



Offshore Petroleum Regulator
for Environment & Decommissioning

Lennox 110/15-6 Intersection Well – Drilling and Plug and Abandonment

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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Project Details	
Application reference	Lennox 110/15-H Intersection Well – Plug and Abandonment of 110/15-6
Date application received:	21 July 2026
Applicant details	Eni UK Limited
Applications Being Applied for	DRA/1195 DR/2670/0



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Contents

1. Description of the Activity.....	4
2. Requirement for a Habitats Regulations Assessment	7
3. Stage 1: Test of Likely Significant Effects (LSE) – Is the activity likely to have a significant effect on the site’s conservation objectives?	7
3.1 Pressures associated with the activity.....	7
3.2 LSE Assessment	9
3.3 LSE conclusion: Alone.....	18
3.4 LSE in-combination assessment.....	18
3.5 LSE conclusion: In-combination	24
4 Stage 2: Appropriate Assessment – Could the activity adversely affect the integrity of a site?	25
4.1 Appropriate Assessment Alone: Liverpool Bay SPA	26
4.2 Appropriate Assessment In-Combination: Liverpool Bay SPA.....	45
5. Conclusion of Habitats Regulations Assessment	54
6. Appendix.....	55
7. References.....	59



Offshore Petroleum Regulator
for Environment & Decommissioning

1. Description of the Activity

Eni UK Limited has applied to undertake drilling operations associated with the 110/15-H Intersection Well and the subsequent plug and abandonment (P&A) of the 110/15-6 well within the Lennox Field located within the Liverpool Bay. The purpose of the project is to remediate a historic well integrity issue associated with the previously abandoned 110/15-6 well, which has been identified as a potential leakage pathway and risk to the future HyNet Carbon Dioxide Transportation and Storage (CCS) Project.

A new intersection well is required because the original 110/15-6 wellbore is no longer accessible through conventional wellhead re-entry. Due to the technical uncertainty associated with intersecting the existing wellbore, the application also includes contingent mechanical sidetracks, drilling of a replacement intersection well within 40 ft of the original spud location, and, if required, re-entry and side-tracking from 110/15-6z. Each contingent approach retains the same objective of accessing and remediating 110/15-6. The project is intended to restore long-term well integrity and support the future reuse of the depleted Lennox reservoir for geological carbon dioxide storage.

The proposed works will be undertaken using the Valaris 120 jack-up Mobile Offshore Drilling Unit (MODU), with the Valaris 72 included as a contingency. Operations are expected to last up to 180 days and will be supported by platform supply vessels, an emergency response and rescue vessel (ERRV), routine helicopter transfers and, if required, a rock placement vessel. Pre-lay rock pads required for rig stability have been approved under a separate application (SA/2353) and will be installed prior to mobilisation of the drilling rig.

The activity will involve:

- Location of a jack-up drilling rig at the 110/15-H well location;
- Drilling of a new intersection well to intercept the previously abandoned 110/15-6 well, including contingency sidetrack and redrill options should the primary interception attempt be unsuccessful;
- Riserless drilling of the 36-inch top-hole section using seawater and viscous sweeps, with cuttings discharged at the seabed; later sections use water-based mud with cuttings separated and discharged from the surface.
- Installation and cementing of well casings and conductors;
- Use and discharge of water-based drilling muds and associated cuttings during drilling operations;
- Re-entry of the 110/15-6 well through a milled window;
- Removal of legacy well barriers and remediation of the abandoned well;
- Installation of new cement barriers and, subject to separate regulatory approval, potential use of bismuth alloy plugs to achieve long-term well integrity;
- Plug and abandonment of both the 110/15-6 well and the intersection well;
- Recovery of conductors and casings from below the seabed.

Location

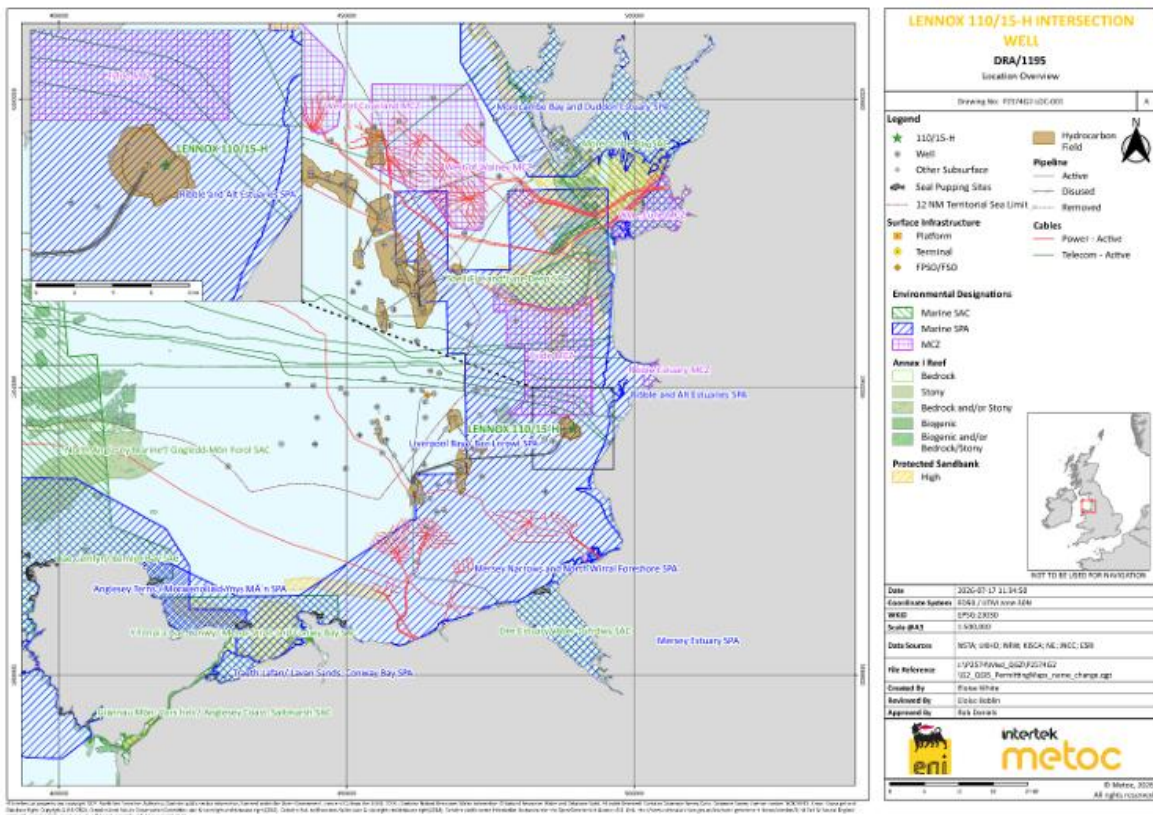


Figure 1: Map of project location with all SACs and SPAs boundaries overlain



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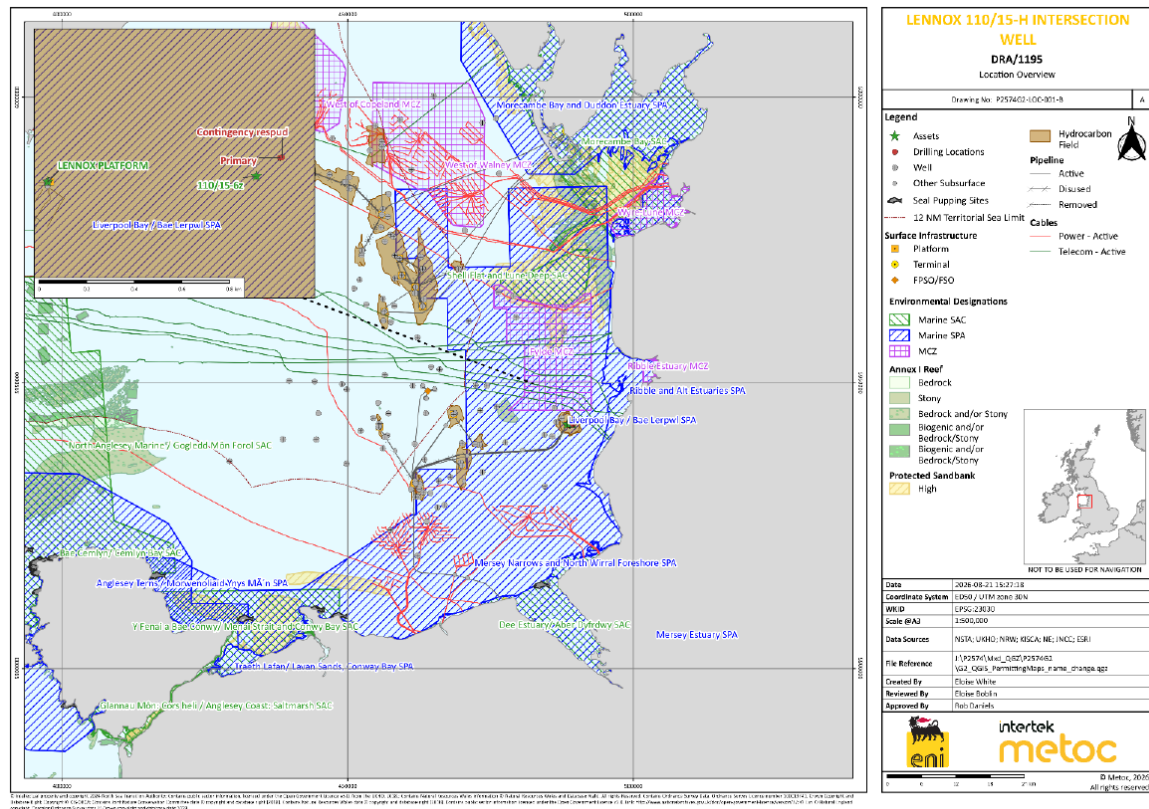


Figure 2: Map of drilling locations with all SACs and SPAs boundaries overlain

Protected areas

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

Table 1: SPAs and SACs in or near the activity

Liverpool Bay SPA – Designated for Non-breeding season and breeding birds

Conservation Objectives: The integrity of the site is maintained or restored as appropriate by maintaining or restoring:

- the extent and distribution of the habitats of the qualifying features
- the structure and function of the habitats of the qualifying features
- the supporting processes on which the habitats of the qualifying features rely
- the populations of each of the qualifying features
- the distribution of qualifying features within the site

Qualifying Species

- Red Throated Diver (Non-breeding season)
- Common Scoter (Non-breeding season)
- Little Gull (Breeding Season)
- Common Tern (Breeding season)
- Little Tern (Breeding season)
- Water bird assemblage of >20000 birds (Non-breeding season)



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Timing

The proposed works are expected to be undertaken between 14 October 2026 and 30 September 2027, for a maximum operational duration of 180 days. The worst case includes contingency drilling and operational delays. The primary 110/15-H drilling location is approximately 0.98 km from the Lennox Platform and lies within the Liverpool Bay/Bae Lerpwl SPA. Weather delays may impact the schedules of the activities and the dates may vary.

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, 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.

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

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 (e.g. use of MoDU): This includes activities such as abrasion or excavation of the seabed, the temporary placement of objects or materials on the seabed, the removal of material and even the collection of samples.

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.



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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 the following levels of seabed disturbance:

Area of Disturbance: 11,941.8 m².

A change in seabed type:

The placement of hard materials or deposits on the seabed alters its physical characteristics, transforming it from a soft-sediment substrate with its typical biological assemblage to a hard substrate that supports species associated with rock or coarse sediments. The significance and severity of this change will depend on local seabed conditions. If the deposits become partially buried by sand, the shift in habitat type and biological community may be less pronounced than if the hard deposits remain permanently exposed and elevated above the seabed. Areas covered by these deposits will no longer provide the same habitat or ecological functions as before. For assessment purposes, the spatial footprint of the deposits will be considered as degraded habitat.

Degradation of water or sediment quality: The activity will involve the discharge of fluids into the sea, some of which may contain chemicals or hydrocarbons that could be toxic or persistent, potentially affecting water or sediment quality. All chemical use will be strictly regulated under the offshore chemical permitting regime, and any hydrocarbon discharge will be controlled through an oil discharge permit.

Impulsive Underwater Noise: The activity will generate impulsive sound within the water column. High-energy impulsive sound is known to elicit responses in some species, causing them to flee, alter normal behaviours (e.g., reduced feeding), or experience physiological stress. This effect, commonly referred to as disturbance, can occur over considerable distances from the noise source. For harbour porpoise, these distances are defined by the Effective Deterrent Ranges (EDRs) established by the Statutory Nature Conservation Bodies (SNCBs). See [website](#) for EDR details.

Downhole explosive use and underwater sound: Perforation may use up to 410 kg of explosives downhole at a minimum depth of approximately 609.6 m. No environmental impact is anticipated at this depth.

Displacement of species: Certain bird species within the SPA are highly sensitive to human activity and exhibit strong disturbance responses to the presence of vessels and structures. The visual stimulus from vessels and surface infrastructure can cause birds to flee over considerable distances, and they may not return for a period of time, effectively preventing access to their supporting habitat. Repeated or prolonged disturbance can lead to a decline in the birds' condition and overall health.

Pressures scoped out: The operation will also exert the following pressures which are **not** likely to exert any significant effect on the conservation objectives:



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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.

Accidental Hydrocarbon Release: The potential for an accidental hydrocarbon release does not represent a credible pathway and the proposed drilling operations are subject to established well control measures, with the MODU Temporary Operations Oil Pollution Emergency Plan (TOOPEP) and Oil Pollution Emergency Plan (OPEP), and associated spill prevention and response procedures reducing the likelihood of a significant release to a very low level.

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
Liverpool Bay SPA JNCC link and NE link	Common Scoter Red Throated Diver Little Gull Common Tern Little Tern Waterbird Assemblage (Non-breeding season November to March inclusive)

Table 3 – sites screened out

The following sites have been screened out of the LSE assessment	
Site Name	Reason for screening out
Ribble Estuary MCZ	The site is 14.3 kilometres from the project and is sufficiently far away so that none of the pressures will be experienced to any meaningful degree within the boundaries of the site.
Wyre Lune MCZ	The site is 27.8 kilometres from the project and is sufficiently far away so that none of the pressures will be experienced to any meaningful degree within the boundaries of the site.
Dee Estuary / Aber Dyfrdwy SAC	The site is 20.8 kilometres from the project and is sufficiently far away so that none of the pressures will be experienced to any meaningful degree within the boundaries of the site.
Shell Flat and Lune Deep SAC	The site is 21 kilometres from the project and is sufficiently far away so that none of the pressures will be experienced to any meaningful degree within the boundaries of the site.



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Morecambe Bay SAC	The site is 32.6 kilometres from the project and is sufficiently far away so that none of the pressures will be experienced to any meaningful degree within the boundaries of the site.
Mersey Narrows and North Wirral Foreshore SPA	The site is 20 kilometres from the project and is sufficiently far away so that none of the pressures will be experienced to any meaningful degree within the boundaries of the site.
Dee Estuary SPA	The site is 26.8 kilometres from the project and is sufficiently far away so that none of the pressures will be experienced to any meaningful degree within the boundaries of the site.
Morecambe Bay and Duddon Estuary SPA	The site is 28.2 kilometres from the project and is sufficiently far away so that none of the pressures will be experienced to any meaningful degree within the boundaries of the site.
Mersey Estuary SPA	The site is 30.5 kilometres from the project and is sufficiently far away so that none of the pressures will be experienced to any meaningful degree within the boundaries of the site.

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 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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for Environment & Decommissioning

Table 4 - Test of likely significant effect ALONE

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 ALONE?	
Pressure	Feature	Conservation Objective	Conclusion
Liverpool Bay SPA			
- Physical seabed disturbance - Change in seabed type - Degradation of water or sediment quality - Impulsive Underwater Noise - Displacement of species	Red Throated Diver. <i>Gavia stellata</i>	1: Maintain – The Population >1800 individuals	No. There is no mechanism by which the activity could cause the population of Red Throated Diver to decline i.e. either through direct mortality or by reducing the condition of the birds.
- Displacement of species	Red Throated Diver. <i>Gavia stellata</i>	2: Restore – The spatial distribution of the population in site 3: Minimise - Disturbance	Where activity is wholly outside the red-throated diver non-breeding period, no LSE from vessel disturbance is identified. However, the project programme may overlap periods when red-throated diver are present in significant numbers. Given the sensitivity of the feature to vessel and structure-related disturbance, and without relying on seasonal avoidance, an LSE cannot be excluded. The effect is therefore taken forward to Appropriate Assessment. Vessel activity occurring in non-breeding season - Potentially. There will be vessels operating within the site during months when Red-throated Divers (RTD) are present in significant numbers. The project will involve approximately 164 vessel movements within the Liverpool Bay SPA over a 180 day period. Any resulting disturbance or displacement is expected to be short-lived and highly localised, and therefore unlikely to cause a significant or long-term change in the distribution of birds within the SPA.



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Is there likely to be a significant effect on the conservation Objectives ALONE?			
Feature	Feature	Conservation Objective	Conclusion
Pressure			
			Liverpool Bay already experiences a high volume of daily vessel traffic, as approaches to the Port of Liverpool pass through the site. This maritime traffic typically follows established channels and lanes for safety reasons, and RTDs generally avoid these regular shipping routes. Where RTDs are present in these areas, they are likely accustomed to existing shipping activity. Project vessels will remain within these established channels as far as possible before making a short diversion to the work location. Oil and gas platforms have been present within the SPA since before its designation, and RTDs are likely to avoid these structures. Consequently, the likelihood of RTDs occurring in close proximity to the platforms is low, and vessel movements associated with these platforms are unlikely to cause significant additional displacement.
- Physical seabed disturbance - Change in seabed type - Degradation of water or sediment quality - Impulsive Underwater Noise - Displacement of species	Red Throated Diver. <i>Gavia stellata</i>	4: Restore - The supporting habitat extent/distribution 5: Maintain – food and prey availability	No. Red-throated Divers feed on a wide range of fish species, including demersal species; therefore, significant alterations to seabed conditions could impair their ability to feed and reduce prey availability. However, the area of seabed disturbance caused by the project will represent an extremely small proportion of the available habitat. Specifically, approximately 11,941.8 m² of temporary disturbance will occur due to the placement of equipment on the seabed and associated excavation activities. This equates to just 0.00047% of the SPA. Subtidal sandy sediment habitats and their associated biological communities are known to recover fully and relatively quickly from seabed disturbance and abrasion. Once recovery is complete, the affected area will provide the same level of supporting habitat and functionality as prior to impact. There is some potential for permanent change in sediment type due to deposits which will form a hard substratum on the seabed. The total area of permanent deposits would be approximately 120 m², equating to less than 0.00005% of the SPA. Contingency rock stabilisation material may affect up to 1,140 m², equating to less than 0.00004% of the SPA. This rock would overlap with the separately permitted pre-lay rock-pad footprint. While it is uncertain whether this change in substratum type could influence localised fish



Offshore Petroleum Regulator
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Feature		Is there likely to be a significant effect on the conservation Objectives ALONE ?	
Pressure	Feature	Conservation Objective	Conclusion
			and prey availability, the affected area is so small that any change is unlikely to result in a significant reduction in prey availability or alter the ecological functioning of the SPA. There will be no degradation of water or sediment quality and upon recovery the affected area will provide the same level of supporting habitat and functionality as prior to impact
- Physical seabed disturbance - Change in seabed type - Degradation of water or sediment quality - Impulsive Underwater Noise - Displacement of species	Common Scoter. <i>Melanitta nigra</i>	1: Maintain – Population at >141801 individuals	No. There is no mechanism by which the activity could cause the population of Common Scoter to decline i.e. either through direct mortality or by reducing the condition of the birds.
- Displacement of species	Common Scoter. <i>Melanitta nigra</i>	2: Maintain – The spatial distribution of the population in site 3: Minimise - Disturbance	Where activity is wholly outside the Common Scoter non-breeding period, no LSE from vessel disturbance is identified. However, the project programme may overlap periods when Common Scoter are present in significant numbers. Given the sensitivity of the feature to vessel and structure-related disturbance, and without relying on seasonal avoidance, an LSE cannot be excluded. The effect is therefore taken forward to Appropriate Assessment. Vessel activity occurring in non-breeding season - Potentially. There will be vessels operating within the site during months when CS are present in significant numbers. The project will involve approximately 164 vessel movements within the Liverpool Bay SPA over a 180 day period. Any resulting disturbance or displacement is expected to be short-lived and highly localised, and therefore unlikely to cause a significant or long-term change in the distribution of birds within the SPA.



Offshore Petroleum Regulator
for Environment & Decommissioning

Is there likely to be a significant effect on the conservation Objectives ALONE?			
Feature	Feature	Conservation Objective	Conclusion
Pressure			
			Liverpool Bay already experiences a high volume of daily vessel traffic, as approaches to the Port of Liverpool pass through the site. This maritime traffic typically follows established channels and lanes for safety reasons, and CS generally avoid these regular shipping routes. Where CS are present in these areas, they are likely accustomed to existing shipping activity. Project vessels will remain within these established channels as far as possible before making a short diversion to the work location. Oil and gas platforms have been present within the SPA since before its designation, and CS are likely to avoid these structures. Consequently, the likelihood of CS occurring in close proximity to the platforms is low, and vessel movements associated with these platforms are unlikely to cause significant additional displacement.
- Physical seabed disturbance - Change in seabed type - Degradation of water or sediment quality - Impulsive Underwater Noise - Displacement of species	Common Scoter. <i>Melanitta nigra</i>	4: Maintain - The supporting habitat extent/distribution 5: Maintain – food availability	No. Common Scoter primarily feed on benthic fauna, so significant alterations to seabed conditions could impair their ability to feed and reduce prey availability. However, the area of seabed disturbance caused by the project will represent an extremely small proportion of the available habitat. Specifically, approximately 11,941.8 m² of disturbance will occur due to the placement of equipment on the seabed and associated excavation activities. This equates to 0.00047% of the SPA. The subtidal sandy habitats and associated biological assemblages within the impact area are known to recover fully and relatively quickly following seabed disturbance and abrasion. There will be no degradation of water or sediment quality and upon recovery the affected area will provide the same level of supporting habitat and functionality as prior to impact.
- Physical seabed disturbance - Change in seabed type - Degradation of water or sediment quality	Little Gull. <i>Hydrocoloeus minutus</i>	Maintain - 1: Population at >319 individuals. 2: Distribution of population. 3: Food availability. 4. Supporting habitat. 5: Connectivity	No. Little gulls roost within the Mersey Narrows and North Wirral foreshore and travel to foraging areas in Liverpool Bay. Consistently higher densities are observed offshore Blackpool and the Ribble Estuary around the 12 nm mark. Little gulls are not known to exhibit significant avoidance or disturbance in response to vessels. Natural England's Advice on Operations for the site indicates that the species has low sensitivity to vessel disturbance. It is therefore unlikely that there will be any



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Is there likely to be a significant effect on the conservation Objectives ALONE?			
Feature	Feature	Conservation Objective	Conclusion
- Impulsive Underwater Noise - Displacement of species		- with supporting habitats. 6: Minimise disturbance	significant displacement of little gulls from the project area, nor any reduction in prey availability or abundance. While increases in suspended sediments may temporarily affect their ability to visually detect prey, any change in turbidity will be highly localized, short-term, and of such low magnitude that it will not significantly exceed existing background levels.
- Physical seabed disturbance - Change in seabed type - Degradation of water or sediment quality - Impulsive Underwater Noise - Displacement of species	Common Tern. <i>Sterna hirundo</i>	- Maintain - 1: Population. 2: Distribution of population. 3: Food availability. 4. Supporting habitat. 5: Connectivity with supporting habitats. 6: Minimise disturbance	No. Common terns breed in the Mersey Narrows and North Wirral Foreshore SPA and using a mean maximum foraging range of 15km (as described in Natural England;2012). The SPA protects the offshore foraging and areas for common tern which breed at sites on the coast, and terns will be feeding and commuting in various parts of the SPA including the operational area. The proposed activities will involve a limited number of vessel movements (164 movements over 180 days) within the Liverpool Bay SPA. These movements will be short-term and primarily constrained to existing navigational routes associated with the approaches to the port of Liverpool or localised to the existing installations. The SPA already experiences high levels of baseline vessel traffic, and little tern routinely commute between coastal colonies and offshore foraging areas within this environment. Project vessels will not introduce new or uncharacteristic disturbance pathways and will only deviate locally from established channels to access the work area. Any disturbance to common tern is expected to be temporary and localised, with individuals able to avoid vessels or adjust flight paths with no disruption to overall movement patterns. Given the limited scale and duration of activity, and the availability of alternative transit routes, there is no potential for a meaningful effect on connectivity between breeding colonies and foraging habitat.
- Physical seabed disturbance	Little Tern. <i>Sternula albifrons</i>	- Maintain - 1: Population. 2: Distribution of population. 3: Food	No. Little terns are known to breed on Gronant Beach at the Point of Ayr within the Dee Estuary SPA and utilise a foraging range of 5km (as described in the conservation advice). The SPA protects these offshore foraging areas and terns will be feeding and commuting



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Is there likely to be a significant effect on the conservation Objectives ALONE?			
Feature	Feature	Conservation Objective	Conclusion
- <i>Change in seabed type</i> - <i>Degradation of water or sediment quality</i> - <i>Impulsive Underwater Noise</i> - <i>Displacement of species</i>		availability. 4. Supporting habitat. 5: Connectivity with supporting habitats. 6: Minimise disturbance	in various parts of the SPA including the operational area. The proposed activities will involve a limited number of vessel movements (164 movements over 180 days) within the Liverpool Bay SPA. These movements will be short-term and primarily constrained to existing navigational routes associated with the approaches to the port of Liverpool or localised to the existing installations. The SPA already experiences high levels of baseline vessel traffic, and little tern routinely commute between coastal colonies and offshore foraging areas within this environment. Project vessels will not introduce new or uncharacteristic disturbance pathways and will only deviate locally from established channels to access the work area. Any disturbance to little tern is expected to be temporary and localised, with individuals able to avoid vessels or adjust flight paths with no disruption to overall movement patterns. Given the limited scale and duration of activity, and the availability of alternative transit routes, there is no potential for a meaningful effect on connectivity between breeding colonies and foraging habitat.
- <i>Physical seabed disturbance</i> - <i>Change in seabed type</i> - <i>Degradation of water or sediment quality</i> - <i>Impulsive Underwater Noise</i> - <i>Displacement of species</i>	Assemblage of >200000 Waterbirds	Maintain – 1: Population of assemblage. 2: Diversity of species. 3: Distribution of species. 4: Supporting habitat. 5: Minimise disturbance	No. Common scoter is the dominant species within the Liverpool Bay SPA (Lawson, et. al., 2016) and the birds represent the highest sensitivity to pressure. The effects upon the assemblage will most closely mirror those of the scoter and the conclusions of the common scoter assessment will be used as an equivalent.



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As the programme may overlap the non-breeding period and seasonal avoidance is not relied upon, likely significant effects from disturbance and displacement cannot be excluded for red-throated diver and Common Scoter. These features have therefore been taken forward to Stage 2 Appropriate Assessment.



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3.3 LSE conclusion: Alone

It **can** be concluded that the activity is not likely to cause a significant effect alone on the conservation objectives of the following site(s) in Table 5:

Table 5: LSE Conclusion

Site	Feature	Likely significant Effect - Alone?
Liverpool Bay SPA	Common Tern Little Tern Litte Gull Waterbird assemblage	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: LSE Conclusion

Site	Feature	Likely significant Effect?
Liverpool Bay SPA	Common Scoter Red Throated Diver	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.

Other plans or projects occurring in the Site



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Projects considered In-combination		
Project	Activity Type	Site Effected
West of Duddon Sands Offshore Wind Farm	Common licensable operational and maintenance activities	Liverpool Bay SPA
LBA Partial Decommissioning Program (ENI, 2025)	Partial Decommissioning Programmes (PDP) to facilitate the repurposing of the Liverpool Bay Assets under the Hynet Carbon Dioxide Transportation and Storage project	Liverpool Bay SPA
Douglas 13-11 P&A	P&A of the 110/13-11 open water well in the Douglas field	Liverpool Bay SPA
Douglas 13-13 P&A	P&A of the 110/13-13 open water well in the Douglas field	Liverpool Bay SPA
Hamilton 13-4 P&A	P&A of the 110/13-4 open water well in the Hamilton field	Liverpool Bay SPA
Morgan and Morecambe Offshore Wind Farms Transmission Assets	Development consent progressing. Construction of the Morgan and Morecambe offshore windfarms	Liverpool Bay SPA
Renewal Maintenance Dredge Liverpool Docks	Maintenance dredging and disposal within Mersey Impounded Dock System.	Liverpool Bay SPA
Mersey Docks disposal of dredged material	Mersey Channel and River Maintenance Dredge Disposal Renewal	Liverpool Bay SPA
Mona Offshore Wind Farm	Development stage. Construction of the Mona offshore windfarm.	Liverpool Bay SPA
Awel y Môr Project	Consented. Pre-construction of the Awel y Môr offshore windfarm.	Liverpool Bay SPA

Table 7: Projects with potential disturbance impacts to act in-combination

Table 8: Test of likely significant effect IN-COMBINATION

Could any other activity In – combination with the project likely have a significant effect on the conservation objective?		
Feature	Conservation Objective	Conclusion
Liverpool Bay SPA		
Red Throated Diver. <i>Gavia stellata</i>	1: Maintain – The Population >1800 individuals	Other activities are ongoing in the SPA which have the potential to disturb and displace birds and to affect their supporting habitats. However, the magnitude, scale and duration of the impacts associated with this project are of such a small scale that even when combined with those of ongoing and upcoming activities there would be no increase in mortality or significant deterioration in condition.
Red Throated Diver. <i>Gavia stellata</i>	2: Restore – The spatial distribution of the population in the site 3: Minimise - Disturbance	Although Liverpool Bay SPA is currently in unfavourable condition and has restore conservation objectives for distribution, the additional effects of the project will not contribute to a significant change in the population distribution even when these changes are considered in-combination with other activities in the site The project involves approximately 164 vessel movements over 180 days, which represents a very small proportion of the overall maritime activity within the SPA. Any disturbance or displacement of Red-Throated Divers (RTDs) will be short-lived and highly localized, with no mechanism for causing long-term or sustained changes in distribution or population condition. Under a worst-case scenario applying the instantaneous disturbance estimate across the operational period 7 RTD, equivalent to 0.39% of the Liverpool Bay SPA population may be disturbed per transit. This figure is derived from the annual average density of 0.43 birds/km² and an instantaneous disturbance area of 12.57 km² around a vessel (2 km disturbance radius). A maximum of 164 is expected over 180 days, therefore 6.4 RTD may be displaced per day which is equivalent to 0.36% of the population. This figure is highly precautionary and does not represent unique individuals, nor does it assume the permanent loss of supporting habitat. Rather, it reflects the theoretical maximum number of birds that could be exposed to temporary disturbance from vessel



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Could any other activity in – combination with the project likely have a significant effect on the conservation objective?		
Feature	Conservation Objective	Conclusion
		activity. Birds are expected to relocate to nearby suitable habitat and recolonise disturbed areas following vessel passage.
Red Throated Diver. <i>Gavia stellata</i>	4: Restore - The supporting habitat extent/distribution 5: Maintain – food and prey availability	The project will not have significant effects on seabed condition, suspended sediment, or habitat quality. While other activities within the SPA may influence the seabed, these do not result in significant or long-term changes to the physical, chemical, or hydrodynamic characteristics of the site. There is no realistic potential for these minor, short-lived alterations to propagate or accumulate in a way that could compromise the site's conservation objectives
Common Scoter. <i>Melanitta nigra</i>	1: Maintain – Population at >141801 individuals	Other activities are ongoing in the SPA which have the potential to disturb and displace birds and to affect their supporting habitats. However, the magnitude, scale and duration of the impacts associated with this project are of such a small scale that even when combined with those of ongoing and upcoming activities there would be no increase in mortality or significant deterioration in condition.
Common Scoter. <i>Melanitta nigra</i>	2: Maintain – The spatial distribution of the population in site 3: Minimise - Disturbance	The additional effects of the project will not contribute to a significant change in the population distribution even when these changes are considered in-combination with other activities in the site The project involves approximately 164 vessel movements over 180 days, which represents a very small proportion of the overall maritime activity within the SPA. Any disturbance or displacement of Common Scoter (CS) will be short-lived and highly localized, with no mechanism for causing long-term or sustained changes in distribution or population condition. Under a worst-case scenario applying the instantaneous disturbance estimate across the operational period 363 CS, equivalent to 0.26% of the Liverpool Bay SPA population may be disturbed per transit. This figure is derived from the annual average



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Could any other activity in – combination with the project likely have a significant effect on the conservation objective?		
Feature	Conservation Objective	Conclusion
		density of 37 birds/km² and an instantaneous disturbance area of 19.63 km² around a vessel (2.5 km disturbance radius). A maximum of 164 is expected over 180 days, therefore 330.7 CS may be displaced per day which is equivalent to 0.23% of the population. This figure is highly precautionary and does not represent unique individuals, nor does it assume the permanent loss of supporting habitat. Rather, it reflects the theoretical maximum number of birds that could be exposed to temporary disturbance from vessel activity. Birds are expected to relocate to nearby suitable habitat and recolonise disturbed areas following vessel passage.
Common Scoter. <i>Melanitta nigra</i>	4: Maintain - The supporting habitat extent/distribution 5: Maintain – food availability	The project will not have significant effects on seabed condition, suspended sediment, or habitat quality. While other activities within the SPA may influence the seabed, these do not result in significant or long-term changes to the physical, chemical, or hydrodynamic characteristics of the site. There is no realistic potential for these minor, short-lived alterations to propagate or accumulate in a way that could compromise the site's conservation objectives
Little Gull. <i>Hydrocoloeus minutus</i>	Maintain - 1: Population at >319 individuals. 2: Distribution of population. 3: Food availability. 4. Supporting habitat. 5: Connectivity with supporting habitats. 6: Minimise disturbance	The proposed activity is predicted to have an extremely small and localized effect on little gull, well below levels that could compromise the species' conservation objectives. The scale, duration, and intensity of the impact are negligible, and no critical habitats or key foraging areas will be materially affected. When considering potential cumulative effects with other plans and projects, the contribution from this project remains so minor that it does not materially add to overall pressures. Even in combination, the incremental effect is inconsequential and will not result in a significant effect on the conservation objectives
Common Tern. <i>Sterna hirundo</i>	Maintain - 1: Population. 2: Distribution of population. 3: Food availability. 4. Supporting habitat. 5: Connectivity	The proposed activity is predicted to have an extremely small and localized effect on common tern, well below levels that could compromise the species' conservation objectives. The scale, duration, and intensity of the impact are negligible, and no critical habitats or key foraging areas will be materially affected.



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Could any other activity in – combination with the project likely have a significant effect on the conservation objective?		
Feature	Conservation Objective	Conclusion
	with supporting habitats. 6: Minimise disturbance	When considering potential cumulative effects with other plans and projects, the contribution from this project remains so minor that it does not materially add to overall pressures. Even in combination, the incremental effect is inconsequential and will not result in a significant effect on the conservation objectives
Little Tern. <i>Sternula albifrons</i>	Maintain - 1: Population. 2: Distribution of population. 3: Food availability. 4. Supporting habitat. 5: Connectivity with supporting habitats. 6: Minimise disturbance	The proposed activity is predicted to have an extremely small and localized effect on common tern, well below levels that could compromise the species' conservation objectives. The scale, duration, and intensity of the impact are negligible, and no critical habitats or key foraging areas will be materially affected. When considering potential cumulative effects with other plans and projects, the contribution from this project remains so minor that it does not materially add to overall pressures. Even in combination, the incremental effect is inconsequential and will not result in a significant effect on the conservation objectives
Assemblage of >200000 Waterbirds	Maintain – 1: Population of assemblage. 2: Diversity of species. 3: Distribution of species. 4: Supporting habitat. 5: Minimise disturbance	No. Common scoter is the dominant species within the Liverpool Bay SPA (Lawson, et. al., 2016) and the birds represent the highest sensitivity to pressure. The effects upon the assemblage will most closely mirror those of the scoter and the conclusions of the common scoter assessment will be used as an equivalent.



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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(s) in Table 7:

Table 7

Site	Feature	LSE In-combination?
Liverpool Bay SPA	Common Tern Little Tern Little Gull Waterbird assemblage	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):

Table 8

Site	Feature	Conservation Objective	LSE In-combination?
Liverpool Bay SPA	Common Scoter Red Throated Diver	Maintain – The spatial distribution of the population in site Minimise – Disturbance Maintain - The supporting habitat extent/distribution	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.



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4 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 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.



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4.1 Appropriate Assessment Alone: Liverpool Bay SPA

Feature assessed in AA: Red Throated Diver and Common Scoter

Pressures to be assessed in AA: Displacement of species

Table 9

Feature: Red Throated Diver and Common Scoter				
Pressure(s) to be assessed: Displacement of species				
Attribute Group 1: Non-breeding population: distribution and Disturbance caused by human activity				
Attributes to be assessed				Assessment summary*
Feature	Site	Attribute	Attribute Target	Magnitude of Impact
Red Throated Diver	Liverpool Bay SPA	Non-breeding population: distribution	Restore the distribution of the feature; preventing further deterioration, and where possible, reduce any existing anthropogenic influences impacting feature distribution.	Low. Temporary and localised displacement associated with the presence of the MODU and vessel traffic. A 2 km disturbance buffer has been applied, resulting in an instantaneous disturbance area of 12.57 km ² . Up to 7 red-throated divers (0.39% of the SPA population) may be disturbed at any one time. Assuming 164 vessel transits over 180 days, this equates to approximately 6.4 displacement events per day. Disturbance is temporary, intermittent and reversible, with birds expected to utilise adjacent habitat and recolonise disturbed areas following vessel passage. No sustained change in distribution is predicted.
Red Throated Diver	Liverpool Bay SPA	Disturbance caused by human activity	Minimise the frequency, duration and/or intensity of disturbance affecting the feature so that the population, its distribution within the site, or its use of the habitat is not significantly affected.	Low. Disturbance is limited to vessel movements and the temporary presence of the MODU. Effects are localised to a small proportion of available SPA habitat, are reversible following completion of operations and will not materially impede achievement of the restore or minimise conservation objectives.
Common Scoter	Liverpool Bay SPA	Non-breeding population: distribution	Restore the distribution of the feature; preventing further deterioration, and where possible, reduce any existing	Low. Temporary and localised displacement associated with vessel operations and the MODU. A 2.5 km disturbance buffer has been applied, resulting in an



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			anthropogenic influences impacting feature distribution.	instantaneous disturbance area of 19.63 km ² . Up to 363 common scoter (0.26% of the SPA population) may be disturbed at any one time. Assuming 164 vessel transits over 180 days, this equates to approximately 331 displacement events per day. Disturbance is temporary and reversible and is not predicted to alter the distribution of the SPA population.
Common Scoter	Liverpool Bay SPA	Disturbance caused by human activity	Minimise the frequency, duration and/or intensity of disturbance affecting the feature so that the population, its distribution within the site, or its use of the habitat is not significantly affected.	Low. Disturbance is intermittent, localised and temporary. Birds are expected to relocate to adjacent suitable habitat and return once activity ceases. The scale of disturbance is insufficient to prevent achievement of the minimise disturbance objective or affect long-term distribution within the SPA.

*details are provided in the conclusion outlined in the text below

Disturbance from Installation(s)

The drilling of the intersection well will cause disturbance through the vessel operations. Any disturbance effect created by the Lennox Platform have not been assessed here. The reasoning for this is that the presence of the installations/platforms themselves already creates a disturbance effect, displacing birds from the area and effectively preventing the immediate area around the installations from providing supporting habitat for Common Scoter or Red Throated Diver. The Lennox Platform was installed before the designation of the SPA and are part of the baseline condition of the SPA, thus the presence of vessels immediately alongside the installations i.e. jack-up barges or DSVs will not cause further displacement than already exists.

The drilling of the intersection well will result in disturbance associated with the presence of the Valaris 120 jack-up MODU. The Lennox Platform itself has not been assessed as a source of additional disturbance because it is an existing installation that was present prior to the designation of the Liverpool Bay SPA and therefore forms part of the baseline condition of the site. The platform is assumed to already create a localised area of displacement around the installation, reducing the suitability of the immediate area as supporting habitat for red-throated diver and common scoter.

The Valaris 120 MODU will be positioned at the proposed 110/15-H well location approximately 1 km from the Lennox Platform. Consequently, the MODU represents a separate source of visual and audible disturbance and is expected to extend the area from which birds may be displaced beyond that already associated with the existing platform. Some overlap between the platform and MODU disturbance zones is expected; however, the rig is likely to create an additional area of temporarily disturbed habitat whilst operations are underway.

During the drilling of the 110/15-H intersection well, no separate operational activities are planned at the Lennox Platform which would result in additional vessel traffic or introduce a second source of disturbance. The disturbance assessment therefore assumes that the Valaris 120 and its directly associated support vessels represent the only project-specific disturbance source in the vicinity of Lennox



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during the drilling campaign. As a result, the assessment does not assume any additive disturbance arising from simultaneous platform operations.

The maximum extent of the temporary disturbance associated with the MODU is considered within the quantitative assessment of red-throated diver and common scoter displacement. Any increase in the disturbed habitat will be temporary and fully reversible, ceasing once the MODU leaves the location. Following completion of the works, the affected area will become available as a supporting habitat for the qualifying features of the SPA.

Disturbance from vessels

Red Throated Diver are known to exhibit a strong avoidance response to vessels and offshore structures and are likely to be flushed or displaced out to 2 km from the vessel. Common scoter display a similar response and may be displaced out to a slightly greater distances up to 2.5 km. Where the displacement occurs birds may temporarily cease feeding, resting, fully utilise or even occupy the disturbed area. As a result the area is no longer able to function as a supporting habitat for the birds and its ability to fully contribute to the conservation objectives of the site will be reduced. The significance of this effect is dependent upon the extent of habitat affected, the duration of disturbance and the availability of alternative habitat in the surrounding area. Once disturbing activity has ceased and vessels vacate the area, birds are expected to return and the area will return to representing a supporting habitat for the birds.

Scope of Vessel Operations

The drilling and abandonment programme will require the following vessel operations:

- **Valaris 120 Jack-up MODU** (with Valaris 72 as a contingency vessel), which will be positioned at the proposed 110/15-H well location for the duration of the drilling and abandonment operations. The MODU represents the principal source of disturbance during the campaign due to its continuous presence within an area of the Liverpool Bay SPA used by red-throated diver and common scoter.
- **One Platform Supply Vessel** will be used to transport equipment, consumables and waste between shore and the MODU. Supply visits are expected to occur up to three times per week for the duration of the operation. The total number of visits will be less if the works are completed in less than the maximum 180-day period.
- **One Emergency Response and Rescue Vessel (ERRV)**, which will provide emergency response cover and monitor vessel movements around the rig if required. The ERRV is shared between Eni's Liverpool Bay assets and is regularly positioned between Lennox and Douglas outside the Liverpool Bay SPA. When required to support the drilling activity, however, it may operate in the immediate vicinity of the MODU and its contribution can be treated as lying within, or overlapping, the MODU disturbance footprint.
- **Up to four Anchor Handling Vessels (AHVs)** will be used for the short-duration positioning and deployment of the jack-up MODU. These vessels will leave the location following completion of the positioning operation.
- **Rock Placement Vessel** (contingency only), which may be required if scour protection or stabilisation material is needed around the jack-up location.

Scope of Operations

Lennox Platform



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The Lennox Platform is the only Liverpool Bay asset located wholly within the Liverpool Bay SPA and is situated in an area identified as supporting high densities of red-throated diver and moderate densities of common scoter during the non-breeding season. It is remote from shipping lanes and shipping traffic at the Lennox location is dominated by vessels associated with the platform. Vessels attending this installation are likely to result in the greatest disturbance, compared to vessels attending other platforms or assets in the Liverpool Bay region.

The 110/15-H well is located within the Liverpool Bay SPA in an area characterised by relatively high densities of red-throated diver and moderate densities of common scoter during the non-breeding season. Unlike Douglas, Hamilton and Hamilton North, which are located outside or on the periphery of the SPA and are accessed primarily through established shipping routes, the Lennox location lies within an area where vessel traffic is largely associated with offshore energy activities.

The principal source of disturbance during the drilling campaign will be the presence of the **Valaris 120** at the 110/15-H location and the associated supply vessel transits required to support operations. Red throated diver and common scoter densities tend to be highest in areas where there is suitable habitat but importantly where there is little disturbance or human activity. Vessel routes will, where practicable, utilise established navigation corridors before making a direct approach to the drilling location in order to remain within areas subject to regular vessel movements and minimise interaction with areas supporting higher densities of qualifying bird species.

It should also be noted that no separate operational activities are planned at the Lennox Platform whilst the Valaris 120 is undertaking the drilling programme. As a result, there will be no concurrent platform-related vessel traffic or maintenance activities that could add to the disturbance generated by the rig and its support vessels. The assessment therefore assumes that the Valaris 120, associated PSV movements, AHV mobilisation and ERRV presence represent the only project-specific disturbance sources in the vicinity of Lennox during the drilling campaign.

Consequently, whilst the operation is expected to result in some temporary displacement of red-throated diver and common scoter from the immediate vicinity of the rig and vessel transit routes, the disturbance will be localised, reversible and limited to the duration of the programme. Once drilling operations are complete and vessels depart the area, the disturbed habitat will again become available for use by qualifying SPA species.



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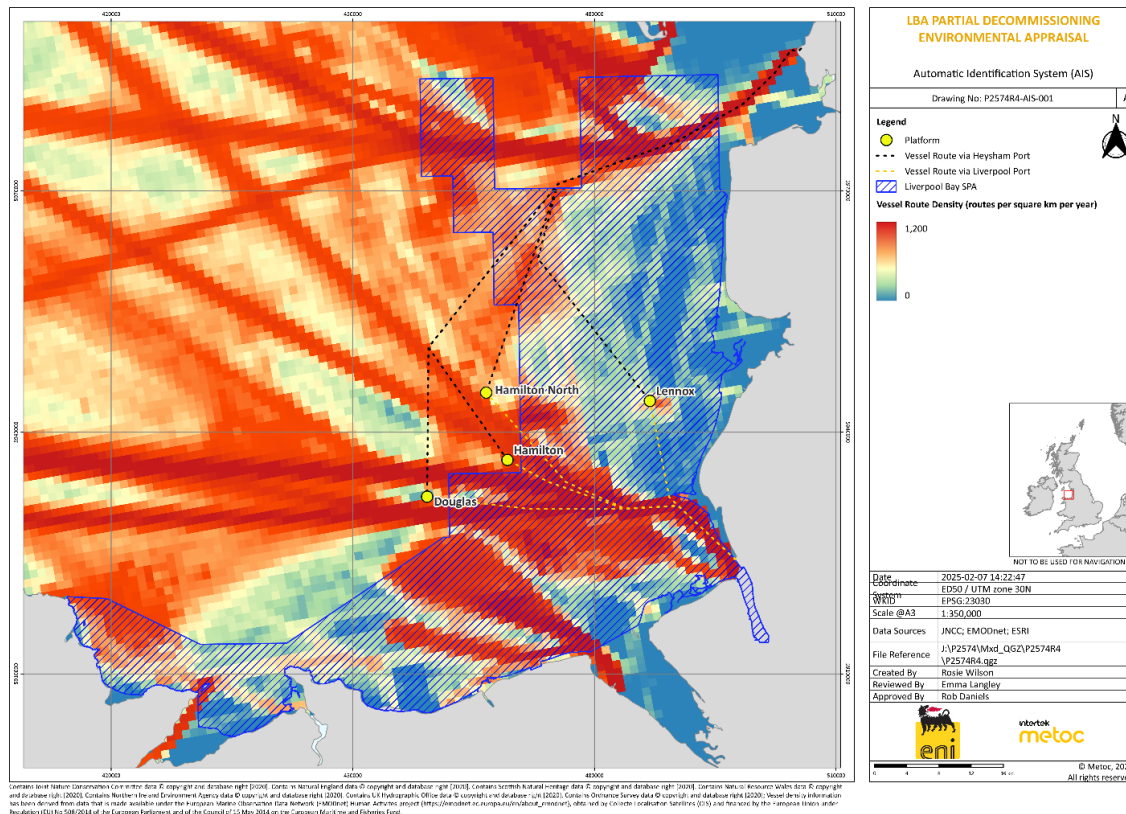


Figure 3: Expected transit routes to Liverpool Bay Assets overlaid on vessel traffic density (red areas indicated areas of highest intensity)

Number of Vessel Transits

The exact number of vessel movements required will depend on the duration of the drilling and abandonment operations and whether any of the contingency drilling scenarios are required. For the maximum 180-day programme, the assessment assumes up to three Platform Supply Vessel return trips per week, resulting in a maximum of 77 supply-vessel visits. The vessel movements also include mobilisation and demobilisation of the Valaris 120 MODU and the use of up to four anchor-handling vessels during positioning of the MODU.

When these movements are combined, the maximum programme comprises **82 return trips**, equivalent to **164 individual vessel transits**. This is the upper estimate for the full 180-day programme and assumes that all contingency drilling measures are required. Fewer vessel transits would be expected if the primary intersection and remediation method is successful and the operations are completed in less than 180 days.

The Valaris 120 will remain at the operational location for the duration of the drilling and abandonment work. The anchor-handling vessels will be required only during positioning and subsequent departure of the MODU. The principal recurring vessel movements will therefore be the PSV return trips, with an average of approximately six individual transits per week under the maximum programme.

Table 10: Scope of Vessel Disturbance Assessment

Parameter	Worst-Case Assessment
Maximum operational duration	180
Duration of operation	October 2026 to September 2027



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PSV Frequency	Up to 3 return trips per week
Maximum PSV Visits	77 through SPA
MODU mobilisation/demobilisation and Anchor Handling Vessel movements	5 return trips
Total return trips	82 through SPA
Total individual vessel transits	164 through SPA
Worst-case route	Approximately 6 per week
Route withing Liverpool Bay SPA	Approximately 51 km
Estimated time within SPA per individual transit	Approximately 4 to 5 hours

Numbers of birds displaced

Two potential vessel transit routes to Lennox from Heysham Port and Liverpool Port have been identified which represent the greatest potential disturbance. These two routes (outlined in Figures 4 and 5) will be the assumed route for all vessel transits. The Heysham and Liverpool routes represent different precautionary cases. The Heysham route has the greatest length and route-wide disturbance corridor within Liverpool Bay SPA and therefore represents the spatial worst case. Approximately 51 km of the Heysham route lies within the SPA. The Liverpool route crosses areas of higher mapped densities of red-throated diver and common scoter and consequently represents the worst case for the number of birds potentially exposed during a transit. Both scenarios are assessed below. The conclusions draw upon the largest disturbance area and the highest bird-exposure estimate, rather than relying on a single route as the worst case for all assessment parameters. All project vessel transits are conservatively assessed on the basis of this route, although vessels are expected to use established navigation routes until making their final approach to the operational location.

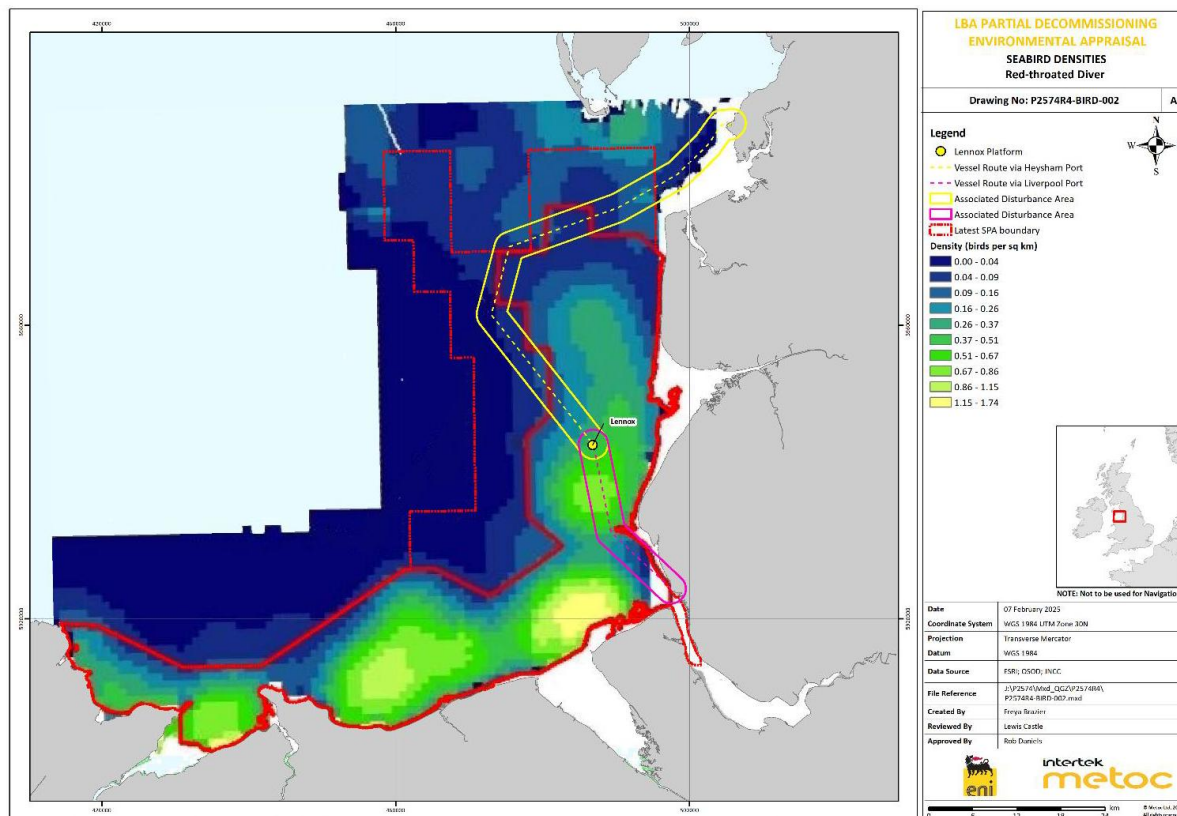


Figure 4: Density of red-throated diver and a worst-case route of vessel transits (Lawson et al., 2016)



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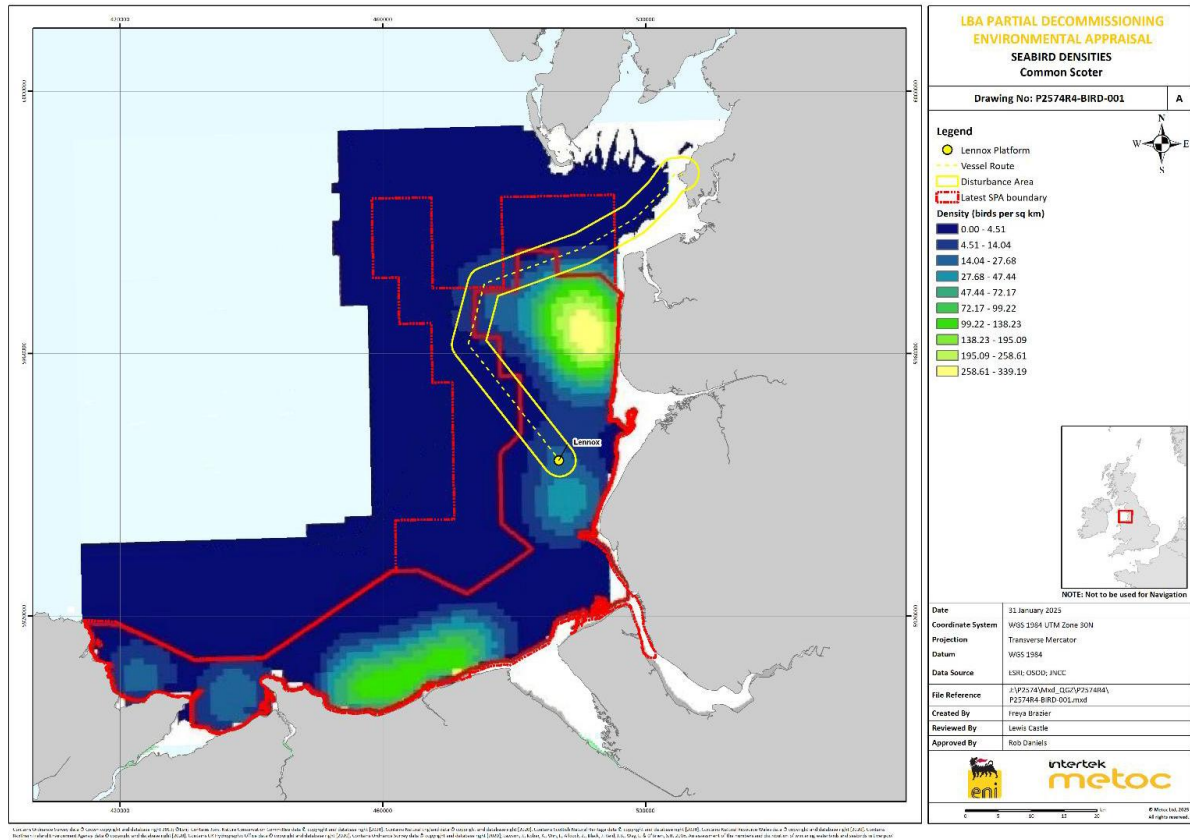


Figure 5: Density of common scoter and a worst-case route of vessel transits (Lawson et al., 2016)

Table 4 identifies the total area that will be disturbed via vessels transiting to Lennox from either Heysham or Liverpool. The Heysham route has the longest distance within the SPA resulting in 207km² of disturbance for Red Throated Divers and 260km² for Common Scoter as shown in table 4. Considering that Liverpool Bay SPA covers an area of 2,528km², this represents 8.2% and 10.3% of impacted SPA area for Red-Throated Diver and Common Scoter, respectively.

Transit route	Species	Disturbance corridor (km2)	% Proportion of the SPA
Heysham port to Lennox	Red-throated diver	207.3	8.2
Heysham Port to Lennox	Common Scoter	260.7	10.3
Liverpool port to Lennox	Red-throated diver	92.7	3.67
Liverpool Port to Lennox	Common Scoter	116.4	4.60

Table 11: Approximate area of disturbance associated with the supply vessel routes

The route-wide disturbance areas represent the total corridor through which the moving disturbance footprint could pass during an individual transit. The percentages therefore describe the spatial extent of the route corridor relative to the total area of Liverpool Bay SPA. They do not represent the proportion of the SPA disturbed simultaneously. At any given point during a transit, disturbance would be confined to the smaller species-specific area surrounding the vessel and would move progressively along the route.

Table 5 indicates that a single worst-case vessel transit along the Heysham to Lennox route could potentially expose up to **23 red-throated diver** and **1,923 common scoter** to disturbance, equivalent to



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approximately **1.28%** and **1.36%** of the Liverpool Bay SPA populations. A single worst-case vessel transit along the Liverpool to Lennox route could potentially expose up to **40 red-throated diver** and **4,306 common scoter** to disturbance, equivalent to approximately **2.2%** and **3%** of the Liverpool Bay SPA populations. These figures are based on the total disturbance corridor associated with the vessel route and represent the maximum number of birds that could potentially be exposed during an individual transit. They do not imply that all of these birds would be disturbed simultaneously, nor that disturbance would persist across the entire route at the same time.

Vessel-related disturbance within the Liverpool Bay SPA is inherently temporary and mobile. As vessels move through the SPA, the disturbance footprint moves with them and any affected birds are expected to relocate to nearby suitable habitat before potentially returning once the vessel has passed. Burger et al. (2019) have suggested that red-throated diver and common scoter can recolonise previously disturbed areas following vessel passage, although the exact timeframe is uncertain and will depend upon local conditions and the frequency of vessel movements.

At any given point during a transit, the area affected by disturbance is substantially smaller than the complete route-wide disturbance corridor. Applying disturbance distances of **2 km for red-throated diver** and **2.5 km for common scoter**, an individual vessel would be expected to generate an instantaneous disturbance area of approximately **12.57 km²** and **19.63 km²**, respectively. These areas represent only a very small proportion of the available supporting habitat within the Liverpool Bay SPA and indicate that the number of birds potentially disturbed at any one time would be considerably lower than the route-wide estimates presented above.

The proposed drilling and abandonment programme includes a maximum of **164 individual vessel transits** over the 180-day operational period; however, these movements will be dispersed over time, averaging approximately six transits per week under the worst-case scenario. Consequently, disturbance will be intermittent and localised rather than continuous across the SPA. The assessment therefore considers it unlikely that vessel movements associated with the project would result in any sustained or significant change in the distribution of red-throated diver or common scoter within the Liverpool Bay SPA. Any displacement that does occur is expected to be temporary, reversible and confined to the duration of the vessel activity.

Two alternative vessel transit routes have been identified between port and the Lennox location, each representing a different worst-case scenario for the purposes of the Liverpool Bay SPA assessment. The first is the route which would result in disturbance across the greatest area of the SPA (the spatial worst case), while the second is the route which intersects the highest densities of qualifying bird species and therefore has the potential to disturb the greatest number of birds (the biological worst case).

The Heysham to Lennox route represents the spatial worst case because it has the greatest length within the SPA and consequently generates the largest disturbance corridor. In contrast, the Liverpool to Lennox route is substantially shorter but passes through areas identified by the available survey data as supporting higher densities of red-throated diver and common scoter. As a result, the Liverpool route generates the highest estimates of potential bird disturbance during a transit.

There is, however, uncertainty associated with the route-wide exposure estimates because they are derived from mapped density data and assume those densities are representative of bird distribution at the time of a vessel transit. In reality, bird distribution will vary spatially and temporally, and the number of birds present along any route at a given time are likely to differ from the mapped figures.

Accordingly, both routes can reasonably be considered precautionary worst-case scenarios depending on the assessment metric applied. The applicant's EAJ adopts the Heysham route as the primary worst-case scenario on the basis that it maximises the area of potential disturbance within the SPA. This Appropriate Assessment considers both the Heysham and Liverpool routes to ensure that both the maximum



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disturbance footprint and the maximum potential bird exposure are taken into account. The information used to assess the Liverpool to Lennox route has been derived from material submitted in support of the related Liverpool Bay Partial Decommissioning Programme assessment, which also considered vessel transits between Liverpool and Lennox.

Table 12 presents precautionary route-wide estimates of the number of birds that could potentially occur within the complete disturbance corridor traversed during an individual vessel transit. These estimates represent potential exposure across the full route and do not indicate that all birds would be disturbed simultaneously.

Species	Density (birds per km ²)*	Total abundance estimates within the SPA _{1,2}	Maximum of individuals affected within the SPA ₃	% of population affected
Red-throated diver via Heysham Port	0.14	1,800	23	1.28
Red-throated diver via Liverpool Port	0.43	1,800	40	2.2
Common scoter via Heysham Port	12.24	141,801	1,923	1.36
Common scoter via Liverpool Port	37	141,801	4,306	3

Table 12: Route-wide potential exposure estimates for vessel transits from Heysham and Liverpool

**Updated information uses the underlying raw annual-average surface-density data from Lawson et al 2016 together with species-specific information along the worst-case Heysham route, to estimate the maximum number of birds potentially exposed during one vessel transit and is representative of that found along the vessel route as shown in Figures 4 and 5.*

Table 13 presents the instantaneous disturbance footprint around a vessel at a single point during transit. It therefore provides an estimate of the area and number of birds potentially exposed at any one time, using a 2 km disturbance radius for red-throated diver and a 2.5 km radius for Common Scoter. The instantaneous estimates are the appropriate figures for describing potential disturbance at a given moment, whereas the route-wide estimates describe potential exposure across the complete transit corridor.

Species	Density of birds (birds/km ²)	Disturbed area around a single vessel km ²	Estimated Birds Disturbed	% of SPA population
Red Throated Diver	0.43	12.57	7	0.39
Common Scoter	37	19.63	363	0.26

Table 13: Numbers of birds disturbed by vessels at an individual location

The estimates in Table 6 represent the number of birds that could potentially be disturbed within the immediate vicinity of a single vessel at any one point in time. Unlike the route-wide estimates presented in Table 5, which describe the total area through which the disturbance footprint passes during an entire transit, Table 6 considers only the instantaneous disturbance area surrounding an individual vessel.

Consistent with the disturbance distances adopted within the EAJ, a radius of **2 km** has been applied for red-throated diver and **2.5 km** for common scoter. This equates to disturbance areas of approximately **12.57 km²** and **19.63 km²**, respectively. Birds occurring within these areas may temporarily alter their behaviour, cease feeding, or move into adjacent areas of suitable habitat whilst the vessel is present. Once



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the vessel has passed, the disturbed area is expected to become available again for use by qualifying species

The numbers presented in Table 6 indicate that only a small proportion of the Liverpool Bay SPA populations would be expected to experience disturbance at any one time. The updated EAJ also notes that red-throated diver and common scoter have been observed returning to previously disturbed areas following vessel passage, indicating that the effect is temporary and reversible rather than resulting in a permanent loss of supporting habitat.

Furthermore, vessel movements associated with the proposed drilling and abandonment programme will be spatially and temporally dispersed throughout the operational period, with vessel activity averaging approximately six transits per week under the maximum 180-day scenario. Consequently, disturbance is expected to be localised and intermittent rather than continuous across the SPA. The disturbance associated with vessel transits is therefore not anticipated to result in a sustained change in the distribution of red-throated diver or common scoter, nor to adversely affect the integrity of the supporting habitat available within the Liverpool Bay SPA.

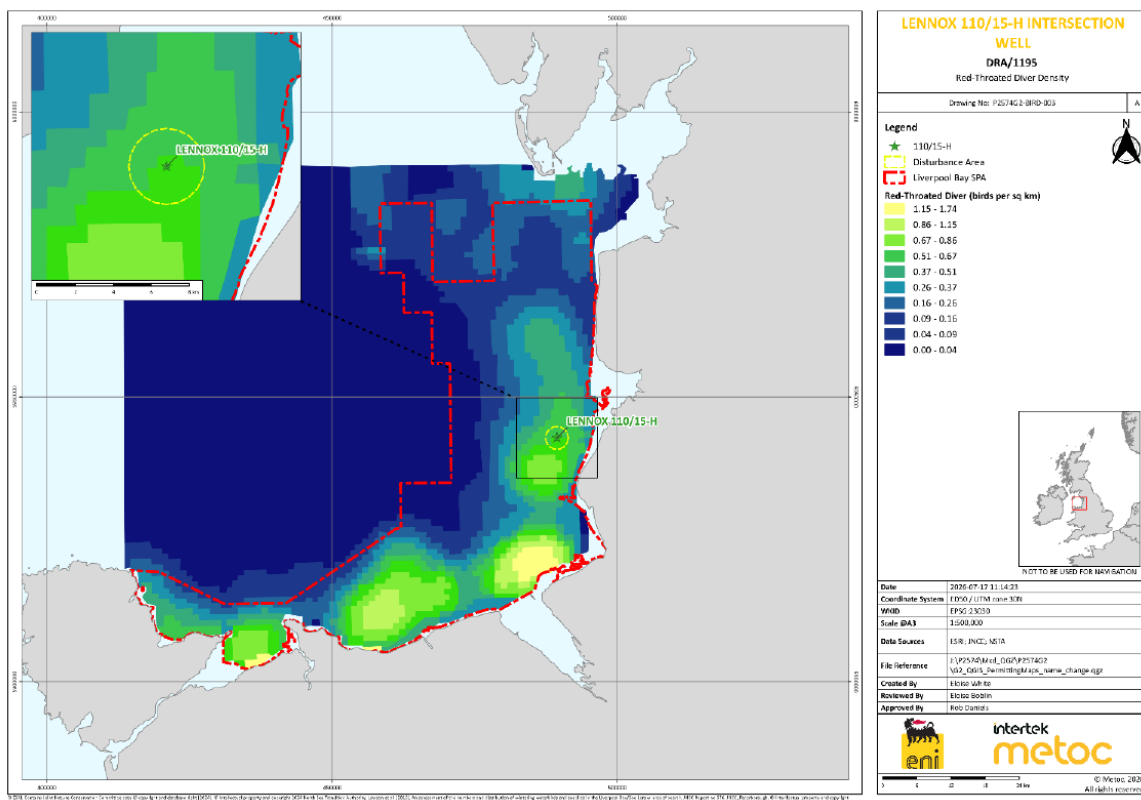


Figure 6: Density of red-throated diver at 110/15-H well (Lawson et al., 2016)



The maximum operational duration assessed for the proposed drilling and abandonment campaign is 180 days. This represents all the potential scenarios including contingency drilling activities, operational delays, adverse weather and vessel availability constraints. The actual duration of the works may be shorter should the primary well interception and remediation method prove successful. For assessment purposes, no reliance has been placed on seasonal avoidance. It is recognised that the full 180-day programme cannot occur wholly within the core 1 November to 31 March period however, the assessment assumes that the maximum proportion of the programme capable of occurring during that period may do so, with any remaining activity potentially occurring during the October and April shoulder months. The conclusions therefore do not depend on a reduced level of activity during the non-breeding season.

Under the maximum operational scenario, the EAJ estimates a total of 164 individual vessel transits over the 180-day programme, comprising PSV movements together with mobilisation and demobilisation of the MODU and associated anchor-handling vessels. This equates to an average of approximately six vessel transits per week. Although vessel activity will occur throughout the programme, disturbance associated with vessel transits will be intermittent and mobile, moving progressively through the SPA rather than affecting the same area continuously.



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for Environment & Decommissioning

The principal source of continuous disturbance during the operation will be the presence of the Valaris 120 MODU positioned at the 110/15-H location. It is estimated that the MODU could create a static disturbance footprint of approximately 13 km² for red-throated diver and 20 km² for common scoter for the period that it remains on location. The disturbance associated with the MODU may therefore persist for up to the full 180-day operational period, although it will be confined to a relatively small part of the Liverpool Bay SPA and will cease entirely upon completion of the works and removal of the rig.

Based on the density data presented and derived from Lawson et al. (2016), the maximum disturbance area associated with the static presence of the drilling rig is estimated to encompass approximately **7 red-throated diver and 363 common scoter** within the Liverpool Bay SPA. These figures represent the precautionary worst-case number of birds that may be temporarily displaced from the immediate vicinity of the rig at any one time and do not represent population-level effects.

Although vessel transits may cause short-term disturbance and temporary displacement, the effects are expected to be localised and reversible. Transit-related disturbance will occur for only a small proportion of the operational period and will move with the vessel rather than remaining fixed in one location. In contrast, the disturbance associated with the static presence of the MODU will be continuous but restricted to a substantially smaller area of the SPA. Once vessel movements cease and the MODU is removed, the affected areas will again become fully available as supporting habitat for red-throated diver and common scoter. Therefore, whilst disturbance may occur throughout the operational period, it is not anticipated that the duration, frequency or spatial extent of disturbance would be sufficient to result in a sustained change in the distribution of qualifying bird species within the Liverpool Bay SPA.

Diurnal Effects

The Statutory Nature Conservation Bodies (SNCBs) have previously highlighted uncertainty regarding the relative significance of disturbance occurring during daylight and night-time periods. Disturbance during daylight hours has been identified as potentially more important because this coincides with the principal foraging period for red-throated diver and common scoter.

For the purposes of this habitat regulations assessment no adjustment has been made to distinguish between daylight and night-time disturbance. This is because it is not clear if disturbance during the day has a greater impact on bird condition than at night. For example, whilst disturbance in the day is more likely to interrupt foraging, birds may be able to resettle in a nearby location and resume feeding with only a minimal interruption in their total foraging time. Birds disturbed at night will likely be 'roosting' and resting on the water and disturbance and displacement of birds at this time could result in different behavioural responses and have different physical, energetic and metabolic effects.

Existing and past vessel operations at the Liverpool Bay installations

The Lennox Platform is an established installation within the Liverpool Bay SPA and has been operational for approximately 30 years. Throughout both the production and decommissioning phases of the field, vessel traffic has been routinely required to support platform operations, drilling activities, well interventions, surveys, inspection campaigns and decommissioning works. Consequently, vessel movements associated with offshore operations form an established component of the baseline environmental conditions at Lennox.

A review of historic vessel activity associated with the Lennox field between 2014 and 2026 is presented in Table 14. Vessel movements have varied considerably between years, reflecting changes in operational requirements, with periods of relatively low activity during routine operations and substantially higher levels of activity during plug and abandonment campaigns, survey programmes and decommissioning-related works. Annual vessel traffic has ranged from approximately 10 transits during periods of sustained



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production activity to 356 transits during recent decommissioning and abandonment campaigns, demonstrating that elevated vessel activity has previously occurred within the Liverpool Bay SPA.

The proposed drilling and abandonment campaign represents a continuation of this established pattern of offshore activity. The drilling operations required for the abandonment of well 110/15-H could require up to 164 individual vessel transits, comprising PSV movements together with mobilisation and demobilisation of the Valaris 120 MODU and associated anchor-handling vessels. While this exceeds historic vessel activity recorded during some production years, it is substantially lower than the levels recorded during recent decommissioning and abandonment campaigns at Lennox and falls within the range of vessel activity already experienced within the area in recent years.

For the purposes of the current assessment, vessel transits have been conservatively assessed using the worst-case Heysham Port route, which maximises overlap with the Liverpool Bay SPA and therefore provides a precautionary estimate of potential disturbance.

The historic operational record demonstrates that vessel activity associated with drilling, well intervention, survey and decommissioning operations has been a recurrent feature of the Lennox area over many years. The proposed operation therefore represents a temporary continuation of an existing baseline activity rather than the introduction of a new source of disturbance into the Liverpool Bay SPA. Furthermore, once the proposed drilling and abandonment programme has been completed, the requirement for future monitoring, intervention and remediation activities at the 110/15-6 well location is expected to be reduced. Therefore, it is expected that following drilling the need for vessel visits to the area will reduce compared to both the recent and historic baseline.

An overview of historic vessel activity at Lennox is provided in Table 7 and provides important context when considering the scale of disturbance associated with the proposed operation relative to vessel activity previously experienced within the Liverpool Bay SPA.

Permitted dates of jack-up rig alongside Lennox	Potential days/weeks when jack-up rig was alongside Lennox	Vessel	Number of trips	Supply trips (assume 2 trips per week)	Total transits per year (2 x number of trips)
2026-2027	30 weeks	Valaris 120	1	90*	Future Ops: 338
2026-2027	Up to 26 weeks	Valaris 120	1	77*	
21/05/2026 to 30/09/2026	3 days	Rock placement (Lennox 6z)	1	n/a	2026: 130
21/05/2026 to 30/09/2026	3 days	Rock placement (Lennox Platform)	1	n/a	
21/06/2025 to 31/09/2026	20 days	Air diving support vessel	1	6	
06/04/2025 to 31/04/2026	55 weeks	ISP (Lennox rigless & pipeline ops)	1	110	
30/04/2025 to 31/05/2026	19 days	Survey Vessel (6z wellhead monitoring)	19	n/a	2025: 356
15/07/2024 to 30/06/2025	52 weeks	Valaris Norway (Lennox Platform P&A)	1	103	
01/12/2023 to 30/06/2024	10 weeks	Valaris Norway (Lennox 6z P&A)	1	19	2024: 78
31/01/2024 to 30/06/2024	8 weeks	ISP	1	16	



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2024	3 weeks	Survey vessel	2	n/a	
2024	3 weeks	Air diving support vessel	1	n/a	
15/04/2023 to 20/05/2023	1 week	ISP	1	2	2023: 10
2023		Survey vessel	3	n/a	2022: 32
13/06/2022 to 11/10/2022	7 weeks	ISP	1	14	
2022		Survey vessel	3	n/a	
04/01/2022 to 27/01/2022	1 week	1SP	1	2	
24/05/2021 to 04/10/2021	9 weeks	ISP	1	18	2021: 40
2021		Survey vessel	2	n/a	2020: 54
20/04/2020 to 13/07/2020	5 weeks	ISP	1	10	
20/04/2020 to 13/07/2020	7 weeks	ISP	1	14	
2020		Survey vessel	3	n/a	
30/11/2019 to 23/02/2020	1 week	ISP	1	6	2019: 16
2019		Survey vessel	2	n/a	2018: 42
17/09/2018 to 30/11/2018	4 weeks	ISP	1	8	
02/12/2017 to 29/01/2018	5 weeks	ISP	1	10	
2018		Survey vessel	3	n/a	
15/05/2017 to 14/03/2017	22 weeks	ISP	1	44	2017: 138
01/12/2016 to 14/03/2017	11 weeks	ISP	1	22	2016: 76
2017		Survey vessel	3	n/a	
25/07/2016 to 03/12/2016	8 weeks	ISP	1	16	
14/03/2016 to 27/04/2016	3 weeks	ISP	1	6	
12/05/2016 to 21/07/2016	7 weeks	ISP	1	14	
2016		Survey vessel	4	n/a	2015: 62
01/08/2015 to 26/10/2015	8 weeks	ISP	1	12	
04/12/2014 to 14/05/2015	6 weeks	ISP	1	16	
2015		Survey vessel	3	n/a	
22/05/2014 to 26/07/2014	8 weeks	Seajacks Leviathan	1	24	2014: 36
2014	2 days	Survey vessel	2	n/a	

*3 Supply vessel trips per week has been assessed

Table 14: Historic vessel activity associated with the Lennox field between 2014 and 2026

Conservation Objectives of 'Restore'



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A number of infrastructure projects and activities have been consented and are in operation within Liverpool Bay. Some of these developments have resulted in the long-term disturbance and displacement of Red Throated Diver, with the largest contributor of this disturbance being the Burbo Bank Extension windfarm which has caused the displacement of Red Throated Diver over an area up to 12km from the windfarm. The disturbance and displacement effect of these projects now forms part of the baseline condition of the SPA and is the main driver behind the determination that the site is in unfavourable condition and reason for the 'restore and minimise' attribute targets for distribution and disturbance. The restore target requires that all sources of disturbance be avoided or minimised as far as is reasonably practicable.

The Liverpool Bay SPA conservation objectives for red-throated diver require the distribution of the non-breeding population to be restored and disturbance from human activities to be minimised. These restore and minimise targets reflect the current unfavourable condition of the feature and the presence of existing anthropogenic pressures within the SPA. The objective is therefore not simply to avoid direct impacts but also to ensure that activities do not contribute to further deterioration of feature distribution or impede future recovery.

Existing pressures contributing to the restore objective include the long-term displacement effects associated with established infrastructure and offshore wind farm developments within and adjacent to Liverpool Bay, particularly the displacement of red-throated diver from extensive areas surrounding operational wind farms which now form part of the baseline condition against which additional plans and projects must be assessed.

With regards to the restore objective, this assessment has considered whether the proposed drilling programme would materially hinder recovery of the feature or contribute to a further deterioration in its distribution within the SPA. The proposed disturbance is temporary, reversible and limited in spatial extent. The maximum instantaneous disturbance area associated with a vessel transit is estimated to affect approximately 7 red-throated diver (0.39% of the SPA population) and 363 common scoter (0.26% of the SPA population) at any one time, while the static MODU disturbance footprint represents a very small proportion of the available supporting habitat within the SPA.

Vessel activity will be intermittent, averaging approximately six transits per week under the worst-case scenario, and will predominantly utilise existing navigation routes before making a direct approach to the operational area. Disturbance associated with transits will therefore be transient and mobile rather than continuous. Evidence considered within the EAJ indicates that red-throated diver and common scoter are capable of recolonising areas following vessel passage and that disturbance does not result in a permanent loss of supporting habitat.

Consequently, although the project may cause temporary displacement of a small number of birds, there is no evidence that the scale, duration or frequency of disturbance would materially impede restoration of the distribution of red-throated diver within the Liverpool Bay SPA or prevent achievement of the conservation objective to minimise disturbance. The proposal therefore represents a short-term and reversible pressure that will not materially undermine the long-term ability of the site to achieve its restore objectives.

Mitigation Measures: Vessel management plan

To minimise disturbance and displacement of qualifying bird species within the Liverpool Bay SPA, Eni has committed to implementing a Vessel Management Plan (VMP) for all vessels associated with the drilling and abandonment programme. The VMP has been developed in consultation with the Statutory Nature Conservation Bodies (SNCBs) and incorporates measures specifically intended to minimise disturbance to red-throated diver and common scoter, consistent with the SPA conservation objectives to restore distribution and minimise disturbance.



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The mitigation hierarchy has been applied by first considering whether activity could be avoided during sensitive periods. Complete seasonal avoidance is not relied upon because the timing and duration of the operation are constrained by technical uncertainty, contingency well-intersection options, rig and vessel availability, weather and safe operational sequencing. The programme will nevertheless seek to avoid or reduce overlap with the most sensitive periods where reasonably practicable. Residual disturbance will then be minimised through controls on vessel number, routing, speed, waiting locations, lighting, manoeuvring and time spent within the SPA.

The Vessel Management Plan will include the following measures:

- Vessel transits between Liverpool Bay installations and ports, including Heysham and Liverpool, will utilise existing established shipping routes and heavily used navigation corridors wherever practicable in order to minimise interaction with areas supporting higher densities of qualifying bird species.
- The Emergency Response and Rescue Vessel (ERRV) will, where not required to support operations directly at the drilling location, maintain its normal standby position outside the Liverpool Bay SPA. Where the ERRV is required to support the MODU, its presence will be within, or overlap, the existing disturbance footprint associated with the drilling unit and will not create a separate disturbance area.
- Any vessel stand-off, holding or waiting locations will be selected outside the Liverpool Bay SPA wherever operationally practicable.
- Where vessels are required to operate outside established shipping corridors, routes will be planned to avoid areas known to support elevated densities of red-throated diver and common scoter where practicable. Route planning will be informed by available monitoring data, density mapping and advice from the SNCBs.
- Vessel speeds will be reduced, where safe and practicable, within areas supporting higher densities of qualifying bird species, particularly in the vicinity of the Lennox drilling location.
- Vessel movements will be kept to the minimum necessary to safely undertake the operation. Supply vessel visits will be undertaken only as required and the duration of vessel presence within the SPA will be minimised wherever practicable.
- Operations will be planned to avoid sensitive periods where practicable; however, where activities overlap with the non-breeding season, additional management measures within the VMP will be applied to minimise disturbance.
- Vessel crews will receive environmental briefings outlining the purpose of the VMP, the sensitivities of SPA qualifying features and the procedures to be followed to minimise disturbance.
- A dedicated bridge watch will be maintained by appropriately trained crew during transits through sensitive areas, with vessels avoiding concentrations of seabirds where safe and practicable.
- Lighting aboard vessels and the MODU will be minimised to the extent compatible with safe operations in order to reduce unnecessary disturbance to seabirds.
- Unnecessary manoeuvring, station keeping and engine over-revving will be avoided in order to reduce visual and acoustic disturbance.

The Vessel Management Plan will form a mandatory condition of the relevant consents, including the Marine Licence and Consent to Locate, and must be in place before the commencement of drilling and abandonment activities. Compliance with the Vessel Management Plan will ensure that vessel-related



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disturbance is reduced as far as reasonably practicable and that the project does not materially impede the restoration or maintenance of the conservation objectives of the Liverpool Bay SPA.

Table 15

Feature: Red Throated Diver and Common Scoter			
Pressure(s) to be assessed: Displacement of species			
Attribute Group 2: Non-breeding population: abundance			
Attributes to be assessed			
Feature	Attribute	Attribute Target	Magnitude of impact
Red Throated Diver	Non-breeding population: abundance	Maintain the size of the non-breeding population at a level which is at or above 141,801 individuals (mean peak 2015, 2018, 2019 & 2020).	Negligible to low. There is no direct mortality pathway. At any one time a maximum of 7 individuals (0.39% of the SPA population) may be displaced. Even applying highly precautionary mortality assumptions used in the Liverpool Bay DP AA, any theoretical increase in mortality would be substantially below levels capable of affecting SPA abundance. No measurable reduction in population abundance is predicted.
Common Scoter	Non-breeding population: abundance	Maintain the size of the non-breeding population at a level which is at or above 141,801 individuals (mean peak 2015, 2018, 2019 & 2020).	Negligible to low. A maximum of 363 birds (0.26% of the SPA population) may be disturbed at any one time. Displacement is temporary and reversible and there is no evidence linking disturbance of this scale to measurable mortality or population decline. Population abundance will be maintained.

*Details are provided in the conclusion outlined in the text below.

Birds displaced by vessels or offshore structures are expected to move into adjacent areas of suitable habitat and resume normal behaviour. Consequently, vessel-related disturbance is not anticipated to result in direct mortality. However, displacement may temporarily increase local bird densities in surrounding areas, potentially altering feeding behaviour, increasing competition for prey resources and reducing foraging efficiency. If such effects were sufficiently widespread or prolonged, they could theoretically influence body condition and ultimately survival rates.

The disturbance associated with the proposed 110/15-H drilling and abandonment operations is expected to be temporary, intermittent and reversible. Vessel movements will be spread throughout the operational period, averaging approximately six transits per week under the worst-case scenario, while the area affected by vessel disturbance represents only a small proportion of the available supporting habitat within the Liverpool Bay SPA. It is estimated that at any one time, the maximum number of birds potentially disturbed by a single vessel is approximately **7 red-throated divers** and **363 common scoters**, equivalent to **0.39%** and **0.26%** of the relevant SPA populations respectively.

There is little evidence available linking temporary vessel displacement to mortality, a precautionary benchmark assessment has been undertaken following the approach adopted within the ENI Liverpool Bay Partial Decommissioning Plan (DP) Appropriate Assessment. This assessment applied hypothetical mortality rates of **0.5% and 1% of displaced birds**, derived from the lower end of mortality assumptions



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used in SNCB advice relating to long-term displacement associated with offshore wind farms. The DP AA concluded that, even under these highly precautionary assumptions, additional mortality would represent **less than 0.1% of the SPA populations** and because the disturbance will not be a sustained pressure over a long time, affecting baseline mortality over multiple generations, it is therefore not expected to result in persistent or significant population-level effects

The disturbance predicted for the current drilling programme is substantially lower than the disturbance scenarios considered within the DP assessment. The maximum number of birds potentially disturbed at any one time is limited to approximately 7 red-throated diver and 363 common scoter and any displacement would be confined to the duration of individual vessel passages or the temporary presence of the MODU. Applying the same highly precautionary mortality assumptions used within the DP assessment would result in a theoretical increase in mortality that is immeasurably small relative to both SPA populations and well below a level capable of influencing population abundance.

Vessel disturbance associated with the Lennox 110/15-H well will be localised, dispersed over time and temporary, with birds expected to recolonise disturbed areas following vessel passage. There is therefore no credible mechanism by which the proposed activity could result in a measurable reduction in the abundance of either red-throated diver or common scoter within Liverpool Bay SPA.

Conclusion

Although temporary displacement of a small number of birds may occur, the scale, duration and frequency of disturbance are insufficient to affect survival or population abundance. Even when assessed using highly precautionary mortality assumptions derived from offshore wind displacement guidance, any theoretical increase in mortality would be substantially below levels capable of affecting the SPA populations. The proposed activity will therefore not adversely affect the integrity of Liverpool Bay SPA with respect to the non-breeding population abundance of red-throated diver or common scoter.

Table 16

Feature: Red Throated Diver and Common Scoter			
Pressure(s) to be assessed: Displacement of species			
Attribute Group 3: Supporting habitat extent/distribution			
Attributes to be assessed			
Feature	Attribute	Attribute Target	Magnitude of impact
Red Throated Diver	Non-breeding population: abundance	Maintain the size of the non-breeding population at a level which is at or above 141,801 individuals (mean peak 2015, 2018, 2019 & 2020).	Negligible. The scale of seabed disturbance is insufficient to reduce prey abundance or availability at a biologically meaningful scale and will not affect foraging resources available within the Liverpool Bay SPA.
Common Scoter	Non-breeding population: abundance	Maintain the size of the non-breeding population at a level which is at or above 141,801 individuals (mean peak 2015, 2018, 2019 & 2020).	Negligible. Temporary and highly localised seabed disturbance will not significantly affect benthic prey communities or food availability within Liverpool Bay SPA



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Red Throated Diver	Supporting habitat: extent, distribution and quality of supporting habitat for the non-breeding season	Restore the extent, distribution and availability of suitable habitat which supports the feature; preventing further deterioration, and where possible, reduce any existing anthropogenic influences impacting the extent and quality (including water quality).	Negligible. Temporary seabed disturbance of approximately 11,941.8 m ² represents around 0.00047% of the SPA. Any permanent habitat alteration associated with cement deposition or contingency rock placement would affect only a very small proportion of the site. No significant long-term reduction in habitat availability, prey resources, water quality or habitat function is predicted.
Common Scoter	Supporting habitat: extent, distribution and quality of supporting habitat for the non-breeding season	Restore the extent, distribution and availability of suitable habitat which supports the feature; preventing further deterioration, and where possible, reduce any existing anthropogenic influences impacting the extent and quality (including water quality).	Negligible. The spatial footprint of seabed disturbance and permanent habitat change is extremely small relative to the extent of supporting habitat within the SPA. No measurable effect on benthic prey resources, habitat extent, habitat quality or habitat distribution is predicted.

Impacts arising from the temporary displacement of red-throated diver and common scoter have been considered under Attribute Groups 1 and 2, which assess disturbance, distribution and population abundance. The proposed drilling and abandonment activities are not expected to result in any significant effect on the extent, distribution or quality of supporting habitat within the Liverpool Bay SPA. Temporary seabed disturbance associated with the operation is limited to approximately 11,941.8 m², representing around 0.00047% of the SPA area, whilst any permanent habitat alteration associated with cement deposition or contingency rock stabilisation would affect only a very small proportion of the site. The effects outlined are considered to be highly localised and in the context of the available supporting habitat within the SPA are not considered to be significant.

Drilling operations are not predicted to result in any significant deterioration in prey availability, sediment quality, water quality or the physical and hydrodynamic processes that support the qualifying features. Any seabed disturbance, sediment deposition or increases in suspended sediment concentrations will be temporary, localised and recoverable, with affected areas expected to continue to provide supporting habitat following completion of the works. The proposed activity therefore does not introduce a mechanism by which the supporting habitat used by red-throated diver or common scoter would be materially reduced, fragmented or degraded.

Although the conservation objectives for supporting habitat require the extent, distribution and availability of suitable habitat to be restored where appropriate, the scale of habitat affected by the proposed works is negligible relative to the extent of available habitat within Liverpool Bay SPA and would not impede achievement of the restoration objective. Consequently, there will be no significant or long-term change to the physical, chemical or hydrodynamic characteristics of the SPA, nor any adverse effect on supporting habitat extent, distribution, quality or prey resources. On this basis, Attribute Group 3 requires no further assessment and the operation will not adversely affect the integrity of the Liverpool Bay SPA in relation to supporting habitat for red-throated diver or common scoter.

Table 17: Appropriate Assessment Conclusion: Alone



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Feature	Adverse Effect on Site Integrity?	Summary of Reason
Red Throated Diver and Common Scoter	No	The proposed Lennox 110/15-H drilling and abandonment programme may result in temporary and localised disturbance and displacement of a small number of birds within the Liverpool Bay SPA. However, disturbance is short-term, reversible and limited in spatial extent, affecting only a small proportion of the SPA population and supporting habitat. Birds are expected to relocate to adjacent suitable habitat and recolonise disturbed areas following vessel passage. Seabed disturbance and any associated changes to supporting habitat, prey availability, water quality or sediment quality are negligible in the context of the SPA and will not result in any significant or long-term reduction in habitat function. The project will not affect population abundance, distribution, supporting habitat extent, prey resources, or the achievement of the site's maintain, minimise or restore conservation objectives. Consequently, the operation will not adversely affect the integrity of the Liverpool Bay SPA, either through disturbance of qualifying species or degradation of their supporting habitat.

4.2 Appropriate Assessment In-Combination: Liverpool Bay SPA

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.

Projects considered in-combination

The following plans and projects have been considered within the in-combination assessment. Whilst not all projects have been approved or commenced, their published programmes indicate the potential for activities to occur within the Liverpool Bay SPA during the same period as the proposed Lennox 110/15-H drilling and abandonment operations. The principal pathway for in-combination effects is disturbance and displacement of Liverpool Bay SPA qualifying features, particularly red-throated diver and common scoter, arising from vessel activity, construction activity, offshore infrastructure and associated habitat disturbance.

HyNet Carbon Dioxide Transportation and Storage Project (2024-2052)

The HyNet project includes the repurposing of existing Liverpool Bay assets, installation of new offshore infrastructure, surveys, cable installation, trenching and rock placement activities. Construction activities have the potential to overlap with the Lennox drilling programme and may generate approximately 240 construction vessel round trips over the entire construction period. This on average will add an additional 2 vessels per day to the Liverpool Bay SPA. Cable laying activities will not take place in winter, meaning the vessel movements will be related to supply and support vessels. Vessel activity will be predominately within existing shipping lanes and will not create additional displacement/disturbance



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Liverpool Bay Partial Decommissioning Programme (2024-2028)

The approved Liverpool Bay Partial Decommissioning Programme includes platform decommissioning, well abandonment operations, vessel support activities and associated subsea works across the Liverpool Bay assets. Approximately 70 vessels over 253 transits through the Liverpool Bay SPA are expected to occur as a result of the decommissioning work. Activities at Lennox, Douglas, Hamilton and Hamilton North may overlap temporally with the proposed operation and contribute to vessel-related disturbance within the SPA.

Douglas and Hamilton Open Water Well Abandonment Campaigns

The Douglas 13-11, Douglas 13-13 and Hamilton 13-4 plug and abandonment operations are programmed between 2026 and 2027 and include jack-up drilling units, support vessels and associated logistics activity. These projects have the potential to contribute an additional 34 vessel transits within Liverpool Bay SPA during the same wintering period as the Lennox operation.

Millon, Calder and Dalton decommissioning (2027 – 2032)

Decommissioning operations are planned to start in 2027 moving through to 2032. These 3 platforms are outside of the Liverpool Bay SPA so activities at the platforms will not affect the SPA and most vessel access will take place outside of the SPA. Impacts will be from the transiting of vessels, primarily supply vessels (using Liverpool port as a worst-case transit destination). Their assessment accounts for a single vessel moving through the Liverpool Bay SPA on 18 separate days. The developer will however try and identify routes which avoid the SPA and use existing shipping routes or areas of high bird density.

Morgan and Morecambe Offshore Wind Farms Transmission Assets (2026-2030)

The Morgan offshore windfarm is a proposed development of up to 96 turbines, 36km from the Northwest coast of England. The application for development has been accepted by the planning inspectorate but examination has yet to commence. The Morecambe offshore windfarm is a development of up to 35 turbines 30km off the coast of northwest England. The examination of the application by the planning inspectorate is underway. Both windfarm arrays are outside the Liverpool Bay SPA.

Due to the close proximity of the two arrays, the transmission assets i.e. the export cables to shore for the Morgan and Morecambe OWF are being progressed as a joint development and a separate application for the transmission assets has been submitted to the planning inspectorate, examination of the application has yet to commence.

The cable routes for the two wind farms will cross the Liverpool Bay SPA meaning the installation of cable and vessels associated with the array construction have the potential to affect the SPA.

Mona Offshore Wind Farm (2026- 20228 - anticipated construction phase)

The Mona Offshore Wind Farm remains a relevant future project due to the potential for construction, cable installation and associated vessel activity within Liverpool Bay. Although final construction timings remain uncertain, it has been considered as a precautionary in-combination project because future offshore works could overlap with periods when qualifying SPA species are present. At the time of assessment, the project anticipated up to 1,929 installation vessel return trips and approximately 126 cable installation vessel movements during construction. The project documentation indicates that the principal installation works are intended to occur outside the peak wintering period, reducing the likelihood of overlap with sensitive red-throated diver and common scoter periods.

Awel y Môr Offshore Wind Farm (2025 – 2030 - construction and pre-construction phase)



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The Awel y Môr project is a proposed renewable energy project, 10.50 km off the coast of North Wales, of up to 1.1 GW. There is a proposal for a maximum of 50 turbines, associated transmission assets, and cabling (including and interlink cable with Gwynt y Môr OWF). The windfarm is not within the SPA, but the transmission and access routes do cross the SPA. The project remains under construction planning and may involve vessel activity associated with offshore wind farm and export cable installation. Specific vessel numbers are not currently available; however, vessel disturbance will be controlled through project-specific environmental management and vessel management plans.

Mostyn Energy Park (2023 -2025)

This is an extension of the Mostyn Energy Park at the Port of Mostyn. The project requires construction of a 360 m quay, reclamation of 3.5 ha, capital dredging of new berth pockets and re-dredging of the approach channel. Dredged material will be used as fill material for reclamation, with the disposal of excess dredged material at Mostyn Deep. There will also be maintenance dredging of new and existing berths, the approach channel and harbour area. The energy park is not in the Liverpool Bay SPA, but the approach channel and Mostyn deep spoil ground are within the SPA and vessel movements associated with the dredging and construction works will occur in the SPA. These vessel movements will however be within regularly used shipping channels and spoil ground access routes.

West of Duddon Sands Offshore Wind Farm Operations and Maintenance Activities

Routine operational and maintenance activities continue throughout the operational life of the wind farm and require vessel movements within the wider Liverpool Bay region. Whilst the magnitude of these activities is relatively low, they contribute to the existing baseline level of vessel disturbance and are therefore considered within the cumulative assessment.

Liverpool and Mersey Dredging Activities

The Renewal Maintenance Dredge Liverpool Docks project and the Mersey Docks dredged material disposal activities involve regular dredging vessels and disposal operations within Liverpool Bay SPA. These long-term activities contribute to background vessel traffic and have the potential to act in combination with other projects through increased disturbance and displacement pressure.



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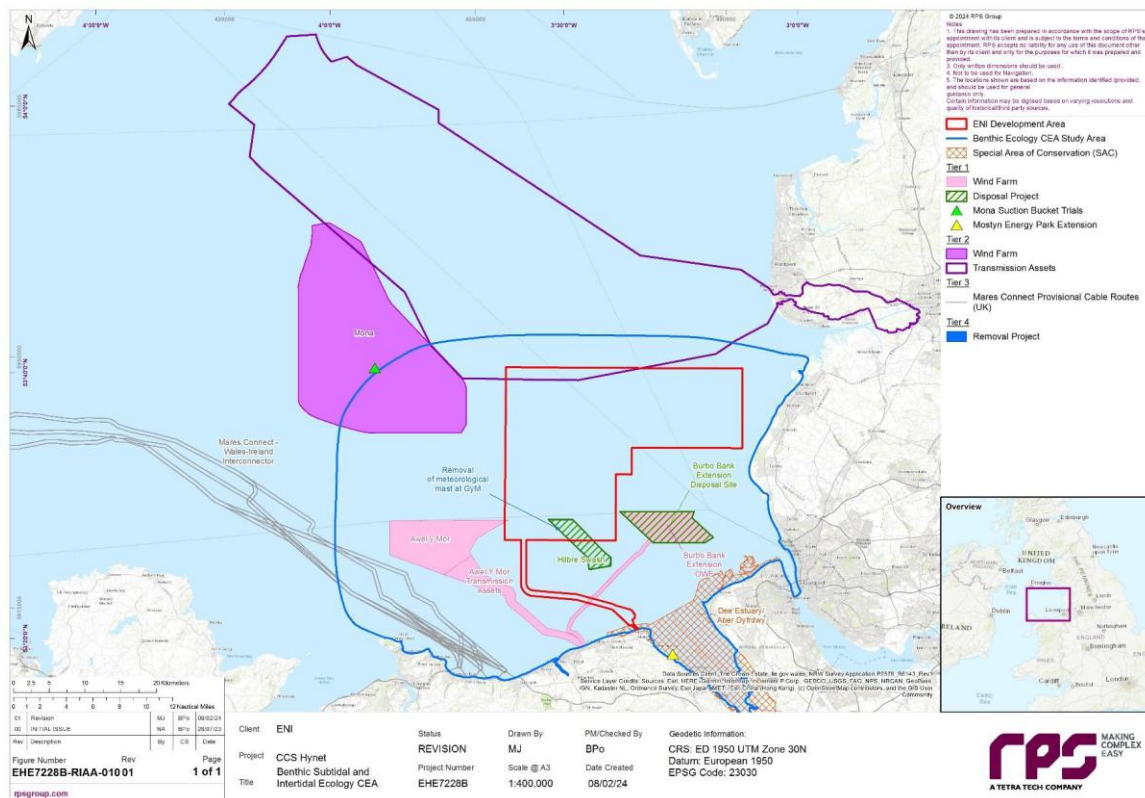


Figure 8: Map of existing infrastructure and proposed new development in the vicinity of the decommissioning operations.

* This figure has been reproduced from the HyNet Environmental Statement. The Gwynt y Môr OWF mast removal project and the MaresConnect Wales-Ireland Interconnector were not considered further due to insufficient information being available at the time of assessment. The Millom, Calder and Dalton Decommissioning Project is not shown as no interaction with the proposed activity had been identified when the figure was produced.

Table 18

Feature: Red Throated Diver and Common Scoter
Pressure: Displacement of species
Attribute Group 1: Non-breeding population: distribution and Disturbance caused by human activity

The projects identified within the in-combination assessment have the potential to contribute additional disturbance and displacement pressures within the Liverpool Bay SPA through vessel movements, offshore construction activities, surveys, dredging operations, offshore wind farm construction and the operation of existing infrastructure. The plans and projects considered relevant to the assessment are summarised in Table X. These activities may generate temporary disturbance within areas used by red-throated diver and common scoter; however, the majority of effects are expected to be localised, short-term and reversible. Furthermore, most projects are subject to project-specific environmental controls, vessel management plans and mitigation measures designed to minimise disturbance to qualifying bird species



**Offshore Petroleum Regulator
for Environment & Decommissioning**

Table 19 reflects the best available information at the time of assessment. Whilst it is not possible to accurately quantify the total number of vessel movements that may occur concurrently with the Lennox 110/15-H drilling and abandonment programme, the available evidence indicates that the additional disturbance arising from these projects is unlikely to be substantially greater than existing baseline conditions within Liverpool Bay. The majority of activities comprise temporary vessel operations occurring within a marine environment that already supports significant levels of commercial shipping, offshore energy and maintenance activity.

Although existing infrastructure and developments contribute to the unfavourable condition of some Liverpool Bay SPA features and underpin the restore objectives for red-throated diver and common scoter, the proposed Lennox 110/15-H operations would represent only a small incremental addition to these existing pressures. The disturbance associated with the project is temporary, localised and reversible and, when considered in combination with the plans and projects identified above, is not expected to result in a significant or sustained change in the distribution of qualifying species, materially impede achievement of the conservation objectives, or adversely affect the integrity of the Liverpool Bay SPA.

Project	Potential for disturbance impacts to act in combination	Magnitude of impacts
HyNet Carbon Dioxide Transportation and Storage Project	Yes	Up to 2 vessel transits per day in winter 2026 to 2027. The majority of these will be at the Douglas, Hamilton, Hamilton N but some attending Lennox
Liverpool Bay Partial Decommissioning Programme	Yes	Approximately 70 vessels over 253 transits through the Liverpool Bay SPA between 2024 and 2028. The majority of these will be at the Douglas, Hamilton, Hamilton North with some attending Lennox.
Douglas and Hamilton Open Water Well Abandonment Campaigns	Yes	Plug and abandonment operations are programmed between 2026 and 2027. These projects have the potential to contribute an additional 34 vessel transits within Liverpool Bay SPA.
Millom, Dalton, Calder DP	Potential	18 transits through SPA between 2027 - 2030
Awel y Môr Offshore Wind Farm	Yes	Unknown number of vessels will transit through the SPA, mitigation through the form of a vessel management plan will be employed
Mona Offshore Wind Farm	No	Up to 1,929 installation vessel movements (return trips) during construction and up to 126 installation vessel movements during cable laying. These are intended for a construction period out-with the wintering seasons and will be managed by a vessel management plan. Cable installation will not take place in wintering season as controlled by the environmental management plan (Mona OWF;2024). Vessel related disturbance on wintering RTD and CS during construction are not considered likely.
Morgan and Morecambe OWF Transmission Assets	Potential	There could be vessel traffic associated with the construction phase, however the number of vessels involved, and the timing of these works is not clear. They will however be managed by an environmental management plan to minimise disturbance to birds.



Offshore Petroleum Regulator
for Environment & Decommissioning

Port of Mostyn Expansion	Yes	Vessels and dredgers associated with the construction works may operate within the SPA however they will use regularly used shipping routes and disturbance is unlikely to be significantly above background levels
West of Duddon Sands Offshore Wind Farm Operations and Maintenance Activities	Potential	Ongoing operations and maintenance activities require periodic vessel movements within Liverpool Bay SPA. Disturbance effects are temporary, localised and associated with routine maintenance vessel traffic. Activities contribute to the existing background level of vessel disturbance but are not expected to result in additional displacement of red-throated diver or common scoter.
Liverpool and Mersey Dredging Activities	Potential	Long-term dredging and disposal activities generate regular vessel movements within Liverpool Bay SPA and contribute to baseline disturbance pressures. Dredging vessels generally operate along established navigation corridors and disposal routes, limiting the extent of additional disturbance. Impacts are expected to be temporary and localised, with no significant effect on qualifying bird populations or their distribution

Project	Licence reference	Activity	Planned schedule	Licence status	Within or outside of the Liverpool Bay SPA
Hynet Carbon dioxide Pipeline Development consent Order (DCO) Project	CML2350 CML2330 CML2365	Re-purposing existing Eni offshore assets including the installation of new platform jackets and pipeline sections, re-purposing gas pipelines, seismic and geophysical surveys, laying and burying cables and rock protection materials	June 2024 – December 2052	Acknowledged	Within
Burbo Bank Offshore Wind Farm	MLA/2023/002 93	Installation of aerodynamic blade tip boosters	January 2024 - July 2032	Issued	Within
	MLA/2016/001 48	Common licensable operational and maintenance activities	September 2016 – December 2032	Issued	Within
Ormonde Offshore Wind Farm	MLA/2016/002 24/3	Common licensable operational and maintenance activities	2016 - 2027	Issued	Outside
Walney 1&2 Offshore Wind Farms	MLA/2016/001 51/3	Common licensable operational and maintenance activities	September 2016 – March 2032	Issued	Outside
Walney Extension Transmission Assets	MLA/2019/005 14/1	Common licensable operational and maintenance activities	February 2020 – September 2043	Issued	Outside
	MLA/2023/002 59	Installation of aerodynamic blade tip boosters	5th October 2023 – 30th September 2041	Issued	Outside
West of Duddon Sands Offshore Wind Farm	MLA/2016/001 50/3	Common licensable operational and maintenance activities	September 2016 – November 2037	Issued	Within
LBA Partial Decommissioning Program (ENI, 2025)	N/A	Partial Decommissioning Programmes (PDP) to facilitate the repurposing of the Liverpool Bay Assets under the Hynet Carbon Dioxide Transportation and Storage project	2024 - 2028	Issued	Within



Offshore Petroleum Regulator
for Environment & Decommissioning

Project	Licence reference	Activity	Planned schedule	Licence status	Within or outside of the Liverpool Bay SPA
Douglas 13-11 P&A	WIA/1764	The P&A of the 110/13-11 open water well in the Douglas field	November 2025 – November 2026	Issued	Within
Douglas 13-13 P&A	WIA/2021	The P&A of the 110/13-13 open water well in the Douglas field	September 2026 – September 2027	Submitted	Within
Hamilton 13-4 P&A	WIA/1691	The P&A of the 110/13-4 open water well in the Hamilton field	September 2026 – September 2027	Issued	Within
Liverpool Cruise Terminal Extension	EXE/2025/00231	Maintenance and development work to increase the capacity of the Liverpool cruise terminal and allow for an additional cruise liner to berth.	Q1 2026 – Q4 2028	Submitted	Outside
Morgan and Morecambe Offshore Wind Farms Transmission Assets	EN020032	Construction of the Morgan and Morecambe offshore windfarms	2026 - 2030	Issued	Within
	MLA/2025/00574	Geotechnical investigations to assist the development of the design of the Morecambe OWF	February 2026 – October 2026	Complete	Within
	MLA/20250012	Collection of metocean data to support the understanding of site conditions	June 2025 – December 2026	Issued	Within
Renewal Maintenance Dredge Liverpool Docks	MLA/2025/00037	Maintenance dredging and disposal within Mersey Impounded Dock System.	August 2025 – August 2035	Issued	Within
Mersey Docks disposal of dredged material	MLA/2021/00202/2	Mersey Channel and River Maintenance Dredge Disposal Renewal	August 2021 – August 2031	Issued	Within
Geotechnical surveys of a NationalGrid HVDC transmission link	RML2571	Geotechnical surveys along the potential route of a HVDC transmission link in the Irish Sea	March 2026 – March 2027	Issued	Outside

Table 19: Projects with disturbance impacts to act In-combination

The proposed Lennox drilling programme is predicted to generate a maximum of 164 vessel transits over a 180-day period, equivalent to approximately six vessel transits per week under the worst-case scenario. At any one time, the maximum number of birds predicted to be disturbed by a single vessel is approximately 7 red-throated diver (0.39% of the SPA population) and 363 common scoter (0.26% of the SPA population). Disturbance associated with vessel transits will be temporary, localised and mobile, with the disturbance footprint moving with vessels rather than remaining fixed within the SPA. The static disturbance footprint associated with the MODU is similarly small in the context of the available habitat and SPA populations.

The proposed operation therefore represents only a small incremental contribution to the overall level of vessel activity occurring within Liverpool Bay. Even when considered in combination with the projects identified above, there is no evidence that the scale, duration or frequency of disturbance would materially impede restoration of the distribution of red-throated diver or common scoter, prevent achievement of the conservation objective to minimise disturbance, or result in a significant change in population distribution within the SPA. The effects are temporary, reversible and limited in spatial extent and are not sufficient to undermine the integrity of the site.

Table 20

Feature: Red Throated Diver and Common Scoter
Pressure: Displacement of species
Attribute Group 2: Non-breeding population: abundance

There is limited evidence to support a direct relationship between short-term vessel disturbance and measurable mortality in red-throated diver or common scoter populations. Disturbance associated with vessel movements and the presence of the MODU during the Lennox 110/15-H well drilling and abandonment is temporary, localised and reversible, with displaced birds expected to relocate to adjacent suitable habitat and, where disturbance ceases, to recolonise previously disturbed areas. Consequently, any effects on abundance are most appropriately considered through the potential consequences of repeated displacement rather than direct mortality.

The proposed Lennox 110/15-H drilling and abandonment programme would result in a maximum of 164 vessel transits over a 180-day period, representing approximately six transits per week under the worst-case scenario. Based on the density information and disturbance distances presented in the EAJ, the maximum number of birds predicted to be disturbed at any one time by a single vessel is approximately 7



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red-throated diver and 363 common scoter which is equivalent to 0.39% and 0.26% of the relevant SPA populations respectively. These figures represent highly precautionary estimates and assume birds are present throughout the disturbance footprint.

Disturbance associated with vessel transits and the presence of the MODU will be temporary, localised and reversible. Birds disturbed from one area are anticipated to relocate to adjacent suitable habitat and to recolonise disturbed areas following cessation of activity. There is no evidence that temporary vessel-related displacement of this scale would result in measurable mortality or a reduction in population abundance.

The Liverpool Bay Partial DP Appropriate Assessment previously applied highly precautionary mortality assumptions of 0.5% and 1% of displaced birds to test whether temporary disturbance could result in population-level consequences (Table 21). Even under these conservative assumptions, any theoretical increase in mortality was calculated to be substantially less than 0.1% of the SPA populations, indicating that significant impacts on population abundance would not be expected. The level of disturbance predicted for the Lennox drilling programme is considerably lower than many of the disturbance scenarios considered within the Liverpool Bay Partial DP assessment and therefore provides additional confidence that abundance objectives would not be affected.

Whilst other plans and projects within Liverpool Bay SPA may contribute additional vessel activity and disturbance, most are subject to project-specific environmental controls and vessel management plans designed to minimise impacts on qualifying bird species. Although it is not possible to quantify precisely the total number of vessel movements that may occur concurrently with the Lennox operation, available information indicates that cumulative disturbance would remain temporary, dispersed in space and time, and small relative to both the size of the SPA and the populations of red-throated diver and common scoter.

Consequently, there is no mechanism by which the proposed Lennox operation, either alone or in combination with other plans and projects, would result in a measurable reduction in the abundance of red-throated diver or common scoter within the Liverpool Bay SPA. The conservation objective to maintain the non-breeding populations of both qualifying features would therefore continue to be achieved, and the integrity of the site would not be adversely affected

Project	Feature	Increase in Baseline Mortality (%)
Liverpool Bay HyNet Transportation and Storage Project	Red-throated diver	Up to 0.89
	Little gull	Up to 0.040
	Common Scoter	Up to 0.98
	Little tern	0.04
	Waterbird assemblage	No data available
Mona Offshore Wind Farm Transmission	All features	The transmission aspect of the Mona offshore wind farm was not assessed quantitatively. The qualitative assessment was of no significant effects to the Liverpool Bay SPA
Awel y Môr Offshore Wind Farm	Red-throated diver	Up to 0.582
	Little gull	No data available
	Common Scoter	Up to 0.007
	Little tern	Beyond 5 km foraging range
	Waterbird assemblage	No data available
Morecambe	Red-throated diver	0.01
	Little gull	No data available
	Common Scoter	No data available
	Little tern	Beyond 5 km foraging range



Offshore Petroleum Regulator
for Environment & Decommissioning

	Waterbird assemblage	No data available
Morgan and Morecambe OWF Transmission shared transmission	Red-throated diver	Up to 0.35
	Little gull	No data available
	Common Scoter	Up to 0.98
	Little tern	Beyond 5 km foraging range
	Waterbird assemblage	No data available
Minimum total in-combination excess mortality*	Red-throated diver	1.932*
	Little gull	0.040*
	Common Scoter	1.967*
	Little tern	0.04
	Waterbird assemblage	No data available

*For projects with quantitative data only

Table 21: Summary of the Displacement Results from Other Projects within the Liverpool Bay SPA

Whilst it is unlikely that the temporary and highly localised displacement arising from vessel movements associated with the proposed operation would result in measurable increases in mortality, other plans and projects operating within Liverpool Bay SPA may contribute additional disturbance pressures which could act in combination. However, the available evidence indicates that the majority of these activities generate short-term, intermittent and reversible disturbance rather than the prolonged habitat loss or chronic displacement typically associated with population-level effects. The precautionary mortality estimates derived for the in-combination assessment represent an upper-bound worst-case scenario and should be interpreted accordingly. Even under these highly conservative assumptions, any theoretical increase in mortality remains very small relative to the SPA populations of red-throated diver and common scoter and is not expected to result in a measurable reduction in population abundance or a significant change in population status within Liverpool Bay SPA.

Table 22

Feature: Red Throated Diver and Common Scoter
Pressure: Displacement of species
Attribute Group 3: Supporting habitat extent/distribution

The conservation objectives for red-throated diver and common scoter require the maintenance of prey availability and the restoration of the extent, distribution and quality of supporting habitat within the Liverpool Bay SPA. Potential in-combination effects on these attributes could arise through seabed disturbance, habitat alteration, sediment deposition, changes in prey communities or degradation of water and sediment quality associated with other plans and projects operating within the SPA.

The Lennox 110/15-H drilling and abandonment programme will result in a maximum temporary seabed disturbance footprint of approximately **11,941.8 m²**, representing approximately **0.00047%** of the Liverpool Bay SPA. The principal sources of disturbance comprise anchor placements, anchor chain movement, drill cuttings deposition, cement overflow and limited conductor recovery activities. Any permanent habitat alteration associated with cement deposition is predicted to affect approximately **120 m²**, whilst contingency stabilisation material could affect up to **1,140 m²** of seabed. Even when these areas are combined, the footprint represents an extremely small proportion of the available supporting habitat within the SPA.

Other plans and projects operating within Liverpool Bay SPA may also result in localised seabed disturbance, sediment mobilisation and habitat alteration. These include offshore wind farm construction activities, cable installation works, dredging operations, decommissioning projects and HyNet-related infrastructure activities. These effects are generally temporary, spatially restricted and managed through



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project-specific environmental controls. Whilst cumulative habitat disturbance may occur, there is no evidence that the combined footprint of these activities would result in extensive loss, fragmentation or degradation of supporting habitat at a scale capable of affecting prey availability or population-level use of the SPA by qualifying bird species.

Red-throated diver utilise a wide range of fish species, whilst common scoter primarily feed on benthic invertebrates. The scale of habitat affected by the Lennox operation is insufficient to cause any measurable reduction in prey abundance, prey distribution or prey availability within the SPA. Even when considered in combination with other plans and projects, the operational footprint remains negligible relative to the extensive supporting habitat available across Liverpool Bay SPA. Furthermore, there is no realistic mechanism by which the proposed activity could result in significant or long-term changes to the physical, chemical or hydrodynamic characteristics of the SPA which underpin prey resources and habitat function.

Consequently, the proposed Lennox operation, either alone or in combination with other plans and projects, is not expected to adversely affect the availability of prey resources, the extent or quality of supporting habitat, or the ability of the SPA to achieve its habitat-related conservation objectives. The integrity of the site will therefore be maintained.

Table 23: Appropriate Assessment Conclusion: In-combination

Feature	Adverse Effect on Site Integrity?	Summary of Reason
Red Throated Diver and Common Scoter	Yes	The proposed Lennox operation would make only a small incremental contribution to existing disturbance and habitat pressures within Liverpool Bay SPA. In-combination effects are predicted to be temporary, localised and reversible, with no significant effect on population abundance, distribution, prey availability or supporting habitat. The conservation objectives for red-throated diver and common scoter would continue to be achieved and therefore no adverse effect on the integrity of the site is predicted.

5. Conclusion of Habitats Regulations Assessment

An assessment has been undertaken to determine whether the proposed Lennox **110/15-6 Intersection Well – Drilling and Plug and Abandonment** 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 sites and features:

Liverpool Bay SPA – Common Scoter (Non-breeding) and Red Throated Diver (Non-Breeding)

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/SPA sites, either alone or in-combination with other relevant plans and projects.



Offshore Petroleum Regulator
for Environment & Decommissioning

6. Appendix

Application documents

Statutory Nature Conservation Body (SNCB) Consultation

SNCB consulted: JNCC – Response received 2 October 2026
SNCB Comment: An Adverse Effect on Site Integrity as a result of the proposed works alone can be ruled out. Based on the proposed mitigation measures and the information presented in the HRA, an Adverse Effect on Site Integrity as a result of the proposed works in-combination with other Plans and Projects can also be ruled out.
SNCB consulted: Natural England – Response received 7 October 2026
SNCB Comment: Activity During the Overwintering Within Table 4 the assessment concludes that there will be no LSE in where vessel activity occurs outside the non-breeding season whilst simultaneously acknowledging that vessel activity during the non-breeding season has the potential to result in disturbance and displacement effects. The project programme extends from October 2026 to September 2027 and further information on the quantity of vessel movements and MODU presence during the overwintering period is required to identify and assess a defined winter worst-case scenario.
OPRED Response: Activity During the Overwintering While it is acknowledged that some elements of the proposed campaign may occur outside the overwintering period the assessment has adopted a precautionary maximum operational envelope of 180 days, including up to 164 vessel transits and continuous MODU presence, and applies non-breeding-season bird densities without relying on seasonal avoidance to support the conclusion. Although the full 180-day programme cannot occur wholly within the November to March period, the assessment assumes that the maximum period capable of falling within that core overwintering period may do so, with the balance potentially occurring during the October and April shoulder months. The applicant has considered timing restrictions as part of project planning. However, the proposed activity is required to remediate a historic well integrity issue which has been identified as a potential leakage pathway and a risk to the future HyNet CCS development. The operation represents a critical-path activity and includes significant technical uncertainty associated with intersecting an existing abandoned wellbore. Consequently, a wide programme window is required to accommodate vessel availability, weather constraints and multiple contingent intersection scenarios. Complete avoidance of the overwintering period cannot currently be assumed to be reasonably practicable and the assessment carried out therefore assumes the full 180-day operational duration, including MODU presence and associated vessel activity, could occur during the sensitive non-breeding period and assesses disturbance on that basis. The project programme extends from October 2026 to September 2027 to provide flexibility for operational and weather-related constraints; however, the purposes of the assessment undertaken a full winter overlap has been assumed, thereby representing a defined winter worst-case scenario. Further text and clarification have been provided in Table 4.



Offshore Petroleum Regulator
for Environment & Decommissioning

SNCB Comment: Inconsistency between Table 4 and Section 3.3

The assessment contains an apparent inconsistency between Table 4 and Section 3.3 regarding likely significant effects on red-throated diver and common scoter, and clarification was requested on how the differing conclusions were reached.

OPRED Response: Inconsistency between Table 4 and Section 3.3

Table 4 presents separate screening scenarios depending on whether activity overlaps the non-breeding season; it was not intended to conclude that no LSE would arise under the project's full programme envelope. As activity may occur while red-throated diver and common scoter are present in significant numbers, LSE could not be excluded and both features were screened into Appropriate Assessment in Section 3.3. Table 4 has been amended to state this conclusion consistently and to remove ambiguous seasonal wording.

Further text and clarification have been provided in Table 4.

SNCB Comment: Liverpool/Heysham vessel route discrepancy

Clarification is requested on the vessel transit route considered to represent the biological worst-case scenario, noting that the assessment identified the Heysham route as the precautionary assessment route while vessel transits from Liverpool Port may result in higher levels of disturbance to red-throated diver and common scoter.

OPRED Response: Liverpool/Heysham vessel route discrepancy

The assessment has considered both the Heysham and Liverpool transit routes which are identified as representing different precautionary scenarios. The Heysham route is the spatial worst case because it has the longest overlap and largest route-wide disturbance corridor within the SPA. The Liverpool route is the biological exposure worst case because it crosses areas of higher mapped bird density and produces the higher route-wide estimates of potentially exposed red-throated diver and common scoter. The assessment concludes that disturbance effects would be temporary, localised and reversible under either scenario. The Vessel Management Plan will require route selection to minimise interaction with higher-density bird areas where safe and operationally practicable.

Further text and clarification have been provided to pages 31 to 36 and Tables 10 to 13 have been updated and amended.

SNCB Comment: Baseline overwinter vessel activity

Additional information is requested on baseline vessel activity at the Lennox Platform during the overwintering period (1 November to 31 March) to enable an assessment of the increase in activity above existing conditions and the potential significance of disturbance impacts associated with the proposed vessel movements.

OPRED Response: Baseline overwinter vessel activity

The assessment contains substantial annual vessel-activity information for the Lennox area from 2014 to 2026, demonstrating that drilling, intervention, survey, decommissioning and abandonment-related vessel activity forms part of the operational baseline. The available data are not consistently separated for the 1 November to 31 March period and therefore cannot provide a precise winter-only average. The assessment provides annual vessel activity records showing considerable variation in traffic levels. It is acknowledged that proposed operation represents an increase over the long-term average vessel activity; however, it is a temporary, one-off remediation campaign required to address a known well integrity issue and potential



Offshore Petroleum Regulator
for Environment & Decommissioning

leakage pathway that has been identified as a risk to the HyNet CCS project and is a critical-path activity. Following completion of the remediation and abandonment works, future monitoring, intervention and vessel requirements at the 110/15-6 well location are expected to reduce, resulting in a corresponding reduction in vessel activity compared with both recent and projected baseline conditions. The baseline information presented is considered to be sufficient to demonstrate the existing operational context and that the disturbance assessment appropriately assesses the proposed activity within that context, whilst acknowledging that additional winter-specific baseline information would provide useful supplementary context.

SNCB Comment: Application of mitigation hierarchy

Further justification is requested to demonstrate that disturbance impacts arising from vessel activity and the temporary presence of the MODU had been reduced as far as reasonably practicable, including consideration of seasonal avoidance of the overwintering period and application of the mitigation hierarchy.

OPRED Response: Application of mitigation hierarchy

Seasonal avoidance has been considered but complete exclusion of operations from the non-breeding season is not currently considered reasonably practicable. The proposed activity is required to remediate a known well integrity issue and potential leakage pathway associated with the 110/15-6 well, which has been identified as a risk to the future HyNet CCS project and is a critical-path activity for the repurposing of the Liverpool Bay assets for carbon storage. The programme window extends across multiple seasons because of the technical uncertainty associated with intersecting an existing abandoned well, the need to accommodate contingency drilling scenarios, vessel availability and weather-related delays. As such, complete avoidance of the overwintering period cannot be assumed to be reasonably practicable.

The assessment demonstrates application of the mitigation hierarchy through embedded avoidance and minimisation measures, including implementation of a Vessel Management Plan, minimising vessel movements and operational duration, use of existing navigation routes, route selection to avoid areas of higher bird density where practicable, reduced transit speeds, bridge watch procedures, lighting controls, minimisation of unnecessary manoeuvring and positioning of the ERRV outside the SPA where possible. The assessment also concludes that disturbance would be temporary, localised and reversible. Furthermore, successful completion of the remediation works is expected to reduce the future requirement for monitoring, intervention and vessel traffic at the well location, resulting in a long-term reduction in disturbance compared with continuing management of the existing well integrity issue.

Further clarity on the mitigation hierarchy is provided on page 40,

SNCB Comment: Cumulative and in-combination impacts

The cumulative and in-combination assessment is considered to be unclear. The assessment does not appear to utilise the most up-to-date information available regarding several offshore projects in the Liverpool Bay region and there is insufficient information on potential temporal overlap between projects occurring during the sensitive overwintering period. Information on some project descriptions and planning-stage information appear outdated and the assessment still states that these projects have yet to enter the examination phase.



Offshore Petroleum Regulator
for Environment & Decommissioning

OPRED Response: Cumulative and in-combination impacts

The in-combination assessment considered the relevant disturbance and displacement pathway using information available when the assessment was prepared. Updated information has been requested from the Applicant on the status, programme and potential overwintering overlap of relevant regional projects. The project descriptions and temporal-overlap assessment will be updated where necessary, and the conclusion will be confirmed after that information has been reviewed.

SNCB consulted: NE – Response received 16 October 2026

SNCB Comment:

NE welcomed the additional information and clarification provided but maintained its previous conclusion that insufficient information was available to rule out an adverse effect on Liverpool Bay SPA. OPRED considers that the assessment contains the information necessary and available to undertake the Appropriate Assessment and reach a conclusion on site integrity.

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Offshore Petroleum Regulator
for Environment & Decommissioning

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