

# MORAY WEST OFFSHORE WINDFARM

## Onshore Transmission Infrastructure Environmental Impact Assessment (EIA)

Moray Offshore Windfarm (West) Limited

### Chapter 7 Landscape and Visual Impact Assessment





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Acronyms	
Acronym	Expanded Term
AC	Aberdeenshire Council
AGLV	Area of Great Landscape Value
AIS	Air Insulated Switchgear
AOD	Above Ordnance Datum
BOWL	Beatrice Offshore Windfarm Limited
CIA	Cumulative Impact Assessment
CLVIA	Cumulative Landscape and Visual Impact Assessment
CZTV	Cumulative Zone of Theoretical Visibility
ELC	European Landscape Convention
GDL	Gardens and Designed Landscapes
GIS	Gas Insulated Switchgear
GLVIA3	Guidelines for Visual Impact Assessment Version 3
HDD	Horizontal Directional Drilling
IEMA	Institute of Environmental Management & Assessment
LCA	Landscape Character Assessment
LCT	Landscape Character Type
LI	Landscape Institute
LVIA	Landscape and Visual Impact Assessment
MC	Moray Council
MWELCS	Moray Council Wind Energy Landscape Capacity Study
NCR	National Cycle Route
NPF3	National Planning Framework 3
OFTI	Offshore Transmission Infrastructure
OS	Ordnance Survey
RCCA	Regional Coastal Character Area
SLA	Special Landscape Areas
SLCA-WE	Strategic Landscape Capacity Assessment for Wind Energy
SLVIA	Seascape Landscape and Visual Assessment
SNH	Scottish Natural Heritage
SPP	Scottish Planning Policy
SUDS	Sustainable Urban Drainage System
TA	Technical Appendix
WCS	Worst Case Scenario

Acronyms	
Acronym	Expanded Term
ZTV	Zone of Theoretical Visibility

## 7 Landscape and Visual Amenity

### 7.1 Introduction

7.1.1.1 This chapter considers the likely significant effects on the landscape and visual resource associated with the construction and operation of the proposed Moray West Onshore Transmission Infrastructure (OnTI). The specific objectives of the chapter are to:

- Detail the consultation and guidance relevant to Landscape and Visual Impact Assessment (LVIA) that has informed this assessment;
- Describe the assessment methodology and significance criteria used in completing the impact assessment;
- Describe the LVIA baseline;
- Describe the potential effects, including direct, indirect and cumulative effects;
- Describe the mitigation measures proposed to address likely significant effects; and
- Assess the residual effects remaining following the implementation of mitigation.

7.1.1.2 The assessment has been carried out by two Chartered Landscape Architects at Optimised Environments Limited (OPEN). OPEN is a multi-disciplinary design and environmental planning practice that has landscape architects that specialise in LVIA work. This chapter has been prepared by Jo Phillips, an Associate at OPEN with 15 years of experience working on LVIAs for energy developments.

7.1.1.3 This chapter is supported by the following Technical Appendices:

- Technical Appendix 7.1 LVIA Methodology.

7.1.1.4 This chapter is supported by the following figures which are referenced in the text where relevant.

- Figure 7.2.1 – OnTI LVIA Study Area;
- Figures 7.3.1 to 7.3.9 – Baseline Maps;
- Figures 7.3.10 to 7.3.16 Viewpoint Visualisations;
- Figure 7.4.1 – Substation Proposed Mitigation; and
- Figure 7.7.1 – Cumulative Developments.

### 7.2 Approach to Assessment

#### 7.2.1 Guidance

7.2.1.1 The following guidance and data will be used to inform the LVIA:

- Landscape Institute (LI) and Institute of Environmental Management & Assessment (IEMA) (2013). Guidelines for Landscape and Visual Impact Assessment: Third Edition;
- LI (2011). Use of Photography and Photomontage in Landscape and Visual Impact Assessment, Note 01/11;
- LI (2017). Visual representation of development proposals LI Technical Guidance Note 02/2017;
- Scottish Natural Heritage (SNH) (2017). Visual Representation of Wind Farms (Version 2.2);
- SNH (2012). Assessing the Cumulative Impact of Onshore Wind Energy Developments;

- Natural England and Department of Environment, Food and Rural Affairs (2014). Guidance. Landscape and seascape character assessments. How to carry out and use landscape and seascape character assessments;
- Moray Council (2012). Moray Wind Energy Landscape Capacity Study Final Main Study Report prepared by Alison Grant and Carol Anderson, Landscape Architects;
- Aberdeenshire Council (2014). Strategic Landscape Capacity Assessment for Wind Energy;
- Aberdeenshire Council (2017). Aberdeenshire Local Development Plan 2017 Supplementary Guidance 9 – Aberdeenshire Special Landscape Areas.

### 7.2.2 Planning Policy Context and Guidance

7.2.2.1 Chapter 4: Planning Policy Context of this EIA Report sets out the policy and legislation associated with the Moray West OnTI. The Moray West OnTI lies within the Moray Council area with the exception of the northern part of the onshore cable route and Onshore Landfall Area, which are located within Aberdeen Council’s area.

7.2.2.2 International, regional and local policies that relate to the value and importance placed on the landscape and visual resource are described in this section. Table 7.1 sets out the Legislation and Policy Framework relevant to the LVIA.

Table 7.2.1: Policy Framework Relevant to the LVIA	
International Policy	Description
European Landscape Convention (ELC)	Convention promotes the protection, management and planning of all landscapes in Europe. Landscape is described as “an area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors” (ELC, 2000). The definition applies to all urban and peri-urban landscapes, towns, villages, rural areas, the coast and inland areas. In addition, it applies to ordinary or even degraded landscape as well as those areas that are outstanding or protected.  The ELC became binding in the UK from 1 March 2007. As a signatory, the UK government has therefore undertaken to adopt general policies and measures to protect, manage and plan landscapes.
National Policy	Description
National Planning Framework 3 (NPF3)	Published by the Scottish Government in June 2014. NPF3 is a long-term strategy for Scotland and is the spatial expression of the Government’s Economic Strategy and plans for development and investment in infrastructure. In its introduction, the NPF3 notes the importance of maintaining economically active and vibrant rural areas whilst “safeguarding our natural and cultural assets and making innovative and sustainable use of our resources”.
Scottish Planning Policy, 2014 (SPP)	Sets out national planning policies which reflect Scottish Ministers’ priorities for operation of the planning system and for the development and use of land. As part of Scotland’s commitment to sustainable economic growth it is recognised in Paragraph 2 that the planning system should “...take a positive approach to enabling high-quality development and making efficient use of land to deliver long-term benefits for the public while protecting and enhancing natural and cultural resources”.  Sets out policies for the protection of nationally and locally important landscapes including Gardens and Designed Landscapes.
Local Policy	Description
Moray Local Development Plan (2015)	<b>Policy E7: Areas of Great Landscape Value (AGLV) and impacts upon the wider landscape.</b> The policy is as follows:



Table 7.2.1: Policy Framework Relevant to the LVIA

International Policy	Description
	<p>'Development proposals which would have a significant adverse effect upon an Area of Great Landscape Value will be refused unless:</p> <p>They incorporate the highest standards of siting and design for rural areas.</p> <p>They will not have a significant adverse effect on the landscape character of the area, in the case of wind energy proposals the assessment of landscape impact will be made with reference to the terms of the Moray Wind Energy Landscape Capacity Study.</p> <p>They are in general accordance with the guidance in the Moray and Nairn Landscape Character Assessment.'</p> <p><b>Policy BE5: Battlefields, Gardens and Designed Landscapes (GDL)</b></p> <p>'Development proposals which adversely affect Battlefields or Gardens and Designed Landscapes, or their setting will be refused unless:</p> <p>The overall character and reasons for the designation will be not compromised, or</p> <p>Any significant adverse effects can be satisfactorily mitigated and are clearly outweighed by social, environmental, economic or strategic benefits.</p> <p>The Council will consult Historic Scotland on any proposal which may affect Inventory sites.'</p>
<p>Aberdeenshire Local Development Plan (2017)</p>	<p><b>Policy E2: Landscape</b> advises that:</p> <p>'We will refuse development that causes unacceptable effects through its scale, location or design on key natural landscape elements, historic features or the composition or quality of the landscape character. These impacts can be either alone or cumulatively with other recent developments. Development should not otherwise significantly erode the characteristics of landscapes as defined in the Landscape Character Assessments produced by Scottish Natural Heritage (see <a href="http://www.snh.gov.uk/protecting-scotlandsnature/looking-after-landscapes/lca/">www.snh.gov.uk/protecting-scotlandsnature/looking-after-landscapes/lca/</a>) or have been identified as Special Landscape Areas of local importance.'</p> <p>Policy E2 is supported by the Proposed Aberdeenshire Special Landscape Areas Supplementary Guidance, which identifies and describes the Special Landscape Areas of Aberdeenshire, including the 'North Aberdeenshire Coast' SLA. It provides for the designation of ten Special Landscape Areas and reinforces the need for development proposals within these areas to provide "social, environment or economic benefits of at least local public importance" and for these proposals to mitigate their potential adverse effects through careful "layout, siting and design".</p>

### 7.2.3 Scope of Assessment

- 7.2.3.1 The scope of the assessment is to identify all significant effects and significant cumulative effects that would arise as a result of the Moray West OnTI. The LVIA considers the impacts associated with the three main onshore components; namely the Onshore Landfall Area, the onshore cable route and the onshore substation, and the effects these would have on landscape elements, landscape character receptors and visual receptors.
- 7.2.3.2 The effects of the landfall, onshore cable route and onshore substation are all assessed during the construction phase, whilst only the effects of the onshore substation are assessed during the operational phase. This scope reflects the very limited potential for significant effects to arise in respect of the operational phase of the landfall and the onshore cable route, when operational components are buried underground and intermittent and small-scale ground level

access covers would be the only visible components. This approach was proposed in Moray West Onshore Transmission Infrastructure Scoping Report (2017).

- 7.2.3.3 After the lifetime of the Moray West Offshore Wind Farm, it is possible that the Moray West Onshore Substation may be retained and not decommissioned. However, in accordance with the Scoping Report and Scoping Opinion received from Moray Council and Aberdeenshire Council, the most likely decommissioning scenario for the OnTI is also considered in this EIA Report.
- 7.2.3.4 It is likely that decommissioning will be broadly similar to, or less than, the construction phase in terms of the scale of works and their duration. The main difference would occur in respect of the onshore substation where decommissioning effects would be notably less than those relating to the construction phase, owing to the screening effect of mitigation planting following 50 years of growth. The general decommissioning approach will involve above ground structures being removed and below ground structures being left in-situ.
- 7.2.3.5 The scope of the assessment considers cumulative effects but only in respect of the onshore substation. The landfall and the onshore cable route are unlikely to give rise to significant cumulative effects owing to a combination of their relatively small scale and the short-term duration of their impacts, limited to within the construction phase, with practically no residual effects in the operational phase. Furthermore, there are no major developments within close enough proximity of the landfall or onshore cable route to give rise to a potential cumulative effect.

#### **Construction Phase**

- 7.2.3.6 The construction phase of the OnTI project will last up to 2 years. The most notable changes to the landscape and visual resource as a result of the OnTI will occur during the construction phase and are as follows:
- Short term and localised effects on the landscape elements of agricultural/amenity land, hedgerows and trees where the landfall, onshore cable route and onshore substation will be constructed. The construction of the onshore infrastructure, associated construction compounds and access roads will have a direct impact owing to the removal of landscape elements.
  - Short term and localised effects on the Coastal Character Area (CCA) and Landscape Character Types (LCTs) as a result of the construction works associated with the landfall, onshore cable route and onshore substation. The construction of the onshore infrastructure, associated construction compounds and access roads will have direct and indirect impacts on the surrounding coastal and landscape character owing to the presence and activity of the construction works and the emergence of the substation.
  - Short term and localised effects on the visual amenity of residents, road-users, walkers and other visual receptors as a result of the construction works associated with the landfall, onshore cable route and substation. The construction of the onshore infrastructure, associated construction compounds, cable laying techniques and access roads will have impacts on visual receptors within the local area owing to the presence and activity of the construction works and the emergence of the substation.

#### **Operational and Maintenance Phase**

- 7.2.3.7 The wind farm is anticipated to have an operational lifespan of 50 years, and thus for its currently defined role so would the OnTI. However, as the transmission assets may provide a further purpose in due course and are unlikely to be constrained in the same way by design life, the consent sought for the OnTI phase of the project would last in perpetuity. The impacts on the landscape and visual resource from the OnTI that would occur during the operational phase would relate to the presence of the substation and are as follows:

- Long term effects on landscape character as a result of the presence of the onshore substation and cumulative effects in conjunction with other electrical infrastructure in the Blackhillock area.
- Long term effects on the visual amenity principally of residents and road-users as a result of the presence of the onshore substation and cumulative effects in conjunction with other electrical infrastructure in the Blackhillock area.

**Potential Cumulative Impacts**

- 7.2.3.8 In respect of the onshore infrastructure, the potential for cumulative impacts is limited. In relation to the landfall and the onshore cable route, this limited potential relates primarily to the absence of other existing and proposed energy developments within the vicinity of these onshore components. Furthermore, the limited extent of the effects of the landfall and onshore cable route, the relatively localised scale of their associated construction works and the absence of any visible components during the operational phase other than discreet access covers, also contribute to the limited potential for cumulative impacts to arise.
- 7.2.3.9 There is greater potential for cumulative impacts to arise in relation to the construction and operation of the substation, owing to its larger extent and scale of construction works, and its notable presence during the operational phase. Cumulative effects would arise in conjunction with the cluster of other existing and proposed substations and overhead lines, centred on Blackhillock, approximately 2 km to the north. The site for the onshore substation has been carefully selected to minimise the potential for cumulative effects. It is located at a relative low point surrounded by higher ground and is partially enclosed by tree largely coniferous tree belts.

**Consultation**

- 7.2.3.10 Table 7.2.2 summarises the issues raised relevant to the OnTI which have been identified during consultation activities undertaken to date. It indicates how these issues have been addressed within this EIA Report or how Moray West have approached them.

Table 7.2.2: Consultation			
Date	Consultee	Issue Raised	Moray West Approach
Scoping Opinion	MC	<p>MC agree effects proposed in the scoping report to be scoped in, and out, of the EIA subject to the advice of other consultees.</p> <p>MC agree methods described in the scoping report are sufficient to inform a robust impact assessment subject to the advice of other consultees - the methods described included the format for the visualisations.</p> <p>The study area radius should be increased from 6 km to 10 km to include the A96(T) corridor north west of Keith, as un-interrupted views of Blackhillock on the northern flanks of Cairds Hill exist.</p> <p>Depending upon the timing of any detailed submissions, potential effects from the other substations at Blackhillock for SSE Networks (nearing completion) and Beatrice Offshore Windfarm Ltd (under construction) may be sufficiently progressed such that they can be</p>	<p>The location of the substation site on the other side of Cairds Hill from Blackhillock ensures that there would be no visibility of it from the A96(T) corridor north west of Keith and therefore the study area has not been increased to 10 km in order to include this area.</p> <p>The location of the substation site within an area that is separate from Blackhillock and the Beatrice Offshore Windfarm Ltd (BOWL) substation ensures that cumulative photomontages are unnecessary as part of the context of the onshore substation.</p>

Table 7.2.2: Consultation			
Date	Consultee	Issue Raised	Moray West Approach
		meaningfully included in cumulative photomontages.	
27/07/2017	SNH	SNH agree effects proposed in the scoping report to be scoped in, and out, of the EIA. SNH agree methods described in the scoping report are sufficient to inform a robust impact assessment - this included the format for the visualisations and the proposed study area.	
06/12/2017	SNH	Viewpoint locations confirmed as satisfactory.	Viewpoints included in assessment in Table 7.3.1 and shown on Figure 7.3.9.
Scoping Opinion	AC	<p>Scoping report has largely identified the likely sensitive receptors within Aberdeenshire.</p> <p>The proposed study area and format for visualisations are acceptable.</p> <p>Agree that operational and decommissioning impacts of the underground cables can be scoped out subject to confirmation of the route and cables to be buried and left in-situ.</p> <p>Aberdeenshire Local Development Plan 2017 (ALDP 2017), recently adopted and policies and landscape areas as identified in this ALDP 2017 will require to be incorporated into any assessment.</p>	<p>Reference made to Aberdeenshire Local Development Plan 2017 (ALDP 2017) and its relevant policies in section 7.2.2.</p> <p>The North Aberdeenshire Coast SLA is considered in the assessments of the landfall and cable route effects in Tables 7.5.4 and 7.5.5.</p> <p>Operational and decommissioning impacts of onshore cable route have been scoped out. While the detailed location of the 30 m working width has not been fixed, the corridor within which the onshore cable route would be located, has been fixed. Detailed design would take into account landscape and visual, as well as environmental and technical constraints along the route, based on current best practice to limit disturbance. At decommissioning, cables would be buried and left in-situ.</p>
Scoping Opinion	MC	<p>Para 2.5 of the Scoping report refers to decommissioning of the substation down to foundation level. The specific extent of decommissioning of all above ground structures inclusive of plant, fences, lighting columns etc. at the substation would need to be clarified to assess the landscape impact in perpetuity beyond the operational duration of the transmission infrastructure.</p> <p>In para 5.3.5 of the Scoping Report, reference is made to reviewing the progress</p>	<p>Decommissioning is considered to be similar in scale to construction albeit with a notable reduction in effects owing to the screening effect of mitigation planting following 50 years of growth.</p> <p>Subsequent consultation with MC on the scope of the cumulative assessment included only consideration of the Lurg Hill and Aultmore wind farms and not</p>

Table 7.2.2: Consultation			
Date	Consultee	Issue Raised	Moray West Approach
		on the Dorenell windfarm to Blackhillock substation transmission line. This has now been consented and construction of the composite pole overhead line is to start soon.	Dorenell transmission line, which has now been completed and forms part of the baseline character and views.

#### 7.2.4 Data Gathering

##### **Study Area**

- 7.2.4.1 The Study Area for the LVIA (OnTI) includes buffer areas around the onshore substation, the Onshore Landfall Area and the onshore cable route. The Study Area is shown on Figure 7.2.1.
- 7.2.4.2 The Onshore Landfall Area for the export cables will be within a section of the Aberdeenshire coastline located in the vicinity of Redhythe Point, situated between Sandend to the west and Portsoy to the east. The export cables will extend northwards, away from the coast, to the Moray West Offshore Wind Farm.
- 7.2.4.3 The LVIA Study Area follows the onshore cable route inland, south-west from the coast for approximately 23 km to an onshore substation, located approximately 4 km south of Keith. The Study Area extends to a 6 km radius around the substation and includes a 2.5 km corridor along the Onshore Landfall Area and onshore cable route (1 km either side of the 500 m onshore cable corridor).

##### **Desk Study / Field Survey**

- 7.2.4.4 The LVIA for the OnTI is largely based upon the description of the baseline landscape and visual conditions of the identified receptors as set out in 7.3 Baseline Conditions. This and additional baseline information has been gathered through desk study and fieldwork with the different extents of the LVIA Study Area being taken into account.

#### 7.2.5 Assessment Methodology

##### **Evaluation of Effects**

- 7.2.5.1 The methodology is set out in detail in Technical Appendix 7.1: LVIA Methodology. The methodology used to carry out the LVIA has been developed by OPEN for the LVIA of energy developments. The methodology draws on the guidance listed in section 7.2.1.
- 7.2.5.2 The assessment will be based on a design envelope (or 'Rochdale Envelope') approach, as supported by The Planning Inspectorate Advice Note Nine (The Planning Inspectorate, 2012) and as agreed with SNH, MC and AC. The design envelope presents the parameters of the project which represent the worst-case scenario. This ensures the application covers the maximum extent of the project. In respect of the onshore substation, visualisations show a design envelope in the form of a grey 3D box covering the 300 m x 200 m footprint of the substation compound area and attributing a maximum 13 m height to the built development. This approach covers any variations that may occur within these outer parameters as the design for the onshore substation evolves.
- 7.2.5.3 The description of the Moray West OnTI contained in Chapter 2: The Proposed Development of this EIA Report provides further details of the likely substation infrastructure. Figure 2.4.2

illustrates the indicative layout and Figure 2.4.3 illustrates the indicative elevation of the onshore substation.

#### 7.2.6 *Assessment of Potential Effects*

7.2.6.1 The significance of the effect on landscape elements, landscape character receptors and visual receptors is dependent on the multiple factors considered in determining the sensitivity and the magnitude of change and by applying professional judgement to assess whether or not the Moray West OnTI would have an effect that is significant or not significant. A significant effect will occur where the combination of the variables results in the Moray West OnTI having a material effect on the landscape or visual receptors, so that its character or appearance is redefined by the presence of the Moray West OnTI. A not significant effect will occur where the change as a result of the introduction of the Moray West OnTI is not definitive, and the landscape or visual receptor continues to be defined principally by its baseline characteristics. In this instance the Moray West OnTI may affect the appearance of the landscape or visual receptor, but this effect will not result in a material change.

7.2.6.2 This assessment assumes clear weather and optimum viewing conditions. This means that effects that are assessed to be significant may be not significant under different, less clear conditions.

##### **Sensitivity Criteria**

7.2.6.3 Sensitivity is an expression of the ability of a landscape element, landscape character receptor, view or visual receptor to accommodate the Moray West OnTI and is dependent on baseline characteristics including its susceptibility to change, value, quality, importance, the nature of the viewer, and existing character.

##### **Magnitude of Effect**

7.2.6.4 Magnitude of change is an expression of the scale of the change on landscape elements, landscape character receptors and visual receptors that will result from the Moray West OnTI. Geographical extent and duration/reversibility will also be taken into account.

##### **Significance Criteria**

7.2.6.5 The significance of effects will be assessed through a combination of two considerations; (i) the sensitivity of the landscape element, landscape character receptor, or visual receptor, and (ii) the magnitude of change that will result from the introduction of the Moray West OnTI.

7.2.6.6 OPEN's methodology for assessing energy developments is not reliant on the use of a matrix to determine the significance of visual effects, nor does it define levels of significance. As required by the Town and Country Planning (Environmental Impact Assessment) (Scotland) Regulations 2017 (the EIA Regulations), OPEN identifies whether effects are likely to be significant (or not). Although it is not reliant on the use of a matrix it is considered useful to include a matrix in the methodology to help illustrate how combinations of sensitivity and magnitude of change can give rise to a significant effect and to provide an understanding as to the threshold at which significant effects may arise. Table 7.2.3 below provides this illustration.

Table 7.2.3: Approach for Determination of Significance

Magnitude of Change	Sensitivity					
		Low	Medium-Low	Medium	Medium-High	High
Negligible / None	Not significant	Not significant	Not significant	Not significant	Not significant	Not significant
Low	Not significant	Not significant	Not significant	Not significant	Not significant	Not significant
Medium-Low	Not significant	Not significant	Not significant	Not significant	Significant / not significant	Significant / not significant
Medium	Not significant	Not significant	Significant / not significant	Significant / not significant	Significant / not significant	Significant
Medium-High	Not significant	Significant / not significant	Significant / not significant	Significant	Significant	Significant
High	Significant / Not significant	Significant / not significant	Significant	Significant	Significant	Significant

- 7.2.6.7 Combinations of higher magnitude and sensitivity are generally assessed as significant effects in terms of the requirements of the EIA Regulations. Combinations of lower levels of magnitude and sensitivity are generally assessed as not significant.
- 7.2.6.8 It should be noted however that intermediate combinations may be significant, or not significant, depending on the specific factors and effect that is assessed in respect of a particular landscape or visual receptor. In accordance with the GLVIA3 (paragraph 6.43), experienced professional judgement is applied to the assessment of all effects and reasoned argument is presented in respect of the findings in each case.
- 7.2.6.9 Following the process set out in GLVIA3, it is assessed whether such an impact is beneficial, adverse or neutral; whether it is permanent or reversible; long, medium or short term; and over what geographical extent this may occur.

### 7.3 Baseline Conditions

7.3.1.1 The baseline conditions are described in three parts. The first part provides a broad overview of the Study Area along the onshore cable route from the Onshore Landfall Area to the onshore substation. The second part describes the landscape character areas and landscape designations in the Study Area. The third part describes the visual receptors associated with settlements, roads, paths and other features and attractions in the Study Area.

#### 7.3.2 Overview

7.3.2.1 In general, the character of the landscape follows a typical sequence from coastal bays with a strong association to the sea, to open coastal farmland, and through to rolling upland farmland with areas of enclosed forest. There are few settlements and rural development typically comprises intermittent farmsteads set within open agricultural land. The exceptions to this include the coastal village of Sandend, located to the west of the Onshore Landfall Area, the

town of Keith located 4 km north of the substation, and the small settlements of Fordyce and Kirkton of Deskford, which are located immediately adjacent to the onshore cable corridor.

- 7.3.2.2 The main transport routes passing through the Study Area include the A98, which runs along the north coast between Fraserburgh and Fochabers, the A96, which links Keith with Aberdeen and the A95, which runs east from Keith connecting it to the coast. Three key B roads: B9016, B9018 and B9022 provide north-south links between Keith and the coast, and between these a tight network of interlinked minor, and often single-track roads connect farmsteads and small settlements.

### 7.3.3 *Baseline Landscape Character Types*

- 7.3.3.1 The onshore cable corridor is predominantly located within the Moray Council area apart from the most northerly 0.5 km section south from the Onshore Landfall Area, which is situated within the Aberdeenshire Council area. 'Moray Wind Energy Landscape Capacity Study' (Moray Council, 2016) and the 'Strategic Landscape Capacity Assessment for Wind Energy' (Aberdeenshire Council, 2014) provide the updated Landscape Character Assessments (LCAs) for these areas. These have been used as the basis of the assessment of landscape character receptors with reference to the original LCAs original based on the national programme commissioned by Scottish Natural Heritage (SNH 1997a; SNH 1997b).
- 7.3.3.2 The coastal edge where the Onshore Landfall Area is located relates to the Sandend Bay Regional Coastal Character Area identified in Chapter 14: SLVIA of the Offshore EIA Report.
- 7.3.3.3 Landscape Character Types (LCTs) which occur in the Study Area are shown in Figure 7.3.1 in respect of the Onshore Landfall Area, Figure 7.3.2 and 7.3.3 in respect of the onshore cable corridor and 7.3.4 in respect of the substation. The relevant LCTs are described below.

#### **Coastal Cliffs LCT**

- 7.3.3.4 The coast contained in the Study Area is typical of the Coastal Cliffs LCT (26i) identified in the Aberdeenshire Capacity Assessment, in that it is characterised by rocky cliffs and sheltered coves with areas of farmland located south of the coastline which transition into coastal grasslands. Ground cover comprises low lying coastal grasslands and scrub, and in the absence of tree cover, expansive coastal views occur.
- 7.3.3.5 The north facing Sandend Bay, a popular sandy beach, is sheltered by dunes, with the bay forming a break in the continuous cliff line found to the west and east. Inland the landscape transitions from a sweeping sandy bay through a band of sand dunes to small low-lying farm fields and amenity areas. To the south, a short but steep slope marks the transition to the arable farmland, rising to an elevation of approximately 25 m above sea level.
- 7.3.3.6 Sandend is a small, historic fishing village set along the western side of Sandend Bay. The southern part of the village lies closest to the Onshore Landfall Area to the east, where a short street of mid-20th century housing, a village hall at The Bents and a Caravan Park set within the coastal grassland area occur. At the eastern side of the bay, are the four story high ruins of the 18th century Glenglassaugh windmill and the warehouse buildings of the Glenglassaugh distillery providing a distinctive industrial heritage character. Adjacent to this is the Burn of Fordyce, this area differs in character being set within a riparian corridor of mixed deciduous woodland providing an enclosed and sheltered feel within an otherwise open, treeless landscape.
- 7.3.3.7 The Coastal Cliffs LCT merges inland with the Coastal Farmland LCT and is bounded on its southern edge by the A98, a single carriageway road with open expansive views to the north, over the surrounding coastal landscape towards the sea, and to the south, over coastal farmland towards a backdrop of Upland Farmland with intermittent farmsteads.



### **Coastal Farmland LCT**

- 7.3.3.8 This LCT covers the broad hinterland and extends approximately 3 km to the south of the narrow coastal platform and lies to the north of the rolling agricultural land found further inland. It is bounded to the north by the A98 and covers the area immediately to the west of the village of Fordyce as far south as the area of Breach where it then transitions into Upland Farmland. At its northern end it includes a disused railway line, which forms a subtle intervention through the surrounding arable farmland.
- 7.3.3.9 The landscape character is typical of the Coastal Farmland LCT (7iii) identified in the Aberdeenshire Capacity Assessment (Aberdeenshire Council, 2014) and comprises subtly undulating landform with the sea often forming a background feature. Fields are large and geometrical in form, typically divided using fences or occasional drystone dykes with a network of single track, tarmacked roads lined by coastal grassland and scrub verges. The general lack of trees, tall hedges or strong landform allows unrestricted views to the coast in a northerly direction and open views as far as the topography allows in a southerly direction.
- 7.3.3.10 Aside from the village of Fordyce, which is located outside the eastern edge of the onshore cable corridor, the landscape is sparsely populated with development consisting of intermittent farmsteads. The disused railway line in the northern portion is inaccessible to public access and forms a strong band of scrub and young woodland vegetation recessed into the landscape and running parallel to the A98.
- 7.3.3.11 The Burn of Fordyce cuts through the southern section of this LCT providing a thin strip of wetland vegetation with occasional areas of riparian woodland occurring along its course. This is an open and exposed landscape with only occasional areas of shelter provided by stands of trees acting as agricultural shelter belts.

### **Upland Farmland LCT**

- 7.3.3.12 The remainder of the onshore cable corridor is located within the Moray Council area and is typical of the Upland Farmland (LCT 8) described in the Moray Wind Energy Capacity Study (Moray Council, 2016). This is an extensive LCT with much variation including narrow contained valleys and sparsely settled, open farmland with forested plateau and hill tops. In general, the character is gently undulating, exposed and expansive, although views out as far as the coast are limited to those areas situated on high points at a clear distance from surrounding forestry. The landscape has a simple character of pastoral fields with evenly distributed farms accessed by a close network of minor roads.
- 7.3.3.13 Given the level of variation within this LCT, in the 'Moray Wind Energy Landscape Capacity Study' it has been subdivided into two more specific typologies to distinguish between Broad Forested Hills and Narrow Valleys. The onshore cable corridor runs for approximately 28 km though the broader Upland Farmland LCT whilst skirting the bottom of and occasionally cutting into the forested hills of Cotton Hill, Hill of Summertown, Gallow Hill, Meikle Balloch Hill and Cairds Hill. In its northern section between Cotton Hill and Kirktown of Deskford it runs along the eastern edge of the Valleys within Upland Farmland LCT.

### **Valleys within Upland Farmland LCT**

- 7.3.3.14 These are medium scale valleys, which are well settled with scattered farms and occasional small settlements. A distinctive pattern of shelterbelts and strips of riparian woodland follow tributaries and connect with larger expanses of woodland frequently located in the adjacent 'Broad Forested Hills' LCT. A series of small burns provide a pattern of tributaries to the larger Burn of Deskford, these burns frequently either act as or have been straightened to form drainage ditches running along the edge of fields. An intertwining single-track road network connects historical settlements and farmsteads.

7.3.3.15 The valleys are backdropped by conical hills within the adjacent Broad Forested Hills LCT, however the valleys themselves are generally self-contained and not visible from surrounding character types. They do however contain roads bigger than the typical single-track roads, such as the B9018 through Kirktown of Deskford.

#### **Broad Forested Hills within Upland Farmland LCT**

7.3.3.16 The onshore cable corridor skirts around, and occasionally crosses into this LCT, which comprises hills which are densely forested with conifer plantations. These upland landscapes of gentle hills with broad summits are sparsely populated yet surrounded by more settled valleys. Dense stands of trees denote an enclosed character with openings to more expansive views over rolling hills at the edges of woodland.

7.3.3.17 Some more distinctive conical hills, are located within this character type including Lurg Hill, which the onshore cable corridor runs along the edge of, and Meikle Balloch.

#### *7.3.4 Baseline Visual Receptors*

7.3.4.1 There are a number of locations within the Study Area where visual receptors are most usually found. These include settlements, routes and features and attractions. Visual Receptors which occur in the Study Area are shown in Figure 7.3.5 in respect of the Onshore Landfall Area, Figure 7.3.6 and 7.3.7 in respect of the onshore cable corridor and 7.3.8 in respect of the substation. The relevant visual receptors are described below.

#### **Settlements**

7.3.4.2 The key settlements in the Study Area are Sandend and Fordyce. Their sensitivity to the Moray West OnTI is heightened by Conservation Areas (CA) designations, the northern part of Sandend and the whole of Fordyce being designated. The larger town of Keith is located within the 6 km radius of the substation study area although visual receptors associated with this settlement would be unlikely to see the onshore substation owing to the screening effect of the intervening landform.

7.3.4.3 Sandend is a historical harbour settlement with development following a linear pattern along the western edge of the bay. The historic centre is focused on the harbour area and houses are organised in rows running NE-SW with gable ends facing the harbour. As such views over Sandend Bay from these properties are limited and sensitivity to development is reduced. However, 20th century residential properties along Seaview Road and at The Bents and also Sandend Caravan Park all address the coast to the east to some degree heightening the sensitivity of their residents as visual receptors. Sandend lies out with the western boundary of the Onshore Landfall Area.

7.3.4.4 Fordyce is an historical village dating back to the 1200's and is located within the 1 km buffer zone to the eastern edge of the onshore cable corridor approximately 2.5 km south of Sandend. It is classified as an 'outstanding' conservation area and is characterised by narrow winding streets following a medieval plan. It includes many listed buildings such as Fordyce Castle as well as the Scheduled Ancient Monument (SAM) of the old church and burial grounds. The town itself is recessed within the valley of the Burn of Fordyce and is enclosed to the west by an associated line of riparian woodland. This enclosure reduces the sensitivity of residents as visual receptors. Depending on the final routing of the cable, whose relationship to Fordyce will be derived from the chosen landfall site, it may be that a number of 20th century residential properties on the western edge of Fordyce at Pitchaidie Place will overlook the onshore cable corridor, with potential visibility from school road if the cable is directed east of the settlement.

- 7.3.4.5 Aside from these towns, settlement along or close to the onshore cable corridor consists mostly of scattered farms or small groups of houses, the largest of which is the Conservation Area of Berryhillock located on the western edge of the onshore cable corridor along the Burn of Deskford. The majority of these settlements are located within the Upland Valleys LCT and views out to the onshore cable corridor from higher land are limited.
- 7.3.4.6 The residents of individual properties, which lie in the vicinity of the onshore substation, are considered as visual receptors and include: Whitehillock, Brodie Cottage, Burnside, Easter Auchairn, Alenhousehillock, Auchnaclach, Blackhillock, Backside of Ardonald and Raemurrack. While Marypark lies in the vicinity to the north and Newtack to the north-east, intervening Pitlurg Wood would screen visibility of the onshore substation from these properties.

#### **Roads**

- 7.3.4.7 There are several main roads, which are crossed by the onshore cable corridor. The coastal route of the A98 would be crossed 0.5 km south of Sandend, the A95 would be crossed near Davoch of Grange, and the A96 would be crossed by the onshore cable corridor at Newtack.
- 7.3.4.8 Numerous minor roads traverse the study area interconnecting with each other and connecting with more major roads to provide a network of access to rural farms and settlements. The B9018, which acts as a key north to south connector between Keith and Cullen, on the coast, runs roughly parallel to the onshore cable corridor for 8 km through Upland Farmland and Upland Farmland Valleys.
- 7.3.4.9 The onshore substation is located immediately adjacent to the A96, the road-users on which are important visual receptors. This is a major road running through Keith and connecting Aberdeen with Inverness. There is a series of viewpoint locations along this road on the approach to the onshore substation site, as well as on the more minor roads through the Den of Pitlurg to the immediate south and the B9115 to the north.

#### **Railways**

- 7.3.4.10 The Study Area includes the main railway line connecting Aberdeen and Inverness. It follows an east to west orientation running roughly parallel to the A96, between Nethermills and the north of Keith. It is crossed by the onshore cable corridor at the edge of the Hill of Ardrone and adjacent to the River Isla. It operates regular passenger services with some limited light freight traffic.

#### **Long Distance Routes**

- 7.3.4.11 National Cycle Route 1 (NCR1) runs along the north Caithness coast between John O'Groats and Thurso and passes through the onshore cable corridor at Fordyce. It connects with the Moray Coast trail at Cullen, an 80 km long-distance footpath along the Moray coastline between Forres and Cullen. NCR1 also forms part of EuroVelo Route 1, a network of high-quality cycling routes that connect the whole continent.

#### **Core Paths**

- 7.3.4.12 Core paths occur along the coastal edge to the east of Sandend. While paths on OS mapping are shown to connect along much of the length of the coast between Cullen to the west and Portsoy to the east, on Aberdeenshire Council and Moray Council core paths plans, some breaks are shown to occur, most notably across Sandend. To the east of Sandend, the core path extends from Glassaugh Distillery to Portsoy, while to the west it extends to Biekie's Goat, approximately 1 km to the east of Cullen.

### **Attractions and Visitor Facilities**

- 7.3.4.13 The effect on tourism and recreation in the area is addressed in Chapter 12: Socio-economics, Tourism and Recreation of this EIA Report. There are features and resources of interest to visitors in the Study Area. The coastal village of Sandend along with the Glenglassaugh distillery and windmill located at the east end of Sandend provide an attractive location for visitors. Sandend is a popular location for surfing and has a relatively attractive beach/dunes area with a small car park and interpretative materials provided for visitors. Fordyce is described as a conservation village and is held up as: *'the epitome of refined country living'* according to the Banffshire Coast tourism site. Fordyce Joiners Workshop and Visitor Centre is a museum providing information for visitors showcasing the skills of rural craftsmen and is located close to the onshore cable corridor.
- 7.3.4.14 The agricultural landscape through which the onshore cable corridor is located is largely free from formal public footpaths, which are instead mainly located on the surrounding hills. The onshore cable corridor passes along the edge of Balloch Wood on Meikle Balloch Hill, which contains a network of paths and horse trails through coniferous woodland leading to a moorland summit. From here extensive views over Moray and Aberdeenshire can be experienced. This trail network links up with The Bin, the western slopes of which are located within the 6 km Study Area for the onshore substation.

#### *7.3.5 Baseline Viewpoints*

- 7.3.5.1 The LVIA is informed by a series of viewpoints which have been agreed with SNH and are listed in Table 7.3.1: Viewpoints. These viewpoints represent the views of road-users and residents within the area around the onshore substation. They are shown in conjunction with the ZTV on Figure 7.3.9 (Page 1 of 2) and 7.3.9 (Page 2 of 2).
- 7.3.5.2 Baseline descriptions for each viewpoint are included in the assessment tables in section 7.5.

<b>Table 7.3.1: Viewpoints</b>				
<b>No</b>	<b>Location / Figure Reference</b>	<b>Grid Reference</b>	<b>Distance from Substation Boundary</b>	<b>Representative of Receptors</b>
1	Minor road between A96 and B9115 (Figure 7.3.10)	Easting: 343668 Northing: 846102	597 m	Road-users
2	A96 southbound (Figure 7.3.11)	Easting: 344161 Northing: 846403	403 m	Road-users
3	A96 northbound (Figure 7.3.12)	Easting: 344743 Northing: 846119	207 m	Road-users
4	Access route to Brodie Cottage (Figure 7.3.13)	Easting: 345004 Northing: 845974	451 m	Road-users / Residents
5	Minor road by A96 (Figure 7.3.14)	Easting: 345812 Northing: 845862	1,238 m	Road-users
6	Minor road west of Auchnaclach (Figure 7.3.15)	Easting: 345288 Northing: 844764	1,278 m	Road-users / Residents
7	Minor road across Moss of Raemurrack	Easting: 344357	1,116 m	Road-users / Residents

Table 7.3.1: Viewpoints				
No	Location / Figure Reference	Grid Reference	Distance from Substation Boundary	Representative of Receptors
	(Figure 7.3.16)	Northing: 844696		

### 7.3.6 Landscape Planning Designations

7.3.6.1 Landscape designations which occur within the Study Area are limited to the North Aberdeenshire Coast Special Landscape Area (SLA) designated by Aberdeenshire Council, as shown on Figure 7.3.1.

### 7.3.7 Future Baseline

7.3.7.1 The baseline character of the landscapes associated with the Onshore Landfall Area, onshore cable route, and onshore substation is likely to change in the future as a result of the effects of climate change, land use policy, environmental improvements and development pressures.

7.3.7.2 Aberdeenshire Council and The Moray Council recognise that climate change is happening and have included policies within their Local Development Plans and prepared studies to set out their approach to tackling and adapting to climate change. The main effect of climate change is considered to be rises in average temperatures all year round, which will lead to more erratic weather patterns, with increased flood and drought risks arising. Flooding will typically occur in low lying river flood plains and droughts in areas where water tables are already low and water sources restricted. Further tree planting may be encouraged through changes in policy and peat restoration may take place in order to increase carbon capture.

7.3.7.3 Subsidies associated with the European Union Common Agricultural Policy will be retained during a transitional period of three to five years after Brexit, beyond which new subsidies proposed by the current Government could reward farmers who plant woodland and wildflower meadows on their land. This will potentially change the character of the landscape by introducing a greater extent of rural woodland and establishing a greater diversity of habitat.

7.3.7.4 Consented and application onshore wind farms may be constructed and are therefore included in the cumulative assessment. However, it is anticipated that these onshore wind farms may not be built due to the UK Government's withdrawal of financial assistance and therefore potential implications for financial viability.

7.3.7.5 Residential development would be likely to remain relatively small scale and infilling within or expanding edges of existing settlements, reflecting recent trends in and around the towns and villages in the study areas.

### 7.3.8 Data Limitations

#### **Zone of Theoretical Visibility**

7.3.8.1 The ZTV has been generated using Geographical Information System software (ESRI ArcGIS Version 10.4.1) to demonstrate the extent to which the onshore substation may theoretically be seen from any point in the Study Area. Figure 7.3.9 (Page 1 of 2) shows the ZTV based on the bare ground situation and Figure 7.3.9 (Page 2 of 2) shows the ZTV based on the bare ground situation and woodland blocks, with an assumed average height of 10 m applied to these wooded areas.

7.3.8.2 There are limitations in this theoretical production, and these should be considered in the interpretation and use of the ZTV:

- The ZTV does not take into account the screening effects of buildings, or other local features that may prevent or reduce visibility and would be of key importance in providing screening of the proposed substation;
- The ZTVs are based on theoretical visibility from 2m above ground level; and
- The ZTVs are based on 5 m data grid (OS Terrain 5).

7.3.8.3 These limitations mean that while the ZTV is used as a starting point in the assessment, providing an indication of where the Moray West OnTI would theoretically be visible, the information drawn from the ZTV is checked in the field, to ensure that the assessment conclusions represent the actual visibility of the project reasonably accurately.

## 7.4 Embedded Mitigation

7.4.1.1 Embedded mitigation has been developed as part of the overall EIA process through site selection and detailed design where possible. The iterative design process has involved the consideration of the sensitivity of the landscape and visual receptors with the aim to mitigate the effects on those more sensitive receptors, especially where visual amenity of residents is a concern.

7.4.1.2 A site selection process has been undertaken to consider all relevant technical and environmental constraints across the search areas for all onshore infrastructure components. In respect of LVIA input, this has involved providing guidance and advice on potential sites for the onshore substation.

7.4.1.3 The selection process has given due consideration to the following key criteria:

- The influence of the surrounding landform on the visibility of the site - whether it is exposed or enclosed in the local and wider landscape;
- The ability of the site to accommodate a large-scale, level platform and associated earthworks that can be integrated within surrounding landform and features of the landscape;
- The influence of existing mature vegetation on the visibility of the site – whether it fully or partly screens the site within the local and wider area;
- The potential opportunities to use mitigation planting and earthworks to reduce potential landscape and visual effects;
- The sensitivity of surrounding landscape and visual receptors to the potential impacts of the Moray West OnTI, especially designated landscapes and residential receptors; and
- The relationship with the existing and proposed substations clustered around Blackhillock, in respect of limiting potential cumulative effects.

7.4.1.4 The use of existing trees and woodland blocks in order to mitigate potential effects is of notable benefit, as the vegetation is already well established, and especially in respect of mature trees, can provide a full or partial screen of substantial scale. The substation site is enclosed to the north and west by coniferous woodland, which creates instant screening for the substation from these directions and establishes a substantial backdrop in views from the east and south.

7.4.1.5 Mitigation planting for the substation would comprise the establishment of additional woodland belts principally to the east of the site (Figure 7.4.1). This would complement existing woodland blocks and belts, increasing the overall extent to ensure robust screening, and eventually form enclosure around much of the onshore substation. Adjacent to the A96, mitigation planting would be set on smoothly profiled earthwork bunds to raise the overall height and extent of vertical screening (Figure 7.4.1). It is important these bunds are low and tie in with the existing

flow of the landform so that they do not appear at variance with the existing landscape character. The roadside cuttings and embankments along the A96 create a useful precedent.

- 7.4.1.6 The mitigation planting would be designed to create a mixed woodland and comprise a mix of faster growing 'nurse' species and slower growing 'core' species. The core species would comprise a mix of predominantly native deciduous and coniferous, canopy species that would outlive the nurse species and characterise the woodland structure over the longer term. It is anticipated that the growth rate of these species would be on average 300 mm per annum. The nurse species would be faster growing and shorter-lived, providing shelter to bring on the canopy species. The mix would contain species such as alder, birch, and pine, with average growth rates of 400 mm per annum. It is anticipated that 6 m growth would take 15 years and the trees would have reached approximately 11 m (assuming planting height of 1 m) after 25 years. The nurse species would be sufficiently fast growing to provide substantial screening of the substation by 15 years (as illustrated by the visualisations).

## 7.5 Assessment of Potential Effects

### 7.5.1 Design Envelope Parameters

- 7.5.1.1 The Moray West OnTI is being progressed within a range of potential construction methods and design options. This section outlines the range of possible design parameters for each element of the Moray West OnTI.

#### **Onshore Landfall Area**

- 7.5.1.2 The Onshore Landfall Area denotes the location where the offshore export cables are brought ashore and jointed to the onshore cables within transition joint bays. They will be installed by either open cut trenching or Horizontal Directional Drilling (HDD), or a combination of the two.
- 7.5.1.3 This assessment considers the possibility of the landfall being located in the vicinity of Redhythe Point, in the area of rocky cliffs and cliff top farmland. The landscape and visual impact of the landfall construction will be assessed in respect of this section of coastline. This approach reflects the current uncertainty regarding the exact location and represents the geographical opportunities available in this area.
- 7.5.1.4 The extent and nature of onshore and offshore construction works is dependent on the possible use of trenching methods and HDD and the length of any proposed HDD routes. Broad distinctions can be made between short and long HDD options. For the purposes of this assessment where multiple potential HDD length options are proposed these will be considered as sub categories of magnitude of change.
- 7.5.1.5 The offshore export cables and onshore cable circuits would be jointed within transition joint bays. Typically, there would be two transition joint bays 20 m x 5 m with an approximate spacing of 5 m between each. These would be located as close to the landfall as possible. Post-construction, there would be no above ground structures. Link boxes measuring 1.5 m x 4 m would be located adjacent to each transition joint bay, buried approximately 2.5 m deep using mechanical excavators, lined with concrete and topped with an access cover. A permanent access track may be required for maintenance purposes.
- 7.5.1.6 Trenching options at Red Haven Cove would involve open cut trenching in the intertidal zone. A trench would be cut in one or multiple passes to the correct depth before the cable would be laid back in the trench at a later date.

#### **Cable Route**

- 7.5.1.7 Construction of the onshore cable route between the Onshore Landfall Area and the new substation would include the installation of two high voltage AC cable circuits with each circuit comprising three separate cables. The cables will be buried at a target depth of 1 m.

- 7.5.1.8 The majority of the route would be constructed using traditional open cut trenches with specified areas of engineering difficulty undertaken using HDD or other trenchless techniques. A minimum 30 m Construction Working Corridor would be required along the onshore cable route to construct the cable system. Where trenchless techniques, such as HDD, would be required owing to areas of engineering difficulty, there would be no requirement for an open trench within a 30 m working width corridor, as ducts and cables would be installed underground.
- 7.5.1.9 Where the cable route crosses main roads or natural obstacles including the A98, A95, A96, River Isla and Aberdeen to Inverness railway line, it is likely that the technique of HDD would be used to install controlled bores below the ground surface. This technique involves specialist plant and materials to be delivered directly to the work front with two access points required, one on either side of the HDD location as well as a drilling rig and associated launch pit (5 m x 2 m by 1 m deep) and receiving pit (size dependent on the length of the drill).
- 7.5.1.10 The working width for cable circuits may expand beyond 30 m at HDD crossing points to accommodate greater separation of drill holes for each cable and need for more complex plant arrangements. A non-saline water supply is required for HDD drilling. This may be supplied by road in tankers or via construction of a temporary water storage lagoon on site. A silt sediment pond of maximum 7 m x 7 m (and 8 m deep) could be required.
- 7.5.1.11 This LVIA refers to the general terms ‘onshore cable corridor’ when referring to the PAB corridor and ‘onshore cable route’ when referring to the 30 m Construction Working Corridor, which would be located within the 500 m onshore cable corridor. The Construction Working Corridor allows sufficient space for the two cable circuits plus associated temporary drainage, haul roads, access points and areas for personnel and machinery. There would also be strategically located construction compounds at four select points along the route. The onshore cable route would be located to avoid buildings and where possible rivers forested areas.
- 7.5.1.12 The open trench method involves the excavation of a trench by mechanical excavators, installation of the cable ducts and backfilling of the trench. Each circuit is laid in a separate trench with a minimum of 3 m separation between circuits. A number of joint bays with associated permanent access chambers would be required along the route to facilitate the connection of each cable section.
- 7.5.1.13 Access points would be located where the cable route runs close to or crosses existing public roads or tracks. At each access point bespoke bell mouths would be designed and installed to allow HGV access. At key locations temporary haul roads may be installed along the route between access points and existing public roads. There are seven indicative access points listed in Table 7.5.1. Construction compounds may also be sited adjacent to these. Full details will be provided at detailed design.
- 7.5.1.14 One main site compound (approximately 6 Ha), housing site offices and welfare facilities would be located in the field to the east of the onshore substation location. Four additional satellite compounds (typically 70 m by 70 m) would be needed for storage of materials and equipment along the onshore cable route. There would also be an additional compound at the Onshore Landfall Area to accommodate HDD drilling.

Table 7.5.1: Indicative Access Points/Potential Construction Compound Locations along the Cable Route	
1	A98 at Glassaugh/Linkbraeheads
2	B9018 at Windy Hills
3	B9018 at Goukstone/Burnend
4	B9018 at Grange Crossroads



**Table 7.5.1: Indicative Access Points/Potential Construction Compound Locations along the Cable Route**

5	B9018 at access to Mains of Paithnick
6	A95 at access to Clerkseat/Hollydyke
7	A96 Whitehillock access junction at Pitlurg Wood

### **Substation**

- 7.5.1.15 The construction of the substation would occupy the two fields located either side of a single-track road, which currently provides access to Whitehillock farm from the A96. The permanent substation infrastructure would be located in the western field; the eastern field would be used for temporary works and possibly for permanent landscape works including mitigation planting.
- 7.5.1.16 Access would be taken from the A96 (location 7 in Table 7.5.2) with improvements to the existing minor road undertaken to accommodate heavy loads for the substation construction. The substation compound would be up to 60,000 m<sup>2</sup> (300 m x 200 m), it is proposed that it would include two permanent buildings with a maximum height of up to 13 m and a base height of approximately 231.5 m AOD. In order to ensure the worst-case scenario is represented, these dimensions are based on a Gas Insulated Switchgear (GIS) onshore substation solution, as this would comprise built structures which would increase the density and mass of this part of the Moray West OnTI. GIS may also be marginally taller in height than the alternative Air Insulated Switchgear (AIS) onshore substation solution (the AIS onshore substation would not require built structures).
- 7.5.1.17 A 2.5 m high perimeter fence would be erected around the substation compound and lighting installed for use during maintenance visits only. Landform changes around the site would have side slopes of approximately 1:3 gradient and the Moray West OnTI would also include a Sustainable Urban Drainage System (SUDS) treatment area with associated access. The permanent area of the onshore substation would be surrounded by stock/rabbit proof fencing.

### *7.5.2 Realistic Worst-Case Design Scenario*

- 7.5.2.1 The realistic worst case represents the scenario within the range of options covered by the design envelope that would result in the greatest potential for change to the receptor in question. As such the maximum design scenario, represents the “realistic worst-case scenario” for the impact assessment.
- 7.5.2.2 The assessment of potential effects is based upon the worst-case scenario for the onshore cable route and onshore substation works. At the Onshore Landfall Area, where HDD impacts are assessed, the worst-case scenario is applied, and this varies depending on the location (see Table 7.5.1). An additional assessment of the impact of trenching techniques is included for relevant receptors as a potential design option at the Onshore Landfall Area. The worst-case design scenarios for each stage are outlined in Table 7.5.2.

Table 7.5.2: Worst Case Scenarios			
Parameter	Worst Case Criteria	Worst Case Definition	Notes
<b>Onshore Landfall Area Construction</b>			
Onshore Landfall Area - HDD option	Working compound dimensions	100 m x 40 m	A HDD option for the Onshore Landfall Area east of Sandend. Access would be drawn from the A98 and minor roads with final sections covered by temporary haul road.
	Transition Joint Bays	Two bays 20 m x 5 m (100 m <sup>2</sup> ), with 5 m spacing between	
	Maximum HDD length	approx. 1,000 m	
	Maximum construction time	Up to 34 weeks / 12 hours per day (24 hours required for HDD drilling)	
Onshore Landfall Area - Trench option	Working compound dimensions	100 m x 40 m	An open cut trench option for the landfall would be located potentially at Red Haven Cove to the east of Sandend. Options at Red Haven cove would involve two construction compounds measuring 45 m x 70 m & 40 m x 55 m located within the cove and in the fields above the cove respectively.
	Transition Joint Bays	Two bays 20 m x 5 m (100 m <sup>2</sup> ), with 5 m spacing between	
	Maximum trench length	approx. 500 m	
	Maximum construction time	Up to 23 weeks / 12 hours per day	
<b>Onshore Cable Corridor</b>			
Construction	Construction method	Open cut trenching for the majority of the route with HDD in areas of engineering difficulty.	Joint bays to include surface level access covers for maintenance – located next to existing boundaries and roads for ease of access during maintenance visits.  The onshore cable corridor includes an alternative route approximately 3 km inland from the Onshore Landfall Area. This provides options for the negotiation of the Cotton Hill plantation and Cotton Hill/Fordyce area of search for minerals. Only one of these options will be utilised at the detailed design and planning stages.  Temporary fences will be erected shortly before installation, along the
	Maximum working width and length	Assumes minimum 30 m working corridor width, located within a 500 m wide onshore cable corridor. May be increased in areas of technical difficulty or where construction compounds are required.  28 km length (western route)	
	Construction compounds	1 main compound min dimensions 100 m x 100 m 4 satellite compounds 70 m x 70 m	
	HDD locations	6 (western route)	
	Transition Joint bays	Located at a minimum distance of every c.750 m	

Table 7.5.2: Worst Case Scenarios			
Parameter	Worst Case Criteria	Worst Case Definition	Notes
	Maximum construction time	Up to 30 months / 12 hours per day (24 hours required for HDD drilling)	boundaries of the working width.
<b>Onshore Substation</b>			
Construction	Maximum land take for temporary works	6Ha	Work hours weather dependent for certain construction works/ localised techniques.
	Maximum construction time	Up to 2 years / 12 hours per day	
Operation	Maximum land take	60,000 m <sup>2</sup>	For the purposes of the assessment, a continuous height of 13 m across the extent of the substation compound footprint is applied, which establishes the worst-case scenario for the vertical extent of the substation buildings and main electrical equipment. 13 m is generally the maximum height of components on the substation site and while not all components would be this tall, the design envelope based on this height ensures the worst-case scenario is covered.
	Max Height	13 m	
	Access	To be taken from A96 (upgrades may be required)	

### 7.5.3 Assessment of Potential Effects – Scoping Out

- 7.5.3.1 The potential impacts of the Moray West OnTI are assessed under two phases: construction and operation and with respect to three onshore components: landfall, onshore cable route and onshore substation. The assessment is presented in the format of tables, set out with an assessment process which considers the significance of the effect for each relevant landscape or visual receptor. Particular consideration is given to sensitive receptors such as designated landscapes, local residents, recreational users of the countryside and road-users.
- 7.5.3.2 The potential effects during construction at landfall vary depending on the techniques used and the location of landfall. Distinctions are made within the magnitude of change column to determine the different levels of the impacts of using open cut trenching and HDD techniques.
- 7.5.3.3 Once operational, it is anticipated that the potential impacts of the landfall and onshore cable route would be greatly reduced by their location underground with very limited elements of the associated development visible above ground, limited to access covers. These have, therefore, been scoped out of the assessment of operational effects. With respect to the onshore substation, the potential impacts during operation would be moderated by the presence and growth of mitigation planting. The gradual reduction in potential effects over time are considered in the main assessment tables.
- 7.5.3.4 It is likely that decommissioning would be broadly similar to the construction phase in terms of the scale of works and their duration. The main difference would occur in respect of the onshore

substation where decommissioning effects would be notably less than those relating to the construction phase, owing to the screening effect of mitigation planting following 50 years of growth. The general decommissioning approach will involve above ground structures being removed and below ground structures being left in-situ.

7.5.3.5 The following assessment tables therefore focus on the construction effects for landfall, onshore cable route and onshore substation, and the operational effects of the onshore substation.

7.5.4 Assessment of Potential Construction Effects – Landfall Options

Table 7.5.3: Potential Effects during Construction – Onshore Landfall Area

Receptor / Location	Baseline Condition	Sensitivity	Magnitude of Change	Significance of Effect
<b>Landscape Element: Arable Farmland</b>	To the east of Sandend the landfall construction area would be located within large fields of arable farmland. These fields are characterised by a lack of enclosure and an absence of natural vegetation. They extend close to the coastal edge where gorse scrub and grasses occur.	<p>The sensitivity of the arable farmland is <b>medium to low</b>.</p> <p>The susceptibility of the arable farmland to the landfall construction is limited. The arable farmland is already modified by the cultivation of single species rotational crops and is highly managed.</p> <p>The agricultural land is relatively easy to reinstate and would be fully reinstated post construction.</p> <p>The value of the agricultural land is medium to low as it occurs extensively across this landscape and has little scarcity value.</p>	<p>The magnitude of change on the agricultural land would be <b>medium to low</b>.</p> <p>At the Onshore Landfall Area in the vicinity of Redhythe Point, an area of arable farmland would be altered by the presence of the construction compound and the transition joint bays. However, this overall area constitutes only a small proportion of the wider arable farmland. The agricultural land that would be disturbed has been modified by intensive, arable farming and no natural vegetation would be lost.</p>	<p><b>Not significant</b>, short term and reversible.</p> <p>Whilst an area of the agricultural land would be disturbed over the short term, this land has no special sensitivity as a landscape element and forms a small proportion of a much wider resource. The agricultural land would be reinstated post construction.</p>
<b>Landscape Character: The Coast LCT</b>	The Coast LCT is a narrow strip of land, typically less than 1 km, which extends along the north-east coast of Banff and Buchan. The character is described as an area of high headlands, sheer cliffs, occasional narrow inlets and sheltered bays. It is characterised by its general openness, and exposure to coastal views.	<p>The sensitivity of The Coast LCT is <b>medium to high</b>.</p> <p>The susceptibility of the LCT to the landfall construction is medium. This is a sensitive coastal landscape with its defining characteristics relating to open coastal views, historic fishing villages and surrounding arable farmland.</p> <p>The value of the landscape is medium to high owing principally to</p>	<p>The magnitude of change would be <b>medium to high</b> within the localised areas of the landfall.</p> <p>The Coast LCT would be directly altered by the construction of the potential landfall in the Onshore Landfall Area. The landfall construction compound would comprise a maximum area of 40 m x 100 m, taking up only a small part of the wider geographical extent of the LCT. The scale of the change</p>	<p><b>Significant</b>, short term, reversible within the localised area of the potential landfall.</p> <p><b>Not significant</b> for the remainder of The Coast LCT.</p>

Table 7.5.3: Potential Effects during Construction – Onshore Landfall Area

Receptor / Location	Baseline Condition	Sensitivity	Magnitude of Change	Significance of Effect
		its location in the SLA. It is an attractive section of coast albeit with the influences of settlement and arable agriculture along much of its length.	would therefore be limited in the context of the wider LCT and the influence of its coastal character.  The scale of the construction works at the potential landfall, although relatively small, would impact locally on the character of the landscape through the alteration to, and addition of unfamiliar features to the farmland, including the compound, plant, materials and excavation processes associated with the transition joint bays.	
<b>Landscape Designation: North Aberdeenshire Coast Special Landscape Area (SLA)</b>	The north Aberdeenshire coast, from Logie Head to Fraserburgh, is one of ten Special Landscape Areas in Aberdeenshire. This landscape is locally designated due to its high scenic value created by the juxtaposition of rugged coastal cliffs and headlands with traditional fishing villages nestling at the base of cliffs.	The sensitivity of the North Aberdeenshire Coast is <b>medium to high</b> .  The susceptibility of the SLA to the landfall construction is medium. The landscape is noted in the Supplementary Guidance Statement of Importance as having qualities of wildness, although in the vicinity of Redhythe Point this is moderated by its relative accessibility and the influence of settlement and agriculture. The beaches are described as pristine and Sandend is noted for its recreational amenity which enables good access to the outdoors. The development of renewable energy, including grid	The magnitude of change would be <b>medium to high</b> within the localised areas of the landfall.  The geographical extent of the landfall construction is relatively small when considered as a proportion of the wider extent of the North Aberdeenshire Coast SLA.  The scale of the construction work at the site level would locally impact upon the character of the landscape through its alteration and the addition of unfamiliar features including a compound, plant, machinery, materials and excavation processes. The landfall construction would also locally alter the character of this landscape	<b>Significant</b> , short term, reversible within the localised areas of the landfall.  <b>Not significant</b> for the remainder of the North Aberdeenshire Coast SLA.

Table 7.5.3: Potential Effects during Construction – Onshore Landfall Area

Receptor / Location	Baseline Condition	Sensitivity	Magnitude of Change	Significance of Effect
		<p>connection and associated infrastructure, is listed as a potential force for change in the SLA citation as it could affect views to and from the SLA. However, the short-term nature of the change proposed reduces the susceptibility, as the landfall construction area would be completely reinstated, and the operational components buried underground.</p> <p>The value of the SLA is medium to high. The SLA citation notes the local importance of expansive views across the North Sea from coastal roads and its designation aims to protect the recreational value of the area.</p>	<p>through its visibility from areas in the local vicinity. The landfall construction may affect coastal views out to sea and reduce the general openness from close range locations.</p>	
<p><b>Visual Receptor: Visitors to Findlater Castle</b></p>	<p>Findlater Castle is a Scheduled Monument dating to the 1200's which sits on a low lying, protruding section of the cliff edge between West Sands and Crathie Point. The castle ruins are still visible, integrated into the cliff edge and a formal viewpoint is reached by a signposted path and indicated on OS maps of the area. There is the possibility that the landfall may be visible.</p>	<p>The sensitivity of visitors to the Findlater Castle viewpoint is <b>medium</b>.</p> <p>The susceptibility of visitors to the landfall construction is low. The focus of the view from the viewpoint is Findlater Castle to the north and the North Sea extending beyond. Although construction works may be visible at the landfall, this would occur at a minimum distance of approximately 2 km from the viewpoint.</p>	<p>The magnitude of change would be <b>low</b>.</p> <p>The boundary of the Onshore Landfall Area is located a minimum of approximately 2 km at its closest point to Findlater Castle viewpoint. From the viewpoint, a limited section of the more distant cliffs to the east of Sandend is visible above the landform and close-range gorse, and while there is the possibility that construction works associated with a landfall site in this area</p>	<p><b>Not significant</b> short term and reversible.</p>

Table 7.5.3: Potential Effects during Construction – Onshore Landfall Area

Receptor / Location	Baseline Condition	Sensitivity	Magnitude of Change	Significance of Effect
		The value of the view is medium to high. It is a formal viewpoint marked on OS mapping and a place people visit to enjoy the views. It includes a historic, designated monument of interest to visitors as well as a wider valued landscape which is designated as part of the North Aberdeenshire Coast SLA.	would be visible, the separation distance of approximately 2 km means that it would appear as a relatively small-scale feature with limited influence on the character of the views. Furthermore, it would not be located in the sector of the view towards the castle which forms the main attraction.	
<b>Visual Receptor: Walkers along the coastal Core Paths</b>	Core paths occur from Sandend, west along the coast to Biekie's Goat, 1 km to the east of Cullen and from Glassaugh Distillery east along the coast to Portsoy. The core paths do not connect across Sandend, although most walkers cross the beach and informal paths occur across the open space and farmland to the south of the beach. Walkers on these paths experience attractive views of the coastal landscape, within which settlement and cultivated landscapes are an integral part.	<p>The sensitivity of walkers along the coastal core paths is <b>medium to high</b>.</p> <p>The susceptibility of walkers to the effects of landfall construction is medium to high. A key focus of their attention would be on views of the coastline which is relatively undeveloped. The views along the path are generally open, encompassing a wide area and providing a variety of elements, which draw the attention and provide alternative points of focus along the route.</p> <p>The value of the views from the core paths is medium to high. The core paths pass through the Aberdeenshire Coast SLA which denotes its local landscape value.</p>	<p>The magnitude of change would be <b>medium to high</b> within the localised areas of the landfall site.</p> <p>The geographical extent over which the construction work will have an influence on walkers is relatively small when considered as a proportion of the wider extent of the core paths.</p> <p>In those sections of the paths adjacent or within close range to the Onshore Landfall Area, the visual amenity of walkers would be affected by the change in character. The presence and activity of construction works would affect the views of walkers as a result of the presence and activity of the compounds, plant, machinery, stock piles and excavation processes. This effect would be moderated by the location of the landfall to the south</p>	<p><b>Significant</b>, short term and reversible within the localised areas of the landfall site.</p> <p><b>Not significant</b> for walkers along the remainder of these core paths.</p>



Table 7.5.3: Potential Effects during Construction – Onshore Landfall Area

Receptor / Location	Baseline Condition	Sensitivity	Magnitude of Change	Significance of Effect
			of the core paths, such that it would mostly be seen in the context of the landward views rather than the more attractive coastal views to the north. The landfall would have more of an impact where it features in views along the coast, although the scale of the construction works combined with the greater separation distance in such views, would moderate these effects.	
<b>Visual receptor: Residents of Sandend Settlement</b>	Sandend is a small fishing village with a historic harbour area of traditional cottages which has been designated as a Conservation Area (CA). These cottages have been arranged in an enclosed pattern to reduce the effects of coastal winds. In contrast, more recent developments form a linear pattern along Seaview Road, with much of the development located on the western side with an outlook over Sandend to the coastal cliffs to the east. At the southern end of the settlement, the modern development on The Bents wraps around such that the properties are orientated north or south.	<p>The susceptibility of residents on Seaview, The Bents and the caravan park is generally <b>medium to low</b>, while for residents adjacent to the harbour, it is <b>low</b>.</p> <p>The majority of properties in the CA are part of an enclosed layout from which visibility of the landfall would be limited. The houses are tightly packed in a linear formation and this, along with the intervening landform, restricts views outwards to the surrounding landscape.</p> <p>The susceptibility of residents on Seaview, The Bents and the caravan park is variable depending on the individual outlook from each property but generally is medium to low owing to the predominant orientation south-east, although</p>	<p>The magnitude of change for residents at Sandend, would be <b>low</b>. The magnitude of change for residents adjacent to the harbour would be <b>negligible</b> or <b>no effect</b>.</p> <p>The orientation and the generally open outlook of some of the properties along Seaview would mean the construction works would potentially be visible in residents' views, if it were located at the western end of the Onshore Landfall Area. The impact would arise in relation to the presence and activity of the construction compound and potential visibility of vessels offshore. The scale of change would be moderated due to the separation distance from the settlement, which would mean the</p>	<b>Not significant</b> , short term and reversible.

Table 7.5.3: Potential Effects during Construction – Onshore Landfall Area

Receptor / Location	Baseline Condition	Sensitivity	Magnitude of Change	Significance of Effect
		<p>some of the properties on Seaview look towards the coastal cliffs to east, in which construction works associated with the Onshore Landfall Area may be visible.</p> <p>The value of the views from the settlement is medium-high. The settlement lies within the North Aberdeenshire Coast SLA and the historic harbor area is designated as a CA.</p>	<p>construction works would appear as a small-scale feature and occupy a small proportion of the wider view, if visible at all. In respect of residents at The Bents and the caravan park, the Onshore Landfall Area would be unlikely to align within the direction of residents' views and the magnitude of change would be low.</p>	
<b>Visual Receptor: Road Users on the Coast Road – A98</b>	<p>The coastal route of the A98 runs 0.5 km south of Sandend parallel to the coast between Portsoy and Cullen. It is an important coastal route passing through Moray and Aberdeenshire linking traditional coastal towns including: Buckie, Findochty, Portsoy and Cullen. It is the primary route for access to Sandend and it also forms the southern boundary of the North Aberdeenshire Coast SLA.</p>	<p>The sensitivity of road-users on the coastal road is <b>medium</b>.</p> <p>The susceptibility of road-users on the A98 coastal road to the landfall construction is medium. Although views open out to the north of Sandend they are transient and relatively short in duration. Views across the coastal area in the vicinity of Redhythe Point would be short in duration and this moderates the susceptibility of road-users to the effects of the Onshore Landfall Area in this location.</p> <p>The value of the views from the road is medium. At Sandend the view opens up briefly to provide an outlook to the north over the coastline, encompassing the historical Glassaugh windmill and</p>	<p>The magnitude of change would be <b>medium to low</b> depending on the location of the landfall site within the Onshore Landfall Area.</p> <p>Road users would be travelling past the views across the coast between Redhaven Cove and Redhythe Point for approximately 300 m, generally at relatively high speed and as part of a longer journey. The Onshore Landfall Area construction works would be located inland from the coastal edge, within the agricultural fields and potentially visible from the road. The magnitude of change would be medium. This relates to the relative proximity of this area to the road and the potential of the construction works to feature in views towards the coast, appearing</p>	<p><b>Not significant</b>, short term and reversible.</p>

Table 7.5.3: Potential Effects during Construction – Onshore Landfall Area

Receptor / Location	Baseline Condition	Sensitivity	Magnitude of Change	Significance of Effect
		forming an attractive view along this route. The landscape to the north of the A98 is located within the North Aberdeenshire Coast SLA and therefore has local value relating to scenic quality.	as an addition of elements that are uncharacteristic.	
<b>Visual Receptor: Residents of individual properties northwards of the A98</b>	Individual properties and farmhouses occur intermittently along the edges of the agricultural fields between the A98 and the cliff edge. They are linked to each other and the A98 by a network of minor roads and tracks. These include the properties of Redhythe, Redhythe Croft and North Arnbath Croft, to the east. These properties are all located within the vicinity of the potential landfall.	<p>The sensitivity of residents in properties north of the A98 is <b>medium to high</b>.</p> <p>The susceptibility of residents to the landfall construction is medium. Although views could potentially be frequent and long in duration, the orientation of properties is typically not directly towards the Onshore Landfall Area. They are mostly designed to be sheltered from the coastal winds, with an inward facing aspect onto private gardens or farmsteads.</p> <p>The value of the views from these properties is medium to high. The properties are located in a rural location where the expectation would be to see surrounding farmland, but not construction works. While some properties may have views towards the sea, they are all set back from the coastal edge.</p> <p>The outlook from the properties is largely contained within the North</p>	<p>The magnitude of change would be medium to low.</p> <p>The scale of the construction work within the broader coastal aspect is relatively small. However, the scale of change from works traffic using the road network and access tracks from the A98 to properties would add to the overall effect.</p> <p>Properties are located within proximity to the proposed Onshore Landfall Area and associated construction works. This includes the use of existing roads and the creation of new access tracks both temporary and permanent for maintenance purposes.</p>	<b>Not significant</b> , short term and reversible.

Table 7.5.3: Potential Effects during Construction – Onshore Landfall Area

Receptor / Location	Baseline Condition	Sensitivity	Magnitude of Change	Significance of Effect
		Aberdeenshire Coast SLA and are therefore considered to have some local, scenic value.		
<b>Visual Amenity: Users of Sandend Beach</b>	Sandend Beach is a gently sloping, sheltered bay stretching eastwards from Sandend village. Views across the bay are open over a broad stretch of sand and out towards an open expanse of sea. The remains of anti-tank position and pillbox defenses form a line along MHWS between the sand and long grasses which populate sand dunes further inland. The bay is a recreational beach destination for locals and visitors and is known for its surfing, although there are limited facilities.	<p>The sensitivity of people using Sandend Beach is <b>medium</b>.</p> <p>The susceptibility of users of the beach and bay is medium as they are generally transient and would be unlikely to experience views over a long duration. The construction works associated with the Onshore Landfall Area would be located on the coastline to the east of Sandend. The separation distance would moderate the susceptibility of beach users to the potential effects by ensuring the effects would be indirect and reducing the perceived scale of the works in views from the beach and the bay.</p> <p>The value of the views is medium-high. The landscape within the views is recognised locally through the North Aberdeenshire Coast SLA designation. It is especially popular in the summer and is one of the few sheltered sandy bays along this otherwise rocky cliff lined stretch of shoreline.</p>	<p>The magnitude of the change would be <b>medium to low</b> across the area of the beach, coastal area and sand dunes.</p> <p>There would be no direct effects on the beach as the Onshore Landfall Area would be located to the east of Sandend. There would be the potential for indirect effects to arise in respect of visibility of the Onshore Landfall Area occurring from the beach. The construction work associated with HDD or trenching would appear as a relatively small scale feature from the beach and be seen within the sector of the views towards the cliffs, rather than the more sensitive sector of the sandy bay and views out to sea.</p>	<b>Not significant</b> , short term and reversible across the area of the beach, coastal area and sand dunes.

Table 7.5.3: Potential Effects during Construction – Onshore Landfall Area

Receptor / Location	Baseline Condition	Sensitivity	Magnitude of Change	Significance of Effect
<b>Visual Amenity: Users of Sandend Harbour and Breakwater</b>	Sandend Harbour is a mid-19th century, small harbour enclosed by two curved rubble walls with a concrete facing. It is situated north of the historical centre of Sandend on the western edge of the bay and faces northeast to the sea.	<p>The sensitivity of the views of visitors to the harbour area is <b>medium</b>.</p> <p>The susceptibility to change is medium to low. People using the harbour are likely to be transient and therefore their views would be of limited duration. The harbour is oriented north-east, facing out to sea rather than towards the landward areas, east of Sandend, where the Onshore Landfall Area would be located.</p> <p>The value of views from the harbour is medium to high. It is located within the North Aberdeenshire Coast SLA and is included in the Sandend Conservation Area. Therefore, people’s expectation of views from this location will be that they are of scenic quality.</p>	<p>The magnitude of change would be <b>low</b>.</p> <p>While the northerly orientation of the harbour and its enclosure by built form to the south and south-east, would reduce the extent to which the construction works associated with the Onshore Landfall Area would be visible, these works, located on the coastline east of Sandend, would potentially be visible but perceived to be small scale owing to the separation distance from Sandend and their inclusion as part of a broader vista.</p>	<b>Not significant, short term and reversible.</b>

7.5.5 Assessment of Potential Construction Effects – Onshore Cable Route

Table 7.5.4: Potential Effects during Construction – Onshore Cable Route				
Receptor	Baseline Condition	Sensitivity	Magnitude of Change	Significance of Effect
<p><b>Landscape Element: Agricultural Land</b></p>	<p>The agricultural land along the onshore cable corridor is classified using typologies of three different LCTs:</p> <p>At the coast a narrow strip of land forms an open coastal field with little enclosure. South of the A98 Coastal Farmland consists of a simple pattern of large geometric fields of highly fertile, gently undulating or flat land. These are intensively farmed primarily for arable crops with some pasture land. This then transitions into Rolling Coastal Farmland moving west from Moray into Aberdeenshire. Fields become smaller and more varied in size and the landform becomes rolling. Fields are subdivided by a close network of roads and shelter belts. Just south of Black Hill and Lurg Hill the landscape further transitions into Upland Farmland. This has a character of extensive, gently undulating farmland encompassing broad</p>	<p>The sensitivity of the agricultural land is <b>medium to low</b>.</p> <p>Its susceptibility to the Moray West OnTI is limited as the land is already modified by the cultivation of single species rotational crops, there is no natural vegetation, the land is intensively farmed and presents a highly managed landscape. The agricultural land is relatively easy to reinstate and would be fully reinstated post construction.</p> <p>Its value is medium to low because agricultural land occurs extensively across this landscape. A small section of the agricultural land contained in the north is a component part of the North Aberdeenshire Coast SLA.</p>	<p>The magnitude of change would be <b>medium to low</b>.</p> <p>An area of agricultural land would be altered, over the short term to accommodate the cable trench. Whilst the cable route would cover a 28 km distance, the working width would be confined to approximately 30 m. Whilst it would pass through a mix of land uses, the majority of the land would be agricultural. This overall area constitutes only a small proportion of the wider agricultural land in this region. The agricultural land being disturbed has no special qualities or characteristics and has been modified from its intrinsic state by intensive arable farming and or grazing. The agricultural land would be reinstated post construction.</p>	<p><b>Not significant</b>, short term and reversible.</p>

Table 7.5.4: Potential Effects during Construction – Onshore Cable Route

Receptor	Baseline Condition	Sensitivity	Magnitude of Change	Significance of Effect
	shallow valleys to the north of the River Isla. Here, the fields become larger in size once more and are predominantly pasture land enclosed by post and wire fences.			
<b>Landscape Element: Hedgerows</b>	Within the vicinity of the 23 km onshore cable corridor, fields are typically divided using post and wire fences. There are few hedgerows along the route as these have often been removed as part of farming practice. The few hedgerows that do occur are of mixed condition and are often sparse.	The sensitivity of the hedgerows is <b>medium to high</b> . The susceptibility of hedgerows to change is medium. Removal of sections of hedgerow would be replanted post construction and would take 3 to 5 years to re-establish. This may leave a gap in the better condition hedgerows but would not be noticeable in the more typically incomplete hedgerows. The value of hedgerows is medium to high. Where they exist they comprise an important, remnant component of the character of the agricultural landscape.	The magnitude of change would be <b>low</b> . The limited extent of hedgerows means they do not represent a significant resource in this landscape. Where they do exist and where they would be crossed by the onshore cable route, the length of the sections to be removed would be 30 m. Any hedgerows removed would be replanted post construction and would take approximately 5 years to infill gaps.	<b>Not significant</b> , short term and reversible.
<b>Landscape Element: Trees / Tree Belts</b>	Within the Rolling Coastal Farmlands character area, the landscape contains strips of riparian woodland, which follow tributaries of the Burn of Deskford and extend across the	The sensitivity of the trees/tree belts is <b>medium to high</b> . The susceptibility of trees/tree belts to change is medium to high. If removed, it would take time to re-establish and	The magnitude of change would be <b>low</b> . The detailed design of the cable route would endeavour to avoid alteration of the trees and tree belts to ensure that the scale of change to a low level. The	<b>Not Significant</b> , long term and reversible.

Table 7.5.4: Potential Effects during Construction – Onshore Cable Route

Receptor	Baseline Condition	Sensitivity	Magnitude of Change	Significance of Effect
(see below for assessment of ancient woodland)	onshore cable corridor. Some of these strips consist of ancient woodland – see below for detailed assessment of these areas.  As the landscape consists of open arable farmland individual trees are infrequent.	would leave a visible gap in the landscape.  The value of trees is medium to high given their relative scarcity within a landscape of primarily agricultural fields and the contribution they make to the rural character.	extent of trees and tree belts over the entire 23km stretch of cable route is limited and if these were to be removed they could be replanted, although not in the immediate vicinity of the cables.  Individual mature trees would be avoided, where possible, by directing the 30 m working corridor around important specimens.	
<b>Landscape Element: Coniferous Woodland</b>	Coniferous woodland is a strong character feature of the Broad Forested Hills within the Upland Farmland LCT.  Coniferous plantation forestry tends to be arranged in solid, angular blocks and strips. It may be of mixed age and large areas are arranged in coups as a managed crop in rotation. It may also be sited to provide shelter to the adjacent agricultural fields.	The sensitivity of coniferous woodland to change is <b>medium to low</b> .  The susceptibility to change is low as plantation woodland is a managed crop, which is subject to regular cycles of felling and re-planting leaving temporarily open areas whilst plantations re-establish.  The value of the plantation coniferous woodland is medium to low, this is a common element within the landscape, its form is often regular and unnatural in appearance and in this area is not located in areas protected by landscape designations. However, it does contribute to the pattern and character of the Upland Farmland LCT.	The magnitude of change would be <b>medium to low</b> .  The majority of coniferous woodland in the onshore cable corridor would remain unaffected by the construction works. There is the potential that two small areas of coniferous woodland would be affected at Cotton Hill and Lurg Hill. In both locations it may be possible to avoid tree felling by locating the cable route to coincide with existing tracks and roads. In a worst-case scenario, it is assumed that a 30 m working width would be removed from these plantations forming a notable break, albeit concealed by the wider woodland cover. The overall effect would be	<b>Not significant</b> , long term and reversible.



Table 7.5.4: Potential Effects during Construction – Onshore Cable Route

Receptor	Baseline Condition	Sensitivity	Magnitude of Change	Significance of Effect
			limited by the small proportion of woodland potentially affected and the relatively small scale of the construction works.	
<b>Landscape Element: Ancient Woodland</b>	Some small patches of Ancient woodland occur in the Study Area of the onshore cable corridor. These include a patch on the north-east base of Cotton Hill, a small strip which extends into the onshore cable corridor from Kirktown of Deskford, and a small patch south of Nethertown. South of Keith and north of the proposed substation location, Cairds Wood, which is classified as Ancient Woodland also lies within the onshore cable corridor, although recent felling has occurred in this area.	The sensitivity of the Ancient Woodland to the Moray West OnTI is <b>high</b> .  Ancient woodland, which has existed as wooded areas continuously since 1750, is rare within this landscape which is typically non-natural and intensively farmed. Existing areas of Ancient Woodland are therefore highly susceptible to removal or disturbance as they are also difficult to replace. Comparisons between data sources for the location of Ancient Woodland and aerial mapping showing woodland on the ground, show that some areas have been removed.	The magnitude of change as a result of the Moray West OnTI would be <b>negligible or no effect</b> .  The 500 m width of the onshore cable corridor in relation to the 30 m working width required to construct the onshore cable route means that there is scope to ensure those areas of Ancient Woodland which still exist are avoided. This will be the approach taken in the detailed routing of the onshore cable route or alternatively the use of HDD drilling if practicable.	<b>Not Significant</b> (assumes not routed through Ancient Woodland or alternatively HDD drilling deployed if practicable).
<b>Landscape Element: Disused Railway</b>	A disused rail line runs through the onshore cable corridor. This is the historical Moray Firth coast line which closed in the late 1960's. The section at Sandend has no formal access along it and is a banked recess	The sensitivity of the disused rail line to change is <b>medium to low</b> .  The susceptibility to change is low, as the existing vegetation is of no special significance and can be readily reinstated post construction.	The magnitude of change would be <b>negligible</b> or there would be <b>no effect</b> .  It is likely that HDD drilling would be used to pass the ducts and cable under the disused railway. This would involve compounds at either end, most likely associated with HDD drilling	<b>Not significant</b> , short term and reversible.

Table 7.5.4: Potential Effects during Construction – Onshore Cable Route

Receptor	Baseline Condition	Sensitivity	Magnitude of Change	Significance of Effect
	filled with rough grassland and gorse scrub.	The value of the landscape element is medium as it constitutes an element of character within the landscape which reveals the industrial heritage of the area. It also denotes an unusual topographical feature within an otherwise flat open coastal plain of arable fields.  It is a component of the landscape that is contained within the North Aberdeenshire Coast SLA and therefore is locally valued.	compounds for the A98. The disused railway would not be directly affected by the use of HDD drilling.	
<b>Landscape Element: River Isla</b>	The River Isla, a tributary of the River Deveron, flows in a west to east direction. It coincides with the onshore cable corridor just north of Meikle Ardone, parallel to and north of the Aberdeen to Inverness rail line and parallel to and just south of the A95. The Inverness to Aberdeen rail line runs through the valley of the Isla for much of its course and the two are closely related. The river itself is characterised by a narrow and shallow meandering channel running through a flat valley of predominantly pastoral	The sensitivity of the River Isla to the Moray West OnTI is <b>medium</b> .  The susceptibility of the river to change is medium to low. Previous work has taken place adjacent to the river for construction of the rail line and A95. The river and its associated planting contributes to the overall character of the local landscape.  The value of the river is medium to high, it plays a major contribution to the character of the local area and forms a picturesque valley through which the A95 and Aberdeen to Inverness rail line are routed. There are no landscape designations or	The magnitude of change during construction work is <b>medium</b> .  Crossing the river involves the technique of HDD to install controlled bores below the ground surface.  The construction work would involve specialist plant and materials, a drilling rig as well as the construction of new access points either side of the river to allow Heavy Goods Vehicle (HGV) access. A silt sediment pond would be required as well as launch and receiving pads.  The extent of construction work would be limited to areas offset either side of the river and would therefore be very	<b>Not significant</b> , short term and reversible.  Due to the limited extent of the riverside that would be affected.

Table 7.5.4: Potential Effects during Construction – Onshore Cable Route

Receptor	Baseline Condition	Sensitivity	Magnitude of Change	Significance of Effect
	agricultural fields. The river Deveron, which it flows into, is an important watercourse for salmon.	special landscape features within this section of the river.	localised. While the magnitude of change could be further reduced by combining crossing of the River Isla with crossing of the rail line and the A95, at a location where they are in proximity with each other, three individual HDDs are considered in this assessment to represent the worst-case scenario.	
<b>Visual receptor: Road-users on major roads - A98, A95 and A96</b>	There are several main roads which coincide with the onshore cable corridor. The coastal route of the A98 crosses 0.5 km south of Sandend, the A95 crosses near Davoch of Grange and the A96, which acts as a major access road to Keith, crosses the onshore cable corridor at Newtack approximately 4 km south of Keith.	<p>The sensitivity of road users of the A98 at Sandend, the A95 and A96 is <b>medium</b>.</p> <p>The susceptibility of road users to HDD construction work and access works on the A98 is medium. Although road users are generally passing through at speed their attention is drawn to the panoramic views which open at this point. There are, however, no formal opportunities to stop on this section of the route in order to gain longer duration views, other than at the bus stop opposite the Sandend junction.</p> <p>The susceptibility of road users to HDD construction work on the A95 is medium, the attention of road users is likely to be drawn to construction</p>	<p>The magnitude of change during construction work is <b>medium</b>.</p> <p>Crossing the A98, A95 and A96 would involve the technique of HDD to install controlled bores below the ground surface.</p> <p>Existing views would be interrupted by the scale of the construction work, which would involve specialist plant and materials, a drilling rig as well as the construction of new access points either side of the road to allow HGV access. A silt pond would be required as well as launch and receiving ponds.</p> <p>In addition, access points and associated compounds are proposed at the A98 Glassaugh / Linkbraeheads area.</p>	<b>Not significant</b> , short term and reversible.

**Table 7.5.4: Potential Effects during Construction – Onshore Cable Route**

Receptor	Baseline Condition	Sensitivity	Magnitude of Change	Significance of Effect
		<p>work in an otherwise open agricultural landscape with a quiet, rural character. The susceptibility of road users to HDD construction work on the A96 is medium, the attention of road users is likely to be drawn to construction work in an otherwise open agricultural landscape.</p> <p>The value of the view from the A98 is medium. Views from this point of the road are open and expansive with an uninterrupted panorama overlooking the coast with a historical windmill and Sandend to the north and rolling hills to the south. This is a rare point along the road where it passes close to the coast and allows such expansive views of the sea. The landscape contained in the views to the north of the A98 is located within the North Aberdeenshire Coast SLA and therefore is considered to be locally scenic, however it is only appreciated for a short duration.</p> <p>The value of views from the A95 in this section is medium. There are no formal viewpoints or landscape designations that would otherwise heighten the value of this view. Views</p>	<p>However, the extent of construction work would be limited to the areas immediately adjacent to the road and would therefore be localised.</p>	

Table 7.5.4: Potential Effects during Construction – Onshore Cable Route

Receptor	Baseline Condition	Sensitivity	Magnitude of Change	Significance of Effect
		<p>along this section of the road afford an open aspect south over the valley and out towards the surrounding hills.</p> <p>The value of views from the A96 is medium, there are no formal viewpoints or landscape designations here and it is experienced briefly by road users passing through. There are no special features, however views from the road offer an open aspect over the valley and out towards surrounding hills to the south.</p>		
<b>Visual Receptor: road users on minor road networks</b>	<p>Numerous minor roads traverse the cable route, interconnecting with each other and connecting with more major roads to provide a network of access to rural farms and settlements. The B9018, which acts as a key north to south connecting road between Keith and the coast at Cullen, runs roughly parallel to the proposed cable route for 8 km through upland farmland and upland farmland valleys.</p> <p>In addition, access points are proposed at four points along the B9018 at Windy Hill,</p>	<p>The sensitivity of minor road users crossing the cable route is <b>medium to low</b>. The sensitivity of road users on the B9018 running parallel to the cable route is <b>medium</b>.</p> <p>The susceptibility to change of road users on roads which cross the cable route is low. The views of road-users are transitory, and their attention is focussed on the wider visual amenity of an agricultural landscape with a generally rural character.</p> <p>The susceptibility of road users on the section of B9018 is medium. The alignment of the onshore cable corridor, parallel to the B9018</p>	<p>The magnitude of change would be <b>medium to low</b>.</p> <p>Single track roads, which cross the cable route would have temporary diversions/roads implemented and single carriageway roads would be operated using single lane closures. The trenching works would occur over a very small geographical extent of the road (approximately 30 m) and the trench would be orientated perpendicular to the road wherever possible to minimise disruption.</p> <p>The magnitude of change in the view from the B9018 would be medium – road users would experience</p>	<b>Not significant</b> , short term and reversible.

Table 7.5.4: Potential Effects during Construction – Onshore Cable Route

Receptor	Baseline Condition	Sensitivity	Magnitude of Change	Significance of Effect
	Goukstone/Burnend, Grange Crossroads and Mains of Paithnick (see Table 7.5.2). This would involve construction compounds and associated works.	<p>increases the duration of time over which road-users would be influenced by the presence of the construction works. Their views are primarily of an agricultural landscape, where the land has been modified through farming practices. The presence of a minimum 30 m working corridor through this area will form a notable feature albeit not completely at variance with the baseline character.</p> <p>The value of the views of road users on the B9018 is medium. This section of road does not pass through any planning designations which would otherwise denote a special scenic value, however, local value relates to the open aspect of views over rolling fields towards surrounding hills.</p>	<p>construction work over a larger geographical extent whilst travelling parallel to the cable route. However, to minimise construction disturbance, cable circuits would be installed in a linear fashion with reinstatement occurring in stages along the route.</p> <p>Road users on the B9018 would have open views to the east onto trench excavation work for a period of 8 km, which would detract the attention from the existing visual amenity of an agricultural landscape with wider views to distant hills.</p>	
<b>Visual Receptors: Passengers on the Aberdeen to Inverness Rail Line.</b>	The onshore cable corridor crosses the Aberdeen to Inverness rail line near Little Ardrone/Meikle Ardrone. The line here follows an east to west orientation and runs roughly parallel to both the A96 and the River Isla which are both located to the north. It operates regular passenger services with some	<p>The sensitivity of rail passengers is <b>medium to low</b>.</p> <p>The susceptibility of passengers is low, they are moving at speed through the landscape and views are restricted by the train carriage as well as by woodland planting along the edges of the rail line. The line itself is recessed into the landscape which further</p>	<p>The magnitude of change during construction work is <b>medium</b>.</p> <p>Crossing the rail line involves the technique of HDD to install controlled bores below the ground surface.</p> <p>Existing views would be interrupted by the scale of the construction work, which would involve specialist plant and materials, a drilling rig as well as</p>	<b>Not Significant</b> , short term and reversible.

Table 7.5.4: Potential Effects during Construction – Onshore Cable Route

Receptor	Baseline Condition	Sensitivity	Magnitude of Change	Significance of Effect
	limited light freight traffic. This visual receptor is representative of the views of passengers travelling by train to and from Aberdeen and Inverness.	restricts views outwards to the surroundings. The value of the views is medium. The rail line travels through open countryside which has no designations or special elements at this location. There are expansive, albeit intermittent views over the surrounding countryside and the rail line passes close to the picturesque River Isla.	the construction of new access points either side of the rail line to allow HGV access. A silt sediment pond would be required as well as launch and receiving pads. However, the geographical extent of construction work would be limited within the areas immediately adjacent to the rail line and would therefore be very localised. While the magnitude of change could be further reduced by combining crossing of the Inverness Rail Line with crossing of the River Isla and the A95, at a location where they are in proximity with each other, three individual HDDs are considered in this assessment to represent the worst-case scenario (see also Landscape Element: River Isla).	
<b>Visual Receptor: Residents of Farms and Rural Properties</b>	Farms or rural properties within or adjacent to the onshore cable corridor consist primarily of scattered farms or small groups of houses located on the western edge of the onshore cable corridor along the Burn of Deskford. This is	The sensitivity of residents to the Moray West OnTI is <b>medium</b> . Individual properties close to the onshore cable route or construction compounds and with outlooks towards the construction works would have a medium to high susceptibility to change due to their static nature and the potential for views of long	The magnitude of change would be <b>medium or low</b> . The working width of trench construction would be a minimum 30 m and this would moderate the perceived scale of the construction works, which would comprise mechanical excavators, materials, fencing and earth bunds up to 2 m in	<b>Not significant</b> , short term and reversible.

Table 7.5.4: Potential Effects during Construction – Onshore Cable Route

Receptor	Baseline Condition	Sensitivity	Magnitude of Change	Significance of Effect
	<p>representative of residents at home.</p> <p>In addition, residents at home would be affected by construction work for potential access points and potential construction compounds along the A98, B9018 at Windy Hill, Goukstone/Burnend, Grange Crossroads and Mains of Paithnick, as well as on the A95 at Clerkseat/Hollydyke (see Table 7.5.2).</p>	<p>duration from the properties at close proximity.</p> <p>Properties with no direct outlook onto the onshore cable route or construction compounds, or which are located some distance or with intervening landform or vegetation would have a low susceptibility.</p> <p>The value of views from properties along the onshore cable corridor are typically medium. The onshore cable corridor Study Area is not covered by any landscape designations which would otherwise denote a special value. Views from properties are typically out to open agricultural fields.</p>	<p>height. There would, however, be the possibility that views from properties feature a considerable length of the route and in these situations the magnitude of change would rise to medium.</p>	
<p><b>Visual Amenity: Residents of Fordyce</b></p>	<p>Fordyce is an historical village dating back to the 1200's and is located to the eastern edge of the onshore cable corridor approximately 2.5 km south of Sandend. It is classified as an 'outstanding' Conservation Area and is characterised by narrow winding streets following a medieval plan. It includes many listed buildings such as Fordyce castle as well as the scheduled</p>	<p>The sensitivity of the views of residents within Fordyce to the Moray West OnTI is <b>low</b>, the sensitivity of properties on the eastern and western edge of Fordyce to the Moray West OnTI is <b>medium</b>.</p> <p>The susceptibility of properties within Fordyce to the onshore cable route is negligible – the town is recessed within a valley and views are contained by surrounding built form and riparian woodland.</p>	<p>The magnitude of change as a result of the Moray West OnTI would be <b>medium to low</b>.</p> <p>The working width of trench construction would be a minimum of 30 m and this would moderate the perceived scale of the construction works, which would comprise mechanical excavators, materials, fencing and earth bunds up to 2 m in height. There would, however, be the possibility that views from properties</p>	<p><b>Not Significant</b>, short term and reversible.</p> <p>The relatively small scale of the construction works combined with the short-term duration would lead to a not significant effect.</p>



Table 7.5.4: Potential Effects during Construction – Onshore Cable Route

Receptor	Baseline Condition	Sensitivity	Magnitude of Change	Significance of Effect
	monument of the old church and burial grounds. The town itself is recessed within the valley of the Burn of Fordyce and is enclosed to the west by an associated line of riparian woodland. Eight 20th century residential properties on the western edge of Fordyce at Pitchaidie Place overlook the onshore cable corridor.	<p>Properties on the eastern and western edges of Fordyce may be located close to the onshore cable route depending on the final route selected. Residents, therefore, have a medium to high susceptibility as views from these static receptors could potentially be long in duration.</p> <p>The value of the views from the settlement is medium. It is an 'outstanding' Conservation Area, however there are no landscape planning designations covering the wider landscape contained within the views that would heighten the value of the views.</p>	feature a notable length of the onshore cable route construction and in these situations the magnitude of change would rise to medium.	
<b>Visual Amenity: Residents of Berryhillock</b>	Berryhillock is a small hamlet located approximately 1 km south of Kirktown of Deskford. It is set within the valley of the Burn of Deskford and mainly comprises a row of cottages set along the minor road, offset east and parallel to the B9018. The fronts are mostly orientated west over the adjacent farm field and the backs orientated east towards the river, although mature riparian tree cover	<p>The sensitivity of the views of residents within Berryhillock to the Moray West OnTI is <b>low</b>.</p> <p>The susceptibility of the views of residents to the onshore cable route is low. The onshore cable route would be located to the east of the hamlet, although the exact location is still to be determined. The hamlet is enclosed within the valley landform and views are contained by the riparian woodland and this reduces</p>	<p>The magnitude of change as a result of the Moray West OnTI would be <b>low</b>.</p> <p>The single storey structure of many of the properties, combined with their principal orientation to the west and the enclosure by tree cover to the east, limits the potential visibility of the onshore cable route to the east. The scale of the construction works would be relatively small scale and would be seen in the context of a predominantly agricultural landscape</p>	<p><b>Not Significant</b>, short term and reversible.</p> <p>The enclosure of the hamlet by tree cover and landform combined with the relatively small scale of the construction works would lead to a not significant effect.</p>

Table 7.5.4: Potential Effects during Construction – Onshore Cable Route				
Receptor	Baseline Condition	Sensitivity	Magnitude of Change	Significance of Effect
	largely screens views in this direction. The Old Mill is located to the east of the cottages, adjacent to the burn. Berryhillock is a Conservation Area.	susceptibility despite the potential proximity. The value of the views from the settlement is medium. Berryhillock is designated as a Conservation Area. There are, however, no landscape planning designations covering the wider landscape contained within the views, which would otherwise heighten the value of these views.	where farm machinery is commonly used. These factors all moderate the potential magnitude of change.	
<b>Visual Amenity: Walkers on Footpaths</b>	Path networks tend to be located on the hills which surround the cable route on either side. Some minor and informal paths exist running across the onshore cable corridor acting as connections between roads and properties. The footpaths are representative of recreational walkers.	The sensitivity of walkers on footpaths to the Moray West OnTI is <b>medium to low</b> . The susceptibility of walkers on footpaths to the Moray West OnTI is medium. Core paths are generally located at a distance away from the onshore cable corridor, albeit with more informal paths crossing the corridor. Given the elevated location of most of the formal footpaths, views over a wider extent of the cable construction route may be experienced. However, these views are frequently obscured by woodland and only visible in glimpses where the forest has been recently felled. Where the peaks of hills are clear of	The magnitude of change as a result of the Moray West OnTI would be <b>low</b> . The extent of trench construction along the cable route would be limited. Where visible from footpaths it would form a small proportion of a much wider view of the surrounding landscape and be seen in a context where farming and forestry practices use similar scale machinery. The scale of the construction work is relatively small, containing construction works to a working width of a minimum 30 m and producing earth bunds up to 2 m in height. Mechanical excavators would be used but no large-scale plant or machinery would be needed.	<b>Not Significant</b> , short term and reversible.

Table 7.5.4: Potential Effects during Construction – Onshore Cable Route

Receptor	Baseline Condition	Sensitivity	Magnitude of Change	Significance of Effect
		<p>woodland, views encompass a wider outlook and the cable route would form a minor component of a much larger panorama.</p> <p>The value of footpaths is medium. They do not form part of a national route however, they hold local significance and are listed on online walking forums as well as promoted by Forestry Commission Scotland.</p>		
<p><b>Visual Amenity: Cyclists on National Cycle Route 1</b></p>	<p>National Cycle Route 1 (NCR1) runs along the north Moray and Aberdeenshire coast between Inverness and Aberdeen and passes through the onshore cable corridor along a minor road 'The Loan' at Fordyce. NCR 1 also forms part of the EuroVelo route 1 – a network of high quality cycle routes that connect the whole European continent.</p>	<p>The sensitivity of the cyclists to the Moray West OnTI is <b>medium to high</b>.</p> <p>The susceptibility to change is medium. The cycle route crosses the onshore cable corridor at Fordyce. The roadsides of The Loan are open such that clear views extend out over the farmland in all directions. It is anticipated that cyclists using this route expect to enjoy views of an unspoilt rural landscape.</p> <p>The value of the views from the cycle route is medium to high. This route is of national significance - connecting Dover to Shetland via the east coast of England and Scotland. It is also of international significance forming part of EuroVelo 1. However, this section is</p>	<p>The magnitude of change as a result of the Moray West OnTI would be <b>low</b>.</p> <p>Where the cycle route crosses the cable route it would be temporarily rerouted to enable the construction of trenches. Excavations would occur over a very small geographical extent of the cycle route and the size of the trench would typically be contained to a working width of a minimum 30 m. During construction work the views experienced by cyclists would be drawn to the construction works in an otherwise flat, open, arable landscape with few notable features. Views would feature construction trenches and excavation machinery. However,</p>	<p><b>Not Significant</b>, short term and reversible.</p>

**Table 7.5.4: Potential Effects during Construction – Onshore Cable Route**

Receptor	Baseline Condition	Sensitivity	Magnitude of Change	Significance of Effect
		not covered by any landscape planning designations which would otherwise denote a regional or local scenic value.	the scale of the construction works would be relatively small.	

7.5.6 Assessment of Potential Construction Effects – Substation

Table 7.5.5: Potential Effects during Construction - Substation

Receptor	Baseline Condition	Sensitivity	Magnitude of Change	Significance of Effect
<p><b>Landscape Element:</b> <b>Agricultural Land</b></p>	<p>Agricultural land within the vicinity of the proposed substation comprises large open arable fields divided typically with fences rather than hedgerows.</p>	<p>The sensitivity of the agricultural land to the Moray West OnTI is <b>medium to low</b>.</p> <p>Its susceptibility to the substation is low as the land is already modified by the cultivation of single species rotational crops, there is no natural vegetation, the land is intensively farmed and presents a highly managed landscape. The agricultural land is also relatively easy to reinstate.</p> <p>Its value is medium to low because whilst agricultural land contributes to the rural character, it also occurs extensively across this landscape and therefore has no scarcity value. The agricultural land that would be affected by the substation does not lie within an area that is covered by a landscape planning designation.</p>	<p>The magnitude of change to the agricultural land as a result of the Moray West OnTI is <b>medium</b>.</p> <p>The substation compound would occupy an area of agricultural land up to 60,000 m<sup>2</sup> with additional land being used for the access, SUDs, mitigation planting and earthworks. During the construction phase the field to the east would be used for a temporary construction compound. The extent of agricultural land lost during construction works would form a small proportion of the agricultural land over the broader region. However, it represents a medium magnitude of change at a local level due to the size of the construction works and extent of the proposed substation.</p> <p>The agricultural land on the construction compound would be reinstated post-construction while on the substation compound it would not be reinstated and would therefore be permanently altered.</p>	<p><b>Not significant</b>, short term and reversible in respect of the construction compound.</p> <p><b>Not significant</b> and permanent in respect of the substation compound.</p>

Table 7.5.5: Potential Effects during Construction - Substation

Receptor	Baseline Condition	Sensitivity	Magnitude of Change	Significance of Effect
<b>Landscape Element: Coniferous Woodland</b>	Shelter belts of coniferous woodland are present between fields and along the edges of roads as well as larger expanses of forested plantations including Pitlurg Wood. These provide visual breaks in an otherwise open, pastoral landscape. The areas of coniferous woodland are typically single species and single age such that there is a lack of diversity in their appearance with their layouts following a geometric pattern. There are also areas of deciduous woodland in the local area around the substation site, most notably in the riparian woodland associated with the Burn of Cairnie although these will not be affected by the Moray West OnTI.	<p>The sensitivity of the coniferous woodland to the Moray West OnTI is <b>medium to low</b>.</p> <p>The susceptibility of coniferous woodland to the Moray West OnTI is medium to low. Although comprising a strong visual component of the landscape, coniferous plantations form a modification of the natural landscape and although comprising a longer-term crop are periodically still subject to periodic felling and replanting.</p> <p>The value of coniferous woodland is medium to low. While it forms a characterising feature of the upland farmland, there is little scarcity value and the woodland can be easily reinstated.</p>	<p>The magnitude of change to the coniferous woodland as a result of the Moray West OnTI would be <b>medium to low</b>.</p> <p>The size, scale and geographical extent of change would be negligible as construction work would be located within open fields and would not involve the removal of any existing trees or woodland. The cable route approach to the substation would either use open trenching routed to avoid the coniferous woodland along the perimeter of the site or would be installed using HDD.</p> <p>Mitigation planting around the substation would introduce new woodland which would extend the existing boundary of Pitlurg Wood and introduce new woodland belts along the A96 and surrounding the eastern field. This would constitute a localised change to the woodland structure.</p>	<b>Not significant</b> , beneficial, short term and reversible.
<b>Landscape Character:</b>	Both the location of the proposed substation and the majority of land within the	The sensitivity of the Upland Farmland is <b>medium</b> .	The magnitude of change would be <b>medium to high</b> within the localised area defined by the enclosing	<b>Significant</b> within the localised area defined by the enclosing woodland to the north and west, the LCT boundary approximately 200 m to the

Table 7.5.5: Potential Effects during Construction - Substation

Receptor	Baseline Condition	Sensitivity	Magnitude of Change	Significance of Effect
<b>Upland Farmland LCT</b>	northern half of the 6 km study area for the substation is classified as Upland Farmland. This is described as settled, open farmland which is gently undulating, exposed and expansive. In the 6 km radius Study Area the agricultural land is commonly interspersed with shelterbelts and small patches of dense coniferous woodland.	The susceptibility of the Upland Farmland LCT to change is medium. The land is settled and has been modified for agricultural and industrial uses including quarrying, the introduction of substations at Blackhillock, pylon lines, and numerous wind turbines at both commercial and residential scales. The landscape is also peppered with small scale agricultural outbuildings and farm machinery throughout. The value of the landscape character is medium – this is a common landscape character type which is expansive and covers a large area between the coastal character areas and the Upland Hills character area located further inland. It is not covered by any landscape planning designation.	woodland to the north and west, the LCT boundary approximately 200 m to the south and an eastward extent of approximately 800 m. The magnitude of change would be <b>low</b> or <b>negligible</b> in all remaining parts of the LCT.  The size and scale of the proposed construction site would be larger than other existing industrial elements within this landscape character type (with the exception of the substation at Blackhillock), and it would sit within a landscape which is still characterised primarily by its use as upland farmland and would significantly alter this character within the local landscape context.  As illustrated by the ZTV, the geographical extent of the visibility of the proposed construction site from within this character area is minimal and is covered by viewpoints 1-3. In all remaining parts of the LCT either there would be no visibility or limited visibility would occur from a greater distance. From the area around Blackhillock the existing influence of electrical	south and an eastward extent of approximately 800 m. Short term and reversible.

Table 7.5.5: Potential Effects during Construction - Substation

Receptor	Baseline Condition	Sensitivity	Magnitude of Change	Significance of Effect
			developments moderates the magnitude of change.	
<b>Landscape Character: Broad Forested Hills within Upland Farmland LCT</b>	This character area comprises upland landscapes of gentle hills with broad summits which sit within the Upland Farmland character area. Approximately 1 km to the northeast of the proposed substation location and within the 6 km Study Area is the landmark conical hill of Meikle Balloch. This is densely forested with commercial plantations of coniferous species. The forested slopes denote an enclosed character with openings to more expansive views over rolling hills at the edges of woodland and broad open views from the un-forested hill top.	The sensitivity of this LCT to the Moray West OnTI is <b>medium to low</b> . The susceptibility of the landscape character to change is low, this is a dynamic landscape which is subject to constant change as a result of commercial forestry activities. The value of the landscape character is medium – it contributes significantly to the larger upland farmland character area by introducing visually prominent stands of dense woodland which provides variety and interrupts an otherwise open, rolling pastoral landscape.	The magnitude of change as a result of the Moray West OnTI would be <b>low</b> . The Moray West OnTI could be visible from the top of, and along the southwestern slopes of the forested hill of Meikle Balloch, however the scale of the proposed construction work within the broader landscape would not constitute a change which would significantly alter the landscape character. The ZTV indicates that the emerging substation could be visible from the top of the surrounding forested hills including Meikle Balloch and the Bin. However, despite the large geographical extent from which it could be visible, the enclosure of the tree cover would notably reduce actual visibility, and where visible the Moray West OnTI would be integrated within a broader upland farmland landscape with a varied character.	<b>Not significant</b> , short term and reversible. This is due to the limited sensitivity of the LCT, the enclosure of the forest cover and the small scale of the construction works.



Table 7.5.5: Potential Effects during Construction - Substation

Receptor	Baseline Condition	Sensitivity	Magnitude of Change	Significance of Effect
<b>Landscape Character: Farmed Moorland Edge LCT</b>	The land to the south of the proposed substation construction is classified as Farmed Moorland Edge, as represented by viewpoints 4, 5, 6, and 7. This LCT is within Aberdeenshire and some crossover exists in the character descriptions with Moray's classification of 'Broad Forested Hills within Upland Farmland'. This landscape is characterised as rough upland farmland on a plateau of low, shallow rolling hills with occasional distinct hills including the Bin and the Balloch with the A96 running through its centre. There are large conifer plantations and the area has qualities of remoteness which increase with distance from the town of Keith.	The sensitivity of the Farmed Moorland Edge to the Moray West OnTI is <b>medium</b> . Given its perceptual qualities of relative isolation, the susceptibility of the landscape character to change from the proposed construction is medium. However, the construction site is located in an adjacent LCT and the character would only be susceptible to change in areas in close range which directly overlook the Moray West OnTI site. The value of the LCT is medium. In general, this character area represents a transition between the upland Moorland Plateau and Agricultural Heartland LCTs.	The magnitude of change as a result of the Moray West OnTI would be <b>medium</b> . The proposed location of the construction site is in the adjacent LCT, however the size and spread of the Moray West OnTI would mean that it would be visible from this adjacent Moorland Edge LCT. The magnitude of change would be medium as views from the south of the construction site offer a direct outlook onto the proposed construction work. This is covered in more detail by viewpoints 4, 5, 6 and 7 which are located within the Farmed Moorland Edge character area.	<b>Significant</b> in localised areas which directly overlook the Moray West OnTI. <b>Not significant</b> in remaining parts of the LCT. Short term and reversible. The proposed construction work would be located in the adjacent Upland Farmland LCT, however given the qualities of perceived relative isolation opposite the development, construction could alter the character of the landscape in areas which directly overlook the Moray West OnTI including viewpoint 7.
<b>Landscape Character: Rolling Forested Hills LCT</b>	This landscape comprises often prominent steep sided rounded hills cut by long well-defined valleys. The hills are broadly patterned with coniferous	The sensitivity of the Rolling Forested Hills to the Moray West OnTI is <b>medium to low</b> .	The magnitude of change as a result of the Moray West OnTI is <b>low</b> . The geographical extent of any view from the Hill of Towie and	<b>Not significant</b> , short term and reversible.

Table 7.5.5: Potential Effects during Construction - Substation

Receptor	Baseline Condition	Sensitivity	Magnitude of Change	Significance of Effect
	forestry grass and heather moorland. In some cases, the forestry extends down onto lower slopes to fill narrow valleys. Small farms are located high on the upper slopes often next to small tributary valleys. The 6 km study area includes within this LCT the eastern edge of the Hill of Towie, which is forested on its lower slopes with open moorland and commercial wind turbines towards the summit.	<p>The susceptibility of the landscape character to change is medium to low. Although the Hill of Towie has a rural open character, it has already had substantial development in the form of wind turbines. The attention of visual receptors is subsequently focussed towards the existing turbines on the hill.</p> <p>The value of the landscape character is medium – there are no formal landscape designations, however the moorland and forested hills associated with this LCT are valued for their rural and upland character over the wider area from the hill peaks.</p>	<p>surrounding slopes of the Hill of Bellyhack to the proposed construction work is limited due to the distance from the construction site as well as the presence of woodland belts in the adjacent ‘Upland Farmland’ character area.</p> <p>The size and scale of the development at this distance would be minimal and viewed within the context of a much broader landscape scene encompassing many different landscape elements.</p>	
<b>Landscape Character: Valleys within Upland Farmland LCT</b>	<p>This character type covers the area to the west of the 6 km study boundary and extends as a narrow strip running south of the proposed substation between the Upland Farmland and Farmed Moorland Edge to include the area between the Moray West OnTI and the Den of Pitlurg SSSI.</p> <p>The character comprises medium scale, self-contained</p>	<p>The sensitivity of the Valleys within Upland Farmland to the Moray West OnTI is <b>medium</b>.</p> <p>The susceptibility of this landscape to change from construction work is medium. It is already well settled with scattered farms, small settlements and a network of minor B roads. Existing burns have also been sometimes modified from their natural course to act as drainage channels.</p>	<p>The magnitude of change as a result of the Moray West OnTI would be <b>medium</b>.</p> <p>The proposed location of the construction site is adjacent to a narrow strip of this LCT north of the Den of Pitlurg. The proximity and scale of the Moray West OnTI would constitute a medium magnitude of change to the character type, but this would be limited to the</p>	<p><b>Significant</b>, short term and reversible in the small strip 200-400 m south of the development which directly overlooks the construction work.</p> <p><b>Not significant</b> in all other areas of the LCT. Short term and reversible.</p> <p>The proximity of the proposed construction work would have a significant impact on the character of this adjacent LCT but limited specifically to the area 200-400 m from the development.</p>

Table 7.5.5: Potential Effects during Construction - Substation

Receptor	Baseline Condition	Sensitivity	Magnitude of Change	Significance of Effect
	valleys, well settled with scattered farms and small settlements. A series of small burns and associated riparian woodland provide a pattern of tributaries associated with the River Isla.	The value of the landscape character is medium, there are no formal landscape designations and the character comprises riparian woodland and burns amongst isolated areas of development.	immediate area 200 m to 400 m south of the construction works.	
<b>Viewpoint 1: Minor road between A96 and B9115</b>	The viewpoint is located near to the junction of the B9115 and a minor road connecting with the A96. It is representative of views obtained by minor road-users over a stretch of approximately 800 m when approaching the A96 from the west. In the foreground, the landscape is characterised, towards the north, by an agricultural landscape with large open arable fields divided by fences. To the south there is a stand of coniferous woodland with a mixed deciduous edge providing an enclosed feel to the southern edge of the B9115 and restricting further views in this direction. A line of pylons runs through the landscape in	<p>The sensitivity of the view to the Development is <b>medium to low</b>. The susceptibility of road users is low. Visual receptors would be transient, and the substation construction site would be located beyond a substantial belt of coniferous forestry and mixed woodland.</p> <p>The value of the view is medium to low. It is not taken from a formal viewpoint, it is not covered by any landscape designations and is experienced incidentally by road users travelling to the A96. There are no special features and the views from the road are typical of the wider area.</p>	<p>The magnitude of the change as a result of the Moray West OnTI would be <b>low</b>.</p> <p>The construction compound, plant and associated works traffic would be screened by existing mature woodland which encloses the southern edge of the B9115. Tall structures such as cranes, used for a short period of the construction phase, may be visible over the tree tops.</p> <p>These structures would be similar in perceived height and scale from this viewpoint to existing pylons in the landscape and therefore would not introduce development into views from this road but would increase its extent.</p> <p>The geographical extent of the construction would be visible in only a small proportion of the wider view</p>	<b>Not significant</b> , short term and reversible along a stretch of the B9115 approximately 800 m long.

Table 7.5.5: Potential Effects during Construction - Substation

Receptor	Baseline Condition	Sensitivity	Magnitude of Change	Significance of Effect
	the midground behind the A96, cutting through the agricultural fields. The rolling, upland hill of Meikle Balloch, covered with stands of coniferous forest at different stages of growth, including felled patches, is a prominent feature of the distant view. A mast is visible on the horizon of the Hill of Greenwood. Sporadic farmsteads are dotted on the lower un-forested slopes, and the windfarms of Edintore, as well as a nearer farm scale turbine, are clearly visible in views further to the north.		and would be primarily screened by existing woodland.	
<b>Viewpoint 2: A96 southbound</b>	The viewpoint is located on the bend of the A96 looking south east towards onshore substation site and is representative of road users travelling on the A96 from Keith along approximately 500 m of the journey. Views south are restricted by a prominent band of coniferous woodland lined by a deciduous edge located behind an open arable	The sensitivity of road users to the Moray West OnTI is <b>medium to low</b> . The susceptibility of road users is low. Road users pass through this viewpoint at relatively high speeds making the views transitory and of short duration. Although the viewpoint is in close proximity to the onshore substation site, it would mostly be screened behind a prominent band of coniferous woodland.	The magnitude of change as a result of the Moray West OnTI would be <b>low</b> . The size and scale of the change in views is low. Despite the large scale and proximity of the onshore substation site, the existing dense band of woodland would screen the onshore substation construction except for tall cranes, used during the construction phase, which may be visible over the tree tops.	<b>Not significant</b> , short term and reversible over approximately a 500 m section of the road.

Table 7.5.5: Potential Effects during Construction - Substation

Receptor	Baseline Condition	Sensitivity	Magnitude of Change	Significance of Effect
	field. This woodland lies to the north of the site. In front of this, views are dominated by the road and vegetated verges.	The value of the view is medium to low. It is not taken from a formal viewpoint, it is not covered by any landscape designations and is experienced incidentally by road users traveling southbound on the A96 as there are no formal stopping points in the vicinity. There are no special features and the views from the road at this point are more enclosed and less varied than is typical of this road in general.	This viewpoint is representative of a stretch of road approximately 500 m long travelling from Keith southbound towards the construction site.	
<b>Viewpoint 3: A96 northbound</b>	<p>This viewpoint is representative of the most direct, open view to the onshore substation from the A96. It is located on the A96 close to the onshore substation site and is representative of views from approximately 300 m of the route.</p> <p>It is located on the verge to the south of the road just prior to a large bend where the road re-orientates in a north south direction. The viewpoint represents road users travelling north towards Keith. The view</p>	<p>The sensitivity of road users to the Moray West OnTI is <b>medium</b>. The susceptibility of road users is medium. Road users pass through this viewpoint at relatively high speed making their views transitory. However, the viewpoint is directly in front of onshore substation site, and the proximity of the onshore substation construction would draw the interest of the road user in this direction.</p> <p>The value of the view is medium – it is not taken from a formal viewpoint, it is not covered by any landscape designations and is experienced incidentally and relatively briefly by</p>	<p>The magnitude of the change as a result of the Moray West OnTI would be <b>high</b>.</p> <p>From this viewpoint, the onshore substation construction would be visible at close range. The spread of the onshore substation construction work would appear to fill the two fields which are currently open farmland immediately adjacent to the road. This would notably alter the character of the views from this localised section of the A96. The height of the onshore substation (once built) and tall machinery used in its construction would rise above the existing horizon line directly</p>	<b>Significant</b> , short term and reversible.

Table 7.5.5: Potential Effects during Construction - Substation

Receptor	Baseline Condition	Sensitivity	Magnitude of Change	Significance of Effect
	is of an open pastoral landscape bounded by coniferous woodland to the west and open to the south with occasional bands of coniferous woodland between further pastoral fields. Distant peaks of hills form the horizon and rise above the nearer forestry providing a sense of open expanse over a large distance. Wind turbines at Edintore approximately 2 km away are prominent of the horizon to the north above the road.	road users traveling on the A96. There are no special features, however the view offers an open aspect over the valley and out towards surrounding hills to the south.	ahead and to the side of the line of travel.  The viewpoint is representative of a stretch of the A96, approximately 300 m long, where the extent of the change in the views would be is substantial, altering >50% of the open pastoral view. In addition to the visibility of the onshore substation construction. The onshore substation construction works would also include the widening and upgrading of the existing junction and access road between the A96 to Whitehillock Farm, which would be visible from the road.	
<b>Viewpoint 4: Access route to Brodie Cottage</b>	The viewpoint at Brodie Cottage is orientated west towards the onshore substation site whilst Brodie Cottage itself is orientated to the south with unobstructed views overlooking the valley towards distant hills. This viewpoint is representative of the minor road users and the approaches to the properties along it. The view is across a fence and	The sensitivity of the view to the Moray West OnTI is <b>medium to high</b> . The susceptibility of people approaching west along the minor road or within the properties is medium to high, the road directly faces the onshore substation construction site and would be the primary focus of people travelling west along the road. Residents and visitors to the houses may gain visibility from parts of their property	The magnitude of the change as a result of the Moray West OnTI would be <b>high</b> .  Construction would be prominent within this view and be the primary focus of attention in an otherwise open arable and forested landscape. Although pylons and wind turbines are currently visible in the landscape the proximity and spread of the onshore substation construction will be more prominent across a large	<b>Significant</b> , short term and reversible.

Table 7.5.5: Potential Effects during Construction - Substation

Receptor	Baseline Condition	Sensitivity	Magnitude of Change	Significance of Effect
	<p>gateway, a field of rough grassland and a remnant hedge onto open arable fields, backclothed by coniferous forestry. To the north-west the horizon is lined with coniferous woodland and wind turbines at Edintore whilst to the south the view looks over the Den of Pitlurg to the Hill of Janetstown behind. Farm outbuildings at Whitehillock are clearly visible in front of a band of woodland to the south. The foreground of the view towards the onshore substation includes pylon and pole mounted transmission lines that cross the view.</p>	<p>and this may be frequent, although views from within the houses themselves is limited.</p> <p>Broader panoramic views over the valley continue to the south would draw attention away from the onshore substation construction for viewers whose focus is not primarily ahead.</p> <p>The value of the view is medium -It will be locally valued as the setting and rural outlook of these properties however, it is not taken from a formal viewpoint, it is not covered by any landscape designations. There are no special features and the view towards the onshore substation construction site forms part of a broader panorama over a much wider valley.</p>	<p>proportion of the view approximately from the west-north-west round to the south-west. It is this wider view to the south-west round to the south-east which forms the primary outlook for visual receptors. Whilst the view in this direction would be unaffected and remain open the introduction of plant, construction compounds, stock piles and traffic to the views westwards would detract from the wider views.</p>	
<p><b>Viewpoint 5: Minor road by A96</b></p>	<p>This viewpoint is located on the minor road which runs parallel to the A96 at a similar elevation. It is representative of the views obtained by road users when heading west towards Keith on the A96, as well as of road users on the</p>	<p>The sensitivity of the views of road users of both the A96 and the minor road is <b>medium</b>. The sensitivity of the view of residents of the properties at Burnside and Easter Auchairn is <b>medium to high</b>. The susceptibility of road users of is medium. Road users are moving</p>	<p>The magnitude of change as a result of the Moray West OnTI would be <b>medium to high</b>. The size, nature and scale of the onshore substation construction would result in it appearing as a prominent feature as part of the middle-distance landscape of the</p>	<p><b>Significant</b>, short term and reversible.</p>

**Table 7.5.5: Potential Effects during Construction - Substation**

Receptor	Baseline Condition	Sensitivity	Magnitude of Change	Significance of Effect
	<p>minor access road to properties on either side of the Den of Pitlurg. Similar views may also be gained from the lower properties and approaches to the properties at Burnside and Easter Auchairn, which slightly closer and at lower elevations, respectively.</p> <p>The landscape comprises gently rolling, large, open arable fields broken by occasional stands of coniferous trees and a strip of mixed deciduous woodland along the Den of Pitlurg. The horizon to the northwest, behind the onshore substation site, is backclothed by an unbroken band of coniferous woodland with turbines visible behind the A96. Pylon lines and pole mounted transmission lines cross the landscape as vertical features rising above the horizon line. The farm buildings and associated trees at Burnside and Whitehillock are visible as point features within the view.</p>	<p>through the landscape at moderate to high speeds and their views are transitory. The onshore substation is directly ahead of travellers moving west and this would draw the attention of the visual receptors away from wider views to the south. The susceptibility of people in or approaching the properties at Burnside or Easter Auchairn is medium-high due to the potential for frequent or long duration views in the direction of the onshore substation.</p> <p>The value of the view is medium - It will be locally valued as the setting and rural outlook of these properties and in views from the road, however, the views is not taken from a formal viewpoint, it is not covered by any landscape designations. There are no special features and the views encompasses a broader panorama over a much wider valley.</p>	<p>view in this direction and viewed at a distance of approximately 750 m. Construction work would alter the existing horizon view of coniferous woodland and, given its closer proximity within the arable fields, would be perceived as larger in spread than existing wind turbines and pylons, although generally lower in height.</p> <p>The viewpoint is representative of a relatively brief view from the A96 and views from an approximately 350 m long stretch of the minor road ahead of the direction of travel when travelling westwards.</p> <p>The rising ground to the west of the house at Burnside would be likely to limit visibility of much of the onshore substation construction from the house, however, this would occur at less than 500 m distance. The orientation of the properties at Easter Auchairn will determine whether or not they would gain visibility of the onshore substation construction to the west-north-west at a range of approximately 750 m.</p>	



Table 7.5.5: Potential Effects during Construction - Substation

Receptor	Baseline Condition	Sensitivity	Magnitude of Change	Significance of Effect
			The construction site would sit within a wider vista and views would be orientated towards the development on the horizon.	
<b>Viewpoint 6: Minor road west of Auchnaclach</b>	<p>The viewpoint west of Auchnaclach and is broadly representative of views from the nearby properties at Blackhillock, Auchnaclach and Raemurrack. Backside of Ardonald has screening tree planting on its northern boundary and would therefore be unlikely to gain views in the direction of the onshore substation.</p> <p>The view is north-north-west over the Den of Pitlurg towards the A96 and is perpendicular to the line of travel along the road. It is representative of residents and of rural road users. The view comprises an open arable landscape in the foreground with large fields and few fences or hedgerows. The top of a band of mixed deciduous woodland indicates the presence of the Burn of</p>	<p>The sensitivity of the view to the Moray West OnTI is <b>medium</b>. The susceptibility of residents and road users is medium. The onshore substation is situated on the horizon line at a distance of approximately 1 km across the valley from the viewpoint. Properties have their main aspects oriented away from the onshore substation site and views from the grounds and houses are typically enclosed or partially screened by existing planting around the properties. There may be frequent views from the accesses to the properties, which may be affected.</p> <p>Road users move relatively quickly along this minor road. Views are perpendicular to the line of travel; however, the views south are restricted by rising landform so that the view across the valley to the north (in the direction of the</p>	<p>The magnitude of change as a result of the Moray West OnTI would be <b>medium to high</b>.</p> <p>The size, nature and scale of the construction of the onshore substation would be prominent feature of the middle ground landscape within this view. It would be located on and above the horizon line in a part of the view that draws the attention of viewers. The perceived height of the onshore substation construction would generally be lower than the pylons and the existing wind turbines, which currently draw the eye on the horizon to the north-west. The onshore substation would not be the only large-scale development visible in the view but would increase its influence and extent.</p>	<b>Significant</b> , short term and reversible effects on road users and from parts of the nearby properties or accesses to them.

Table 7.5.5: Potential Effects during Construction - Substation

Receptor	Baseline Condition	Sensitivity	Magnitude of Change	Significance of Effect
	Cairnie which is set within a small, steep sided valley (a large meltwater channel) obscured from view in the midground. They pylon and pole mounted transmission lines are tall structures apparent within this view. The wind turbines at Edintore can be clearly seen on the horizon to the north-west which is lined by stands of coniferous trees along the top of gently rolling hills.	onshore substation) tends to draw the attention of travellers. The value of the view is medium– It will be locally valued as the setting and rural outlook of these properties and in views from the road, however it is not taken from a formal viewpoint or located near footpaths and there are no formal opportunities to stop along the road.		
<b>Viewpoint 7: Minor road across Moss of Raemurrack</b>	The landscape at this viewpoint comprises a relatively tranquil and rural character. The viewpoint is located on the minor road to the south of the Moss of Raemurrack approximately 0.5 km west of the property of Raemurrack. The viewpoint is orientated northwards over the Den of Pitlurg. This is perpendicular to the line of travel. It is representative of minor road users. The landscape of the fore and middle ground is	The sensitivity of the view to the Moray West OnTI is <b>medium</b> . The susceptibility of rural road users is low to medium. Road users move relatively quickly along this minor road. Views are perpendicular to the line of travel; however, the views south are restricted by rising landform so that the view across the valley to the north (in the direction of the onshore substation) tends to draw the attention of travellers. It will be locally valued as the rural outlook from the road, however it is	The magnitude of change as a result of the Moray West OnTI would be <b>medium</b> . The size, nature and scale of the onshore substation construction would be prominent feature of the middle ground landscape within this view. It would be visible to the north at a range of approximately 1 km. The onshore substation construction would be located within a different part of the wide field of view to that affected by the existing wind turbines at Edintore	<b>Significant</b> , short term and reversible

Table 7.5.5: Potential Effects during Construction - Substation

Receptor	Baseline Condition	Sensitivity	Magnitude of Change	Significance of Effect
	<p>characterised by open, rough grassland with sporadic areas of scrub and pioneer species typical of unimproved land. Beyond this the land use changes to open, arable farmland divided by dense stands of coniferous shelterbelts and plantations. In the north-west, the turbines at Edintore are prominent on the horizon behind farm buildings at Mains of Pitlurg. In the north and east the horizon is characterised by coniferous plantations on rolling hills with the pylon mounted transmission lines apparent on the skyline and the farm buildings at Whitehillock set below.</p> <p>The viewpoint is representative of views from a stretch of road approximately 300 m in length.</p>	<p>not taken from a formal viewpoint or located near footpaths and there are no formal opportunities to stop along the road.</p> <p>It represents a more natural landscape view in an otherwise intensively farmed area.</p>	<p>which are perceived from this viewpoint as much taller elements within the landscape than the onshore substation construction which rises above the horizon line only slightly.</p> <p>The separation of the onshore substation construction from the minor road by existing vegetation and a substantial area of open landscape limits the level of the change in this view.</p>	
<p><b>A96</b> Sequential cumulative</p>	<p>The A96 is the main road between Aberdeen and Inverness. It is a busy road with traffic travelling at the National Speed Limit. The section</p>	<p>The sensitivity of the views of road-users on the A96 to the cumulative effects of the Moray West OnTI is <b>medium</b> for north-bound road-users and <b>low</b> for south-bound road-users.</p>	<p>The cumulative magnitude of change experienced by north-bound road-users on the A96 as a result of the addition of the Moray West OnTI</p>	<p><b>Significant</b>, short term and reversible for north-bound road-users.</p> <p><b>Not significant</b>, short term and reversible for south-bound road-users.</p>

Table 7.5.5: Potential Effects during Construction - Substation

Receptor	Baseline Condition	Sensitivity	Magnitude of Change	Significance of Effect
effects on road-users	relevant to this assessment lies between Cairnie and Keith. The surrounding landscape is characterised by low hills, rolling farmland and occasional forestry blocks. In terms of development, farmsteads occur intermittently, there are occasional masts on hill tops and an electricity transmission line crosses the loop of the A96 close to the onshore substation site. On Blackhillock Hill, there is a cluster of existing substations and convergence of electricity transmission lines. The substations are more evident to south-bound rather than north-bound road-users.	<p>The susceptibility of south-bound road-users to the Moray West OnTI is low owing to the screening of the site by Pitlurg Wood when travelling in this direction, although the widened access would be visible and construction compound may be visible at an oblique angle where the A96 passes the onshore substation site. The susceptibility of north-bound road-users is medium to high as they experience views aligned towards the site for an approximate 300 m section.</p> <p>The value of views from the A96 are medium. The landscape is not covered by any designations that would otherwise denote a special value and there are no landmark features or formal viewpoints.</p>	<p>would be <b>medium</b>, while for south-bound road-users it would be <b>low</b>. During the construction phase, the onshore substation site would form a prominent feature in the views of north-bound road-users owing to the presence of the construction compound and the emergence of the onshore substation, along with the associated activity of plant, especially the use of tall cranes. This would be seen over an approximate 300 m section and aligned with forward facing views.</p> <p>While the cluster of substations at Blackhillock would not be seen in conjunction with the onshore substation construction owing to separation distance and intervening landform, they would be seen sequentially, from a section approximately 2 km further north. While the substations would be visible from the road, the oblique angle at which visibility would occur would moderate their influence on the cumulative situation. The effects on south-bound road-users would be limited by the screening of the</p>	

Table 7.5.5: Potential Effects during Construction - Substation

Receptor	Baseline Condition	Sensitivity	Magnitude of Change	Significance of Effect
			onshore substation construction by Pitlurg Wood.	
<p><b>Landscape Character: Upland Farmland LCT</b></p> <p>Cumulative effects on landscape character</p>	<p>The onshore substation and the existing substations at Blackhillock are located in the Upland Farmland LCT. There is therefore a potential for a significant effect to arise. This LCT is described as settled, open farmland which is gently undulating, exposed and expansive. In the 6 km radius Study Area the agricultural land is commonly interspersed with shelterbelts and small patches of dense coniferous woodland. There is also small-scale development in the form of intermittent farmsteads and rural properties and larger scale development in the form of the substations and the convergence of transmission lines towards this location.</p>	<p>The sensitivity of the Upland Farmland to the cumulative effects of the Moray West OnTI is <b>medium</b>.</p> <p>The susceptibility of the Upland Farmland LCT to the Moray West OnTI is medium. Large scale energy developments already have a notable influence on the baseline character of the LCT around Blackhillock. The local landscape around the onshore substation site is not directly influenced by these developments although the electricity transmission lines are a feature.</p> <p>The value of the landscape character is medium. This is a common landscape character type which is expansive and covers a large area between the coastal character areas and the Upland Hills character area located further inland. It is not covered by any landscape planning designation.</p>	<p>The cumulative magnitude of change as a result of the addition of the Moray West OnTI would be <b>medium</b>.</p> <p>While there is an existing influence on the landscape character of this LCT owing to the cluster of substations and concentration of electricity transmission lines at Blackhillock, the construction of the onshore substation would spread the influence of energy developments across a wider extent of the LCT to the south. The separate location of the onshore substation from Blackhillock and the extent of screening formed by existing Pitlurg Wood and intervening landform, means that the effects on landscape character would be experienced sequentially and not in conjunction. The onshore substation location avoids further concentrating effects in the Blackhillock area.</p>	<p><b>Significant</b> short term and reversible.</p>

7.5.7 Assessment of Potential Operational Effects – Substation

Table 7.5.6: Potential Effects during Operation - Substation				
Receptor	Baseline Condition	Sensitivity	Magnitude of Change	Significance of Effect
<p><b>Landscape Character: Upland Farmland LCT</b></p>	<p>Both the location of the onshore substation and the majority of land within the northern half of the 6 km study area for the substation is classified as Upland Farmland. This is described as settled, open farmland which is gently undulating, exposed and expansive. In the 6 km radius Study Area the agricultural land is commonly interspersed with shelterbelts and small patches of dense coniferous woodland.</p>	<p>The sensitivity of the Upland Farmland LCT is <b>medium</b>. The susceptibility of the Upland Farmland LCT to change is medium. The land is settled and has been modified for agricultural and industrial uses including quarrying, the introduction of substations at Blackhillock, pylon lines, and numerous wind turbines at both commercial and residential scales. The landscape is also peppered with small scale agricultural outbuildings and farm machinery throughout. The value of the landscape character is medium – this is a common landscape character type which is expansive and covers a large area between the coastal character areas and the Upland Hills character area located further inland. It is not covered by any landscape planning designation.</p>	<p>At 0 years of onshore substation operation the magnitude of change would be <b>medium</b> within the localised area defined by the enclosing woodland to the north and west, the LCT boundary approximately 200 m to the south and an eastward extent of approximately 800 m. The magnitude of change would be <b>low</b> or <b>negligible</b> in all remaining parts of the LCT. After 15 years of operation the magnitude of change would be <b>low</b> or <b>negligible</b> at both the local level as well as within the wider LCT. Post construction, the onshore substation would directly alter local landscape character owing to its presence in this LCT. Its influence across the wider LCT to the north and west would be limited by the screening effect of existing Pitlurg Wood. The substation would be visible to the south and east with some partially screening by bunding along the A96. The onshore substation is of a smaller scale than existing substations at nearby Blackhillock. It would not be totally</p>	<p><b>Not significant</b>, long term, permanent. Beneficial in terms of the influence of the woodland areas.</p>

Table 7.5.6: Potential Effects during Operation - Substation

Receptor	Baseline Condition	Sensitivity	Magnitude of Change	Significance of Effect
			<p>out of character within its upland farmland LCT setting, which contains other electrical infrastructure and relatively large buildings.</p> <p>The magnitude of change would steadily decrease as mitigation planting matures. After 20 years the onshore substation would be screened behind woodland belts, which are of a scale and type in-keeping with the woodland that is characteristic of this LCT.</p> <p>As illustrated by Viewpoints 1-3, mitigation planting would partially screen the onshore substation from view.</p> <p>In all remaining parts of the LCT either there would be no, or limited visibility, or limited visibility would occur from a greater distance.</p>	
<p><b>Landscape Character: Farmed Moorland Edge LCT</b></p>	<p>The land to the south of the proposed substation construction is classified as Farmed Moorland Edge, as represented by viewpoints 4, 5, 6, and 7. This LCT is within Aberdeenshire and some crossover exists in the character descriptions with Moray's classification of 'Broad Forested Hills within Upland</p>	<p>The sensitivity of the Farmed Moorland Edge LCT is <b>medium</b>. Given its perceptual qualities of relative isolation, the susceptibility of the landscape character to change from the proposed construction is medium. However, the construction site is located in an adjacent LCT and the character would only be susceptible to change</p>	<p>The magnitude of change as a result of the Moray West OnTI would be <b>medium to low</b>.</p> <p>The LCT would be affected by views of the onshore at minimum distances of approximately 500 m in the adjacent LCT, as part of its wider context. The size, nature and spread of the onshore substation would mean that it would be visible</p>	<p><b>Not significant</b>, long term, permanent. Beneficial in terms of the influence of the woodland areas.</p>

Table 7.5.6: Potential Effects during Operation - Substation

Receptor	Baseline Condition	Sensitivity	Magnitude of Change	Significance of Effect
	Farmland'. This landscape is characterised as rough upland farmland on a plateau of low, shallow rolling hills with occasional distinct hills including the Bin and the Balloch with the A96 running through its centre. There are large conifer plantations and the area has qualities of remoteness which increase with distance from the town of Keith.	in areas in close range which directly overlook the Moray West OnTI.  The value of the LCT is medium. In general, this character area represents a transition between the upland Moorland Plateau and Agricultural Heartland LCTs.	from this adjacent Moorland Edge LCT.  At year 0 of the operation of the onshore substation, the magnitude of change would be medium-low as views north from the LCT offer a direct outlook onto the onshore substation. However, after 15 years the scale of the development would be largely obscured behind mixed woodland planting and the magnitude of change would be low.  This is covered in more detail by viewpoints 4, 5, 6 and 7 which are located within the Farmed Moorland Edge character area.	
<b>Landscape Character: Valleys within Upland Farmland LCT</b>	This character type covers the area to the west of the 6 km study boundary and extends as a narrow strip running south of the onshore substation between the Upland Farmland and Farmed Moorland Edge to include the area between the Moray West OnTI and the Den of Pitlurg SSSI.  The character comprises medium scale, self-contained valleys, well settled with scattered farms and small settlements. A series of small	The sensitivity of the Valleys within Upland Farmland to the Moray West OnTI is <b>medium</b> .  The susceptibility of this landscape to the proposed operational development is medium. It is already well settled with scattered farms, small settlements and a network of minor B roads. Existing burns have also been sometimes modified from their natural course to act as drainage channels.  The value of the landscape character is medium, there are no formal landscape designations and	The magnitude of change as a result of the Moray West OnTI would be <b>medium to low</b> .  Upon initial completion, the magnitude of change from the operational substation on this adjacent LCT would be low in all areas except for the area 200 m to 400 m south of the Moray West OnTI, where the proximity and scale of the development would constitute a medium magnitude of change.  After 15 years the scale of the development would be largely	<b>Not significant</b> , long term, permanent. The impact of the onshore substation would gradually reduce as mitigation planting would mature over time.



Table 7.5.6: Potential Effects during Operation - Substation

Receptor	Baseline Condition	Sensitivity	Magnitude of Change	Significance of Effect
	burns and associated riparian woodland provide a pattern of tributaries associated with the River Isla.	the character comprises riparian woodland and burns amongst isolated areas of development.	obscured behind mixed deciduous woodland and the magnitude of change would be reduced to low across the entire character type.	
<b>Viewpoint 1: Minor road between A96 and B9115</b>	The viewpoint is located near to the junction of the B9115 and a minor road connecting with the A96. It is representative of views obtained by minor road-users over a stretch of approximately 800 m when approaching the A96 from the west. In the foreground, the landscape is characterised, towards the north, by an agricultural landscape with large open arable fields divided by fences. To the south there is a stand of coniferous woodland with a mixed deciduous edge providing an enclosed feel to the southern edge of the B9115 and restricting further views in this direction. A line of pylons runs through the landscape in the midground behind the A96, cutting through the agricultural fields. The rolling, upland hill of Meikle Balloch, covered with	The sensitivity of the view is <b>medium to low</b> . The susceptibility of road users is low. Visual receptors would be transient, and the onshore substation is located beyond a substantial belt of coniferous forestry and mixed woodland. The value of the view is medium to low. It is not taken from a formal viewpoint, it is not covered by any landscape designations and is experienced incidentally by road users travelling to the A96. There are no special features and the views from the road are typical of the wider area.	The magnitude of change as a result of the Moray West OnTI would be <b>negligible</b> . The maximum height of the onshore substation components including the buildings and electrical infrastructure would be screened by the existing coniferous and deciduous woodland which encloses the southern edge of the B9115.	<b>Not significant</b> , long term, permanent.

Table 7.5.6: Potential Effects during Operation - Substation

Receptor	Baseline Condition	Sensitivity	Magnitude of Change	Significance of Effect
	stands of coniferous forest at different stages of growth, including felled patches, is a prominent feature of the distant view. A mast is visible on the horizon of the Hill of Greenwood. Sporadic farmsteads are dotted on the lower un-forested slopes, and the windfarms of Edintore, as well as a nearer farm scale turbine, are clearly visible in views further to the north.			
<b>Viewpoint 2: A96 southbound</b>	The viewpoint is located on the bend of the A96 looking south east towards onshore substation and is representative of road users travelling on the A96 from Keith along approximately 500 m of the journey. Views south are restricted by a prominent band of coniferous woodland lined by a deciduous edge located behind an open arable field. This woodland lies to the north of the site. In front of this, views are dominated by the road and vegetated verges.	The sensitivity of road users to the Moray West OnTI is <b>medium to low</b> . The susceptibility of road users is low. Road users pass through this viewpoint at relatively high speeds making the views transitory and of short duration. Although the viewpoint is in close proximity to the onshore substation, it would mostly be screened behind a prominent band of coniferous woodland.  The value of the view is medium to low. It is not taken from a formal viewpoint, it is not covered by any landscape designations and is experienced incidentally by road users traveling southbound on the	The magnitude of change as a result of the Moray West OnTI would be <b>negligible</b> . Despite the large scale and proximity of the onshore substation the existing dense band of coniferous woodland would screen the onshore substation.	<b>Not significant</b> , long term, permanent.

Table 7.5.6: Potential Effects during Operation - Substation

Receptor	Baseline Condition	Sensitivity	Magnitude of Change	Significance of Effect
		A96 as there are no formal stopping points in the vicinity. There are no special features and the views from the road at this point are more enclosed and less varied than is typical of this road in general.		
<b>Viewpoint 3: A96 northbound</b>	<p>This viewpoint is representative of the most direct, open view to the onshore substation from the A96. It is located on the A96 close to the onshore substation and is representative of views from approximately 300 m of the route.</p> <p>It is located on the verge to the south of the road just prior to a large bend where the road re-orientates in a north south direction. The viewpoint represents road users travelling north towards Keith. The view is of an open pastoral landscape bounded by coniferous woodland to the west and open to the south with occasional bands of coniferous woodland between further pastoral fields. Distant peaks of hills form the horizon and rise above the nearer</p>	<p>The sensitivity of road users to the Moray West OnTI is <b>medium</b>. The susceptibility of road users is medium. Road users pass through this viewpoint at relatively high speed making their views transitory. However, the viewpoint is directly in front of onshore substation, and the proximity of the onshore substation construction would draw the interest of the road user in this direction.</p> <p>The value of the view is medium – it is not taken from a formal viewpoint, it is not covered by any landscape designations and is experienced incidentally and relatively briefly by road users traveling on the A96. There are no special features, however the view offers an open aspect over the valley and out towards surrounding hills to the south.</p>	<p>At 0 years of operation the magnitude of change would be <b>medium to high</b>.</p> <p>After 15 years of operation the magnitude of change would be <b>negligible</b>.</p> <p>In the initial operational phase, the onshore substation would be seen across a large proportion of the horizontal field of view above the roadside bunding. The presence of bunding would reduce the initial visual impact prior to the establishment of mitigation planting by partially screening the lower elements of the onshore substation and reducing its perceived vertical extent within the views from an approximately 300 m section of the road.</p> <p>As mitigation planting matured, between 0 and 15 years, the extent of the onshore substation screened</p>	<p><b>Significant</b> and long term between 0 to 15 years of operation.</p> <p><b>Not significant and</b> permanent from 15 years of operation. Beneficial in terms of the influence of the woodland.</p>

Table 7.5.6: Potential Effects during Operation - Substation

Receptor	Baseline Condition	Sensitivity	Magnitude of Change	Significance of Effect
	forestry providing a sense of open expanse over a large distance. Wind turbines at Edintore approximately 2 km away are prominent of the horizon to the north above the road.		would gradually increase until it would be totally screened.	
<b>Viewpoint 4: Access route to Brodie Cottage</b>	The viewpoint at Brodie Cottage is orientated west towards the onshore substation whilst Brodie Cottage itself is orientated to the south with unobstructed views overlooking the valley towards distant hills. This viewpoint is representative of the minor road users and the approaches to the properties along it. The view is across a fence and gateway, a field of rough grassland and a remnant hedge onto open arable fields, backclothed by coniferous forestry. To the north-west the horizon is lined with coniferous woodland and wind turbines at Edintore whilst to the south the view looks over the Den of Pitlurg to the Hill of Janetstown behind. Farm outbuildings at Whitehillock are clearly visible	<p>The sensitivity of the view to the Moray West OnTI is <b>medium to high</b>. The susceptibility of people approaching west along the minor road or within the properties is medium to high, the road directly faces the onshore substation and would be the primary focus of people travelling west along the road. Residents and visitors to the houses may gain visibility from parts of their property and this may be frequent, although the potential for views from within the houses are limited.</p> <p>Broader panoramic views over the valley continue to the south would draw attention away from construction of the onshore substation for viewers whose focus is not primarily ahead. The value of the view is medium -It will be locally valued as the setting and rural outlook of these</p>	<p>At 0 years of operation the magnitude of change would be <b>high</b>.</p> <p>After 15 years of operation the magnitude of change would be <b>medium</b>.</p> <p>After 20 years of operation the magnitude of change would be <b>low</b>.</p> <p>The onshore substation would be located at a distance of approximately 500 m from this viewpoint. It would be a prominent feature in an otherwise open, arable landscape.</p> <p>Although pylons and wind turbines are currently visible in the landscape the nature, proximity and extent of the onshore substation would be far greater than any existing features. Until mitigation planting has matured the onshore substation would be perceived as the tallest and one of the most prominent elements in the landscape, introducing further large scale</p>	<p><b>Significant</b>, long term, between 0 to 20 years of operation.</p> <p><b>Not significant</b> and permanent from 15 years of operation. Beneficial in terms of the influence of the woodland.</p>

Table 7.5.6: Potential Effects during Operation - Substation

Receptor	Baseline Condition	Sensitivity	Magnitude of Change	Significance of Effect
	in front of a band of woodland to the south. The foreground of the view towards the onshore substation includes pylon and pole mounted transmission lines that cross the view.	properties however, it is not taken from a formal viewpoint, it is not covered by any landscape designations. There are no special features and the view towards the onshore substation forms part of a broader panorama over a much wider valley.	electrical infrastructure and large buildings to the view. After 15 years, once mitigation planting has established the lower parts of the onshore substation would be screened from view by two bands of planting. The upper part of the onshore substation would remain visible from this location. After 20 years, it is anticipated that mitigation planting would screen most of the onshore substation.	
<b>Viewpoint 5: Minor road by A96</b>	This viewpoint is located on the minor road which runs parallel to the A96 at a similar elevation. It is representative of the views obtained by road users when heading west towards Keith on the A96, as well as of road users on the minor access road to properties on either side of the Den of Pitlurg. Similar views may also be gained from the lower properties and approaches to the properties at Burnside and Easter Auchairn, which slightly	The sensitivity of the views of road users of both the A96 and the minor road is <b>medium</b> . The sensitivity of the view of residents of the properties at Burnside and Easter Auchairn is <b>medium to high</b> . The susceptibility of road users is medium. Road users are moving through the landscape at moderate to high speeds and their views are transitory. The onshore substation is directly ahead of travellers moving west and this would draw the attention of the visual receptors away from wider views to the south. The susceptibility of people in or approaching the properties at	At 0 years of operation the magnitude of change would be <b>medium</b> . After 15 years of operation the magnitude of change would be <b>medium to low</b> . The size, nature and scale of the onshore substation would be a prominent feature of the view in this direction at a range of 1.2 km. The buildings, electrical infrastructure and lighting rods would be visible features within the fenced compound. Until mitigation planting has established the presence of the	<b>Significant</b> and long term between 0 to 15 years of operation. <b>Not significant</b> and permanent from 15 years of operation. Beneficial in terms of the influence of the woodland.

Table 7.5.6: Potential Effects during Operation - Substation

Receptor	Baseline Condition	Sensitivity	Magnitude of Change	Significance of Effect
	<p>closer and at lower elevations, respectively.</p> <p>The landscape comprises gently rolling, large, open arable fields broken by occasional stands of coniferous trees and a strip of mixed deciduous woodland along the Den of Pitlurg. The horizon to the northwest, behind the onshore substation, is backclothed by an unbroken band of coniferous woodland with turbines visible behind the A96. Pylon lines and pole mounted transmission lines cross the landscape as vertical features rising above the horizon line. The farm buildings and associated trees at Burnside and Whitehillock are visible as point features within the view.</p>	<p>Burnside or Easter Auchairn is medium-high due to the potential for frequent or long duration views in the direction of the onshore substation.</p> <p>The value of the view is medium - It will be locally valued as the setting and rural outlook of these properties and in views from the road, however, the views is not taken from a formal viewpoint, it is not covered by any landscape designations. There are no special features and the views encompasses a broader panorama over a much wider valley.</p>	<p>onshore substation would partially alter the existing view of the coniferous woodland backcloth. Given its closer proximity, the onshore substation would be perceived as larger in spread than existing wind turbines and pylons. Due to the presence of existing turbines and pylons the onshore substation would be at least partially in keeping with existing baseline features.</p> <p>Once the mixed woodland planting has established, at 15 years the lower parts of the onshore substation would be screened, however the upper parts of the buildings would be visible.</p>	
<p><b>Viewpoint 6: Minor road west of Auchnaclach</b></p>	<p>The viewpoint west of Auchnaclach and is broadly representative of views from the nearby properties at Blackhillock, Auchnaclach and Raemurrack. Backside of Ardonald has screening tree planting on its northern boundary and would therefore</p>	<p>The sensitivity of the view to the Moray West OnTI is <b>medium</b>. The susceptibility of residents and road users is medium. The onshore substation is situated on the horizon line at a distance of approximately 1 km across the valley from the viewpoint. Properties have their main aspects oriented away from</p>	<p>At 0 years of operation the magnitude of change would be <b>medium</b>. After 15 years of operation the magnitude of change would be <b>medium to low</b>.</p> <p>The size, nature and scale of the onshore substation within the view would be a notable but not a particularly prominent feature</p>	<p><b>Significant</b> and long term between 0 to 15 years of operation.</p> <p><b>Not significant</b> and permanent from 15 years of operation. Beneficial in terms of the influence of the woodland.</p>

Table 7.5.6: Potential Effects during Operation - Substation

Receptor	Baseline Condition	Sensitivity	Magnitude of Change	Significance of Effect
	<p>be unlikely to gain views in the direction of the onshore substation.</p> <p>The view is north-north-west over the Den of Pitlurg towards the A96 and is perpendicular to the line of travel along the road. It is representative of residents and of rural road users. The view comprises an open arable landscape in the foreground with large fields and few fences or hedgerows. The top of a band of mixed deciduous woodland indicates the presence of the Burn of Cairnie which is set within a small, steep sided valley (a large meltwater channel) obscured from view in the midground. The pylon and pole mounted transmission lines are tall structures apparent within this view. The wind turbines at Edintore can be clearly seen on the horizon to the north-west which is lined by stands of coniferous trees along the top of gently rolling hills.</p>	<p>the onshore substation and views from the grounds and houses are typically enclosed or partially screened by existing planting around the properties. There may be frequent views from the accesses to the properties, which may be affected.</p> <p>Road users move relatively quickly along this minor road. Views are perpendicular to the line of travel; however, the views south are restricted by rising landform so that the view across the valley to the north (in the direction of the onshore substation) tends to draw the attention of travellers.</p> <p>The value of the view is medium– It will be locally valued as the setting and rural outlook of these properties and in views from the road, however it is not taken from a formal viewpoint or located near footpaths and there are no formal opportunities to stop along the road.</p>	<p>within the middle distance of this view. Only relatively small parts of the forested skyline would be altered by the taller buildings and electrical infrastructure and this would be partially screened by existing woodland.</p> <p>The fenced compound and buildings as well as the electrical infrastructure would be visible and would add a large-scale development to a largely rural baseline view.</p> <p>Once the mixed woodland has established, between 0 and 15 years, the majority of the buildings and electrical infrastructure would be screened, with only the upper part of the onshore substation visible above the tree tops.</p> <p>Screening would be sufficient to reduce the magnitude of change to medium to low.</p>	
<b>Viewpoint 7: Minor road</b>	The landscape at this viewpoint comprises a relatively tranquil	The sensitivity of the view to the Moray West OnTI is <b>medium</b> .	At 0 years of operation the magnitude of change would be	<b>Significant</b> and long term between 0 to 15 years of operation.

Table 7.5.6: Potential Effects during Operation - Substation

Receptor	Baseline Condition	Sensitivity	Magnitude of Change	Significance of Effect
<b>across Moss of Raemurrack</b>	and rural character. The viewpoint is located on the minor road to the south of the Moss of Raemurrack approximately 0.5 km west of the property of Raemurrack. The viewpoint is orientated northwards over the Den of Pitlurg. This is perpendicular to the line of travel. It is representative of minor road users. The landscape of the fore and middle ground is characterised by open, rough grassland with sporadic areas of scrub and pioneer species typical of unimproved land. Beyond this the land use changes to open, arable farmland divided by dense stands of coniferous shelterbelts and plantations. In the north-west, the turbines at Edintore are prominent on the horizon behind farm buildings at Mains of Pitlurg. In the north and east the horizon is characterised by coniferous plantations on rolling hills with the pylon mounted transmission lines apparent on the skyline and the farm	The susceptibility of rural road users is low to medium. Road users move relatively quickly along this minor road. Views are perpendicular to the line of travel; however, the views south are restricted by rising landform so that the view across the valley to the north (in the direction of the onshore substation) tends to draw the attention of road-users. It will be locally valued as the rural outlook from the road, however it is not taken from a formal viewpoint or located near footpaths and there are no formal opportunities to stop along the road. It represents a generally natural landscape view in an otherwise intensively farmed area.	<b>medium.</b> After 15 years of operation the magnitude of change would be <b>medium to low.</b> The size, nature and scale of the onshore substation within the view would be a notable but not a prominent feature within the middle distance of this view. Only relatively small parts of the forested skyline would be altered by the taller buildings and electrical infrastructure and this would be partially screened by existing woodland. The fenced compound and buildings as well as the electrical infrastructure would be visible and would add a large-scale development to a largely rural baseline view. Once the mixed woodland has established, between 0 and 15 years, the majority of the buildings and electrical infrastructure would be screened, with only the upper part of the onshore substation visible above the tree tops. Screening would be sufficient to reduce the magnitude of change to medium to low.	<b>Not significant</b> and permanent from 15 years of operation. Beneficial in terms of the influence of the woodland.



Table 7.5.6: Potential Effects during Operation - Substation

Receptor	Baseline Condition	Sensitivity	Magnitude of Change	Significance of Effect
	<p>buildings at Whitehillock set below.</p> <p>The viewpoint is representative of views from a stretch of road approximately 300 m in length.</p>			
<p><b>A96</b> Sequential cumulative effects on road-users</p>	<p>The A96 is the main road between Aberdeen and Inverness. It is a busy road with traffic travelling at the National Speed Limit. The section relevant to this assessment lies between Cairnie and Keith. The surrounding landscape is characterised by low hills, rolling farmland and occasional forestry blocks. In terms of development, farmsteads occur intermittently, there are occasional masts on hill tops and an electricity transmission line crosses the loop of the A96 close to the onshore substation. On Blackhillock Hill, there is a cluster of existing substations and convergence of electricity transmission lines. The substations are more evident to south-bound rather than north-bound road-users.</p>	<p>The sensitivity of the views of road-users on the A96 to the cumulative effects of the Moray West OnTI is <b>medium</b> for north-bound road-users and <b>low</b> for south-bound road-users.</p> <p>The susceptibility of south-bound road-users to the onshore substation is low owing to the screening of the site by Pitlurg Wood when travelling in this direction, although the widened access would be visible and construction compound may be visible at an oblique angle where the A96 passes the onshore substation. The susceptibility of north-bound road-users is medium to high as they experience views aligned towards the site for approximately 300 m.</p> <p>The value of views from the A96 are medium. The landscape is not covered by any designations that would otherwise denote a special</p>	<p>The cumulative magnitude of change experienced by north-bound road-users on the A96 as a result of the addition of the Moray West OnTI would be <b>medium</b>, while for south-bound road-users it would be <b>low</b>.</p> <p>During the operational phase, the onshore substation would form a prominent feature in the views of north-bound road-users owing to the presence of the onshore substation. This would be seen over approximately 300 m and be aligned with forward facing views.</p> <p>Mitigation planting proposed on bunding adjacent to the A96 and along the eastern site boundary would gradually mitigate these effects, such that after 15 years the onshore substation would be screened or part screened from the A96 and this would reduce the cumulative magnitude of change to low or negligible.</p>	<p><b>Significant</b>, for the first 15 years of operation for north-bound road-users.</p> <p><b>Not significant</b>, for south-bound road-users and for north-bound road-users after 15 years of operation.</p>

Table 7.5.6: Potential Effects during Operation - Substation

Receptor	Baseline Condition	Sensitivity	Magnitude of Change	Significance of Effect
		value and there are no landmark features or formal viewpoints.	While the cluster of substations at Blackhillock would not be seen in conjunction with the construction of the onshore substation owing to separation distance and intervening landform, they would be seen sequentially, from a section approximately 2 km further north. While the substations would be visible from the road, the oblique angle at which visibility would occur would moderate their influence on the cumulative situation. The addition of the onshore substation would increase the visual influence of energy developments into a new section of the A96 where it would form a prominent feature. The effects on south-bound road-users would be limited by the screening of the construction of the onshore substation by Pitlurg Wood.	
<p><b>Landscape Character: Upland Farmland LCT</b></p> <p>Cumulative effects on landscape character</p>	The onshore substation and the existing substations at Blackhillock are located in the Upland Farmland LCT. There is therefore a potential for a significant effect to arise. This LCT is described as settled, open farmland which is gently undulating, exposed and expansive. In the 6 km radius	<p>The sensitivity of the Upland Farmland to the cumulative effects of the Moray West OnTI is <b>medium</b>.</p> <p>The susceptibility of the Upland Farmland LCT to the onshore substation is medium. Large scale energy developments already have a notable influence on the baseline character of the LCT around</p>	<p>The cumulative magnitude of change as a result of the addition of the Moray West OnTI would be <b>medium</b>.</p> <p>While there is an existing influence on the landscape character of this LCT owing to the cluster of substations and concentration of electricity transmission lines at</p>	<p><b>Significant</b> for the first 15 years of operation. <b>Not significant</b> after 15 years of operation.</p>

**Table 7.5.6: Potential Effects during Operation - Substation**

Receptor	Baseline Condition	Sensitivity	Magnitude of Change	Significance of Effect
	<p>Study Area the agricultural land is commonly interspersed with shelterbelts and small patches of dense coniferous woodland. There is also small-scale development in the form of intermittent farmsteads and rural properties and larger scale development in the form of the substations and the convergence of transmission lines towards this location.</p>	<p>Blackhillock. The local landscape around the onshore substation is not directly influenced by these developments although the electricity transmission lines are a feature.</p> <p>The value of the landscape character is medium. This is a common landscape character type which is expansive and covers a large area between the coastal character areas and the Upland Hills character area located further inland. It is not covered by any landscape planning designation.</p>	<p>Blackhillock, the construction of the onshore substation would spread the influence of energy developments across a wider extent of the LCT to the south. The separate location of the onshore substation from Blackhillock and the extent of screening formed by existing Pitlurg Wood and intervening landform, means that the effects on landscape character would be experienced sequentially and not in conjunction. The location of the onshore substation avoids further concentrating effects in the Blackhillock area.</p>	

## 7.6 Additional Mitigation and Enhancement Measures

7.6.1.1 Mitigation measures proposed as part of the Moray West OnTI are embedded within the construction and operational phases of the assessment and described in detail in the relevant 'potential effects' table. No additional post-assessment mitigation measures are currently proposed. The impacts assessed in Tables 7.5.4 to 7.5.7 are therefore representative of the residual effects that will arise as a result of the Moray West OnTI as summarised in section 7.8.

## 7.7 Assessment of Cumulative Effects

7.7.1.1 In the main assessment presented in Section 7.6, the cumulative effects of the Moray West OnTI in conjunction with the existing substations at Blackhillock has been considered in respect of effects on the Upland Farmland LCT, in which the Moray West OnTI and the existing substations are located, and the A96 from which there is potential to experience a sequential, rather than a conjunctive effect.

7.7.1.2 The following section considers the potential for significant cumulative effects arising from the Moray West OnTI in conjunction with other energy developments and their associated onshore infrastructure.

7.7.1.3 The methodology for the Cumulative Landscape and Visual Impact Assessment (CLVIA) is set out in Technical Appendix 7.1: LVIA Methodology.

7.7.1.4 GLVIA Version 3 (2013) advises the following:

*'The most significant cumulative landscape effects are likely to be those that would give rise to changes in the landscape character of the study area of such an extent as to have major effects on its key characteristics and even, in some cases, to transform it into a different landscape type. This may be the case where the project being considered itself tips the balance through its additional effects. The emphasis must always remain on the main project being assessed and how or whether it adds to or combines with the others being considered to create a significant cumulative effect.'*

7.7.1.5 GLVIA Version 3 also advises that:

*'Higher levels of significance may arise from cumulative visual effects related to:*

- Developments that are in close proximity to the main project and are clearly visible together in views from the selected viewpoints;
- Developments that are highly inter-visible, with overlapping ZTVs – even though the individual developments may be at some distance from the main project and from individual viewpoints, and when viewed individually not particularly significant, the overall combined cumulative effect on a viewer at a particular viewpoint may be more significant.'

7.7.1.6 Table 7.7.1 sets out the list of cumulative schemes to be considered in the CLVIA as agreed with MC and AC and indicates their relevance to the cumulative assessment. Figure 7.7.1 presents a plan showing the location of these cumulative developments.

Table 7.7.1: Cumulative Wind Farms in the Study Area				
Wind Farm	Number of Turbines	Height to Blade Tip (m)	Distance to Moray West Onshore Substation (km)	Relevant to Cumulative Assessment?
<b>Consented</b>				
Aultmore	13	110	14 km	No
<b>Application</b>				
Lurg Hill	5	130	13 km	No

- 7.7.1.7 The potential for a significant cumulative effect to arise in relation to consented or application stage developments is limited to the consented wind farm at Aultmore, and the application wind farm at Lurg Hill. Those parts of the Moray West OnTI that are relevant to this cumulative situation include the construction of the onshore cable route and the construction and operation of the onshore substation.
- 7.7.1.8 The potential for a significant cumulative effect is limited by the following factors. The separation distance between the onshore substation and the wind farms is large enough to limit the possibility of inter-visibility from arising. The Upland Farmland LCT, which lies between the onshore substation and the wind farms, comprises hilly landform of a sufficient scale to reduce the extent to which the onshore substation would be visible, as well as the extent to which it would be inter-visible with the wind farms. The ZTV in Figure 7.3.9 (Page 2 of 2) shows how Cairds Wood to the north-west and Balloch Hill to the north-east reduces visibility of the onshore substation across the wider landscape in these directions. Where forestry occurs over the hills, the extent of visibility of the onshore substation would be reduced further.
- 7.7.1.9 While the 110 m high Aultmore turbines and 130 m high Lurg Hill turbines would form prominent features with visibility extending out to an approximate 10 km radius, the substation, with a maximum building height of 13 m, would in contrast have a very localised visual influence, with visibility rapidly dissipating with distance, as shown on the ZTV on Figure 7.3.9 (Page 2 of 2).
- 7.7.1.10 The limited visibility of the onshore substation, therefore, limits the potential for significant cumulative effects to arise, as its visual influence would be limited to the local area, where the visual influence of the wind farms would be very limited.
- 7.7.1.11 While the wind farms would be located closer to the onshore cable route, this component of the Moray West OnTI would also be unlikely to give rise to significant cumulative effects owing to the relatively small scale and localised influence of the construction works during a short-term construction period, and the absence of effects during the longer-term operational period.

## 7.8 Summary

- 7.8.1.1 The potential effects on the landscape and visual receptors that would arise as a result of the Moray West OnTI have been assessed in this chapter. The process taken identifies those receptors with the potential to be significantly affected and assesses the potential effects that the construction phase and life of the Moray West OnTI would give rise to. The significance of these effects has been assessed through combining the sensitivity of each receptor with a prediction of the magnitude of change that would occur as a result of the Moray West OnTI.

- 7.8.1.2 The Moray West OnTI comprises a landfall, onshore cable route, onshore substation and all associated infrastructure. The onshore substation is assessed during the construction and operational phases, while the landfall and onshore cable route are assessed only during the construction phase. This is because during the operational phase, the components would be buried underground with practically no residual effects.
- 7.8.1.3 The assessment of the landfall considers an area of search in the vicinity of Redhythe Point, referred to as the Onshore Landfall Area. The landfall will be located in this area and will deploy HDD drilling, or open cut trenching as an option at Redhaven Cove to the west. The assessment of the onshore cable route considers a construction working width of a minimum 30 m located within a 500 m onshore cable corridor. This is expanded along the northern coast to allow for the onshore cable route coming off the landfall options and includes an alternative route to the east of Cotton Hill. The exact location of the route is to be determined. The assessment of the onshore substation considers the location adjacent to the A96, 4 km south of Keith.
- 7.8.1.4 The study area for the Moray West OnTI covers the extent of the Onshore Landfall Area in the vicinity of Redhythe Point on the Aberdeenshire Coastline, a 500 m corridor within which the onshore cable route would be located and a 6 km radius around the onshore substation. From this study area, those receptors with the potential to be significantly affected have been assessed in detail.
- 7.8.1.5 Embedded mitigation forms part of the onshore substation proposal. It has been designed to mitigate landscape and visual effects with particular consideration of the potential effects on north-bound road-users on the A96. It comprises bands of woodland planting which would grow to form a relatively fast growing and sufficiently dense screen around the onshore substation.

#### *7.8.2 Onshore Landfall Area*

- 7.8.2.1 The assessment of the Onshore Landfall Area found no significant effects would arise in relation to landscape elements. In terms of landscape character, there would be significant effects on The Coast LCT relating to the Onshore Landfall Area, but only within the localised landscape around where the landfall would be located. Significant effects on the landscape designation of the North Aberdeenshire Coast SLA would also arise within the same extents of the Onshore Landfall Area as assessed in respect of The Coasts LCT. These effects would all be localised and short term, relating to the duration of the construction works which would be a maximum of 34 weeks. No other landscape receptors would be significantly affected by the Onshore Landfall Area.
- 7.8.2.2 In respect of visual receptors, the assessment considered the impact of the Onshore Landfall Area on the views of residents, road-users, walkers and other recreational visitors to this area. The findings showed that significant effects would only arise in relation to walkers on the coastal core path. These effects would all be localised and short term, relating to the duration of the construction works which would be a maximum of 34 weeks. No other visual receptors would be significantly affected by the landfall options.

#### *7.8.3 Onshore Cable Route*

- 7.8.3.1 The assessment of the onshore cable route has shown that no significant effects would arise in respect of landscape or visual receptors. This finding relates to the fact that the construction works would be relatively small in scale, such that the extent of the influence would be limited and effects contained within localised areas.

#### *7.8.4 Onshore Substation*

- 7.8.4.1 The assessment of the onshore substation during the construction phase found that there would be no significant effects on the landscape elements of the agricultural land or the coniferous forestry, but that there would be localised significant effects on three LCTs, namely, Upland Farmland, Farmed Moorland Edge and Valleys within Upland Farmland. These effects would all

relate to the presence or close-range presence of the onshore substation construction and would be short term in duration.

- 7.8.4.2 During the operational phase, there would be no significant effects on landscape receptors and effects would gradually be reduced by the growth of the surrounding mitigation planting.
- 7.8.4.3 In respect of effects on representative viewpoints, the assessment found that there would be no effects on the two representative viewpoints to the north, but that the five representative viewpoints of the A96, minor roads and rural properties to the south, would be significantly affected during the construction phase and would be short term in duration.
- 7.8.4.4 During the operational phase, the five representative viewpoints to the south would continue to undergo significant effects, with mitigation gradually reducing these effects to not significant mostly within 15 years of operation.

#### 7.8.5 Cumulative Effects

- 7.8.5.1 Potential for cumulative effects to arise would relate to the addition of the Moray West OnTI to the existing cumulative baseline comprising the existing substations at Blackhillock. The two receptors assessed as having potential to undergo significant effects include the Uplands Farmland LCT in which the Moray West OnTI and the existing substations are located and the A96 from which road-users would experience a sequential cumulative effect. The assessment found that significant cumulative effects would arise in respect of both these receptors during the construction phase and up until year 15 of operation beyond which time the effects would be mitigated by the growth of the woodland planting around the onshore substation and along the A96 earth bund.
- 7.8.5.2 The LVIA and CIA have demonstrated that despite the geographical extent of the project, there would be no significant effects in relation to the onshore cable route and that significant effects relating to landfall would be localised and short term. While significant effects relating to the onshore substation would occur at the construction phase and extend into the operational phase, these effects would be mitigated by embedded mitigation planting by 15 to 20 years.

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