

MORAY WEST

OFFSHORE WINDFARM

Onshore Transmission Infrastructure Environmental Impact Assessment (EIA)

Moray Offshore Windfarm (West) Limited

Chapter 15 Summary of the Environmental Impact Assessment



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Acronyms	
Acronym	Expanded Term
AC	Aberdeenshire Council
CAR	Water Environment (Controlled Activities) (Scotland) Regulations 2011
CIRIA	Construction Industry Research and Information Association
CTMP	Construction Traffic Management Plan
DWPA	Drinking Water Protection Area
ECow	Ecological Clerk of Works
EIA	Environmental Impact Assessment
EPUK	Environmental Protection UK
FCS	Favourable Conservation Status
GPPs	Guidance for Pollution Prevention
GWDTE	Groundwater Dependent Terrestrial Ecosystem
HDD	Horizontal Directional Drilling
HGV	Heavy Goods Vehicle
IAQM	Institute of Air Quality Management
LNCS	Local Nature Conservation Site
LTC	Landscape Character Type
MC	Moray Council
MHWS	Mean High Water Springs
MPCP	Marine Pollution and Contingency Plan
MS	Method Statement
NCN	National Cycle Network
NVC	National Vegetation Classification
OnTI	Moray West Onshore Transmission Infrastructure
PAB	Planning Application Boundary
PPGs	Pollution Prevention Guidelines
PWS	Private Water Supply
SBL	Scottish Biodiversity List
SEPA	Scottish Environment Protection Agency
SESA	Study of Environmentally Sensitive Area
SLA	Special Landscape Area
SNH	Scottish Natural Heritage
SSSI	Site of Special Scientific Interest
SuDS	Sustainable Drainage Systems

Acronyms	
Acronym	Expanded Term
WFD	Water Framework Directive
ZoI	Zone of Influence

15 Summary of the Environmental Impact Assessment

15.1 Introduction

- 15.1.1.1 This chapter of the Environmental Impact Assessment (EIA) Report provides a summary of the key environmental issues associated with the Moray West Onshore Transmission Infrastructure (OnTI), as identified within the technical assessments presented within Chapters 5 to 13. Chapter 14: Whole Project Assessment summarises the key environmental effects for the whole project considered together (Moray West Site, Moray West OfTI and Moray West OnTI).
- 15.1.1.2 Prior to undertaking the technical assessments, each discipline has identified a number of embedded mitigation measures assumed to be inherent in the design and delivery of the OnTI. These have been identified to minimise the potential effects and are usually design commitments (e.g. the location of infrastructure) or construction practises (e.g. good practice onsite or construction techniques). All embedded mitigation measures are summarised in Section 15.2.
- 15.1.1.3 As set out in Chapter 3: The Environmental Impact Assessment Process, the potential effects of the OnTI have generally been assessed through a process of determining the sensitivity of impact receptors (accounting for adaptability, tolerance, recoverability and value / importance), then predicting the magnitude of impacts upon them (accounting for spatial extent, duration, frequency and reversibility).
- 15.1.1.4 Effects, both positive and negative, have generally been graded on a scale from negligible to major, with moderate and major effects being considered significant in EIA terms. However, there are exceptions to this for certain disciplines. In the assessment summaries provided in Section 15.2, the effect levels have been identified alongside whether or not they are deemed significant.
- 15.1.1.5 Where potential significant effects have been identified, additional mitigation measures have been proposed to reduce such effects to acceptable levels. The effects have then been re-assessed and the residual significance determined. All additional mitigation measures are summarised in Section 15.2.

15.2 Environmental Impact Assessment Outcomes

- 15.2.1.1 This section summarises the outcomes of the EIA on a discipline-by-discipline basis. The proposed embedded mitigation measures are first described, before the assessment of each potential effect is summarised regarding potential impact source, pathway and receptor; effect significance; additional mitigation requirements; and residual effect significance. Cumulative effects, if any, are also described.
- 15.2.1.2 With the application of additional mitigation measures, most of the potential effects predicted to occur as a result of the OnTI have been reduced to levels considered not significant in EIA terms. Some significant effects remain regarding landscape and visual impacts.

15.2.1 Hydrology, Hydrogeology and Geology

Embedded Mitigation

- 15.2.1.1 The technical assessment set out in Chapter 5: Hydrology, Hydrogeology and Geology assumes the measures set out in Table 15.2.1 will be adopted during construction of the OnTI.

Table 15.2.1: Embedded Measures – Hydrology, Hydrogeology and Geology	
Development Phase	Measures
Detailed design	<ul style="list-style-type: none"> • Siting of the onshore cable circuits outside the Drinking Water Protection Area (DWPA) of the Herricks Springs and Burn and Shenwell Spring. An initial 100 m buffer will be applied and Scottish Water will be consulted on proposals to ensure they are appropriate. • Watercourse crossing methods will depend on the importance of features, the results of ground investigations and consultations with Scottish Environment Protection Agency (SEPA). Sensitive watercourses will be crossed using horizontal directional drilling (HDD) where practicable; smaller or modified watercourses will more likely be crossed using open cut techniques. • HDD will be used to pass the onshore cable circuits beneath forestry, or they will be installed in existing tracks and rides to avoid felling. • The peat probe survey, and desk based reviews for areas not surveyed, will inform identification of an onshore cable circuit route that avoids peat. In the event that peat cannot be avoided, further peat probe surveying and micro-siting will be undertaken to limit any impacts. • A 'floating access track' will be designed and utilised on peat greater than 1 m deep. A 'cut track' design will be used on shallow or no peat. Topsoil and peat will be stripped to expose foundations on which to build aggregate tracks. • Infrastructure will be sited at sufficient distances from receptors to avoid any disruption to the quantity and quality of water serving each assessed private water supplies (PWSs). Further clarification on source type and indicative pipeline / abstraction locations of each PWS will be sought from their registered owners. If required, detailed PWS risk assessments will be undertaken prior to construction. These assessments will be submitted to Moray Council (MC), Aberdeenshire Council (AC) and SEPA as appropriate. • Consideration will be given to the avoidance of potential land contamination. Prior to construction, targeted ground investigations will be completed on any critical areas within the OnTI's footprint to provide information on the ground and groundwater conditions that will guide the temporary and permanent works design. This will include the collection of environmental samples if potential contamination is suspected or encountered. • The onshore cable circuits will be sited to avoid groundwater dependent terrestrial ecosystems (GWDTEs). Where these cannot be avoided, comprehensive National Vegetation Classification (NVC) surveys will be undertaken to determine if they are true GWDTEs and identify their exact nature and extent. Survey findings will further inform design of the OnTI to help avoid, minimise and quantify any impacts. • Where infrastructure is to be installed within the Cullen to Stake Ness Coast Site of Special Scientific Interest (SSSI), a detailed NVC survey will inform the exact siting of infrastructure and works areas, as well as determining the installation methodology. Detailed consultation with Scottish Natural Heritage (SNH) will be undertaken and a detailed method statement (MS) prepared and agreed that will ensure the exposed Dalradian rock features of the SSSI are protected in accordance with SNH's management objectives for the site during construction of the OnTI, and remain unaltered during its operation. • The heating and drying out of peat and soils will be avoided through design of the onshore cable circuits, the depth of installation and the selection and handling of backfill material (e.g. thermal properties of the material and compaction).

Table 15.2.1: Embedded Measures – Hydrology, Hydrogeology and Geology

Development Phase	Measures
Construction	<ul style="list-style-type: none"> • Engineering works and construction activities in, or near watercourses will adhere to the principles of the Water Environment (Controlled Activities) (Scotland) Regulations 2011 (CAR) as outlined in the SEPA CAR practical guide (2018). The Contractor will consult SEPA on the requirement for CAR authorisations. This will include all abstractions, discharges and engineering activities. • Measures to avoid, reduce or control pollution of surface water and groundwater will incorporate SEPA requirements and the appropriate CIRIA guidelines for pollution control, including the appropriate Guidance for Pollution Prevention (GPP) / Pollution Prevention Guidelines (PPGs). • Work taking place within areas designated as SSSI will be completed in accordance with SNH (2011) Sites of Special Scientific Interest booklet for owners and occupiers of SSSIs - Operations within SSSIs. • Risks from accidental spillages / leaks during handling and storage of chemicals, transformer oil and fuels will be mitigated by pollution prevention measures and good working practices. • During refuelling, waste storage, concrete preparation and washout, 50 m buffers will be applied to all surface watercourses, groundwater borehole abstraction points and springs. • Procedures for dealing with unexpected land contamination if encountered during construction will be put in place. • Where an access track necessitates a temporary watercourse crossing, appropriate design will ensure flood flow conveyance and sediment transfer conditions are commensurate with existing conditions. Temporary bridges or culverts will be removed within 12 months following construction of the OnTI. • Culverting and watercourse crossings will take place during periods of normal to low flow to avoid conveyance related flood risk effects. Watercourse sections will be isolated using barriers that span the width of the channel. Water will be extracted and diverted downstream by pumping methods before treatment to remove silt prior to downstream discharge. Before removing the barriers, accumulated silt will be extracted and disposed of appropriately. Timing will be agreed between the Contractor, SNH, the Deveron, Bogie, & Isla Rivers Charitable Trust and the River Deveron Salmon Fishery Board. Isolation works will be kept to as short a duration as possible, and screening will take place to prevent fish being drawn into pumps; • Culverting proposals will adhere to the SEPA position statement on culverting of watercourses (WAT-PS-06-02). Closed culverts will only be used for single track roads over small watercourses (<2 m in width); span bridges and bottomless arch structures will be prioritised for other crossings. Watercourse crossings will follow SEPA supporting guidance WAT -SG-25 (SEPA, 2015); • The location of Scottish Water assets will be confirmed. Assets potentially affected by the OnTI will be identified, with particular consideration to access tracks and pipe crossings; • Access tracks will be constructed from inert, non-metalliferous material, with low erodibility and low sulphide content. • A drainage strategy for each construction compound will be prepared, utilising sustainable urban drainage systems (SuDS) principles for new elements. Areas used for fuel storage, plant maintenance and refuelling will be surfaced with impermeable materials to prevent infiltration of contaminated runoff.

Table 15.2.1: Embedded Measures – Hydrology, Hydrogeology and Geology

Development Phase	Measures
	<p>Drainage from areas not served by existing drainage systems will be designed in accordance with SuDS principles to achieve pre-development rates.</p> <ul style="list-style-type: none"> • Regarding excavation for the onshore cable circuits, topsoil will be stripped and stored along the access tracks. The excavation of soils and peat will be undertaken to avoid cross contamination between distinct horizons and layers, where possible. The different horizons and layers will be kept and stored separately for use at a later date. Stockpiles will be present for the shortest practicable timeframe, with stockpiles being reinstated as the construction work progresses. Stockpiles which remain present for three months or longer will be carefully reinstated using seeding techniques. Peat will be stockpiled with due consideration for slope stability and excavated topsoils should be stored on geotextile matting to a maximum of 1 m thickness. Soil stockpiles will be located at least 10 m from all watercourses. Stockpile gaps will be located at topographic low points to preserve existing flow paths. • Temporary onsite storage of excavated materials suspected or confirmed to be contaminated will be on impermeable sheeting, covered and with adequate leachate / runoff drainage to prevent migration of contaminants. Materials will be segregated where possible to prevent cross-contamination. • If asbestos is present (or suspected to be present) in soils and / or construction and demolition materials, the works will be carried out in accordance with the CL:AIRE industry guidance 'CAR-SOIL'. In the event that asbestos is confirmed, works (e.g. assessment, delineation, removal and verification) shall be undertaken by a specialist asbestos contractor. • If peat excavation is required, peat storage and handling will be undertaken in accordance with SEPA's regulatory guidance (2012). • Where pockets of peat and groundwater seepages / flush zones are identified along the access tracks at the detailed design stage, geotextiles will be used beneath the track material to prevent the track from settling into the ground to help maintain sub-surface flow. • Regarding aggregate surfaces, locally displaced runoff will be managed by a combination of SuDS infiltration and attenuation measures, including soakaways, swales or attenuation storage, as appropriate to local conditions. • All access tracks and working area construction materials will be removed at the end of construction, reinstated with material from the soil stockpiles (to a level slightly above natural ground level to allow for settlement), and reseeded or replanted. • Cross drainage will be provided as necessary at topographic low points to avoid disrupting flow paths and to retain natural surface water flow routes. • Dewatering of trench excavations will be carefully monitored, and groundwater flow disruption and drawdown will be minimised. The time excavations are open will be limited to minimise ingress of water and dewatering requirements. • If water being pumped from excavations is suspected to be contaminated, appropriate measures will be taken, in accordance with the CAR, to prevent uncontrolled or unauthorised releases to ground or the water environment. • Temporary cut off drains will be installed to prevent surface water and shallow groundwater ingress into excavations. Intercepted water will be encouraged to infiltrate into the ground, mimicking natural flow patterns in accordance with the principles of SuDS. Where discharge of cut-off drains to watercourses is the only practical option, measures such as silt fencing, straw bales, below ground

Table 15.2.1: Embedded Measures – Hydrology, Hydrogeology and Geology	
Development Phase	Measures
	<p>perforated pipes and / or Siltbusters® will be employed to moderate runoff rates and promote settlement of suspended sediment.</p> <ul style="list-style-type: none"> • A minimum stand-off buffer will be applied so that no works will be undertaken within 6 m of watercourses (other than where crossings are required). • The depth of HDDs at crossings will be such that the river bed is undisturbed and pressurised bentonite in the drill hole does not leak into watercourses. • Prior to construction, cleaning of existing field ditches and culverts will be undertaken to alleviate drainage blockages or restrictions. There will be an identification of existing infrastructure, such as drainage outfalls within watercourses, and any work required to avoid or improve existing outfalls. • Potential main drains along field edges will be investigated and diverted as required. Interceptor or cut-off drains will be installed where there are frequent shallow drains crossing the cable circuit route in order to minimise disruption to field drainage. • During construction, a programme of visual inspections will be undertaken to ensure that the potential effects on the River Deveron DWPA are appropriately monitored. The visual inspection points will be selected along tributaries of the River Isla and downstream of construction areas (Burn of Paithnick, Burn of Drum, Burn of Ardrone, Burn of Carnie). The results will be recorded and the information submitted to SEPA and Scottish Water. Proposals for visual inspections will be submitted to Scottish Water along with a summary of planned activities prior to construction. • The Contractor will identify springs, wells, PWSs and any sewerage infrastructure including treatment plants, septic tanks, soakaways, interconnecting pipes and outfalls, that require appropriate protection. These will be mapped and appropriate exclusion zones applied to ensure they are not disturbed by construction. Staff will be trained to protect PWSs deemed to be at risk. Training will ensure staff know the locations of at risk sources, the activities that pose the highest risk to these sources, the likely consequences of a pollution incident and the emergency procedures should an incident occur. In the event that a PWS is identified as being at risk, a comprehensive sampling programme will be agreed with the relevant local authority. • Vulnerable construction infrastructure (e.g. fuel and chemical storage areas) will be located in areas of low flood risk. • A specific Pollution Incident Response Plan will be implemented that will include standard best practice measures in line with SEPA requirements / GPP and the Control of Substances Hazardous to Health Regulations. • Ground excavated for the onshore cable circuit ducts and joint bays will be reinstated to ensure that the local ground conditions will be as permeable pre-construction conditions.
Operation and maintenance	<ul style="list-style-type: none"> • A specific Pollution Incident Response Plan will be implemented that will include standard best practice measures in line with SEPA requirements / GPP and the Control of Substances Hazardous to Health Regulations.

Additional Mitigation

- 15.2.1.2 The following measures are proposed in accordance with the requirement to minimise the potential effects of the OnTI as far as practicable. In particular, the first measure is proposed in order to help reduce the potentially significant effect on the quantity and quality of GWDTes during the construction phase as identified in Section 5.5 of Chapter 5: Hydrology, Hydrogeology and Geology.
- 15.2.1.3 **Protection of GWDTes** – Further investigation is required at the detailed design stage. NVC surveys will be carried out to further qualify and refine the extents and nature of these Phase 1 habitats. This will in turn help inform the implementation of buffers to reduce potential impacts on potential GWDTes. Careful consideration will be given to siting infrastructure at sufficient distances from receptors to avoid disruption to the function of the ‘true GWDTes’. Drainage strategies must also be drawn up by the Contractor in accordance with the principles outlined in Section 5.4.3 of Chapter 5: Hydrology, Hydrogeology and Geology, to ensure that water pumped from excavations will be discharged to mimic natural flow conditions as closely as possible after being passed through SuDS features. The design proposals should be submitted to and approved by SEPA prior to construction.
- 15.2.1.4 **Surface Water Management Plan** – At the detailed design stage, the appointed Contractor will provide a detailed surface water management plan for the construction and operation of the cable circuits. This will include details of drainage plan proposals in accordance with SuDS principles and GPPs to ensure minimal disruption to the hydrological and hydrogeological regime. The plan will also include a schedule of watercourse crossing methodologies and proposed mitigation strategies for in channel works. The detailed plan will be prepared for the cable circuits and submitted to SEPA for approval.
- 15.2.1.5 **Onshore Substation Drainage Design** – At the detailed design stage the appointed Contractor will provide an onshore substation drainage strategy, which includes operational discharge requirements. This will include proposals for either licensed discharging or public sewer connections following liaison with SEPA and Scottish Water as appropriate. Drainage strategies are also to identify a suite of SuDS measures to be implemented during the operation of the OnTI. The below ground earth grid at the onshore substation will be surfaced with material which is at least as permeable as the topsoil which was removed during construction. These types of measures will be commensurate with local conditions, to ensure no impact upon the downgradient PWS groundwater abstraction and GWDTes. The detailed drainage strategy will be submitted to SEPA and Scottish Water for approval.
- 15.2.1.6 **Piling Risk Assessment** – In the event that piling is selected for installation of the onshore substation foundations, a detailed piling risk assessment will be prepared at the detailed design stage. This will assess the hydrogeology, ground properties, and piling methodologies to estimate potential issues and direct design of any required remediation measures. The piling risk assessment will be submitted to SEPA for approval at the detailed design stage, prior to the commencement of construction.

Summary of Potential Effects

- 15.2.1.7 The technical assessment of the OnTI’s potential effects on hydrology, hydrogeology and geology is summarised in Table 15.2.2.

Table 15.2.2: Summary of Potential Effects – Hydrology, Hydrogeology and Geology					
Potential Effect	Receptors	Significance of Effect	Additional Mitigation Measures	Significance of Residual Effect	Cumulative Effect
Construction (Cable Circuits)					
Damage to the qualifying Dalradian geological features.	SSSI – Cullen to Stake Ness Coast (geological).	Minor Negative (Not Significant).	N/A	Minor Negative (Not Significant).	Not Significant.
Reduction of groundwater availability to support GWDTes as a consequence of water quantity and / or quality effects.	GWDTes 141.	Moderate Negative (Significant).	NVC surveys will determine if potential GWDTes are true and what their extent is. Careful determination of buffers and siting of infrastructure will avoid disruption to the function of the 'true GWDTes'. Drainage strategies will ensure water pumped from excavations will be discharged to mimic natural flow conditions after being passed through SuDS features. Design proposals will be agreed with SEPA.	Minor Negative (Not Significant).	Not Significant.
Ground disturbance and mobilisation of sediments / contaminants leading to silt laden or contaminated runoff entering watercourses.	Water Framework Directive (WFD) waterbodies (e.g. Burn of Drum WFD).	Minor Negative (Not Significant).	N/A	Minor Negative (Not Significant).	Not Significant.

Table 15.2.2: Summary of Potential Effects – Hydrology, Hydrogeology and Geology					
Potential Effect	Receptors	Significance of Effect	Additional Mitigation Measures	Significance of Residual Effect	Cumulative Effect
Potential for accidental contamination entering watercourses, associated with spillage or leakage of fuels, lubricants or other chemicals.	WFD waterbodies (e.g. Burn of Drum WFD).	Negligible Negative (Not Significant).	N/A	Negligible Negative (Not Significant).	Not Significant.
Changes to watercourse morphology as a result of works in or near watercourses (e.g. installation of cable and access track watercourse crossings).	WFD waterbodies (e.g. Burn of Drum WFD).	Minor Negative (Not Significant).	N/A	Minor Negative (Not Significant).	Not Significant.
Reduction of water availability to support existing surface water and groundwater abstractions as a consequence of water quantity and / or quality effects.	Water resources – Public Water Supplies (e.g. River Deveron DWPA).	Minor Negative (Not Significant).	N/A	Minor Negative (Not Significant).	Not Significant.
Reduction of water availability to support existing surface water and groundwater abstractions as a consequence of water quantity and / or quality effects.	Water resources – PWSs	Minor Negative (Not Significant).	N/A	Minor Negative (Not Significant).	Not Significant.
Physical disruption to existing discharge	Water resources – licensed discharges.	Negligible Negative	N/A	Negligible Negative	Not Significant.

Table 15.2.2: Summary of Potential Effects – Hydrology, Hydrogeology and Geology					
Potential Effect	Receptors	Significance of Effect	Additional Mitigation Measures	Significance of Residual Effect	Cumulative Effect
infrastructure (e.g. septic tank, soakaways or discharge outfalls) from trenching and temporary access track / compound establishment.		(Not Significant).		(Not Significant).	
Changes in watercourse conveyance from temporary watercourse crossings; Volumetric displacement of flood water; Changes in runoff rates and new flow pathways; and Increases in flow due to dewatering of excavations.	Flood risk receptors (e.g. A95).	Minor Negative (not Significant).	N/A	Negligible Negative (Not Significant).	Not Significant.
Construction (Onshore Substation)					
Ground disturbance and mobilisation of sediments or contaminants leading to silt laden or contaminated runoff entering watercourses.	WFD waterbodies (e.g. Burn of Cairnie).	Minor Negative (Not Significant).	N/A	Minor Negative (Not Significant).	Not Significant.
Reduction of water availability to support existing surface water and groundwater abstractions as a consequence of water	Water resources – Public Water Supplies (DWPAs).	Minor Negative (Not Significant).	N/A	Minor Negative (Not Significant).	Not Significant.

Table 15.2.2: Summary of Potential Effects – Hydrology, Hydrogeology and Geology					
Potential Effect	Receptors	Significance of Effect	Additional Mitigation Measures	Significance of Residual Effect	Cumulative Effect
quantity and / or quality effects.					
Reduction of water availability to support existing surface water and groundwater abstractions as a consequence of water quantity and / or quality effects.	Water resources – PWSs 41, 42 and 43.	Minor Negative (Not Significant).	N/A	Minor Negative (Not Significant).	Not Significant.
Operation and Maintenance (Cable Circuits)					
Reduction of groundwater availability to support GWDTEs as a consequence of water quantity and / or quality effects.	GWDTE (e.g. GWDTE 141).	Negligible Negative (Not Significant).	N/A	Negligible Negative (Not Significant).	Not Significant.
Diversion of sub surface land drainage flow pathways due to the permanent presence of concrete lined joint bays and granular material around cable circuits.		Minor Negative (Not Significant).	N/A	Minor Negative (Not Significant).	Not Significant.
Changes to watercourse morphology due to the permanent presence of erosion protection around cable crossings.	WFD waterbodies.	Minor Negative (Not Significant).	N/A	Minor Negative (Not Significant).	Not Significant.

Table 15.2.2: Summary of Potential Effects – Hydrology, Hydrogeology and Geology					
Potential Effect	Receptors	Significance of Effect	Additional Mitigation Measures	Significance of Residual Effect	Cumulative Effect
Reduction of water availability to support existing surface water and groundwater abstractions as a consequence of water quantity and / or quality effects.	Water resources – Public Water Supplies (DWPAs).	Minor Negative (Not Significant).	N/A	Minor Negative (Not Significant).	Not Significant.
Reduction of water availability to support existing surface water and groundwater abstractions as a consequence of water quantity and / or quality effects.	Water resources – PWSs.	Negligible Negative (Not Significant).	N/A	Negligible Negative (Not Significant).	Not Significant.
Operation and Maintenance (Onshore Substation)					
Changes in runoff rates and new flow pathways associated with the impermeable onshore substation footprint.	WFD waterbody (Burn of Cairnie WFD).	Minor Negative (Not Significant).	N/A	Minor Negative (Not Significant).	Not Significant.
Reduction of water availability to support existing groundwater or surface water abstractions as a consequence of water quantity and / or quality effects.	Water resources – Public Water Supplies (DWPAs).	Minor Negative (Not Significant).	N/A	Minor Negative (Not Significant).	Not Significant.

Table 15.2.2: Summary of Potential Effects – Hydrology, Hydrogeology and Geology					
Potential Effect	Receptors	Significance of Effect	Additional Mitigation Measures	Significance of Residual Effect	Cumulative Effect
Reduction of water availability to support existing groundwater or surface water abstractions as a consequence of water quantity and / or quality effects.	Water resources – PWSs 41, 42 and 43.	Negligible Negative (Not Significant).	N/A	Negligible Negative (Not Significant).	Not Significant.
Decommissioning (Cable Circuits)					
Reduction of groundwater availability to support GWDTes as a consequence of water quantity and / or quality effects.	GWDTes (e.g. GWDE 141).	Negligible Negative (Not Significant).	N/A	Negligible Negative (Not Significant).	Not Significant.
Diversion of sub surface land drainage flow pathways due to the permanent presence of limited below ground concrete lined joint bays and granular material around cable circuits.		Minor Negative (Not Significant).	N/A	Minor Negative (Not Significant).	Not Significant.
Changes to watercourse morphology as a result of works in or near watercourses.	WFD waterbodies (e.g. Burn of Drum WFD).	Minor Negative (Not Significant).	N/A	Minor Negative (Not Significant).	Not Significant.

Table 15.2.2: Summary of Potential Effects – Hydrology, Hydrogeology and Geology

Potential Effect	Receptors	Significance of Effect	Additional Mitigation Measures	Significance of Residual Effect	Cumulative Effect
Reduction of water availability to support existing surface water and groundwater abstractions as a consequence of water quantity and / or quality effects.	Water resources – Public Water Supplies (e.g. River Deveron DWPA).	Minor Negative (Not Significant).	N/A	Minor Negative (Not Significant).	Not Significant.
Reduction of water availability to support existing surface water and groundwater abstractions as a consequence of water quantity and / or quality effects.	Water resources – PWSs.	Negligible Negative (Not Significant).	N/A	Negligible Negative (Not Significant).	Not Significant.
Decommissioning (Cable Circuits)					
Ground disturbance and mobilisation of sediments or contaminants leading to silt laden or otherwise contaminated runoff entering watercourses.	WFD waterbodies (e.g. Burn of Cairnie).	Minor Negative (Not Significant).	N/A	Minor Negative (Not Significant).	Not Significant.
Reduction of water availability to support existing surface water and groundwater abstractions as a consequence of water quantity and / or quality effects.	Water resources – Public Water Supplies (DWPAs).	Minor Negative (Not Significant).	N/A	Minor Negative (Not Significant).	Not Significant.

Table 15.2.2: Summary of Potential Effects – Hydrology, Hydrogeology and Geology

Potential Effect	Receptors	Significance of Effect	Additional Mitigation Measures	Significance of Residual Effect	Cumulative Effect
Reduction of water availability to support existing surface water and groundwater abstractions as a consequence of water quantity and / or quality effects.	Water resources – PWSs 41, 42 and 43.	Negligible Negative (Not Significant).	N/A	Minor Negative (Not Significant).	Not Significant.

15.2.2 Ecology and Nature Conservation

Embedded Mitigation

15.2.2.1 The technical assessment set out in Chapter 6: Ecology and Nature Conservation assumes the measures set out in Table 15.2.1 will be adopted during construction of the OnTI.

Table 15.2.3: Embedded Measures – Ecology and Nature Conservation	
Development Phase	Measures
Detailed design / pre-construction	<p>Regarding infrastructure and construction activities within the Cullen to Stake Ness Coast SSSI:</p> <ul style="list-style-type: none"> • Where practicable, the preferred technique for the installation of infrastructure is assumed to be HDD, as long as this reduces the overall impacts on all features (biological and geological). A HDD MS for works within the zone of influence (ZoI) of the SSSI will be drawn up in consultation with SNH; • Should it prove necessary to use installation techniques other than HDD (e.g. open cut trenching), consultation will be undertaken with SNH throughout the detailed design process regarding the most appropriate approach, as well as to agree siting of infrastructure and temporary works areas; • A botanical assessment (National Vegetation Classification [NVC]) will be undertaken within the ZoI along with surveys of the designated geological features and used to refine the exact construction methods and locations (both temporary and permanent) to avoid the best representative locations of the designated features. The potential to focus on areas where scrub encroachment (and / or other factors) is compromising the Favourable Conservation Status (FCS) of the SSSI will be considered along with a suite of bespoke mitigation and compensation measures if required; and • If works are required within the intertidal areas of the SSSI, further Phase 1 / Phase 2 intertidal surveys will be undertaken to ensure there are no effects upon SSSI features or other sensitive habitats and communities. <p>SESAs and / or LNCSs:</p> <p>Where the cable circuits are proposed to traverse LNCS / SESA designations, a detailed habitat, faunal and / or botanical assessment will be undertaken within the ZoI as agreed with relevant consultees. A MS will be developed highlighting any amended construction methods and / or location to ensure that site integrity will not be negatively affected.</p> <p>Habitats and Species Outside Designated Sites:</p> <p>Surveys of key ecological features will be undertaken to inform the final design of the OnTI. These will include any important habitats and / or species together with any legally protected habitats and / or species that may be directly or indirectly impacted by the proposed works. The survey methodologies will follow current accepted guidance at the time when they are carried out.</p>
Construction	<p>The HDD exit point and joint bay will be located above the MHWS to minimise loss and disturbance to the intertidal habitats and species.</p> <p>The Marine Pollution and Contingency Plan being produced for the Moray West offshore export cable corridor to cover the construction, operation and maintenance phases of the Moray West Offshore Wind Farm will apply to the intertidal area and will be followed. This will include planning for accidental spills, address all potential contaminant releases and include pollution event response protocols.</p>

Table 15.2.3: Embedded Measures – Ecology and Nature Conservation

Development Phase	Measures
	<p>Construction works that may affect important ecological features will be supervised by a project ecologist or Ecological Clerk of Works (ECoW) to be approved by the relevant authorities. Best practice mitigation measures will be applied to avoid or minimise potential impacts upon key ecological features and will include:</p> <ul style="list-style-type: none"> • Tool-box talks will be prepared and delivered by the ECoW as necessary to advise site workers of the presence of ecological features and the mitigation measures required; • Construction activities will be limited to clearly-defined working areas and vegetation clearance will be kept to a minimum. Where important habitat loss is unavoidable, habitat removal will be timed and phased to minimise potential effects, and compensatory habitat created, or existing habitat enhanced in advance of the works. Habitat connectivity will be retained wherever possible by maintaining links within and to green corridors such as tree lines, scrub and watercourses. Where effects on connectivity are unavoidable, it may be artificially supplemented (e.g. by the creation of temporary brush hedges); • General construction methods will aim to minimise noise, ground vibrations and disturbance where possible; • Dust control measures will be implemented. These will include: using a system of onsite vehicle routes; turning areas and loading areas with suitable speed limits and signage; sheeting of potential dust-generating materials being transported on lorries / vans to and within the site; using road sweepers as necessary; damping down access tracks during dry weather; and spraying of stockpiles in dry weather; • Where night works are unavoidable, the need for artificial lighting will be kept to a minimum and directed away from sensitive receptors. The ECoW may make recommendations revising the times of working hours at specific locations or times of year as appropriate to avoid disturbance of sensitive receptors; • Watercourse crossings will be designed according to best practice (CIRIA, 2010). The exact designs for culvert structures and other watercourse crossings will be the subject of consultation with SEPA, SNH and other relevant consultees prior to construction, and will be designed to allow the through passage of fish and otters, while maintaining existing flow conditions and river bed conditions within each watercourse; • All culverts will be fitted with mammal ledges to facilitate otter and water vole movement along ditches and through the culverts themselves; • Where in-channel culverts are to be installed, they will be specifically designed to be as narrow as possible and fit existing channel dimensions, thereby ensuring that flow conveyance is maintained or enhanced relative to current conditions. All culverts will also be fitted with mammal ledges to facilitate otter and water vole movement along ditches and through culverts. Connectivity will therefore only be severed temporally during the installation and removal works, which is short term; typically taking between one and five days; • Any construction activities within 10 m of a watercourse or waterbody will be conducted following a detailed MS. Where in-channel culverts are to be installed, they will be specifically designed to be as narrow as possible while fitting existing channel dimensions, thereby ensuring that flow conveyance is maintained or enhanced relative to current conditions; • Delineation of waterbodies to prevent plant / operatives will be implemented to avoid damaging riparian vegetation and disturbing associated species. A minimum stand off from all watercourses and waterbodies will be adopted

Table 15.2.3: Embedded Measures – Ecology and Nature Conservation

Development Phase	Measures
	<p>where possible on a site by site specific basis. Construction practices will comply with SEPA’s GPPs / PPGs) with a view to preventing the pollution of ground and surface waters.</p> <ul style="list-style-type: none"> • Stand-off buffers, temporary soakaways, appropriately discharged dewatering, soil stockpiles at appropriate locations, silt fencing and appropriate housekeeping measures to prevent pollution and siltation to water receptors; • Steep-sided excavations will be covered at night, or an escape ramp provided to prevent badgers / otter and other legally protected / important species falling in or becoming trapped; • A construction vehicle speed limit will be specified. Operatives will also be warned of the presence (or potential presence) of species in order to reduce the risk of death or injury to them through vehicle collision. The majority of construction work will be completed between sunset and sunrise, which limits the likelihood of fatalities; • HDD will be applied to pass the onshore cable circuits beneath Pitlurg Wood, with no felling of woodland being required; • The extent of any unnecessary habitat disturbance will be minimised by backfilling, where possible, material displaced as a result of cable circuit trenching and burial activities in order to promote recovery of habitats and species; • Areas of replacement planting / seeding (if required) will be undertaken where required for mitigation to offset removals and following agreement with landowners. Planting will be subject to an aftercare and monitoring programme for an agreed period, during which any plantings lost would be replaced. • If effects on important ecological habitats are unavoidable, and if appropriate to the habitat, top soil (and thus the associated seed bank) will be appropriately stored and either reinstated following works or used at an alternative suitable location to preserve that seed bank. For other habitats (e.g. sand dune), recolonization may be more appropriate. This will need to be monitored, with the option to replant should the regeneration not achieve pre-agreed standards as agreed with the relevant consultees; • Pre-construction verification check surveys will be undertaken for all protected species where potential significant effects or legal breaches could occur otherwise, considered to include (but not be limited to) otter, water vole, badger, red squirrel, pine marten and bats. Survey results and mitigation measures will be set out in MSs and be regularly reviewed throughout the construction phase to ensure that they continue to be applicable and fit for purpose. Where the presence of legally protected species is confirmed, the works will be designed to minimise potential impacts on each species according to a specific MS or licence from SNH (if required); • A minimum 30 m buffer will be applied to badger setts, otter holts, pine marten dens, red squirrel dreys or water vole burrows. The timing of any activities within this buffer that could be disturbing will be restricted to daylight hours where at all possible; • A minimum 100 m buffer will be applied to a Scottish wildcat dens or bat roosts during the detailed design process. The timings of any activities within this buffer that could be disturbing will be restricted to daylight hours where at all possible;

Table 15.2.3: Embedded Measures – Ecology and Nature Conservation

Development Phase	Measures
	<ul style="list-style-type: none"> • Where bat roosts within trees are lost and / or disturbed as a result of land take / land cover change such losses or disturbance will be facilitated via licensed mitigation where effects cannot be reduced sufficiently by non-licensed MSs; • A lighting strategy will be implemented to minimise the extent to which lighting associated with construction activities could potentially affect nocturnal (or predominantly nocturnal) species such as bats and otters. Measures incorporated will include: lights will be of the minimum brightness and / or power rating capable of performing the desired function; light fittings used will reduce the amount of light emitted above the horizontal; light will be positioned correctly and directed downwards; the direction of lights will seek to avoid spillage and will make use of motion sensors, avoiding light spill onto vegetated areas or potential bat roost sites. External lighting, including security lighting, will be minimised during the hours of darkness, where possible, particularly in the vicinity of any confirmed bat roosts. Should site compounds require security lighting, these will be on a timer and be motion sensitive. If the trees or structures that may potentially be used by bats will be affected by light, advice will be sought from a suitably qualified ecologist, and additional bat survey, assessment and mitigation may be required. Best practice guidelines will be followed during the works; • If reptiles are found in areas that will be affected by the OnTI, buffers will be determined on a case by case basis for a reptile hibernaculum. Any habitat removal work in these areas will be supervised by a suitably qualified ecologist, and carried out according to a MS. This will be designed to avoid the risk of injury to reptiles. In the unlikely event that reptiles need to be captured and translocated, they will be moved by a suitably qualified ecologist to newly created habitats on site, approved by a suitably qualified ecologist to provide good quality reptile habitat (e.g. with hibernacula, compost heaps, log / brash piles and basking areas); • Throughout construction, any steep-sided excavations will be covered at night, or an escape ramp provided to avoid protected species such as badger or otter falling in and becoming trapped; • Vegetation clearance that could affect breeding birds will be undertaken outside of the main breeding season (March to August inclusive) or, if this is not possible, areas to be cleared will be inspected by the ECoW or a qualified ornithologist no more than five days prior to clearance works. Any potential effects on bird nests will be mitigated by the adoption of specific mitigation measures. These will include pre-construction nest checks and adoption of appropriate species specific buffers. In some cases, there may be a requirement to install suitable screening around working areas. An ECoW / qualified ornithologist may be required to monitor the nesting birds during the working phase in certain areas and halt any significantly disturbing activities; and • Best practice measures will be employed to avoid / minimise the spread of non-native invasive species via pre-construction verification checks under the supervision of an appointed project ecologist or ECoW. A MS would include details of the recommended working methods to avoid such a spread of invasive species, including site hygiene and demarcation. Additionally, onsite biosecurity measures will be implemented to avoid / minimise the spread of agricultural pest / diseases (e.g. the use of appropriate biocides in wheel washes to ensure pests / diseases are not transferred between land parcels).

Summary of Potential Effects

15.2.2.2 The technical assessment of the OnTI's potential effects on ecology and nature conservation is summarised in Table 15.2.4.

Table 15.2.4: Summary of Potential Effects – Ecology and Nature Conservation					
Potential Effect	Receptors	Significance of Effect	Additional Mitigation Measures	Significance of Residual Effect	Cumulative Effect
Construction					
Pollution.	Den of Pitlurg SSSI: Upland birch woodland and valley fen.	Minor Negative (Not Significant).	N/A	Minor Negative (Not Significant).	Not Significant.
Land-take / land cover change	Cullen to Stake Ness SSSI: lowland dry, heath, saltmarsh, shingle and springs (including flushes).	Minor Negative (Not Significant).	N/A	Minor Negative (Not Significant).	Not Significant.
Pollution.		Negligible Negative (Not Significant).	N/A	Negligible Negative (Not Significant).	Not Significant.
Pollution.	Mill Wood SSSI: Upland birch woodland.	Minor Negative (Not Significant).	N/A	Minor Negative (Not Significant).	Not Significant.
Land-take / land cover change.	Cullen to Whitehills Coast LNCS: habitats.	Minor Negative (Not Significant).	N/A	Minor Negative (Not Significant).	Not Significant.
Pollution.		Minor Negative (Not Significant).	N/A	Minor Negative (Not Significant).	Not Significant.
Pollution.	SESAs: Logie Head, Redhythe Point, Craibstone Quarry and Mill Wood.	Minor Negative (Not Significant).	N/A	Minor negative. (Not Significant)	Not Significant.
Land take / land cover change.		Minor Negative (Not Significant).	N/A	Minor Negative (Not Significant).	Not Significant.
Land take / land cover change.	Woodland including: ancient woodland; Broadleaved woodland - semi-natural; Broadleaved woodland – plantation; and Mixed woodland –	Minor Negative (Not Significant).	N/A	Minor Negative (Not Significant).	Not Significant.

Table 15.2.4: Summary of Potential Effects – Ecology and Nature Conservation

Potential Effect	Receptors	Significance of Effect	Additional Mitigation Measures	Significance of Residual Effect	Cumulative Effect
	plantation and marshy grassland.				
Land take / land cover change.	G1: Standing water / G2: Running water.	Minor Negative (Not Significant).	N/A	Minor Negative (Not Significant).	Not Significant.
Pollution.		Minor Negative (Not Significant).	N/A	Minor Negative (Not Significant).	Not Significant.
Loss / disturbance.	Intertidal habitats and species.	Negligible to Minor Negative (Not Significant).	N/A	Negligible to Minor Negative (Not Significant).	Not Significant.
Increased suspended sediment concentrations / sediment disturbance.		Negligible to Minor Negative (Not Significant).	N/A	Negligible to Minor Negative (Not Significant).	Not Significant.
Land take / land cover change.	Barn owl.	Minor Negative (Not Significant).	N/A	Minor Negative (Not Significant).	Not Significant.
Increase in light, noise or vibration.		Minor Negative (Not Significant).	N/A	Minor Negative (Not Significant).	Not Significant.
Increased vehicle movements.		Minor Negative (Not Significant).	N/A	Minor Negative (Not Significant).	Not Significant.
Increase in light, noise or vibration.	Quail.	Minor Negative (Not Significant).	N/A	Minor Negative (Not Significant).	Not Significant.
Land take / land cover change.	Reptiles.	Minor Negative (Not Significant).	N/A	Minor Negative (Not Significant).	Not Significant.

Table 15.2.4: Summary of Potential Effects – Ecology and Nature Conservation

Potential Effect	Receptors	Significance of Effect	Additional Mitigation Measures	Significance of Residual Effect	Cumulative Effect
Increased vehicle movements.		Minor Negative (Not Significant).	N/A	Minor Negative (Not Significant).	Not Significant.
Land take / land cover change.	Badger.	Negligible Negative (Not Significant).	N/A	Negligible Negative (Not Significant).	Not Significant.
Increase in noise and vibration.		Negligible Negative (Not Significant).	N/A	Negligible Negative (Not Significant).	Not Significant.
Increased vehicle movements.		Negligible Negative (Not Significant).	N/A	Negligible Negative (Not Significant).	Not Significant.
Land take / land cover change.	Bat assemblage.	Minor Negative (Not Significant).	N/A	Minor Negative (Not Significant).	Not Significant.
Increase in light, noise or vibration.		Minor Negative (Not Significant).	N/A	Minor Negative (Not Significant).	Not Significant.
Land take / land cover change.	Water vole and otter.	Minor Negative (Not Significant).	N/A	Minor Negative (Not Significant).	Not Significant.
Pollution.		Minor Negative (Not Significant).	N/A	Minor Negative (Not Significant).	Not Significant.
Land take / land cover change.	Red squirrel and pine marten.	Minor Negative (Not Significant).	N/A	Minor Negative (Not Significant).	Not Significant.
Increase in noise and vibration.		Minor Negative (Not Significant).	N/A	Minor Negative (Not Significant).	Not Significant.
Increased vehicle movements.		Minor Negative (Not Significant).	N/A	Minor Negative (Not Significant).	Not Significant.

Table 15.2.4: Summary of Potential Effects – Ecology and Nature Conservation

Potential Effect	Receptors	Significance of Effect	Additional Mitigation Measures	Significance of Residual Effect	Cumulative Effect
Land take / land cover change.	Scottish wildcats.	Minor Negative (Not Significant).	N/A	Minor Negative (Not Significant).	Not Significant.
Increase in noise and vibration.		Minor Negative (Not Significant).	N/A	Minor Negative (Not Significant).	Not Significant.
Increased vehicle movements.		Minor Negative (Not Significant).	N/A	Minor Negative (Not Significant).	Not Significant.
Land take / land cover change.	Aquatic fauna.	Minor Negative (Not Significant).	N/A	Minor Negative (Not Significant).	Not Significant.
Pollution.		Minor Negative (Not Significant).	N/A	Minor Negative (Not Significant).	Not Significant.
Land take / land cover change.	Non-native invasive species.	Negligible Positive (Not Significant).	N/A	Negligible Positive (Not Significant).	Not Significant.
Operation and Maintenance					
Loss / disturbance.	Intertidal habitats and species.	Negligible to Minor Negative (Not Significant).	N/A	Negligible to Minor Negative (Not Significant).	Not Significant.
Increased suspended sediment concentrations / sediment disturbance.		Negligible to Minor Negative (Not Significant).	N/A	Negligible to Minor Negative (Not Significant).	Not Significant.
Decommissioning					
Loss / disturbance.	Intertidal habitats and species.	Negligible to Minor Negative	N/A	Negligible to Minor Negative	Not Significant.

Table 15.2.4: Summary of Potential Effects – Ecology and Nature Conservation

Potential Effect	Receptors	Significance of Effect	Additional Mitigation Measures	Significance of Residual Effect	Cumulative Effect
		(Not Significant).		(Not Significant).	
Increased suspended sediment concentrations / sediment disturbance.		Negligible to Minor Negative (Not Significant).	N/A	Negligible to Minor Negative (Not Significant).	Not Significant.

15.2.3 Landscape and Visual Amenity

Embedded Mitigation

15.2.3.1 An iterative design process has involved the consideration of landscape sensitivity and visual receptors with the aim of mitigating the effects on those more sensitive receptors, especially where visual amenity of residents is a concern. Regarding onshore substation site selection, this gave 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 Development, 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.

15.2.3.2 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 regarding mature trees, can provide a full or partial screen of substantial scale. The onshore substation site is enclosed to the north and west by coniferous woodland, which creates instant screening from these directions and establishes a substantial backdrop in views from the east and south.

15.2.3.3 Mitigation planting for the onshore substation will comprise the establishment of additional woodland belts principally to the east of the site. This will 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 will be set on smoothly profiled earthwork bunds to raise the overall height and extent of vertical screening. 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.

Summary of Potential Effects

15.2.3.4 The technical assessment of the OnTI's potential effects on landscape and visual amenity is summarised in Table 15.2.5.

Table 15.2.5: Summary of Potential Effects – Landscape and Visual Amenity					
Potential Effect	Receptors	Significance of Effect	Additional Mitigation Measures	Significance of Residual Effect	Cumulative Effect
Construction – Onshore Landfall Area					
Installation of infrastructure disturbing landscape elements.	Arable Farmland.	Not Significant.	N/A	Not Significant.	No effects.
Installation of infrastructure disturbing landscape character.	The Coast Landscape Character Type (LCT).	Significant within the localised area of the Onshore Landfall Area. Not Significant for the remainder of The Coast.	N/A	Significant within the localised area of the Onshore Landfall Area. Not Significant for the remainder of The Coast.	No effects.
Installation of infrastructure disturbing landscape designation.	North Aberdeenshire Coast Special Landscape Area (SLA).	Significant within the localised area of the Onshore Landfall Area. Not Significant for the remainder of the North Aberdeenshire Coast SLA.	N/A	Significant within the localised area of the Onshore Landfall Area. Not Significant for the remainder of the North Aberdeenshire Coast SLA.	No effects.
Visual effects.	Visitors to Findlater Castle.	Not Significant.	N/A	Not Significant.	No effects.
Visual effects.	Walkers along the coastal Core Paths.	Significant within the localised area of the Onshore Landfall Area. Not Significant for walkers along the remainder of these core paths.	N/A	Significant within the localised area of the Onshore Landfall Area. Not Significant for walkers along the remainder of these core paths.	No effects.
Visual effects.	Residents of Sandend.	Not Significant in respect of residents at the caravan park, The Bents and Seaview Road.	N/A	Not Significant in respect of residents at the caravan park, The Bents and Seaview Road.	No effects.

Table 15.2.5: Summary of Potential Effects – Landscape and Visual Amenity					
Potential Effect	Receptors	Significance of Effect	Additional Mitigation Measures	Significance of Residual Effect	Cumulative Effect
		Not Significant for residents in the area adjacent to the harbour. Not Significant for residents in relation to the Onshore Landfall Area to the west and east of Sandend Bay.		Not Significant for residents in the area adjacent to the harbour. Not Significant for residents in relation to the Onshore Landfall Area to the west and east of Sandend Bay.	
Visual effects.	Road users on A98.	Not Significant	N/A	Not Significant	No effects.
Visual effects.	Residents of individual properties northwards of the A98.	Not Significant.	N/A	Not Significant.	No effects.
Visual effects.	Users of Sandend Beach.	Not Significant.	N/A	Not Significant.	No effects.
Visual effects.	Users of Sandend Harbour and Breakwater.	Not Significant.	N/A	Not Significant.	No effects.
Construction – Onshore Cable Circuits					
Installation of infrastructure disturbing landscape elements.	Agricultural Land.	Not Significant.	N/A	Not Significant.	No effects.
Installation of infrastructure disturbing landscape elements.	Hedgerows.	Not Significant.	N/A	Not Significant.	No effects.
Installation of infrastructure disturbing landscape elements.	Trees / Tree Belts.	Not Significant.	N/A	Not Significant.	No effects.

Table 15.2.5: Summary of Potential Effects – Landscape and Visual Amenity

Potential Effect	Receptors	Significance of Effect	Additional Mitigation Measures	Significance of Residual Effect	Cumulative Effect
Installation of infrastructure disturbing landscape elements.	Coniferous Woodland.	Not Significant.	N/A	Not Significant.	No effects.
Installation of infrastructure disturbing landscape elements.	Ancient Woodland.	Not Significant.	N/A	Not Significant.	No effects.
Installation of infrastructure disturbing landscape elements.	Disused Railway.	Not Significant.	N/A	Not Significant.	No effects.
Installation of infrastructure disturbing landscape elements.	River Isla.	Not Significant.	N/A	Not Significant.	No effects.
Visual effects.	Road-users on major roads -A98, A95 and A96.	Not Significant.	N/A	Not Significant.	No effects.
Visual effects.	Road users on minor road networks.	Not Significant.	N/A	Not Significant.	No effects.
Visual effects.	Passengers on the Aberdeen to Inverness rail line.	Not Significant.	N/A	Not Significant.	No effects.
Visual effects.	Residents of farms and rural properties.	Not Significant.	N/A	Not Significant.	No effects.
Visual effects.	Residents of Fordyce.	Not Significant.	N/A	Not Significant.	No effects.
Visual effects.	Residents of Berryhillock.	Not Significant.	N/A	Not Significant.	No effects.
Visual effects.	Walkers on footpaths.	Not Significant.	N/A	Not Significant.	No effects.

Table 15.2.5: Summary of Potential Effects – Landscape and Visual Amenity

Potential Effect	Receptors	Significance of Effect	Additional Mitigation Measures	Significance of Residual Effect	Cumulative Effect
Visual effects.	Cyclists on National Cycle Route 1.	Not Significant.	N/A	Not Significant.	No effects.
Construction – Onshore Substation					
Installation of infrastructure disturbing landscape elements.	Agricultural Land.	Not Significant.	N/A	Not Significant.	No effects.
Installation of infrastructure disturbing landscape elements.	Coniferous Woodland.	Not Significant.	N/A	Not Significant.	No effects.
Installation of infrastructure disturbing landscape character.	Upland Farmland LCT.	Significant.	N/A	Significant.	No effects.
Installation of infrastructure disturbing landscape character.	Broad Forested Hills within Upland Farmland LCT.	Not Significant.	N/A	Not Significant.	No effects.
Installation of infrastructure disturbing landscape character.	Farmed Moorland Edge LCT.	Significant in localised areas. Not Significant in remaining parts of the LCT.	N/A	Significant in localised areas. Not Significant in remaining parts of the LCT.	No effects.
Installation of infrastructure disturbing landscape character.	Rolling Forested Hills LCT.	Not Significant.	N/A	Not Significant.	No effects.
Installation of infrastructure disturbing landscape character.	Valleys within Upland Farmland LCT.	Significant in the small strip 200-400 m south which will directly overlook the construction work.	N/A	Significant in the small strip 200-400 m south which will directly overlook the construction work.	No effects.

Table 15.2.5: Summary of Potential Effects – Landscape and Visual Amenity

Potential Effect	Receptors	Significance of Effect	Additional Mitigation Measures	Significance of Residual Effect	Cumulative Effect
		Not Significant in all other areas of the LCT.		Not Significant in all other areas of the LCT.	
Visual effects.	Viewpoint 1 – Minor road between A96 and B9115.	Not Significant.	N/A	Not Significant.	No effects.
Visual effects.	Viewpoint 2 – A96 southbound.	Not Significant.	N/A	Not Significant.	No effects.
Visual effects.	Viewpoint 3 – A96 northbound.	Significant.	N/A	Significant.	No effects.
Visual effects.	Viewpoint 4 – Access route to Brodie Cottage.	Significant.	N/A	Significant.	No effects.
Visual effects.	Viewpoint 5 – Minor road by A96.	Significant.	N/A	Significant.	No effects.
Visual effects.	Viewpoint 6 – Minor road west of Auchnaclach.	Significant.	N/A	Significant.	No effects.
Visual effects.	Viewpoint 7 – Minor road across Moss of Raemurrack.	Significant.	N/A	Significant.	No effects.
Sequential cumulative effects.	Road users on A96.	Significant between 0 to 15 years of operation for northbound road users. Not Significant between 0 - 15 years of operation for southbound road users. Not Significant from 15 years of operation.	N/A	Significant between 0 to 15 years of operation for northbound road users. Not significant between 0 - 15 years of operation for southbound road users. Not Significant from 15 years of operation.	No effects.

Table 15.2.5: Summary of Potential Effects – Landscape and Visual Amenity					
Potential Effect	Receptors	Significance of Effect	Additional Mitigation Measures	Significance of Residual Effect	Cumulative Effect
Cumulative effects on landscape character.	Upland Farmland LCT.	Significant.	N/A	Significant.	No effects.
Operation – Onshore Substation					
Effect on landscape character.	Landscape Character – Upland Farmland LCT.	Not Significant.	N/A	Not Significant.	No effects.
Effect on landscape character.	Landscape Character – Farmed Moorland Edge LCT.	Not Significant.	N/A	Not Significant.	No effects.
Effect on landscape character.	Landscape Character – Valleys within Upland Farmland LCT.	Not Significant.	N/A	Not Significant.	No effects.
Visual effects.	Viewpoint 1 – Minor road between A96 and B9115.	Not Significant.	N/A	Not Significant.	No effects.
Visual effects.	Viewpoint 2 – A96 southbound.	Not Significant.	N/A	Not Significant.	No effects.
Visual effects.	Viewpoint 3 – A96 northbound.	Significant between 0 to 15 years of operation. Not Significant from 15 years of operation.	N/A	Significant between 0 to 15 years of operation. Not Significant from 15 years of operation.	No effects.
Visual effects.	Viewpoint 4 – Access route to Brodie Cottage.	Significant between 0 to 20 years of operation. Not Significant from 15 years of operation.	N/A	Significant between 0 to 20 years of operation. Not Significant from 15 years of operation.	No effects.
Visual effects.	Viewpoint 5 – Minor road by A96.	Significant between 0 to 15 years of operation.	N/A	Significant between 0 to 15 years of operation.	No effects.

Table 15.2.5: Summary of Potential Effects – Landscape and Visual Amenity					
Potential Effect	Receptors	Significance of Effect	Additional Mitigation Measures	Significance of Residual Effect	Cumulative Effect
		Not Significant from 15 years of operation.		Not Significant from 15 years of operation.	
Visual effects.	Viewpoint 6 – Minor road west of Auchnaclach.	Significant between 0 to 15 years of operation. Not Significant from 15 years of operation.	N/A	Significant between 0 to 15 years of operation. Not Significant from 15 years of operation.	No effects.
Visual effects.	Viewpoint 7 – Minor road across Moss of Raemurrack.	Significant between 0 to 15 years of operation. Not Significant from 15 years of operation.	N/A	Significant between 0 to 15 years of operation. Not Significant from 15 years of operation.	No effects.
Sequential cumulative effects.	Road users on A96.	Significant between 0 to 15 years of operation. Not Significant from 15 years of operation.	N/A	Significant between 0 to 15 years of operation. Not Significant from 15 years of operation.	No effects.
Cumulative effects on landscape character.	Upland Farmland LCT.	Significant between 0 to 15 years of operation. Not Significant from 15 years of operation.	N/A	Significant between 0 to 15 years of operation. Not Significant from 15 years of operation.	No effects.

15.2.4 *The Historic Environment*

Embedded Mitigation

- 15.2.4.1 Detailed design of the OnTI, particularly design of a route for the onshore cable circuits and the identification of construction techniques, will account for the location of heritage assets. In the case of designated assets, these will be avoided when identifying locations for infrastructure.
- 15.2.4.2 In the case of non-designated assets, detailed design will ensure the OnTI avoids these where practicable. Where this is not practicable, for instance due to the presence of other environmental constraints, additional mitigation measures will be required (see Table 15.2.6).

Summary of Potential Effects

- 15.2.4.3 The technical assessment of the OnTI's potential effects on the historic environment is summarised in Table 15.2.6.

Table 15.2.6: Summary of Potential Effects – The Historic Environment					
Potential Effect	Receptors	Significance of Effect	Additional Mitigation Measures	Significance of Residual Effect	Cumulative Effect
Construction					
Direct, partial or whole loss of assets.	Known non-designated assets.	Moderate Negative (Significant).	Where the avoidance of assets through design is not possible, a programme of archaeological mitigation including recording, monitoring and, or excavation as appropriate will be undertaken in accordance with a Written Scheme of Investigation to be prepared in consultation with the Aberdeenshire Council Archaeology Service, following confirmation of detailed construction design. Detailed design or construction methods are set out for each asset in Appendix 8.2, and are summarised for the different groups of assets within Table 8.6.1.	Minor to Negligible Negative (Not Significant).	N/A
Direct, partial or whole loss of assets.	Unknown assets – remains dating to the Prehistoric and Iron Age periods.	Major to Moderate Negative (Significant).		Minor Negative (Not Significant).	N/A
Direct, partial or whole loss of assets.	Unknown assets – remains dating to the Roman period.	Major to Moderate Negative (Significant).		Minor Negative (Not Significant).	N/A
Direct, partial or whole loss of assets.	Unknown assets – remains dating to the medieval period.	Moderate Negative (Significant).		Minor to Negligible Negative (Not Significant).	N/A
Direct, partial or whole loss of assets.	Unknown assets – remains dating to the Post medieval.	Moderate Negative (Significant).		Minor to Negligible Negative (Not Significant).	N/A
Operation and Maintenance					
Indirect change to setting of designated assets from above ground	Category B listed building – Edintore House (LB 8703).	Minor to Negligible Negative (Not Significant).	N/A	Minor to Negligible Negative (Not Significant).	No effects.

Table 15.2.6: Summary of Potential Effects – The Historic Environment					
Potential Effect	Receptors	Significance of Effect	Additional Mitigation Measures	Significance of Residual Effect	Cumulative Effect
infrastructure at onshore substation site.					
Decommissioning					
Scoped out.					

15.2.5 *Traffic and Transport*

Embedded Mitigation

15.2.5.1 The technical assessment set out in Chapter 9: Traffic and Transport assumes the following measures will be adopted during construction of the OnTI:

- Suitable access points and optimum routes and times for construction traffic movements;
- Reducing disruption to traffic in built up areas and along key pinch points through the adoption of haul routes and the use of HDD to install the onshore cable circuits beneath major transport routes;
- Consolidating Heavy Goods Vehicle (HGV) and employee movements at a consolidation area close to a main road (such as at the construction compounds) to reduce vehicle movements along more sensitive local routes;
- Implementation of a Construction Traffic Management Plan (CTMP) and Travel Plan to manage road works, employee and HGV movements. The plans will also set out sensitive times to be avoided, which routes to use and strategies to continually monitor and enforce;
- Management measures to limit impacts on Core Paths and cycle routes; and
- Repairing any damage caused to existing roads due to construction traffic movements.

Summary of Potential Effects

15.2.5.2 The technical assessment of the OnTI's potential effects on traffic and transport is summarised in Table 15.2.7.

Table 15.2.7: Summary of Potential Effects – Traffic and Transport					
Potential Effect	Receptors	Significance of Effect	Additional Mitigation Measures	Significance of Residual Effect	Cumulative Effect
Construction					
Traffic increases causing delay to drivers.	Local population.	Moderate Negative (Not Significant).	N/A	Moderate Negative (Not Significant).	Moderate Negative (Not Significant).
Severance and disruption to pedestrian amenity.		Moderate Negative (Not Significant).	N/A	Moderate Negative (Not Significant).	Moderate Negative (Not Significant).
Disruption to the use of core paths.		Minor / Moderate Negative (Not Significant).	N/A	Minor / Moderate Negative (Not Significant).	Moderate Negative (Not Significant).
Traffic increases causing delay to public transport.		Minor Negative (Not Significant).	N/A	Minor Negative (Not Significant).	Moderate Negative (Not Significant).
Operation and Maintenance					
Scoped out.					
Decommissioning					
Considered likely to be no greater than construction effects.					

15.2.6 Noise and Vibration

Embedded Mitigation

- 15.2.6.1 The relevant construction documentation prepared for the OnTI will include a section on noise and vibration management incorporating best practice measures.
- 15.2.6.2 It is standard practice that design measures (e.g. enclosure) are applied to onshore substation equipment. However, for the purposes of the assessment, such measures have not been considered as embedded mitigation as the form they will take will not be confirmed until the detailed planning and design stages (see Table 15.2.8).

Summary of Potential Effects

- 15.2.6.3 The technical assessment of the OnTI's potential noise and vibration effects is summarised in Table 15.2.8.

Table 15.2.8: Summary of Potential Effects – Noise and Vibration

Potential Effect	Receptors	Significance of Effect	Additional Mitigation Measures	Significance of Residual Effect	Cumulative Effect
Construction					
Noise generated by construction activities at the onshore substation site.	Local population.	Minor Negative (Not Significant).	N/A	Minor Negative (Not Significant).	Not Significant.
Noise generated by construction activities to install the onshore cable circuits.		Minor Negative (Not Significant).	N/A	Minor Negative (Not Significant).	Not Significant.
Noise generated at the locations of HDD activities (daytime).		Minor Negative (Not Significant).	Detailed assessment of works once locations known, use of screening if required.	Minor Negative (Not Significant).	Not Significant.
Noise generated at the locations of HDD activities (nighttime).		Moderate Negative (Significant).	Detailed assessment of works once locations known, use of screening if required. Careful timing of works if required.	Minor Negative (Not Significant).	Not Significant.
Noise generated by construction traffic.		Minor Negative (Not Significant).	N/A	Minor Negative (Not Significant).	Not Significant.
Vibration disturbance by piling at the onshore substation site, or at the locations of HDD activities.		Minor Negative (Not Significant).	N/A	Minor Negative (Not Significant).	Not Significant.

Table 15.2.8: Summary of Potential Effects – Noise and Vibration					
Potential Effect	Receptors	Significance of Effect	Additional Mitigation Measures	Significance of Residual Effect	Cumulative Effect
Operation and Maintenance					
Noise generated by the operation of equipment at the onshore substation site.	Local population.	Major (Significant).	Sound reduction through use of enclosures, barriers, installation of low noise equipment.	Minor Negative (Not Significant).	Not Significant.
Decommissioning					
Noise generated by decommissioning activities at the onshore substation site.	Local population.	Minor Negative (Not Significant).	N/A	Minor Negative (Not Significant).	Not Significant.
Vibration disturbance by decommissioning activities substation site.		Minor Negative (Not Significant).	N/A	Minor Negative (Not Significant).	Not Significant.

15.2.7 Air Quality

Embedded Mitigation

15.2.7.1 The technical assessment presented in Chapter 11: Air Quality assumes the following measures will be adopted during construction of the OnTI:

- A Construction Travel Plan and CTMP will be set in place to reduce the impact of dust in the vicinity of the OnTI (see Chapter 9: Traffic and Transport);
- Institute of Air Quality Management (IAQM) (2014) guidance standard measures for mitigating the impacts of dust during construction and demolition will be followed; and
- The principles of 'good practice' will be applied to the OnTI, as set out in Chapter 5 of the Environmental Protection UK (EPUK) and IAQM guidance (2017). The OnTI does not contravene any Air Quality Action Plans or render any of the measures unworkable. The OnTI will not create a new 'street canyon' or building configuration that inhibits effective pollution dispersion. Delivering sustainable development is a key theme of the application. The OnTI will be designed to minimise public exposure to pollution sources.

Summary of Potential Effects

15.2.7.2 The technical assessment of the OnTI's potential effects on air quality is summarised in Table 15.2.9.

Table 15.2.9: Summary of Potential Effects – Air Quality					
Potential Effect	Receptors	Significance of Effect	Additional Mitigation Measures	Significance of Residual Effect	Cumulative Effect
Construction					
Construction dust.	Dust soiling.	N/A	‘Highly recommended’ site-specific mitigation measures as identified in EPUK and IAQM (2017) as appropriate.	Negligible Negative (Not Significant).	N/A
Construction dust.	Human health.	N/A	‘Highly recommended’ site-specific mitigation measures as identified in EPUK and IAQM (2017) as appropriate.	Negligible Negative (Not Significant).	N/A
Construction dust.	Mill Wood SSSI / Den of Pitlurg SSSI.	N/A	‘Highly recommended’ site-specific mitigation measures as identified in EPUK and IAQM (2017) as appropriate.	Negligible Negative (Not Significant).	N/A
Construction dust.	Cullen to Stake Ness Coast SSSI.	N/A	‘Highly recommended’ site-specific mitigation measures as identified in EPUK and IAQM (2017) as appropriate.	Negligible Negative (Not Significant).	N/A
Traffic based pollutants.	Human receptors.	Negligible Negative (Not Significant).	None.	Negligible Negative (Not Significant).	N/A
Traffic pollutants.	Ecology receptors.	Negligible Negative (Not Significant).	None.	Negligible Negative (Not Significant).	N/A

Table 15.2.9: Summary of Potential Effects – Air Quality					
Potential Effect	Receptors	Significance of Effect	Additional Mitigation Measures	Significance of Residual Effect	Cumulative Effect
Operation and Maintenance					
Scoped out.					
Decommissioning					
Demolition dust.	Dust soiling.	N/A	‘Highly recommended’ site-specific mitigation measures as identified in EPUK and IAQM (2017) as appropriate.	Negligible Negative (Not Significant).	N/A
Demolition dust impacts.	Human receptors.	N/A	‘Highly recommended’ site-specific mitigation measures as identified in EPUK and IAQM (2017) as appropriate.	Negligible Negative (Not Significant).	N/A
Demolition dust impacts.	Den of Pitlurg SSSI.	N/A	‘Highly recommended’ site-specific mitigation measures as identified in EPUK and IAQM (2017) as appropriate.	Negligible Negative (Not Significant).	N/A

15.2.8 *Socio-Economics, Tourism and Recreation*

Embedded Mitigation

15.2.8.1 The working method, as set out in Chapter 2: The Proposed Development, includes a number of elements that constitute embedded mitigation with respect to recreation:

- The PAB was chosen to allow for the avoidance of sensitive land uses, such as those for recreation;
- The working width for installation of the onshore cable circuits will generally be 30 m (wider in some locations for technical necessity), restricting the need for lengthy diversions;
- To prevent road closures, a temporary road or diversion will be constructed / implemented where the onshore cable circuits are to be installed across a recreational asset, such as where the cable crosses under core path KT04 near Balloch Wood, and at the National Cycle Network (NCN)1 crossing west of Fordyce. Where a recreational asset is to be crossed using open cut techniques, traffic flow will be maintained with one lane of the road remaining open and under signal control. Once the cable ducts have been installed, all roads will be reinstated;
- During operation the infrastructure is expected to be largely maintenance free with negligible impact upon recreation resources; and
- At decommissioning, it is anticipated that all underground equipment and the onshore substation foundations will remain in-situ. This will minimise any impact on recreation resources.

Summary of Potential Effects

15.2.8.2 The technical assessment of the OnTI's potential socio-economic effects is summarised in Table 15.2.10.

Table 15.2.10: Summary of Potential Effects – Socio-Economics

Potential Effect	Receptors	Significance of Effect	Additional Mitigation Measures	Significance of Residual Effect	Cumulative Effect
Construction					
Creation of direct and indirect employment.	Local economy. Scottish economy.	Minor Positive (Not Significant).	N/A	Minor Positive (Not Significant).	No effects.
Creation of direct and indirect Gross Value Added.	Local economy. Scottish economy.	Minor Positive (Not Significant).	N/A	Minor Positive (Not Significant).	No effects.
Effects on the volume or value of Tourism.	Local Study Area. Localised PAB area.	Minor (Not Significant). Moderate Positive (Significant)	N/A N/A	Minor (Not Significant). Moderate Positive (Significant)	No effects. No effects.
Obstruction of access routes.	Fordyce - Sandend core path.	Minor Negative (Not Significant).	Provision of alternative routes.	Minor Negative (Not Significant).	No effects.
	Sandend - Portsoy core path.	Minor Negative (Not Significant)	Temporary provision of alternative route.	Minor Negative (Not Significant).	No effects.
	Core path KT04.	Minor Negative (Not Significant)	Temporary provision of alternative routes.	Minor Negative (Not Significant).	No effects.
	NCN1.	Minor Negative (Not Significant)	Temporary provision of alternative routes.	Minor Negative (Not Significant).	No effects.
	The Old Military Road.	Minor Negative (Not Significant)	Temporary provision of alternative routes.	Minor Negative (Not Significant).	No effects.
Operation and Maintenance					
No effects.					

Table 15.2.10: Summary of Potential Effects – Socio-Economics					
Potential Effect	Receptors	Significance of Effect	Additional Mitigation Measures	Significance of Residual Effect	Cumulative Effect
Decommissioning					
No effects.					

15.2.9 Land Use

Embedded Mitigation

15.2.9.1 The route and site selection process applied to the identification of the Planning Application Boundary (PAB), has taken into consideration the various land uses and has incorporated embedded mitigation in order to minimise any potential effects that may arise on the land use receptors. These embedded measures include:

- The location of the onshore substation has been chosen in order to maximise natural woodland screening of the onshore substation and avoid any loss of woodland at Pitlurg Wood. The onshore cable circuits from the onshore substation to Blackhillock substation will be installed underneath Pitlurg Wood (using HDD) so that there is no loss, or severance, of woodland;
- The PAB has been identified so as to avoid the 'Cotton Hill' Safeguarded Area / Area of Search for Minerals Development;
- Sections of the initially identified onshore cable corridor have been altered or realigned within the PAB in order to allow improved options for cable circuit installation to be placed around developed land, or moved in order to follow existing wayleaves or edges of woodland, field boundaries or natural features such as watercourses or contours in order to avoid or reduce severance of or disruption to these features;
- Sections of the initially identified onshore cable corridor have been removed from the PAB in order to avoid designated sites (e.g. Mill Wood SSSI or woodland listed on the AWI); and
- The defined settlements and rural groupings of Sandend, Fordyce, Kirkton of Deskford and Berryhillock have been excluded from the PAB.

Additional Mitigation

15.2.9.2 The assessment identified a small number of potentially significant effects. The following additional mitigation measures are proposed to reduce these:

- The process of identifying the cable circuit route at detailed design stage will be cognisant of existing and future land uses. Efforts will be made to avoid sensitive land uses (such as Class 3.1 arable agriculture land) and land take will be limited where practicable and will consider other environmental and technical constraints, e.g. routing the onshore cable corridor to follow field boundaries or through existing wayleaves between blocks of commercial forestry or around areas of valuable arable agricultural land where possible;
- Consultation with landowners and other interested parties (e.g. tenants) will take place to determine the preferred location for cable circuits to be placed in order to limit severance or disruption to current land use practices;
- Large-scale tree felling will be avoided. A buffer area of at least 6 m will be provided between any areas of woodland or trees and any construction activities. This buffer will be extended further to a distance of 30 m wherever possible or feasible; and
- Appropriate stakeholder consultation and pollution prevention measures will be undertaken and put in place to minimise temporary effects arising from the use of open trenching techniques at watercourses (as set out within Chapter 5: Hydrology, Hydrogeology and Geology and Chapter 6: Ecology and Nature Conservation), with particular consideration of migratory fish populations that may be present.

Summary of Potential Effects

15.2.9.3 The technical assessment of the OnTI's potential land use effects is summarised in Table 15.2.11.

Table 15.2.11: Summary of Potential Effects – Land Use

Potential Effect	Receptors	Significance of Effect	Additional Mitigation Measures	Significance of Residual Effect	Cumulative Effect
Construction					
Temporary disturbance / change in land use.	Agricultural land.	Moderate Negative (Classes 3.1) (Significant). Minor Negative (Class 3.2 – 4.2) (Not Significant). Minor Negative (Class 5.3 – 6.2) (Not Significant).	Consultation and sensitive routing of the onshore cable circuits at detailed design.	Minor Negative (Classes 3.1) (Not Significant). Minor Negative (Class 3.2 – 4.2) (Not Significant). Minor Negative (Class 5.3 – 6.2) (Not Significant).	N/A
Temporary disturbance / change in land use.	Forestry.	Minor Negative (ancient, broadleaved and scattered woodland) (Not Significant). Negligible to Minor Negative (coniferous woodland) (Not Significant).	Large-scale tree felling will be avoided. A buffer area of at least 6 m will be provided between any areas of woodland or trees and any construction activities.	Minor Negative (ancient, broadleaved and scattered woodland) (Not Significant). Negligible Negative (coniferous woodland) (Not Significant).	N/A
Temporary disturbance / change in land use.	Watercourses.	Minor Negative (Not Significant).	Application of pollution prevention measures, stakeholder consultation and selection of most appropriate construction technique.	Minor Negative (Not Significant).	N/A

Table 15.2.11: Summary of Potential Effects – Land Use					
Potential Effect	Receptors	Significance of Effect	Additional Mitigation Measures	Significance of Residual Effect	Cumulative Effect
Operation and Maintenance					
Permanent change in land use.	Agricultural land and watercourses.	Negligible to Minor Negative (cable) (Not Significant). Minor Negative (onshore substation) (Not Significant).	Land use will primarily be returned to baseline condition prior to construction, with the exception of the substation where land use will alter but involve a small area of land take (6 ha: 0.2% of Class 3.2 land within PAB).	Negligible to Minor Negative (cable) (Not Significant). Minor Negative (onshore substation) (Not Significant).	N/A
Permanent change in land use.	Forestry.	Negligible to Minor Negative (Not Significant).	N/A	Negligible to Minor Negative (Not Significant).	N/A
Decommissioning					
Change in land use.	Agricultural land and watercourses.	Negligible to Minor Negative (cable) (Not Significant). Minor Negative (onshore substation) (Not Significant).	Onshore substation will either be retained or land use will likely revert back from built up to agricultural if substation is removed.	Negligible to Minor Negative (cable) (Not Significant). Minor Negative (onshore substation) (Not Significant).	N/A

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