

2025 Perenco Pipeline Protection Campaign

Habitats Regulations Assessment (HRA)



RECORD OF THE HABITATS REGULATIONS ASSESSMENT UNDERTAKEN UNDER REGULATION 5 OF THE OFFSHORE PETROLEUM ACTIVITIES (CONSERVATION of HABITATS) REGULATIONS 2001 (As Amended).

Document Version	Date Published	Summary of Changes
1.0	26/09/2025	Document created for SNCB review
1.2	01/10/2025	Typos amended
2.0	13/10/2025	Changes following JNCC review
3.0	16/10/2025	Changes follow increase in PL23 deposits
3.1	20/10/2025	Inclusion of Natural England response and amendment to SNS SAC figures based on update from operator

Project Details	
Application reference	PL/2581/0 PL/2580/0 PL/2582/0 PL/2583/0
Date application received:	20 August 2025
Applicant details	Perenco
Applications Being Applied for	Pipeline Screening Directions



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1. Description of the Activity

Perenco are the operator of export pipelines between offshore oil and natural gas fields in the Southern North Sea and the onshore terminals at Bacton and Dimlington. These pipelines are buried but traverse a region of sea characterised by strong tidal flow and highly mobile sands and gravels. Consequently, the pipelines are regularly surveyed to monitor seabed levels and identify areas where the pipeline is partially exposed at the seabed due to scouring and winnowing of the sediment. Where excessive scouring and sediment transport occurs the pipeline can become fully exposed and unsupported by the seabed i.e. they develop free spans. These pipelines exposures represent a number of environmental risks but of primary importance is the risk they pose to pipeline integrity. Where pipelines are free-spanning and unsupported the pipeline structure becomes stressed, and the pipeline can fail (as happened to PL24 in this region in 2021). This process can happen unexpectedly, particularly during storms consequently, Perenco undertakes regular monitoring and pipeline remediation campaigns to prevent freespans from forming or growing.



To further exacerbate the problem created by the mobile seabed, the concrete coating which both protects the pipelines and weighs them down is failing due to improper manufacture when they were installed many decades ago. As a result, the coating is breaking away and the pipelines are becoming increasingly buoyant making them more likely to become exposed and free-spanning.

To remedy the free span risk Perenco are undertaking a deposit campaign where concrete mattress and rock filter units (RFUs), which are mesh bags filled with fragments of rock, are placed onto the pipeline. The deposits weigh the pipelines down helping to anchor them to the seabed encouraging reburial or preventing further exposure, they also provide extra structural support beneath areas of exposed pipe.



Fig1: Examples of concrete mattresses used to remediate exposed pipe

Applications to be assessed

The campaign will install deposits on 6 separate pipelines, each pipeline deposit is subject to its own application with OPRED. These applications comprise the following:

- PL/2581/0 Pipeline PL22
- PL/2580/0 Pipeline PL28
- PL/2582/0 Pipeline PL23
- PL/2583/0 Pipeline PL24
- Schedule 3 Notification (EX/262/2025) Pipeline PL450 and Pipeline PL488 at Ravenspurn South C & B platforms*

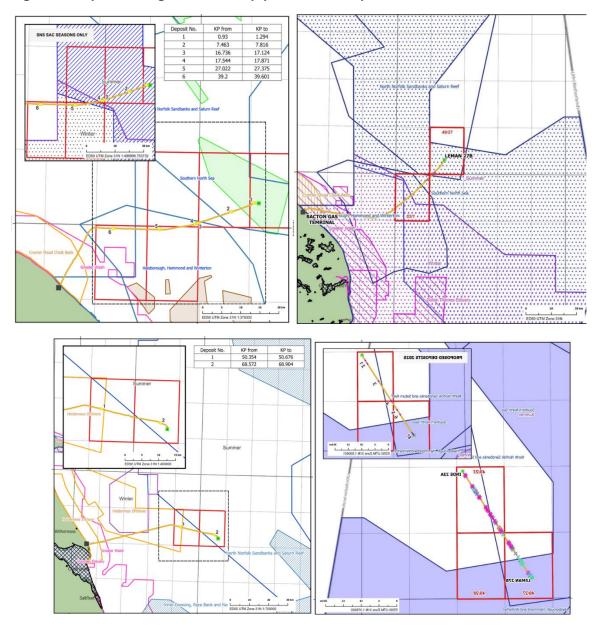
*Note: Schedule 3 notifications apply to deposits placed on pipelines within the 500m zone of an installation and are not processed via the PETS portal

This habitats regulations assessment considers the effects of all pipeline applications within the 2025 Deposit campaign

Location

The deposits will be placed in multiple locations along the pipelines in the Southern North Sea these are detailed in figure 2.

Figure 2: Maps showing the relevant pipelines and deposit locations



The activity is within the following sites:

- North Norfolk Sandbanks and Saturn Reef SAC (NNSSR)
- Southern North Sea SAC (SNS)
- Haisborough Hammond and Winterton (HHW) SAC



Table 1: Pipeline deposits to be placed as part of the 2025 pipeline remediation campaign

Portal Ref & Pipeline	Deposits	Total Deposit Footprint	Area of HHW*	Area of NNSSR*	Area of SNS SAC*
PL/2581/0: PL22	32 Mattresses	537m2		369m2	151.2m2
PL/2580/0: PL28	16 Mattresses and 2 RFUs	112m2	-	-	63m2
PL/2582/0: PL23	28 Mattresses 112 RFUs	1019 m2	935.4m2	84m2	952.2m2
PL/2583/0 :PL24	10 Mattresses	168m2	-	100.8m2	168m2
EX/262/2025: PL450	26 RFU	127.4m2	-	-	127.4m2
EX/262/2025: PL448	26 RFU	127.4m2	-	-	127.4m2
Total		2090.8m2	935.4.4m2	553.8m2	1589.2m2
% of feature in site			0.00014	0.0000154%	0.0000043%

- HHW 668,920,000 m² note this is the area of the delineated sandbank polygons the true habitat extent is likely larger as the interpretation of sandbank habitat has evolved to include the wider areas around the sandbanks themselves
- NNSSR 3,603,410,000m²
- SNS SAC 36,951km2

Timing

The proposed works are expected to be undertaken within the period 15th October 2025 to 30th September 2026

2. Requirement for a Habitats Regulations Assessment

Regulation 5 of the Offshore Petroleum Activities (Conservation of Habitats) Regulations 2001 (As amended) outlines that the Secretary of State (SoS), before agreeing to the grant of consent of any activity which is likely to have a significant effect on a relevant site, make an appropriate assessment of the implications for the site in view of its conservation objectives. This document is the record of the SoS appropriate assessment.



Where the term 'Site' is used within this document, it means any site forming the UK National Site Network site. The National Site Network is the UK network of protected sites on land and sea which were designated under the Habitats and Wild Birds directives namely Special Protection Areas (SPA) or Special Areas of Conservation (SAC).

The assessment will first determine what sites and protected features are likely to have conservation objectives which could be significantly affected by the activity and will then proceed to undertake an appropriate assessment of the implication of these effects on the site's integrity.

3. Stage 1: Test of likely Significant effects (LSE)

Is the activity likely to have a significant effect on the site's conservation objectives?

3.1 Pressures associated with the activity

The project is considered to exert the following pressures on the environment:

<u>A change in seabed type:</u> This incorporates the deposition of hard material such as concrete mattresses, rock or drill cuttings into soft sediment environments such as sandbanks.

3.2 LSE Assessment

Conservation Objectives:

The purpose of the LSE is to test whether the activity could affect, in any significant way, the conservation objectives of the site. Site features and conservation objectives are taken from relevant SNCB conservation advice packages found on the following webpages:

Haisborough Hammond and Winterton SAC

North Norfolk Sandbanks and Saturn Reef SAC

Southern North Sea SAC

Sites Screened Out of the Assessment

<u>Greater Wash SPA</u>: The SPA has not been included within the HRA as none of the deposits occur within the SPA. The depositing vessel may need to travel through the SPA as it travels between port and the pipeline locations. The movements of the vessel before and after the pipeline operations are not within the scope of OPREDs regulation and the vessel will follow existing established maritime protocols and routes and utilise established port approaches.



Test of likely significant effect

Note:

In the table below the conservation objectives for each feature have been compiled together where they have sufficient similarity that they can assessed together as a group.



Feature	Is there likely	to be a significant effec	t on the conservation Objectives <u>ALONE</u>
Pressure	Feature	Conservation	Conclusion
		Objective	
Southern North Sea S	AC		
A change in seabed	Harbour	1.Maintain - Harbour	No (No noise impacts)
type	porpoise	porpoise a viable	The project will not result in the injury of any harbour porpoise and there is no
	(Phocoena	component of the site;	mechanism whereby the long-term condition or reproductive success of harbour
	Phocoena)		porpoise could be significantly affected.
A change in seabed	Harbour	2.There is no	
type	porpoise	significant disturbance	No. (No noise impacts)
	(Phocoena	of the species	The project will not emit impulsive noise and there is no mechanism whereby the
	Phocoena)		project could cause significant disturbance that may alter the distribution of
			porpoise in the site.



Feature	Is there likely	to be a significant effec	t on the conservation Objectives <u>ALONE</u>	
Pressure	Feature	Conservation Objective	Conclusion	
A change in seabed type	Harbour porpoise (Phocoena Phocoena)	3.Maintain - The condition of supporting habitats and processes, and the availability of prey is maintained	No. The disturbance created by the project will be highly localised and unlikely disrupt prey availability for harbour porpoise. The sedimentary habitats in tregion are exposed to periodic physical disturbance, and the benthic and demer communities show good recovery to physical disturbance. Harbour porpoise for on array of fish species and the new hard substratum is unlikely to cause significant reduction in available prey items as fish will still utilise the area.	
North Norfolk Sandba	ank SAC			
A change in seabed type	Sandbanks covered by seawater all the time	1: Restore - Extent and Distribution of sandbanks habitat 2: Restore - Structure and Function comprising distribution of sediment types, biological assemblages and topography	Yes	
A change in seabed type	Sandbanks covered by seawater all the time	3: Maintain - Supporting processes comprising water quality, sediment quality, hydrodynamic regime	No. There will be no mechanism whereby water or sediment quality could be affected as the deposits are chemically inert. Furthermore, the deposits are too small to significantly alter the movement of sediment or hydrodynamic regime, there will be no changes obvious beyond the several metres from deposit and in all likelihood the deposits will reduce the effect of existing exposed pipeline on the local hydrodynamic regime.	



Feature	Is there likely	to be a significant effec	t on the conservation Objectives <u>ALONE</u>
Pressure	Feature	Conservation	Conclusion
		Objective	
A change in seabed	Reefs:	1: Restore – The extent	No. (No reef damaged)
type	Biogenic	and distribution of reef	The available evidence does not indicate there will be any reef formations within
	Reef	in the site	the footprint of the seabed disturbance or interaction. There will consequently be
	(Sabellaria)	2: Restore - Structure	no effect on the extent of reef in the site or its structure or function.
		and Function of the	
		reef in the site	
		including the	
		associated biological	
		communities and	
		ecosystem functions	
A change in seabed	Reefs:	3: Restore – The reef's	No.
type	Biogenic	supporting processes	There will be no change in water flow, no reduction in sediment or nutrient supply
	Reef	comprising water	and no change in sediment composition or type. Thus there will be no change in
	(Sabellaria)	quality, supporting	the supporting processes for the reef
		habitats and	
		hydrodynamic regime	
Haisborough Hammo	n and Winterto	on SAC	



Feature	Is there likely	to be a significant effec	t on the conservation Objectives <u>ALONE</u>
Pressure	Feature	Conservation	Conclusion
		Objective	
A change in seabed	Sandbanks	1: Restore - Extent and	Yes
type	covered by	Distribution of	
	seawater all	sandbanks habitat	
	the time	2: Restore - Structure	
		and Function	
		comprising	
		distribution of	
		sediment types,	
		biological	
		assemblages and	
		topography	
A change in seabed	Sandbanks	3: Maintain -	No. There will be no mechanism whereby the water or sediment quality could be
type	covered by	Supporting processes	affected as the deposits are chemically inert. The deposits are too small to
	seawater all	comprising water	significantly alter the movement of sediment or hydrodynamic regime, there will
	the time	quality, sediment	be no changes obvious beyond the several metres from deposit and in all
		quality, hydrodynamic	likelihood the deposits will reduce the effect of existing exposed pipeline on the
		regime	local hydrodynamic regime.
A change in seabed	Reefs:	1: Restore – The extent	No. (No reef damaged)
type	Biogenic	and distribution of reef	The available evidence does not indicate there will be any reef formations within
	Reef	in the site	the footprint of the seabed disturbance or interaction. There will consequently be
	(Sabellaria)	2: Restore - Structure	no effect on the extent of reef in the site or its structure or function.
		and Function of the	
		reef in the site	
		including the	
		associated biological	
		communities and	
		ecosystem functions	



Feature	Is there likely to be a significant effect on the conservation Objectives ALONE		
Pressure	Feature Conservation		Conclusion
		Objective	
A change in seabed	Reefs:	3: Restore – The reef's	No.
type	Biogenic	supporting processes	There will be no change in water flow, no reduction in sediment or nutrient supply
	Reef	comprising water	and no change in sediment composition or type. Thus there will be no change in
	(Sabellaria)	quality, supporting	the supporting processes for either feature
		habitats and	
		hydrodynamic regime	

3.3 LSE Conclusion: Alone

It **cannot** be concluded that the activity is unlikely to cause a significant effect alone on the conservation objectives of the following site:

Site	Feature	Conservation Objective	LSE?
Haisborough Hammond and Winterton SAC	Sandbanks covered by seawater all the time	Extent and Distribution, Structure and Function	Υ
North Norfolk Sandbanks and Saturn reef SAC	Sandbanks covered by seawater all the time	Extent and Distribution, Structure and Function	У



It **can** be concluded that the activity is unlikely to cause a significant effect alone on the conservation objectives of the following site(s):

Site	Feature	LSE?
Southern North Sea SAC	Harbour porpoise (Phocoena phocoena)	N
Haisborough Hammond and Winterton SAC	Reefs	N
North Norfolk Sandbanks and Saturn Reef SAC	Reefs	N

3.4 LSE In-combination assessment

This section determines whether there are impacts from other plans or projects which could act in-combination with those of the project to create a significant effect on conservation objectives.

In-combination assessment where an LSE has already been identified

- If a significant effect on the conservation objectives alone has been identified, incombination effects on those conservation objectives will not be further assessed in the LSE stage as it will be assessed in the appropriate assessment.

Existing Plans or Projects

The in-combination assessment considers projects which have been approved or where an application has been submitted. Those projects which have been fully completed or installed are no longer considered within the in-combination assessment. These projects form the part of the site's new baseline and the cumulative effect of further activities will be considered by the HRA when evaluating the significance of the effects against the conservation objectives. For example relatively small impacts in a site which has been heavily impacted over time (and thus has a restore objective) will have a greater significance compared to the same impact in a site with no previous impacts.

Other Plans or projects occurring in the Site

Haisborough Hammond and Winterton SAC and North Norfolk Sandbanks SAC:

Feature: Sandbanks

No further in-combination assessment has been undertaken at the LSE stage as this will be assessed at stage 2 Appropriate Assessment stage

Feature: Reef

Projects which cause seabed disturbance and abrasion are considered as having the potential to affect Sabellaria reef. A review of recently submitted applications shows there to be several other



projects potentially occurring in both SACs during 2025 which are likely to cause seabed abrasion, however the total area affected is a very small proportion of the SAC. Furthermore, the absence of any reef-like structures in survey data and the incompatibility of mobile sand waves for the formation of reef habitats means that likelihood of reef habitats being affected by the pipeline operations is low meaning the likelihood of a significant in-combination effect occurring is negligible.



Feature	Conservation	Conclusion
	Objective	
Southern No	rth Sea SAC	
Harbour	1.Maintain - Harbour	
porpoise	porpoise a viable	No.
, , (Phocoena	component of the site;	A review of activities and projects occurring in the SNS SAC have indicated that there will not be any
Phocoena)		projects which represent a significant risk to supporting habitats, prey availability or harbour porpoise condition. Therefore, the minor effects of the project are unlikely to significantly affect the conservation objectives of the site even when considered in-combination with other projects ongoing in the SAC
Harbour	2.There is no	No.
porpoise	significant disturbance	A significant number of activities are expected to occur in the SNS SAC during 2025. The management
(Phocoena	of the species	of disturbance and displacement associated with the impulsive noise generated by these projects is
Phocoena)		being actively managed through the cross-industry developers coordination forum (DCF). The project is not expected to contribute any further impulsive noise into the SAC so is not considered likely to increase disturbance levels in the SAC.



Could any otl	ner activity act <u>In – comb</u>	pination with the project to significantly effect the conservation objective?
Feature	Conservation Objective	Conclusion
Harbour porpoise (Phocoena Phocoena)	3.Maintain - The condition of supporting habitats and processes, and the availability of prey is maintained	No. A review of activities and projects occurring in the SNS SAC have indicated that there will not be any projects which represent a significant risk to supporting habitats, prey availability or harbour porpoise condition. Therefore, the minor effects of the drilling project are unlikely to significantly affect the conservation objectives of the site even when considered in-combination with other projects ongoing in the SAC
North Norfoll	Sandbanks and Saturn	Reef
Sandbanks covered by seawater all the time	1: Restore - Extent and Distribution of sandbanks habitat 2: Restore - Structure and Function comprising distribution of sediment types, biological assemblages and topography	Yes
Sandbanks covered by seawater all the time	3: Maintain - Supporting processes comprising water quality, sediment	No. There will be no mechanism whereby the water or sediment quality could be affected as the deposits are chemically inert. The deposits are too small to significantly alter the movement of sediment or hydrodynamic regime, there will be no changes obvious beyond the several metres from deposit and in all likelihood the deposits will reduce the effect of existing exposed pipeline on the local hydrodynamic regime.



Feature	Conservation	Conclusion
	Objective	
	quality, hydrodynamic	
	regime	
Reefs:	1: Restore – The extent	
Biogenic	and distribution of reef	No (No reef in project area)
Reef	in the site	
(Sabellaria)	2: Restore - Structure	Projects which cause seabed disturbance and abrasion are considered as having the potential to
	and Function of the	affect Sabellaria reef. A review of recently submitted applications shows there to be several other
	reef in the site	projects potentially occurring in both SACs during 2025 which are likely to cause seabed abrasion,
	including the	however the total area affected is a very small proportion of the SAC. Furthermore, the absence of any
	associated biological	reef-like structures in survey data and the incompatibility of -mobile sand waves for the formation of
	communities and	reef habitats means that likelihood of reef habitats being affected by the pipeline operations is low
	ecosystem functions	meaning the likelihood of a significant in-combination effect occurring is negligible.
Reefs:	3: Restore – The reef's	No (No reef in project area)
Biogenic	supporting processes	No reef formations are expected in the impact footprint and the project will thus not effect sabellaria
Reef	comprising water	reef alone, meaning there is no possibility it could effect the feature in-combination
(Sabellaria)	quality, supporting	
,	habitats and	
	hydrodynamic regime	



Could any otl	ould any other activity act <u>In – combination</u> with the project to significantly effect the conservation objective?			
Feature	Conservation Objective	Conclusion		
Sandbanks	1: Restore - Extent and			
covered by	Distribution of			
seawater all	sandbanks habitat			
the time	2: Restore - Structure			
	and Function	Yes		
	comprising			
	distribution of			
	sediment types,			
	biological			
	assemblages and			
	topography			
Sandbanks	3: Maintain -	No. There will be no mechanism whereby the water or sediment quality could be affected as the		
covered by	Supporting processes	deposits are chemically inert. The deposits are too small to significantly alter the movement of		
seawater all	comprising water	sediment or hydrodynamic regime, there will be no changes obvious beyond the several metres from		
the time	quality, sediment	deposit and in all likelihood the deposits will reduce the effect of existing exposed pipeline on the		
	quality, hydrodynamic	local hydrodynamic regime.		
	regime			
Reefs:	1: Restore – The extent			
Biogenic	and distribution of reef	No (No reef in project area)		
Reef	in the site	No reef formations are expected in the impact footprint and the project will thus not affect sabellaria		
(Sabellaria)	2: Restore - Structure	reef alone, meaning there is no possibility it could affect the feature in-combination		
	and Function of the			
	reef in the site			
	including the			
	associated biological			
	communities and			
	ecosystem functions			



Offshore Petroleum Regulator for Environment & Decommissioning

Could any ot	Could any other activity act <u>In – combination</u> with the project to significantly effect the conservation objective?				
Feature	Conservation Objective	Conclusion			
Reefs:	3: Restore – The reef's	No (No reef in project area)			
Biogenic	supporting processes	No reef formations are expected in the impact footprint and the project will thus not affect sabellaria			
Reef	comprising water	reef alone, meaning there is no possibility it could affect the feature in-combination			
(Sabellaria)	quality, supporting				
	habitats and				
	hydrodynamic regime				



3.5 LSE Conclusion: In-combination

No Likely Significant Effect - In Combination

It **can** be concluded that the activity is unlikely to cause a significant effect in-combination with other plans or projects on the conservation objectives of the following site:

Site	Feature	LSE?
Southern North Sea SAC	Harbour Porpoise	N
Haisborough Hammond and Winterton SAC	Reefs	N
North Norfolk Sandbanks and Saturn Reef SAC	Reefs	N

Likely Significant Effect Possible - In Combination

It **cannot** be concluded that the activity is unlikely to cause a significant effect in-combination with other plans or projects on the conservation objectives of the following site:

Site		Feature	Conservation	LSE?
			Objectives	
Haisborough	Hammond	Sandbanks	Extent and Distribution	Υ
and Winterton SAC			Structure and function	
North Norfolk Sandbanks				
and Saturn Ree	ef SAC			

4 Stage 2: Appropriate Assessment

Could the activity adversely affect the integrity of a site?

Following the LSE assessment (Stage 1) the SoS must undertake an AA to determine whether the proposed activities, when considered alone or in-combination with other plans and projects, could have an adverse effect on the integrity of those sites.

Integrity test and Conservation Objective Attributes:

The 'integrity of the site' is not defined in the Conservation Objectives. However, EU and UK Government guidance defines the integrity of a site as "the coherence of the site's ecological structure and function, across its whole area, or the habitats, complex of habitats and/or populations of species for which the site is or will be classified' (EC 2000, Defra 2012). Therefore,



the integrity of the site applies to the whole of the site, and it is the potential impacts across the whole of the site that are required to be appropriately assessed.

To inform an appropriate assessment, the SNCB's provide supplementary advice on conservation objectives (SACOs), fundamental to the SACOs are the 'attributes'. These biological, physical and chemical properties together describe the ecological requirements of the site and the conservation objectives. To determine whether an activity may impact the site's integrity, an appropriate assessment will need to consider whether the activity may impair or degrade any of these attributes.

Attribute Targets

Each attribute has a target of maintain or restore/minimise, and these targets are informed by the condition assessment (undertaken by SNCBs). The targets guide the management approach for the site. Where a target of restore is identified, it means the SNCBs have identified that activities have or are taking place which have degraded an attribute. In these situations, it is important that activities look to minimise, **as far as is practicable**, any further deterioration. Where a target of maintain is proposed, it means the attribute is sufficiently unimpeded that it favourably supports the condition of the feature and no active intervention is required to reduce pressures.

Notes:

- Where attribute characteristics are similar, they have been grouped together for the purposes of the assessment

4.2 Appropriate Assessment **Alone**: North Norfolk Sandbanks and Saturn Reef SAC & Haisborough Hammond and Winterton SAC

Scope of Appropriate Assessment:

Feature assessed: Sandbanks

Attributes related to the conservation objective 'supporting processes' have not been considered in the appropriate assessment as this conservation objective was not deemed to be affected

Pressures: Deposition of hard substrate



Attribute Group 1: Structure and Function – Physical Characteristics

Attributes to	Attributes to be assessed			
Feature	Site	Attribute	Attribute Target	Magnitude of Impact
Sandbanks	HHW & NNSBSR	Structure and function: presence and abundance of key structural and influential species	Maintain OR Recover OR Restore] the abundance of listed species, to enable each of them to be a viable component of the habitat.	Negligible effect
Sandbanks	HHW	Structure: non- native species and pathogens (habitat)	Restrict the introduction and spread of non-native species and pathogens, and their impacts.	Negligible effect
Sandbanks	HHW & NNSBSR	Structure: sediment composition and distribution	Restore the distribution of sediment composition across the feature (and each of its sub features	Minor effect: Very localised changes in sediment composition expected
Sandbanks	HHW	Structure: topography	Maintain the presence of topographic features, while allowing for natural responses to hydrodynamic regime, by preventing erosion or deposition through human-induced activity.	Negligible effect as any changes in bed level created by flow will likely not stretch more than several metres from the deposit
Sandbank	NNSBSR	Structure: Finer scale topography	Restore the finer scale bedforms such as sand waves, mega-ripples and mounds which are driven by hydrodynamic processes and that have	Minor effect: Very localised changes in topography immediately adjacent to the deposits, likely no greater than is



			been altered by seabed infrastructure.	created by the existing exposed pipe.
Sandbanks	HHW	Structure: volume	Maintain the existing (where no previous evidence exists) or best-known (where some evidence exists) volume of sediment in the sandbank, allowing for natural change.	No effect

^{*}details are provided in the conclusion outlined in the text below

Pressure: Deposition of hard substrate The RFUs and concrete mattresses are specifically intended to stabilise the exposed pipelines, these are becoming increasingly buoyant and now represent prominent structures above the seabed, creating scour, erosion and deposition patterns in the immediate area. The deposits will anchor this pipeline to the seabed reducing the effect on local sediment dynamics and preventing further exposure and disruption to seabed conditions. The deposits themselves will sit close to the seabed surface and initially will remain prominent features on the seabed over time however they are likely to show varying levels of burial and exposure. For example, multibeam bathymetric imagery provided by the applicant (Fig. 3 and 4) shows that some mattresses deposited in previous pipeline campaigns have become buried by sediment and sand waves. Furthermore, the imagery shows that the effects of these deposits on sediment transport and physical processes were restricted to very minor highly localised changes. The scour depression created by the pipeline in Fig 4 extends 20m from the pipeline, the depositional tails and alterations in sand wave orientation and shape are not observed outside of the scour depression meaning that beyond 20m it is highly unlikely that any changes in the sandbank's physical structure or function could be observed. This imagery is likely to be indicative of the situation that will be observed at proposed 2025 deposit locations and shows that whilst there will be some localised change in bedfroms there is no reason to assume such a change would have adverse effects on the sandbank function.

The area to be covered by deposits is already characterised by the exposed pipeline and the placement of RFUs and mattresses onto this structure will not significantly change the characteristics of the immediate area. For example, the deposits are unlikely to cause a change in local topography, sediment composition, sediment transport or hydrodynamics to a greater degree than is currently created by the exposed pipeline. The pipeline deposits may in fact reduce and prevent further changes to the structure of the sandbank created by the exposed buoyant pipeline.



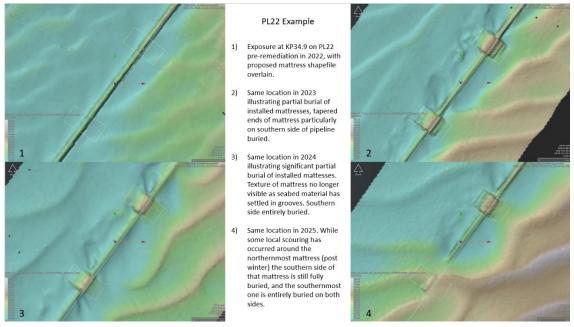


Figure 3: Multibeam imagery of the concrete mattresses over pipeline PL22 and the progressive burial of the mattress by sediment over time

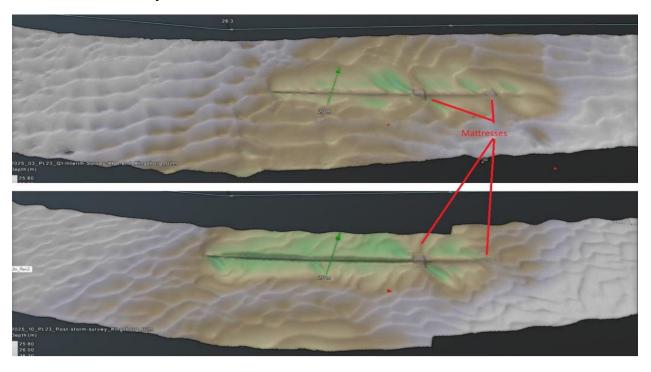


Figure 4: Multibeam imagery of PL23 at one of the deposit locations showing the physical processes and evolution of the seabed topography around the exposed pipeline and existing mattresses. Changes in bedforms (seabed wave forms) are localised to the immediate vicinity of the mattresses and some have been buried indicating a relatively benign impact on the sandbank's physical structure and function



Attribute Group 2: Extent and Distribution & Biological structure

Attributes to	Attributes to be assessed			
Feature	Attribute	Attribute Target	Magnitude of impact	
Sandbanks	Extent and distribution	Restore the total extent and spatial distribution of subtidal sandbanks to ensure no loss of integrity, while allowing for natural change and succession	Minor effect	
Sandbanks	Distribution: presence and spatial distribution of biological communities	Restore the presence and spatial distribution of subtidal sandbank communities.	Minor effect	
Sandbanks	Structure: species composition of component communities	Restore the species composition of component communities	Minor effect: Very localised changes in species composition associated with RFUs and mattresses	

Pressure: Deposition of hard substrate.

Both the Haisborough Hammond and Winterton SAC and North Norfolk Sandbanks and Saturn Reef SAC have conservation objectives to restore the extent and distribution of the subtidal sandbank feature within the site. This restore objective is driven by the view that the site is in unfavourable condition which is partly due to the presence of existing or consented energy infrastructure e.g. offshore windfarms and oil and gas, which has caused the loss of sandbank habitat.

The placement of mattresses and RFUs will cover the area of seabed either side of the pipeline as it drapes over the pipeline structure, replacing the naturally sandy sediment with a hard substratum. It is not possible to determine whether these will be removed as part of any future decommissioning programme, so the assessment assumes this to be a permanent change. The hard substratum would not be capable of supporting the same infaunal species assemblage as the original sandy sediment and thus not offer the same ecological function to the sandbank. This smothering of the sandy sediment with hard substratum will result in a degradation of the annex 1 sandbank habitat and thus result in a direct and proportional reduction in the extent of the feature within the site. The area of this loss or degradation is very small however, namely the area of the deposits in the NNSBSR SAC from the whole SNS pipeline deposit campaign results in



 553.8m^2 which equates to <0.000015% of the estimated area of sandbank in the site. The area of the deposits in the HHW SAC is 935.4m^2 which equates to 0.00014% of the site.

The sediment to be covered by the deposits is a highly mobile sand, characterised by scour pits and bedforms, which due to its dynamic nature is likely to support an impoverished infaunal species assemblage with sparse opportunistic fauna. Therefore the effect of changing this area of sediment to a hard substratum is unlikely to significantly reduce the abundance or distribution of any structural or characterising species.

Whilst the SNS pipeline deposit campaign will cause some further change to the extent of sandy habitat in the SACs the area of seabed that will be covered by mattresses and RFUs is so small that it cannot make a significant change to the ecological functions of the site or the populations it supports.

Conclus	Conclusion - alone			
Feature	Adverse Effect on Integrity	Reason		
Sandbanks	No	There will be a change in sediment composition due to the deposition of concrete mattresses and RFUs. This will cause some change in biological assemblages and a loss in some species and communities. This habitat degradation will be limited to a very small area in the immediate vicinity of the exposed pipeline. The impact footprint is too small to affect the large scale annex 1 sandbank complex that extends across the whole site.		

4.2 Appropriate Assessment In-combination: North Norfolk Sandbanks and Saturn Reef SAC

Note: The attributes assessed in the in-combination assessment are the same as those in the assessment alone, only the attribute group titles are shown to reduce the size of the document

Attribute Group 1: Structure and Function

Attribute Group 2: Extent and Distribution



The NNSSR SAC is an area of significant industrial activity comprising oil and gas, offshore wind, carbon storage and marine aggregates. Much of this activity has resulted in the deposition of infrastructure and hard substates (i.e. rock protection and concrete mattresses) on the seabed. The SNCBs undertook an assessment of the condition of the annex sandbank feature in the NNSSR SAC and determined it was in unfavourable condition due in large part to the extent of infrastructure and seabed deposits on the sandbank feature. It is their view that the amount of infrastructure on the sandbank is of such a scale that it is causing a significant degradation in habitat extent and ecological function. This conclusion has resulted in targets requiring the restoration of the following conservation objective attributes:

- the Extent and Distribution of the feature, the distribution of biological communities and the structure of biological communities.

Because of the restore target, further degradation could take the site further away from its conservation objective.

Infrastructure within the site - Existing Baseline

The SAC selection assessment for the site did not reference the total amount of deposits or infrastructure in the SAC and there is no direct evidence from monitoring to inform the condition assessment. The assessment is instead based on a 'vulnerability assessment' which identifies whether activities are occurring in the site to which the feature is sensitive, and judgement is used to determine whether this is happening at a scale which could degrade the site's condition.

To help address this uncertainty and evaluate the level of degradation the site has experienced as well as understanding the contribution this application could make to the overall condition of the site, the Department has undertaken a review to understand how much of site is potentially affected by hard deposits. The steps of this review are outlined below:

Step 1: Designation Baseline

Oil and gas infrastructure has been located within the NNSSR SAC for many decades, and it is difficult to map the historically placed infrastructure. However, it has been reasonably assumed that the site was in an acceptable condition at its time of designation and did not require restoration. This assumption has been taken from the SNCBs SAC site selection document which was produced to support the designation of the site (JNCC 2010). It states the following:

Conservation of structure and functions - Annex 1 sandbank

- Degree of conservation of structure

The North Norfolk Sandbanks site has been graded III (average or partially degraded structure) for the conservation of structure sub-criterion.

Degree of conservation functions:

The North Norfolk Sandbanks site is graded II (good prospects)



- Overall Verdict

The overall grade for the conservation of structure and function criterion is grade C (average or reduced conservation). The prospects for this feature to maintain its functions in the future, taking into account known pressures and management of activities are good

- Restoration possibilities

The North Norfolk Sandbanks site is graded II (restoration possible with average effort)

Step 2: Deposits made between 2011 - 2016

The Department undertook a review of consented deposits between 2011 and 2016 (BEIS;2021). This identified that within the NNSSR SAC 0.047 km² of deposits were placed on the seabed.

Step 3: Deposits made between 2017 - 2025

A review of the deposits within the SAC was undertaken by Shell in 2025 as part of their Leman Golf application (SA/2121) this covered the years 2017 to 2025 and this showed that 0.797 km² have been placed on the seabed in the NNSSR SAC. The table includes deposits made between 2017 and 2022 by other operators and deposits made by Shell within the last five years. Though this doesn't show the full picture and there will be some deposits that have been missed, it represents a large proportion of the deposits. See table 5 in appendix A.

Step 4: Offshore Wind Deposits

There are no offshore wind farms within the SAC. However, the offshore wind farm Hornsea Three has an export cable which runs through the SAC. Permitted seabed disturbance including rock deposits within the SAC are 0.418 km².

Results

The site was formally designated in 2017, but was recommended to the EU in 2010, which is when the SAC site selection document (referenced above) was written. At this point in time, the SNCBs stated that the condition of the site was acceptable although some restoration of SAC habitat was advisable with average effort required. Table 2 summarises the deposits placed in the site between 2011 and present.

The review has identified that between the site being recommended for designation to the present day, approximately 1.262 km² of deposits have been place on the seabed. As discussed above this is not an exhaustive list of deposits within the SAC however it does represent a very large proportion of the permitted deposits. The cumulative area of deposits and infrastructure amounts to 0.035% of the site which is an extremely small proportion of the total extent of the feature in the SAC. It is not clear how the SNCBs have ascertained that such a small proportional area of seabed deposits could impact the functionality and biological assemblages of the SAC to an extent whereby it's condition would be considered unfavourable. However, what is clear is that the addition of a further 554m² of deposits, which equates to 0.0000154% of the feature, in addition to the 0.035% of the feature that is already affected by deposits, would make a negligible difference to the condition of the site.



Whilst the site has conservation objective targets to restore the extent of sandbank habitat and its biological assemblage, the contribution made by the RFUs and mattresses to the condition of the site and the effect it would have on the site's restoration potential would be so small as to be immaterial.

Table 2 Total deposits placed within the NNSSR SAC between 2011 and 2025

Total Deposits 2017 – 2025: OPRED Approvals	0.798 km² (List does not include every deposit within the time period)
Total Deposits 2011 -2016: OPRED Approvals	0.048 km2
Orsted Hornsea Three Export Cable – Note this footprint has been subject to SoS approved compensation measures and for the purposes of this assessment the impacts from this project do not require consideration as the effects on the network have been compensated	0.418 km2
Total Area - Deposits in NNSSR: OPRED approvals and Offshore Wind Approvals	1.262 km²
Total Area - Deposits in NNSSR: OPRED approvals and Offshore Wind Infrastructure discounted	0.845km ²
Total Proportion of NNSSR SAC effected by hard substrate deposits since 2011 (including OWF)	0.035%
Total Proportion of NNSSR SAC effected by hard substrate deposits since 2011 (excluding OWF)	0.0235%

- Area of NNSSR SAC 3,603 km²
- The figures show in table 2 are potentially overestimates as these represent the deposit quantities applied for and in practice the deposited quantities are often less than this. It should also be noted that this is not an exhaustive list of every deposit and there may be some which have not included.

Table 4: projects potentially taking place within the NNSSR SAC during 2025

Activity		Company	Disturbance (Temporary and
			permanent) km²
PL23/PL22/PL24	Mattress	Perenco	0.000554
deposits			
Hewett Decom		ENI	0.012



Wenlock Decom	Petrodec	0.075
Leman 49/27H CO ² Injection	Perenco	0.00335
Anglia Decomm	Ithaca	0.038
Ensign Decomm	Ithaca	3.92
LDP2-LDP5 Infrastructure	Chrysaor	30.3
Decomm		
Aggregate Extraction	DEME	27
(Humber 3 & 5 Areas)		
Hornsea Project Three Cable	Orsted	9.3
Installation		
Activities		
Total		70.64km ²

Conclusion		
Feature	Adverse Effect on Integrity	Reason
Sandbanks	No	Very little of the SAC has been covered by seabed deposits since its designation (<0.035%). The additional hard substratum proposed to be deposited by the project amounts to a further 0.0000154% of the site. Such a small additional contribution on top of the small existing area of the SAC affected by deposits, is unlikely to significantly alter the condition of the site. The coherence of the habitats and species which underpin the complex of sandbank habitats across the site will not be altered.

4.3 **Appropriate Assessment In-combination :** Haisborough Hammond and Winterton SAC

Note: The attributes assessed in the in-combination assessment are the same as those in the assessment alone, only the attribute group titles are shown to reduce the size of the document

Attribute Group 1: Structure and Function

Attribute Group 2: Extent and Distribution



The Haisborough Hammond Winterton SAC is an area of significant industrial activity comprising oil and gas, offshore wind, carbon storage and marine aggregates. Much of this activity has resulted in the deposition of infrastructure and hard substates (i.e. rock protection and concrete mattresses) on the seabed. The SNCBs undertook an assessment of the condition of the annex sandbank feature in the HHW SAC and determined it was in unfavourable condition in large part due to the extent of the infrastructure and deposits on the sandbank feature. It is their view that the amount of infrastructure on the sandbank is causing a degradation of habitat, and this conclusion has triggered the conservation objective targets to Restore following conservation objective attributes:

- the Extent and Distribution of the feature, the distribution of biological communities and the structure of biological communities.

Because of the restore target, further degradation will take the site further away from its conservation objective.

Infrastructure within the site - Existing Baseline

The confidence the SNCBs have in their condition assessment (which informs the restore target) is reported as 'low'. The commentary provided in support of the condition assessment states that no information is available on the total amount of deposits or infrastructure on the SAC and there is no direct evidence from monitoring to inform the condition assessment. The assessment is instead based on a 'vulnerability assessment' which identifies whether activities are occurring in the site to which the feature is sensitive, and judgement is used to determine whether this is happening at a scale which could degrade the sites condition.

To help evaluate the level of degradation the site has experienced and understand the level of contribution the drilling application could make to the overall condition of the site, the Department has undertaken a review to understand how much of site is potentially affected by hard deposits. The steps of this review are outlined below:

Step 1: Designation Baseline

Oil and gas infrastructure has been located within the HHW SAC for many decades, and it is difficult to map the historically placed infrastructure. However, it has been reasonably assumed that the site was in an acceptable condition at its time of designation and did not require restoration. This assumption has been taken from the SNCBs SAC site selection document which was produced to support the designation of the site (JNCC & NE;2010). It states the following:

Conservation of structure and functions - Annex 1 sandbank

Degree of conservation of structure

The Haisborough, Hammond and Winterton site has been graded II (structure well conserved) for the conservation of structure sub-criterion.

Degree of conservation functions:

The Haisborough, Hammond and Winterton site is graded II (good prospects)

- Overall Verdict



The overall grade for the conservation of structure and function criterion is grade B (good conservation value). The prospects for this feature to maintain its functions in the future, taking into account known pressures and management of activities are good

Restoration possibilities

As the site has been graded II for both the conservation of structure and the conservation of function sub-criteria, there is no requirement to assess the restoration possibilities sub-criterion.

Step 2: Deposits made between 2011 - 2016

The Department undertook a review of consented deposits between 2011 and 2016 (BEIS;2021). This identified that within the HHW SAC 44,299m² of deposits were placed on the seabed.

Step 3: Deposits made between 2017 - 2025

A review of the approvals made by the Department between 2017 and 2025 has shown that $23855m^2$ has been placed on the seabed in the HHW SAC. See table in appendix

Step 4: Offshore Wind Deposits

Offshore wind approvals for the Vanguard and Boreas offshore windfarms accounted for rock, used as cable protection, to be deposited in the HHW SAC. This amounted to 24000m² for the Boreas windfarm, and 50000m² for the Vanguard windfarm. Note this footprint has been subject to SoS approved compensation measures and for the purposes of this assessment the impacts from this project do not require consideration as the effects on the network have been compensated

Results

The site was formally designated in 2017, but was recommended to the EU in 2010, which is when the SAC site selection document (referenced above) was written. At this point in time, the SNCBs stated that no restoration of SAC habitat was required. Table 3 summarises the deposits placed in the site between 2011 and present.

The review has identified that between the site being recommended for designation to the present day, approximately $144052m^2$ of deposits have been place on the seabed. This amounts to 0.0098% of the site which an extremely small proportion of the total extent of the feature in the SAC. It is not clear how such a small proportional area of seabed deposits could impact the functionality and biological assemblages of the SAC to an extent whereby it's condition would be considered unfavourable. However, what is clear is that the addition of a further 935.4m² of rock protection, which equates to 0.00014% of the feature, in addition to the 0.0095% of the feature that is already affected by deposits, would make a negligible difference to the condition of the site.

Whilst the site has conservation objective targets to restore the extent of sandbank habitat and its biological assemblage, the contribution made by the RFUs and mattresses to the condition of the site and its ability to meet the restore objective would be so small as to be immaterial.

Table 3 Total deposits placed within the HHW SAC between 2011 and 2025



Total Deposits 2017 – 2025: OPRED Approvals		25753 m ²
Total Deposits 2011 -2016: OPRED Approvals ¹		44299 m²
Norfolk Boreas Offshore Windarm – assessed cable deposits ²	To be constructed – subject to SOS compensation	24000 m ²
Norfolk Vanguard Offshore Windfarm – assessed cable deposits ³	To be constructed – subject to SOS compensation	50000 m ²
Total Area – Deposits in HHW: Just OPRED approvals		70052m ²
Total Area - Deposits in HHW: OPRED approvals and Offshore Wind Approvals		144052 m²
Total Proportion of HHW effected by hard substrate deposits since 2011 (OPRED and OWF)		0.0098%
Total Proportion of HHW effected by hard substrate deposits since 2011 (OPRED approvals)		0.00477%

^{*}Area of HHW SAC 1468698947 m²

Table 5: projects potentially taking place within the HHW SAC during 2025

Project	Activity Type	Seabed
		Disturbance
Hewett 52/5-A Debris	Decommissioning	400m2
Removal		
Della P&A operations –	Well plug and abandonment from	21903m2
Positioning of jack up rig	platform	
Hewett Decommissioning -	Subsea Excavation at PL20 for the	37m2
	discharge of treated PL21 flushing	
	fluids	
Pipeline PL/23 & PL/24	Mattress and Grout bag	269m2
pipeline protection	placement over exposed pipeline	
Hewett CCS	Drill CCS appraisal well	13102m2
C48/30appraisal well		

^{*} The figures show in table 3 are potentially overestimates, as these represent the deposit quantities applied for and in practice the deposited quantities are often less than this



Project	Activity Type	Seabed Disturbance
Perenco 2025 Pipeline	Pipeline deposits	935.4m2
Deposits		
Shell Leman PL25 Pipeline	Pipeline deposits	4000m2
deposits		
Total		40489m2
Proportion of SAC		0.0027%

Conclus	Conclusion		
Feature	Adverse Effect on Integrity	Reason	
Sandbanks	No	Very little of the SAC has been covered by seabed deposits since its designation (<0.01%). The additional rock deposit proposed by the project amounts to a further 0.00014% of the site. Such a small additional contribution on top of the small existing area of the SAC affected by deposits, is unlikely to significantly alter the condition of the site. The coherence of the habitats and species which underpin the complex of sandbank habitats across the site will not be altered.	

5 Conclusion of Habitats Regulations Assessment

An assessment has been undertaken to determine whether the Perenco 2025 pipeline deposit operations could significantly impact the conservation objectives of any site within the UK National Site Network. The likelihood of a significant effect on the conservation objectives of the following site and features could not be ruled out for the following sites and features

- Haisborough Hammond and Winterton SAC Sandbanks covered by seawater all of the time
- North Norfolk sandbanks and Saturn Reef SAC Sandbanks covered by seawater all of the time

The appropriate assessment has determined that the project will have some effect on the SAC, however, it has been concluded that any effects will not be significant



The Secretary of State, therefore, concludes that the proposed project will not adversely affect the integrity of the SAC, either alone or in-combination with other plans and projects.

Annex

Application documents

Statutory Nature Conservation Body (SNCB) Consultation

JNCC & Natural England

Comment: The JNCC and Natural England agree with conclusions regarding the SNS SAC however they disagree with the assessment's conclusions regarding in-combination impacts on the North Norfolk Sandbanks and Haisborough Hammond and Winterton SAC. They agree with the conclusion that impacts from the deposits alone are very small and wouldn't adversely affect the site. They do not consider the deposit footprint to be an insignificant footprint and, as the site is already in an unfavourable condition, and the additional footprint of the proposed deposits will take the site further from its restore objective.

Response: This issue represents a recurring point of divergence between OPRED and JNCC/NE. OPRED does not consider there to be sufficient grounds, justification, or evidence to support the assertion that the placement of very small deposits of hard substratum within the NNSSR or HHW has the potential to adversely affect the integrity of the site.

The deposits in question occupy an extremely limited area of the SACs, with any effects confined to the immediate vicinity of the deposit location, an area already influenced by the presence of exposed pipeline infrastructure. The sediment at this location is characterised by relatively ubiquitous, likely impoverished sandy biotopes, which are common throughout the sites and the wider southern North Sea. OPRED sees no plausible mechanism by which these very small deposits could lead to a significant reduction in the population of any species, nor result in the loss of habitat that is unique, restricted, or of critical functional importance to any species or ecological group.

The JNCC/NE position appears to be primarily informed by their assessment that the site is in an unfavourable condition, largely attributed to existing infrastructure and hard substratum deposits. This assessment has led to the adoption of a 'restore' conservation objective for the sandbank feature. OPRED has concerns regarding the robustness of this condition assessment and holds significant reservations about its use in informing Habitats Regulations Assessments.



The condition assessment methodology referred to as a 'vulnerability assessment' is a coarse, high-level review that evaluates whether pressures are present in the site and whether its features may be sensitive to those pressures. A judgement is then made on whether these pressures are occurring at a level that could degrade the habitat sufficiently to render the site unfavourable. OPRED has engaged with JNCC on this process and it is evident that the assessments were not informed by any quantified measure of the area affected by hard substratum, nor by specific ecological evidence. Rather, they adopt a generalised view that hard substratum presence has likely resulted in some loss of sandy/soft habitats, which when combined with fishing pressures may be contributing to degradation.

While OPRED acknowledges that such vulnerability assessments can be appropriate for forming preliminary views on site condition in the absence of detailed scientific or ecological data, the high degree of uncertainty and low confidence associated with this assessment necessitate a cautious interpretation of its conclusions. These limitations have been duly considered within the HRA.

As part of the assessment, OPRED has undertaken a quantification of the total area of the SAC affected by infrastructure and hard substratum. This review has determined that over 99.95% of each site remains entirely unaffected by any hard substratum. There is no clear indication from JNCC or NE as to which physical or ecological processes, or which populations, are considered to be degraded or impaired by the proposed deposits. What is evident, however, is that the cumulative increase in hard substratum footprint resulting from the current proposal 0.0000154% or 0.00014% is so small that its effect on site integrity would be immaterial.

It is important to reiterate that 'integrity' in this context refers to the ability of the site as a whole to maintain its ecological functions and to support the habitats and species for which it has been designated. Based on the evidence and analysis presented, OPRED maintains that the proposed deposits will not compromise the integrity of the NNSSR SAC due to the small scales involved.

Comment: JNCC identified that some of the physical structure and function attributes referenced in stage 2 of the assessment do not correctly replicate those detailed in the JNCC SACO conservation advice document. JNCC advised that future HRAs should assess the attributes for each site effected separately instead of merging them together even where the features are the same

Response: The Attributes used in the assessment have been changed accordingly and future HRAs will consider the how best to assess multiple sites with similar features,

Comment: JNCC questioned whether the spatial footprint used for the SNS SAC aspect of the assessment was correct – as they feel the PL28 footprint is too large being 63m2 instead of 49m2

Response: The operator has provided 2 footprints for the SNS SAC, the worst-case footprint was adopted for the assessment

Natural England

Comment:: NE notes uncertainty regarding whether the increased height above seabed from the placement of mattresses and RFUs could adversely affect the structure and function (including sediment composition, distribution, volume, and topography) and associated marine processes of the Annex I Sandbank feature. NE also requested confirmation that the



multibeam imagery showing seabed evolution around previous concrete mattresses is relevant to PL23.

Response: Additional text has been included to address potential impacts on the physical structure and function of the sandbank feature. Multibeam imagery specific to deposits on PL23 has also been incorporated to support the assessment.

Natural England Comment: Marine Physical Processes and Data Sharing

Comment: NE advises that further evidence regarding marine physical processes is required. They also recommend that OPRED share additional data (e.g. spatial distribution, extent, elevation above seabed, type of works, temporary or permanent, location) to inform cumulative and in-combination assessments.

Response: Given the limited scale and nature of the pipeline deposits, the available information is considered sufficient for the current assessment. However, the Department is actively progressing work to strengthen the evidence base for future assessments and will continue to liaise and share relevant data with SNCBs.

Natural England Comment: Vessel Movements and Regulatory Scope

Comment: NE notes that the AA states vessel movements before and after pipeline operations are outside OPRED's regulatory scope. NE has previously advised on vessel transit through the Greater Wash SPA and was unaware that this activity may fall outside OPRED's remit.

Response: Response: While operators may assess vessel transits within SPAs, OPRED's regulatory scope varies depending on the nature of the activity. For example, survey-related vessel movements may be considered within scope. In this case, the vessel involved is engaged in ongoing operations at Perenco platforms and routinely transits to regional ports. Its movement to and from the deposit site is considered part of normal operations and would be overinclusive if assessed separately.

Natural England Comment: Conservation Objective 3 - HHW SAC

Comment: NE notes that Conservation Objective 3 for the Sandbank feature was assessed as having no LSE alone but was not included in the in-combination assessment.

Response: Conservation Objective 3: Supporting processes, was included in the LSE incombination assessment table for HHW

Comment: We advise that OPRED should include a comprehensive list of all projects considered in the in-combination LSE assessment

Response: A list of projects was not included in the in-combination LSE assessment as the primary impact is on the sandbank feature. All relevant impacts, including cumulative and incombination effects, will be fully considered at the AA stage. There is no plausible mechanism by which sabellaria reef could be affected, as deposits are placed directly on exposed pipelines with extensive seabed scour, making reef formation unlikely. Similarly, the deposits pose no meaningful risk to the Southern North Sea SAC, which is designated for harbour porpoise. Regardless of other projects in the SAC, the deposits cannot credibly impact its conservation objectives. Therefore, listing all projects was deemed unnecessary for this assessment.

Natural England Comment: Baseline vs In-Combination Projects

Comment: NE expresses concern that some projects considered part of the baseline in the AA should instead be included in the in-combination assessment, particularly those



occurring after the 2022 baseline characterisation survey. This view is based on NE's best practice guidelines and evidence standards.

Response: The guidelines referenced are primarily designed for offshore wind developments, which follow a staged application process with defined characterisation surveys to inform EIAs. In contrast, this application relates to maintenance and intervention activities for an existing asset. There is no formal characterisation survey stage; instead, the operator conducts regular seabed surveys, including multiple multibeam surveys annually. These are continuously used to inform environmental characterisation. Including all post-2022 projects in the in-combination assessment would offer limited value and lack clear rationale in this context.

References

JNCC (2020). Guidance for assessing the significance of noise disturbance against Conservation Objectives of harbour porpoise SACs.

BEIS (2021) Technical Note Review of rock and other protective material use in offshore oil and gas operations in the UK Continental Shelf

