Physical Environment

Chapter 08: Landscape and Visual

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Glossary

Application Site	The area within the red line Planning Boundary comprising the OnTW, as defined.
Original OnTW	The OnTW, as was granted planning permission in principle in September 2014, under ELC reference 14/00456/PPM.
Original OnTW ES	The Environmental Statement that was submitted to support the application for the Original OnTW in 2014.
Construction Compound	An indicative area within the Revised Application Site used to accommodate the temporary work site including; construction parking, construction welfare facilities, construction meeting room, construction laydown and storage area, construction security facilities (fenced area/gate and security access) and construction security lighting.
Landfall	Point where up to two Offshore Export Cables from ICOL's Offshore Wind Farm will be brought ashore.
Offshore Export Cable	The subsea, buried or protected electricity cables running from ICOL's Offshore Wind Farm offshore substation to the Landfall.
Onshore Export Cable Corridor	The area within the Application Site where the proposed Onshore Export Cables will be laid.
Onshore Export Cables	Electricity cables from the transition pits to the Onshore Substation and from the Onshore Substation to the grid connection point.
Onshore Substation	The proposed electrical substation comprising of all the equipment and associate infrastructure required to enable connection to the electrical transmission grid.
Onshore Substation Site/Substation Site	The indicative area within the Application Site where the proposed Onshore Substation and screening will be located.
Onshore Transmission Works (OnTW)	All proposed works within the Application Site, typically including the Onshore Substation, cables transition pits, cable jointing pits, underground electricity transmission cables connecting to the Onshore Substation and further underground cables required to facilitate connection to the national grid. This includes all permanent and temporary works required.
Planning Boundary	The red line application boundary containing the Onshore Transmission Works (OnTW), as defined.

Abbreviations and Acronyms

AGLV	Area of Great Landscape Value
CAT	Countryside Around Towns
EIA	Environmental Impact Assessment
ELC	East Lothian Council
ELLP	East Lothian Local Plan
GDL	Inventory Gardens and Designed Landscapes
GLVIA3	Guidelines for Landscape and Visual Impact Assessment, 3rd Edition
HES	Historic Environment Scotland
ICOL	Inch Cape Offshore Limited
LCA	Landscape Character Area
LCT	Landscape Character Type
LDP	Local Development Plan
LVIA	Landscape and Visual Impact Assessment
MLWS	Mean Low Water Springs
OnTW	Onshore Transmission Works
OS	Ordnance Survey
PPP	Planning Permission in Principle
SDP	Strategic Development Plan
SESplan	The Strategic Development Planning Authority for Edinburgh and South East Scotland
SLA	Special Landscape Area
SNH	Scottish Natural Heritage
ZTV	Zone of Theoretical Visibility

8 Landscape and Visual

8.1 Introduction

1 This Chapter of the Environmental Impact Assessment (EIA) Report examines the potential landscape and visual impacts associated with the construction, operation and decommissioning phases of the Inch Cape Onshore Transmission Works (OnTW). The OnTW includes the Landfall, Onshore Export Cables and Onshore Substation.

2 A full description of the OnTW is included in detail in *Chapter 5: Description of Development*. The area of search for the Onshore Substation and the Onshore Export Cable Corridor is discussed in *Chapter 4: Site Selection and Alternatives*.

3 This chapter is supported by the following Technical Appendices contained in *Volume 2*:

- *Appendix 8A: Landscape and Visual Assessment Methodology*;
- *Appendix 8B: LVIA Figures*; and
- *Appendix 8C: Viewpoint Assessment*.

4 This chapter also shares direct linkages with the following EIA report chapters and makes reference to their content where relevant:

- *Chapter 6: Ecology*; and
- *Chapter 9: Cultural Heritage*.

8.2 Consultations

5 Public consultation events were held on 06 June and 14 June 2017 in East Lothian. Scoping and pre-application consultation responses received from East Lothian Council (ELC), Scottish Natural Heritage (SNH) and Historic Environment Scotland (HES) which are relevant to this Landscape and Visual Impact Assessment (LVIA) are summarised in *Table 8.1* below, including Inch Cape Onshore Limited's (ICOL) response and identifies where relevant information can be found within this EIA report.

Table 8.1: Scoping and Consultation Responses and Actions

Consultee	Scoping/ Consultation Response	ICOL Response
East Lothian Council (ELC)	It is agreed that the baseline data and technical studies undertaken for the previous ES are likely to remain broadly relevant, though may require supplementing or updating (REF: Para 2.6, Page 6).	This suggested approach is noted and has been adopted. The baseline data and technical studies undertaken for the Original OnTW ES have been used for this LVIA where relevant with additional material to update and provide relevant baseline for the Application Site. *See Section 8.4*

Consultee	Scoping/ Consultation Response	ICOL Response
ELC	The assessment should be focussed on the significant impacts of the proposal on the environment (REF: Para 2.5, Page 7).	This is in line with relevant guidance and is the approach used for this LVIA.
ELC	Scoping Issues to include: • Impacts on local visual amenity and landscape including the coast and nearby recreational areas; • Landscape and visual impact on residents; • Impacts on local landscape designations; and • Landscape and visual impact on people engaged in outdoor recreation.	The LVIA has been carried out to include all designated and non-designated landscapes as well as visual receptors likely to be significantly affected by the OnTW.
ELC	The Application Site is located in landscape type "Musselburgh / Prestonpans Coast" character area as defined by ASH 1998 study (ASH, 1998).	This is noted and the character assessment highlighted by the consultee has been used as the basis of assessment. *See Section 8.4.3*
ELC	Proposed Special Landscape Areas and Countryside Around Town should be included in the LVIA (REF 6.62, Page 30).	These designations are included in a proposed Local Development Plan (LDP). Effects of the OnTW on designations contained in the adopted and extant Local Plan have been assessed in this LVIA. However, the designations proposed in the LDP are draft policy only and at this stage can only be accorded limited weight. While they do not form the basis of assessment, reference is made to these designations where appropriate.

Consultee	Scoping/ Consultation Response	ICOL Response
ELC	The assessment should include a full topographic analysis survey of the Application Site showing contours, spot heights at no less than 0.5 m intervals and include adjacent areas.	GLVIA3 requires that the landscape baseline is recorded to an *"appropriate level"* (Paragraph 5.33). In terms of assessing potential visibility, GLVIA3 also recognises that *"many factors other than terrain will influence actual visibility"* (Paragraph 6.10). The assessment has been carried out with reference to a ZTV and visualisations prepared using Ordnance Survey (OS) Terrain-5 Digital Terrain Model. This is common industry practice and the product is described by OS as being suitable for *"planning and visual purposes to enable* (…) *environmental analysis; line of sight planning and view-shed modelling; landscape visualisation"* (OS Terrain 5 User Guide). It is therefore considered to be appropriate for this application. A full topographic analysis survey of the Application Site and immediately adjacent areas would be used to inform detail design, if Planning Permission in Principle (PPP) were granted. Further detail on the methodology used to prepare the visualisations is provided in *Appendix 8A.*
ELC	A north/south and east/west cross section of the Application Site is required, clearly showing the existing ground and proposed ground levels and how the OnTW will relate to the adjacent landscape setting.	Indicative cross sections have been referred to in the LVIA and are presented on *Figure 8.6b.*
ELC	A 5 km Zone of Theoretical Visibility (ZTV) should be provided and include modelling of tree belts, woodland and built form.	A five kilometre bare ground ZTV has been used to inform the LVIA and is presented on *Figure 8.1*. In addition, the ZTV is shown overlaid on aerial photography, showing tree belts, woodland and built form, and is presented on *Figure 8.2*.

Consultee	Scoping/ Consultation Response	ICOL Response
ELC	It is requested that a ZTV for the existing Application Site is provided.	Paragraph 5.3 of GLVIA3 suggests that a review of available mapping, landscape character assessments and field survey should be used to understand baseline condition. A ZTV of the Application Site would not assist with this and so one has not been prepared; it is not normal practice and it is not considered that it would assist the LVIA relating to the OnTW.
ELC	Viewpoints should be chosen which do not have obstructions such as hedgerows, gates, walls or mounds blocking the view of the proposal. Representative viewpoints from within Special Landscape Areas, Conservation Areas, Core Paths, Monuments, designed landscapes, public parks and roads.	A proportionate range of viewpoints has been used to represent relevant landscape and visual receptors within the five kilometre study area. In line with Guidelines for Landscape and Visual Impact Assessment 3rd Edition (GLVIA3), paragraph 6.20 this takes account of public accessibility, number and sensitivity of viewers, nature of the viewing experience, distance and direction. While not necessarily all illustrated with viewpoints, appropriate receptors have been visited and assessed as part of the LVIA.
ELC	Viewcones of 50 cm viewing distance, 45 degree viewcone should be used for some of the viewpoints.	The Landscape Institute, via their website [1] , suggests that *"guidance prepared by SNH relating to the visual representation of wind farms gives further useful insight into visualisation techniques in general, which may be helpful in developing approaches in other situations".* The use of this wind farm guidance has become common for producing visualisations for many forms of development and produces images which are now familiar to assessors and decision makers. In line with examples supplied in the current SNH guidance, each viewpoint is presented with a 53.5 degree horizontal field of view which the guidance recommends should be viewed at a comfortable arm's length.

[1] https://www.landscapeinstitute.org/visualisation/ (accessed 08 December 2017)

Consultee	Scoping/ Consultation Response	ICOL Response
ELC	Details of how the photomontages have been prepared should be provided in methodology statement.	Refer to *Appendix 8A*.
ELC	A description of any measures envisaged preventing, reducing and offsetting any significant adverse effects on the environment should be given.	A description of embedded mitigation is included as part of this chapter. Refer to *Section 8.5*.
ELC	The LVIA should be completed with reference to an assessment matrix specified by the ELC Landscape Advisor.	The LVIA has been completed using a tried and tested methodology which includes an assessment matrix as set out in the Scoping Report. This is consistent with GLVIA3 and, as recommended in GLVIA3, the LVIA has not relied on prescriptive application of a matrix formula but does provide a reasoned assessment based on professional judgement. This methodology was also employed for the LVIA carried out in respect of the Original OnTW ES. The previous methodology and related matrix was accepted by ELC and GLVIA3 is clear about the importance of not relying on prescriptive application of a matrix formula.
ELC	It is requested that lighting be considered as part of the assessment.	Potential impacts from temporary lighting during construction have been included in the LVIA. Refer to *Section 8.8.1, Paragraph 145.* Potential impacts from motion-sensitive security and controlled maintenance lighting during operation have been considered as part of the LVIA. Refer to *Section 8.8.2, Paragraph 153*.
ELC	Tree surveys and arboricultural constraints plans should be prepared as part of the LVIA.	There are no trees within the site and very few mature trees in the immediately surrounding area. Existing vegetation in the vicinity of the site is shown on Figure 8.5: Landscape Analysis. Accordingly, a tree survey has not been prepared at this stage for the PPP application.

Consultee	Scoping/ Consultation Response	ICOL Response
Scottish Natural Heritage (SNH)	SNH *"highlight the visual prominence of the Application Site in a key location between Cockenzie and Prestonpans communities".*	This is noted and potential effects resulting have been considered as part of the LVIA, particularly in relation to residential receptors in the local communities and to those travelling through the area. Refer to *Section 8.8.2, Paragraphs 169-194.*
SNH	SNH has advised that reduction of potential effects could be achieved through consideration of the design of the OnTW and mitigation proposals.	SNH's advice provided on site during the consultation meeting of 27th July 2017 was helpful and has been taken into consideration in the evolution of the layout of the OnTW as well as related mitigation. Refer to *Section 8.5*.
SNH	It is advised that *"selection of appropriate viewpoints should be based on identified likely significant impacts".*	A proportionate range of viewpoints has been used to represent landscape and visual receptors within the five kilometre radius study area. While not necessarily all illustrated with viewpoints, relevant receptors have been visited and predicted effects assessed as part of the LVIA.
Historic Environment Scotland (HES)	HES indicate that they are content that impacts on their historic environment interests (including inventory gardens and designed landscapes) are not likely to be significant.	This is noted but assessment of potential effects on HES Inventory listed gardens and designed landscapes within the five kilometre radius study area has been carried out as part of the LVIA. Refer to *Section 8.8.2, Paragraphs 165-167*.

8.3 Policy and Legislation

6 Relevant planning policies and legislation are introduced in *Chapter 2: Policy and Legislation*. An overview of policies relevant to the LVIA is provided below.

8.3.1 Local Policy

7 The planning and policy context of the five kilometre radius LVIA study area for the OnTW EIA Report is set by the adopted East Lothian Local Plan (ELLP, 2008) and the Strategic Development Plan for Edinburgh South East Scotland (SESplan) (SDPA, 2013).

8 ELC is progressing work on a replacement Local Development Plan (LDP), as set out in *Chapter 2: Policy and Legislation*. The Proposed LDP has not yet been adopted by ELC and is subject to a formal Examination process, considering outstanding objections. At this time, therefore, only limited weight can be given to the policies and contents of the Proposed LDP, as discussed in *Chapter 2: Policy and Legislation*. Notwithstanding, those elements of the Proposed LDP of relevance to the LVIA are referenced where appropriate in this chapter. This approach was agreed during consultation with ELC (see *Table 8.1 above*).

9 Current adopted Local Plan policies that relate to the landscape and visual impacts of the OnTW are summarised below.

- Policy NRG1: Electricity Generating Stations
    - The Application Site is largely located on land covered by NRG1, i.e. land identified for use as, or in association with, a power generating station.
- Policy C3: Protection of Open Space
    - The Onshore Export Cable Corridor will be partly located within land that is covered by Policy C3. This area will be restored following completion of the construction phase and so there will be only temporary loss of open space. The Application Site is adjacent to an area of land that is covered by Policy C3 and the LVIA has considered the potential for indirect effects on this area.
- Policy DP2: Design
    - The LVIA has considered potential impacts of the OnTW on landscape character and visual amenity of the surrounding area which informed the siting and design of the Onshore Substation. The OnTW has been sited to reduce the removal of existing vegetation. Embedded landscape mitigation, as described in *Section 8.5* and shown on *Figures 8.6a and 8.6b*, will contribute to further integrating of the OnTW within its immediate surroundings.
- Policy NH4: Areas of Great Landscape Value
    - No part of the Application Site is located on land covered by NH4. Potential indirect impacts of the OnTW on the Longniddry North Berwick Coastline Area of Great Landscape Value (AGLV), which is located at 2.4 km from the Application Site, have been considered in the LVIA, as described in *Section 8.8.2, Paragraph 164*.
- Policy ENV8: Gardens and Designed Landscapes
    - No part of the Application Site is located on land covered by ENV8. Potential indirect impacts of the OnTW on Gardens and Designed Landscapes within the study area have been assessed in the LVIA as described in *Section 8.8.2, Paragraphs 165-167*.
- Policy DP1: Landscape and Streetscape Character
    - The LVIA has considered potential impacts of the OnTW on landscape character including urban areas, which informed the siting and preliminary design of the Onshore Substation. Embedded landscape mitigation (see *Section 8.5* and *Figures 8.6a and 8.6b*) set out the proposed retention of existing vegetation, proposed earth bunding and related tree and shrub planting which will contribute to integrating the OnTW with the surrounding landscape. Residual effects on landscape character are described in *Section 8.8.2, Paragraphs 154-161*.
- Policy ENV1: Residential Character and Amenity
    - The impact of the OnTW on the visual amenity of residential receptors within the five kilometre study area has been assessed in the LVIA as described in *Section 8.8.2, Paragraphs 169-175.*

- Policy C6: Rights of Way and Policy C7: Core Paths and Other Routes
    - The impacts of the OnTW on Rights of Way and Core Paths in the study area have been assessed in the LVIA as described in *Section 8.8.2, Paragraphs 181-189.*
- Policy DC1: Development in the Countryside and Undeveloped Coast
    - No part of the Application Site is located on land covered by DC1. Potential indirect effects of the OnTW on parts of the study area which are covered by this policy have been considered as part of the LVIA in relation to landscape character, as described in *Section 8.8.2, Paragraphs 154-161*.

8.3.2 Draft Proposed Local Development Plan Policies

10 ELC has published its Proposed LDP (2016) which will, when adopted, replace the 2008 Local Plan. The LDP is, at the time of writing, subject to an Examination by the Directorate for Planning and Environmental Appeals (DPEA) to consider unresolved objections. The plans, policies and land use allocations of the Proposed LDP are not therefore adopted ELC policy and can only be accorded limited weight at this time. Notwithstanding, those draft policies and proposed land use allocations of potential relevance to the Application Site and OnTW in the context of LVIA are summarised below.

- Policy DC8: Countryside Around Towns (CAT)
    - This policy concerns areas of countryside (beyond that covered by the Edinburgh Green Belt) which have a role in conserving the landscape setting of certain towns and villages. If adopted as part of the Proposed LDP, Policy DC8 will be supported by accompanying supplementary guidance.
    - A review of the proposed policy suggests that it primarily relates to potential development within areas considered to be CAT. The accompanying proposal maps show that the OnTW will not be located in such an area (*see Figure 2.1*). The Proposed LDP also states that *"new development must not harm the landscape setting of the countryside location"*.
    - Owing to intervening distance and baseline context, it is not considered that significant effects would occur and so effects of the OnTW on areas which may be covered by this proposed designation have not been considered as part of the LVIA.
- Policy DC9: Special Landscape Areas (SLAs)
    - This policy concerns a revised local landscape designation, intended to replace AGLVs identified in the current Local Plan, and prepared following publication of SNH and Historic Scotland guidance (2006). If adopted as part of the Proposed LDP, Policy DC9 will be supported by accompanying supplementary guidance.
    - A review of the Proposed LDP mapping shows that the OnTW will be adjacent to an area included within this proposed designation to the west of the Application Site (*see Figure 2.1*).
    - The consideration of the potential effects on landscape character is part of the LVIA.

8.4 Baseline Environment

11 The baseline study establishes the existing landscape and visual conditions within the five kilometre radius study area for the OnTW. As set out in *Table 8.1* it has been agreed during consultation with ELC that the baseline data collected for the Original OnTW ES LVIA will be used for this LVIA for the OnTW, updated where necessary in respect of the Application Site.

12 In order to define that baseline environment, the following activities were undertaken:

- Desktop Study; and
- Field Survey (carried out previously in respect of the Original OnTW and carried out in June, July and September 2017 in respect of the Application Site).

8.4.1 Study Area

13 A Zone of Theoretical Visibility (ZTV) was prepared to inform the extent of the study area at the commencement of the LVIA. A ZTV shows the area predicted to have views of a proposed development on the basis of a digital terrain model of the earth surface within a prescribed area. Further explanation of the ZTV is provided in *Appendix 8A*.

14 A study area of five kilometre radius from the centre of the Application Site was used previously for the Original OnTW ES LVIA. As the roof of the proposed switchgear building (i.e. the tallest component) of the OnTW is similar to that of the Original OnTW, and the results of the two ZTVs were broadly similar, it was considered appropriate to retain a five kilometre study area for this LVIA. Significant effects are considered unlikely to occur outwith this area.

15 The ZTV was run for the roof level of the proposed switchgear building which is currently expected to be 12.3 m above ground level. The ZTV is shown on *Figure 8.1* which also shows the location of the viewpoints included in the assessment.

8.4.2 Landscape Context

16 The Application Site for the OnTW consists of ground to accommodate the Offshore Export Cable, Onshore Substation Site access area and Onshore Export Cable (see *Figure 1.4*). The footprint of the Onshore Substation Site will be approximately 3.5 ha (excluding the embankment and landscaping). The Application Site as a whole extends to an area of approximately 10.2 ha, and ranges from sea level to approximately 12 m above ordnance survey datum on its southern boundary.

17 The Application Site for the OnTW is situated, with the exception of parts of the Landfall and Onshore Export Cables, within the boundaries of the former Cockenzie Power Station and lies to the east of Preston Links.

18 There are no existing landscape features or vegetation within the boundaries of the former Cockenzie Power Station. However, there are a number of landscape features within the Application Site. These include sea walls to the north and groups of shrubs on amenity grass between the site of the former Cockenzie Power Station and the Edinburgh Road (B1348). In addition, a stonewall boundary with informal grassland to the rear sits between the existing

Cockenzie substation and the Edinburgh Road. These are also located within the Application Site boundary.

19 The Application Site is located within the urban area between Prestonpans and Cockenzie, as defined in the Lothians Landscape Character Assessment (1998, ASH Consulting Group for SNH). The area surrounding the Application Site varies with the open expanse of the Firth of Forth estuary immediately to the north, Cockenzie Harbour and the settlement of Cockenzie to the east and the large existing Cockenzie substation to the south. The landscape to the west is more open and consists of open space with grass mounds known as Preston Links, which is crossed by a number of pathways including the John Muir Way. Further west and south is the settlement of Prestonpans. The John Muir Way traverses the Application Site to the north, adjacent to the sea wall and there are a number of core paths to the south and west outwith of the Application Site.

20 The landscape of the study area is traversed by the A1 and the main East Coast railway line, as well as a dense network of roads serving the local population. The B1348, known as the Edinburgh Road, which connects Cockenzie and Port Seton to Prestonpans, goes through the Application Site.

21 There are views from the Application Site northward across the Firth of Forth to the Fife coast and along the coastline to the east towards Gosford Sands to the north east of Longniddry. Westward there are views along the coast to Musselburgh with the higher parts of Edinburgh including Arthur's Seat and Calton Hill visible, as well as more distantly the Pentland Hills. To the south of the Application Site, the land rises steeply to the south of the A1 and the East Coast railway line towards the settlement of Tranent.

8.4.3 Data Sources

22 A desk study was undertaken to help identify landscape and visual receptors within the study area which could potentially be affected by the OnTW. The following sources of information were reviewed:

- Ordnance Survey (OS) maps at 1:50 000, 1:25 000 and 1:10 000 scales;
- ZTV of the Onshore Substation switchgear building;
- Aerial photographs;
- Historic Environment Scotland's Inventory of Gardens and Design Landscapes;
- East Lothian Local Plan 2008 (East Lothian Council, 2008);
- East Lothian Proposed Local Development Plan 2016 (East Lothian Council, 2016); and
- The Lothians Landscape Character Assessment. Scottish Natural Heritage Review no.91 (ASH Consulting Group, 1998).

Zone of Theoretical Visibility

23 The ZTV presented on *Figure 8.1* shows the maximum theoretical visibility of the Onshore Substation within the five kilometre study area based on a digital terrain model or 'bare

ground', which does not take account of screening by vegetation, localised variations in topography or buildings. The ZTV uses the highest structure within the OnTW: the roof of the switchgear building (currently designed to be 12.3 m above ground level). The ZTV therefore illustrates a maximum theoretical visibility scenario and worst case scenario extent of visibility. Field surveys have demonstrated that actual visibility of the OnTW within the study area will be much reduced as a result of local landforms, buildings and to a lesser degree existing vegetation.

24 *Figure 8.2* shows the ZTV overlaid onto satellite aerial imagery of the LVIA study area which indicates the extent of buildings, woodland belts and other features that will limit the extent of the predicted theoretical visibility.

25 According to the ZTV (*Figure 8.1*), the viewshed is limited by the topography of the Tranent ridge, as described in *Section 8.5.2* at a distance of approximately 2.5 km to the south, south-east and south-west of the OnTW. There is therefore limited visibility in these directions. The ZTV shows that potential visibility extends along the coastal margin and out across the Firth of Forth with a few pockets of limited visibility in areas such as west of Seton Sands and near Cuthill Rocks. The ZTV illustrates that slight changes in local topography will restrict visibility commencing at a distance of approximately 600 m and then extending to the south-east up to the boundary of the study area. The elevated landform of the Battle of Prestonpans Viewpoint at 1.4 km to the south of the Application Site, sits within a low lying area with limited visibility other than at the top of this artificial hill. Further to the south-west the spread of the ZTV is limited by the lower topography associated with the North Esk River valley.

8.4.4 Landscape Character

26 The landscape character information for this LVIA is based on a combination of the desk and site surveys and the relevant SNH Landscape Character Assessment document: The Lothians Landscape Character Assessment, Scottish Natural Heritage Review no.91 (ASH Consulting Group, 1998).

27 The published character assessment (SNH, 1998) categorises the landscape character of the area at two hierarchical levels: unique areas sharing key landscape characteristics known as Landscape Character Areas (LCAs) and groups of these units which can be described more broadly as Landscape Character Types (LCTs).

28 The following three SNH LCTs occur within the five kilometre study area:

- Lowland Hills and Ridges - This landscape type includes areas of high ground and is "*characterised by common elements of topography, landform and land cover, which differ significantly from the adjoining plains and valleys"* (Para 3.2.10: SNH, 1998). The Mayfield / Tranent Ridge LCA is part of this LCT;
- Lowland Plains - This landscape type includes a *"broad swathe of gently rolling drift-covered plain … divided into eastern and western sectors by the Pentland Hills and the urban mass of Edinburgh"* (Para 3.2.12: SNH, 1998). It is predominantly arable farmland. The Haddington Plain LCA is part of this LCT; and

- Coastal Margins - The Firth of Forth *"is the dominant influence on* (the) *landscapes forming a coastal fringe along the northern boundary of the* (Lothian) *region. The landform is generally flat to gently undulating, although there are prominent local variations including igneous outcrops, raised beaches and dunelands. Land cover is dominated by arable farmland … interrupted by a concentrated strip of developed urban land stretching from Silverknowes in north-west Edinburgh through to Prestonpans in the east"* (Para 3.2.13: SNH, 1998). The Musselburgh / Prestonpans Fringe and the North Berwick Plain LCAs are part of this LCT.

29 In addition to the LCTs and LCAs described above, there are areas of urban character within the study area. The four LCAs and the urban area within the study area are shown in *Figure 8.3* and are described below. The OnTW will be located within the urban area.

Mayfield / Tranent Ridge LCA

30 The closest edge of the Mayfield / Tranent Ridge LCA is approximately two kilometres south of the Application Site. From here, it extends south and south-west beyond the study area boundary.

31 This character area comprises an elongated, undulating ridge between the valleys of the River South Esk and the Tyne Water. The following descriptions of elements contributing to character are taken from the published character assessment (Page 56: SNH, 1998):

- "*A plateau-like upper surface which reaches around 260 m AOD is bounded by smooth, steeply rolling side slopes which shelve down to the river valleys"*;
- *"The agricultural landscape of large arable fields is divided by fences and low hedgerows, occasionally dotted with mature oak, ash, sycamore and beech trees. Small farm woodlands and mixed shelterbelts of species such as larch, pine, spruce, ash and sycamore are common and distinctive features throughout this predominantly open landscape"*;
- *"Several prominent quarries and opencast coalmines are dispersed across the western slopes, which are also traversed by pylon lines in a few places"*;
- *"The elevated slopes afford extensive and dramatic views across the surrounding valleys and lowlands towards the coast"*; and
- *"A lack of screening of the modern housing developments, coalmines and quarries which have intruded into the lower western slopes has allowed these features to attain visual prominence in an otherwise attractive landscape of well-wooded farmland"*.

32 No current landscape designations apply to Mayfield / Tranent Ridge LCA although several locations are identified as proposed SLA. Due to the medium quality / condition of the landscape, and taking account of the open extensive views, as well as the visual prominence of modern housing development, former mining areas and electricity towers with associated overhead wirelines, this landscape is considered to have medium value (see *Section 8.6.2, Paragraph 100*).

Musselburgh / Prestonpans Fringe LCA

33 The Musselburgh / Prestonpans Fringe LCA is approximately 250 m from the Application Site at its closest point and from here it extends south-west beyond the study area boundary. The LCA stretches from Cockenzie and Port Seton to the eastern edge of Edinburgh.

34 The following descriptions of elements contributing to character are taken from the published character assessment (Page 77: SNH, 1998):

- *"This section of the Firth of Forth coastal plain includes the lower floodplain of the mature River Esk, although the river is rarely of visual prominence. To the east, the well-defined Mayfield / Tranent ridgeline backs the plain"*; and
- *"The coastal strip is almost continuously settled, and is bound by a dense network of transport routes, including the East Coast railway and major and minor roads"*.

35 The built up character of the coast contrasts with the expansiveness of the Firth of Forth. Settlement along the coast is almost continuous but the towns and villages are interspersed by areas of woodland and farmland. The buildings and chimneys of the former Cockenzie Power Station used to be the most dominant man-made feature of the area prior to their demolition. The adjacent substation remains a prominent feature of the landscape but to a lesser extent.

36 In respect of the factors taken into account to establish landscape value, as identified in *Appendix 8A: LVIA Methodology*, the landscape is of varied quality/condition, with extensive areas of development, including road and rail routes. There is limited scenic quality within the LCA although views to the adjacent landscape of the Mayfield/Tranent Ridge and out across the Firth of Forth provide scenic interest. There are no particular landscape characteristics of note in the LCA which has extensive urban and industrial use. There are local opportunities for recreational activity associated with Core Paths and Rights of Way which traverse the area. The Battle of Prestonpans (1745) took place in the North Berwick Plain, south-east of the Application Site. No current or landscape designations or proposed SLA apply to this landscape area and, having regard to the above factors and due to its urban/industrial character, the value attached to the landscape is considered to be medium (see *Section 8.6.2, Paragraph 100*).

North Berwick Plain LCA

37 The western boundary of the North Berwick Plain LCA is approximately two kilometres east of the Application Site at its closest point. It extends from this point, east of Port Seton and Fishergate Road, along a similar route as the A198 with the B1348 beyond the extent of the study area.

38 The following descriptions of elements contributing to character are taken from the published character assessment (Pages 74-75: SNH, 1998):

- *"Extensive tracts of arable land sweep smoothly across the plain, divided into a large-scale network of fields … broken by clipped hedgerows with occasional stone walls and fences"*;

- *"The fertile swathes of crops combine with extensive estate woodlands, locally distinctive villages, farmsteads and isolated mansions and a varied coastline to create a highly attractive landscape of great diversity"*; and
- *"The comprehensive minor road network and the main East Coast railway line are generally unobtrusive due to the patterns of undulating terrain"*.

39 Part of the coastline of the North Berwick Plain LCA is designated as Longniddry North Berwick Coastline AGLV which occurs approximately 2.6 km to the east of the Application Site, as shown on *Figure 8.4*. There is no description of the designation or reasons given for the identification or extent of the locally designated area available from ELC. However, from observation, the AGLV is closely associated with the coastal edge and the juxtaposition of land and sea. Seton House Garden and Designed Landscape (GDL) is at the western extent of this character area.

40 The landscape quality/condition of the North Berwick Plain is varied with open, undulating, intensively farmed fields extending down towards the coastal edge. It is also traversed by several roads and the main East Coast railway line. There are no particularly rare landscape elements but the coastal edge does provide a distinctive feature and has associated conservation interest which extends across the Firth of Forth. The area is a popular recreational and tourism destination and having regard to all these factors, the value attached to the landscape is considered to be high (see *Section 8.6.2, Paragraph 100*).

Haddington Plain LCA

41 At its closest point, the boundary of the Haddington Plain LCA is approximately two kilometres south-east of the Application Site. From here, it extends east, south-east and south beyond the edge of the study area.

42 The following descriptions of elements contributing to character are taken from the published character assessment (Page 70: SNH, 1998):

- *"Forming the heartland of East Lothian, this extensive agricultural plain undulates gently in a series of east / west tending ridges and depressions, rising very gradually southward towards the fringes of the Lammermuir Hills";* and
- *"Broken clipped hedgerows, scattered hedgerow trees, numerous post-and-wire fences and occasional stone walls divide the land cover of large arable fields".*

43 No current landscape designations apply to this landscape area, which is predominantly agricultural and therefore of medium quality/condition. ELC do not propose to designate SLA in the part of the LCA within the study area. The landscape is of varied scenic quality with some extensive views across the landscape and over the adjacent coast. According to the SNH LCA, the landscape has a rich historical legacy including an archaeological heritage. It offers local recreational opportunities. The value attached to the Haddington Plain is considered to be medium (see *Section 8.6.2, Paragraph 100*).

Urban Area

44 As noted above, the Application Site is located within the urban area (see *Figure 8.3* for location and extent). The developed coastal edge forms a strip of urban character from Cockenzie and Port Seton through Prestonpans and Musselburgh beyond the edge of the study area. The published character assessment (SNH, 1998) does not describe or characterise the urban area although notes the pressure within it for further development. Each of the settlements along the coast has distinctive characteristics, with all of the settlements having historic cores, some parts of which have Conservation Area Status.

45 The Pinkie House GDL is located in this character area, on the edge of the study area, and the Cockenzie House GDL is approximately 450 m east of the Application Site. There are no other current landscape designations within the urban area although ELC propose SLAs within the area. Landscape quality is limited, but the coastal edge has scenic interest and recreational value. However, having regard to the extensive development and absence of distinctive landscape characteristics, the majority of the urban area is considered of medium landscape/townscape value outside of the areas designated with Conservation Area status which are considered to be of high value (see *Section 8.6.2, Paragraph 100*).

8.4.5 Landscape Designations

46 Landscape designations included in the East Lothian Local Plan and which are within the study area are illustrated on *Figure 8.4*. Also described in this section, and shown on *Figure 8.4*, are the proposed SLAs set out in ELC's Proposed Local Development Plan.

Area of Great Landscape Value (AGLV)

47 East Lothian Local Plan 2008 identifies areas considered to be of outstanding landscape value as AGLVs (see Policy NH4 at *Section 8.3.1* above), which therefore entail more restrictive limits on the type of development that would be permitted. The Application Site is not located within an AGLV.

48 The Longniddry and North Berwick Coastline AGLV extends eastward along the coast from an area between Port Seton and Longniddry, approximately two kilometres east of the Application Site, as noted in *Section 8.4*. The reasons for the designation are not provided in the East Lothian Local Plan 2008 but the AGLV is clearly focused on the coastal edge and is considered to have a high value as a landscape receptor (see *Section 8.6.2, Paragraph 100*).

Special Landscape Area (SLA)

49 As noted in *Section 8.3.2*, Policy DC9 of the Proposed LDP (ELC, 2016) concerns a revised local designation, intended to replace AGLV. While not a current designation, the consideration of the potential effect on landscape character is part of the LVIA.

50 A review of the Proposed LDP mapping suggests that the Longniddry North Berwick Coastline AGLV is intended to be incorporated into a new and more extensive SLA: the Port Seton and North Berwick Coast SLA. In addition, further areas of the East Lothian coastline and inland areas within the LVIA study area are proposed for SLA designation as follows:

- Elphinstone Ridge SLA;
- Garden County Farmland SLA;
- Prestonpans Coast SLA;
- River Esk SLA; and
- Fisherrow Sands SLA.

51 As shown on *Figure 8.4*, these proposed new SLA designations, while still to be ratified, do not include the Application Site although it is noted that the proposed Prestonpans Coast SLA includes the area of recreational ground at Preston Links to the west of the Application Site.

Gardens and Designed Landscapes (GDL)

52 GDLs identified in Historic Environment Scotland's Inventory are landscapes of quality and value at a national level which are often associated with the presence of visitors. GDLs are also examined in *Chapter 9*.

53 Three GDLs listed in Historic Environment Scotland's Inventory are located within the study area and are described in *Table 8.2* and shown on *Figure 8.4*.

Table 8.2: Inventory Gardens and Designed Landscapes in the study area

GDL	Reason for Inclusion in the Inventory
Cockenzie House Approximately 450 m east of the Application Site	Cockenzie House comprises a late 17th century layout of house, walled garden and associated garden buildings in the middle of Cockenzie's residential area. The trees of the garden are noted in the inventory as contributing to the surrounding townscape but the gardens themselves are currently considered to be in a poor state.
Seton House (Palace) Approximately two kilometre east of the Application Site	Grade A Listed Castellated late Georgian House, one of Robert Adam's late houses in the castle style, it is made up of various shaped towers around a curved wall enclosing the courtyard which is entered by a central archway. The walls and woods associated with the house are visible from the surrounding landscape but they tend to screen the house and chapel from view.
Pinkie House Approximately 4.8 km south-west of the Application Site	Pinkie House is located within Musselburgh and the inventory notes it as a Renaissance house of the 17th century set within formal and enclosed gardens of the same period. Today, there are said to be no long-distance views from the landscape owing to the surrounding built development.

GDL	Reason for Inclusion in the Inventory
Gosford House Approximately five kilometres north-east of the Application Site	Gosford House, the seat of the Earls of Wemyss and March is set in 5, 000 acres of combined coast and parkland approximately 2 miles east of Longniddry. The building was completed in 1800 and the central block was partly burnt in 1940, the refurbishment of which is ongoing. Given that only the western periphery of this GDL is within the five kilometre study area and the screening by intervening building and topography, it has been concluded that there will be no impact on the GDL from the OnTW, as such it has not been carried forward for assessment.

54 As the GDLs are identified in Historic Environment Scotland's Inventory which records the specific qualities attributable to each listed property, they are considered to be of high value as landscape receptors (see *Section 8.6.2, Paragraph 101*).

8.4.6 Visual Receptors

55 Visual amenity receptors in the study area include residents of individual properties and settlements with views of the OnTW; recreational users of outdoor facilities and local footpaths/core paths; and road and rail users. Effects on cultural heritage receptors such as conservation areas, listed buildings and scheduled monuments are examined in *Chapter 9: Cultural Heritage*. The visual receptors considered in the LVIA are described below.

Settlements and Residential Properties

56 Settlements within the study area occur predominantly along the coastal fringes and comprise the historic towns of Musselburgh, Prestonpans, Cockenzie and Port Seton. The inland settlement of Tranent is located to the south of the Application Site and Longniddry is to the east.

57 Visibility of the surrounding landscape from settlements is typically not uniform because views of the surrounding landscape from within settlements are frequently obscured by intervening buildings, structures, trees and vegetation within the settlement itself. Thus outward views are generally obtained from the outer edges of these settlements as well as elevated areas and/or upper storey views.

58 The following residential receptors are predicted, on the basis of the ZTV (see *Figure 8.1*) and the field surveys, to have potential views of the OnTW:

- Residents of properties on Whin Park (west edge of Cockenzie);
- Residents of properties close to Cockenzie Harbour; and
- Residents of properties on Appin Drive (east edge of Prestonpans).

59 As views from houses are generally static, the same view being obtained on a daily basis, and people have a particular interest in the views obtained from their homes, the value attached to residential views is considered to be high (see *Section 8.6.2, Paragraph 107*).

Transport Routes

60 Several transport route corridors traverse the study area, many of which are associated with urban development, while others provide access to the wider countryside. Three principal criteria have been considered in determining the inclusion of routes in the assessment: firstly, the extent to which the route traverses the study area or extends across a notable part of it, rather than including just a short section of the route; secondly, the importance of the route in terms of recognition, signage, and usage; and thirdly, the extent of visibility predicted of the switchgear building (as the tallest component of the OnTW) from the route.

61 The following routes have been identified for consideration in the assessment based on these criteria:

- B1348 (Edinburgh Road) - located adjacent to the southern boundary of the Application Site and traverses the study area, broadly following the line of the coast;
- B1361 - extends at its closest point approximately 1.3 km south-west of the Application Site and connects the A199 at Musselburgh with the A198 close to the A1;
- A1 - extends at its closes point approximately 1.7 km to the south of the Application Site and meanders across the study area, broadly, on an east/west alignment;
- A198 - extends at its closest point approximately 1.4 km to the south-east of the Application Site and traverses the study area, from that point, on a broadly east/west alignment;
- A199 - extends at its closest point approximately 2.2 km to the south of the Application Site and traverses the study area, broadly, on an east/west alignment;
- East Coast Railway - extends at its closest point approximately 1.2 km to the south-east of the Application Site and traverses the study area, broadly, on an east/west alignment; and
- B6371 - extends at its closest point approximately 400 m to the east of the Application Site and extends south from that point, connecting the B1348 (Edinburgh Road) with the A198.

62 The B1348 forms part of the Scotland's Golf Coast Road, a promoted tourist route between Musselburgh and Dunbar, and is therefore considered to be of high value. All other routes are considered to be of medium value (see *Section 8.6.2, Paragraph 107*).

Long Distance Recreational Routes

63 John Muir Way - This long-distance footpath extends over 215 km from Helensburgh to Dunbar. Within the study area it follows the coast between Musselburgh and Longniddry as shown on *Figure 8.4*. It crosses the northern extent of the Application Site.

64 The value attached to the John Muir Way, which is recognised as one of the Great Trails of Scotland, is considered high (see *Section 8.6.2, Paragraph 107*).

Core Paths

65 The study area is criss-crossed by the Core Paths network, as shown on *Figure 8.4*. Two of these routes which are in close proximity to the Application Site have been selected as being representative of visual receptors on the Core Path network in close proximity to the OnTW.

- Core Path 284 extends at its closest point approximately 70 m from the Application Site; and
- Core Path 145/146 extends at its closest point approximately 200 m from the Application Site along an embankment.

66 The value attached to the Core Paths, which are used for recreational walks, is considered high (see *Section 8.6.2, Paragraph 107*).

Visitor/Recreational Attractions

67 The Application Site is approximately 1.3 km from Prestonpans Battlefield (as shown on *Figure 9.2*) as identified in Historic Environment Scotland's Inventory of Historic Battlefields. It is located between the A1 and the B1361 where these roads pass between Tranent and Prestonpans. The Battlefield contains interpretation boards and there is a marked viewpoint, shown on OS mapping, with further interpretation boards on top of a nearby former bing which affords an elevated view towards the Application Site and the surrounding landscape.

68 Meadowmill Sports Centre is located to the west of the Battle of Prestonpans Viewpoint, 1.5 km south-east of the Application Site.

69 Longniddry Golf Course is located on the western edge of the town between Longniddry and Seton Sands Caravan Park, 2.8 km east of the Application Site.

70 Seton Sands Caravan Park is located to the west edge of the Longniddry Golf Course, 2.1 km east of the Application Site.

71 Levenhall Links includes a boating pond, bird reserve and visitor facilities and is located approximately 3.5 km south-west of the Application Site.

72 Musselburgh Race Course is located approximately 4.2 km south-west of the Application Site.

73 The value attached to the outdoor visitor attractions is considered high as these attractions are located where the surrounding landscape contributes to the enjoyment of the facilities. The value attached to the Sports Centre is considered to be medium, as the surrounding landscape does not form an integral part of the experience of using this asset. For further explanation of attribution of value, see *Section 8.6.2, Paragraph 107*.

8.4.7 Site Specific Surveys

74 Field surveys were carried out in June 2017, 27 July 2017 and 21 September 2017. The site visits were informed by the preliminary ZTV (*Figure 8.1*) and OS maps, which helped narrow down the potential extent over which the Onshore Substation might be visible within the study

area. The site visits also enabled the assessors to understand where buildings or vegetation will restrict visibility of the Onshore Substation and the route for the Onshore Export Cables.

75 Key landscape and visual receptor locations were identified based on the methodology detailed in *Appendix 8A: LVIA Methodology* and visited during the field surveys. In particular, major residential receptors and key vantage points were visited as well as main roads, the B1348 adjacent to the Application Site, the John Muir Way, Rights of Way and Core Paths.

8.4.8 Information Gaps and Limitations

76 The LVIA and accompanying visualisations (see *Figures 8.7 to 8.17*) of the OnTW are based on the approximate parameters, as appropriate for an application for Planning Permission in Principle (PPP). The final detailed design for the OnTW will be submitted for approval, should PPP be granted.

8.4.9 Baseline without the OnTW

77 If the OnTW were not implemented, it is likely that there would be change to the landscape and visual context of the Application Site and immediately surrounding area with some form of development occurring on the site of the former Cockenzie Power Station as well as the development of other proposed projects (see *Section 8.13*). The site of the former Cockenzie Power Station is identified as a location for energy related development in National Planning Framework 3 and is identified in the adopted Local Plan 2008 for use as, or in association with, a power generating station, as discussed further in *Chapter 2: Policy and Legislation*.

8.5 Embedded Mitigation

78 The purpose of mitigation is to avoid, reduce and where possible remedy or offset any significant adverse effects on the landscape and visual amenity arising from the OnTW, and to maximise the positive contributions the OnTW can make to the landscape and visual environment of the Application Site and adjacent area where appropriate.

79 Following the baseline studies and initial field surveys a Landscape Analysis Plan was prepared as shown on *Figure 8.5*. This identifies the key existing landscape elements on and around the Application Site and key views toward the Onshore Substation.

80 Desktop study and field surveys highlighted specific opportunities associated with the Application Site and surrounds. In particular, existing mounds and areas of vegetation on Preston Links to the west have the potential to screen elements of the Onshore Substation. These also present an opportunity to introduce similar related landforms within the Application Site which will augment the screening function of these existing landforms and potentially extend the open green space of Preston Links.

81 As noted in *Table 5.1* contained in *Chapter 5: Description of Development*, embedded mitigation has been incorporated into the OnTW and taken into consideration in this EIA report.

82 The assessment of effects on landscape fabric, landscape character, designations and visual amenity has taken account of embedded mitigation measures which form part of the OnTW in order to minimise potential effects on the landscape and visual resources of the study area.

8.5.1 Preliminary Design Principles for the OnTW

83 The preliminary location, design and orientation of the OnTW have been carefully considered to prevent, reduce, and where possible offset potential significant landscape and visual effects.

84 The following principles have been adopted in developing the preliminary design and mitigation of the OnTW:

- a high standard of design has been applied to structures, with materials and finishes that contribute to integrating the OnTW with the adjacent area, as far as practicable;
- embedded mitigation will be carried out to achieve substantial screening of the Onshore Substation, through a combination of earth mounding and planting, to minimise visibility from more sensitive receptor locations such as the housing on the east edge of Prestonpans and recreational resources in the surrounding area; and
- the cable connection will be underground rather than an overhead line with all disturbed areas reinstated on completion of the construction phase.

8.5.2 Landfall and Onshore Export Cable Corridor Embedded Mitigation

85 All temporary areas will be reinstated after use and any site material will generally be used on site as part of a balanced cut and fill operation where possible.

8.5.3 Onshore Substation Embedded Mitigation

86 The visual impact of the Onshore Substation has been a key consideration in development of the OnTW. Critical aspects of the OnTW relate to the height and mass of the switchgear building which is expected to be the tallest structure within the Onshore Substation. The key elements comprise its shape and form in relation to neighbouring buildings and surrounding landscape, as well as its colour.

87 Indicative colour treatment and textural finishes have been selected to relate to the existing Cockenzie substation. It is anticipated that the Onshore Substation will be clad with similar materials or as agreed with through consultation with ELC. This is to create a unity of design and to help integrate the switchgear building with its surroundings. Use of generally muted colours and simple architectural detail will result in a complementary built form.

88 In addition to the switchgear building, external components will be present at the Onshore Substation. In order to contribute to screening these from the B1348 (Edinburgh Road), it is proposed that walls of up to seven metres will be constructed on either side of the switchgear building. These walls will be clad in a material similar to that of the switchgear building.

89 Further information about the preliminary design of the buildings and the indicative site layout is provided in *Chapter 5: Description of Development* and shown on *Figure 5.11*.

90 A Landscape Mitigation Plan for the Onshore Substation has been developed as shown on *Figure 8.6*. Earth mounding up to four metres above existing ground level will be created within the perimeter of the Application Site. These are intended to help screen the Onshore Substation and to relate to the existing adjacent landforms on Preston Links. Parts of these mounds within the Application Site will be planted with a mix of mainly native species reflecting tree and shrub species identified in the surrounding area during field surveys as well as species considered to be fast growing and suitable for the site conditions.

91 It is intended, that where possible, the landscape mitigation will be implemented in advance of the main OnTW construction works, to provide early screening to this stage of the OnTW as well as to ensure that planted material can become established as early as possible to achieve the intended landscape and visual mitigation.

92 The photomontages presented on *Figures 8.7 to 8.17* illustrate the proposed earth mounding and planting which form the embedded mitigation at Year One of the operational phase and Year 15 of the operational phase of the OnTW. It is recognised that prevailing site conditions may limit or slow the development of plant stock and this is reflected in the scale of planting shown on visualisations.

93 Woodland and shrub planting will be feathered (0.75 m - 1 m) stock, planted at one metre spacing to form a dense vegetation belt. The following species are proposed for structure planting around the perimeter of the Onshore Substation.

Tree Species Mix

- Sycamore - *Acer pseuodplatanus*;
- Alder - *Alnus glutino*sa;
- Hornbeam - *Carpinus betulus*;
- Black Pine - *Pinus nigra*;
- Dwarf Pine - *Pinus mugo*;
- Goat Willow - *Salix caprea*;
- Rowan - *Sorbus aucuparia*; and
- Scots Pine - *Pinus sylvestris*.

Shrub Species Mix:

- Hawthorn - *Crateagus monogyna*;
- Broom - *Cytisys scoparius*;
- Gorse - *Ulex europaea*;
- Dog Rose - *Rosa canina*; and
- Sea Buckthorn - *Hippophae rhamnoides*.

94 As noted in *Section 8.5.2*, existing areas of mature vegetation within and immediately adjacent to the Application Site will be protected during the construction phase of the OnTW and retained in order to augment the screening that will be provided by the landscape mitigation, as shown on the Landscape Analysis plan (*Figure 8.5*).

95 The LVIA has been carried out on the basis of the landscape mitigation, including retention of existing vegetation wherever possible, all being carried out as described above.

8.6 Assessment Methodology

8.6.1 Guidance and Methods

96 The guidance which applies to the topic of LVIA comprises:

- Landscape Institute and the Institute of Environmental Management and Assessment (2013). Guidelines for Landscape and Visual Impact Assessment, 3rd Edition (GLVIA3);
- Swanwick, C (2002) Landscape Character Assessment - Guidance for England and Scotland. The Countryside Agency and Scottish Natural Heritage;
- Landscape Institute (2011) Advice Note 01/11 Photography and Photomontage in Landscape and Visual Impact Assessment; and
- Landscape Institute (2017) Advice Note 02/17 Visual representation of development proposals.

8.6.2 Methodology

97 The methodology for this LVIA is derived from 'The Guidelines for Landscape and Visual Impact Assessment, 3rd Edition' (GLVIA3) which is widely regarded by the landscape profession as the professional standard. Photography has been undertaken and visualisations prepared with reference to the relevant guidance from SNH and the Landscape Institute.

98 The Methodology for this LVIA and preparation of the related Figures are presented in *Appendix 8A*.

Magnitude of Change

99 The magnitude of landscape and / or visual change is described as substantial, moderate, slight or negligible, based on the interpretation of a combination of largely quantifiable parameters, such as size or scale of the OnTW, geographical extent as well as duration and reversibility of the impacts.

Sensitivity of Landscape Receptors

100 The sensitivity of landscape receptors to change arising from the OnTW is defined as high, medium, low or negligible based on professional interpretation, combining judgements of the value attached to the landscape and their susceptibility to the type of change or development proposed. Landscape receptors include landscape fabric or elements; the different landscape

character types or areas which may be affected by the proposed development, as well as landscape designations and GDLs within the study area.

101 The value of the landscape is assessed as part of the baseline (see *Section 8.4*). The value attached to landscape receptors reflects landscape designations and the level of importance which they signify (national, regional or local authority, community). However, landscape designations are not the sole indicator of landscape value. Where there is no landscape designation, the following factors are considered in order to identify valued landscape:

- Landscape quality;
- Scenic quality;
- Rarity;
- Representativeness;
- Conservation interest;
- Recreation value;
- Perceptual aspects; and
- Cultural associations.

102 Value is defined as high, medium or low based on an interpretation of the above factors.

103 Susceptibility to change means the ability of the landscape fabric/elements and landscape character, including designated landscapes, to accommodate the proposed development without undue consequences for the maintenance of the baseline character and/or the achievement of the prevailing landscape planning policies and strategies (see Paragraph 5.40 of GLVIA3).

104 Susceptibility of landscape fabric/elements to change is defined as high, medium or low based on an interpretation of a combination of parameters including:

- Contribution of the landscape element which will be removed/affected to the key characteristics of the surrounding landscape; and
- Extent to which the landscape element which will be removed/affected can be replaced.

105 Susceptibility of landscape character, including landscape designations, to change is defined as high, medium or low based on an interpretation of a combination of parameters including:

- The scale and pattern of the landscape and its elements/features;
- The simplicity or complexity of the landscape;
- The nature of skylines;
- Landscape quality or condition;
- Existing land use;
- Visual enclosure/openness of views; and

- The scope for mitigation, which would be in character with the existing landscape.

Sensitivity of Visual Receptors

106 Sensitivity of visual receptors is defined as high, medium, low or negligible based on professional interpretation, combining judgements of the value attached to the particular views and their susceptibility to the type of change or development proposed. Value is identified through the baseline assessment with susceptibility and overall sensitivity being identified as part of the detailed assessment.

107 The judgement of value attached to the views experienced by people is defined as high, medium or low taking into account the following factors:

- Views from residential properties are generally considered to be highly valued;
- Recognition of the value attached to a particular view, for example in relation to heritage assets, or through natural heritage/planning designations; and
- Indicators of the value attached to views by visitors and references to them in literature or art.

108 The susceptibility of different visual receptors to change in views and visual amenity is mainly a function of:

- The occupation or activity of people experiencing the view at particular locations; and
- The extent to which their attention or interest may therefore be focused on the views and the visual amenity they experience at a particular location.

109 In relation to the occupation or activity of people experiencing the view at the viewpoint, visual susceptibility is defined in *Table 8.3*.

Table 8.3: Definitions of Level of Susceptibility of Visual Receptors

Level of Susceptibility	Definition
High	Residents at home; users of outdoor recreational facilities including strategic recreational footpaths, cycle routes or rights of way, whose attention may be focused on the landscape; visitors to heritage assets, important landscape features with physical, cultural or historic attributes; beauty spots or picnic areas.
Medium	Travellers on road, rail or other transport routes.
Low	People engaged in outdoor sports or recreation (other than appreciation of the landscape), commercial buildings, and other locations where people's attention may be focused on their work or activity, not on their surroundings, and where the setting is not important to the quality of working life.

Assessment of Effect Significance

110 Landscape and visual effects are assessed as major, moderate, minor or negligible by comparing landscape or visual sensitivity and the predicted magnitude of change. These categories are based on combining viewpoint or landscape sensitivity with predicted magnitude of change, as illustrated in *Table 8.4* below.

Table 8.4: Assessment of Effect Significance

	Magnitude of Change			
	Substantial	**Moderate**	**Slight**	**Negligible**
Receptor Sensitivity				
High	Major	Major / Moderate	Moderate	Moderate / Minor
Medium	Major / Moderate	Moderate	Moderate / Minor	Minor
Low	Moderate	Moderate / Minor	Minor	Minor / Negligible
Negligible	Moderate / Minor	Minor	Minor / Negligible	Negligible

111 For the purposes of this assessment those residual effects indicated as Major and Major / Moderate are considered significant. The clear definition of parameters which contribute to assessment of sensitivity and predicted magnitude of change and robust application of the assessment process is considered to be more relevant to the judgement of whether effects are significant or not, rather than the labelling of effects in a particular category. As noted in *Table 8.1*, the methodology applied in carrying out the LVIA is consistent with GLVIA3 which recommends that matrices should not be used in a prescriptive way, but rather that a reasoned assessment based on professional judgement should be carried out and explained.

112 The matrix is not used as a prescriptive tool and the methodology and assessment of effects at any particular location must allow for the exercise of expert professional judgement.

113 It should be noted that since the landscape and visual impacts arising from the construction, operation and decommissioning of the Onshore Substation are likely to be greater than those arising from the other elements of the OnTW, the LVIA for the Onshore Substation has been undertaken which includes preparation of a ZTV, viewpoint analysis and production of visualisations showing the Onshore Substation.

114 It is anticipated that the impacts arising from the Onshore Export Cable Corridor, Landfall, Transition Pits and Jointing Pits will be limited to the construction phase only and once the ground is reinstated, there will be no impact on landscape or visual amenity. Accordingly, the

LVIA only considers the impacts of the Onshore Export Cable Corridor and related elements (Landfall, Cable Transition Pits, and Jointing Pits) during the construction phase.

8.7 Impact Assessment - Landfall and Onshore Export Cable

115 A detailed description of all elements of the OnTW, construction activities and proposed machinery as well as an anticipated programme of works, is provided in *Chapter 5: Description of Development*.

116 Construction stage impacts considered within this LVIA and associated with the Landfall and Onshore Export Cable are:

- Construction (and Decommissioning) of the Landfall - open cut trenching or horizontal directional drilling between the offshore cable at a point below Mean Low Water Springs (MLWS) and the transition pit;
- Construction (and Decommissioning) of the Onshore Export Cable Corridor - excavation of two trenches between the Landfall and the Onshore Substation in a corridor 80 m wide and 150 m long, two trenches between the Onshore Substation and the Grid substation in a corridor 120 m wide and 150 m long, and formation of Transition and Jointing Pits with surface restored as far as practicable within the context of the proposed landscape mitigation.

117 The Onshore Export Cables will be underground and the land around it will be reinstated therefore it is not anticipated that there will be any impacts on landscape character or visual amenity from the operational phase of the Landfall or the Onshore Export Cable Corridor.

8.7.1 Impacts of Construction - Landfall and Onshore Export Cable

118 Construction of the Landfall and the Onshore Export Cable will require introduction of plant and machinery with associated vehicle and people movements at the Landfall and along the route of the Onshore Export Cable (approximately 100 m long).

119 At the Landfall, the two options being considered to bring Offshore Export Cables ashore are open cut trenching or horizontal directional drilling. Cable Transition Pits will be used to connect the Offshore Export Cables with the Onshore Export Cables. From here, two open cut trenches will be used to connect the Onshore Export Cables to the Onshore Substation. This is described in further detail in *Chapter 5: Description of Development.*

120 During these works ICOL commits to maintaining access to the Preston Links at all times, with the possible exception of the area directly adjacent to the Landfall. There will be no access to the John Muir Way in the vicinity of the Landfall while construction activities (such as excavation or cable pull-in) are taking place. Where appropriate, a diversion will be agreed with ELC.

121 Disturbed areas will be reinstated as far as practicable to the original condition on completion of the construction phase.

Impact on Landscape Fabric / Resource

122 Physical impacts to the landscape resource will occur at the Landfall. If open cut trenching is chosen as the method of installing the Landfall of the cable, a trench will be excavated between a point below MLWS to the transition pit. Once the cable is installed in the trench, it will be backfilled. There will therefore be a short term physical disturbance to a section of the waterfront which will be backfilled on completion of the works.

123 If horizontal directional drilling is used as the method of installing the cable, there will be less visible disturbance of the shore, but operating plant and construction activity will cause some disturbance in the working area.

124 The magnitude of change to the physical fabric of the intertidal area from both methods of cable installation will be limited in extent and temporary in nature and is considered to be moderate. It will occur over a section of shore that has been subject of historic disturbance from adjacent mining activity as well as the former Cockenzie Power Station. The landscape fabric is considered to be of medium value having regard to the current condition of the shore as well as taking account of its contribution to recreational enjoyment of the adjacent open ground. It is considered to be of low susceptibility to change of the nature envisaged due to the extent of modification which has taken place in the vicinity. Combining the medium value with the low susceptibility, the sensitivity of the landscape fabric at the Landfall is considered to be medium.

125 The effect of the Landfall on the physical landscape resource is considered to be Moderate and temporary.

126 Construction works for the Onshore Export Cable will be limited to the minimum corridor to accommodate the cables with all ground reinstated on completion of cable installation. This will affect a short section of the John Muir Way long distance footpath and an area of brownfield land which was part of the site of the former Cockenzie Power Station.

127 There will be a moderate magnitude of change along the length of the Onshore Export Cable Corridor during the construction phase. However, these impacts will be temporary (it is expected that the installation between the Cable Transition Pits and the Onshore Substation will require approximately 10 days for each of the two cables) and will reduce considerably once construction works have been completed and with implementation of reinstatement and landscape mitigation works.

128 The landscape fabric of the Onshore Export Cable Corridor is considered to be of medium value having regard to the current condition and taking account of the recreational use of the John Muir Way. The landscape fabric is considered to be of low susceptibility to change associated with installation of the Onshore Export Cable Corridor due to the largely brownfield condition. Its overall sensitivity is considered to be low.

129 The effect of the construction phase of the Onshore Export Cable Corridor on the physical landscape resource is considered to be Moderate / Minor but temporary.

Impacts on Landscape Character

130 A small part of the urban area will be affected by the Landfall and Onshore Export Cable Corridor during the construction phase, but the magnitude of change will be slight, being very limited in area and temporary. This will result in a Minor effect on the landscape character of the urban area, becoming Negligible, due to the temporary nature of the construction and the limited area which will be affected within the urban area.

131 No significant effects are predicted for any of the designated landscapes in the study area during the construction phase as there will be no direct effects of the construction on the landscape fabric of these designated areas. The closest designated area would be the Cockenzie House GDL which would be approximately 440 m from the Landfall and the Onshore Export Cable Corridor at its closest point.

Impacts on Visual Amenity

132 The construction works for the Landfall will be visible for walkers on the John Muir Way and adjacent Core Paths, rights of way and open ground.

133 The construction phase will be temporary and occur sequentially along the Export Cable Corridor (over a period of approximately 10 days for each of the two cables).

134 For walkers on the John Muir Way and users of Preston Links, views in this vicinity are considered to be of medium value, having regard to the lack of any current landscape designation or association with a particular heritage asset, as well as taking account of the openness of views provided from these areas. Walkers are considered to be of high susceptibility to change and with an overall high sensitivity to change of the nature envisaged by the construction phase of the Landfall and Onshore Export Cable. There will be a substantial magnitude of change and a Major and significant but temporary effect for these visual receptors over a limited section of the John Muir Way and parts of Preston Links. On completion of the construction phase, effects for walkers on the John Muir Way and users of Preston Links will be as assessed for the operational phase described below.

135 For road users and pedestrians on the B1348, there will be a substantial magnitude of change from the construction phase due to works on the north side of the road within the Application Site. As this road is an identified tourist route, the Golf Coast Road, it is considered to be of high sensitivity for road users and for pedestrians, and there will be a Major, temporary and significant effect during the construction phase. For medium sensitivity road users, the effect will be Major/Moderate, temporary and significant. On completion of the construction phase, effects for road users and pedestrians on the B1348 will be as assessed for the operational phase described below.

136 It is not anticipated that there will be any significant effects on visual amenity during the construction phase for any other receptors in the study area.

8.7.2 Impacts of Operation - Landfall and Onshore Export Cable Corridor

137 As previously described, once installed and following establishment of landscape mitigation measures, it is not considered that there will be any effects from the Landfall or the Onshore Export Cables on landscape character or visual amenity.

8.8 Impact Assessment - Onshore Substation

138 A detailed description of all elements of the Onshore Substation, construction activities and proposed machinery as well as an anticipated programme of works, is provided in *Chapter 5 Description of Development*. Impacts considered within this LVIA and associated with the Onshore Substation are:

- Construction (and Decommissioning) of the Onshore Substation - establishment of construction laydown areas, security, parking and all elements of the Onshore Substation, as identified in *Chapter 5: Description of Development*;
- Implementation of landscape mitigation - formation of bunding and associated earthworks and planting as described in *Sections 8.5.2 and 8.5.3* and shown on *Figures 8.6a and 8.6b*;
- Construction works associated with the switchgear building, external switchgear, busbars, transformers reactors, capacitor banks; and
- Formation of internal access routes, Onshore Substation car park, welfare facilities and other elements as identified in *Chapter 5: Description of Development*.

139 Cable routes and internal access road works will be established, followed by the construction of the necessary switchgear/control building then installation of external components, internal components and finally cable installation. After testing and commissioning, reinstatement works will be carried out to the temporary work areas.

140 Once the Onshore Substation Site and external access track are established, initial ground works will be undertaken to prepare the location for the Onshore Substation. This will involve raising the construction level above the existing reinforced concrete slab as described in *Chapter 5: Description of Development*. Once the foundations are laid, internal access roadways will be constructed followed by the delivery and installation of the Onshore Substation components. Other enabling works may be required onsite such as relocation of services.

141 All electrical infrastructure will be manufactured offsite and transported to the Application Site for subsequent assembly. A security fence of up to three metre in height will be erected around the perimeter of the Onshore Substation and warning signs posted. Twenty-four hour security will be in place for the duration of the construction period.

8.8.1 Impacts of Construction - Onshore Substation

142 Construction of the Onshore Substation will involve movement of construction vehicles, plant and construction workers with all associated activity on the Onshore Substation Site for the duration of the construction phase, anticipated to be 28 months.

Impacts on Landscape Fabric / Resource

143 Construction of the Onshore Substation will result in further change to the brownfield site which was the location of the former Cockenzie Power Station and is currently subject to ongoing demolition works. The value of the fabric of the existing site is considered to be low having regard to its condition. Its susceptibility to change is considered to be low and its overall sensitivity low.

144 The magnitude of change arising from the construction phase of the Onshore Substation will be substantial and the effect on the landscape resource of the Application Site will be Moderate. This will be mitigated by the implementation of the Landscape Mitigation Plan which will involve the planting of extensive areas of predominantly native tree and shrub species around the perimeter of the Onshore Substation.

Impact on Landscape Character

145 The Onshore Substation will be located in the urban area. The historic cores of the settlements in the urban area are identified as Conservation Areas and are ascribed a high value (*Section 8.6.2, Paragraph 102*). The Onshore Substation Site is not in a Conservation Area and so the urban area in which it will be located is considered to be of medium value. The townscape is of mixed dates and styles contributing to a varied and highly textured townscape fabric. Parts of the urban area are more open, including open amenity areas which obtain longer views to the surrounding landscape including the Firth of Forth and distant hills. The urban area also accommodates some small and large scale industrial elements as previously described. It is generally considered to be of medium susceptibility to the type of development proposed, having regard to the existing industrial elements in the landscape to the south of the Application Site and adjacent built form within the wider urban area as well as taking account of its varied scale. Its overall sensitivity is considered to be medium increasing to high within the Conservation Areas of adjacent settlements.

146 The magnitude of change from the construction phase of the Onshore Substation in the wider urban area within the study area will be slight, due to the limited extent of the proposed works which will take place adjacent to an existing substation on the south side of the B1348 and the temporary nature of the effect. The overall effect of the construction phase of the Onshore Substation on the urban area will therefore be Moderate/Minor.

147 None of the other LCAs within the study area will be affected by the construction phase of the Onshore Substation.

Impacts on Visual Amenity

148 Effects on visual amenity during the construction phase of the Onshore Substation will arise from the construction activities (outlined above), and vehicles entering and leaving the Application Site via the designated access point and the temporary Construction Compound as well as temporary lighting. These visual impacts will primarily affect road users and pedestrians on the B1348 and recreational walkers on the John Muir Way and people using the recreational space on Preston Links. The construction works will be seen in the context of

the completion of the current demolition works on the site of the former Cockenzie Power Station, the existing Cockenzie substation and related electricity power lines.

149 For high sensitivity users of the recreational routes and adjacent open space, the construction phase will cause a substantial magnitude of change resulting in a Major, but temporary effect on visual amenity. This will be mitigated by the establishment of the earth mounding and associated planting.

150 Due to the short duration of the works, the construction phase will have a temporary and localised significant impact on visual amenity for residents, recreational users of open space, the John Muir Way and Core Paths such as 146, 276 and 284 which cross this area.

151 The construction works will also be visible by vehicle users on the busy B1348 (Edinburgh Road). As identified in *Section 8.6.2, Paragraphs 107-110*, road users are generally considered to be of medium sensitivity to change of the nature proposed. However, as this route forms part of the Golf Coast Road, tourists and visitors using this road are considered to be of high sensitivity. Having regard to the temporary nature of the works which will be partially visible from sections of these roads, it is considered that the magnitude of change from the construction phase of the Onshore Substation will be moderate and the effect for tourists and visitors will be Major/Moderate, temporary and significant, with a Moderate and temporary effect for local road users on the B1348.

8.8.2 Impacts of Operation - Onshore Substation

152 The following paragraphs describe the impacts of the Onshore Substation during the operational phase on landscape character, landscape designations and visual amenity in the LVIA study area. The assessment of these impacts draws on the findings of the Viewpoint Assessment presented in *Appendix 8C*. As it is anticipated that there will be no further disturbance to the physical elements of the landscape during the operational phase, there will be no impacts or effects on the physical landscape resource during the operational phase.

153 During consultation, a request was made by ELC for consideration of lighting as part of the LVIA. The preliminary design does not include full-time security lighting of the Onshore Substation. Instead, it is intended that motion-sensitive security and controlled maintenance lighting will be used. The adjacent stretch of the B1348 is illuminated by street lights on both sides. In this context, it is not considered that motion-sensitive security and controlled maintenance lighting would result in potential significant effects. Given that the purpose of the LVIA is to focus on potential significant effects (see *Table 8.1*), no further assessment of lighting has not been carried out.

154 It is intended that, where possible, implementation of the landscape mitigation described in *Section 8.5* will commence at the start of the construction phase will mean that, by the start of the operational phase, the earth mounding and associated tree and shrub planting around the perimeter of the Onshore Substation will be in place. The assessment of effects of the operational phase on landscape character and visual amenity has therefore been carried out on the basis that this embedded landscape mitigation has been completed.

Impact on Landscape Character

155 The Onshore Substation will introduce a large scale building with related external structures and components to the urban area on the site of the former Cockenzie Power Station. Ongoing demolition work on the site of the former Cockenzie Power Station has opened up part of the urban area which is designated for energy generation in the extant ELLP (Policy NRG1). The existing Cockenzie substation and related infrastructure, i.e. related electricity towers and transmission lines, as well as the former Coal Store, influence the landscape character of the Application Site and surrounding area. Electrical infrastructure is therefore already a feature of the landscape and the Onshore Substation and its components will not introduce wholly new elements into the landscape. The Onshore Substation will increase the amount of this type of development within part of the urban area.

156 Eight of the viewpoints assessed are in the urban area, which is the LCA in which the Onshore Substation will be located, as identified in *Table 8.5* and shown on *Figure 8.3*. The value of this landscape ranges from medium to high value as a result of the diverse nature of the undesignated townscape, localised conservation area status, and the scenic quality provided by the adjacent coastline as well as general recreational value provided by areas of informal open space close to residential settlement. The urban area is considered to be of medium susceptibility to change of the type associated with the Onshore Substation. The landscape accommodates a range of residential development in terms of date and type, road and rail infrastructure as well as industrial activity in the form of the existing Cockenzie substation and related electrical infrastructure. The Onshore Substation will add a limited but prominent area of further change seen in this context.

157 The magnitude of change assessed at the eight viewpoints within the urban area varies from slight (Viewpoints 2, 3 and 5 and ELC Additional Viewpoints 11) to substantial (Viewpoints 1 and 4 and ELC Additional Viewpoint 10) at Year One (see *Table 8.5a*). At Year 15, the magnitude of change at most viewpoints will be unchanged whereas at Viewpoint 1 it will reduce from substantial to moderate (see *Table 8.5b*). All of the viewpoints are in close proximity (within two kilometres) of the Onshore Substation although even at some of these nearby locations, such as Viewpoints 2 and 5, there will be limited visibility of the Onshore Substation, due to screening which will be provided by existing landform, vegetation and buildings and by the proposed landscape mitigation planting and landform.

158 Due to the medium sensitivity of the urban area, there will be a Moderate effect in the area immediately surrounding the Onshore Substation site at Year One. Due to the limited visibility of the Onshore Substation anticipated from the majority of the urban area, this effect will reduce rapidly with increasing distance from the Application Site, with a Minor to Negligible effect on the character within the wider urban area.

159 At Year 15, the landscape mitigation will have matured, providing screening and integration of the Onshore Substation into the surrounding landscape. The magnitude of change to the landscape character of the urban area will remain moderate in the immediate vicinity of the Onshore Substation and this will continue to result in a Moderate effect. As at Year One, the

magnitude will reduce within a short distance from the Application Site to a Minor to Negligible effect on the character within the wider urban area.

160 Viewpoint 7 is located in the Musselburgh / Prestonpans Fringe LCA which is considered to be of medium value, as identified in *Section 8.4.4.* This landscape is of medium susceptibility to the OnTW and overall sensitivity is also considered to be medium. The magnitude of change at this viewpoint, at Year One and Year 15, is considered to be negligible. This is an elevated viewpoint and it is likely that there will be no view of the Onshore Substation from the many parts of this LCA. Where the Onshore Substation will be seen, it will result in no more than a Negligible effect.

161 Viewpoint 9 is located in the Mayfield / Tranent Ridge LCA which is considered to be of medium value, as identified in *Section 8.4.4*. This landscape is of medium susceptibility to change of the type associated with the Onshore Substation. The landscape accommodates extensive residential development as well as being traversed by roads and electricity towers extending southward from the existing Cockenzie substation. While the upper part of the Onshore Substation building will be visible from elevated parts of the Mayfield / Tranent Ridge LCA, it will have a very limited influence on this landscape character. The magnitude of change from the operation of the Onshore Substation at Year One at Viewpoint 9 will be negligible (see *Table 8.5a*). This location is at the northern edge of this LCA, closest to the OnTW. It is therefore considered that a Negligible effect on landscape character will occur at Years One and 15 for parts of this LCA closest to the Onshore Substation, reducing rapidly with increased distance further southward.

162 No viewpoints in the North Berwick Plain LCA or the Haddington Plain LCA were included in the assessment. Based on site survey and knowledge of the study area, visibility of the Onshore Substation from the North Berwick Plain and Haddington Plain LCAs will be very limited and there will not be any significant effect on the landscape character of these LCAs.

Table 8.5a: Summary of Effects on Landscape Character at Viewpoints at Year One

ID	Viewpoint	Landscape Receptor	Landscape Receptor Sensitivity	Magnitude of Change	Effect
1	B1348 (Edinburgh Road)	Urban Area	Medium	Substantial	Major/Moderate*
2	Cockenzie Harbour	Urban Area	High	Slight	Moderate
3	John Muir Way	Urban Area	Medium	Slight	Moderate/Minor
4	John Muir Way	Urban Area	Medium	Substantial	Major/Moderate*

ID	Viewpoint	Landscape Receptor	Landscape Receptor Sensitivity	Magnitude of Change	Effect
5	B1348 (Edinburgh Road	Urban Area	Medium	Slight	Moderate/Minor
6	Top of Mound adjacent Atholl View, Prestonpans	Coastal Margins Character	Medium	Substantial	Major/Moderate*
7	Battle of Prestonpans Viewpoint	Coastal Margins Character	Medium	Negligible	Negligible
9	A199	Lowland Hills and Ridges Character	Medium	Negligible	Negligible
10	Preston Links	Urban Area	Medium	Substantial	Major/Moderate*
11	Cockenzie Harbour	Urban Area	High	Slight	Moderate
12	John Muir Way	Urban Area	High	Moderate	Major/Moderate

* Effects which are Major or Major/Moderate are highlighted bold and are considered to be significant.

Table 8.5b: Summary of Effects on Landscape Character at Viewpoints at Year 15

ID	Viewpoint	Landscape Receptor	Landscape Receptor Sensitivity	Magnitude of Change	Effect
1	B1348 (Edinburgh Road)	Urban Area	Medium	Moderate	Moderate
2	Cockenzie Harbour	Urban Area	High	Slight	Moderate
3	John Muir Way	Urban Area	Medium	Slight	Moderate/Minor

ID	Viewpoint	Landscape Receptor	Landscape Receptor Sensitivity	Magnitude of Change	Effect
4	John Muir Way	Urban Area	Medium	Substantial	Major/Moderate*
5	B1348 (Edinburgh Road	Urban Area	Medium	Slight	Moderate/Minor
6	Top of Mound adjacent Atholl View, Prestonpans	Coastal Margins Character	Medium	Substantial	Major/Moderate*
7	Battle of Prestonpans Viewpoint	Coastal Margins Character	Medium	Negligible	Negligible
9	A199	Lowland Hills and Ridges Character	Medium	Negligible	Negligible
10	Preston Links	Urban Area	Medium	Substantial	Major/Moderate*
11	Cockenzie Harbour	Urban Area	High	Slight	Moderate
12	John Muir Way	Urban Area	High	Moderate	Major/Moderate

* Effects which are Major or Major/Moderate are highlighted bold and are considered to be significant.

Impact on Designated Landscapes

163 The impacts of the Onshore Substation on the designated landscapes in the study area have been assessed through review of the ZTV (see *Figure 8.1*), field survey work and the assessment of impacts on the LCAs as well as being informed by the Viewpoint Assessment (see *Appendix 8C*).

164 The key characteristics, extent and value of the designated landscapes within the study area which have the potential to be affected by the Onshore Substation, are set out in the Baseline Assessment (see *Section 8.4.5*).

Areas of Great Landscape Value (AGLV)

165 Although shown as having theoretical visibility of the Onshore Substation, due to the intervening vegetation and distance, as well as buildings, it is not predicted that there will be any significant landscape or visual effects on the Longniddry North Berwick Coastline AGLV, which is located 2.4 km to the north east of the Onshore Substation.

Gardens and Designed Landscapes

166 Although shown as having theoretical visibility of the Onshore Substation, due to the mature trees on the perimeter of Cockenzie House and intervening buildings, it is not predicted that there will be any landscape or visual effects on this GDL, located approximately 450 m east of the Application Site.

167 Due to the intervening vegetation and buildings there will be limited visibility of the Onshore Substation predicted at Seton House (Palace), located two kilometres east of the Onshore Substation Site. However, filtered views from the west facing towers may be obtained. The magnitude of change for such predicted limited views is considered to be negligible. The high sensitivity and negligible magnitude of change will result in a Moderate/Minor effect on the west facing tower of Seton House at Year One and at Year 15.

168 Although shown as having theoretical visibility of the Onshore Substation, due to the intervening vegetation, buildings and distance there will be no landscape or visual impact predicted on Pinkie House located 4.8 km south-west of the Onshore Substation.

Impacts on Visual Amenity

169 During its operational phase the Onshore Substation will result in a change in views for some receptors in the study area. The following paragraphs describe the degree of change and the resulting level of effect.

Settlements and Residential Properties

170 As previously described, because views from houses are generally static, the same view being obtained on a daily basis, the value attached to these views is considered to be high (as described in the detailed methodology in *Appendix 8A*). Susceptibility to the Onshore Substation in views from residential buildings is judged to be high because residents are considered to be concerned about views from their properties and therefore susceptible to changes in these views. The overall sensitivity of all residential receptors in the study area is regarded high.

171 Site survey has established that due to intervening landforms, buildings and vegetation, when combined with the distance of views, no visibility or limited visibility is predicted from the majority of the settlements within the study area. There will be no significant effect on visual amenity arising from the Onshore Substation for residents of Musselburgh, Wallyford, Longniddry or Tranent.

172 Seven of the viewpoints considered are representative or illustrative of views experienced by residential receptors (see *Tables 8.6a and 6b*). Viewpoint 8, on the northern edge of Tranent, identified in the Scoping Report, was dropped from the assessment because of lack of visibility and so six viewpoints which represent residential receptors are included in the assessment. Further to the west, at Viewpoint 9 which is on the A199 at the western edge of Tranent, a negligible magnitude of change is predicted at both Year One and at Year 15, with a Negligible and not significant effect due to the very limited extent of predicted visibility of the Onshore Substation from this location. This viewpoint demonstrates the limited visibility of the Onshore Substation for residents inland from the Application Site. It is assessed that there will be no significant visual effects upon residential receptors in the vicinity of representative Viewpoint 9 (see *Figure 8.14*).

173 Viewpoints 1 and 2 (*Figures 8.7 and 8.8*) and Additional ELC Viewpoints 11 and 12 (*Figures 8.16 and 8.17*) are located close to the western edge of Cockenzie and Viewpoint 5 (*Figure 8.11*) is close to the eastern edge of Prestonpans. At Viewpoint 1, it is assessed that there will be a substantial magnitude of change at Year One which will reduce to a medium magnitude of change at Year 15, and accordingly, a Major effect reducing to Major/Moderate and significant. At Viewpoint 2 and at ELC Additional Viewpoints 11, it is assessed that there will be a slight magnitude of change at Year One and 15 resulting in a Moderate effect on visual amenity. At ELC Additional Viewpoint 12 (see *Figure 8.17*), it is assessed that there will be a moderate magnitude of change resulting in a Major/ Moderate and significant effect for nearby residents.

174 Site survey has shown that visibility from residential receptors in this area is highly dependent on the orientation of receptor buildings and on the positioning of intervening buildings and vegetation relative to the Onshore Substation. For the majority of residential receptors in Cockenzie, Prestonpans and Port Seton, site survey has shown that there will be no change in views and so no effect will result from the Onshore Substation.

175 At Year One, there is potential for a limited number of residential receptors on the western edge of Cockenzie, e.g. some of those at Whin Park, to experience a substantial magnitude of change (as described in *Appendix 8C* for Viewpoint 1). This will result in a Major and significant effect when combined with the high sensitivity of residential receptors. By Year 15, this magnitude of change will reduce to moderate and, when combined with their high sensitivity, the resulting effect will also reduce to Major / Moderate but will remain significant.

176 There is also the potential for a limited number of residential receptors in the vicinity of Cockenzie Harbour to experience a slight magnitude of change (as described in *Appendix 8C* for Viewpoint 2 and ELC Additional Viewpoint 11). When combined with high sensitivity, this will result in a Moderate effect.

177 There is the potential for a limited number of residential receptors on the eastern edge of Prestonpans, e.g. those at Appin Drive, to experience a slight magnitude of change (as described in *Appendix 8C* for Viewpoint 5). In combination with the high sensitivity attributed to residential receptors, it is assessed that this will result in a Moderate effect.

Transport Routes

178 Those travelling by road or rail gain transient views and are therefore generally considered to have medium susceptibility to change associated with the Onshore Substation (as described in *Appendix 8A*). The views from these routes are generally considered to be medium although, in the case of promoted tourist routes, this can be increased to high.

179 The B1348 (Edinburgh Road) is a promoted tourist route forming part of the Scotland's Golf Coast Road and it is also the closest road to the Onshore Substation, being partly within the OnTW Application Site. Viewpoints 1 and 5 are positioned adjacent to this route. Although close to the Application Site, existing landform and vegetation will limit views of the Onshore Substation here and embedded landscape mitigation (including landform, screening walls and planting) will reduce this potential visual impact further. As described at *Tables 8.6a and 8.6b*, the magnitude of change at these viewpoints will range from slight to substantial at Year One and reduce by Year 15 to range from slight to moderate. Given the high sensitivity of tourist receptors associated with this road, the resultant visual effect will be Major and significant at Year One and will reduce to Major / Moderate and remain significant at Year 15. These effects will be transient, occurring over a short section of the B1348 (approximately 0.9 km) beyond which there will be no visibility and no effect for road users or pedestrians.

180 Viewpoint 9 is located on the A199 on the western edge of Tranent, at a point where there are relatively open views; this road is often lined by trees and built development within the study area. At this location, it is predicted that there will be a negligible magnitude of change for medium sensitivity road users resulting in a Negligible visual effect at Year One and Year 15 (see *Tables 8.6a and 6b*). Due to the limited or intermittent visibility that will be obtained over short sections of this road the overall magnitude of change of the Onshore Substation is considered to be negligible and this will result in a Negligible effect on the A199 as a whole.

181 Site survey has established that intervening landform, buildings and vegetation will limit visibility of the Onshore Substation from both the B1361 and the B6371. The magnitude of change likely to be experienced by road users here is considered to be no greater than slight. When combined with the medium sensitivity of these road users to the Onshore Substation, it is assessed that there will be Negligible or no effect, and not significant.

182 Similarly, there are no predicted significant effects for users of the A1, A198 and those travelling by train on the East Coast Railway. Due to the undulating topography and the intervening buildings and vegetation it will be difficult to obtain any views of the Onshore Substation from any of these routes.

Long Distance Recreational Routes

183 Viewpoints 3 and 4 and ELC Additional Viewpoint 12 are positioned on the John Muir Way and the relevant visualisations (see *Figures 8.9, 8.10* and *8.17*) show that views of the Onshore Substation from the John Muir Way will be partly screened by the intervening landform and by proposed landscape mitigation measures. It is assessed that the magnitude of change will vary between substantial at Viewpoint 4, moderate at ELC Additional Viewpoint 12 and slight at Viewpoint 3 upon visual receptors which have high sensitivity. As a result, the visual effect

on users of this route at close proximity to the Onshore Substation will be Major in Years One and 15 from locations with open views such as Viewpoint 4, reducing to Major/Moderate and Moderate at ELC Additional Viewpoint 12 and Viewpoint 3 respectively.

184 The John Muir Way is a long distance route between Helensburgh on the Firth of Clyde and Dunbar on the Firth of Forth. Although the Onshore Substation will result in a significant localised effect due to the varied nature of the predicted visibility and related effects on visual amenity demonstrated by the representative viewpoints, it is not considered that the overall integrity and visual amenity of the route will be diminished. Open views across the Firth of Forth which provide the scenic interest over this section of the route will not be obstructed or interrupted by the Onshore Substation.

Core Paths / Rights of Way

185 The value of views from Core Paths, Rights of Way and recreational routes through the study area is considered to be high as described in *Section 8A.2.1* (*Appendix 8A*). People walking on recreational routes/Core Paths/Rights of Way are considered to be of high susceptibility to change in the views from these routes. Therefore, the sensitivity to change associated with the Onshore Substation for walkers on Core Paths, Rights of Way and recreational routes, is considered to be high.

186 Following site survey and review of visualisations (*Figures 8.7 to 8.17*), it is considered that the greatest magnitude of change for users of Core Paths and Rights of Way is likely to result close to the Application Site.

187 Core Paths 276, 441 and 277 follow similar alignments to the John Muir Way, which is represented by Viewpoints 3 and 4 and so views from these paths have not been assessed separately.

188 Viewpoint 6 is located on a large bund immediately south, and elevated above, the western extent of Core Path 145 / 146. This viewpoint presents a more open view than is available to users of the Core Path who will have their view towards the Onshore Substation partly obscured by a stone wall. At Viewpoint 6 (see *Tables 8.6a and 6b*), it is assessed that there will be a substantial magnitude of change during operation and that this will result in a Major effect for recreational walkers using the informal path at the top of the bund. While it is likely that walkers on Core Path 145 / 146 will experience partly screened views of the Onshore Substation when compared to those at Viewpoint 6, it is considered that the scale and prominence of visible elements will still result in a substantial magnitude of change and a Major visual effect on parts of these Core Paths with more open views.

189 Core Path 284 is located to the south of the existing Cockenzie Substation and, at its western extent, terminates at an access road from which users will have a direct view of the Onshore Substation over a distance of approximately 150 m, on the other side of the B1348. In the context of the existing Cockenzie Substation, this will not introduce a new element to the view from the path. However, it will be an additional built element that will obscure the current open view towards the Firth of Forth with the Fife coastline beyond obtained since the former Cockenzie Power Station was demolished. At Year One, the Onshore Substation will result in a

substantial magnitude of change and, in combination with high sensitivity for recreational walkers, there will be a Major and significant effect here. At Year 15, landscape mitigation planting adjacent to the B1348 will have matured and provide some screening to the Onshore Substation. It is considered that the magnitude of change will reduce to moderate and that this will result in a Major/Moderate effect which will be significant.

190 Core Path 147 is positioned alongside the B6371. Visibility from this road is limited, as described at *Paragraph 181* above. Given this limited visibility, it is assessed that there will not be a significant visual effect here.

191 Site survey has shown that views from other Core Paths close to the Onshore Substation will be limited by intervening buildings, landform and vegetation. Based on this, and review of visualisations (*Figures 8.7 to 8.17*) included in the LVIA, it is considered that there will not be significant visual effect for users of these paths.

Visitor Attractions

192 There is no viewpoint at Prestonpans Battlefield but Viewpoint 7 is located at the elevated viewing point above it and so it is possible to derive an understanding of potential effects from this nearby, but higher elevation location. The magnitude of change assessed for Viewpoint 7 is negligible and, for the high sensitivity receptors at this location, this will result in a Minor/Negligible visual effect due to the very limited predicted extent to which the Onshore Substation would be visible. The Battlefield is north-east and its elevation is approximately 10 m less than that of the assessed viewpoint. Site survey has shown that there will be very limited views of the Onshore Substation from the Battlefield as a result of intervening woodland. However, it is considered that the visual effect on Prestonpans Battlefield as a result of operation of the Onshore Substation will be less than that for Viewpoint 7, i.e. Negligible.

193 Meadowhill Sports Centre is also positioned close to and below Viewpoint 7, to the west and south-west of the assessed viewpoint. Visibility from the sports centre building and outdoor facilities will be limited by intervening buildings at Prestonpans and mature trees lining the East Coast Railway. It is assessed that the visual effect on Meadowhill Sports Centre as a result of operation of the Onshore Substation will be similar to or less than that for Viewpoint 7, i.e. Negligible.

194 Although shown as having theoretical visibility by the ZTV, a review of visualisations (*Figures 8.7 and 8.17*) and site survey has shown that visibility of the Onshore Substation from Longniddry Golf Course, Seton Sands Caravan Park, Levenhall Links and Musselburgh Race Course will be limited by intervening distance, buildings, landform and vegetation. The visual effect on visitors to these attractions will range from Negligible to none.

195 The effects of the Onshore Substation at representative viewpoints during the operational phase are summarised in *Tables 8.6a and 8.6b* below.

Table 8.6a: Summary of Effects on Visual Amenity at Year One

ID	Viewpoint	Visual Receptor	Visual Receptor Sensitivity	Magnitude of Change	Effect
1	B1348 (Edinburgh Road)	Residents, Tourists and Pedestrians	High	Substantial	**Major***
		Other Road Users	Medium	Substantial	**Major/Moderate***
2	Cockenzie Harbour	Residents, Tourists and Recreational Walkers	High	Slight	Moderate
		Workers	Low	Slight	Minor
3	John Muir Way	Tourists and Recreational Walkers	High	Slight	Moderate
4	John Muir Way	Tourists and Recreational Walkers	High	Substantial	**Major***
5	B1348 (Edinburgh Road	Residents, Tourists and Pedestrians	High	Slight	Moderate
		Other Road Users	Medium	Slight	Moderate/Minor
6	Top of Mound adjacent Atholl View, Prestonpans	Recreational Walkers	High	Substantial	**Major***
7	Battle of Prestonpans Viewpoint	Tourists and Recreational Walkers	High	Negligible	Negligible
9	A199	Residents and Pedestrians	High	Negligible	Negligible
		Other Road Users	Medium	Negligible	Negligible
10	Preston Links	Recreational Walkers	High	Substantial	**Major***

ID	Viewpoint	Visual Receptor	Visual Receptor Sensitivity	Magnitude of Change	Effect
11	Cockenzie Harbour	Residents, Tourists and Recreational Walkers	High	Slight	Moderate
		Workers	Low	Slight	Minor
12	John Muir Way	Residents, Tourists and Recreational Walkers	High	Moderate	**Major / Moderate***

* Effects which are **Major** or **Major/Moderate** are highlighted bold and are considered to be significant.

Table 8.6b: Summary of Effects on Visual Amenity at Year 15

ID	Viewpoint	Visual Receptor	Visual Receptor Sensitivity	Magnitude of Change	Effect
1	B1348 (Edinburgh Road)	Residents, Tourists and Pedestrians	High	Moderate	**Major/Moderate***
		Other Road Users	Medium	Moderate	Moderate
2	Cockenzie Harbour	Residents, Tourists and Recreational Walkers	High	Slight	Moderate
		Workers	Low	Slight	Minor
3	John Muir Way	Tourists and Recreational Walkers	High	Slight	Moderate
4	John Muir Way	Tourists and Recreational Walkers	High	Substantial	**Major***

ID	Viewpoint	Visual Receptor	Visual Receptor Sensitivity	Magnitude of Change	Effect
5	B1348 (Edinburgh Road	Residents, Tourists and Pedestrians	High	Slight	Moderate
		Other Road Users	Medium	Slight	Moderate/Minor
6	Top of Mound adjacent Atholl View, Prestonpans	Recreational Walkers	High	Substantial	**Major***
7	Battle of Prestonpans Viewpoint	Tourists and Recreational Walkers	High	Negligible	Negligible
9	A199	Residents and Pedestrians	High	Negligible	Negligible
		Other Road Users	Medium	Negligible	Negligible
10	Preston Links	Recreational Walkers	High	Substantial	**Major***
11	Cockenzie Harbour	Residents, Tourists and Recreational Walkers	High	Slight	Moderate
		Workers	Low	Slight	Minor
12	John Muir Way	Residents, Tourists and Recreational Walkers	High	Moderate	**Major /Moderate***
		Road users	Medium	Moderate	Moderate

* Effects which are **Major** or **Major/Moderate** are highlighted bold and are considered to be significant.

8.8.3 Impacts of Decommissioning

196 The Onshore Substation will be decommissioned following the end of its operational life which is not fixed but would be for the lifetime of ICOL's Offshore Wind Farm. A draft decommissioning plan will be prepared prior to construction and a final plan prior to

decommissioning as required. It is expected that the Onshore Export Cables will be removed and the ground re-instated as far as practicable.

197 Impacts arising from the decommissioning phase will generally be similar to, or less than, those arising from the construction phase due to the similar nature of the works. The assessment findings are therefore presented in the construction and operation phases of the OnTW only, assuming that the impacts during construction will apply to the impacts during decommissioning.

8.9 Cumulative Impact Assessment

198 In accordance with the Scoping Report, consideration has been given to the potential cumulative impact of the OnTW on the landscape and visual resource in the study area. *Sections 2.1.1 and 4.6* of the Scoping Report set out the approach taken to defining the scope of the cumulative impact assessment for the OnTW.

199 As identified in the Scoping Report at *Section 4.6, Paragraph 80* and *Section 8.5, Paragraph 195*, the only project which remains a consideration for the EIA of the Revised OnTW is Blindwells New Settlement. Phase One of this new town development Framework was granted consent by ELC in March 2017 and consists of 1600 houses, mixed commercial and retail as well as a primary school. Blindwells will be located to the east of Prestonpans and south of Cockenzie and Port Seton, between the A198 and the A1. It is anticipated that construction work may commence in early 2018.

200 Whilst the Blindwells development will occupy approximately 130 hectares, due to its location approximately 1.5 kilometres to the south east of the Application Site and the fact that no visibility of the OnTW is predicted from the Blindwells site, (see *Appendix 8B: Figure 8.1*), as well as the extent of intervening buildings within Cockenzie and Port Seton and vegetation to the west of the B6371 (see *Appendix 8B: Figure 8.2*), it is not considered that there will be any cumulative landscape or visual effects from the OnTW and Blindwells. Accordingly, no further assessment of cumulative effects has been carried out.

201 ELC also requested that consideration be given to the potential cumulative effects of the OnTW with the ICOL's Offshore Wind Farm. The Consented Offshore Wind Farm would be over 70 kilometres from Cockenzie and whilst there may be theoretical blade tip visibility from more elevated parts of the OnTW LVIA study area, due to the intervening distance, it is not considered that there would be any potential for significant cumulative effects during the operational phase from the OnTW with the Consented Offshore Wind Farm. During the construction phase, there may be simultaneous visibility of the Offshore Export Cable installation with the Onshore Export Cable construction at the Landfall. However, it is considered that the cumulative effect on landscape or seascape character, or on visual amenity of the combined construction would be no greater than the effects assessed from the construction phase of the OnTW considered on its own, as set out in *Section 8.7.1, Paragraphs 130 and 134*.

202 Accordingly, it is considered that there would not be any significant cumulative effects on landscape or seascape character, or on visual amenity from the OnTW with the consented Offshore Wind Farm.

8.10 Conclusion and Residual Effects – Onshore Transmission Works

203 The OnTW will be located in an area formerly associated with the now demolished Cockenzie Power Station and opposite Cockenzie substation. It has been designed to minimise impacts on landscape and visual amenity wherever possible by incorporation of screen walls within the design of the Onshore Substation. Additionally, embedded landscape mitigation comprising earth mounding and associated planting, as shown on *Figures 8.6a and 8.6b* will be implemented, where possible, at the commencement of the construction phase with details finalized during the detailed design stage and agreed with ELC.

204 There will be limited localised significant effects on the physical landscape resource due to direct impact during the construction phase (see *Sections 8.7.1 and 8.8.1*). These effects will be of a temporary nature in respect of the Landfall and Onshore Export Cable, with all disturbed areas being reinstated on completion of construction. Direct effects from construction of the Onshore Substation will be mitigated by implementation of the embedded landscape mitigation, with the establishment of mounding and associated tree and shrub planting around three sides of the Onshore Substation, as shown on *Figures 8.6a and 8.6b*.

205 There will be a Negligible or no effect on landscape character or visual amenity from the operational phase of the Landfall or the Onshore Export Cable which will be underground.

206 At Year One, significant effects on landscape character of the urban area, in which the OnTW will be located, will occur from the Onshore Substation at locations (see Viewpoints 1, 4 and 6) close to the Application Site to the north, east and south west. As the embedded mitigation planting matures, effects will reduce at some of these locations, e.g. Viewpoint 1 where the effect on landscape character is predicted to reduce to Moderate. At other nearby locations in the urban area, (see Viewpoints 2, 3 and 5) as a consequence of existing landscape elements and embedded landscape mitigation, significant effects are not predicted. No significant effects on any other landscape character areas within the LVIA study area are predicted.

207 The Application Site is not within any national, regional or local landscape designations. The OnTW will not have any significant effects on any designated landscapes in the study area, including Longniddry to North Berwick Coastline AGLV and GDLs at Cockenzie House, Pinkie House and Seton House.

208 The majority of the settlements within the study area will not have direct or open views to the Onshore Substation. At both Year One and Year 15, significant effects on visual amenity will occur during the operational phase of the Onshore Substation for residents of a small number of properties on the western edge of Cockenzie and the eastern edge of Prestonpans. There will not be significant effects on visual amenity of residents in any other settlements in the study area.

209 There will be localised significant effects on short sections of the John Muir Way and core paths 276, 277 and 441 which follow this long distance way, where it skirts round the north end of Preston Links and passes to the north of the Onshore Substation along the coastal edge. The main scenic value of views from this long distance route between Prestonpans and Cockenzie is the extensive panoramas across the Firth of Forth towards the coast of Fife, as well as distant views to Edinburgh with Arthur's Seat and Calton Hill visible and the Pentland Hills beyond. These important views will not be interrupted from the John Muir Way. Significant effects are predicted for sections of Core Paths 145, 146 and 284.

210 At Year One, significant effects are predicted for road users and pedestrians over approximately 650 m length of the B1348 (Edinburgh Road) which is identified as part of the Golf Coast Road tourist route. By Year 15, the length of this route predicted to incur significant effects is anticipated to reduce with establishment of the Embedded Landscape Mitigation.

211 The Onshore Substation will introduce an additional industrial scale building on the north side of the B1348 (Edinburgh Road) opposite the existing Cockenzie Substation. This part of the urban area is already characterized by large scale buildings and associated infrastructure although the demolition of the former Cockenzie Power Station has opened up this part of the coastal edge. The Application Site is identified for power generation and related uses in the Local Plan and NPF3 and therefore whilst it currently provides open views, it is not anticipated that these will persist given the current land use zoning.

212 The preliminary design of the Onshore Substation incorporates embedded landscape mitigation comprising earth mounding and associated planting, as shown on *Figures 8.6a and 8.6b*, on three sides of its perimeter that will relate to the existing open amenity space at Preston Links. This embedded landscape treatment together with design of the switchgear building and related screen walls will provide screening of the Onshore Substation and help to integrate it with its surroundings. As shown in *Tables 8.5a to 8.5b*, maturation of the embedded landscape mitigation will reduce effects on landscape character and visual amenity between Year One and Year 15.

213 A Summary of the Effects of the OnTW on landscape fabric, landscape character and visual amenity in the study area is provided in *Table 8.7* below. Impacts arising from the decommissioning phase will generally be similar to, or less than, those arising from the construction phase due to the similar nature of the works, as described in *Section 8.8.3*.

Table 8.7: Summary of effects

Impact	Receptor	Effect (including embedded mitigation)	Residual Effect at Year 15
Landfall Construction	Landscape Fabric	Moderate/temporary	No effect
	Urban Area (Landscape Character)	Minor/temporary	Negligible
	Visual Amenity - users of the John Muir Way	Major	Negligible
	Visual Amenity - users of Preston Links	Major/Moderate	Negligible
	Visual Amenity - users of the B1348	Negligible	No effect
Onshore Export Cable Construction	Landscape Fabric	Moderate/Minor	Negligible
	Urban Area (Landscape Character)	Minor	Negligible
	Visual Amenity - users of the John Muir Way	Major	Negligible
	Visual Amenity - users of Preston Links	Major	Negligible
	Visual Amenity - users of the B1348	Major/Moderate	Moderate
Onshore Substation Construction	Landscape Fabric	Moderate	No further change
	Urban Area (Landscape Character)	Moderate/Minor	No further change
	Visual Amenity - users of the John Muir Way	Major	No further change

Impact	Receptor	Effect (including embedded mitigation)	Residual Effect at Year 15
	Visual Amenity - users of Core Paths 145, 146 & 284	Major	Major to Major/Moderate
	Visual Amenity - users of Preston Links	Major	Major to Major/Moderate
	Visual Amenity - users of the B1348	Major/Moderate	Major/Moderate and moderate
Landfall Operation	Landscape Fabric	No Effect	No Effect
	Urban Area (Landscape Character)	No Effect	No Effect
	Visual Amenity - users of the John Muir Way	No Effect	No Effect
	Visual Amenity - users of Preston Links	No Effect	No Effect
	Visual Amenity - users of the B1348	No Effect	No Effect
Onshore Export Cable	Landscape Fabric	No Effect	No Effect
	Urban Area (Landscape Character)	No Effect	No Effect
	Visual Amenity - users of the John Muir Way	No Effect	No Effect
	Visual Amenity - users of Preston Links	No Effect	No Effect
	Visual Amenity - users of the B1348	No Effect	No Effect
Onshore Substation	Landscape Fabric	No further change	No further change

Impact	Receptor	Effect (including embedded mitigation)	Residual Effect at Year 15
	Urban Area (Landscape Character)	Moderate (locally) Minor to Negligible (generally)	Moderate (locally) Negligible (generally)
	Mayfield / Tranent Ridge LCA	Negligible (locally) None (generally)	Negligible (locally) None (generally)
	Musselburgh / Prestonpans Fringe LCA	Negligible (locally) Negligible to none (generally)	Negligible (locally) Negligible to none (generally)
	Visual Amenity - residents at Whin Park, Cockenzie	Major	Major/Moderate
	Visual Amenity - Cockenzie Harbour	Moderate	Moderate
	Visual Amenity - Appin Drive, Prestonpans	Moderate	Moderate
	Visual Amenity - users of the John Muir Way	Major (locally) No Effect (generally)	Major (locally) No Effect (generally)
	Visual Amenity - users of Core Paths 145 & 146	Major	Major
	Visual Amenity - users of Core Path 284	Major	Major/Moderate
	Visual Amenity - users of Preston Links	Major	Major
	Visual Amenity - visitors to Prestonpans Battlefield Site	Negligible	Negligible

Impact	Receptor	Effect (including embedded mitigation)	Residual Effect at Year 15
	Visual Amenity - visitors to Meadowhill Sports Centre	Negligible	Negligible/ none
	Visual Amenity - users of the B1348	Major (locally) No Effect (generally)	Major/Moderate (locally) No Effect (generally)
	Visual Amenity - users of the A199	Negligible	Negligible

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