



UK Government

The consenting lifecycle of marine geological carbon dioxide stores



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1 Introduction

1.1 Motivation

This document outlines the roles and responsibilities of organisations involved in the consenting lifecycle of marine geological carbon dioxide storage in the UK, serving as a reference for the regulatory framework and key interaction points.

It is intended to aid the carbon storage sector by providing a common reference framework. This will assist the understanding of the complexities of the carbon storage consenting process, allowing organisations to engage with the appropriate bodies in a timely manner, facilitating the consenting process. The sector's stakeholders have expressed strong endorsement for such a resource.

The government had made it a core aim to kickstart growth by streamlining development processes and decision-making, thereby reducing the regulatory burden on businesses and investors. This document serves as an initial step by outlining current roles and processes. By providing a common foundation, the document enables developers to navigate the regulatory landscape with greater efficiency and confidence. This alignment with government goals not only facilitates smoother planning, but also helps propel the UK towards a more sustainable and economically robust future.

1.2 How to use this document

This document provides an overview of the roles and responsibilities of the organisations involved in the consenting lifecycle (pre-licensing through to post-decommissioning) for marine geological carbon dioxide storage in the UK. It is intended as a reference document and indicates the key interaction points needed to enable properly consented operations.

This document consists of:

- A glossary of terms.
- Overview maps giving a high-level perspective of relevant activities and consents (including licences, permits, certificates, etc.) which may need to be undertaken or acquired by carbon dioxide (CO₂) storage developers.
- Individual maps for each body providing more details on activity, processes and interdependencies between bodies.

As of publication date, there are four carbon dioxide storage clusters under development in the UK. The stores for these clusters lie in Scottish offshore and English waters, as such the key consenting bodies are the North Sea Transition Authority (NSTA), the Offshore Petroleum Regulator for Environment and Decommissioning (OPRED), the Office for Gas and Electricity Markets (Ofgem), the Health and Safety Executive (HSE), the Crown Estate (TCE), and

Crown Estate Scotland (CES). We have included information from bodies with authority in other areas, including the Welsh Ministers, and the Department for the Economy, Northern Ireland (NI-DfE). These two bodies are responsible for carbon dioxide storage licensing in Welsh and Northern Ireland associated waters which, whilst not overlapping with the territorial sea and Exclusive Economic Zone (EEZ), may have certain responsibilities for nearby stores. Regulators such as the Marine Management Organisation (MMO) are also included, who may be involved in regulating activities such as enabling infrastructure or other ancillary activities not exempted under the [Marine and Coastal Access Act 2009](#) Section 77.

This document describes the key consents required and other useful information as of 30 May 2025. This document is for informational purposes only and does not constitute legal advice. Developers are strongly encouraged to seek legal advice on the process. It is strongly recommended that developers contact all relevant bodies at the earliest possible point to support a smooth process.

1.3 Phases

Throughout this document, all maps use the same project development phases, building on those used in [Carbon Storage Guidance, NSTA](#). Not all the processes of the relevant bodies align with the NSTA's phases; these phases are used to provide a clear framework for sharing the information.

The phases are broken down into the following periods and terms: Pre-Licensing, Appraisal, Assess, Define, Execute, Operational Term, Post-Closure Term, and Post-Decommissioning. For reference, we also give an indication of the likely position of the Final Investment Decision (FID), between the Define and Execute Phases. The Appraisal/Initial Term, the Operational Term, the Post-Closure Period, and the Post-Transfer Period in this document correspond to the NSTA's Appraisal Term, Operational Term, Post-Closure Period, and the Post-Transfer Period.

Term/Period	Phase	Definition
Pre-Licensing Period	N/A	Period prior to Storage Licence being issued by NSTA. During this period nomination process and licensing round are organised by the NSTA
Appraisal/ Initial Term	Appraisal Phase	First phase of the Storage Licence, requiring geological evaluation through exploration/appraisal of the store, delivery and review of Early Risk Assessment and Site Characterisation Review Report.
Appraisal/ Initial Term	Assess Phase	Full characterisation of storage site and complex, CO ₂ transport and facilities concept select.
Appraisal/ Initial Term	Define Phase	Fully optimised development plan, detailed implementation plans, and Storage Permit Application.

Term/Period	Phase	Definition
Operational Term	Execute Phase	Following grant of a Storage Permit, storage operator implements project scope, carrying out all required development and construction activities prior to first injection (e.g. well construction, engineering, procurement, construction, commissioning and start-up).
Operational Term	Operate Phase	Storage complex in operation.
Post-Closure Period	Post-Closure Phase	Period beginning immediately after the closure of the storage site and continuing until the termination of the Storage Licence outlined in The Storage of Carbon Dioxide (Termination of Licences) Regulations.
Post-Transfer Period	Post-Transfer Phase	Period after the licence is terminated and transferred to government. Storage complex safely decommissioned.

1.4 Scope

This document outlines the roles, responsibilities, and interdependencies of the regulatory and other relevant bodies involved in consenting of marine geological carbon dioxide storage in the UK, where “marine” is defined to be within the UK territorial sea and EEZ. It relates specifically to consenting activities during Exploration and Appraisal, Development, Operation, Decommissioning, and Post-Decommissioning Phases of the geological storage complex, the injection facilities associated to the store (including well-head, wells, and development wells), and the installation. It concerns the main processes without which the construction or operation of a store cannot proceed, referred to as “consents”. This includes the NSTA storage licence and permit, the Ofgem economic licence, the OPRED environmental impact assessment and habitat regulation assessments, the Emission Trading Scheme (ETS) permit, and possible marine and European Protected Species (EPS) licence, where not otherwise exempted. This document is not an exhaustive list of all approvals that might be required for a particular project; it does not include, for example, authorisations required for the use of particular chemicals in construction or operation. The document does not directly cover the consenting of enabling infrastructure, e.g., any separate approvals that may be required for pipelines or cables, nor other capture or transport components within the Carbon Capture Utilisation and Storage (CCUS) value chain.

In the territorial sea and EEZ, the main consenting bodies are the NSTA, Scottish Ministers, OPRED, Ofgem, HSE, the Crown Estate, and Crown Estate Scotland. This document includes Natural Resources Wales (NRW), the Marine Directorate (SG-MD), and the Department for Agriculture, Environment and Rural Affairs, Northern Ireland (NI-DAERA), who may have consenting responsibilities for stores in certain areas of the territorial sea. This document also includes Welsh Ministers and the NI-DfE as they may have responsibilities associated with stores close to the territorial sea in Wales and Northern Ireland. We have also included

regulators such as the MMO who may be involved in regulating activities such as enabling infrastructure or other ancillary activities not otherwise exempted.

Please consult relevant regulatory or consenting organisations and legislation for enabling infrastructure consenting regimes, and for further information on the consenting regime for carbon dioxide storage, in cases where such infrastructure does not form part of the storage site covered by a storage permit.

1.5 Legal disclaimer

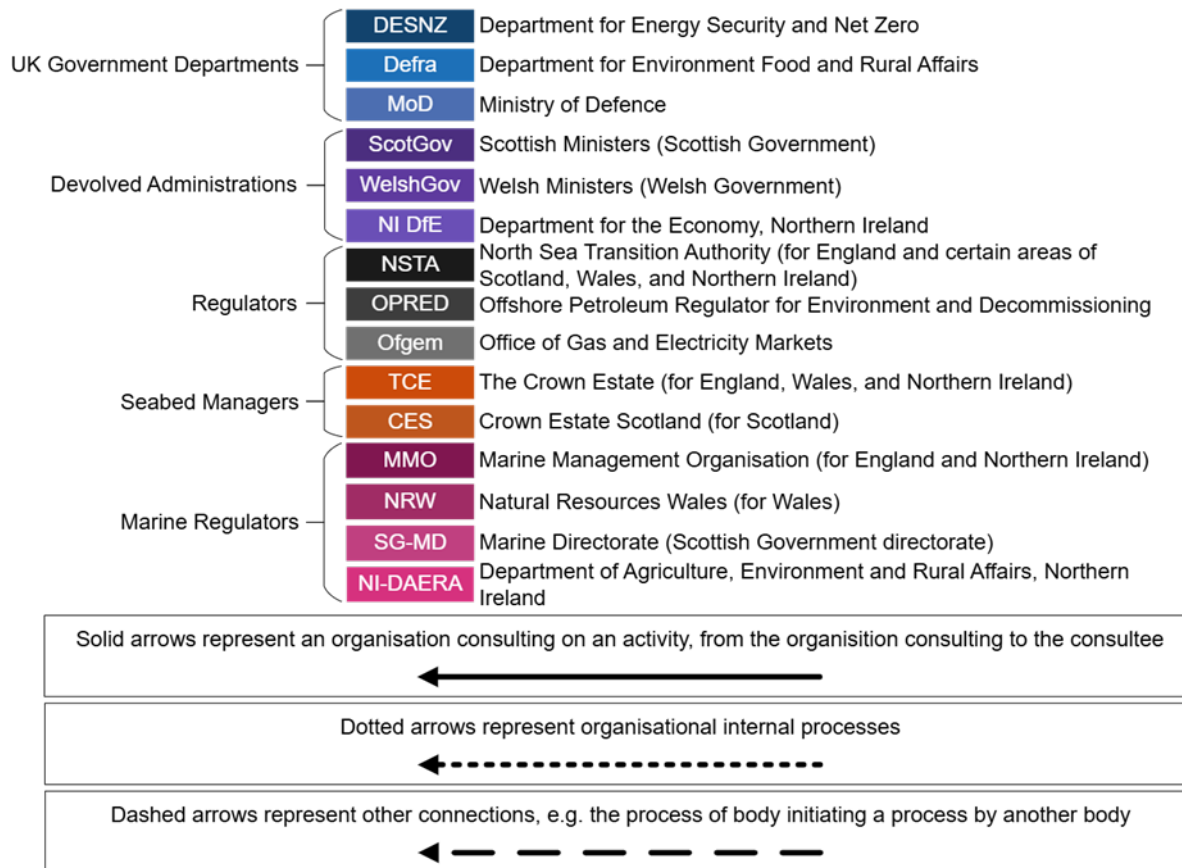
This document is a snapshot of the key consents required, and other useful information, for permanent offshore geological carbon dioxide storage as of 30 May 2025.

This document does not constitute legal advice. It is intended for informational purposes only and should not be relied upon as a substitute for professional legal advice. For specific legal advice, please consult a qualified professional or the bodies and regulators involved.

2 Key and definitions

2.1 Key to maps

Figure 1. Key to maps



2.2 Definition of terms

Term	Relevant body	Definition
Associated waters (Northern Ireland)	NI-DfE	Also referred to as Northern Ireland associated waters in this document. This term refers to the internal waters of the United Kingdom as are adjacent to Northern Ireland, for which NI-DfE is the licensing authority under the Energy Act 2008 Section 18. Internal waters does not include the territorial sea (see UK Territorial and Internal Waters, Admiralty (MoD)).

Term	Relevant body	Definition
Associated waters (Scotland)	ScotGov	Also referred to as Scottish associated waters in this document. This term refers to the territorial sea which is adjacent to Scotland and the internal waters of Scotland for which ScotGov are licensing authority under the Energy Act 2008 Section 18. The territorial sea which is adjacent to Scotland is typically that within 12 nautical miles from the baseline (see UK Territorial and Internal Waters, Admiralty (MoD)).
Associated waters (Wales)	WelshGov	Also referred to as Welsh associated waters in this document. This term refers to the internal waters of the United Kingdom as are adjacent to Wales for which WelshGov are licensing authority under the Energy Act 2008 Section 18. Internal waters does not include the territorial sea (see UK Territorial and Internal Waters, Admiralty (MoD)).
Agreement for Lease (AfL)	TCE	A form of option agreement and a legal contract which grants a developer exclusive rights to conduct certain Permitted Operations in a specific area, with the option to then lease that area from TCE for a defined period.
Appraisal Agreement (AA)	CES	Also known as the Seabed Rights for Appraisal. A type of Seabed Agreement: Crown Lease Rights, covered by the Energy Act 2008 Section 1. In place until the holder enters into an Option Agreement, which is expected to be immediately after the full application for a Storage Permit has been submitted to NSTA. The Appraisal Agreement provides the developer the exclusive right to apply for an Option Agreement for carbon storage at the site.
Change of Use Relief (CoUR)	OPRED	Concerns the reuse of assets. See Energy Act 2008 Sections 30A and 30B. Regulation with further details are in development.
Consent (for Stores)		The main processes without which the construction or operation of a store cannot proceed. Includes the NSTA storage licence and permit, the Ofgem economic licence, the OPRED environmental impact assessment and habitat regulation assessments, the ETS permit, and marine and EPS licence, where appropriate. Excludes for example, authorisations required for the use of particular chemicals in construction or operation

Term	Relevant body	Definition
Crown Estate Scotland (CES)	CES	Manages the seabed and much of the foreshore around Scotland. Manages seabed rights and leases for carbon dioxide storage in Scotland.
Department for Energy Security and Net Zero (DESNZ)	DESNZ	UK government department responsible for UK energy security, protecting billpayers, and reaching net zero. Leads government policy on CCUS and UK ETS.
Department for Environment, Food and Rural Affairs (Defra)	Defra	UK government department focusing on improving and protecting the environment, supporting food, farming, and fishing industries, and sustaining rural communities. Responsible for environmental policy without direct regulatory roles.
Department for the Economy, Northern Ireland (NI-DfE)	NI-DfE	Responsible for wider economic policy, including specific areas such as energy, tourism, and telecoms. Licensing authority for carbon dioxide storage in Northern Ireland associated waters.
Department of Agriculture, Environment and Rural Affairs, Northern Ireland (NI-DAERA)	NI-DAERA	Has responsibility for food, farming, environmental, fisheries, forestry and sustainability policy and the development of the rural sector in Northern Ireland. Marine licensing authority for the territorial sea adjacent to Northern Ireland.
Early Risk Assessment (ERA)	NSTA	An activity in the early Appraisal/Initial Term of a Carbon Storage Licence. Aims to identify and define any potential risks, including to CO2 containment, storage capacity and injectivity, and to establish key uncertainties in defining the proposed storage site and identify risk reduction measures. Described fully in Guidance on Applications for a Carbon Storage Permit, NSTA .
Economic Licence	Ofgem/ (DESNZ)	An Economic Licence is legally required to transport or store carbon dioxide in the UK. Issued by Ofgem (or Secretary of State, in the Interim Period).

Term	Relevant body	Definition
Environmental Impact Assessment (EIA)	OPRED/ MMO/NRW /SG-MD /NI-DAERA	A process carried out to ensure that the likely significant environmental effects of certain projects are identified and assessed before a decision is taken on whether a proposal should be allowed to proceed. See The Marine Works (Environmental Impact Assessment) Regulations 2007 , The Offshore Oil and Gas Exploration, Production, Unloading and Storage (Environmental Impact Assessment) Regulations 2020 .
European Protected Species (EPS) Licence	OPRED/ NRW/ SG-MD/ NI-DAERA	For OPRED, see the Conservation of Offshore Marine Habitats and Species Regulations 2017 . For NRW, see Conservation of Habitats and Species Regulations 2017 and the Conservation of Offshore Marine Habitats and Species Regulations 2017 . For SG-MD, see EPS Licensing, Scottish Government . For NI-DAERA, see The Conservation (Natural Habitats, etc.) Regulations (Northern Ireland) 1995 .
Exclusive Economic Zone (EEZ)		Under Energy Act 2008 Section 17, a licence is required for activities in the territorial sea or waters in a Gas Importation and Storage Zone. A Gas Importation and Storage Zone is defined in Energy Act 2008 Section 1, and is the area specified as the United Kingdom's exclusive economic zone.
FID		Final investment decision
Future Licensing Arrangements	Ofgem	Arrangements for licensing after the Interim Period.
Habitats Regulations Assessments (HRA)	OPRED/ MMO/NRW /SG-MD	Process of assessing the implications of activities on a relevant site in view of the site's conservation objectives, before deciding whether to undertake, permit or authorise such activities. See e.g. The Conservation of Offshore Marine Habitats and Species Regulations 2017 , Habitats regulations assessments , Habitats Regulations Appraisal, Scottish Government , or The Offshore Petroleum Activities (Conservation of Habitats) Regulations 2001 (following The Energy Act 2008 (Consequential Modifications) (Offshore Environmental Protection) Order 2010).
Health and Safety Executive (HSE)	HSE	Regulates workplace health, safety, and welfare in Great Britain. Regulates welfare and safety for offshore workers, including activities related to the deployment of geological carbon dioxide stores.

Term	Relevant body	Definition
Interim Period	DESNZ/ Ofgem	Period during which the Secretary of State has the power to grant economic licences to Transport and Storage Network operators (see the Energy Act 2023 Section 16 and Schedule 1). Secretary of State has power to decide in regulations when the Interim Period ends.
Lease	TCE/CES	A contract between TCE or CES and a developer for the use of a specific area of seabed for carbon storage.
Marine Conservation Zones (MCZ)	Defra/MMO/ NRW	Marine Conservation Zones are areas that protect a range of nationally important, rare or threatened habitats and species around England and Wales. See Marine Conservation Zones, JNCC , Marine conservation zone designations in England, Defra , and Marine Protected Areas, NRW
Marine Directorate (SG-MD)	SG-MD/ ScotGov	Manages marine licensing in Scottish inshore and offshore waters. Responsible for monitoring certain activities related to carbon dioxide storage and issuing marine licences for relevant activities. Directorate of the Scottish Government.
Marine Geological Carbon Dioxide Stores		Geological carbon dioxide stores in the territorial sea and EEZ of the UK.
Marine Licence	OPRED/ MMO/NRW /SG-MD /NI-DAERA	The Marine and Coastal Access Act 2009 and Marine (Scotland) Act 2010 provide that a marine licence is required for 'licensable marine activities'. A marine licence is a consent to undertake these marine licensable activities. This is granted, enforced and regulated by the OPRED, MMO, NRW, SG-MD, or NI-DAERA (depending on the works location within the respective regulatory authorities' jurisdictions).
Marine Management Organisation (MMO)	MMO	Licenses, regulates and plans marine activities in the seas around England and the Northern Ireland offshore area. Responsible for marine licensing in English waters and the Northern Ireland offshore area.
Ministry of Defence (MoD)	MoD	UK Government department ensuring the defence and security of the United Kingdom. Involved in the consultation process during environmental assessments and marine licensing.

Term	Relevant body	Definition
Natural Resources Wales (NRW)	NRW	Manages natural resources and environmental protection in Wales. Responsible for marine and EPS licensing of certain activities related to carbon dioxide storage in the territorial sea adjacent to Wales. Includes marine licensing and EPS licensing (NRW Permitting Service), and for providing conservation advice (NRW Advisory). Acts on behalf of Welsh Ministers.
Nomination	NSTA	Preliminary phase where developers can nominate specific areas they are interested in for storage activities. Helps identify which blocks to include in the upcoming competitive process for licensing.
North Sea Transition Authority (NSTA)	NSTA	Regulates the oil and gas, offshore hydrogen, and offshore carbon storage industries. Licensing and permitting authority for offshore carbon dioxide transport and storage. The North Sea Transition Authority is the business name of the Oil and Gas Authority.
Offshore Petroleum Regulator for Environment and Decommissioning (OPRED)	OPRED	Responsible for regulating environmental and decommissioning activity for offshore oil and gas, gas storage, hydrogen storage and carbon dioxide transport and storage. With respect to carbon dioxide storage, OPRED's remit extends to UK territorial sea (with the exception of Scottish territorial sea) and the UK EEZ. OPRED is part of DESNZ.
Office of Gas and Electricity Markets (Ofgem)	Ofgem	Great Britain's independent energy regulator. Regulates UK carbon dioxide Transport and Storage (T&S) networks to protect the interests of T&S network users and consumers, and promote the economic and efficient development and operation of T&S networks, having regard to an operators financeability.
Option Agreement	CES	A legal contract which grants a developer exclusive right to lease a specific area of seabed from CES for a defined period. Defines the conditions precedent to entering a Lease. In place during the NSTA's evaluation of the full Storage Permit application.
Pipeline Works Authorisation	NSTA	Required to construct and use pipelines associated with a new storage site or complex. Issued by the NSTA. See Pipeline Works Authorisations, NSTA .

Term	Relevant body	Definition
Scottish Government (ScotGov)	ScotGov	Manages devolved matters such as health, education, justice, and transport in Scotland. Supports the development of carbon storage to decarbonise key sectors. Responsible for carbon storage within Scottish internal waters and territorial sea (typically up to 12 nautical miles of coast).
Seabed Rights for Appraisal	CES	Also known as the Appraisal Agreement (AA). See above.
Section 29 Notice	OPRED	Also known as the Decommissioning Liability Notice. Aim is to ensure safe and compliant decommissioning. Requires the party on whom it is served to submit a Decommissioning Programme, usually after cessation of injection. Served under Petroleum Act 1998 Section 29 (Part IV) by virtue of Energy Act 2008 Section 30.
Storage Exploration and Appraisal Agreement (SEAA)	TCE	An exploration and appraisal agreement for carbon storage under which TCE provides developers necessary rights to undertake their exploration and appraisal activities. Required for both non-intrusive and intrusive activities.
Storage Licence	NSTA/ ScotGov	Also called a Carbon Dioxide Appraisal and Storage Licence. Anyone who wishes to carry out activities specified in the Energy Act 2008 Section 17 in the UK territorial sea, or EEZ must hold a Storage Licence. This includes to explore for, establish an installation for, or use of a controlled place or convert a natural feature for the storage of carbon dioxide. Issued by NSTA or ScotGov in the territorial sea and EEZ.
Storage Permit	NSTA/ ScotGov	A permit granted under a Storage Licence, authorising the use of a place as a storage site. Issued by NSTA in areas for which NSTA is responsible. Issued by Scottish Ministers in the territorial sea adjacent to Scotland.
Territorial Sea	NSTA/ ScotGov/ WelshGov/ NI-DfE/ NI-DAERA	Sea adjacent to a country, typically up to 12 nautical miles, see UK Territorial and Internal Waters , Admiralty (MoD) and UK, UK Overseas Territories and UK Crown Dependencies Maritime Limits and Law of the Sea , UK Hydrographic Office.

Term	Relevant body	Definition
The Crown Estate (TCE)	TCE	Managers of the seabed and much of the coastline around England, Wales and Northern Ireland. TCE is not a regulator or a consenting body but provides permission (via leases and other agreements) for offshore pipeline transportation and carbon storage (including related exploration and appraisal activities), as set out in Crown Estate Act 1961 and the Energy Act 2008 .
UK ETS Authority	UK ETS Authority	Body made up of the UK, Scottish, and Welsh Governments, and the Northern Ireland Department of Agriculture, Environment and Rural Affairs. Responsible for setting the policy and legislation of the UK ETS.
UK Emissions Trading Scheme (UK ETS)	UK ETS Authority	Carbon emission trading scheme based on cap and trade, established in the UK by the UK ETS Authority. See The Greenhouse Gas Emissions Trading Scheme Order 2020 .
UK ETS Permit	OPRED	Required under the UK ETS Order to carry out the transport and storage of carbon dioxide. Determined and issued by OPRED. Required before installation operation.
Well Consents	NSTA	Approvals issued by the NSTA in accordance with the terms of a Storage Licence that allow operators to undertake specific well-related activities.
Welsh Government (WelshGov)	WelshGov	Manages devolved matters such as health, education, and local government in Wales. Licensing authority for carbon dioxide storage in Welsh associated waters. Responsible for inspection of marine licenced activities and enforcement.

3 Overview maps

This section contains three overview maps that provide a representation of the consenting lifecycle for a marine geological carbon dioxide store.

Columns represent the Phases of activity, using the Phasing described in Section 1.3. The rows represent the different organisations (also shown by differing colours). For example, a box in the column labelled Define Phase and the row labelled Ofgem contains the activities of Ofgem in the Define Phase.

The three maps are as follows:

- **Overview of roles and responsibilities:** This map outlines the consenting-related activities of each stakeholder at various stages of the consenting lifecycle. For instance, during the Appraise Phase, Crown Estate Scotland may grant an Appraisal Agreement.
- **Consenting agreements and licence timelines:** This map illustrates the main consents required, such as various licences, permits, and leases, along with their phasing throughout the store lifecycle. It also identifies the organisations responsible for these documents. For example, the NSTA issues Storage Permits that remain valid from the end of the Define Term until the end of the Post-Closure Period.
- **Interdependencies timelines:** This map highlights the key interdependencies within the consenting lifecycle, showing when external organisations are involved in the processes of a particular stakeholder. For example, the MOD is consulted during the MMO's Marine Licensing process.

More detail on the roles, responsibilities, and interdependencies of each individual organisation can be found in their relevant section.

Figure 2: Overview of roles and responsibilities of each organisation

High-level overview of the roles and responsibilities of the relevant bodies at various stages in the process. It does not show the dependencies between bodies at these steps. Consents, e.g. licences, leases, certificates, are indicated with bold and underlined text.

		Exploration and appraisal of potential storage complex		FID	Storage project build		Storage complex in operation		Storage complex safely decommissioned		
Pre-Licensing Period		Appraisal/Initial Term		Operational Term		Post-Closure Period		Post-Transfer Period			
		Appraisal Phase		Define Phase		Execute Phase		Operate Phase		Post-Closure Phase	
DESNZ	Engaged during choice of licence areas			During Ofgem Interim Period, negotiations on <u>Economic Licence</u> application		During Ofgem Interim Period, issues <u>Economic Licence</u> if content				Where the storage licence is granted by the NSTA, transfer of store liabilities to SoS	
Defra	Oversees policy (e.g. marine licensing) that would govern the environmental regulation of carbon dioxide storage in England, but does not have a direct regulatory role.										
MoD	Consultee during choice of licence areas and competitive process for licenses	Consult on discharge of <u>Storage Licence</u> requirements for exploration and survey, Consultee with MMO/ MD/ NRW during <u>Marine Licence</u> process		Consultee with MMO/ MD/ NRW during <u>Marine Licence</u> process		Consult on discharge of <u>Storage Licence</u> requirements for installations and operations					
ScotGov	Licensing authority for geological carbon dioxide storage in Scottish associated waters										
WelshGov	Licensing authority for geological carbon dioxide storage in Welsh associated waters					Licensing authority for geological carbon dioxide storage in Welsh associated waters. <u>Marine and EPS Licences</u> may be required throughout activities (issued by NRW). If licensed, Welsh Government are responsible for inspection of marine licensed activities and enforcement					
NI-DfE	Licensing authority for geological carbon dioxide storage in Northern Ireland associated waters										
NSTA	May invite nominations for acreage, selects areas for licence acreage offering, runs competitive process for licensing, issue <u>Storage Licence</u>	<u>Storage Licence</u> in place, stewards licensees through <u>Early Risk Assessment</u> and Site Characterisation Review, may issue <u>Exploration Licence</u> and grant <u>Well Consents</u> for appraisal wells		<u>Storage Licence</u> in place, stewards licensees through full site and risk characterisation, grants <u>Well Consents</u> for appraisal wells		<u>Storage Licence</u> in place, informs key stakeholders of receipt of draft permit application, engages with licensee on draft <u>Storage Permit</u> application, assesses final <u>Storage Permit</u> application, issues <u>Storage Permit</u> if appropriate (conditional on Secretary of State agreement on EIA and HRA), grants <u>Well Consents</u> for appraisal		<u>Storage Licence</u> in place, <u>Storage Permit</u> in place, stewards licensees to build the development and finalise operation plan, grants other relevant consents (e.g. Pipeline Works Authorisations, <u>Well Consents</u>)		<u>Storage Licence</u> in place, <u>Storage Permit</u> in place, regular stewardship to ensure continued compliance with <u>Storage Permit</u> , other consent in place	
OPRED	To inform NSTA competitive process for licensing decision, OPRED undertakes <u>Habitats Regulations Assessment (HRA)</u> and a <u>Marine Conservation Zone / Scottish Marine Protected Area</u> assessment of relevant protected sites.	If exploration work is to be conducted, offshore <u>Environmental Impact Assessment (EIA)</u> and <u>HRA</u> requirements		Offshore EIA and HRA on <u>Storage Permit</u> application (agreement from Secretary of State on EIA and HRA required for <u>Storage Permit</u> issuance); assesses risk for decommissioning liabilities		Serves <u>Section 29 Notice</u> on company, assesses financial resources, assess for and issues <u>Change of Use, Relief</u> when satisfied; <u>UK Emissions Trading Scheme (ETS) Storage Permit</u> for installation in effect; possible environmental approvals required		<u>UK ETS Storage Permit</u> for installation in effect; <u>Section 29 Notices</u> still apply, ensures storage company has the resources to meet its decommissioning liabilities; possible environmental approvals required		Approves <u>Decommissioning Programmes</u> and monitors their execution; possible environmental approvals required	
Ofgem				In future licensing arrangements, Ofgem assesses <u>Economic Licence</u> application		In future licensing arrangements, Ofgem issues <u>Economic Licence</u> if content		<u>Economic Licence</u> in place; Ofgem responsible for post-award economic regulation			
TCE	Consultee during choice of licence areas and competitive process for licenses	Grants <u>Storage Exploration and Appraisal Agreement (SEAA)</u> if required		Grant <u>Agreement for Lease</u>		<u>Lease</u> in place					
CES	Consultee during choice of licence areas and competitive process for licenses	Grants <u>Appraisal Agreement</u>		<u>Appraisal Agreement</u> in place		Issues <u>Option Agreement</u> and <u>Lease</u> , then grants <u>Option Agreement</u>		<u>Lease</u> in place			
MMO		May offer advice before <u>Marine Licence</u> application. <u>Marine and Wildlife Licences</u> may be necessary for appraisal activity				There are exemptions in place. Developer may need to apply to MMO for <u>Marine and Wildlife Licences</u> for enabling activities		There are exemptions in place. <u>Marine and Wildlife Licences</u> may be required throughout enabling activities, possibly needing renewal. If licensed, MMO responsible for compliance and enforcement activity			
NRW		May offer advice before <u>Marine Licence</u> application. <u>Marine and EPS Licences</u> may be necessary for appraisal activity				Developer applies for NRW <u>Marine and EPS Licences</u> if the store or associated infrastructure is in Welsh associated waters, and may need to apply in offshore Welsh waters		<u>Marine and EPS Licences</u> may be required throughout activities, possibly needing renewal. If licensed, applicant is responsible for undertaking monitoring activities; NRW is responsible for discharge of conditions			
SG-MD		May offer advice before <u>Marine Licence</u> application, may require or recommend a <u>Pre-Application Consultation</u> . <u>Marine and EPS Licences</u> may be necessary for appraisal activity				Developer applies for a SG-MD <u>Marine and EPS Licences</u> ahead of development, unless exempt		<u>Marine and EPS Licences</u> may be required throughout activities, possibly needing renewal. If licensed, SG-MD responsible for compliance and enforcement activity			
NI-DAERA		May offer advice before <u>Marine Licence</u> application. <u>Marine and Wildlife Licences</u> may be necessary for appraisal activity				Developer may need to apply to NI-DAERA for a <u>Marine and Wildlife Licences</u>		<u>Marine and EPS Licences</u> may be required throughout activities, possibly needing renewal. If licensed, NI-DAERA responsible for compliance and enforcement activity			

Figure 3: Consent agreements and licences timelines

This outlines the necessary consents (licences, permits, certificates, etc.) that a store will need to operate, when in the lifecycle they are required, and which bodies issue this consent.

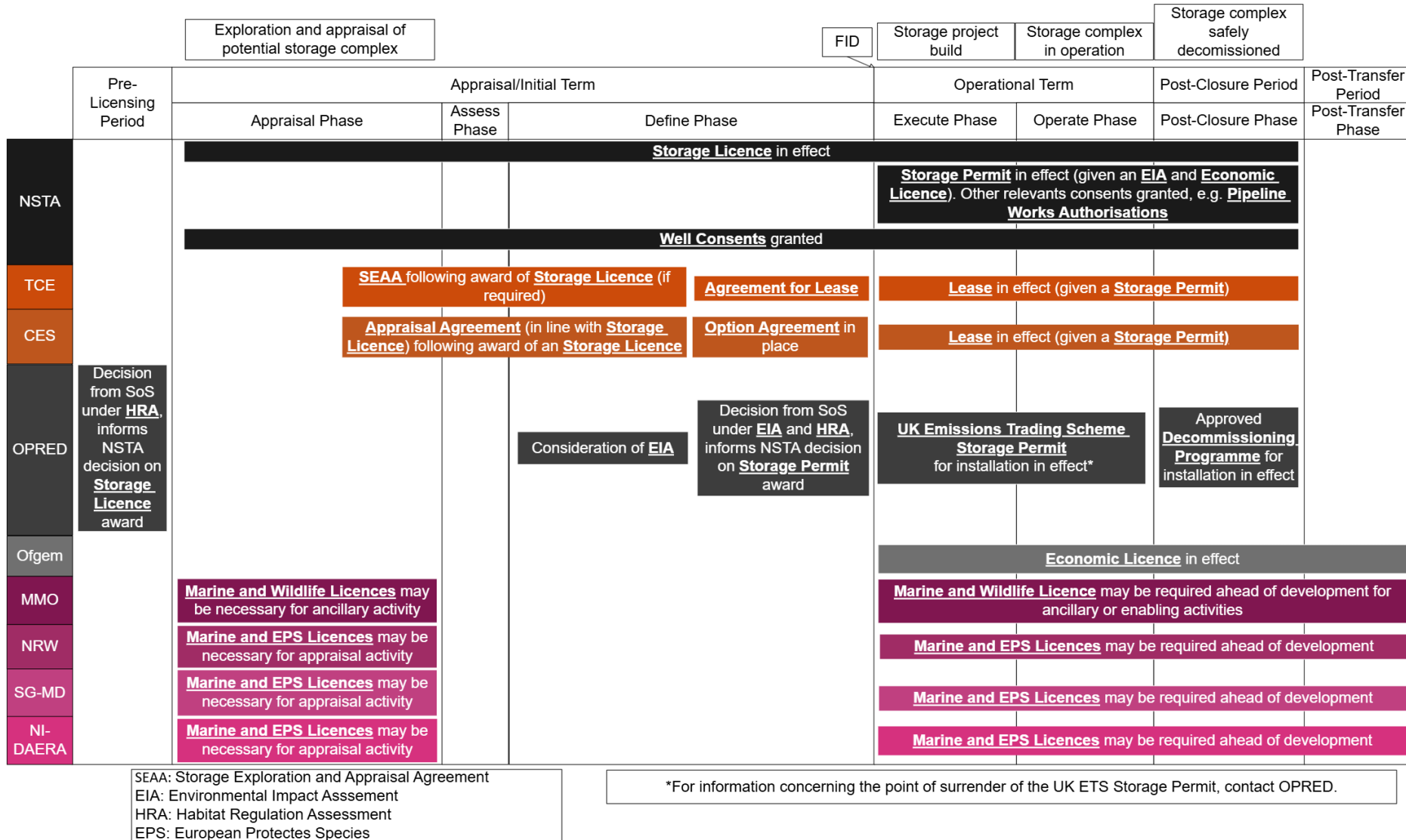


Figure 4: Consenting interdependencies timeline

Interdependencies between relevant bodies during the regulatory lifecycle are indicated, with each box representing a body's input into another organisation's activity, but not activities they undertake individually (e.g., TCE and CES Agreements for lease).

Interdependencies Timelines

This chart shows some of the interdependencies between relevant bodies during the regulatory lifecycle. Each box indicates a body's input into another organisations activity, but not activities they undertake individually (e.g., TCE and CES Agreements for lease).

	Exploration and appraisal of potential storage complex		FID		Storage project build	Storage complex in operation	Storage complex safely decommissioned
	Pre-Licensing Period		Appraisal/Initial Term		Operational Term		Post-Closure Period
			Appraisal Phase	Assess Phase	Define Phase	Execute Phase	Operate Phase
DESNZ	NSTA engages on Licensing Process				CES consults on Lease	Economic Licence* decision	
MoD	NSTA consults on Licensing Process	NSTA consults on Storage Licence	NSTA consults on discharge of Storage Licence requirements for exploration and survey		MMO consults on Marine Licence NRW consults on Marine Licence SG-MD consults on Marine Licence NI-DAERA consults on Marine Licence	NSTA consults on discharge of Storage Licence requirements for installation and operations	
ScotGov	NSTA engages on Licensing Process						
NSTA	Competitive process for Licensing	Storage Licence Decision			Storage Permit Decision CES consults on Lease		OPRED consults on Decommissioning Programme
OPRED	Inform NSTA licensing round decision, undertakes HRA and MCZ/SMPA assessment				NSTA consults on Storage Permit		Approve Decommissioning Programme
Ofgem					TCE consults on Lease CES consults on Lease	Economic Licence* decision	
TCE	NSTA consults on Licensing Process	NSTA consults on Storage Licence	SEAA granted		AfL granted Consulted on Marine Licence Consulted on Marine Licence	Lease granted	
CES	NSTA consults on Licensing Process	NSTA consults on Storage Licence	AA Decision	AA granted	Option Agreement Granted Lease Decision SG-MD consults on Marine Licence	Lease granted	
MMO					Marine Licence Decision		
NRW					Marine Licence Decision		
SG-MD					Marine Licence Decision		
NI-DAERA					Marine Licence Decision		

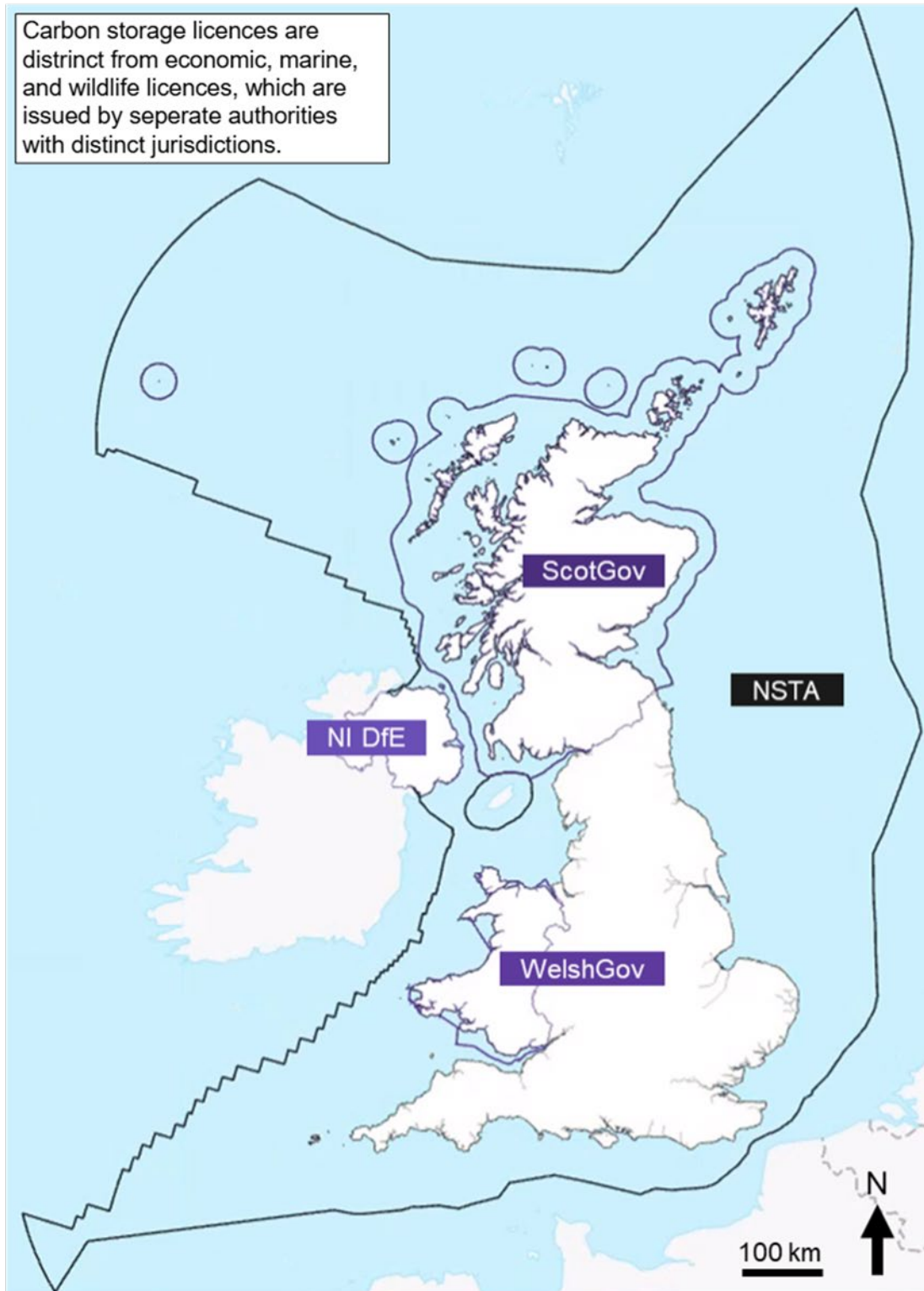
SoS: Secretary of State
AA: Appraisal Agreement
AfL: Agreement for Lease
SEAA: Seabed Exploration and Appraisal Agreement
HRA: Habitats Regulations Assessment
MCZ: Marine Conservation Zone
SMPA: Scottish Marine Protected Area

*during the Interim Period, DESNZ issues the Economic Licence. During future licensing arrangements, Ofgem is expected to issue the Economic Licence

4 Licensing authority map

The following map describes the regions for which the various carbon storage licensing authorities (NSTA, ScotGov, WelshGov, NI DfE) are responsible.

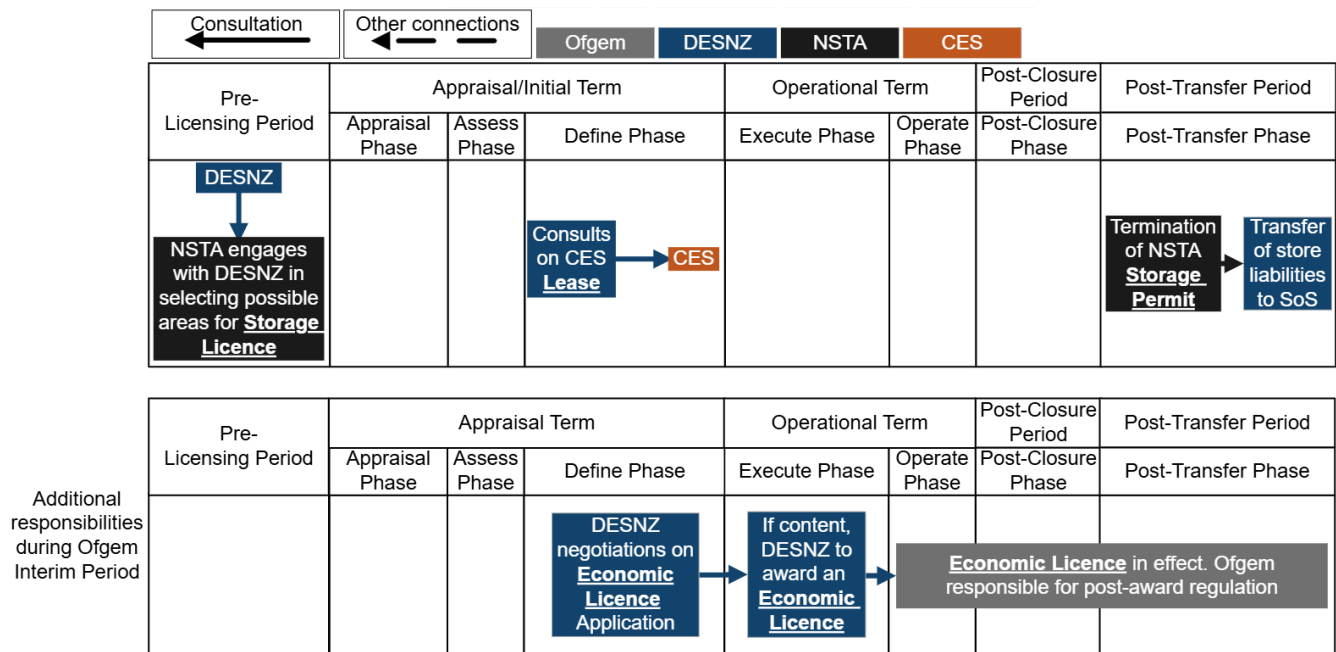
Figure 5: Carbon Storage Licensing Authority map



5 Organisations

5.1 Department for Energy Security and Net Zero (DESNZ)

Figure 6: Department for Energy Security and Net Zero (DESNZ) roles, responsibilities, and interdependencies



5.1.1 Roles

The Department for Energy Security and Net Zero (DESNZ) is the UK Government's department with direct policy responsibility for CCUS, and is responsible for UK energy security, protecting billpayers and reaching net zero. The DESNZ Secretary of State may grant an economic licence during Interim Period to Transport and Storage Network operators (after the Interim Period, this power is transferred to Ofgem).

5.1.2 Responsibilities relevant to carbon storage consenting

- Assessing and awarding economic licences to carbon storage projects during the Interim Period.
- Engages with NSTA and other stakeholders on licensing requirements.
- The Secretary of State has responsibility for stores following the transfer of liabilities once the NSTA licence is terminated (see [The Storage of Carbon Dioxide \(Termination of Licences\) Regulations 2011](#)).

5.1.3 Interdependencies

- Engage with Ofgem, NSTA, and other economic and environmental bodies interests in relation to the consenting for carbon dioxide storage.

5.2 Department for Environment, Food and Rural Affairs (Defra)

Figure 7: Department for Environment, Food and Rural Affairs (Defra) roles, responsibilities, and interdependencies

Pre-Licensing Period	Appraisal/Initial Term			Operational Term		Post-Closure Period	Post-Transfer Period
	Appraisal Phase	Assess Phase	Define Phase	Execute Phase	Operate Phase	Post-Closure Phase	Post-Transfer Phase
Oversees policy (e.g. marine licensing) that would govern the environmental regulation of carbon dioxide storage in England, but does not have a direct regulatory role.							

5.2.1 Roles

The Department for Environment, Food and Rural Affairs (Defra) is the UK government department focusing on improving and protecting the environment, supporting food, farming, and fishing industries, and sustaining rural communities. Defra oversees policy (e.g., marine licensing) that would govern the environmental regulation of carbon dioxide storage in England but does not have a direct regulatory role.

5.2.2 Responsibilities relevant to carbon storage consenting

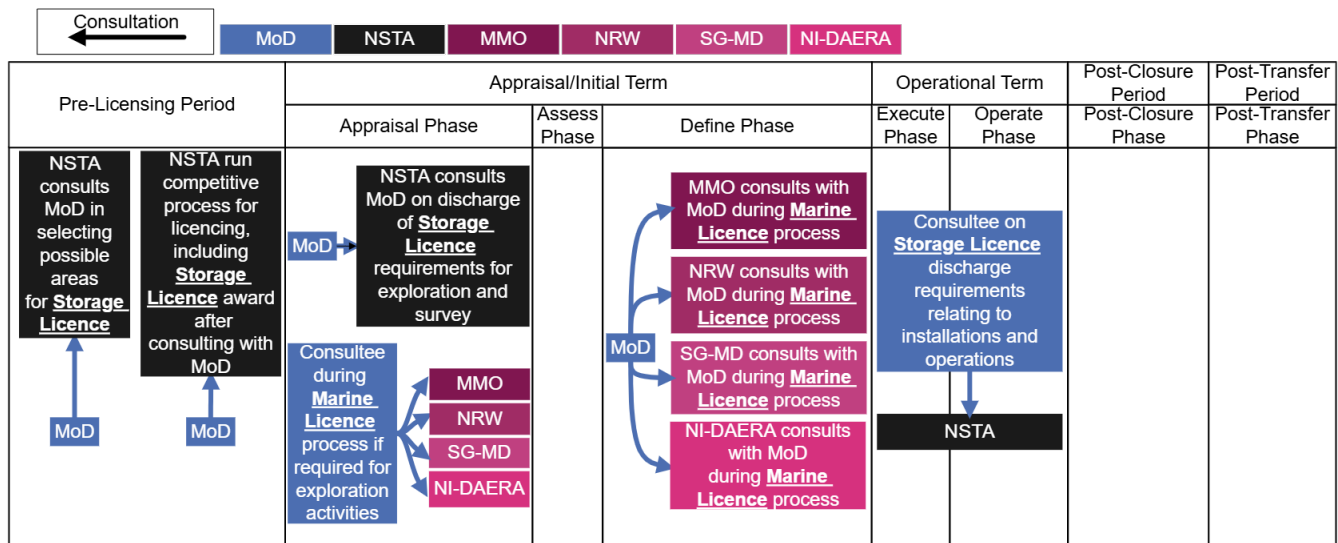
- N/A

5.2.3 Interdependencies

- Engages with other environmental bodies like OPRED, NRW, and MMO interests in relation to the consenting for carbon dioxide storage.

5.3 Ministry of Defence (MoD)

Figure 8: Ministry of Defence (MoD) roles, responsibilities, and interdependencies



5.3.1 Roles

The Ministry of Defence (MoD) is the UK governments ministerial department with direct policy responsibility for the UK's defence and security. The MoD is involved in the consultation process during environmental assessments and marine licencing, as some potential marine sites may be close to or located in areas used for MoD-related activities. Its authority comes from various defence legislation.

5.3.2 Responsibilities relevant to carbon storage consenting

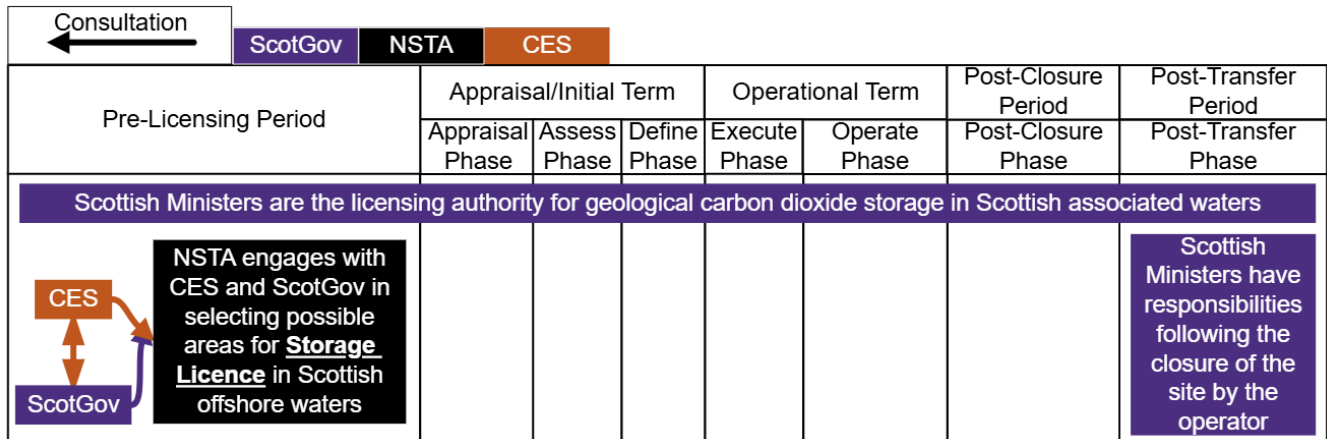
- Providing consultation for Environmental Impact Assessments and marine licence applications.
- Ensuring that defence interests are not compromised by carbon dioxide storage activities.

5.3.3 Interdependencies

- Engages with OPRED, NSTA, and other regulatory bodies to protect defence interests in relation to the consenting for carbon dioxide storage.

5.4 Scottish Government

Figure 9: Scottish Ministers/Government roles (ScotGov), responsibilities, and interdependencies



5.4.1 Roles

Scottish Ministers (Scottish Government) serve as the licensing authority for geological carbon dioxide storage in Scottish associated waters. Its authority is derived from the [Energy Act 2008](#) Section 18(2)(b). The role of Scottish Ministers are further described in [The Storage of Carbon Dioxide \(Licensing etc.\) \(Scotland\) Regulations 2011](#) and [The Storage of Carbon Dioxide \(Termination of Licences\) Regulations 2011](#) (especially Regulations 14-16). Note that in the offshore area beyond 12 nautical miles, the NSTA is the licensing authority.

5.4.2 Responsibilities relevant to carbon storage consenting

- Granting licences for carbon dioxide storage in the territorial sea adjacent to Scotland.
- Monitoring and managing obligations transferred from operators following the termination of a licence, including monitoring and implementing corrective measures when necessary. Remedying potential environmental impacts, transfer of liabilities incurred by a licence holder at termination, and recovery of certain costs.

5.4.3 Interdependencies

- Engages with SG-MD, NSTA, and wider Scottish regulatory bodies.

5.4.4 Supplementary information

- A short life working group has been established to review the legislation and policy relating to the exercise of licensing functions by Scottish Ministers; see [Lybster carbon dioxide storage: short life working group, Scottish Government](#). Fields further offshore fall within the remit of the NSTA.
- General policy information can be found here: [Carbon capture, utilisation and storage, Scottish Government](#).

5.5 Welsh Government

Figure 10: Welsh Government (WelshGov) roles, responsibilities, and interdependencies

WelshGov		NRW					
Pre-Licensing Period	Appraisal/Initial Term			Operational Term		Post-Closure Period	Post-Transfer Period
	Appraisal Phase	Assess Phase	Define Phase	Execute Phase	Operate Phase	Post-Closure Phase	Post-Transfer Phase
Welsh Ministers are the licensing authority for geological carbon dioxide storage in Welsh associated waters							
	Marine Licence and EPS Licence may be required throughout activities. If licensed, Welsh Government are responsible for inspection of marine licensed activities and enforcement						
	NRW issues Marine and EPS Licences, and is responsible for discharge of conditions						

5.5.1 Roles

The Welsh Government serve as the licensing authority for geological carbon dioxide storage in Welsh associated waters. Its powers are based on the [Energy Act 2008](#) Section 18. They are responsible for the inspection of marine licenced activities and enforcement in Welsh associated waters. In the territorial sea and EEZ adjacent to Wales, the NSTA is the licensing authority.

5.5.2 Responsibilities relevant to carbon storage consenting

- Issuing licences for geological storage of carbon dioxide within Welsh associated waters.
- Inspects marine licensed activities and enforcement.

5.5.3 Interdependencies

- Engages with NRW, NSTA, and other Welsh regulatory bodies.

5.5.4 Supplementary information

- General policy information can be found here [Welsh Government's preferred policy on carbon capture, utilisation and storage, Welsh Government](#) and here [A carbon capture, utilisation, and storage network for Wales: report, Welsh Government](#).

5.6 Department for the Economy, Northern Ireland (NI-DfE)

Figure 11: Department for the Economy, Northern Ireland (NI-DfE) roles, responsibilities, and interdependencies

Pre-Licensing Period	Appraisal/Initial Term			Operational Term		Post-Closure Period	Post-Transfer Period
	Appraisal Phase	Assess Phase	Define Phase	Execute Phase	Operate Phase	Post-Closure Phase	Post-Transfer Phase
The NI-DfE are the geological carbon dioxide storage licensing authority in Northern Ireland associated waters							

5.6.1 Roles

The Department for the Economy, Northern Ireland (NI-DfE) is the Northern Irish department responsible for wider economic policy, including specific areas such as energy in Northern Ireland. NI-DfE acts as the licensing authority for carbon dioxide storage in Northern Ireland associated waters. Its authority is derived from the [Energy Act 2008](#) Sections 17(2)(a) and 18(2) and [The Storage of Carbon Dioxide \(Licensing etc.\) Regulations \(Northern Ireland\) 2015](#). In the territorial sea and EEZ adjacent to Northern Ireland, the NSTA is the licensing authority.

5.6.2 Responsibilities relevant to carbon storage consenting

- Issuing licences for geological carbon storage within Northern Irish associated waters.

5.6.3 Interdependencies

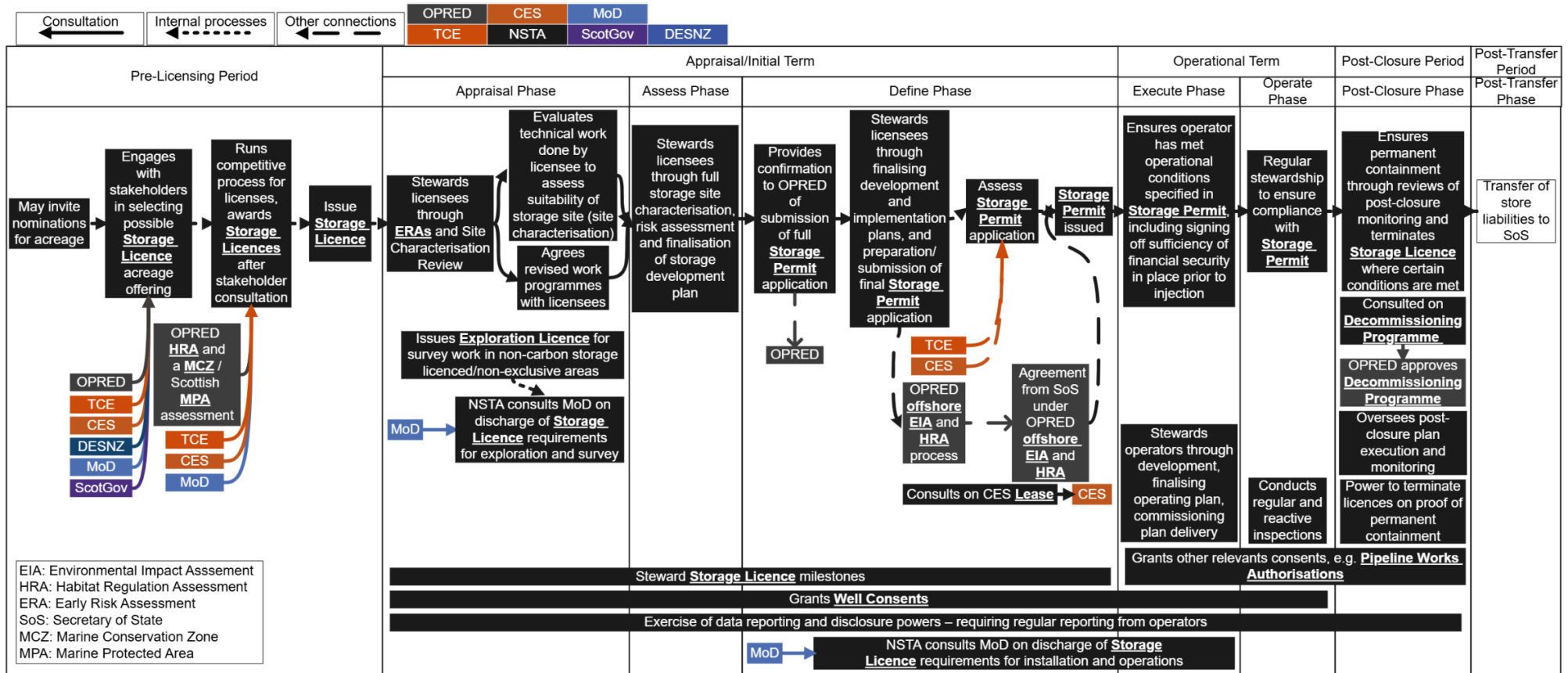
- Engages with NI-DAERA, NSTA, MMO, and wider Northern Irish regulatory bodies.

5.6.4 Supplementary information

- There are no currently licensed storage sites within the remit of the NI-DfE.

5.7 North Sea Transition Authority (NSTA) roles, responsibilities, and interdependencies

Figure 12: North Sea Transition Authority (NSTA) roles, responsibilities, and interdependencies



5.7.1 Roles

The North Sea Transition Authority (NSTA) is responsible for licensing, permitting, and regulating carbon storage activities in the UK territorial sea (with the exception of the Scottish territorial sea) and the UK Exclusive Economic Zone (EEZ). Its powers are derived from the [Energy Act 2008](#), [Energy Act 2016](#), and [The Storage of Carbon Dioxide \(Licensing etc.\) Regulations 2010](#).

5.7.2 Responsibilities relevant to carbon storage consenting

- Identifying areas for carbon storage licensing in discussion with DESNZ, TCE, CES, OPRED, and other stakeholders (see [Types of licence, NSTA](#)).
- Stewarding storage licensees through licence phases, including operations pertaining to licence including appraisal, development, operational and decommissioning activity.
- Issuing storage permits.
- Supporting appropriate and timely decommissioning in collaboration with OPRED and other stakeholders.
- Issuing various consents (e.g. well consents, Pipeline Works Authorisations).

5.7.3 Interdependencies

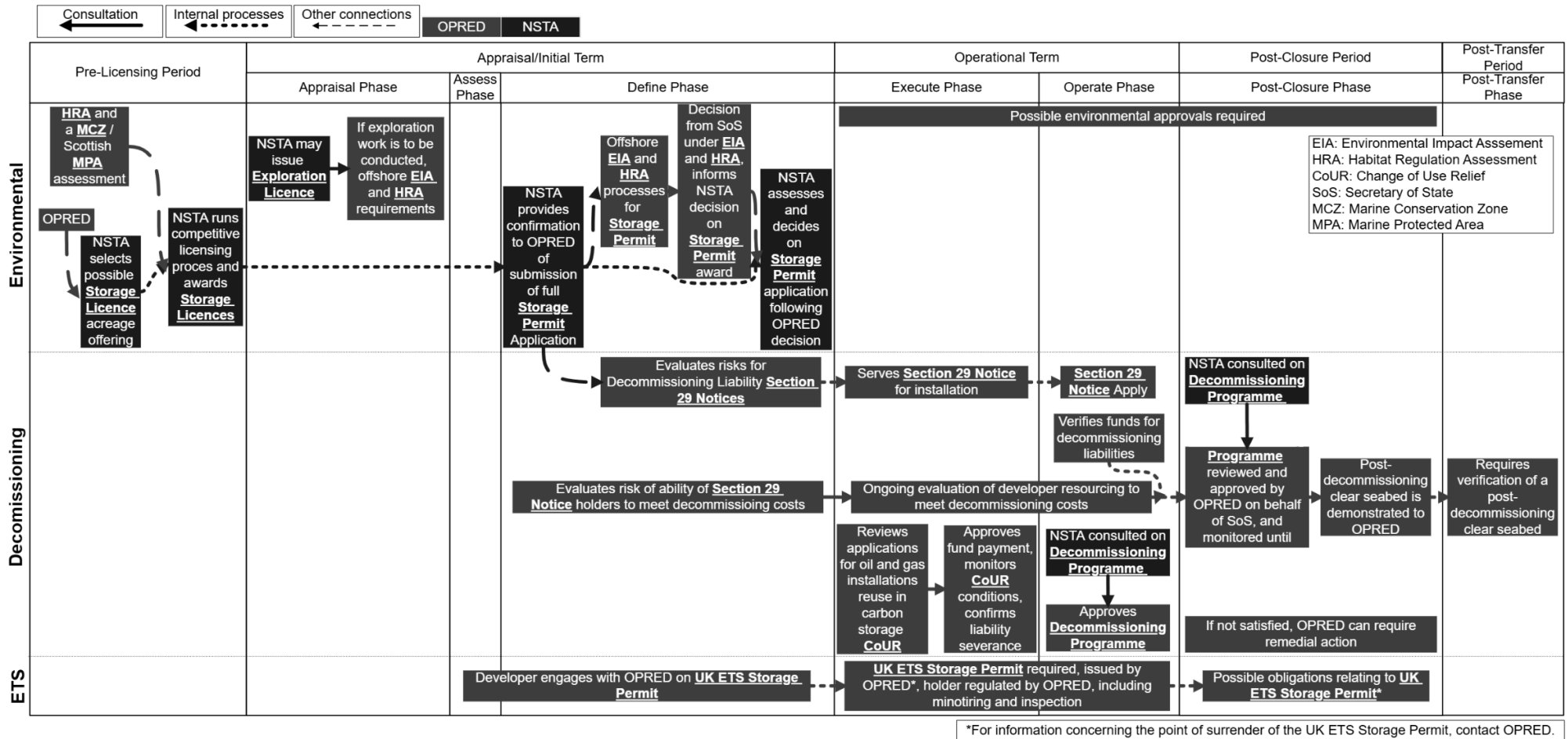
- Engages with OPRED, TCE, CES, DESNZ, and wider stakeholders for licensing, permitting, and regulatory processes.

5.7.4 Guidance

- [Guidance on the application for a Carbon Dioxide Appraisal and Storage Licence, NSTA](#)
- [Carbon Dioxide Appraisal and Storage Licence: Licence Transfer and Change of Control Approach, NSTA](#)
- [Guidance on Applications for a Carbon Storage Permit, NSTA](#)
- [Guidance on the content of an offshore carbon storage permit applications, NSTA](#)
- [Guidance for Measurement of Carbon Dioxide for Carbon Storage Permit Applications, NSTA](#)
- [Approach to assessing Financial Soundness of Track 1 cluster Transport & Storage Companies \(T&SCos\) to hold an NSTA carbon dioxide storage permit, NSTA](#)
- [Pipeline Works Authorisations, NSTA](#), see also the Execute Phase Requirements in [Guidance on Applications for a Carbon Storage Permit, NSTA](#)
- The NSTA can be contacted for further guidance on well consents.

5.8 Offshore Petroleum Regulator for Environment and Decommissioning (OPRED)

Figure 13: Offshore Petroleum Regulator for Environment and Decommissioning (OPRED): OPRED roles, responsibilities, and interdependencies



5.8.1 Roles

The Offshore Petroleum Regulator for Environment and Decommissioning (OPRED) regulates offshore carbon dioxide transport and storage activities to ensure environmental protection and satisfactory decommissioning, including ensuring certain decommissioning financial obligations are met. Its authority is derived from the [Petroleum Act 1998 \(particularly Part IV\)](#), [The Offshore Oil and Gas Exploration, Production, Unloading and Storage \(Environmental Impact Assessment\) Regulations 2020](#), [The Energy Act 2008 \(Consequential Modifications\) \(Offshore Environmental Protection\) Order 2010](#), the [Energy Act 2008](#) (see e.g. Section 30), [The Offshore Petroleum Activities \(Conservation of Habitats\) Regulations 2001](#), and [The Environmental Assessment of Plans and Programmes Regulations 2004](#).

5.8.2 Responsibilities relevant to carbon storage consenting

- Environmental assessments including Environmental Impact Assessments (EIAs), Habitats Regulations Assessments (HRAs) for offshore carbon dioxide storage projects. The following guidance on legislation is available: [Oil and gas: offshore environmental legislation, DESNZ-OPRED](#) and [Oil and gas: offshore environmental legislation, DESNZ-OPRED](#)
- Serving Section 29 Notices under Part 4 of the [Petroleum Act 1998](#) (as it applies by virtue of [Energy Act 2008](#) Section 30).
- Assessing financial resources for abandonment (decommissioning) obligations, and approving and overseeing abandonment programmes under Part 4 of the [Petroleum Act 1998](#).
- The UK ETS Authority has set out the requirements to hold a UK ETS permit in legislation for carbon dioxide storage and OPRED is the UK ETS regulator for offshore carbon dioxide storage activities in the UK sector of the continental shelf and the territorial sea adjacent to England. OPRED has monitoring and inspection responsibilities relating to the UK ETS Permit. The permit must be approved prior to the regulated activity starting (carbon dioxide transport or storage). The core legislation is:
 - [The Greenhouse Gas Emissions Trading Scheme Order 2020 \(as amended\)](#); and
 - [Commission Implementing Regulation \(EU\) 2018/2066 of 19 December 2018 on the monitoring and reporting of greenhouse gas emissions pursuant to Directive 2003/87/EC of the European Parliament and of the Council](#).

5.8.3 Interdependencies

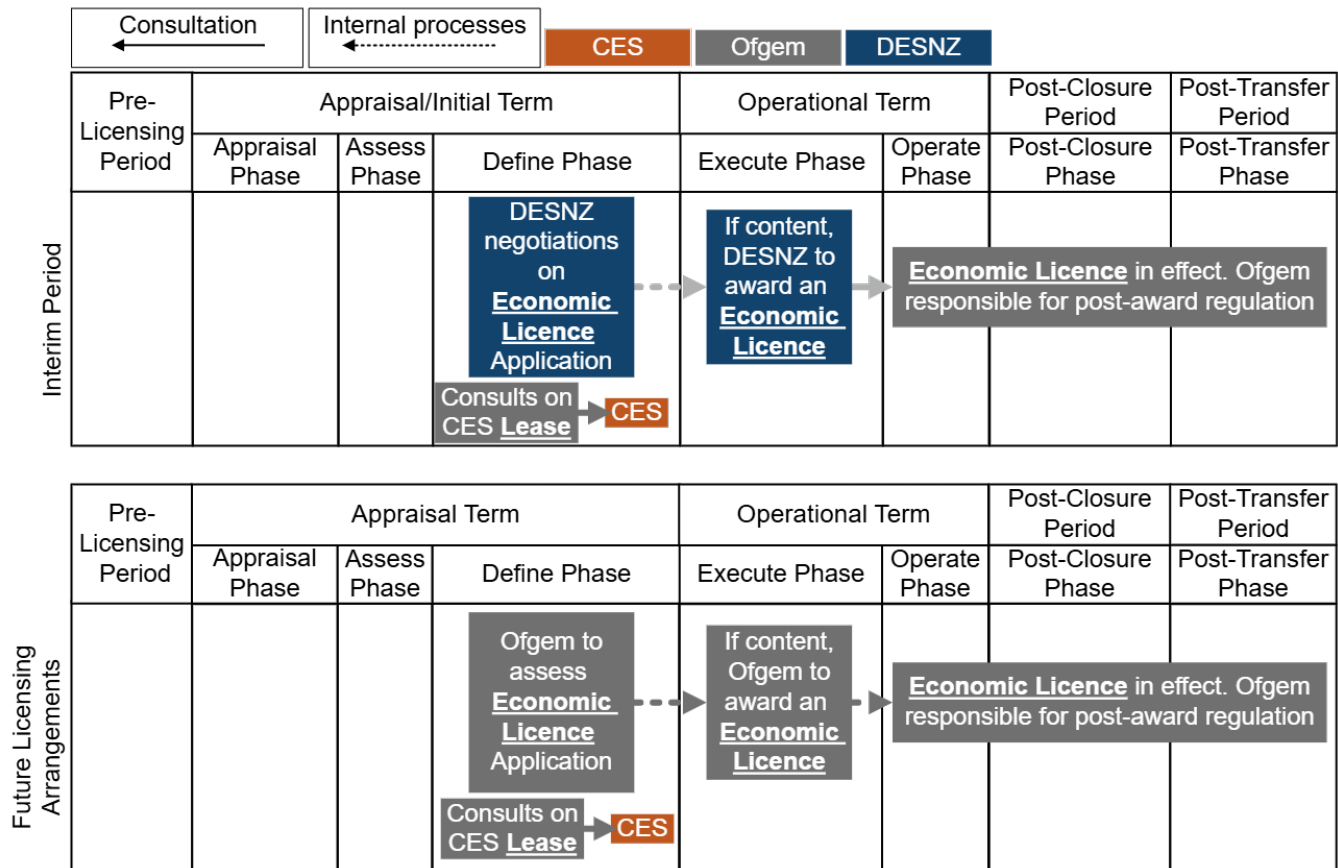
- Engages with NSTA, HSE, TCE, CES, and wider regulatory bodies on environmental and decommissioning matters.

5.8.4 Guidance and links

- Further guidance, including details of the regulations, can be found on the OPRED website, see e.g. [Oil and gas: offshore environmental legislation, OPRED](#) or [Decommissioning of Offshore Oil and Gas Guidance Notes, OPRED](#); or the consultation [Establishing the offshore decommissioning regime for CO₂ transport and storage networks: update to consultation response, OPRED](#).
- Cross-government information on UK ETS as it relates to storage can be found here: [Integrating greenhouse gas removals in the UK Emissions Trading Scheme](#), or [Participating in the UK ETS, UK ETS Authority](#).

5.9 Office of Gas and Electricity Markets (Ofgem)

Figure 14: Office of Gas and Electricity Markets (Ofgem) roles, responsibilities, and interdependencies



5.9.1 Roles and responsibilities relevant to carbon storage consenting

Under the [Energy Act 2023](#), anyone who wishes to operate a site for the disposal of carbon dioxide by way of geological storage, or to transport carbon dioxide by pipeline, or any other means of transport specified in regulations, all or part of the way to a geological storage site within the UK, must obtain an economic licence.

During the interim period

- During an interim period, all economic licences will be awarded by the DESNZ Secretary of State. During this period, prospective applicants should contact DESNZ for further guidance on economic licensing processes.
- Any activities undertaken under an economic licence are regulated by the Office of Gas and Electricity Markets (Ofgem). Ofgem starts their regulatory work after the government grants an economic licence.

Future licensing arrangements

- The Secretary of State will determine the end of the interim period, which is when Ofgem will then start to award economic licences. Ofgem is working with DESNZ to evaluate whether any update to the economic licensing regime will be necessary as the CCS market develops.

5.9.2 Supplementary information

- DESNZ have negotiated the terms of the first economic licences to be awarded to the two clusters chosen by the government for participation in the Track 1 process. The terms of the economic licence have been published by DESNZ. These licences set out how Ofgem will regulate, according to their statutory duties. All relevant guidance for the regulation of Track 1 projects is published on the Ofgem website.
- Further guidance can be found here: [Carbon capture and storage, Ofgem](#).

5.10 Health and Safety Executive (HSE)

5.10.1 Roles

The Health and Safety Executive (HSE) is Great Britain's national regulator for workplace health and safety, and regulates activities related to carbon capture and storage. HSE's roles and responsibilities are explained in the [Health and Safety at Work etc. Act 1974](#) (HSWA).

HSWA is the basis of the UK health and safety regulatory framework, placing a fundamental general duty on employers to ensure, so far as is reasonably practicable, the health, safety and welfare at work of their employees, and of other people who may be affected by the work activity. HSWA provides powers to create secondary legislation, and HSE has introduced more prescriptive and specific regulations to apply to work activities that create a major accident hazard risk.

[The Offshore Installations \(Offshore Safety Directive\) \(Safety Case etc.\) Regulations 2015](#) (SCR2015) explain the responsibilities and obligations of offshore operators. HSE is responsible for safety case assessment, inspection, investigation and, where appropriate, enforcement. As this is new activity, HSE encourages duty holders to make early contact before commencing CCUS activity.

5.10.2 Responsibilities relevant to carbon storage consenting

- Ensuring the operator has adequately assessed potential hazards, for example through a Safety Case (following SCR2015). Safety case regulation aims to reduce the risks from major accident hazards to the health and safety of the workforce employed on offshore installations. HSE does not approve a safety case, but instead accepts that the case for safety has been made if the measures described within the operator's safety case are followed and implemented.

5.10.3 Interdependencies

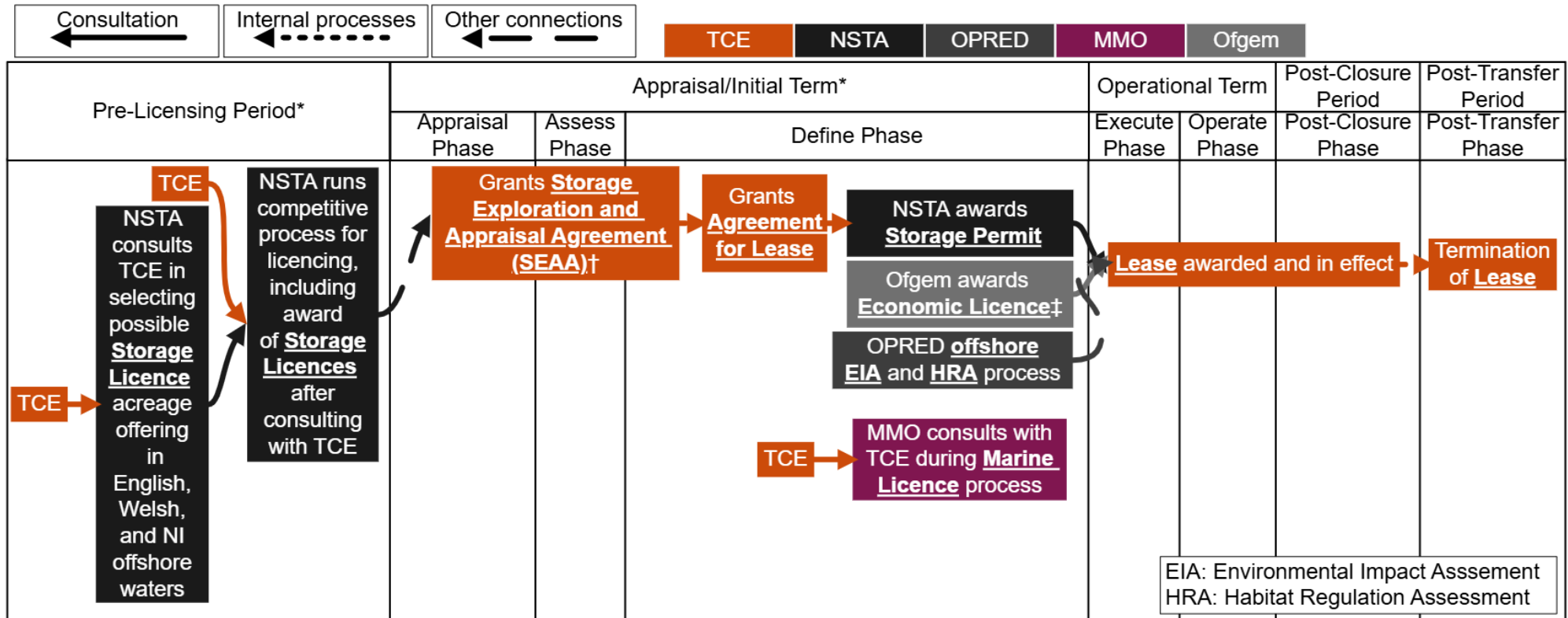
- HSE will consult with and advise various stakeholders during the regulation process.

5.10.4 Supplementary information

- HSE maintains the following website [Carbon capture and storage \(CCS\), HSE](#).
- New or revised guidance will be produced as appropriate.

5.11 The Crown Estate (TCE)

Figure 15: The Crown Estate (TCE) roles, responsibilities, and interdependencies



5.11.1 Roles

The Crown Estate (TCE) is manager of the seabed around England, Wales and Northern Ireland, and is responsible for granting leases for offshore pipeline transportation, seabed, and subsurface rights to developers for carbon dioxide transport and storage. Through this, TCE aims to support the UK's path to net zero and create lasting economic, environmental and social value for the nation.

Although TCE is not a regulator, it has obligations in managing the seabed defined within The [Crown Estate Act 1961](#), and the [Energy Act 2008](#). As such, consent of The Crown Estate Commissioners is required for any activities on or to the seabed within territorial sea, and/or for the exploration in EEZ for the purposes of gas storage.

TCE work closely with regulators and stakeholders, including the NSTA and DESNZ.

5.11.2 Responsibilities relevant to carbon storage consenting

- Issuing Storage Exploration and Appraisal Agreements subject to NSTA licence issuance.
- Granting agreements and leases for seabed and subsurface rights to developers, including exploration and appraisal activities.

5.11.3 Interdependencies

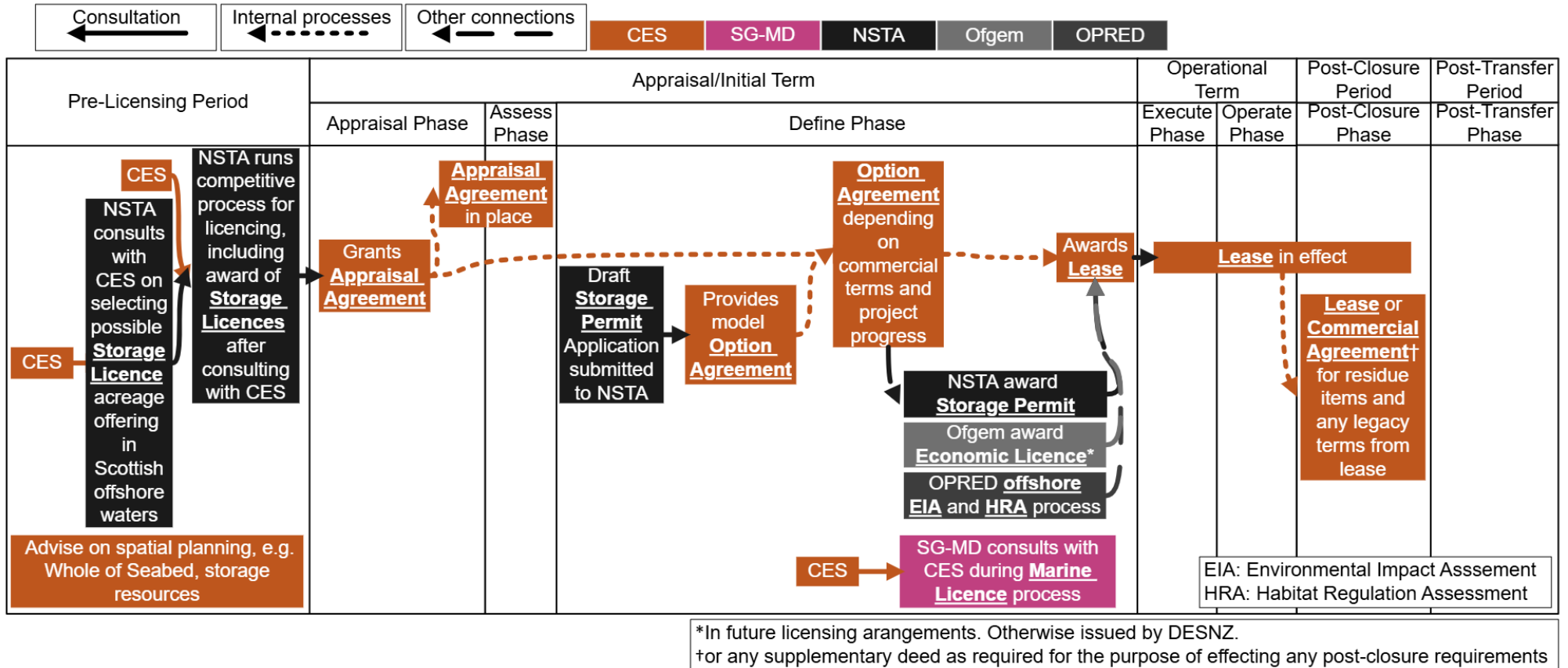
- Engages with NSTA, DESNZ, and OPRED on seabed management and licensing.

5.11.4 Supplementary information

- TCE maintains the following website [Carbon capture, The Crown Estate](#).
- More information from TCE on leasing strategy, including typical term lengths is to be provided in due course.

5.12 Crown Estate Scotland (CES)

Figure 16: Crown Estate Scotland (CES) roles, responsibilities, and interdependencies



5.12.1 Roles

Crown Estate Scotland (CES) manages seabed rights and leases for carbon dioxide storage in Scottish waters. Their authority is based on the [Scottish Crown Estate Act 2019](#), and in the Energy Acts.

5.12.2 Responsibilities relevant to carbon storage consenting

- Issuing appraisal agreement, then an options agreement, subject to assessment and NSTA licence issuance
- Granting leases for seabed and subsurface rights to developers.
- Collaborating with NSTA on licensing application reviews.
- Ensuring seabed rights are aligned with regulatory consent processes.

5.12.3 Interdependencies

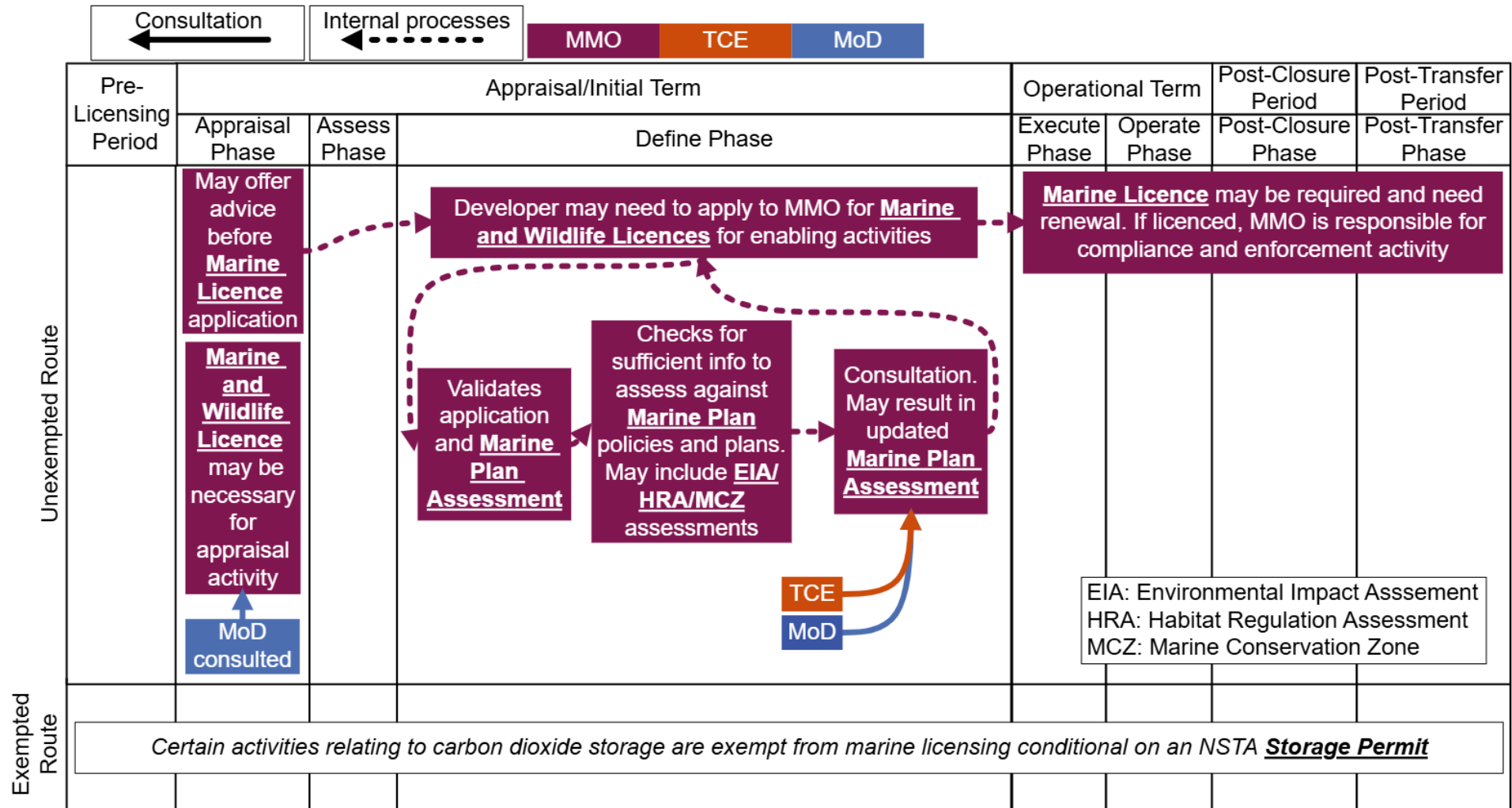
- Engages with the Scottish Government, NSTA, DESNZ, and OPRED for seabed management and licensing.

5.12.4 Supplementary information

- CES maintains the following website [Carbon capture and storage, Crown Estate Scotland](#).

5.13 Marine Management Organisation (MMO) roles, responsibilities, and interdependencies

Figure 17: Marine Management Organisation (MMO) roles, responsibilities, and interdependencies



5.13.1 Roles

The Marine Management Organisation (MMO) is responsible for marine licensing in English and Northern Irish waters. Its powers are derived from the [Marine and Coastal Access Act 2009](#) and [The Conservation of Offshore Marine Habitats and Species Regulations 2017](#). Activities relating to geological carbon storage are exempt from MMO marine licensing, conditional on an NSTA storage permit (following [Marine and Coastal Access Act 2009](#) Section 77(1)). Some ancillary or enabling activities may not be exempt.

5.13.2 Responsibilities relevant to carbon storage consenting

There are exemptions in place for activities immediately connected to geological carbon storage. Marine and wildlife licences may be necessary for some ancillary or enabling activity. For more details, contact MMO.

5.13.3 Interdependencies

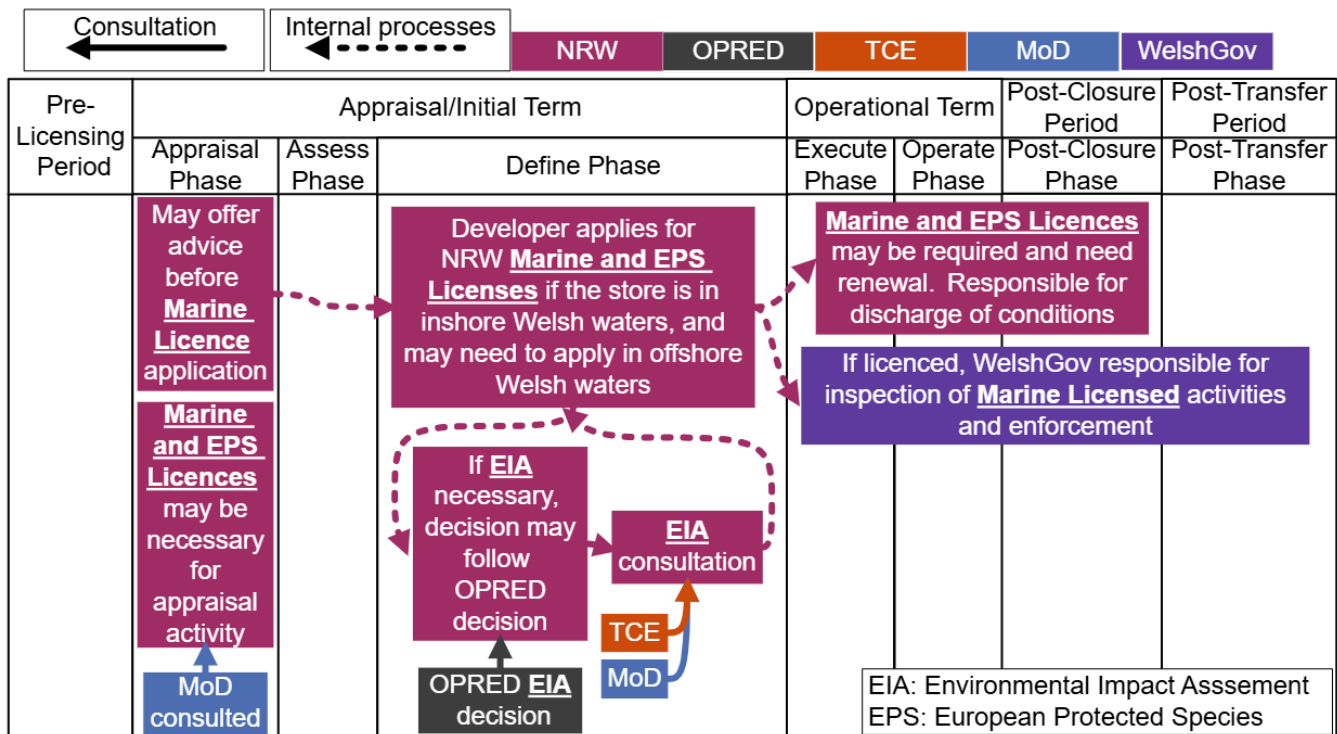
- Engages with OPRED, Defra, and wider marine and environmental bodies.

5.13.4 Supplementary information

- Certain activities related to permanent carbon dioxide storage may be exempt from marine licences, see [Marine and Coastal Access Act 2009](#) Sections 66, 77, and 81, and the [Energy Act 2008](#) Section 18. This may not apply to all ancillary and enabling activities. See also [Marine Licensing exempted activities, MMO](#).
- For general marine licence guidance, including timeline, see [The marine licence application timeline, MMO](#). The MMO offer a Pre-application enquiry service available through The Marine Case Management System: [MCMS, MMO](#). The following detailed information is available: [Marine licensing exempted activities, MMO](#), [Make a marine licence application, MMO](#), [Check if you need a marine licence - MCMS Self Service, MMO](#), [Do I need a marine licence?, MMO](#), [Using Marine Plans, MMO](#), [Marine planning in England, MMO](#), and [Explore marine plans, MMO](#).
- For wildlife licence guidance, see [Understand and apply for marine wildlife licences and report an incident, MMO](#).
- See also [Oil and gas: offshore environmental legislation, DESNZ-OPRED](#).

5.14 Natural Resources Wales (NRW)

Figure 18: Natural Resources Wales (NRW) roles, responsibilities, and interdependencies



5.14.1 Roles

Natural Resources Wales (NRW) comprises of a regulator, the NRW Permitting Service, and an advisory service, NRW Advisory. NRW Permitting Service determines marine licence applications acting on behalf of the Welsh Ministers. NRW Advisory advises on marine and European Protected Species (EPS) Permits within territorial sea adjacent to Wales, with the Joint Nature Conservation Committee having responsibility for offshore waters. The authority for NRW comes from, amongst other places, the [Marine and Coastal Access Act 2009](#), the [Conservation of Habitats and Species Regulations 2017](#), and the [Conservation of Offshore Marine Habitats and Species Regulations 2017](#).

5.14.2 Responsibilities relevant to carbon storage consenting

- Issuing marine licences and EPS licences for carbon dioxide storage projects within Welsh waters.
- Monitoring activities under the marine licence and EPS licence to ensure regulatory compliance.
- Consulting with developers on potential marine and EPS licensable activities.

5.14.3 Interdependencies

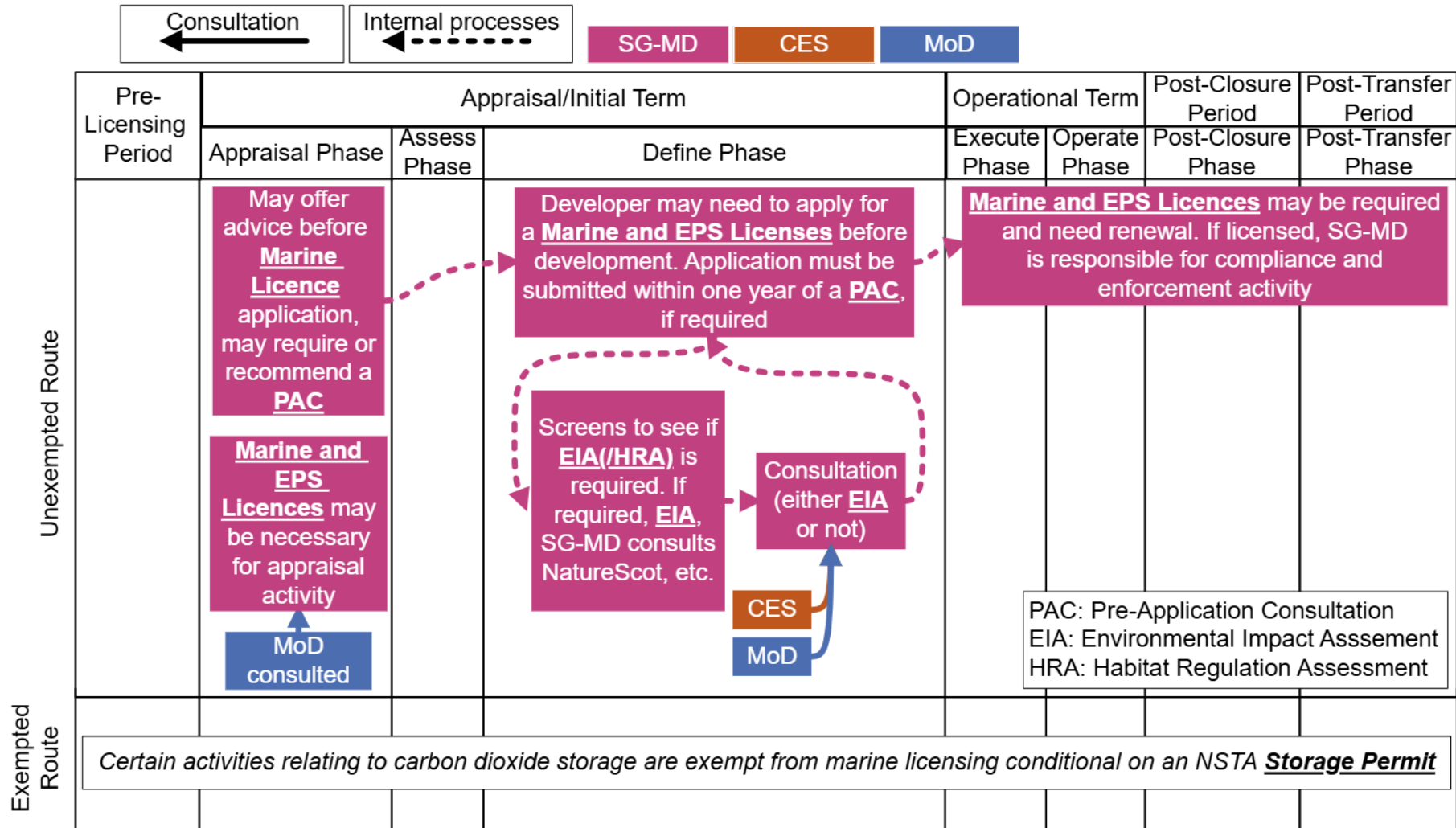
- Engages with the Welsh Government, Defra, and wider marine and environmental bodies, possibly including OPRED.

5.14.4 Supplementary information

- Activities related to permanent carbon dioxide storage are not exempt from marine licences in inshore areas, (see [Marine and Coastal Access Act 2009](#) Section 77).
- For more information on the marine licensable area and activities that need a marine licence see: [Activities that need a marine licence, Natural Resources Wales](#).
- The EIA decision of NRW may be deferred to another regulator, in this case OPRED, following [The Marine Works \(Environmental Impact Assessment\) Regulations 2007](#).
- See also [Marine protected areas, Natural Resources Wales](#).
- NRW's marine development webpages contain relevant information from NRW Advisory: [Marine development, Natural Resources Wales](#).
- For information on Marine European Protected Species licensing see: [Marine European Protected Species licensing, Natural Resources Wales](#).

5.15 Marine Directorate (SG-MD)

Figure 19: Marine Directorate (SG-MD) roles, responsibilities, and interdependencies



5.15.1 Roles

The SG-MD is a directorate of the Scottish Government, and is the marine and EPS licensing authority in the territorial sea and EEZ adjacent to Scotland. Its powers are based on the [Marine \(Scotland\) Act 2010](#), particularly Section 21, and [Marine and Coastal Access Act 2009](#) Section 66. Activities relating to geological carbon storage are exempt from SG-MD marine licensing. Marine licensing exemption applies to anything done in the course of carrying on an activity for which a licence under the [Energy Act 2008](#) Section 18 is required (following the [Marine and Coastal Access Act 2009](#) Section 77(1)). Some ancillary or enabling activities may not be exempt. Note, this does exemption does not apply to EPS licences.

5.15.2 Responsibilities relevant to carbon storage consenting

There are exemptions in place for activities immediately connected to geological carbon storage in the EEZ adjacent to Scotland outwith the territorial sea. Marine and EPS licences may be necessary for some ancillary or enabling activity. For more details, contact SG-MD.

5.15.3 Interdependencies

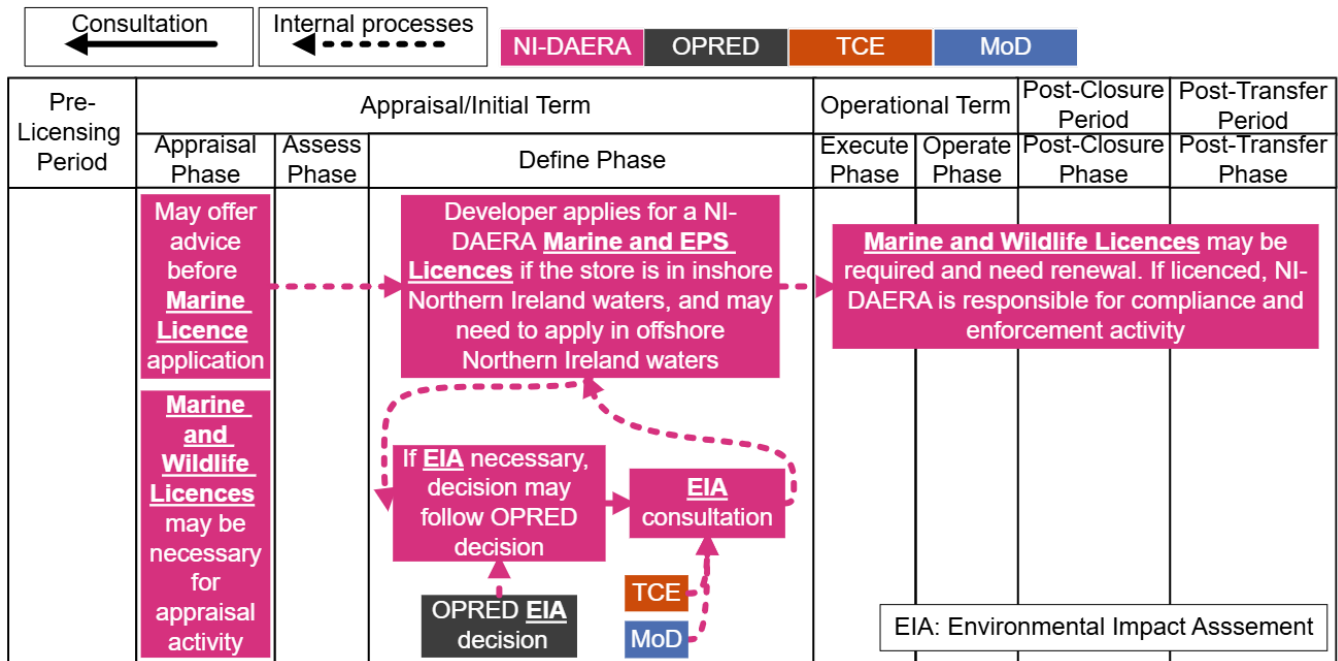
- Engages with ScotGov, CES, and wider Scottish regulatory bodies.

5.15.4 Supplementary information

- Certain activities related to permanent carbon dioxide storage may be exempt from marine licences, based on [Marine and Coastal Access Act 2009](#) Sections 77 and 81, and [The Marine Licensing \(Exempted Activities\) \(Scottish Inshore Region\) Order 2011](#) Section 14 (e.g. some cables). See [Marine licensing - exempted activities: guidance, Scottish Government](#) and [Marine Licensing exempted activities, MMO](#). These exemptions apply to anything done in the course of carrying on an activity for which a licence under the [Energy Act 2008](#) Section 18 is required.
- SG-MD provides guides and pre-application consultations for developers, following [The Marine Licensing \(Pre-application Consultation\) \(Scotland\) Regulations 2013](#). See also [Marine licensing: considerations before submitting an application, Scottish Government](#).
- If not exempt, details on the EIA can be found at [Marine environment: licensing and consenting requirements, Scottish Government](#) and [EPS Licensing, Scottish Government](#)

5.16 Department of Agriculture, Environment and Rural Affairs, Northern Ireland (NI-DAERA)

Figure 20: Department of Agriculture, Environment and Rural Affairs, Northern Ireland (NI-DAERA) roles, responsibilities, and interdependencies



5.16.1 Roles

The NI-DAERA is a directorate of the Northern Ireland Executive, and is the marine and EPS licensing authority in the territorial sea adjacent to Northern Ireland. The authority for NI-DAERA comes from, amongst other places, [The Conservation \(Natural Habitats, etc.\) Regulations \(Northern Ireland\) 1995](#).

5.16.2 Responsibilities relevant to carbon storage consenting

- Issuing marine, wildlife, and EPS licence for carbon dioxide storage projects in the territorial sea adjacent Northern Ireland.
- Monitoring activities under the marine licence and EPS licence to ensure regulatory compliance.
- Consulting with developers on potential marine and EPS licensable activities.

5.16.3 Interdependencies

- Engages with the Northern Ireland Executive, particularly NI-DfE, and with MMO, Defra, and wider marine and environmental bodies, possibly including OPRED.

5.16.4 Supplementary information

- General details can be found here: [Marine Licensing, NI-DAERA](#), [Marine licensing and permits, NI-DAERA](#), [Wildlife licensing, Department of Agriculture, Environment and Rural Affairs](#).
- Unlike in other jurisdictions, activities related to permanent carbon dioxide storage are not exempt from marine licences in inshore areas, (see [Marine and Coastal Access Act 2009](#) Section 77, and [Energy Act 2008](#) Section 18, and [The Marine Licensing \(Exempted Activities\) Order \(Northern Ireland\) 2011](#)). These activities may be exempt in offshore areas, see [Northern Ireland guidance exemptions to marine licensing, under part 4 of the Marine and Coastal Access Act 2009, NI-DAERA](#)

6 Interdependencies and collaboration

The successful execution of carbon dioxide storage projects relies on the collaborative efforts and interdependencies among many regulatory bodies and organisations. Key interdependencies include:

- Consultation and data sharing between DESNZ, NSTA, OPRED, Ofgem, and TCE or CES for licensing and permit applications as appropriate.
- Environmental assessments, safety regulations, and marine licensing involving the OPRED, HSE, MMO, NRW, SG-MD, NI-DAERA, and other relevant stakeholders.
- Economic and financial assurance engagement between the DESNZ, NSTA, OPRED, and Ofgem.

7 Contact list

Body	Relevant Website	Contact
DESNZ	Carbon capture and storage, DESNZ-OPRED-EA	ccuscorrespondence@energysecurity.gov.uk
Defra	Does not directly regulate	Does not directly regulate
MoD	Does not directly regulate	Does not directly regulate
ScotGov	Carbon capture, utilisation and storage, Scottish Government	MD.MarineLicensing@gov.scot
WelshGov	Welsh Government's preferred policy on carbon capture, utilisation and storage, Welsh Government	EnergyPolicyMailbox@gov.wales
NI-DfE	Geological Storage of Carbon Dioxide in Northern Ireland, NI-DfE	dfemail@economy-ni.gov.uk
NSTA	Carbon storage, NSTA	correspondence@nstauthority.co.uk
OPRED	Offshore Petroleum Regulator for Environment and Decommissioning, UK Government	opred@energysecurity.gov.uk
Ofgem	Carbon capture and storage, Ofgem	CCUS@ofgem.gov.uk
HSE	Carbon capture and storage (CCS), HSE	Ways to contact HSE, HSE
TCE	Carbon capture, The Crown Estate	CCUS@thecrownestate.co.uk
CES	Carbon capture and storage, Crown Estate Scotland	marine@crownestatescotland.com
MMO	Do I need a marine licence?, MMO	Marine.constents@marinemanagement.org.uk

Body	Relevant Website	Contact
NRW	Activities that need a marine licence, NRW	Marine licensing: marinelicensing@naturalresourceswales.gov.uk Species licensing: specieslicence@naturalresourceswales.gov.uk Marine environmental advice: marine.area.advice@cyfoethnaturiolcymru.gov.uk
SG-MD	Marine environment: licensing and consenting requirements, Scottish Government	MD.MarineLicensing@gov.scot
NI-DAERA	Marine Licensing, NI-DAERA	Contacts, NI-DAERA

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Any enquiries regarding this publication should be sent to us at:
ccuscorrespondence@energysecurity.gov.uk

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