



# Scotland England Green Link 2 - English Onshore Scheme

Environmental Statement:  
Volume 2

Chapter 5: Approach to Environmental  
Impact Assessment

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For: National Grid Electricity Transmission

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## 5. Approach to Environmental Impact Assessment

### 5.1 Introduction

This chapter of the Environmental Statement (ES) describes the approach and outlines the scope of the environmental assessment for the English Onshore Scheme. In addition, it also provides general information about the environmental assessment process including the key steps taken, and the methodology and the terminology adopted. Where a technical discipline deviates from this methodology to align with topic specific guidance, this is detailed within the corresponding chapter.

### 5.2 Overview of Environmental Assessment

Environmental assessment is the process of identifying, evaluating and mitigating the likely significant environmental effects of a proposed development. It promotes the early identification and evaluation of the likely significant environmental effects of the development and enables appropriate mitigation (that is measures to avoid, reduce or offset significant adverse effects) to be identified and incorporated into the design of the development, or commitments to be made to implement environmentally sensitive construction methods and practices. The results of the environmental assessment also ensure that decision makers, such as Local Planning Authorities (LPA) and statutory consultees as well as other interested parties including local communities, are aware of a proposed development's potential environmental effects and whether these may be significant or not so that they may be considered in the determination of an application for planning permission.

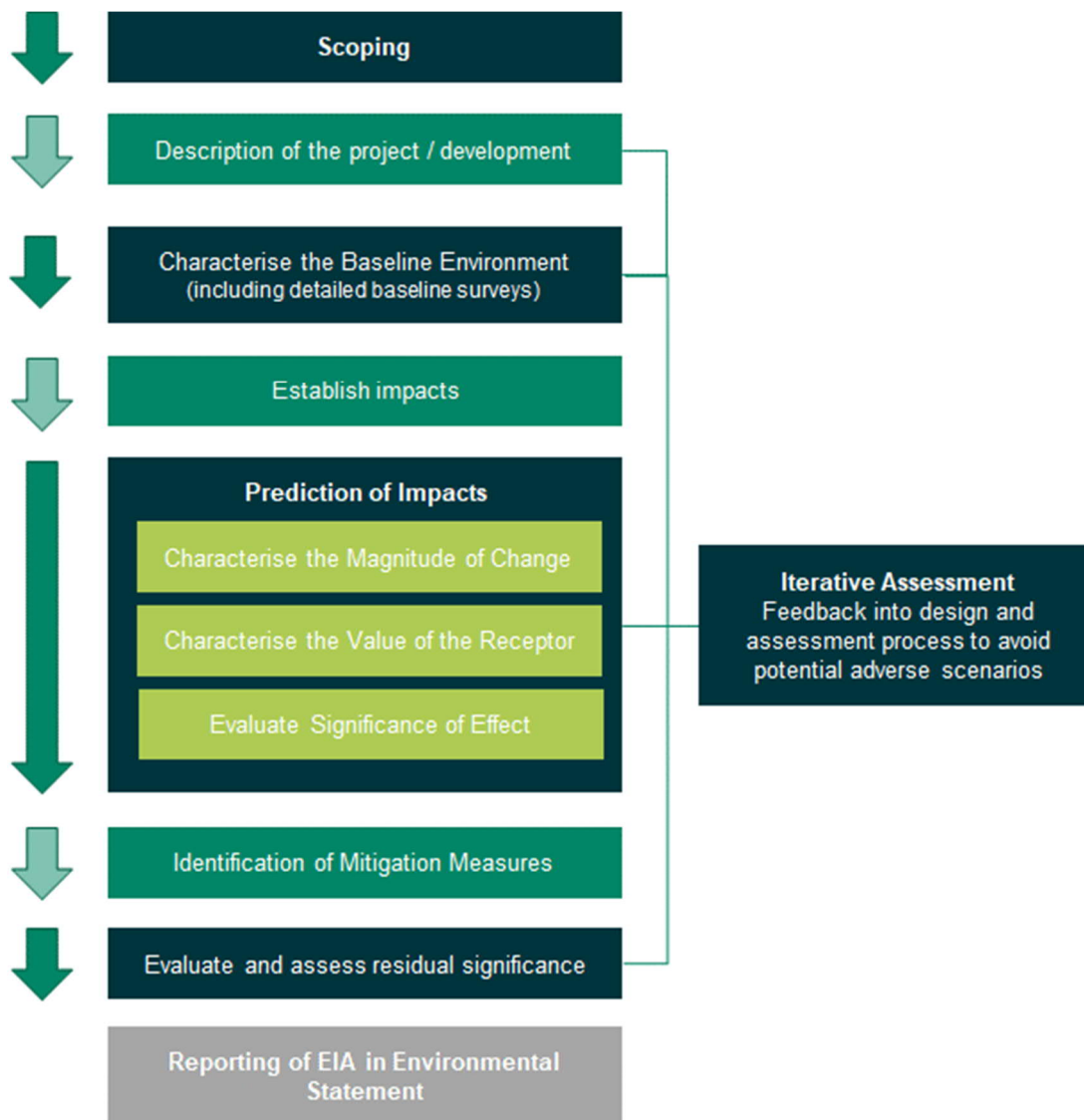
The assessment methodology follows a systematic approach in order to assess the potential impacts and subsequent effects of the English Onshore Scheme on human health, socio-economics, the natural and physical environments, and material assets where applicable and in an appropriate manner. The environmental assessment has been undertaken in parallel with the development of the design of the English Onshore Scheme, thereby maximising opportunities to mitigate likely significant effects as they have been identified.

The environmental appraisal has followed the iterative Environmental Impact Assessment (EIA) process, as illustrated in **Figure 5-1** and detailed below. It is noted that these stages have followed on from EIA screening complete with both East Riding of Yorkshire Council (ERYC) and Selby District Council (SDC) to understand whether or not a statutory EIA was necessary. These screening responses are provided in **Appendix 5-A**.

- *Scoping studies*: Following on from the screening process, Scoping was the next step in the EIA process, with the production of a Scoping Report (Ref 5-1). This provided an opportunity for ERYC, SDC and other consultees to comment on the proposed scope and approach of the EIA. Scoping responses obtained from consultees are provided in **Appendix 5-B**;
- *Baseline studies*: These have comprised a combination of desk-based studies and field surveys to establish an understanding of the existing environmental conditions (the 'baseline') within the study area and therefore ensure an accurate assessment of the likely significant effects of the English Onshore Scheme. As the design has become more defined, the scope of the baseline studies has also become more detailed. Baseline study information and data are provided in the discipline chapters and relevant appendices of this ES.
- *Assessment of impacts*: The potential environmental impacts of the English Onshore Scheme (both beneficial and adverse) have been predicted and evaluated using a range of specialist methods which are described in subsequent chapters of this ES. Where possible mitigation measures have been incorporated into the base scheme design such that they inform its detailed design and/or how it shall be constructed. Through iterative assessment, potential impacts have been predicted and opportunities to mitigate them identified in the design, with the aim of preventing or reducing impacts as much as possible. The approach provides the opportunity to prevent or reduce adverse effects from the outset; and
- *Identification of likely significant effects*: A detailed description of the general approach to assessing effects is contained in this chapter with detailed approaches tailored to individual environmental

topics following topic-specific guidance contained in subsequent sections. The ES identifies the significance of both the potential and residual effects of the scheme and identifies whether these are significant or not significant. Residual effects are those which remain taking into account proposed project specific mitigation. As described above the approach to the development and EIA of the English Onshore Scheme has resulted in much of the mitigation being embedded within the base scheme design. Therefore, mitigation by design has been taken into account when evaluating the significance of the potential impacts meaning that in some instances the significance of residual effects is the same as that reported for potential effects.

**Figure 5-1: Overview of the EIA Process**



## 5.2.1 Legislative Background

### 5.2.1.1 Brexit impact on Environmental Legislation

As of exit day (11pm on 31 January 2020), the UK is no longer a European Union (EU) Member State. The European Union (Withdrawal) Act 2018 (EU(W)A 2018) provides for the European Communities Act 1972 (ECA 1972) to be repealed from exit day.

EU legislation which applied directly or indirectly to the UK before 11.00 pm on 31 January 2020 has been retained in UK law as a form of domestic legislation known as 'retained EU law'. This is set out in sections 2 and 3 of the European Union (Withdrawal) Act 2018 (c. 16). Section 4 of the 2018 Act ensures that any remaining EU rights and obligations, including directly effective rights within EU treaties, continue to be recognised and available in domestic law after exit.

Whilst this is a change, it does mean that relevant directives previously applied directly or indirectly to the UK have been retained and therefore are still relevant to the environmental assessment within this report. This includes, for example:

- Directive 2011/92/EU on the assessment of the effects of certain public and private projects on the environment (and subsequent amending Directive 2014/52/EU) (the EIA Directive);
- Directive 2008/50/EC the Ambient Air Quality and Cleaner Air for Europe Directive (the EU Air Quality Framework Directive);
- Directive 92/3/EEC on the conservation of natural habitats and of wild fauna and flora (Habitats Directive); and
- Directive 2000/60/EC the Water Framework Directive (WFD).

The Town and Country Planning (EIA) Regulations 2017 (as amended 2018) and the Infrastructure Planning (EIA) Regulations 2017 (as amended 2018) (collectively referred to as the 'EIA Regulations') (Ref 5-2) transpose the requirements of the EIA Directive into UK legislation. In exercise of the powers in EU(W)A 2018, the UK Government made the Environmental Assessments and Miscellaneous Planning (Amendment) (EU Exit) Regulations 2018 (SI 2018/1232). These regulations provide for the EIA Regulations to be amended with effect from 11pm on 31 December 2020. In particular, the amendments update references in the EIA Regulations to EU law, Member States, and related terms to reflect the UK leaving the EU. The regulations do not make any substantive changes to the way the EIA regime will operate in England and Wales following the UK's exit from the EU.

### 5.2.1.2 The need for EIA of the English Onshore Scheme

The 2017 EIA Regulations include two schedules of development which are derived from the EIA Directive:

- Schedule 1 Development (Annex I of the EIA Directive): Development of this type requires that an EIA is undertaken, and the results described in an Environmental Statement (or EIA Report) which accompanies the application.
- Schedule 2 Development (Annex II of the EIA Directive): Development of this type may require that an EIA is undertaken depending on the scale of the development, its characteristics and the sensitivity of the environment in which the development will take place. The results of the EIA must be described in an ES (or EIA Report) which accompanies the application.

There is no reference to subsea transmission projects or the components that they comprise (converter stations, subsea or underground cables) in either Schedule 1 or 2 of the 2017 EIA Regulations (or Annex I or II of the EIA Directive). Noting the length of the English Onshore Scheme and the various receptors across East Riding and North Yorkshire that may be affected NGET sought screening opinions from ERYC and SDC. Opinions received from ERYC and SDC on 8<sup>th</sup> April 2021 and 19<sup>th</sup> March 2021 respectively (**Appendix 5-B**), both confirmed that the English Onshore Scheme is considered to be 'EIA Development'.

### 5.2.1.3 Content of the Environmental Statement

The EIA will follow the requirements outlined in the 2017 EIA Regulations (Ref 5-2). Schedule 4 of the EIA Regulations sets out the minimum information which must be included within an ES. **Table 5-1** summarises these requirements and identifies where the required information may be found within this ES.

**Table 5-1: 2017 EIA Regulations: Schedule 4 Requirements**

Legislative Requirement	Where this information is in this ES
1. Description of the development, including in particular— (a) a description of the location of the development; (b) a description of the physical characteristics of the whole development and the land-use requirements during the construction and operational phases; (c) a description of the main characteristics of the operational phase of the development, for instance, nature and quantity of the materials and natural resources	The English Onshore Scheme is described in <b>Chapter 3: Description of the English Onshore Scheme</b> of the ES. This chapter provides a detailed description of each of the components that constitute the English Onshore Scheme including the proposed underground HVDC cable route, the proposed converter station (including permanent access), and the proposed HVAC underground cables between the proposed converter station to the existing substation.

Legislative Requirement	Where this information is in this ES
<p>used; (d) an estimate, by type and quantity, of expected residues and emissions (water, air and soil pollution, noise, vibration, light, heat, radiation, etc.) resulting from the construction and operation of the proposed development.</p>	<p>This description includes their location, physical characteristics, temporary supporting land take requirements, installation and construction methods as well as proposed reinstatement works. <b>Chapter 3: Description of the English Onshore Scheme</b> also includes a detailed description of the operational requirements of the HVDC link.</p>
<p>2. A description of the reasonable alternatives (for example in terms of development design, technology, location, size and scale) studied by the developer, which are relevant to the proposed project and its specific characteristics, and an indication of the main reasons for selecting the chosen option, including a comparison of the environmental effects.</p>	<p>The approach to the development of the English Onshore Scheme through siting and routeing, and the alternatives which have been considered are described in <b>Chapter 2: Project Development and Alternatives</b>. This includes a summary of the assessment of alternative landfall and converter station sites as well as cable route corridors.</p>
<p>3. A description of the aspects of the current state of the environment (baseline scenario) and an outline of the likely evolution thereof without implementation of the development as far as natural changes from the baseline scenario can be assessed with reasonable effort on the basis of the availability of environmental information and scientific knowledge.</p>	<p>The results of baseline studies and the aspects of the environment likely to be significantly affected by the English Onshore Scheme (referred to as receptors) have been identified and are reported in <b>Chapters 7-16</b>.</p>
<p>4. A description of the factors specified in regulation 4(2) likely to be significantly affected by the development (population, human health, biodiversity, land, soil, water, air, climate, material assets, cultural heritage, and landscape).</p>	<p>The factors likely to be significantly affected by the English Onshore Scheme have been identified and are reported in <b>Chapters 7-16</b>. The scope of the assessment and approach taken to complete the assessment has been agreed with the determining authority and statutory consultees as part of the scoping stage and in subsequent and technical discussions. The outcomes of scoping are described further later in this chapter, and Scoping Opinions received from the LPAs provided in <b>Appendix 5-B. Chapter 6</b> and summaries of technical discussions provided in each of assessment chapters (<b>Chapters 7-16</b>).</p>
<p>5. A description of the likely significant effects of the development on the environment resulting from:</p> <ol style="list-style-type: none"> <li>a. the construction and existence of the development;</li> <li>b. the use of natural resources, considering as far as possible the sustainable availability of these resources;</li> <li>c. the emissions of pollutants, noise, vibration, light, heat and radiation, the creation of nuisances, and the disposal and recovery of waste;</li> <li>d. the risks to human health, cultural heritage or the environment;</li> <li>e. the cumulation of effects with other existing and/or approved projects, taking into account any existing environmental problems relating to areas of particular environmental importance likely to be affected or the use of natural resources;</li> <li>f. the impact of the project on climate and the vulnerability of the project to climate change; and</li> <li>g. the technologies and the substances used.</li> </ol>	<p>The likely significant effects resulting from the construction and operation of the English Onshore Scheme including the direct, indirect, temporary, permanent, beneficial and adverse effects have been identified, assessed and reported in <b>Chapters 7-16</b>. The cumulative effects are reported in <b>Chapter 17: Cumulative and In-Combination Effects</b>.</p>
<p>6. A description of the forecasting methods or evidence, used to identify and assess the significant effects on the environment, including</p>	<p>Forecasting methods, limitations and uncertainties are detailed, where relevant, in each individual technical chapter in <b>Chapters 7-16</b>.</p>

Legislative Requirement	Where this information is in this ES
details of difficulties encountered and the main uncertainties involved.	
7. A description of the measured envisaged to avoid, prevent, reduce or, if possible, offset any identified significant adverse effects on the environment and, where appropriate, of any proposed monitoring arrangements.	The measures proposed to prevent, reduce and where required offset any significant adverse effects (referred to as mitigation) are identified in <b>Chapters 7-18</b> . Note that <b>Chapter 18: Outline Construction Environmental Management Plan</b> compiles the committed mitigation measures that will be embedded within the approach and management of construction activities.
8. A description of the expected significant adverse effects of the development on the environment deriving from the vulnerability of the development to risks of major accidents and/or disasters which are relevant to the project concerned.	As the English Onshore Scheme is not considered a source of hazard that could result in a major accident and/or disaster this topic is scoped out of the ES, in agreement with scoping opinions received from ERYC and SDC ( <b>Appendix 5-B</b> ).
9. A non-technical summary of the information provided above.	A Non-Technical Summary of the key findings of the environmental assessment is set out in Volume 1 of the ES.
10. A reference list detailing the sources used for the descriptions and assessments included in the EAR.	A reference list is included in each chapter of the ES, where relevant.

### 5.3 Scoping Stage

In April 2021, a scoping report was submitted to the affected LPAs (ERYC and SDC) (Ref 5-1) to inform and support the provision of a scoping opinion as to the information required to be provided in this ES. The Scoping Report identified those aspects of the environment which were considered likely to be significantly affected by the EOS and the approach to the identification and assessment of those effects. It also scoped out those aspects of the environment which were considered unlikely to be significantly affected. A copy of the scoping opinions provided by ERYC and SDC are contained in **Appendix 5-B**. Each of the technical chapters of the ES details the scoping comments relevant to its topic area and outlines how they have been addressed.

Matters which have been scoped out of the ES are:

- *Air Quality* – the construction and operation of the English Onshore Scheme is considered unlikely to result in significant effects on air quality. Good construction practice measures were identified at scoping and have been embedded within Outline CEMP in Chapter 18 to further minimise dust effects during construction and cable installation. Air quality was therefore agreed to be scoped out subject to confirmation that construction traffic numbers did not meet screening criteria. This is confirmed in **Chapter 14: Traffic and Transport**.
- *Health and Wellbeing* - Given that individual topic chapters, namely Noise and Vibration, Traffic and Transport and Socio-economics, Recreation and Tourism will form part of the EIA and will consider and assess potential impacts to human receptors at an appropriate geographical scale, it is not proposed to include a standalone chapter relating specifically to human health within the ES. This is considered to be a proportional approach. Relevant mitigation measures and further consideration of residual effects on human receptors will be provided in each relevant ES chapter. As a result, any health impacts that might occur in each of these areas will be assessed directly within the EIA process.
- *Traffic and Transportation (operational phase only)* – operational effects resulting from traffic and transport are considered unlikely to be significant. Under normal operation, vehicle movements will be limited during a typical working day and as such are considered unlikely to result in a significant effect on other road users. During periods of maintenance there may be additional movements including Abnormal Indivisible Loads (AILs) but these are considered unlikely to occur regularly, and thus will not be significant. Effects resulting from traffic and transport during construction are assessed in **Chapter 14: Traffic and Transport**.
- Operational assessment of the underground cables is also scoped out of the Landscape and Visual Amenity; Geology and Hydrogeology; Noise and Vibration; Waste and Materials; and some

aspects of the Socio-economic, Recreation and Tourism assessments due to the buried and inert nature of the asset once installed.

## 5.4 Baseline Studies

In order to assess the potential impacts resulting from the English Onshore Scheme it was necessary to first establish the environmental conditions that currently exist along and within the vicinity of the scheme as well as the likely evolution of the baseline without the scheme.

Appropriate understanding of the existing baseline for each environmental receptor was collated through some or all of the following processes:

- Undertaking baseline surveys and collecting data to establish the exiting baseline conditions;
- Review secondary data sources (i.e., review of existing documentation and literature); and
- Stakeholder consultation including statutory and non-statutory bodies.

The key data sources used to establish the baseline are described in each technical assessment chapter; where relevant, each chapter is also supported by additional background and baseline information provided within an appendix.

## 5.5 Assessment of Impacts

The Guidelines for Environmental Impact Assessment (IEMA, 2004, p11/2) (Ref 5-3) state: “*The assessment stage of the EIA should follow a clear progression; from the characterisation of ‘impact’ to the assessment of the significance of the effects taking into account the evaluation of the sensitivity and value of the receptors.*” There was a diverse range of potential impacts to consider within the assessment process and a range of prediction methods were used, including quantitative, semi-quantitative and qualitative approaches. The definitions used to describe impacts are noted in **Table 5-2**.

**Table 5-2: Impact Definition**

Terms	Definition
<b>Direct impact</b>	Impacts that result from a direct interaction between the English Onshore Scheme activities and the receiving environment.
<b>Indirect impact</b>	Impacts on the environment, which are not a direct result of the English Onshore Scheme / English Onshore Scheme activities, often produced away from the activity or as a result of a complex pathway.
<b>Cumulative impact</b>	Impacts that result from incremental changes caused by other present or reasonably foreseeable actions together with the English Onshore Scheme (European Commission, 1999) (Ref 5-4). Generally considered to be the same impact but from different projects e.g., noise generated from two separate projects combining to affect residential amenity.
<b>Beneficial impact</b>	An impact that is considered to represent an improvement on the baseline condition or introduces a new desirable factor (IEEM, 2010) (Ref 5-5).
<b>Adverse impact</b>	An impact that is considered to represent an adverse change from the baseline condition or introduces a new undesirable factor (IEEM, 2010) (Ref 5-5).

### 5.5.1 Magnitude of Change

The criteria for defining the magnitude of an impact are set out in **Table 5-3**. Key factors that influence this include:

- *Scale of change* – The scale of change refers to the degree of change to or from the baseline environment caused by the impact being described;
- *Spatial extent* – The extent of an impact is the full area over which the impact occurs; and
- *Duration and frequency* – The duration is the period within which the impact is expected to last prior to recovery or replacement of the feature. Frequency refers to how often the impact will occur.



**Table 5-3: Impact Magnitude Criteria**

Magnitude	Criteria
<b>High</b>	Long term and/or regional level loss; or major alteration to key elements/features of the baseline condition such that post development character/composition of the baseline will be fundamentally changed.
<b>Medium</b>	Medium term loss and/or local level change (greater than the English Onshore Scheme footprint) or alteration to one or more key elements/features of the baseline conditions such that post development character/composition of the baseline condition will be materially changed.
<b>Low</b>	Short term, site specific and/or a minor shift away from baseline conditions. Changes arising from the alteration will be detectable but not material; the underlying character/composition of the baseline condition will be similar to the pre-development situation.
<b>Negligible</b>	Very little change from baseline conditions. Change is barely distinguishable, approximating to a "no change" situation.

## 5.5.2 Sensitivity of the Receptor

The sensitivity of a receptor or feature is characterised by the vulnerability to change, recoverability and importance of the receptor or feature (**Table 5-4**). Characterisation of the receptors in the environmental assessment was achieved by balancing out these three considerations to determine the receptor's sensitivity:

- *Vulnerability* – The vulnerability of the receptor relates to its capacity to accommodate change i.e., the tolerance/intolerance of the receptor to change;
- *Recoverability* – The ability of the receptor to return to the baseline state before the English Onshore Scheme impact caused the change; and
- *Importance* – The importance of the receptor or feature is a measure of the value assigned to that receptor based on biodiversity and ecosystem services, social value and economic value. Importance of the receptor is also defined within a geographical context, whether it is important internationally, nationally or locally.

**Table 5-4: Sensitivity Criteria**

Sensitivity	Description
<b>High</b>	Receptor has little or no ability to absorb change without fundamentally altering its character. For example: <ul style="list-style-type: none"> <li>• Receptor has low/no capacity to return to baseline conditions within English Onshore Scheme life, e.g., low tolerance to change and low recoverability such as a physical feature formed over a geological time scale, or loss of access with no alternatives;</li> <li>• The receptor is a designated feature of a protected site or is rare or unique; and</li> <li>• Receptor is economically valuable.</li> </ul>
<b>Medium</b>	Receptor has moderate capacity to absorb change without significantly altering its character. For example: <ul style="list-style-type: none"> <li>• Receptor has intermediate tolerance to change;</li> <li>• Medium capacity to return to baseline condition, e.g., &gt;5 of up to 10 years; and</li> <li>• The receptor is valued but not protected.</li> </ul>
<b>Low</b>	The receptor is tolerant to change without significant detriment to its character. For example: <ul style="list-style-type: none"> <li>• Receptor has high tolerance to change;</li> <li>• High capacity to return to baseline condition, e.g., within 1 year or up to 5 years; and</li> <li>• May affect socio-economic behaviour but is not a nuisance to users.</li> </ul> The receptor is common and/or widespread.
<b>Negligible</b>	The receptor is tolerant to change with no effect on its character. The English Onshore Scheme activity does not have a detectable effect on survival or viability.

### 5.5.3 Evaluating the Significance of Effect

Having established the magnitude of change and the sensitivity of the receptor the significance of the effect was then assessed. The identification of significance typically requires the application of professional judgement, however a significance matrix (**Table 5-5**) may also be used as a guide to help identify the likely significance of effects. Where specialist disciplines undertaking the assessment have a variation of the table below that aligns with magnitude and sensitivity criteria that best suits their topic area, this is detailed in the specialist chapter (Chapters 7-16).

**Table 5-5: Significance Matrix**

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

The result of the interpretation of this matrix in line with the approach defined by each discipline is the assignment of the level of significance of the effect for all potential English Onshore Scheme impacts. Where individual topics have adapted this matrix to align with their methodology, this is explained in the relevant chapter. This was done prior to any project specific mitigation and re-evaluated following the incorporation of appropriate project specific mitigation measures. **Table 5-6** provides typical descriptions for each of the four impact significant definitions.

**Table 5-6: Explanation of Significance Categories**

Significance Category	Indicative Description <sup>1</sup>	Significant Effect?
<b>Major</b>	A large and detrimental change to a sensitive receptor: likely or apparent exceeding of accepted (often legal) threshold. A large and beneficial change, resulting in improvements to the baseline resulting in previously poor conditions being replaced by new legal compliance or major contribution being made to national targets. These effects may represent key factors in the decision-making process. Potentially associated with site and features of national importance or likely to be important considerations at a regional or district scale. Major effects may relate to resources or features which are unique and which, if lost, cannot be replaced or relocated.	Yes
<b>Moderate</b>	A medium scale change which, although not beyond an acceptable threshold, is still considered to be generally unacceptable, unless balanced out by other significant positive benefits of a project. Likely to be in breach of planning policy rather than a legal statute. These effects, if adverse, are likely to be important at a local scale and on their own could have a material influence on decision making. A positive moderate effect is a medium scale change that is significant in that the baseline conditions are improved to the extent that guideline targets are contributed to.	Yes, typically - but subject to application of professional judgement.
<b>Minor</b>	A small change that, whilst adverse, does not exceed legal or guideline standards. Unlikely to breach planning policy. A small positive change, but not one that is likely to be a key factor in the overall balance of issues.	No

<sup>1</sup> Adapted from Design Manual for Roads and Bridges (DMRB) Volume 11, Section 2, Part 5 HA205/08 (Ref 5-6)

Significance Category	Indicative Description <sup>1</sup>	Significant Effect?
	These effects may be raised as local issues and may be of relevance in the detailed design of a project but are unlikely to be critical in the decision-making process.	
<b>Negligible</b>	A very small scape change that is so small and unimportant that it is considered acceptable to disregard. Effects which are beneath levels of perception, within normal bounds of variation or within the margin of forecasting error, these effects are unlikely to influence decision making irrespective of other effects.	No

Moderate and Major levels of significance were considered to be significant in EIA terms, whilst Negligible or Minor impacts were not considered to be significant.

## 5.6 Approach to Mitigation

A standard hierarchical approach to identifying mitigation requirements has been used:

- *Avoid or Prevent:* In the first instance, mitigation should seek to avoid or prevent the adverse effect at source for example, by routing the cables away from a sensitive receptor;
- *Reduce:* If the effect is unavoidable, mitigation measures should be implemented which seek to reduce the significance of the effect; and
- *Offset:* If the effect can neither be avoided nor reduced, mitigation should seek to offset the effect through the implementation of compensatory mitigation.

Mitigation measures fall into two categories: '*mitigation by design*' which are built into the design of the English Onshore Scheme; and 'Project Specific Mitigation' which is in addition to project design commitments and which are identified as a result of the environmental assessment which has been undertaken as part of this ES. Further information is provided below helping to defined these two categories of mitigation:

- *Mitigation by Design:* The English Onshore Scheme has been developed through an iterative process which involves seeking to avoid or reduce potential environmental effects through the appropriate routing and siting of the English Onshore Scheme infrastructure and design of the scheme; and
- *Project Specific Mitigation:* Project specific mitigation refers to measures which have been identified and proposed as a result of the environmental assessment. These are presented within each of the topic chapters and have been identified to further avoid or reduce identified potentially adverse environmental effects where they cannot be directly incorporated into the initial design of the English Onshore Scheme.

## 5.7 Evaluation and Assessment of Residual Significance

Following the identification of project specific mitigation measures, the significance assessment was then re-evaluated to determine whether there is likely to be a residual effect and the significance of any residual effect. When applied after mitigation, the resulting significance level is referred to as the residual significance.

Residual effects assessed as Moderate or Major after consideration of proposed mitigation measures were analysed further alongside the design in order to discuss and possibly further mitigate impacts where possible. Where further mitigation is not possible a residual effect may remain, and in some instances an offset measure(s) may be applied.

## 5.8 Cumulative Effects

Schedule 4 Part 1 of the 2017 EIA Regulations (Ref 5-2) requires that the description of the likely significant effects should cover:

*“the direct effects and any indirect, secondary, cumulative, trans-boundary, short-term, medium-term and long-term, permanent and temporary, positive and negative effects of the development.”*

For the purpose of this ES cumulative effects have been defined under two categories; intra-project effects and inter-project effects. These two types of cumulative effects are explained below:

- *Intra-Project Effects*: The combined effects arising as a result of the English Onshore Scheme upon a single receptor or resource. An example would be where a local resident is affected by dust, noise and a loss of visual amenity during the construction of the scheme, with the result being a greater nuisance than each individual effect alone; and
- *Inter-Project Effects*: The combined effects of the English Onshore Scheme with other relevant developments which may, on an individual basis result in no significant effects but, together (i.e., cumulatively), have a significant effect.

## 5.9 References

**Ref 5-1** National Grid Electricity Transmission (April 2021) English Onshore Scheme: Scoping Report

**Ref 5-2** Town and Country Planning (Environmental Impact Assessment) Regulations 2017

**Ref 5-3** Guidelines for Environmental Impact Assessment (IEMA) 2004

**Ref 5-4** Guidelines for the Assessment of Indirect and Cumulative Impacts as well as Impact Interactions (European Commission) 1999

**Ref 5-5** Guidelines for Ecological Impact Assessment in Britain and Ireland (Marine and Coastal) (IEEM) 2010

**Ref 5-6** Design Manual for Roads and Bridges (DMRB) Volume 11, Section 2, Part 5 HA205/08 (Highways Agency) 2008



