



Offshore Petroleum Regulator
for Environment & Decommissioning

Leman 27J – Jacket Removal

Habitats Regulations Assessment (HRA)



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

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Description of the Activity

The proposed project comprises the positioning of the jack-up heavy lift vessel OBANA adjacent to the Leman 27J installation within UKCS Block 49/27 in the Southern North Sea, followed by the removal of the remaining jacket and associated infrastructure as part of the approved decommissioning programme. The installation ceased production in 2020, the topsides were removed in 2024 following well plug and abandonment activities, and the jacket currently remains in Jacket Dismantlement Interval Status pending final removal. The project is scheduled to commence no earlier than October 2026 and includes positioning the OBANA alongside the jacket using a six-anchor configuration, removal of the jacket and remaining conductors, recovery of subsea infrastructure, debris clearance activities and transport of recovered materials to shore for dismantling and waste recovery.

The project is located within both the North Norfolk Sandbanks and Saturn Reef Special Area of Conservation (SAC) and the Southern North Sea SAC. Site-specific benthic surveys undertaken in 2022 and 2025 identified extensive areas of *Sabellaria spinulosa* biogenic reef within the vicinity of the installation which qualify as Annex I reef habitat. The positioning of the OBANA represents the principal interaction with these habitats, as spudcan placement and anchor handling operations will result in temporary seabed disturbance within a limited proportion of the surveyed reef area. Detailed analysis undertaken by the operator determined that the preferred rig positioning arrangement (Option B) would minimise direct impacts on the reef while maintaining operational safety requirements. The wider survey area is also characterised by Annex I sandbank habitat associated with the North Norfolk Sandbanks and Saturn Reef SAC.

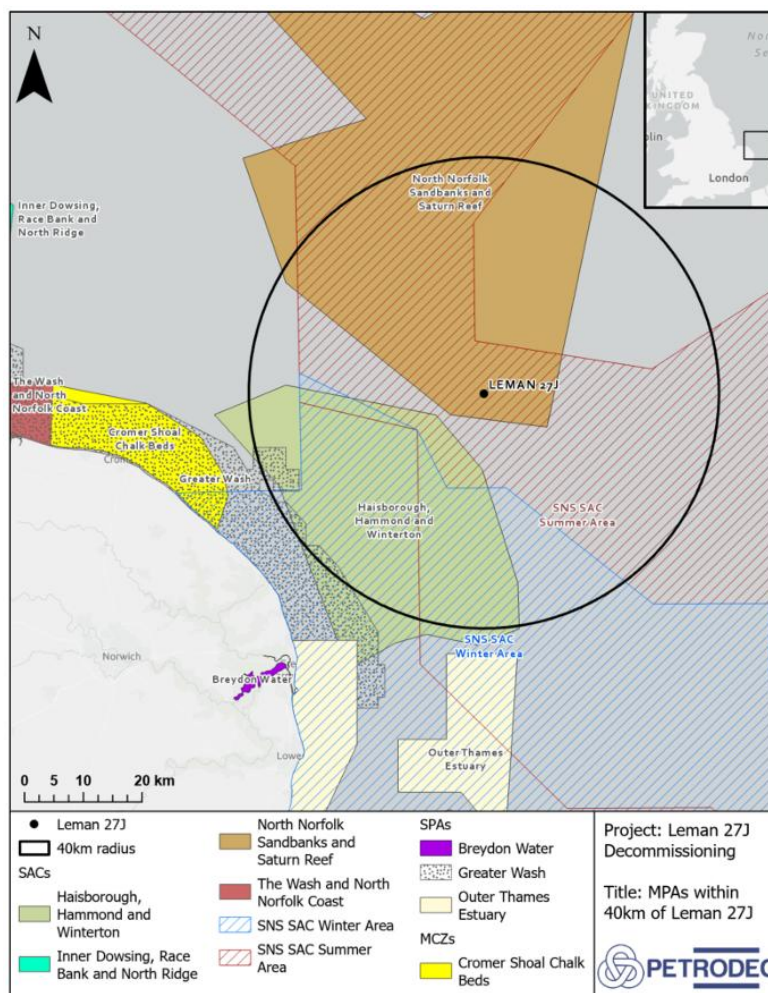
This Habitats Regulations Assessment considers whether the temporary seabed disturbance associated with vessel positioning, anchor deployment, spudcan penetration and associated decommissioning activities could adversely affect the integrity of the North Norfolk Sandbanks and Saturn Reef SAC, either alone or in combination with other plans and projects. Consideration is also given to the potential for effects on the Southern North Sea SAC through disturbance of harbour porpoise and on supporting ecological processes. The assessment draws upon the project-specific environmental surveys, reef monitoring undertaken before and after previous jack-up operations at the site, and the environmental assessments submitted in support of the Consent to Locate and Marine Licence applications.



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Location

Figure 1: Map of project location with all SACs and SPAs boundaries overlain



Timing

The campaign is scheduled for a 26 day period, starting at the earliest on 13th October 2026 and will be completed by 31st December 2026 at the latest. Weather delays may impact the schedules of the activities and the dates may vary slightly.

Protected areas

The activity is within or within close proximity to the following sites:

Table 1: SPAs and SACs in or near the activity

Southern North Sea SAC – Designated for Harbour porpoise

Conservation Objectives:

1. Harbour porpoise is a viable component of the site;
2. There is no significant disturbance of the species; and
3. The condition of supporting habitats and processes, and the availability of prey is maintained

North Norfolk Sandbanks and Saturn Reef SAC - Sandbanks and Reef

Conservation Objectives: Achieve favourable condition of Annex I Sandbanks and



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Annex I Reef by maintaining or restoring, subject to natural change:

- The extent and distribution of the qualifying habitats in the site;
- The structure and function of the qualifying habitats in the site;
- The supporting processes on which the qualifying habitats rely

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, 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 (AA) of the implications for the site in view of its conservation objectives. This document is the record of the Secretary of State's AA.

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. If the assessment concludes that a likely significant effect (LSE) cannot be ruled out, it will proceed to undertake an appropriate assessment (AA) of the implication of these effects on the site's integrity.

Stage 1: Test of Likely Significant Effects (LSE) – Is the activity likely to have a significant effect on the site's conservation objectives?

Pressures associated with the activity

Pressures scoped in: The project is considered to exert the following pressures on the environment and which **have** the potential to affect the conservation objectives:

- **Physical seabed disturbance**

The activity will physically disturb the sediment, resulting in:

Abrasive action: Equipment dragged across or placed on the seabed can damage species living on or near the surface. This action may also destabilize the substrate, hindering the colonization of certain species.

Penetration and excavation: Equipment penetrating the seabed and causing minor sediment excavation will overturn the substratum, leading to damage and mortality of species within or on the seabed. A recovery period will be required before the sediment regains its natural species assemblage. The length of this recovery period will depend on the species present and the natural level of sediment disturbance.

The operations will result in total seabed disturbance of **16,656m²** ~~26,528m²~~

- **Degradation of water or sediment quality**



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The activity will involve the discharge of fluids into the sea, some of which may contain chemicals potentially affecting localised water or sediment quality. All chemical use will be strictly regulated under the offshore chemical permitting regime

- **Change in Seabed Composition**

The activity will deposit material on the seabed which could change the composition of seabed sediments. This material consists of:

- swarf and garnet fragments from the cutting process
- naturally occurring sands and seabed sediments which have accumulated within the piles and need to be removed to allow cutting below the seabed

Cumulatively the area covered by depositional material is:

- Swarf from leg cutting: 85m²
- Sediment from inside piles: 85m²
- Swarf from internal cutting: 4m²
- Garnet 4m²
- Swarf from leg extensions 85m²

All of the deposits will fall within 2.6 metres of the centre of the pile and will accumulate within the same area. The total area affected will thus be 85m²

Pressures Scoped out of assessment:

Non-impulsive Underwater noise: Vessel operations, machinery and physical interventions will emit some level of sound into the water column. This sound is not of an intensity, scale or impulsive nature which is likely to cause significant adverse reactions in marine fauna.

3.2 LSE Assessment

Conservation Objectives

The purpose of the LSE test is to assess whether the activity could affect, in any significant way, the conservation objectives of the site. Site features and conservation objectives are taken from relevant Statutory Nature Conservation Bodies' (SNCB) conservation advice packages links to which are provided in table 2

Table 2 – sites to be assessed

Sites to be assessed in Stage 1 LSE	Features to be assessed
Southern North Sea SAC link	Harbour Porpoise
North Norfolk Sandbanks and Saturn Reef SAC link	Sandbanks Reef

LSE Assessment Table

The likely significant effect assessment is undertaken in the table 4 below. In order to maintain the assessment at a manageable size, the conservation objectives for each feature



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have been compiled together where they are deemed to have sufficient similarity that they can be assessed together as a group.



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Table 4 - 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 be assessed together as a group.

Feature		Is there likely to be a significant effect on the conservation Objectives <u>ALONE</u> ?	
Pressure	Feature	Conservation Objective	Conclusion
Southern North Sea SAC			
•Physical seabed disturbance •Degradation of water or sediment quality •Change in seabed composition	Harbour porpoise (<i>Phocoena Phocoena</i>)	1.Maintain - Harbour porpoise a viable component of the site;	No (No noise impacts) The project will not result in the injury of any harbour porpoise and there is no mechanism whereby the long-term condition or reproductive success of harbour porpoise could be significantly affected.
•Physical seabed disturbance •Degradation of water or sediment quality •Change in seabed composition	Harbour porpoise (<i>Phocoena Phocoena</i>)	2.There is no significant disturbance of the species	No. (No noise impacts) The project will not emit impulsive noise and there is no mechanism whereby the project could cause significant disturbance that could alter the distribution of porpoise in the site.



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Is there likely to be a significant effect on the conservation Objectives ALONE?			
Feature	Feature	Conservation Objective	Conclusion
•Physical seabed disturbance •Degradation of water or sediment quality •Change in seabed composition	Harbour porpoise (<i>Phocoena Phocoena</i>)	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 to adversely disrupt prey availability for harbour porpoise. The sedimentary habitats in the region are exposed to periodic physical disturbance, and the benthic and demersal communities show good recovery to physical disturbance, particularly where this disturbance does not significantly change the sediment composition/type. This will allow for the supporting habitats to rapidly recover and will not result in reductions or significant changes in the distribution of prey fish. There will be minor, localised changes in sediment composition arising from the deposition of metal swarf and garnet particles generated during leg and pile cutting activities. In addition, small volumes of sand and sediment retained within the piles will be deposited onto the adjacent seabed following internal dredging and cutting below the seabed. The quantities of deposited material are limited and will be confined to the immediate vicinity of the works. Given the high-energy, mobile sediment environment and strong tidal currents present within the Southern North Sea, the deposited material is expected to disperse, resettle and become incorporated within the surrounding seabed. As a result, no appreciable change in sediment characteristics or benthic community structure is predicted
North Norfolk Sandbank SAC			



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Is there likely to be a significant effect on the conservation Objectives ALONE?			
Feature	Pressure	Feature	Conservation Objective
•Physical seabed disturbance •Degradation of water or sediment quality •Change in seabed composition	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	Extent: No loss of extent or change in feature distribution will occur as there will be no permanent deposits or permanent alteration in sediment type Biological community: Disturbance, movement and minor excavation of seabed through the placement and movement of equipment can cause the damage and/or a reduction in infaunal and epifaunal species. However, the communities associated with the sandy habitats found in the site have a moderate to high resilience to physical disturbance and are well adapted to such pressures, thus rapid recolonisation and recovery of the species composition and abundance in impacted areas is expected. There will be no lasting significant change in biological assemblage or sediment characteristics. There will be minor, localised changes in sediment composition arising from the deposition of metal swarf and garnet particles generated during leg and pile cutting activities. In addition, small volumes of sand and sediment retained within the piles will be deposited onto the adjacent seabed following internal dredging and cutting below the seabed. The quantities of deposited material are limited and will be confined to the immediate vicinity of the works. Given the high-energy, mobile sediment environment and strong tidal currents present within the Southern North Sea, the deposited material is expected to disperse, resettle and become incorporated within the surrounding seabed. As a result, no appreciable change in sediment characteristics or benthic community structure is predicted



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Is there likely to be a significant effect on the conservation Objectives ALONE?			
Feature	Feature	Conservation Objective	Conclusion
•Physical seabed disturbance •Degradation of water or sediment quality •Change in seabed composition	Sandbanks covered by seawater all the time	3: Maintain - Supporting processes comprising water quality, sediment quality, hydrodynamic regime	No. All chemical discharges will comply fully with the Offshore Chemical Regulations and the Offshore Petroleum Activities (Oil Pollution and Control) Regulations 2005. This includes strict adherence to the conditions set out in the project's chemical permit and oil discharge permit issued by OPRED. All chemicals discharged have a HQ/OCNS rating of E or Gold which means they are of the lowest risk and there is little possibility of toxic effects All chemicals used will be assessed and registered through the Offshore Chemicals Notification System (OCNS). The chemical permit details the quantities of each chemical, and all discharges are subject to a rigorous chemical risk assessment process, reviewed by specialist assessors at CEFAS. Risk Quotients (RQ values) for all chemical discharges are low, indicating no significant toxic effects that could compromise the conservation objectives of the SAC. All chemicals discharged have a HQ/OCNS rating of E or Gold which means they are of the lowest risk and there is little possibility of toxic effects Any changes to water flow, topography, suspended sediment, or sedimentary processes will be highly localised and incapable of exerting lasting effects on the attributes of the sandbank feature at a scale that could affect the site wide conservation objectives.
•Physical seabed disturbance •Degradation of water or sediment quality •Change in seabed composition	Reefs: Biogenic Reef (Sabellaria)	1: Restore – The extent and distribution of reef in the site 2: Restore - Structure and Function of the reef in the site including the	(Some reef damaged) Evidence indicates that sabellaria reef formations could be present in the area of seabed disturbance and could be damaged by the operations. The area of the seabed disturbance is 16,656 26528m² and the area of reef that could be potentially damaged is 7,069 4,335m². The extent and distribution of Sabellaria reef is highly variable and the distribution of reef in the SAC at any



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Is there likely to be a significant effect on the conservation Objectives ALONE?			
Feature	Pressure	Conservation Objective	Conclusion
		associated biological communities and ecosystem functions	moment in time is subject to high uncertainty. However, to understand the proportionality of the impact, JNCC at the time of designation estimated that sabellaria reef extended over 1.15km ² , the area of reef impacted therefore could potentially equate to 0.361% of the feature's extent within the site.
•Physical seabed disturbance •Degradation of water or sediment quality •Change in seabed composition	Reefs: Biogenic Reef (Sabellaria)	3: Restore – The reef's supporting processes comprising water quality, supporting habitats and hydrodynamic regime	No. There will be no change in water flow, no reduction in sediment or nutrient supply and no change in sediment composition or type. Thus there will be no change in the supporting processes for either feature There will be minor, localised changes in sediment composition arising from the deposition of metal swarf and garnet particles generated during leg and pile cutting activities. In addition, small volumes of sand and sediment retained within the piles will be deposited onto the adjacent seabed following internal dredging and cutting below the seabed. The quantities of deposited material are limited and will be confined to the immediate vicinity of the works. Given the high-energy, mobile sediment environment and strong tidal currents present within the Southern North Sea, the deposited material is expected to disperse, resettle and become incorporated within the surrounding seabed. As a result, no appreciable change in sediment characteristics or benthic community structure is predicted



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3.3 LSE conclusion: Alone

It **can** be concluded that the activity is unlikely to cause a significant effect alone on the conservation objectives of the following site(s) in Table 5:

Table 5

Site	Feature	Likely significant Effect?
Southern North Sea SAC	Harbour porpoise (<i>Phocoena phocoena</i>)	N
North Norfolk Sandbanks and Saturn Reef SAC	Sandbanks covered by seawater all the time	N

It **cannot** be concluded that the activity is unlikely to cause a significant effect alone on the conservation objectives of the following site(s) in Table 6:

Table 6

Site	Feature	Likely significant Effect?
North Norfolk Sandbanks and Saturn Reef SAC	Reefs	Y

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, in-combination effects on those conservation objectives will not be further assessed in the LSE stage as it will be assessed in the AA.

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 being installed are no longer considered within the in-combination assessment. These projects form part of the site's new baseline and the cumulative effect of further activities will be considered by the Habitats Regulations Assessment 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.



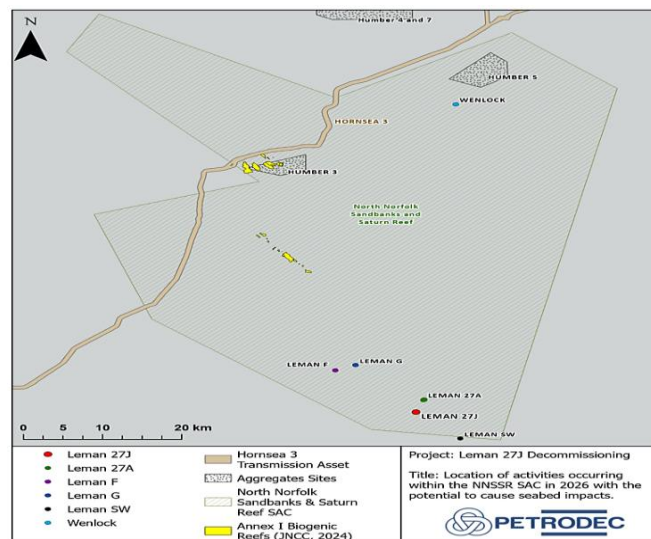
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Other plans or projects occurring in the Site

Table 7: Planned activities for 2026 occurring within the North Norfolk Sandbanks and Saturn Reef SAC

Infrastructure Name	Owner/Operator	Activity Description	Date of Activity*	Source of Seabed Impact
Leman 27J	PUK	Jacket Removal	Oct 2026	Positioning of rig and removal of jacket
Leman 27J	PUK	Post decom debris and pipeline section removal	2026/2027	Removal of seabed debris and pipeline sections
Leman 27A	PUK	Pre-decom debris removal	2027	Removal of seabed debris
Leman 27A	PUK	Installation Removal	2027/2028	Positioning of rig and removal of installation
Leman Southwest	PUK	Subsea well Decommissioning	Sept 2026 (completed)	Positioning of rig
Wenlock	Energiean	Installation Removal	Oct 2026	Positioning of rig and removal of installation
Leman F & G	Shell	Installation Decommissioning	Before 2028	Positioning of rig and removal of installation
Humber 3	Various	Marine Aggregate Extraction Area	Recurring activity	Removal of aggregates form seabed
Humber 5	Various	Marine Aggregate Extraction Area	Recurring activity	Removal of aggregates form seabed
Hornsea 3 Cable	Ørsted	Cable laying	2026 to 2027	Burying cable and depositing dredged materials.

Fig 2: Location of activities occurring in 2026 within the SAC, which have the potential to cause impacts on the seabed





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Could any other activity <u>In – combination</u> with the project likely have a significant effect on the conservation objective?		
Feature	Conservation Objective	Conclusion
Southern North Sea SAC		
<i>Harbour porpoise (Phocoena Phocoena)</i>	1. Maintain - Harbour porpoise a viable component of the site; .	(No Impulsive sound emitted) The EAJ has undertaken a review of activities and projects occurring in the SNS SAC and 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 project are unlikely to significantly affect the conservation objectives of the site even when considered in-combination with other projects ongoing in the SAC
<i>Harbour porpoise (Phocoena Phocoena)</i>	2. There is no significant disturbance of the species	(No Impulsive sound emitted) A significant number of activities are expected to occur in the SNS SAC throughout the year. The management of disturbance and displacement associated with the impulsive noise generated by these projects is being actively managed through the cross-industry developers coordination forum (DCF). This 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.



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Could any other activity <u>In – combination</u> with the project likely have a significant effect on the conservation objective?		
Feature	Conservation Objective	Conclusion
Harbour porpoise (<i>Phocoena Phocoena</i>)	3.Maintain - The condition of supporting habitats and processes, and the availability of prey is maintained	(No Impulsive sound emitted) 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 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 Norfolk 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	Although the sandbanks feature within the SAC is currently in unfavourable condition and subject to restore objectives, primarily due to existing infrastructure that has caused impacts to the extent and distribution of habitat, the proposed activity will not result in a significant effect on the conservation objectives when considered in-combination with other plans and projects. The activity involves temporary seabed disturbance and minor excavation, in addition to the deposition of some cutting media and sediment in the several metres of seabed surrounding each leg. The disturbance and small scale deposition will not cause any permanent loss of habitat extent or significant alteration in sediment type. The physical pressures are short-term, localized, and reversible. The biological communities associated with sandy habitats exhibit moderate to high resilience to physical disturbance and are well adapted to such pressures, enabling rapid recolonisation and recovery of species composition and abundance following disturbance. Consequently, there will be no lasting change in sediment characteristics or biological assemblage.



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Could any other activity <u>In – combination</u> with the project likely have a significant effect on the conservation objective?		
Feature	Conservation Objective	Conclusion
		While other plans and projects within the SAC may exert similar temporary pressures, these do not introduce additional permanent habitat loss beyond what is already present due to existing infrastructure. The cumulative effect of these activities remains small in scale and temporary and will not compromise the ability to achieve the site's conservation objectives or restoration targets. Therefore, the proposed activity, in-combination with other plans and projects, will not have a significant adverse effect on the integrity of the sandbanks feature or its conservation objectives. Whilst other activities contribute to areas of sandbank loss and modification, the incremental contribution from this project is so minor that it would not give rise to any additional change of ecological relevance at the site level. The cumulative effects remain highly localised and do not affect the overall extent, distribution, structure or function of the sandbanks feature across the SAC and there would be no meaningful or significant cumulative effect on the extent or distribution of sandbanks habitat, nor on the sedimentary structure, topography or characteristic biological communities of the feature at SAC scale.
Sandbanks covered by seawater all the time	3: Maintain - Supporting processes comprising water quality, sediment quality, hydrodynamic regime	No. Any potential changes to water flow, topography, suspended sediment, or sedimentary processes arising from the project will be highly localized and temporary. These changes lack the spatial extent and persistence necessary to influence the physical or ecological attributes of the sandbank feature at a scale relevant to site-wide conservation objectives. When considered in



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Could any other activity <u>In – combination</u> with the project likely have a significant effect on the conservation objective?		
Feature	Conservation Objective	Conclusion
		combination with other plans or projects, the cumulative magnitude of such changes remains negligible because: The localized nature of the effects means they do not interact meaningfully with similar pressures from other sources. There is no potential for these minor, short-lived alterations to propagate or accumulate in a way that could compromise the conservation objectives of the sandbank habitat.
Reefs: Biogenic Reef (Sabellaria)	1: Restore – The extent and distribution of reef in the site 2: Restore - Structure and Function of the reef in the site including the associated biological communities and ecosystem functions	(Reef found in project area) Projects which cause seabed disturbance, alterations in seabed type and abrasion are considered as having the potential to affect Sabellaria reef. A review of recently submitted applications, detailed within the EAJ, shows there to be several other projects potentially occurring in the SAC during the same year which are likely to cause seabed disturbance
Reefs: Biogenic Reef (Sabellaria)	3: Restore – The reef's supporting processes comprising water quality, supporting habitats and hydrodynamic regime	Reef is found in project area The localized and short-term nature of the effects means they do not interact meaningfully with pressures from other sources to propagate or accumulate in a way that could alter any of the supporting processes necessary for the management of reef in the site. The removal of the Ieman 27 jacket



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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(s) in Table 7:

Site	Feature	LSE?
Southern North Sea SAC	Harbour Porpoise	N
North Norfolk Sandbanks and Saturn Reef SAC	Sandbanks	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(s) in Table 8 (for example):

Site	Feature	Conservation Objective	LSE?
North Norfolk Sandbanks and Saturn Reef SAC	Reefs	1: Restore – The extent and distribution of reef in the site 2: Restore - Structure and Function of the reef in the site including the associated biological communities and ecosystem functions 3: Maintain – Supporting processes	Y

As Stage 1 of the assessment has concluded that there is a likely significant effect on the conservation objectives on the sites listed in the table above. The assessment will proceed to the Stage 2, the Appropriate Assessment.

Stage 2: Appropriate Assessment – Could the activity adversely affect the integrity of a site?

Following the LSE assessment (Stage 1) the Secretary of State 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 AA, the SNCBs provide supplementary advice on conservation objectives. The “**integrity attributes**” are fundamental to the supplementary advice on conservation objectives. These biological, physical and chemical properties together describe the ecological



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requirements of the site and the conservation objectives. To determine whether an activity may impact the site's integrity, an AA will need to consider whether the activity may impair or degrade any of these attributes.

Attribute Targets

Each attribute has a target of maintain/minimise or restore, 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.

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

Each attribute has a target of maintain/minimise or restore, 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.

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

Appropriate Assessment Alone: North Norfolk Sandbanks and Saturn Reef SAC

Feature assessed in AA: Reefs (Biogenic – Sabellaria)

Pressures to be assessed in AA: Physical Seabed Disturbance

The conservation advice identifies the following attributes as requiring restoration: extent and distribution, physical structure (topography and surface complexity), biological structure (key and influential species), biological structure (characteristic communities) and supporting ecological and physical processes. The proposed activities have the potential to affect these attributes through physical seabed disturbance associated with deployment of the OBANA spudcans, anchors and anchor lines during positioning of the vessel adjacent to the Leman 27J jacket

Table 9: Feature Attribute group 1

Feature: Reef (Sabellaria)	
Pressure(s) to be assessed: Physical Seabed Disturbance	
Attribute Group 1 – Extent, Structure and Function	
Attributes to be assessed	Assessment summary*



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Feature	Site	Attribute	Attribute Target	Magnitude of Impact
Reef	NSSSR	Attribute: Extent and distribution	Restore	
Reef	NSSSR	Physical structure - topography and surface complexity of the feature	Restore	
Reef	NSSSR	Biological structure: Key and influential species	Restore	
Reef	NSSSR	Biological Structure: Characteristic communities	Restore	
Reef	NSSSR	Function – Ecological and Physical process	Restore	

Extent and Distribution

The conservation advice seeks restoration of the extent and distribution of Annex I reef throughout the SAC. *Sabellaria spinulosa* is a tube-building polychaete worm that constructs rigid tubes from sand grains bound together using mucus secretions. The species may occur as individual worms, crusts or larger elevated formations that meet the definition of biogenic reef. Whilst *Sabellaria* in its various forms may occur throughout the SAC, extensive reef structures typically develop in locations where environmental conditions favour the accumulation and persistence of dense aggregations of live and dead tubes.

Areas identified and mapped as reef are rarely uniform in their coverage. Within mapped reef polygons, the distribution of reef structures is often highly variable, with a mosaic of reef structures, crusts and areas of un-colonised sediment. Similarly, reef boundaries are typically diffuse rather than often transition gradually into surrounding sediments. The feature is also highly dynamic, with reef structures continually undergoing natural cycles of erosion, degradation and reformation. Consequently, both the extent and distribution of reef within the SAC may vary over time and estimates of total reef extent are inherently uncertain.

The reef structures surrounding Leman 27J form an extensive feature that occurs throughout the surveyed area and may extend beyond the survey boundary. The extent and distribution of reef recorded during the 2025 survey was broadly consistent with that recorded during the 2022 survey, indicating that the reef represents a persistent component of the SAC rather than a short-lived aggregation. The reef present around Leman 27J therefore constitutes an important component of the wider Annex I reef resource within the SAC. Furthermore, the installation is located within, or immediately adjacent to, an area identified by the MMO as an area to be managed for reef due to the presence of reef-forming *Sabellaria spinulosa*.

The honeycomb structures that characterise *Sabellaria* reef are formed from sand tubes bound together using mucus secretions and are therefore susceptible to physical damage from contact with heavy equipment. Interaction with spudcans, anchors and anchor chains is expected to result in localised crushing, abrasion and break-up of reef structures and may, in some instances, remove reef material entirely within the direct footprint of the activity. However, *Sabellaria* reef naturally occurs within a physically dynamic environment and is



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adapted to periodic disturbance associated with storms, sediment transport and seabed mobility. Consequently, damaged reef structures are capable of re-establishing once the pressures have been removed i.e. is not re-occurring and suitable environmental conditions and a viable larval supply remain available.

Area of Impact

The Leman 27J removal operation will result in a degree of unavoidable physical interaction with the reef surrounding the jacket.

The operator has clarified that the seabed disturbance figures presented in the original application represented a conservative overestimation of the potential impact. The initial estimates were based on a scenario in which anchor chains were dragged across the seabed during the rig move from the stand-off location to the final drilling position. The operator has confirmed that, in practice, the OBANA winches will pull in the anchor chains during the move, lifting them clear of the seabed and thereby avoiding contact with the substrate. Once the rig is in its final position, slack will be introduced into the chains, allowing them to settle back onto the seabed. As a result, the predicted seabed disturbance has been significantly reduced and is considered to represent a more realistic worst-case estimate of the activity.

The interaction will cause physical disturbance and abrasion of the seabed due to the following operations:

- Rig positioning: Anchor anchor chain spud can placement — 25,677m²
- External excavation (contingency) — 452m²
- Jacket pile removal — 54.28m²
- Conductor removal — 5.08m²
- Stabbing pile removal — 8.07m²
- Debris removal — 99.5m²
- ROV, tools and basket placement — 232m²

Activity	Total Seabed Area Disturbed (m ²)	Total Seabed Disturbance (m ³)	Fate of Disturbed Sediments
Positioning of OBANA (Spud Cans) & Use of Anchors *	25,677 15,627	7,595 6,590	Suspended into water column & deposited on seabed
Swarf generated from cutting of the jacket leg extensions	85	0.0074	
Swarf generated from external cutting of the jacket legs	85	0.0036	
External seabed excavation (contingency)	452	300	
Deposition of sediments from jacket pile dredging	985	21.12	
Garnet discharged during internal pile cutting	4	3.92	
Swarf generated from internal cutting of the piles	4	0.0004	
Removal of jacket piles	54.28	13.6	
Removal of conductors	5.08	0.35	
Removal of drilling template	0	6.6	
Deposition of sediment from stabbing pile dredging	0	4.08	
Removal of stabbing piles	8.07	5.44	
Removal of seabed debris	99.5	40.62	
Use of ROV, subsea basket, and tools/equipment	232	23.2	
Total Seabed Disturbance	26,528 16,656	8,010 7,009	

* Anchor plan Option B:

* Worst case impact for finalised anchor plan



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Table 10: Seabed Impact Areas

Total Area of seabed disturbance:	16,656m²
Total Area of seabed disturbance overlapping with potential Sabellaria Reef	4,335m²
% of reef within the site damaged (based indicative designation baseline estimates)	0.36%
% of reef in survey area damaged	0.8%

The preferred vessel positioning configuration (Option B) has been selected to minimise reef interaction whilst maintaining operational safety and is predicted to directly affect approximately 4,335 m² of reef habitat. An update to the application has confirmed that option B will be the final rig location and that the other options discussed in the application have been ruled out, thus removing any uncertainty as the worst case scenario. This represents approximately 0.36% of the estimated 1.15 km² reef extent cited by JNCC at the time of designation, although there is inherent uncertainty associated with quantifying the total extent of this dynamic feature. The affected area also represents approximately 0.77%~~1.3%~~ of the reef mapped within the survey area. The disturbance therefore affects only a small proportion of the available reef resource both locally and at the SAC scale.

Physical Structure: Topography and Surface Complexity

The conservation advice identifies the need to restore the physical structure of the reef, including its topography and surface complexity. Physical contact from spudcans, anchors and anchor lines is likely to temporarily flatten, compress or disturb reef material within the direct footprint of the activity. However, the affected area is highly localised to the immediate area of contact between the seabed and the spudcans, anchors and chains. Importantly, the disturbance will cease on completion of the jacket removal campaign and the seabed will subsequently be free to recover unimpeded.

The EAJ notes that the reefs present at Leman 27J are characterised by low to medium "reefiness" and occur within a naturally dynamic environment subject to strong tidal currents and significant natural physical disturbance.

The application presents evidence from the previous ERDA jack-up campaign undertaken at the site in 2024. During that campaign, approximately 7,354 m² of Sabellaria reef was estimated to have been affected by spud can placement and anchoring activities. Comparative reef surveys undertaken before and after the campaign demonstrated some localised direct damage to reef likely and whilst some changes in the wider reef boundaries were observed, these are considered likely to reflect natural variation in reef extent and uncertainty associated with reef delineation rather than deterioration resulting from the activities. The core reef habitat remained present and there was no evidence of significant long-term adverse effects on reef structure, function or integrity attributable to the jack-up operations.

The proposed jacket removal campaign using the OBANA is expected to result in a comparable level of seabed disturbance over broadly the same area as that affected during the ERDA campaign. As the previous disturbance did not result in any detectable long-term



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deterioration of the reef system, there is a high degree of confidence that the proposed works will not adversely affect the extent, distribution, structure or function of the Sabellaria reef complex, and that any impacts will be localised, temporary and recoverable.

This evidence indicates that reef structure is capable of recovering following localised operational disturbance and supports the conclusion that temporary changes to reef topography and surface complexity are unlikely to result in a significant change in the extent or distribution of reef within the surrounding area. Whilst some localised flattening, crumbling and scouring of reef structure may occur within the direct footprint of the activity, the overall boundaries and distribution of mapped reef patches are expected to remain largely unchanged.

The operator has taken considerable measures to reduce the impacts by repositioning the OBANA and its anchors to an optimum position to avoid some areas of reef. They have also reduced the number of anchors normally deployed from 8 to 6 in a effort to reduce the seabed footprint.

Biological Structure: Key and Influential Species and Characteristic Communities

The key species underpinning the Annex I reef feature is *Sabellaria spinulosa*. Physical disturbance may remove or damage individual worms and reef tubes within the direct footprint of the activity. However, substantial areas of reef will remain unaffected and continue to provide a source population for recolonisation. The EAJ describes *S. spinulosa* as an r-selected species with rapid growth rates, high reproductive output and a widespread larval supply. Published evidence cited within the EAJ demonstrates recovery of disturbed reef areas within months to years where surrounding reef remains intact and suitable environmental conditions persist.

There may therefore be temporary localised changes in the distribution and abundance of species associated with the Sabellaria reef whilst disturbed areas recover. However, these species are expected to recolonise affected areas as reef structure re-establishes. In the interim, the characteristic reef community will continue to be supported by the extensive area of adjacent undisturbed reef habitat that will remain available throughout the SAC.

Function: Ecological and Physical Processes

Successful recovery of disturbed reef habitat is dependent upon the continued availability of the ecological and physical processes that support reef formation and persistence. These include hydrodynamic conditions, sediment supply, nutrient availability, larval recruitment and the availability of suitable substrate for settlement.

The proposed works are not expected to alter seabed composition to a level that would preclude reef formation, a recolonisation may recommence as soon as the OBANA has departed the site. The works will not modify tidal currents, alter sediment transport processes or introduce barriers to larval settlement. Suspended sediments generated during positioning activities are expected to disperse rapidly within the naturally dynamic Southern North Sea environment.

Sabellaria reefs are naturally tolerant of sediment mobilisation and commonly occur within areas characterised by strong currents and naturally elevated suspended sediment



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concentrations. The ecological and physical processes that support reef persistence, recruitment and recovery will therefore remain available following completion of the works.

Conclusion

Where physical disturbance results in severe damage to reef structures, there will be a temporary reduction in the extent of reef present within the affected footprint. However, evidence presented within the EAJ, including reef survey data collected before and after the ERDA jack-up campaign undertaken during topside removal operations, demonstrates that Sabellaria reef is capable of substantial recovery following localised physical disturbance.

The disturbance associated with the Leman 27J jacket removal campaign is therefore expected to be reversible, with recovery anticipated to commence shortly after completion of operations and removal of the OBANA. The vessel will remain on location for approximately 26 days and no permanent structures, rock placement, mattresses, scour protection or other deposits are proposed that would inhibit recolonisation of disturbed areas.

Table 11: Feature Attribute Group 2

Feature: Reef – (Sabellaria)			
Attribute Group 2 – Supporting Processes			
Attributes to be assessed			
Feature	Attribute	Attribute Target	Magnitude of impact
Reef	Hydrodynamic regime	Maintain	
Reef	Supporting habitats	Restore	
Reef	Water Quality	Maintain	

Hydrodynamic Regime

The conservation advice identifies the hydrodynamic regime as an important supporting process for the reef feature. Hydrodynamic conditions influence sediment transport, suspended sediment concentrations, larval dispersal and the availability of suitable conditions for reef establishment and persistence. The proposed works involve temporary vessel positioning, seabed disturbance associated with anchors, spudcans and infrastructure removal, and limited sediment resuspension. Whilst these activities will cause localised and short-term disturbance to the seabed, they will not alter tidal currents, wave energy, water movement patterns or wider sediment transport processes operating within the SAC.

The disturbance footprint is small relative to the size of the SAC and all operational equipment will be removed at the completion of the campaign. No permanent structures, deposits or seabed modifications are proposed that could alter local hydrodynamic conditions. Consequently, the hydrodynamic processes that support the formation, persistence and recovery of Sabellaria reef will remain unchanged following completion of the works. The project is therefore not expected to adversely affect this attribute.



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Supporting Habitats

The conservation advice identifies the importance of maintaining and restoring the habitats that support the reef feature. Supporting habitats include the surrounding sedimentary environments that provide suitable substrate and environmental conditions for settlement, recruitment and expansion of *Sabellaria spinulosa*.

The project will result in temporary disturbance to a limited area of existing reef and surrounding sediments. However, the disturbance is localised, reversible and does not involve the permanent removal or alteration of supporting habitat. No materials will be introduced that would prevent future settlement of *Sabellaria* and no long-term changes to seabed composition are anticipated.

Water Quality

Water quality is an important supporting process for *Sabellaria* reef and influences larval settlement, growth, survival and the ecological communities associated with the feature. Potential effects on water quality from the project are limited to temporary and localised increases in suspended sediment concentrations generated during seabed disturbance activities and the discharge of a small amount of chemicals. These are chemicals just relate to the operation of rig and are rig wash and jacking grease, both have very low toxicity or risk when discharged into the marine environment.

Any sediment mobilisation will be short-lived and will occur within a naturally dynamic environment characterised by strong tidal currents, mobile sediments and naturally elevated suspended sediment concentrations. *Sabellaria* reefs occur naturally within these conditions and are adapted to periodic episodes of sediment disturbance and sediment transport. The project will not result in the discharge of significant contaminant loads, persistent increases in turbidity, oxygen depletion, nutrient enrichment or any other long-term deterioration in water quality conditions.

Conclusion

The proposed works will not result in any meaningful alteration of the hydrodynamic regime, supporting habitats or water quality conditions upon which the *Sabellaria* reef feature depends. Whilst temporary and localised seabed disturbance will occur during the campaign, the environmental conditions necessary to support reef persistence, recruitment and recovery will remain available throughout and following completion of the works.

Appropriate Assessment Conclusion: Alone

Feature	Adverse Effect on Site Integrity?	Summary of Reason
Reefs	No	Whilst the project will result in some localised damage to <i>Sabellaria spinulosa</i> reef within the direct footprint of the activities, the operator has selected the preferred vessel positioning arrangement to minimise interaction



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		with reef habitat as far as reasonably practicable. There is reasonable confidence that disturbed areas of reef will recover through natural recolonisation and reef re-establishment following completion of the works. Furthermore, monitoring undertaken in relation to previous jack-up operations at Leman 27J provides good evidence that the wider reef resource is resilient to localised disturbance and that the overall extent, distribution and integrity of the reef feature are likely to remain substantially unchanged. Therefore the project is not expected to result in a permanent loss or fragmentation of the reef resource
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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 (instead of listed each attribute again) to reduce the size of the document

Table 12: Feature Attribute Group 1

Feature: Reefs
Pressure: Seabed Disturbance
Attribute Group 1: Extent, Structure and Function

The assessment has considered the potential for the proposed works to act in combination with other plans and projects to affect the extent, structure and function of the Annex I *Sabellaria spinulosa* reef feature within the North Norfolk Sandbanks and Saturn Reef SAC. The EAJ identifies a number of other relevant activities occurring within the SAC, including offshore decommissioning activities associated with the Leman 27A, Leman Southwest, Wenlock and Leman F & G fields, aggregate extraction activities within the Humber 3 and Humber 5 aggregate areas and installation of the Hornsea 3 export cable. These activities have the potential to result in varying degrees of temporary seabed disturbance and therefore represent the principal sources of potential in-combination effects relevant to the reef feature. These are outlined in table 13.

The EAJ presents a numerical cumulative impact assessment for *Sabellaria* reef within the SAC however these figures are derived using precautionary assumptions regarding the proportion of individual project disturbance footprints that overlap reef habitat. These assumptions are broad and include, for example, assumptions regarding the proportion of offshore decommissioning footprints affecting reef habitat and the extent of reef potentially present within other development corridors. The EAJ also acknowledges that the extent and distribution of *Sabellaria* reef within the SAC is also highly variable, patchy and dynamic, and that reef boundaries can change naturally over time. For the purposes of this habitats regulation assessment it has not been deemed appropriate consider that the numerical estimates presented provide a sufficiently reliable basis upon which meaningful cumulative reef impact calculations can be derived. The reason for this is that whilst the total seabed disturbance associated with the identified plans and projects can be estimated, there is no



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reliable means of determining the precise proportion of those disturbance footprints that coincide with Annex I reef habitat. It is therefore not possible to robustly quantify the total cumulative area of reef affected across the SAC. The vast majority of the seabed affected by the identified projects does not comprise *Sabellaria* reef habitat. For example, some of these projects in reality had no estimated reef impact. Furthermore, the reef resource itself is widely distributed across the SAC and occurs as a naturally dynamic mosaic of reef structures, crusts and small patches which undergoes continual natural cycles of loss and re-establishment. It is not possible to quantify how much reef habitat is present in the SAC at any moment in time.

In considering the potential for in-combination effects, this assessment has therefore placed greater weight on the nature, scale and reversibility of the impacts than on the numerical impact estimates presented in the EAJ. The direct impact associated with the proposed works is limited to a small localised area of reef surrounding the Leman 27J installation. The disturbance is temporary, no permanent infrastructure or deposits will remain in place following completion of the works, and the environmental conditions required to support recovery will remain available. Evidence presented within the EAJ, including the comparison of reef surveys undertaken before and after the 2024 ERDA jack-up operations, indicates that the wider reef system surrounding Leman 27J remained present and functional following previous disturbance events and provides confidence that localised impacts are recoverable.

It is recognised that other projects within the SAC may also result in localised areas of temporary physical disturbance. However, there is no evidence that the combined effect of these activities would result in the widespread loss, fragmentation or deterioration of the reef resource, nor that they would prevent the restoration of the extent and distribution of the feature, undermine the viability of reef-forming *Sabellaria spinulosa* populations, adversely affect characteristic reef communities or impair the ecological processes that support reef persistence and recovery. Extensive areas of unaffected reef habitat will remain available throughout the SAC to support recolonisation and recovery.

Table 13: Total area of each activity occurring within the SAC, and the seabed impact area of these activities.



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Activity	Sector	Date of Activity	Activity Footprint within SAC (km ²) ¹	Area of seabed impact from activities (km ²) ²
Leman 27J jacket removal	Oil & Gas	Oct 2026	1	0.025
Leman 27J post decom works	Oil & Gas	2026/2027	0.196	0.0027
Leman 27A pre-decom works	Oil & Gas	2027	0.196	0.0005
Leman 27A installation removal	Oil & Gas	2027/2028	1	0.025
Leman Southwest	Oil & Gas	Sept 2026 (completed)	0.13 ³	0.0025
Wenlock	Oil & Gas	Oct 2026	1	0.025
Leman F & G	Oil & Gas	Before 2028	2	0.055
Humber 3	Dredging	Ongoing	17.2	4.3
Humber 5	Dredging	Ongoing	28.3	7.1
Hornsea 3	Windfarm	2026 to 2027	27.5	0.3
Cumulative Totals			78.39	11.84
Leman 27J as % of cumulative total	-	-	1.3	0.2

1: Decommissioning is 500m zone, Dredging is zoned area, windfarm cable is designated corridor in SAC (18.5km long x 1.5km wide).

2: Average footprint of a Jackup rig and anchors; Based on BMAPA (2025) – up to 25% of area may be active in a given year; assumed 50m corridor of impact along pipeline route. Leman F&G area reported in DP EA.

Table 14: Feature Attribute Group 2

Feature Reefs (Sabellaria)
Pressure: Seabed Disturbance
Attribute Group 2: Supporting Processes

This section of the assessment considers whether the proposed works could act in combination with other plans or projects within the North Norfolk Sandbanks and Saturn Reef SAC to affect the hydrodynamic processes that support the Annex I reef feature. The EAJ identifies a number of projects occurring within the SAC, including offshore decommissioning activities, aggregate extraction areas and the Hornsea 3 export cable installation. However, the Leman 27J jacket removal campaign is temporary in nature, lasting approximately 26 days, and does not involve the installation of any permanent infrastructure capable of altering tidal currents, wave energy or sediment transport pathways. The disturbance footprint associated with the project is limited to localised seabed interactions arising from vessel positioning and removal operations. Upon completion of the works all equipment will be removed from site and no lasting modification of hydrodynamic conditions will occur.

The North Norfolk Sandbanks and Saturn Reef SAC is a naturally dynamic system characterised by strong tidal currents and ongoing sediment mobility. Whilst other activities within the SAC may also result in localised and temporary seabed disturbance, there is no evidence that the cumulative effect of these activities would result in alteration of the hydrodynamic regime at a scale capable of affecting reef establishment, persistence or recovery. The ecological and physical processes that support the reef feature will therefore remain available and functional.



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Supporting Habitats

EAJ identifies cumulative activities within the SAC including installation decommissioning projects, debris removal works, aggregate extraction and cable installation activities. The combined seabed impact footprint associated with all identified activities was estimated by the operator to represent approximately 0.33% of the SAC area. The jacket removal project at Leman 27J impacts up to 0.0007% of the total SAC area.

Whilst some temporary disturbance of reef and supporting sediment habitats will occur, the impact is highly dispersed across the SAC and affects only a very small proportion of the habitat resource available. Significant areas of suitable supporting habitat will remain unaffected by the proposed works and by other identified activities. Furthermore, the project does not result in permanent habitat conversion, permanent habitat loss or the introduction of structures that would prevent future settlement of reef-forming species.

Water Quality

Potential in-combination effects on water quality could arise through the resuspension of sediments, release of naturally occurring sediment-bound contaminants, vessel discharges and operational chemical use associated with multiple activities within the SAC. However, the EAJ notes that the Southern North Sea is a high-energy environment characterised by strong tidal mixing and naturally elevated suspended sediment concentrations. Sediment plumes generated by the proposed works are expected to be localised and short-lived, with rapid dilution and dispersion occurring following release. Baseline sediment chemistry data showed no widespread contamination issues within the survey area and contaminant concentrations were generally below aligned with regional norms.

The operational chemical discharges associated with the project are limited to routine rig chemicals assessed under the Offshore Chemicals Regulations and deck drainage water managed through established control measures. Other identified activities within the SAC are similarly regulated through existing environmental permitting regimes. Given the small scale of the discharges, their temporary nature, and the high assimilative capacity of the receiving environment, there is no credible mechanism by which the project, either alone or in combination with other identified activities, would result in a deterioration of water quality capable of affecting the reef feature or its recovery potential.



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Appropriate Assessment Conclusion: In-combination

Feature	Adverse Effect on Site Integrity?	Summary of Reason
Reefs	No	Although other activities within the SAC may also result in temporary seabed disturbance, the extent of Sabellaria reef affected cannot be meaningfully quantified due to the patchy and dynamic nature of the feature. The proposed impact is localised, temporary and recoverable, and there is no evidence that the combined effect of identified activities would result in widespread loss, fragmentation or deterioration of the reef resource or prevent recovery of the feature

Conclusion of Habitats Regulations Assessment

An assessment has been undertaken to determine whether the proposed Leman 27J Jacket Removal may have a likely significant effect on the conservation objectives of sites within the UK National Site Network.

The potential for likely significant effects could not be excluded for the following site and feature:

- North Norfolk Sandbanks and Saturn Reef SAC – Reefs (Biogenic Sabellaria spinulosa reef)

Following appropriate assessment, and having considered the nature, scale and duration of the proposed activities, the Secretary of State has concluded that the project will not adversely affect the integrity of the identified SAC, either alone or in-combination with other relevant plans and projects.

Appendix

Application documents

Statutory Nature Conservation Body (SNCB) Consultation

SNCB consulted: JNCC – Response received 07/10/26

SNCB Comment: Permanent deposits

JNCC noted that the HRA did not assess the permanent deposition of garnet, swarf and dredged sediments associated with the works. Whilst JNCC did not anticipate significant impacts from these deposits due to their highly localised nature, they considered that permanent deposits should nevertheless be reflected within the assessment

OPRED Response: The HRA has been updated to include permanent deposits

SNCB Comment: Assessment should consider the worst-case anchor scenario

JNCC considered that the HRA should assess the worst-case rig positioning scenario. As the operator had not committed to Option B, JNCC advised that the larger reef footprint



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associated with Option A should be assessed to enable a meaningful assessment of the full potential environmental effects of the project

OPRED Response: The operator has now confirmed that only option B will be employed i.e. using 6 anchors, it therefore represents the worst-case scenario upon which to base the assessment.

SNCB Comment: Significant reef impacts and uncertainty over recovery

JNCC disagreed with the conclusion of no adverse effect on integrity for the Annex I reef feature of the North Norfolk Sandbanks and Saturn Reef SAC. JNCC considered that the area of Sabellaria reef potentially affected was significant and advised that there remains uncertainty regarding the recoverability and reversibility of impacts at this scale, such that a precautionary approach should be applied

OPRED Response: The operator has subsequently refined the anchoring methodology. The updated application indicates that, during movement from the stand-off location to the final working position, the anchor chains will be lifted clear of the seabed as tension is applied through the OBANA winching system. As a result, the anchor chains will not be dragged across the seabed, substantially reducing the extent of seabed abrasion previously assumed within the assessment. Consequently, the actual area of reef affected is expected to be smaller than the area initially assessed and these seabed disturbance figures have been revised down.

OPRED does not agree with the JNCC view that there is substantial uncertainty regarding the recoverability of impacts associated with jack-up vessel placement at this location. Comparable anchoring and jack-up activities were undertaken during the 2024 ERDA campaign, resulting in a similar scale of disturbance to the reef feature. Post-activity survey data demonstrated that the Annex I reef remained present and that there was no evidence of significant deterioration in the extent, distribution or appearance of the wider reef attributable to those activities, beyond very localised areas. This provides site-specific evidence that the reef is capable of recovery from disturbance of a similar nature and scale.