

Net Zero Teesside Project

Planning Inspectorate Reference: EN010103

Land at and in the vicinity of the former Redcar Steel Works site, Redcar and in Stockton-on-Tees, Teesside

The Net Zero Teesside Order

Document Reference: 5.10 Other Consents and Licences

The Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 – Regulation 5(2)(q)



Applicants: Net Zero Teesside Power Limited (NZN Power Ltd) & Net Zero North Sea Storage Limited (NZNS Storage Ltd)

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GLOSSARY

Abbreviation	Description
AGI	Above Ground Installation
AIL	Abnormal Indivisible Loads
AOD	Above Ordnance Datum
CCUS	Carbon Capture, Usage and Storage
CDM	Construction Design and Management
CEMP	Construction Environmental Management Plan
CO2	Carbon Dioxide
DCO	Development Consent Order
DML	Deemed Marine Licence
EPC	Engineering Procurement and Construction
ES	Environmental Statement
Ha	Hectares
HDD	Horizontal Directional Drilling
HSE	Health and Safety Executive
LPA	Local Planning Authority
MLWS	Mean Low Water Springs
MOC	Minimum Offtake Connection
MMO	Marine Management Organisation
MW	Megawatt: the measure of power produced.
NG	National Grid
NGET	National Grid Electricity Transmission
NPS	National Policy Statement
NSIP	Nationally Significant Infrastructure Project
NZNS	Net Zero North Sea Storage Limited
NZT	Net Zero Teesside Power Limited
OFGEM	Office of Gas and Electricity Markets
PA 2008	Planning Act 2008
PCC	Power, Capture and Compressor Site
SoS	Secretary of State
STDC	South Tees Development Corporation
TTRO	Temporary Traffic Regulation Order

CONTENTS

1.0	Introduction	1
1.1	Overview	1
1.2	The Applicants	1
1.3	What is Carbon Capture, Usage and Storage?.....	3
1.4	The Site	4
1.5	The Proposed Development	4
1.6	The Purpose and Structure of this Document	5
2.0	Other Consents and Licences.....	6

TABLES

Table 1.1:	NZT Entities.....	2
Table 2.1:	Other Consents and Licences required for this DCO Application.....	7
Table 2.2	Other Consents and Licences required for the Off-shore Works.....	16

1.0 INTRODUCTION

1.1 Overview

1.1.1 This 'Other Consents and Licences document (Document Ref. 5.10) has been prepared on behalf of Net Zero Teesside Power Limited and Net Zero North Sea Storage Limited (the 'Applicants'). It forms part of the application (the 'Application') for a Development Consent Order (a 'DCO'), that has been submitted to the Secretary of State (the 'SoS') for Business, Energy and Industrial Strategy, under section 37 of 'The Planning Act 2008' (the 'PA 2008').

1.1.2 The Applicants are seeking development consent for the construction, operation and maintenance of the Net Zero Teesside Project ('NZT'), including associated development (together the 'Proposed Development') on land at and in the vicinity of the former Redcar Steel Works site, Redcar and in Stockton-on-Tees, on Teesside (the 'Site'). The former Steel Works site, along with other land required for the Proposed Development, lies within the boundary of the land controlled by the South Tees Development Corporation ('STDC'), which is now known as 'Teesworks'.

1.1.3 A DCO is required for the Proposed Development as it falls within the definition and thresholds for a 'Nationally Significant Infrastructure Project' (a 'NSIP') under Sections 14(1)(a) and 15 of the PA 2008, associated development under Section 115(1)(b) and by direction under Sections 35(1) and 35ZA of the same Act. The DCO, if made by the SoS, would be known as the 'Net Zero Teesside Order' (the 'Order').

1.1.4 The Proposed Development will be the UK's first commercial scale, full chain Carbon Capture, Usage and Storage project and will initially capture up to 4 million tonnes (Mt) of carbon dioxide (CO₂) emissions per annum. It will comprise a number of elements, including a new gas-fired Electricity Generating Station with post-combustion carbon capture plant; gas, water and electricity connections (for the generating station); a CO₂ pipeline network (a 'gathering network') for collecting CO₂ from a cluster of local industries on Teesside; a CO₂ compressor station (for the compression of the CO₂) and a CO₂ export pipeline.

1.1.5 The CO₂ captured from the Electricity Generating Station and local industries will be compressed and then transported (via the export pipeline) for secure storage within the Endurance saline aquifer located 145 kilometres offshore from Teesside under the North Sea. The export pipeline has the capacity to carry up to 10Mt of CO₂ per annum. The Proposed Development will therefore make a significant contribution toward the UK reaching its greenhouse gas emissions target by 2050.

1.2 The Applicants

1.2.1 NZT encompasses proposals to both decarbonise electricity generation and a cluster of carbon intensive industries on Teesside. In line with the CCUS business models published by BEIS in December 2020, there will be separate entities who will be responsible for:

- electricity generation with post-combustion carbon capture (including the gas, water and electricity connections);

- CO₂ gathering (from industrial emitters), CO₂ compression and CO₂ export and storage; and
- industrial (including hydrogen production) carbon capture and connections to the CO₂ gathering network.

1.2.1 The entities are set out in Table 1.1 below:

Table 1.1: NZT Entities

Onshore works scope	Partnership	NZT Entity	Within the scope of the DCO Application?
Electricity Generating Station with post-combustion carbon capture (including the gas, water and electricity connections)	bp*, Eni, Equinor and Total	Net Zero Teesside Power Limited	Yes
CO ₂ gathering network, CO ₂ compression and the onshore section of CO ₂ export pipeline	bp*, Eni, Equinor, National Grid, Shell and Total	Net Zero North Sea Storage Limited	Yes
Industrial and hydrogen production carbon capture and connection to the CO ₂ gathering network	Individual industrial emitters	N/A	No

*Operator on behalf of the relevant Partnership

- 1.2.2 NZT is being promoted by Net Zero Teesside Power Limited ('NZT Power') and Net Zero North Sea Storage Limited ('NZNS Storage'). NZT Power and NZNS Storage (together the Applicants for the purposes of the DCO Application) have been incorporated on behalf of bp as operator of the two Partnerships.
- 1.2.3 The electricity generation with post-combustion carbon capture Partnership comprises bp, Eni, Equinor and Total, with bp leading as operator. NZT Power will be responsible for the Proposed Development in so far as it relates to the construction, operation and eventual decommissioning of the Electricity Generating Station together with its carbon capture plant (both within the scope of the DCO Application).
- 1.2.4 The CO₂ gathering network, CO₂ compression and onshore section of CO₂ export pipeline Partnership comprises bp, Eni, Equinor, National Grid, Shell and Total, with bp leading as operator. NZNS Storage will be responsible for the Proposed Development in so far as it relates to the construction, operation and eventual decommissioning of the equipment required for the high-pressure compression of

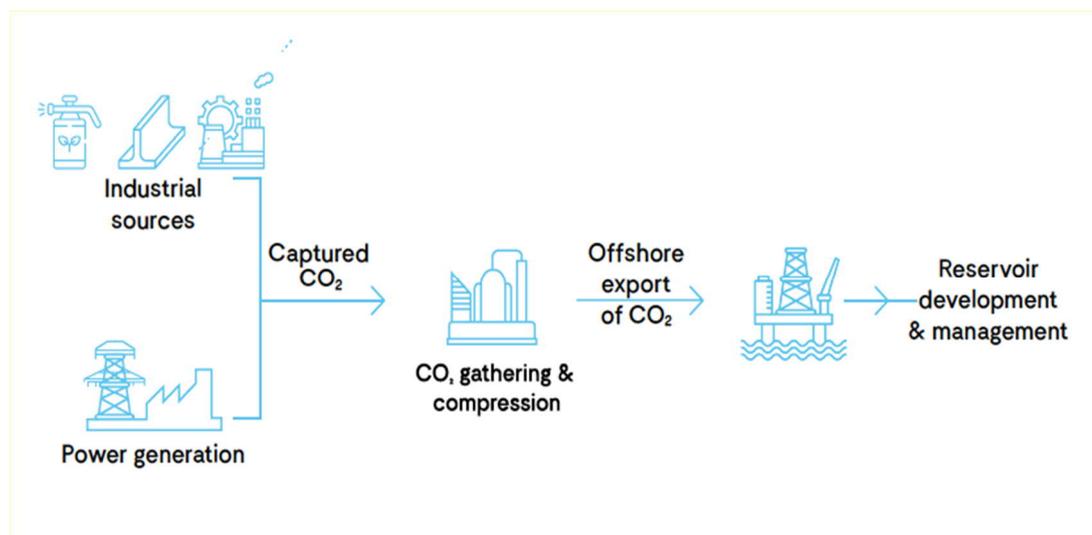
CO₂ from the electricity generating station and industrial emitters via the CO₂ gathering network and the onshore section of the CO₂ export pipeline (these are all within the scope of the DCO Application).

1.2.5 NZNS Storage will also be responsible for the offshore elements of NZT, comprising the offshore section of the CO₂ export pipeline (below Mean Low Water Springs ('MLWS')) to a suitable offshore geological CO₂ storage site under the North Sea, CO₂ injection wells and associated infrastructure. The offshore elements of NZT (with the exception of the gas and CO₂ pipeline crossings of the River Tees and the water outfall from the Electricity Generating Station) do not form part of the DCO Application.

1.3 What is Carbon Capture, Usage and Storage?

1.3.1 Carbon Capture, Usage and Storage ('CCUS') is a process that removes CO₂ emissions at source, for example emissions from an Electricity Generating Station or industrial installation, and then compresses the CO₂ so that it can be safely transported to secure underground storage sites. It is then injected into layer of solid rock filled with interconnected pores where the CO₂ becomes trapped and locked in place, preventing it from being released into the atmosphere. Figure 1.1 below shows what is involved in the process.

Figure 1.1: CCUS Process



1.3.2 The technologies used in CCUS are proven and have been used safely across the World for many years. Storage sites are located several kilometres underground and are subject to stringent tests to ensure that they are geologically suitable. In the UK, it is expected that the storage sites will be located offshore, in areas such as the North Sea.

1.3.3 CCUS is one of a number of technologies that are crucial to reducing CO₂ emissions and combatting global warming. The UK Government has committed to achieving 'Net Zero' in terms of greenhouse gas emissions by 2050. This is a legally binding target.

1.4 The Site

1.4.1 The Site lies within the administrative boundaries of both Redcar and Cleveland Borough Council and Stockton-on-Tees Borough Council. It also partly lies within the boundary of the Teesworks area that is controlled by the STDC.

1.4.2 Most of the Site lies within the administrative area of Redcar and Cleveland Borough Council, although parts of Site (for the Electricity Generating Station's gas supply connection to the National Transmission System for gas and the CO₂ gathering network) cross the River Tees into the administrative area of Stockton-on-Tees Borough Council. At this location, the River Tees is tidal. In addition, there are elements of the Site which extend into South Gare, Coatham Sands and the North Sea. Those sections of the Site that are below MLWS are outside the jurisdiction of either local authority being part of the UK marine area.

1.4.3 The Site extends to approximately 462 hectares ('ha') in area. Much of it comprises previously developed (including part of the former Redcar Steel Works Site) and existing industrial land, some of which was reclaimed from the Tees Estuary in the late C19th and during the C20th. The Site is relatively flat and low-lying and sits at a level of between sea level and approximately 9 metres Above Ordnance Datum ('AOD'). The area surrounding the Site is largely characterised by industrial and commercial uses, although there are open areas of land to the north in the form of South Gare and Coatham Sands, which are used for recreational purposes and that are of nature conservation importance.

1.4.4 A more detailed description of the Site and its surroundings is provided at Chapter 3 'Description of the Existing Environment' in the Environmental Statement ('ES') Volume I (Document Ref. 6.2).

1.5 The Proposed Development

1.5.1 The Proposed Development will work by capturing CO₂ from the Electricity Generating Station in addition to a cluster of local industries on Teesside and transporting it via a CO₂ export pipeline to the Endurance saline aquifer under the North Sea. The Proposed Development will initially capture and transport up to 4Mt of CO₂ per annum, although the CO₂ export pipeline has the capacity to accommodate up to 10Mt of CO₂ per annum thereby allowing for future expansion.

1.5.2 The Proposed Development comprises the following elements:

- a combined cycle gas turbine ('CCGT') Electricity Generating Station with an electrical output of between 750 and 860 megawatts and post-combustion carbon capture plant;
- cooling water, gas and electricity grid connections and infrastructure for the Electricity Generating Station;
- a CO₂ gathering network (including connections under the tidal River Tees) to collect and transport the captured CO₂ from industrial emitters to a CO₂ compressor station (the industrial emitters using the gathering network will be responsible for consenting their own carbon capture plant and connections to the gathering network);

- a high-pressure CO₂ compressor station to receive and compress the captured CO₂ from the Electricity Generating Station and gathering network before it is transported offshore; and
 - a dense phase CO₂ export pipeline for the onward transport of the captured and compressed CO₂ to the Endurance saline aquifer under the North Sea.
- 1.5.3 The Electricity Generating Station, its post-combustion carbon capture plant and the CO₂ compressor station will be located on part of the STDC Teesworks area (on part of the former Redcar Steel Works Site). The CO₂ export pipeline will also start in this location before heading offshore. The Electricity Generating Station connections and the CO₂ gathering network will require corridors of land within both Redcar and Stockton-on-Tees, including crossings beneath the River Tees.
- 1.5.4 All of the above elements are included in the scope of the DCO Application, with the exception of the CO₂ export pipeline, where only the onshore section of pipeline above MLWS is included. The CO₂ export pipeline below MLWS and the CO₂ storage site under the North Sea (the Endurance saline aquifer) will be the subject of separate consent applications, including under the Petroleum Act 1998 and the Energy Act 2008. These applications will be supported by an Offshore Environmental Statement.
- 1.5.5 The ancillary development required in connection with and subsidiary to the above elements of the Proposed Development is detailed in Schedule 1 of the draft DCO (Document Ref. 2.1). A more detailed description of the Proposed Development is provided at Schedule 1 'Authorised Development' of the draft DCO and Chapter 4 'The Proposed Development' in ES Volume I (Document Ref. 6.2) and the areas within which each of the main elements of the Proposed Development are to be built are denoted by the coloured and hatched areas on the Works Plans (Document Ref. 4.4).
- 1.6 The Purpose and Structure of this Document
- 1.6.1 The purpose of this document is to provide information on the other consents and licences that are, or may be, required under other legislation for the construction and operation of the Proposed Development, outside of the DCO (Document Ref. 2.1).
- 1.6.2 The document will be updated by the Applicants, as required, during the examination of the Application by the SoS.
- 1.6.3 The other consents and licences required are presented in Table 2.1 of Section 2.

2.0 OTHER CONSENTS AND LICENCES

- 2.1.1 Table 2.1 below lists the type of consent/licence required, the relevant consenting body, any agreement that has been reached with that body, actions to be undertaken and the status of the relevant application (e.g. whether the consent/licence has been granted or the anticipated application submission date).

Table 2.1: Other Consents and Licences required for this DCO Application

No	Consent/licence	Relevant body	Comments/ status	Timescales going forward
1	Electricity Generation Licence - Section 6 of The Electricity Act 1989 (licences authorising supply, etc.)	Office of Gas and Electricity Markets (OFGEM)	Not yet progressed. Licence required for the generation of electricity by the generating station (Work No. 1)	To be applied for prior to commissioning of the Proposed Development.
2	Hazardous Substances Consent - Sections 4 and 6 of The Planning (Hazardous Substances) Act 1990 & Schedule 1 of The Planning (Hazardous Substances) Regulations 2015	LPA (Redcar and Cleveland Borough Council) who would consult the HSE	Not yet progressed. If required, Hazardous Substances Consent application to be prepared for submission to LPA.	Would be applied for prior to the start of construction once the volumes of hazardous substances to be stored on site are known.
3	The Control of Major Accident Hazards (COMAH) Regulations 2015	Health and Safety Executive	Not yet required. If required, COMAH licence application to be prepared for submission to HSE	Would be applied for prior to the start of construction once the volumes of hazardous substances to be stored on site are known.

No	Consent/licence	Relevant body	Comments/ status	Timescales going forward
4	Greenhouse Gas Permit - Greenhouse Gas Emissions Trading Scheme Order 2020	Environment Agency	New permit will be required. Not commenced. Will be required for the emission of carbon dioxide from the plant.	Application submission prior to commissioning of the plant.
5	Construction Noise Consent - Section 61 of The Control of Pollution Act 1974	LPA -(Redcar and Cleveland Borough Council and Stockton on Tees Borough Council)- dependant on what administrative area specific works were in.	May be required prior to construction of the plant for certain activities. No action required at present.	Would be applied for prior to the start of construction, or prior to specific construction activities, if required.
6	Notification of Construction Works - The Construction (Design and Management) CDM Regulations 2015	The Health and Safety Executive ('HSE').	Not yet required. HSE should be notified in writing prior to the start of construction work using the HSE F10 Form. HSE should be notified in writing prior to the start of construction work using the HSE F10 Form. Submitted prior to appointment of contractor by the Applicant.	HSE will be notified prior to the commencement of the start of construction.

No	Consent/licence	Relevant body	Comments/ status	Timescales going forward
7	Permit for Transport of Abnormal Loads - The Road Vehicles (Authorisation of Special Types) (General) Order 2003 or The Road Traffic Act 1988	VCA (the Executive Agency of the Department for Transport), Highways England and local highway authority (Redcar and Cleveland Borough Council and Stockton on Tees Borough Council)- dependant on what administrative area specific works were in).	Not yet required. The need will be determined by the EPC contractor. Details for the management of Abnormal Loads and Abnormal Indivisible Loads ('AILs') are secured within the 'Construction traffic management and travel planning' requirement in Schedule 2 of the DCO	No action required at present. A permit(s) would be sought once the number and type of Abnormal Loads and AILs has been established following appointment of the contractor.
8	Temporary Traffic Regulation Order	Local highway authority (Redcar and Cleveland Borough Council and Stockton on Tees Borough Council) - dependant on what administrative area specific works were in).	Not yet required. May be required to allow traffic management e.g. in respect of creating new access or to minimise queueing / prevent certain turns during the construction period. The need will be determined by the contractor.	No action required at present. TTRO would be sought once the number and nature of TTROs is established following appointment of the contractor.

No	Consent/licence	Relevant body	Comments/ status	Timescales going forward
9	Agreement under Section 278 Highways Act for the carrying out of works to the public highway	Local highway authority (Redcar and Cleveland Borough Council and Stockton on Tees Borough Council) - dependant on what administrative area specific works were in).	Not yet required. Required to allow any required works to the public highway necessary to create a new access (i.e. crossing the highway verge and tying in).	No action required at present. Would be required prior to start of construction.
10	Building Regulations Approval - The Building Regulations 2010 (as amended)	Redcar and Cleveland Borough Council	Not yet required. Will be required in respect of buildings and structures forming part of the Proposed Development.	No action required at present. Buildings Regulations Approval would be sought prior to and during the construction phase.
11	Environmental Permit - The Environmental Permitting (England and Wales) Regulations 2016 (as amended)	Environment Agency	In progress. A bespoke permit will be required for the operation of the power station and associated development (Work No. 1).	In progress – application expected to be submitted to the EA in mid-2021

No	Consent/licence	Relevant body	Comments/ status	Timescales going forward
12	Environmental Permit (Flood Risk Activities) - The Environmental Permitting (England and Wales) Regulations 2016	Environment Agency	May not be required and not yet progressed. Required for works in, under, over or within 8 m of the top of the bank of a main river or within 16 m of the top of the bank of a tidal main river.	No action required at present. If required, application submission will be at least 2 months prior to start of construction.
13	Environmental Permit (for discharge to surface water) – The Environmental Permitting (England and Wales) Regulations 2016 (as amended)	Environment Agency	Not yet required. May be required for discharge of uncontaminated surface water from the construction site if this lasts for more than 3 continuous months.	No action required at present. This would be sought prior to construction if required by the contractor.
14	Gas Safety Case - The Gas Safety (Management) Regulations 1996 (Regulation 3)	Health Safety Executive (HSE)	Not yet required. Will be required in connection with the Proposed Gas Connection (Work No. 2). A safety case must be prepared and submitted to the HSE for approval prior to gas being conveyed. An exemption may apply.	No action required at present. Safety case will be submitted prior to commencement of the start of construction of the Proposed Gas Connection.

No	Consent/licence	Relevant body	Comments/ status	Timescales going forward
15	Pipeline Safety Notification - The Pipeline Safety Regulations 1996 (Regulation 20)	HSE	Not yet required. Will be required in connection with the Proposed Gas Connection (Work No. 2). HSE must be notified a minimum of 6 months prior to commencement of construction of the Proposed Gas Connection.	No action required at present. HSE will be notified a minimum of 6 months prior to commencement of construction of the Proposed Gas Connection.
16	Planning & Advanced Reservation of Capacity Agreement	National Grid	Due to the projected connection date, NZT has not applied for PARCA nor reserved gas network capacity. NZT has engaged NGG to undertake a preliminary assessment of PARCA matters, and no operational concerns have been identified. NGG has not identified any inability to provide gas at the ramp rates required.	Consistent with the project's overall schedule, and during the FEED process NZT will submit a PARCA application and a full connection application. NZT intends to enter into a Network Exit Agreement with NGG, following the schedule and in parallel with the construction process to ensure gas can flow through the Gas Connection at the required time (please see Work No. 2.)
17	Application to Offer for physical connection to gas National Transmission System ('NTS') network	National Grid Gas	Not yet required. Will be required in connection with the Proposed Gas Connection (Work No. 2).	To be applied for 12 months prior to construction

No	Consent/licence	Relevant body	Comments/ status	Timescales going forward
18	Connection Agreement for connection to the electricity distribution network.	National Grid Electricity Transmission (NGET)	Engagement with NGET has been ongoing throughout 2020, concluding in NZT Power receiving a formal connection offer from NGET in December 2020. At the time of DCO application submission, Net Zero Teesside Power Limited and NGET are in the process of finalising the connection agreement(s) and it is anticipated that such connection agreement(s) will soon be executed, thus confirming sufficient capacity at the Tod Point sub-station to accommodate the export of electricity from the Low-Carbon Electricity Generating Station located within the PCC Site.	NZT intends to exercise and accept the NGET formal connection offer in mid-2021. The execution of the connection agreement(s) secures sufficient capacity at the Tod Point sub-station to accommodate the export of electricity from the Electricity Generating Station.
19	Fire Notice - The Regulatory Reform (Fire Safety) Order 2005.	Local fire and rescue authority.	No action required at present.	Would be applied for prior to the start of construction, or prior to specific construction activities, if required.

No	Consent/licence	Relevant body	Comments/ status	Timescales going forward
20	Deemed Marine Licence - Marine and Coastal Access Act 2009.	Marine Management Organisation	Progressed. The DCO will incorporate a 'Deemed Marine Licence' (DML) for works below MHWS	A DML is included within the draft DCO (Document Ref. 2.1). The scope and terms of the DML have been discussed and agreed with the MMO
21	European Protected Species Licence - The Conservation of Habitats and Species Regulations 2010	Natural England	Not yet progressed. Required for any components of the Proposed Development that affect protected species. Pre- construction surveys would be undertaken to confirm the position (and the need for any licence(s)) prior to construction works. The pre-construction surveys are secured by a requirement within the DCO.	No action required at present. Application submission prior to start of construction if required.
22	Class Licence under Wildlife and Countryside Act 1981 (as amended) Section 10(3)(c)	Natural England	May not be required. May be needed pre construction to undertake works in and around ditches which may displace water voles. A 'water vole class licence' would be held by the ecologist under form WML-CL31 rather than a full development licence.	No action required at present. Application submission prior to start of construction if required.

No	Consent/licence	Relevant body	Comments/ status	Timescales going forward
23	Assent for works within a Site of Special Scientific Interest	Natural England	Not yet progressed. Will be required for non-intrusive works within Teesside and Cleveland Coast SSSI (e.g. control of Horizontal Directional Drilling) or vehicular access	No action required at present. Application submission prior to start of construction.

Table 2.2 Other Consents and Licences required for the Off-shore Works

No	Consent/licence	Relevant body	Comments/ status	Timescales going forward
A	Carbon dioxide storage licence	Oil and Gas Authority	Required to permit storage of CO ₂ in the Endurance Saline Aquifer. Storage licence held by Carbon Sentinel, BP Exploration and ENI [BP to Confirm]	<p>Licence covers appraisal. Permit awarded under The Storage of Carbon Dioxide (Licensing etc.) Regulations 2010 for actual storage of CO₂.</p> <p>Store Permit requires OGA approval of the Store Development Plan (and approval of supporting Environmental Statement under The Offshore Oil and Gas Exploration, Production, Unloading and Storage (Environmental Impact Assessment) Regulations 2020)</p>
B	Grant of Appropriate Rights	Crown Estate	Under the Energy Act 2008 - Provisions relate to interference with navigation on the UKCS and applies to oil and gas offshore facilities. It requires written consent from the OGA to permit certain works which may impede navigation by other users of the sea.	<p>Written consent required for activity that is likely to cause obstruction or danger to navigation; involves the construction, alteration, improvement, dismantlement or abandonment of any works; the deposit of any object or materials; or the removal of any object or materials.</p> <p>May also consider application for safety zones under Petroleum Act 1987 (Energy Act 2008)</p>

No	Consent/licence	Relevant body	Comments/ status	Timescales going forward
C	Marine Licence	Marine Management Organisation	Not yet progressed. Off-shore works below MHWS not covered by the DML as part of the on-shore works.	No action required at present. Application submission prior to start of construction. Application will be supported by an Environmental Statement.
D	Pipeline Works Authorisation	Oil and Gas Authority	Not yet progressed. Required before any off-shore pipeline construction works commence.	No action required at present. Application submission prior to start of construction if required.