



AQUIND Limited

AQUIND INTERCONNECTOR

Statement of Common Ground Between
Aquind Limited and National Grid Electricity
Transmission Plc

Agreed Draft

The Planning Act 2008

Infrastructure Planning (Examination Procedure) Rules 2010, Rule 8(1)(e)

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1. INTRODUCTION AND PURPOSE

1.1. PURPOSE OF THE STATEMENT OF COMMON GROUND

1.1.1.1. A Statement of Common Ground ('SoCG') is a written statement produced as part of the application process for an application for a Development Consent Order ('DCO') and is prepared jointly by the applicant and another party. A SoCG sets out the matters of agreement between both parties, matters where there is not agreement and matters which are under discussion.

1.1.1.2. In this regard paragraph 58 of the Department for Communities and Local Government's guidance entitled "Planning Act 2008: examination of applications for development consent" (26 March 2015) hereafter referred to as DCLG Guidance) describes a SoCG as follows:

"A statement of common ground is a written statement prepared jointly by the applicant and another party or parties, setting out any matters on which they agree. As well as identifying matters which are not in real dispute, it is also useful if a statement identifies those areas where agreement has not been reached. The statement should include references to show where those matters are dealt with in the written representations or other documentary evidence."

1.1.1.1. The aim of a SoCG is to assist the Examining Authority to manage the examination of an application for a DCO by providing an understanding of the status of matters at hand and allowing the Examining Authority to focus their questioning. The effective use of SoCG is expected to lead to a more efficient examination process.

1.1.1.2. A SoCG may be submitted prior to the start or during an Examination and updated as necessary or as requested during an Examination.

1.2. DESCRIPTION OF THE PROPOSED DEVELOPMENT

1.2.1.1. AQUIND Limited ('the Applicant') submitted an application for the AQUIND Interconnector Order (the 'Order') pursuant to Section 37 of the Planning Act 2008 (as amended) (the 'PA2008') to the Secretary of State ('SoS') on 14 November 2019 (the 'Application').

1.2.1.2. The Application seeks development consent for those elements of AQUIND Interconnector (the 'Project') located in the UK and the UK Marine Area (the 'Proposed Development').

1.2.1.3. The Project is a new 2,000 MW subsea and underground High Voltage Direct Current ('HVDC') bi-directional electric power transmission link between the South Coast of England and Normandy in France. By linking the British and French electric power grids it will make energy markets more efficient, improve security of supply and enable greater flexibility as power grids evolve to adapt to different sources of renewable energy and changes in demand trends such as the development of electric vehicles. The Project will have the capacity to transmit up to 16,000,000 MWh of electricity per annum, which equates to approximately 5 % and 3 % of the total consumption of the UK and France respectively.

1.2.1.4. The Proposed Development includes:

- HVDC Marine Cables from the boundary of the UK Exclusive Economic Zone to the UK at Eastney in Portsmouth;
- Jointing of the HVDC Marine Cables and HVDC Onshore Cables;
- HVDC Onshore Cables;
- A Converter Station and associated electrical and telecommunications infrastructure;
- High Voltage Alternating Current ('HVAC') Onshore Cables and associated infrastructure connecting the Converter Station to the Great Britain electrical transmission network, the National Grid, at Lovedean Substation (by way of an extension to the existing substation, including site establishment, earthworks, civil and building works); and
- Smaller diameter Fibre Optic Cables to be installed together with the HVDC and HVAC Cables and associated infrastructure.

1.3. THIS STATEMENT OF COMMON GROUND AND THE ROLE OF NGET

1.3.1.1. This SoCG has been prepared by the Applicant in accordance with the DCLG Guidance and precedent examples of SoCG available on the Planning Inspectorate's ('PINS') website and is considered to represent an accurate representation of discussions with NGET at Deadline 6.

1.3.1.2. NGET is interested in the Proposed Development as the owner of plot 1-27 as shown on the Land Plans, which the Applicant is seeking to acquire for Converter Station Option B(ii) and the licenced owner of electricity transmission assets at Lovedean Substation plots 1-28, 1-31, 1-33 and 1-34 as shown on the Land Plans, and the HVAC onshore cables which form part of the Proposed Development.

- 1.3.1.3. The Applicant has entered into a connection agreement for the Proposed Development to connect into the National Grid at Lovedean Substation.
- 1.3.1.4. For the purpose of this SoCG the Applicant and NGET will be jointly referred to as the 'Parties'.

2. RECORD OF ENGAGEMENT UNDERTAKEN TO DATE

- 2.1.1.1. The Parties have been engaged in consultation since the inception of the proposed Scheme. Early correspondence dates back to 2014.
- 2.1.1.2. A summary of recent key planning meetings and correspondence between the Parties can be found in the table below.

Table 2.1 – Record of Engagement Undertaken to Date

Date	Form of Contact	Summary
20/05/2019	Meeting	High level planning discussion
21/08/2019	Meeting	Discussion of DCO parameters
10/10/2019	Teleconference	General planning including Works Plans, Converter Station parameters, landscaping, and substation connection works.
07/02/2020	Teleconference	Planning, workstreams, connection works, construction traffic, other energy proposals in the vicinity.
19/03/2020	Teleconference	Planning, optioneering including selection of Lovedean.
03/06/2020	Teleconference	Alignment of disciplines, protective provisions, Converter Station options, land rights, technical specification update, legal matters.
13/10/2020	Teleconference	Discussion relating to the Statement of Common Ground (this document), contents of the NGET written representation (6 th October), transfer of rights from the Order and land rights
28/10/2020	Teleconference	A meeting to progress outstanding matters between the parties' respective land agents and solicitors on 28 October 2020 and both the Applicant and NGET are targeting agreement of Heads of Terms by Deadline 5
12/11/2020	Teleconference	Discussion relating to contents of the Statement of Common Ground (this document).
03/12/2020	Teleconference	Discussion relating to Work No.1 and the assessment of this by the Applicant.

2.1.1.3. Note that other meetings where the agenda and discussion relates solely to engineering matters or land rights are not summarised.

3. SUMMARY OF TOPICS COVERED BY THE STATEMENT OF COMMON GROUND

3.1. TOPICS COVERED IN THE STATEMENT OF COMMON GROUND

3.1.1.1. The following topics discussed between the Applicant and National Grid are commented on further in this SoCG:

- Development Consent Order
- Land and Property Agreement and Protective Provisions

3.1.1.2. For the avoidance of doubt, matters not covered in this SoCG have not been discussed between the parties.

4. CURRENT POSITION

4.1. DEVELOPMENT CONSENT ORDER

Table 4.1 - Development Consent Order

Ref.	Description of matter	Current Position	RAG
Development Consent Order			
NGET4.1.1	Grid Connection Works	<p>It has been discussed and agreed that all associated works to connect the Interconnector and Converter Station to Lovedean Substation (including works within the existing Lovedean Substation site) shall be included within the DCO for the Proposed Development and those works are to be provided for within Works No.1 at Schedule 1 to the draft DCO.</p> <p>On review of the draft DCO, NGET requested a change to the description of Works No. 1 in order to make clear that the grid connection works (Works No. 1) would include an extension to the existing substation. Both parties agreed to revised wording in order to bring the necessary clarity to the draft DCO.</p> <p>The agreed revised wording is as follows;</p> <p><i>Work No.1 – substation connection works consisting of –</i></p> <ul style="list-style-type: none"> (a) <i>Extension of the existing substation, including site establishment , earthworks, civil and building works.</i> (b) <i>2 400 kilovolt air and or gas insulated switchgear bays, associated secondary equipment and auxiliary services;</i> (c) <i>Onshore HVAC cables of up to 800 metres in length (each cable circuit);</i> (d) <i>up to 5 link boxes per cable circuit with dimensions of up to 0.8 metres in length by 0.8 metres in width by 0.6 metres in height;</i> <p>In order to confirm that these works have already been appropriately assessed in the Environmental Statement, the Applicant agreed to perform an audit which explains how Works No.1 have been assessed in each chapter of the Environmental Statement. The findings of this audit are set out in a letter from the Applicant to NGET appended to this document.</p>	Agreed
NGET4.1.2	Converter Station Options	<p>The Parties have engaged in discussions relating to the eastwards shift of the Converter Station (Option B(ii)) onto NGET land. It is agreed that NGET has no objection to the principle of this micro-siting subject to completion of the associated land agreement (pending).</p>	On-going
NGET4.1.3	Landscaping at Lovedean Substation	<p>The parties have discussed the implications of the Proposed Development on the landscaping associated with the existing Lovedean substation.</p> <p>It is accepted that Converter Station Option B(ii) would result in a loss of existing mitigation planting at the Lovedean substation.</p>	Agreed

		A plan identifying the indicative landscape proposals in connection with Option B(ii) for the Converter Station has been provided to NGET for consideration and National Grid has no concerns in respect of the indicative proposals.	
NGET4.1.4	AC cables and connection bays	<p>The principle of the routing of the AC cables from the Converter Station to Lovedean substation has been agreed, connecting at two connection bays within the Lovedean substation.</p> <p>It is agreed in principle that NGET will build, own and operate the AC connection bays and the 400kV AC cables from the sealing end in the substation to the sealing end in the Converter Station, to be completed via a transfer of the benefit of part of the Order. It is on this basis that Article 7 (6)(b) of the draft DCO (REP1-021) provides for the benefit of the Order in so far as it relates to Work No. 1 to be able to be transferred to National Grid.</p>	Agreed
NGET4.1.5	Work Order	Work No. 1 – substation connection works, and Work No. 2 – works to construct the Converter Station and associated equipment (covering the AC cables) as described at Schedule 1 of the draft DCO (REP1-021 Deadline 1 submission) are relevant to NGET and these are the Works which are the subject of this Statement of Common Ground.	Agreed

4.2. LAND AND PROPERTY AGREEMENT AND PROTECTIVE PROVISIONS

Table 4.2 - Land and Property Agreement and Protective Provisions

Ref.	Description of matter	Current Position	RAG
Land and Property Agreement and Protective Provisions			
NGET4.2.1	Land Agreements	Discussions are ongoing between the Applicant and NGET on completion of the Heads of Terms and associated land agreements.	On-going
NGET4.2.2	Protective Provisions	The parties are currently agreeing the appropriate form of protective provisions required. Whilst those discussions are ongoing, it is anticipated that a form of protective provisions acceptable to both parties will be agreed prior to the end of the examination.	On-going

5. SIGNATURES

Ref.	National Grid	Aquind (the Applicant)
Signature		
Printed Name		
Title		
On behalf of	National Grid	Aquind Limited
Date		

REFERENCES

- Aquind Interconnector Ltd. (2019, December 12). *2.2 Land Plans*. Retrieved from National Infrastructure Planning: <https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/EN020022/EN020022-000461-2.2%20Land%20Plans.pdf>
- Aquind Interconnector Ltd. (2019, December 12). *2.6 Converter Station and Telecommunications Buildings Parameter Plans*. Retrieved from National Infrastructure Planning: <https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/EN020022/EN020022-000465-2.6%20Converter%20Station%20and%20Telecommunications%20Buildings%20Parameter%20Plans.pdf>
- Aquind Interconnector Ltd. (2019, December 12). *6.2.15.48 Environmental Statement - Volume 2 - Figure 15.48 Indicative Landscape Mitigation Plan Option B(i) (north)*. Retrieved from National Infrastructure Planning: [https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/EN020022/EN020022-000734-6.2.15.48%20ES%20-%20Vol%202%20-%20Figure%2015.48%20Indicative%20Landscape%20Mitigation%20Plan%20Option%20B\(i\)%20\(north\).pdf](https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/EN020022/EN020022-000734-6.2.15.48%20ES%20-%20Vol%202%20-%20Figure%2015.48%20Indicative%20Landscape%20Mitigation%20Plan%20Option%20B(i)%20(north).pdf)

Appendix 1 – Letter relating to NGET

4.1.1

**AQUIND ENVIRONMENTAL STATEMENT (62100616-WSP-NGET-
20201120)**



c/o Andrew Lucas

National Grid House
National Grid Electricity Transmission
Warwick Technology Park
Gallows Hill
Warwick
CV34 6DA

62100616-WSP-NGET-20201120

17 December 2020

Dear Sir/Madam,

AQUIND Environmental Statement

Following receipt of your comments in relation to the Environmental Statement (ES) provided to us on Friday, 6th November 2020 we have conducted an audit in order that we can summarise how Work No. 1 has been considered in the Environmental Statement and supporting assessments.

We have set out our inputs and approach to the Environmental Statement in Table 1-1 and from this you can see how the Environmental Statement has been prepared. In summary, we have conducted our assessments based upon the output of the Front-End Engineering Design (FEED) study provided to us in April 2019¹ in a manner which provides National Grid with reasonable flexibility to develop this design further. Prompted by your recent comments, we offer the following specific confirmation of this;

- i. Paragraph 3.6.2.2 of the ES Chapter 3 (Description of the Proposed Development) (APP-118) refers to Plate 3.4² which shows proposed positions of the Aquind Connection Bays at National Grid's Lovedean Substation. Whilst the purpose of this plate is to show the positions of the connection bays, this shows an indicative extension area (in red). This does not represent a commitment to build the extension in the area shown, and as set out in Table 1-1 our environmental assessments have not treated this as a final design.

¹ National Grid Drawing Number: PDD-33585-LAY-001 (VER 00, 22-MAR-19)

² We acknowledge the typographical error whereby the ES refers to Plate 3.5 rather than Plate 3.4

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Whilst Paragraph 3.6.2.6 of the ES Chapter 3 (Description of the Proposed Development) anticipates that one cable circuit would enter from the North-West and the other from the North, we have always acknowledged that this is subject to design, surveys and coordination with the converter station design. Therefore, the application was not prepared in a way which secures the entry point to the substation and we confirm that any alternative entry points (e.g. from the south) are sufficiently covered in the ES.

- ii. Paragraph 3.6.2.8 of the ES Chapter 3 (Description of the Proposed Development) refers to Plate 3.5³, which shows a Typical Arrangement of HVAC cables and FOC in the ground. This is referred to as “indicative” and represents a typical arrangement. We understand that NGET may wish to install the cable circuits with a greater depth of cover, separation between circuits or in a trefoil arrangement for example. We confirm that the assessments reported in the Environmental Statement support this flexibility and would not be altered by it.

Further to the audit that has been undertaken, we confirm that Work No 1 with the addition of “a) Extension of the existing substation, including site establishment, earthworks, civil and building works” has been assessed in the ES and that it is therefore not necessary to amend the contents of the Environmental Statement or carry out additional assessment work.

We also take this opportunity to re-state that the recently agreed amendments to the description of Works No. 1 are intended to bring clarity to the Development Consent Order (DCO) further to your request for this, rather than to introduce any new works that were not previously foreseen or assessed.

Yours faithfully



p.p. Daniel Abbott

on behalf of Martin Devine
Project Manager, WSP

³ We acknowledge the typographical error whereby the ES refers to Plate 3.6 rather than Plate 3.5



Table 1-1 – Inputs and approach to the AQUIND Environmental Statement

Chapter	Confirmation of what has been assessed for Works No. 1	Location of Assessment within the ES	Status of Assessment within the ES
Chapter 15 Landscape and Visual Amenity	<p>The Landscape and Visual Impact Assessment (LVIA) considered the HVAC cable termination equipment in parameter zone 3 (building and equipment up to 15m height⁴) and in the area for Works No. 1⁵ between the Converter Station and existing Substation. The exact location of the HVAC cable termination was not fixed and the HVAC Cables were assessed on the basis that they would run east west and between existing National Grid mitigation planting to the north and ancient woodland to the south.</p> <p>The assessment considered the consequences of a future baseline including a westerly and southerly extension and did not specify parameters for the extension or new structures apart from a 30m telecommunication mast and antenna which are the subject of a separate planning application.</p>	<p>Paragraph 15.1.1.2 of ES Chapter 15 (Landscape and Visual Amenities) (APP-130).</p> <p>Paragraph 15.7.1.8 of ES Chapter 15 (Landscape and Visual Amenities) (APP-130).</p> <p>Paragraph 15.5.4.6 of ES Chapter 15 (Landscape and Visual Amenities) (APP-130).</p> <p>Paragraph 15.7.1.29 of ES Chapter 15 (Landscape and Visual Amenities) (APP-130).</p>	<p><i>The extension works (as contained in the FEED study plan and description at Section 1.1.2 of Additional Supporting Information for Onshore Works (ES Appendix 3.5)) were assessed as part of the ES.</i></p>

⁴ Parameter Zone 3 is described in the original parameter plans (<https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/EN020022/EN020022-000465-2.6%20Converter%20Station%20and%20Telecommunications%20Buildings%20Parameter%20Plans.pdf>)

⁵ The area for Works No. 1 (substation connection works) is shown in the Works Plans (Reference: <https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/EN020022/EN020022-002765-2.4%20Works%20Plans%20Rev03.pdf>)

Chapter	Confirmation of what has been assessed for Works No. 1	Location of Assessment within the ES	Status of Assessment within the ES
	The LVIA, for both Option B(i) and B(ii), assumed the new structures would be compatible in height, scale and mass to the existing substation and remain within the area for Works No.1, as they must do so.		
Chapter 16 Onshore Ecology	An assessment of impacts on all important ecological features (including habitats) within and adjacent to the Order Limits in Section 1 was undertaken. As the NGET connection works must remain within the Order Limits there will not be any ecological effects as a consequence of them which have not been assessed.	Section 16.6.1 of ES Chapter 16 (Onshore Ecology) (APP-131).	<i>The extension works (as contained in the FEED study plan and description at Section 1.1.2 of Additional Supporting Information for Onshore Works (ES Appendix 3.5)) were assessed as part of the ES.</i>
Appendix 16.3 Arboriculture	The arboriculture assessment considers the entire Converter Station Area ⁶ to the extent of the Order Limits. All arboricultural features within the area for Works No.1 have been appraised.	Section 1.7.2 of ES Appendix 16.3 (Arboriculture Report) (APP-411).	<i>The extension works (as contained in the FEED study plan and description at Section 1.1.2 of Additional Supporting Information for Onshore Works (ES Appendix 3.5)) were assessed as part of the ES.</i>
Chapter 17 Soils and Agricultural Land Use	The agricultural land assessment was not undertaken at a level of detail which describes the National Grid connection works or the arrangement of equipment. This was not necessary as this detail would not bring any change to the assessment.	Paragraphs 17.6.2.4 to 17.6.2.12 of ES Chapter 17 (Soils and Agricultural Land Use) (APP-132).	<i>The extension works (as contained in the FEED study plan and description at Section 1.1.2 of Additional Supporting Information for Onshore Works (ES Appendix 3.5)) were assessed as part of the ES.</i>

⁶ Where “Converter Station Area” is a term defined in the Glossary (Reference: <https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/EN020022/EN020022-001508-1.7%20Glossary%20Rev002.pdf>)

Chapter	Confirmation of what has been assessed for Works No. 1	Location of Assessment within the ES	Status of Assessment within the ES
	<p>This assessment has assumed the typical cable construction arrangement and mitigation to prioritise the reuse of top-soils when reinstating soils over the cables. There would be no effect on the assessment if deeper or wider trenches are assumed or if the spacing between trenches varies.</p>	<p>Paragraphs 17.6.2.1 to 17.6.2.3 and 17.6.2.13 to 17.6.2.15 of ES Chapter 17 (Soils and Agricultural Land Use) (APP-132).</p>	
<p>Chapter 18 Ground Conditions</p>	<p>In the assessment of ground conditions, it is assumed that all land within the Order Limits is potentially disturbed. Where contamination is identified within the Order Limits this will be remediated under Requirement 13 of the dDCO (REP3-003).</p> <p>Mitigation measures will be in place to prevent the mobilisation of contamination during the construction phase within the Order Limits. Mitigation measures are contained in Section 5.5 and Section 6.9.2 of the updated Onshore Outline Construction Environmental Management Plan (CEMP) (REP4-005). Deviations from the HVAC trench cross section or extension of the Lovedean 400kV substation do not necessitate any change to this approach or affect the conclusions of the assessment.</p>	<p>Paragraphs 18.5.4.3 to 18.5.4.11, Section 18.6, paragraphs 18.7.3.1 to 18.7.3.9 and paragraphs 18.7.4.1 to 18.7.3.8 of ES Chapter 18 (Ground Conditions) (APP-133).</p>	<p><i>The extension works (as contained in the FEED study plan and description at Section 1.1.2 of Additional Supporting Information for Onshore Works (ES Appendix 3.5)) were assessed as part of the ES.</i></p>
<p>Chapter 19 Groundwater</p>	<p>The trenched Onshore Cable Corridor groundwater quantity and quality impacts have been assessed. A shortened version of the ES Chapter 19 assessment text is provided below.</p>	<p>Groundwater quantity impacts associated with the Converter Station Area have been assessed in Section 19.6.2 of ES Chapter 19 (Groundwater) (APP-134).</p>	<p><i>The extension works (as contained in the FEED study plan and description at Section 1.1.2 of Additional Supporting Information for Onshore Works (ES Appendix 3.5)) were assessed as part of the ES.</i></p>

Chapter	Confirmation of what has been assessed for Works No. 1	Location of Assessment within the ES	Status of Assessment within the ES
	<p>The trenches could intercept perched groundwater in the superficial Head Deposits aquifer, which would require sump pump dewatering to mitigate trench flooding, however, this is not anticipated based on local topography and local groundwater conditions. Where groundwater interceptions occur, seepages will likely be in small finite quantities and a negligible magnitude of change is predicted. The excavations proposed in the Chalk bedrock aquifer are not predicted to intercept groundwater and a Negligible effect is predicted on the Chalk aquifer and associated water users.</p> <p>It is predicted that there will be a no additional impact to either the superficial Head Deposit aquifer (Low sensitivity), Chalk aquifer and water users (High sensitivities) for the cable installations and a Negligible significance of effect is assigned on this basis. This is not considered a significant environmental impact.</p> <p>Due to the inert ground materials proposed for trench construction and the included embedded mitigation measures, it is anticipated that there will be a Negligible magnitude impact on groundwater quality for the following aquifers during the trench construction: Chalk (Portsdown Chalk Formation, Spetisbury Chalk Member, Tarrant Chalk Member, Newhaven Chalk Formations, Undifferentiated Chalk) and associated Water Users (High sensitivity) and the</p>	<p>Groundwater quality impacts associated with the Converter Station Area were assessed in Section 19.6.3 of ES Chapter 19 (Groundwater) (APP-134).</p> <p>Groundwater quantity impacts associated with the trenched Onshore Cable Route in Section 1 (Converter Station Area) were assessed in paragraphs 19.6.4.2 to 19.6.4.5 of ES Chapter 19 (Groundwater) (APP-134).</p> <p>Groundwater quality impacts associated with the trenched Onshore Cable Route in all Sections including Section 1 (Converter Station Area) were assessed in paragraphs 19.6.5.3 to 19.6.5.4 of ES Chapter 19 (Groundwater) (APP-134).</p>	

Chapter	Confirmation of what has been assessed for Works No. 1	Location of Assessment within the ES	Status of Assessment within the ES
Chapter 20 Surface Water Resources and Flood Risk	<p>Head Deposits. This is predicted to result in a Negligible effect for these aquifers which is not considered to be significant.</p> <p>No further assessment is required, as the impacts from the HVAC connection and substation extension are the same as those from the trenched Onshore Cable Corridor and the converter station works respectively.</p> <p>The potential impacts to surface water drainage patterns, surface water feature water quality and flood risk with relevant mitigations and a summary of residual effects has been assessed for the Converter Station Area and the Onshore Cable Corridor within ES Chapter 20 (Surface Water Resources and Flood Risk).</p> <p>The proposed National Grid Connection Works are considered within the assessment of the area for Works No. 1. Therefore, it has been adequately assessed in terms of the potential for impacts on surface water resources and flood risk.</p> <p>It has been assumed that the extension works and proposed buildings (i.e. Portable Relay Room) would not require National Grid to change the overall existing drainage strategy at Lovedean 400 kV substation.</p>	<p>The Converter Station Area and Onshore Cable Corridor surface water drainage patterns were assessed in Section 20.7.2 of ES Chapter 20 (Surface Water Resources and Flood Risk) (APP-135).</p> <p>The Converter Station Area and Onshore Cable Corridor surface water features water quality was assessed in Section 20.7.4 of ES Chapter 20 (Surface Water Resources and Flood Risk) (APP-135).</p> <p>The Converter Station Area and Onshore Cable Corridor flood risk was assessed in Section 20.7.5 of ES Chapter 20 (Surface Water Resources and Flood Risk) (APP-135).</p>	<p><i>The extension works (as contained in the FEED study plan and description at Section 1.1.2 of Additional Supporting Information for Onshore Works (ES Appendix 3.5)) were assessed as part of the ES.</i></p>
Chapter 21 Heritage and Archaeology	<p>It is assumed for the purposes of the Heritage and Archaeology assessment that topsoil would be removed across the entire Converter Station Area</p>	<p>Magnitude of change assessed in paragraphs 21.6.2.3 to 21.6.2.5 and paragraphs 2.6.2.17</p>	<p><i>The extension works (as contained in the FEED study plan and description at Section 1.1.2 of Additional Supporting Information for Onshore</i></p>

Chapter	Confirmation of what has been assessed for Works No. 1	Location of Assessment within the ES	Status of Assessment within the ES
	<p>(including the area for Works No. 1) as part of the preliminary site works (paragraph 21.6.2.3), encompassing the proposed National Grid connection works.</p> <p>Any further impact associated with the excavation of HVAC cable trenches is assessed in paragraph 21.6.2.18. Minor changes to extent and depth of the proposed cable trench connection would not change the conclusions of the assessment. Therefore, the assessment suitably covers the National Grid Connection Works.</p>	<p>to 2.6.2.18 of ES Chapter 21 (Heritage and Archaeology) (APP-136).</p>	<p><i>Works (ES Appendix 3.5)) were assessed as part of the ES.</i></p>
<p>Chapter 22 Traffic and Transport</p>	<p>The Traffic and Transport chapter has assessed the impacts of the peak period of construction activities on the public highway network and users of it. No assessments have been completed to consider Works No. 1 separately since it is the peak (cumulative) construction traffic generated by the Proposed Development which has been assessed, and which it is not anticipated would be exceeded as a result of the construction of the National Grid Connection Works and the Converter Station where undertaken in parallel.</p>	<p>Section 22.4.6 of ES Chapter 22 (Traffic and Transport) (APP-137) and paragraphs 15.5.2.9 of the ES Addendum (REP1-139) provide details of the assumptions used regarding construction of the Converter Station.</p>	<p><i>The extension works (as contained in the FEED study plan and description at Section 1.1.2 of Additional Supporting Information for Onshore Works (ES Appendix 3.5)) were assessed as part of the ES.</i></p>
<p>Chapter 23 Air Quality</p>	<p>An Institute of Air Quality Management (IAQM) dust risk assessment has been completed for the Converter Station Area based on the construction data available for earthworks, construction and trackout. This</p>	<p>Paragraphs 23.6.2.6 to 23.6.2.9 of the updated ES Chapter 23 (Air Quality) (Rev 002) (REP1-033).</p>	<p><i>The extension works (as contained in the FEED study plan and description at Section 1.1.2 of Additional Supporting Information for Onshore</i></p>

Chapter	Confirmation of what has been assessed for Works No. 1	Location of Assessment within the ES	Status of Assessment within the ES
	<p>includes the areas identified for the NGET connection since they are included within the area for Works No. 1. The assessment found the area to present a high risk for dust soiling, and low risk for impacts to human health. The overall impact is conservatively based on the highest assessed risk activities to be undertaken. Therefore, the overall assessment is for a high risk in an area with high sensitivity receptors. With the incorporation of the appropriate embedded mitigation measures from Section 1.4 of Appendix 23.1, and incorporated into Section 5.11 of the Onshore Outline CEMP (REP4-005), the residual effects in respect of Onshore Cable Corridor Section 1 – Lovedean (Converter Station Area) are assessed as negligible, not significant.</p>	<p>Section 1.3.1 of ES Appendix 23.2 (IAQM Construction Assessment) (Rev 002) (REP1-074).</p> <p>Section 1.4 of ES Appendix 23.2 (IAQM Construction Assessment) (Rev 002), Table 36 provides the Dust and Air Emissions Mitigation Measures.</p>	<p><i>Works (ES Appendix 3.5)) were assessed as part of the ES.</i></p>
<p>Chapter 24 Noise and Vibration</p>	<p>The noise and vibration assessment included;</p> <ul style="list-style-type: none"> i. Trenching and duct installation for the HVAC cable circuits between the Converter Station and Lovedean Substation. ii. Groundworks and general construction activities at the Lovedean substation <p>It was assumed that the nature of the works (e.g. in terms of construction plant and techniques) were comparable with HVDC cable duct installation and Converter Station works.</p>	<p>Paragraphs 24.4.2.15 and 24.6.2.11 of ES Chapter 24 (Noise and Vibration) of the ES (APP-139).</p>	<p><i>The extension works (as contained in the FEED study plan and description at Section 1.1.2 of Additional Supporting Information for Onshore Works (ES Appendix 3.5)) were assessed as part of the ES.</i></p>

Chapter	Confirmation of what has been assessed for Works No. 1	Location of Assessment within the ES	Status of Assessment within the ES
	<p>An illustrative route was assessed (between the east side of the Converter Station and west side of Lovedean Substation), but the alignment was not specifically presented in the ES.</p> <p>These works could take place anywhere within Works No.1 and the effects would be those presented in the ES (i.e. negligible). This is because the nearest receptors are far enough away from Works No.1 such that negligible magnitude of noise levels would be anticipated.</p>		
Chapter 25 Socio- economics	<p>The assessment took into consideration all areas of works (including Works No. 1). The baseline assessment included identification of residential receptors, commercial businesses, community facilities, recreational routes, leisure facilities.</p> <p>The assessment considered both construction stage effects (such as Non-Motorised User routes) and also the operation stage effects (i.e. the impact on Users of Recreation and Open Space and again the Non-Motorised User Routes).</p> <p>Therefore, the assessment methodology and outcomes suitably cover the National Grid Connection Works.</p>	Paragraphs 25.5.5.2, 25.5.6.2; 25.5.7.3; 25.7.2.34; 25.7.2.37; 25.7.2.39; 25.7.3.3; 25.7.3.4; 25.7.3.5 and Sections 25.10 and 25.11 of ES Chapter 25 (Socio-economics) (APP-140).	<i>The extension works (as contained in the FEED study plan and description at Section 1.1.2 of Additional Supporting Information for Onshore Works (ES Appendix 3.5)) were assessed as part of the ES.</i>
Chapter 26 Human Health	Section 26.6.2 of the ES Chapter 26 (Human Health) assesses the effect of Section 1 Lovedean (Converter Station Area) on Human Health associated with Air	Portable relay rooms and southern connection within the substation Order Limits:	<i>The extension works (as contained in the FEED study plan and description at Section 1.1.2 of Additional Supporting Information for Onshore</i>

Chapter	Confirmation of what has been assessed for Works No. 1	Location of Assessment within the ES	Status of Assessment within the ES
	<p>Quality (construction), Noise (construction and operation), Landscape and Green Space (construction and operation), Employment and Business Activity (construction), Soil/Land Contamination and Water Quality (construction) and electric and magnetic fields (EMF) (operation). The area for Work No.1 is included within the Converter Station Area, though reference to any specific layout at Lovedean substation is not included.</p> <p>Section 26.6.2.24 states <i>'It is anticipated that the dominant noise sources from the operation of the Converter Station Area are likely to be the converter transformers, the converter transformer fans and the valve converter cooling fan bank'</i>. It is considered this accurate as the National Grid Connection Works would not be the dominant operational noise source.</p> <p>In relation to the HVAC cable circuit, the Human Health assessment does not make reference to the arrangement (depth/width) of trenches and cables. The assessment does identify that the <i>'installation rate for one circuit will be approximately 18 m - 30 m per day and typically in 100 m sections within urban areas, and approximately 50 m per day for areas of open land'</i> in Section 26.6.1.2, which is applicable to the HVAC Cable installation rate, and elements of the Human Health assessment has been based this assumption.</p>	<p>No specific reference to layout/activities of the substation, however Section 1 Lovedean (Converter Station Area) is assessed in Section 26.6.2 of ES Chapter 26 (Human Health) (APP-141).</p> <p>HVAC Cable arrangement changes within the Order Limits</p> <p>The Human Health assessment does not make reference to the arrangement (depth/width) of trenches and HVAC cables. Paragraph 26.6.1.2 of ES Chapter 26 (Human Health) (APP-141) identifies the installation rate. Paragraphs 26.6.3.70 and 26.6.3.71 of ES Chapter 26 (Human Health) (APP-141) repeat construction assumptions used in ES Appendix 3.7 (Onshore Electric and Magnetic Field Report) (APP-361), to determine the effect of EMF.</p>	<p><i>Works (ES Appendix 3.5)) were assessed as part of the ES.</i></p>

Chapter	Confirmation of what has been assessed for Works No. 1	Location of Assessment within the ES	Status of Assessment within the ES
	<p>Sections 26.6.3.70 and 26.6.3.71 consider the effects of EMF. These sections utilise information from ES Appendix 3.7 Onshore Electric and Magnetic Field Report and identify that <i>'Due to the grounded shielding of the HVAC and HVDC Onshore Cables there will be no electric field present along the HVAC Cable Route and HVDC Cable Route. The public would therefore not be exposed to electric fields from the Onshore Cable Corridor because the field is contained by the cable's protective metal sheath' and 'The HVAC Cables are laid in agricultural land. The peak magnetic field from the HVAC Cable is predicted to be 33 μT (50 Hz) at 1 m above ground, and reduces rapidly with distance from the cables'.</i></p>		
Chapter 27 Waste and Material Resources	<p>The construction material and waste type and quantities have been assessed from the information which is provided in Chapter 3 (Description of the Proposed Development) (APP-118) and is consistent with the outputs of the April 2019 NGET FEED Study.</p> <p>The data are based on the preliminary design of the Proposed Development as was available from the output of the 2019 FEED Study and in accordance with best practice considers a 'worst case' scenario based on the area for Works No.1 to estimate the consumption of material resources and generation of waste.</p>	Discussed in paragraphs 27.1.2.2, 27.4.5.4 – 27.4.5.13 of ES Chapter 27 (Waste and Material Resources) (APP-142) and ES Appendix 27.2 (Waste and Material Resources Assumptions and Limitations) (APP-478).	<i>The extension works (as contained in the FEED study plan and description at Section 1.1.2 of Additional Supporting Information for Onshore Works (ES Appendix 3.5)) were assessed as part of the ES.</i>



Chapter	Confirmation of what has been assessed for Works No. 1	Location of Assessment within the ES	Status of Assessment within the ES
	<p>A reasonable worst-case scenario has been assumed. BAs a result, based on the preliminary design, changes arising from refinement of the detailed design are not expected to change the significance of the effects reported in the waste and material resources assessment.</p>		
<p>Chapter 28 Carbon and Climate Change</p>	<p>Greenhouse Gases (GHGs)</p> <p>The construction GHG emissions have been assessed from the preliminary design data including for the grid connection. This includes the use of SF₆ gas to act as an insulator.</p> <p>Climate Resilience</p> <p>Connection point and portable relay rooms –The resilience measures and assessment as identified for the Converter Station (Table 28.19 and Table 28.20) also apply to the connection point and portable relay rooms.</p> <p>The resilience measures and assessment identified for the Onshore Cable Corridor (Table 28.21 and Table 28.22) also applies to the HVAC cables.</p>	<p>GHGs</p> <p>Section 28.6 of ES Chapter 28 (Carbon and Climate Change) (APP-143).</p> <p>Climate Resilience</p> <p>Table 28.19, Table 28.20, Table 28.21 and Table 28.22 of ES Chapter 28 (Carbon and Climate Change) (APP-143).</p>	<p><i>The extension works (as contained in the FEED study plan and description at Section 1.1.2 of Additional Supporting Information for Onshore Works (ES Appendix 3.5)) were assessed as part of the ES.</i></p>