BERWICK BANK WIND FARM ONSHORE EIA REPORT AND EIA ADDENDUM

NON-TECHNICAL SUMMARY (NTS)

ANNOTATED VERSION

August 2023

Document Status

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FIGURES

ABBREVIATIONS & ACRONYMS

CEMP	Construction Environmental Management Plan
dB	decibel
ECML	East Coast Main Line
EIA	Environmental Impact Assessment
ELC	East Lothian Council
FTE	Full Time Equivalent
GVA	Gross Value Added
ha	hectare
HDD	Horizontal Directional Drilling
km	kilometre
LNCS	Local Nature Conservation Site
LVIA	Landscape And Visual Impact Assessment
m	metre
OnTW	Onshore Transmission Works
PPP	Planning Permission in Principle
NTS	Non-Technical Summary
SEPA	Scottish Environment Protection Agency
SPEN	Scottish Power Energy Networks
SSER	SSE Renewables Ltd
SSSI	Site of Special Scientific Interest
SuDS	Sustainable Drainage System

PREAMBLE

This August 2023 version of the Non-Technical Summary (NTS) (version 4.1) contains highlighted text. Any text which is highlighted has been added to the NTS since the previous March 2023 issue (version 3).

1. INTRODUCTION

1.1. BACKGROUND

1. This document is the Non-Technical Summary (NTS) of the Onshore Environmental Impact Assessment (EIA) Report which accompanies an application made by Berwick Bank Wind Farm Limited (hereafter referred to as "the Applicant") a wholly owned subsidiary of SSE Renewables Limited ("SSER").

2. The Applicant is submitting a planning application to East Lothian Council (ELC) under the Town and Country Planning Act (Scotland), to construct, operate and maintain, and decommission onshore grid connection infrastructure ("the Proposed Development") associated with the proposed Berwick Bank Wind Farm ("the Project"). The Proposed Development is situated near Torness and the village of Innerwick, south-east of Dunbar, East Lothian, Scotland. The location is shown on Figure 1 below. A separate offshore EIA Report has been submitted to support the applications for the offshore consents, licences, and permissions under the Section 36 of the Electricity Act 1989, the Marine (Scotland) Act 2010 and the Marine and Coastal Access Act 2009.

3. Renewable energy is a key factor in helping Scotland reach its target of Net Zero by 2045. The Project as a whole will make a meaningful contribution to the national targets for the generation of renewable energy and reduction in greenhouse gas emissions.

1.2. PURPOSE OF THE ONSHORE EIA REPORT

4. ITPEnergised was appointed by the Applicant to assess the environmental impacts of the Proposed Development in accordance with The Town and Country Planning (Environmental Impact Assessment) (Scotland) Regulations 2017.

5. The Environmental Impact Assessment (EIA) process is reported in an EIA Report, which describes the design iteration process and methods used to assess the beneficial and adverse environmental impacts predicted to result from the construction, operation and maintenance, and decommissioning of the Proposed Development. It also sets out mitigation measures designed to prevent, reduce and, if possible, offset any significant adverse environmental impacts. An assessment of residual effects, those expected to remain following implementation of mitigation measures, is also presented.

6. Following the submission of the application for Planning Permission in Principle (PPP) in March 2023, the Applicant has undertaken further work to address consultation responses. This further work has been undertaken by the Applicant and the results are provided in the form of an Addendum to the Onshore EIA Report in support of the Application. The Addendum includes additional information pertaining to the following:

   - Cumulative Effects Assessment
   - Flood Risk Assessment
   - Ecology, including Biodiversity Net Gain
   - Landscape Mitigation Plan

7. The information included in the Onshore EIA and Onshore EIA Addendum is summarised in this NTS.This document is intended to present a summary of the findings of the Onshore EIA Report and the EIA Report Addendum in non-technical language.

1.3. AVAILABILITY OF THE ONSHORE EIA REPORT

8. Physical hardcopies of the Onshore EIA Report will be available for public viewing during the consultation period at suitable locations in agreement with ELC, the location of which will be advertised via a public notice at the time of submission.

9. Hard copies of this Non-Technical Summary are available free of charge from the Applicant (contact: berwickbank@sse.com). Hard copies of the full Onshore EIA Report are available for £600.

10. Electronic copies of the Onshore (as well as the Offshore) EIA Report can be accessed at www.berwickbank.com. Electronic copies of the Onshore EIA Report can also be accessed, and representations submitted online via the ELC planning portal: https://pa.eastlothian.gov.uk/online-applications/.

1.4. REPRESENTATIONS TO THE APPLICATION

11. Any representations to the Town and Country Planning application should be made directly to East Lothian Council as follows:

East Lothian Council
John Muir House
Brewery Park
Haddington
EH41 3HA

Email: environment@eastlothian.gov.uk Web: eastlothian.gov.uk

2. SITE LOCATION AND DESCRIPTION

12. The Proposed Development site is situated near Torness and the village of Innerwick, south-east of Dunbar, East Lothian, Scotland. Figure 1 below shows the location of the planning application boundary ("the site"). The site is approximately 598 hectares (ha) in size. Further details on the site location can be found in Volume 1, Chapter 1 of the Onshore EIA Report.

13. The proposed cable landfall is located north-west of Torness Power Station and Skateraw harbour. The onshore cable corridor runs from the landfall for approximately 1.5 km, connecting to new electricity transmission buildings, located north-east of Innerwick. The electricity transmission buildings connect to the proposed Scottish Power Energy Network (SPEN) Branxton substation to the south-east via a continuation of the onshore cable corridor for approximately 1.8 km.

14. The extent of the site runs from the settlement of Branxton in the south, Bilsdean in the south-east, the coastline at Skateraw and Torness in the north, Oxwell Mains Cement Works and Quarry in the north-west, and Fouracres in the west.

15. The land on which the site is located is predominantly agricultural land, connected by small local roads and tracks. The A1 trunk road and East Coast Main Line (ECML) railway cut through the site in a north-west to south-east direction running parallel to the coast.

16. The Proposed Development site at the coastline extends down to Mean Low Water Springs. This overlaps with the site boundary of the Offshore Works of the Project, which extends up to Mean High Water Springs. This area of overlap between Mean Low and High Water Springs is referred to as the 'intertidal area'. Further detail on the approach taken to the assessment in this area due to the overlap in consenting jurisdiction is provided within Volume 1, Chapter 2 of the Onshore EIA Report.

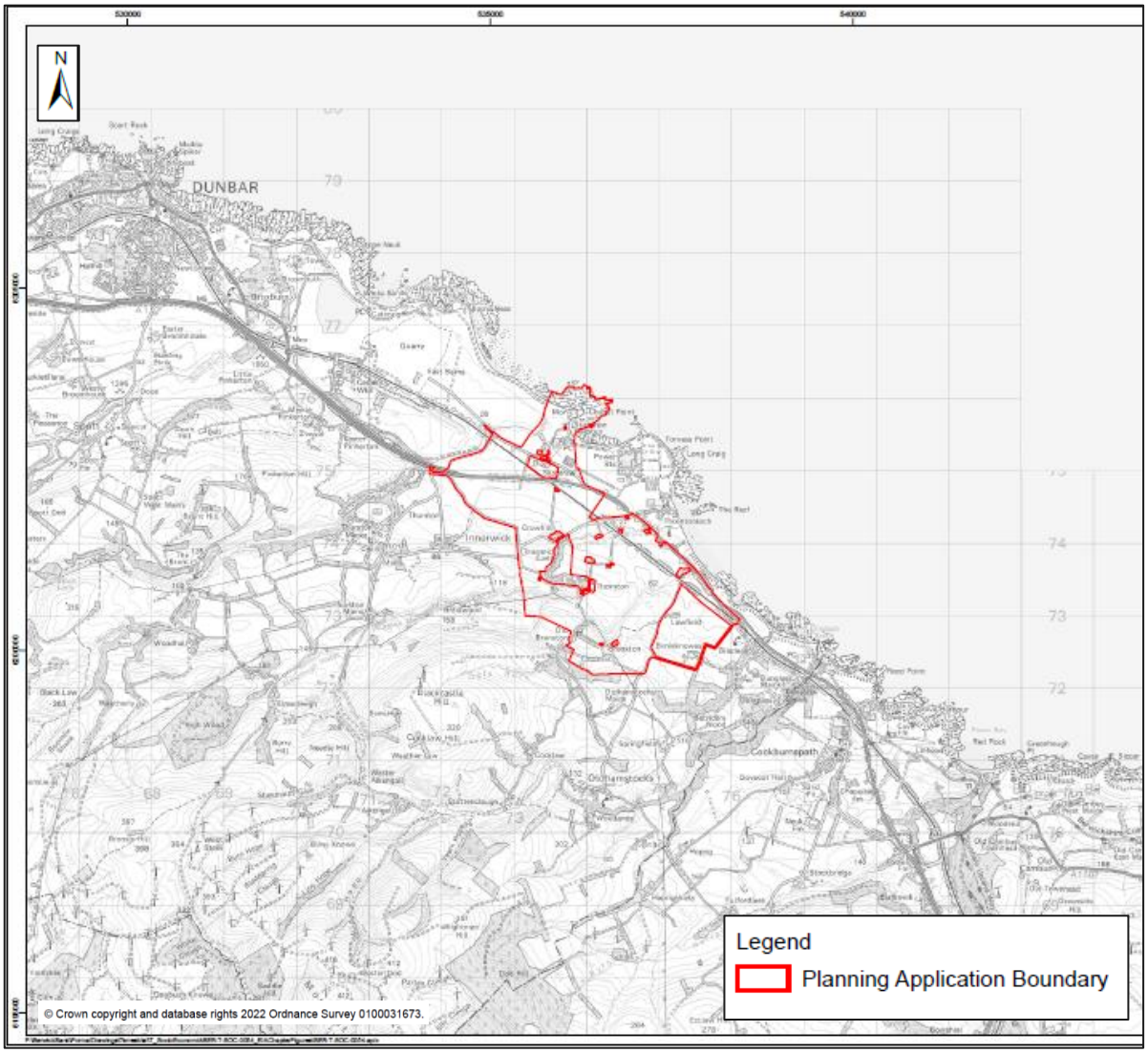

Figure 1 - Site Location Plan

3. SITE SELECTION AND DESIGN

3.1. SITE SELECTION

17. The site selection process undertaken by the Applicant which has led to the Proposed Development has been based on a grid connection agreement with National Grid Electricity System Operator for an onshore connection point approximately 8 km south of Dunbar, near to the existing SPEN grid infrastructure. There is a strong technical and environmental preference to bring the power generated by the offshore wind farm to landfall as close as possible to the onshore grid connection.

18. Alternatives have been considered in relation to the following infrastructure components of the Proposed Development:

- Cable landfall;
- Onshore cable route; and
- Onshore substation location.

19. In identifying a suitable site, the Applicant considered several landfall and substation options within the vicinity of Branxton. These were evaluated from an engineering, consents (planning and environment), costs, and land use perspective. Further details of the two-stage site selection process are provided within Volume 1, Chapter 4 of the Onshore EIA Report.

20. Once the preferred cable landfall, cable corridor, and onshore substation locations were established, further design work was undertaken to minimise, as far as possible, the impact on the environment.

3.2. DESIGN PROCESS

21. As part of the EIA process design iterations were prepared and considered for the landfall and substation locations and on-site infrastructure. The following principles were considered during the design iterations made by the Applicant to ensure that the final design of the Proposed Development was the most suitable for the site:

- Landscape and visual context;
- Suitable terrain and topography;
- Proximity to the grid connection at Branxton;
- The pre-existing presence of man-made structures in the local environment;
- Feasibility of access;
- Minimise proximity to residential properties;
- No international or national statutory designations for landscape or nature conservation within or in close proximity to the site;
- Appropriate ground conditions; and
- Availability and size of land parcels.

3.3. OUTCOME

22. The screening process identified Skateraw beach as the preferred landfall location and land north-east of Innerwick as the preferred onshore substation location due to more favourable environmental, engineering and land considerations.

23. Further information on the screening and shortlisting process is given in Volume 1, Chapter 4 of the Onshore EIA Report.

4. THE PROPOSED DEVELOPMENT

24. Berwick Bank Wind Farm ("the Project") includes both the offshore and onshore infrastructure required to generate and transmit electricity from the offshore wind turbine array area to the grid connection point located onshore at Branxton, south-west of Torness Power Station. The Proposed Development referred to within this report is the Onshore Transmission Works (OnTW) required to enable the grid connection for the Berwick Bank Wind Farm.

25. The Proposed Development layout is shown within Figure 2 below and will comprise:

- a landfall location, where the offshore cables make landfall;
- new electricity transmission buildings;
- onshore cables within a cable corridor between the landfall and the new onshore substation, and between the new onshore substation and the SPEN Branxton grid substation; and
- associated ancillary infrastructure to facilitate construction works, including temporary construction compounds and access tracks.

26. Further details of each element are provided below. Full details can be found within Volume 1, Chapter 5 of the Onshore EIA Report.

27. The electricity transmission buildings will either be a high voltage alternating current (HVAC) substation comprising of control buildings, internal and external HV equipment and Gas Insulated Switchgear; or a high voltage direct current (HVDC) converter substation comprising of converter buildings, HV internal and external equipment and Gas Insulated Switchgear. The assessments within the EIA have considered the parameters of either design scenario. For the purposes of the EIA Report, the electricity transmission buildings are hereafter referred to as the "onshore substation", which encompasses either option of a substation or converter substation.

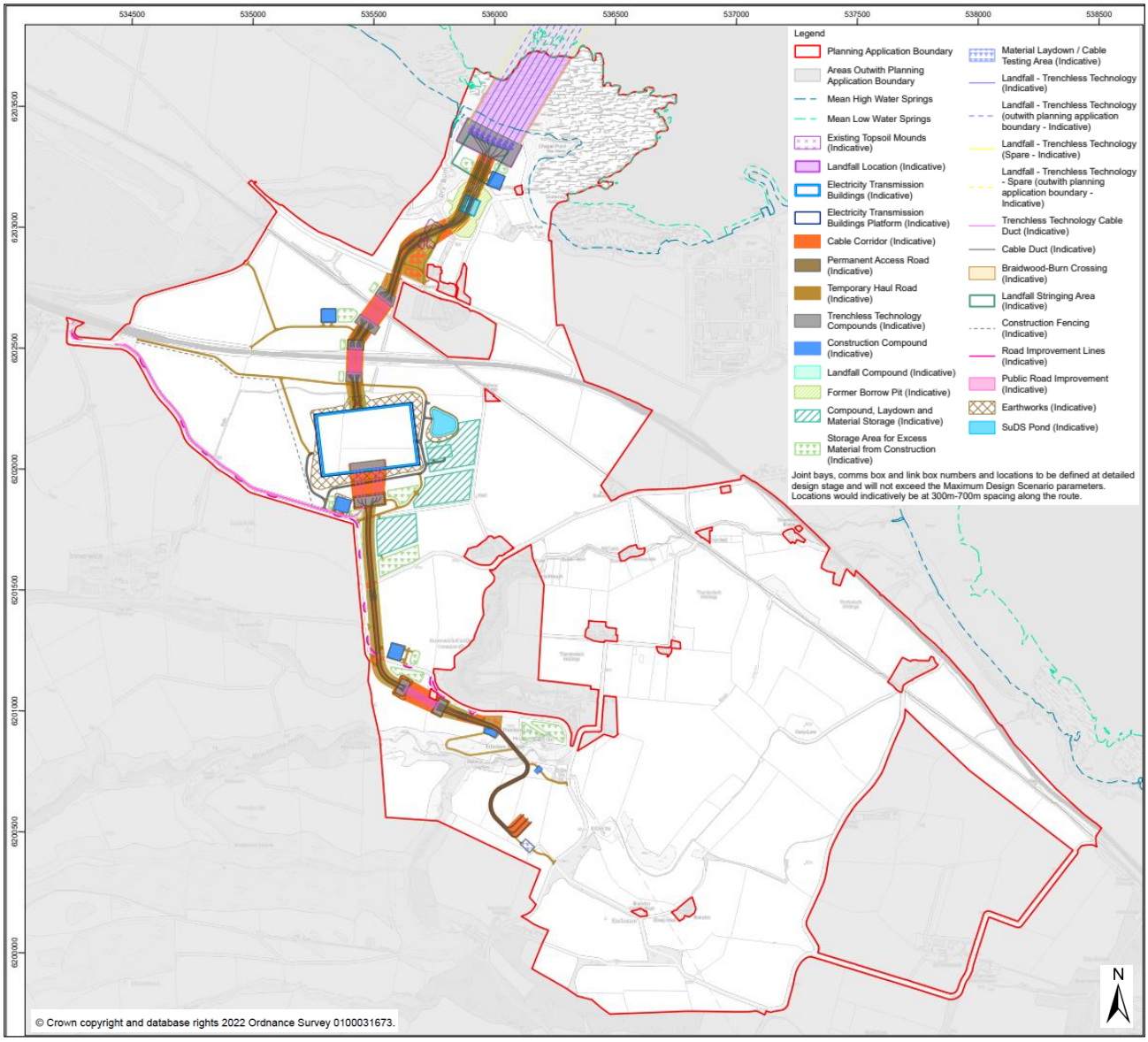

Figure 2 - Site Layout Plan

4.1. LANDFALL

28. At landfall, the offshore export cables will come to shore via trenchless technology (e.g. Horizontal Directional Drilling (HDD)) and will be connected to the onshore cables via eight buried transition joint bays. Each transition joint bay will comprise an underground, box-like structure, where the cables will be buried. There will also be temporary infrastructure associated with the landfall works, including temporary construction compounds and a temporary material storage area.

29. The proposed transition joint bays will be located approximately 130 m north-west of Skateraw harbour, on land used for agriculture.

4.2. ONSHORE CABLES

From Landfall to Onshore Substation

30. The first section of the cable route will run from landfall to the onshore substation.

31. The onshore cables will be installed underground within excavated cable trenches for the majority of the route. However, there will be some sections which will require the use of trenchless technology (e.g. HDD), to pass underneath constrained locations. Trenchless works will be required in the following locations:

- under the ECML railway;
- under the A1 trunk road;

32. Before connecting to the onshore substation, the proposed onshore cables will cross a minor burn which lies south of the A1 and north of the proposed onshore substation. The onshore cables will then connect to the switchgear within the new onshore substation.

Onshore Substation to SPEN Branxton Substation

33. Following the connection to the new onshore substation, the onshore cables will exit the south of the onshore substation.

34. Trenchless technology (e.g. HDD) will be required in the following locations:

- exiting the onshore substation platform; and
- under the Scheduled Monument near Castledene.

35. The cables will cross the Braidwood Burn via a cable bridge crossing before connecting to the proposed SPEN Branxton grid substation, which is adjacent to the existing Innerwick sealing end compound. It is anticipated that the detailed design of the Braidwood Burn crossing will be confirmed and agreed with the Scottish Environment Protection Agency (SEPA) following ground investigations prior to construction. The cable bridge crossing will not be maintained for pedestrian or vehicle access and will be secured to prevent public access.

4.3. ONSHORE SUBSTATION

36. The onshore substation will be located within an agricultural field, on a northern facing slope approximately 680 m north-east of Innerwick.

37. The onshore substation will be a permanent compound comprising elements of electrical infrastructure including buildings, which are required to transform the power supplied by the offshore wind farm and facilitate connection to the National Grid. The onshore substation will comprise of a maximum of 18 buildings. The onshore substation will include operational buildings and facilities including car parking, security fencing and welfare facilities.

38. The onshore substation footprint will be 97,500 m^2 (maximum 390 m length by 250 m width) with a built maximum height of 21 m.

39. A new permanent access road to the onshore substation will be required from a new junction onto the unclassified public road to the south-west of the onshore substation location. This new permanent access road will be a surfaced single carriageway road with passing places and will be a private road.

40. Permanent and temporary drainage systems will be established around the onshore substation, including a permanent Sustainable Drainage System (SuDS) pond to the east. A permanent access road to the SuDS pond is also proposed for maintenance purposes.

41. The Proposed Development will not be permanently staffed during operation, with frequency of visits anticipated to be 4 times a month for general checks and maintenance.

4.4. TEMPORARY CONSTRUCTION WORKING AREAS

42. There will be temporary infrastructure associated with the landfall works, the two sections of cable route, and onshore substation including temporary construction compounds and temporary material storage areas. The location of these is shown within Figure 2. These will be restored following construction, and further details are provided within Volume 1, Chapter 5 of the Onshore EIA Report.

4.5. CONSTRUCTION PROGRAMME

43. The on-site construction period for the Proposed Development is expected to be approximately 40 months, with a proposed commencement date in 2024.

44. Planning permission is being sought for 24-hour, 7-days per week construction working hours. The 24-hour construction period is anticipated to be only necessary for the trenchless solutions, as once drilling has started it needs to be completed regardless of the time of day and has been requested by National Rail and Transport Scotland for the crossings of the ECML railway and A1 trunk road. All other construction works will be limited where practicable to weekday daytimes and Saturday mornings. As such, any necessary night-time working will be minimised as far as reasonably practicable. A fully detailed construction programme will be provided to ELC in a Construction Environmental Management Plan (CEMP) prior to the commencement of construction. An outline CEMP is provided as an appendix to the EIA Report (Volume 4, Appendix 5.1).

45. The operational lifespan of the Project is assumed to be up to 35 years from the start of offshore operation. The decommissioning plan and any associated decommissioning activities will be subject to consultation and approval by ELC.

5. CONSULTATION

5.1. STATUTORY CONSULTATION

46. A formal EIA Scoping Opinion was requested from ELC in August 2020 through the submission of an EIA Scoping Report. The EIA Scoping Report contained details of the site baseline, the Proposed Development, proposed environmental impacts to be assessed in the EIA, and the assessment methodologies that would be used. ELC consulted with a variety of statutory and non-statutory consultees before providing an EIA Scoping Opinion in October 2020.

47. As well as the formal EIA Scoping process, the Applicant continued to liaise directly with key stakeholders in order to refine the approach to the EIA Report and develop a design solution for the site which reflects the feedback received. Direct consultation has also been undertaken with specific statutory consultees, to confirm and agree the detailed approach to the technical surveys and assessments on a topic by topic basis.

48. Further information on the consultation process is given in Volume 1, Chapter 2 of the Onshore EIA Report.

5.2. PUBLIC CONSULTATION

49. A programme of pre-application community engagement for the Proposed Development has been undertaken by the Applicant which has included various meetings, correspondence, and exhibitions with local communities.

50. The first public exhibition to introduce Berwick Bank Wind Farm to the public was held virtually in November 2020. This was followed up by a Community Roadshow in October 2021 and a second public exhibition (in person) in December 2021. A third public exhibition was held in March 2022. The aims of the exhibitions were to provide updated information on the Proposed Development and allow the team to respond to any questions the public may have.

51. The pre-application consultation helped identify the issues that are important to the local community and, where appropriate, shape the final proposal which is now the subject of this application. The Applicant is grateful to residents and local representatives for their input into the pre-application community engagement process and for their participation in the discussions.

52. The Applicant confirms that they will continue to liaise with the local community during the application process and during the construction, operational and decommissioning phases of the Proposed Development.

6. ENVIRONMENTAL IMPACT ASSESSMENT (EIA)

53. The EIA considers the effects of the Proposed Development during construction, operation and maintenance, and decommissioning on the following topics:

- landscape and visual (effects on the character of the landscape and views from agreed locations);
- ecology (the effects on protected habitats, flora and fauna, excluding birds);
- ornithology (the effects on birds and protected bird habitats);
- noise (effects on local properties from noise arising from the Proposed Development);
- cultural heritage (effects on the integrity and setting of historic sites and/or features);
- geology, hydrology, soils and flood risk (the effects on surface water, groundwater, rocks and soils);
- traffic and transport (effects from traffic travelling to, and from, the Proposed Development on local roads and receptors);
- socio-economics (effects on the local and national economy); and
- land use, recreation and tourism (effects on local land, local tourism businesses, and recreation facilities).

54. Volume 1, Chapter 2 of the Onshore EIA Report describes the EIA process in more detail.

55. For each topic the existing conditions (the baseline) were identified and the effects of the Proposed Development on these conditions assessed (the potential effects). Potential effects are assessed on a scale of negligible, minor, moderate and major, with effects of moderate or major deemed to be significant in the terms of EIA. Primary and tertiary mitigation measures (mitigation as part of the design and standard practices) have also been considered when reaching conclusions of effect significance, where it is concluded that there is still the potential for a significant adverse effects, secondary mitigation measures have then been proposed to minimise any significant adverse effects. Following this, an assessment was undertaken of the effects of the Proposed Development on the existing conditions taking into consideration the proposed mitigation (the residual effects). In addition to the above, the cumulative effects of the Proposed Development, i.e. effects considered in conjunction with other developments in the local area, were assessed. Further details of the cumulative approach and the schemes considered is provided in Volume 1, Chapter 2 and Volume 4, Appendix 2.4 of the Onshore EIA Report.

56. Following submission of the PPP, the Applicant was notified of the submission of a Section 36 (S36) application for the proposed Branxton Energy Storage System (the 'Branxton BESS Project') on land in the vicinity of the Proposed Development. The cumulative effects assessment (CEA) was subsequently updated for the technical topics considered relevant (Landscape and Visual, Ecology, Ornithology, Cultural Heritage, Socio-economics and Land Use, Tourism and Recreation) to account for potential cumulative effects with the Branxton BESS Project and is provided as part of the EIA Report Addendum. Further information on the additional consideration of the proposed Branxton Energy Storage System (the 'Branxton BESS Project') can be found in the Onshore EIA Report Addendum.

57. The Applicant has also undertaken further work to address consultation responses following the submission of the PPP application and this work has been included in the EIA Report Addendum alongside the CEA in support of the application. This additional work includes updates to the Flood Risk Assessment originally provided as a Technical Appendix to Volume 1, Chapter 11 of the Onshore EIA Report, amendments to the assessment presented in the ecology chapter (Volume 1, Chapter 7) of the Onshore EIA Report, the inclusion of an Initial Biodiversity Net Gain Assessment of the Proposed Development, and an updated Outline Landscape Mitigation Plan. Further details regarding the updated

sections, including reasons for their inclusion and summary of their outcomes are provided in the Onshore EIA Report Addendum.

58. The detailed assessment of proposed infrastructure within the intertidal zone has been split between the Onshore and Offshore EIA Reports, with cross referencing to relevant sections throughout the respective chapters within the other EIA Report. The Onshore EIA has considered the effects of onshore infrastructure landward of MHWS on receptors within the intertidal area. No infrastructure will be present in the intertidal area as cables will be installed using trenchless technology (e.g. HDD). Therefore, no direct effects on the intertidal area have been identified. The Offshore EIA has considered the effects of the offshore infrastructure seaward of MHWS on the intertidal areas. Further detail to the approach taken to the assessment of the intertidal area due to the overlap in consenting jurisdiction is provided within Volume 1, Chapter 2 of the Onshore EIA Report.

59. A summary of the baseline conditions, the proposed mitigation, the resulting residual effects and the cumulative effects for each topic is provided below.

6.2. LANDSCAPE AND VISUAL

60. The full assessment of landscape and visual impacts is provided in Volume 1, Chapter 6 of the Onshore EIA Report and is supplemented in the EIA Report Addendum.

61. The landscape and visual impact assessment (LVIA) considers the effects of the Proposed Development on landscape character and visual amenity within a study area up to 5 km from the site. The assessment has been undertaken in accordance with all relevant published guidance and has involved desk-based and field-based assessments. The approach and scope of the assessment was agreed through scoping and through further consultation with East Lothian Council.

62. The baseline for the assessment includes landscape and visual receptors and information relating to cumulative developments in the area. The landscape of the site and study area is described through observations made in the field along with published landscape character assessment. Physical landscape elements, landscape character types and designated landscapes are considered in the landscape assessment. Visual receptors include people in settlements, using the local area for recreation, and travelling through the area on roads. Representative viewpoints have been selected to assess the range of visual receptors, and these viewpoints were agreed through consultation. The LVIA is also accompanied by a series of photomontage visualisations to illustrate the potential change in view from these representative viewpoints, including the screening potential of proposed woodland planting once established (15 years). The cumulative assessment considers the effect of the addition of the Proposed Development in relation to other developments in the study area and also considers the combined cumulative effect of the offshore elements of the Berwick Bank project together with the Proposed Development (onshore elements).

63. The LVIA concluded that construction of the landfall and onshore cable corridor would not give rise to significant physical landscape or landscape character effects and that likely significant construction effects would be localised, temporary and limited to visual effects upon high sensitivity receptors in close proximity to the construction activity. No significant seascape character effects have been identified for the intertidal area and due to trenchless technology being proposed at the landfall, no physical disturbance of the beach or intertidal area or physical effect would occur.

64. For the onshore substation, significant effects upon the landscape character of the LVIA study area have been identified during construction and year 1 to a localised range of 1 km within both the host Coastal Margins landscape character type and a small area of the neighbouring Upland Fringes landscape character type within 1 km of the onshore substation. The LVIA found that the onshore substation would give rise to significant visual effects during construction and year 1 within around 1 km and from elevated inland hill fringes within 2.5 km. Significant residual visual effects at year 15 following establishment

of mitigation planting have been identified within around 750 m and from elevated inland hill fringes within 2.5 km.

65. Cumulative effects have been found to be significant when considering the whole project effect (i.e., the total effect of the Berwick Bank onshore elements and the Berwick Bank Wind Farm offshore elements) on localised parts of the landscape around the onshore substation where there are also sea views to the Berwick Bank offshore elements. This assessment is described in full in Volume 2, Chapter 15: Seascape, Landscape and Visual of the Offshore EIA Report, summarised in the LVIA, and supplemented in the EIA Report Addendum. None of the key landscape and visual receptors are assessed as having significant cumulative effects as a result of other developments in the study area. Where cumulative developments are visible from key landscape and visual receptors, they would have limited cumulative interaction with the Proposed Development or the cumulative effect would be minimal, short term and temporary, substantially limiting their cumulative influence when considering the additional effect of the Proposed Development.

66. The industrial character of the coastal landscape is a notable influence on the landscape and visual resource within the immediate context of the Proposed Development at Torness Power Station, Dunbar Cement Works, Dunbar Landfill Site and Dunbar Energy Recovery Facility. Whilst the scale of the Proposed Development, in conjunction with the broad and open character of the coastal plain, give rise to significant residual effects, these effects will be experienced within the context of nearby industrial development and within a very localised part of the study area, in the immediate landscape and visual context of the Proposed Development.

6.3. ECOLOGY

67. The full assessment of the effects on ecology is provided in Volume 1, Chapter 7 of the Onshore EIA Report, and is supplemented in the EIA Report Addendum.

68. The ecology assessment considered the potential impacts and their resulting effects on ecological features, including designated nature conservation sites, habitats and protected species, in line with best practice guidance.

69. The assessment was informed by desk studies and field surveys, including a Preliminary Ecological Appraisal, and targeted surveys for badger, otter, water vole, bats, and great crested newts. These surveys covered varying study areas dependent on the target species, in accordance with relevant guidance, across the site boundary and surrounding area. The extents of these are provided within Volume 2, Figure 7.1.

70. Habitat surveys identified that the predominant habitats within the study area are improved grassland and arable agricultural land, generally species poor, with greater diversity found within coastal grassland habitats, along field margins, hedgerows, and riparian woodland corridors.

71. The Proposed Development overlaps with the Barns Ness Site of Special Scientific Interest (SSSI) at the landfall. Trenchless techniques are to be used to install the cable under the SSSI and no significant effects on this feature are anticipated. Dryburn Valley Local Nature Conservation Site (LNCS) and Dunglass Burn LNCS lie under the footprint and Thurston Burn Valley LNCS and Thornton Glen Scottish Wildlife Trust reserve lie within 45 m of the Proposed Development. The impact of the Proposed Development on the Braidwood Burn corridor was re-assessed as part of the Onshore EIA Report Addendum. The amendments to the assessment did not alter the conclusions presented in Volume 1, Chapter 7 of the Onshore EIA Report. The potential for direct impacts due to habitat loss/disturbance and indirect impacts due to habitat fragmentation were considered within the ecological assessment. No likely significant effects were anticipated following the implementation of proposed mitigation which is to include micro-siting of works to avoid removal of mature trees and minimise tree felling requirements within the Braidwood Burn corridor.

72. Protected species surveys identified evidence of otter, badger, bat, and great crested newts across their respective study areas. Impacts on these have been avoided through the design of the Proposed Development, and through implementation of suitable mitigation measures, including but not limited to the following:

- engagement of a suitably qualified Ecological Clerk of Works to oversee construction works;
- pre-construction surveys of protected species;
- installation of great crested newt fencing to separate work areas from suitable habitat;
- a Habitat Enhancement and Management Plan which will include the creation of grassland, hedgerow, and woodland habitats;
- a sensitive lighting scheme;
- pollution prevention measures within a Construction Environmental Management Plan; and
- invasive species management plan.

73. The ecological assessment concluded that there would be no likely significant effects arising from the Proposed Development during the construction, operation and maintenance, or decommissioning phases following the implementation of proposed mitigation.

74. The cumulative ecology assessment reported in Chapter 7 of the Onshore EIA Report and supplemented in the EIA Report Addendum identified no likely significant cumulative effects as a result of the Proposed Development.

75. No infrastructure will be placed in the intertidal area as the cables will be installed using trenchless technology (e.g. HDD). Therefore, there will be no adverse effects on the intertidal area.

6.4. ORNITHOLOGY

76. Volume 1, Chapter 8 of the Onshore EIA Report provides the full assessment of the effects on ornithology, and is supplemented in the EIA Report Addendum.

77. The ornithology assessment considered the potential effects associated with the Proposed Development on bird life present.

78. Information on onshore ornithology was collected through desk studies and field surveys, including breeding bird and wintering bird surveys, in order to determine the current breeding and non-breeding assemblages of species within the study area.

79. The desk study identified four nature conservation designations of international importance within 20 km of the Proposed Development (Outer Firth of Forth and St Andrews Bay Complex Special Protected Area (SPA), Firth of Forth SPA/Ramsar, St Abb's Head to Fast Castle SPA and Forth Islands SPA) and no nature conservation designations of national or local importance designated for ornithological reason within 5 km of the Proposed Development.

80. Desk studies identified that a total of 128 bird species have been recorded within 5 km of the site over the last 10 years. Field surveys confirmed species present across the study area to include peregrine, pink footed geese, redshank, curlews, oystercatcher, herring gull, and black-headed gull.

81. The Applicant is committed to standard mitigation measures which will include engagement of an Ecological Clerk of Works to oversee construction works and protect breeding bird nests, and a proposed planting scheme to improve habitats.

82. The assessment considered likely potential impacts on bird species to include disturbance, displacement, and habitat loss.

83. The ornithological assessment concluded that there would be no likely significant effects arising from the Proposed Development during the construction, operation and maintenance, or decommissioning phases.

84. The cumulative ornithology assessment included in Chapter 8 of the Onshore EIA Report and supplemented by the EIA Report Addendum identified no likely significant cumulative effects as a result of the Proposed Development.

85. No infrastructure will be present in the intertidal area as the cables will be installed using trenchless technology (e.g. HDD). Therefore, there will be no direct effects on the intertidal area. The assessment concluded that there will be no significant effects on species present within the intertidal aeras as a result of the onshore infrastructure landward of MHWS.

6.5. NOISE

86. The full assessment of the impacts of noise and vibration is provided in Volume 1, Chapter 9 of the Onshore EIA Report.

87. A detailed assessment considered the construction and operational phase noise and vibration levels of the Proposed Development.

88. Background noise surveys were undertaken at noise monitoring locations at noise sensitive receptors within close proximity to the Proposed Development, and the data analysed to derive noise limits in accordance with relevant industry guidance.

89. The impacts assessed include increases in road traffic noise, vibration at sensitive receptors and noise at sensitive receptors.

90. The use of noise limits will ensure that the Proposed Development can operate within accepted levels of disturbance. The Proposed Development will commit to limiting operational noise from the onshore substation to a noise rating level (in accordance with relevant guidance) of no greater than 5 decibels (dB) above the representative background levels at any time at the noise sensitive receptors, or a noise rating level of 35dB (A) where background levels are low (in accordance with relevant guidance).

91. Mitigation measures, during both construction and operation, have been proposed. Mitigation during construction will be largely secured within the CEMP and with the provision of specific mitigation such as site boundary temporary barriers. Mitigation measures for operational noise from the substation will be developed through the detailed design post consent phase and may include such measures as enclosure of specific equipment.

92. Overall, it is concluded that following the implementation of secondary mitigation, there will be no likely significant residual effects arising from the Proposed Development during the construction, operational and maintenance or decommissioning phases.

93. It is concluded that following the implementation of mitigation measures, there will be no likely significant cumulative effects from the Proposed Development alongside other projects/plans. This conclusion includes consideration of the Branxton BESS Project, which was scoped out from further noise assessment in the CEA as the operational noise levels resulting from the Proposed Development would be significantly below existing background noise levels experienced at the relevant residential receptors (in accordance with relevant guidance). There are no potential effects identified within the intertidal area.

6.6. CULTURAL HERITAGE

94. The full assessment of the effects on cultural heritage assets is provided in Volume 1, Chapter 10 of the Onshore EIA Report, and is supplemented in the EIA Report Addendum.

95. Cultural Heritage refers to any element of the historic environment which has cultural significance. Both discrete features, and extensive landscapes defined by specific historic events can be defined as heritage assets. Designated assets include Scheduled Monuments, Listed Buildings, World Heritage Sites, Conservation Areas, Inventory Gardens and Designed Landscapes, Inventory Historic Battlefields, and Historic Marine Protected Areas. Other assets may also be locally designated through policies in the Local Development Plan. Cultural Heritage therefore includes all types of historic buildings and structures and archaeological sites.

96. The cultural heritage baseline was characterised via a desk-based assessment, site surveys, and consultation with Historic Environment Scotland and the East Lothian Council Archaeology Service.

97. The Cultural Heritage assessment identified that there are six designated assets and 45 non-designated heritage assets within the 100 m of the Proposed Development (the 'Inner Study Area'). The archaeological potential varies across the Proposed Development site.

98. The Cultural Heritage assessment also found that there are 105 designated cultural heritage assets within 5 km of the proposed substation (the 'Outer Study Area'), including two Properties in Care, 30 Scheduled Monuments, 67 Listed Buildings, two Inventory Gardens and Designed Landscapes, two Inventory Battlefields and two Conservation Areas.

99. A number of potential impacts on cultural heritage assets, associated with the construction phase of the Proposed Development, were identified. These included construction impacts on three known cultural heritage assets and potential direct impacts on previously unrecorded subsurface archaeological remains. With the proposed mitigation measures in place, most of these impacts result in residual effects of minor, adverse significance, which is not significant in EIA terms.

100. A number of potential impacts on cultural heritage assets, associated with the operational phase of the Proposed Development, have been identified. These include impacts on the settings of a number of cultural heritage assets within the Outer Study Area. No mitigation is possible to offset these impacts. While most of these impacts result in residual effects of minor adverse significance, there will remain residual effects of moderate adverse significance (significant in EIA terms) on two designated cultural heritage assets: Innerwick Conservation Area and 'Crowhill, enclosure WNW of' which is a Scheduled Monument.

101. Cumulative impacts from the construction of the Proposed Development in combination with developments in the surrounding area, including the Branxton BESS Project, have the potential for a significant adverse effect on previously unrecorded subsurface archaeology. With the proposed mitigation measures in place, it is predicted these cumulative impacts will result in effects of minor adverse significance (not significant in EIA terms).

102. Cumulative impacts from the operation of the Proposed Development in combination with developments in the surrounding area have been considered. A potential cumulative effect of minor significance on 'Branxton, enclosure 350 m NNW of', a Scheduled Monument, has been identified. No mitigation is possible to offset this impact, therefore there will remain a residual effect of minor adverse significance (not significant in EIA terms) on this heritage asset.

103. No infrastructure will be placed in the intertidal area as the cables will be installed using trenchless technology (e.g. HDD). Therefore no potential effects are identified within the intertidal area.

6.7. GEOLOGY, HYDROLOGY, SOILS AND FLOOD RISK

104. The full assessment of the effects on geology, hydrology, soils and flood risk is provided in Volume 1, Chapter 11 of the Onshore EIA Report. An updated Flood Risk Assessment

originally prepared as a Technical Appendix to Chapter 11 of the Onshore EIA Report is provided in the EIA Report Addendum.

105. Geology, hydrology, soils, and flood risk considers the physical structure of the earth, ground conditions and water environment in relation to the Proposed Development. This assessment considers a study area of up to 1 km from the site boundary to allow potential effects on downstream receptors to be identified.

106. The study area comprises six surface water catchments as defined by SEPA's Baseline Confluence Nested Catchments. Of the six catchments, four are partially located within the site. The watercourses and waterbodies within the Proposed Development site, and the nearby Thorntonloch Beach Bathing Waters, have been classified by SEPA under the Water Framework Directive, and are considered to range from moderate to excellent quality status. No private or public water supplies have been identified within the study area and one licenced water abstraction is located within the study area at Skateraw. All potential sources of flooding within the study area have been assessed and shown to be between 'no risk' to 'low risk' to the Proposed Development (with mitigation applied in some instances).

107. The bedrock and superficial geology underlying the study area has been identified, assessed, and is considered to present no risk to development. The Barns Ness Coast SSSI and Thorntonloch Local Geodiversity Site are located at the coastline at Skateraw, with direct impacts avoided through the use of trenchless technology at landfall. The study area is predominantly agriculture land, with impacts on top and sub-soils considered within the assessment. An area of potentially contaminated land due to the presence of PFA has been identified within the Skateraw Borrow Pit.

108. A number of potential impacts on sensitive receptors, associated with the construction, operational and maintenance, and decommissioning phases of the Proposed Development, were identified. The receptors considered included hydrology, hydrogeology, flood risk, contaminated land, statutory geological designated sites, and soils, with potential impacts including run-off and pollution changing water quality, increased flood risk, and compaction and erosion of soils.

109. Mitigation proposed includes site design, and implementation of the CEMP, water quality monitoring plan, operational drainage strategy, and decommissioning plan.

110. With the proposed mitigation measures in place, impacts on hydrology, geology, soils and flood risk during construction, operation, and decommissioning result in effects of negligible to minor adverse significance and therefore not significant in EIA terms. This outcome remains unaffected by the updates made to the Flood Risk Assessment included in the EIA Report Addendum.

111. Cumulative effects in relation to geology, hydrology, soils and flood risk from the Branxton BESS Project were not considered as part of the CEA. The location of the Branxton BESS Project and the implementation of drainage strategies means that opportunity for significant adverse impacts would not occur. Cumulative effects from the nearby SPEN Branxton Grid Substation and the Eastern Link Project Converter Station developments would be of minor or negligible adverse significance (not significant in EIA terms) upon hydrology, flood risk, statutory geologically designated sites and soil sensitive receptors.

112. With the implementation of the trenchless technology at landfall, impacts within the intertidal area are assessed to be of negligible to minor adverse significance (not significant in EIA terms).

6.8. TRAFFIC AND TRANSPORT

113. Volume 1, Chapter 12 of the Onshore EIA Report assesses the effects of the Proposed Development on access, traffic and transport during the construction phase. Traffic volumes during operation will be very low, therefore have been scoped out of detailed assessment.

A Transport Assessment is provided in EIA Volume 4, Appendix 12.1 which reviews the impact of transport related matters associated with the Proposed Development.

114. Each of the individual elements of the Proposed Development will be accessed via a dedicated access point, as detailed in the Transport Assessment. The study area for traffic and transport assessment includes roads within the local road network in and around Innerwick and Thorntonloch, including the U209, the C121, the C122 and the C124, as well as along the A1 trunk road between Easter Pinkerton and Bilsdean and Skateraw Road. To obtain traffic flows to establish a baseline, Automatic Traffic Count surveys were undertaken on local roads within the study area. Baseline traffic flows along the A1 trunk road were obtained from Transport Scotland's traffic flow database.

115. The construction phase trip estimates have been based upon first principle estimates of traffic movements to and from the site, having established the likely volumes of construction materials, resources, and components.

116. The Proposed Development would lead to a temporary increase in traffic volumes on the study road network during the construction phase. Traffic volumes would decrease considerably outside the peak period of construction. The maximum traffic impact associated with construction is predicted to occur in Month 14 of the programme, when an additional 669 trips (522 Cars & Lights and 147 heavy goods vehicles) are included to the network.

117. During the peak construction phase, traffic movements are expected to increase by over 30% along the road leading to Skateraw and the U209 (north of Barnes Ness Terrace), with total flow impacts predicted to increase by 179.6% and 157.6%, respectively. While the increases in flows are statistically significant, they are generally caused by relatively low total flows along this road link which will see an additional 321 and 222 daily journeys during peak construction along these road links, respectively. With the proposed mitigation measures in place, (including a Construction Traffic Routeing Management Plan) the impacts along these links will result in effects of slight adverse significance (not significant in EIA terms).

118. No road capacity issues are expected on any of the roads within the study area due to the additional construction traffic movements associated with the Proposed Development as background traffic movements are low, the links are of a reasonable standard and appropriate mitigation is proposed.

119. Cumulative impacts associated with the construction traffic of the consented Crystal Rig IV Wind Farm, Branxton Grid Substation, and the Eastern Link Project result in effects of negligible significance (not significant in EIA terms) upon transport related receptors within the traffic and transport study area following the application of mitigation measures such as an overarching Traffic Management and Monitoring Plan.

120. As noted in the EIA Report Addendum, if the construction phases of the Proposed Development and the Branxton BESS Project overlap, it is reasonable to expect the respective Traffic Management Plans would ensure that unacceptable adverse effects from construction traffic on nearby sensitive receptors would be avoided. The potential for any significant cumulative traffic during construction would be limited to the A1, a high capacity trunk road.

121. No effects are anticipated within the intertidal area.

6.9. SOCIO-ECONOMICS

122. The full assessment of the effect on socio-economics is provided in Volume 1, Chapter 13 of the Onshore EIA Report, and is supplemented in the EIA Report Addendum.

123. Socio-economics considers the local economies in the areas most likely to be affected by the Proposed Development. This assessment considers a socio-economics local study area

based on the local authority areas in closest proximity to the onshore substation and export cabling – East Lothian, Scottish Borders, Midlothian, and the City of Edinburgh. These will be important locations used to support the construction, operation and maintenance, and decommissioning activities related to the onshore components of the Proposed Development. This assessment also considers a national study area based on Scotland as a whole.

124. The offshore wind sector is identified as a high priority industry within national strategic planning policies. Capitalising on opportunities within the broader renewable energy sector is a priority within local strategic planning policies. This reflects the opportunities the offshore wind and renewables sectors provide for supporting economic development and growth, and providing jobs and incomes for Scottish residents.

125. Prior to Covid-19, in 2019 there were 460,000 people employed in the socio-economics local study area (ONS, 2022), and total economic output – measured by Gross Value Added (GVA) – was £30.1 bn (ONS, 2019). In 2019 there were 2.6 m people employed in Scotland (ONS, 2022), and total economic output – measured by GVA – was £147 bn (ONS, 2019). Measuring the offshore wind sector is challenging, however detailed research by the Fraser of Allander Institute estimates there were 4,700 full time equivalent (FTE) jobs and £447 m in GVA supported by the offshore wind sector in Scotland in 2019. It is currently a small sector when compared to the whole economy, but one with the potential to grow – research by Skills Development Scotland indicates the sector could support 20,000 jobs by 2031.

126. Looking towards the future, the available data shows relatively weak performance of the Scottish economy anticipated in the medium term, with a declining working age population and falling levels of total employment. The offshore wind sector is identified as a key growth opportunity but is reliant on investments being secured, such as the Proposed Development. Without such investments the scale of growth in the offshore wind sector as forecast will not be realised.

127. A number of potential impacts on socio-economics activities associated with the construction, operation and maintenance, and decommissioning phases of the Proposed Development have been identified. These include supporting employment and GVA across the socio-economics local study area and Scotland. Impacts are assessed to be beneficial in nature. The Applicant is also committed to a range of activities seeking to enhance beneficial impacts.

128. Impacts on employment associated with the construction phase of the Proposed Development are assessed to be of moderate to major beneficial significance at the socio-economics local study area level (significant in EIA terms). Impacts on GVA associated with the construction phase of the Proposed Development are assessed to be of minor to moderate beneficial significance at the socio-economics local study area level (not significant in EIA terms). Impacts on employment and GVA associated with the operation and maintenance and decommissioning phases of the Proposed Development are assessed to be of negligible beneficial significance at the socio-economics local study area level (not significant in EIA terms).

129. At the Scotland level, impacts on employment associated with the construction phase of the Proposed Development are assessed to be of minor to moderate beneficial significance (not significant in EIA terms) under the Baseline scenario and of moderate to major beneficial significance under the Enhanced scenario. Impacts on GVA associated with the construction phase of the Proposed Development are assessed to be of minor to moderate beneficial significance (not significant in EIA terms). Impacts on both employment and GVA associated with the operation and maintenance and decommissioning phases of the Proposed Development are assessed to be of negligible beneficial significance (not significant in EIA terms).

130. The Proposed Development will support existing employment through contracts placed with existing enterprises and support new employment and GVA output enabling the expansion of the offshore wind sector in Scotland, which is a high policy priority.

131. Cumulative impacts from other projects related to offshore wind farm developments including the Branxton BESS Project were found to result in additional beneficial effects. Cumulative changes are assessed to enhance beneficial effects over and above those assessed for the Proposed Development in isolation.

6.10. LAND USE, TOURISM AND RECREATION

132. The full assessment of the effects on land use, tourism and recreation is provided in Volume 1, Chapter 11 of the Onshore EIA Report, and is supplemented in the EIA Report Addendum.

133. The land use, tourism and recreation assessment has been informed by desk studies, site specific surveys, and consultation with stakeholders. The land use study area is predominantly composed of a patchwork of largely arable agricultural fields, with localised areas of industry, and small areas of woodland and forestry. The majority of the land is defined as Class 2 or Class 3.1 prime agricultural land. The tourism and recreation assessment identified visitor attractions, recreational sites and routes, beaches, and tourism accommodations across the study area. This included Thorntonloch beach, Skateraw harbour, the John Muir Way Link path, National Cycle Route 76, and 28 tourist accommodation receptors, including hotels, bed and breakfasts, and caravan parks.

134. The assessment considered direct impacts to changes in land use as a result of the footprint of the Proposed Development. It also considered direct impacts on tourism and recreation receptors (disruption to routes) and indirect impacts (i.e., visibility of the Proposed Development or increased traffic levels impacting visitor experiences), which will result in changes in visitor numbers.

135. Mitigation measures will include an access management plan to implement path diversions and signage for core paths within the site, temporary screening during construction, a construction traffic management plan, and restoration of land use following construction.

136. The construction of the Proposed Development will result in a maximum temporary land take of 42.58 ha and a permanent land take of 16.53 ha. The majority the permanent land take will be a result of the onshore substation. These are assessed to be of negligible to minor adverse significance and not significant in EIA terms.

137. Following implementation of mitigation measures, the assessment concluded that residual impacts on identified tourism and recreation receptors during construction and operation ranged from negligible to minor adverse significance, (not significant in EIA terms).

138. Cumulative impacts from identified cumulative developments, including the addition of the Branxton BESS Project, would be of negligible to minor adverse significance (not significant in EIA terms) upon land use, tourism, and recreation receptors.

139. No infrastructure will be placed in the intertidal area as the cables will be installed using trenchless technology (e.g. HDD). Therefore, there will be no adverse effects on the intertidal area.

7. CONCLUSION

140. This Non-Technical Summary of the Onshore EIA Report provides an overview of the EIA undertaken for the Proposed Development. Within Volume 4, Appendix 15.1 of the EIA Report a schedule of commitments can be found which details the environmental mitigation measures, summarised above, which the Applicant has committed to implement.

141. Volume 1, Chapter 15 of the EIA Report summarises the potential effects, the mitigation to be implemented and the resulting residual effects. It also provides a summary of the cumulative effects of the Proposed Development in combination with other proposed developments in the local area.

142. The final layout has been informed by a robust EIA and comprehensive design iteration process, considering potential environmental impacts and their effects, physical constraints, and health and safety considerations. The information used to inform the design iteration process included consultation responses received, baseline data and the impact assessment undertaken.

143. Consideration has been given to a range of design issues as well as various environmental, ecological, and technical requirements. Predicted environmental effects arising from the Proposed Development have been mitigated as far as possible, if not eliminated during the iterative design process. The inclusion of the Branxton BESS Project within the CEA and the additional work undertaken by the Applicant provided in the Onshore EIA Report Addendum has not changed the outcomes of the original assessment outlined in the Onshore EIA Report.

144. Overall, the Proposed Development is an appropriately designed, and sensibly located onshore grid infrastructure associated with the proposed Berwick Bank Wind Farm which is in line with policies in the local and strategic development plans and conforms to national policy. The Proposed Development, as essential infrastructure associated with the wider Berwick Bank Wind Farm, will provide a valuable contribution towards the ambitious national targets for electricity generation from renewable sources.


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