

# **Environmental Impact Assessment (EIA) Report**

## ***LT384 Tealing to Westfield Overhead Line (OHL) 400 kV Upgrade***

***November 2024***



## VOLUME 2: CHAPTER 11 – CULTURAL HERITAGE

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### Figures (Volume 3 of this EIA Report)

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## 11. CULTURAL HERITAGE

### 11.1 Introduction

11.1.1 This EIA Report chapter will assess the potential effects of the Proposed Development on cultural heritage.

11.1.2 Cultural heritage in this context refers to the above and below-ground archaeological resource, built heritage, the historic landscape, and any other elements which may contribute to the historical and cultural heritage of the area. The aim of this chapter is to provide:

- a summary of the baseline conditions of the Proposed Development Site (see Paragraph 11.1.3);
- a concise appraisal of the direct and indirect risks posed by the Proposed Development on cultural heritage; and,
- recommendations for additional mitigation measures as required.

11.1.3 The term the 'Proposed Development Site' or simply the 'Site' refers to the entire area within the LOD, shown in Figure 3.1 (Volume 3). The Study Area adopted for the baseline study comprises the LOD and a buffer of 250 m either side of the it.

11.1.4 Details regarding what the Proposed Development consists of can be found in Chapter 3: Project Description (Volume 2), however, key elements are works to upgrade existing towers, as well as works required to provide access to the towers. This latter work includes the creation of temporary access tracks, upgrading existing access tracks, and installation of trackway panels, as well as construction of bell mouths and culvert upgrades / construction of new culverts. There will also potentially be a new tower to replace either Tower 129 or 132 and associated with this a temporary diversion tower needed during construction, as well as a potential height increase of 2 m for Towers 155 and 156.

11.1.5 The report draws on the following technical figures and appendices:

- Figure 11.1: Heritage Assets within 250m Study Area adopted for the baseline study (Volume 3);
- Appendix 11.1: Gazetteers (Volume 4); and,
- Appendix 11.2: Site Photos (Volume 4).

11.1.6 External sources used to inform the baseline and appraisal are referenced appropriately.

#### **Legislation**

11.1.7 The assessment was conducted within the context of the legislative and planning framework designed to protect and conserve heritage resources. There are several statutory instruments and policies governing the approach to cultural heritage. The main pieces of legislation are:

- Town and Country Planning (Scotland) Act 1997 (as amended)<sup>1</sup>;
- The Town and Country Planning (Development Management Procedure) (Scotland) Regulations 2013 (as amended by the Town and Country Planning (Historic Environment Scotland) Amendment Regulations 2015)<sup>2</sup>;

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<sup>1</sup> Scottish Government (1997) *Town and Country Planning Act*, Edinburgh: Scottish Government.

<sup>2</sup> Scottish Government (2013) *The Town and Country Planning (Development Management Procedure) (Scotland) Regulations*, Edinburgh: Scottish Government.

- Planning (Listed Buildings and Conservation Areas) (Scotland) Act 1997<sup>3</sup>;
- Ancient Monuments and Archaeological Areas Act 1979<sup>4</sup>; and,
- Historic Environment Scotland Act 2014<sup>5</sup>.

### ***National Planning Policy***

11.1.8 The principal elements of national policy and guidance comprise:

- National Planning Framework 4 (NPF4)<sup>6</sup>;
- Historic Environment Policy for Scotland (HEPS)<sup>7</sup>;
- Our Past, Our Future - The Strategy for Scotland's Historic environment<sup>8</sup>;
- Planning Advice Note (PAN) 2/2011 – Planning and Archaeology<sup>9</sup>;
- PAN 71 – Conservation Area Management<sup>10</sup>; and,
- Historic Environment Scotland (HES) 'Managing Change in the Historic Environment' series of guidance notes (particularly *Managing Change in the Historic Environment: Setting*<sup>11</sup>).

11.1.9 NPF4 sets out the national spatial strategy for Scotland and sets out spatial principles, regional priorities, national developments and national planning policy. It forms part of the Development Plan alongside the relevant local development plan (LDP). The Proposed Development is defined through NPF4 as a National Development, under Annex B, Category 3 'Strategic Renewable Electricity Generation and Transmission Infrastructure'. Policy 7 of NPF 4 relates to cultural heritage and key elements of the policy include 'point h' which relates to scheduled monuments and states:

*"h) Development proposals affecting scheduled monuments will only be supported where:*

- *direct impacts on the scheduled monument are avoided;*
- *significant adverse impacts on the integrity of the setting of a scheduled monument are avoided; or*
- *exceptional circumstances have been demonstrated to justify the impact on a scheduled monument and its setting and impacts on the monument or its setting have been minimised."*

11.1.10 Impacts on non-designated assets are covered by 'points n and o':

*"n) Enabling development for historic environment assets or places that would otherwise be unacceptable in planning terms, will only be supported when it has been demonstrated that the enabling development proposed is:*

- *essential to secure the future of an historic environment asset or place which is at risk of serious deterioration or loss; and*

<sup>3</sup> Scottish Government (1997) *Planning (Listed Buildings and Conservation Areas) (Scotland) Act*, Edinburgh: Scottish Government.

<sup>4</sup> UK Government (1979) *Ancient Monuments and Archaeological Areas Act*, Edinburgh: HMSO.

<sup>5</sup> Historic Environment Scotland (2014) *Historic Environment Scotland Act*, Edinburgh: HMSO.

<sup>6</sup> Scottish Government (2023) *National Planning Framework 4*, Edinburgh: Scottish Government.

<sup>7</sup> Historic Scotland (2019) *Historic Environment Policy for Scotland*, Edinburgh: Historic Environment Scotland.

<sup>8</sup> Historic Environment Scotland (2023) *Our Past, Our Future: The Strategy for Scotland's Historic Environment*, Edinburgh: Historic Environment Scotland.

<sup>9</sup> Scottish Government (2011) *Planning Advice Note 2/11 – Planning and Archaeology*, Edinburgh: Scottish Government.

<sup>10</sup> Scottish Government (2004) *Planning Advice Note 71 – Conservation Area Management*, Edinburgh: Scottish Government.

<sup>11</sup> Historic Environment Scotland (2016) *Managing Change in the Historic Environment*, Edinburgh: Historic Environment Scotland.

- *the minimum necessary to secure the restoration, adaptation and long-term future of the historic environment asset or place.*

*The beneficial outcomes for the historic environment asset or place should be secured early in the phasing of the development, and will be ensured through the use of conditions and/or legal agreements.*

- o) *Non-designated historic environment assets, places and their setting should be protected and preserved in situ wherever feasible. Where there is potential for non-designated buried archaeological remains to exist below a site, developers will provide an evaluation of the archaeological resource at an early stage so that planning authorities can assess impacts. Historic buildings may also have archaeological significance which is not understood and may require assessment.*

*Where impacts cannot be avoided they should be minimised. Where it has been demonstrated that avoidance or retention is not possible, excavation, recording, analysis, archiving, publication and activities to provide public benefit may be required through the use of conditions or legal/planning obligations.*

*When new archaeological discoveries are made during the course of development works, they must be reported to the planning authority to enable agreement on appropriate inspection, recording and mitigation measures.”*

11.1.11 Policy 11 relates to energy and as such is also relevant to the Proposed Development. ‘point e’ relates to impacts resulting from renewable developments and states:

*“e) In addition, project design and mitigation will demonstrate how the following impacts are addressed:*

- *ii – significant landscape and visual impacts, recognising that such impacts are to be expected for some forms of renewable energy. Where impacts are localised and/ or appropriate design mitigation has been applied, they will generally be considered to be acceptable; ... [and]*
- *vii – impacts on historic environment”*

11.1.12 ‘Our Past, Our Future’, released in June 2023<sup>12</sup>, represents the updated Historic Environment Scotland strategy. The three main priorities identified in this document are:

- Priority 1: Delivering the transition to net zero;
- Priority 2: Empowering resilient and inclusive communities and places; and,
- Priority 3: Building a wellbeing economy.

### **Local Planning Policy**

11.1.13 The Angus Local Development Plan was adopted in 2016<sup>13</sup>. The plan is currently under review and the next Local Development Plan (Angus Plan) will be prepared under the new legislative requirements of the Planning (Scotland) Act 2019, and likely to be adopted in 2029. The following policies within the local development plan are relevant to this chapter:

- Policy PV8 – Built and Cultural Heritage.

11.1.14 The Perth and Kinross Local Development Plan was adopted in 2019<sup>14</sup>. The following policies within the local development plan are relevant to this chapter:

<sup>12</sup> Historic Environment Scotland (2023) *Our Past, Our Future: The Strategy for Scotland’s Historic Environment*, Edinburgh: Historic Environment Scotland.

<sup>13</sup> Angus Council (2016) Angus Local Development Plan

<sup>14</sup> Perth and Kinross Council (2019) Perth and Kinross Local Development Plan.

- Policy 26: Scheduled Monuments and Archaeology;
- Policy 27: Listed Buildings;
- Policy 28: Conservation Areas;
- Policy 29: Gardens and Designed Landscapes; and,
- Policy 31: Other Historic Environment Assets.

11.1.15 The Fife Local Development Plan was adopted in 2017<sup>15</sup>. The plan is currently under review and the next Local Development Plan will be prepared under the new legislative requirements of the Planning (Scotland) Act 2019, and likely to be adopted in 2027-28. The following policies within the local development plan are relevant to this chapter:

- Policy 14 – Built and Historic Environment.

### **Guidance**

11.1.16 The assessment has been undertaken following the Chartered Institute for Archaeologists (CIfA) Standards and Guidance for Historic Environment Desk-Based Assessment<sup>16</sup>.

## **11.2 Assessment Methodology and Significance Criteria**

### **Scope of the Assessment**

11.2.1 As part of this assessment, a search of relevant data has been undertaken with material collected for a Study Area of 250 m from the LOD. These sources include:

- PastMap<sup>17</sup>;
- HES website<sup>18</sup>;
- Historic mapping on the National Library of Scotland website<sup>19</sup>;
- Perth and Kinross Historic Environment Record (HER) data;
- Aberdeenshire HER; and,
- Other available online sources.

11.2.2 An assessment of impacts on the permanent setting changes during operation has been scoped out of the assessment because of the limited changes to the OHL, and as such only the single 250 m study area to inform the baseline has been used.

11.2.3 All assets are listed in the gazetteers provided in Appendix 11.1 (Volume 4), these are also shown on Figure 11.1 (Volume 3). Assets are referred to in the text by their HES number, with the 'SM' prefix signifying a scheduled monument, the 'LB' prefix signifying a listed building, and 'GDL' signifying a garden and designed landscape. Non-designated assets from the Canmore database<sup>20</sup> have no prefix, while assets from the Perth and Kinross

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<sup>15</sup> Fife Council (2017) Angus Local Development Plan

<sup>16</sup> Chartered Institute for Archaeologists (2020). Standard and guidance for historic environment desk-based assessment. (online) Available at: [https://www.archaeologists.net/sites/default/files/CifAS%26GDBA\\_4.pdf](https://www.archaeologists.net/sites/default/files/CifAS%26GDBA_4.pdf) [Accessed: July 2024]

<sup>17</sup> Historic Environment Scotland (2024) PastMap (online) Available at: <https://www.pastmap.org.uk/> [Accessed: July 2024]

<sup>18</sup> Historic Environment Scotland. (2024) (online) Available at: [www.historicenvironment.scot](http://www.historicenvironment.scot) [Accessed: July 2024]

<sup>19</sup> National Library of Scotland (2024) Maps (online) Available at: <https://maps.nls.uk/> [Accessed: July 2024]

<sup>20</sup> Historic Environment Scotland (2024) CANMORE Database (online) Available at: <https://canmore.org.uk/> [Accessed: July 2024]

Council HER have the prefix 'MPK' and assets from the Aberdeenshire HER have the prefix 'NO'. Assets recorded as part of the walkover survey and documentary research have the prefix 'AECOM'.

### **Appraisal of Impacts**

- 11.2.4 The impact assessment considers any impacts to the value (significance) of an asset, either physically or through changes to its setting.
- 11.2.5 The value (sensitivity) of a heritage asset is determined by professional judgement, guided but not limited to any designated status the asset may hold. The value of an asset is also judged upon a number of different factors including the special characteristics the assets might hold which can include evidential, historical, aesthetic, communal, archaeological, artistic and architectural interests. This value of a heritage asset is assessed primarily in accordance with the guidance set out in NPF4 and the Historic Environment Policy for Scotland (HEPS)<sup>21</sup>. The value (sensitivity) is defined by the sum of its heritage interests. Taking these criteria into account, each identified heritage asset can be assigned a level of value (sensitivity) in accordance with a five-point scale as set out in Table 11-1.

**Table 11-1: Heritage Value (Sensitivity) Criteria**

| <b>Value</b>      | <b>Examples</b>  |
|-------------------|--|
| <b>Very High</b>  | <ul style="list-style-type: none"> <li>World Heritage Sites (WHS);</li> <li>Assets of acknowledged international importance; and,</li> <li>Historic landscapes of international sensitivity, whether designated or not.</li> </ul>   |
| <b>High</b>       | <ul style="list-style-type: none"> <li>Scheduled Monuments;</li> <li>Non-designated sites/ features of schedulable quality and national importance;</li> <li>Category A Listed Buildings;</li> <li>Gardens and landscape on the Inventory of Designed Landscapes of outstanding archaeological, architectural or historic interest; and,</li> <li>Registered Battlefields.</li> </ul>  |
| <b>Medium</b>     | <ul style="list-style-type: none"> <li>Sites / features that contribute to regional research objectives;</li> <li>Category B and C Listed Buildings;</li> <li>Locally listed or non-designated buildings that can be shown to have special interest in their fabric or historical association;</li> <li>Conservation areas;</li> <li>Historic townscapes or built-up areas with historic integrity in their buildings, or built settings; and,</li> <li>Non-designated historic landscapes of regional sensitivity.</li> </ul> |
| <b>Low</b>        | <ul style="list-style-type: none"> <li>Non-designated sites / features of local importance;</li> <li>Non-designated buildings of modest quality in their fabric or historical association; and</li> <li>Historic landscapes whose sensitivity is limited by poor preservation and/or poor survival of contextual associations or with specific and substantial importance to local interest groups.</li> </ul>   |
| <b>Negligible</b> | <ul style="list-style-type: none"> <li>Assets with very little or no surviving archaeological interest;</li> <li>Buildings of no architectural or historical note; buildings of an intrusive character; and</li> <li>Landscapes with little or no significant historical interest.</li> </ul>  |

<sup>21</sup> Historic Scotland (2019) *Historic Environment Policy for Scotland*, Edinburgh: Historic Environment Scotland.

- 11.2.6 Having identified the value of the heritage asset, the next stage in the appraisal will be to identify the level and degree of impact to an asset arising from the Proposed Development. Impacts may arise during construction or operation and can be temporary or permanent. Impacts can occur to the physical fabric of the asset or affect its setting.
- 11.2.7 When professional judgement is considered, some sites may not fit into the specified category in this table. Each heritage asset will be assessed on an individual basis and take account of regional variations and their individual qualities.
- 11.2.8 The level and degree of impact (magnitude of impact) will be assigned with reference to a four-point scale as set out in Table 11-2. In respect of cultural heritage, an assessment of the level and magnitude of impact is made in consideration of any design mitigation already considered in the design of the Proposed Development (embedded mitigation). Where no change to the significance of the asset is caused, this will be stated and the assessment will not be taken further.

**Table 11-2: Magnitude of Change Criteria**

| Magnitude of Change | Examples  |
|---------------------|---|
| High                | Total removal or alteration of an asset, such that the physical resource and/or the key components of its setting are totally altered resulting in complete change to an asset's setting and loss of heritage value of the asset. |
| Medium              | Partial alteration of an asset, such that the heritage value of the resource and/or the key components of its setting are clearly modified.   |
| Low                 | Minor alteration of an asset, such that the components of its setting are noticeably different, but the physical characteristics are not affected and the impact does not result in a noticeable loss of heritage value.          |
| Negligible          | Slight changes to historic elements that hardly affect the setting of an asset and do not result in any loss of value.  |

- 11.2.9 An assessment of the level of significant effect, having taken into consideration any embedded mitigation, will be determined by cross-referencing between the significance (heritage value) of the asset (Table 11-1) and the magnitude of impact (Table 11-2). The resultant level of significant effect (Table 11-3) can be negligible, minor, moderate or major and neutral, adverse or beneficial.
- 11.2.10 Effects of major or moderate significance are considered to be significant.
- 11.2.11 An assessment of the predicted significance of effect will be made both prior to and following the implementation of mitigation measures to identify the residual effects. This first highlights where mitigation may be appropriate, and then demonstrates the effectiveness of that mitigation, providing a framework for the assessment of the significance of effect which takes mitigation measures into consideration.
- 11.2.12 All archaeological work will be undertaken in line with guidance published by ClfA<sup>22</sup>.

<sup>22</sup> Chartered Institute for Archaeologists (2020) *Standard and Guidance for Historic Environment Desk-Based Assessment*, Reading: ClfA.



**Table 11-3: Assessment of Significance**

| Value      | Magnitude of Impact |            |            |            |           |
|------------|---------------------|------------|------------|------------|-----------|
|            | High                | Medium     | Low        | Negligible | No Change |
| Very High  | Major               | Major      | Moderate   | Minor      | Neutral   |
| High       | Major               | Moderate   | Moderate   | Minor      | Neutral   |
| Medium     | Moderate            | Moderate   | Minor      | Negligible | Neutral   |
| Low        | Moderate            | Minor      | Negligible | Negligible | Neutral   |
| Negligible | Minor               | Negligible | Negligible | Negligible | Neutral   |

### **Consultation**

11.2.13 Initial consultation was undertaken with the Aberdeenshire Council Senior Historic Environment Officer (ACSHEO), who also provide heritage curatorial services for the Angus region, by email on the May 2024 when details of the project were shared. The ACSHEO agreed that significant impacts on the setting of assets was unlikely due to the scheme not involving alterations to the height of the towers, and that the most likely impacts would be physical impacts resulting from the construction of access tracks and laydown areas / compounds, as well as any planting or ecological mitigation that might be required. As such, the potential for impacts on the permanent setting changes during operation to designated and non-designated heritage assets has been scoped out.

11.2.14 Further consultation was undertaken with the ACSHEO in June 2024 when an Historic Environment Records (HER) data search was undertaken, and the overall LOD and Study Area were shared. The ACSHEO agreed that the potential for impacts was still largely limited to physical impacts resulting from ground works. It was noted that mitigation in the form of archaeological monitoring would likely be necessary in areas where stripping would be required in areas of previously recorded heritage assets or of high archaeological potential.

11.2.15 Initial consultation was undertaken with the Perth and Kinross Heritage Trust (PKHT) by email in May 2024 when initial details relating to the project was shared and HER data was ordered. This was followed by a Teams meeting on the 1<sup>st</sup> August 2024 when further details relating to the Proposed Development, including access tracks, were shared. The PKHT noted that there would not be significant impacts on the setting of assets due to the scheme not involving alterations to the height of the majority of Towers, and as such impacts on setting could be scoped out. They also agreed that the most likely impacts would be physical impacts resulting from the construction of access tracks and laydown areas / compounds.

11.2.16 The PKHT noted that while evaluation trenching was unlikely to be required due to the relatively small footprint of access tracks, archaeological mitigation would be required due to the potential for physical impacts resulting from topsoil stripping for access tracks. This mitigation was likely to include archaeological monitoring during topsoil stripping and would require enough time for an archaeologist to fully record any features that might be recorded.

11.2.17 The PKHT also noted that in areas where the Proposed Development would result in the partial loss of historic landscape features such as drystone walls which would not be reinstated post construction, the exposed end sections of the drystone wall should be 'made good' by a qualified person to avoid the risk of further damage to the wall through erosion. Finally, the PKHT also agreed that due to tower alterations being limited and not likely to result in significant impacts, impacts on setting could be scoped out.

11.2.18 This was followed by a Scoping Response in writing on the 12<sup>th</sup> August 2024 which confirmed the telephone discussions, and also noted that a pre and post-condition survey would be required in any areas where non-invasive tracks were being used in archaeologically sensitive areas such as near scheduled monuments. PKHT also recommended the use of temporary fencing and buffers to protect both designated and non-designated assets, and appointing an Archaeological Clerk of Works (ACoW) to manage impacts on unknown archaeological remains and protect known archaeology along the LOD.

11.2.19 The Scoping Response received from Fife Council on the 26<sup>th</sup> August confirmed that their Heritage Team did not have any major concerns relating to impacts resulting from the Proposed Development, and did not expect any significant impacts.

11.2.20 HES provided a Scoping Response in writing on the 26<sup>th</sup> August 2024 in which they agreed that, due to the nature of the Proposed Development, impacts on setting could be scoped out. They also noted that the main potential for impacts on designated assets was limited to Megginch Castle Garden and Designed Landscape (GDL00278) and requested that the EIA Report contained details relating to reprofiling, foundation works, and access track works (including potential tree loss) that might be required.

11.2.21 HES also noted that temporary protection measures, such as Heras Fencing should, be used to protect the scheduled monument from accidental damage, and that other mitigation measures should include toolbox talks to ensure employee awareness. HES also recommended ground protection to avoid accidental damage within the scheduled area.

#### ***Assumptions and Limitations***

11.2.22 The current assessment examines possible physical impacts resulting from the Proposed Development during the construction and operational phases. Due to the nature of the Proposed Development, impacts are likely to arise from works to upgrade the foundations of the existing towers, as well as works to construct one new tower, and install the access tracks and associated bell mouths required to reach the towers during construction.

11.2.23 Access track works which currently have the potential to result in ground disturbance fall into three categories which are as follows:

- Upgrade to existing track / road: surface upgrade required to existing road or track, and track may also need widening. Changes to be permanent. Track width – 4-7 m. Depth of disturbance – 0.15- 0.8 m;
- New temporary stone road: New temporary road where no road currently exists, or in areas where a footpath or bridleway on mapping no longer survives. In each case the road will be reinstated to its previous state after construction. Track width – 4-7 m. Depth of disturbance – 0.15- 0.8 m; and,
- Trackway panels: Trackway panels to be laid directly onto the ground. This might require some limited cut and fill in areas where the ground is uneven. Track width – 4-7 m. Depth of disturbance – 0.15-0.8 m.

11.2.24 At the time of writing, it is not certain which towers will need a foundation upgrade, and as a result it is not clear which access tracks will be needed. If towers do not need foundations upgrading and works will be limited to reconductoring and restringing, the access tracks associated with the towers may not be required. However, due to the limited design information the assessment has used a worst-case scenario and assumed that all towers will need upgrading and all proposed access tracks will be required to the maximum width (7 m) and the maximum depth (0.8 m).

11.2.25 Works to reinforce tower foundations will also result in physical impacts. Current design information suggests that an area at least 2.5 m by 2.5 m was excavated to construct the existing tower legs, and this might need to be enlarged to 5.2 m by 5.2 m per leg, with a total works area around each foundation being up to 77 m by 77 m. As

a result, this work would have the potential to impact on a limited area of previously undisturbed ground if foundation works are required.

11.2.26 There is also the potential that either Tower 129 or Tower 132 will need to be replaced with a new tower close to the existing tower. As part of the construction process, a temporary diversion tower would also be required for the works, and the original tower would be dismantled. This is further described in Chapter 3: Project Description (Volume 2) and illustrated in Figure 3.1 (Volume 4). These potential works for one replacement tower would therefore lead to ground disturbance.

## 11.3 Baseline Conditions

11.3.1 This chapter examines the potential impacts and effects on sites of archaeological and cultural heritage interest resulting from the Proposed Development. A detailed baseline of information for the 250 m Study Area was obtained as part of the assessment.

### *Land use, Topography, and Geology*

11.3.2 The existing Tealing to Westfield OHL, which forms the focus of this assessment, covers approximately 37 km and runs from the Tealing Substation in the north-east (centred on NGR NO 39932 37005), to the licence boundary shared with SPEN (located in the Pitmedden Wood area of the Ochil Hills) in the west (centred on NGR NO 22670 14507). Located within the counties of Angus, Perth and Kinross and Fife, the scheme passes through a varying landscape that can be broken down into three main areas (Figure 11.1 (Volume 3)).

11.3.3 The initial section of the OHL, which runs for approximately 14 km from the Tealing Substation to the settlement of Longforgan, passes through the eastern end of the Braes of the Carse, an undulating landscape set at the foothills of the Sidlaw Hills. The landscape is dominated by agricultural land, most of which is arable, with blocks of woodland throughout the area. These vary from small pockets of woodland to larger areas forming the outer limits of designed landscapes such as those visible near Knapp. A number of small settlements are distributed through the area, while farmsteads and hamlets are scattered throughout the landscape.

11.3.4 The second section of the OHL covers approximately 20 km and runs from Longforgan in the east to the Abernethy area in the west. For the most part, the OHL in this section runs along flat open land on the north side of the River Tay, known as the Carse of Gowrie, before it crosses the Tay near St Madoes and reaches the base of the Ochil Hills east of Abernethy.

11.3.5 The landscape through which the OHL passes is dominated by arable agricultural land, with most fields being large due to the removal of boundaries in the late 19<sup>th</sup> and 20<sup>th</sup> centuries. This low-lying open landscape also represents a main infrastructure corridor with other OHLs, the main A90 road to Aberdeen, and the Edinburgh to Aberdeen rail line all passing through the area. A number of larger villages are also present in the area, as are frequent farmsteads and small settlements.

11.3.6 The final section of the OHL runs from the A913 to the east of Abernethy and heads south rising on the Ochil Hills. The landscape of this section, covering approximately 3 km, consists of heavily wooded hills of Pitmedden Wood rising up to 300 m above sea level. While the upland area is dominated by commercial woodland, there are some areas of agricultural land used for pastoral activities. Settlements in this area are limited, although farmsteads are frequent within the landscape.

11.3.7 The OHL passes through varying solid geology, with sandstones, siltstones, and mudstones of the Dundee Flagstone Formation laid down in the Devonian Period at the northeastern end changing to sandstones of the

Glenvale Sandstone Formation (also laid down during the Devonian) in the central low-lying area<sup>23</sup>. The geology of the southwestern end of the OHL remains mainly sandstones of the Glenvale Sandstone Formation, with localised areas of Andesite and Basaltic Andesite of the Ochil Volcanic Formation formed during the Devonian period on the higher ground in the Pitmedden Wood area where the OHL terminates.

11.3.8 The drift geology of the OHL varies from tills of the Quaternary Period at the northeastern end, giving way to raised tidal flats (silts and clays) of the Devensian and Holocene in the lower-lying areas north of the River Tay. There is no information recorded relating to the drift geology of the upland area in the Pitmedden Wood area where the OHL terminates.

### ***Designated Assets***

11.3.9 A total of 69 designated assets were recorded within 250 m of the LOD of which 11 are scheduled monuments, 55 are listed buildings, and three are Gardens and Designed Landscapes. Of the assets identified, a number fall within the LOD including four scheduled monuments, eight listed buildings, and one GDL. There are no Registered Battlefields or World Heritage Sites within the Study Area.

11.3.10 The majority of the scheduled monuments date to the prehistoric period and assumed to be settlements recorded as cropmarks, including two unenclosed settlements within the LOD (SM7199; SM6465), as well as others within the Study Area (SM6466; SM7232; SM7236; SM7205). Other scheduled monuments dating to the prehistoric period include a possible burial mound within the LOD (SM6535), as well as a ring ditch (SM7226) in the Study Area.

11.3.11 A further four scheduled monuments dating to later periods have also been recorded within the LOD and Study Area. These comprise elements of the Dundee and Newtyle Railway (SM6123) which dates to the post-medieval period and is partially located within the LOD, as well as an early medieval cross slab (SM159) and a medieval chapel (SM5452) within the Study Area.

11.3.12 The listed buildings consist of eight Category A listed buildings, 19 Category B listed buildings, and 27 Category C listed buildings, of which one Category A, two category B, and five Category C listed buildings are located within the LOD. The majority of the listed building date to the Post-Medieval period, with the buildings within the LOD including the Category A North Gate of Huntley Castle (LB12871), as well as Category B listed Balruddery Farm, (LB10858) and East Inchmichael Farm (LB48154). The remaining Category C listed building within the LOD consist of a road bridge (LB10859), the Chance Inn (LB10977), South Inchmichael (LB11601), Cairnie Farmhouse (LB17626), and Sparrowmuir Cottage (LB48197).

11.3.13 Buildings in the Study Area largely date to the Post-Medieval period with most concentrated in the settlements located throughout the Study Area including Longforgan and Inchtute, both of which are Conservation Areas, and Chapelhill, while other concentrations or groupings form part of the three GDLs within the Study Area such as the lodge to Inchyra House (LB19808), and Megginch Castle (LB10963) and Megginch Castle Burial Ground (LB10968). A grouping also forms the Huntley Castle complex including the former castle which is now a prison (LB12868) and the associated icehouse (LB12870).

11.3.14 The remaining listed buildings represent farmhouses and associated buildings (LB47353; LB13138; LB6490), as well as lager houses such as Mansfield Manse (LB10974), and public buildings such as churches (LB19820), and railway stations (LB11603).

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<sup>23</sup> BGS (2024) BGS Geology Viewer: (online) Available at: [https://geologyviewer.bgs.ac.uk/?\\_ga=2.52794920.1018437293.1722853537-1169658595.1722853537](https://geologyviewer.bgs.ac.uk/?_ga=2.52794920.1018437293.1722853537-1169658595.1722853537) [Accessed August 2024]

11.3.15 The three GDLs that have elements within the Study Area consist of Megginch Castle (GDL00278), Rossie Priory (GDL00331), and Inchyra (GDL00220), although only the southern part of Megginch Castle is located within the LOD.

### ***Non-designated Assets***

11.3.16 A total of 185 non-designated assets were recorded within 250 m of the LOD on Canmore, the Aberdeenshire HER, and the Perth and Kinross HER (see Appendix 11.1 (Volume 4) and Figure 11.1: (Volume 3)). The majority of these assets date to the post-medieval period and relate to agricultural activities in the landscape through which the LOD passes, although a limited number are related to settlement activity in the small settlements that lie close to the LOD.

11.3.17 Previously recorded heritage assets in the 250 m Study Area are discussed by period below.

#### *Prehistoric and Roman (40,000BC to AD400)<sup>24</sup>*

11.3.18 Previously recorded assets in the Study Area represents human activity from the prehistoric period onwards, with the landscape through which the OHL passes providing an area rich in natural resource including rivers, woodland, and fertile soils which have been exploited from at least the Mesolithic period (9800BC – 4000BC). While no evidence of Mesolithic activity has been recorded in the Study Area, lithic scatters possibly dating to the Mesolithic have been recorded in the wider area near East Inchmichael (MPK20193). During this period, the Tay and the Earn would have been much wider, with large areas of the Study Area in the lowland ‘Carse of Gowrie’ area being intertidal/ under water<sup>25</sup>, and as a result Mesolithic activity within the Study Area is likely to be limited to the slightly elevated areas which would have represented the former shoreline.

11.3.19 The first clear evidence of prehistoric activity within the Study Area dates to the Neolithic period (4000BC – 2200BC) with assets including a possible cursus monument recorded as a cropmark near Carmichael Cottages (MPK5126), and the stray finds of stone mace head recorded near Megginch (MPK4725). Further evidence for Neolithic activity has also been recorded outside of the Study Area throughout the various landscapes of the Proposed Development, with evidence of possible burials and ritual monuments noted, although settlement activity is limited to stray finds of lithic and pit clusters.

11.3.20 This pattern continues into the Bronze Age (2200BC – 800BC), with the assets recorded in the Study Area are limited to two bronze axe heads from Pitcurran (MPK10145) and Glencase (MPK7160), however, the visibility of assets dating to the later prehistoric period increases with evidence of settlement activity dating to the Iron Age (800BC – AD400) recorded as cropmarks throughout the Study Area. These include possible enclosures (MPK5125; MPK4732; MPK6204; MPK6797) as well as souterrains (MPK5108; MPK5384; NO33NE0033; NO33SW0006), and other associated features such as ring ditches (MPK6807; MPK4722), and while most of these features have not been investigated through archaeological excavation, they have been tentatively dated to the Iron Age based on their form, and their distribution would suggest the Study Area was well settled by the Iron Age period.

11.3.21 While more extensive evidence for Roman activity has been recorded in the wider landscape, including the large Roman camps at Carpow (SM2275) and Abernethy (SM9449) which flank the Study Area as it crossed the Rivers Earn and Tay at the western end of the Development, there is relatively limited evidence for Roman activity within

<sup>24</sup> Due to the varied nature of the Scottish landscape, and the resulting variations in settlement/land use, there is no agreed chronology at a national level. As such, the dates that have been assigned to the various periods for the baseline study are those set out in the Regional Archaeological Research Framework for North East Scotland which was produced as part of the Scottish Archaeological Research Framework (ScARF) (Regional | The Scottish Archaeological Research Framework (scarf.scot))

<sup>25</sup> Wright, D, Ballin, T, & Wickham-Jones, C. (2022) ‘Palaeolithic and Mesolithic’ in *Perth and Kinross Archaeological Research Framework*, Perth: Perth and Kinross Council.

the Study Area. Previously recorded assets dating to the Roman period within the Study Area are all limited to stay finds of Roman coins, with material recorded at Carpow (MPK6442), Western Clunie (MPK6173), and Pitfour (MPK7145) near the Tay/Earn crossing, as well as Castle Huntley (MPK6859) towards the eastern end of the Development.

*Early - Medieval (AD400 to AD900)*

11.3.22 Evidence dating to the early medieval period with the Study Area is limited to two assets, both of which are carved Pictish stones, and both of this are located outside of the LOD. The first was recorded at the settlement of Longforgan near the point at which the OHL crosses the A96 (MPK5099), while the second (which is also a scheduled monument) is located in a field near Balkello at the north-eastern end of the OHL (SM159).

11.3.23 During the early medieval period the Study Area, as well as the Perth and Kinross, Angus, and Aberdeenshire areas, fell within the Kingdom of the Picts, and while clear archaeological evidence for early medieval settlement activity is limited, further Pictish carved stones have been recorded in the wider landscape including the Strathmore area to the north with a large concentration from the Meikle<sup>26</sup>.

11.3.24 Placename evidence has also suggested early medieval settlement activity within this area during this period, with Pictish placename elements including *aber*, *pren*, and *lanerc*, recorded throughout the area<sup>27</sup>, and Pitfour also containing Pictish name elements<sup>28</sup>. Abernethy, on the western side of the Study Area near the point at which it crosses the Rivers Tay and Earn, was also a key settlement from at least the 6<sup>th</sup> century, becoming a key religious centre<sup>29</sup>. This evidence would suggest that while the Study Area continued to be exploited throughout the early medieval period, it was most likely used as agricultural land, with the main focus of settlement being located outside of the Study Area.

*Medieval (AD900 to AD1600)*

11.3.25 While evidence for activity dating to the medieval period is limited within the Study Area, a number of assets have been recorded that would suggest the settlement continued to develop throughout this period. A total of eight assets dating to the medieval period have been recorded within the Study Area, of which two are within the LOD. The two within the LOD include stray pottery find spots (MPK18120), as well as the site of Ross Chapel (MPK5188). The latter asset has only been recorded through documentary sources and the four figure grid reference places it within the area, although its actual location is not known.

11.3.26 The remaining medieval assets are largely find spots and include a lead seal (MPK6860), while the final assets is a possible boundary stone (MPK4730).

11.3.27 A further four assets dating to the medieval or post-medieval period have also been recorded in the Study Area, all of which are areas of ridge and furrow cultivation. This remains associated with this form of agriculture have been largely recorded as cropmarks / soil marks, with the later intensive ploughing of the 20<sup>th</sup> century removing many of the earthworks. However, some small areas of earthworks have been recorded in areas not subject to later ploughing such as Megginch GDL (GDL00278) suggesting that areas of the landscape through which the Study Area passes was used for arable agriculture during the medieval period.

11.3.28 While the evidence for settlement activity within the Study Area is limited, this is largely a result of the OHL on which the Study Area is focused avoiding the main settlements in the area and passing instead through the agricultural lands that surround them. A number of the settlements in the wider area have their origins in the

<sup>26</sup> Small, A. (1999) 'The Dark Ages' in Omand, D. (ed.) *The Perthshire Book*, Edinburgh: Birlinn Limited.

<sup>27</sup> Nicolaisen, W. F. H. (2001) *Scottish Place-Names – Their Study and Significance: New Edition*, Edinburgh: Birlinn Limited.

<sup>28</sup> Smith, R. (2001) *The Making of Scotland*, Edinburgh: Canongate Books Limited

<sup>29</sup> Small, A. (1999) 'The Dark Ages' in Omand, D. (ed.) *The Perthshire Book*, Edinburgh: Birlinn Limited

medieval period, if not earlier, with Longforgan recorded from at least the 11<sup>th</sup> century, Inchtute the 16<sup>th</sup> century<sup>30</sup>, and Tealing the 13<sup>th</sup> century<sup>31</sup>. As there is no evidence of significant shrinkage or abandonment of settlements in the Study Area from the medieval period onwards, it is likely that the landscape through which the OHL currently passes was used as agricultural land during the medieval period.

*Post-Medieval (AD1600 to AD1900)*

11.3.29 The post-medieval period represents the most visible period in terms of previously recorded heritage assets, with 58 designated assets and 101 non-designated assets recorded within the Study Area. The majority of these are associated with the continued development and expansion of the settlements that flank the LOD, as well as the agricultural activities that dominated the landscape of the LOD which passes through the agricultural land avoiding most settlements and farmsteads. Assets associated with the development of settlement in the Study Area include residential buildings (MPK13814), as well as other buildings such as manses (e.g. MPK3109; 31734), mills (e.g. 82579; NO33NW0049; NO33NW0088), and toll houses on road (NO33NE0081), while agricultural features include a number of farmhouses (e.g. MPK8581; MPK17455; MPK6095; MPK9691). A number of assets linked to the Rivers Tay and Earn have also been recorded where the Study Area crossed the water courses, with remains including former fishing bothies (MPK15049; MPK15047; MPK20331), as well as ferry houses and piers (MPK15050), while the 19<sup>th</sup> century development of the regions infrastructure is represented through remains of railways. These include features on lines that remain active such as the station and signal box at Errol (LB11603), as well as those that have been abandoned (e.g. NO33NW0057; NO33NW0052; 187848). Finally, the movement towards more industrial activities has also been noted within the Study Area, with features including brick and tile works (MPK13384) and quarries (NO33NW0046). However, as the existing OHL avoids most settlements it is unsurprising that the majority of assets recorded in the LOD are linked to the agricultural activities that dominate the area.

11.3.30 Historic cartographic sources of the area dating from the 17<sup>th</sup> century are largely limited to county level surveys of limited detail, however, most depict a settlement pattern similar to that which survives into the modern period with many of the large contemporary hamlets and villages in the Study Area and the surrounding landscape visible. For example, the Blaeu survey of Angus dating to 1662-65 shows *C. Lyon* (Huntley), *Foules* (Fowlis), *Auchterhous* (Auchterhouse), *Balbeuchle* (Balbeuchley), *Praistoun* (Prieston), and *Telen* (Tealing) to the east<sup>32</sup>, while the associated survey of neighbouring Fife which also covers the Carse of Gowrey shows Erroll<sup>33</sup>. The Blaeu survey of the southern element of the Study Area, which lies within Fife, includes the settlement of *Abirnethy* (Abernethy) and West Cluny, while the uplands are shown as woodland and named as Pittmeden<sup>34</sup>.

11.3.31 The first detailed survey of the area was the Roy survey of undertaken between 1747 and 1752. This again shows the majority of the settlements noted above on the earlier surveys as well as a number of the farmsteads that can be identified within present-day landscape of the Study Area. These farmsteads include Wester Clunie, *Pitcogg* (Pitcoag), and Ardgait at the western end of the Study Area, *Inchcunons* (Inchcoonans), Inchmichael, and Horn near the central section, and Strathmartin at the western end of the Study Area<sup>35</sup>. The survey also shows a number of the larger houses with associated gardens or more formal designed landscapes including Castle Huntley (LB12868), which is named Castle Lyon, and is shown with its main approach being from the south rather than the north-east as it currently stands. Other larger houses with associated possible designed landscape elements include Pitfour Castle (LB17628) where the southern extents of the parkland fell within the Study Area,

<sup>30</sup> Smith, R. (2001) *The Making of Scotland*, Edinburgh: Canongate Books Limited.

<sup>31</sup> Johnston, J. B. (1972) *Place-Names of Scotland*, Wakefield: S. R. Publishers Limited.

<sup>32</sup> Viewed at [View map: Blaeu, Joan, 1596-1673 ; Edward, Robert, approximately 1616-1696, Angusia Provincia Scotiae Sive The Shire of Angus - Blaeu Atlas Maior, 1662 \(nls.uk\)](#) [Accessed: July 2024]

<sup>33</sup> Viewed at [View map: Gordon, James, 1615?-1686; Blaeu, Joan, 1596-1673, Fifae Vicecomitatus, The Sherifdome of Fyfe. - Blaeu Atlas of Scotland, 1654 \(nls.uk\)](#) [Accessed: September 2024]

<sup>34</sup> Viewed at [View map: Blaeu, Joan, 1596-1673, Fifae Pars Orientalis, \[vulgo\], The East Part of Fife. - Blaeu Atlas of Scotland, 1654 \(nls.uk\)](#) [Accessed: September 2024]

<sup>35</sup> Viewed at [Georeferenced Maps - Map images - National Library of Scotland \(nls.uk\)](#) [Accessed: September 2024]

and Maginch GDL (GDL00278). This latter asset differs enormously from its current form with the parkland depicted as smaller fields bordered with limited woodland, with the main approaches from the south-west and south-east. While the south-west approach partially survives today, the southeast approach has been totally removed and replaced with the eastern avenue that survives in the contemporary landscape.

11.3.32 The survey also provides more information regarding land use, and it shows the majority of the Study Area being used for arable agriculture, with this form of land use especially prevalent in the open fertile land of the Carse of Gowrie. Areas of what appear to be unimproved lands, presumably used for pasture, are shown in the upland area of Pitmedden Wood at the south, while a combination of arable and possible pasture is noted in the undulating land at the east.

11.3.33 Predominantly agricultural land use within the Study Area appears to continue into the late 18<sup>th</sup> century, with the reports on the various parishes covered by the Study Area in the First Statistical Account of Scotland noting fine agricultural land alongside some areas of woodland and unimproved moorland at the eastern and southern limits. The report for Parish of Liff and Bervie at the northeastern end noted a more mixed land use characteristic of parishes falling in a more upland area<sup>36</sup>, while the account for the neighbouring parish of Lundie and Fowlis also notes that improvements had been made to the arable land in the later 18<sup>th</sup> century with the parish being the first in the region to attempt crop rotation<sup>37</sup>. Improvements in arable cultivation is also noted in the lower lying land throughout the Carse of Gowrie, with the account for Errol noting a move from an infield/outfield system in the early last quarter of the 1700s greatly improving the land<sup>38</sup>, while the accounts for both Longforgan<sup>39</sup> and Inchtute<sup>40</sup> also note efforts being made to improve the arable fields in the last quarter of the 18<sup>th</sup> century. The account for St Madoes notes the problems arising with the parish lacking any arable on which to graze the cattle and horses required<sup>41</sup>. A slightly different situation is noted at the southern end of the Study Area where the land rises onto the higher ground of Pitmedden Wood within the Parish of Abernethy, and while the account notes improvements in the arable land on the low ground near the river, it also notes more livestock and areas of woodland on the higher ground<sup>42</sup>.

11.3.34 A similar situation is reported in the Second Statistical Account completed in the 1840s for the various lowland parishes (Longforgan<sup>43</sup>, Inchtute<sup>44</sup>, Errol<sup>45</sup>, and Rhynd<sup>46</sup>), with the landscape of the Study Area dominated by arable agriculture, while the first detailed mapping of the Study Area, provided by the First Edition Ordnance Survey plans published in the 1860s, depicts a landscape that can be largely traced in the contemporary field systems and settlement pattern, with most farmsteads within the Study Area surviving today and only minor alterations to fields. A number of the more formal designed landscapes are also well established by this period with Megginch GDL largely resembling the form that survives in the contemporary landscape (GDL00278), while both the Dundee and Perth Railway, and the Dundee and Newtyle Railways has also been constructed.

11.3.35 Noticeable changes between the First Edition Mapping and the contemporary landscape are largely limited to the settlement of St Madoes, Inchtute, and Longforgan which developed and expanded in the late 19<sup>th</sup> and early 20<sup>th</sup> century, with the landscape of the LOD dominated by agricultural land, much of which appears to be arable.

<sup>36</sup> Constable, T. (1794) 'United Parishes of Liff and Bervie' in Sinclair, J. (ed.) *The Statistical account of Scotland Volume 13*, Edinburgh: William Creech.

<sup>37</sup> Hally, A. (1793) 'United Parishes of Lundie and Fowlis' in Sinclair, J. (ed.) *The Statistical account of Scotland Volume 7*, Edinburgh: William Creech.

<sup>38</sup> Herdman, W. (1792) 'Parish of Errol' in Sinclair, J. (ed.) *The Statistical account of Scotland Volume 4*, Edinburgh: William Creech.

<sup>39</sup> Anon (1797) 'Parish of Longforgan' in Sinclair, J. (ed.) *The Statistical account of Scotland Volume 19*, Edinburgh: William Creech.

<sup>40</sup> Millar, J. (1792) 'Parish of Inchtute' in Sinclair, J. (ed.) *The Statistical account of Scotland Volume 4*, Edinburgh: William Creech.

<sup>41</sup> Black, D. (1792) 'Parish of St Mados' in Sinclair, J. (ed.) *The Statistical account of Scotland Volume 3*, Edinburgh: William Creech.

<sup>42</sup> Duncan, W. (1794) 'Parish of Abernethy' in Sinclair, J. (ed.) *The Statistical account of Scotland Volume 11*, Edinburgh: William Creech.

<sup>43</sup> Walker, R. S. (1845) 'Parish of Longforgan' in Anon (ed.) *The New Statistical Account of Scotland Volume Ten*, Edinburgh: William Blackwood and Sons.

<sup>44</sup> Honey, J. A. (1845). 'Parish of Inchtute' in Anon (ed.) *The New Statistical Account of Scotland Volume Ten*, Edinburgh: William Blackwood and Sons.

<sup>45</sup> Grierson, J. (1845) 'Parish of Errol' in Anon (ed.) *The New Statistical Account of Scotland Volume Ten*, Edinburgh: William Blackwood and Sons.

<sup>46</sup> Traquair, J. (1845) 'Parish of Rhynd' in Anon (ed.) *The New Statistical Account of Scotland Volume Ten*, Edinburgh: William Blackwood and Sons.



### *Modern (AD1900 to Present)*

11.3.36 Only a limited number of assets dating to the modern period have been recorded in the Study Area, including Huntley Castle which was converted to a prison (LB12868), as well as kennels linked to the Megginch Castle (78239), and features associated with the former Second World War Tealing Airfield (296865; 367922).

11.3.37 While only a limited number of assets have been recorded, the cartographic and documentary sources suggest that the landscape of the Study Area changed very little in the modern period, with the field systems depicted in the Ordnance Survey mapping of the 19<sup>th</sup> century still very visible in the contemporary landscape. The largest changes have been in the settlements, many of which have grown during the 20<sup>th</sup> century. These include St Madoes at the western end of the Study Area, as well as Inchtute and Longforgan at the north-eastern end. However, the LOD avoids the main settlements and instead passes through the agricultural land.

### **Site Visit**

11.3.38 An initial site reconnaissance visit of the LT384 Tealing to Westfield OHL was undertaken between the 12<sup>th</sup> and 15<sup>th</sup> March 2023. The purpose of this visit was to view the existing OHL in the landscape, and look for situations where moving towers, or increasing the height of towers, may result in significant impacts on heritage assets. All site visits were undertaken from public footpaths or roads, with no access to private land. Weather conditions varied from clear skies, to overcast with low cloud and snow showers, but in general the conditions allowed good views of the existing OHL in the landscape.

11.3.39 This was followed by a site visit to examine the proposed access track works which form the basis of the assessment once it was established that the movement or increase in height of most towers would not be required. This survey noted that a number of trackways recorded on the Ordnance Survey mapping of the area, and where minor upgrades had been proposed, do not survive as roads or bridleways, but are little more than minor footpaths meaning that upgrading to a temporary stone track will involve disturbance (i.e., Appendix 11.2, Photographs 22-25 (Volume 4)). It was, however, noted that in many cases extensive trackways used to service the arable land exist in a number of areas and as a result widening or upgrades in these areas should be minimal (i.e., Appendix 11.2, Photographs 12, 19, and 26 (Volume 4)). It was also noted that the flat open fields should also be suitable for the use of trackway without the need to strip to create level ground for trackway panels (i.e., Appendix 11.2, Photographs 2, 3, 5, and 9-11 (Volume 4)).

11.3.40 No new assets were recorded as part of the walkover survey, although in two areas sections of historic footpath were noted. The first, noted as Piperdam to Binn, was noted near Piperdam Plantation and Piperdam Loch to the west of Towers 155-157 (Appendix 11.2, Photographs 7 and 8 (Volume 4)), while the second was noted at the southern end of the Development linking Woodriffe Road to Lumbennie Hill in the area of Towers 71 and 72 (Appendix 11.2, Photographs 22 and 23 (Volume 4)). The Proposed Development proposes to upgrade the first of these tracks, while the second track is listed as a 'New Temporary Stone Road'.

## **11.4 Issues Scoped Out**

11.4.1 The operational phase of the Proposed Development will result in no change to the height or appearance of the majority of towers or the OHL, and as a result impacts on setting have been scoped out with the agreement of stakeholders. Only two towers may see a slight increase in height (Towers 155 and 156 may be increased by 2 m), with the potential for a single tower being relocated (Tower 129 or 132). As these towers are not in close proximity to assets, and do not have the potential to result in significant impacts due to their distance from assets, and the overall appearance of the OHL not changing in a significant way. Furthermore, vehicle movements will be controlled during construction, and lighting will be minimal. As a result, significant impacts at both the construction and operational phases are not predicted and an assessment of impacts on setting has been scoped out.

## 11.5 Assessment of Effects, Mitigation and Residual Effects

### *Embedded Mitigation*

- 11.5.1 The Applicant has committed to not removing, demolishing, or having any physical impacts on all listed buildings within the LOD, including access tracks works. As such, there is no potential for physical impacts on the listed buildings: LB12871; LB10858; LB48154; LB10859; LB10977; LB11601; LB17626; and LB48197. As a result, physical impacts on listed buildings do not form part of the assessment below.
- 11.5.2 Where possible, the Proposed Development, including all access tracks, has been designed to avoid previously recorded heritage assets, thereby avoiding the potential for physical impacts. There are four scheduled monuments within the Proposed Development:
- the Dundee and Newtyle Railway Embankment (SM6123): partly within Tower 172 works area, associated EPZ assessment area and LOD;
  - Dronley House Mound (SM6535): partly within EPZ assessment area near Tower 167 and LOD;
  - East Adamston souterrain and unenclosed settlement (SM6465): partly within Tower 164 works area and LOD; and,
  - South Inchmichael unenclosed settlement (SM7199): partly within Tower 118 works area and LOD.
- 11.5.3 Although these scheduled monuments fall within or close to areas marked for works associated with the Proposed Development, no works will take place within the scheduled monuments, which will be marked as exclusion zones during construction. If the designs change in any of these areas, the Applicant or their Principal Contractor will need to apply for Scheduled Monument Consent (SMC) and develop an appropriate mitigation strategy should there be a direct impact on the Scheduled Monument.
- 11.5.4 Bespoke tracks have been identified within the access track design, which are existing tracks that have been identified as needing upgraded, however due to environmental constraints the upgrade works will be limited to avoid felling the trees lining these tracks (see Table 3-1 in Chapter 3: Project Description (Volume 2) for further detail). This is relevant to the eastern avenue of Megginch GDL, as detailed further below on page 11-21.

### *Construction Phase*

- 11.5.5 The construction phase has the potential to result in the following impacts:
- Permanent physical impacts on previously recorded heritage assets due to the construction of access tracks and foundation works to existing towers; and,
  - Permanent physical impacts on previously unrecorded heritage assets due to construction of access tracks and foundation works to existing towers.
- 11.5.6 The results of the desk-based assessment demonstrate that the landscape through which the LOD passes has been exploited and occupied from the prehistoric period onwards, and a number of heritage assets have been recorded within the LOD.
- 11.5.7 A total of six designated assets and 64 non-designated assets have been recorded within the LOD. A number of these are find spots and as such represent assets that are no longer existing in situ, while a number of other assets have been recorded through documentary sources and accurate grid references are not known. Furthermore, the majority of the remaining assets are not located near any proposed works, such as tower foundation upgrades or access track works, or have been avoided / excluded as part of the design process (i.e., the scheduled monuments and listed buildings). As such, based on the current design there are no impacts on

these assets predicted, and as a result these assets have not been taken forwards to full assessment (see Table 11-4).

**Table 11-4: Assets within the LOD but located away from areas of works, and therefore not at risk of physical impacts.**

| Asset ID                        | Description / Site Name   | Period        | X Coordinate | Y Coordinate |
|---------------------------------|---|---------------|--------------|--------------|
| SM6535;<br>NO33NW0024;<br>74463 | Dronley House, mound 150 m S of. Scheduled Monument.                                      | Prehistoric   | 334140       | 736375       |
| SM6123;<br>NO33NE0044           | Dundee and Newtyle Railway, embankment SW of Balbeuchly House. Scheduled Monument.        | Post-Medieval | 335777       | 737242       |
| SM7199;<br>MPK5171;<br>30441    | South Inchmichael, unenclosed settlement N of. Scheduled Monument.                        | Prehistoric   | 324844       | 725327       |
| SM6465;<br>NO33NW0016;<br>31896 | East Adamston, souterrain and unenclosed settlement 670 m NNE of. Scheduled Monument.     | Prehistoric   | 333450       | 735904       |
| MPK7045;<br>80896               | Leetown, Leetown Victory Social Club. Club (Period Unassigned), House (Period Unassigned) | Modern        | 320900       | 721410       |
| MPK3128                         | Ferryfield Of Carpow, Old Road  | Post-Medieval | 319500       | 718020       |
| MPK15049                        | Steinshaugh Fishing Lodge / River Earn  | Post-Medieval | 319008       | 718258       |
| MPK16560                        | Balgay Orchard  | Post-Medieval | 327054       | 727228       |
| MPK18871                        | Pitfour Walled Garden   | Post-Medieval | 320233       | 720690       |
| MPK16530                        | Castle Huntley Orchard.   | Post-Medieval | 330450       | 729010       |
| MPK16528                        | Megginch Orchard  | Post-Medieval | 324308       | 724704       |
| MPK3108;<br>27957               | Easter Rhynd. Farmstead (Period Unassigned)   | Post-Medieval | 318490       | 718690       |
| MPK3109;<br>27958               | Old Manse Of Rhynd. Manse (Period Unassigned)   | Post-Medieval | 318220       | 718650       |
| 27977                           | Ferryfield Of Carpow, Old Road. Road(S) (Period Unassigned)                               | Post-Medieval | 319400       | 718000       |
| MPK5120;<br>32012               | King's Well. Well (Period Unassigned)   | Post-Medieval | 330350       | 730020       |
| MPK6095;<br>78371               | Ardgath Farm Cottages. Cottage(S) (Period Unassigned)                                     | Post-Medieval | 322000       | 722660       |

| Asset ID              | Description / Site Name  | Period        | X Coordinate | Y Coordinate |
|-----------------------|--|---------------|--------------|--------------|
| MPK7027;<br>80298     | Megginch Castle, East Lodge. Lodge (19 <sup>th</sup> Century)  | Post-Medieval | 325253       | 724497       |
| MPK17722;<br>294457   | Megginch Castle, Rig and Furrow. Rig and Furrow (Medieval) - (Post Medieval)   | Post-Medieval | 324285       | 724405       |
| MPK8317;<br>113626    | Easter Rhynd. Rig and Furrow (Medieval) - (Post Medieval)  | Post-Medieval | 318370       | 718620       |
| MPK8634;<br>127201    | Pitfour, Cairnie Mill. Watermill (Period Unassigned)   | Post-Medieval | 319180       | 720560       |
| MPK8605;<br>126201    | Wester Greenside. Farmhouse (Period Unassigned), Farmstead (Period Unassigned)   | Post-Medieval | 320260       | 716920       |
| MPK9691;<br>140669    | Easter Rhynd. Farmstead (Period Unassigned)  | Post-Medieval | 318450       | 718490       |
| MPK9668;<br>140646    | North Murie. Farmstead (19th Century)  | Post-Medieval | 322840       | 724020       |
| MPK9669;<br>140647    | North Murie. Farmstead (19th Century)  | Post-Medieval | 322860       | 723980       |
| MPK10104;<br>153069   | Gallowflat Farm. Farmstead (Period Unassigned)   | Post-Medieval | 320920       | 721050       |
| MPK11870;<br>169550   | St Madoes, Chapelhill, Thatched Cottage. Thatched Cottage (Period Unassigned)  | Post-Medieval | 320700       | 721300       |
| MPK19378;<br>353792   | Chapelhill. Milestone (19 <sup>th</sup> Century)   | Post-Medieval | 320792       | 721323       |
| 348413                | Inchyra. Finger Ring (Gold) (17 <sup>th</sup> Century)   | Post-Medieval | 318890       | 720400       |
| NO33NW0034            | East Adamston Mill. Mill Complex, now in residential use. On the 1 <sup>st</sup> edition Os Map (1860), it is marked as a flax yarn bleaching mill and shown as three roofed buildings and an unroofed building in an enclosure to the north, shown as a drying green.       | Post-Medieval | 333142       | 735297       |
| NO33NW0030            | Dronley Mill. Former corn and sawmill complex, now in residential use. It is dated 1707 but was probably rebuilt in the 19th century. On the 1 <sup>st</sup> edition OS map (1860), it is shown as being made up of a complex of eight buildings of various plans and sizes. | Post-Medieval | 334095       | 735912       |
| NO33NE0083            | Auchterhouse. A lead alloy medal, dating to the 19th century, found during metal detecting.  | Post-Medieval | 335165       | 736897       |
| NO33NE0086;<br>122803 | Mid Leoch. Cottages  | Post-Medieval | 335902       | 736852       |
| NO33NW0033            | East Adamston. Farmsteading and B-listed farmhouse (LB6487), still in use. The farmhouse was built in the earlier-19 <sup>th</sup> century, and the steading has a re-set stone dated 1757. The site was owned by the Duncans of   | Post-Medieval | 332875       | 735561       |

| Asset ID            | Description / Site Name  | Period                   | X Coordinate | Y Coordinate |
|---------------------|--|--------------------------|--------------|--------------|
|                     | Lundie, later of Camperdown, during the 18 <sup>th</sup> and 19 <sup>th</sup> centuries.   |                          |              |              |
| NO33SW0017          | Balruddery Farm. Farmhouse and farmstead, former Balruddery Home Farm, dating from circa 1820, attributed to David Neave. Two-storey, rectangular-plan, 3-bay, classically detailed farmhouse with a single storey projection to the rear. Includes listed farmhouse (LB10858).            | Post-Medieval            | 330387       | 732909       |
| NO33NW0102          | West Adamston. Farmstead depicted on historic OS maps.   | Post-Medieval            | 332095       | 735664       |
| NO33NE0104          | Wynton. Farmstead depicted on historic OS maps.  | Post-Medieval            | 337624       | 736905       |
| NO33SW0116          | Balruddery Cottages, Invergowrie. Row of cottages, depicted on historic OS maps. It is depicted on the 1 <sup>st</sup> edition OS map as a long L-plan building with an enclosure to the south. On the 2 <sup>nd</sup> edition OS map it is depicted as rectangular and divided into five. | Post-Medieval            | 330389       | 733238       |
| MPK5874;<br>78244   | Mains Of Megginch. Aviary (20 <sup>th</sup> Century), Farmstead (19 <sup>th</sup> Century)   | Post-Medieval;<br>Modern | 323840       | 724250       |
| MPK10830;<br>161537 | Inchcoonans Goods Station, Level Crossing and Signal Box. Goods Station (19 <sup>th</sup> Century) - (20 <sup>th</sup> Century), Level Crossing (19 <sup>th</sup> Century) - (20 <sup>th</sup> Century), Signal Box (19 <sup>th</sup> Century) - (20 <sup>th</sup> Century)                | Post-Medieval;<br>Modern | 323610       | 723710       |
| 187848              | Dronley Station. Railway Station (19 <sup>th</sup> Century) - (20 <sup>th</sup> Century)   | Post-Medieval;<br>Modern | 334310       | 735960       |
| MPK5108;<br>31724   | Longforgan. Souterrain (Prehistoric)(Possible)   | Prehistoric              | 330400       | 729920       |
| MPK6825;<br>80109   | Castle Huntly Holdings. Buckle (Copper)(Possible)  | Prehistoric              | 330900       | 730300       |
| MPK10145;<br>157564 | Pitcurran. Flat Axehead (Bronze)   | Prehistoric              | 319900       | 716900       |
| MPK6442;<br>70103   | Carpow. Coin(S) (Roman)  | Roman                    | 320000       | 717000       |
| 372470              | East Coast Onshore 275 kv Ohl Upgrade, Tealing-Westfield Route, Watching Brief. No Class (Event) (Period Unassigned)   | Unknown                  | 330337       | 729921       |
| MPK5126;<br>32043   | Carmichael Cottages. Cropmark(a) (Period Unknown), Cursus (Neolithic), Mortuary Enclosure (Neolithic)(Possible), Quarry(S) (Period Unassigned)(Possible)   | Prehistoric              | 330382       | 731042       |
| MPK17455            | Priorland, St Madoes. Farmstead And Horse Engine   | Post-Medieval            | 318831       | 720400       |

| Asset ID   | Description / Site Name   | Period        | X Coordinate | Y Coordinate |
|------------|---|---------------|--------------|--------------|
| NO33SW0109 | Balruddery House. Site of Balruddery House and gardens, depicted on OS 1 <sup>st</sup> and 2 <sup>nd</sup> edition maps, and coach house and stables still in use, with surrounding designed landscape. The house was designed by David Neave and built circa 1820. | Post-Medieval | 331506       | 732069       |

11.5.8 The remaining 23 assets recorded within the LOD fall within, or close to proposed works which may involve ground disturbance, such as stripping of topsoil for the of new temporary access tracks or upgrading the foundations of existing towers (Table 11-5). As a result, these have been taken forward to assessment.

**Table 11-5: Previously recorded assets within the LOD and within proposed work areas taken forward to assessment.**

| Asset ID             | Description / Site Name   | Period                   | X Coordinate | Y Coordinate |
|----------------------|---|--------------------------|--------------|--------------|
| GDL00278             | Megginch Garden and Designed Landscape  | Post-Medieval            | 323959       | 724511       |
| NO33NE0033;<br>85848 | Wynton. Cropmarks of a possible souterrain and other indeterminate features recorded by the RCAHMS during aerial reconnaissance in 1992.  | Prehistoric              | 337467       | 737170       |
| NO33NE0034;<br>85849 | Wynton. Cropmarks of a possible souterrain and other indeterminate features recorded by the RCAHMS during aerial reconnaissance in 1992.  | Prehistoric              | 337275       | 737180       |
| NO33NW0057           | Dundee and Newtyle Railway, Auchterhouse to Pitpointie. Remains of a stretch of the Dundee and Newtyle railway between Auchterhouse and Pitpointie (NO33NE0070). The track has been removed and much of the line returned to agriculture.                                 | Post-Medieval            | 335885       | 736559       |
| NO33NW0051           | DRONLEY STATION. Remains of a Railway Station. Dronley station was opened 16th December 1831 as part of the Dundee and Newtyle Railway. The station was reconstructed in the 1860s and closed on 10th January 1951.   | Post-Medieval            | 334221       | 735989       |
| NO33NW0052           | Dronley. Remains of a section of dismantled railway. from the former Dundee and Newtyle Railway. The railway line was crossed in two places in this section. The line opened on 16 <sup>th</sup> December 1831, was closed to passengers on 1 <sup>st</sup> October 1955. | Post-Medieval            | 334148       | 736108       |
| MPK5125;<br>32030    | Carmichael Cottages. Cropmark(s) (Period Unknown), Field Boundary(s) (Period Unassigned)(Possible), Pit(s) (Period Unassigned), Rig and Furrow (Medieval) - (Post Medieval), Ring Ditch (Period Unassigned)   | Prehistoric;<br>Medieval | 330636       | 731076       |
| MPK19616;<br>355054  | Longforgan, Carmichael Farm, South Villa. Archaeological Feature (Possible)   | Unknown                  | 330520       | 731120       |
| MPK7064;<br>82506    | Castle Huntly Holdings. Cropmark(S) (Period Unknown), Ring Ditch House (Prehistoric)(Possible)  | Prehistoric              | 330630       | 730688       |

| Asset ID             | Description / Site Name   | Period                     | X Coordinate | Y Coordinate |
|----------------------|---|----------------------------|--------------|--------------|
| MPK5171              | South Inchmichael, unenclosed settlement N of. Eastern section of asset is Scheduled.   | Prehistoric                | 324813       | 725318       |
| MPK4650;<br>30406    | Ninetree Brae. Cropmark(s) (Period Unknown), Enclosure(s) (Period Unknown), Pit(s) (Period Unknown), Quarry(s) (Period Unknown), Rig and Furrow (Medieval) - (Post Medieval), Souterrain(s) (Prehistoric) | Various                    | 325490       | 725210       |
| MPK4675;<br>30443    | Plaistow. Enclosure (Period Unknown), Rig And Furrow (Medieval) - (Post Medieval)   | Medieval;<br>Post-Medieval | 324611       | 725542       |
| MPK4722;<br>30512    | Inchcoonans. Ring Ditch (Prehistoric)   | Prehistoric                | 323613       | 723794       |
| MPK4732;<br>30533    | Ardgath. Pit(S) (Period Unknown), Unenclosed Settlement (Prehistoric)   | Prehistoric                | 322060       | 722640       |
| MPK6797;<br>71842    | Ardgath. Enclosure (Period Unknown)(Possible)   | Prehistoric                | 321950       | 722520       |
| MPK6792              | Unenclosed Settlement, Gallowflat / Gallows Knowe. Unenclosed settlement recorded through aerial photography. Part scheduled (SM7232)   | Prehistoric                | 321101       | 721193       |
| MPK6807;<br>68442    | Priorland. Ring Ditch (Prehistoric)(Possible)   | Prehistoric                | 319060       | 720450       |
| MPK15050             | River Earn / Pier   | Post-Medieval              | 319083       | 718222       |
| NO33NE0023;<br>31868 | Wynton Wood. Cropmarks of a ring-ditch recorded by the RCAHMS in 1983. There are also possible faint traces of other cropmarks in the same field.   | Prehistoric                | 338100       | 737451       |
| NO33NE0025;<br>31870 | Wynton. Cropmarks of a rectilinear enclosure with slightly rounded corners. It was recorded in a cereal crop to the west of Wynton Wood on photographs taken by the RCAHMS in 1982, 1992 and 1996.        | Prehistoric                | 337631       | 737229       |
| MPK6204;<br>72399    | Cottown. Cropmark(s) (Period Unknown), Enclosure (Period Unknown) (Possible)  | Prehistoric                | 320790       | 720920       |
| MPK16899;<br>286010  | Easter Rhynd. Linear Feature(s) (Period Unassigned)   | Prehistoric                | 318160       | 718620       |
| 367900               | Tayfield. Cropmark (Period Unknown)   | Prehistoric                | 319830       | 720030       |
| N/A                  | Historic Landscape features such as dry-stone walls, boundary dykes, and historic trackways.  | Post-Medieval              | N/A          | N/A          |

#### *Megginch Garden and Designed Landscape (GDL00278)*

11.5.9 The Garden and Designed Landscape associated with Megginch Castle is located on low-lying open land within the Carse of Gowrie to the north of the settlement of Errol and Errol Station. It is bordered to the north by the A90 and to the south by the main east coast railway line linking to Aberdeen, with the operational Tealing to Westfield OHL passing through its southern and eastern limits. While a garden is known to have existed here since the 16<sup>th</sup>

century, the current design largely dates to the late 18<sup>th</sup> and 19<sup>th</sup> centuries when the avenues were set out, and banks of woodland were planted separating the inner formal gardens and house from the outer element which is now used for arable farming. The operational Tealing to Westfield OHL crosses the eastern avenue and passes through the outer arable land on the south and eastern sides of the GDL. The designed landscape has historical, aesthetic and communal interest and is an example of formal garden design in the late-19<sup>th</sup> and early 20<sup>th</sup> century. As a designated Garden and Designed Landscape it is considered to be of high value (sensitivity).

11.5.10 The works proposed in the area of the GDL consist of two elements: minor changes to the woodland associated with clearances required for the OHL; and works associated with access tracks.

11.5.11 The work to allow a safe clearance between the OHL would require the reduction of some crowns of some deciduous trees, as well as the removal of a limited number of trees, to maintain a suitable clearance between the trees and the OHL near Tower 115. This reduction in crown size and tree loss is expected to be limited to the south-eastern area of the woodland, which is located less than 20 m from the OHL, and is in line with existing tree management associated with the operational use of the OHL. As such, the tree reduction and loss is not expected to alter the character of the GDL.

11.5.12 The design of the proposed access tracks include upgrading the existing eastern and western avenues within the boundary of the GDL. The eastern avenue is lined with mature trees, whilst the western avenue does not have the same extent of tree cover.

11.5.13 For the eastern avenue, this upgrade has been identified as a bespoke track (see Figure 11.1 (Volume 3)), which is a commitment that the upgrade will not result in a widening of the access track here in order to prevent the loss of the trees along the eastern avenue, which are an important feature in the approach to the GDL.

11.5.14 Furthermore, should there be concerns that the level of construction traffic may cause root damage, an alternative option of the installation of temporary trackway panels to cross the arable fields is proposed. The installation of temporary track panels may result in some ground disturbance and impacts on any buried archaeological remains that might exist in the area. Up to two young trees would also be lost from the eastern avenue to allow entry from the existing track onto the trackway.

11.5.15 Either the careful upgrade of the existing eastern avenue track to avoid the loss of trees here, or the alternative option of using trackway, would not alter the character of the parkland. The magnitude of change is therefore considered to be low, which on an assets of high value would result in a **minor adverse** significance of effect. This is not considered significant in EIA terms

#### *Wynton Crop Mark Site (NO33NE0033)*

11.5.16 An area of cropmarks was recorded through aerial photography in the area of Tower 177, with possible remains including a souterrain and other settlement remains. While undated, the feature is assumed to be Iron Age based on their form, and the presence of other similar features dated to the prehistoric period in the wider landscape. The asset may have archaeological and historical interest from the information it could contain linked to its purpose as well as the population living in the area when the feature was constructed/ in use. The assets are considered to be of medium value (sensitivity).

11.5.17 The current design includes an upgrade to the foundations of Tower 177, as well as associated access track works (Trackway Panels) within the area of the cropmarks. However, any physical impacts on buried remains that might survive are likely to be limited to a small area of the overall asset, and as a result the magnitude of change is considered to be low. On an asset of medium value, this would result in a **minor significance** of effect. This is not significant in EIA terms.



*Wynton Crop Mark Site (NO33NE0034)*

11.5.18 An area of cropmarks was recorded through aerial photography in the area of Tower 176, with possible remains including a souterrain and other settlement remains. While undated, the features are assumed to be prehistoric based on their form, and the presence of other similar features dated to the prehistoric period in the wider landscape. The asset may have archaeological and historical interest from the information it could contain linked to its purpose as well as the population living in the area when the feature was constructed/ in use. The assets are considered to be of medium value (sensitivity).

11.5.19 The current design includes an upgrade to the foundations of Tower 176, as well as associated access track works (Trackway Panels) within the area of the cropmarks. However, any physical impacts on buried remains that might survive are likely to be limited to a small area of the overall asset, and as a result the magnitude of change is considered to be low. On an asset of medium value, this would result in a **minor significance** of effect. This is not significant in EIA terms.

*Dundee to Newtyle Railway between Auchterhouse and Pitpointie (NO33NW0057)*

11.5.20 The remains of a section of the former Dundee to Newtyle Railway has been recorded on historic mapping in the area of Tower 172. No traces of the railway line or track bed were observed on the walkover survey, with the alignment incorporated into a footpath along a field boundary. Any remains that might survive as buried features may have archaeological and historical interest from the information it could about the development of the railways in the 19<sup>th</sup> century. The assets are considered to be of low value (sensitivity).

11.5.21 The current design includes works associated with an access track (Trackway Panels) to access Tower 172 adjacent to the former railway. Any physical impacts on buried remains that might survive are likely to be limited to a short section of the overall asset, and as a result the magnitude of change is considered to be low. On an asset of low value, this would result in a **negligible significance** of effect. This is not significant in EIA terms.

*Dronley Station and Section of Dundee to Newtyle Railway (NO33NW0051 and NO33NW0052)*

11.5.22 The remains of the former Dronley Station, opened in 1831, and former trail alignment have been recorded on historic mapping in the area of the access track needed to access Tower 166. No traces of the station were observed during the walkover survey with part of the land now used as a public carpark, while the rest has been returned to agriculture with the track bed converted to a footpath. Any remains that might survive as buried features may have archaeological and historical interest from the information they could provide about the development of the railways in the 19<sup>th</sup> century. The assets are considered to be of low value (sensitivity).

11.5.23 The current design includes works associated with an access track (Trackway Panels) to access Tower 166. Any physical impacts on buried remains that might survive are likely to be limited to a very small area of the overall asset, and as a result the magnitude of change is considered to be low. On an asset of low value, this would result in a **negligible significance** of effect. This is not significant in EIA terms.

*Carmichael Cottages Cropmark Site and Archaeological Remains (MPK5125 and MPK19616)*

11.5.24 An area of cropmarks was recorded through aerial photography in the area of Tower 144, with possible remains including a ring ditch, enclosures, and ridge and furrow (MPK5125), while a watching brief at the adjacent farm recorded limited remains dating to the post-medieval period (MPK19616). While most of the cropmarks are undated, the features are assumed to be prehistoric based on their form, with the ridge and furrow being later (either medieval or post-medieval). The features may have archaeological and historical interest from the information they could contain linked to the history of land use in the area, as well as the chronology of the site. The assets are considered to be of medium value (sensitivity).

11.5.25 The current design includes an upgrade to the foundations of Tower 144, as well as associated access track works (Trackway Panels) within the area of the cropmarks. However, any physical impacts on buried remains that might survive are likely to be limited to a small area of the overall asset, and as a result the magnitude of change is considered to be low. On an asset of medium value, this would result in a **minor significance** of effect. This is not significant in EIA terms.

*Castle Huntley Holdings Cropmark Site (MPK7064)*

11.5.26 An area of cropmarks was recorded through aerial photography in the area of the access track to Tower 143, with possible remains including a ring ditch and an enclosure. While most of the cropmarks are undated, the features are assumed to be prehistoric based on their form. The features may have archaeological and historical interest from the information they could contain linked to the history of land use in the area, as well as the chronology of the site. The assets are considered to be of medium value (sensitivity).

11.5.27 The current design includes an upgrade to the foundations of Tower 144, which lies outside of the area of cropmarks, as well as associated access track works (Trackway Panels) within the area of the cropmarks. However, any physical impacts on buried remains that might survive are likely to be limited to a small element of the overall asset, and as a result the magnitude of change is considered to be low. On an asset of medium value, this would result in a **minor significance** of effect. This is not significant in EIA terms.

*South Inchmichael and East Inchmichael Cropmark Sites (MPK5171; MPK4650; and MKP4675)*

11.5.28 An extensive area of cropmarks have been recorded through aerial photography in the area of South and East Inchmichael, with possible remains including enclosures, field systems and unenclosed settlements. While most of the cropmarks are undated, the features are assumed to be prehistoric based on their form. The features may have archaeological and historical interest from the information they could contain linked to the history of land use in the area, as well as the chronology of the site. An element of the cropmarks, which appears to represent the main focus of settlement, is scheduled (SM7199), with the remaining non-designated area of the cropmark representing possible field systems. The scheduled area falls outside of the proposed works and the remaining unscheduled remains are considered to be of medium value (sensitivity).

11.5.29 The current design includes foundation upgrades to Towers 118 and 119, as well as associated access track works required to access Towers 118 to 121 (a mixture of Trackway Panels and Upgrade to Existing Road) within the area of the cropmarks. Part of the cropmark site is scheduled (SM7199), however, the scheduled area is excluded from the area of proposed works. Any physical impacts on buried remains that might survive are likely to be limited to a small element of the overall asset, which is extensive, and as a result the magnitude of change is considered to be low. On an asset of medium value, this would result in a **minor significance** of effect. This is not significant in EIA terms.

*Inchcoonans Ring Ditch Cropmark Site (MPK4722)*

11.5.30 A possible ring ditch has been identified as cropmarks through aerial photography to the southwest of Megginch Castle in the area of Tower 112. While undated, the feature is assumed to be prehistoric based on its form and other dated examples in the area. The feature may have archaeological and historical interest from the information it could contain linked to the history of land use in the area, as well as the chronology of the site. The feature is considered to be of medium value (sensitivity).

11.5.31 The current design includes foundation upgrades to Tower 112, as well as associated access track works required to access Towers 112 (Trackway Panels) partially within the area of the cropmark. Any physical impacts on buried remains that might survive are likely to be limited to a small element of the overall asset, which is extensive, and

as a result the magnitude of change is considered to be low. On an asset of medium value, this would result in a **minor significance** of effect. This is not significant in EIA terms.

*Ardgath Cropmark Sites (MPK4732; MPK6797)*

11.5.32 Two areas of cropmarks have been recorded through aerial photography in the area of Ardgath, with possible remains including an enclosure and pits. While most of the cropmarks are undated, the features are assumed to be prehistoric based on their form. The features may have archaeological and historical interest from the information they could contain linked to the history of land use in the area, as well as the chronology of the site, and are considered to be of medium value (sensitivity).

11.5.33 The current design includes a foundation upgrade to Tower 106, as well as associated access track works required to access Tower 106 (a mixture of Trackway Panels and Upgrade to Existing Road) partially within the area of the cropmarks. Any physical impacts on buried remains that might survive are likely to be limited to a small element of the overall asset, which is relatively large, and as a result the magnitude of change is considered to be low. On an asset of medium value, this would result in a **minor significance** of effect. This is not significant in EIA terms.

*Gallowflat Cropmark Sites (MPK6792)*

11.5.34 An extensive area of cropmarks have been recorded through aerial photography in the area of South of Leetown, with possible remains including enclosures, field systems and possible unenclosed settlements. While most of the cropmarks are undated, the features are assumed to be prehistoric based on their form. The features may have archaeological and historical interest from the information they could contain linked to the history of land use in the area, as well as the chronology of the site. An element of the cropmarks is scheduled (SM7232), however, the scheduled remains fall outside of the LOD and the remaining unscheduled remains are considered to be of medium value (sensitivity).

11.5.35 The current design includes works access with access tracks required to access Towers 99 and 100 (a mixture of Trackway Panels and Upgrade to Existing Road). While these works do not fall within the cropmarks, they are located immediately adjacent to them (although at least 150 m away from the scheduled area) and as such there is the potential for them to result in physical impacts. Any physical impacts on buried remains that might survive are likely to be limited to a small element of the overall asset, which is extensive, and as a result the magnitude of change is considered to be low. On an asset of medium value, this would result in a **minor significance** of effect. This is not significant in EIA terms.

*Priorland Ring Ditch Cropmark Site (MPK6807)*

11.5.36 A possible ring ditch has been identified as cropmarks through aerial photography to the southwest of St Maddoes in the area where access track works are required to access Tower 91 – 93. While undated, the feature is assumed to be prehistoric based on its form and other dated examples in the area. The feature may have archaeological and historical interest from the information it could contain linked to the history of land use in the area, as well as the chronology of the site. The feature is considered to be of medium value (sensitivity).

11.5.37 The current design includes works to provide access tracks to Towers 91 - 93 (a new Temporary Access Road, see Appendix 11.2, Photograph 21 (Volume 4)) that is within the eastern limits of the cropmark, and a part of the field that has been partially disturbed through the construction of an existing temporary access track. Any physical impacts on buried remains that might survive will be limited to a small element of the overall asset, and possibly ground that has been previously disturbed. As a result, the magnitude of change is considered to be low, and on an asset of medium value, this would result in a **minor significance** of effect. This is not significant in EIA terms.

*River Earn Pier (MPK15050)*

11.5.38 The remains of a former pier within the River Earn have been recorded on historic mapping of the area, while aerial photographs suggest some elements may survive within the river/the intertidal zone. Located in the area of Tower 166, as well as the access tracks required to reach it, the former pier is thought to have been used by a ferry that operated on the river, as well as fishing boats. Any remains that might survive as buried features may have archaeological and historical interest from the information they could contain about the pier and how it was used. The assets are considered to be of low value (sensitivity).

11.5.39 The current design includes works associated with an access track (Trackway Panels and Upgrade to Existing Road) to access Tower 85. Any physical impacts on buried remains that might survive are likely to be limited to a very small area of the overall asset, and as a result the magnitude of change is considered to be low. On an asset of low value, this would result in a **negligible significance** of effect. This is not significant in EIA terms.

*Crop Mark Sites (NO33NE0023; NO33NE0025; MPK6204; MPK16899; 367900)*

11.5.40 A number of areas of cropmarks have been recorded through aerial photography, with possible settlement remains, enclosures, and field systems recorded. While undated, the features are assumed to be prehistoric based on their form, and the presence of other similar features dated to the prehistoric period in the wider landscape. The asset may have archaeological and historical interest from the information they could contain linked to its purpose as well as the population living in the area when the feature was constructed / in use. The assets are considered to be of medium value (sensitivity).

11.5.41 While the current design will not impact on these assets, the full extent of many of them is not well understood and there is the potential for elements to continue into the areas of disturbance if stripping is required for elements such as access tracks, bell mouths, or tower foundations. Any physical impacts on buried remains that might survive are, however, likely to be limited to a small area and as a result the magnitude of change is considered to be low. On an asset of medium value, this would result in a **minor significance** of effect. This is not significant in EIA terms.

**Mitigation**

11.5.42 In areas where heritage assets have been previously recorded and where stripping is required, mitigation is assumed, subject to consultation with relevant stakeholders, to consist of archaeological monitoring during the stripping of access tracks to allow any buried features that might survive to be recorded prior to construction. Based on the current findings, no areas of strip, map, and record are proposed due to the limited intrusive works in areas of previously recorded archaeology.

11.5.43 Based on the current design all scheduled monuments will be avoided and there will be no impact. If the design alters and temporary works are required that may affect any scheduled monuments, an application for SMC will be submitted which will include a detailed proposal for site specific mitigation. As such, mitigation will be agreed as part of the SMC application and in pre-application consultation with HES.

11.5.44 In areas where historic landscape features such as drystone walls and stone dykes cannot be avoided, any elements removed during construction should be rebuilt in the same form once construction is complete. In areas where this cannot take place due to a permanent access being required, the ends of walls / dykes should be 'made good' during the construction phase to avoid the feature deteriorating through erosion.

11.5.45 All mitigation works will be agreed with the relevant Local Authority Archaeological Advisor, and HES in the case of designated assets, once full details of the construction works have been agreed and prior to works commencing.

11.5.46 Table 11-6 provides a 'Summary of Cultural Heritage Mitigation Measures' which will be used to inform the commitments in the contract documents.

**Table 11-6 Summary of Cultural Heritage Mitigation Measures**

| Mitigation Item | Location   | Timing of Measure | Description  | Mitigation Purpose / Objective  | Specific Consultation or Approval Required   | Potential Monitoring Requirements  |
|-----------------|--|-------------------|--|---|--|--|
| CH-1            | Throughout Proposed Development                    | Construction      | Archaeological monitoring to be undertaken during construction and ground works (i.e., stripping for access tracks, bell-mouths, and tower foundation upgrades) in areas where archaeological remains have been recorded.  | Identify, excavate, and record previously recorded archaeological features.   | An Archaeological Strategy to be agreed pre-construction with the relevant Local Planning Authority Archaeological Advisor, and approved via a Written Scheme of Investigations (WSI). | Expected that day-to day works on site will be under the supervision of an ACoW. Periodic site monitoring visits from Local Planning Authority Archaeological Advisor likely during construction. To be agreed as part of the WSI.         |
| CH-2            | Throughout Proposed Development                    | Construction      | Archaeological monitoring to be undertaken during construction and ground works (i.e., stripping for access tracks, bell-mouths, and tower foundation upgrades) in areas in close proximity to previously recorded archaeological remains, or where the archaeological potential is considered to be higher due to aspects such as limited ground disturbance. | Identify, excavate, and record previously unrecorded archaeological features, as well as above ground features such as drystone walls.                      | An Archaeological Strategy to be agreed pre-construction with the relevant Local Planning Authority Archaeological Advisor, and approved via a WSI.                                    | Expected that day-to day works on site will be under the supervision of an ACoW. Periodic site monitoring visits from Local Planning Authority Archaeological Advisor likely during construction. To be agreed as part of the WSI.         |
| CH-3            | Megginch Garden and Designed Landscape (GDL00278). | Construction      | Track upgrade to be restricted in width to avoid removal of historic landscape features, such as dry-stone walls, removal of trees, and large-scale changes to aspects such as current access track character.   | Limit large scale widening of existing tracks to avoid loss of historic landscape features / elements, and significant impacts on the character of the GDL. | An Archaeological Strategy to be agreed pre-construction with HES and the relevant Local Planning Authority Archaeological Advisor, and approved via a WSI.                            | Expected that day-to day works on site will be under the supervision of an ACoW. Periodic site monitoring visits from HES and Local Planning Authority Archaeological Advisor likely during construction. To be agreed as part of the WSI. |
| CH-4            | Upgrade to Access to Towers 153-156.               | Construction      | Track upgrade to be restricted in width to avoid removal of historic landscape features such as dry-stone walls.   | Limit large scale widening of existing tracks and new temporary access tracks to avoid loss of historic landscape features/ elements.                       | An Archaeological Strategy to be agreed pre-construction with HES and the relevant Local Planning Authority Archaeological Advisor, and approved via a WSI.                            | Expected that day-to day works on site will be under the supervision of an ACoW. Periodic site monitoring visits from HES and Local Planning Authority Archaeological Advisor likely during construction. To be agreed as part of the WSI. |

| Mitigation Item | Location   | Timing of Measure | Description   | Mitigation Purpose / Objective   | Specific Consultation or Approval Required   | Potential Monitoring Requirements   |
|-----------------|--|-------------------|---|--|--|---|
| CH-5            | All scheduled monuments where the Proposed Development will result in works within the same field.<br>Currently: SM6535, SM6123, SM6465, and SM7199. | Construction      | Temporary fencing to be installed around scheduled monuments to avoid accidental damage where construction works are undertaken in the same field as a scheduled monument.  | Avoid accidental physical impacts on scheduled monuments.  | An Archaeological Strategy to be agreed pre-construction with the HES as well as relevant Local Planning Authority Archaeological Advisor, and approved via a WSI. This is likely to include agreeing buffers. | Expected that day-to day works on site will be under the supervision of an ACoW. Periodic site monitoring visits may be required by HES and the Local Planning Authority Archaeological Advisor during construction. To be agreed as part of the WSI. |
| CH-6            | Throughout Proposed Scheme   | Construction      | Any sections of historic landscape features removed (i.e., dry-stone walls, boundary dykes etc) to be reinstated / restored once construction has been completed. In areas where the need for a permanent access means reinstatement/restoration is not possible, exposed ends of walls and similar features should be 'made good' by a qualified individual to avoid further loss of the features through erosion. | Avoid / minimise impacts on historic landscape features, such as dry-stone walls and boundary dykes.   | An Archaeological Strategy to be agreed pre-construction with the relevant Local Planning Authority Archaeological Advisor, and approved via a WSI.  | Expected that day-to day works on site will be under the supervision of an ACoW. Periodic site monitoring visits from Local Planning Authority Archaeological Advisor likely during construction. To be agreed as part of the WSI.                    |
| CH-7            | Throughout Proposed Scheme   | Construction      | Pre and post-condition surveys to be undertaken in fields where construction works are being undertaken.  | Avoid / minimise impacts on previously recorded heritage assets that are not expected to be disturbed (i.e., construction works not expected to break ground). | Works to be agreed pre-construction with the relevant Local Planning Authority Archaeological Advisor, and approved via a WSI.   | Expected that day-to-day works on site will be under the supervision of an ACoW. Periodic site monitoring visits from Local Planning Authority Archaeological Advisor likely during construction. To be agreed as part of the WSI.                    |

### Residual Effects

11.5.47 Table 11-7 provides a summary of pre-mitigation construction impacts, mitigation measures, and residual effects that have been described within this chapter. Significant effects typically comprise effects that are moderate or above.

**Table 11-7: Potential Cultural Construction impacts and Residual Effects**

| Asset ID/ Description  | Scale of Effect | Mitigation | Residual Effect |
|--|-----------------|------------|-----------------|
| GDL. Megginch Garden and Designed Landscape  | Minor           | CH1; CH-3  | Minor           |
| NO33NE0033; 85848. Wynton. Cropmarks   | Minor           | CH-1       | Minor           |
| NO33NE0034; 85849. Wynton. Cropmarks   | Minor           | CH-1       | Minor           |
| NO33NW0057. Dundee and Newtyle Railway, Auchterhouse to Pitpointie   | Negligible      | CH-1       | Negligible      |
| NO33NW0051. Dronley Station  | Negligible      | CH-1       | Negligible      |
| NO33NW0052. Dronley. Section Of Dismantled Railway.  | Negligible      | CH-1       | Negligible      |
| MPK5125; 32030. Carmichael Cottages. Cropmark(s), Field Boundary(s), Pit(s), Rig and Furrow, and Ring Ditch. | Minor           | CH-1       | Minor           |
| MPK19616; 355054. Longforgan, Carmichael Farm, South Villa. Archaeological Feature (Possible).               | Minor           | CH-1       | Minor           |
| MPK7064; 82506. Castle Huntly Holdings. Cropmark, Ring Ditch House.  | Minor           | CH-1       | Minor           |
| MPK5171. South Inchmichael Unenclosed Settlement.  | Minor           | CH-1       | Minor           |
| MPK4650. Nintree Brae. Cropmarks   | Minor           | CH-1       | Minor           |
| MPK4675. Plaistow. Cropmark.   | Minor           | CH-1       | Minor           |
| MPK4722; 30512. Inchcoonans. Ring Ditch  | Minor           | CH-1       | Minor           |
| MPK4732; 30533. Ardgaith. Pits and Unenclosed Settlement.  | Minor           | CH-1       | Minor           |
| MPK6797; 71842. Ardgaith. Enclosure  | Minor           | CH-1       | Minor           |
| MPK6792. Unenclosed Settlement, Gallowflat / Gallows Knowe   | Minor           | CH-1       | Minor           |
| MPK6807; 68442. Priorland. Ring Ditch.   | Minor           | CH-1       | Minor           |
| MPK15050. River Earn/ Pier   | Negligible      | CH-1       | Negligible      |
| NO33NE0023; 31868. Wynton Wood Cropmarks   | Minor           | CH-2       | Minor           |
| NO33NE0025; 31870. Wynton. Cropmarks   | Minor           | CH-2       | Minor           |
| MPK6204; 72399. Cottown. Cropmark(s) and Enclosure   | Minor           | CH-2       | Minor           |
| MPK16899; 286010. Easter Rhynd. Linear Feature(s).   | Minor           | CH-2       | Minor           |
| 367900. Tayfield. Cropmark   | Minor           | CH-2       | Minor           |



| Asset ID/ Description   | Scale of Effect | Mitigation | Residual Effect |
|---|-----------------|------------|-----------------|
| N/A. Historic Landscape features such as dry-stone walls, boundary dykes, and historic trackways. | Minor           | CH-2; CH-4 | Minor           |

### ***Operational Phase***

11.5.48 Due to the nature of the Proposed Development, all impacts are limited to physical impacts during the construction phase, with no impacts on the setting of assets during the operational phase. As such, there are no impacts predicted during the operational phase and no requirement for mitigation.

### ***Cumulative Effects***

11.5.49 Due to the nature of the Proposed Development, all impacts are limited to physical impacts during the construction phase, with no impacts on the setting of assets during the operational phase. None of the schemes assessed as part of the Chapter 15: Cumulative Assessment (Volume 2) will result in physical impacts on assets assessed as part of the current assessment, and as such, no cumulative impacts are predicted.

## **11.6 Summary**

11.6.1 The current assessment examined previously recorded assets within a 250 m Study Area of the LOD, with data collected from the HES (both designated assets and non-designated assets on Canmore), the Perth and Kinross HER, and the Aberdeenshire HER. This data was supplemented by a review of historic mapping, documentary sources, and a walkover survey undertaken by the author.

11.6.2 The results of the baseline assessment identified that the Study Area contains evidence of archaeological remains dating to the later prehistoric periods to the modern period. The LOD largely follows an existing OHL which traverses a predominantly agricultural landscape with few modern or historic settlements. Below ground archaeology associated with isolated agricultural settlement dating from the later prehistoric and medieval to post-medieval periods is expected to experience relatively limited impacts as a result of the Proposed Development.

11.6.3 Permanent impacts on the setting of assets have been scoped out as the Proposed Development will not result in any changes to the majority of towers. Where there may be changes, with either Tower 129 or Tower 132 being replaced, and/or Towers 155 and 156 increasing in height by 2 m, these will not result in any change to setting.

11.6.4 Most previously recorded assets will also be avoided by works associated with the reconductoring, such as the installation of temporary trackways or the upgrade of existing tracks, and as such mitigation in most areas is limited to archaeological monitoring where trackways is being stripped to record elements of previously recorded features that might extend into the work areas, or previously recorded assets.

11.6.5 While the current design avoids / excludes all scheduled monuments, it is noted that any changes to design that would result in potential impact to a scheduled monument would require SMC.