU density of the least biodiversity impacted alternative alignment (see Alternative Alignment 7a (Potential)).</p>	G
	Alternative Alignment 7c	<p>Habitats: Biodiversity</p> <p>The density of Biodiversity Units derived from habitats within this alternative alignment LoD is calculated to be 7.41 BU/ha.</p> <p>Irreplaceable habitats are calculated to be present at a density of 1.46 BU/ha. Watercourses are present at a density of 0.07 BU/km.</p>	<p>This alignment has been RAG rated as Green because it has been evaluated as having less than 110% of the BU density of the least biodiversity impacted alternative alignment (see Alternative Alignment 7a (Potential)).</p>	G
Natural Heritage Ornithology	Alternative Alignment 7a (Potential) + Alternative Alignment 7b + Alternative Alignment 7c	<p>Designations</p> <p>The alternative alignments are located in an area where there is connectivity with the core foraging ranges of qualifying features (greylag geese; 15-20 km) of the Loch of Skene SPA (c. 4 km to the northeast).</p>	<p>The alternative alignments have been RAG rated as Amber as they may compromise an internationally or nationally designated area and/or the conservation status of the qualifying features of the site having assumed connectivity between the Loch of Skene SPA roost and associated foraging areas.</p> <p>Information on the historic distribution of feeding greylag geese suggests that collision risk is a constraint throughout the LoDs of the alternatives</p>	A

Topic	Option	Constraints	Evaluation of Constraint	RAG Score
			<p>due to the alignments location between the SPA and feeding fields (Mitchell, 2012)¹.</p> <p>Vantage Point watch surveys (Sept 2023 to March 2024) have recorded significant activity foraging goose flights within and across the area where the alternative alignments are located. In addition, foraging goose surveys in early 2023 recorded pink-footed geese foraging in fields c. 3 km north. Foraging sites are however subject to change across the winter and between years due to field planting/use.</p> <p>Line-marking with bird diverters would be required in these locations of the OHL as design mitigation in locations where conductors are likely to pose collision risk to susceptible birds.</p>	
	Alternative Alignment 7a (Potential) + Alternative Alignment 7b + Alternative Alignment 7c	<p>Schedule 1 species</p> <p>The alternative alignments contain habitats that have the potential to support populations of Schedule 1 birds. Woodland habitat supports Schedule 1 raptors.</p> <p>Desk records are noted within 2 km of the alternative alignments.</p>	The alternative alignments have been RAG rated as Amber as they have the potential to compromise the conservation status of Schedule 1 bird populations in the region or nationally. There are records of Schedule 1 species in the location in which the alternative alignments are located.	A
	Alternative Alignment 7a (Potential) + Alternative Alignment 7b + Alternative Alignment 7c	<p>Birds of Conservation Concern</p> <p>The land intersected by the OHL alternative alignments may support populations of birds on the Red and Amber lists of Birds of Conservation Concern (BoCC), some of which are also on Schedule 1. Red-listed waders may be present with the alternative alignments also noted as having breeding wader habitat (based on BTO modelling).</p> <p>The section in which the alignments are located is unlikely to compromise the conservation status of populations of a red or amber listed species or essential breeding, passage or wintering habitat, and therefore this criterion has been scoped from appraisal.</p>		
Natural Heritage Hydrology, Geology & Hydrogeology	Alternative Alignment 7a (Potential) + Alternative Alignment 7b + Alternative Alignment 7c	<p>Surface and Groundwater Drinking Water Protected Areas</p> <p>There are no Surface DWPAs within the area of the alternative alignments, therefore this criterion has been scoped out of the appraisal.</p>		
	Alternative Alignment 7a (Potential) +	<p>Aquifer Providing Regional / Local Resources</p> <p>There are no known PWS or abstractions within the area of the alternative alignments, therefore this criterion has been scoped out of the appraisal.</p>		

¹ Mitchell, C. 2012. Mapping the distribution of feeding Pink-footed and Iceland Greylag Geese in Scotland. Wildfowl & Wetlands Trust / Scottish Natural Heritage Report, Slimbridge. 108pp.

Topic	Option	Constraints	Evaluation of Constraint	RAG Score
	Alternative Alignment 7b + Alternative Alignment 7c			
	Alternative Alignment 7a (Potential)	<p>Surface Waters or Aquifer Providing Water for Agricultural or Industrial Use</p> <p>The LoD of Alternative Alignment 7a (Potential) crosses four watercourses/ drains and a small pond in the north. The largest watercourse within the LoD of the alignment is the Gormack Burn. SEPA Future Flood maps indicate that the flood extent (200-year plus climate change) at the alignment crossing location is between 60 m and 110 m.</p>	<p>This alignment has been RAG rated as Green as it is unlikely to result in water flow pathway(s) to surface and groundwaters. All watercourses, ponds and flood extents can be avoided or spanned in the LoD of the alignment and there are no known water supplies or abstractions within the alignment LoD that would represent a material constraint.</p>	G
	Alternative Alignment 7b	<p>Surface Waters or Aquifer Providing Water for Agricultural or Industrial Use</p> <p>The LoD of this alternative alignment crosses five watercourses/ drains and is adjacent to two small ponds. The largest watercourse within the LoD of the alignment is the Gormack Burn and the alignment crosses it approximately 200 m upstream of its confluence with the Silverstripe Burn.</p> <p>The Gormack Burn and tributaries run parallel to the alignment for approximately 600 m.</p> <p>SEPA Future Flood maps indicate that there is a wide flood extent associated with the Gormack Burn and its tributaries, which impinges into the western part of the alternative alignment LoD along the length of the burn, by up to 100 m in places.</p>	<p>This alignment has been RAG rated as Green as it is unlikely to result in water flow pathway(s) to surface and groundwaters. All watercourses, ponds and predicted flood extents can be avoided or spanned within the LoD of the alignment and there are no known water supplies or abstractions within the alignment LoD that would represent a material constraint.</p> <p>The alignment would have to be moved towards the eastern side of the alignment LoD to be able to avoid the flood risk areas and watercourse buffers associated with the Gormack Burn and tributaries.</p>	G
	Alternative Alignment 7c	<p>Surface Waters or Aquifer Providing Water for Agricultural or Industrial Use</p> <p>The LoD of this alternative alignment crosses five watercourses/ drains and is adjacent to two minor watercourse features/ponds. The largest watercourse within the LoD of the alignment is the Gormack Burn and the alignment crosses it approximately 1.3 km downstream of its confluence with the Silverstripe Burn.</p> <p>SEPA Future Flood maps indicate that there is a wide flood extent associated with the Gormack Burn, with an indicative floodplain over 460 m width. Consequently, it is not possible to span the Gormack Burn without infrastructure being emplaced within the floodplain extent.</p>	<p>This alignment has been RAG rated as Amber as it may compromise the quality or quantity of surface or groundwaters of local importance or would require de-watering of construction activities. All watercourses and ponds can be avoided or spanned within the LoD of the alignment and there are no known water supplies or abstractions within the alignment LoD. However, the alignment cannot avoid the 200-year future flood extent of the Gormack Burn. Therefore, construction activities are effectively within the watercourse during the 200-year future flood event and there is potential to compromise quality and/or quantity of surface waters (and groundwater) of local importance or would require dewatering construction activities.</p>	A

Topic	Option	Constraints	Evaluation of Constraint	RAG Score
			The alignment LoD would have to be relocated several hundred metres to the west to be able to completely span and avoid the flood risk areas and watercourse buffers associated with the Gormack Burn and tributaries.	
Cultural Heritage Designations, Cultural Heritage Assets	Alternative Alignment 7a (Potential)	Designations: World Heritage Sites (WHS), Scheduled Monuments (SM) Inventory Gardens and Designed Landscapes (GDL) and Inventory Battlefields Within 1 km of the edge of the alignment LoD there are two Scheduled Monuments of national importance and high sensitivity. <ul style="list-style-type: none"> East Finnercy Cairn (SM 6076) (NGR NO 764 042): this prehistoric burial cairn stands on a ridge on a south-facing slope in farmland c.200 m from the northeast edge of the alignment LoD. Views from the cairn are concentrated south, looking across and along the Gormack Burn valley. The cairn is visible in views from the public roads that run to the northeast and southeast, from where it can be seen in its farmland setting. Views from (particularly those to the south), and to, the cairn from the wider landscape, are important aspects of its setting. Tillyorn Moated Homestead (SM 12161) (NGR NO 754, 802): the remains of this medieval defensive domestic site stand in arable farmland southeast of Tillyorn Cottage and c.740 m from the eastern edge of the alignment LoD. The monument lies close to the confluence of the Silverstripe Burn and the Gormack Burn and there are open views from the monument in all directions. The relationship between the monument and the watercourses, and its association with the Strathdon valley, are important aspects of its setting. 	This alignment has been RAG rated as Amber as although it would avoid direct interaction with any designated assets, it may compromise the setting of the following designated asset that lies close to the northern end of the alignment. <ul style="list-style-type: none"> East Finnercy Cairn (SM 6076): the edge of the alignment LoD passes within c.200 m to the southwest of the monument, at its northern end, potentially compromising its setting, due to the proximity of an angle tower to the monument and the introduction of towers into key views from the monument to the south. 	A
	Alternative Alignment 7b	Designations: World Heritage Sites (WHS), Scheduled Monuments (SM) Inventory Gardens and Designed Landscapes (GDL) and Inventory Battlefields One Scheduled Monument, Tillyorn Moated Homestead (SM 12161) (NGR NO 754 802), of national importance and of high sensitivity, lies within the alternative alignment LoD and is within c.50 m of the alignment. (See description of monument in row above (Alternative Alignment 7a (Potential))). Within 1 km there is one additional Scheduled Monument, East Finnercy Cairn (SM 6076). The remains of this prehistoric burial	This alignment has been RAG rated as Red as although it would avoid direct interaction with any designated assets, it will compromise the setting of the following designated assets that lie close to the alignment. <ul style="list-style-type: none"> Tillyorn Moated Homestead (SM 12161): this monument lies within the alternative alignment LoD. The OHL would introduce new towers within the immediate surroundings of the Scheduled Monument, these being large in scale to the monument, and which would dominate the setting of the monument, compromising its setting. East Finnercy Cairn (SM 6076): the edge of the LoD passes within c.200 m to the southwest of the monument, at its northern end, 	R

Topic	Option	Constraints	Evaluation of Constraint	RAG Score
		cairn at the northeast section of the alternative alignment lies c.200 m from the northern edge of the alignment LoD. (See description of monument in row above (Alternative Alignment 7a (Potential))).	compromising its setting, due to the proximity of an angle tower to the monument and the introduction of towers into key views from the monument to the south.	
	Alternative Alignment 7c	Designations: World Heritage Sites (WHS), Scheduled Monuments (SM) Inventory Gardens and Designed Landscapes (GDL) and Inventory Battlefields Within 1 km of the edge of this alternative alignment LoD there is one Scheduled Monument of national importance and high sensitivity. <ul style="list-style-type: none"> East Finercy Cairn (SM 6067), the remains of this prehistoric burial cairn to the northeast of the alignment lie c.200 m from the northern edge of the alignment LoD. (See description of monument in row above (Alternative Alignment 7a (Potential))). 	This alignment has been RAG rated as Amber as although it would avoid direct interaction with any designated assets, it may compromise the setting of the following designated asset that lies close to the northern end of the alignment. <ul style="list-style-type: none"> East Finercy Cairn (SM 6076): the edge of the alternative alignment LoD passes within c.200 m to the southwest of the monument, at its northern end, potentially compromising its setting, due to the proximity of an angle tower to the monument and the introduction of towers into key views from the monument to the south. 	A
	Alternative Alignment 7a (Potential)	Designations: Sites and Monuments Record (SMR) Entries Four recorded SMR sites of archaeological and cultural interest fall within the alignment LoD. These are two farmsteads (NJ70SE0072 and NJ70SE0068), that are still occupied; a former woollen mill (NJ70SE0158), which is now a residential property, and a well (NJ70SE0012). These are all elements of medieval/post-medieval settlement and are recorded as being of 'Standard' importance in the SMR. They are assessed as being of local heritage value and of no more than low sensitivity.	This alignment has been RAG rated as Green for SMR sites, as the archaeological and cultural heritage sites identified do not represent significant constraints to development of an OHL in this alignment. The SMR sites are thinly spread throughout the alignment LoD and are small in extent. There is flexibility to position an OHL within the LoD to avoid the SMR sites.	G
	Alternative Alignment 7b	Designations: Sites and Monuments Record (SMR) Entries Five recorded SMR sites of archaeological and cultural interest fall within this alternative alignment LoD. One of the assets, a prehistoric field system (NJ70SE0005) at Blackdams, has the potential to contain archaeological evidence relating to prehistoric farming activities. Further prehistoric activity is indicated close to the Gormack Burn by the presence of a cup-marked boulder (NJ70SE0246). The remaining heritage assets are associated with medieval/post-medieval settlement, including a former farmstead (NJ70SE0154), former sands and gravel workings (NJ70SE0082), and a well (NJ70SE0012). They are all elements of the historic landscape.	This alignment has been RAG rated as Green for SMR sites, as the archaeological and cultural heritage sites identified do not represent significant constraints to development of an OHL in this alignment. The majority of the SMR sites are present around Tillyorn (NGR NO 375 802). Most are located at the periphery of the LoD and therefore there is flexibility to position an OHL within the LoD to avoid the SMR sites.	G

Topic	Option	Constraints	Evaluation of Constraint	RAG Score
		All of the assets within the alignment LoD are recorded as being of 'Standard' importance in the SMR and are assessed as being of local heritage value and of no more than low sensitivity.		
	Alternative Alignment 7c	<p>Designations: Sites and Monuments Record (SMR) Entries</p> <p>Four recorded SMR site of archaeological and cultural interest fall within this alternative alignment LoD. These are a well (NJ70SE0012), two areas of relict rig and furrow remains (NJ70SE0011 and NJ70SE0052), and three consumption dykes (NJ70SE0014) (a type of field clearance, unique to NE Scotland) used as field boundaries.</p> <p>All of the heritage assets are recorded in the SMR as being of 'Standard' importance and are assessed as being of local heritage value and of low sensitivity.</p>	<p>This alignment has been RAG rated as Green for SMR sites, as the archaeological and cultural heritage sites identified do not represent significant constraints to development of an OHL in this alignment.</p> <p>The SMR sites are thinly spread throughout the LoD. Most are small in extent and therefore there is flexibility within the LoD to avoid the SMR sites.</p> <p>Where direct impacts on SMR sites cannot be avoided, constraints could be mitigated through a programme of works (i.e. trial trench evaluation and excavation or watching briefs) in advance of construction works to a cope agreed by the local authority.</p>	G
	Alternative Alignment 7a (Potential)	<p>Cultural Heritage Assets</p> <p>There are two Category C Listed Buildings within 1 km of the edge of the alignment LoD: North Coldstream (LB 3075) and Templefold (LB 3150), both are small farmsteads of local importance and low sensitivity. The closest, Templefold (LB 3150), lies around 650 m east of the alignment LoD.</p> <p>The Listed Buildings within the immediate landscape surrounding the alignment have generally localised settings and are not considered to be significant constraints.</p>	<p>This alignment has been RAG rated as Green for cultural heritage assets as it would be unlikely to disturb, or compromise the settings of, any cultural heritage assets.</p>	G
	Alternative Alignment 7b	<p>Cultural Heritage Assets</p> <p>There are two Category C Listed Buildings within 1 km of the edge of the alternative alignment LoD: North Coldstream (LB 3075) and Templefold (LB 3150), both are small farmsteads of local importance and low sensitivity. The closest Templefold (LB 3150) lies around 610 m east of the alignment LoD.</p> <p>The Listed Buildings within the immediate landscape surrounding the alignment have generally localised settings and are not considered to be significant constraints.</p>	<p>This alignment has been RAG rated as Green for cultural heritage assets as it would be unlikely to disturb, or compromise the setting of, any cultural heritage assets.</p>	G
	Alternative Alignment 7c	<p>Cultural Heritage Assets</p> <p>There are two Category C Listed Buildings within 1 km of the edge of the alternative alignment LoD: North Coldstream (LB 3075) and Templefold (LB 3150), both are small farmsteads of local importance and low sensitivity. The closest, Templefold</p>	<p>This alignment has been RAG rated as Green for cultural heritage assets as it would be unlikely to disturb, or compromise the settings of, any cultural heritage assets.</p>	G

Topic	Option	Constraints	Evaluation of Constraint	RAG Score
		<p>(LB 3150), lies within the LoD of the alignment, around 80 m northeast of the centreline.</p> <p>The Listed Buildings within the immediate landscape surrounding the alignment have generally localised settings and are not considered to be significant constraints.</p>		
People Proximity to Dwellings	Alternative Alignment 7a (Potential)	<p>Proximity to Dwellings</p> <p>There are six locations along Alternative Alignment 7a (Potential) where residential properties are located within approximately 200 m of the edge of the LoD. These are, from south to north:</p> <ul style="list-style-type: none"> • Murphiehowe Farm and Quiddiesmill Croft which are located approximately 175 m and 140 m respectively from the edge of the LoD to the east; • Two residential properties at Quiddies Mill which are located approximately 60 m and 115 m to the east of the edge of the LoD; • Cullerlie and Milltown of Cullerlie which are located approximately 195 m and 20 m respectively to the west of the edge of the LoD; • A group of properties at Schoolhill, the closest of which is located approximately 75 m to the east of the edge of the LoD; • Westerton Farm which is located approximately 115 m to the west of the LoD; and • A group of properties at West Cullery, the closest of which is located approximately 145 m to the east of the edge of the LoD. 	<p>This alignment has been RAG rated as Amber. The LoD provides some flexibility for an OHL alignment to be located a distance of more than four times the nominal tower height (approx. 240 m) from some residential properties.</p> <p>The OHL may require to be aligned within a distance of two to four times the nominal tower height in the vicinity of the residential properties within the central section of Alternative Alignment 7a (Potential) at Quiddies Mill and Milltown of Cullerlie. These dwellings highly constrain the LoD due to their location on either side of the alignment (to the east and west) and their proximity to the LoD (≤ 115 m). The LoD provides limited flexibility to increase the distance between the OHL and these properties beyond 170 m. This constraint is unavoidable however the LoD offers some opportunity for the OHL to be aligned at distances beyond two times the nominal tower height (approx. 120 m).</p> <p>Further north the OHL may also require to be aligned within a distance of two to four times the nominal tower height in the vicinity of the residential properties at Schoolhill, Westerton Farm and West Cullery where the alignment would pass through a gap between the properties. These properties reduce the degree of flexibility within the LoD due to their respective locations either side of the alignment (to the east and west), limiting the opportunity to increase the distances between the alignment and the properties. The LoD however does offer opportunity for a 170 m separation distance to be achieved between the OHL and these properties.</p> <p>Elsewhere along Alternative Alignment 7a (Potential), the LoD offers opportunity for the OHL to be located at a distance of more than four times the nominal tower height from properties at Murphiehowe Farm and Quiddiesmill Croft at the southern end of the alignment and Cullerlie in the central section of the alignment.</p>	A
	Alternative Alignment 7b	<p>Proximity to Dwellings</p> <p>There are seven locations along this alternative alignment where residential properties are located within approximately 200 m of the edge of the LoD. These are, from south to north:</p>	<p>This alignment has been RAG rated as Amber. The LoD provides some flexibility for an OHL alignment to be located a distance of more than four times the nominal tower height (approx. 240 m) from some residential properties.</p>	A

Topic	Option	Constraints	Evaluation of Constraint	RAG Score
		<ul style="list-style-type: none"> Hoghillock which is located approximately 150 m to the south of the alignment LoD; Four properties at Candyglirach Cottages, the closest of which is located approximately 70 m to the north of the edge of the LoD; Two properties at Greendams, located at approximately 65 m and 195 m east of the LoD; Blackdams Croft which is located approximately 160 m to the east of the LoD; Tillyorn which is located approximately 165 m to the west of the LoD; Westerton which is located approximately 95 m to the southeast of the edge of the LoD; and West Cullerlie Farm which is located approximately 175 m to the southeast of the LoD. 	<p>The OHL may require to be aligned within a distance of two to four times the nominal tower height in the vicinity of the residential properties at the southern end of the alignment at Candyglirach Cottages and Hoghillock where the alignment would pass through a gap between the properties. These properties reduce the degree of flexibility within the LoD due to their respective locations either side of the alignment (to the north and south), limiting the opportunity to increase the distances between the alignment and the properties. The LoD however does offer opportunity for a 170 m separation distance to be achieved between the OHL and these properties.</p> <p>Within the central section of the alignment near the properties at Greendams, the LoD offers opportunity to achieve a distance of more than four times the nominal tower height between the OHL and these properties however this may be unlikely due to a further environmental constraint associated with Red Moss to the west of the LoD in this section.</p> <p>Elsewhere along the alternative alignment, the LoD offers opportunity for the OHL to be located at a distance of more than four times the nominal tower height from properties at Blackdams Croft, Tillyorn, Westerton and West Cullerlie Farm within the northern section of the alignment.</p>	
	Alternative Alignment 7c	<p>Proximity to Dwellings</p> <p>The northern part of this alternative alignment passes within 200 m of a residential property at West Cullerlie Cottage which is located approximately 150 m to the southwest of the alignment LoD, and three properties at Templefold; one property is located approximately 95 m to the northeast and two properties are located approximately 140 m to the northeast of the edge of the LoD.</p> <p>No other properties are located within 200 m of the edge of the alignment LoD.</p>	<p>This alignment has been RAG rated as Amber. The OHL may require to be aligned within a distance of two to four times the nominal tower height in the vicinity of the residential properties at the northern end of the alignment at West Cullerlie Cottage and three properties at Templefold where the alignment would pass through a gap between the properties. These properties reduce the degree of flexibility within the LoD due to their respective locations either side of the alignment (to the southwest and northeast), limiting the opportunity to increase the distances between the alignment and the properties. The LoD however does offer opportunity for at least a 170 m separation distance to be achieved between the OHL and these properties.</p> <p>No other properties along the LoD constrain this alternative alignment.</p>	A
Landscape/ Visual Designations, Landscape Character, Visual	Alternative Alignment 7a (Potential) + Alternative Alignment 7b + Alternative Alignment 7c	<p>Landscape Designations</p> <p>There are no landscape designations within the area of the alternative alignments, or within 1 km, and therefore this criterion has been scoped out of the appraisal.</p>		

Topic	Option	Constraints	Evaluation of Constraint	RAG Score
	Alternative Alignment 7a (Potential) + Alternative Alignment 7c	<p>Landscape Character</p> <p>All alignment alternatives are located within the Wooded Estates – Aberdeenshire LCT. As all alternatives are located within a wider landscape defined by the same characteristics, a comparison of landscape character constraints is focused on localised features at the alignment scale. There are limited landscape character features within Alternative Alignment 7a (Potential) and Alternative Alignment 7c that form a constraint.</p>	<p>The alternative alignments have been RAG rated as Green as they are unlikely to compromise the characteristic elements of the landscape character type.</p>	G
	Alternative 7b	<p>Landscape Character</p> <p>All alternative alignments are located within the Wooded Estates – Aberdeenshire LCT. As all alternatives are located within a wider landscape defined by the same characteristics, a comparison of landscape character constraints is focused on localised features at the alignment scale. Alternative Alignment 7b passes through a small area of woodland to the east of Redmoss which contributes to the ‘<i>strong woodland structure</i>’ of the LCT.</p> <p>This woodland constrains a very short section of the alignment (approximately 140 m in total) and so the level of constraint is considered to be limited.</p>	<p>This alignment has been RAG rated as Amber as the removal of trees on the eastern edge of woodland at Red Moss to accommodate the OHL would compromise this characteristic element of the landscape at the local level and its contribution to the wooded nature that is strongly associated with the Wooded Estates – Aberdeenshire LCT.</p>	A
	Alternative Alignment 7a (Potential)	<p>Visual</p> <p>Visual receptors at scattered residential properties and people travelling along the local road network form a constraint, particularly residents at Quiddies Mill and Milton of Cullerlie in the central part of Alternative Alignment 7a (Potential), and Schoolhill, Westerton Farm and West Cullery in the northern part of the alignment.</p>	<p>This alignment has been RAG rated as Amber as an OHL in this location may compromise visual amenity experienced by a number of sensitive visual receptors including people at residential properties and users of the local road network.</p> <p>Visual receptors at the residential properties at Quiddies Mill and Milltown of Cullerlie visually constrain the central part of the Potential Alignment due to their distance of ≤ 115 m from the LoD and their positions on either side of the alignment. Visual receptors at these properties would have very close proximity views with the OHL forming a very prominent feature in views, and the LoD offers limited opportunity to increase the distance of views beyond 170 m in these two sections of the alignment. This constraint is unavoidable however the level of constraint could be reduced by ensuring towers are aligned beyond 170 m from these receptors where possible.</p> <p>Visual receptors at residential properties at Schoolhill, Westerton Farm and West Cullery in the northern section of Alternative 7a (Potential) also visually constrain the alignment where the LoD passes through the gap between these properties at distances of < 170 m. Visual receptors at these properties will have close proximity views with the OHL forming a</p>	A

Topic	Option	Constraints	Evaluation of Constraint	RAG Score
			<p>prominent feature in views, however the LoD does offer opportunity to increase the distance of views of the OHL beyond 170 m in this section.</p>	
	<p>Alternative Alignment 7b</p>	<p>Visual Visual receptors at scattered residential properties and people travelling along the local road network form a constraint, particularly residents at Candyglirach Cottages and Hoghillock in the southern part of this alternative alignment, Greendams in the central section and Blackdams Croft, Tillyorn, Westerton and West Cullerlie Farm in the norther section.</p>	<p>This alignment has been RAG rated as Amber as an OHL in this location may compromise visual amenity experienced by a number of sensitive visual receptors including people at a number of residential receptors and users of the local road network.</p> <p>Visual receptors at the residential properties at the southern end of the alignment at Candyglirach Cottages and Hoghillock visually constrain the LoD due to their respective distances of 70 m and 150 m from the LoD and their positions on either side of the alignment. Visual receptors at these properties would have close proximity views with the OHL forming a prominent feature in views, however the LoD does offer opportunity to increase the distance of views of the OHL beyond 170 m in this section.</p> <p>Visual receptors at the residential property at Greendams, located approximately 65 m from the LoD in the central section of the alignment, would have close proximity views of the OHL. Potential to increase the distance of views beyond 170 m will be subject to a further environmental constraint to the west of the LoD in this section.</p> <p>Visual receptors at residential properties further north at Blackdams Croft and Tillyorn and in the northern section of the alignment at Westerton and West Cullerlie Farm would also have close proximity views with the OHL, however the LoD in these sections offers opportunity to increase the distance of views beyond 200 m.</p>	<p>A</p>
	<p>Alternative Alignment 7c</p>	<p>Visual Visual receptors at scattered residential properties and people travelling along the local road network form a constraint, particularly residents at the property at West Cullerlie Cottage and three properties at Templefold at the northern end of this alternative alignment.</p>	<p>This alignment has been RAG rated as Amber as an OHL in this location may compromise visual amenity experienced by a number of sensitive visual receptors including residential properties and users of the local road network.</p> <p>Visual receptors at the residential properties at the northern end of the alignment at West Cullerlie Cottage and Templefold visually constrain the LoD where it passes through a gap between these properties. Visual receptors at these properties would have close proximity views with the OHL forming a prominent feature in views, however the LoD does offer opportunity to increase the distance of views of the OHL beyond 170 m in this section.</p> <p>Elsewhere along the alignment there is a limited number of visual receptors that would have close proximity views (within 200 m) of the OHL.</p>	<p>A</p>

Topic	Option	Constraints	Evaluation of Constraint	RAG Score
Land Use Agriculture, Forestry, Recreation	Alternative Alignment 7a (Potential) + Alternative Alignment 7b + Alternative Alignment 7c	Agriculture None of the alternative alignments spans any areas of prime agricultural land and they would only interact with land of lower classifications and would therefore not compromise the agricultural use or viability of the land as an agricultural resource. Interaction between the alignment and areas of prime agricultural land are assessed to be similar for each of the alternative alignments and therefore this criterion has been scoped out of the appraisal.		
	Alternative Alignment 7a (Potential)	Forestry The LoD of the alignment intersects one small narrow strip of an unnamed woodland comprising coniferous woodland, located alongside, and parallel to, Couper's Road (at NGR NJ 76676 01175). This shelterbelt has some characteristics indicative of commercial forestry.	This alignment has been RAG rated as Green as the alignment is unlikely to compromise commercial returns of forestry operations. The alignment is constrained to a minor extent by the presence of a small belt of woodland along Couper's Road where some commercial forestry activity may be present. In this area, the alignment LoD intersects the edge of the woodland block and some felling and/or re-design of planting may be required as the result of the operational corridor to accommodate the OHL. Additionally, further felling may be required to ensure a wind firm edge along an operational corridor. It is not considered that the commercial viability of the wooded area would be compromised, although there may be some required changes in planting and management as a result of felling.	G
	Alternative Alignment 7b	Forestry The LoD of this alignment intersects with two areas of woodland comprising commercial forestry: <ul style="list-style-type: none"> • The southern edge of an unnamed woodland comprising coniferous woodland is intersected by the alignment, located alongside, and parallel to, Couper's Road (at NGR NJ 76676 01175). This shelterbelt has some characteristics indicative of commercial forestry. • The eastern edge of an unnamed woodland consisting of commercial forestry, located near to Greendams adjacent to the eastern boundary of the Candyglirach LNCS, is intersected by the alignment (at NGR NJ 75444 01808). 	This alignment has been RAG rated as Green as the alignment is unlikely to compromise commercial returns of forestry operations. The alignment is constrained to some extent by the presence of woodland along Couper's Road and near Greendams where some commercial forestry is present. At these points, the alignment LoD intersects the edge of the woodland block and some felling and/or re-design of planting may be required as the result of the operational corridor to accommodate the OHL. Additionally, further felling may be required to ensure a wind firm edge along an operational corridor. Although the alignment may interact with a small section of the forestry operations at Greendams, the majority of the forest is located to the west of the alignment. There is also potential to align the OHL to avoid much of the woodland along Couper's Road. It is not considered likely that an OHL would compromise future commercial returns of the forestry operation, and it is not considered to be a constraint, although there may be some required changes in planting and management as a result of felling.	A
	Alternative Alignment 7c	Forestry	This alignment has been RAG rated as Amber as it intersects with the edge of, or passes close to and through, several areas of commercial	A

Topic	Option	Constraints	Evaluation of Constraint	RAG Score
		<p>The LoD of this alignment intersects with two areas of woodland comprising commercial forestry:</p> <ul style="list-style-type: none"> An unnamed woodland block to the west of Forest of Drum is crossed by the alignment, with the potential for one tower to be situated within the centre of the woodland area (at NGR NJ 77246 01647). The eastern edge of the northern part of the LoD intersects the western edge of an unnamed woodland to the north of Schoolhill (at NGR NJ 76568 03650). 	<p>forestry where interaction with woodland management and operations may compromise the commercial returns from the forestry.</p> <p>The alignment is constrained to some extent by the presence of woodland areas with some commercial forestry activity present. At these points, tree clearance for an operational corridor within these woodlands may compromise commercial returns from these enterprises. Some felling and/or re-design of planting may be required to accommodate the OHL.</p> <p>The alignment LoD intersects with the southwestern edge of the unnamed woodland area to the north of Schoolhill. Some felling may be required to create a wind firm edge where coniferous species are present. Taking account of the potential to align the OHL to avoid much of this woodland, it is considered unlikely that an OHL would compromise the commercial returns of this area.</p> <p>The alignment LoD intersects with the centre of the unnamed woodland block to the west of the Forest of Drum, with the potential for at least one tower to require location within the wooded area. An OHL would interact with the forestry operations and may compromise the future commercial returns from the site.</p>	
	Alternative Alignment 7a (Potential) + Alternative Alignment 7b + Alternative Alignment 7c	<p>Recreation</p> <p>All alternative alignments do not cross any core paths, NCN routes, Scottish Great Trails or any fishing beats. Interaction between the alignment and recreational use of the land has been assessed to be similar for each of the alternative alignments and therefore this criterion has been scoped out of the appraisal.</p>		
Planning Proposals	Alternative Alignment 7a (Potential)	<p>Alternative Alignment 7a (Potential) does not cross any proposed or consented planning applications.</p>	<p>This alignment has been RAG Rated as Green as there are no projects known to the planning system that have been identified which may interact with the alignment.</p>	G
	Alternative Alignment 7b	<p>Two planning proposals has been identified which this alternative alignment would intersect:</p> <ul style="list-style-type: none"> The alignment LoD overlaps with an approved application for the erection of a dwellinghouse and outbuilding located at Greendams (APP/2022/0415). The alignment only crosses the existing private access track which is part of the application site boundary. An application for the conversion of an agricultural steading to a dwellinghouse is located at Hogshillock 	<p>This alignment has been RAG Rated as Green as there are no projects known to the planning system that have been identified which may interact with the alignment.</p> <p>The alignment does not cross the area of development for the approved application at Greendams and only spans the existing private track. This planning proposal is not considered a constraint.</p> <p>The alignment does not overlap with the boundary of the planning application at Hogshillock and therefore this planning proposal is not considered a constraint.</p>	A

Topic	Option	Constraints	Evaluation of Constraint	RAG Score
		(APP/2024/0885), approximately 80 m to the south of the alignment LoD.	Please refer to ' People: Proximity to Dwellings ' where this application has been assessed in relation to the property distance to this alternative alignment.	
	Alternative Alignment 7c	One planning proposal has been identified which may interact with this alternative alignment: <ul style="list-style-type: none"> A consented proposal for the construction of a solar farm is located approximately 50 m east of the edge of the alignment LoD, located between Schoolhill and Begg Burn (at NGR NJ 77443 02633). 	This alignment has been RAG Rated as Green as there are no projects known to the planning system that have been identified which may interact with the alignment. The alignment does not overlap with the boundary of the consented proposal for a solar farm near Schoolhill and is therefore not considered a constraint.	G

APPENDIX I: APPRAISAL OF ALTERNATIVE ALIGNMENTS AT LOCATION 8: ECHT

This appendix presents the baseline constraints and the findings of the appraisal of key environmental considerations for three alternative alignments at Location 8: Echt in Section F of the Proposed Route (Route F2) and details the RAG Ratings applied to each alternative identified under each environmental topic as per SSEN Transmission's Routeing Guidance.

The environmental topics consider the following, natural heritage, cultural heritage, people, landscape and visual, land use and planning.

The tables presented in this appendix detail the baseline constraints and the findings of the appraisals based on a study area which comprises the alignment and its LoD, defined here as 100m either side of the alignment.

Table I1. Environmental Constraints for Alternative Alignments at Location 8: Echt in Section F

Topic and Criteria	Option	Constraints	Evaluation of Constraints	RAG Score
Natural Heritage Designations Protected Species Habitats	Alternative Alignment 8a (Potential)	Designations: International, European or National Designations There are no statutory designated sites recognised at an international, European or national level for their natural heritage intersected by the alternative alignment LoD or within 3.1 km. The alignment LoD intersects with three blocks of woodland listed on the AWI as LEPO: <ul style="list-style-type: none"> • Backstrip Wood, east of Landerberry (NGR NJ 75616 04399): the woodland comprises upland birchwood and extends approximately one quarter the width of the alignment LoD. • North Kirkton Wood, southeast of Echt (NGR NJ 75061 05377): the woodland extends the full width of the alignment LoD. Field surveys identified this to be a mosaic of Scots pine plantation, with scattered scrub and Sitka spruce plantation. • Myriewell Wood, northeast of Echt (NGR NJ 74921 06208): the woodland extends the full width of the alignment LoD. Field surveys in 2024 identified that the northern extent of the woodland comprises a line of mature broadleaved trees. 	This alignment has been RAG rated as Amber because it has the potential to compromise the conservation status of three LEPO woodlands. The LEPO woodlands of North Kirkton Wood and Myriewell Wood extend across the full width of the alignment LoD. Operational corridors would be required to be maintained through these LEPO woodlands requiring some felling. The requirement for an operational corridor could be mitigated to some extent by targeting wherever possible the narrowest sections of woodland, considering tower siting and design, and applying mitigation to retain woodland through sensitive construction techniques. In addition, the baseline value of North Kirkton Wood has been affected by commercial forestry, while Myriewell Wood comprises a narrow treeline within the LoD, and it may therefore be possible to enhance the condition of these woodlands through new planting and sensitive management. The alignment is constrained by Backstrip Wood LEPO which extends into the LoD. The requirement for felling could be avoided through careful micro-siting and construction of the nearest OHL towers and access tracks.	A
	Alternative Alignment 8b	Designations: International, European or National Designations There are no statutory designated sites recognised at an international, European or national level for their natural heritage intersected by the alternative alignment LoD or within 3.6 km. The alignment LoD intersects with one block of woodland listed on the AWI as LEPO: <ul style="list-style-type: none"> • Backstrip Wood, east of Landerberry (NGR NJ 75616 04399): the woodland extends approximately one quarter the width of the alignment LoD. Field surveys identified this as an upland birchwood. 	This alignment has been RAG rated as Green because it has limited potential to compromise the conservation status of a LEPO woodland. The alignment is constrained by Backstrip Wood LEPO which extends into the LoD. The requirement for felling could be avoided through careful micro-siting and construction of the nearest OHL towers and access tracks.	G
	Alternative Alignment 8c	Designations: International, European or National Designations There are no statutory designated sites recognised at an international, European or national level for their natural heritage intersected by the alternative alignment LoD or within 2.7 km.	This alignment has been RAG rated as Amber because it has the potential to compromise the conservation status of three LEPO woodlands.	A

Topic and Criteria	Option	Constraints	Evaluation of Constraints	RAG Score
		<p>The alignment LoD intersects with three blocks of woodland listed on the AWI as LEPO:</p> <ul style="list-style-type: none"> • Braigiewell Wood, east of Echt (NGR NJ 75998 05071): the woodland extends the full width of the alignment LoD. Field surveys identified a mosaic of mixed, broadleaved and Scots pine plantation, and bracken within the alignment LoD. • Sellars Moss woodland (NGR NJ 75835 05515) extends the full width of the alignment LoD. Field surveys identified this as a coniferous plantation woodland with a large amount of windfall. • Myriewell Wood, northeast of Echt (NGR NJ 74921 06208): the woodland extends the full width of the alignment LoD. Field surveys in 2024 identified that the northern extent of the woodland comprises a line of mature broadleaved trees. 	<p>The LEPO woodlands of Braigiewell Wood, Sellars Moss and Myriewell Wood extend across the full width of the alignment LoD. Operational corridors would be required to be maintained through these LEPO woodlands requiring some felling.</p> <p>The requirement for an operational corridor could be mitigated to some extent by targeting wherever possible the narrowest sections of woodland, considering tower siting and design, and applying mitigation to retain woodland through sensitive construction techniques. In addition, the baseline value of Braigiewell Wood and Sellars Moss has been affected by commercial forestry, while Myriewell Wood comprises a narrow treeline within the LoD. It may therefore be possible to enhance the condition of these woodlands through new planting and sensitive management.</p>	
	Alternative Alignment 8a (Potential) + Alternative Alignment 8b + Alternative Alignment 8c	<p>Designations: Regional Designations</p> <p>There are no regionally designated sites within any of the alignment LoDs or within 700 m. This criterion has therefore been scoped out of this appraisal.</p>		
	Alternative Alignment 8a (Potential) + Alternative Alignment 8b + Alternative Alignment 8c	<p>Protected Species: European Protected Species (EPS); UK Biodiversity Action Plan (BAP) Species; Other Protected and Notable Species</p> <p>Records of and/or habitat potential for EPS (such as otter and bats), UKBAP species (such as pine marten, red squirrel, reptiles and amphibians), and other notable species (such as badger) are considered to represent a similar level of baseline constraint for all alternative alignments. All alternative alignments have been evaluated as having similar potential to support these species and would require a similar range of standard mitigation measures to be implemented including those in SSEN Transmission's SPPs. These criteria have therefore been scoped out of this appraisal.</p>		
	Alternative Alignment 8a (Potential) + Alternative Alignment 8b + Alternative Alignment 8c	<p>Habitats: Annex 1 Habitats; Groundwater Dependent Terrestrial Ecosystems (GWDTE)</p> <p>Desk study and field survey data indicate that habitats within all alignment LoDs comprise a mosaic of farmland with some hedgerows and trees. There is limited potential for small pockets of Annex 1 habitats, restricted for example to remnant extents of semi-natural woodland. Similarly, there is limited potential for GWDTEs, restricted to low-lying damp areas on the edges of fields. Field surveys have not identified any Annex 1 or GWDTE habitats within either alignment LoD.</p> <p>Due to the similarity in constraint represented by the types of habitat present and the similar level of potential for presence of Annex 1 habitats and GWDTEs across the alignments, these criteria have been scoped of this appraisal.</p>		

Topic and Criteria	Option	Constraints	Evaluation of Constraints	RAG Score
	Alternative Alignment 8a (Potential)	Habitats: Biodiversity The density of Biodiversity Units derived from habitats within the alignment LoD is calculated to be 8.61 BU/ha. Irreplaceable habitats are calculated to be present at a density of 0.06 BU/ha. Watercourses are present at a density of 0.23 BU/km.	This alignment has been assigned a Red RAG rating because it has been evaluated as having more than 120% of the BU density of the least biodiversity impacted alternative (see Alternative Alignment 8b).	R
	Alternative Alignment 8b	Habitats: Biodiversity The density of Biodiversity Units derived from habitats within the alignment LoD is calculated to be 6.72 BU/ha. Irreplaceable habitats are calculated to be present at a density of 0.05 BU/ha. Watercourses are present at a density of 0.08 BU/km.	This alignment has been assigned a Green RAG rating because it has been evaluated as having the lowest biodiversity unit density.	G
	Alternative Alignment 8c	Habitats: Biodiversity The density of Biodiversity Units derived from habitats within the alignment LoD is calculated to be 8.80 BU/ha. Irreplaceable habitats are calculated to be present at a density of 0.02 BU/ha. Watercourses are present at a density of 0.08 BU/km.	This alignment has been assigned a Red RAG rating because it has been evaluated as having more than 120% of the BU density of the least biodiversity impacted alternative (see Alternative Alignment 8b).	R
Natural Heritage Ornithology	Alternative Alignment 8a (Potential)	Designated Sites The alignment does not coincide directly with any Special Protected Area (SPA). However, it does intersect land which has connectivity with the core foraging ranges of some qualifying features from the Loch of Skene SPA/SSSI. The Loch of Skene SPA lies approximately 2.8 km to the northeast of the alignment LoD. The site is designated for goldeneye, goosander and greylag goose, the latter of which has a core foraging range of up to 20 km, and therefore, the land intersected by the alignment has potential connectivity with the Loch of Skene SPA. The national conservation status of the greylag goose population is favourable but is sensitive to operational effects of OHLs due to potential collision risks. Greylag goose flights have been recorded to the west of the alignment with likely intersection over the alignment given potential flight paths with intersecting flights of pink-footed geese (SSSI species) also recorded as intersecting the OHL alignment.	The alternative alignment has been RAG rated as Amber since it may compromise an internationally or nationally designated area and/or the conservation status of the qualifying features of the site having assumed connectivity between the Loch of Skene SPA roost and associated foraging areas. Information on the historic distribution of feeding greylag geese suggests that collision risk is a constraint throughout the LoD of the alignment due to the alternative alignment's location between the SPA and feeding fields (Mitchell, 2012) ¹ . Vantage Point watch surveys recorded activity of foraging goose flights within and across the area where the alternative alignment is located. In addition, foraging goose surveys in early 2023 recorded pink-footed geese foraging in fields near the alignment. Foraging sites are subject to change across the winter and between years due to field planting/use.	A

¹ Mitchell, C. 2012. Mapping the distribution of feeding Pink-footed and Iceland Greylag Geese in Scotland. Wildfowl & Wetlands Trust / Scottish Natural Heritage Report, Slimbridge. 108pp.

Topic and Criteria	Option	Constraints	Evaluation of Constraints	RAG Score
			Line-marking with bird diverters is likely to be required for this alignment as part of the OHL design mitigation where conductors are likely to pose high risk to susceptible birds.	
	Alternative Alignment 8b	<p>Designated Sites</p> <p>The alignment does not coincide directly with any Special Protected Area (SPA). However, it does intersect land which has connectivity with the core foraging ranges of some qualifying features from the Loch of Skene SPA/SSSI.</p> <p>The Loch of Skene SPA/SSSI lies approximately 2.8 km to the northeast of the alignment LoD. Greylag goose flights have been recorded to the west of the alignment with likely intersection over the alignment given potential flight paths with intersecting flights of pink-footed geese (SSSI species) also recorded as intersecting the OHL alignment.</p>	<p>The alternative alignment has been RAG rated as Amber since it may compromise an internationally or nationally designated area and/or the conservation status of the qualifying features of the site having assumed connectivity between the Loch of Skene SPA roost and associated foraging areas.</p> <p>Information on the historic distribution of feeding greylag geese suggests that collision risk is a constraint throughout the LoD of the alignment due to the alternative alignment's location between the SPA and feeding fields (<i>Mitchell, 2012</i>).</p> <p>Vantage Point watch surveys recorded activity of foraging goose flights within and across the area where the alternative alignment is located. In addition, foraging goose surveys in early 2023 recorded pink-footed geese foraging in fields near the alignment. Foraging sites are subject to change across the winter and between years due to field planting/use, however, this alignment lies further from the Loch of Skene SPA than other alternatives.</p> <p>Line-marking with bird diverters is likely to be required for this alignment as part of the OHL design mitigation where conductors are likely to pose high risk to susceptible birds.</p>	A
	Alternative Alignment 8c	<p>Designated Sites</p> <p>The alignment does not coincide directly with any Special Protected Area (SPA). However, it does intersect land which has connectivity with the core foraging ranges of some qualifying features from the Loch of Skene SPA/SSSI.</p> <p>The Loch of Skene SPA lies approximately 2.8 km to the northeast of the alignment LoD. Greylag goose flights have been recorded to the west of the alignment with likely intersection over the given potential flight paths with intersecting flights of pink-footed geese (SSSI species) also recorded as intersecting the OHL alignment.</p>	<p>The alternative alignment has been RAG rated as Amber since it may compromise an internationally or nationally designated area and/or the conservation status of the qualifying features of the site having assumed connectivity between the Loch of Skene SPA roost and associated foraging areas.</p> <p>Information on the historic distribution of feeding greylag geese suggests that collision risk is a constraint throughout the LoD of the alignment due to the alternative alignment's location between the SPA and feeding fields (<i>Mitchell, 2012</i>).</p> <p>Vantage Point watch surveys recorded activity of foraging goose flights within and across the area where the alternative alignment is located. In addition, foraging goose surveys in early 2023 recorded pink-footed geese foraging in fields near the alignment. Foraging sites are subject to change across the winter and between years due to field</p>	A

Topic and Criteria	Option	Constraints	Evaluation of Constraints	RAG Score
			<p>planting/use. This alignment lies closer to the Loch of Skene SPA than the other alternatives.</p> <p>Line-marking with bird diverters is likely to be required at this alignment part of the OHL as design mitigation where conductors are likely to pose high risk to susceptible birds.</p>	
	Alternative Alignment 8a (Potential)	<p>Schedule 1 species</p> <p>The Alternative Alignment 8a includes habitat that supports Schedule 1 species. Surveys and desk study data have not recorded breeding Schedule 1 species.</p>	This alignment has been RAG rated as Amber since it has the potential to compromise the conservation status of Schedule 1 bird populations in the region or nationally, as part of the overall Section F OHL.	A
	Alternative Alignment 8b	<p>Schedule 1 species</p> <p>The Alternative Alignment 8b includes habitat that supports Schedule 1 species. Surveys and desk study data have not recorded breeding Schedule 1 species.</p>	This alignment has been RAG rated as Amber since it has the potential to compromise the conservation status of Schedule 1 bird populations in the region or nationally, as part of the overall Section F OHL.	A
	Alternative Alignment 8c	<p>Schedule 1 species</p> <p>The Alternative Alignment 8c includes habitat that supports Schedule 1 species. Desk study information together with surveys confirm Schedule 1 species within disturbance distance of the alignment.</p> <p>There are records of Schedule 1 species in the location in which the alignment is located.</p>	<p>This alignment has been RAG rated as Amber since it has the potential to compromise the conservation status of Schedule 1 bird populations in the region or nationally, as part of the overall Section F OHL.</p> <p>This alignment is considered the least favourable with regards to ornithology, given proximity to the Loch of Skene SPA/SSSI.</p>	A
	Alternative Alignment 8a (Potential) + Alternative Alignment 8b + Alternative Alignment 8c	<p>Birds of Conservation Concern</p> <p>The land intersected by the OHL alternative alignments may support populations of birds on the Red and Amber lists of Birds of Conservation Concern (BoCC). The alternative alignments do not coincide with areas likely to support wading birds.</p> <p>The alignments are considered unlikely to compromise the conservation status of populations of a red or amber listed species or essential breeding, passage or wintering habitat, and therefore this criterion has been scoped out of appraisal.</p>		
Natural Heritage Hydrology / Geology / Hydrogeology	Alternative Alignment 8b + Alternative Alignment 8a (Potential) + Alternative Alignment 8c	<p>Surface and Groundwater Drinking Water Protected Area</p> <p>The alignment is not located close to any DWPA. Further downstream, over 10 km away there is a DWPA (ID 23315) at the River Dee- Peterculter to tidal limit.</p>	The alignment has been RAG rated Green as it is considered unlikely to result in surface flow pathways and subsequently compromise the quality of surface waters of local importance.	G

Topic and Criteria	Option	Constraints	Evaluation of Constraints	RAG Score
	Alternative Alignment 8a (Potential)	Aquifers providing Regional/Local resources There is a private water supplied property approximately 220 m southwest of the alignment centreline at North Mains farm (NGR NJ 74228, 06370). This is supplied by a groundwater spring. There are several type B private water supplied properties within 250 m of the alignment at Monecht Cottages (NGR NJ 74716, 06508).	This alignment has been RAG rated as Amber as it may compromise quality or quantity of surface or groundwater of regional importance (e.g. through creation of a pathway for run-off which may cause some disruption to abstraction water flow and/or quality). There is a PWS supplied property nearby and may have an abstraction located near the alignment. The PWS property is only 120 m southwest of the alignment LoD and the source may therefore be within the LoD and has potential for the quality/quantity of the surface/groundwaters recharging the spring to be compromised.	A
	Alternative Alignment 8b	Aquifers providing Regional/Local resources There is a private water supplied property approximately 160 m east of the alignment centreline at North Mains farm (NGR NJ 74228, 06370). This is supplied by a groundwater spring and the source abstraction is currently unknown.	This alignment has been RAG rated as Amber as it may compromise quality or quantity of surface or groundwater of regional importance (e.g. through creation of a pathway for run-off which may cause some disruption to abstraction water flow and/or quality). There is a PWS supplied property nearby and may have an abstraction located near the alignment. The PWS property is only 60 m east of the alignment LoD and the source may therefore be within the LoD and has potential for the quality/quantity of the surface/groundwaters recharging the spring to be compromised.	A
	Alternative Alignment 8c	Aquifers providing Regional/Local resources There is a private water supplied property approximately 220 m southwest of the alignment at North Mains farm (NGR NJ 74228, 06370). This is supplied by a groundwater spring. There are several type B private water supplied properties within 250 m of the alignment, including at Hill of Braigie (NGR NJ 75796, 05097) and Monecht Cottages (NGR NJ 74716, 06508).	This alignment has been RAG rated as Amber as it may compromise quality or quantity of surface or groundwater of regional importance (e.g. through creation of a pathway for run-off which may cause some disruption to abstraction water flow and/or quality). There is a PWS supplied property nearby and may have an abstraction located near the alignment. The PWS property is only 120 m southwest of the alignment LoD and the source may therefore be within the LoD and has potential for the quality/quantity of the surface/groundwaters recharging the spring to be compromised.	A
	Alternative Alignment 8b + Alternative Alignment 8a (Potential)	Surface Water or aquifer providing water for agricultural or industrial use The alignment crosses one watercourse which is shown on 1:50k Ordnance Survey mapping and major watercourses including: <ul style="list-style-type: none"> Large Unnamed tributary to the Gormack Burn Based on SEPA Future Flood Maps there is one major area of fluvial flood risk crossed by the alignment over the unnamed tributary to the Gormack Burn which is around 500 m wide. This can be spanned with careful siting of infrastructure, but current	This alignment has been RAG rated as Amber as it may compromise quality and/or quantity of surface or groundwaters of local importance or would require dewatering of construction activities. The 500 m wide floodplain extent of the Gormack Burn cannot be spanned at the point the alignment crosses the watercourse without careful siting of infrastructure. Infrastructure is currently sited within the 200-year plus climate change floodplain. Therefore, construction activities are effectively within the watercourse during the 200-year future flood event and there is potential to compromise quality and/or	A

Topic and Criteria	Option	Constraints	Evaluation of Constraints	RAG Score
		<p>proposals have sited two towers within the floodplain area and access tracks would also lie within the floodplain.</p>	<p>quantity of surface waters (and groundwater) of local importance or would require dewatering construction activities.</p>	
	<p>Alternative Alignment 8c</p>	<p>Surface Water or aquifer providing water for agricultural or industrial use</p> <p>The alignment crosses one watercourse which is shown on 1:50k Ordnance Survey mapping and major watercourses including:</p> <ul style="list-style-type: none"> • Large Unnamed tributary to the Gormack Burn <p>Based on SEPA Future Flood Maps there is one major area of fluvial flood risk which is avoided, and another smaller section crossed by the alignment over the unnamed tributary to the Gormack Burn which is around 50 m wide. This can be spanned easily without siting infrastructure within the floodplain.</p>	<p>Surface Water or aquifer providing water for agricultural or industrial use</p> <p>This alignment has been RAG rated as Green as it is considered unlikely to result in water flow pathway(s) to surface and groundwater. The floodplains of all the larger watercourses can be crossed.</p>	<p>G</p>
<p>Cultural Heritage Designations Cultural Heritage Assets</p>	<p>Alternative Alignment 8a (Potential)</p>	<p>Designations: World Heritage Sites (WHS), Scheduled Monuments (SM), Inventory Gardens and Designed Landscapes (GDL), Inventory Battlefields</p> <p>Within 1 km of the edge of the alignment LoD there is one GDL, and three Scheduled Monuments, of national importance and high sensitivity.</p> <ul style="list-style-type: none"> • Dunecht GDL (GDL 153) • Barmekin of Echt, Fort (SM 57) • Upper Broomhill, Hut Circles (SM 12190) • East Finnercy, Cairn (SM 6076) <p>The alignment LoD is located within close proximity to the southwestern corner of Dunecht GDL (GDL 153).</p> <p>The closest Scheduled Monument to the alignment LoD is East Finnercy Cairn (SM 6076) located c.190 m northeast of the southern end of the potential alignment LoD.</p> <p>Those designated heritage assets that are likely most sensitive to the alignment alternative (effects on their settings) are those either prominent landmarks and/or have long views across the landscape as important aspects of their settings. These would include hillforts, burial cairns and stone circles, or designed landscapes that have long distance views and vistas that contribute to their cultural significance.</p>	<p>The alignment has been RAG rated as Amber as it may compromise the setting of the designated assets that lie close to the alignment. Although the alignment LoD clips the southwest corner of one GDL, an amber rating has been applied, as it has been considered that mitigation, i.e. avoidance of the GDL, would remove any direct effects on the GDL from the Proposed Development.</p> <ul style="list-style-type: none"> • Dunecht House GDL (GDL 153): the OHL is located within close proximity to the southwestern corner of the GDL. Alternative Alignment 8a (Potential) and Alternative Alignment 8c follow a slightly longer course in closer proximity to the GDL than Alternative Alignment 8b, potentially comprising its setting due to the introduction of new OHL towers in the landscape surrounding the GDL which could intrude into key views to and from the GDL, especially from Barmekin Hill to the west. • East Finnercy Cairn (SM 6076): the edge of the alignment LoD passes within c.190 m to the southwest of the monument, at its southern end potentially impacting upon its setting, due to the proximity of an angle tower to the monument, the introduction of proposed towers into key views from the monument to the south and potential visibility of the proposed OHL towers beyond the monument in views to the burial cairn from the northeast. • Barmekin of Echt, Fort (SM 57): the edge of the alignment LoD passes within c.940 m to the southeast of the monument and the 	<p>A</p>

Topic and Criteria	Option	Constraints	Evaluation of Constraints	RAG Score
		<p>Key constraints identified in regard to the potential alignment includes:</p> <ul style="list-style-type: none"> • Dunecht House GDL (GDL 153), East Finnercy Cairn (SM 6076) and Barmekin of Echt, Fort (SM 57). • Dunecht House GDL (GDL 153) (NGR NJ 765 077): this designed landscape is situated on the northern plain of the River Dee to the south of Dunecht village. The designed landscape forms the setting for Category A Listed Dunecht House (LB 3133) and other associated Listed Buildings. The broadleaved woodland policies that edge the GDL provide a major contribution to the surrounding scenery. Key views from the House and the GDL are to the south overlooking Leuchars Moss and across to the Durris Forest to the southeast. Key views to and across the GDL are gained from Barmekin Hill to the west of the GDL. • East Finnercy Cairn (SM 6076) (NGR NJ 764 042): this prehistoric burial cairn stands on a ridge on a south-facing slope in farmland c.190 m from the northeast edge of the alignment LoD. Views from the cairn are concentrated south, looking across and along the Gormack Burn valley. The cairn is visible in views from the public roads that run to the northeast and southeast, from where it can be seen in its farmland setting. Views from (particularly those to the south), and to, the cairn from the wider landscape, are important aspects of its setting. • Barmekin of Echt, Fort (SM 57) (NGR NJ 725 071): this hillfort stands in a prominent position on the summit of Barmekn Hill c.940 m to the northwest of the alignment LoD. The prominent topographical position of the hillfort and views to and from it are key aspects of its setting. 	<p>proposed OHL towers could intrude into key views to and from the monument, potentially impacting upon its setting.</p> <p>Potential to mitigate impact on the settings of these assets is limited, however, the LoD provides some flexibility to reduce intrusion into key views to and from the designated heritage assets through micro-siting of towers, subject to other constraints. Overall, there is some scope, through micro-siting of towers to reduce but not remove the constraints from these designated assets.</p>	
	<p>Alternative Alignment 8b</p>	<p>Designations: World Heritage Sites (WHS), Scheduled Monuments (SM), Inventory Gardens and Designed Landscapes (GDL), Inventory Battlefields</p> <p>Within 1 km of the edge of the alignment LoD there is one GDL and three Scheduled Monuments of national importance and high sensitivity.</p> <ul style="list-style-type: none"> • Dunecht GDL (GDL 153) 	<p>The alignment has been RAG rated as Amber as it may compromise the setting of the designated assets that lie close to the alternative alignment. Although the alignment LoD clips the southwest corner of one GDL, an amber rating has been applied, as it has been considered that mitigation, i.e. avoidance of the GDL, would remove any direct effects on the GDL from the alignment.</p>	<p>A</p>

Topic and Criteria	Option	Constraints	Evaluation of Constraints	RAG Score
		<ul style="list-style-type: none"> • Barmekin of Echt, Fort (SM 57) • Upper Broomhill, Hut Circles (SM 12190) • East Finnercy, Cairn (SM 6076) <p>The alignment LoD is located within close proximity to the southwestern corner of Dunecht GDL (GDL 153).</p> <p>The closest Scheduled Monument to the alignment LoD is East Finnercy Cairn (SM 6076) located c.190 m northeast of the southern end of the alignment LoD.</p> <p>Those designated heritage assets that are likely most sensitive to the alignment (effects on their settings) are those either prominent landmarks and/or have long views across the landscape as important aspects of their settings. These would include hillforts, burial cairns and stone circles, or designed landscapes that have long distance views and vistas that contribute to their cultural significance.</p> <p>Key constraints identified in regard to the alignment includes:</p> <ul style="list-style-type: none"> • Dunecht House GDL (GDL 153), East Finnercy Cairn (SM 6076) and Barmekin of Echt, Fort (SM 57). • Dunecht House GDL (GDL 153) (NGR NJ 765 077): this designed landscape is situated on the northern plain of the River Dee to the south of Dunecht village. (See description of GDL in row above (Alternative Alignment 8a (Potential))). • East Finnercy Cairn (SM 6076) (NGR NJ 764 042): this prehistoric burial cairn stands on a ridge on a south-facing slope in farmland c.190 m from the northeast edge of the alignment LoD. (See description of monument in row above (Alternative Alignment 8a (Potential))). • Barmekin of Echt, Fort (SM 57) (NGR NJ 725 071): this hillfort stands in a prominent position on the summit of Barmekn Hill c.870 m to the northwest of the alignment LoD. (See description of monument in row above (Alternative Alignment 8a (Potential))). 	<ul style="list-style-type: none"> • Dunecht House GDL (GDL 153): the OHL is located within close proximity to the southwestern corner of the GDL. Alternative Alignment 8a (Potential) and Alternative Alignment 8c follow a slightly longer course in closer proximity to the GDL than Alternative Alignment 8b, potentially compromising its setting due to the introduction of new OHL towers in the landscape surrounding the GDL which could intrude into key views to and from the GDL, especially from Barmekin Hill to the west. • East Finnercy Cairn (SM 6076): the edge of the alignment LoD passes within c.190 m to the southwest of the monument, at its southern end potentially compromising its setting, due to the proximity of an angle tower to the monument, the introduction of towers into key views from the monument to the south and potential visibility of the OHL towers beyond the monument in views to the burial cairn from the northeast. • Barmekin of Echt, Fort (SM 57): the edge of the alignment LoD passes within c.870 m to the southeast of the monument and the OHL towers could intrude into key views to and from the monument, potentially compromising its setting. <p>Potential to mitigate impact on the settings of these assets is limited, however, the LoD provides some flexibility to reduce intrusion into key views to and from the designated heritage assets through micro-siting of towers, subject to other constraints. Overall, there is some scope, through micro-siting of towers to reduce but not remove the constraints from these designated assets.</p>	

Topic and Criteria	Option	Constraints	Evaluation of Constraints	RAG Score
	<p>Alternative Alignment 8c</p>	<p>Designations: World Heritage Sites (WHS), Scheduled Monuments (SM), Inventory Gardens and Designed Landscapes (GDL), Inventory Battlefields</p> <p>The baseline constraints are the same as for Alternative Alignment 8a (Potential), above.</p>	<p>The alignment has been RAG rated as Amber as it may compromise the setting of the designated assets that lie close to the alignment. Although the alignment LoD clips the southwest corner of one GDL, an amber rating has been applied, as it has been considered that mitigation, i.e. avoidance of the GDL, would remove any direct effects on the GDL from the Proposed Development.</p> <ul style="list-style-type: none"> Dunecht House GDL (GDL 153): the OHL LoD is adjacent to the southwestern corner of the GDL. Alternative Alignment 8a (Potential) and Alternative Alignment 8c follow a slightly longer course in closer proximity to the GDL than Alternative Alignment 8b, potentially comprising its setting due to the introduction of new OHL towers in the landscape surrounding the GDL which could intrude into key views to and from the GDL, especially from Barmekin Hill to the west. East Finnercy Cairn (SM 6076): the edge of the alignment LoD passes within c.190 m to the southwest of the monument, at its southern end potentially impacting upon its setting, due to the proximity of an angle tower to the monument, the introduction of proposed towers into key views from the monument to the south and potential visibility of the proposed OHL towers beyond the monument in views to the burial cairn from the northeast. Barmekin of Echt, Fort (SM 57): the edge of the alignment LoD passes within c.940 m to the southeast of the monument and the proposed OHL towers could intrude into key views to and from the monument, potentially impacting upon its setting. <p>Potential to mitigate impact on the settings of these assets is limited, however, the LoD provides some flexibility to reduce intrusion into key views to and from the designated heritage assets through micro-siting of towers, subject to other constraints. Overall, there is some scope, through micro-siting of towers to reduce but not remove the constraints from these designated assets.</p>	<p>A</p>
	<p>Alternative Alignment 8a (Potential)</p>	<p>Designations: Sites and Monuments Record (SMR) Entries</p> <p>Two SMR sites of archaeological and cultural heritage interest fall within the alignment LoD.</p> <p>These comprise areas of relict rig and furrow cultivation remains (NJ70SE0056 and NJ70NE0050), that now survive in areas of woodland/commercial forestry. The alignment LoD just clips the</p>	<p>The alignment has been RAG rated as Green for SMR sites, as the archaeological and cultural heritage sites identified do not represent significant constraints to development of an OHL in this alignment.</p> <p>The SMR site located at the edge of the alignment LoD can be easily avoided through design.</p>	<p>G</p>

Topic and Criteria	Option	Constraints	Evaluation of Constraints	RAG Score
		southwestern edge of one of the areas of relict rig and furrow cultivation remains (NJ70NE0056).	Where direct impacts on SMR sites cannot be avoided, constraints could be mitigated through a programme of works (i.e. trial trench evaluation and excavation or watching briefs) in advance of construction works to a scope agreed by the local authority.	
	Alternative Alignment 8b	<p>Designations: Sites and Monuments Record (SMR) Entries</p> <p>Two recorded SMR site of archaeological and cultural heritage interest are just clipped by the alignment LoD.</p> <p>These comprise areas of relict rig and furrow cultivation remains (NJ70SE0056 and NJ70NE0050), that now survive in areas of woodland/commercial forestry.</p> <p>Both heritage assets are recorded in the SMR as being of ‘Standard’ importance and are assessed as being of local heritage value and of low sensitivity.</p>	<p>The alignment has been RAG rated as Green for SMR sites, as the archaeological and cultural heritage sites identified do not represent significant constraints to development of an OHL in this alignment.</p> <p>The SMR sites are located at the edge of the alignment LoD and can be easily avoided through design.</p> <p>Where direct impacts on SMR sites cannot be avoided, constraints could be mitigated through a programme of works (i.e. trial trench evaluation and excavation or watching briefs) in advance of construction works to a scope agreed by the local authority.</p>	G
	Alternative Alignment 8c	<p>Designations: Sites and Monuments Record (SMR) Entries</p> <p>Three SMR sites of archaeological and cultural heritage interest fall within the alignment LoD.</p> <p>These comprise two artefact findspots of a hot metal press letter and a lead decoration (NJ70SE0126 and NJ70SE0128) uncovered during metal detecting at Braigiewell, and the possible site of a former church (NJ70NE0049).</p> <p>All of the heritage assets are recorded in the SMR as being of ‘Standard’ importance and are assessed as being of local heritage value and of low sensitivity.</p>	<p>The alignment has been RAG rated as Green for SMR sites, as the archaeological and cultural heritage sites identified do not represent significant constraints to development of an OHL in this alignment.</p> <p>No remains of the findspots survive in situ and these assets are not considered a constraint to the development of an OHL.</p> <p>Where direct impacts on SMR sites cannot be avoided, constraints could be mitigated through a programme of works (i.e. trial trench evaluation and excavation or watching briefs) in advance of construction works to a scope agreed by the local authority.</p>	G

Topic and Criteria	Option	Constraints	Evaluation of Constraints	RAG Score
	<p>Alternative Alignment 8a (Potential)</p>	<p>Cultural Heritage Assets</p> <p>Within 1 km of the edge of the alignment LoD there is:</p> <ul style="list-style-type: none"> One Category A Listed Building, Echt Parish Church (LB 3152), of national importance and high sensitivity. Four Category B Listed Buildings of regional importance and medium sensitivity. Four Category C Listed Buildings of local importance and low sensitivity. <p>The Listed Buildings are mainly located towards the northern end of the alignment, clustered in or around Echt village. They comprise mostly of small residential properties (ie farmsteads and cottages) small parish kirks or bridges, all of which have generally localised settings and are not significant constraints.</p> <p>Category A Listed Building Dunecht House (LB 3133) which stands at its closest c.1.7 km to the northeast of the alignment LoD is considered to be especially sensitive to change on its setting. The House stands within Dunecht House GDL (see above). The principal elevation of the House is orientated south-southeast overlooking formal gardens and the Leuchars Moss in the south and across to the Durris Forest in the southeast.</p>	<p>The alignment has been RAG rated as Amber for cultural heritage assets as it may compromise the setting of the following Listed Building.</p> <ul style="list-style-type: none"> Dunecht House (LB 3133): the alternative alignment passes to the south of the House, potentially impacting upon its setting due to the introduction of new OHL towers in the wider landscape surrounding the GDL and which could intrude into key views from the House to the south-southeast overlooking Leuchars Moss and across to the Durris Forest. <p>Potential to mitigate impact on the settings of this asset is limited, however, the LoD provides some flexibility to reduce intrusion into key views to and from the designated heritage asset through micro-siting of towers, subject to other constraints. Overall, there is some scope, through micro-siting of towers to reduce but not remove the constraints from this designated asset.</p>	<p>A</p>
	<p>Alternative Alignment 8b</p>	<p>Cultural Heritage Assets</p> <p>Within 1 km of the edge of the alignment LoD there is:</p> <ul style="list-style-type: none"> One Category A Listed Building, Echt Parish Church (LB 3152), of national importance and high sensitivity. Five Category B Listed Buildings of regional importance and medium sensitivity. Four Category C Listed Buildings of local importance and low sensitivity. <p>The Listed Buildings are mainly located towards the northern end of the alignment, clustered in or around Echt village. They comprise mostly of small residential properties (ie farmsteads and cottages) small parish kirks or bridges, all of which have generally localised settings and are not significant constraints.</p> <p>Category A Listed Dunecht House (LB 3133) which stands at its closest c.1.7 km to the northeast of the alignment LoD is</p>	<p>The alignment has been RAG rated as Amber for cultural heritage assets as it may compromise the setting of the following Listed Building.</p> <ul style="list-style-type: none"> Dunecht House (LB 3133): the alternative alignment passes to the south of the House, potentially impacting upon its setting due to the introduction of new OHL towers in the wider landscape surrounding the GDL and which could intrude into key views from the House to the south-southeast overlooking Leuchars Moss and across to the Durris Forest. <p>Potential to mitigate impact on the setting of this asset is limited, however, the LoD provides some flexibility to reduce intrusion into key views to and from the designated heritage asset through micro-siting of towers, subject to other constraints. Overall, there is some scope, through micro-siting of towers to reduce but not remove the constraints from the designated asset.</p>	<p>A</p>

Topic and Criteria	Option	Constraints	Evaluation of Constraints	RAG Score
		considered to be especially sensitive to change on its setting. (See description of monument in row above (Alternative Alignment 8a (Potential))).		
	Alternative Alignment 8c	Cultural Heritage Assets The baseline constraints are the same as for Alternative Alignment 8a, above.	The alignment has been RAG rated as Amber for cultural heritage assets as it may compromise the setting of the following Listed Building. <ul style="list-style-type: none"> Dunecht House (LB 3133): the alternative alignment passes to the south of the House, potentially impacting upon its setting due to the introduction of new OHL towers in the wider landscape surrounding the GDL and which could intrude into key views from the House to the south-southeast overlooking Leuchars Moss and across to the Durris Forest. Potential to mitigate impact on the settings of this asset is limited, however, the LoD provides some flexibility to reduce intrusion into key views to and from the designated heritage asset through micro-siting of towers, subject to other constraints. Overall, there is some scope, through micro-siting of towers to reduce but not remove the constraints from this designated asset.	A
People Proximity to Dwellings	Alternative Alignment 8a (Potential)	There are seven locations along the alignment where either individual or groups of residential properties are located within approximately 200 m of the edge of the LoD. These are, from south to north: <ul style="list-style-type: none"> Little Finnercy located approximately 85 m to the south of the LoD. South Monecht Farm located approximately 20 m to the west of the LoD. South Monecht Cottage located approximately 60 m to the east of the LoD. Myriewell House located approximately 75 m to the south of the LoD. Group of properties at Monecht Cottages located approximately 110 m to the northeast of the LoD. North Mains Farm located approximately 115 m to the southwest of the LoD. 	This alignment has been RAG rated as Amber. The LoD provides some flexibility for an OHL alignment to be located at a distance of more than four times the nominal tower height (approx. 240 m) from most residential properties. However, it is considered that the presence of other constraints in the alignment LoD may make this difficult to achieve in some locations. Achieving a distance of more than four times the nominal tower height from dwellings would be challenging at properties at South Monecht Farm and South Monecht Cottage where the alignment would pass through a gap between these properties. These properties reduce the degree of flexibility within the LoD due to their respective locations either side of the alignment, and because they are the closest properties to the LoD. Distances between two to four times the nominal tower height however can be achieved. The OHL may also be required to be aligned within a distance of two to four times the nominal tower height in the vicinity of the properties at Myriewell House and Monecht Cottages due to their proximity and location on either side of the alignment. At both of these pinch points, the	A

Topic and Criteria	Option	Constraints	Evaluation of Constraints	RAG Score
		<ul style="list-style-type: none"> Upper Mains located approximately 185 m to the southwest of the LoD. 	<p>alignment would be developed to maximise the separation as far as practicable.</p> <p>Elsewhere, the LoD offers opportunity for the OHL to be located at a distance of more than four times the nominal tower height from the remaining dwellings that are located within 200 m of the LoD, subject to other constraints.</p> <p>This alignment has the fewest number of properties within 200 m of the LoD in comparison to Alternative Alignments 8b and 8c.</p>	
	Alternative Alignment 8b	<p>There are six locations along the alignment where either individual or groups of residential properties are located within approximately 200 m of the edge of the LoD. These are, from south to north:</p> <ul style="list-style-type: none"> Little Finnercy located approximately 85 m to the south of the LoD. A number of properties on the eastern edge of Echt (approximately 33 dwellings), the closest of which are located approximately 50 m to the west of the LoD. Monecht House and Kirk Cottages located approximately 60 m to the east of the LoD. North Mains Cottage located approximately 115 m to the northeast of the LoD. North Mains Farm located approximately 60 m to the east of the LoD. Echt Primary School, located approximately 250 m to the west of the edge of the LoD and on the southern edge of Echt, forms a constraint due to the increased number and concentration of people that congregate at this property. 	<p>This alignment has been RAG rated as Amber. The LoD provides some flexibility for an OHL alignment to be located at a distance of more than four times the nominal tower height (approx. 240 m) from most residential properties. However, it is considered that the presence of other constraints in the alignment LoD may make this difficult to achieve in some locations.</p> <p>Achieving a distance of more than four times the nominal tower height from dwellings would be challenging to the east of Echt, between properties along the eastern edge of Echt and properties at Monecht House, Kirk Cottages and North Mains Cottage. These properties create a constraining pinch point along the length of the alignment due to the density of properties at Echt and their positions and proximity either side of the LoD which limits the available width in which to locate an OHL. Distances between two to four times the nominal tower height, however, can be achieved, and as such the alignment would be developed to maximise the separation as far as practicable. The number and density of dwellings at Echt within two to four times the nominal height of the towers, and the concentration of people at Echt Primary School, is also a key constraint as this alignment would bring an OHL closer to a larger number of people, in comparison to Alternative Alignment 8a (Potential) and Alternative Alignment 8c.</p> <p>Elsewhere, the LoD offers opportunity for the OHL to be located at a distance of more than four times the nominal tower height from the remaining dwellings that are located within 200 m of the LoD, subject to other constraints.</p>	A
	Alternative Alignment 8c	<p>There are nine locations along the alignment where either individual or groups of residential properties are located within approximately 200 m of the edge of the LoD. These are, from south to north:</p>	<p>This alignment has been RAG rated as Amber. The LoD provides some flexibility for an OHL alignment to be located at a distance of more than four times the nominal tower height (approx. 240 m) from most residential properties. However, it is considered that the presence of</p>	A

Topic and Criteria	Option	Constraints	Evaluation of Constraints	RAG Score
		<ul style="list-style-type: none"> • Little Finnercy located approximately 85 m to the west of the LoD. • Hill of Braegie Farm located approximately 65m to the west of the LoD. • South Monecht Croft House located approximately 105 m to the east of the LoD. • South Monecht Cottage located approximately 100 m to the south of the LoD. • Group of properties at Meanecht Cottages located approximately 185 m to the northeast of the LoD. • Myriewell House located approximately 110 to the south of the LoD. • Group of properties at Monecht Cottages located approximately 80 m to the northeast of the LoD. • North Mains Farm located approximately 115 m to the southwest of the LoD. • Upper Mains located approximately 185 m to the southwest of the LoD. 	<p>other constraints in the alignment LoD may make this difficult to achieve in some locations.</p> <p>Achieving a distance of more than four times the nominal tower height from dwellings would be challenging at properties between the group of properties at Meanecht Cottages and South Monecht Cottage. These properties reduce the degree of flexibility within the LoD due to their respective locations either side of the alignment. Distances between two to four times the nominal tower height however can be achieved. The OHL may also be required to be aligned within a distance of two to four times the nominal tower height in the vicinity of the properties at Myriewell House and Monecht Cottages due to their proximity and location on either side of the alignment. At both of these pinch points, the alignment would be developed to maximise the separation as far as practicable.</p> <p>Elsewhere, the LoD offers opportunity for the OHL to be located at a distance of more than four times the nominal tower height from the remaining dwellings that are located within 200 m of the LoD, subject to other constraints.</p>	
Landscape and Visual Designations Landscape Character Visual	Alternative Alignment 8a (Potential) + Alternative Alignment 8b + Alternative Alignment 8c	Landscape Designations There are no landscape designations within the areas contained by the alignment LoDs, or within 1 km, and therefore this criterion has been scoped out of the appraisal.		
	Alternative Alignment 8a (Potential)	Landscape Character All alignments are located within the Wooded Estates – Aberdeenshire LCT. Since all alignments are located within a wider landscape defined by the same characteristics, a comparison of landscape character constraints is focused on localised features at the alignment scale. The southern end of the alignment intersects a very small part of Backstrip Wood which contains both native and LEPO woodland. Further north, the alignment also crosses North Kirkton Wood which contains LEPO woodland and a narrow belt of LEPO	This alignment has been RAG rated as Amber as the alignment would cross a small scale yet locally prominent area of elevated landform and would therefore compromise landscape character. The area of higher landform to the east and north of Myriewell Wood is a prominent landscape feature as it forms a notably elevated area within a landscape that is generally lower lying. As such, it forms the backdrop to the lower landscape, particularly Echt to the west and South Monecht to the south. Here the alignment runs against the grain of the landscape and its position across this higher landform would increase the prominence of the OHL, as the infrastructure would sit	A

Topic and Criteria	Option	Constraints	Evaluation of Constraints	RAG Score
		<p>woodland that connects to Myriewell Wood. Each of these areas of woodland, particularly mature broadleaved woodland, contribute to local landscape character.</p> <p>North of the B9119, the alignment crosses a high point within the landscape which is formed by a localised yet prominent undulation in the landform to the east and north of Myriewell Wood. This area of higher landform forms the backdrop to the lower lying, flatter landscape around Echt and South Monecht.</p>	<p>higher in the landscape. The OHL may also appear out of scale with the relatively small scale of this more elevated landform, resulting in the scale of this landform being diminished by the OHL infrastructure. The LoD does not offer opportunity to avoid this constraint.</p> <p>Where the alignment crosses LEPO broadleaved woodland at North Kirkton Wood, a notable degree of tree felling would be required to accommodate an OHL. Tree loss would also be required where the alignment crosses a narrow belt of LEPO woodland on the higher landform north of Myriewell Wood. These constraints are unavoidable and therefore an OHL in this alignment would compromise the role these woodlands play in contributing to local landscape character.</p>	
	<p>Alternative Alignment 8b</p>	<p>Landscape Character</p> <p>All alignments are located within the Wooded Estates – Aberdeenshire LCT.</p> <p>Since all alignments are located within a wider landscape defined by the same characteristics, a comparison of landscape character constraints is focused on localised features at the alignment scale.</p> <p>The majority of Alternative Alignment 8b passes through a landscape that is generally simple and low lying, with minimal notable undulations or areas of elevation.</p> <p>The alignment intersects a very small part of Backstrip Wood which contains both native and LEPO woodland, which contributes to local landscape character.</p>	<p>This alignment has been RAG rated as Green as the degree to which the alignment is constrained by features that contribute to landscape character is limited.</p> <p>Despite the LoD’s position across a corner of Backstrip Wood, the area of woodland that would be affected is small and the LoD offers opportunity to avoid this woodland. As such, an OHL in this alignment is unlikely to result in a notable loss of woodland that contributes to landscape character.</p>	<p>G</p>
	<p>Alternative Alignment 8c</p>	<p>Landscape Character</p> <p>All alignments are located within the Wooded Estates – Aberdeenshire LCT.</p> <p>Since all alignments are located within a wider landscape defined by the same characteristics, a comparison of landscape character constraints is focused on localised features at the alignment scale.</p> <p>Between Braigiewell and Myriewell the alignment crosses or clips a number of woodlands including broadleaved woodland at Braigies Moss, LEPO woodland at Braigiewell Wood and some broadleaved woodland at Sellars Moss. Further north, the alignment also crosses a narrow belt of LEPO woodland that connects to Myriewell Wood. Each of these areas of woodland,</p>	<p>This alignment has been RAG rated as Amber as the alignment would cross a small scale yet locally prominent area of elevated landform and would therefore compromise landscape character.</p> <p>The area of higher landform to the east and north of Myriewell Wood is a prominent landscape feature as it forms a notably elevated area within a landscape that is generally lower lying. As such, it forms the backdrop to the lower landscape, particularly Echt to the west and South Monecht to the south. Here the alignment runs against the grain of the landscape and its position across this higher landform would increase the prominence of the OHL, as the infrastructure would sit higher in the landscape. The OHL may also appear out of scale with the relatively small scale of this more elevated landform, resulting in the</p>	<p>A</p>

Topic and Criteria	Option	Constraints	Evaluation of Constraints	RAG Score
		<p>particularly native and mature broadleaved woodland, contribute to local landscape character.</p> <p>North of the B9119, the alignment crosses a high point within the landscape which is formed by a localised yet prominent undulation in the landform to the east and north of Myriewell Wood. This area of higher landform forms the backdrop to the lower lying, flatter landscape around Echt and South Monecht.</p>	<p>scale of this landform being diminished by the OHL infrastructure. The LoD does not offer opportunity to avoid this constraint.</p> <p>Where the alignment crosses LEPO broadleaved woodland at Braigies Moss, Braigiewell Wood and Sellars Moss, some degree of tree felling would be required to accommodate an OHL. The LoD however offers some flexibility to reduce the area of woodland loss that would be required, therefore reducing the degree to which landscape character is compromised as a result of woodland loss. Tree loss would also be required where the alignment crosses a narrow belt of LEPO woodland on the higher landform north of Myriewell Wood. The LoD does not offer flexibility to avoid this constraint.</p>	
	<p>Alternative Alignment 8a (Potential)</p>	<p>Visual</p> <p>Visual receptors at scattered residential properties, recreational routes and people travelling along the local road network form a constraint. Visual receptors that particularly form a constraint include residents at Little Finnercy as the dwelling offers some open views to the east and north towards the alignment at a distance of approximately 85 m from the LoD. Residents at South Monecht Farm, located approximately 20 m from the LoD, and South Monecht Cottage, located approximately 60 m from the LoD, also form a constraint as these properties offer some open views east and west respectively towards the alignment.</p> <p>Further north along the LoD, residents at Myriewell House, located approximately 75 m from the LoD, constrain the route as they are likely to have open views northeast towards the alignment, as well as residents at the group of properties at Monecht Cottages, located approximately 110 m from the LoD, with open views southwest towards the alignment. At the northwestern end of the alignment, residents at North Mains Farm, located approximately 115 m from the LoD, and Upper Mains, located approximately 185 m from the LoD, constrain the route as these properties are also likely to have open or filtered views to the north and northeast towards the alignment.</p> <p>Residents living in Echt, particularly those on the eastern edge of the village, as well as visitors and those travelling in and around the settlement form a constraint as the area of elevated landform</p>	<p>This alignment has been RAG rated as Red as an OHL in this alignment would compromise visual amenity experienced from the wider landscape context where the alignment crosses an area of elevated landform, as well as views experienced by a number of people at residential properties within close proximity.</p> <p>Where the alignment passes over the locally prominent area of elevated landform to the north of Myriewell Wood, the visual prominence of the OHL and its intervisibility with the surrounding area would be increased. The infrastructure would sit higher within the landscape and would be seen as prominent features across the skyline when viewed by people, including residents and road users, in the surrounding landscape, particularly where this higher landform forms the backdrop to Echt and South Monecht. From these areas, an OHL in this alignment would be highly prominent along the eastern horizon when viewed from Echt, and the northern horizon when views from South Monecht, compromising views and the visual setting of these areas. The height of the towers in relation to the relatively small scale of this elevated landform would further accentuate the perceived visual dominance of the OHL. This constraint is unavoidable however an OHL in this alignment would affect fewer views experienced by residents in comparison to Alternative Alignment 8b, and would be less overbearing in views experienced by the larger density of people in Echt as the OHL would be located at a greater distance from this settlement.</p> <p>Visual receptors at the residential properties at Little Finnercy, South Monecht Farm, South Monecht Cottage, Myriewell House, Monecht Cottages, North Mains Farm and Upper Mains constrain the alignment</p>	<p>R</p>

Topic and Criteria	Option	Constraints	Evaluation of Constraints	RAG Score
		<p>north of Myriewell Wood, which the LoD crosses, forms a visually prominent backdrop to the east of the settlement.</p>	<p>due to their distance of <200 m from the LoD and the availability of open or filtered views towards the alignment from these properties. Visual receptors at these properties would have close proximity views with the OHL forming a very prominent feature in views.</p> <p>The level of constraint could be reduced from most of these properties as the LoD offers opportunity to increase the distance in which the OHL would be seen from the properties. This however is likely to be challenging where the alignment passes through pinch points, including between South Monecht Farm and South Monecht Cottage and a second pinch point formed by Myriewell House and Monecht Cottages. At these pinch points, the respective locations of these properties either side of the alignment limit the available width in which to increase the distance the OHL would be seen in views.</p>	
	<p>Alternative Alignment 8b</p>	<p>Visual</p> <p>Visual receptors at scattered residential properties, recreational routes and people travelling along the local road network form a constraint. Visual receptors that particularly form a constraint include residents at Little Finnercy as the dwelling offers some open views to the east and north towards the alignment at a distance of approximately 85 m from the LoD.</p> <p>Residents at properties at Echt, particularly those on the eastern edge of the village, as well as visitors and those travelling in and around the settlement form a constraint as these visual receptors are likely to have open and close proximity views of the alignment, as the LoD passes within very close proximity to Echt. People at Echt Primary School on the southern edge of Echt are also likely to have some close proximity open views of the alignment.</p> <p>Residents at Monecht House and Kirk Cottages, located approximately 60 m from the LoD, form a constraint as these properties offer some filtered views west towards the alignment. Residents at North Mains Cottage, located approximately 115 m from the LoD, and North Mains Farm, located approximately 60 m from the LoD, also form a constraint as both of these properties offer open views west towards the alignment.</p>	<p>This alignment has been RAG rated as Red as an OHL in this alignment would compromise visual amenity experienced by a large number and concentrated density of people at the settlement of Echt.</p> <p>Where the alignment passes to the east of Echt, the OHL would sit within very close proximity to residents on the eastern edge of the settlement, occupying views from these properties. In these views, and from other parts of Echt with open views to the east, the OHL infrastructure would appear as large scale and highly dominant, and in some cases, potentially overbearing features. As such, an OHL in this alignment would compromise views and the visual setting of a higher density and concentrated group of people at Echt, particularly given the proximity of the OHL to the settlement. This constraint is unavoidable.</p> <p>Visual receptors at the residential properties at Little Finnercy, Monecht House, Kirk Cottages, North Mains Cottage and North Mains Farm constrain the alignment due to their distance of <200 m from the LoD and the availability of open or filtered views towards the alignment from these properties. Visual receptors at these properties would have close proximity views with the OHL forming a very prominent feature in views.</p> <p>The level of constraint could be reduced for residents at Little Finnercy and North Mains Farm as the LoD offers some opportunity to increase the distance in which the OHL would be seen from these properties. This however is likely to be challenging where the alignment passes through the pinch point formed by Echt and Monecht House, Kirk</p>	<p>R</p>

Topic and Criteria	Option	Constraints	Evaluation of Constraints	RAG Score
			<p>Cottages and North Mains Cottage. At this pinch point, the respective locations of these properties either side of the alignment limit the available width in which to increase the distance the OHL would be seen in views.</p>	
	<p>Alternative Alignment 8c</p>	<p>Visual</p> <p>Visual receptors at scattered residential properties, recreational routes and people travelling along the local road network form a constraint. Visual receptors that particularly form a constraint include residents at Little Finnercy as the dwelling offers some open views to the east and north towards the alignment at a distance of approximately 85 m from the LoD. Residents at South Monecht Cottage, located approximately 100 m from the LoD, also form a constraint as the property offers some open views northeast towards the alignment. Residents at the group of properties at Meanecht Cottages, located approximately 185 m from the LoD, constrain the alignment as these properties offer some open views south and west towards the alignment.</p> <p>Further northwest along the LoD, residents at Myriewell House, located approximately 110 m from the LoD, constrain the route as they are likely to have open views northeast towards the alignment, as well as residents at the group of properties at Monecht Cottages, located approximately 80 m from the LoD, with open views southwest towards the alignment. At the northwestern end of the alignment, residents at North Mains Farm, located approximately 115 m from the LoD, and Upper Mains, located approximately 185 m from the LoD, constrain the route as these properties are also likely to have open or filtered views to the north and northeast towards the alignment.</p> <p>Residents living in Echt, particularly those on the eastern edge of Echt, as well as visitors and those travelling in and around the settlement form a constraint as the area of elevated landform north of Myriewell Wood, which the LoD crosses, forms a visually prominent backdrop to the east of the settlement.</p>	<p>This alignment has been RAG rated as Red as an OHL in this alignment would compromise visual amenity experienced from the wider landscape context where the alignment crosses an area of elevated landform, as well as views experienced by a number of people at residential properties within close proximity.</p> <p>Where the alignment passes over the locally prominent area of elevated landform to the north of Myriewell Wood, the visual prominence of the OHL and its intervisibility with the surrounding area would be increased. The infrastructure would sit higher within the landscape and would be seen as prominent features across the skyline when viewed by people, including residents and road users, in the surrounding landscape, particularly where this higher landform forms the backdrop to Echt and South Monecht. From these areas, an OHL in this alignment would be highly prominent along the eastern horizon when viewed from Echt, and the northern horizon when views from South Monecht, compromising views and the visual setting of these areas. The height of the towers in relation to the relatively small scale of this elevated landform would further accentuate the perceived visual dominance of the OHL. This constraint is unavoidable however an OHL in this alignment would affect fewer views experienced by residents in comparison to Alternative Alignment 8b and would be less overbearing in views experienced by the larger density of people in Echt as the OHL would be located at a greater distance from this settlement.</p> <p>Visual receptors at the residential properties at Little Finnercy, South Monecht Cottage, Meanecht Cottages, Myriewell House, Monecht Cottages, North Mains Farm and Upper Mains constrain the alignment due to their distance of <200 m from the LoD and the availability of open or filtered views towards the alignment from these properties. Visual receptors at these properties would have close proximity views with the OHL forming a very prominent feature in views.</p> <p>The level of constraint could be reduced from most of these properties as the LoD offers some opportunity to increase the distance in which the OHL would be seen from the properties. This however is likely to be</p>	<p>R</p>

Topic and Criteria	Option	Constraints	Evaluation of Constraints	RAG Score
			challenging where the alignment passes through pinch points, including between Meanecht Cottages and South Monecht Cottage and a second pinch point formed by Myriewell House and Monecht Cottages. At these pinch points, the respective locations of these properties either side of the alignment limit the available width in which to increase the distance the OHL would be seen in views	
Land Use Agriculture	Alternative Alignment 8a (Potential) + Alternative Alignment 8b + Alternative Alignment 8c	Agriculture None of the alternative alignments spans any areas of prime agricultural land and they would only interact with land of lower classifications and would therefore not compromise the agricultural use or viability of the land as an agricultural resource. Interaction between the alignment and areas of prime agricultural land are assessed to be similar for each of the alternative alignments and therefore this criterion has been scoped out of the appraisal.		
Land Use Forestry	Alternative Alignment 8a (Potential)	Forestry The alignment intersects with three areas of woodland blocks comprising commercial forestry: <ul style="list-style-type: none"> • an unnamed block of woodland located to the northeast of Landerberry (NGR NJ 75383 04499) is intersected by the eastern edge of the alignment; • the alignment intersects through the centre of North Kirkton Wood (NGR NJ 75084 05363) which appears to be felled upon review of aerial imagery; and • a narrow strip of woodland (part of Myriewell Wood) is intersected by the alignment at NGR NJ 74938 06215 and appears to be felled upon review of aerial imagery. 	Forestry This alignment has been RAG rated as Amber as it intersects the edge of, or passes close to and through, three areas of commercial forestry where interaction with woodland management and operations may compromise the commercial returns from the forestry. The alignment is constrained to some extent by the presence of woodland areas with some commercial forestry activity likely to be present. At these points, tree clearance for an operational corridor within these woodlands may compromise commercial returns from these enterprises as some felling and/or re-design of planting may be required to accommodate the OHL. The eastern edge of the alignment LoD intersects with the edge of a woodland area located to the northeast of Landerberry. Taking account of the potential to align the OHL to avoid much these woodland blocks, it is considered unlikely that the alignment would compromise the commercial returns. The alternative alignment intersects through the centre of North Kirkton Wood and Myriewell Wood, located to the southeast and east of Echt respectively. It is considered that the alignment would interact with forestry operations and as such may compromise the future commercial returns from the site due to felling and required changes in planting and management, as well as fragmentation of North Kirkton Wood.	A

Topic and Criteria	Option	Constraints	Evaluation of Constraints	RAG Score
	<p>Alternative Alignment 8b</p>	<p>Forestry</p> <p>The alignment LoD intersects with the western edge of two woodland blocks comprising commercial forestry:</p> <ul style="list-style-type: none"> • an unnamed block of woodland located to the northeast of Landerberry (NGR NJ 75383 04499) is intersected by the eastern edge of the alternative alignment. • the western edge of North Kirkton Wood is intersected by the eastern edge of the alternative alignment (NGR NJ 75049 05004) located to the southeast of Echt. 	<p>Forestry</p> <p>This alignment has been RAG rated as Green as it is unlikely to compromise the commercial returns or viability of a forestry operation.</p> <p>The alignment is constrained to some extent by the presence of woodland areas with some commercial forestry activity likely to be present. At these points, tree clearance for an operational corridor within these woodlands has some potential to interact with woodland management but is not predicted to compromise commercial returns from these enterprises. Some felling and/or re-design of planting may be required to accommodate the OHL.</p> <p>The edges of the two woodland areas identified would be intersected by the alignment LoD. Some felling may be required to create a wind firm edge where coniferous species are present. Taking account of the potential to align the OHL to avoid much of this woodland, it is considered unlikely that an OHL would compromise the commercial returns of these areas.</p>	<p>G</p>
	<p>Alternative Alignment 8c</p>	<p>Forestry</p> <p>The alignment intersects with four areas of woodland blocks comprising commercial forestry:</p> <ul style="list-style-type: none"> • an unnamed woodland block of woodland is intersected by the western section of the alignment in two locations to the northeast of Braigies Moss: at NGR NJ 76049 04885 and at NGR NJ 75992 05063. • the western edge of Braigiewell Wood is intersected by the alignment at NGR NJ 76072 05178. • the alignment intersects through the centre of a woodland area at Sellars Moss at NGR NJ 75727 05619. • a narrow strip of woodland (part of Myriewell Wood) is intersected by the alignment at NGR NJ 74938 06215 and appears to be felled upon review of aerial imagery. 	<p>Forestry</p> <p>This alignment has been RAG rated as Amber as it intersects the edge of, or passes close to and through, four areas of commercial forestry where interaction with woodland management and operations may compromise the commercial returns from the forestry.</p> <p>The alignment is constrained to some extent by the presence of woodland areas with some commercial forestry activity likely to be present. At these points, tree clearance for an operational corridor within these woodlands may compromise commercial returns from these enterprises as some felling and/or re-design of planting may be required to accommodate the OHL.</p> <p>The alternative alignment intersects with a woodland area to the northeast of Braigies Moss as well as Braigiewell Wood, located to the east of Landerberry. Taking account of the potential to align the OHL to avoid much these woodland blocks, it is considered unlikely that the alignment would compromise the commercial returns.</p> <p>Sellars Moss and a narrow strip of woodland associated with Myriewell Wood are intersected by the alternative alignment. Woodland at Sellars Moss would likely require at least one tower to be sited within the woodland area. It is considered that the alignment is likely to interact with forestry operations and as such may compromise the</p>	<p>A</p>

Topic and Criteria	Option	Constraints	Evaluation of Constraints	RAG Score
			future commercial returns from the site due to felling and required changes in planting and management.	
Land Use Recreation – Paths and Trails	Alternative Alignment 8a (Potential) + Alternative Alignment 8c	Recreation Both alternative alignments do not cross any core path, NCN route or Scottish Great Trails.	Recreation The alternative alignments have been RAG rated as Green as both avoid interaction with core paths, NCN routes and Scottish Great Trails.	G
	Alternative Alignment 8b	Recreation The alternative alignment crosses two core paths: <ul style="list-style-type: none"> the Echt to North Woods core path is located to the south of the settlement of Echt. the Myriewell Circular core path is located to the north of the settlement of Echt. 	Recreation This alignment has been RAG rated as Green as although it interacts with two core paths, it is considered unlikely that the recreational use of these features will be compromised. The alternative alignment crosses the centre of two core paths located to the south and to the north of the settlement of Echt, and both core paths can be spanned by the OHL. Although the alternative alignment may interact with recreational amenity associated with the core paths, it is considered unlikely that recreational use of these features would be compromised and therefore it is not considered a significant constraint.	G
Land Use Recreation - Fishing	Alternative Alignment 8a (Potential) + Alternative Alignment 8b + Alternative Alignment 8c	Fishing No fishing beats are crossed by the three alternative alignments, and therefore this criterion has been scoped out of this appraisal.		
Planning Proposals	Alternative Alignment 8a (Potential) + Alternative 8c	Planning The alternative alignments do not cross any proposed or consented planning applications.	Planning The alternative alignments have been RAG rated as Green as there are no projects known to the planning system that have been identified which may interact with the alternative alignments.	G
	Alternative Alignment 8b	Planning The following planning proposal has been identified which may form a constraint to the alignment. <ul style="list-style-type: none"> The alternative alignment intersects with the northeastern corner of a consented planning application for the erection of 	Planning This alignment has been RAG rated as Amber as it may be inconsistent with other third party proposals known to the planning system. The alternative alignment partially intersects with the boundary of a planning application within Echt, and it presents a constraint to the alignment. There is the potential to align the OHL to avoid intersecting	A

TRANSMISSION

Topic and Criteria	Option	Constraints	Evaluation of Constraints	RAG Score
		25 houses in the northeastern part of Echt village (APP/2022/2257).	with this planning application. However, the degree of flexibility within the LoD is limited, limiting the opportunity to avoid distances of <170 m between the OHL and properties. This constraint is unavoidable and could result in the OHL being less than two times the nominal tower height.	

APPENDIX J: DESIGN DEVELOPMENT LOCATIONS

This appendix describes areas of constraint where possible OHL alignments were considered but not progressed further for detailed appraisal. This is because the least constrained alignment in these examples was apparent as a part of the design and review process. See **Figure J1.1** for indicative locations of the alignments detailed below.

Table J1: Design Development Locations Section A-F of the Proposed Route

Section	Location	Design Development Description
A	1. Southeast of Gallow Hill: consideration of alignments in the section between Hillside of Prieston and Ironside Hill	<p>The development of an alignment in the area on the southern side of Gallow Hill was constrained by the proximity to a communications mast requiring a buffer distance from the OHL of 1.5 times the mast height. Various alignments were explored to mitigate this constraint, considering paths to the east and west of the mast. A western alignment would traverse steep terrain around Gallow Hill, which would increase its visibility on the skyline and disrupt views from users of the A928 at Lumley Den. Multiple towers would require to be positioned on side slopes of the hill which would require significant amounts of cut and fill for access tracks and working pads. An eastern alignment would traverse around Ironside Hill and return to the valley between Gallow Hill and Ironside Hill, maintaining a lower elevation throughout. However, this alignment would bring the OHL closer to a lochan fed by groundwater springs at the base of Ironside Hill and a private water supply sustained by springs at the lochan. By siting towers with consideration to hydrological features, a less constrained path to the east was achieved, whilst also minimising the potential visual impact of the towers.</p> <p>Consequently, the eastern alignment was taken forward as the Potential Alignment at this location.</p>
	2. East of Meikle Kilmundie: consideration of alignments in the area north of Lumley Den	<p>North of the A928, consultation feedback indicated that the presence of prime agricultural land across the route section had the potential to constrain the development of an OHL alignment. An alignment was considered further north in response to this constraint; however, the OHL would then intersect a woodland on the southern slopes of Kincaldrum Hill, requiring a significant portion of it to be cleared to form an operational corridor to accommodate the OHL. An alignment was also considered higher on the western hillside of Hayston Hill, avoiding the woodland and the felling requirements, but which would make the towers more visible in the landscape. This alignment was however, positioned to reduce potential tower siting on prime agricultural land wherever feasible, and to avoid crossing the subsidiary watercourses of the Kilmundie Burn. Given the sparse residential presence in the area of the alignment and therefore the limited visual receptors, the potential increased visual presence of the towers on the landscape was considered to be a less significant constraint.</p> <p>Consequently, this alignment was taken forward as the Potential Alignment at this location.</p>
	3. Douglstown: consideration of alignments west of Ingliston	<p>The Dean Water posed a significant constraint to development of an alignment in the area northwest of Douglstown due to its contribution to an extensive fluvial floodplain and associated surface water risks. The presence of Class 5 and Class 4 peat areas further constrained the area for applicable tower siting locations. Padanaram settlement lies to the northeast of the route, while cottages at East Ingliston southeast of the Dean Water further constrained the development of possible alignments due to the proximity to residential properties. Additionally, a gas pipeline north of Ingliston posed a constraint to tower siting, requiring careful placement to avoid interference. An alignment was developed that traversed the agricultural land through the floodplain, crossing the Dean Water to the far west of Padanaram and Douglstown. This would allow for an efficient run of the suspension towers, reducing construction and maintenance requirements. However, towers placed in the flooded areas would face construction challenges, requiring an upgrade of existing drainage infrastructure. Another alignment was explored to the east, towards Ingliston and approximately 500 m closer to Padanaram. This alignment had a higher interference with gas pipelines, and also intersected agricultural land but crossed the Dean Water at a smaller section of the fluvial floodplain potentially offering a more manageable construction area. However, further assessment did not show an obvious preference for this alignment in terms of alleviating floodplain constraints.</p> <p>Based on the consideration of constraints for the two alignments described, the originally developed alignment was taken forward as the Potential Alignment at this location, with micrositing of towers required across the floodplain.</p>
C	4. Edzell Airfield, consideration of alignments between Bathgate and Primrosehill	<p>The development of an alignment in the area east of Edzell around Auchiburn was constrained by the disused Edzell Airfield, primarily due to the potential/unknown presence of unexploded ordnance (UXO) and radon. Consultation responses indicated that the alignment should remain 1 km from the airfield to mitigate the risk of encountering such areas. A pinch point of numerous woodland blocks and properties to the eastern side constrained a redesign of the OHL away from the airfield immediately to the west. Consequently, an alignment was developed to minimise tree felling by running parallel with an existing access through Inverury Wood, weaving around a property south of the woodland at Gawloch. This approach would preserve the windfirm edge and facilitate</p>

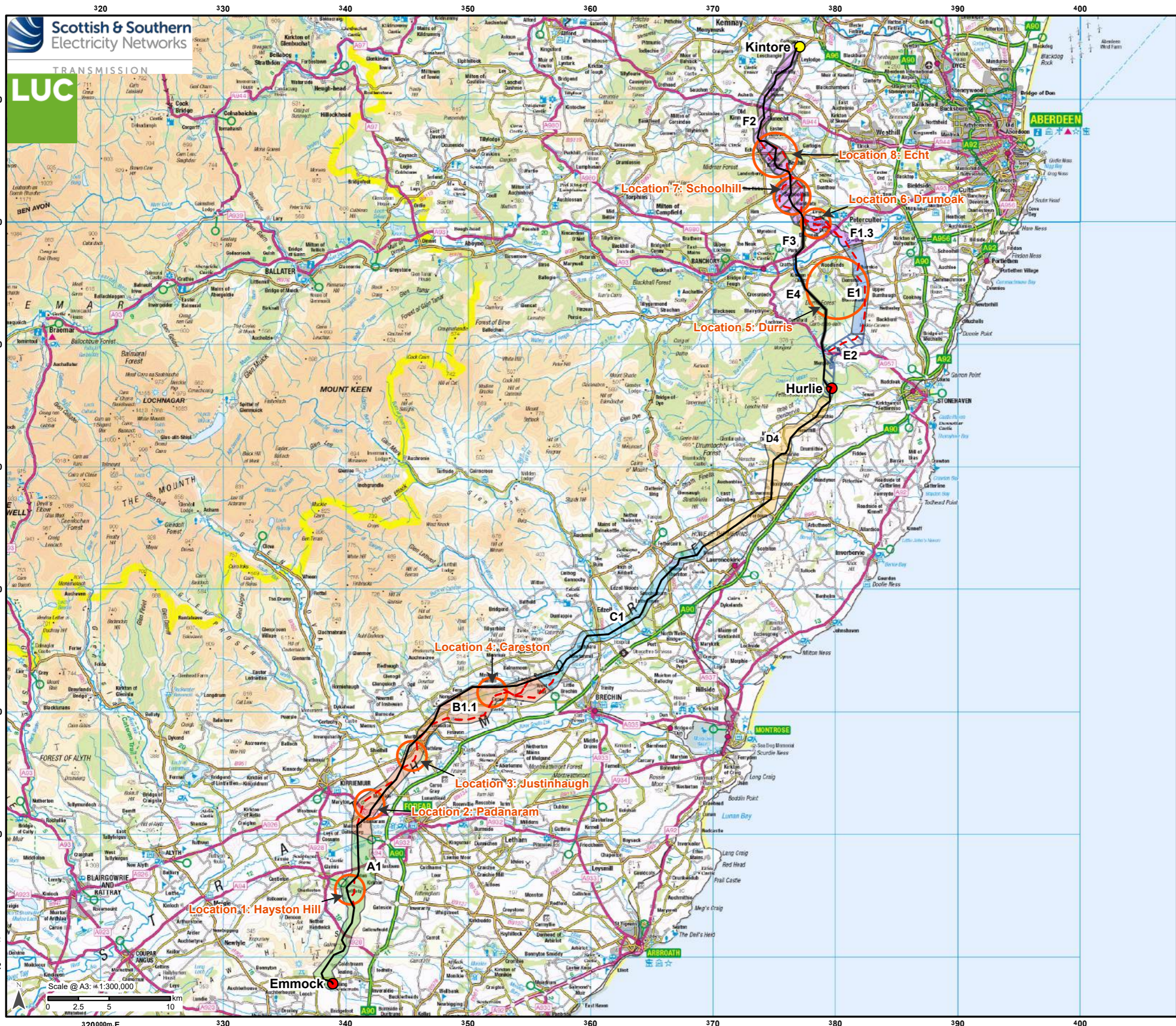
Section	Location	Design Development Description
		<p>efficient access to the towers via the existing track. Despite being located just within 1 km of the airfield; this alignment represented the least constrained path based on other factors.</p> <p>This alignment was taken forward as the Potential Alignment, and relevant surveys will be commissioned where required to determine the potential presence of UXOs in the LoD.</p>
	5. Lady Jane's Plantation, consideration of alignments north of Gourdon to the Dowrie Burn	<p>Properties to the east and west of Lady Jane's Plantation constrained the development of an alignment and restricted the ability to develop possible alignment through the area. Although the entire woodland is designated as LEPO, the trees on the east of the woodland were deemed more valuable than those to the west, being comprised of native species and parts of the western side of the wood are heavily wind-blown. An alignment was therefore developed to run parallel to the western side of an existing track through the wood, minimising potential impact to the higher quality areas of woodland and ensuring a windfirm edge, as well as providing efficient access.</p> <p>Given the constraints posed by properties on either side of the developed alignment, this was considered the most feasible alignment and taken forward as the Potential Alignment.</p>
	6. Haughhead, consideration of alignments around Haughhead and Greenbottom Wood	<p>Consultation feedback identified concerns regarding the biosecurity risk posed by the development of an alignment due to high-value horticulture operations in this location. An alignment was explored to the north of the farming operations, positioning the OHL through Greenbottom Wood; a mature commercial woodland with conifer and mature broadleaved amenity areas. This wood is designated as LEPO with areas of Upland Birch. However, site visits revealed extensive storm damage in large areas of the wood, presenting a potential opportunity to deliver biodiversity enhancement. Although an alignment here would also offer greater flexibility in tower siting outside of floodplain areas, it would bring the OHL closer to more residential dwellings. Consequently, an alignment towards Haughhead across the horticulture operations was considered with careful consideration of tower siting around the agricultural and commercially managed areas.</p> <p>This alignment was taken forward as the Potential Alignment in this location.</p>
D	7. Fordoun, consideration of alignments around the area of Red Hall House, north of Fordoun	<p>The section of the route around Fordoun was initially developed to continue toward the location of the previously identified Fiddes substation. Changes in the substation site location of the proposed Hurlie substation to Fetteresso Forest following feedback to the May to July 2023 consultation led to an amendment in route options.</p> <p>In the Fordoun area, alignments were identified and reviewed to mitigate property constraints, potential unexploded ordnance (UXO) risk, infrastructure crossings such as gas pipelines, Listed Buildings, airfields and tree felling. One alignment followed a straight path northeast, minimising the number of angle structures and avoiding interface with the high-pressure gas pipeline. The alignment would intersect the edge of Woods of Redhall, necessitating tree felling for an operational corridor for the OHL. An alignment through this path would, however, veer north of the Listed Building House of Redhall, avoiding cutting across key views over the formal gardens and surrounding farmland, integral to the setting. Another alignment was considered to the east which would avoid Woods of Redhall but which would be visible in views from the main elevations of House of Redhall, compromising its setting. Additionally, it would not be possible to navigate property constraints around Auchenzeoch and Pittengardner, with the OHL likely to be located closer than the target distance of 170 m from some properties. However, it cuts through a smaller section of LEPO woodland and crosses less mapped watercourses. This alignment would also be sited further from the private airfield northeast of Woods of Redhall.</p> <p>The northeastern alignment was taken forward as the Potential Alignment in this location.</p>
	8. Quithel, consideration of alignments around Droop Hill	<p>Agricultural operations and proximity to residential properties constrained the development of an alignment in the area around Quithel. An alignment was developed towards the northeast across land used for agricultural operations near Annamuick farm and across the west and north of the group of properties at Cuttiesouter. Another alignment was explored further northwest towards Quithel to mitigate areas of constraint associated with agricultural operations and proximity to property. However, this alignment would require larger angle towers to navigate between the scattered properties at Quithel, with a property</p>

Section	Location	Design Development Description
		<p>situated between the new OHL and an existing OHL. Additionally, the OHL would need to traverse a complex area of watercourses, including crossing the Killer Burn, necessitating considerable tower micro-siting in comparison to the first alignment.</p> <p>The northeast alignment was therefore not taken forward, and the first alignment was retained as the Potential Alignment, which would be micro-sited to avoid compromising the productivity of agricultural land.</p>
	9. Fetteresso Forest, consideration of alignments as the alignment enters Fetteresso Forest	<p>Due to the complexity of connecting the proposed OHL into and out of the proposed Hurlie 400 kV substation, alignments were explored in the area tying into the substation. An alignment was considered involving directing the OHL into the western side of the substation, aiming to minimise the number of tower structures required. However, this would necessitate positioning the towers on steeply sloping ground as they traverse the valley crossing, posing technical challenges during construction. Additionally, this alignment would bring the OHL within 275 m of the existing Fetteresso substation, requiring significant tree felling to form an operational corridor for the OHL. Alternatively, a more eastern alignment across Elf Hill into the substation was considered. This alignment would maintain a wider path from the existing substation, which would better cater for future connections into the substation. This alignment better avoided the sloping ground for potential positioning of tower structures, and also minimised the need for tree felling.</p> <p>Consequently, the easterly alignment offered a more favourable approach to the substation connection and was therefore taken forward as the Potential Alignment.</p>
E	10. Mergie, consideration of alignments between Chlachansheils and Slug Road	<p>The development of an alignment north of Fetteresso Forest was constrained by proximity to residential properties at Mergie, particularly to the east of the alignment, and an existing OHL constraining the alignment to the west. These constraints created a pinch point, and severely restricted the development of viable alignments for the new 400 kV OHL in the area. Notably, due to the proximity to property constraints, an alignment in this area would be very close to a newly constructed residential property at Mergie. The only means to avoid this property and seek to achieve a distance of between 100-170m from the property would involve relocating the existing 275 kV OHL (currently being upgraded to 400kV) further west. However, executing this realignment would be a substantial undertaking, requiring further tree felling through Fetteresso Forest and requiring temporary power disruptions while the existing line was diverted. Considering the cost, disruption and complexity of this realignment, the alignment was retained that intersects the target property buffer. In order to mitigate against the property constraint, careful micro-siting of the alignment was initiated to ensure towers are located as far as possible from the property. Additionally, towers would be placed on the edge of productive land where feasible, utilising long conductor spans in this area to minimise impact on the land use and key views from the property.</p> <p>This micro-sited alignment was taken forward as the Potential Alignment.</p>
	11. Easter Auquhollie, consideration of alignments north of Rumbleyond	<p>Several alignments were developed to navigate the constraints around and to the southeast of Easter Auquhollie. Whilst properties are the primary constraint in this location, the presence of windfarms to the north, GWDTEs, Class 4 and 5 peat zones and complex hydrology further north posed additional challenges in designing an alignment through this area. An alignment north of Cowhill and Easter Auquhollie and along the eastern slopes of Bank Hill was explored. While reducing the alignment length and the amount of angle towers required to avoid constraints, this alignment intersected boggy habitat and towers would likely be positioned on the higher ground of the slopes of Bank Hill, increasing their visibility in the landscape.</p> <p>An alignment was developed further east, north of Rumbleyond, which would require more angle towers to navigate the residential properties but would be potentially less prominent in the surrounding landscape, being sited lower on the hill slopes. Additionally, the OHL would be clearly visible and prominent in close proximity views to the east from properties at Easter Auquhollie. The Scheduled Monument at Nether Auquhollie Inscribed Stone stands near to the eastern side of the alignment and is already oversailed by the existing Kintore to Tealing 275 kV OHL. An additional OHL in the area has the potential to further compromise key views from this monument.</p> <p>Another alignment, placed between the alignments described above, was developed. This alignment was situated north of Cowhill but through Easter Auquhollie on the lower slopes of Bank Hill would take the alignment off the hillside, whilst also keeping it out avoiding of key views from the surrounding properties.</p>

Section	Location	Design Development Description
		<p>However, properties at Rumbleyond would become encircled between an existing OHL and the new 400 kV OHL. The area is also constrained by a known PWS source approximately 130 m north of the alignment, as well as the edge of a sensitive blanket bog habitat on the edge of the alignment to the north.</p> <p>The eastern alignment, north of Rumbleyond, was taken forward as the Potential Alignment as it avoids encircling residential properties in OHL whilst also reducing the potential impact to sensitive habitats and aquifer sources. Towers were micrositied to reduce the visual constraints on views to the east from residential properties north of Rumbleyond.</p>
	12. Meikle Carewe, consideration of alignments around Meikle Carewe Hill	<p>The wind farm located on Meikle Carewe Hill posed a constraint to the development of the alignment due to the requirement to achieve standoff distances between the OHL and the wind turbines. The presence of complex hydrology zones to the north of Southward and northeast of Bank Hill also constrained potential tower siting in the area west of Meikle Carewe. These hydrologically complex areas were constrained further by the presence of sensitive bog habitats. Further alignment design resulted in a least constrained alignment being identified which would be sited lower on the slopes of Meikle Carewe Hill than the original alignment. Careful micrositing was required to ensure the towers are strategically placed out of the blanket bog onto more suitable heathland and shrub habitat types.</p> <p>This alignment was therefore taken forward at the Potential Alignment.</p>
	13. Hill of Montsnaught, consideration of alignments from Borrowfield to Newlands	<p>The development of the alignment north of Montsnaught and south of Newlands encountered various constraints including a high-pressure gas pipeline, an existing 275 kV OHL to the east, elevated terrain on the Hill of Montsnaught, several residential properties to the east and at Newlands, Cairnfields, and section of woodland east of South Brachmont. An alignment on the eastern side of the Hill of Montsnaught was explored to minimise the potential impact on the woodland area to the east of South Brachmont. However, this brought the OHL closer to the gas pipeline as it is constrained to the east by the existing 275 kV OHL. Consequently, the alignment would ascend to higher elevation terrain, resulting in additional towers and limitations on tower spotting. This would also likely require a large angle tower sited close to residential properties west of Upper Burnhaugh and east of Newlands. Similarly, an alignment to the west of Hill of Montsnaught would also require an additional c. 1 km of woodland to be felled for an operational corridor, and would intersect Newlands hut circle, cairns and field banks.</p> <p>To address these constraints, an alignment was developed between these alignments to the West of Hill of Montsnaught. This alignment aimed to minimise requiring the least interface with the gas pipeline whilst also avoiding residential properties and other existing infrastructure.</p> <p>This alignment provided a balanced approach in mitigating constraints and was therefore taken forward as the Potential Alignment.</p>
F	14. Culfosie, consideration of alignments east of Barmekin Hill	<p>Due to the necessity to navigate residential properties, PWSs and Dunecht House GDL, an alignment in the area around Culfosie was likely to involve numerous large angle tower structures. Although the constraints would not allow for much flexibility for siting the OHL between Dunecht GDL and a scheduled monument at New Western Echt Stone Circle, an alignment was explored to reduce the amount of angle towers required to avoid the constraints. In this alignment, the OHL would be taken slightly further from properties east of Barmekin Wood, but closer to properties west of Easter Culfosie. However, this alignment avoided higher ground and reduced the number of angle towers required. Consequently, this would reduce the size of the towers and to minimise the potential for impact on visual receptors, despite their closer proximity.</p> <p>This alignment was therefore taken forward as the Potential Alignment.</p>

APPENDIX K: FIGURES

This appendix presents the figures, as referenced in the consultation document.



Alignment

- Potential Alignment
- - Alternative Alignment
- - Realignment of existing OHL
- Area with alternative alignment option(s)

Substations

- Proposed substation
- Existing Kintore substation

Refined Route

- A1
- B1.1
- C1
- D4
- E1
- E2
- F1.3
- F2

Additional Options (identified following March 2024 consultation)

- E4
- F3

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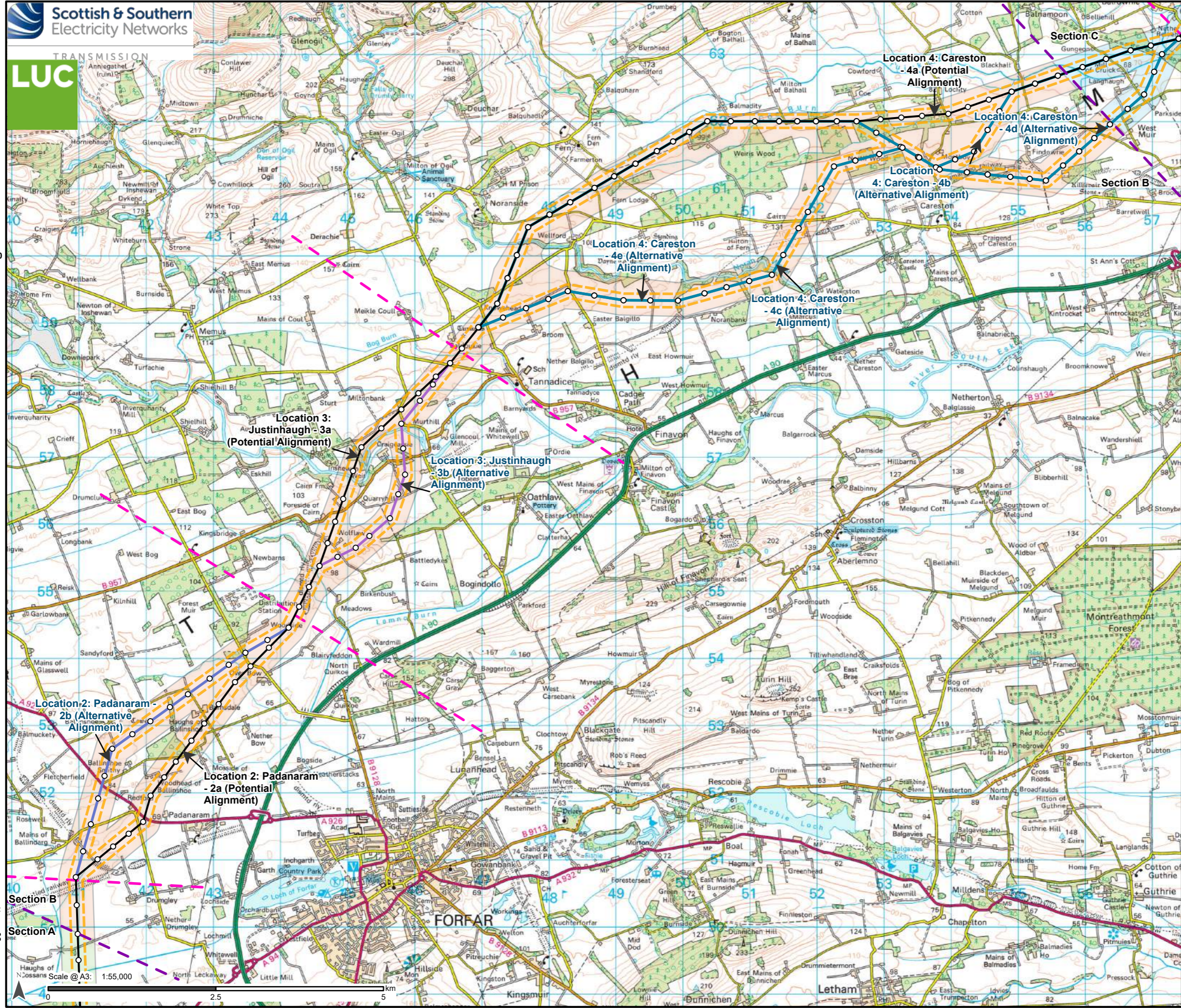
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Project No: LT455
Project: Kintore to Tealing 400kV Overhead Line

Title:
Potential Alignment and Alternative Alignment options

Drawn by: HW Date: 02/09/2024

Figure: 1.1

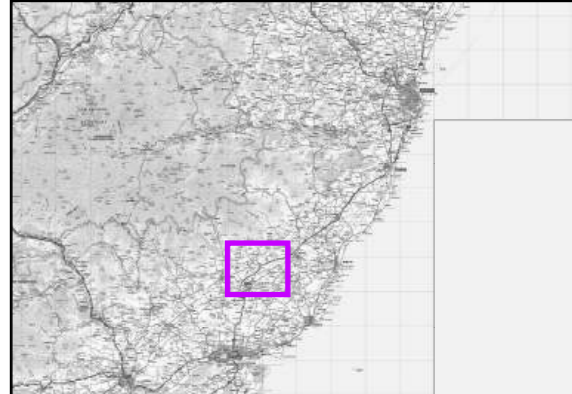


- Alignment**
- Potential Alignment
 - Alternative Alignment (please see labels on figure for names)
 - Padanaram - Alternative Alignment 2b
 - Justinhaugh - Alternative Alignment 3b
 - - - Alternative Alignment Option Boundary
 - - - Section Boundary
 - Indicative Limits of Deviation (LoD)*
 - Indicative Tower Position
- Refined Route**
- A1
 - B1.1
 - C1

- Refined Route**
- A1
 - B1.1
 - C1

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*LoDs to be amended as design progresses



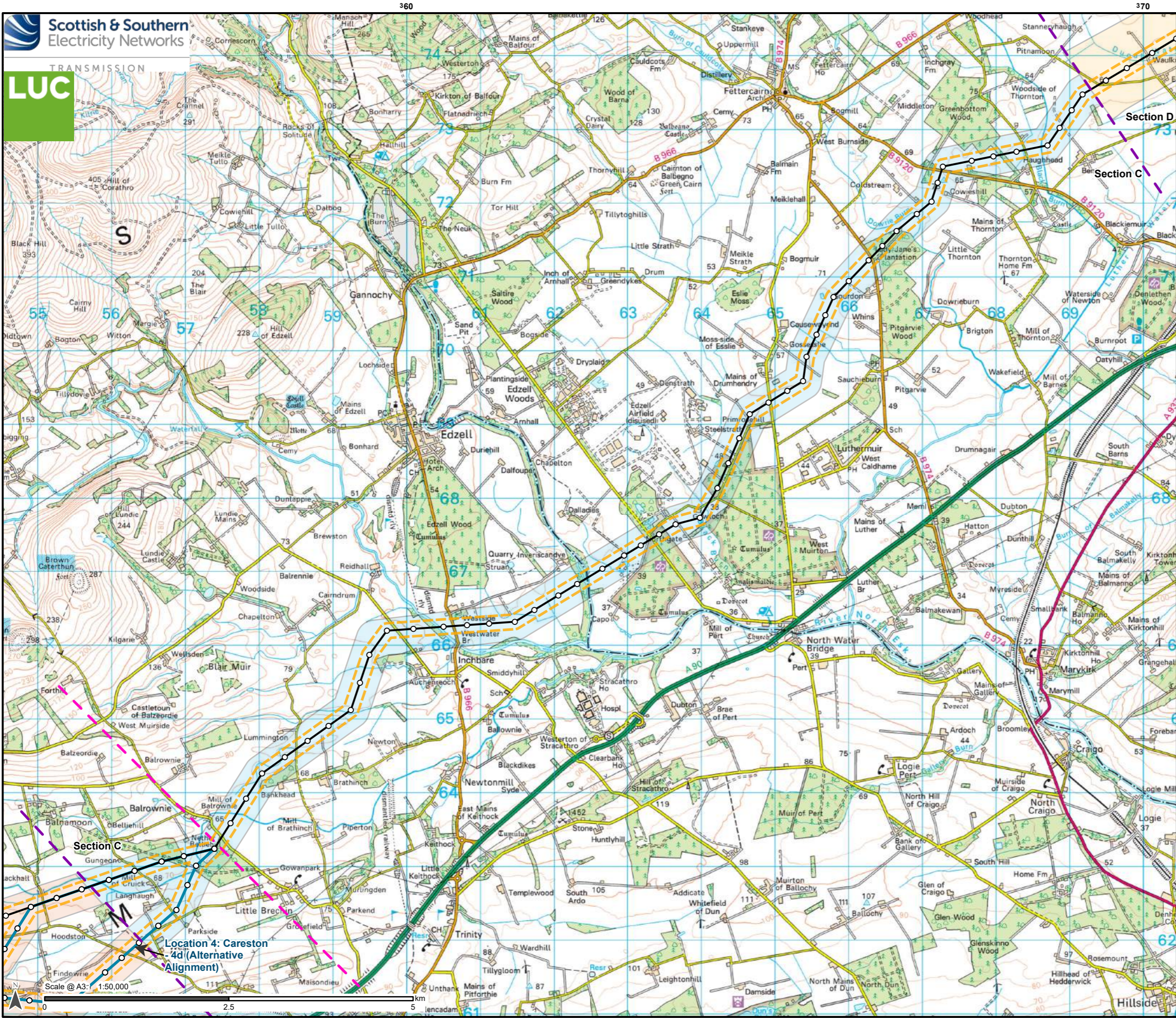
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Title:
Potential Alignment and Alternative Alignment Options - Section B

Drawn by: HW Date: 18/09/2024

Figure: 4.2



- Alignment**
- Potential Alignment
 - Alternative Alignment (please see labels on figure for names)
 - - - Alternative Alignment Option Boundary
 - - - Section Boundary
 - Indicative Limits of Deviation (LoD)*
 - Indicative Tower Position
- Refined Route**
- B1.1
 - C1
- Proposed Route**
- D4

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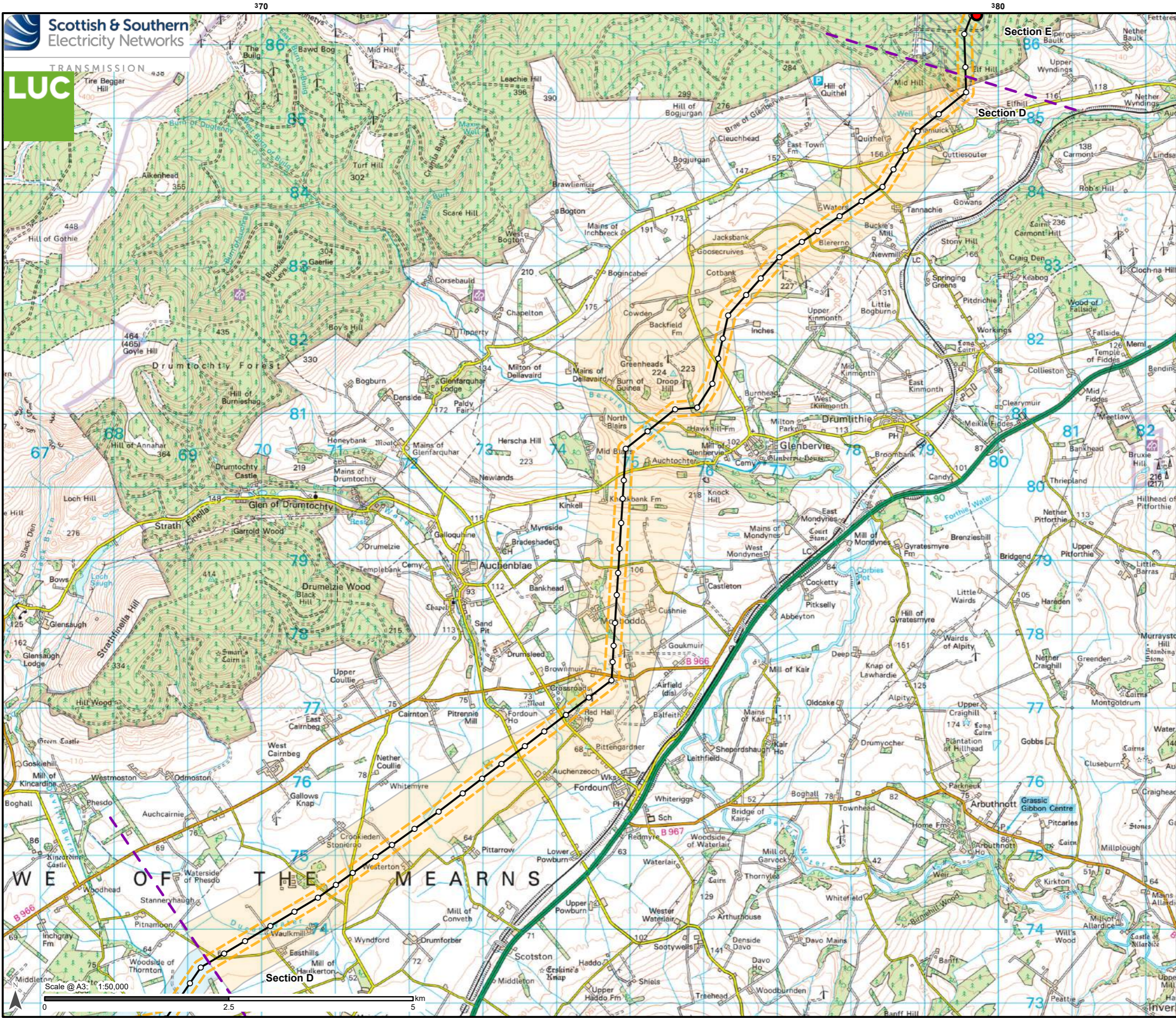
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Title:
Potential Alignment and Alternative Alignment Options - Section C

Drawn by: HW
Date: 18/09/2024

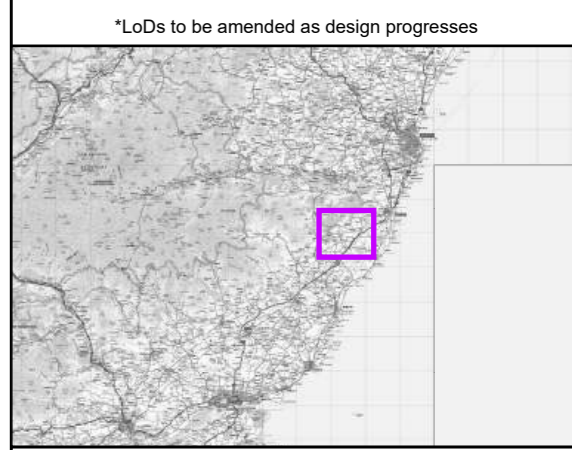
Figure: 4.3



- Alignment**
- Potential Alignment
 - - - Section Boundary
 - ▭ Indicative Limits of Deviation (LoD)*
 - Indicative Tower Position
 - Hurlie Substation Proposal of Application Notice (Aberdeenshire Council Reference ENQ/2024/0146)

- Refined Route**
- C1
- Proposed Route**
- D4
 - E2

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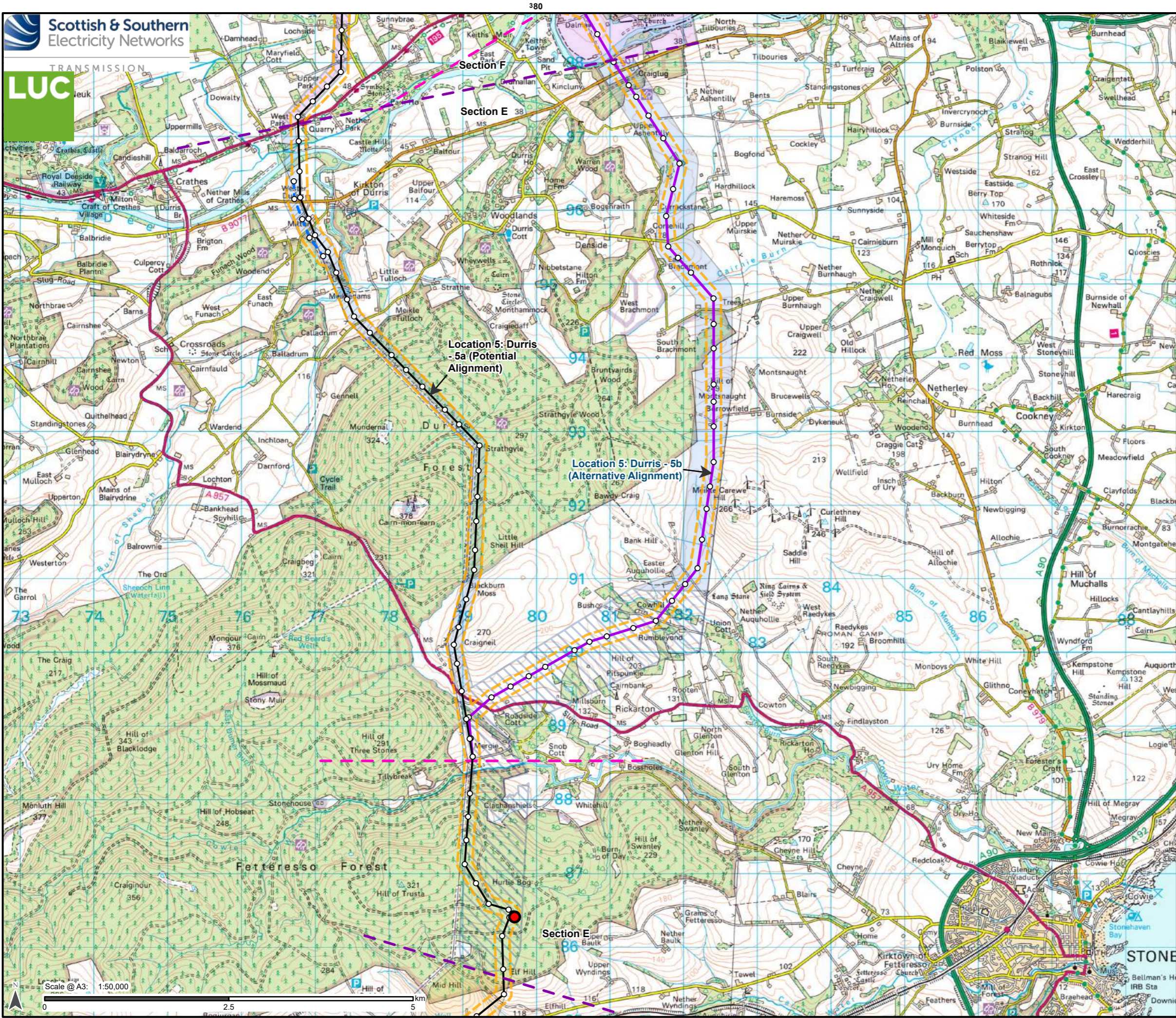
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Title:
Potential Alignment and Alternative Alignment Options - Section D

Drawn by: HW
Date: 18/09/2024

Figure: 4.4



- Alignment**
- Potential Alignment
 - - - Realignment of existing OHL
 - Durriss - Alternative Alignment 5b
 - - - Alternative Alignment Option Boundary
 - - - Section Boundary
 - Indicative Limits of Deviation (LoD)*
 - Indicative Tower Position
 - Hurlie Substation Proposal of Application Notice (Aberdeenshire Council Reference ENQ/2024/0146)
- Refined Route**
- E1
- Proposed Route**
- D4
 - E2
 - F1.3
- Additional options (identified following March 2024 consultation)**
- E4
 - F3

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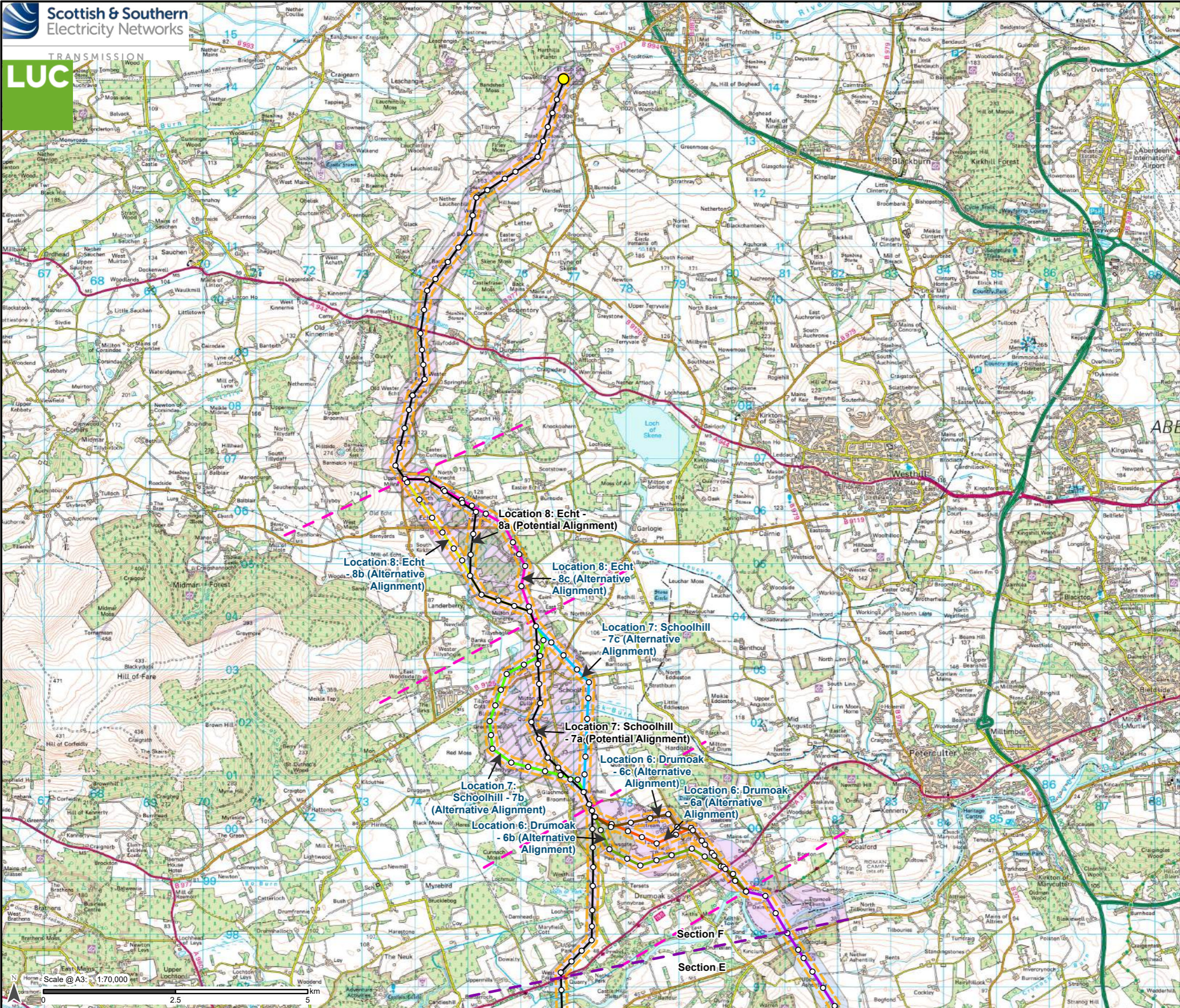
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Title:
Potential Alignment and Alternative Alignment Options - Section E

Drawn by: HW Date: 18/09/2024

Figure: 4.5



Alignment

- Potential Alignment
- Durris - Alternative Alignment 5b
- Durmoak - Alternative Alignment 6a
- Durmoak - Alternative Alignment 6b
- Durmoak - Alternative Alignment 6c
- Schoolhill - Alternative Alignment 7b
- Schoolhill - Alternative Alignment 7c
- Echt - Alternative Alignment 8b
- Echt - Alternative Alignment 8c
- - - Alternative Alignment Option Boundary
- - - Section Boundary
- - - Indicative Limits of Deviation (LoD)*
- Indicative Tower Position

Substation

- Existing Kintore substation

Refined Route

- E1
- F2

Proposed Route

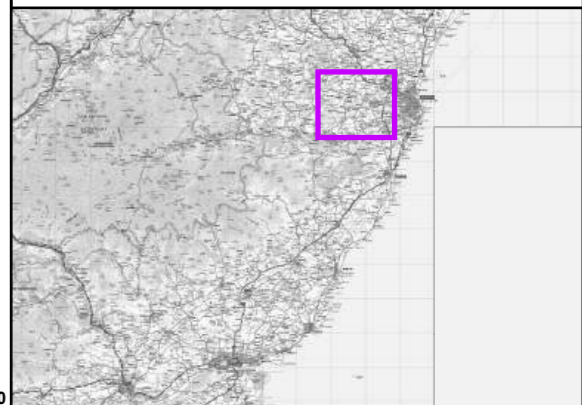
- F1.3

Additional options (identified following March 2024 consultation)

- E4
- F3

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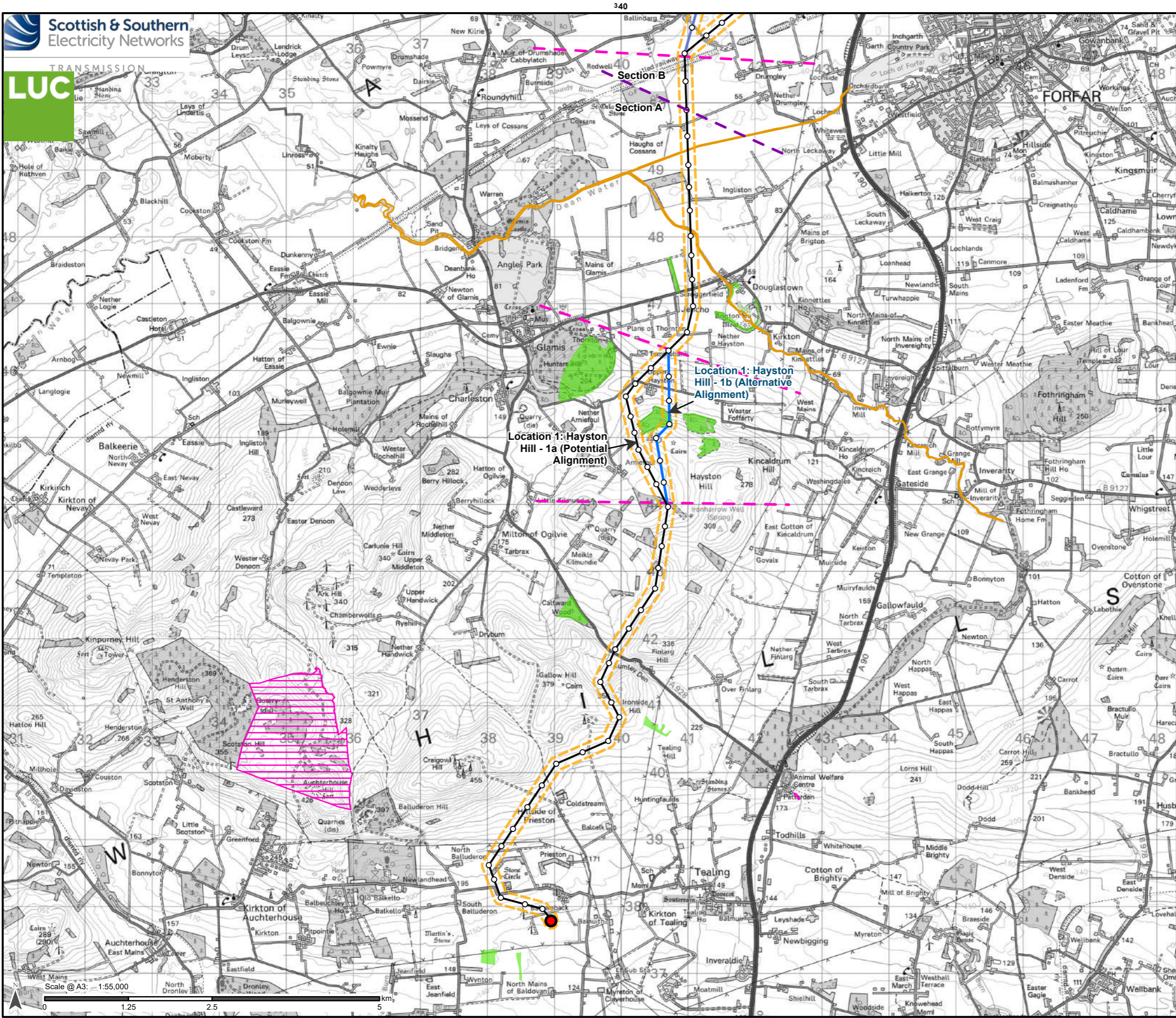
Title:

Potential Alignment and Alternative Alignment Options - Section F

Drawn by: HW

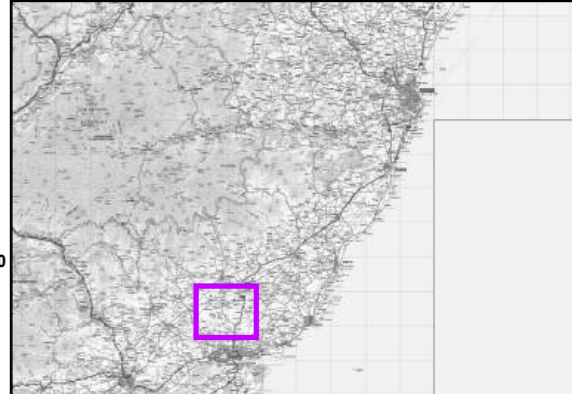
Date: 18/09/2024

Figure: 4.6



- Alignment**
- Potential Alignment
 - Hayston Hill - Alternative Alignment 1b
 - Padanaram - Alternative Alignment 2b
 - - - Alternative Alignment Option Boundary
 - - - Section Boundary
 - Indicative Limits of Deviation (LoD)*
 - Indicative Tower Position
- Substation**
- Emmock Substation Proposal of Application Notice (Angus Council Reference 24/00058/PAN)
- Ecology Constraints Within 5km**
- Special Area of Conservation
 - Site of Special Scientific Interest
- Ecology Constraints Within 1km**
- Ancient Woodland Inventory
- Long-Established (of plantation origin)
 - Other (on Roy map)

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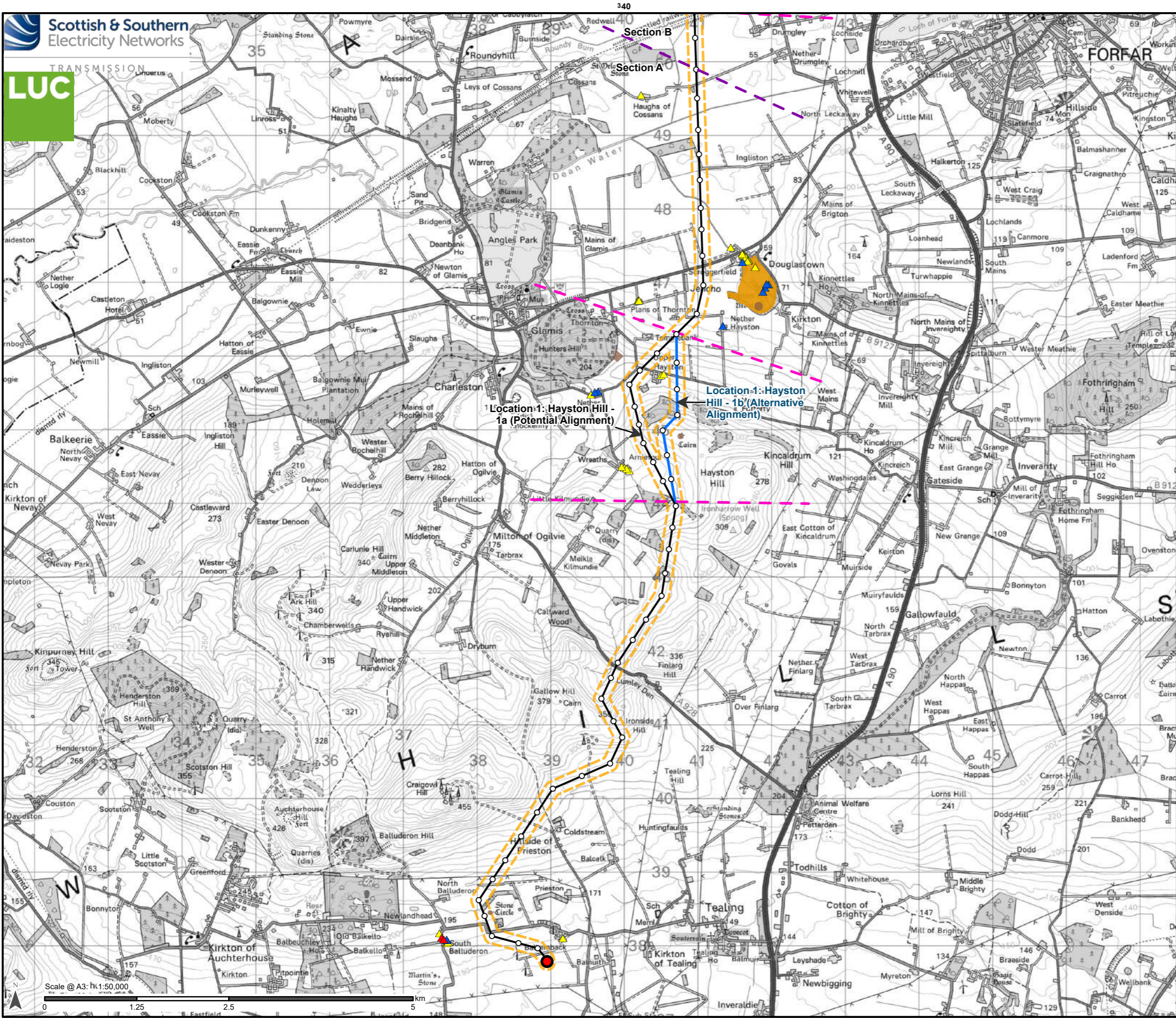
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Title:
Ecology Constraints - Section A

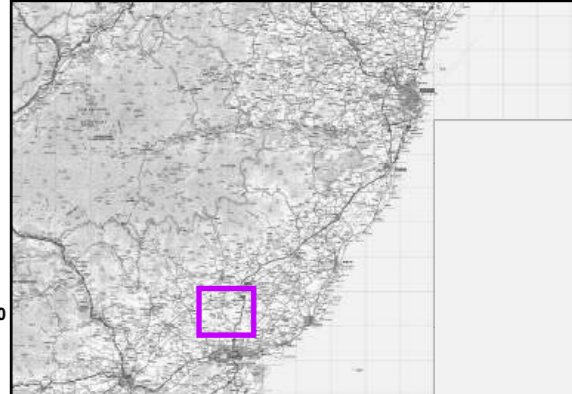
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Figure: 4.7



- Alignment**
- Potential Alignment
 - Hayston Hill - Alternative Alignment 1b
 - Alternative Alignment Option Boundary
 - Section Boundary
 - Indicative Limits of Deviation (LoD)*
 - Indicative Tower Position
- Substation**
- Emmock Substation Proposal of Application Notice (Angus Council Reference 24/00058/PAN)
- Cultural Heritage Constraints Within 1km**
- Listed Building
- ▲ Category A
 - ▲ Category B
 - ▲ Category C
- Scheduled Monument
 - Non-Inventory Designed Landscapes (NIDLs)

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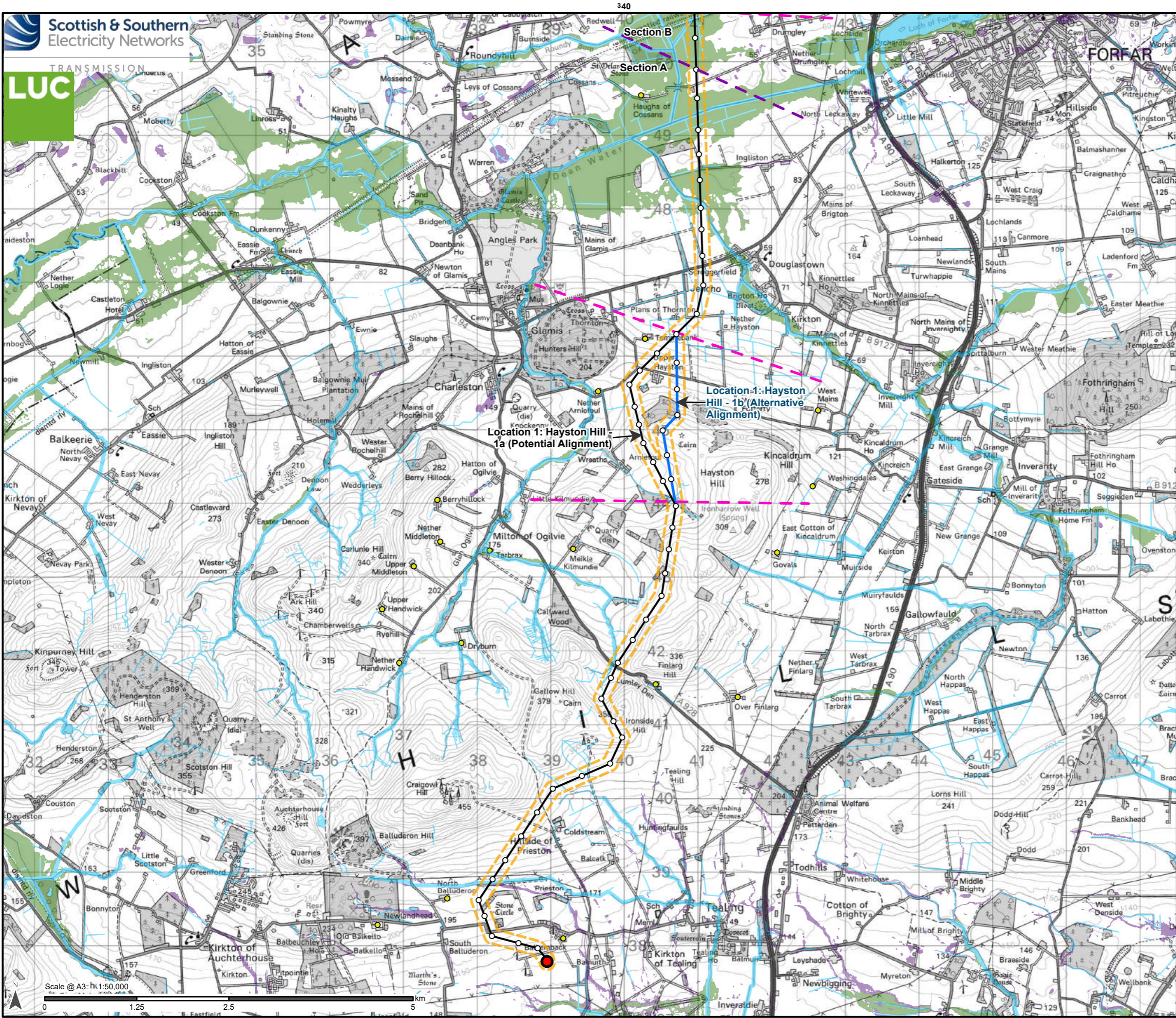
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Title:
 Cultural Heritage Constraints - Section A

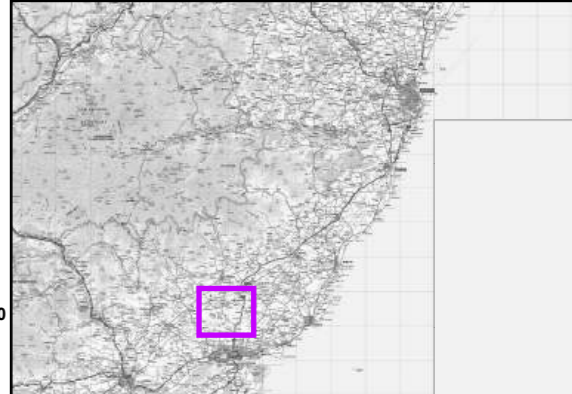
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Figure: 4.8



- Alignment**
- Potential Alignment
 - Hayston Hill - Alternative Alignment 1b
 - Alternative Alignment Option Boundary
 - Section Boundary
 - Indicative Limits of Deviation (LoD)*
 - Indicative Tower Position
- Substation**
- Emmock Substation Proposal of Application Notice (Angus Council Reference 24/00058/PAN)
- Hydrology Constraints**
- Ordnance Survey mapped watercourses
 - River Future Flood Extent (200 year + Climate Change)
 - Surface Water Future Flood Extent (200 year + Climate Change)
 - PWS property locations

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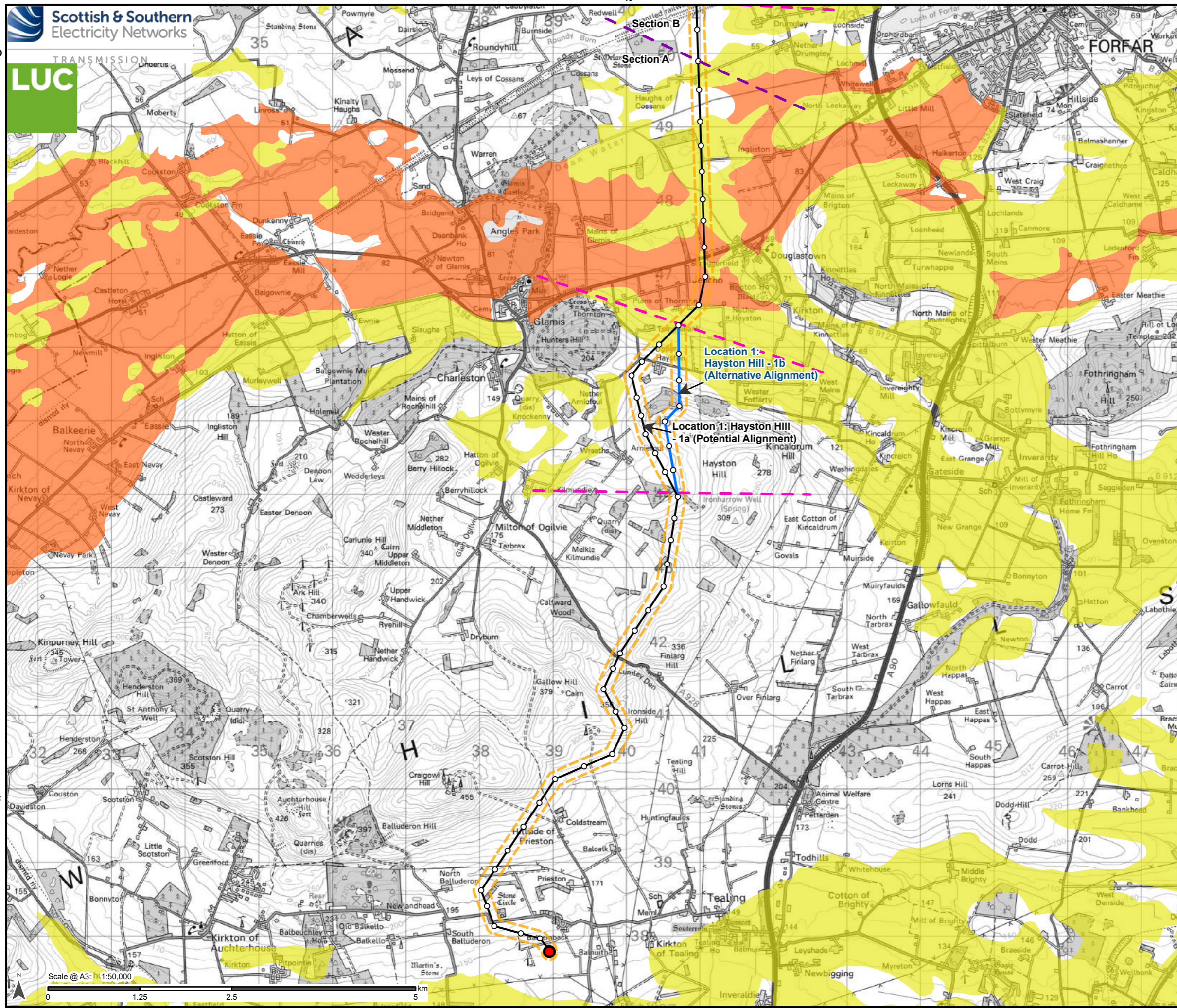
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Project No: LT455
 Project: Kintore to Tealing 400kV Overhead Line

Title:
 Hydrology Constraints - Section A

Drawn by: HW
 Date: 17/09/2024

Figure: 4.9



- Alignment**
- Potential Alignment
 - Hayston Hill - Alternative Alignment 1b
 - Alternative Alignment Option Boundary
 - Section Boundary
 - - - Indicative Limits of Deviation (LoD)*
 - Indicative Tower Position

Substation

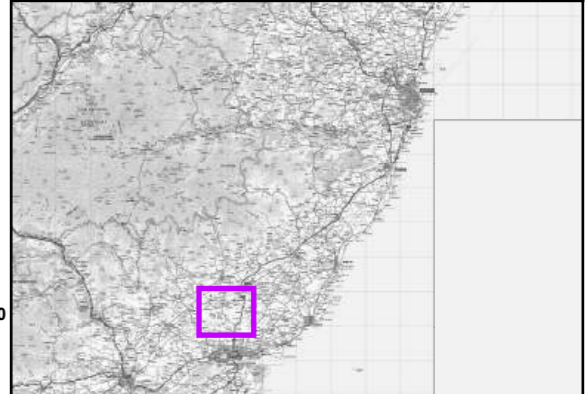
Name

● Emmock Substation Proposal of Application Notice (Angus Council Reference 24/00058/PAN)

Land Capability for Agriculture

- 2 - Land capable of producing a wide range of crops.
- 3.1 - Land capable of producing consistently high yields of a narrow range of crops and/ or moderate yields of a wider range. Short grass leys are common.

Note: Only classes 1, 2 and 3.1 (collectively prime agricultural land) have been mapped. OS base maps are the latest available version from Ordnance Survey, dated July 2024. SSEN Transmission take no responsibility for the release or accuracy of latest version Basemaps from Ordnance Survey. Contains JHI data. *LoDs to be amended as design progresses



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Project No: LT455
Project: Kintore to Tealing 400kV Overhead Line

Title:
Land Capability for Agriculture Constraints - Section A

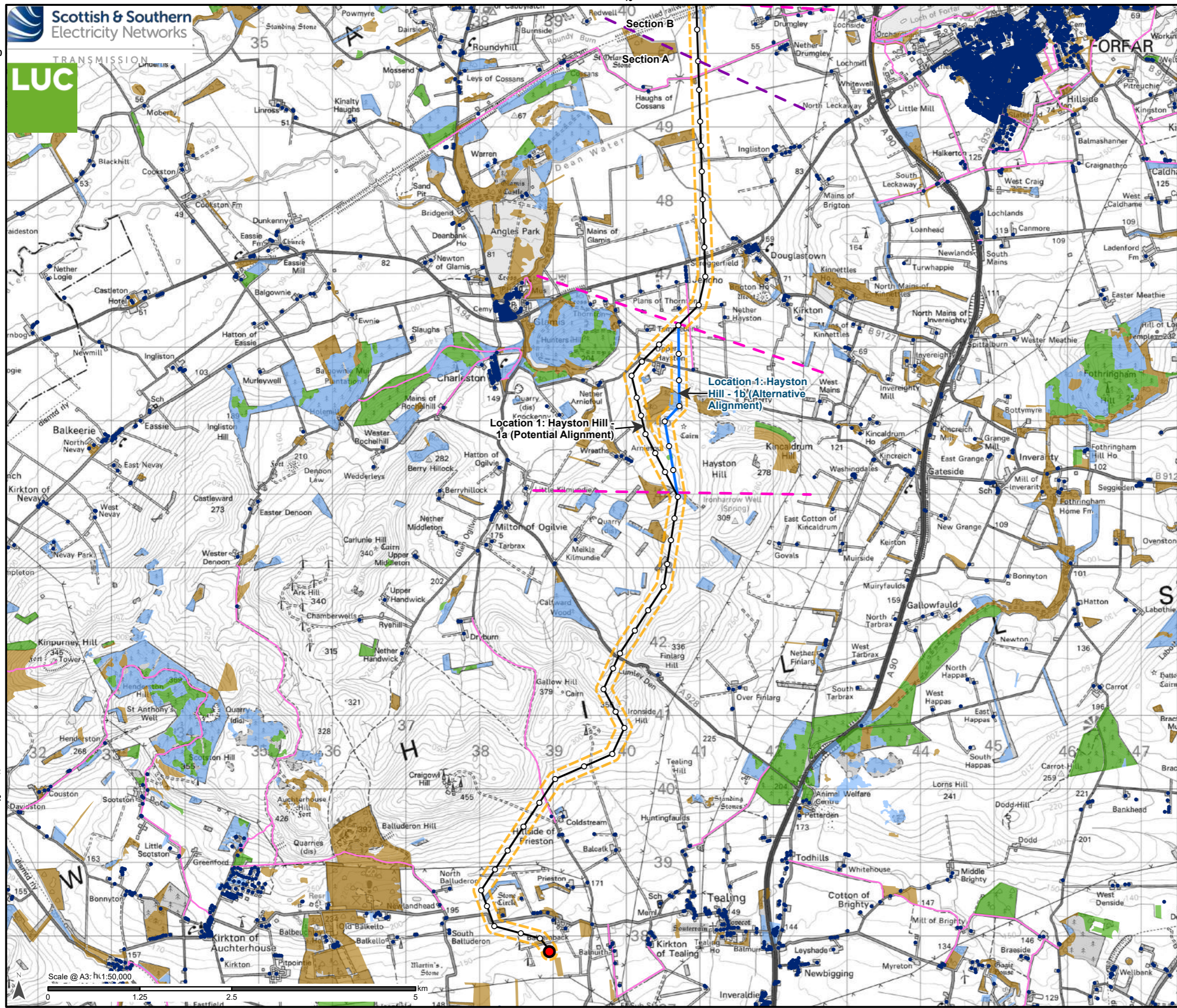
Drawn by: HW
Date: 17/09/2024

Figure: 4.10

750
740000m.N
740

340

340000m.E

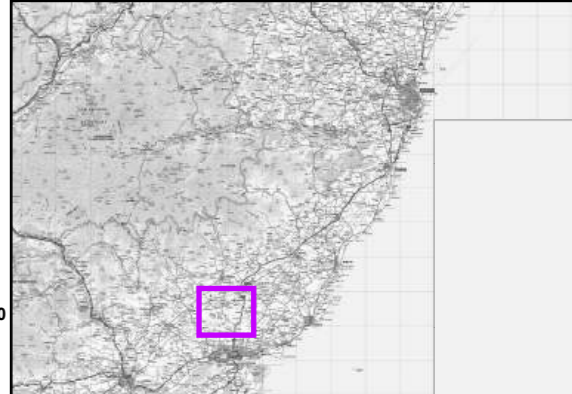


Scottish & Southern
Electricity Networks

LUC

- Alignment**
- Potential Alignment
 - Hayston Hill - Alternative Alignment 1b
 - Alternative Alignment Option Boundary
 - Section Boundary
 - Indicative Limits of Deviation (LoD)*
 - Indicative Tower Position
- Substation**
- Emmock Substation Proposal of Application Notice (Angus Council Reference 24/00058/PAN)
- Properties**
- Residential property
 - LUC additional residential properties (20240327)
- Land Use Constraints**
- National Forest Inventory
- Broadleaved; Mixed mainly broadleaved; Coppice; Coppice with standards; Young trees; Assumed woodland
 - Conifer; Mixed mainly conifer
 - Other
 - Core path

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Project No: LT455
Project: Kintore to Tealing 400kV Overhead Line

Title:
Land Use and Properties - Section A

Drawn by: HW
Date: 17/09/2024

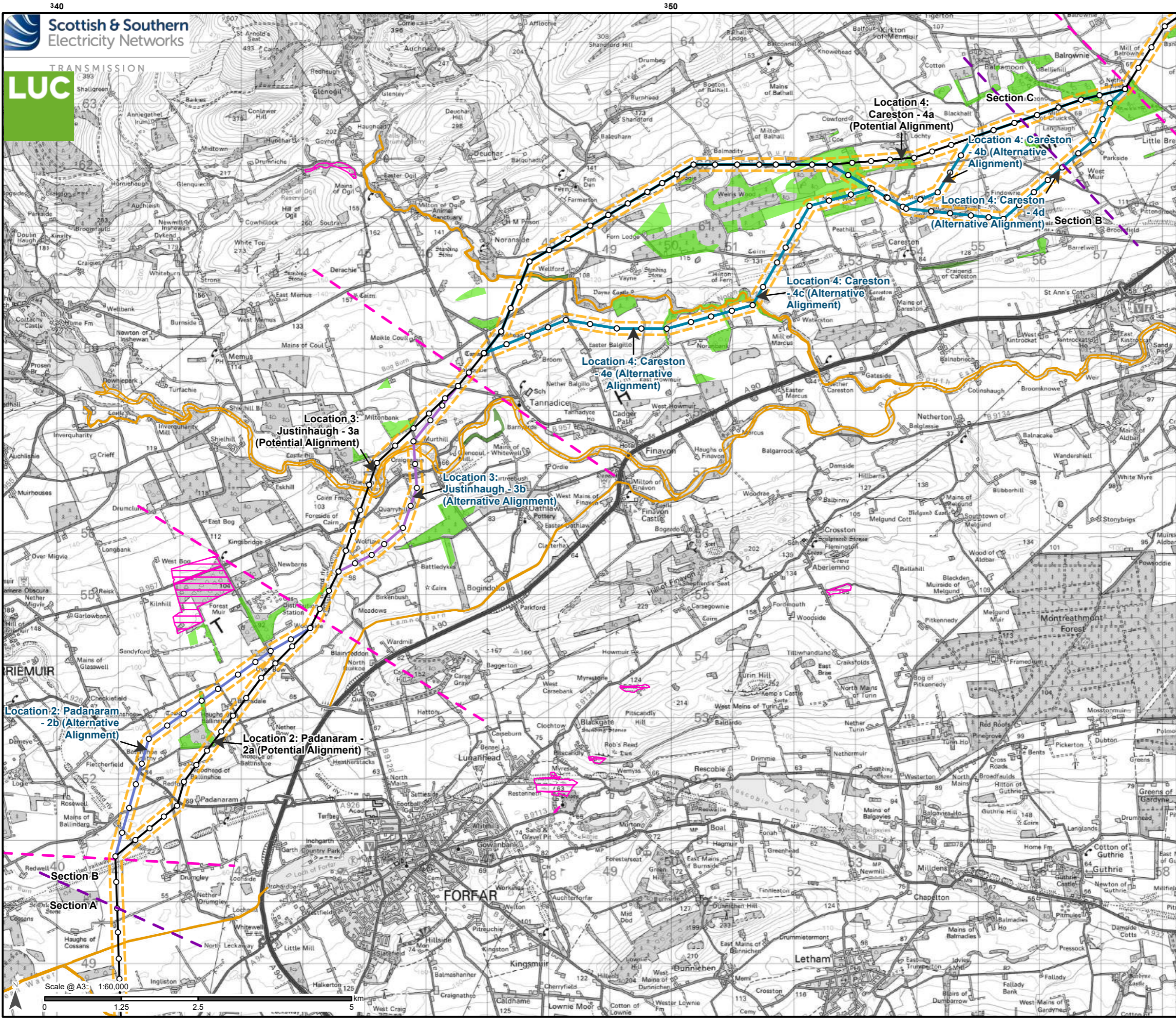
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750
740000m.N
740

340

340000m.E

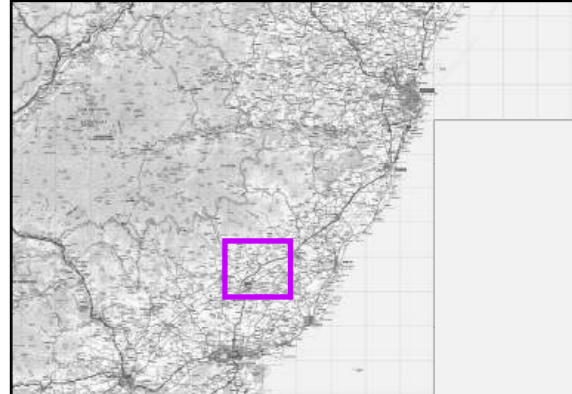
Scale @ A3: 1:150,000
0 1.25 2.5 5 km



- Alignment**
- Potential Alignment
 - Alternative Alignment (please see labels on figure for names)
 - Padanaram - Alternative Alignment 2b
 - Justinhaugh - Alternative Alignment 3b
 - - - Alternative Alignment Option Boundary
 - - - Section Boundary
 - - - Indicative Limits of Deviation (LoD)*
 - Indicative Tower Position
- Ecology Constraints Within 5km**
- Special Area of Conservation
 - Site of Special Scientific Interest
- Ecology Constraints Within 1km**
- Ancient Woodland Inventory
- Ancient (of semi-natural origin)
 - Long-Established (of plantation origin)

Please see Figure 6.1 for detail of Location 4: Careston Alternative Alignments

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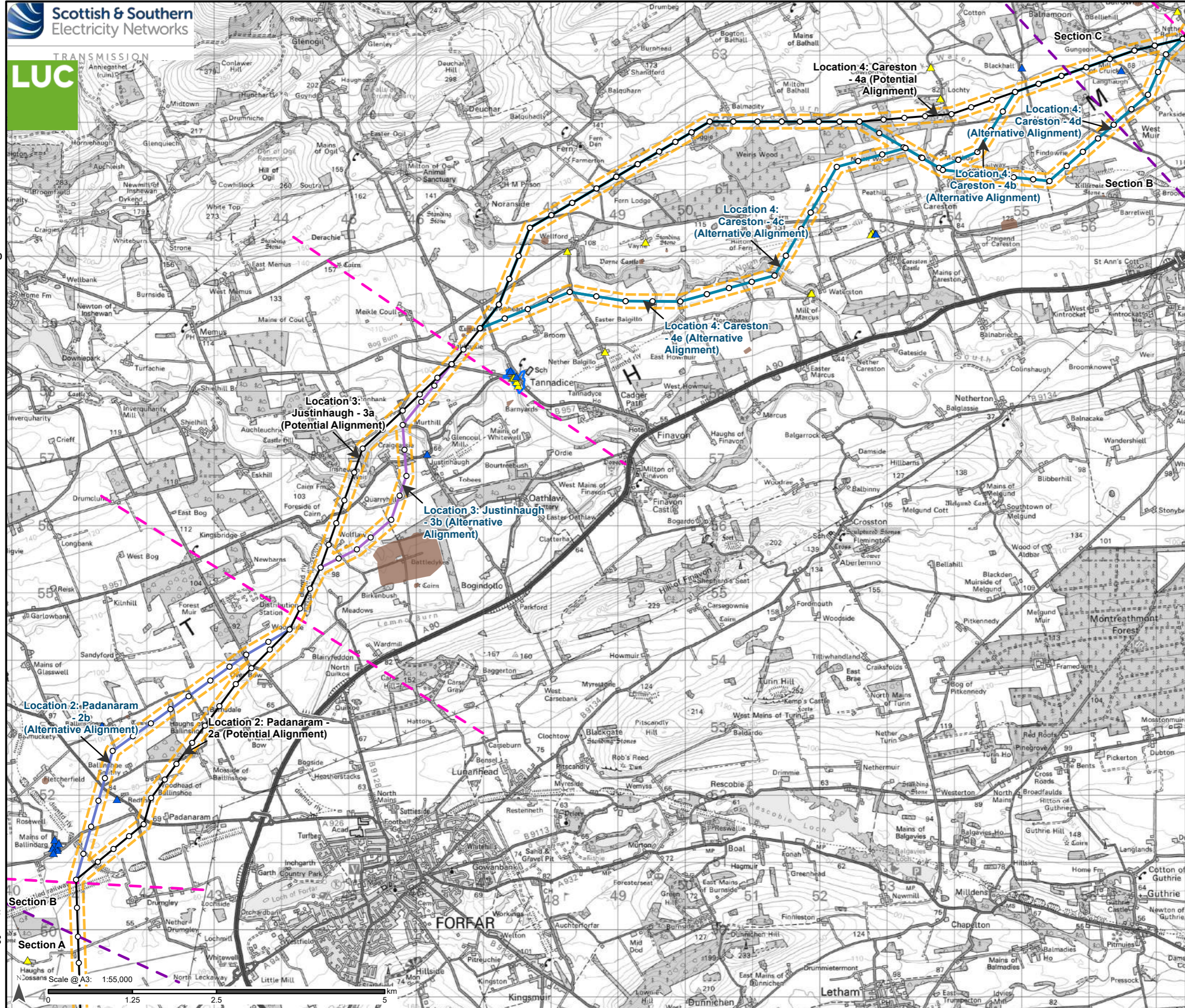
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Project No: LT455
Project: Kintore to Tealing 400kV Overhead Line

Title:
Ecology Constraints - Section B

Drawn by: HW
Date: 18/09/2024

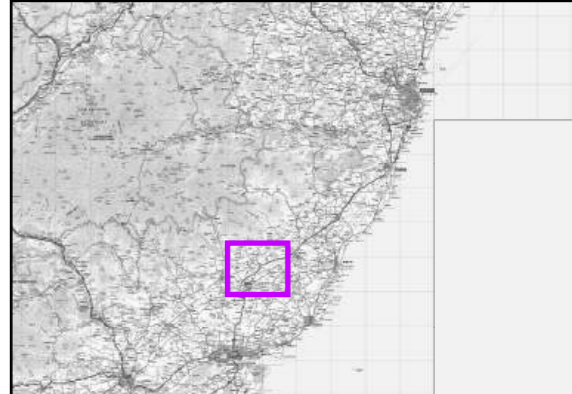
Figure: 4.12



- Alignment**
- Potential Alignment
 - Alternative Alignment (please see labels on figure for names)
 - Padanaram - Alternative Alignment 2b
 - Justinhaugh - Alternative Alignment 3b
 - - - Alternative Alignment Option Boundary
 - - - Section Boundary
 - - - Indicative Limits of Deviation (LoD)*
 - Indicative Tower Position
- Cultural Heritage Constraints Within 1km**
- Listed Building
- ▲ Category B
 - ▲ Category C
- Scheduled Monument
- Conservation Area

Please see Figure 6.1 for detail of Location 4: Careston Alternative Alignments

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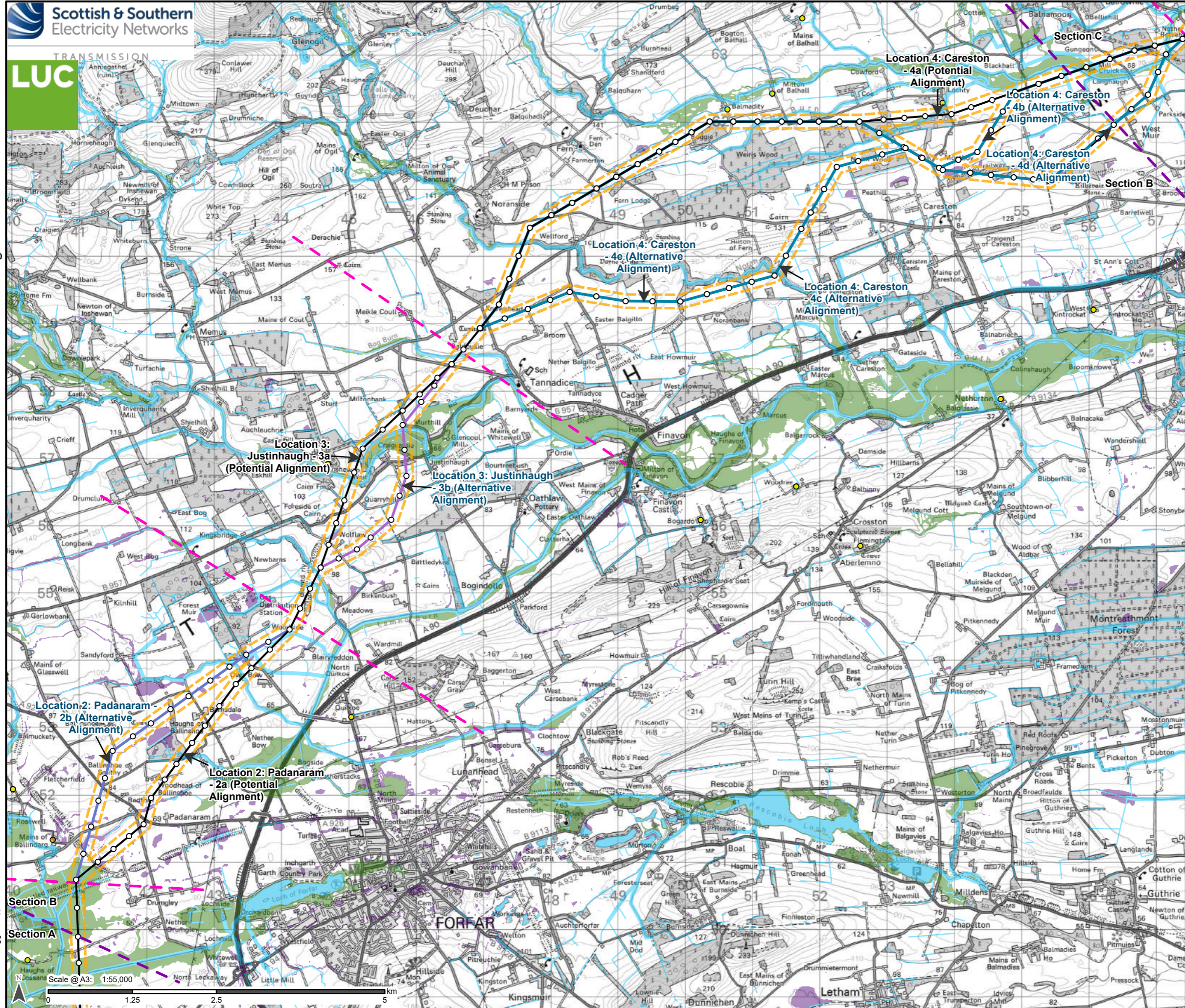
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Project No: LT455
Project: Kintore to Tealing 400kV Overhead Line

Title:
Cultural Heritage Constraints - Section B

Drawn by: HW Date: 17/09/2024

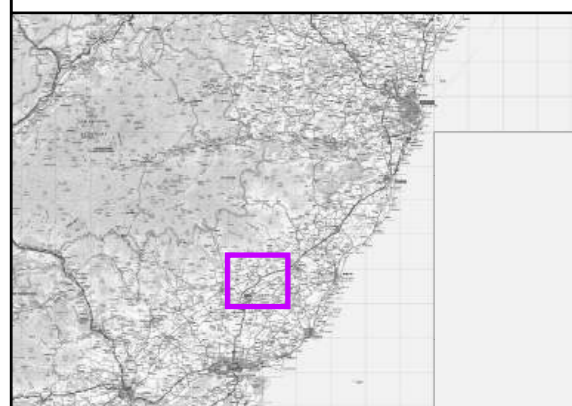
Figure: 4.13



- Alignment**
- Potential Alignment
 - Alternative Alignment (please see labels on figure for names)
 - Padanaram - Alternative Alignment 2b
 - Justinhaugh - Alternative Alignment 3b
 - - - Alternative Alignment Option Boundary
 - - - Section Boundary
 - Indicative Limits of Deviation (LoD)*
 - Indicative Tower Position
- Hydrology Constraints**
- Ordnance Survey mapped watercourses
 - River Future Flood Extent (200 year + Climate Change)
 - Surface Water Future Flood Extent (200 year + Climate Change)
 - PWS property locations

Please see Figure 6.1 for detail of Location 4: Careston Alternative Alignments

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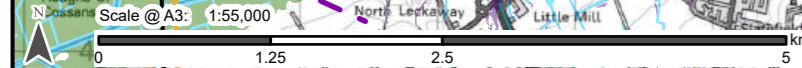
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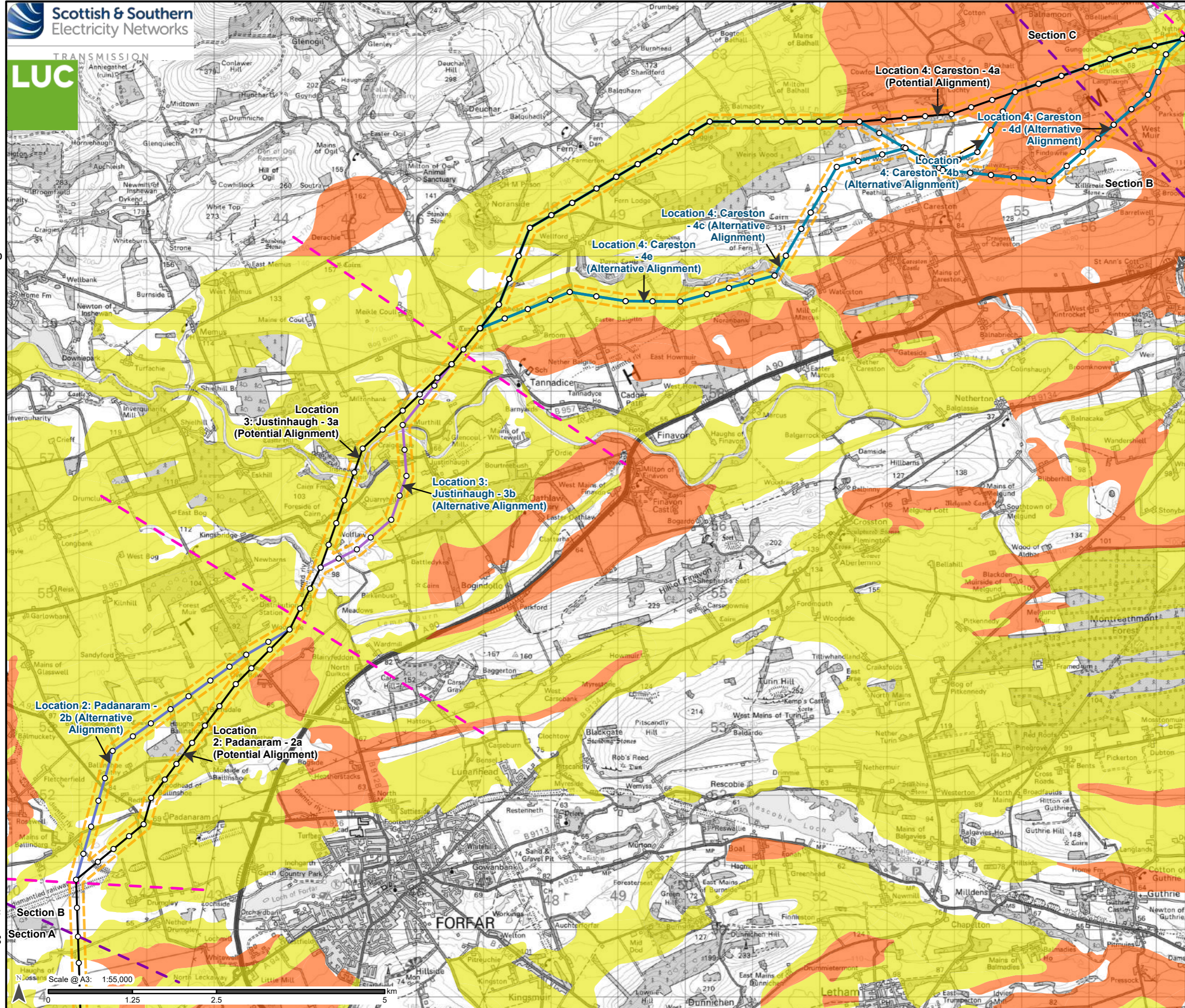
Project No: LT455
Project: Kintore to Tealing 400kV Overhead Line

Title:
Hydrology Constraints - Section B

Drawn by: HW Date: 17/09/2024

Figure: 4.14



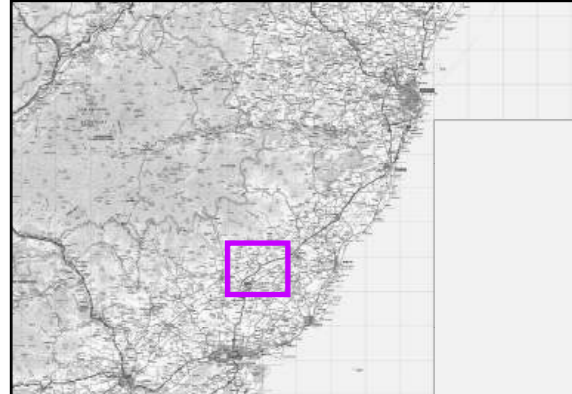


- Alignment**
- Potential Alignment
 - Alternative Alignment (please see labels on figure for names)
 - Padanaram - Alternative Alignment 2b
 - Justinhaugh - Alternative Alignment 3b
 - - - Alternative Alignment Option Boundary
 - - - Section Boundary
 - - - Indicative Limits of Deviation (LoD)*
 - o Indicative Tower Position

- Land Capability for Agriculture**
- 2 - Land capable of producing a wide range of crops.
 - 3.1 - Land capable of producing consistently high yields of a narrow range of crops and/ or moderate yields of a wider range. Short grass leys are common.

Please see Figure 6.1 for detail of Location 4: Careston Alternative Alignments

Note: Only classes 1, 2 and 3.1 (collectively prime agricultural land) have been mapped. OS base maps are the latest available version from Ordnance Survey, dated July 2024. SSEN Transmission take no responsibility for the release or accuracy of latest version Basemaps from Ordnance Survey. Contains JHI data. *LoDs to be amended as design progresses



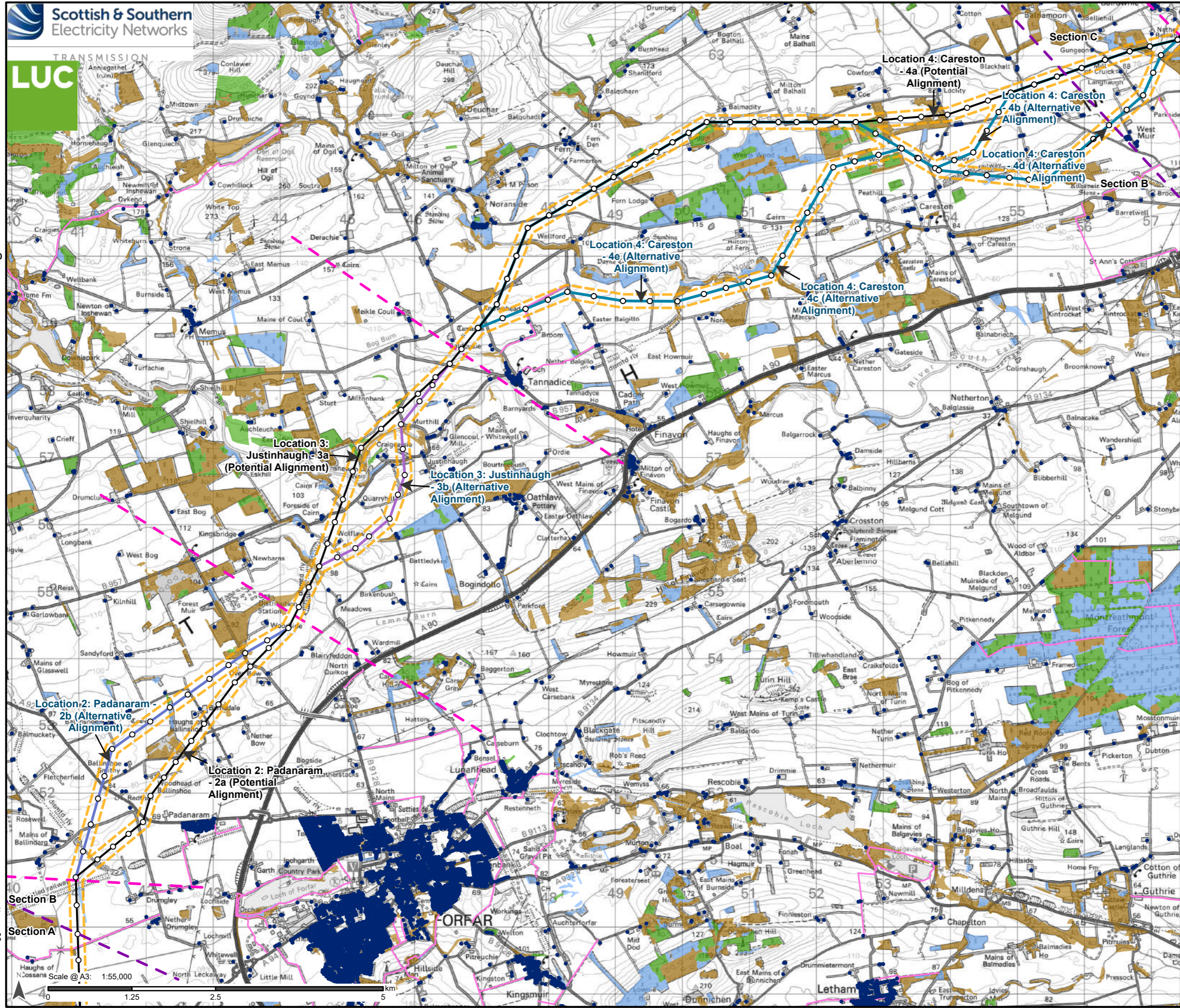
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Project No: LT455
Project: Kintore to Tealing 400kV Overhead Line

Title:
Land Capability for Agriculture Constraints - Section B

Drawn by: HW
Date: 17/09/2024

Figure: 4.15



Alignment

- Potential Alignment
- Alternative Alignment (please see labels on figure for names)
- Padanaram - Alternative Alignment 2b
- Justinhaugh - Alternative Alignment 3b
- - - Alternative Alignment Option Boundary
- - - Section Boundary
- Indicative Limits of Deviation (LoD)*
- Indicative Tower Position

Properties

- Residential property
- LUC additional residential properties (20240327)

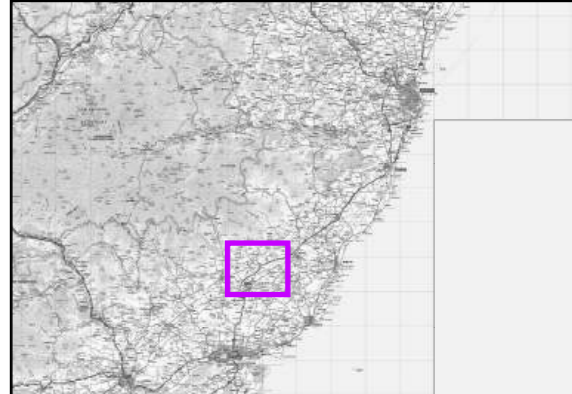
Land Use Constraints

National Forest Inventory

- Broadleaved; Mixed mainly broadleaved; Coppice; Coppice with standards; Young trees; Assumed woodland
- Conifer; Mixed mainly conifer
- Other
- Core path

Please see Figure 6.1 for detail of Location 4: Careston Alternative Alignments

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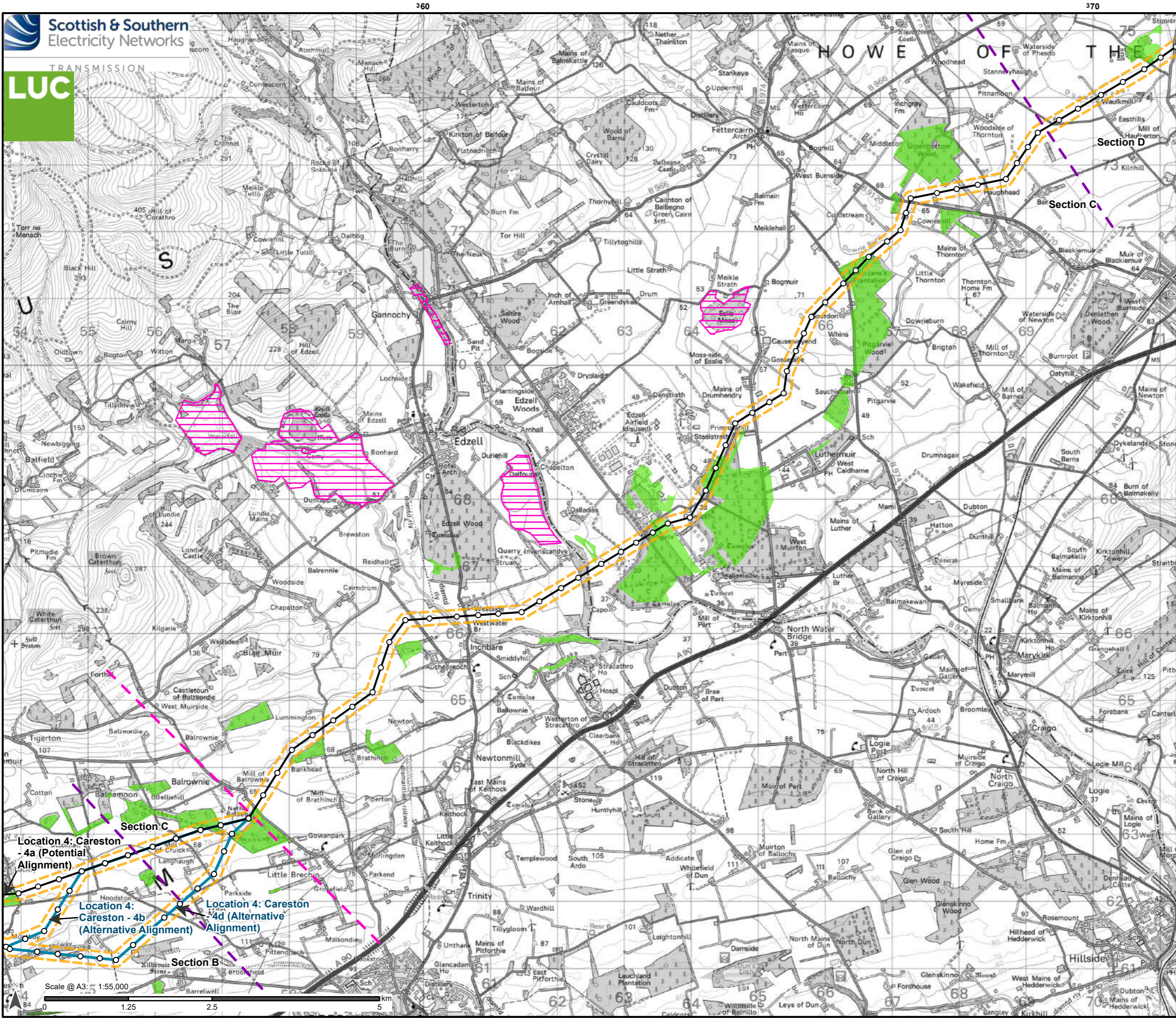
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Project No: LT455
Project: Kintore to Tealing 400kV Overhead Line

Title:
Land Use and Properties - Section B

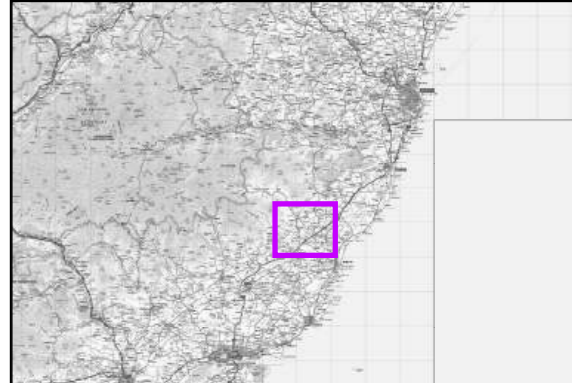
Drawn by: HW
Date: 17/09/2024

Figure: 4.16



- Alignment**
- Potential Alignment
 - Alternative Alignment (please see labels on figure for names)
 - - - Alternative Alignment Option Boundary
 - - - Section Boundary
 - Indicative Limits of Deviation (LoD)*
 - Indicative Tower Position
- Ecology Constraints Within 5km**
- ▭ Site of Special Scientific Interest
- Ecology Constraints Within 1km**
- Ancient Woodland Inventory
- Ancient (of semi-natural origin)
 - Long-Established (of plantation origin)

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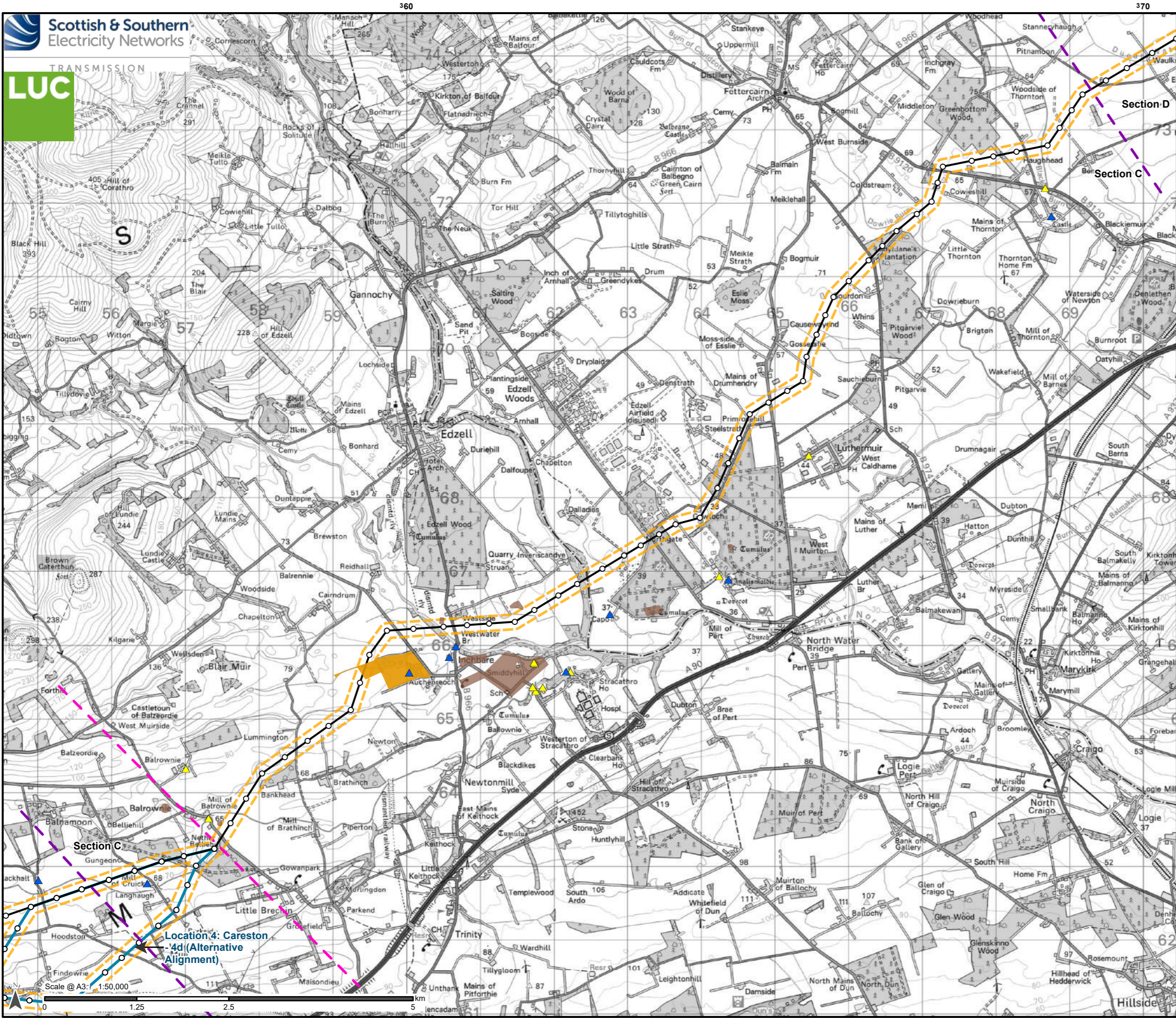
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Project No: LT455
Project: Kintore to Tealing 400kV Overhead Line

Title:
Ecology Constraints - Section C

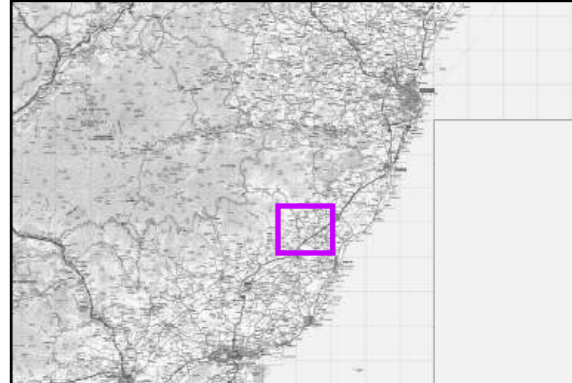
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Date: 18/09/2024

Figure: 4.17



- Alignment**
- Potential Alignment
 - Alternative Alignment (please see labels on figure for names)
 - - - Alternative Alignment Option Boundary
 - - - Section Boundary
 - - - Indicative Limits of Deviation (LoD)*
 - Indicative Tower Position
- Cultural Heritage Constraints Within 1km**
- Listed Building
- ▲ Category B
 - ▲ Category C
 - Scheduled Monument
 - Non-Inventory Designed Landscapes (NIDLs)

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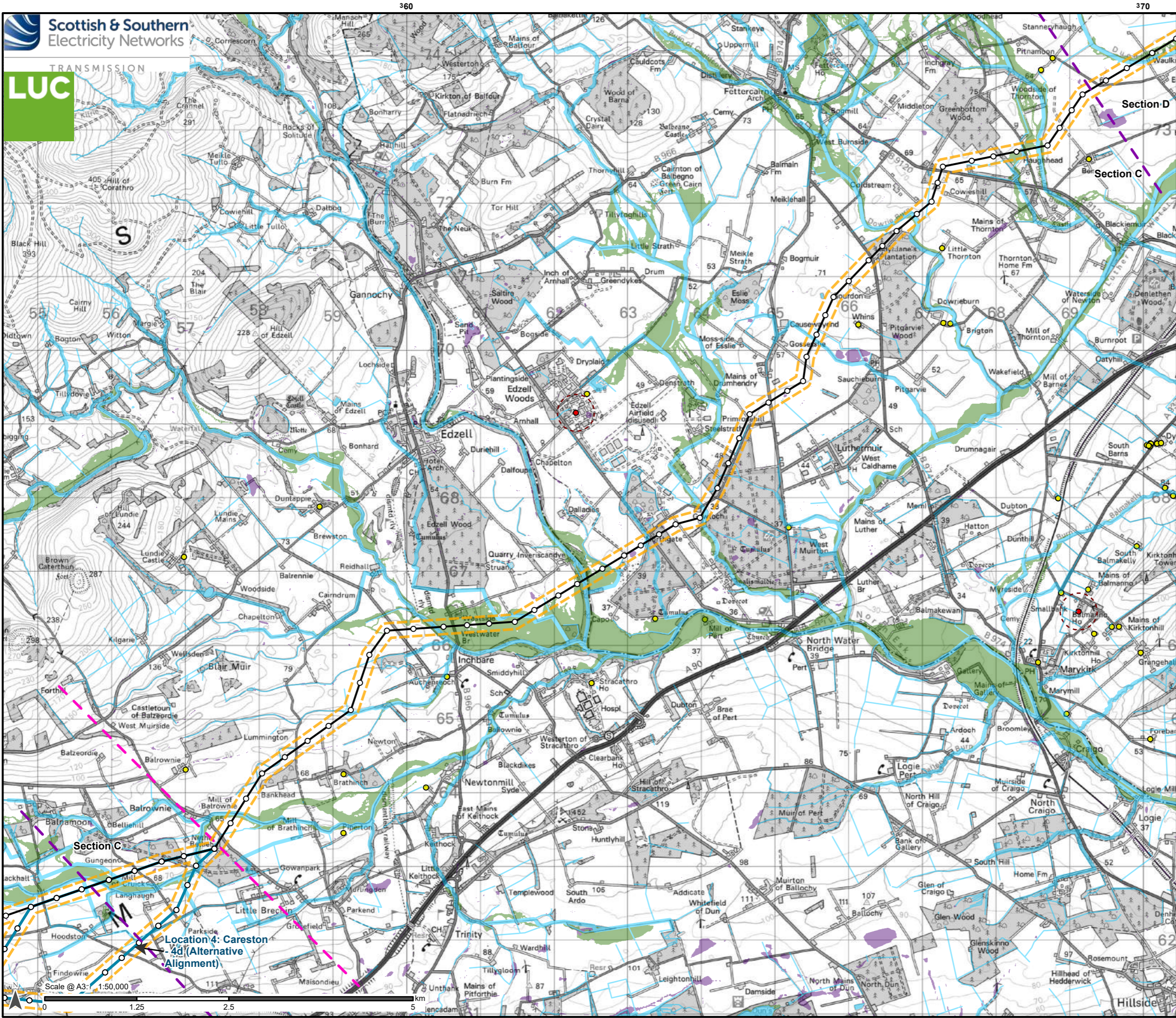
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Project No: LT455
Project: Kintore to Tealing 400kV Overhead Line

Title:
Cultural Heritage Constraints - Section C

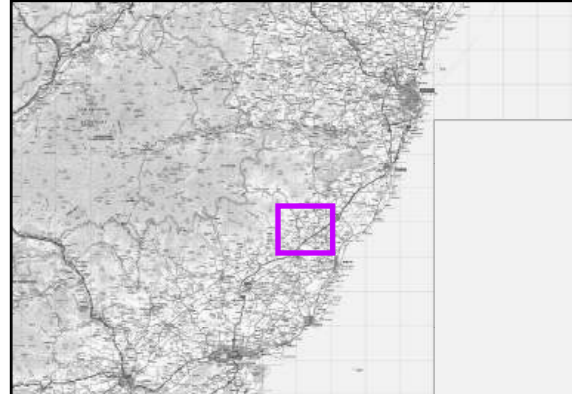
Drawn by: HW Date: 17/09/2024

Figure: 4.18



- Alignment**
- Potential Alignment
 - Alternative Alignment (please see labels on figure for names)
 - - - Alternative Alignment Option Boundary
 - - - Section Boundary
 - Indicative Limits of Deviation (LoD)*
 - Indicative Tower Position
- Hydrology Constraints**
- Ordnance Survey mapped watercourses
 - River Future Flood Extent (200 year + Climate Change)
 - Surface Water Future Flood Extent (200 year + Climate Change)
 - - - PWS source buffer (250m)
 - PWS property locations
 - PWS source locations where known (unverified)

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 Project: Kintore to Tealing 400kV Overhead Line

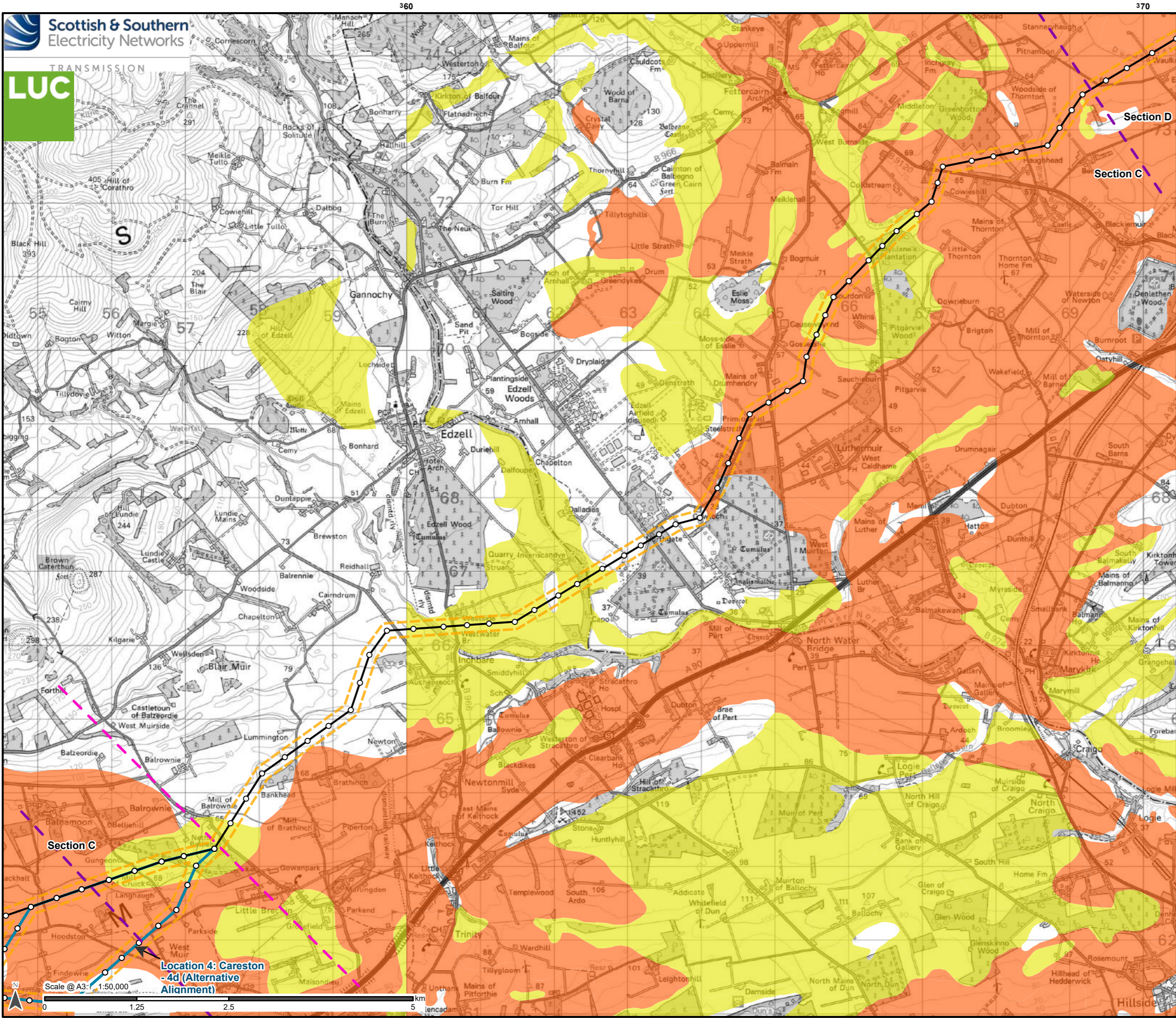
Title:
 Hydrology Constraints - Section C

Drawn by: HW
 Date: 17/09/2024

Figure: 4.19

Location 4: Careston - 4d (Alternative Alignment)

Scale @ A3: 1:50,000
 0 1.25 2.5 5 km



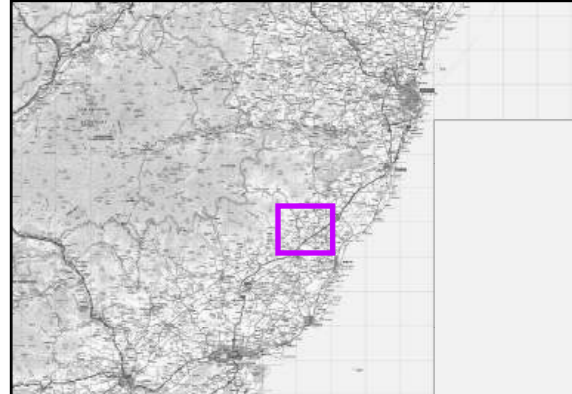
Scottish & Southern
Electricity Networks

TRANSMISSION

LUC

- Alignment**
- Potential Alignment
 - Alternative Alignment (please see labels on figure for names)
 - - - Alternative Alignment Option Boundary
 - - - Section Boundary
 - - - Indicative Limits of Deviation (LoD)*
 - o Indicative Tower Position
- Land Capability for Agriculture**
- 2 - Land capable of producing a wide range of crops.
 - 3.1 - Land capable of producing consistently high yields of a narrow range of crops and/ or moderate yields of a wider range. Short grass leys are common.

Note: Only classes 1, 2 and 3.1 (collectively prime agricultural land) have been mapped. OS base maps are the latest available version from Ordnance Survey, dated July 2024. SSEN Transmission take no responsibility for the release or accuracy of latest version Basemaps from Ordnance Survey. Contains JHI data. *LoDs to be amended as design progresses



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Project No: LT455
Project: Kintore to Tealing 400kV Overhead Line

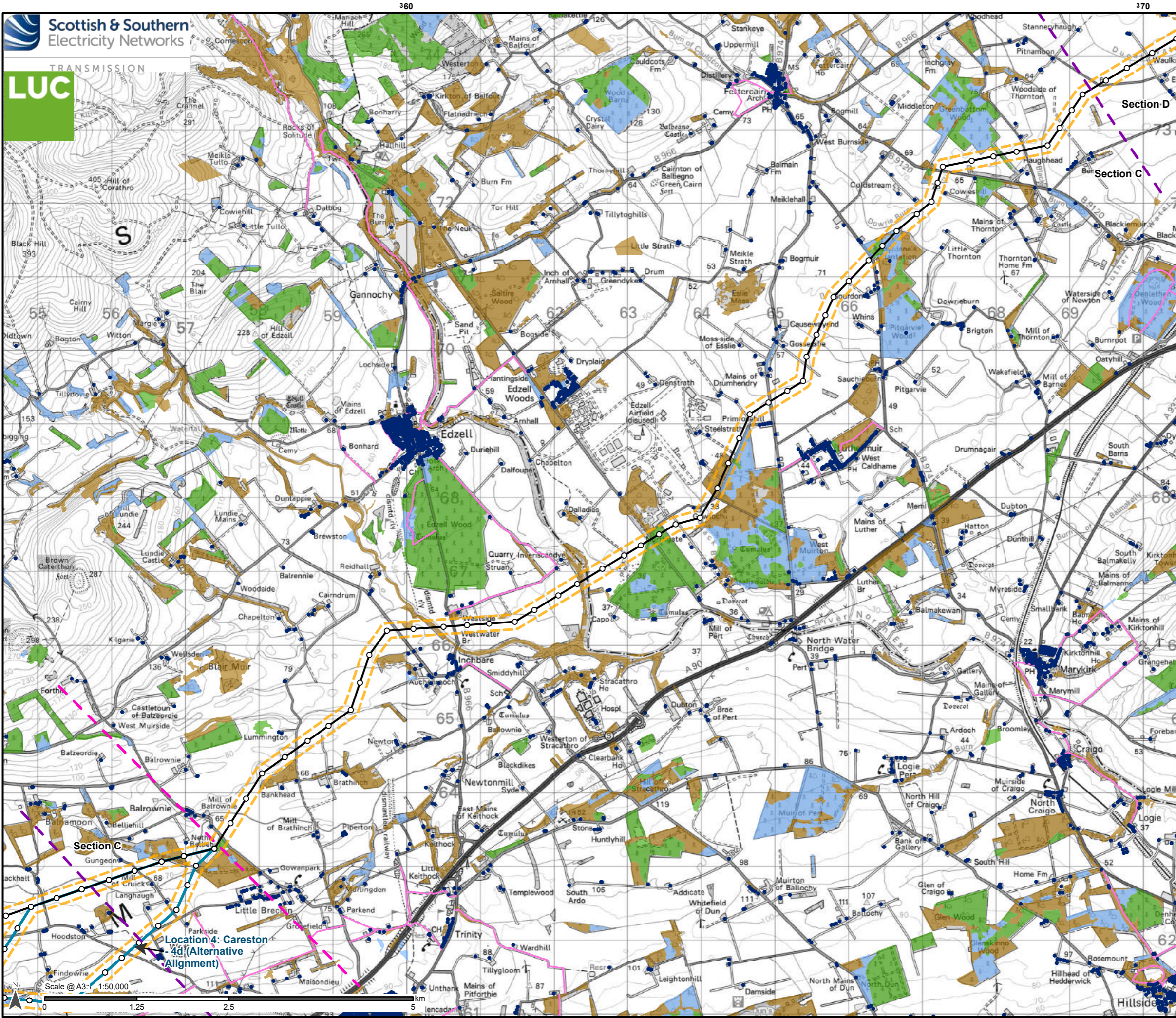
Title:
Land Capability for Agriculture Constraints - Section C

Drawn by: HW
Date: 17/09/2024

Figure: 4.20

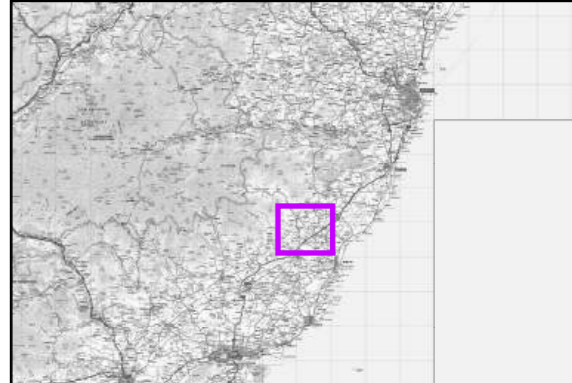
Location 4: Careston - 4d (Alternative Alignment)

Scale @ A3: 1:50,000



- Alignment**
- Potential Alignment
 - Alternative Alignment (please see labels on figure for names)
 - Alternative Alignment Option Boundary
 - Section Boundary
 - Indicative Limits of Deviation (LoD)*
 - Indicative Tower Position
- Properties**
- Residential property
 - LUC additional residential properties (20240327)
- Land Use Constraints**
- National Forest Inventory
- Broadleaved; Mixed mainly broadleaved; Coppice; Coppice with standards; Young trees; Assumed woodland
 - Conifer; Mixed mainly conifer
 - Other
 - Core path

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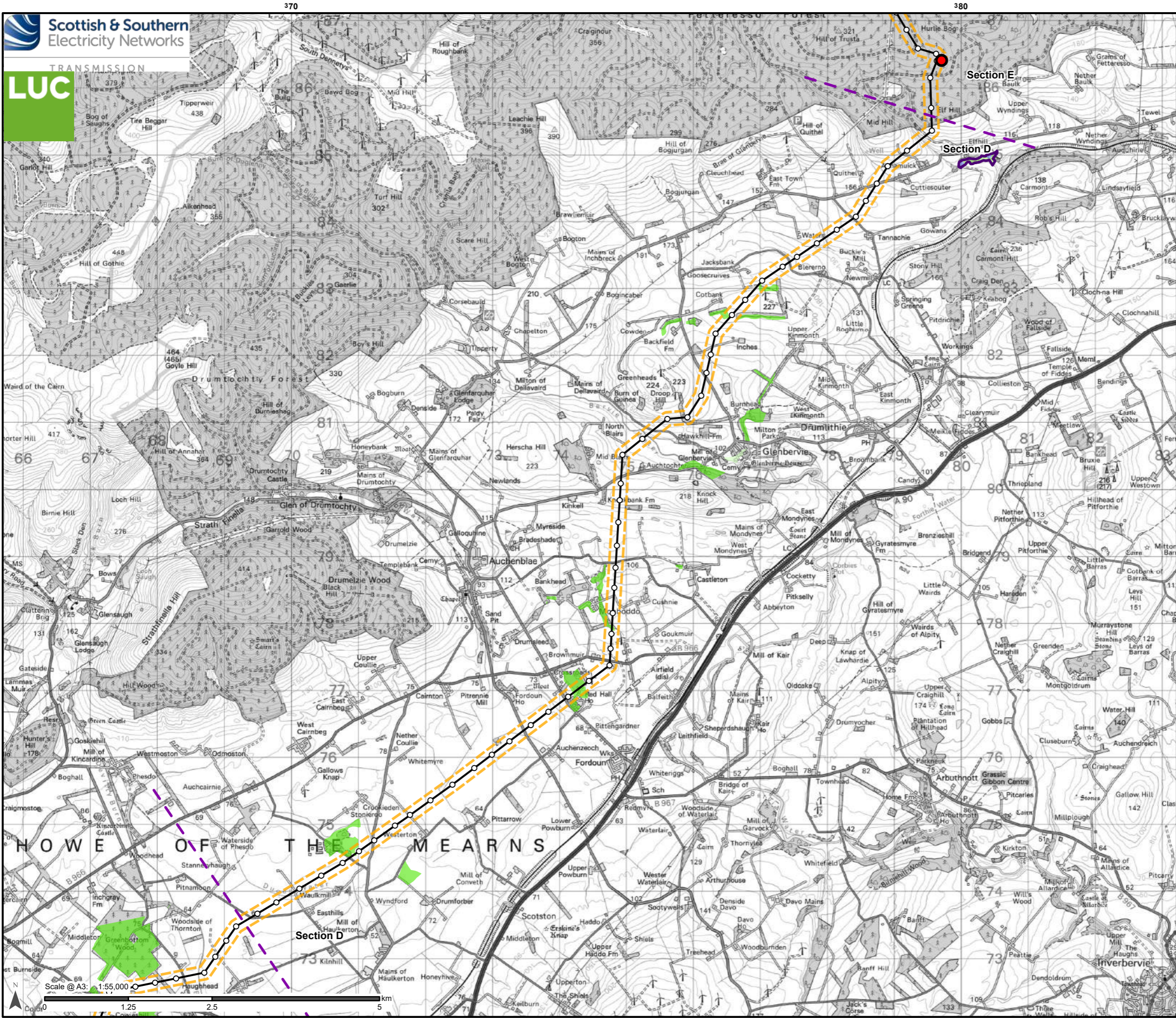
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Project No: LT455
 Project: Kintore to Tealing 400kV Overhead Line

Title:
 Land Use and Properties - Section C

Drawn by: HW
 Date: 17/09/2024

Figure: 4.21



Alignment

- Potential Alignment
- - - Section Boundary
- Indicative Limits of Deviation (LoD)*
- Indicative Tower Position

Substation

- Hurlie Substation Proposal of Application Notice (Aberdeenshire Council Reference ENQ/2024/0146)

Ecology Constraints Within 5km

- Local Nature Reserve

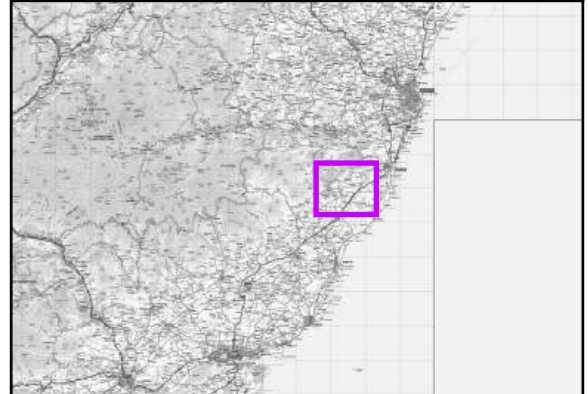
Ecology Constraints Within 1km

- Local Nature Conservation Sites (LNCS)

Ancient Woodland Inventory

- Ancient (of semi-natural origin)
- Long-Established (of plantation origin)
- Other (on Roy map)

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Project: Kintore to Tealing 400kV Overhead Line

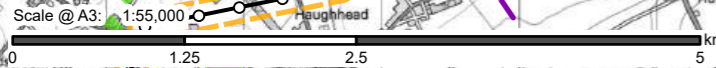
Title:
Ecology Constraints - Section D

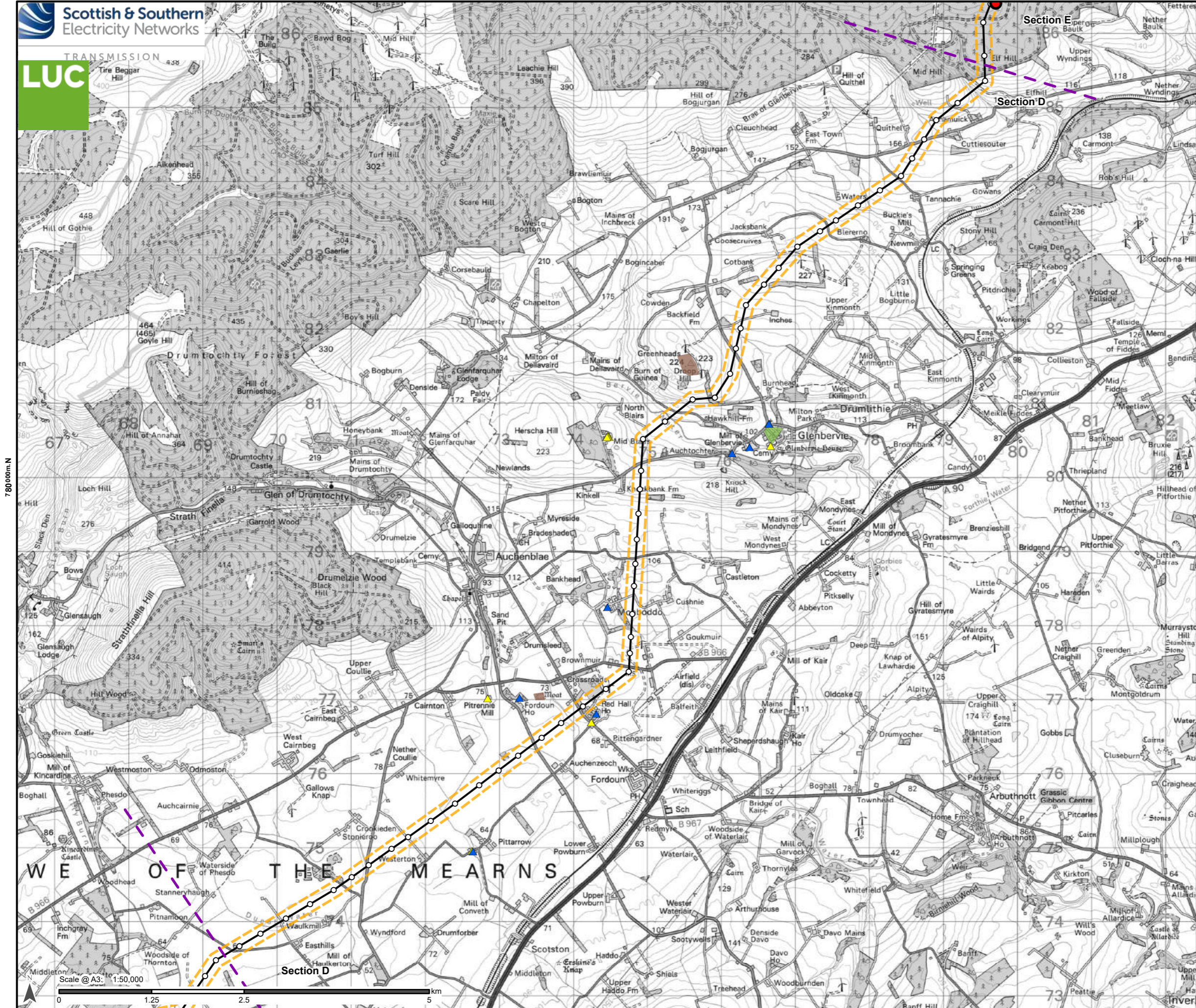
Drawn by: HW Date: 18/09/2024

Figure: 4.22

780000m.N

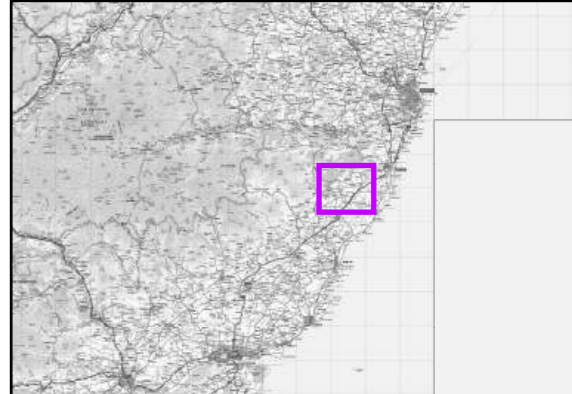
370000m.E





- Alignment**
- Potential Alignment
 - - - Alternative Alignment Option Boundary
 - - - Section Boundary
 - ▭ Indicative Limits of Deviation (LoD)*
 - Indicative Tower Position
- Substation**
- Hurlie Substation Proposal of Application Notice (Aberdeenshire Council Reference ENQ/2024/0146)
- Cultural Heritage Constraints Within 1km**
- Listed Building
- ▲ Category B
 - ▲ Category C
 - ▭ Scheduled Monument
 - ▭ Gardens and Designed Landscape

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Project No: LT455
Project: Kintore to Tealing 400kV Overhead Line

Title:
Cultural Heritage Constraints - Section D

Drawn by: HW Date: 17/09/2024

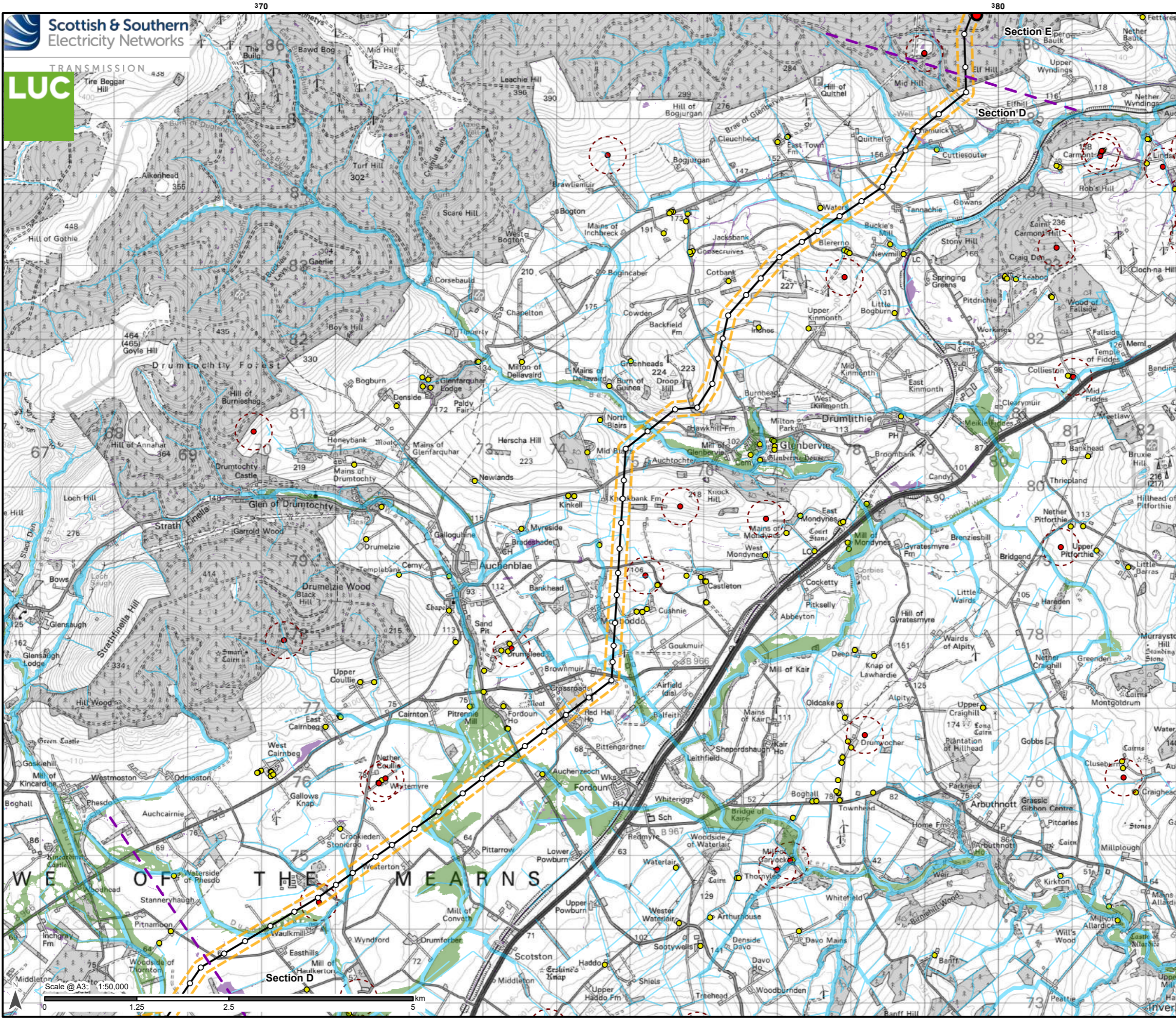
Figure: 4.23

780 000m.N

780

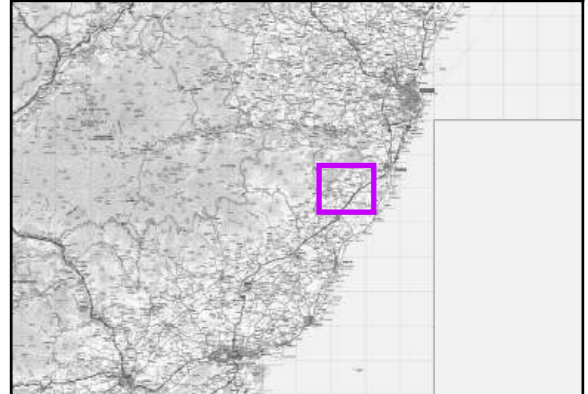
370 000m.E

380



- Alignment**
- Potential Alignment
 - - - Section Boundary
 - ▭ Indicative Limits of Deviation (LoD)*
 - Indicative Tower Position
- Substation**
- Hurlie Substation Proposal of Application Notice (Aberdeenshire Council Reference ENQ/2024/0146)
- Hydrology Constraints**
- ▭ Ordnance Survey mapped watercourses
 - ▭ River Future Flood Extent (200 year + Climate Change)
 - ▭ Surface Water Future Flood Extent (200 year + Climate Change)
 - - - PWS source buffer (250m)
 - PWS property locations
 - PWS source locations where known (unverified)

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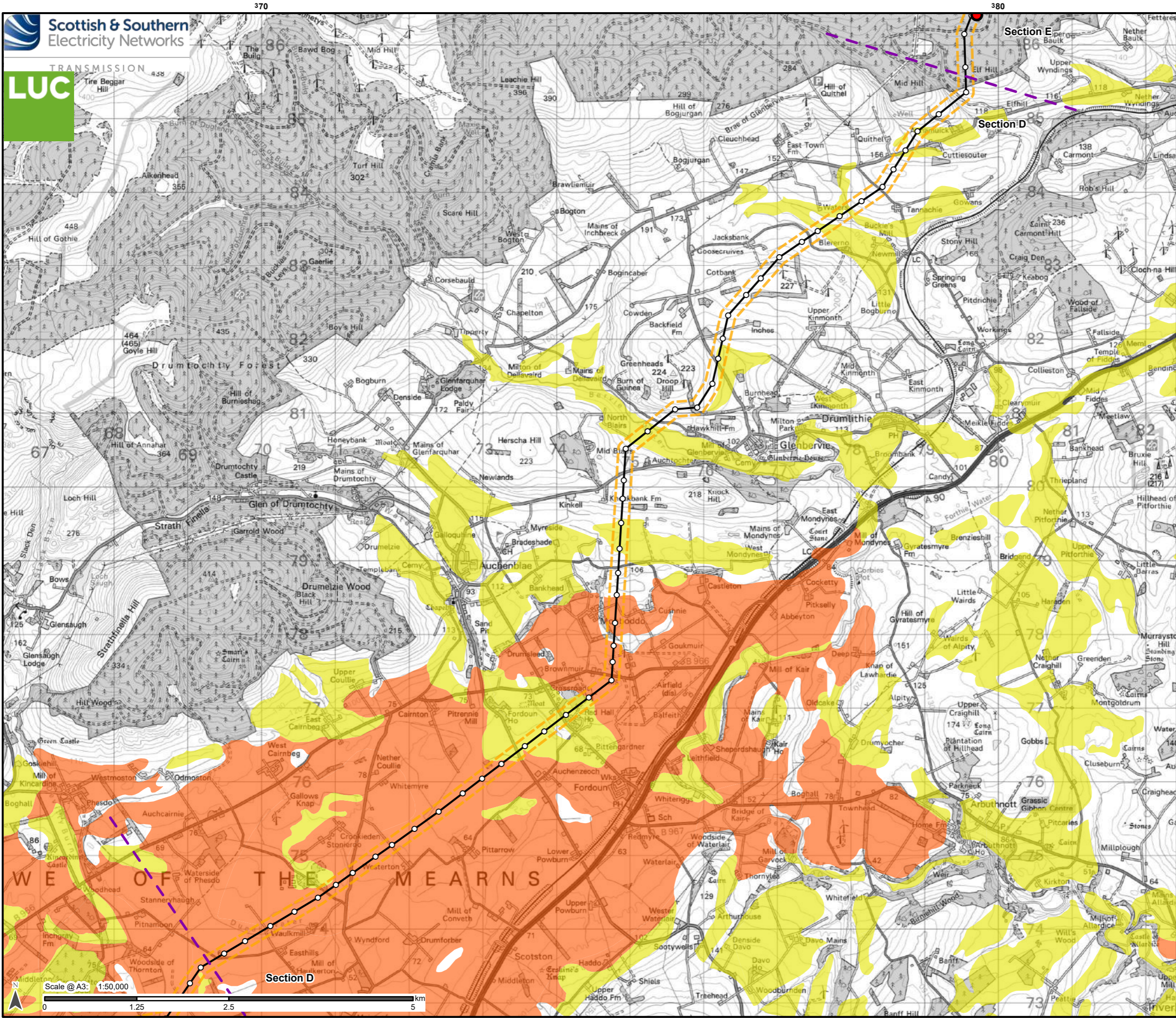
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Project No: LT455
Project: Kintore to Tealing 400kV Overhead Line

Title:
Hydrology Constraints - Section D

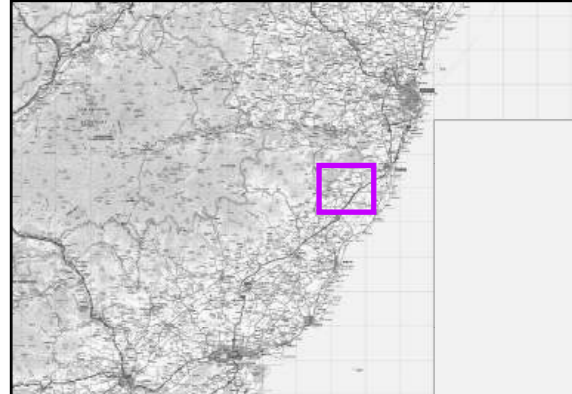
Drawn by: HW Date: 17/09/2024

Figure: 4.24



- Alignment**
- Potential Alignment
 - - - Section Boundary
 - ▭ Indicative Limits of Deviation (LoD)*
 - Indicative Tower Position
- Substation**
- Name
- Hurlie Substation Proposal of Application Notice (Aberdeenshire Council Reference ENQ/2024/0146)
- Land Capability for Agriculture**
- ▭ 2 - Land capable of producing a wide range of crops.
 - ▭ 3.1 - Land capable of producing consistently high yields of a narrow range of crops and/ or moderate yields of a wider range. Short grass leys are common.

Note: Only classes 1, 2 and 3.1 (collectively prime agricultural land) have been mapped. OS base maps are the latest available version from Ordnance Survey, dated July 2024. SSEN Transmission take no responsibility for the release or accuracy of latest version Basemaps from Ordnance Survey. Contains JHI data. *LoDs to be amended as design progresses



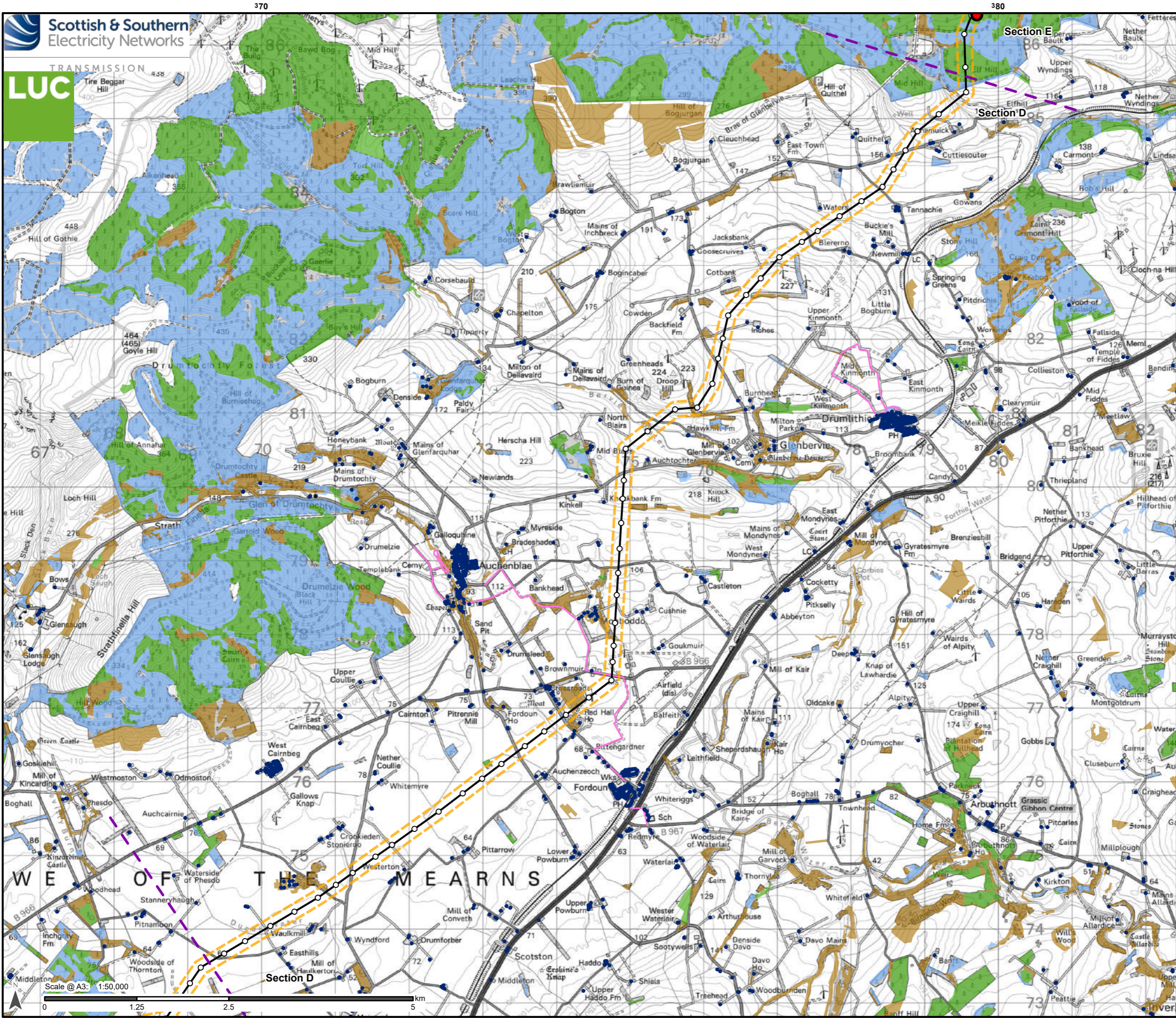
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Project No: LT455
Project: Kintore to Tealing 400kV Overhead Line

Title:
Land Capability for Agriculture Constraints - Section D

Drawn by: HW
Date: 17/09/2024

Figure: 4.25



Alignment

- Potential Alignment
- - - Section Boundary
- ▭ Indicative Limits of Deviation (LoD)*
- Indicative Tower Position

Substation

- Hurlie Substation Proposal of Application Notice (Aberdeenshire Council Reference ENQ/2024/0146)

Properties

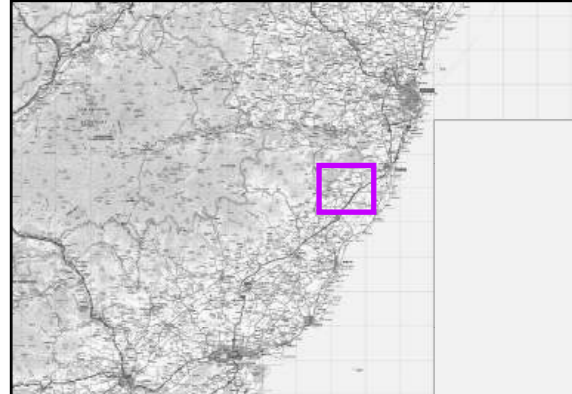
- Residential property
- LUC additional residential properties (20240327)

Land Use Constraints

National Forest Inventory

- Broadleaved; Mixed mainly broadleaved; Coppice; Coppice with standards; Young trees; Assumed woodland
- Conifer; Mixed mainly conifer
- Other
- Core path

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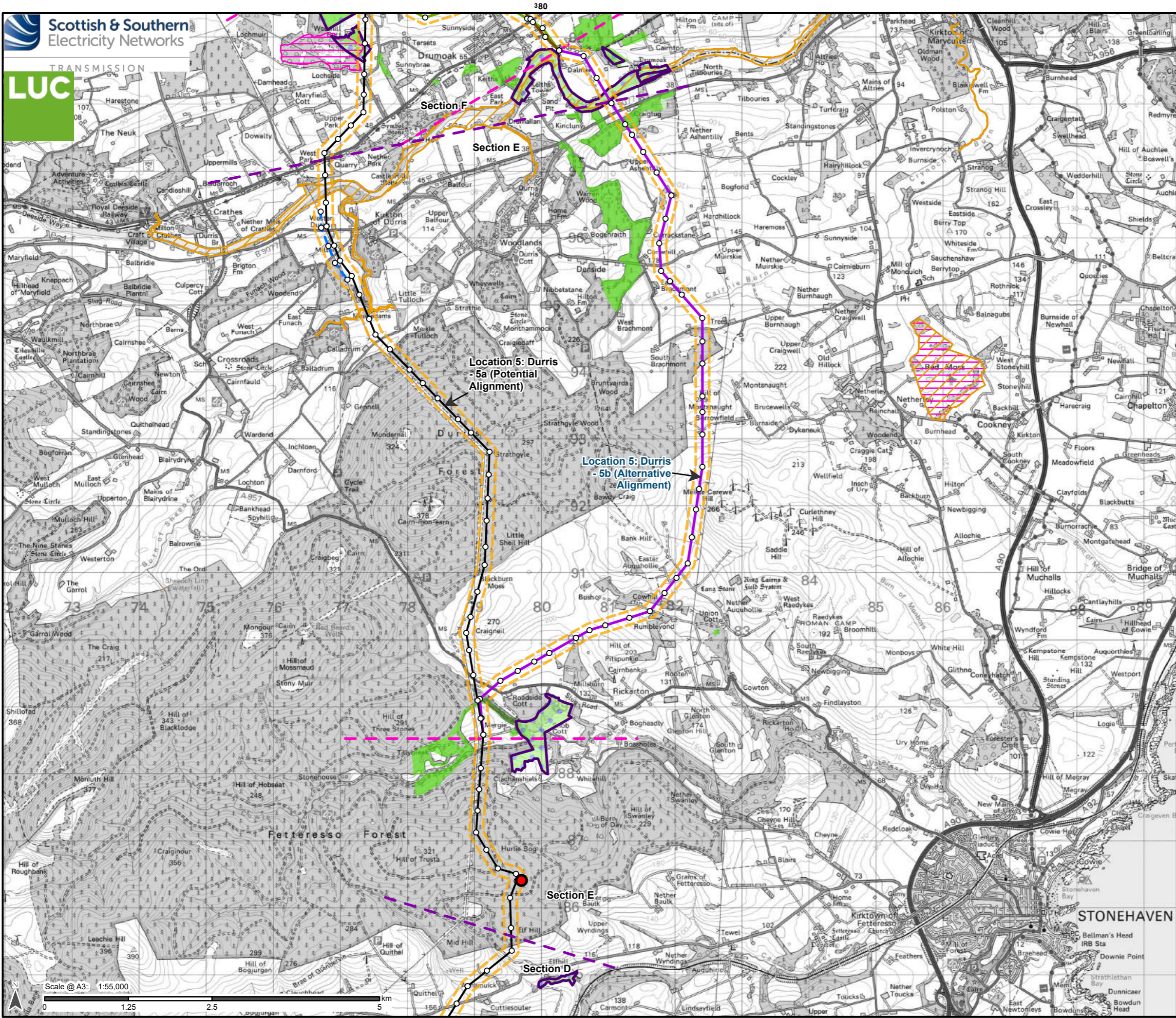
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Project No: LT455
Project: Kintore to Tealing 400kV Overhead Line

Title:
Land Use and Properties - Section D

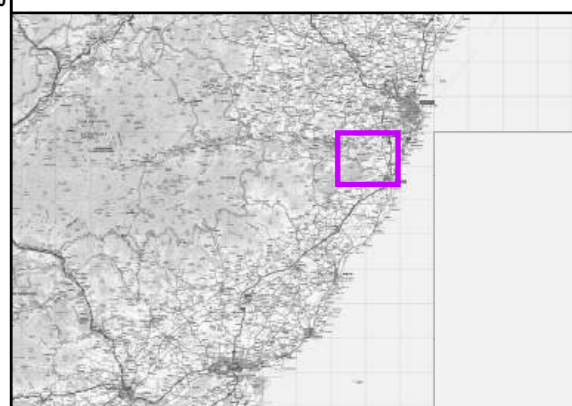
Drawn by: HW Date: 17/09/2024

Figure: 4.26



- Alignment**
- Potential Alignment
 - - - Realignment of existing OHL
 - Durris - Alternative Alignment 5b
 - Drumoak - Alternative Alignment 6a
 - Drumoak - Alternative Alignment 6b
 - Drumoak - Alternative Alignment 6c
 - - - Alternative Alignment Option Boundary
 - - - Section Boundary
 - Indicative Limits of Deviation (LoD)*
 - Indicative Tower Position
- Substation**
- Hurlie Substation Proposal of Application Notice (Aberdeenshire Council Reference ENQ/2024/0146)
- Ecology Constraints Within 5km**
- Special Area of Conservation
 - Site of Special Scientific Interest
 - Local Nature Reserve
- Ecology Constraints Within 1km**
- Local Nature Conservation Sites (LNCS)
- Ancient Woodland Inventory**
- Ancient (of semi-natural origin)
 - Long-Established (of plantation origin)
 - Other (on Roy map)

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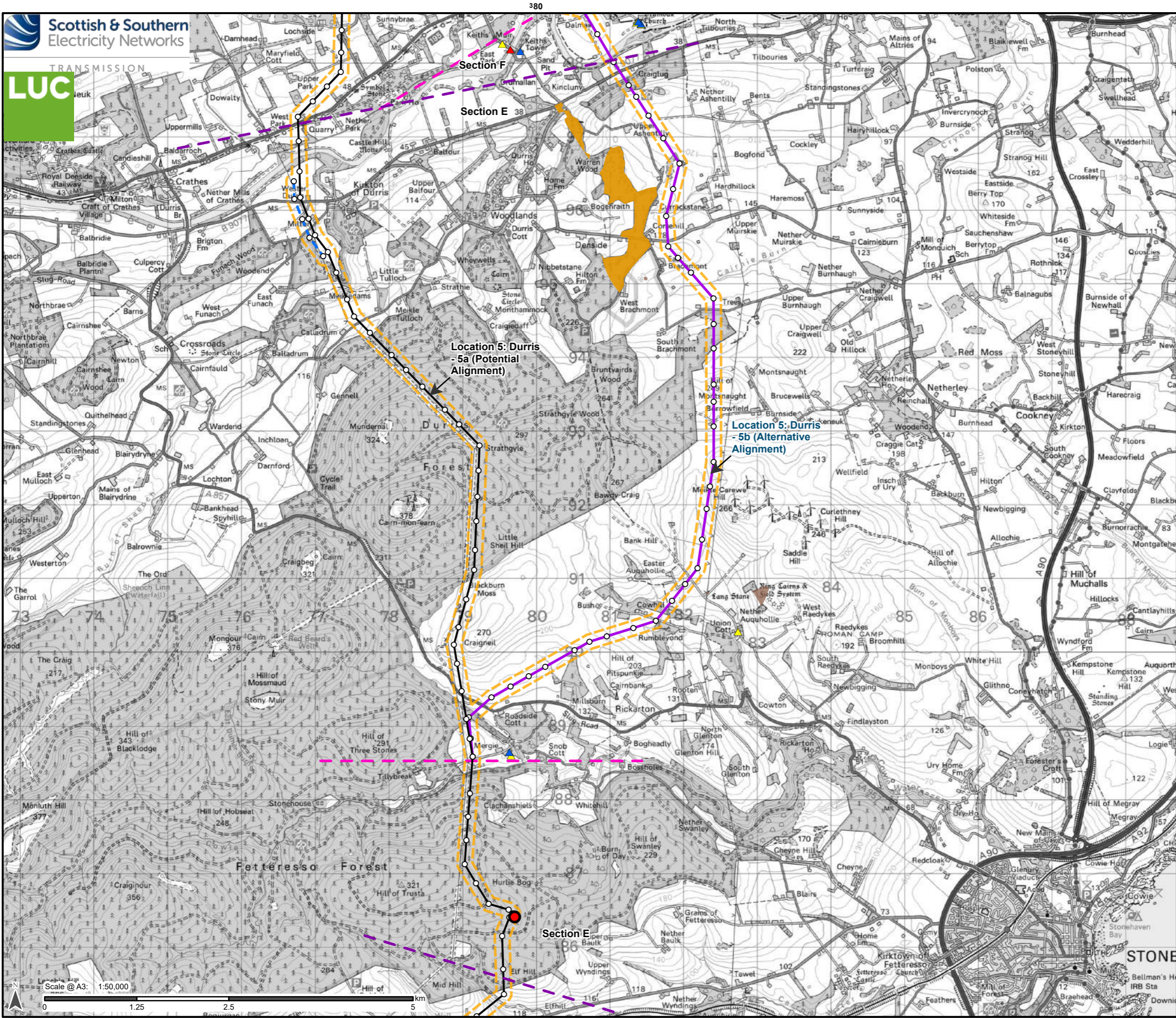
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Project No: LT455
Project: Kintore to Tealing 400kV Overhead Line

Title:
Ecology Constraints - Section E

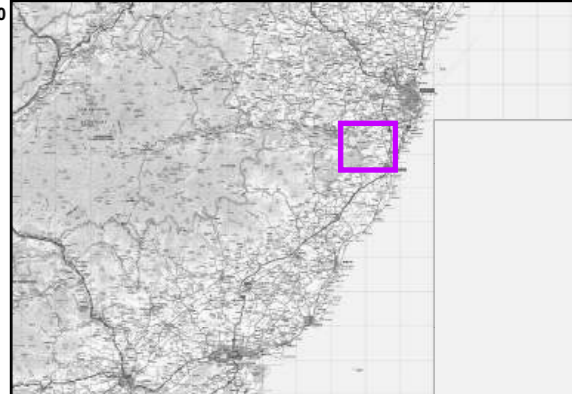
Drawn by: HW Date: 18/09/2024

Figure: 4.27



- Alignment**
- Potential Alignment
 - - - Realignment of existing OHL
 - Durris - Alternative Alignment 5b
 - - - Alternative Alignment Option Boundary
 - - - Section Boundary
 - Indicative Limits of Deviation (LoD)*
 - Indicative Tower Position
- Substation**
- Hurlie Substation Proposal of Application Notice (Aberdeenshire Council Reference ENQ/2024/0146)
- Cultural Heritage Constraints Within 1km**
- Listed Building
- ▲ Category A
 - ▲ Category B
 - ▲ Category C
 - Scheduled Monument
 - Non-Inventory Designed Landscapes (NIDLs)

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Project No: LT455
 Project: Kintore to Tealing 400kV Overhead Line

Title:
 Cultural Heritage Constraints - Section E

Drawn by: HW
 Date: 17/09/2024

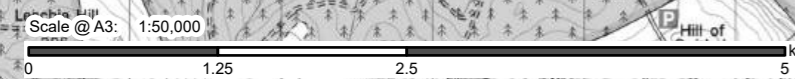
Figure: 4.28

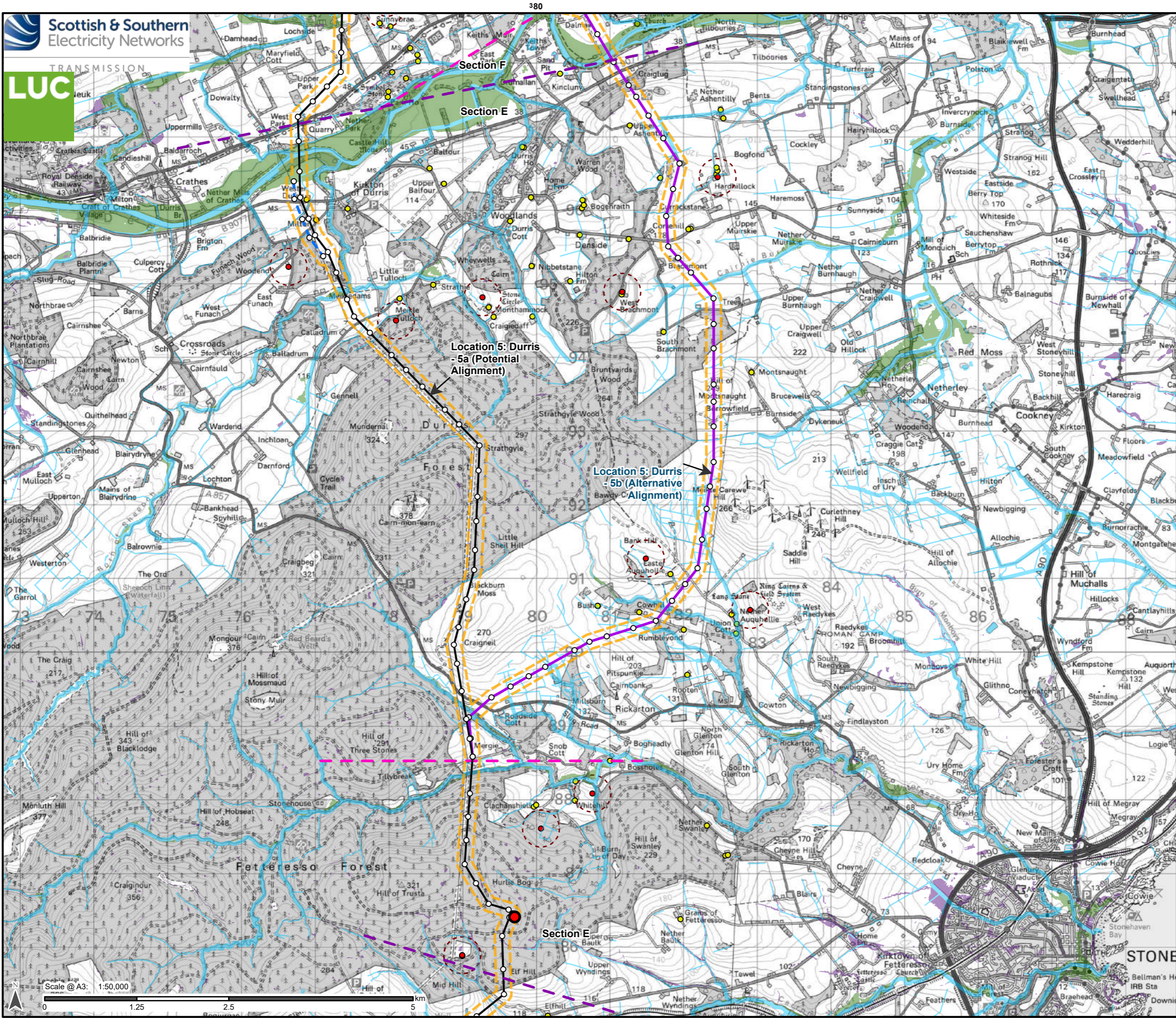
790000m.N

790

380

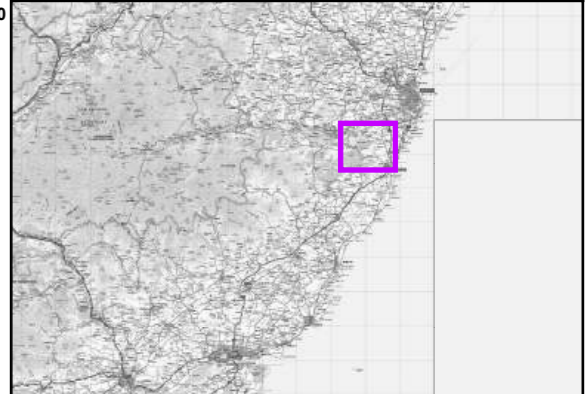
380000m.E





- Alignment**
- Potential Alignment
 - - - Realignment of existing OHL
 - - - Durris - Alternative Alignment 5b
 - - - Alternative Alignment Option Boundary
 - - - Section Boundary
 - Indicative Limits of Deviation (LoD)*
 - Indicative Tower Position
- Substation**
- Hurlie Substation Proposal of Application Notice (Aberdeenshire Council Reference ENQ/2024/0146)
- Hydrology Constraints**
- Ordnance Survey mapped watercourses
 - River Future Flood Extent (200 year + Climate Change)
 - Surface Water Future Flood Extent (200 year + Climate Change)
 - - - PWS source buffer (250m)
 - PWS property locations
 - PWS source locations where known (unverified)

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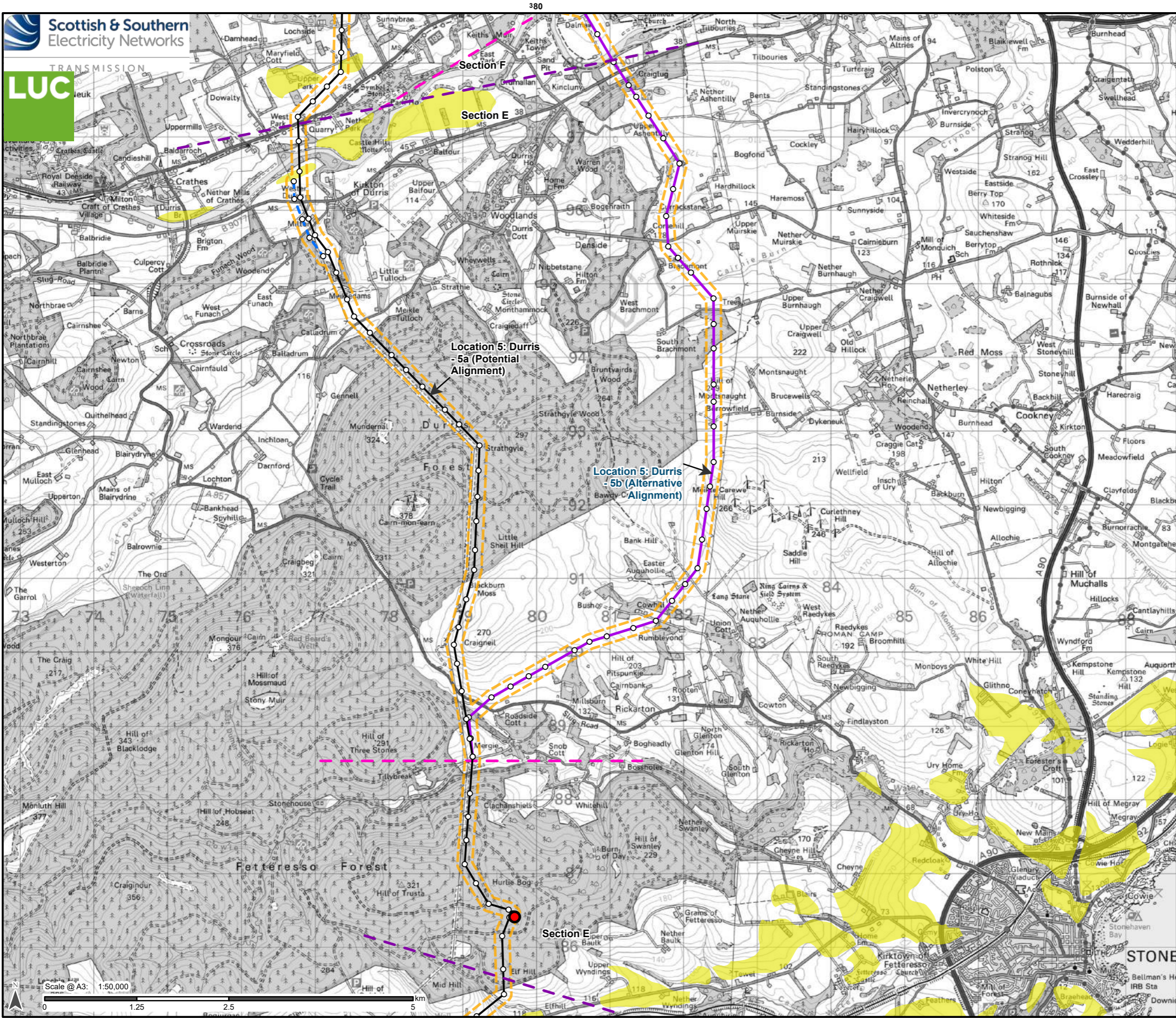
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Project No: LT455
Project: Kintore to Tealing 400kV Overhead Line

Title:
Hydrology Constraints - Section E

Drawn by: HW
Date: 17/09/2024

Figure: 4.29



- Alignment**
- Potential Alignment
 - Realignment of existing OHL
 - Durriss - Alternative Alignment 5b
 - - - Alternative Alignment Option Boundary
 - - - Section Boundary
 - Indicative Limits of Deviation (LoD)*
 - Indicative Tower Position

Substation

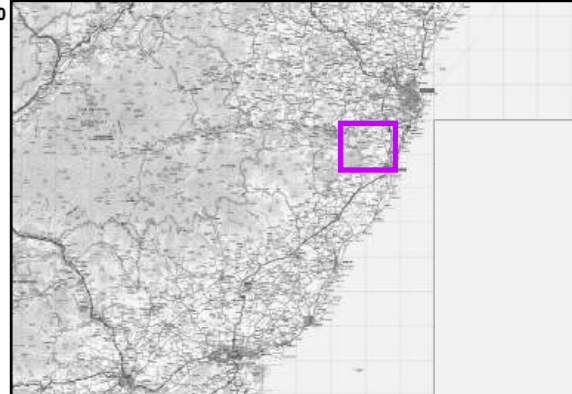
Name

- Hurle Substation Proposal of Application Notice (Aberdeenshire Council Reference ENQ/2024/0146)

Land Capability for Agriculture

3.1 - Land capable of producing consistently high yields of a narrow range of crops and/ or moderate yields of a wider range. Short grass leys are common.

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Project No: LT455
 Project: Kintore to Tealing 400kV Overhead Line

Title:
 Land Capability for Agriculture Constraints - Section E

Drawn by: HW
 Date: 17/09/2024

Figure: 4.30

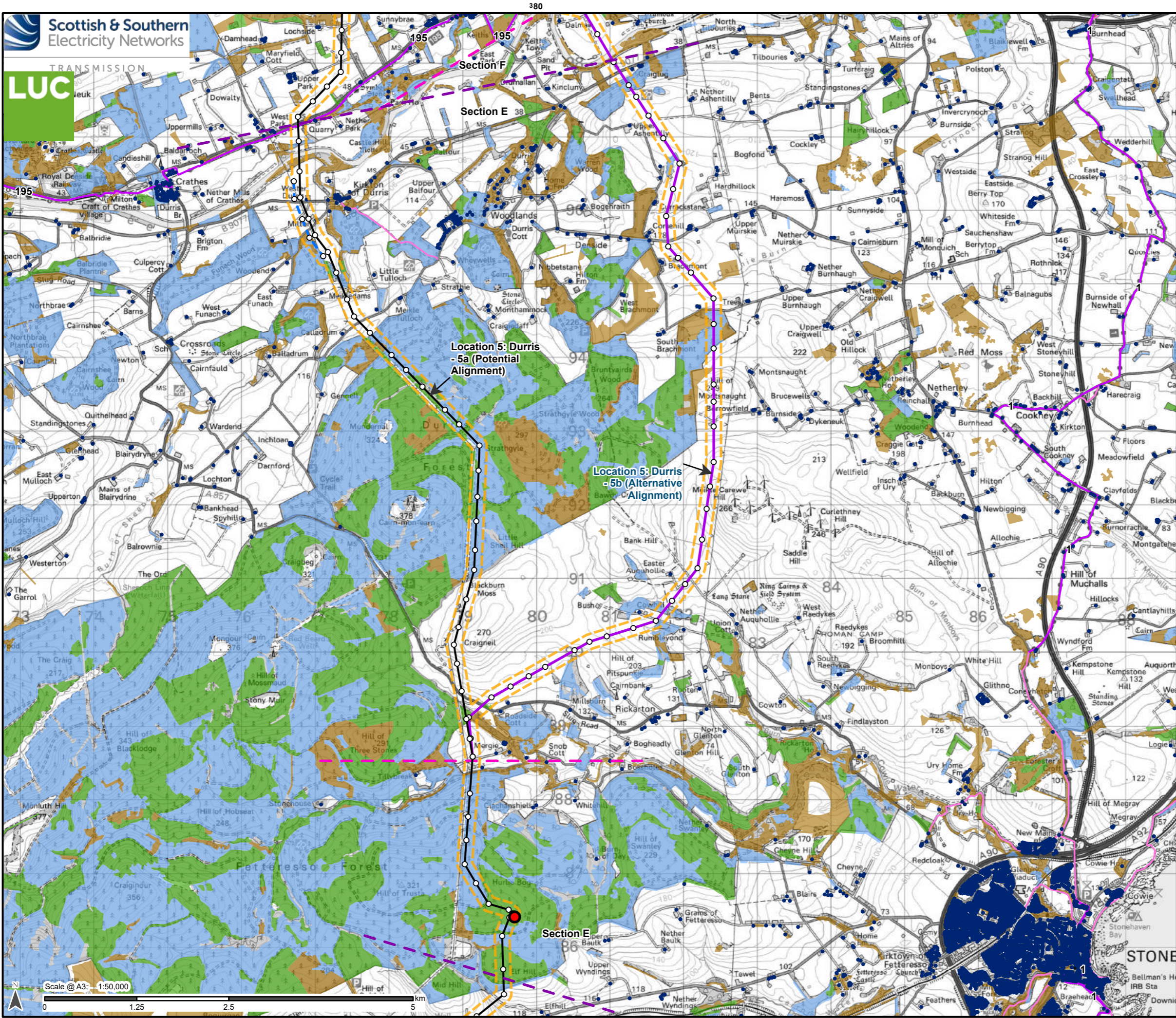
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790

380

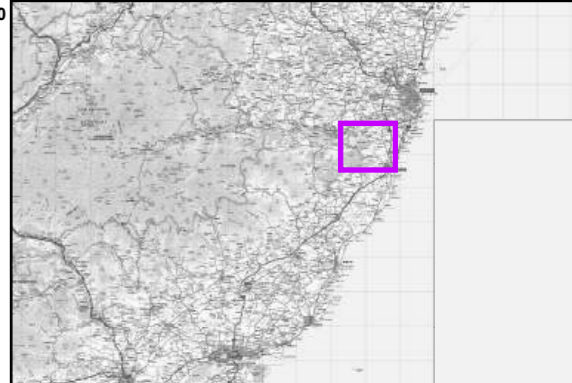
380000m.E

Scale @ A3: 1:50,000
 0 1.25 2.5 5 km



- Alignment**
- Potential Alignment
 - Realignment of existing OHL
 - Durris - Alternative Alignment 5b
 - - - Alternative Alignment Option Boundary
 - - - Section Boundary
 - Indicative Limits of Deviation (LoD)*
 - Indicative Tower Position
- Substation**
- Hurlie Substation Proposal of Application Notice (Aberdeenshire Council Reference ENQ/2024/0146)
- Properties**
- Residential property
 - LUC additional residential properties (20240327)
- Land Use Constraints**
- National Forest Inventory
- Broadleaved; Mixed mainly broadleaved; Coppice; Coppice with standards; Young trees; Assumed woodland
 - Conifer; Mixed mainly conifer
 - Other
- Cycle Route
- National Cycle Network (NCN)
 - Core path

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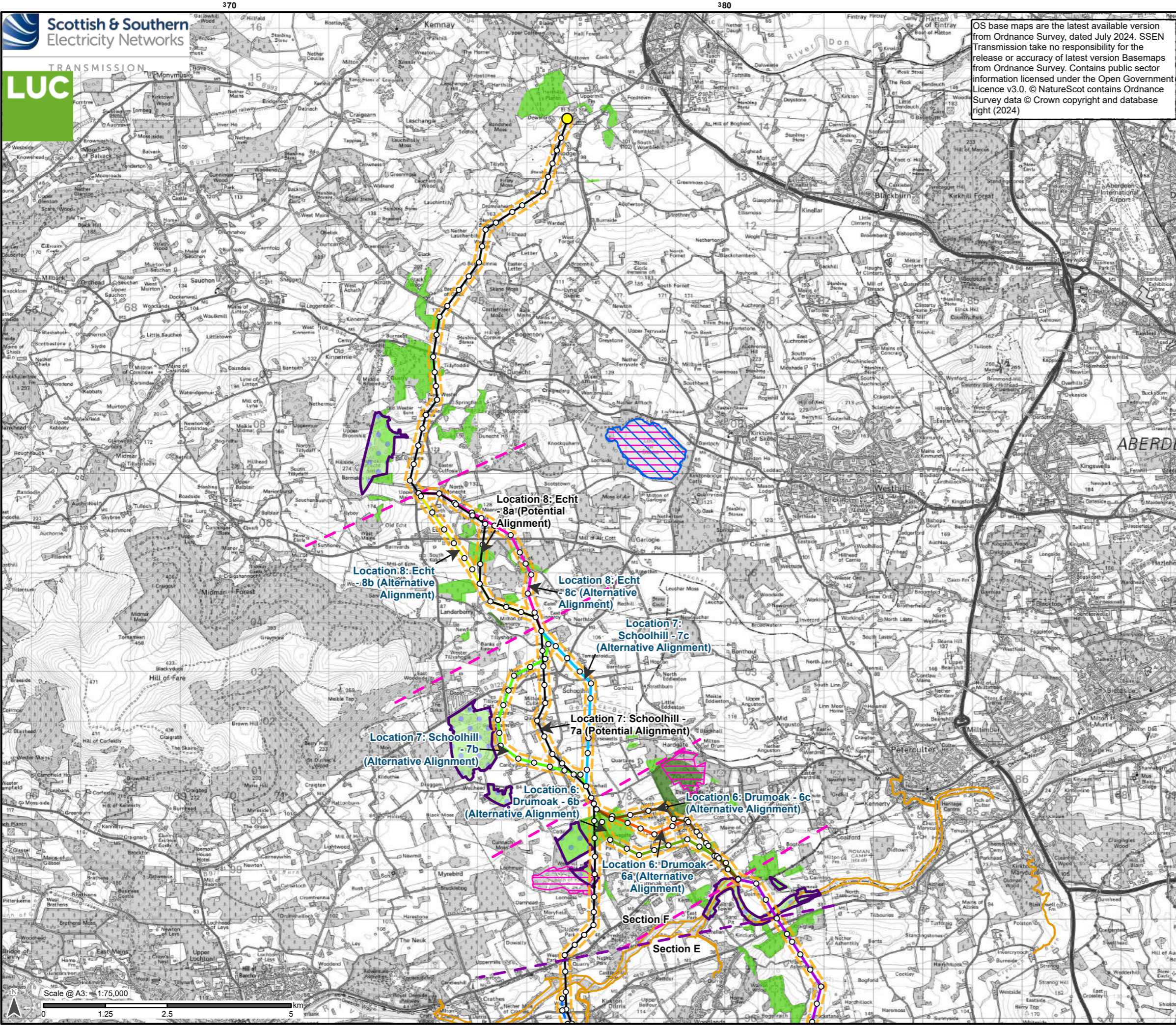
Project No: LT455
 Project: Kintore to Tealing 400kV Overhead Line

Title:
 Land Use and Properties - Section E

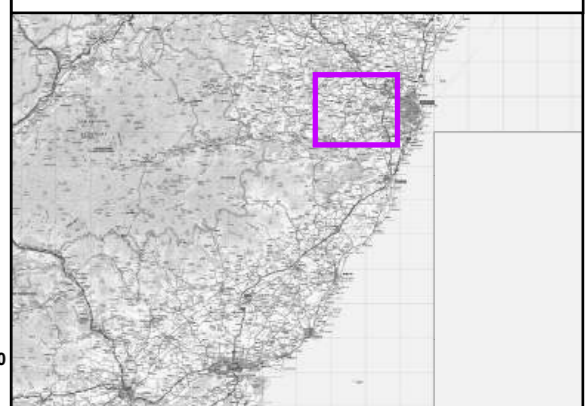
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 Date: 17/09/2024

Figure: 4.31

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- Alignment**
- Potential Alignment
 - - Realignment of existing OHL
 - Durris - Alternative Alignment 5b
 - Drumoak - Alternative Alignment 6a
 - Drumoak - Alternative Alignment 6b
 - Drumoak - Alternative Alignment 6c
 - Schoolhill - Alternative Alignment 7b
 - Schoolhill - Alternative Alignment 7c
 - Eicht - Alternative Alignment 8b
 - Eicht - Alternative Alignment 8c
 - - Alternative Alignment Option Boundary
 - - Section Boundary
 - Indicative Limits of Deviation (LoD)*
 - Indicative Tower Position
- Substation**
- Existing Kintore substation
- Ecology Constraints Within 5km**
- Special Area of Conservation
 - Site of Special Scientific Interest
 - Special Protection Area
 - Local Nature Reserve
- Ecology Constraints Within 1km**
- Local Nature Conservation Sites (LNCS)
- Ancient Woodland Inventory**
- Ancient (of semi-natural origin)
 - Long-Established (of plantation origin)
 - Other (on Roy map)



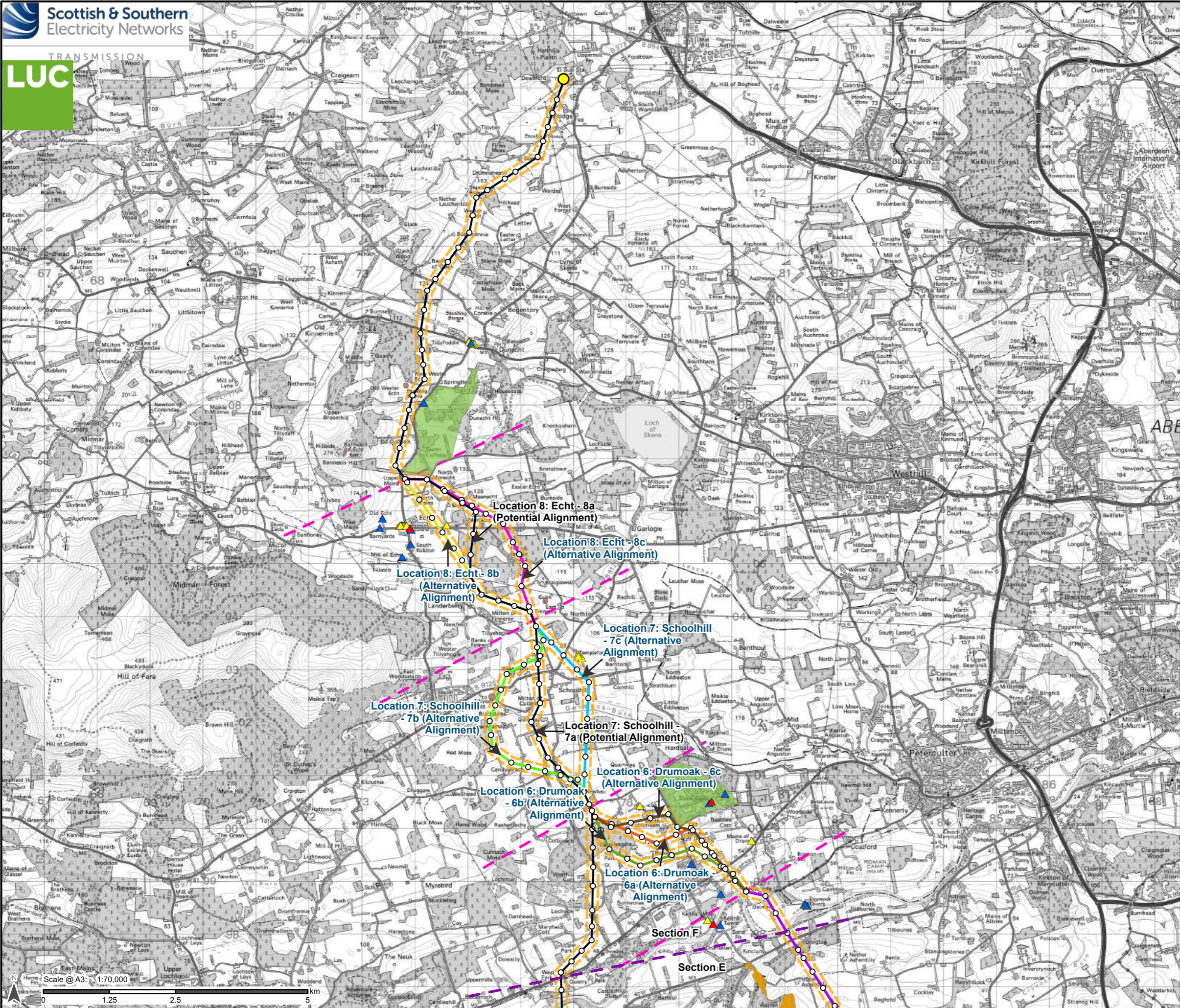
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Project No: LT455
Project: Kintore to Tealing 400kV Overhead Line

Title:
Ecology Constraints - Section F

Drawn by: HW
Date: 18/09/2024

Figure: 4.32



Alignment

- Potential Alignment
- Durris - Alternative Alignment 5b
- Drumoak - Alternative Alignment 6a
- Drumoak - Alternative Alignment 6b
- Drumoak - Alternative Alignment 6c
- Schoolhill - Alternative Alignment 7b
- Schoolhill - Alternative Alignment 7c
- Echt - Alternative Alignment 8b
- Echt - Alternative Alignment 8c
- - - Alternative Alignment Option Boundary
- - - Section Boundary
- Indicative Limits of Deviation (LoD)*
- Indicative Tower Position

Substation

- Existing Kintore substation

Cultural Heritage Constraints Within 1km

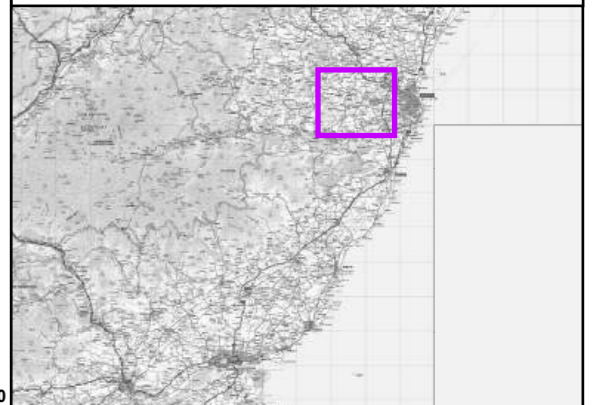
Listed Building

- ▲ Category A
- ▲ Category B
- ▲ Category C

Scheduled Monument

- Gardens and Designed Landscape
- Non-Inventory Designed Landscapes (NIDLs)

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Project No: LT455
Project: Kintore to Tealing 400kV Overhead Line

Title:
Cultural Heritage Constraints - Section F

Drawn by: HW Date: 17/09/2024

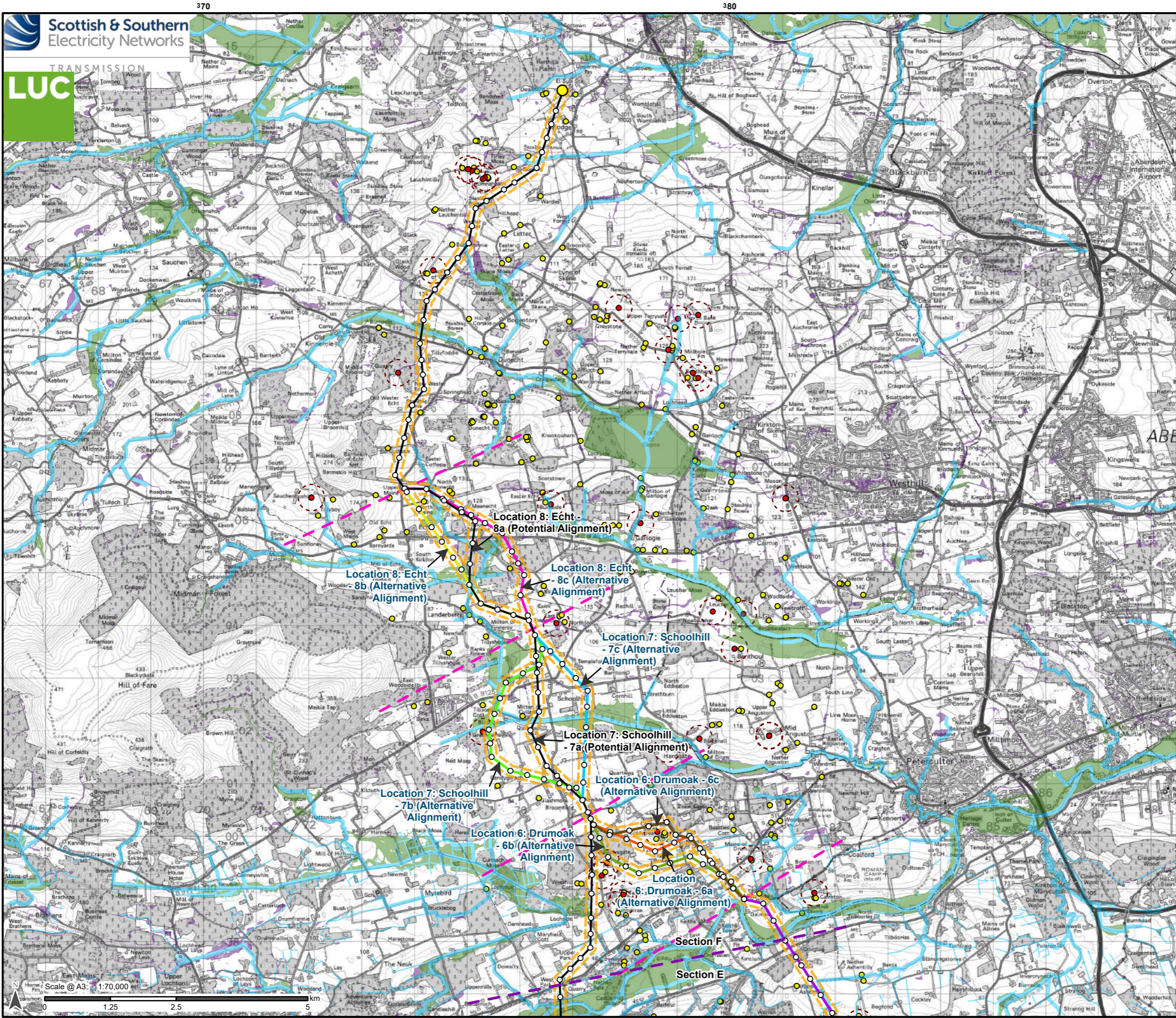
Figure: 4.33

810

810

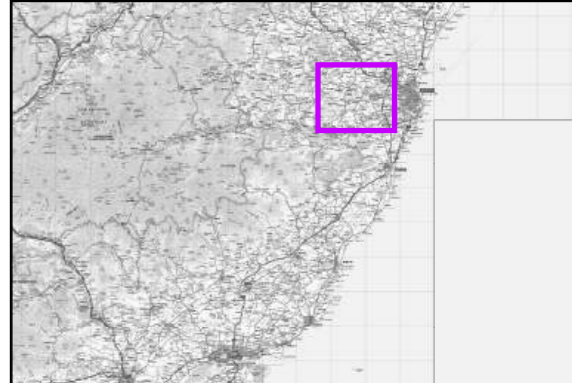
800000m.N

800



- Alignment**
- Potential Alignment
 - Durris - Alternative Alignment 5b
 - Drumoak - Alternative Alignment 6a
 - Drumoak - Alternative Alignment 6b
 - Drumoak - Alternative Alignment 6c
 - Schoolhill - Alternative Alignment 7b
 - Schoolhill - Alternative Alignment 7c
 - Echt - Alternative Alignment 8b
 - Echt - Alternative Alignment 8c
 - - - Alternative Alignment Option Boundary
 - - - Section Boundary
 - Indicative Limits of Deviation (LoD)*
 - Indicative Tower Position
- Substation**
- Existing Kintore substation
- Hydrology Constraints**
- Ordnance Survey mapped watercourses
 - River Future Flood Extent (200 year + Climate Change)
 - Surface Water Future Flood Extent (200 year + Climate Change)
 - - - PWS source buffer (250m)
 - PWS property locations
 - PWS source locations where known (unverified)

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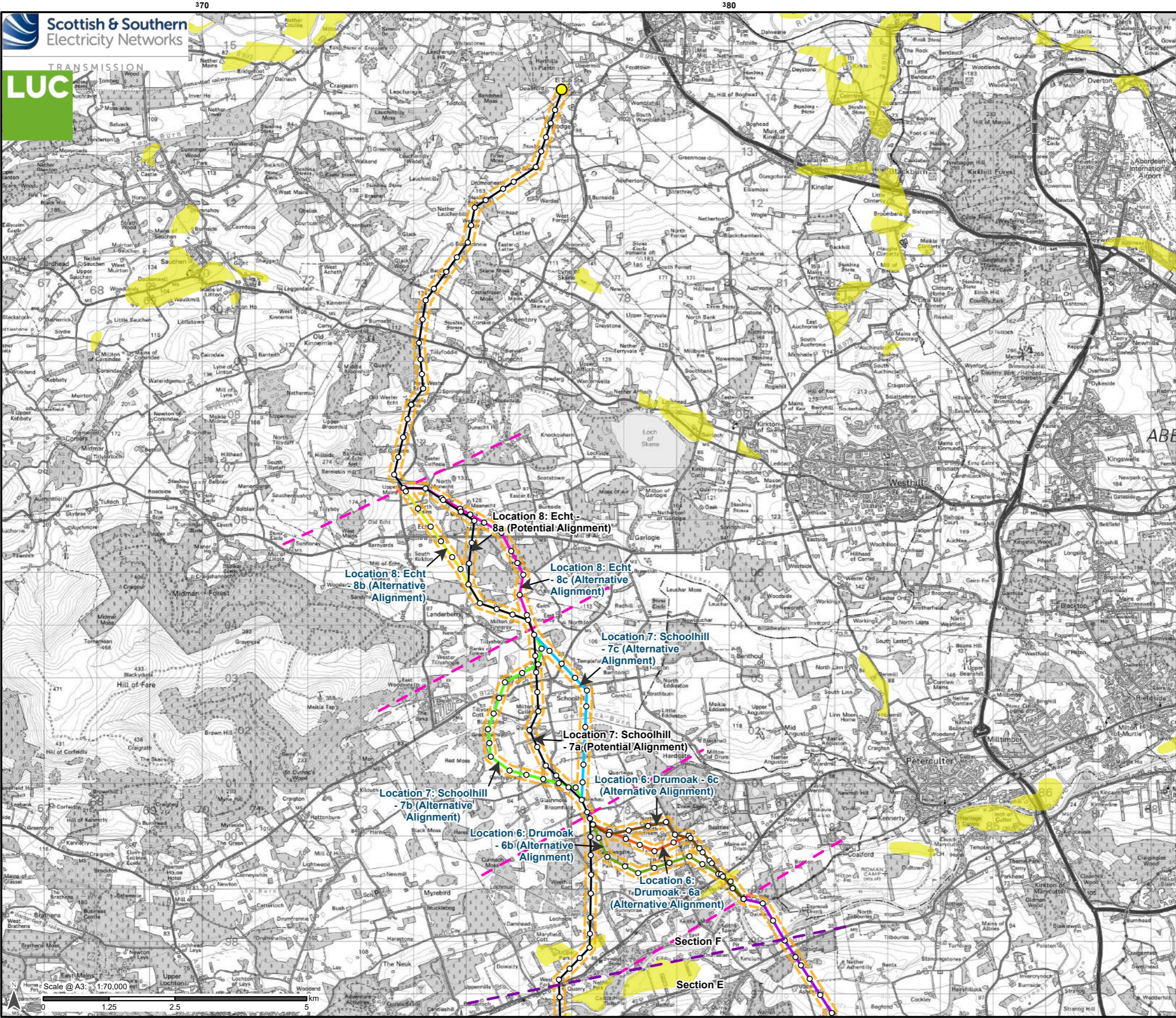
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Project No: LT455
 Project: Kintore to Tealing 400kV Overhead Line

Title:
 Hydrology Constraints - Section F

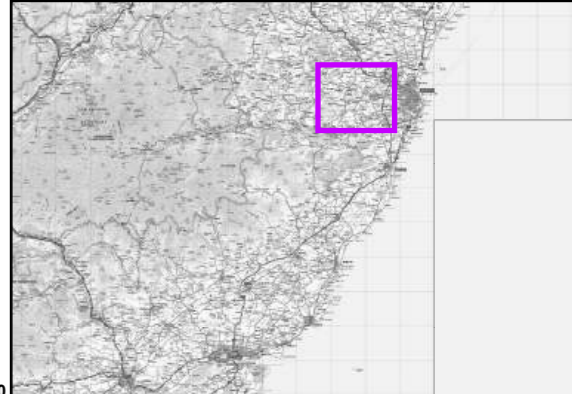
Drawn by: HW
 Date: 17/09/2024

Figure: 4.34



- Alignment**
- Potential Alignment
 - Durris - Alternative Alignment 5b
 - Drumoak - Alternative Alignment 6a
 - Drumoak - Alternative Alignment 6b
 - Drumoak - Alternative Alignment 6c
 - Schoolhill - Alternative Alignment 7b
 - Schoolhill - Alternative Alignment 7c
 - Echt - Alternative Alignment 8b
 - Echt - Alternative Alignment 8c
 - - - Alternative Alignment Option Boundary
 - - - Section Boundary
 - Indicative Limits of Deviation (LoD)*
 - Indicative Tower Position
- Substation**
- Existing Kintore substation
- Land Capability for Agriculture**
- 3.1 - Land capable of producing consistently high yields of a narrow range of crops and/ or moderate yields of a wider range. Short grass leys are common.

Note: Only classes 1, 2 and 3.1 (collectively prime agricultural land) have been mapped. OS base maps are the latest available version from Ordnance Survey, dated July 2024. SSEN Transmission take no responsibility for the release or accuracy of latest version Basemaps from Ordnance Survey. Contains JHI data. *LoDs to be amended as design progresses



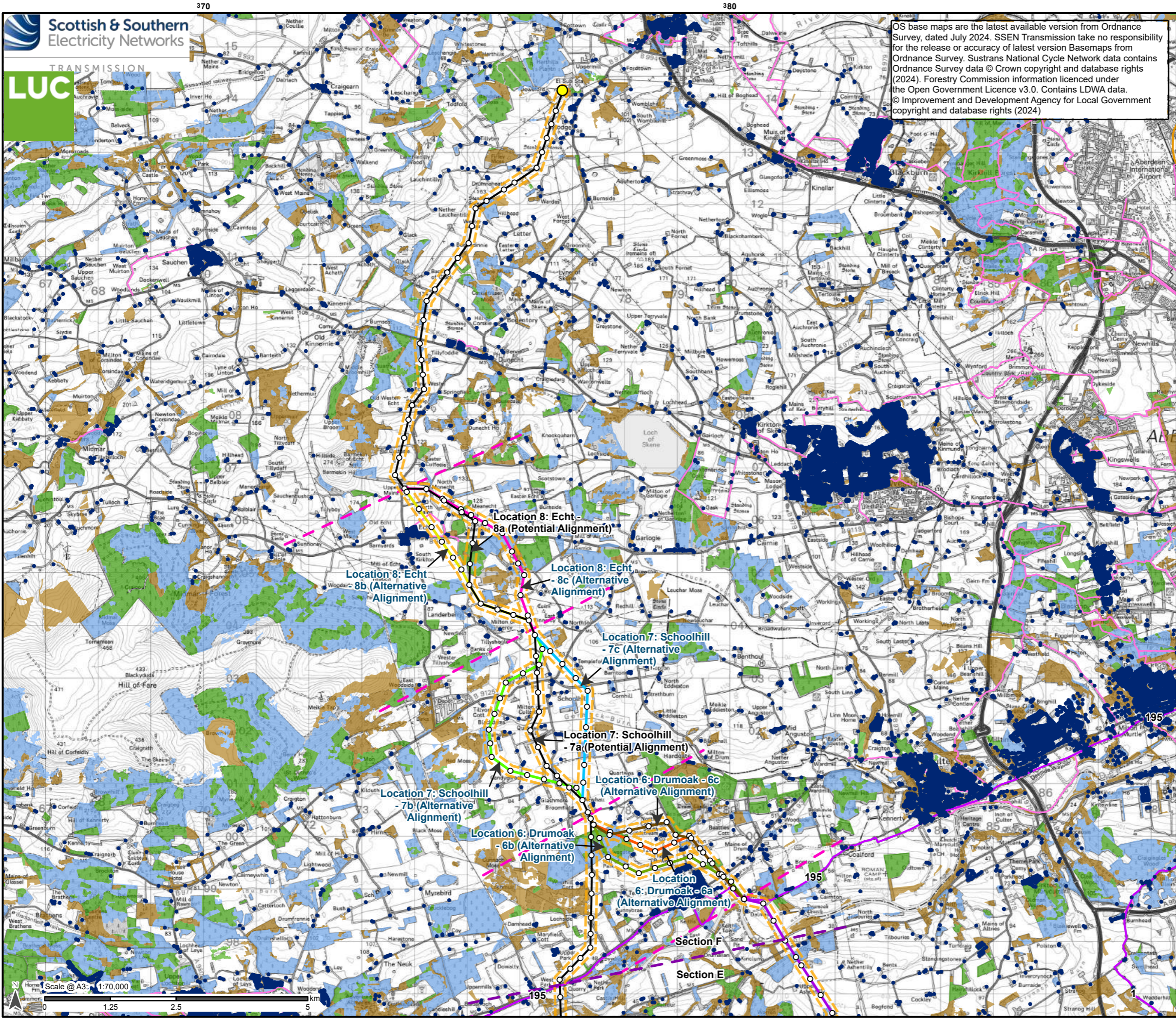
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Project No: LT455
Project: Kintore to Tealing 400kV Overhead Line

Title:
Land Capability for Agriculture Constraints - Section F

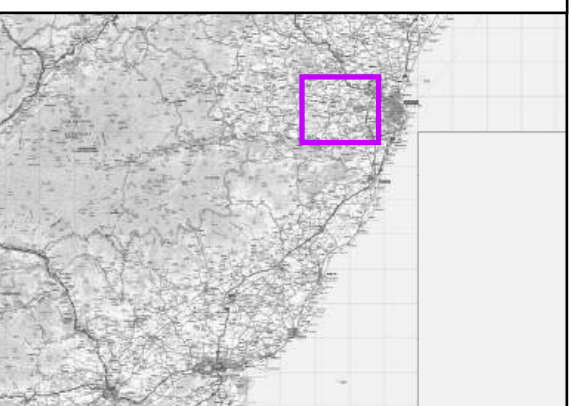
Drawn by: HW
Date: 17/09/2024

Figure: 4.35



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- Alignment**
- Potential Alignment
 - Durris - Alternative Alignment 5b
 - Drumoak - Alternative Alignment 6a
 - Drumoak - Alternative Alignment 6b
 - Drumoak - Alternative Alignment 6c
 - Schoolhill - Alternative Alignment 7b
 - Schoolhill - Alternative Alignment 7c
 - Echt - Alternative Alignment 8b
 - Echt - Alternative Alignment 8c
 - - - Alternative Alignment Option Boundary
 - - - Section Boundary
 - Indicative Limits of Deviation (LoD)*
 - Indicative Tower Position
- Substation**
- Existing Kintore substation
- Properties**
- Residential property
 - LUC additional residential properties (20240327)
- Land Use Constraints**
- National Forest Inventory
- Broadleaved; Mixed mainly broadleaved; Coppice; Coppice with standards; Young trees; Assumed woodland
 - Conifer; Mixed mainly conifer
 - Other
- Cycle Route
- National Cycle Network (NCN)
 - NCN Link (connects to NCN, but not part of a route)
 - Core path



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Project No: LT455
Project: Kintore to Tealing 400kV Overhead Line

Title:
Land Use and Properties - Section F

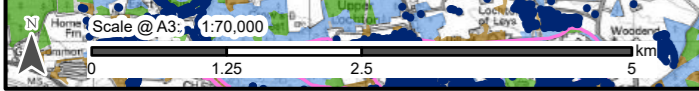
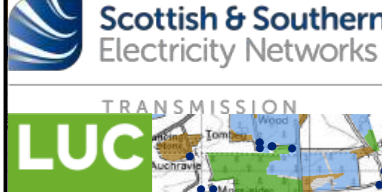
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Date: 17/09/2024

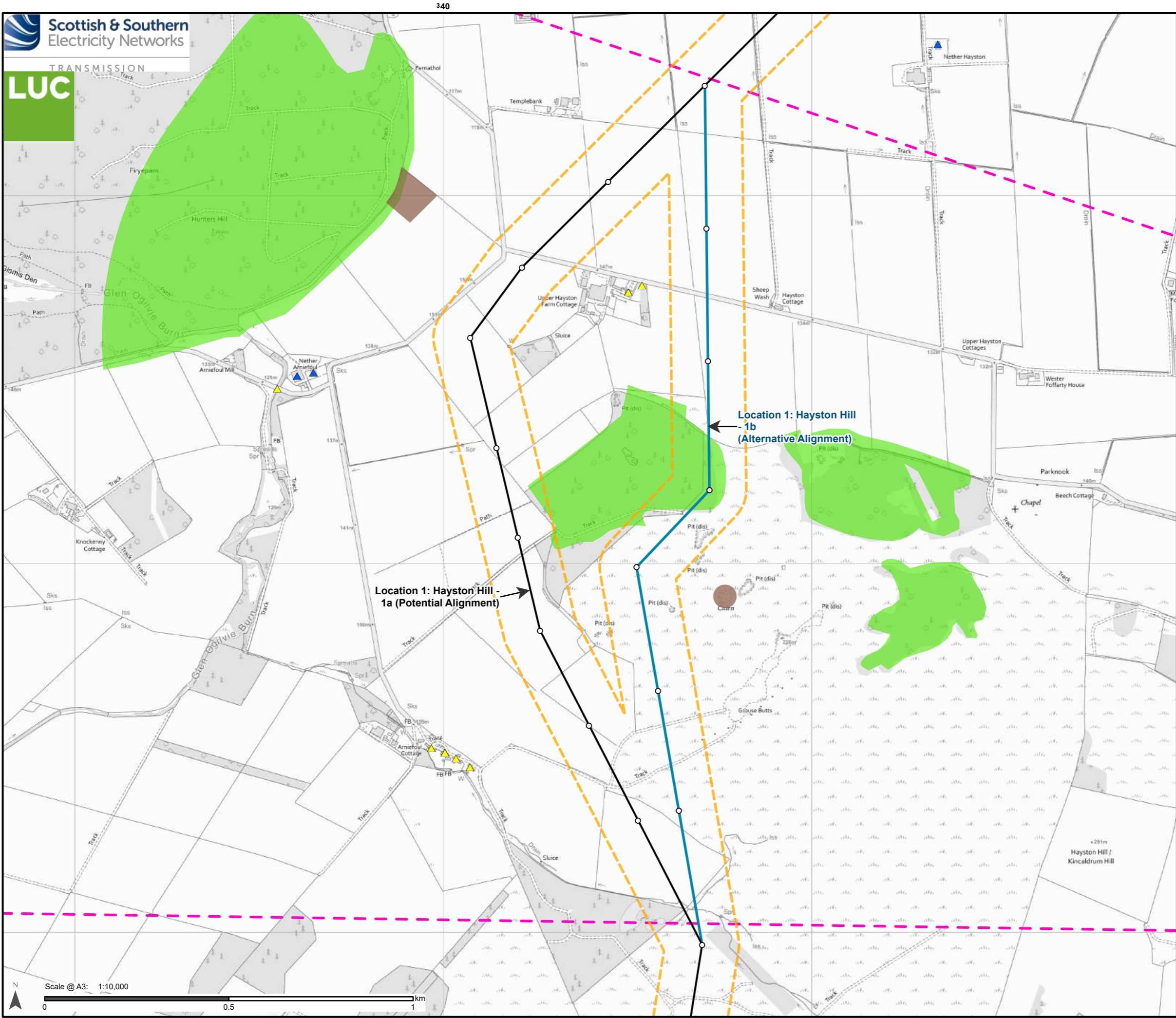
Figure: 4.36

810
800000m.N
800

370 380

370000m.E 380

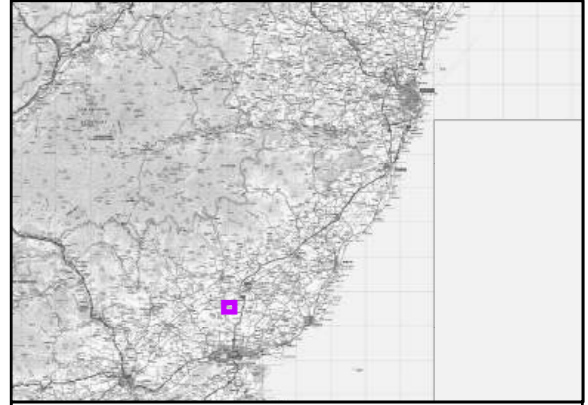




- Alignment**
- Potential Alignment
 - Alternative Alignment (please see labels on figure for names)
 - - - Alternative Alignment Option Boundary
 - - - Indicative Limits of Deviation (LoD)*
 - Indicative tower position
 - 5km buffer
- Ecology Constraints Within 1km**
- Ancient Woodland Inventory
- Long-Established (of plantation origin)
- Cultural Heritage Constraints Within 1km**
- Listed Building
- ▲ B
 - ▲ C
 - Scheduled Monument

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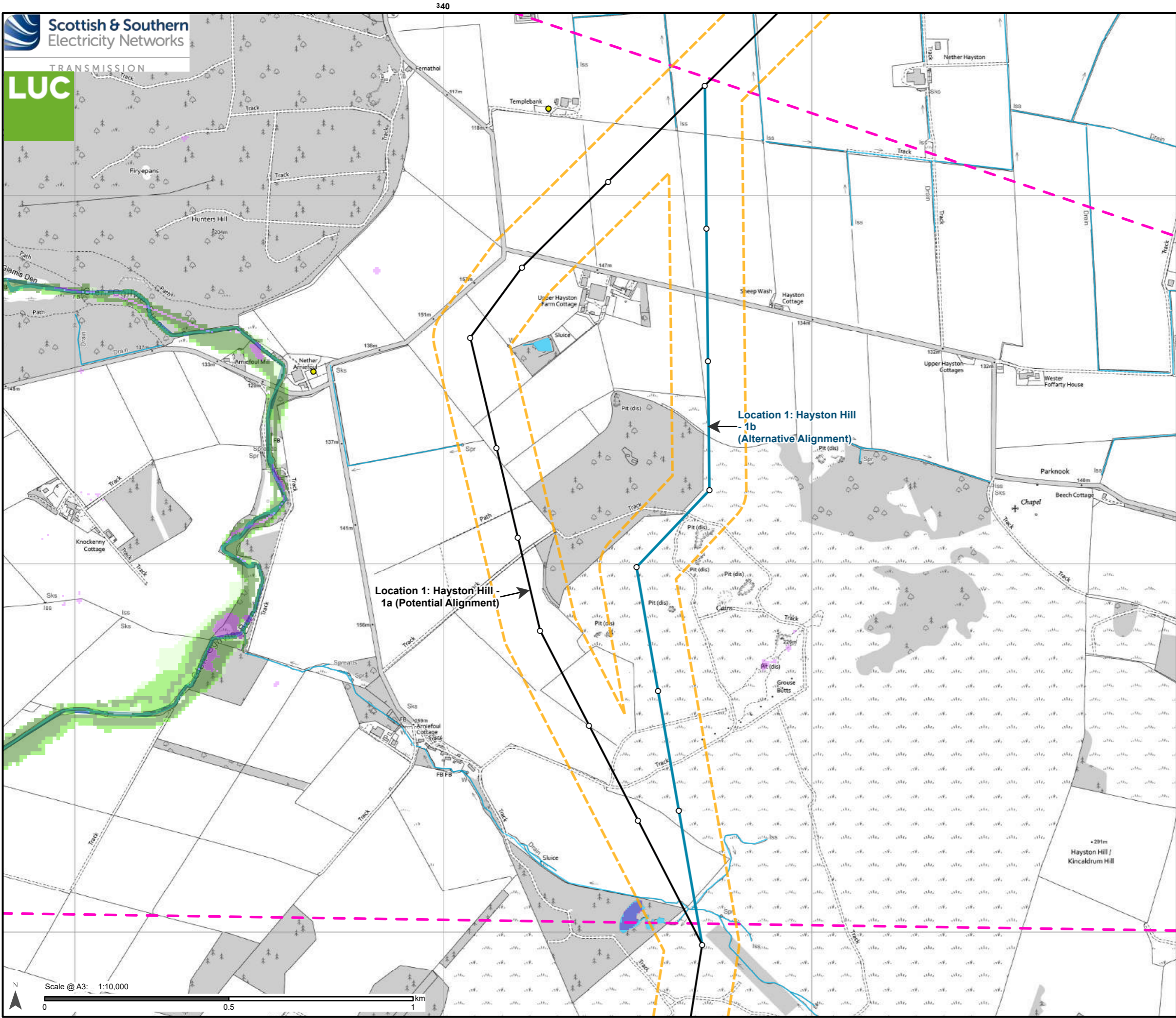
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Project No: LT455
Project: Kintore to Tealing 400kV Overhead Line

Title:
Ecology and Cultural Heritage Constraints for Location 1: Hayston Hill Alternative Alignments

Drawn by: HW Date: 13/09/2024

Figure: 5.1



- Alignment**
- Potential Alignment
 - Alternative Alignment (please see labels on figure for names)
 - - - Alternative Alignment Option Boundary
 - - - Indicative Limits of Deviation (LoD)*
 - Indicative tower position
- Hydrology Constraints**
- Light purple: Flood Risk Management - Surface Low (1000 year)
 - Medium purple: Flood Risk Management - Surface Medium (200 year)
 - Dark purple: Flood Risk Management - Surface High (10 year)
 - Light green: Flood Risk Management - Rivers Low (1000 year)
 - Medium green: Flood Risk Management - Rivers Medium (200 year)
 - Dark green: Flood Risk Management - Rivers High (10 year)
 - Blue line: Main watercourses (Open Rivers)
 - Light blue area: Surface Water Area
 - Light blue line: Surface Water Line
 - Yellow dot: PWS property locations

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*LoDs to be amended as design progresses



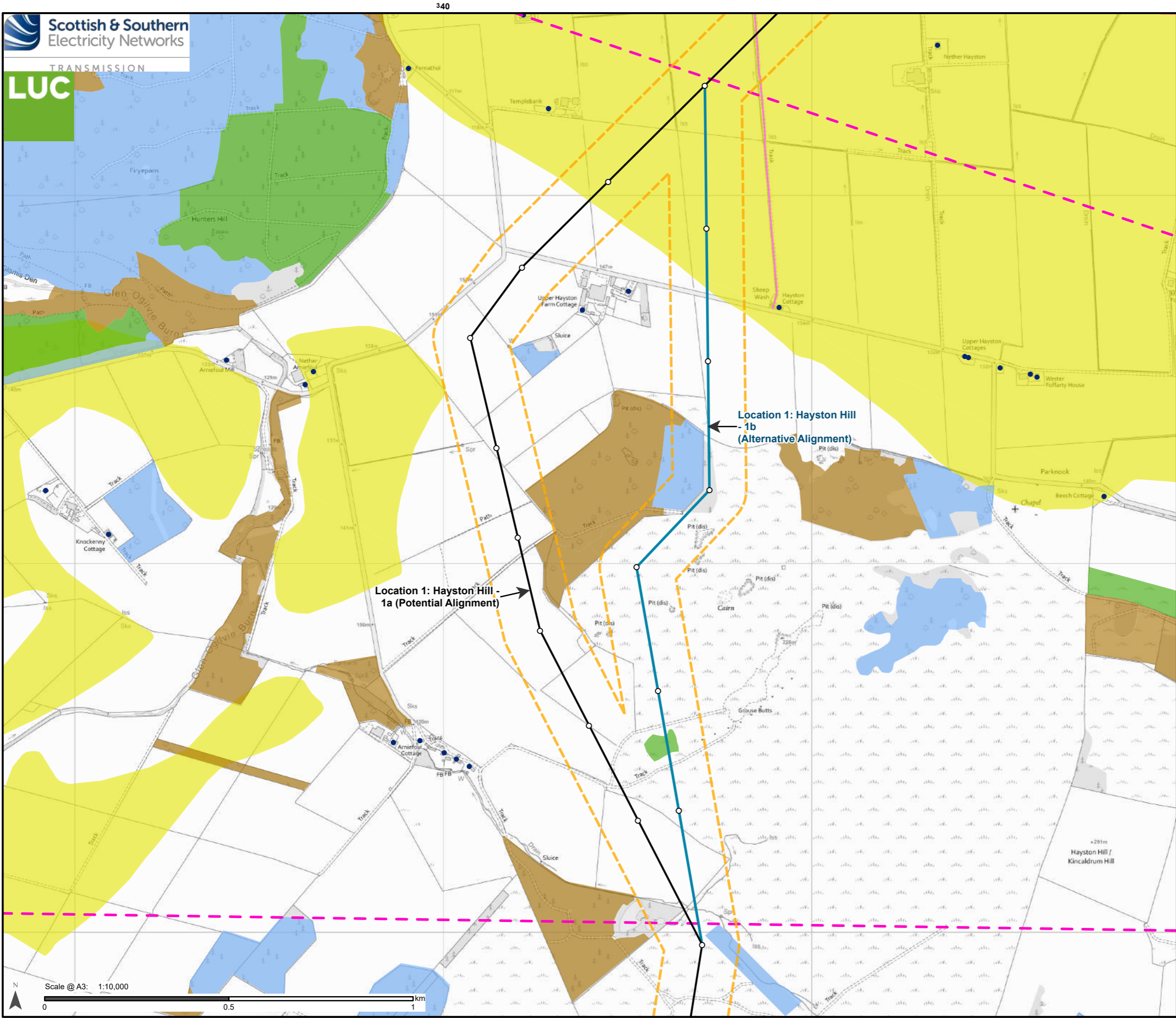
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Project No: LT455
 Project: Kintore to Tealing 400kV Overhead Line

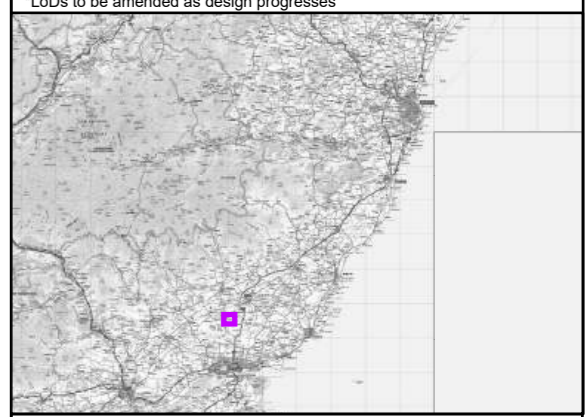
Title:
 Hydrology Constraints for Location 1: Hayston Hill Alternative Alignments

Drawn by: HW Date: 13/09/2024

Figure: 5.2



- Alignment**
- Potential Alignment
 - Alternative Alignment (please see labels on figure for names)
 - - - Alternative Alignment Option Boundary
 - - - Indicative Limits of Deviation (LoD)*
 - Indicative tower position
- Properties**
- Residential property
- Land Use Constraints**
- National Forest Inventory
- Broadleaved; Mixed mainly broadleaved; Coppice; Coppice with standards; Young trees; Assumed woodland
 - Conifer; Mixed mainly conifer
 - Other
- Local Path Networks
- Core path
- Land Capability for Agriculture
- 2 - Land capable of producing a wide range of crops.
 - 3.1 - Land capable of producing consistently high yields of a narrow range of crops and/ or moderate yields of a wider range. Short grass leys are common.
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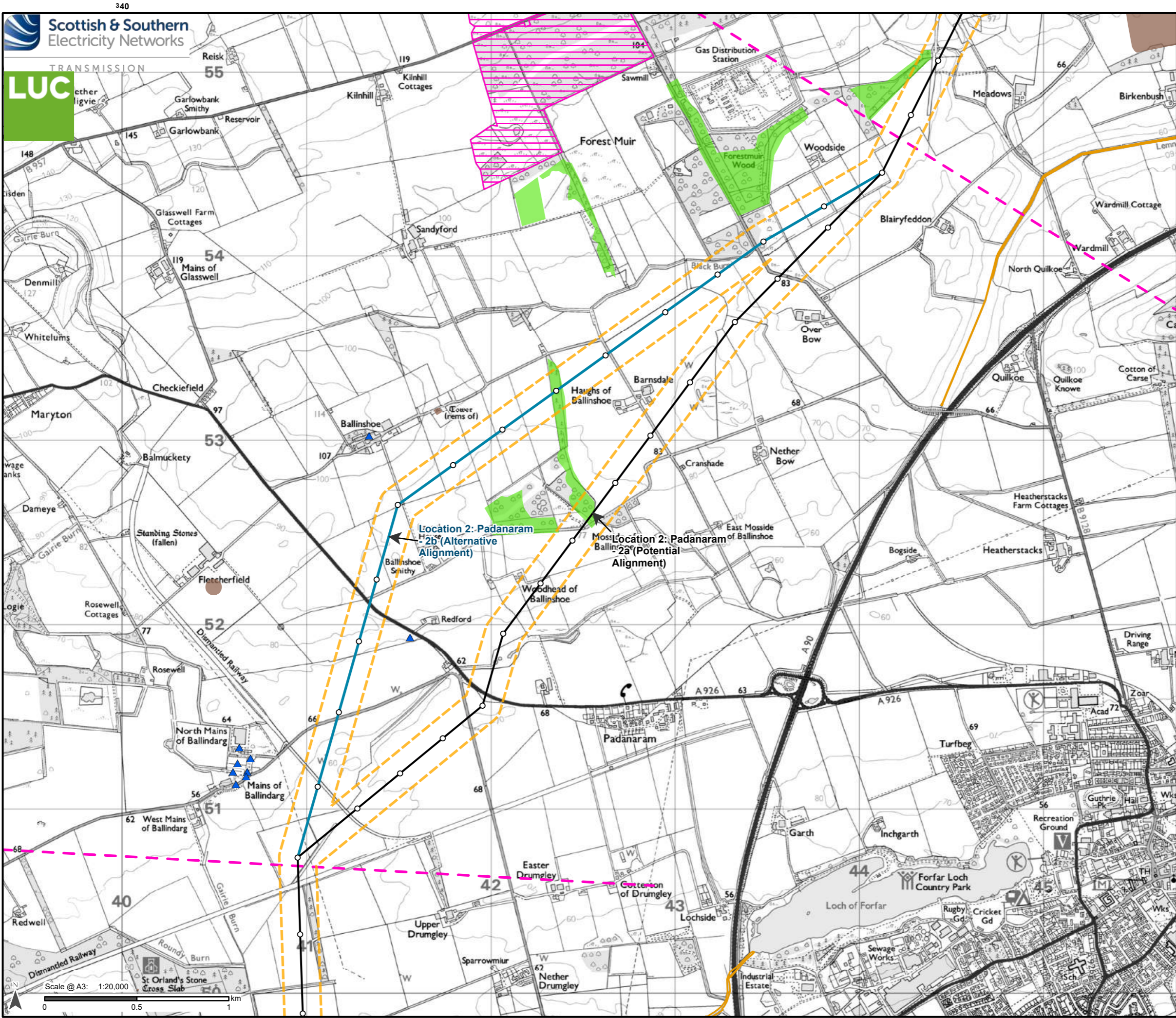
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Project No: LT455
Project: Kintore to Tealing 400kV Overhead Line

Title:
Land Use and Properties for
Location 1: Hayston Hill Alternative Alignments

Drawn by: HW Date: 13/09/2024

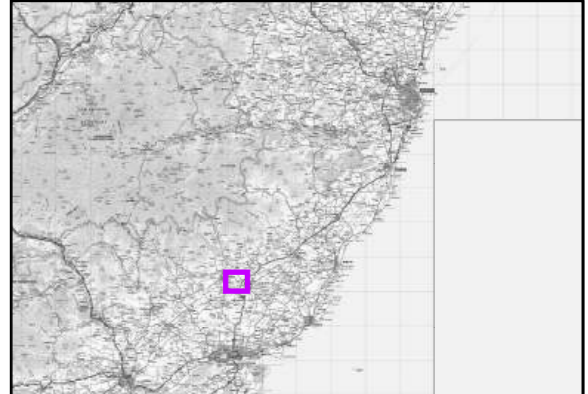
Figure: 5.3



- Alignment**
- Potential Alignment
 - Alternative Alignment (please see labels on figure for names)
 - - - Alternative Alignment Option Boundary
 - - - Indicative Limits of Deviation (LoD)*
 - Indicative tower position
 - 5km buffer
- Ecology Constraints Within 5km**
- ▨ Site of Special Scientific Interest
 - ▨ Special Area of Conservation
- Ecology Constraints Within 1km**
- Ancient Woodland Inventory
- ▨ Long-Established (of plantation origin)
- Cultural Heritage Constraints Within 1km**
- Listed Building
- ▲ B
 - Scheduled Monument

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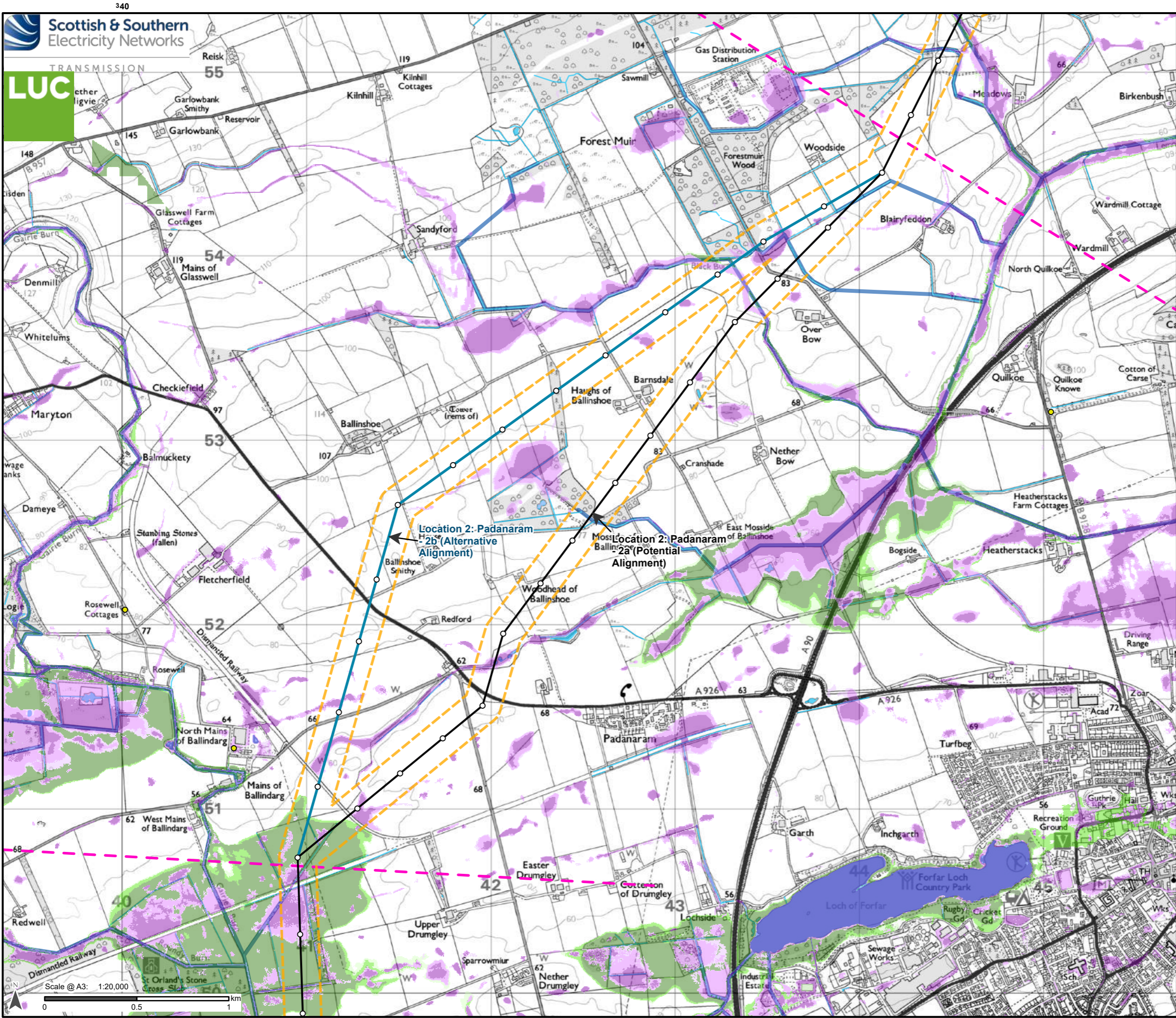
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Project No: LT455
Project: Kintore to Tealing 400kV Overhead Line

Title:
Ecology and Cultural Heritage Constraints for Location 2: Padanaram Alternative Alignments

Drawn by: HW Date: 13/09/2024

Figure: 5.4



- Alignment**
- Potential Alignment
 - Alternative Alignment (please see labels on figure for names)
 - - - Alternative Alignment Option Boundary
 - - - Indicative Limits of Deviation (LoD)*
 - Indicative tower position
- Hydrology Constraints**
- Light Purple: Flood Risk Management - Surface Low (1000 year)
 - Medium Purple: Flood Risk Management - Surface Medium (200 year)
 - Dark Purple: Flood Risk Management - Surface High (10 year)
 - Light Green: Flood Risk Management - Rivers Low (1000 year)
 - Medium Green: Flood Risk Management - Rivers Medium (200 year)
 - Dark Green: Flood Risk Management - Rivers High (10 year)
 - Blue Line: Main watercourses (Open Rivers)
 - Light Blue Area: Surface Water Area
 - Light Blue Line: Surface Water Line
 - Yellow Dot: PWS property locations

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Project No: LT455
 Project: Kintore to Tealing 400kV Overhead Line

Title:
 Hydrology Constraints for Location 2: Padanaram Alternative Alignments

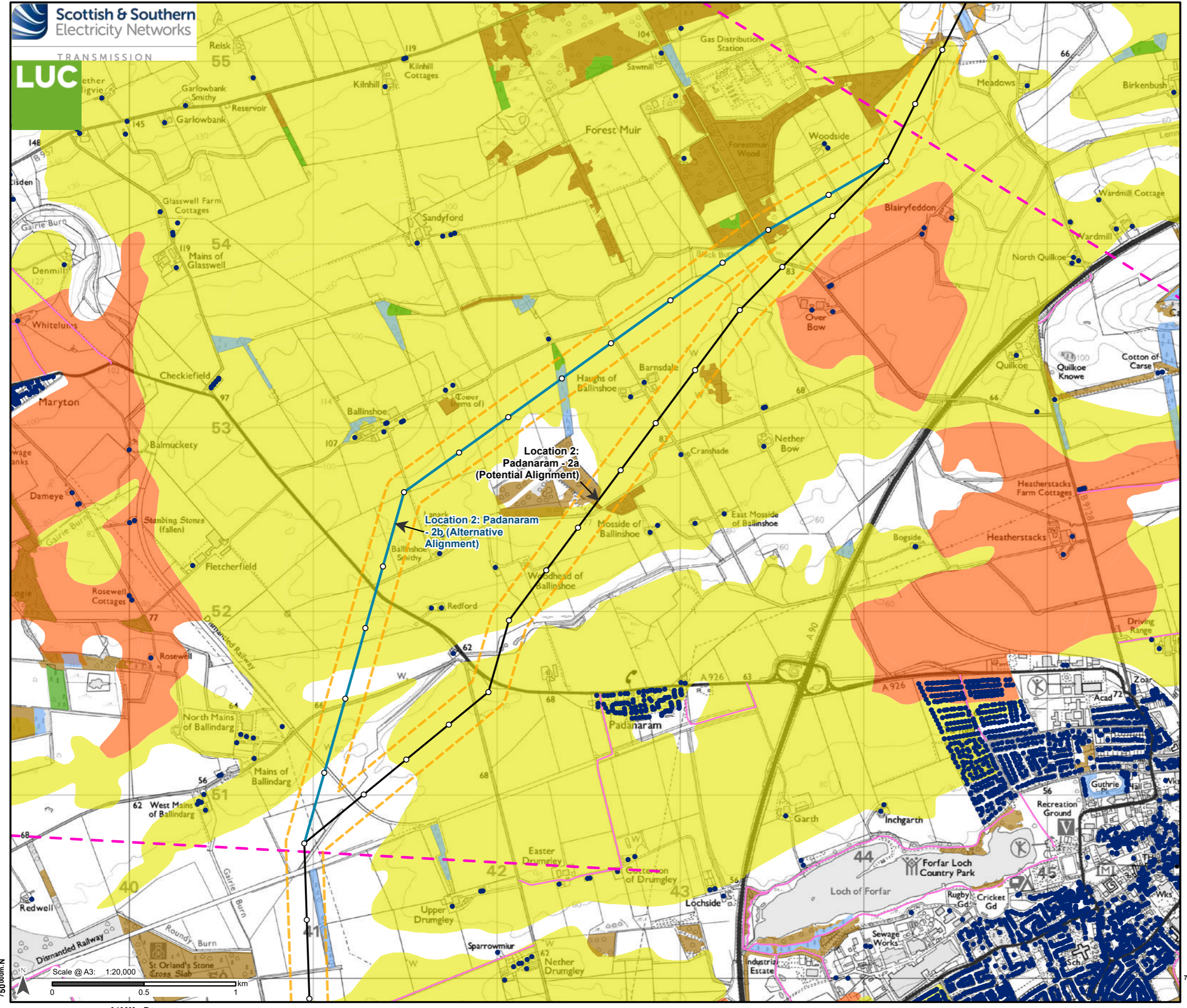
Drawn by: HW Date: 13/09/2024

Figure: 5.5

750000m.N

Scale @ A3: 1:20,000

340000m.E



Alignment

- Potential Alignment
- Alternative Alignment (please see labels on figure for names)
- - - Alternative Alignment Option Boundary
- - - Indicative Limits of Deviation (LoD)*
- o Indicative tower position

Properties

- Residential property

Land Use Constraints

National Forest Inventory

- Broadleaved; Mixed mainly broadleaved; Coppice; Coppice with standards; Young trees; Assumed woodland
- Conifer; Mixed mainly conifer
- Other

Local Path Networks

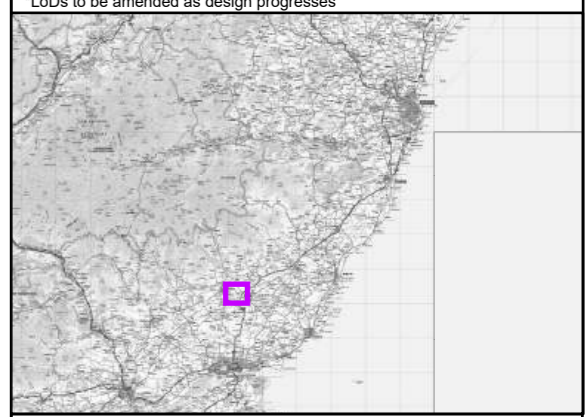
- Core path

Land Capability for Agriculture

- 2 - Land capable of producing a wide range of crops.
- 3.1 - Land capable of producing consistently high yields of a narrow range of crops and/ or moderate yields of a wider range. Short grass leys are common.

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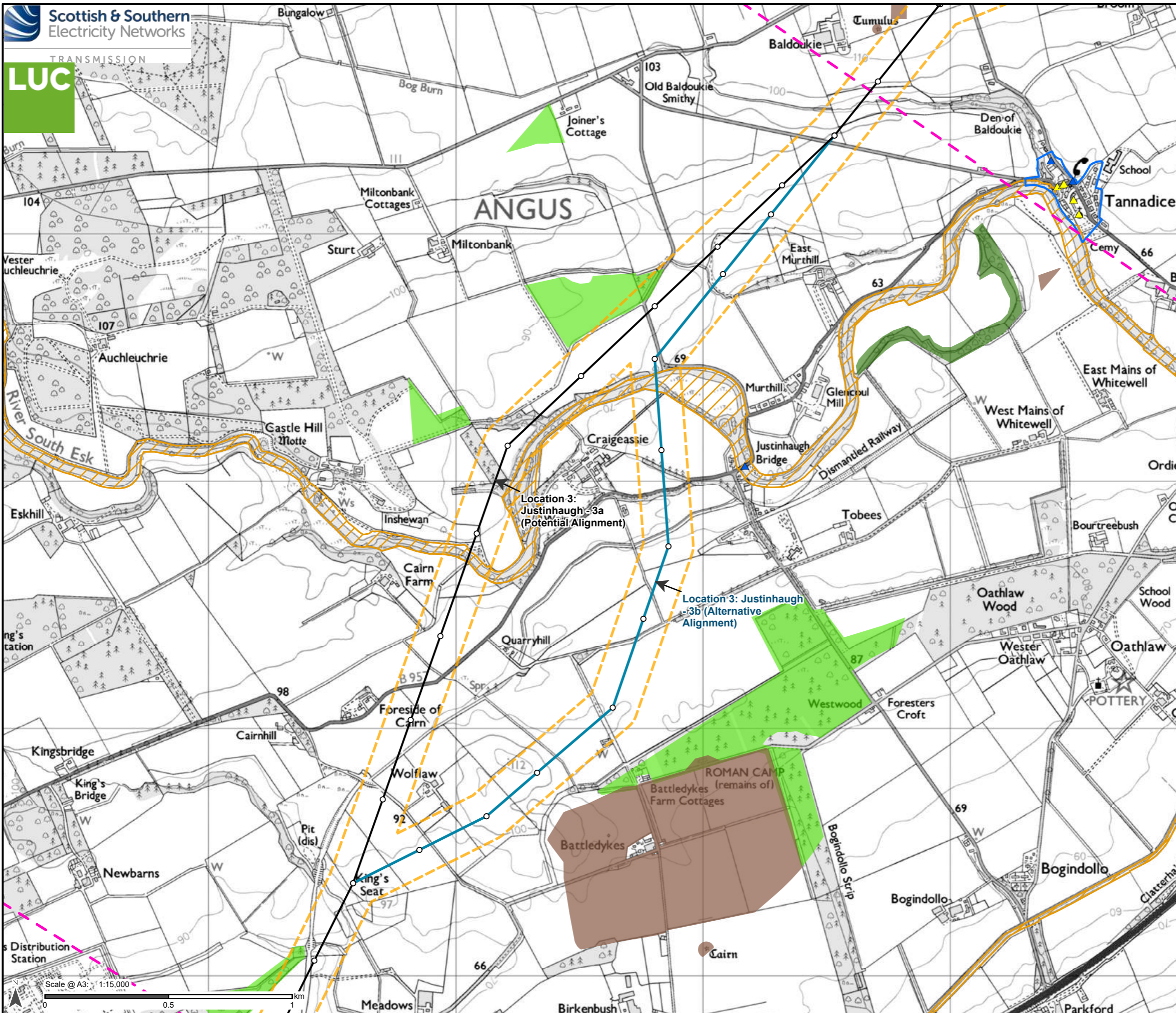
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Project No: LT455
Project: Kintore to Tealing 400kV Overhead Line

Title:
Land Use and Properties for
Location 2: Padanaram Alternative Alignments

Drawn by: HW Date: 13/09/2024

Figure: 5.6



- Alignment**
- Potential Alignment
 - Alternative Alignment (please see labels on figure for names)
 - - - Alternative Alignment Option Boundary
 - - - Indicative Limits of Deviation (LoD)*
 - Indicative tower position
 - 5km buffer
- Ecology Constraints Within 5km**
- Special Area of Conservation
- Ecology Constraints Within 1km**
- Ancient Woodland Inventory
- Ancient (of semi-natural origin)
 - Long-Established (of plantation origin)
- Cultural Heritage Constraints Within 1km**
- Listed Building
- ▲ B
 - ▲ C
 - Scheduled Monument
 - Conservation Area

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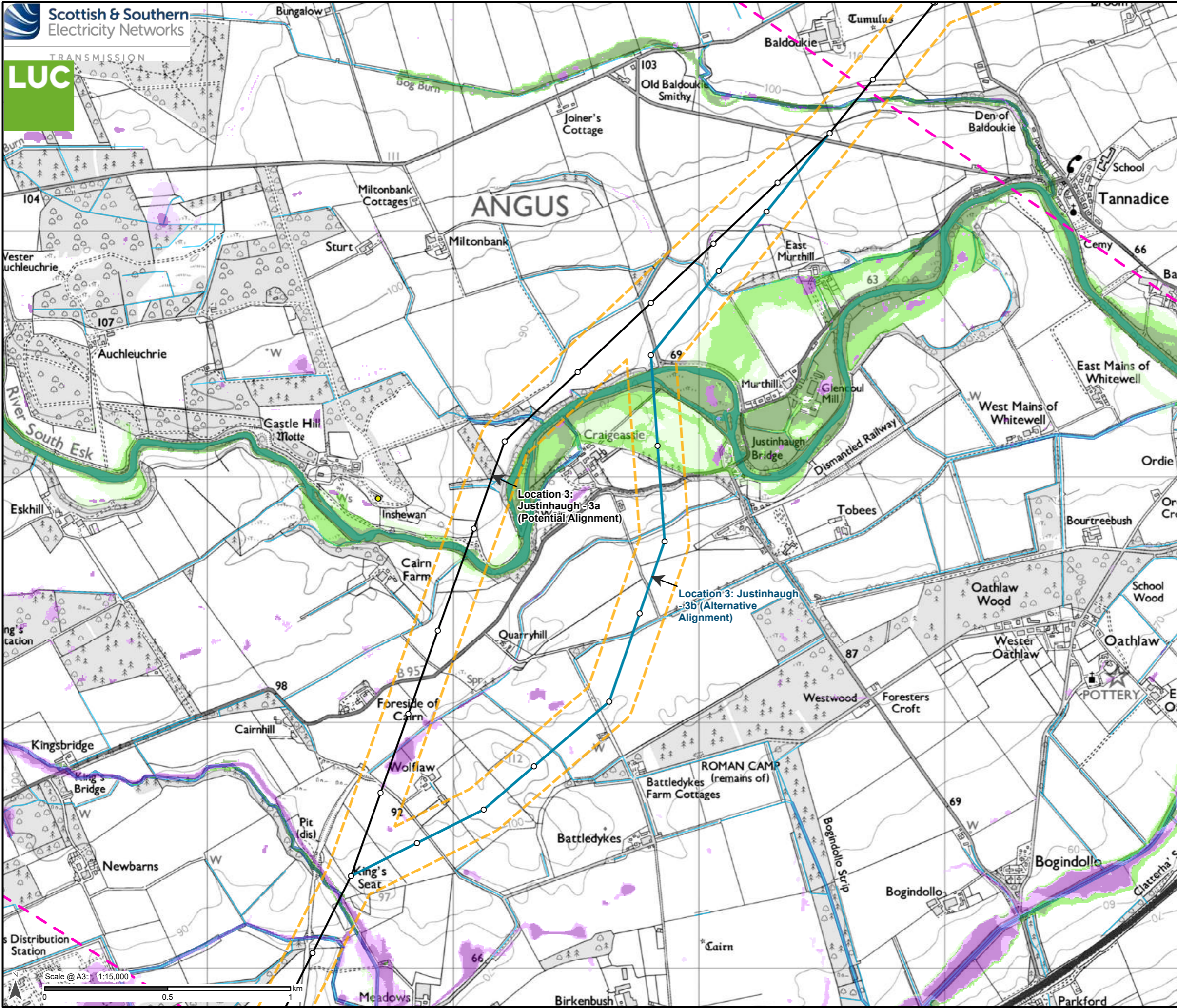
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Project No: LT455
Project: Kintore to Tealing 400kV Overhead Line

Title:
Ecology and Cultural Heritage Constraints for Location 3: Justinhaugh Alternative Alignments

Drawn by: HW Date: 13/09/2024

Figure: 5.7



- Alignment**
- Potential Alignment
 - Alternative Alignment (please see labels on figure for names)
 - - - Alternative Alignment Option Boundary
 - - - Indicative Limits of Deviation (LoD)*
 - Indicative tower position
- Hydrology Constraints**
- Light purple: Flood Risk Management - Surface Low (1000 year)
 - Medium purple: Flood Risk Management - Surface Medium (200 year)
 - Dark purple: Flood Risk Management - Surface High (10 year)
 - Light green: Flood Risk Management - Rivers Low (1000 year)
 - Medium green: Flood Risk Management - Rivers Medium (200 year)
 - Dark green: Flood Risk Management - Rivers High (10 year)
 - Blue line: Main watercourses (Open Rivers)
 - Light blue area: Surface Water Area
 - Light blue line: Surface Water Line
 - Yellow dot: PWS property locations

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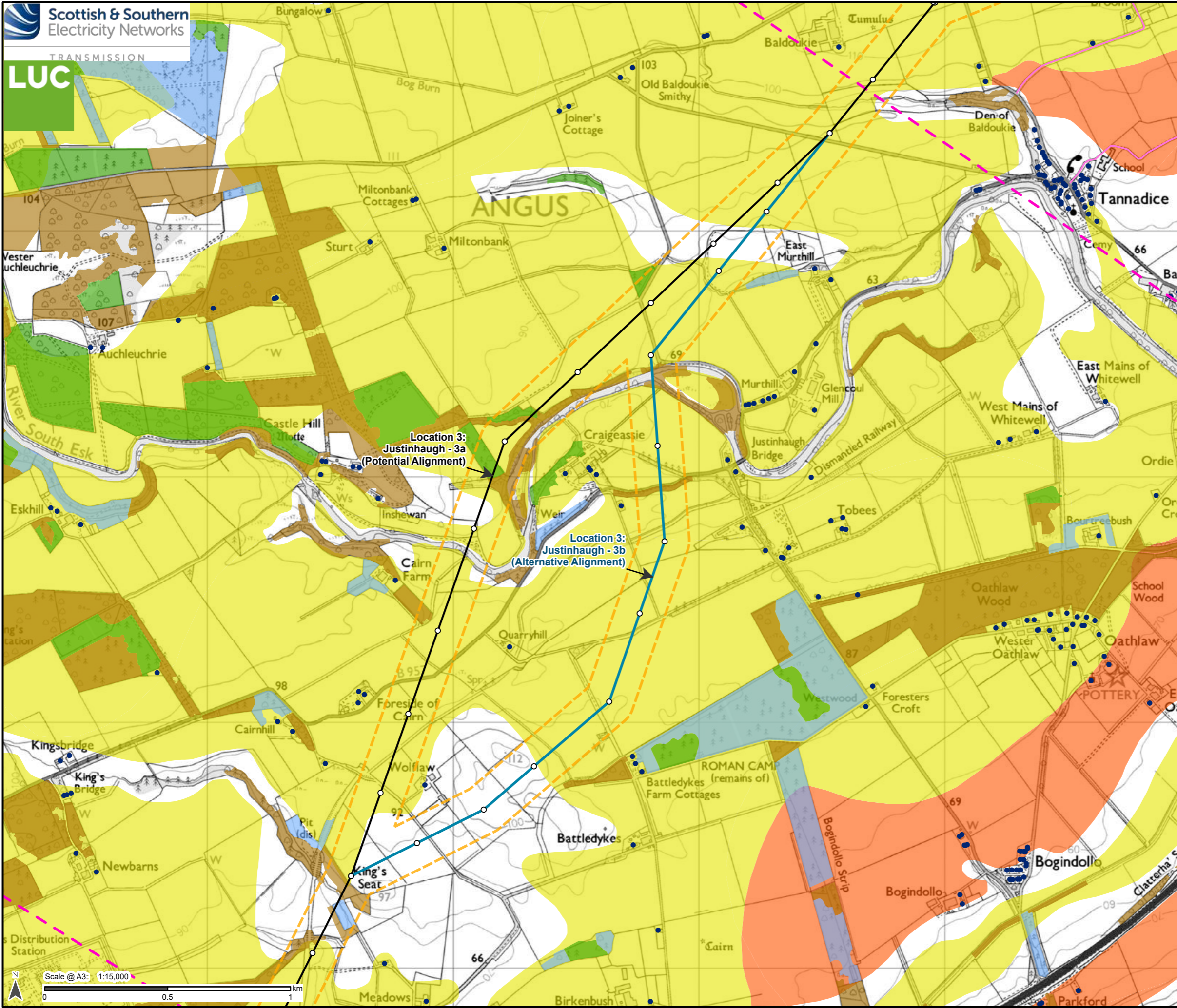
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Project: Kintore to Tealing 400kV Overhead Line

Title:
Hydrology Constraints for Location 3: Justinhaugh Alternative Alignments

Drawn by: HW Date: 13/09/2024

Figure: 5.8



Alignment

- Potential Alignment
- Alternative Alignment (please see labels on figure for names)
- - - Alternative Alignment Option Boundary
- - - Indicative Limits of Deviation (LoD)*
- Indicative tower position

Properties

- Residential property

Land Use Constraints

National Forest Inventory

- Broadleaved; Mixed mainly broadleaved; Coppice; Coppice with standards; Young trees; Assumed woodland
- Conifer; Mixed mainly conifer
- Other

Local Path Networks

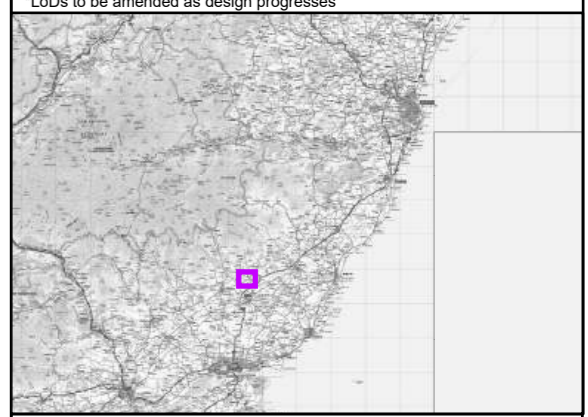
- Core path

Land Capability for Agriculture

- 2 - Land capable of producing a wide range of crops.
- 3.1 - Land capable of producing consistently high yields of a narrow range of crops and/ or moderate yields of a wider range. Short grass leys are common.

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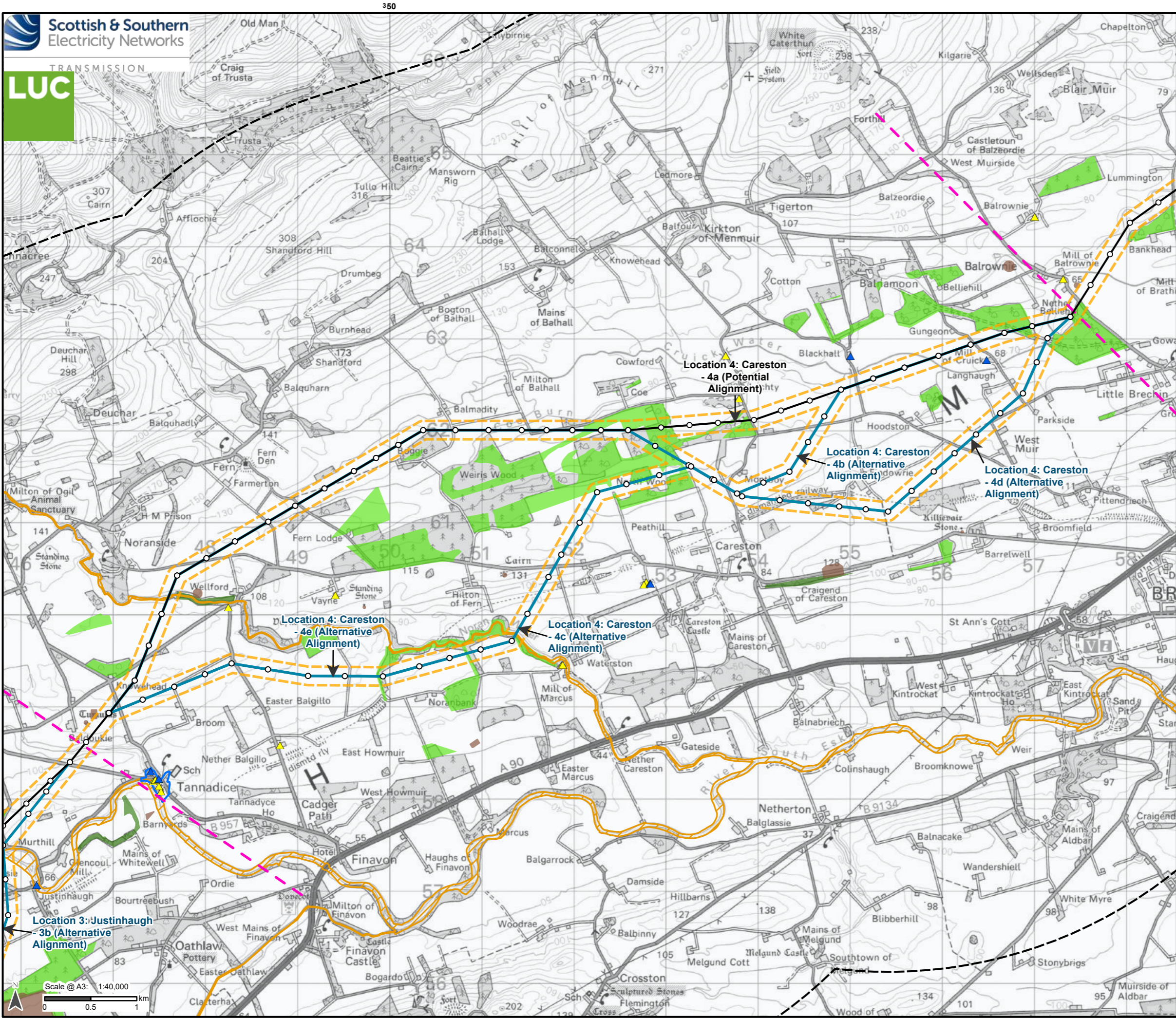
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Project: Kintore to Tealing 400kV Overhead Line

Title:
Land Use and Properties for
Location 3: Justinhaugh Alternative Alignments

Drawn by: HW Date: 13/09/2024

Figure: 5.9

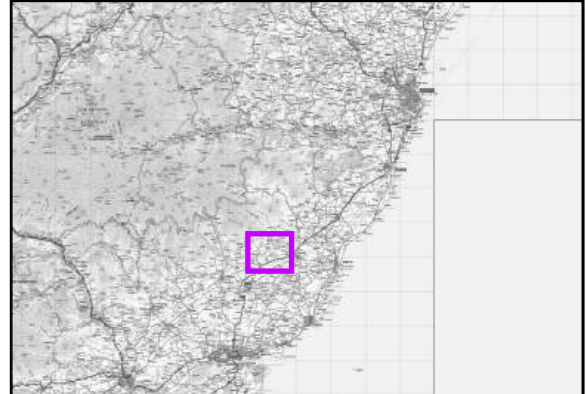


- Alignment**
- Potential Alignment
 - Alternative Alignment (please see labels on figure for names)
 - - - Alternative Alignment Option Boundary
 - - - Indicative Limits of Deviation (LoD)*
 - Indicative tower position
 - 5km buffer
- Ecology Constraints Within 5km**
- Special Area of Conservation
- Ecology Constraints Within 1km**
- Ancient Woodland Inventory
- Ancient (of semi-natural origin)
 - Long-Established (of plantation origin)
- Cultural Heritage Constraints Within 1km**
- Listed Building
- ▲ B
 - ▲ C
 - Scheduled Monument
 - Conservation Area

Please see Figure 6.1 for detail of Location 4: Careston Alternative Alignments

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Title:
 Ecology and Cultural Heritage Constraints for Location 4: Careston Alternative Alignments

Drawn by: HW Date: 13/09/2024

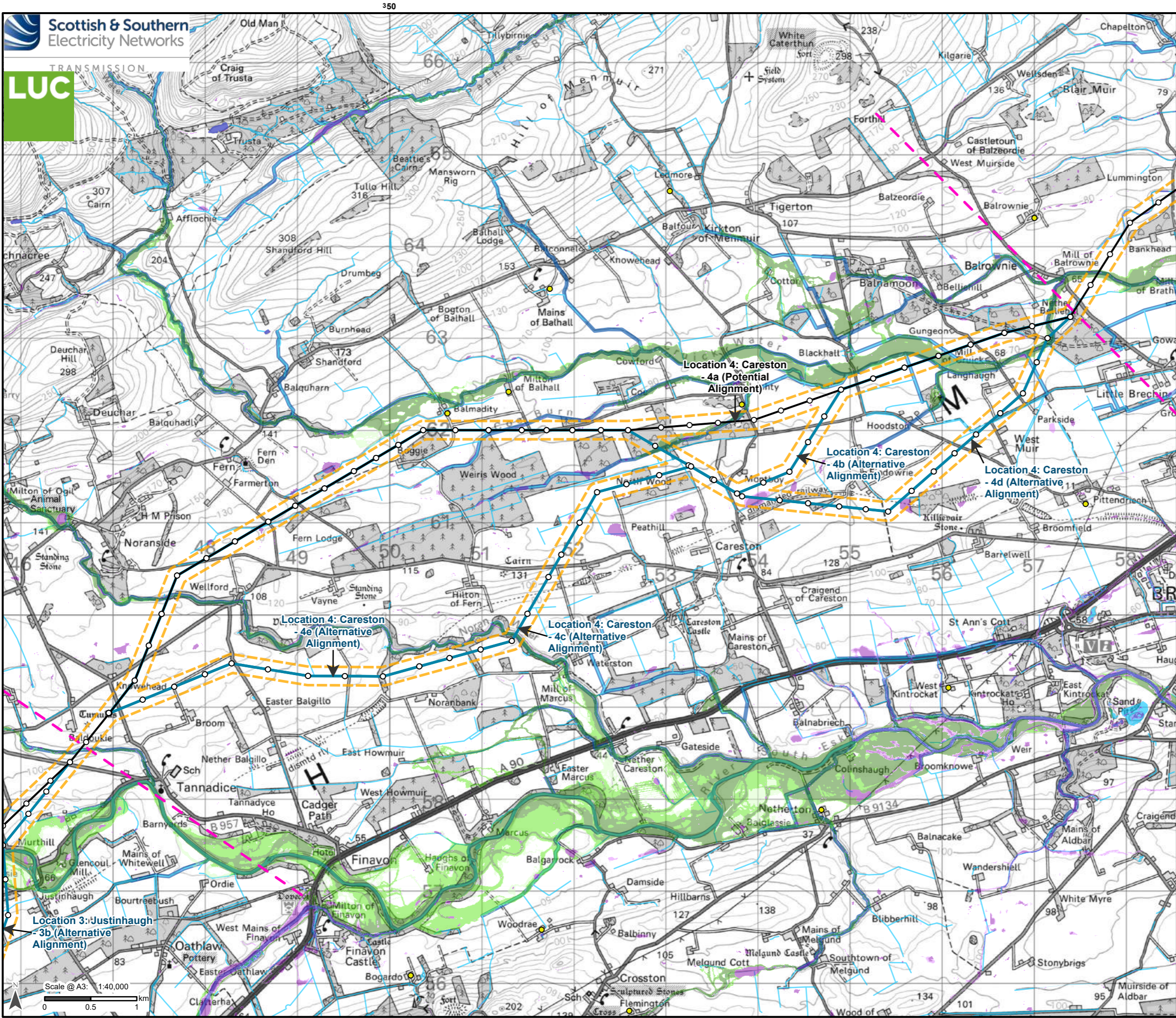
Figure: 5.10

760000m.N

760

350000m.E

Scale @ A3: 1:40,000
 0 0.5 1 km



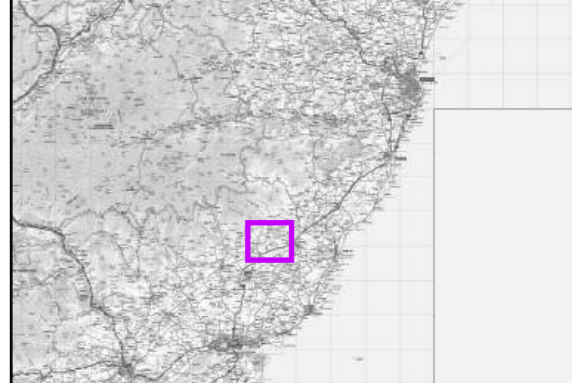
- Alignment**
- Potential Alignment
 - Alternative Alignment (please see labels on figure for names)
 - - - Alternative Alignment Option Boundary
 - ▭ Indicative Limits of Deviation (LoD)*
 - Indicative tower position

- Hydrology Constraints**
- ▭ Flood Risk Management - Surface Low (1000 year)
 - ▭ Flood Risk Management - Surface Medium (200 year)
 - ▭ Flood Risk Management - Surface High (10 year)
 - ▭ Flood Risk Management - Rivers Low (1000 year)
 - ▭ Flood Risk Management - Rivers Medium (200 year)
 - ▭ Flood Risk Management - Rivers High (10 year)
 - Main watercourses (Open Rivers)
 - ▭ Surface Water Area
 - Surface Water Line
 - PWS property locations

Please see Figure 6.1 for detail of Location 4: Careston Alternative Alignments

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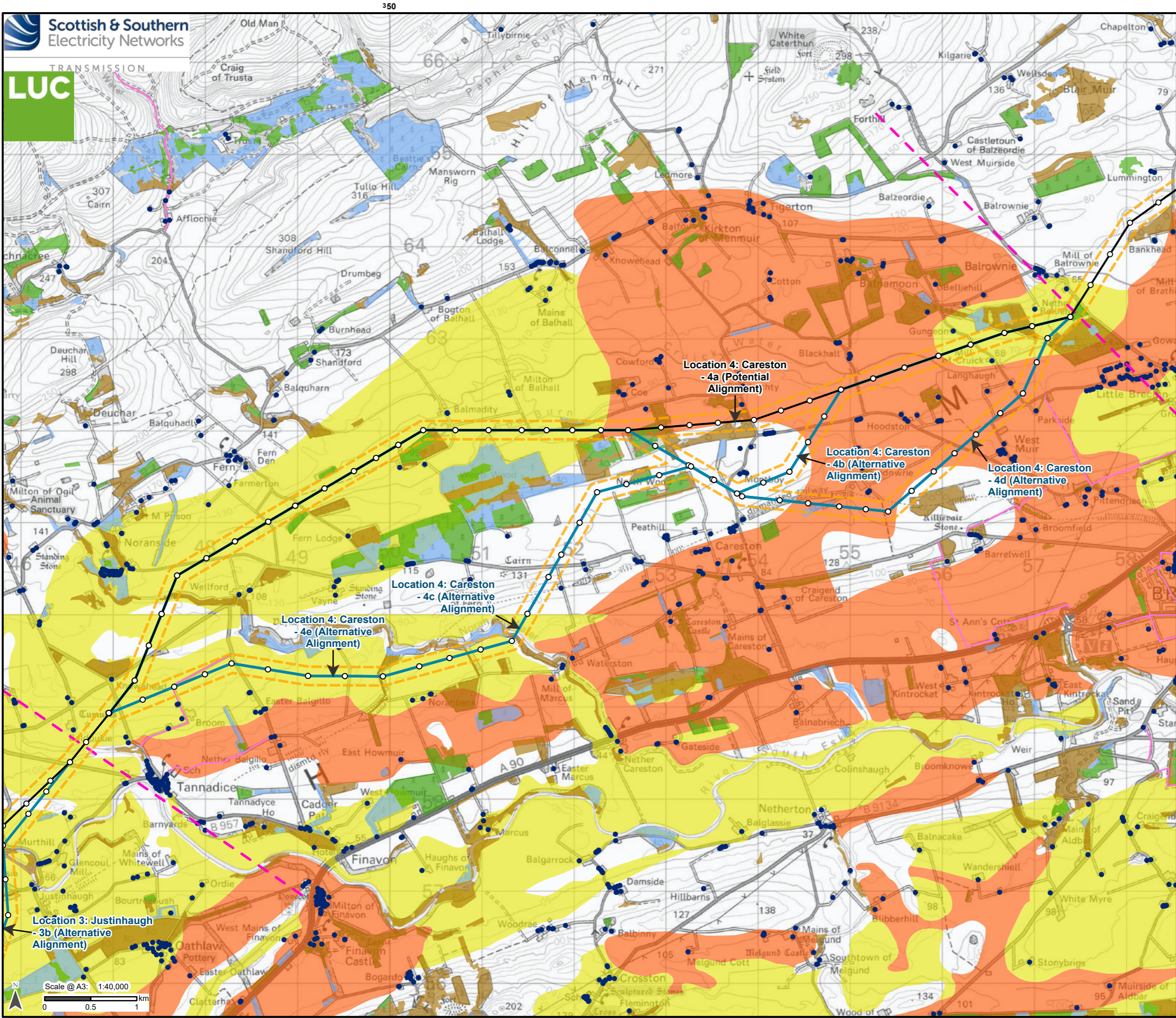
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Project No: LT455
Project: Kintore to Tealing 400kV Overhead Line

Title:
Hydrology Constraints for Location 4: Careston Alternative Alignments

Drawn by: HW Date: 13/09/2024

Figure: 5.11



Alignment

- Potential Alignment
- Alternative Alignment (please see labels on figure for names)
- - - Alternative Alignment Option Boundary
- - - Indicative Limits of Deviation (LoD)*
- o Indicative tower position

Properties

- Residential property

Land Use Constraints

National Forest Inventory

- Broadleaved; Mixed mainly broadleaved; Coppice; Coppice with standards; Young trees; Assumed woodland
- Conifer; Mixed mainly conifer
- Other

Local Path Networks

- Core path

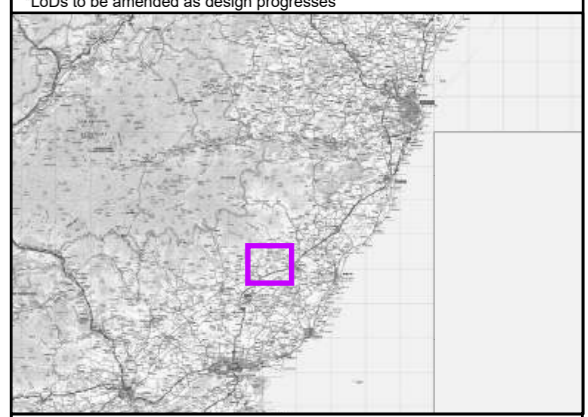
Land Capability for Agriculture

- 2 - Land capable of producing a wide range of crops.
- 3.1 - Land capable of producing consistently high yields of a narrow range of crops and/ or moderate yields of a wider range. Short grass leys are common.

Please see Figure 6.1 for detail of Location 4: Careston Alternative Alignments

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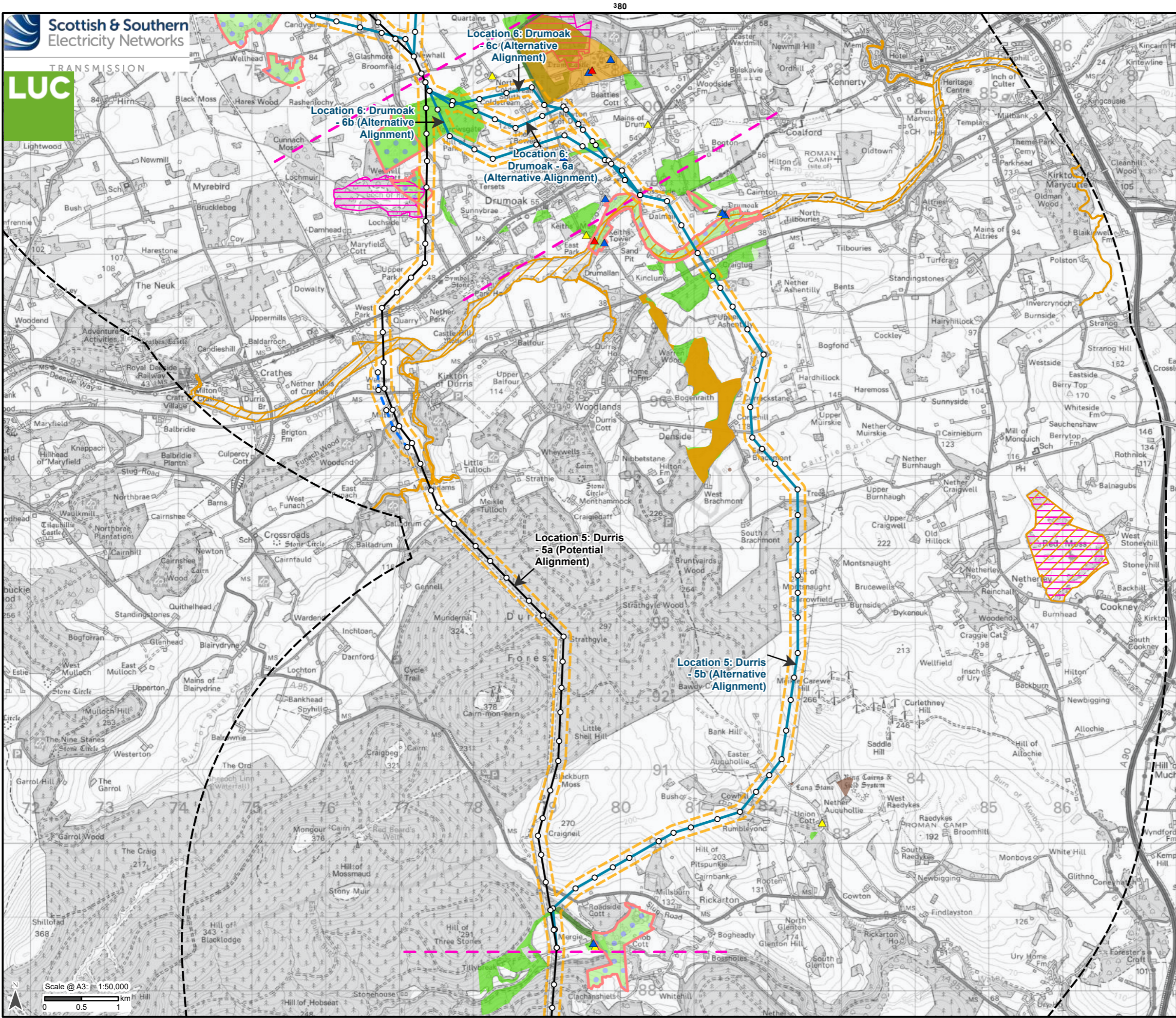
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 Project: Kintore to Tealing 400kV Overhead Line

Title:
 Land Use and Properties for Location 4: Careston Alternative Alignments

Drawn by: HW Date: 13/09/2024

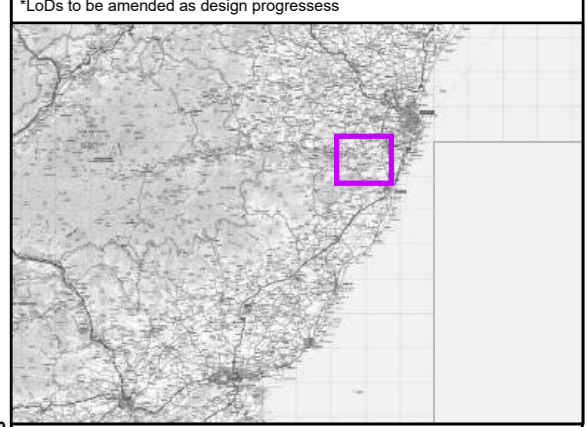
Figure: 5.12



Scottish & Southern
Electricity Networks

LUC

- Alignment**
- Potential Alignment
 - Alternative Alignment (please see labels on figure for names)
 - - - Realignment of existing OHL
 - - - Alternative Alignment Option Boundary
 - - - Indicative Limits of Deviation (LoD)*
 - Indicative tower position
 - 5km buffer
- Ecology Constraints Within 5km**
- ▨ Site of Special Scientific Interest
 - ▨ Special Area of Conservation
 - ▨ Local Nature Reserve
- Ecology Constraints Within 1km**
- Ancient Woodland Inventory
- Ancient (of semi-natural origin)
 - Long-Established (of plantation origin)
 - Other (on Roy map)
 - Local Nature Conservation Sites (LNCS)
- Cultural Heritage Constraints Within 1km**
- Listed Building
- ▲ A
 - ▲ B
 - ▲ C
 - Scheduled Monument
 - Gardens and Designed Landscapes
 - Non-Inventory Designed Landscapes (NIDLs)
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Project No: LT455
Project: Kintore to Tealing 400kV Overhead Line

Title:
Ecology and Cultural Heritage Constraints for Location 5: Durris Alternative Alignments

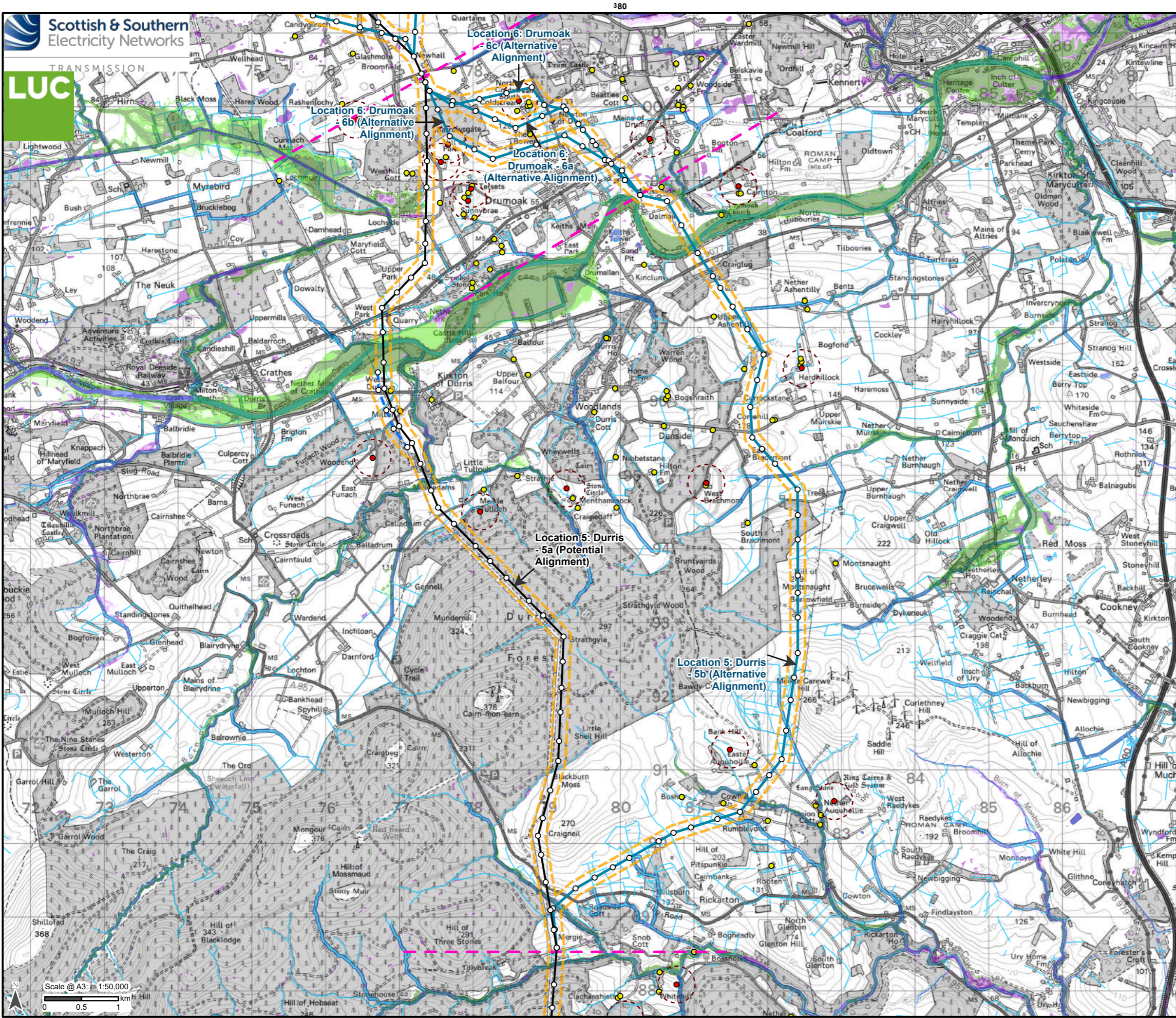
Drawn by: HW
Date: 13/09/2024

Figure: 5.13

Scale @ A3: 1:50,000

0 0.5 1 km

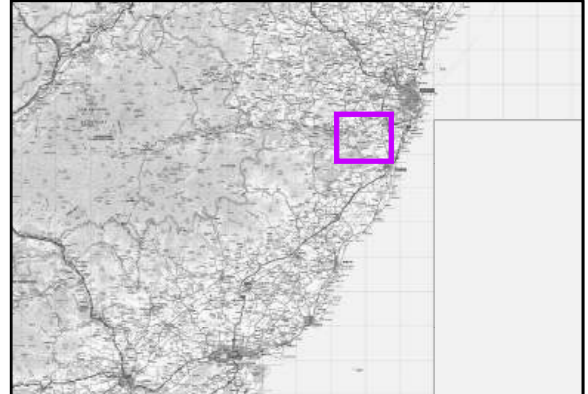
380000m.E



- Alignment**
- Potential Alignment
 - Alternative Alignment (please see labels on figure for names)
 - - - Realignment of existing OHL
 - - - Alternative Alignment Option Boundary
 - Indicative Limits of Deviation (LoD)*
 - Indicative tower position
- Hydrology Constraints**
- Flood Risk Management - Surface Low (1000 year)
 - Flood Risk Management - Surface Medium (200 year)
 - Flood Risk Management - Surface High (10 year)
 - Flood Risk Management - Rivers Low (1000 year)
 - Flood Risk Management - Rivers Medium (200 year)
 - Flood Risk Management - Rivers High (10 year)
 - Main watercourses (Open Rivers)
 - Surface Water Area
 - Surface Water Line
 - PWS property locations
 - PWS source locations where known (unverified)
 - - - PWS source buffer (250m)

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*LoDs to be amended as design progresses



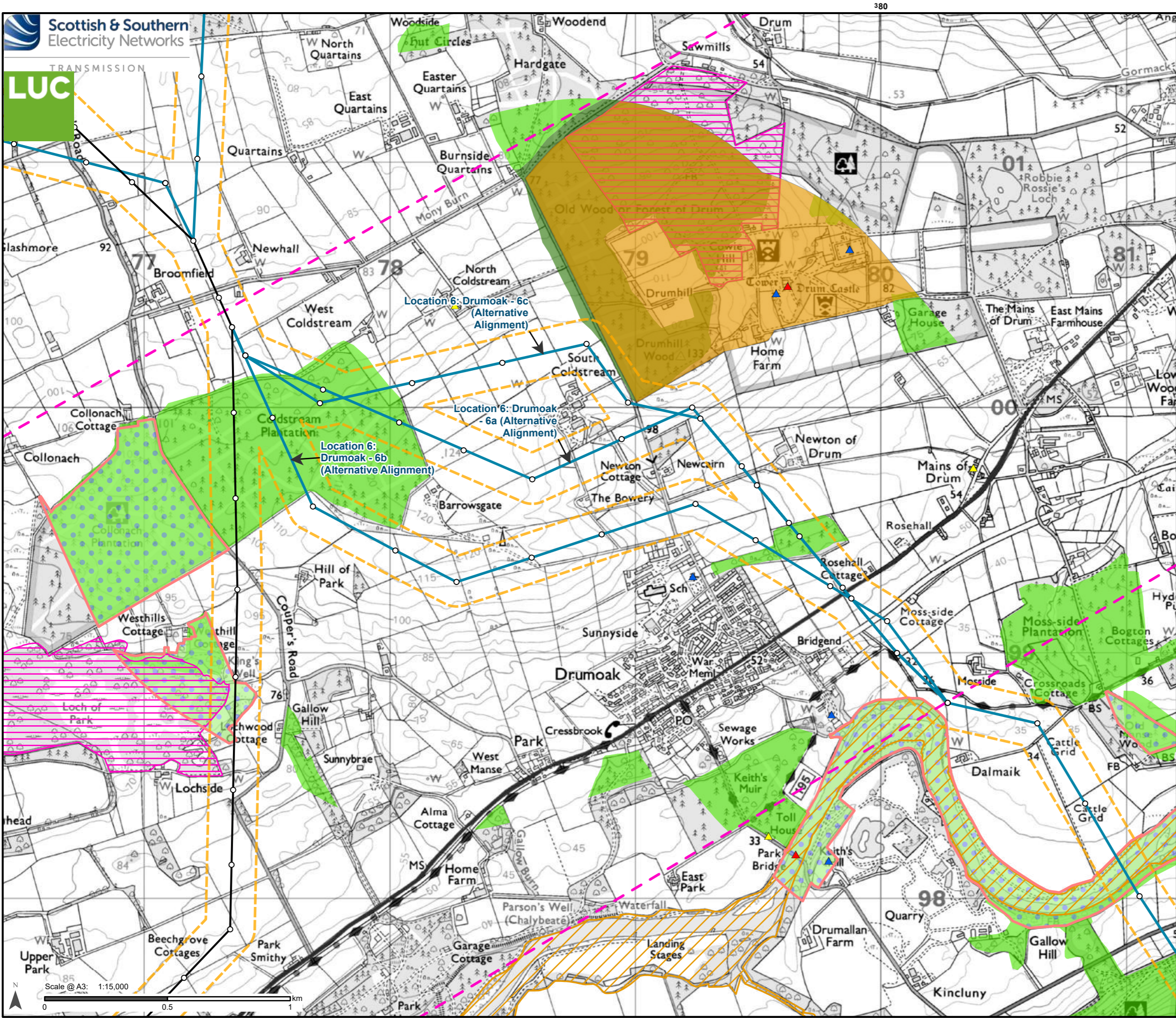
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 Project: Kintore to Tealing 400kV Overhead Line

Title:
 Hydrology Constraints for Location 5: Durris Alternative Alignments

Drawn by: HW Date: 13/09/2024

Figure: 5.14



- Alignment**
- Potential Alignment
 - Alternative Alignment (please see labels on figure for names)
 - - - Alternative Alignment Option Boundary
 - - - Indicative Limits of Deviation (LoD)*
 - Indicative tower position
 - 5km buffer
- Ecology Constraints Within 5km**
- ▭ Site of Special Scientific Interest
 - ▭ Special Area of Conservation
 - ▭ Local Nature Reserve
- Ecology Constraints Within 1km**
- Ancient Woodland Inventory
- ▭ Ancient (of semi-natural origin)
 - ▭ Long-Established (of plantation origin)
 - ▭ Local Nature Conservation Sites (LNCS)
- Cultural Heritage Constraints Within 1km**
- Listed Building
- ▲ A
 - ▲ B
 - ▲ C
 - ▭ Gardens and Designed Landscape

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*LoDs to be amended as design progresses



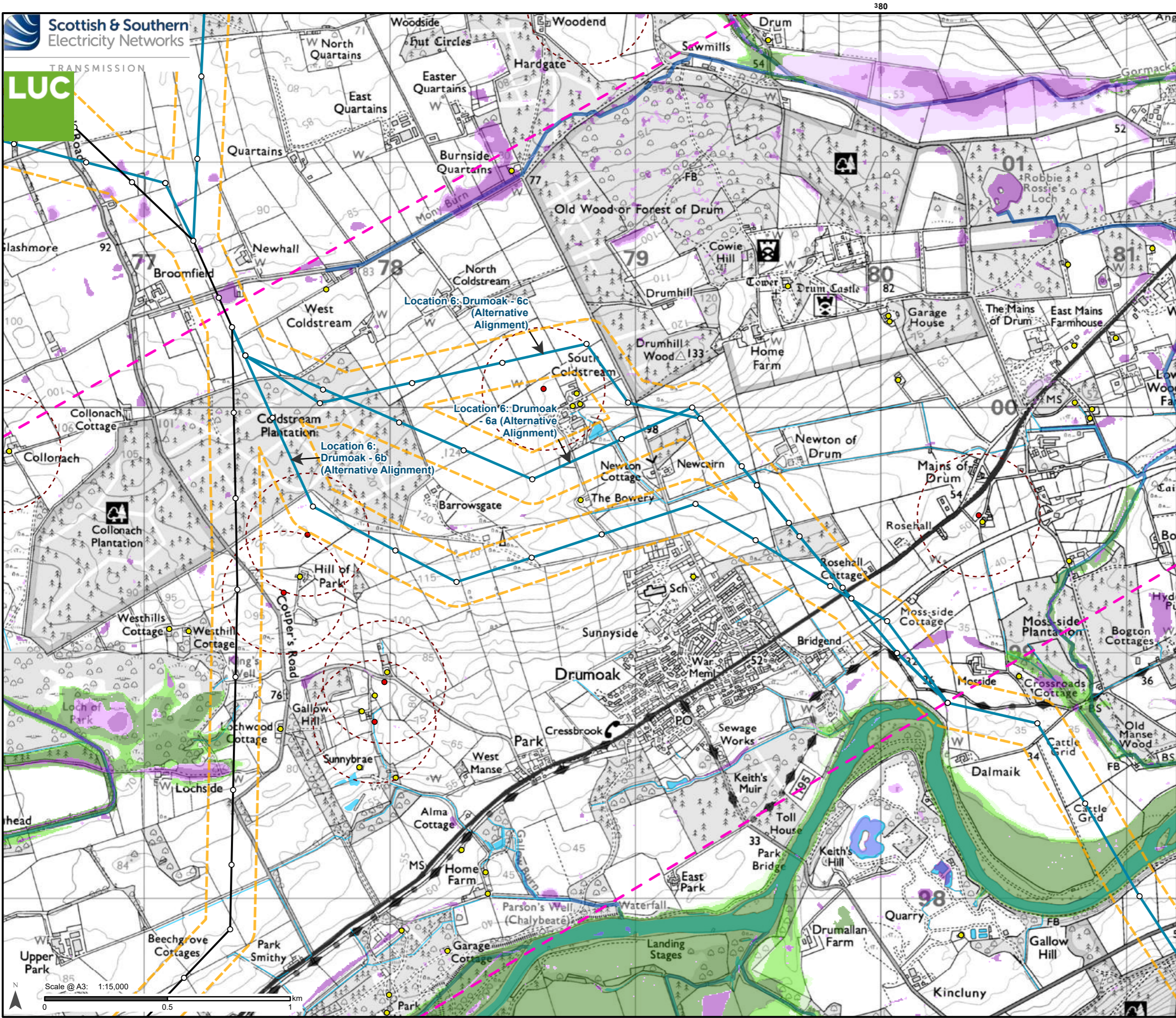
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Title:
 Ecology and Cultural Heritage Constraints for Location 6: North of Drumoak Alternative Alignments

Drawn by: HW Date: 13/09/2024

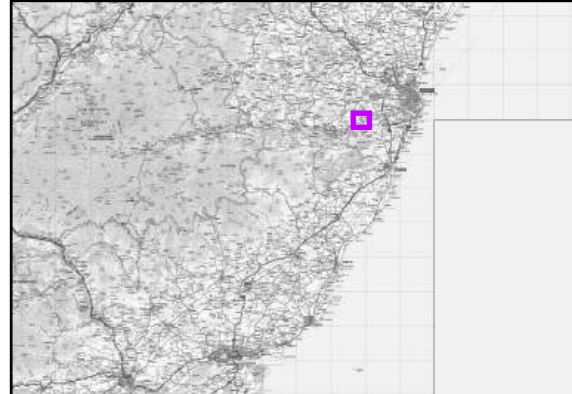
Figure: 5.16



- Alignment**
- Potential Alignment
 - Alternative Alignment (please see labels on figure for names)
 - - - Alternative Alignment Option Boundary
 - - - Indicative Limits of Deviation (LoD)*
 - Indicative tower position
- Hydrology Constraints**
- Light purple: Flood Risk Management - Surface Low (1000 year)
 - Medium purple: Flood Risk Management - Surface Medium (200 year)
 - Dark purple: Flood Risk Management - Surface High (10 year)
 - Light green: Flood Risk Management - Rivers Low (1000 year)
 - Medium green: Flood Risk Management - Rivers Medium (200 year)
 - Dark green: Flood Risk Management - Rivers High (10 year)
 - Blue line: Main watercourses (Open Rivers)
 - Light blue area: Surface Water Area
 - Light blue line: Surface Water Line
 - Yellow dot: PWS property locations
 - Red dot: PWS source locations where known (unverified)
 - Dashed red line: PWS source buffer (250m)

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Title:
Hydrology Constraints for Location 6: North of Drumoak Alternative Alignments

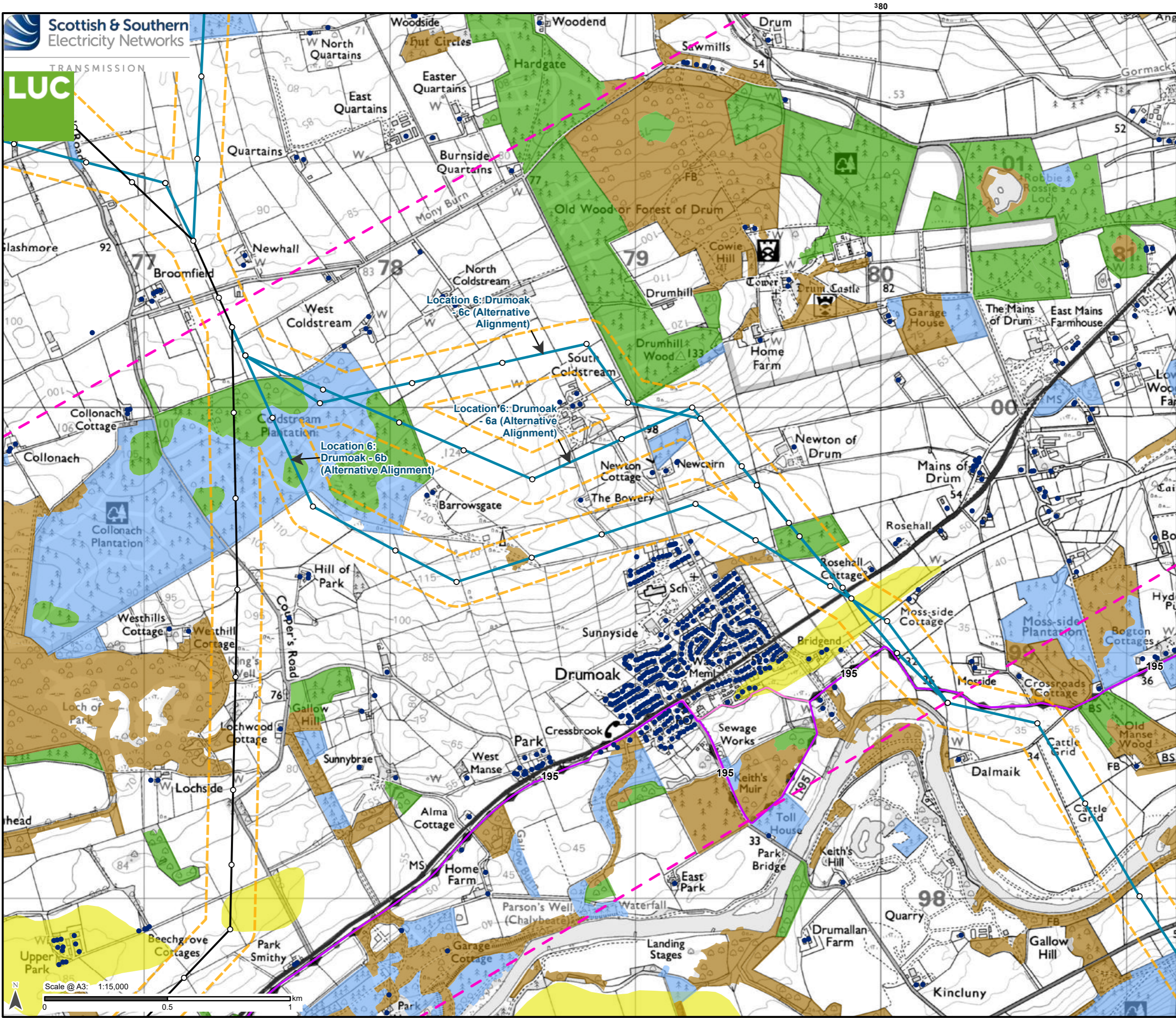
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Figure: 5.17

Scale @ A3: 1:15,000



380000m.E



- Alignment**
- Potential Alignment
 - Alternative Alignment (please see labels on figure for names)
 - - - Alternative Alignment Option Boundary
 - - - Indicative Limits of Deviation (LoD)*
 - Indicative tower position
- Properties**
- Residential property
- Land Use Constraints**
- National Forest Inventory
- Broadleaved; Mixed mainly broadleaved; Coppice; Coppice with standards; Young trees; Assumed woodland
 - Conifer; Mixed mainly conifer
 - Other
- Cycle Route
- National Cycle Network (NCN)
- Local Path Networks
- Core path
- Land Capability for Agriculture
- 3.1 - Land capable of producing consistently high yields of a narrow range of crops and/ or moderate yields of a wider range. Short grass leys are common.

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*LoDs to be amended as design progresses



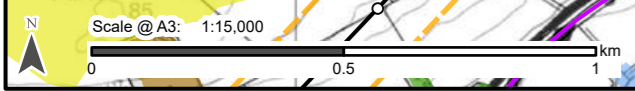
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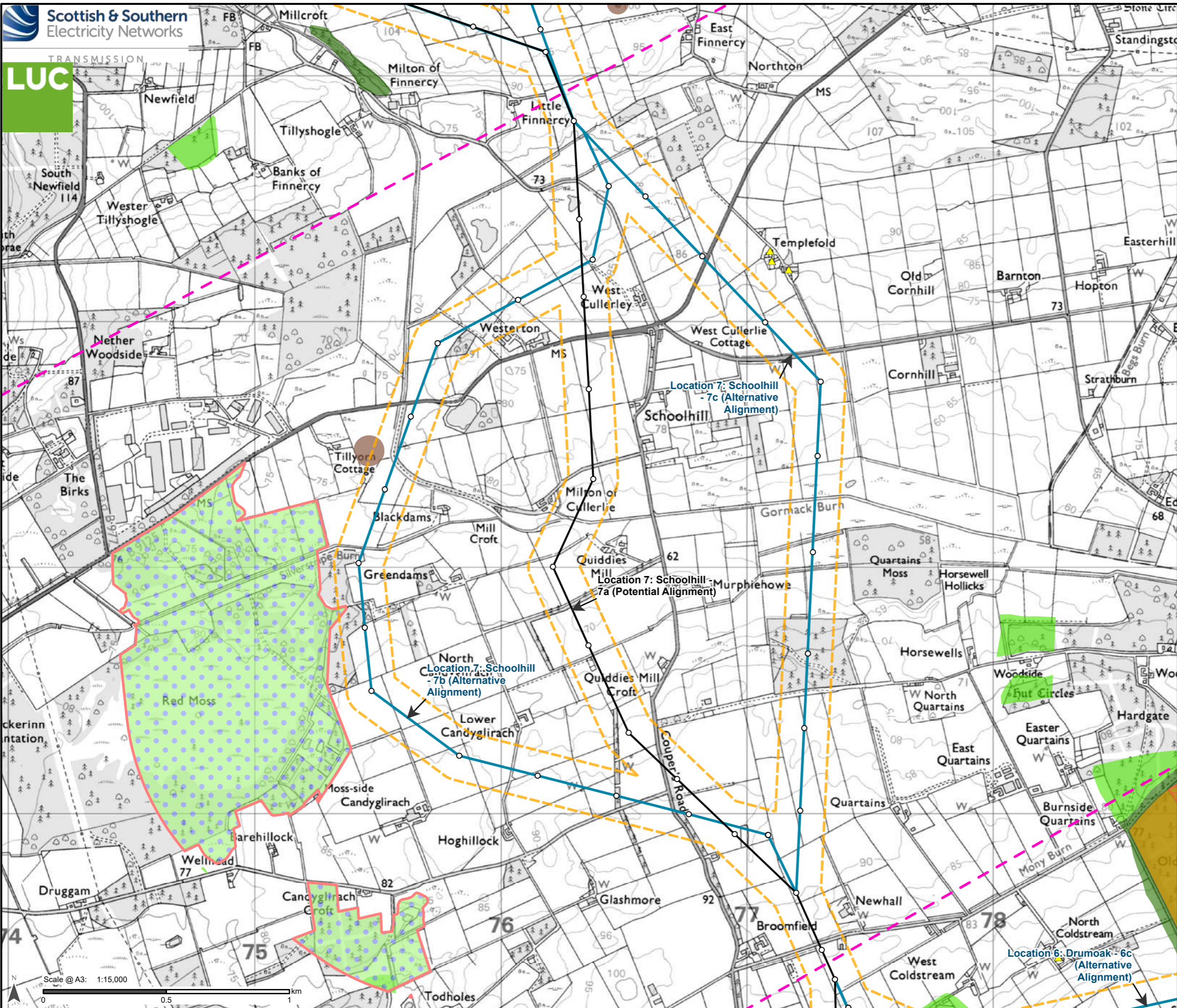
Title:
Land Use and Properties for
Location 6: North of Drumoak Alternative Alignments

Drawn by: HW Date: 13/09/2024

Figure: 5.18



380000m.E



Alignment

- Potential Alignment
- Alternative Alignment (please see labels on figure for names)
- - - Alternative Alignment Option Boundary
- - - Indicative Limits of Deviation (LoD)*
- Indicative tower position
- 5km buffer

Ecology Constraints Within 5km

- Site of Special Scientific Interest
- Local Nature Reserve

Ecology Constraints Within 1km

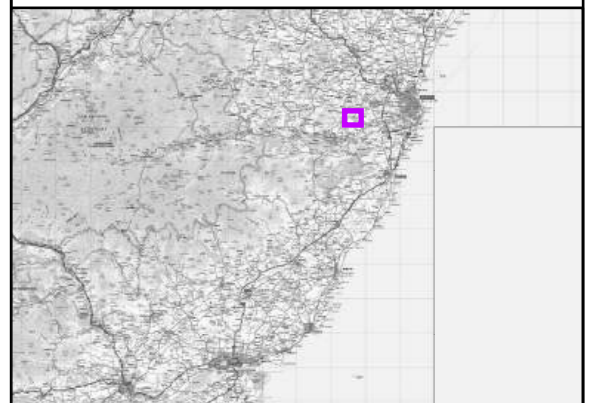
- Ancient Woodland Inventory
- Ancient (of semi-natural origin)
- Long-Established (of plantation origin)
- Local Nature Conservation Sites (LNCS)

Cultural Heritage Constraints Within 1km

- Listed Building
- ▲ C
- Scheduled Monument
- Gardens and Designed Landscape

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*LoDs to be amended as design progresses



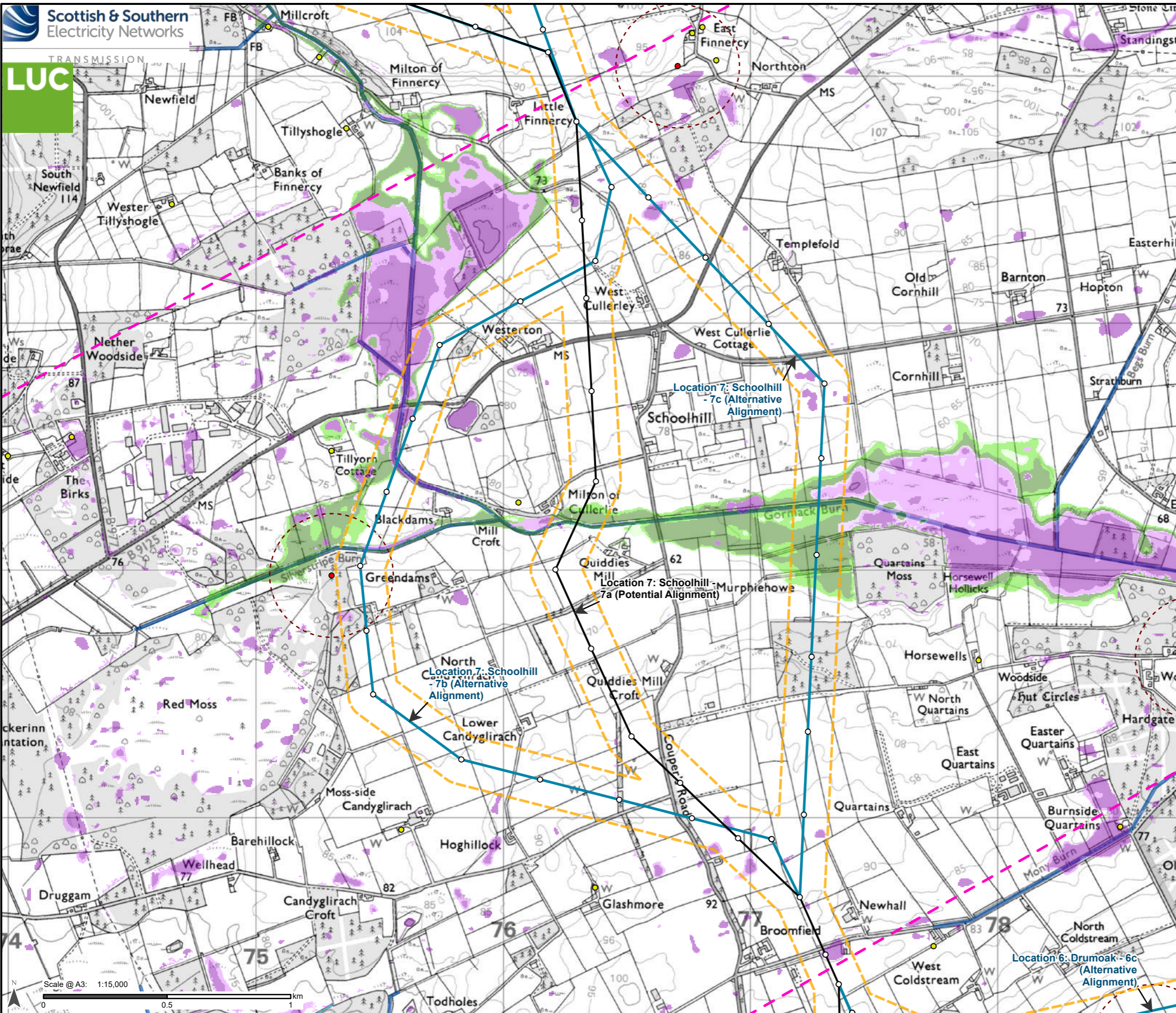
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Project No: LT455
Project: Kintore to Tealing 400kV Overhead Line

Title:
Ecology and Cultural Heritage Constraints for Location 7: Schoolhill Alternative Alignments

Drawn by: HW Date: 13/09/2024

Figure: 5.19



Alignment

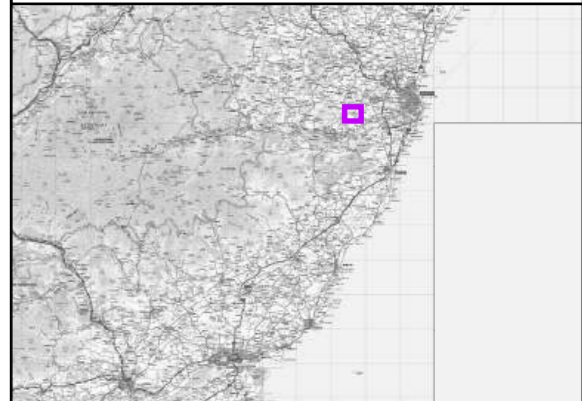
- Potential Alignment
- Alternative Alignment (please see labels on figure for names)
- - - Alternative Alignment Option Boundary
- - - Indicative Limits of Deviation (LoD)*
- o Indicative tower position

Hydrology Constraints

- Light Purple: Flood Risk Management - Surface Low (1000 year)
- Medium Purple: Flood Risk Management - Surface Medium (200 year)
- Dark Purple: Flood Risk Management - Surface High (10 year)
- Light Green: Flood Risk Management - Rivers Low (1000 year)
- Medium Green: Flood Risk Management - Rivers Medium (200 year)
- Dark Green: Flood Risk Management - Rivers High (10 year)
- Blue Line: Main watercourses (Open Rivers)
- Light Blue Line: Surface Water Line
- Yellow Dot: PWS property locations
- Red Dot: PWS source locations where known (unverified)
- Dashed Red Line: PWS source buffer (250m)

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*LoDs to be amended as design progresses



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Project No: LT455

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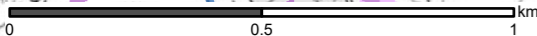
Title:
Hydrology Constraints for Location 7: Schoolhill
Alternative Alignments

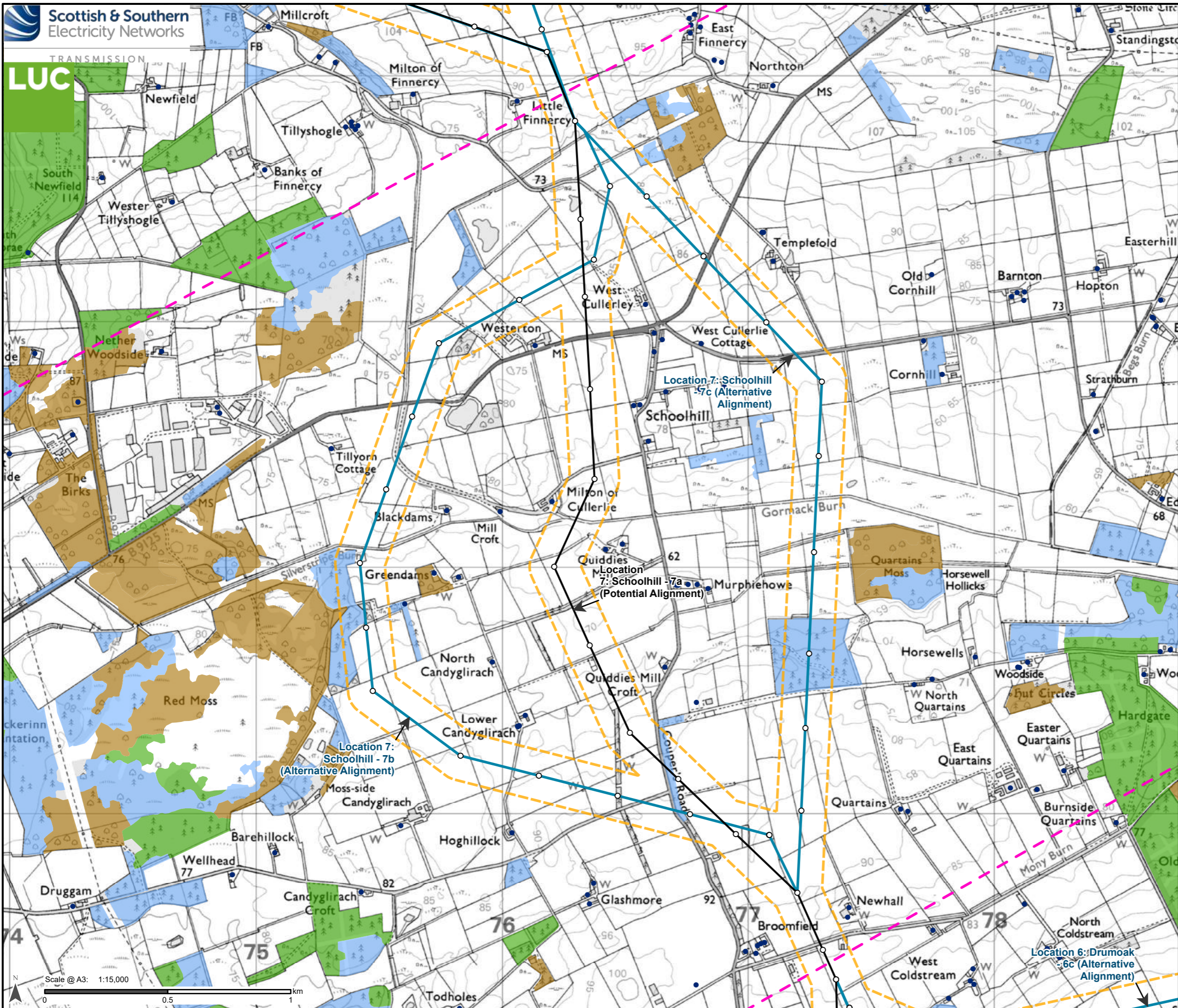
Drawn by: HW

Date: 13/09/2024

Figure: 5.20

Scale @ A3: 1:15,000





- Alignment**
- Potential Alignment
 - Alternative Alignment (please see labels on figure for names)
 - - - Alternative Alignment Option Boundary
 - - - Indicative Limits of Deviation (LoD)*
 - Indicative tower position
- Properties**
- Residential property
- Land Use Constraints**
- National Forest Inventory
- Broadleaved; Mixed mainly broadleaved; Coppice; Coppice with standards; Young trees; Assumed woodland
 - Conifer; Mixed mainly conifer
 - Other

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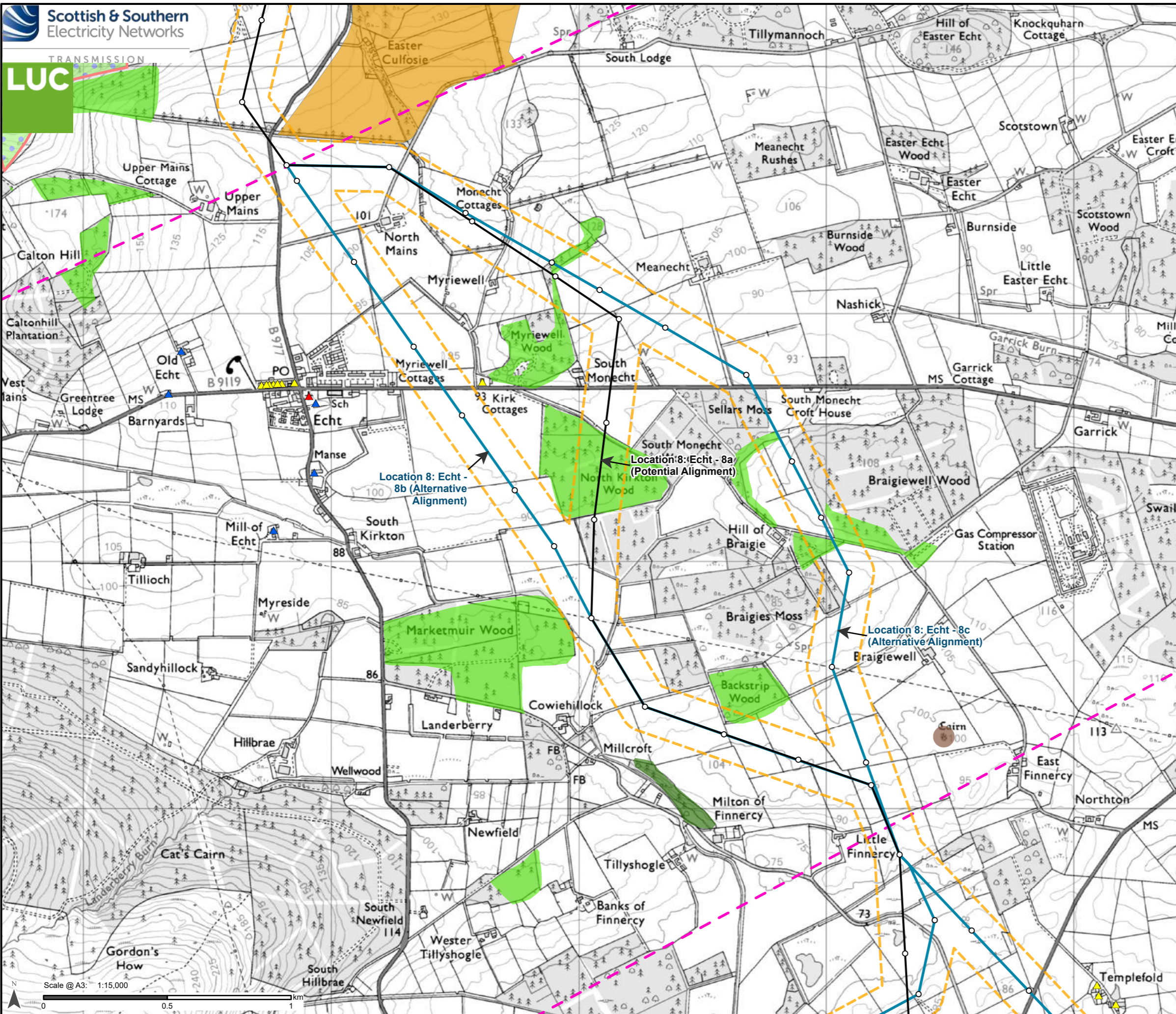
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Project No: LT455
Project: Kintore to Tealing 400kV Overhead Line

Title:
Land Use and Properties for
Location 7: Schoolhill Alternative Alignments

Drawn by: HW Date: 13/09/2024

Figure: 5.21



Alignment

- Potential Alignment
- Alternative Alignment (please see labels on figure for names)
- - - Alternative Alignment Option Boundary
- - - Indicative Limits of Deviation (LoD)*
- Indicative tower position
- 5km buffer

Ecology Constraints Within 5km

- Local Nature Reserve

Ecology Constraints Within 1km

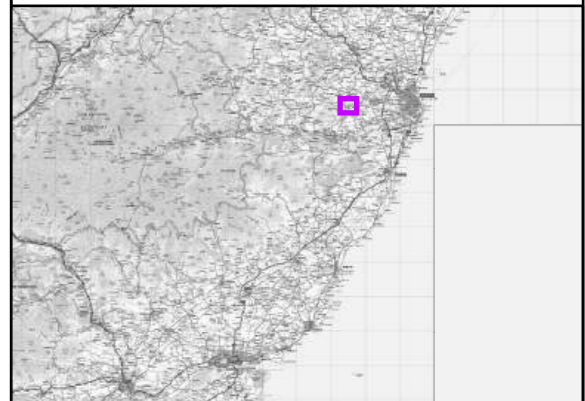
- Ancient Woodland Inventory
- Ancient (of semi-natural origin)
 - Long-Established (of plantation origin)
 - Local Nature Conservation Sites (LNCS)

Cultural Heritage Constraints Within 1km

- Listed Building
- ▲ A
 - ▲ B
 - ▲ C
- Scheduled Monument
- Gardens and Designed Landscape

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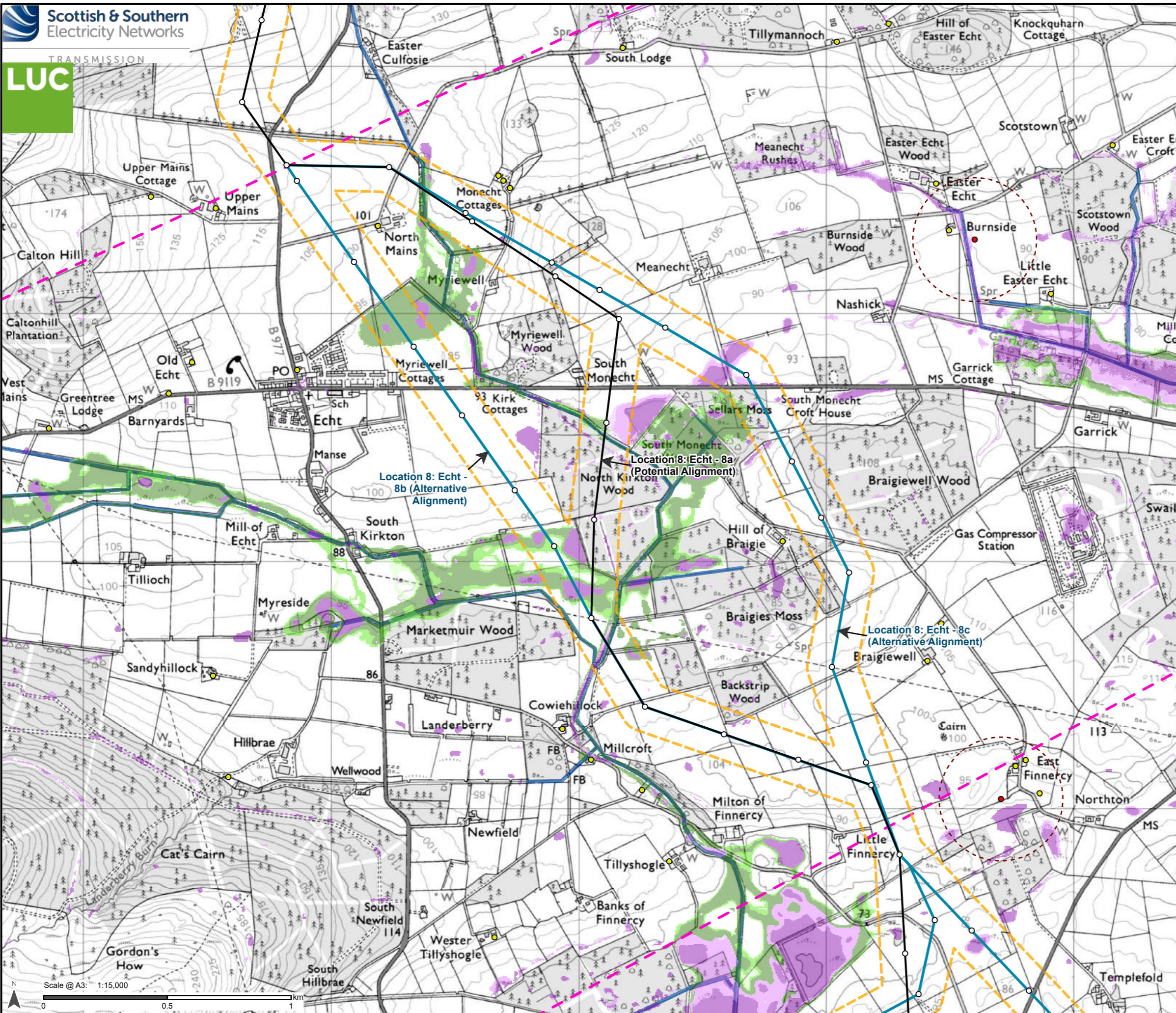
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Project No: LT455
Project: Kintore to Tealing 400kV Overhead Line

Title:
Ecology and Cultural Heritage Constraints for Location 8: Echt Alternative Alignments

Drawn by: HW Date: 13/09/2024

Figure: 5.22



Alignment

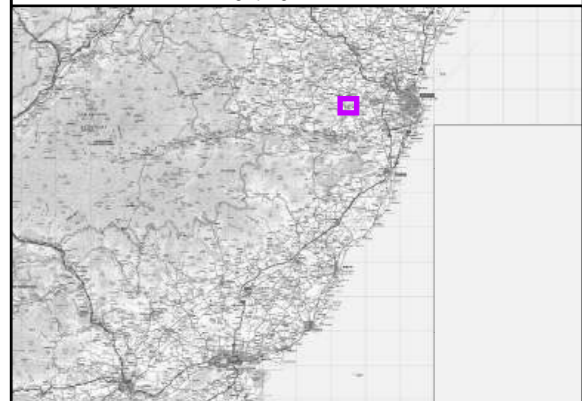
- Potential Alignment
- Alternative Alignment (please see labels on figure for names)
- - - Alternative Alignment Option Boundary
- - - Indicative Limits of Deviation (LoD)*
- Indicative tower position

Hydrology Constraints

- Light purple box: Flood Risk Management - Surface Low (1000 year)
- Medium purple box: Flood Risk Management - Surface Medium (200 year)
- Dark purple box: Flood Risk Management - Surface High (10 year)
- Light green box: Flood Risk Management - Rivers Low (1000 year)
- Medium green box: Flood Risk Management - Rivers Medium (200 year)
- Dark green box: Flood Risk Management - Rivers High (10 year)
- Blue line: Main watercourses (Open Rivers)
- Yellow dot: PWS property locations
- Red dot: PWS source locations where known (unverified)
- Dashed red line: PWS source buffer (250m)

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Project No: LT455

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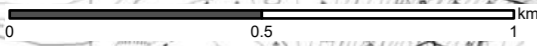
Title:
Hydrology Constraints for Location 8: Eicht
Alternative Alignments

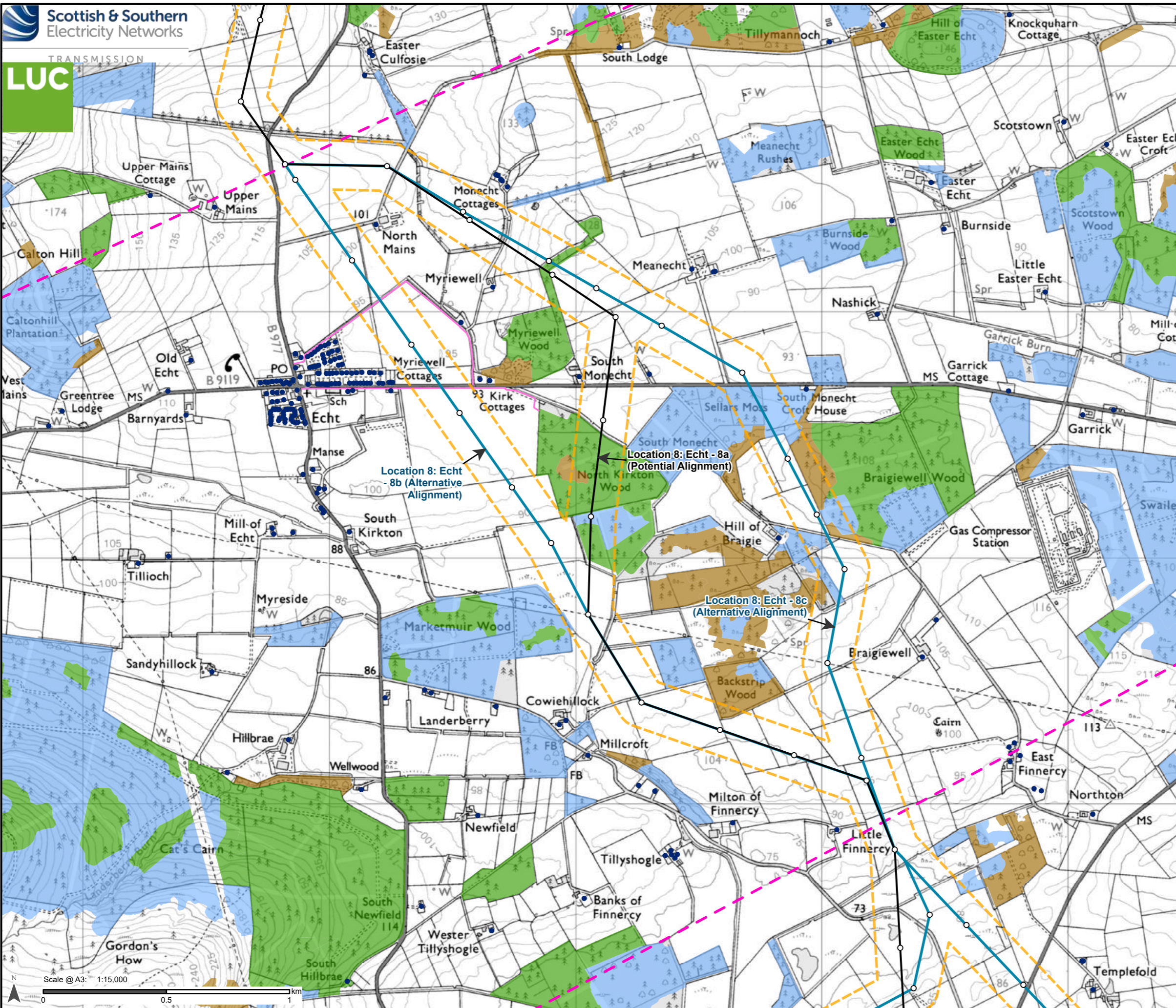
Drawn by: HW

Date: 13/09/2024

Figure: 5.23

Scale @ A3: 1:15,000





Alignment

- Potential Alignment
- Alternative Alignment (please see labels on figure for names)
- - - Alternative Alignment Option Boundary
- - - Indicative Limits of Deviation (LoD)*
- Indicative tower position

Properties

- Residential property

Land Use Constraints

National Forest Inventory

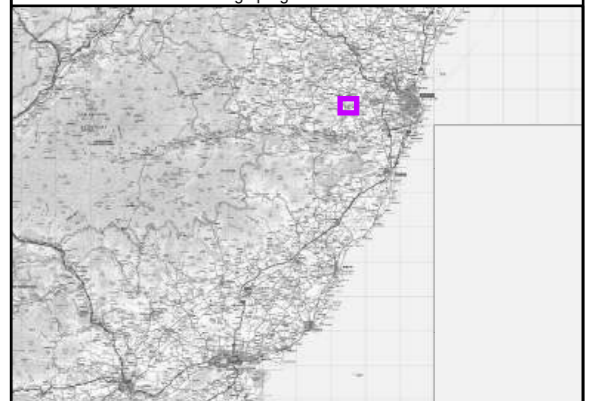
- Broadleaved; Mixed mainly broadleaved; Coppice; Coppice with standards; Young trees; Assumed woodland
- Conifer; Mixed mainly conifer
- Other

Local Path Networks

- Core path

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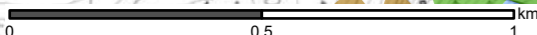
Title:
Land Use and Properties for
Location 8: Echt Alternative Alignments

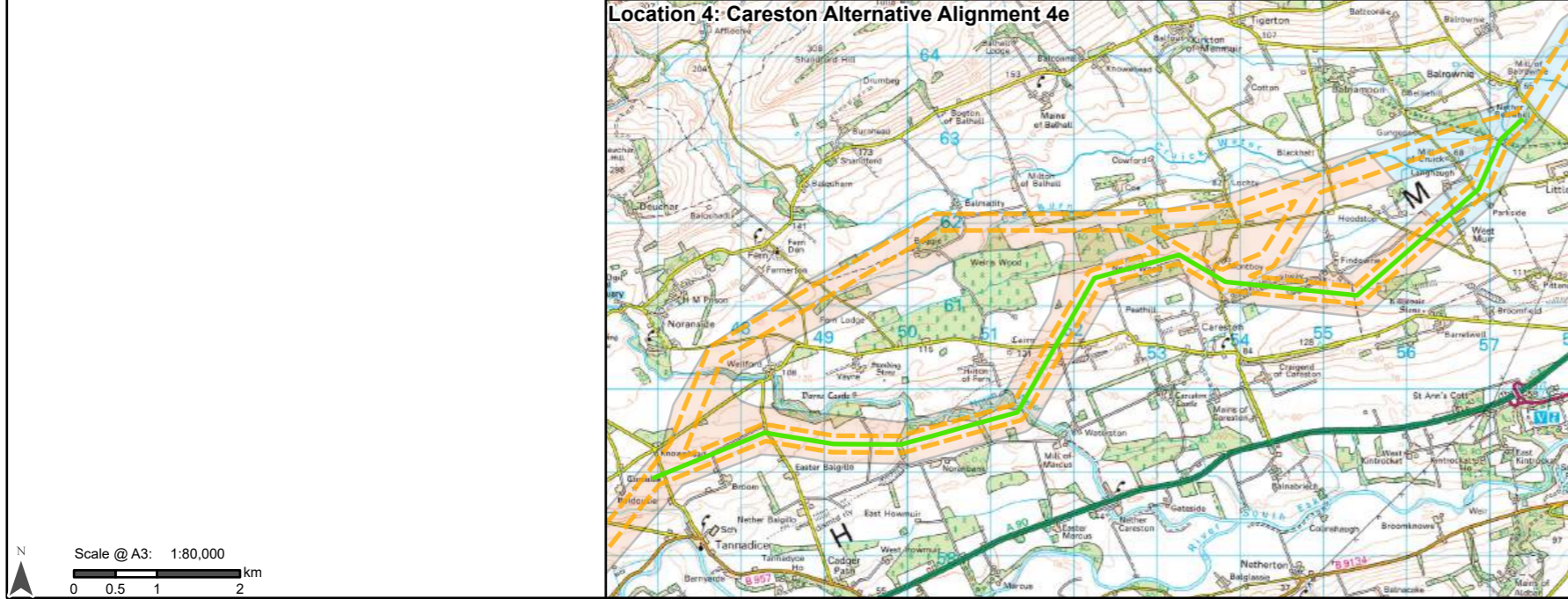
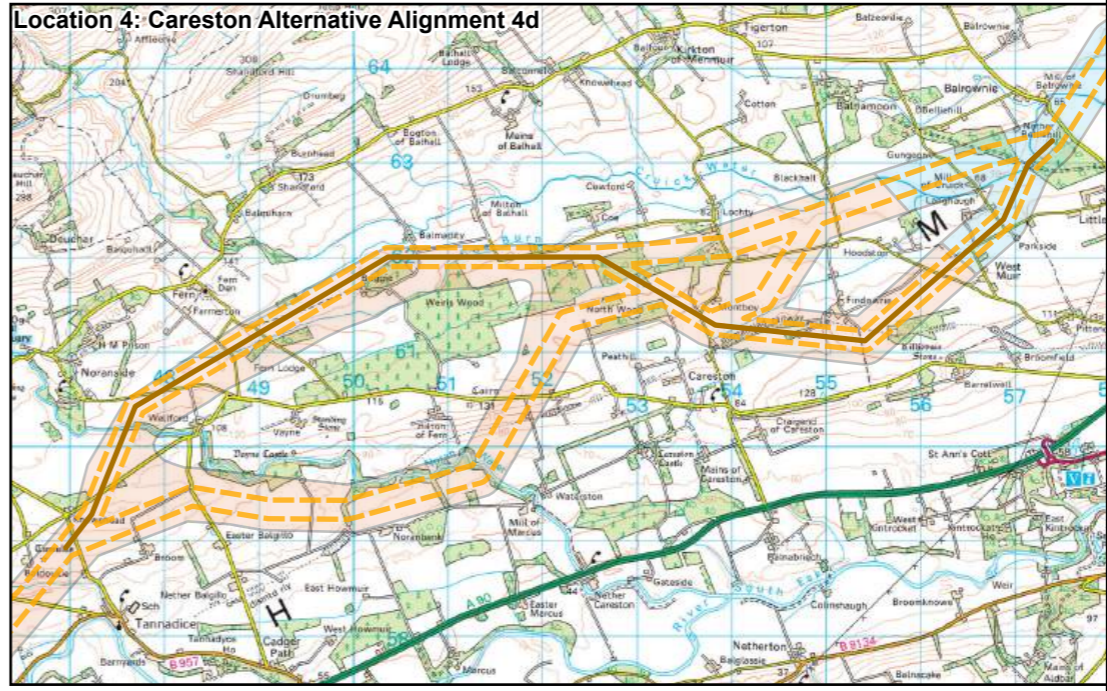
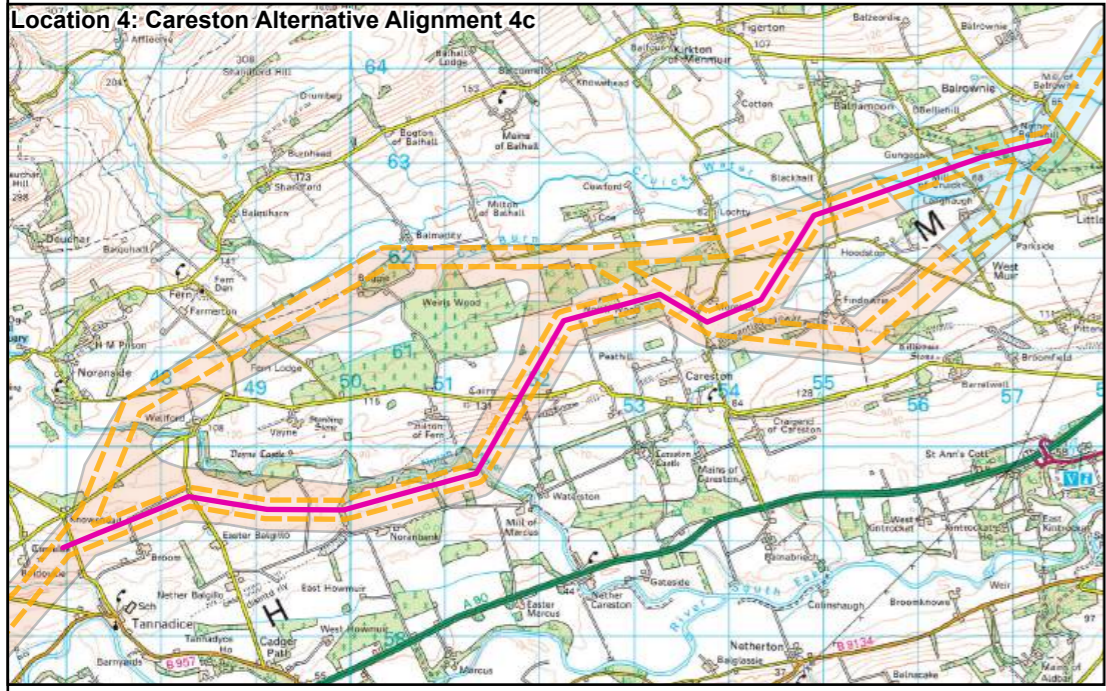
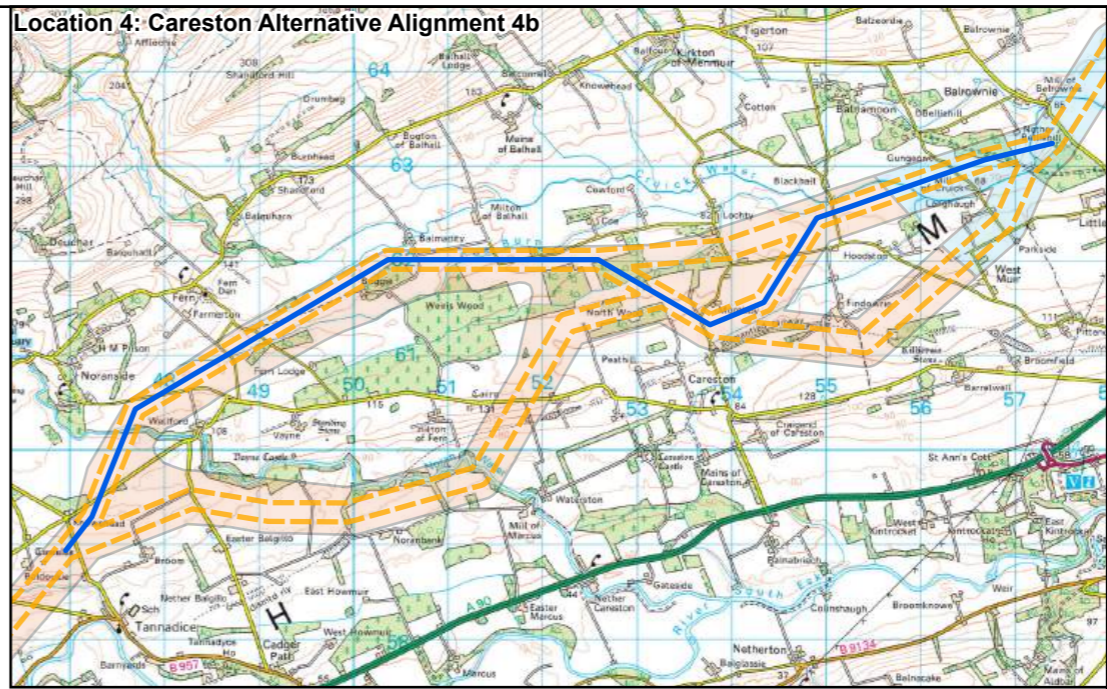
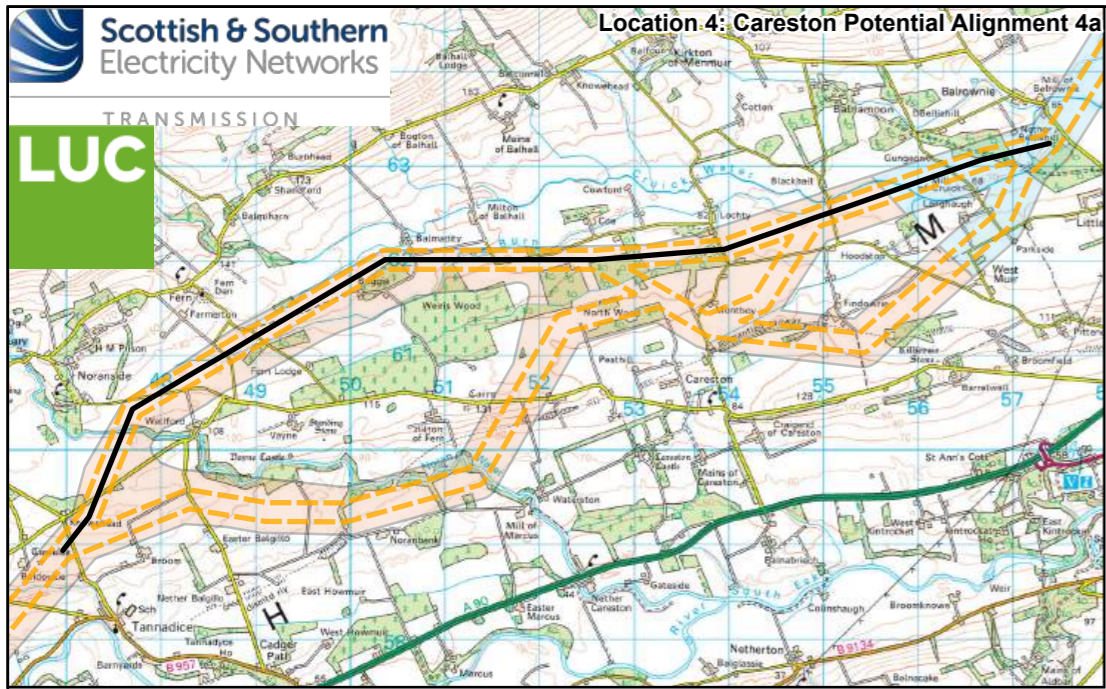
Drawn by: HW

Date: 13/09/2024

Figure: 5.24

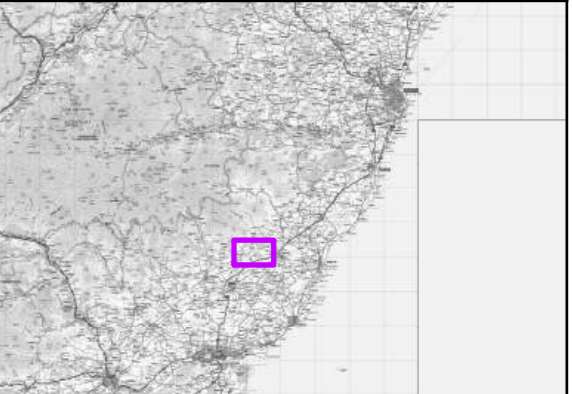
Scale @ A3: 1:15,000





- Alignment**
- Careston - Potential Alignment
 - Careston - Alternative Alignment 4b
 - Careston - Alternative Alignment 4c
 - Careston - Alternative Alignment 4d
 - Careston - Alternative Alignment 4e
 - - - Indicative Limits of Deviation (LoD)*
- Refined Route**
- B1.1
 - C1

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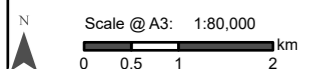
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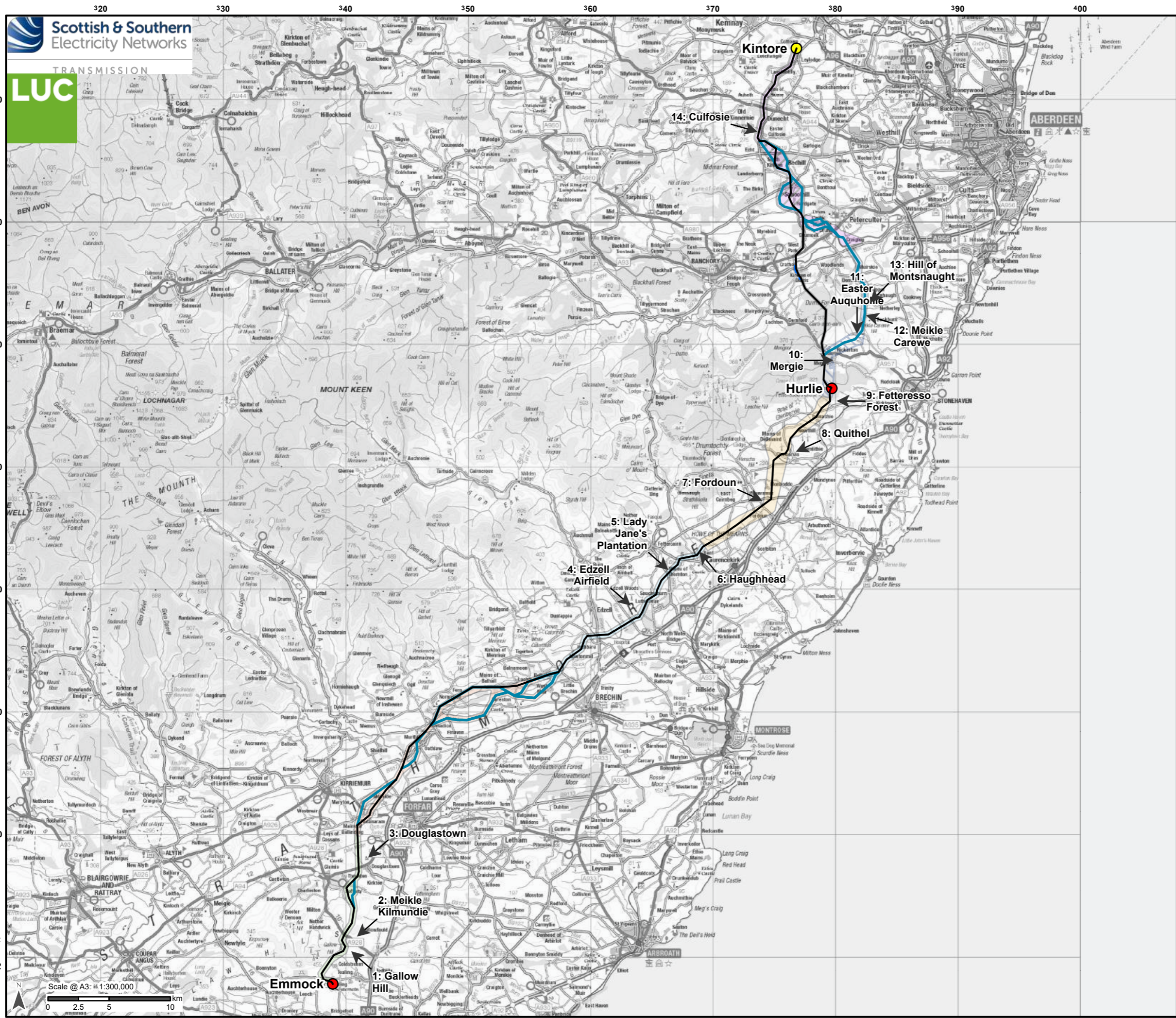
Project No: LT455
Project: Kintore to Tealing 400kV Overhead Line

Title:
Location 4: Careston Alternative Alignments Detailed Plan

Drawn by: CW Date: 17/09/2024

Figure: 6.1





- Alignment**
- Potential Alignment
 - Alternative Alignment
 - Realignment of existing OHL
 - ➔ Indicative Design Development Location
- Substations**
- Proposed substation
 - Existing Kintore substation
- Refined Route**
- A1
 - B1.1
 - C1
 - E1
 - F2
- Proposed Route**
- D4
 - E2
 - F1.3
- Additional options (identified following March 2024 consultation)**
- E4
 - F3

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Project No: LT455
Project: Kintore to Tealing 400kV Overhead Line

Title:
Design Development Locations

Drawn by: HW Date: 13/09/2024

Figure: J1.1