

# Cable Route Identification & Leasing Guidelines

---

Transmission Assets Infrastructure  
for Offshore Renewable Installations



# Contents

---

<b>1.</b>	<b>Glossary of terms</b> .....	5
<b>2.</b>	<b>Introduction</b> .....	9
<b>3.</b>	<b>Background</b> .....	11
3.1	The Crown Estate's role .....	12
3.2	Connecting to the National Electricity Transmission Systems (NETS) .....	13
<b>4.</b>	<b>Cable Route Protocol</b> .....	15
<b>5.</b>	<b>Cable Route Planning and Principles</b> .....	18
5.1	Cable route planning – principles of cable routing and spacing (evidence-based study) .....	18
5.2	Cable route planning – overarching principles .....	19
<b>6.</b>	<b>Early dialogue and conflict checking</b> .....	21
6.1	Conflict checking of indicative cable route(s) .....	21
<b>7.</b>	<b>Cable Route Identification and Approval</b> .....	23
7.1	Contents of the Application .....	23
7.2	The Crown Estate initial technical assessment of cable route by The Crown Estate .....	25
7.3	Formal review and approval of cable route .....	25
<b>8.</b>	<b>Entering into the transmission assets Agreement for Lease</b> .....	26
8.1	Formalising the cable route in the transmission assets Agreement for Lease .....	26
8.2	Rights of protection in the Agreement for Lease .....	27
<b>9.</b>	<b>Entering into the transmission assets Lease</b> .....	28
9.1	Formalising the cable route in the transmission assets Lease .....	28
9.2	Rights of protection in the Lease .....	30

# Contents

---

- 10. As-laid coordinates and potential adjustments to the route**..... 31
- 11. Delineation of leases after the generator-of-to split**..... 32
- Appendix 1 - Cable Route Protocol** ..... 33
  - Requirements ..... 33
  - Initial Area of Search ..... 35
  - Detailed cable route planning..... 38
- Appendix 2 - Cable Route Identification and Approval (CRIA) information submission** ..... 41
- Appendix 3 - Cable Route Protocol compliance**..... 45

---

## Abbreviations

<b>AC</b>	Alternating Current
<b>AfL</b>	Agreement for Lease
<b>AoS</b>	Area of Search
<b>ASSI</b>	Areas of Special Scientific Interest
<b>CION</b>	Connection and Infrastructure Options Note
<b>CRIA</b>	Cable Route Identification and Approval
<b>CRP</b>	Cable Route Protocol
<b>DC</b>	Direct Current
<b>GIS</b>	Geographic Information System
<b>HRA</b>	Habitats Regulations Assessment
<b>m</b>	Metre
<b>MCZ</b>	Marine Conservation Zone
<b>NETS</b>	National Electricity Transmission System
<b>NGESO</b>	National Grid Electricity System Operator
<b>NGET</b>	National Grid Electricity Transmission
<b>OFTO</b>	Offshore Transmission Owner
<b>SAC</b>	Special Area of Conservation
<b>SEA</b>	Strategic Environmental Assessment
<b>SNCB</b>	Statutory Nature Conservation Body
<b>SPA</b>	Special Protection Area
<b>SSSI</b>	Site of Special Scientific Interest

# 1. Glossary of terms

---

The following provides a clear description of relevant terms as used in this guideline (the precise meaning of which is set out in the Agreement for Lease (AfL) and Lease documents where applicable):

---

<b>Act</b>	A bill which has passed through the various legislative steps required for it and which has become law.
<b>Agreement for Lease</b>	An agreement with The Crown Estate for the use of the seabed. The Agreement for Lease allows a developer to enter into a Lease to construct assets on the seabed provided certain conditions are met (including the granting of statutory development consents).
<b>Areas of Special Scientific Interest</b>	A site designated under the Environment (Northern Ireland) Order 2002.
<b>Authority</b>	An authority whether statutory, public, local, binding, European (if applicable), international or otherwise, government department or agency, regulator or a court of competent jurisdiction.
<b>Cable Route</b>	An area of the seabed spatially laid out by the developer to allow the passage of a number of Supply Cables from an offshore generation project to shore for a specific project used for the passage or transmission of electricity generated by the offshore energy installation; by the time the Cable Route is established in the Agreement for Lease it is called 'Option Site' (see below) which later becomes a 'DA Route' (see below) in the Lease.
<b>Cable Route Identification and Approval</b>	A document submitted by a developer to The Crown Estate as part of an application for a transmission assets Agreement for Lease.
<b>Cable Route Protocol</b>	This comprises a set of requirements developed by The Crown Estate, detailed in Appendix 1, to help developers establish a transmission system infrastructure including export cabling.
<b>Connection and Infrastructure Options Note</b>	A document which records the output of the Connection and Infrastructure Options Note optioneering process. It provides a joint record of the rationale for the selection of the overall preferred connection option from the technical, commercial, regulatory, environmental, planning and deliverability aspects.
<b>DA Route</b>	An area extending either side of a centre line shown on a plan in the Lease, situated within the Option Site and within which the Designated Area(s) will be situated. The location and width of the DA Route are to be approved by The Crown Estate (under the Agreement for Lease) based on the developer's justified requirements and determined by the number of cables and their granted spacing.

---

<b>Act</b>	A bill which has passed through the various legislative steps required for it and which has become law.
<b>Designated Area</b>	The part of the foreshore and seabed in which a Supply Cable is to be located, being a strip running from the boundary of the Substation Site to another Substation and/or the shore having a width of 30m.
<b>Dredging Restriction Zone</b>	Where applicable, an area extending within a stated distance, either side of a Designated Area or cable route, within which The Crown Estate will not grant licences to third parties for the dredging or removal of materials.
<b>Environmental Impact Assessment</b>	Process of evaluating the likely environmental impacts of a proposed project or development, being either adverse or beneficial.
<b>Environmental Statement</b>	Prepared by a developer as part of an Environmental Impact Assessment in support of certain planning applications.
<b>Generator Cables</b>	The cables in or under the Option Site for the passage of electricity generated by each of the turbines to a substation or other point of connection and/or the transmission of telecommunications in connection with the offshore windfarm installed pursuant to the Windfarm Agreement for Lease.
<b>Geographical Information Systems</b>	A computer system for capturing, storing, checking and displaying of data related to positions on the earth's surface.
<b>Habitats Regulations Assessment</b>	A statutory process of assessing impacts on Special Areas of Conservation, Special Protection Areas and Ramsar sites set out in the Habitats Regulations.
<b>Habitats Regulations Sites</b>	Special Areas of Conservation, Special Protection Areas and Ramsar sites (whether fully designated or not).
<b>Lease</b>	An agreement between a Project Company and The Crown Estate granting the Project Company certain property interests and/or rights over a relevant area of the seabed in order to carry out a project.
<b>Marine Conservation Zones</b>	A site designated under the Marine and Coastal Access Act.
<b>National Policy Statements</b>	Produced by government to provide a policy framework for each infrastructure sector. They give reasons for the policy set out in the statement and must include an explanation of how the policy takes account of government policy relating to the mitigation of, and adaptation to, climate change.
<b>National Electricity Transmission System</b>	The system in England and Wales consisting of mainly high voltage electric lines.

<b>Act</b>	A bill which has passed through the various legislative steps required for it and which has become law.
<b>National Grid Electricity System Operator</b>	The electricity systems operator in Great Britain, with the responsibility of balancing electricity supply and demand in real-time. NGESO has a role in helping to connect energy projects to the electricity system.
<b>National Grid Electricity Transmission</b>	The owner of the electricity transmission network in England and Wales. NGET has a role in helping to connect energy projects to the network.
<b>Offshore Transmission Owner</b>	A company appointed and licenced by Ofgem to acquire or install and own the export transmission cables and ancillary equipment forming part of the offshore electricity system for an offshore renewable energy installation.
<b>Option Site</b>	An area of the seabed as established in the Agreement for Lease to allow the passage of a number of Supply Cables for a specific project. The location and width of the Option Site are to be approved by The Crown Estate based on the developer's justified requirements. The Option Site also encompasses the passage for Supply Cables between the edge of the offshore renewable energy installation and the offshore 'Substation Site' (which area is otherwise part of the offshore energy installation Agreement for Lease).
<b>Preliminary Environmental Information Report</b>	The process of evaluating the likely significant environmental effects of a proposed project or development beyond the existing circumstances.
<b>Project Company</b>	A special purpose limited liability company established specifically for the purpose of developing a particular project.
<b>Protected Sites</b>	Sites that receive protection by means of certain legislation in recognition of its biodiversity and/or geological value.
<b>Ramsar</b>	A site designated in accordance with the Ramsar Convention on International Wetlands.
<b>Security and Quality of Supply Standard</b>	Sets out the criteria and methodology for planning and operating the National Electricity Transmission System.
<b>Sites of Special Scientific Interest</b>	A site designated under the Wildlife and Countryside Act.
<b>Special Areas of Conservation</b>	A site designated under the Habitats Directive.
<b>Special Protection Areas</b>	A site designated under the Wild Birds Directive.

<b>Act</b>	A bill which has passed through the various legislative steps required for it and which has become law.
<b>Statements of Common Ground</b>	A written statement prepared jointly by the applicant and any interested party, which contains agreed factual information about the application.
<b>Statutory Nature Conservation Bodies</b>	A statutory body with the responsibility to manage conservation sites and advise on impacts. This includes any or all of Natural England, Natural Resources Wales, Scottish Natural Heritage, Northern Ireland Department for the Environment, Agriculture and Rural Affairs and the Joint Nature Conservation Committee.
<b>Strategic Environmental Assessment</b>	A system of incorporating environmental considerations into policies, plans, programmes and strategies.
<b>Substation Site</b>	The area of the seabed circular in shape with a diameter of 200m in which an offshore substation or an offshore converter station is to be erected within an offshore renewable energy installation.
<b>Supply Cable</b>	All cables and ancillary equipment to be installed in the Designated Area and Substation Site for the conveyance or passage or transmission of electricity generated by the renewable energy installation or otherwise required for the operation of the renewable energy installation (but excluding the Generator Cables).
<b>Transmission Assets Infrastructure</b>	The Supply Cables, the Substation and ancillary equipment owned by the Transmission Entity and forming part of the offshore electricity transmission system.
<b>Transmission Entity</b>	An Offshore Transmission Owner, the Project Company under an offshore energy project Agreement for Lease or a group company of a Project Company.
<b>UK National Site Network</b>	The national site network within the UK territory comprising the protected sites already designated under the Habitats and Wild Birds Directives and any further sites designated under the Habitats Regulations.

## 2. Introduction

---

This document is intended to serve as guidance to developers when bringing forward their application to The Crown Estate for an offshore export transmission cable route linked to an offshore renewable energy installation.

The intention is to make developers familiar with the requirements of The Crown Estate in granting property rights for cable routes and to inform developers as to the detail of transmission assets infrastructure that they are expected to provide to The Crown Estate for approval.

The guideline is a generic document suitable for all transmission assets infrastructure in relation to offshore renewable energy installations, although the terms “wind farms”, “Round 4” and “extensions” are referred to from time to time.



The guideline sets out a series of overarching principles that provide best practice guidance on the way in which cable route planning should be undertaken by developers to ensure good management of land and seabed, and to minimise environmental impacts. It is expected that developers will have regard to these principles in the planning of cable routes.

---

This document does not provide guidance on best practice of cable spacing and route design, but it provides a link to a desktop study commissioned by The Crown Estate in March 2012 to assess appropriate spacing between export transmission cables placed adjacent to each other within a cable route. The study report “Principles of Cable Routing and Spacing, The Crown Estate (UK) 2012” is further described in Section 4 and is available to download from the Marine Data Exchange (MDE).

The guideline encourages early dialogue between the developer, The Crown Estate and relevant authority/authorities to facilitate securing an appropriate cable route, incorporating due consideration for the environment and other users of the seabed. It outlines the process to be followed regarding cable route application, assessment and approval (or rejection), introducing a Cable Route Identification and Approval (CRIA) information submission process.

Finally, the guideline articulates the procedure of formalising the cable route and transmission assets infrastructure in an AfL and the levels of protection offered during this phase. It describes the rules surrounding entry into the construction phase and exercising the option for the Lease.

Since the precise legal drafting differs between different agreements (e.g. Extensions and Round 4 AfLs), this guide is generic in form and the legal agreements will always take precedence in the event of any conflict or other discrepancy between documents.

### 3. Background

The identification and leasing of cable routes and transmission assets infrastructure for an offshore renewable energy installation involves offshore renewable energy developers, The Crown Estate and National Grid Electricity System Operator (NGESO). The interactions of these three organisations in export cable route planning are summarised in the diagram below, with further detail provided in the following sections.

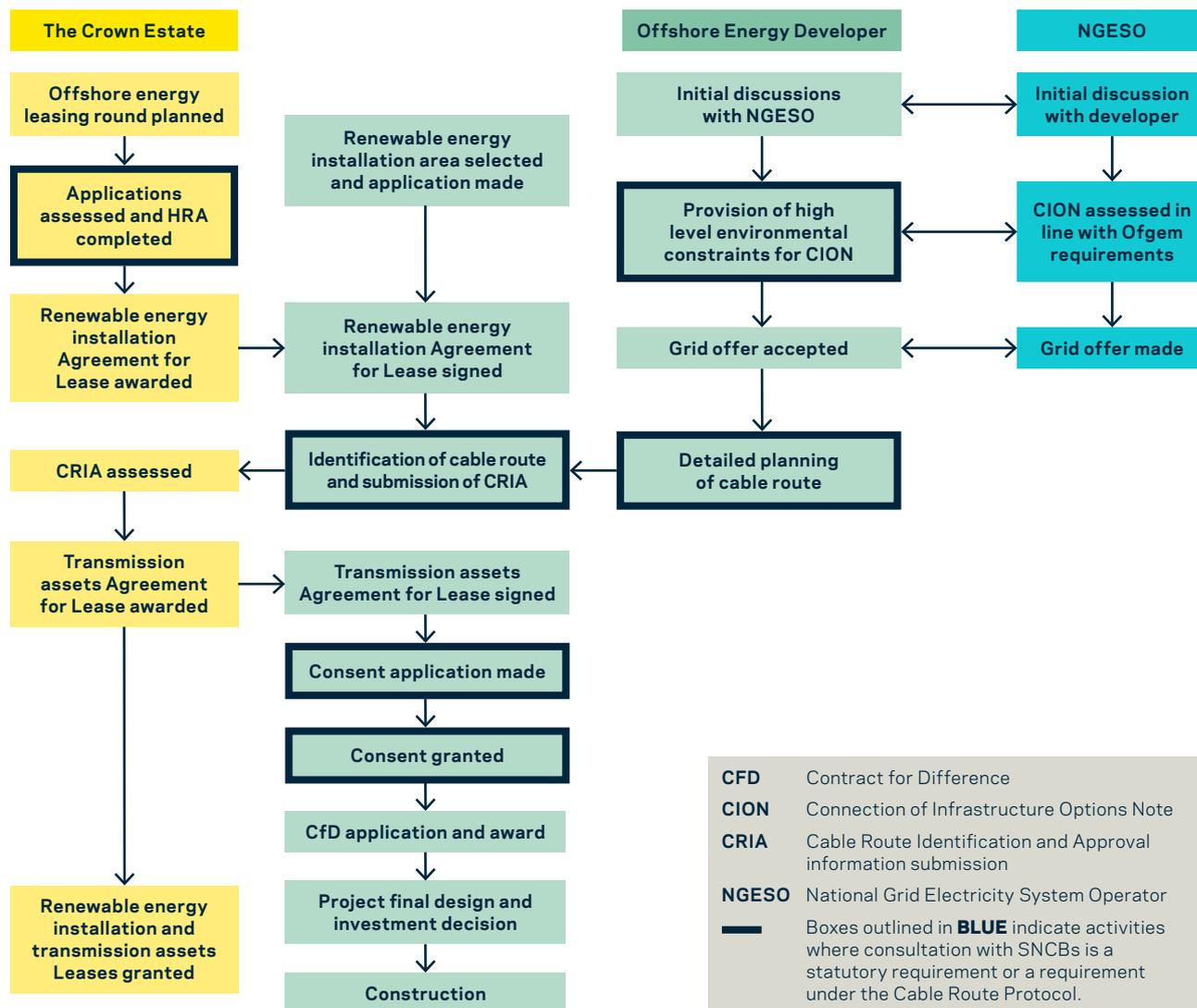


Figure 1 - Interactions of Offshore Energy Developers, The Crown Estate and NGESO in Export Cable Route Planning

---

## 3.1 The Crown Estate's role

The Crown Estate may grant an agreement (known as an AfL) to an entity for the development of a possible offshore renewable energy installation. These AfLs are essentially options that provide developers with an appropriate framework to consider an identified area of the seabed for its suitability for developing an offshore renewable energy project. The AfL does not constitute rights to construct and operate an offshore renewable energy installation and The Crown Estate will only grant such rights (through the execution of a lease) when the developer has obtained all of the necessary consents for the development.

The initial AfL, granted by The Crown Estate for a project, will usually cover the proposed offshore renewable energy installation area only and not the export cable route. As the feasibility of developing the project progresses, desktop studies followed by survey work are typically carried out and an offshore export cable route is identified. The developer may then apply to The Crown Estate for a transmission assets AfL that covers the proposed export cable route and offshore substation locations (which will typically be within the offshore renewable energy installation area). It is a requirement of The Crown Estate that such an application is accompanied by a CRIA (See Section 6) document. This requires information to be submitted on project specification & justification, planning & third-party interests, commercial set-up and guarantor, and must demonstrate compliance with the requirements set out in the Cable Route Protocol (CRP) (Appendix 1). The CRIA provides the evidence required for The Crown Estate to make its decision on granting the transmission assets AfL.

In most cases, a developer will seek a transmission assets AfL in advance of making an application for statutory development consents.

It should be noted that the transmission assets AfL will cover only the marine export cable route and the area within which the offshore substation(s) may be located and (depending on the extent of The Crown Estate's ownership) will generally extend from the offshore installation to Mean High Water. If The Crown Estate does not own the foreshore at the landfall location, the rights will only extend to Mean Low Water.

---

Land option agreements for the onshore cable route will be negotiated separately by the developer with onshore landowners (or, where The Crown Estate is also an onshore landowner, separately with the relevant land agent).

## 3.2 Connecting to the National Electricity Transmission Systems (NETS)

In order to secure an onshore grid connection, an offshore energy developer will need to enter into discussions with NGENSO, which balances the network in England and Wales and manages the connection process to the National Electricity Transmission System (NETS), which is owned by National Grid Electricity Transmission (NGET). Developers wishing to connect new electricity generation to the NETS must make a connection application to secure an onshore grid connection at a specified location, for a stated capacity and at a future point in time.

As part of the connection application, onshore connection locations are comparatively assessed by NGENSO, NGET and the developers through the Connection and Infrastructure Options Note (CION) process to identify the most appropriate grid connection solution for a project. The CION process looks at technical, commercial, regulatory, environmental, planning and deliverability aspects to identify the preferable connection for the consumer<sup>1</sup>. The Electricity Act 1989 requires National Grid (and developers, if acting as Offshore Transmission Owners (OFTOs)) when formulating proposals, to be efficient, coordinated and economical whilst also having regard to the environment.

The decision to submit an application for a grid connection is made by the developer independently of their negotiations with The Crown Estate for an offshore renewable energy installation AfL. The developer may decide to begin the CION process at risk before an offshore renewable energy installation AfL has been granted, or it could choose to wait until after the AfL has been granted. Regardless of when the CION process commences, the offshore energy developer will provide information to NGET to facilitate the CION process, including an environmental summary of possible risks for the considered onshore connection locations.

---

The onshore grid connection location is secured when a grid offer from NGEN is received and accepted by the developer. Only at this point will the developer be in a position to start to consider in detail the potential onshore and offshore cable route options to connect the offshore renewable energy installation to the onshore grid. Following a process of cable route optioneering, the developer will then be in a position to make an application to The Crown Estate for a transmission assets AfL. It is important to note that following acceptance of a grid connection agreement it is still possible that a connection point may change (where there is a 'material trigger'). This could happen before or after a transmission assets AfL has been granted.



<sup>1</sup> Information on the CION process is available in the Connection and Infrastructure Options Note (CION) Process . Guidance Note (v4, Nov 2018), available online at <https://www.nationalgrideso.com/document/45791/download>

## 4. Cable Route Protocol

---

Offshore energy installation export transmission cabling has the potential to cause impacts in marine and coastal environments. In addition to the requirement to install cables, there is often a need for seabed preparation (possibly including sand wave clearance) and post-installation cable protection (which may include rock dumping). Direct impacts from these activities may be particularly significant for those sensitive coastal and offshore habitats which are permanently changed, or lost as a result of cabling. Indirect impacts on marine mammals, birds and fish may also occur as a result of impacts on the habitats which support them.

The Crown Estate has identified that the following pressures from export cabling (without appropriate avoidance and mitigation measures) have the potential to impact upon habitat and species features of Protected Sites (both marine and terrestrial (where relevant)):

- Habitat loss
- Habitat gain
- Direct physical damage
- Indirect physical damage
- Toxic contamination
- Temperature (for some habitats)
- Suspended sediment
- Introduction of invasive non-indigenous species

The Crown Estate Act 1961 places a general duty on The Crown Estate to maintain and enhance the value of the estate with due regard to the requirements of good management. As a public, competent, or managing authority or public body under various Acts (outlined in Table 1), The Crown Estate has statutory duties in relation to the marine (including the foreshore) environment in England, Wales and Northern Ireland. These duties co-exist with The Crown Estate Act but place more specific responsibilities on us.

There is a legal duty on public authorities to ensure that, in exercising their functions, they best further or (if that is not possible) least hinder the achievement of the conservation objectives of Marine Conservation Zones (MCZs).

In practical terms, this means that when The Crown Estate enters into (or changes) a seabed agreement, we must consider the potential effects of that agreement on the habitats and species for which MCZs have been designated.

Under the Wildlife and Countryside Act 1981/Environment (Northern Ireland) Order 2002 (as amended) and Wildlife and Natural Environment Act (Northern Ireland) 2011, The Crown Estate has a duty to take reasonable steps consistent with the proper exercise of its functions to further the conservation and enhancement of the special features of Sites of Special Scientific Interest (SSSIs) and Areas of Special Scientific Interest (ASSIs). We are obliged to look at the impacts of our activities on SSSIs/ASSIs and give notice to the relevant Statutory Nature Conservation Bodies (SNCBs) before carrying out or authorising operations which are likely to damage the features for which SSSIs/ASSIs are notified.

As a Competent Authority under the Habitats Regulations, The Crown Estate is required to conduct a plan-level Habitats Regulations Assessment (HRA) for any leasing/licensing activity that constitutes a ‘plan’, assessing impacts on the UK national site network and other relevant designations (e.g. Ramsar sites) before any seabed rights can be awarded.

**Table 1 – The Crown Estate’s Role a Public, Competent, or Managing Authority or Public Body under various acts**

<b>Role</b>	<b>Legislation</b>	<b>Statutory Duty</b>
Public Authority	Marine and Coastal Access Act 2009/Marine Act (Northern Ireland) 2013	Have regard to Marine Plans and Marine Policy Statement Consider MCZs in decision making
Competent Authority	Conservation of Habits and Species Regulations 2017; Conservation of Offshore Marine Habitats and Species Regulations 2017	Requirement to undertake plan-level Habitats Regulations Assessment for any leasing/licensing activity that constitutes a ‘plan’ where the potential for likely significant effects on European sites cannot be excluded
Public Authority	Environment (Wales) Act 2016	Maintain and enhance biodiversity

Role	Legislation	Statutory Duty
'Section 28G' Authority/Public body	Wildlife and Countryside Act 1981/ Environment (Northern Ireland) Order 2002	Notify SNCBs of impacts on, and change of occupation in, SSSIs/ ASSIs
Public Authority	Natural Environment and Rural Communities Act 2006	Have regard to conserving biodiversity

*In order to fulfil our statutory obligations, The Crown Estate has therefore developed a CRP as an avoidance and mitigation measure for potential cabling impacts to Protected Sites (both marine and terrestrial (where relevant)).*

**The CRP is set out in Appendix 1 of this document.** It has evolved from the plan-level HRA process undertaken for the 2017 Offshore Wind Extensions Plan, and will be secured as a mandatory requirement within the offshore energy installation AfLs. Adherence to the CRP is a prerequisite for granting of a transmission assets AfL. The CRP comprises a set of requirements for offshore energy developers which are designed to manage the offshore export cable planning process with the aim of minimising impacts to designated sites, including Special Protection Areas (SPA), Special Areas of Conservation (SAC), Marine Conservation Zones (MCZ) and SSSIs/ASSIs.

The CRP must be followed by developers as they progress project planning and they will be required to demonstrate compliance with the CRP within the CRIA provided to The Crown Estate as part of the transmission assets AfL application. Demonstration of compliance to the satisfaction of The Crown Estate will be a prerequisite of granting the transmissions assets AfL. If a developer is unable to demonstrate compliance, a transmission assets AfL will not be granted.

The CRP has had regard to other relevant planning policy documents and consenting processes that cover offshore aspects of wind farm development, and is intended to complement these and remain relevant to all offshore energy developments. This includes consideration of the Overarching National Policy Statement for Energy (EN-1), the National Policy Statement for Renewable Energy Infrastructure (EN-3), statutory marine plans, the third Offshore Energy Strategic Environmental Assessment (SEA) and the pre-application consultation requirements of the Planning Act 2008 (as amended).

## 5. Cable route planning and principles

---

### 5.1 Cable route planning – principles of cable routing and spacing (evidence-based study)

In order to assist developers when planning cable routes for offshore wind projects, The Crown Estate commissioned a cable spacing study in March 2012. The objective of the study was to identify, review and assess the factors affecting the routing and spacing of transmission cables for offshore wind farm developments.

The findings, conclusions and recommendations from the study are compiled in a report: 'Principles of Cable Routing and Spacing, The Crown Estate (UK) 2012' which can be found on the MDE.

The report aims to provide the reader with a technical, environmental and commercial overview of the effects of routing transmission cables in close proximity, and as such remains relevant to all offshore energy developments. It is anticipated that the contents of the report will form a point of reference that will assist developers when planning cable routes for offshore energy projects. Whilst directed primarily at developers, it is also hoped that the report will provide useful and relevant information and act as an important reference source to the wider investment, insurance, OFTO, stakeholder and regulatory communities and offer a better appreciation of the matters influencing the spacing between transmission cables.

The report provides a number of worked examples that are designed to illustrate the conclusions from the study. The figures quoted are not designed to be prescriptive but are intended to provide an indicative spacing between cables to give developers an appreciation of various scenarios. It is generally proposed that a risk-based approach will form the foundation of any cable spacing advocated in the route development.

The study report identifies four important issues that will have a defining influence on the routing and spacing of transmission cables.

- Route design and development
- Cable spacing to meet the requirements of Security and Quality of Supply Standard
- Installation/operation and maintenance of existing and future transmission cables
- The effects of electromagnetic fields on navigation and ecology

---

The CRIA should demonstrate that developers have taken into consideration the overall routing and any cable spacing principles as suggested in this study (where applicable):

## 5.2 Cable routing planning – overarching principles

This section sets out overarching principles that provide best practice guidance on the way in which export cable route planning should be undertaken by developers to ensure good management of land and seabed, and to avoid or minimise environmental impacts. Compliance with the CRP will not be assessed on these principles, however, it is expected that developers will have regard to these principles in the planning of cable routes. The specific requirements of the CRP are set out in Appendix 1.

### *Principle 1*

It is anticipated that planning of cable routes offshore and onshore will be undertaken concurrently. Use of the approach set out in the CRP for onshore cable planning is strongly encouraged. Onshore cable planning should have regard to relevant National Policy Statements and national and local terrestrial planning policy frameworks.

### *Principle 2*

Where elements of offshore cable route planning take place before a developer enters into an offshore energy AfL with The Crown Estate, the use of the approach to offshore cable route planning set out in the CRP is strongly encouraged. This applies to all stages of cable route planning including the submission of high-level environmental information to NGENSO in the CION process.

### *Principle 3*

The CRP applies to all Protected Sites (both marine and terrestrial (where relevant)) and known sensitive habitats. In planning the cable route, the emphasis should be on avoiding impacts on Protected Sites. If this is not possible, effects should be reduced to a minimum through design. Mitigation should be the last resort following the ‘avoid, reduce, mitigate’ hierarchy. If it is not possible to avoid all Protected Sites,

---

developers should be able to demonstrate that they have selected the least damaging route.

#### *Principle 4*

Planning of cable routes should be undertaken in close consultation with SNCBs (Natural England, Natural Resources Wales and, where appropriate, Joint Nature Conservation Committee). Other non-statutory consultees should also be included in the consultation where appropriate (including, but not limited to, The Wildlife Trusts and Royal Society for the Protection of Birds). Consultation should continue from the earliest stages of route planning through to consent application. It may be helpful to agree an engagement plan at the outset to set expectations and ensure that required timescales are met, but the fundamental requirement is for consultees to be given the opportunity to provide advice. All consultees must ensure that information about cable route planning is kept confidential where requested (particularly in the early stages before public consultation).

#### *Principle 5*

Where it is necessary to mitigate the effects of cabling at project-level, appropriate measures should ideally be agreed with statutory stakeholders and be capable of being secured within project design and/or consents. Mitigation measures will also need to be acceptable to competent authorities.

#### *Principle 6*

Developers should have regard to the current best practice cabling environmental considerations provided by SNCBs. Developers should also have regard to other cabling guidance and advice produced by SNCBs from time to time, including 'lessons learned' reports, cabling sensitivity documents and research reports from projects relevant to the impacts of cables on the environment.

## 6. Early dialogue and conflict checking

---

Through the regular interactions between the developer and The Crown Estate during project development activities, there is an opportunity to have ongoing dialogue about cable route issues well in advance of the submission of a formal application for a cable route.

The dialogue should seek to clarify a number of important questions in relation to the proposed route, including the anticipated consenting process and how the developer's planning of cable routing and spacing (applying the evidence-based study or similar) will lead to a mutually acceptable agreement on cable spacing, with acceptable risk levels to the cables, but at the same time allowing the development of other commercial enterprises.

Essentially, The Crown Estate must ensure that the legitimate interests of others are not constrained whilst developer uncertainty remains high.

### 6.1 Cable route planning – principles of cable routing and spacing (evidence-based study)

For all proposed (indicative) cable routes a conflict check should be carried out to identify any existing assets, interests or plans granted or noted by The Crown Estate which may be affected by the proposed cable route. This includes consideration of relevant trigger distances set by each of the impacted industry sectors.

In order to undertake such a conflict check, the developer should submit the geographical data for the proposed cable route via their regular contact at The Crown Estate for assessment in its Geographic Information System (GIS) database. The data should be supplied in ESRI shape file or file geodatabase format in a Geodetic WGS1984 (EPSG code 4326) projection with Marine Environmental Data and Information Network standard (v.2.3.7) metadata.

The geographical information on indicative cable routes provided by the developer will be conflict checked by The Crown Estate, and the initial findings will be fed back to the developer, highlighting any conflicts (subject to any confidentiality restrictions). The data will be retained in a GIS database (as confidential information) in order to enhance The Crown Estate's understanding of the developer's likely intent.

---

The Crown Estate will classify the indicative cable route as a 'Registered Interest' (i.e. an initial indication of a preferred route before it has been worked up sufficiently to be incorporated into the AfL). This will allow The Crown Estate to be alerted to any interactions when faced with a likely conflicting or competing interest.



## 7. Cable route identification and approval

---

As indicated in Section 3, the initial AfL granted by The Crown Estate for a project will usually cover the proposed offshore renewable energy installation area only. Once the developer has defined a cable route for consideration, the proposed cable route can be submitted to The Crown Estate for consideration as an Option Site, applying the CRIA process outlined in this Section 7. The process for entering into a transmission assets AfL that covers the proposed export cable route and offshore substation locations can then begin. Further clarification on this process is given in Section 8.

### 7.1 Contents of the application

Before the developer submits an application to The Crown Estate for a proposed cable route, they are expected to have gone through a careful analysis of the cable routing and spacing issues and preliminary survey activity. The application should demonstrate that the developer has taken into consideration any cable spacing principles as detailed in The Crown Estate's study report 'Principles of Cable Routing and Spacing, The Crown Estate (UK) 2012' (where applicable) and confirm that the actions undertaken satisfy the requirements as set out in the CRP (Appendix I).

The contents of the application should follow the template table of contents provided in the CRIA (Appendix 2), which has three main sections as follows:

**Part 1 – Project specification & justification**

**Part 2 – Planning & third-party interests**

**Part 3 – Commercial set-up & Guarantor**

The developer must in Part 1 present the proposed routing and justify the particular case. When advocating a specific spacing between adjacent cables, the developer will need to assess the operational and technical risks against their own commercial interests and those of the investors and other financial stakeholders. The description should include the issues the developer has considered in arriving at the proposed cable project, using cable spacing principles suggested in the evidence-based study report (or similar). It would also be useful

---

for The Crown Estate's understanding of the assessments made to be informed in the application about which consultants have provided input to this.

The application must include a draft specification of the works, i.e. a list of the equipment proposed to be installed on the site for the cable project (for specific details refer to Appendix 2).

The developer may not necessarily have clear details of cable spacing, number and equipment requested in Part 1 at the time of application but will rather take a 'Rochdale Envelope' approach. The developer must then as a minimum provide a justification of the sought-after Option Site, likely to be the extent of the survey area for detailed survey investigations. The developer will then have an opportunity to work further with the technical layout so that the specific information can be provided at the latest by the time the Lease is to be formalised as further discussed in section 8. The extent of the proposed Option Site must also be provided, which should be in the form of a GIS shape file, preferably in WGS84 format. This can either be a redline boundary or x metres from a centreline with limits of deviation within which the cables are to be laid. If defined as a redline boundary, the Option Site can be an irregular shape/polygon thereby allowing some flexibility to avoid known conflicts.

The developer has an obligation to ensure that the proposed cable project is compliant with certain identification criteria requested in Part 2, such as planning restrictions and any potential consequences for third party interests, in addition to demonstrating compliance with the CRP. The developer must demonstrate that they have given consideration to the requirements of existing parties and that discussions have been held to find a mutually acceptable solution.

Part 3 deals with the anticipated corporate set-up of the cable project entity. If the developer's application envisages an early split of the assets into an offshore energy project and OFTO assets, then a separate legal entity may be established by the time the transmission assets AfL is to be signed. The application must include information on the OFTO strategy and the anticipated corporate set-up of the cable project entity.

---

## 7.2 The Crown Estate initial technical assessment of cable route by The Crown Estate

Prior to submission of the full CRIA, the developer should submit the coordinates in the form of a shape file of the indicative cable route to The Crown Estate for the undertaking of a conflict check as described in 6.1 above. Together with a shape file of their indicative cable route, the developer should also submit a draft CRIA for initial technical assessment by The Crown Estate. This allows The Crown Estate to take a view on the completeness of the technical documentation and to potentially request additional information in advance of the full application being drafted.

## 7.3 Formal review and approval of cable route

Following the feedback from The Crown Estate, the developer will prepare the full CRIA documentation in compliance with the application template and submit it to The Crown Estate through the relevant Development Manager for formal review and approval.

## 8. Entering into the transmission assets Agreement for Lease

---

If The Crown Estate determines that the submission of the CRIA is acceptable and that compliance with the requirements of the CRP have been adequately demonstrated, it shall confirm, in writing, approval to the developer.

Following receipt of approval by the developer, the process of entering the relevant transmission assets AfL with the relevant Transmission Entity (an OFTO, the Project Company under an offshore energy project AfL or a group company of a Project Company) will be initiated. In addition to satisfying the requirements of the CRIA and CRP, entering into the transmission assets AfL will also be subject to the transmission entity complying with all necessary and proper requirements as defined in the offshore energy development AfL and certain other conditions which apply.

### 8.1 Formalising the cable route in the transmission assets Agreement for Lease

Once the cable route has been agreed between the developer and The Crown Estate through the CRIA, the route can be formalised in the transmission assets AfL in the form of an Option Site.

See next page for *Figure 2 - Agreement for Lease*

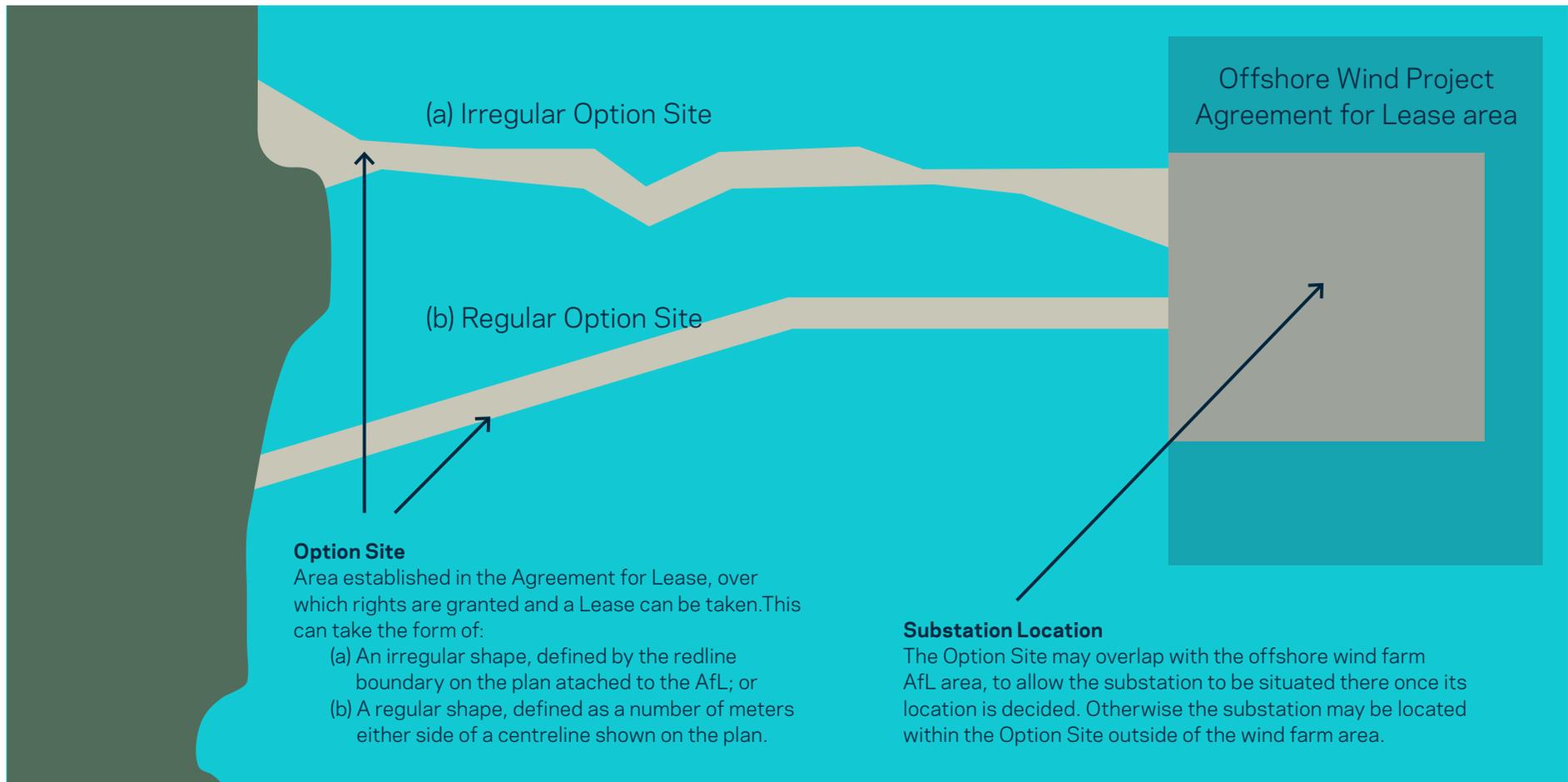


Figure 2 – Agreement for Lease

---

## 8.2 Rights of protection in the Agreement for Lease

The developer is afforded only limited protection over the Option Site under the AfL in which a non-exclusive right to take a transmission assets Lease has been secured. The Crown Estate is still entitled to grant rights to third parties to carry out works which cross or otherwise conflict with the developer's Option Site (with an obligation to simply notifying the developer before and after doing so) – with a reservation made in the third-party lease to allow the future grant of the transmission assets Lease without the third party's consent.

The AfL also allows The Crown Estate to grant rights to dredging within the Option Site, however such rights must be terminated prior to the commencement of the transmission assets Lease, to the extent that the area of the Option Site over which dredging rights have been granted forms part of the DA Route.

On exchange of the transmission assets AfL, the area of the Option Site shall be entered onto The Crown Estate GIS database and internal resource identification tool.



## 9. Entering into the transmission assets Lease

---

Once the project has received all necessary consents and the developer is ready to serve notice to take the Lease with a DA Route, the final proposed cable route and substation site must be submitted to The Crown Estate for review prior to formalising the transmission assets Lease documentation (as set out in the relevant AfL).

It is strongly recommended that the developer provides periodic updates during the period of the transmission assets AfL, as the definition of the final route is developed, to mitigate the risk of non-approval at this stage.

### 9.1 Formalising the cable route in the transmission assets Lease

Unless the details of cable spacing and number remain as detailed in the CRIA and agreed by the time the AfL was entered remain unchanged, the developer is required at this stage, and after all front-end engineering design studies have been finalised, to provide The Crown Estate with the following specific information:

- (i) The final centreline and proposed width of the DA Route or otherwise the proposed red line boundary of the DA Route
- (ii) The number of cables
- (iii) The requested spacing between the cables
- (iv) In the case of Round 4, the proposed Depth of the DA Route and the Designated Areas
- (v) Justification for the cable spacing chosen (e.g. heat dissipation, access for maintenance/repair etc.)
- (vi) Specification of the works, i.e. an exhaustive list of the equipment to be installed on the site for the cable project. The list will be appended to the Lease and should include:
  - Maximum number and working voltage of cables (AC or DC);
  - Substations (including details of foundation type and dimensions of structure)
  - Converter stations (including details of foundation type and dimensions of structure)

- 
- Any ancillary equipment
  - Communications equipment or cables
  - Cable protection (e.g. anticipated burial depths, matting, rock dumping, inshore protection)
  - Number and details of third party asset crossings on the route
  - Cable joint chambers (this is relevant for the foreshore)
  - Conduit
  - Etc.

The cable spacing study mentioned in Section 5 will be used to assist developers and The Crown Estate in agreeing, on an evidence basis, the appropriate spacing to be applied in the specific Lease.

In the transmission assets Lease, the cable route will be defined as a DA Route comprising a number of Designated Areas each 30m wide within a distance of the centreline positioned within certain limits of deviation (or within the red line boundary of the DA Route).

See next page for *Figure 3 – Lease (Pre-construction)*

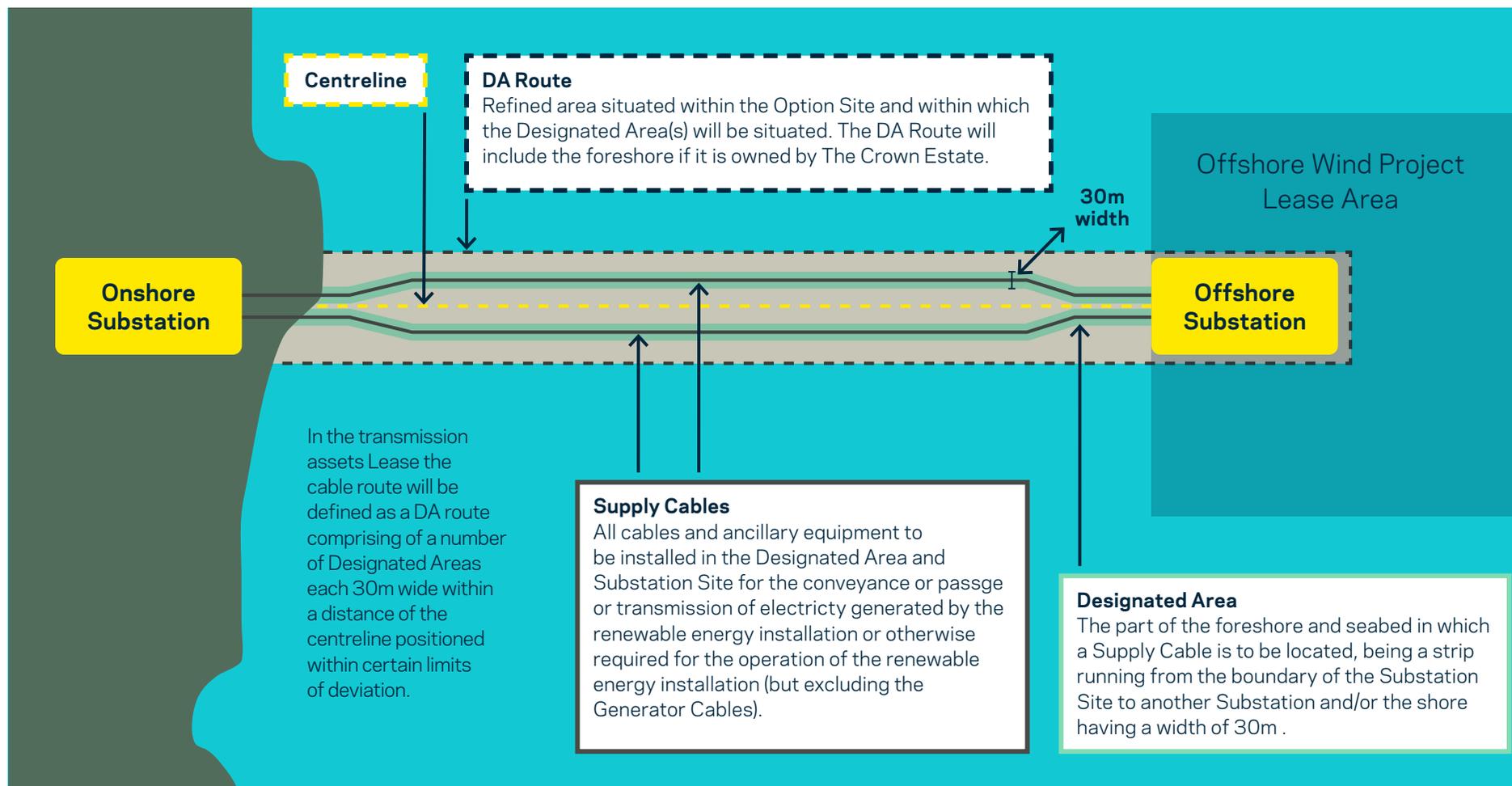


Figure 3 – Lease (Pre-construction)

---

## 9.2 Rights of protection in the lease

Once the transmission assets Lease has been granted, more extensive rights of protection are introduced. Importantly, once a lease is in place, the consent of the tenant is required (not to be unreasonably withheld or delayed) before The Crown Estate grants any leases or licences which cross or come into conflict with the Designated Areas, other than a lease, licence or consent where a term of which is that the tenant's consent shall be obtained.

There may, depending on the type of agreement be a Dredging Restriction Zone extending 235m on either side of each individual Designated Area, so in effect a Dredging Restriction Zone extending 250m from the centre line of each supply cable. The Crown Estate will be entitled to grant rights, without restriction, outside of these zones.

See next page for *Figure 4 - Additional Terms*

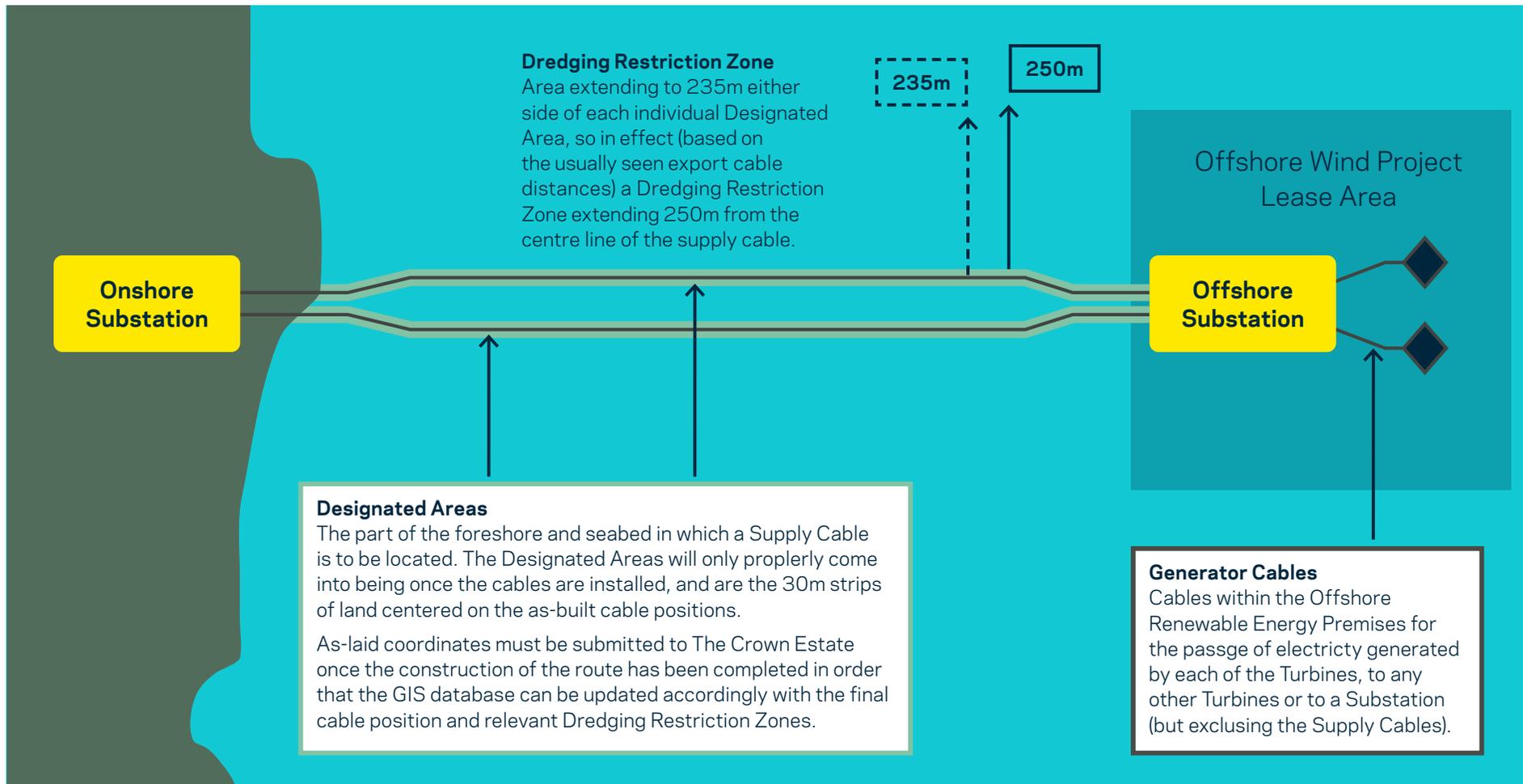


Figure 4 – Additional Terms

## 10. As-laid coordinates and potential adjustments to the route

---

The cable route established in the Lease is expected to show the DA Route subject to any slight adjustments needed during installation. The Designated Areas will only properly come into being once the cables are installed, and are the 30m strips of seabed centred on the as-built cable positions. Designated Areas are to be approved as set out in the relevant AfL.

As laid plans are not, as a matter of course, incorporated into the Lease unless the final route ends up being partially out-with the originally defined DA Route. As-laid coordinates must be submitted to The Crown Estate once the construction of the route has been completed in order that the GIS database can be updated accordingly with the final cable position and where relevant any Dredging Restriction Zones. The Crown Estate reserves the option to require evidence, to its reasonable satisfaction, of works being completed in accordance with the agreed specification.

Also, future repairs of export cables with potential bights laid down off the original route after repair must be fed back to The Crown Estate for update of the GIS database.

A clear process will be agreed between The Crown Estate and the lessee(s) to ensure this data is obtained from the lessee following completion of any works.

The Crown Estate needs this information to ensure developers' interests are accurately flagged during its conflict checking process for other seabed developments.

The same applies to post-installation cable protection, the coordinates for which The Crown Estate will require for conflict checking. It should be noted that rock protection along the cable route is not permitted under the lease unless it has been approved by The Crown Estate as part of the specification for the Lease.

# 11. Delineation of leases after the generator-OFTO split

---

The tenant of the transmission assets Lease will assign the Lease to the OFTO along with ownership of the OFTO assets following conclusion of the OFTO tender process. The Designated Areas will overlap the area of seabed within the generation project site where the cables have been laid - i.e. from the edge of the generation farm to and including the site for the offshore substation. This part of the seabed is leased under the offshore energy installation Lease which contains a reservation which allows for the transmission cable route. The OFTO Lease will generally include the site of the offshore substation, even though this sits within the bounds of the offshore energy installation. Essentially this site will be carved out of the offshore energy installation Lease.

The rights of the generator to manage its cables in the Substation Site area are subject to the rights of the OFTO, whilst the transmission assets Lease gives the OFTO rights to run cables etc. over that small area (as well as between the substation and the shore).



# Appendix 1

---

## Cable Route Protocol

The CRP comprises a set of requirements for offshore energy developers in the planning of offshore export cable routes. Compliance with these requirements is secured within the offshore energy installation AfL and must be demonstrated within the CRIA document which will accompany an application to The Crown Estate for a transmissions assets AfL.

Much of the activity contained within the CRP requirements is aligned with the pre-application consultation that offshore energy developers will need to undertake as part of preparing for submission of an application for development consent (including any evidence plan requirements). It is therefore anticipated that many developers will incorporate the requirements of the CRP into their pre-application consultation process. Where evidence of consultation is required within the CRIA, this will therefore be equivalent to the evidence that developers will need to submit as part of their application for development consent.

## Requirements

### *Requirement 1*

Where elements of offshore cable route planning have taken place before a developer has entered into an offshore energy installation AfL with The Crown Estate, these must be clearly set out within the CRIA (since The Crown Estate can only enforce compliance with the Requirements of the CRP after the developer has entered into the installation AfL).

### *Requirement 2*

Under this CRP, developers must undertake consultation with SNCBs throughout the route selection and refinement process (see Figure 1). The nature of this consultation will vary from project to project, but to be effective the consultation should be ongoing throughout the process and both parties must provide clear information and advice within the agreed timeframes.

---

Developers must demonstrate within the CRIA that clear information on the offshore export cable route has been provided for SNCBs at appropriate stages in cable route planning and that SNCB advice has been sought at appropriate stages (whether through formal or informal consultation). It is acknowledged that some elements of the cable planning process are time-constrained and that delays in receiving input from consultees can result in difficulties for developers. Development of an engagement plan is strongly encouraged. If difficulties have been encountered in engagement, these should be clearly stated within the CRIA and this will be taken into consideration by The Crown Estate.

### *Requirement 3*

When submitting high level environmental information to NGESO as part of the CION process, developers must have considered a comprehensive picture of all offshore/coastal SACs, SPAs, MCZs, SSSIs/ASSIs and Ramsar sites for the various possible offshore transmission connection routes. They must also identify the sensitivities of each of these to impacts from export cabling (either through consultation with SNCBs or by use of the information available from conservation advice packages for sites). Within the CRIA, developers must provide evidence of such SNCB input (whether direct or indirect) to the high-level environmental information provided for the CION process.

### *Requirement 4*

In planning survey work on potential cable routes (or exploratory works within a cable route Area of Search (AoS)), developers must consult with SNCBs to ensure that they have the opportunity to provide feedback on the scope and adequacy of the overarching survey plan. Consultation on the survey plan will be required in order to obtain individual survey licences, and evidence of this consultation is required within the CRIA.

### *Requirement 5*

Developers must demonstrate within the CRIA that planned offshore cable routes are in alignment with the relevant policies and principles within the applicable National Policy Statements and relevant marine plan(s) (including draft marine plans). Particular note should be taken of cable-specific policies within marine plans.

---

### *Requirement 6*

Developers must demonstrate within the CRIA that planned cable corridors have taken into account the outcomes of the relevant plan-level HRA (where applicable) as described in the Report to Inform Appropriate Assessment. This includes any specific requirements on cable planning, any geographically-specific findings and the examples of appropriate project-level cable mitigations.

### *Requirement 7*

Developers must demonstrate within the CRIA that they have had regard to documents and advice produced by SNCBs in relation to offshore export cabling, including current best practice guidance.

Developers must also have regard to the outcomes of relevant research programmes which are available at the point of submitting the CRIA. This may include (amongst other things) research into the impacts of cabling, the recovery of habitats and the efficacy of mitigation measures.

## Initial Area of Search

A developer will usually commence the process of cable route planning (prior to the CION) by identifying the possible onshore grid connection points and then considering a broad AoS for the possible onshore and offshore cable routes. Developers may, following discussions with NGESO and further analysis, be able to narrow down the options to a preferred onshore connection point. However, the overall preferred onshore grid connection option will be influenced by a number of factors, one of which is the constraint analysis undertaken by NGESO under the CION process. Until the grid offer agreement between the developer and NGESO has been signed by both parties, the developer is not in a position to conclude a transmission assets AfL.

The aim of Requirements 8 to 10 (below) is to ensure that, through consultation, the developer has identified the environmental sensitivities within the offshore AoS and that consultees understand the engineering constraints within the AoS before detailed cable route optioneering commences. The consultation will necessarily

---

be on high-level information; the aim is not to have all possible information and to pin down all the details of cable planning, but to ensure that both developers and SNCBs are starting from the same point at the outset of the cable planning process.

It is anticipated that Requirements 8 and 9 can be discharged in a single consultation which should ideally take place as soon as possible after the grid connection location is known. This will probably precede formal Environmental Impact Assessment scoping. Provided it is well documented, the consultation could be undertaken through a written report or an interactive workshop session.

#### *Requirement 8*

The developer must request a Crown Estate GIS proximity check of its proposed AoS and have regard to the findings of this check in cable route planning. This includes identification of any requirement for minimum separation distances from existing assets and any potential requirement to negotiate proximity agreements with other tenants. Iterative checks on refinements of the AoS are recommended but are only a requirement where there is a change in location or an increase in size of the AoS.

#### *Requirement 9*

Within the offshore AoS the developer must identify (and map where possible) the following, which are to be given significant weight in cable route planning:

- Habitats Regulations sites (SACs, SPAs and Ramsar sites, whether fully designated or not)
- MCZs and SSSIs/ASSIs (whether fully designated or not)
- Features of these Protected Sites (including priority habitats and species)
- Protected Sites with conservation objectives to recover features to favourable condition
- Areas of known Annex I habitat outside protected areas but within the AoS
- Habitats that are known to be irreplaceable or very difficult to replace (e.g. chalk reef)

Having undertaken this exercise the developer must consult with SNCBs (and, where appropriate, other relevant non-statutory consultees) to ensure that the best available evidence about the environment and specific sensitivities

---

has been incorporated into the AoS mapping, and that the consultees have the opportunity to provide additional narrative information about particularly sensitive areas or areas of concern to them. Evidence of providing SNCBs with the opportunity to engage must be provided in the CRIA.

#### *Requirement 10*

Developers must prepare an outline view of the possible cabling infrastructure requirements (acknowledging that this may change as the design of the project evolves). The outline should include the potential number and capacities of the export cables with their indicative spacing requirements and the additional structures (e.g. substations and converter stations) which the project is likely to require. Where there are uncertainties in the required infrastructure these should be set out (with reasons).

Within the AoS, developers must identify (and where possible, map) hard engineering constraints such as existing infrastructure/licence areas, challenging ground conditions and sections of the coast where landfall is not possible. Developers should also form an initial view on the likely areas within the AoS where cable preparation works and/or cable protection may be needed (noting that this information is likely to change as survey work is undertaken). Where possible, this information should be presented alongside the environmental information from information from Requirement 9.

The developer must consult with SNCBs (and, where appropriate, non-statutory consultees) to seek to ensure that they understand the likely infrastructure requirements and constraints and that they have the opportunity to raise any areas of concern about placement of infrastructure (including cable protection) and specific Protected Sites/features. Evidence of this consultation (and the way in which SNCB concerns have been addressed) must be provided in the CRIA.

---

## Detailed cable route planning

Following identification of an AoS, developers will typically work through a cable route planning process which narrows down options to a shortlist and then a final route (which will be submitted to The Crown Estate for inclusion in a transmission assets AfL).

Requirements 11 to 13 aim to ensure that this process is undertaken in close consultation with SNCBs. Consultation need not be through formal reporting, but it is expected that regular and iterative communication is undertaken as cable optioneering progresses and that consultees have ample opportunity to provide input to the process well before a final route is selected.

### *Requirement 11*

Developers must demonstrate in the CRIA that they have undertaken regular consultation with SNCBs as the cable route selection process progresses. In line with the requirements for pre-application consultation, communication should be comprehensively documented but need not take the form of formal reporting. The frequency of communication is a matter for agreement between developers and consultees, taking into account consultee resource constraints.

The consultation must encompass the entire process from AoS to final route selection and should include communication of the evolving understanding of cabling infrastructure requirements (including cable protection) as well as the evolving understanding of environmental and technical constraints on the cable route. Consultees must be given the opportunity to comment on proposals.

### *Requirement 12*

Where SNCBs provide advice and guidance during the cable route planning process this must be clearly documented and considered in cable route decision-making. The way in which SNCB advice has been incorporated into the cable route plan must be documented in the CRIA.

If a developer chooses not to follow SNCB advice, or where there a developer disagrees with the conclusions of the SNCB, it must provide clear and detailed

---

justification of this in the CRIA. The level of justification should be similar to that which will ultimately be required within Statements of Common Ground with the SNCB(s).

Developers must include within the CRIA, copies of any formal advice on the cable route received from SNCBs or non-statutory consultees. Where such advice is not yet available (for example where the CRIA is submitted in advance of formal consultation on the cable route), developers must either request that SNCBs provide a letter to accompany the CRIA which sets out their position on the cable route, or develop a joint statement with SNCBs for inclusion in the CRIA which sets out the areas of agreement and disagreement over the cable route.

### *Requirement 13*

The expectation (set out in Principle 3 in Section 5.2) is that the cable route should avoid the risk of harm to Habitats Regulations sites and other Protected Sites. Where this is not possible and a developer seeks to rely on mitigation measures for engineering or commercial reasons, the developer must be able to demonstrate within the CRIA that appropriate weight has been given to environmental considerations in the cable route evaluation process. In practice, this means that within the CRIA the developer must demonstrate that the potential impact of the route on Protected Sites has been carefully considered throughout the process and that all reasonable efforts have been made to avoid environmental impacts and adverse effects on the integrity of sites.

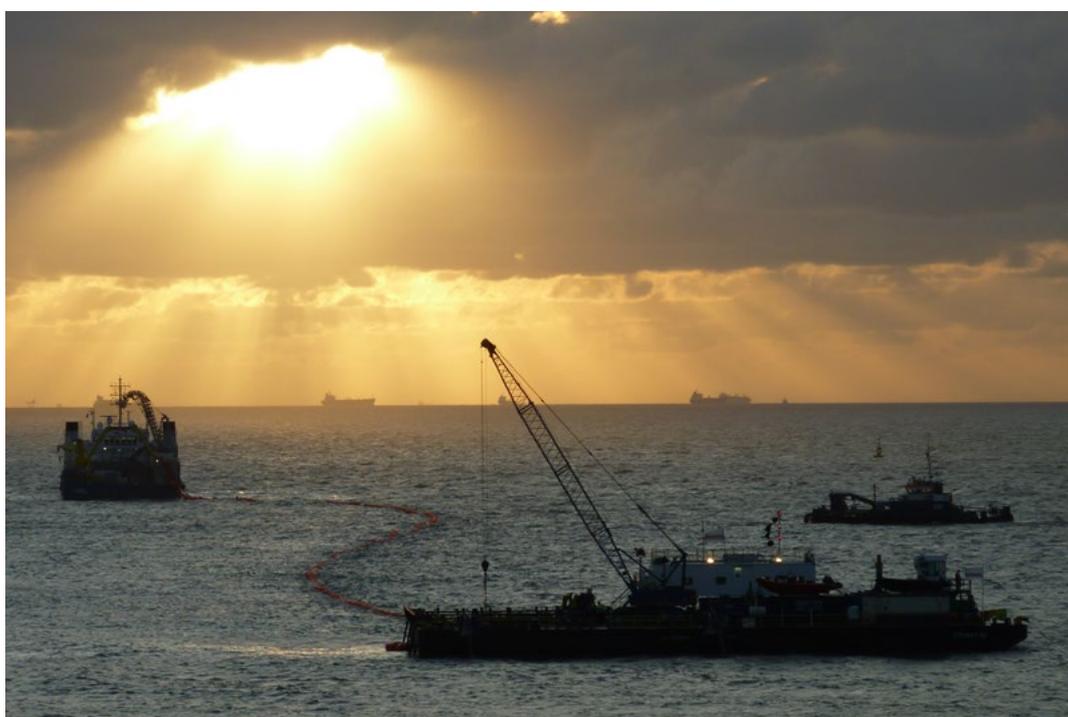
If avoidance is not possible then this must be clearly justified (including reasons why alternative cable routes are unsuitable), only then can mitigation be considered. If mitigation is included in a cable route option, the CRIA must present sufficient evidence to The Crown Estate that suitable mitigation approaches have been considered and can be employed on the project to avoid environmental impacts and adverse effects on the integrity of Habitats Regulations sites. Advice given by SNCBs on the efficacy of proposed mitigations should be provided where available and the mitigation must be capable of being secured in project consents.

---

### *Requirement 14*

Within the CRIA the Developer must either demonstrate that the following activities have been undertaken, or present a coherent programme for their completion:

- a Regulation 12 consultation on a Preliminary Environmental Information Report which includes the cable route or wider area of search; and
- a full assessment of the environmental impacts of the cable route within an Environmental Statement and/or separate report to inform HRA.



# Appendix 2

## Cable Route Identification and Approval information submission

The developer will be required to provide the following information in their CRIA information submission to The Crown Estate.

When completing this pro-forma developers should be cognisant of and seek to evidence how they have met the requirements contained within the CRP (Appendix 1).

Developer	Tender / Leasing Round	Project Name
Date	Revision	Author
Section of Route	Information required in italics. Developer to populate accordingly.	
<b>Summary Information</b>		
0.1	Introduction and narrative summary of the project	<i>Overview of the route proposal, including any project(s) to which it relates and a chart/plan showing both route and project locations (if applicable).</i>
<b>Part 1 - Project Specification &amp; Justification</b>		
1.1	Extent of Proposed Corridor	<i>Please provide:</i> <ul style="list-style-type: none"><li>a. a GIS shape file of the proposed cable route (Option Site), with the projection clearly stated</li><li>b. a plan showing the entire route</li><li>c. a larger scale plan of the landfall location</li></ul> <i>The data under (a) should be supplied in ESRI shape file geodatabase format in a Geodetic WGS1984 (ESPG code 4326) projection with MEDIN standard (v.2.3.7) metadata.</i>

<p><b>1.2</b> A description of the proposed routeing and a justification of corridor width (and where applicable, cable spacing if multiple systems).</p>	<p><i>Briefly describe the process you have gone through to identify the corridor proposed, including details of any survey work which you have undertaken.</i></p> <p><i>A narrative presentation of the proposed routeing of the proposed corridor width.</i></p> <p><i>This section should demonstrate that you have taken into consideration the overall routing and any cable spacing principles as suggested in The Crown Estate’s evidence-based study (where applicable): Principles of Cable Routing and Spacing, The Crown Estate (UK) 2012</i></p> <p><i>For cables, the proposed number and spacing of cables should be included, and a rationale for how this links with the width of corridor requested. If the number and spacing of cables is unknown at the time of application, then a justification for the sought after survey area (the width of the corridor) must still be provided.</i></p> <p><i>Please state if the corridor proposed is representative of a definitive route, or if are you intending to further refine/narrow the route. Please demonstrate how the width of the corridor route has been minimised to prevent unnecessary sterilisation of the seabed but sufficient to accommodate the anticipated requirements of the project. If the route will be further refined, please outline your process for identifying the refined route and the timescales for doing this, making sure that it is clear which elements of work will be undertaken before and after consent.</i></p> <p><i>Note: once under an AfL you should continue to provide TCE with updated routes when they are available (even if there is no change to your AfL).</i></p>
<p><b>1.3</b> A draft specification of the works</p>	<p><i>A list description of the equipment proposed to be installed on the site for the project. Which should include:</i></p> <ul style="list-style-type: none"> <li>- <i>Pipeline diameter &amp; material</i></li> <li>- <i>Maximum number and working voltage of cables, and confirmation of whether AC, DC or option for either:</i> <ul style="list-style-type: none"> <li>→ <i>Offshore Substations (including likely foundation type(s) and dimensions of structure(s))</i></li> <li><i>or;</i></li> <li>→ <i>Offshore Converter stations (including details of likely foundation type(s) and dimensions of structure(s))</i></li> </ul> </li> <li>- <i>Any ancillary equipment</i></li> <li>- <i>Communications equipment or cables</i></li> </ul>

<b>1.3</b>	A draft specification of the works	<ul style="list-style-type: none"> <li>- Infrastructure protections (e.g. anticipated burial depths, matting, rock dumping)</li> <li>- The nature of works proposed at the landfall site</li> <li>- The connection point to the onshore transmission or distribution system and confirmation of relevant onshore network owner</li> <li>- Overview of the works required onshore as part of the project</li> </ul>
<b>1.4</b>	Any other relevant technical information	Such other technical descriptions may be useful for The Crown Estate's understanding of the project, including information about any consultants engaged by the developer to provide input to the project and their scope of works.

## Part 2 - Planning & third party interests

<b>2.1</b>	Planning & Consenting	<ol style="list-style-type: none"> <li>a. Please list the key consents which will be required for the proposal, and your plan for achieving these consents (including approximate timescales).</li> <li>b. List the environmental/other user constraints that you are aware of on the corridor, and briefly explain how you intend to mitigate these impacts. Particular mention should be made of potential impacts on any SACs, SPAs, MCZs/MPAs, SSSIs, and the way in which these will be managed.</li> <li>c. Briefly describe whether there is a Marine Plan in place for this location and if so, how you meet the objectives of the adopted plan.</li> <li>d. Briefly describe any stakeholder engagement which you intend to, or have already undertaken on the corridor, including approximate dates.</li> <li>e. Confirmation that the proposed route accords with any relevant Appropriate Assessment and applicable SEA.</li> </ol>
<b>2.2</b>	Third party interests	<p>Please provide a list of third-party assets (or known proposed assets) which are potentially affected by your proposed corridor and the way in which these conflicts are being/will be managed including any discussions that have been held to find a mutually acceptable solution. It may be convenient to present this in the form of a table.</p> <p>This will be reviewed by TCE against an Asset and Proximity Check which will be undertaken along the corridor proposed. If you would like an early version of this check to inform this proposal, please let us know.</p>

---

<b>2.3</b>	Other relevant information	<i>Such other criteria as may be useful for The Crown Estate's consideration of the location of the proposed corridor.</i>
------------	----------------------------	--

### **Part 3 - Commercial set-up and Guarantor**

<b>3.1</b>	Corporate set-up of project entity	<i>A description of the corporate set-up of the project entity and its corporate linkage to the developer (if different). The project entity may either be the project company, or a group company of a project company, or an OFTO if you have opted for the OFTO Build approach in the case of offshore wind.</i>
------------	------------------------------------	---

<b>3.2</b>	<b>*For offshore wind only</b> Summary of OFTO strategy including key decision gates	<i>Confirmation whether Generator or OFTO Build approach is being adopted, and rationale for this. Summary of the key risks this approach mitigates or introduces (and confirmation of how these will be managed). Key decision gates/milestones under the OFTO process (eg when you expect an OFTO tender would start/end and when assets would transfer to an OFTO, if the Generator Build approach is being adopted).</i>
------------	---	--

**Any relevant appendices (such as other details which the developer deems to be relevant for the assessment of the proposed corridor route may be included in the application**

# Appendix 3

## Cable Route Protocol Compliance

The CRP has evolved from the plan-level HRA process undertaken for the 2017 Offshore Wind Extensions Plan, and comprises a set of requirements for offshore energy developers in the planning of offshore export cable routes. Compliance with these requirements is secured within the offshore energy installation AfL and **adherence to the CRP is a prerequisite for granting of a transmission assets AfL.**

The table below should be used to demonstrate compliance with each CRP requirement; it is acceptable to reference where this information has been provided in the main CRIA information submission where relevant. Some requirements are linked and it may be preferable to address more than one requirement in the same cell of the table and/or body of text in the CRIA, with appropriate cross-referencing.

Developer	Tender / Leasing Round	Project Name
CRP requirement	Information required in italics. Developer to populate accordingly.	
<b>General requirements</b>		
<b>Requirement 1</b> Early offshore cable route planning	<i>Where elements of offshore cable route planning have taken place before a developer has entered into an offshore energy installation AfL with The Crown Estate, these must be clearly set out.</i>	
<b>Requirement 2</b> Consultation with SNCBs throughout the route selection and refinement process	<i>Demonstration that clear information on the offshore export cable route has been provided for SNCBs at appropriate stages in cable route planning, and that SNCB advice has been sought at appropriate stages. Development of an engagement plan is strongly encouraged. If difficulties have been encountered in engagement these should be clearly stated, and this will be taken into consideration by The Crown Estate.</i> <b>(Note: link to Requirement 11)</b>	

---

**Requirement 3**

Consideration of all offshore/coastal environmental designations as part of CION process submission

*Demonstration that when submitting high level environmental information to NGESO as part of the CION process, a comprehensive picture of all offshore/coastal Special Areas of Conservation (SACs), Special Protection Areas (SPAs), MCZS, SSSIs and Ramsar sites for the various possible offshore transmission connection routes has been considered, and the sensitivities of each of these to impacts from export cabling identified. Please provide evidence of SNCB input (whether direct or indirect e.g. use of information available from conservation advice packages for sites) to the high-level environmental information provided for the CION process.*

**Requirement 4**

Consultation with SNCBs in planning survey work

*Please provide evidence that SNCBs have been consulted as part of planning survey work on potential cable routes (or exploratory works for an Area of Search), and that they have had the opportunity to provide feedback on the scope and adequacy of the overarching survey plan.*

**Requirement 5**

Alignment with National Policy Statements and relevant marine plan(s)

*Demonstration that planned offshore cable routes are in alignment with the relevant policies and principles within the applicable National Policy Statements and relevant marine plan(s) (including draft marine plans). Particular note should be taken of cable specific policies within marine plans.*

*Please identify the relevant policies and confirm that these have been given due regard and that the project is aligned with these as a whole. Any aspect that does not align with a policy should be highlighted / discussed in more detail.*

**Requirement 6**

Alignment with outcomes of the relevant Plan-level HRA (where applicable)

*Please demonstrate that the planned export cable routes have taken into account the outcomes of the relevant Plan-level HRA (where applicable) as documented in the Report to Inform Appropriate Assessment, including any specific requirements on cable planning, any geographically-specific findings and the examples of appropriate project-level cable mitigation.*

**Requirement 7**

Regard to SNCB documents, advice and best practice guidance

*Demonstration that regard has been given to documents and advice produced by SNCBs in relation to export cabling, including best practice guidance and the outcomes of relevant research programmes which are available at the point of submitting the CRIA.*

**(Note:** Link to Requirement 12)

---

**Initial Area of Search****Requirement 8**

Request Crown Estate GIS proximity check of proposed AoS

*Please demonstrate that a Crown Estate GIS proximity check has been requested and its findings have been considered in cable route planning, including identification of any requirement for minimum separation distances from existing assets, and any potential requirement to negotiate proximity agreements with other tenants.*

---

**Requirement 9**

Identification of key environmental sensitivities within the offshore AoS

Please provide evidence that within the offshore AoS the following have been identified (and mapped where possible), and given significant weight in cable route planning:

- Habitats Regulations sites (SACs, SPAs and Ramsar sites, whether fully designated or not);
- MCZs and SSSIs/ASSIs (whether fully designated or not);
- Features of these Protected Sites (including priority habitats and species);
- Protected Sites with conservation objectives to recover features to favourable condition; and
- Areas of known Annex I habitat outside protected areas but within the AoS; and
- Habitats that are known to be irreplaceable or very difficult to replace (e.g. chalk reef).

Please provide evidence that consultation with SNCBs (and other relevant non-statutory consultees where considered appropriate) has been undertaken, and that consultees have had the opportunity to engage and provide information about particularly sensitive areas or areas of concern to them.

---

**Requirement 10**

Outline of possible cabling infrastructure

Please provide an outline view of possible cabling infrastructure requirements (acknowledging that this may change as the design of the project evolves). The outline should include the potential number and capacities of the export cables with their indicative spacing requirements and the additional structures (e.g. substations and converter stations) which the project is likely to require. Where there are uncertainties in the required infrastructure these should be set out (with reasons).

Within the AoS, please identify hard engineering constraints such as existing infrastructure/licence areas, challenging ground conditions and sections of the coast where landfall is not possible. Please provide an initial view on the likely areas within the AoS where cable preparation works and/or cable protection may be needed (noting that this information is subject to change as survey work is undertaken). (Note: where possible, this information should be presented alongside environmental information from Requirement 9)

Please provide evidence that consultation with SNCBs (and where considered appropriate, other non-statutory consultees) has been undertaken so that they understand the likely infrastructure requirements and constraints, and that they have had the opportunity to raise any areas of concern about the placement of infrastructure (including cable protection) and specific protected sites/features.

---

---

## Detailed cable route planning

### Requirement 11

Regular consultation with SNCBs through cable route selection process

*Please provide evidence that regular consultation with SNCBs has been undertaken as the cable route selection process progresses. Consultation must encompass the entire process from AoS to final route selection and should include communication of the evolving understanding of cabling infrastructure requirements (including cable protection) as well as the evolving understanding of environmental and technical constraints on the cable route. Consultees must be given the opportunity to comment on proposals.*

*Recognising that the CRIA may be submitted at different stages of a development's planning and consenting process, plans for ongoing and future engagement can also be highlighted.*

**(Note:** [Link to Requirement 2](#))

---

### Requirement 12

SNCB advice and guidance provided during cable route planning process

*Please document where SNCBs have provided advice and guidance during the cable route planning process, and how this has been considered in cable route decision-making. The way in which SNCB advice has been incorporated into the cable route plan must be documented. If the SNCB advice has not been followed, or where there the developer disagrees with the conclusions of the SNCB, please provide clear and detailed justification of this. The level of justification should be similar to that which will ultimately be required within Statements of Common Ground with the SNCB(s).*

*Please provide copies of any formal advice on the cable route received from SNCBs or non-statutory consultees. Where such advice is not yet available (for example where the CRIA is submitted in advance of formal consultation on the cable route), developers must either request that SNCBs provide a letter to accompany the CRIA which sets out their position on the cable route, or develop a joint statement with SNCBs for inclusion in the CRIA which sets out the areas of agreement and disagreement over the cable route.*

**(Note:** [Link to Requirement 7](#))

---

### Requirement 13

Appropriate weight given to environmental considerations

*Demonstration that the potential impact of the route on Protected Sites has been carefully considered throughout the cable route evaluation process, and that all reasonable efforts have been made to avoid environmental impacts and adverse effects on the integrity of sites. If avoidance is not possible then this must be clearly justified (including reasons why alternative cable routes are unsuitable) and only then can mitigation be considered.*

*If mitigation is included in a cable route option, please provide evidence that suitable mitigation approaches have been considered and can be employed on the project to avoid environment impacts and adverse effects on integrity of Habitats Regulations sites. Advice given by SNCBs on the efficacy of proposed mitigations should be provided where available, and the mitigation must be capable of being secured in project consents.*

---

**Requirement 14**

Programme for PEIR  
consultation and Environmental  
Statement and/or HRA

*Demonstration that the following activities have been undertaken, or a coherent programme is in place for their completion:*

- *A consultation on a Preliminary Environmental Information Report which includes the cable route or wider area of search; and*
  - *A full assessment of the environmental impacts of the cable route within an Environmental Statement and/or separate report to inform HRA*
-

---

THE CROWN  
 ESTATE

