



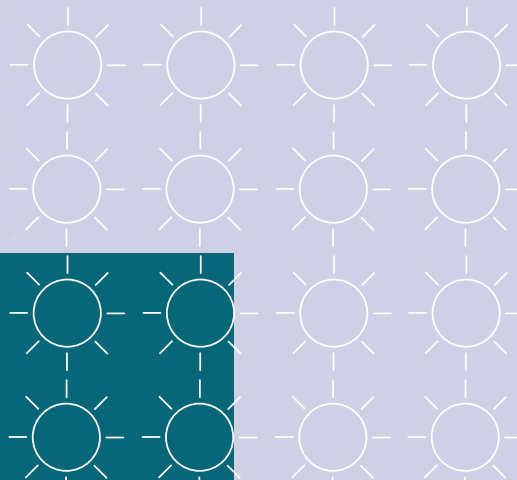
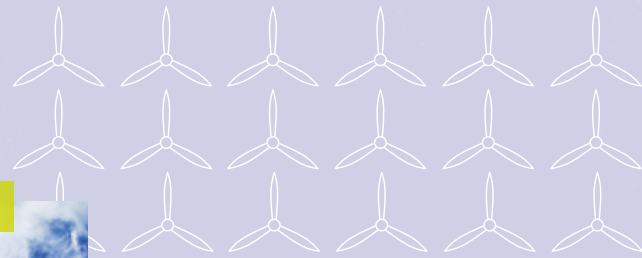
Scottish & Southern  
Electricity Networks

TRANSMISSION

# Emmock 400kV Substation

Pre-application consultation  
feedback event

June 2024



[ssen-transmission.co.uk/emmock](https://ssen-transmission.co.uk/emmock)

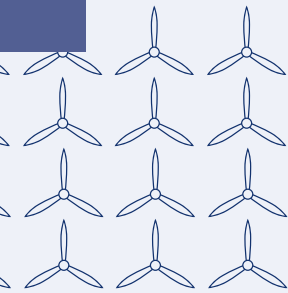
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## The consultation events will be taking place on:

5 June 2024 – Tealing Village Hall, Tealing – 2pm-7pm

6 June 2024 - Tealing Village Hall, Tealing - 2-7pm



# Powering change together



**The time has come to further enhance Scotland’s energy infrastructure, providing power for future generations as we move towards net zero.**

The shift to a cleaner, more sustainable future is about more than climate change. It’s about ensuring future generations have the same opportunities to thrive as we have all had.

Countries around the world are investing in their energy infrastructure to support the demands of modern economies and meet net zero targets. The UK is leading the way in building a modern, sustainable energy system for the future.

### We all have a part to play

When it comes to net zero, we have to be in it together. The UK and Scottish Governments have ambitious net zero targets, and we’re playing our part in meeting them.

We work closely with National Grid Electricity System Operator to connect vast renewable energy resources - harnessed by solar, wind, hydro and marine generation - to areas of demand across the country. Scotland is playing a big role in meeting this demand, exporting two-thirds of power generated in our network.

**But there’s more to be done. By 2050, the north of Scotland is predicted to contribute over 50GW of low carbon energy to help deliver net zero. Today, our region has around 9GW of renewable generation connected to the network.**

At SSEN Transmission, it is our role to build the energy system of the future.

**We’re investing £20 billion into our region’s energy infrastructure this decade, powering more than ten million UK homes and 20,000 jobs, 9,000 of which will be here in Scotland.**



### Find out more

Scan the QR code with your smartphone to find out more about how these policies have been assessed and determined.

### Who we are

We’re responsible for maintaining and investing in the electricity transmission network in the north of Scotland. We’re part of SSE plc, one of the world’s leading energy companies with a rich heritage in Scotland that dates back more than 80 years. We are also closely regulated by the GB energy regulator Ofgem, who determines how much revenue we are allowed to earn for constructing, maintaining and renovating our transmission network.

### What we do

We manage the electricity transmission network across our region which covers a quarter of the UK’s landmass, crossing some of the country’s most challenging terrain. We connect renewable energy sources to our network in the north of Scotland and then transport it to where it needs to be. From underground subsea cables and overhead lines (OHL) to electricity substations, our network keeps your lights on all year round.

### Working with you

We understand that the work we do can have an impact on our host communities. So we’re committed to minimising our impacts and maximising all the benefits that our local developments can bring to your area.

We’re regularly assessed by global sustainability consultancy AccountAbility for how we engage with communities. That means we provide all the information you need to know about our plans and how they will impact communities like yours. We want to hear people’s views, concerns, or ideas and harness local knowledge so that our work benefits their communities: today and long into the future. You can share your views with us at: [ssen-transmission.co.uk/talk-to-us/contact-us](https://ssen-transmission.co.uk/talk-to-us/contact-us)



# The Pathway to 2030

Building the energy system of the future will require a delivery of significant infrastructure over the next few years. In partnership with the UK and Scottish Governments, we're committed to meeting our obligation of connecting new, renewable energy to where it's needed by 2030.

## Achieving net zero

By 2030, both the UK and Scottish Governments are targeting a big expansion in offshore wind generation of 50GW and 11GW respectively. The Scottish Government has also set ambitious targets for an additional 12GW of onshore wind by 2030.

Across Great Britain, including the north of Scotland, there needs to be a significant increase in the capacity of the onshore electricity transmission infrastructure to deliver these 2030 targets and a pathway to net zero.

## Securing our energy future

And it's not just about net zero. It's also about building a homegrown energy system, so that geopolitical turmoil around the world doesn't severely impact the UK and push up energy prices. The UK Government's British Energy Security Strategy further underlines the need for this infrastructure, setting out plans to accelerate homegrown power for greater energy independence. The strategy aims to reduce the UK's dependence on and price exposure to global gas wholesale markets through the deployment of homegrown low carbon electricity generation supported by robust electricity network infrastructure.

## Meeting our 2030 targets

In July 2022, National Grid, the Electricity System Operator (ESO), published the Pathway to 2030 Holistic Network Design (HND). This set out the blueprint for the onshore and offshore transmission infrastructure that's required to support the forecasted growth in the UK's renewable electricity. It's an ambitious plan that will help the UK achieve net zero.

## What does this mean for the East Coast of Scotland?

The East of Scotland will play a key role in meeting these goals. The extensive studies that informed 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 400kV connection between these locations to enable the significant capability needed to take power from onshore and large scale offshore renewable generation, connecting on the East Coast of Scotland before transporting power to areas of demand.

As part of these plans, we're proposing to build a new 400kV OHL between Kintore and Tealing. This also requires two new 400kV substations to be constructed in Fetteresso Forest and at Tealing to enable future connections and export routes to areas of demand.

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 Tealing 400kV site.

These five projects, collectively called Kintore to Tealing 400kV projects, are seen as critical to enable the delivery of the UK and Scottish Government's targets.

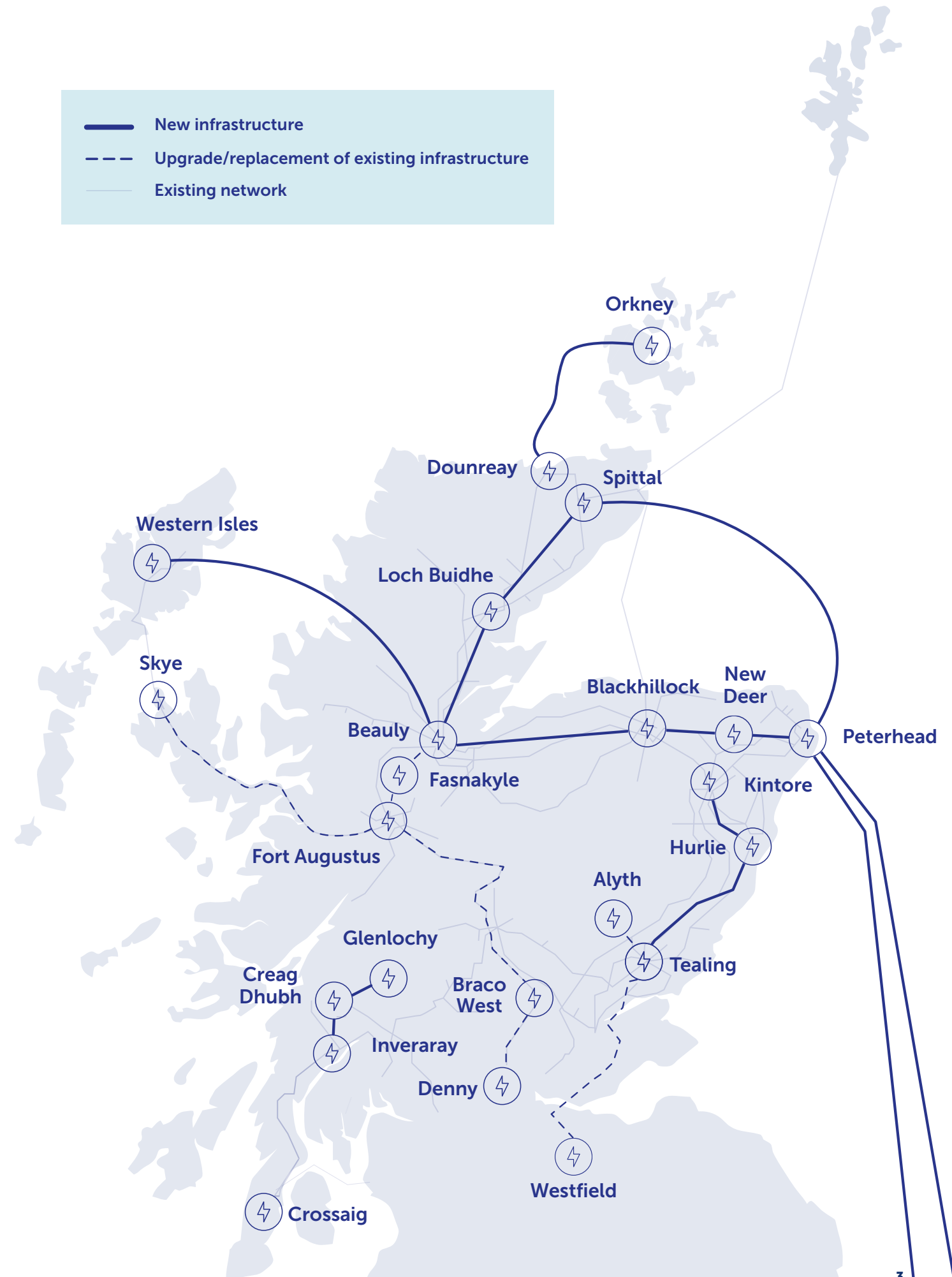
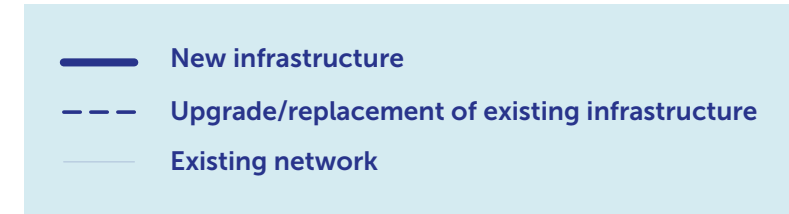
These five projects:

- Kintore - Tealing 400kV OHL
- Hurlie 400kV substation
- Emmock 400kV substation
- Alyth - Tealing 400kV upgrade
- Tealing - Westfield 400kV upgrade

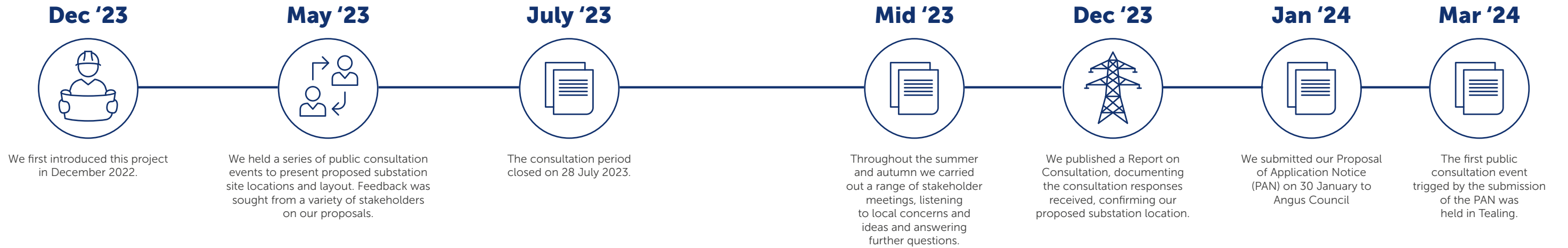
## Future network investment requirements

Our 2030 targets are the first step on the transition to net zero. The UK Government has a target to decarbonise our electricity system by 2035 and fully decarbonise our economy by becoming net zero by 2050, with the Scottish Government committing to net zero five years earlier, by 2045. To achieve these targets, further investment in new low carbon electricity generation and the enabling electricity transmission network infrastructure will be required

The next stage of strategic network planning across Great Britain has now been outlined in the independent Electricity System Operator, National Grid ESO's, 'Beyond 2030' report, published in March this year. For the north of Scotland, the ESO's plan recommends several new and upgraded onshore and offshore reinforcements that the ESO has assessed are required to help deliver net zero targets. These projects, which will be subject to extensive public consultation, are at the very early stages of development and further details will be set out in due course.



# The story so far



## Help shape our plans

The work we have planned is significant and has the potential to deliver benefits in your community, Scotland, and beyond. Yet we know that achieving our goals will require a lot of work that will impact your lives. That's why we want to work with you every step of the way throughout the planning and delivery stages of these essential and ambitious works.

We're committed to delivering a meaningful consultation process that actively seeks the views of everyone affected by our plans. That means making our plans clear and easily accessible, so that you can give us input throughout each stage of the development process.

Throughout the consultation, we'll present our approach to developing the project, including changes made since we last consulted with you. We will also provide some visualisations and maps to show you where everything will be located and to allow you to see what the proposed substation will look like. These will all also be available to view and download from our project website.

## Who we are consulting with

As well as communities, we are keen to hear feedback from a broad range of other stakeholders including but not limited to landowners, businesses, non-statutory consultees, and statutory consultees such as Angus Council, local community councils, NatureScot, Scottish Environment Protection Agency (SEPA), and Historic Environment Scotland (HES).



## What we are seeking views on

We want you to share your thoughts and opinions on our plans, where you think we can make improvements, concerns about the impact of our work and what you think of the refinements or changes we've made.

This event is the second of two planned, sequential, public consultation events following the submission of the Proposal of Application Notice (PAN). The PAN submission triggered the initial formal Town and Country Planning (major application) consultation process for this site, including the 12-week (minimum) pre-application consultation period.

Following the initial consultation event, the project team has sought to ensure that comments or concerns raised have informed, where possible, the primary considerations for the designs as they have progressed. This includes substation layout design, landscaping enhancement and screening. Outside of the formal consultation periods and events, we have continued to provide a dedicated webpage for the projects and liaise with a wide range of stakeholders to help inform the development and design.

We are therefore holding this feedback event to present our proposed substation design, which has been informed by stakeholder feedback, and have set out our responses to feedback received to date.

By telling us what you think, you will help shape our proposals. We want to harness your local knowledge so that we spot any unforeseen challenges early and maximise the potential benefits and opportunities for your communities. Because, ultimately, we want to work with you to ensure that the energy infrastructure we build will be the best it can possibly be.





# Project overview

**We're leading some exciting projects to power change in the UK and Scotland. To support the delivery of 2030 offshore wind targets set by the UK and Scottish Governments, and to power local communities, we need to upgrade our existing network. In some key areas, we need to develop entirely new infrastructure, and quickly.**

Of the Pathway to 2030 Schemes, the east coast scheme is Kintore – Tealing 400kV projects. This is comprised of five key projects, with all the details on what we're doing for each below.

## The new 400kV OHL between Kintore and Tealing

Based on the requirements outlined in National Grid ESO's Pathway to 2030 Holistic Network Design we have developed proposals to reinforce the transmission system. As part of this we are proposing to establish a new 400kV OHL between Kintore and Tealing.

This requires two new 400kV substations to be constructed to connect to this new OHL, one at Fetteresso Forest in Aberdeenshire and one near the village of Tealing in Angus to enable required future connections and export routes to areas of demand.

In addition, two existing OHLs out of Tealing substation to Alyth and Westfield in Fife will be upgraded to operate at 400kV and connect into the new Emmock 400kV substation.

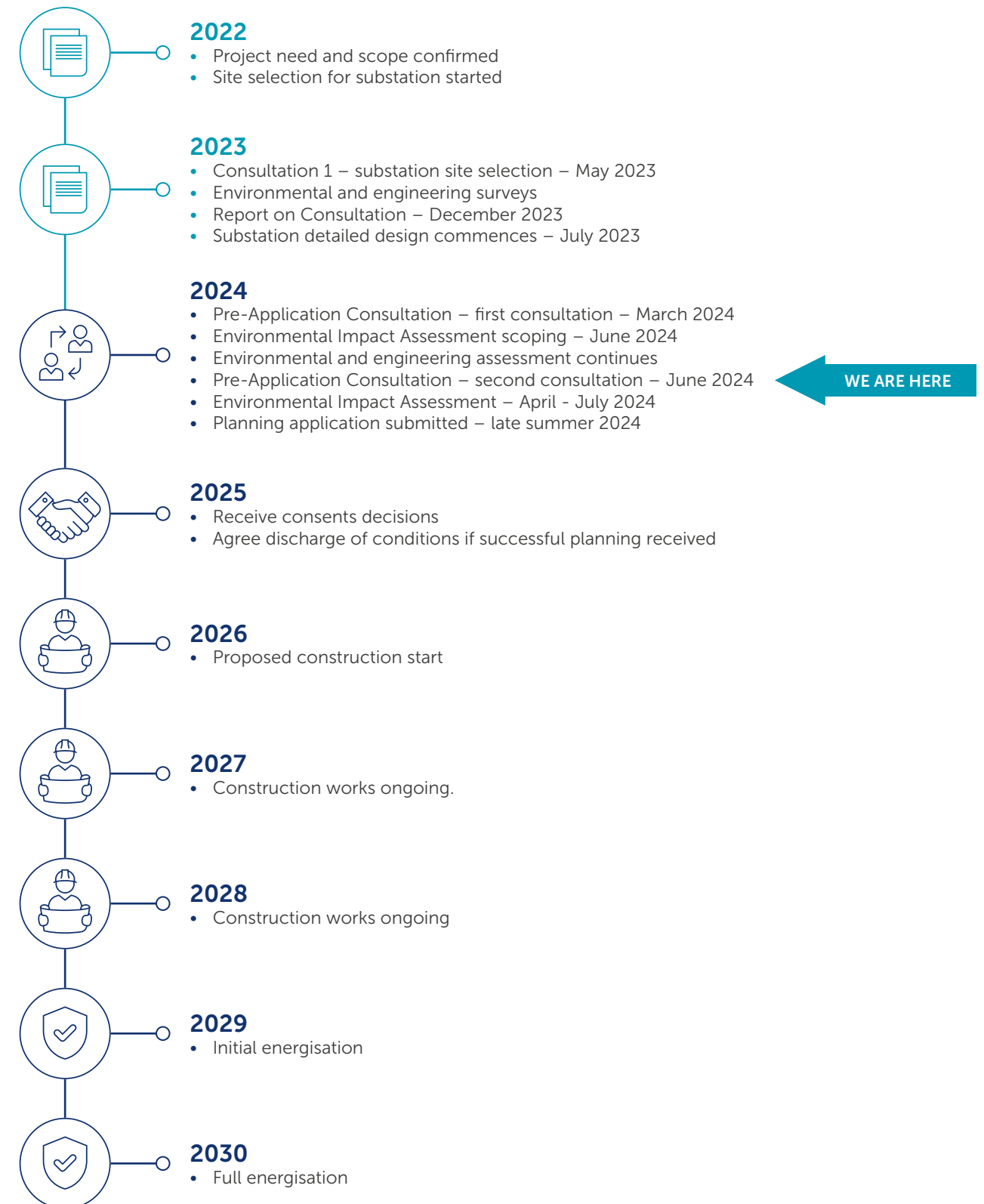
While they have been presented in combined consultation events in May last year, they are separate projects and will be progressed through separate consultation and consenting processes.

## New and upgraded OHL connections

The new Kintore to Tealing OHL will connect from the north of the proposed substation site. This will be a new 400kV line supported by new towers. Towers connecting into the substation would be between 40m and 60m in height on average, tower heights will vary where local topography dictates in order to achieve sufficient clearance distances.

- The existing 275kV OHL from Alyth to the existing Tealing substation will be upgraded and connect to the new proposed substation from the northwest. This will require the construction of approximately 1.5km of new OHL to connect the existing OHL to the new proposed Emmock substation. These new towers will match the existing towers on that line and will be approximately 50m tall. This will also allow the removal of approximately 3.5km of existing OHL.
- The existing 275kV OHL to Westfield, which connects Scottish Power Transmission's (SPT) infrastructure to the existing Tealing substation, will be upgraded and connect to the new proposed Emmock substation. This will connect from the south west. This will require approximately 0.5km of new OHL to connect the existing OHL to the new substation. These new towers will match the existing towers on that line and will be approximately 50m tall. This will leave approximately 1.5km of redundant OHL.
- The new proposed 400kV Emmock and the existing 275kV Tealing substation need to be connected to each other. The proposal is to use the 1.5km section of Tealing Westfield OHL which will become redundant when it is upgraded to 400kV. This will likely require a short section of additional OHL but significantly less than if a new build solution was implemented. There is also likely to be a requirement for an additional OHL circuit between the two sites and this will likely be approximately 1km of new OHL on towers approximately 50m tall.

# Project timeline



# Feedback

Following submission of the PAN in January 2024, the first of two pre-application consultation events were held at Tealing Village Hall on Thursday 7 March 2024. A total of 135 attendees attended.

During the 6 week feedback period, which closed on 15 April 2024, 212 responses were received. These responses were composed of 116 emails and 96 online responses. In addition, responses were received from statutory and non-statutory consultees. It is not possible to determine how many email and online responses were made by attendees at the event.

Email and online responses raised multiple themes. Of the 212 responses, 309 references were made to impacts on communities (for example, loss of amenity, socio-economic impact, health, employment, tourism). Impacts on various aspects of environmental impact were referenced on 512 occasions, and the consultation process on 98 occasions. No responses noted agreement, although several attendees at the consultation event did say they supported the transition to net zero, but not the approach to enabling it.

Figure 1 below shows the frequency of issues raised by broad theme, with most responses raising issues relating to environmental and community impacts. Figure 2 on the next page shows the frequency specific issues were raised.

Figure 1: Emmock 400kV substation points raised by category

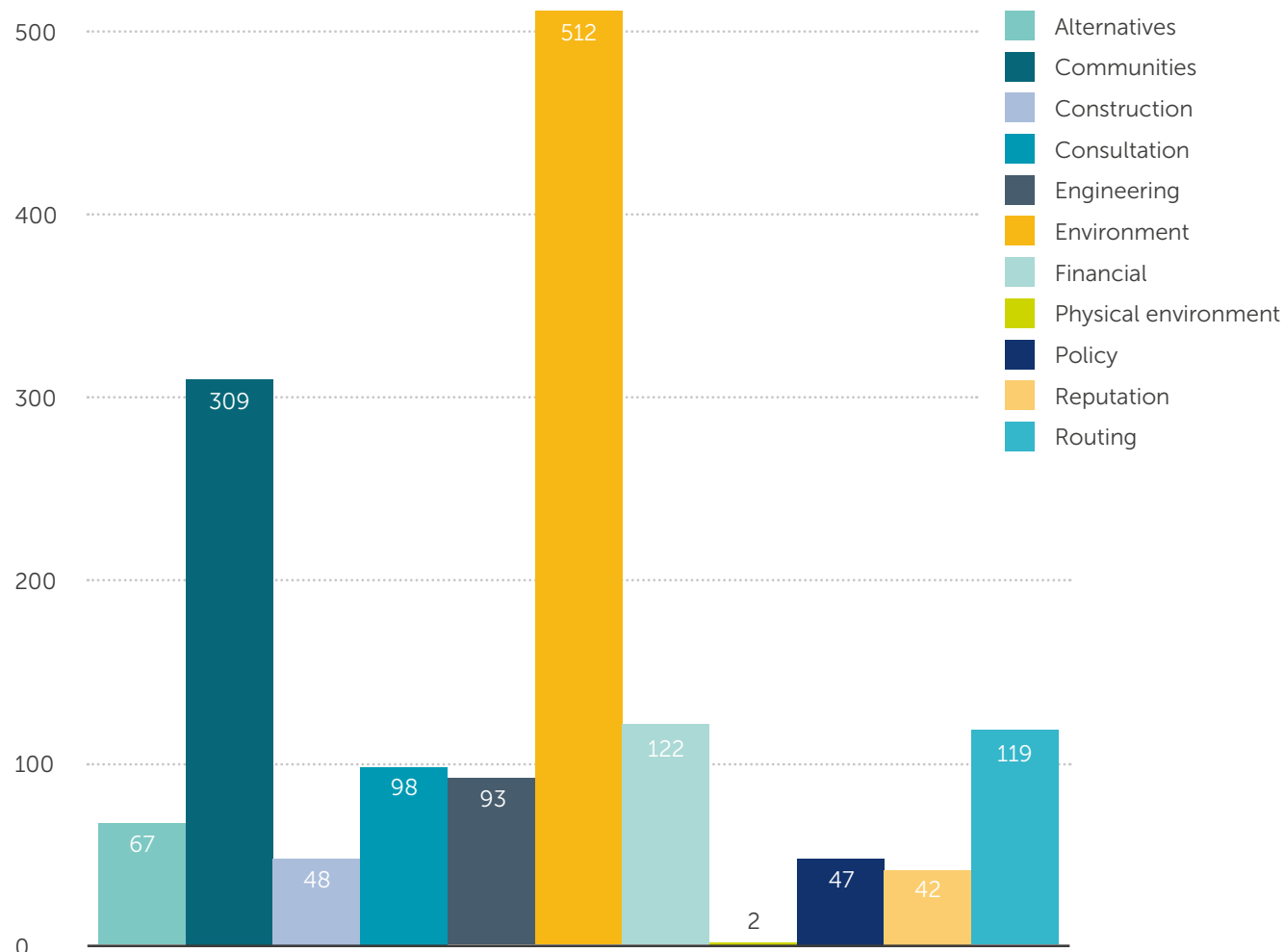
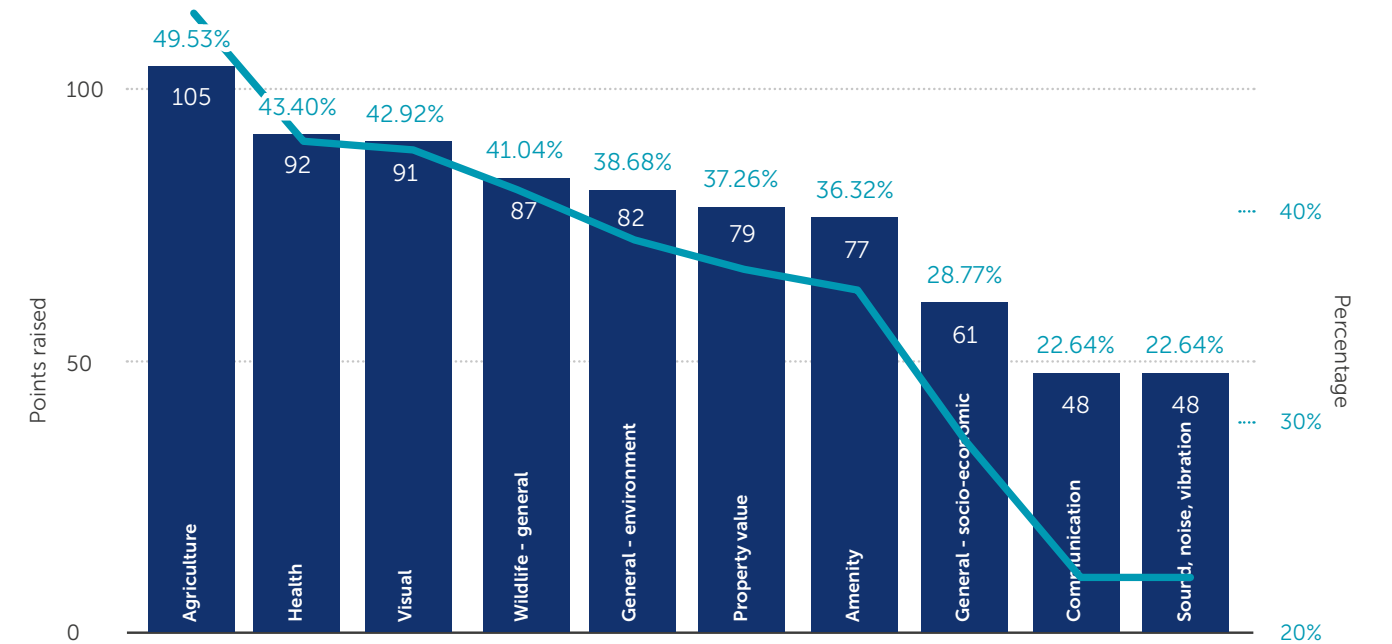


Figure 2: Emmock 400kV substation most frequently raised points



Based on the analysis above, we have organised the feedback around a number of key themes. Those, and our responses, are set out below. In addition, in the following pages, we present updates to the substation design, and explain how those have changed in response to feedback. We also present new information to explain how the construction and development of the substation would likely be progressed and how controls to reduce noise, dust and pollution will be put in place.

Event feedback	Response
<p><b>Agriculture</b> A number of attendees at the consultation event highlighted the impact on agriculture resulting from the loss of land and the associated impact on food security. It was a common theme among respondents accounting for 16% of all responses.</p>	<p>A key factor in the site selection process was avoiding prime agricultural land. The site avoids that. Notwithstanding, we accept that the land, which currently supports cereal crops under rotation, is an agricultural asset. As a part of the site selection, brownfield and derelict land was considered within the area of search. None was identified that satisfied other requirements, notably, size, avoiding settlements and other sensitive features.</p>
<p><b>Wildlife</b> Several respondents questioned the impact the proposed development would have on wildlife.</p>	<p>A key driver in the site selection process was to avoid sites which could impact legally protected and locally designated wildlife sites, and avoid land with a rich biodiversity. While the site is currently farmland, and natural habitat limited, there are diverse habitats along the Fithie Burn and to some extent along field margins. The Fithie has been modified along stretches adjacent to the site, and the development provides an opportunity to naturalise the Burn, increasing its biodiversity. Further, we have a company wide commitment to deliver a 10% gain in biodiversity across our major projects. This will be integrated into the proposed development, specifying a diverse range of new grass, wildflower, shrub and tree planting as part of the landscape design, and wetland habitat as part of the drainage design.</p>

# Feedback

Event feedback	Response
<p><b>Health and wellbeing</b> The impact of the substation and of the wider overall project on health and mental wellbeing was discussed by several attendees and accounted for over 12% of online and email feedback.</p>	<p>We are mindful of the uncertainty that our proposals can pose to communities who may be affected. Our process for project development seeks to identify options that provide an appropriate balance across a variety of considerations and interests. We aim to do this as swiftly as possible to minimise the duration of uncertainty for affected communities. However, we are also committed to providing sufficient time and opportunity for all stakeholders to feed into each stage of our project development process, so that views can be understood and wherever possible incorporated into design decisions. This is a balance which has to be carefully managed. We understand that everyone may be impacted in different ways and would be interested in residents' views regarding any additional activities that would help to address their specific concerns.</p> <p>Our responses to these topics can be found at <a href="https://ssen-transmission.co.uk/2030faqs">ssen-transmission.co.uk/2030faqs</a>. Our statement on Electric Magnetic Fields (EMFs) can also be found here <a href="https://ssen-transmission.co.uk/emf">ssen-transmission.co.uk/emf</a></p>
<p><b>Impacts on views</b> Many attendees and respondents are concerned about the impact the proposed substation will have on views from their properties. Concerns about visual impact accounted for 53% of all the issues raised by respondents.</p>	<p>Since our last consultation event, together with our engineering and environmental consultants, we have been examining how we can lower the proposed substation platform (which would house the new electrical infrastructure). As a result of detailed assessments, we now plan to lower the platform from 140.5m Above Ordnance Datum (AOD) to 139.0m AOD. The site falls from around 173m AOD along the northern boundary to 128m AOD along the southern boundary.</p> <p>Visibility from both north and south will be reduced further by landscaping bunds and new planting. Further information is on page 18.</p>
<p><b>Property values</b> Several attendees expressed concern about the effect of the proposed substation on the values of their homes and their ability to sell, should they wish to.</p>	<p>We understand that there are concerns about the potential impact of our proposed developments on properties within the vicinity of our proposed overhead line alignments and substations sites.</p> <p>These proposals are still under development and are subject to further consultation and design refinement. During this period, we want to work closely with communities and are looking to optimise timescales for decisions on final route alignments and substation location and designs. As the proposed alignments for the overhead lines are determined, and designs of substations are refined, we will engage with property owners, as well as listen to any other concerns there may be. We will look to mitigate impacts on residential properties as far as possible and these impacts will be assessed as part of the Environmental Impact Assessments that will accompany our applications for consent. Extensive surveys will be carried out at identified receptors, including selected residential properties so that we are able to model potential impacts on the wider area.</p> <p>Concerns in relation to impacts on property are being noted by our team however, as a regulated business, we are obliged to follow a statutory legal framework under the Electricity Act 1989 and Land Compensation Act 1961. For those entitled to compensation under the legal framework, we will assess any claim on a case-by-case basis under the direction of this legal framework. If this is the case, we recommend that those making a claim engage a professional adviser and we will generally meet reasonably incurred professional fees in these circumstances. However, for the avoidance of doubt, we will not meet fees incurred in objecting to our proposed developments.</p>

Event feedback	Response
<p><b>Amenity</b> Respondents raised concerns about the impact of the project on amenity.</p>	<p>The selection of the site has sought to minimise impacts on the amenity of those living and working in the area from the outset. In terms of impacts on visual amenity, our response is provided above. Regarding residential amenity and the effects that noise may have on the enjoyment of home and outside space, our response on noise is below.</p> <p>The site avoids direct and indirect effects on footpaths and cycleways. The implications for pedestrians and cyclists using the lanes local to the site are addressed under Construction Traffic below.</p>
<p><b>Noise</b> Many attendees and respondents raised the issue of noise, from both the proposed substation and in combination with the proposed overhead line and other developments such as the battery storage proposals.</p>	<p>There are few properties in the surrounding area having a direct line of sight where noise could be greatest. Further, the formation and planting of landscape bunds will attenuate noise further. We are committed to making sure that noise levels experienced by local residents will be no greater than they are today. Specialist acoustic consultants have been appointed to carry out a Noise and Vibration Impact Assessment which will predict the levels of noise during construction and once the proposed substation is commissioned and under load. Should the assessment suggest that noise will be noticeable at nearby properties, the source of noise will be enclosed and if necessary other measures such as barriers and screens will be incorporated into the design to attenuate noise. The Noise Assessment will include noise from the overhead line, which can be audible in certain weather conditions, and, if the information is available, include noise from the battery storage proposals and other development proposals which may be relevant.</p>
<p><b>Flooding</b> Several attendees at the event highlighted the issue of flooding. Some attendees expressed concerns that the proposed substation would make the situation worse.</p>	<p>We are aware of and have investigated historic flooding in the area, particularly where the Fithie Burn crosses under the U322 Emmock Road. We are aware too of the frequent flooding from the drain which runs parallel, to the road south of Balnuith. As part of the design work, we have commissioned a full Flood Risk Assessment. This has established that the proposed substation will not increase the likelihood of flooding. Indeed, we are exploring how we could reduce flooding by modifying the shallow channel which runs along Emmock Road and by naturalizing the Fithie Burn. Further information is provided on page 18.</p>
<p><b>Construction traffic</b> Several attendees and respondents raised concerns about the level of construction traffic coming through the village and that contractors involved at Tealing and Seagreen substations had ignored their concerns.</p>	<p>While we are yet to finalise our assessment, we are examining the feasibility of routing construction traffic from the south of the site, coming off the A90 at Claverhouse, following the U322 Emmock Road towards Powrie, crossing the railway and continuing towards the site via Myreton of Claverhouse. We recognise that construction traffic can be a significant concern to other road users and the wider community, in terms of safety, noise and dust. Peak movements will occur when we anticipate the need to import stone during the formation of the platform. This phase is likely to continue for 12 months. Further information is provided on page 19 below. A Construction Traffic Management Plan will be one of the many requirements of any planning permission. This will prescribe the routes to be taken by contractors and prohibit the use of some local roads. It will restrict when deliveries can be made, to avoid key times of the day, and ensure that any repairs to roads, culverts, ditches and verges are made soon after being reported. The Community Liaison Group will be a forum to ensure traffic impacts are minimised.</p>



# Feedback

Event feedback	Response
<p><b>Site size and creeping industrialisation</b></p> <p>Many attendees at the event complained of the size of the proposed substation, relative to the village and of the industrialisation of the surrounding area. Some raised the concern that the substation will get bigger in the future.</p>	<p>The requirements for a new substation were set out in the Consultation Document published in May 2023 which explained the factors taken into account when selecting the site, which in brief, included being close to the existing substation, sufficiently large and open, while avoiding prime agricultural land and legally protected sites, existing infrastructure and future development, areas of settlement, water courses and areas vulnerable to flooding. The site meets many of these requirements while providing opportunities to avoid or reduce impacts on the community and environment. The substation platform will be cut into the slope of the fields and landscaping will be provided to screen views of the site. Further information on how the design of the substation has aimed to reduce impacts is on page 17.</p> <p>The size of the proposed substation is determined by the extent of the electrical infrastructure required by the new (Kintore to Tealing) and uprated (Alyth and Westfield) 400kV infrastructure and by the assessment of future connection needs and by our licence obligation to provide a secure and reliable network.</p> <p>As License Holder, we have a legal duty to provide a connection requirement to any generation license holder if requested. We cannot predict future connection requirements but continually assess trends in generation and demand to ensure that the grid is capable of responding to new connection demand and supply needs. Currently, we are aware of five contracted projects that may connect into substations at Tealing, which are at various stages of development, including the Fithie Energy Park proposals by Banks Renewables Group and Balnuth Battery Energy Storage System (BESS) by developer GPC. Details of these projects, and others, contracted connection dates, consenting status and capacity (Transmission Entry Capacity – TEC) can be found on the TEC Register <a href="https://nationalgrideso.com/data-portal/transmissionentry-capacity-tec-register">nationalgrideso.com/data-portal/transmissionentry-capacity-tec-register</a></p> <p>These proposals will be taken into account in the Environmental Impact Assessment (EIA) which will address the cumulative effects of the proposed substation, the new overhead line, the two battery storage proposals and possibly other projects which come into the planning process as the EIA is being carried out.</p> <p>We understand the concern of the Tealing community regarding further expansion. The proposed substation has been designed to take account of foreseeable future needs. However, the rate at which future connection capacity will be used is unpredictable, as it is driven by market and commercial factors over which we have no control. It will be for the consenting authorities to determine if and when new developments requiring a connection come forward.</p>
<p><b>Implementing contractor commitments</b></p> <p>Several attendees raised concerns that the landscaping promised at the existing substation and Seagreen substation has not been properly implemented, and has never fully established because of poor maintenance and a failure to control grazing by deer.</p>	<p>We are committed to delivering our and our Contractors commitments, not only to new planting but other measures which safeguard the community of Tealing. To ensure this is the case at the Emmock site, we will be appointing an independent environmental contractor, reporting to a Liaison Group made up of statutory stakeholders, which will include Tealing Community Council, to ensure all environmental management and mitigation requirements, set out in planning conditions and contracts are implemented and effective. We will also require, as a condition of contract, that the Contractor establishes a Community Liaison Group, to give the Tealing community direct access to the Contractor to address grievances and concerns.</p>

Event feedback	Response
<p><b>Community and local economy</b></p> <p>Several respondents raised the potential impact of the proposed development on the community and local economy. Concerns were expressed on the impact to local tourism businesses, and that increasing industrialisation will mean that families will move away from the village, leading to its decline.</p>	<p>For each project we develop, we conduct a Landscape and Visual Impact Assessment, as part of the Environmental Impact Assessment in which we consider visual impact from centres of population, and walking paths and tourist sites, and where possible reduce any potential negative visual impacts, as we have described above.</p> <p>We are in the process of establishing a Community Benefit Fund which will enable us to work directly with local communities to support initiatives across northern and eastern Scotland. We want to give back to the communities hosting our transmission network and to help fund projects that can leave a lasting, positive legacy in those areas.</p> <p>In terms of broader community benefits, our Pathway to 2030 projects will boost the economy, support local jobs and businesses. Recent studies show our Pathway to 2030 programme could contribute over £6 billion to the UK's economy, support 20,000 jobs across the UK and benefit Scotland by around £2.5 billion, supporting 9,000 Scottish jobs. We typically hold 'Meet the Buyer' events prior to the construction phase to connect our principal contractors with local businesses and this has proven to be an effective means of sharing the economic benefits of our projects with local communities. We are also actively seeking opportunities to accommodate our workers in a way that provides a range of local benefits. We have prepared an information booklet which describes the benefits we anticipate from our projects and our thinking on how community benefit funding might work. <a href="https://ssen-transmission.co.uk/communitybenefit">ssen-transmission.co.uk/communitybenefit</a></p>
<p><b>Failure to adequately consult</b></p> <p>Many respondents suggested the consultation process adopted was inadequate, in that insufficient information was provided and insufficient time for communities to respond was provided.</p> <p>Many respondents questioned their ability to influence the project, expressing the opinion that the decision to proceed was already made.</p> <p>Concerns were raised at the absence of consultation by the ESO in defining future energy needs, how they should be met and the rationale for the Kintore to Tealing project and new substation at Emmock in particular.</p>	<p>We are committed to meaningful and constructive engagement with local communities and residents throughout the development process to seek input and feedback into our proposals. As we consult and develop our projects, we aim to be open and transparent with communities, engaging as early as possible to seek input into our early plans.</p> <p>We share our plans in different formats and through different channels and are continuing seeking ways to improve how we share information and seek inputs.</p> <p>We aim to engage as early as possible with the communities where we may have an impact. Our initial engagement in May 2023 aimed to introduce the project and explain the rationale for selecting the site. Our Report on Consultation in December 2023 presented our analysis of the feedback to that consultation and confirmed our plans to take the Emmock site into the planning process. Our formal consultation event in March this year presented our proposals at that stage. We have continued to progress our design and resolve areas of community and environmental impact in the process. Our aims at this point are to share our latest designs, show how they have aimed to address feedback and highlight where design work may continue as we prepare for our planning application.</p> <p>We have prepared a separate handout which explains how the need for the project has been determined and the role of the ESO which is available here. <a href="https://ssen-transmission.co.uk/2030-need">ssen-transmission.co.uk/2030-need</a></p>



# Feedback

## Event feedback

### Feedback from statutory and non-statutory consultees

## Response

Our consultation booklet published in March 2024 to support our formal consultation events, was issued to Angus Council, Historic Environment Scotland (HES), NatureScot, Scottish Environment Protection Agency, (SEPA) Glamis and Area and Tealing Community Councils and various non-statutory consultees.

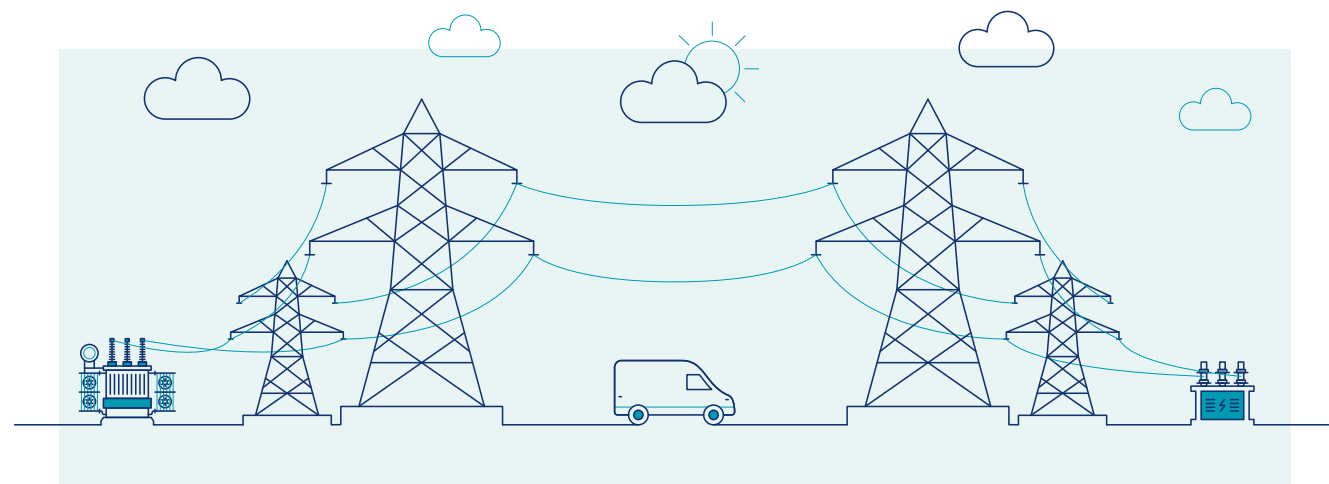
HES welcomed the fact that the EIA will include an assessment of the impact of the project on designated heritage assets and the inclusion of a cumulative impact assessment. NatureScot advised that there would be no likely significant effect on the Firth of Tay and Eden Estuary SPA nor the Loch of Kinnordy and Loch of Lintrathen SPAs. Nor on the Outer Firth of Forth and St Andros Bay Complex SPAs.

In relation to biodiversity enhancement and NPF4 Policy 3, NatureScot encouraged that biodiversity enhancement should be an integral part of the project from the outset. No responses were received from Angus Council or SEPA, although both have provided feedback at the initial consultation in May 2023 and have continued to through the regular engagement we hold with all the statutory consultees.

The Ministry of Defence pointed to the possibility of low flying aircraft and advised that it will seek a planning condition requiring that details of any tall structures at the site are charted. National Gas Transmission advised of the need to ensure we engage with them as the proposals develop to ensure no conflicts with national infrastructure.

That engagement has been ongoing since 2022 and will continue throughout the design and planning processes.

Glamis Community Council raised concerns regarding risks to tourism, farming and health, suggesting impacts could be mitigated by placing the OHL offshore or underground. While the response did not refer to the proposed substation specifically, many of the issues it raised reflect those by the wider community and which have been addressed above.



# The substation site

## About the site

Following our site selection consultation, in May 2023, we advised within our Report on Consultation that site 4 at Balkemback Farm in Tealing, off Emmock Road had been selected as our proposed site for the substation ahead of our first Pre-Application Consultation event earlier this March.

This site is considered best on balance due to the following:

- There are fewer residential properties in close proximity to the site
- Nearby cultural heritage assets identified are unlikely to be adversely impacted by the development
- The site offers efficient connection to the existing Tealing substation, reusing redundant sections
- The requirement of new infrastructure needed to connect upgraded existing circuits is minimised
- The location allows over 3km of existing 275kV OHL to be removed.

## What size is the site

Whilst we are including a larger area in our PAN boundary than is required for just the substation, the area needs to contain all elements of the development.

The substation platform will be approximately 675m x 285m and will consist of:-

- 22x bay 400kV double busbar with the following allocation:-
  - 2x bus sections
  - 3x bus couplers
  - 3x 400/275kV 1200MVA SGTs
  - 2x feeder bays for 400kV OHL to Hurlie/Kintore
  - 2x feeder bays for 400kV OHL to Alyth
  - 2x feeder bays for 400kV OHL to Westfield
  - 6x future feeder bays
  - 2x reactors (maximum height 11m)

A single storey control building (maximum height 7m) which contains ancillary equipment will be required to operate the substation including control panels and low voltage AC and DC systems.

Currently, the tallest equipment in the substation will be the busbar at approximately 14.5m. There may be a requirement in the future that the proposed reactors are placed with larger network stability equipment which can be up to 18m tall with a footprint of approximately 95m x 45m.

## What else will the development consist of? Drainage

Drainage arrangements and SuDs ponds will be included in the planning application.

## Temporary compounds

Temporary construction compounds and laydown areas will be located close to the new site access to support the construction phase. Additional temporary construction compound and laydown areas, if needed, will be identified by the construction contractor prior to commencement of works.

## Access Roads

A new permanent access will be formed off Emmock Road.

## Landscaping bunds

Landscaping bunds will be created around the substation platform, and planted with native shrubs, grasses and flora to reduce landscape and visual impact and to improve the biodiversity of the site compared to its previous agricultural use.

## Lighting

While the lighting strategy has not yet been defined, it will adopt the following broad principles; lighting will be kept to the minimum to ensure safe operations and security; individual light clusters will be low-level, narrow beam, and directed downwards to minimise glare and light spill; different lighting configurations and designs will be adopted for different parts of the site and will be appropriate for use; landscape bund design and positioning will support the reduction of glare and light spill experienced by the local community.





# Substation site layout

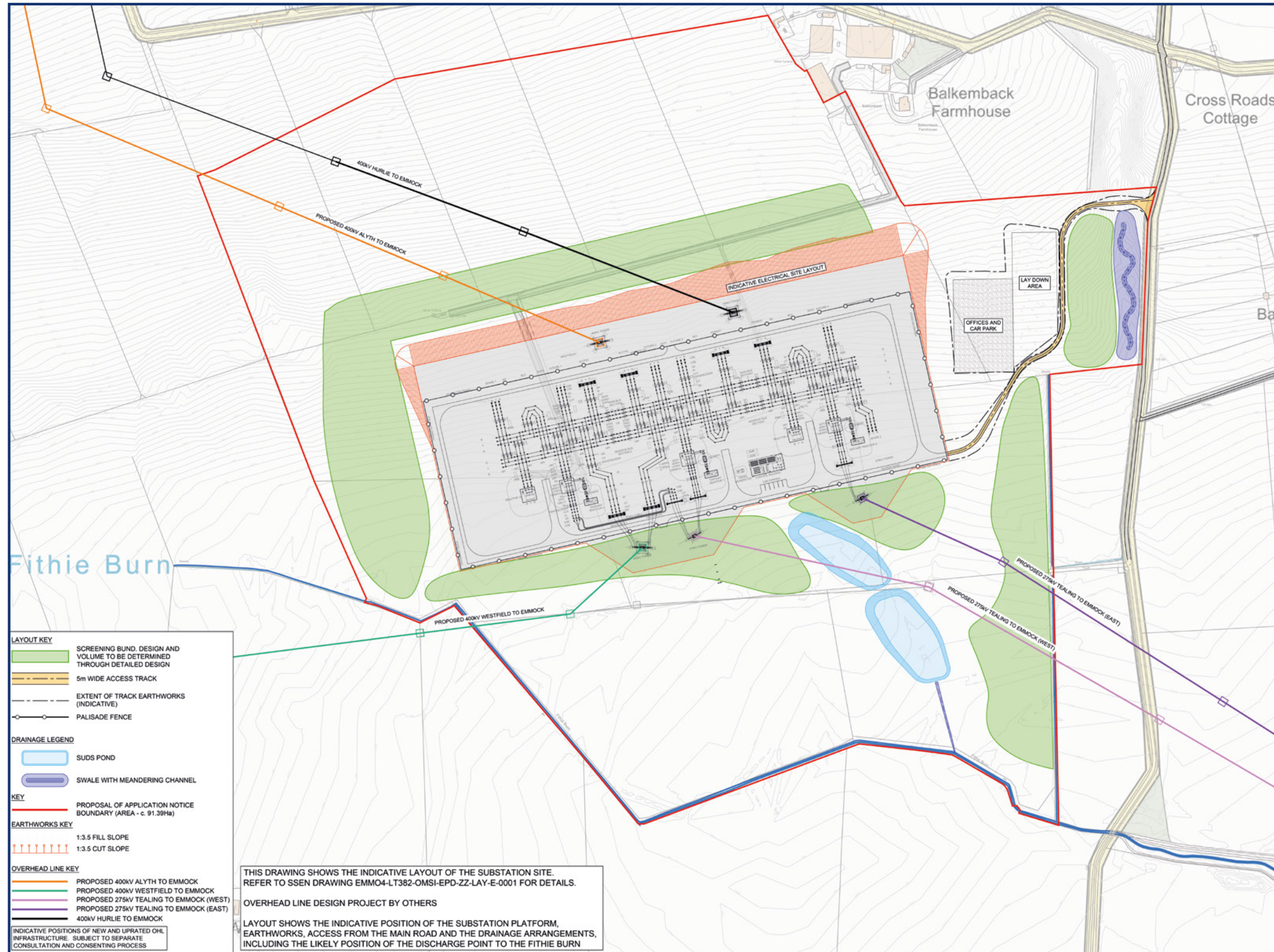


Figure 3: Indicative site layout





# The construction process

## Construction

The overall construction programme is three years, with a fourth year required for commissioning and testing. The broad programme and main construction HGV (Heavy Goods Vehicles) requirements are illustrated below.

Figure 6: Indicative high level construction programme

Activity	Estimated HGV movements/ activity duration	2026				2027				2028				2029			
		Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec
Mobilisation	10-15																
Form access road, temporary compound, clear site	250																
Install drainage, form compound	500-600																
Cut and fill earthworks	20-40																
Form landscape bunds	Using on site equipment																
Install capping layer over platform	15,000-20,000																
Foundations for control building and steelwork	450-550																
Form SuDS network	Using on site equipment																
Landscape planting	5-10																
Security fencing	5-10																
Mobilisation	75																
Installation of support steelwork	30-35																
Installation of primary equipment and steel gantries	70-80																
Delivery and installation of transformers	3																
Delivery and installation of reactors	6																
Installation of secondary equipment and cabling	40-50																
Commissioning	0																

## Managing impacts during construction

Over several years, we have developed and implemented management plans aimed at avoiding and managing construction environmental impacts.

These include an overarching Construction Environmental Management Plan, individual plans to control specific aspects such as noise, dust, and construction waste, working near water courses, working in different habitats, and Construction Traffic Management Plans.

These will be implemented as a condition of the Principal Construction Contract. In addition, the Contractor will be required to prepare additional plans to cover specific requirements that arise through the EIA process, including a Community Engagement Plan. Effective implementation of all of these will be assured through an independent auditor that we will appoint but which will report to statutory consultees, including Tealing and Glamis and Area Community Councils. In that way, the community will have a direct route to ensure we and our Contractors address any issues that adversely affect the community.

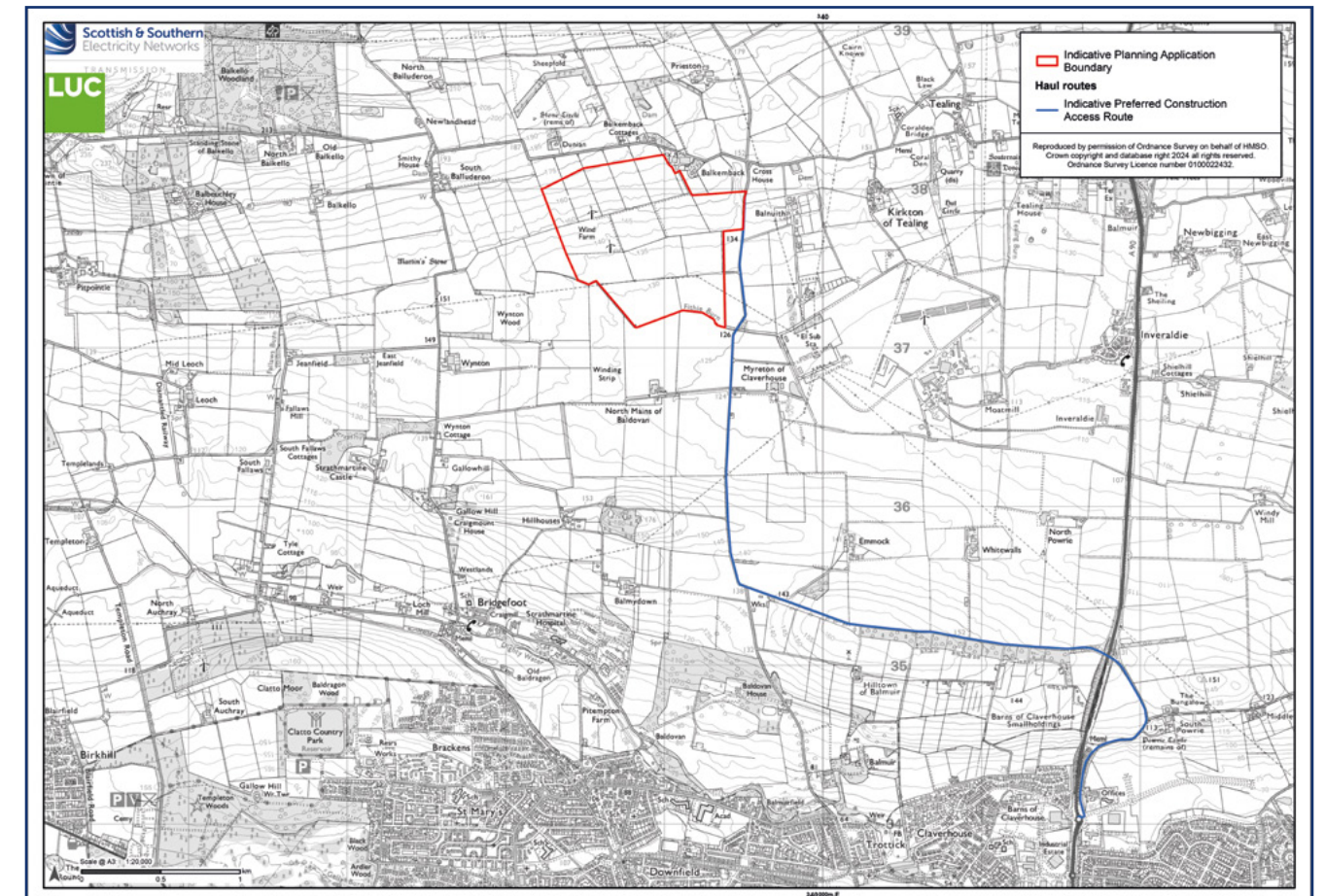
## Construction access

Since our last event, we have examined options for construction access which avoid traffic through the village.

Our proposed approach is that HGV traffic will follow the U322 Emmock Road from the south.

It is likely that the small bridge over the Fithie Burn will need to be strengthened. A detailed survey will be undertaken of culverts and other structures and strengthening and replacement will be undertaken as required. Some passing places may need to be formed.

Figure 7: Indicative construction access





# Other projects in the local area

We know that local stakeholders are keen to understand the full extent of future developments being proposed in their local area.

Below we outline those projects that we have sight of.

## SSEN Transmission projects

Due to the number of developer connections in the area, SSEN Transmission are requiring to extend the existing 132kV Tealing substation.

This is required to provide space provision for at least two BESS developments to connect. The project is at a very early stage of development and the full requirements are yet to be established.

However, it is likely to require a small extension to the platform into where the current Balfour Beatty construction compound is located in the south east corner of the site. It would require forming an extension of the existing platform by approximate 80m x 90m.

The project consists of a platform extension, earthworks, upgrading equipment, additional bays to facilitate all required connections and all associated protection and control upgrades which may require additional buildings to be erected.

These works are in addition to the ongoing 275kV and transformers works at Tealing which is now due for completion by December 2024.

A list of projects that hold contracts for Transmission Entry Capacity (TEC) with National Grid, the Electricity System Owner is available from their website: [nationalgrideso.com/data-portal/transmission-entry-capacity-tec-register](https://nationalgrideso.com/data-portal/transmission-entry-capacity-tec-register)

## Other projects

Applications from commercial developers, such as wind farms and Battery Energy Storage Systems (BESS) operators, to connect to the transmission network are made to National Grid ESO and undergo a lengthy process before we begin to develop a network connection for developments applying in our license area.

We aim to be transparent about the renewable developments looking to connect to our network but are not permitted to disclose any details of these developments until they are in the public domain.

As indicated earlier, we are aware of five contracted projects that would connect into either the existing Tealing substation or the proposed Emmock substation.

OnPath (formerly Banks Renewables Group) has recently submitted a Screening Opinion Request to the Energy Consents Unit concerning its Fithie Energy Park proposals for a 1400MW battery energy storage system on land between Balnuith and the existing Tealing substation.

In addition, Apatura has submitted a proposal for a 100MW battery energy storage facility on a parcel of land surrounded by the OnPath proposal.

17 Acres Bess, Isenau Two and Isenau Five also have contracted offers to connect in to the existing Tealing substation. These projects are in very early development as their connection requirements are not yet fully resolved.

# 3D visualisations

We understand that local stakeholders need to be able to visualise what the development may look like in their local area.

We have commissioned 3D visualisations which model the proposed substation into the local landscape to help the understanding of the proposals in terms of the visual impact, distance, and height.

The following are some images taken from the 3D model to inform our consultation event.

To get a better sense of the proposals in full our consultants, 3D Webtech, will be assisting us at our consultation events with copies of the model that attendees can interact with during the events.

The layout and colour of our proposals may change based on feedback and further refinement of the design, if that happens, we'll update our model and video and share this on our webpage and with you at the next event.

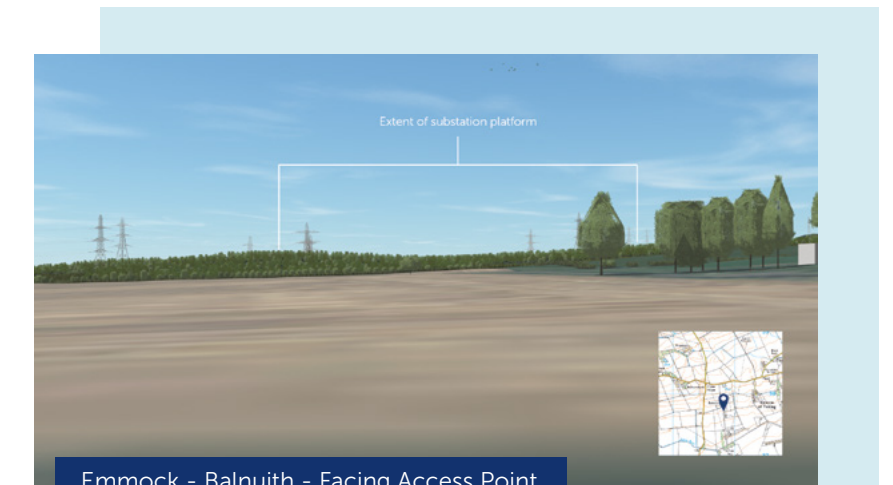
## Photomontages

Photomontage visualisations will also be produced as part of the Environmental Impact Assessment (EIA). Once the EIA is completed and submitted as part of our planning application, we'll ensure these photomontages are available to view.



### Find out more

Scan the QR code with your smartphone to view our most up to date 3D visualisations on the project website.



Emmock - Balnuith - Facing Access Point



Emmock - VP4 - Myreton of Claverhouse



Emmock - VP6 - Dunian

# Have your say

We value community and stakeholder feedback. Without this, we would be unable to progress projects and reach a balanced proposal.

## The feedback period

We intend to submit our planning application in late summer 2024. Our formal feedback period will close on 17 July 2024, however we will welcome final comments from members of the public, statutory consultees and other key stakeholders regarding our proposals until we submit our planning application.

## How to provide feedback

Submit your comments and feedback by emailing or writing to your Community Liaison Manager.

Any comments made to us as the Applicant are not representations to Angus Council as the planning authority.

There will be opportunity to make formal representations to the planning authority following the submission of the planning application.

## What we're seeking views on

During our last public consultation event in March 2024, we wanted to know your thoughts on our project plans, where you thought we could make improvements, and any changes and refinements we'd made.

We are now asking for any final comments or feedback ahead of submitting planning applications for the Emmock 400kV substation project. It would be helpful to share any opportunities to deliver a local community benefit you would like us to consider.

We'll be actively looking to mitigate the impacts of the site as much as possible over the coming months, but it would be helpful to understand what you believe we should be doing to help minimise these impacts and if there are any opportunities to deliver a local community benefit you would like us to consider.

## Our Community Liaison Team

Each project has a dedicated Community Liaison Manager who works closely with community members to make sure they are well informed of our proposals and that their views, concerns, questions or suggestions are put to our project teams.

Throughout the life of our projects, you will hear from us regularly. We aim to establish strong working relationships by being accessible to key local stakeholders such as community councils, residents' associations and development trusts, and regularly engage with interested individuals.

## Community Liaison Manager

Rhiannon Merritt  
Community Liaison Manager



SSEN Transmission  
10 Henderson Road,  
Inverness, IV1 1SN

E: tkup@sse.com

## Additional information

The best way to keep up to date is to sign up to project updates via the project webpage: [ssen-transmission.co.uk/emmock](https://ssen-transmission.co.uk/emmock)

You can also follow us on social media

 [SSEN-Transmission](#)

 [SSETransmission](#)



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# Notes

Blank area for taking notes, featuring horizontal lines for writing.





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