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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                |                                |
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| Applicant details              | INEOS UK SNS Ltd               |
| Applications Being Applied for | GS/1886/0                      |

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## Description of the Activity

INEOS are planning to undertake a geophysical, shallow geotechnical and environmental survey at the proposed Pegasus West field development site, including the proposed pipeline route from the Breagh A platform to Pegasus West. The survey will provide information to inform the planning and assessment of the proposed Pegasus development.

The survey will require the use of the following equipment:

- Sub Bottom Profilers
- Geotechnical sampling – Virbo cores and Cone penetration testing
- Grab sampling (Van Veen)
- Other Acoustic surveys – Multibeam, sidescan, magnetometer. These systems do not require consent and just notification to the Department.

The survey work will be undertaken from a single survey vessel

Details of the two sub bottom profilers are outlined below:

| Parameter                                  | SBP (Innomar)                        | SBP (Sparker)                          |
|--------------------------------------------|--------------------------------------|----------------------------------------|
| Energy Source Type:                        | Innomar Medium-70                    | AAE Dura400/400                        |
| Water depth:                               | c. 19 - 65 m                         | c. 19 - 65 m                           |
| Shot interval:                             | 0.025 seconds                        | 0.25 seconds                           |
| SPL@ 1m: dB re 1 $\mu$ Pa<br>(peak):       | 246 dB re 1 $\mu$ Pa <sup>2</sup> -s | 226 dB re 1 $\mu$ Pa <sup>2</sup> -s   |
| SEL@ 1m: dB re 1 $\mu$ Pa <sup>2</sup> -s: | 223 dB re 1 $\mu$ Pa <sup>2</sup> -s | 197.8 dB re 1 $\mu$ Pa <sup>2</sup> -s |
| Peak energy frequency:                     | 12 kHz                               | 1 kHz                                  |
| Number of cables:                          | 0                                    | 2                                      |
| Length of towed equipment:                 | N/A                                  | 180 m                                  |
| Width of towed equipment:                  | N/A                                  | 1.5 m                                  |
| Survey speed:                              | 4 knots                              | 4 knots                                |
| Sail line spacing:                         | 50 m                                 | 50 m                                   |
| Estimated number of turns:                 | 150                                  | 150                                    |
| Estimated duration of line<br>turns:       | 35 minutes                           | 35 minutes                             |

*Table 1: Details of Survey Equipment Requiring Consent*



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## Location

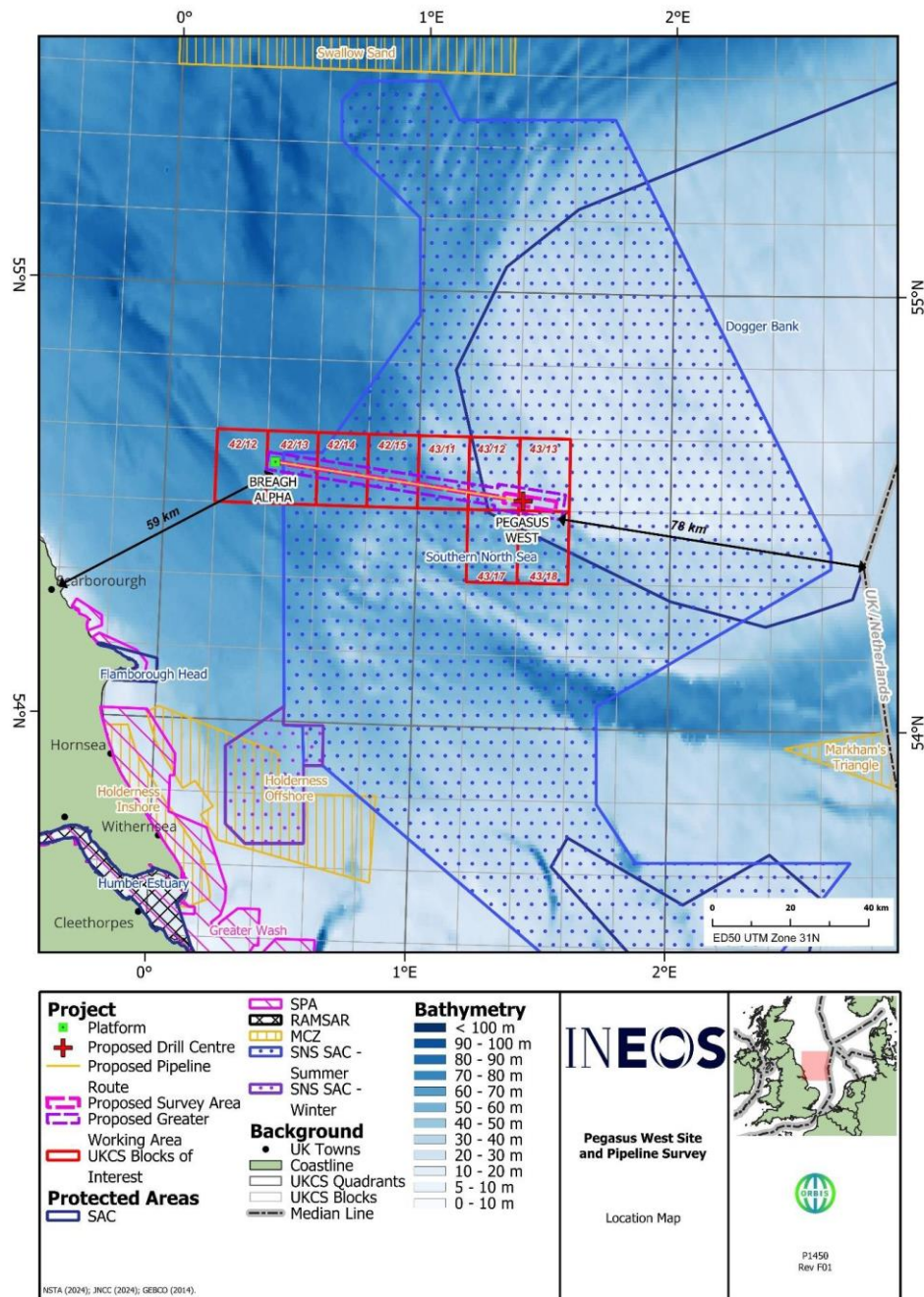


Figure 1: Location of the Pegasus West Survey location

The survey is in Quadrants 42 and 43 (in Seaward Production Licence P2662). The Pegasus West site survey operations will be undertaken within a 2.5 km by 13.6 km area (34 km<sup>2</sup>) centred on the proposed Pegasus West drill centre location in the UKCS Blocks 43/12 and 43/13.

The pipeline route survey operations will be undertaken along ca. 59 km of the proposed pipeline route across a width of 450 m (26.55 km<sup>2</sup>) in the UKCS Blocks 42/13, 42/14, 42/15, 43/11 and 43/12. The last 6 km of the proposed pipeline route will be covered by the proposed site survey area.

The spatial extent of the Pegasus West greater working area (including line turns) is approximately



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395 km<sup>2</sup> and is located approximately 59 kilometres (km) northeast of the Yorkshire coastline at its closest point and approximately 78 km from the UK / Netherlands transboundary line. Note, the geophysical survey equipment will be switched off during line turns in the greater working area.

### Timing

The operations are scheduled to commence on 15th April 2025, at the earliest, and will last for up to 40 days. To account for potential scheduling, operational and weather delays, the marine survey consent is requested until 30th June 2025.

### Requirement for a Habitats Regulations Assessment

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

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

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

### Stage 1: Test of likely Significant effects (LSE)

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

### Pressures associated with the activity

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

#### Underwater noise (impulsive noise)

Impulsive underwater noise will be emitted from the sub bottom profiler units. This noise will be loud enough and of the right frequency range to cause injury and disturbance to marine mammals. Impulsive noise from multibeam and sidescan sonar will also be emitted but this



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sound is of a frequency, directionality and source level that will not cause significant effects on marine life and noise from these sources will not be considered further within the assessment.

### **Underwater noise (non-impulsive noise)**

Underwater noise from non-impulsive sources such as vessel engines and coring systems will be generated during the survey.

### **Seabed disturbance**

The collection of grab samples, cores and geotechnical investigations will require the removal of small amounts of sediment and the positioning of equipment on the seabed which will cause disturbance of sediments and benthic fauna.

Grab samples: Up to 56 stations will be subject to grab sampling, with three grabs at each station. Each grab will impact an area of 0.1m<sup>2</sup> totalling 7m<sup>2</sup>.

Geotechnical: 48 Cone Penetration and 48 Vibrocore tests will be performed which will disturb an area of 1m<sup>2</sup>.

## Screening of protected sites

The activity is within the following sites:

- Southern North Sea (SNS) SAC
- Dogger Bank SAC

### **Screened out of the LSE screening assessment**

There is no pathway for potential effects on the other sites due to the large distance between other sites and the project area. There is also no mechanism whereby the project could impact (in any meaningful way) highly mobile species associated with protected sites i.e. seabirds or marine mammals. (Figure 1).

## LSE Assessment

Site features and conservation objectives are taken from relevant SNCB conservation advice packages found on the following webpages:

- <https://jncc.gov.uk/our-work/southern-north-sea-mpa/>
- <https://jncc.gov.uk/our-work/dogger-bank-mpa/>



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**Table 1. Test of likely significant Effect**

| Pressures exerted by Activity                    | Feature                                       | Is there likely to be a significant effect on the conservation Objectives <u>alone</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|--------------------------------------------------|-----------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Southern North Sea SAC</b>                    |                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Underwater noise (impulsive: geophysical survey) | Harbour porpoise ( <i>Phocoena phocoena</i> ) | <p>No.</p> <p>The project area supports high numbers of harbour porpoise and the proposed operations take place in the summer area of the SNS SAC during between March 2025 and December 2025, with surveys taking place between April 2025 and 30<sup>th</sup> June 2025.</p> <p>Injury risk:<br/>Noise modelling undertaken indicates that, there is potential for sound levels to cause the onset of permanent threshold shift (PTS) to harbour porpoise out to 750 m. The developer explains that this modelling has produced an over precautionary result, and that PTS is highly unlikely to occur out to such a range. This assumption is supported by the fact that other applications for sub bottom profiling surveys (a very common place activity) does not normally produce such large PTS ranges and SBP surveys are not associated with a high injury risk. It is expected that any risk of killing or injury to a marine mammal will be avoided through the implementation and adherence to the JNCC's standard "<i>protocol for minimising the risk of injury to marine mammals from geophysical surveys</i>".</p> <p>Disturbance:<br/>The SNCB guidance on noise management in harbour porpoise SACs states a plan/project, individually or in combination, is significant if it excludes harbour porpoises from more than:</p> <ul style="list-style-type: none"> <li>• 20% of the relevant area of the site in any given day, or</li> <li>• an average of 10% of the relevant area of the site over a season</li> </ul> <p>The SNCB guidance also assigns standardised disturbance distances for harbour porpoise because of different activities. These are termed effective deterrent ranges (EDRs) and it is</p> |



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| Pressures exerted by Activity                  | Feature                                       | Is there likely to be a significant effect on the conservation Objectives <u>alone</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|------------------------------------------------|-----------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                |                                               | <p>assumed that within this EDR harbour porpoise will be disturbed to an extent where they flee the area, effectively displacing porpoise from regions of the SAC.</p> <p>The use of sub bottom profilers requires the use of a 5 km EDR, which extends to the whole area around the survey vessel. The developer has calculated the area of sea within which harbour porpoise may experience disturbance within a 24-hour period, by calculating the longest distance that the vessel may transit while undertaking survey activities and apply the EDR as a spatial buffer around this vessel route, this results in an area of 471.64km<sup>2</sup>. The percentage of the summer area of the SNS SAC that may be excluded because of the proposed operations is 1.75% per day. The contribution to the seasonal average disturbance is 0.11%</p> <p>Based on the predicted extent of potential impacts, it is concluded that there is no potential for a likely significant effect on harbour porpoise from the proposed activity within or adjacent to the Southern North Sea SAC when considered alone.</p> |
| Underwater noise (non-impulsive: vessel-based) | Harbour porpoise ( <i>Phocoena phocoena</i> ) | <p>No.</p> <p>The underwater noise generated by the vessel's dynamic positioning system is not expected to result in significant impacts including permanent or temporary threshold shift nor behavioural disturbance.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Seabed disturbance                             | Harbour porpoise ( <i>Phocoena phocoena</i> ) | <p>No.</p> <p>The disturbance created by the taking of samples from the seabed is expected to be highly localised and unlikely to disrupt prey availability for harbour porpoise. The sedimentary habitats in the region are exposed to periodic physical disturbance and the benthic and demersal communities show good recovery to physical disturbance, particularly where this disturbance does not change the sediment composition/type. This will allow for the habitat and prey of harbour porpoise to rapidly recover.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |



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| Pressures exerted by Activity                     | Feature                                                            | Is there likely to be a significant effect on the conservation Objectives <u>alone</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|---------------------------------------------------|--------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Dogger Bank SAC</b>                            |                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Underwater noise (impulsive: geophysical surveys) | 1110 Sandbanks which are slightly covered by seawater all the time | No.<br><br>There is no impact pathway for this designated feature from underwater noise.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Underwater noise (non-impulsive: vessel-based)    | 1110 Sandbanks which are slightly covered by seawater all the time | No.<br><br>There is no impact pathway for this designated feature from underwater noise.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Seabed disturbance and water-based muds cuttings  | 1110 Sandbanks which are slightly covered by seawater all the time | No.<br><br>The operations will cause some temporary physical disturbance of the seabed however this area is extremely small being approximately 17.33m <sup>2</sup> whereas the sandbank feature within the site extends over 12,331km <sup>2</sup> . The precise area of seabed disturbance within the Dogger Bank SAC is unknown as the survey stations have not been finalised, however a maximum number of 56 stations will be visited with a total disturbance of 17.33m <sup>2</sup> . As this area is very small no attempt has been made to discriminate the proportion of this total disturbance that will take place in the SAC and the assessed scenario considers all disturbance to occur in the SAC.<br><br>The disturbance will result in some damage to benthic species, however the biological assemblages observed in the area will be adapted to natural periodic physical disturbance and are likely to show a good degree of resistance, adaptability and recoverability. The small area of impact relative to total extent of sandbanks in the site and the high recoverability of the seabed means there is no risk of the structure and function of the sandbanks being significantly affected. There will also be no change in water flow, no reduction in sediment or nutrient supply and no change in sediment composition or type. Thus, there will be no change in the feature's supporting processes. |



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## LSE Conclusion: Alone

When considered alone the project is **unlikely to cause a significant effect** on the conservation objectives of any site.



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## LSE In-combination assessment

### Southern North Sea SAC:

The following projects have been evaluated to ascertain if they could exert a pressure on the SNS SAC's designated feature ("Harbour porpoise (*Phocoena phocoena*)"), which when considered in-combination with those of the proposed operations could result in a significant effect on the site's conservation objectives (Table ).

It has been ascertained that these projects, in combination, could exceed the disturbance thresholds identified in the SNCB guidance as being levels beyond which impacts could become significant, namely 20% of the SAC per day and 10% across the relevant season. Therefore, there is potential for significant effects in the SNS SAC.

**Table 2. Likelihood of plans acting in-combination to cause a likely significant effect for the SNS SAC. Blue highlighted entry denotes the proposed operations.**

| Project                 | Activity Type                               | Significant In-combination effect likely? | What pressures may act in-combination?<br>* See Table for references |
|-------------------------|---------------------------------------------|-------------------------------------------|----------------------------------------------------------------------|
| Sofia Offshore Windfarm | Monopiling Unabated                         | Yes.                                      | 1                                                                    |
| Sofia Offshore Windfarm | Monopiling Abated                           | Yes                                       | 1                                                                    |
| East Anglia 3           | Monopiling Unabated                         | Yes                                       | 1                                                                    |
| East Anglia 3           | Monopiling Abated                           | Yes                                       | 1                                                                    |
| East Anglia 3           | Pin Piling                                  | Yes                                       | 1                                                                    |
| Hornsea Three           | UXO Low Order (x1 pd)                       | Yes                                       | 1                                                                    |
| Hornsea Three           | UXO Low Order (x2 pd)                       | Yes                                       | 1                                                                    |
| Hornsea Three           | UXO High Order (x1 pd)                      | Yes                                       | 1                                                                    |
| Doggerbank B            | Monopiling Unabated                         | Yes                                       | 1                                                                    |
| Doggerbank C            | Monopiling Unabated                         | Yes                                       | 1                                                                    |
| Doggerbank C            | Pin Piling                                  | Yes                                       | 1                                                                    |
| Doggerbank D            | Geophysical Survey 1                        | Yes                                       | 1                                                                    |
| Doggerbank D            | Geophysical Survey 2                        | Yes                                       | 1                                                                    |
| National Grid           | Geophysical Survey                          | Yes                                       | 1                                                                    |
| NEP Expansion           | NEP Expansion Seismic (CS007) GS/1867       | Yes                                       | 1                                                                    |
| NEP                     | Phase 1 2DHR GS/1853                        | Yes                                       | 1                                                                    |
| NEP                     | EPCI 3 Geophysical - Offshore Cable GS/1871 | Yes                                       | 1                                                                    |



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| Project                 | Activity Type                                  | Significant In-combination effect likely? | What pressures may act in-combination?<br>* See Table for references |
|-------------------------|------------------------------------------------|-------------------------------------------|----------------------------------------------------------------------|
| NEP                     | EPCI 2 Geophysical - Infield GS/1866           | Yes                                       | 1                                                                    |
| NEP                     | EPCI 1 Geophysical -Pipeline TBC               | Yes                                       | 1                                                                    |
| ENI / Ithaca (Tellus)   | Geophysical Surveys                            | Yes                                       | 1                                                                    |
| Ithaca (Cynus)          | Well Conductor Piling                          | Yes                                       | 1                                                                    |
| Norfolk Projects        | UXO Clearance Campaign                         | Yes                                       | 1                                                                    |
| <b>INEOS UK SNS Ltd</b> | <b>Pegasus West Site &amp; Pipeline Survey</b> | <b>Yes</b>                                | <b>1</b>                                                             |

**Table 3. Pressure reference - Key of pressures use in in-combination assessment**

| Pressure                                         | Ref |
|--------------------------------------------------|-----|
| Underwater noise (impulsive: geophysical survey) | 1   |
| Underwater noise (non-impulsive: vessel-based)   | 2   |
| Seabed disturbance and water-based muds cuttings | 3   |

#### **Dogger Bank SAC:**

The total seabed disturbance amounts to 0.0000173 km<sup>2</sup> whereas the Dogger Bank SAC extends over 12,331km. This temporary impact is considered of such a small scale that is not possible for it to have any significant or material effect on the conservation objectives of the site as it's proportional contribution, even when considered in-combination with or plans and projects, would be in-consequential.

#### **LSE Conclusion: In-combination**

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

| Site                   | Feature                                       |
|------------------------|-----------------------------------------------|
| Southern North Sea SAC | Harbour porpoise ( <i>Phocoena phocoena</i> ) |



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

| Site            | Feature                                                             |
|-----------------|---------------------------------------------------------------------|
| Dogger Bank SAC | 1110 Sandbanks which are slightly covered by seawater all the time) |

## Stage 2: Appropriate Assessment

***Could the activity adversely affect the integrity of a site?***

Following the LSE assessment (Stage 1) the SoS must undertake an AA to determine whether the proposed activities, when considered in combination with other plans and projects, could have an adverse effect on:

**Site:** Southern North Sea SAC

**Features:** Harbour porpoise (*Phocoena phocoena*)

**Pressures:** Underwater noise (impulsive: geophysical survey based)

To ensure that the integrity of the SNS SAC is maintained and that it makes the best possible contribution to the Favourable Conservation Status (FCS) for Harbour Porpoise in UK waters, the site has the following objectives:

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

Note: The objectives are managed in the context of natural change

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. Pressures that would affect site integrity include:

- killing or injuring harbour porpoise (directly or indirectly);
- preventing their use of significant parts of the site (disturbance/displacement);
- significantly damaging relevant habitats; or
- significantly reducing the availability of prey.



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The JNCC and Natural England advice is that ‘noise disturbance within the site should not exclude harbour porpoise from more than 20% of the site on any given day. Over a season, the advice is that an average loss of access to more than 10% of the SAC should be considered significant, recognising that within the SAC the abundance of harbour porpoise per unit habitat is generally higher than the equivalent sized habitat in the rest of the relevant Management Unit. Management of temporary habitat ‘loss’ to below defined area/time thresholds is therefore designed to ensure that it continues to contribute in the best possible way to the maintenance of the species at FCS.’ (JNCC, 2020).

### Appropriate Assessment: Harbour porpoise (*Phocoena phocoena*)

At the LSE assessment stage it was concluded that no significant impact on the designated features of any site will occur when considering the project alone.

### AA Conclusion Alone

No adverse effect on site Integrity

### In-combination Assessment: Harbour porpoise (*Phocoena phocoena*)

### Projects Considered In-combination

The projects listed in Table have the potential to cause cumulative effects on harbour porpoise as they, through the mechanism of noise induced disturbance, have the potential to prevent parts of the site from being used by Harbour porpoise (disturbance/displacement).

### Appropriate Assessment

A further assessment has been undertaken to understand whether the impacts from other plans or projects could act in-combination with those of the proposed operations and cause an adverse effect on the site integrity.

#### Scope of Appropriate Assessment:

**Site:** Southern North Sea SAC

**Features:** Harbour porpoise (*Phocoena phocoena*)

**Pressures:** Underwater noise (impulsive: geophysical survey based)



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Conservation Objective 1: Harbour porpoise is a viable component of the site.

Given that the operation only extends over 12 days and is a survey using sub bottom profiler which is not normally considered to represent a significant injury risk, it is considered that the likelihood of killing or injuring harbour porpoise (directly or indirectly) is very low. This likelihood is further reduced using marine mammal mitigation measures which will ensure the absence of marine mammals from the injury area during start up. Injury is not considered further in the appropriate assessment.

Conservation Objective 2: There is no significant disturbance of the species.

- Daily Disturbance

The other projects planned to be emitting impulsive noise into the summer part of the SAC, during summer, are listed in table 5. Also listed in this table are the associated areas of potential displacement associated with each activity based on their respective EDRs.

If all the activities planned for the summer season were to be undertaken on the same day, the cumulative disturbance and subsequent area of displacement would exceed 20% which indicates there is the potential for a significant impact on the conservation objectives if operations progressed without mitigation measures being employed.

- Daily Disturbance – Mitigation

In practice not all operations listed in table 5 will occur on the same day and if activities are instead planned and distributed on days throughout the summer there is sufficient capacity for all the activities listed to proceed without exceeding the 20% level. The operators of all the projects listed in table 5 will therefore have licence conditions which require them to coordinate with other operators. This coordination will ensure that whenever they are emitting impulsive noise they can evidence that the cumulative displacement area for that day will not exceed 20% of the summer area. They will undertake this coordination via the SIMOPs working work group which is part of the Developers Coordination Forum. The cumulative displacement figure for each day will be recorded on the shared noisy activity spreadsheet which is visible to regulators and industry on the DCF Teams channel.

- Seasonal Disturbance

There is some uncertainty regarding what the average seasonal disturbance will be as most licences account for the longest possible period and in practice the operations are often completed in a shorter time frame. Despite uncertainty regard the exact seasonal figure, there is confidence that this figure will be below 10% because even using the worst case scenarios for seasonal disturbance shown in Table 6, the average would be 8.6%. To provide extra security the seasonal average disturbance figure will be calculated and monitored as part of the live cross-sector sim-ops coordination process which is designed to ensure operations remain within the recommended disturbance thresholds.

Table 1: Estimated disturbance to harbour porpoises within the SNS SAC from various activities in isolation using JNCC (2020) EDRs.



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| Activity                                                  | Maximum Daily Disturbance to the SNS SAC |       | Duration of Impact (days) | Average Seasonal Disturbance to the SNS SAC (%) |
|-----------------------------------------------------------|------------------------------------------|-------|---------------------------|-------------------------------------------------|
|                                                           | km <sup>2</sup>                          | %     |                           |                                                 |
| NEP EPCI 2 SBP Survey                                     | 152                                      | 0.562 | 23                        | 0.071                                           |
| Sofia OWF Survey                                          | 133                                      | 0.493 | N/A                       | 0                                               |
| Sofia OWF Monopiling (Unabated)                           | 1,661                                    | 6.147 | 25                        | 0.840                                           |
| East Anglia Three Monopiling (Unabated)                   | 2,122                                    | 7.850 | 7                         | 5.405                                           |
| East Anglia Three Monopiling (Abated)                     | 1,19                                     | 5.620 | 176                       | 0.300                                           |
| East Anglia Three Pin Piling                              | 705                                      | 2.610 | 21                        | 0.300                                           |
| Hornsea Three April Low Order UXO Clearance (1 per day)   | 78                                       | 0.290 | 8                         | 0.013                                           |
| Hornsea Three April Low Order UXO Clearance (2 per day)   | 157                                      | 0.580 | 8                         | 0.025                                           |
| Hornsea Three April High Order UXO Clearance (1 per day)  | 708                                      | 2.620 | 3                         | 0.043                                           |
| Hornsea Three August Low Order UXO Clearance (1 per day)  | 9                                        | 0.035 | 25                        | 0.005                                           |
| Hornsea Three August Low Order UXO Clearance (2 per day)  | 11                                       | 0.039 | 5                         | 0.001                                           |
| Hornsea Three August High Order UXO Clearance (1 per day) | 132                                      | 0.490 | 20                        | 0.054                                           |
| Dogger Bank B Monopiling (Unabated)                       | 2,865                                    | 10.60 | 1                         | 0.058                                           |
| Dogger Bank C Monopiling (Unabated)                       | 6                                        | 0.024 | 4                         | 0.001                                           |



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|                                       |       |       |    |       |
|---------------------------------------|-------|-------|----|-------|
| NEP Phase 1 Seismic Survey            | 526   | 1.946 | 20 | 0.213 |
| NEP Expansion Seismic Survey<br>CS025 | 1,473 | 5.450 | 18 | 0.536 |
| NEP Expansion Seismic Survey<br>CS007 | 744   | 2.753 | 33 | 0.496 |
| NEP EPCI 1 Survey                     | 121   | 0.448 | 10 | 0.024 |
| NEP EPCI 3 Survey                     | 121   | 0.448 | 19 | 0.046 |
| INEOS Pegasus West                    | 471   | 1.75  | 12 | 0.11  |
| Ithaca Cygnus Conductor Piling        | 706   | 2.62  | 1  | 0.01  |
| Total                                 |       |       |    | 8.551 |

In terms of daily disturbance, other impulsive noise-generating operations may take place concurrently with the proposed operations. Currently the cumulative daily totals for the provisional survey dates are shown in table 6. For these provisional dates there are currently no days where the daily 20% level could be exceeded however these numbers remain provisional and will be managed by the SIMOPS group.



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Table 2: Worst case daily disturbance scenario

| Total Daily:     |                                             | 17.95 | 17.95 | 17.95 | 17.66 | 15.71 | 15.71 | 15.71 | 15.71 | 15.71 | 15.71 | 15.71 | 15.14 |
|------------------|---------------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Project          | Activity Type                               |       |       |       |       |       |       |       |       |       |       |       |       |
| Sofia            |                                             |       |       |       |       |       |       |       |       |       |       |       |       |
| Offshore         |                                             |       |       |       |       |       |       |       |       |       |       |       |       |
| Windfarm         | Monopiling Unabated                         | 7.13  | 7.13  | 7.13  | 7.13  | 7.13  | 7.13  | 7.13  | 7.13  | 7.13  | 7.13  | 7.13  | 7.13  |
| East Anglia 3    | Monopiling Abated                           | 5.62  | 5.62  | 5.62  | 5.62  | 5.62  | 5.62  | 5.62  | 5.62  | 5.62  | 5.62  | 5.62  | 5.62  |
| Hornsea Three    | UXO Low Order (x1 pd)                       | 0.29  | 0.29  | 0.29  |       |       |       |       |       |       |       |       |       |
| NEP              | Phase 1 2DHR GS/1853                        | 1.95  | 1.95  | 1.95  | 1.95  |       |       |       |       |       |       |       |       |
| NEP              | EPCI 3 Geophysical - Offshore Cable GS/1871 | 0.64  | 0.64  | 0.64  | 0.64  | 0.64  | 0.64  | 0.64  | 0.64  | 0.64  | 0.64  | 0.64  | 0.64  |
| NEP              | EPCI 2 Geophysical - Infield GS/1866        | 0.57  | 0.57  | 0.57  | 0.57  | 0.57  | 0.57  | 0.57  | 0.57  | 0.57  | 0.57  | 0.57  |       |
| INEOS UK SNS Ltd | Pegasus West Site & Pipeline Survey         | 1.75  | 1.75  | 1.75  | 1.75  | 1.75  | 1.75  | 1.75  | 1.75  | 1.75  | 1.75  | 1.75  | 1.75  |



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**Conservation Objective 3:** The condition of supporting habitats and processes and the availability of prey is maintained

There is no impact pathway whereby impulsive noise could result in significant impacts to the relevant habitats in a way that could reduce the availability of prey

The developer has undertaken an assessment of the potential impact from impulsive noise on fish and the risk of significant injury or displacement in fish populations was shown to be low. Therefore, the risk of significant impacts to prey availability or supporting habitats is low and is not considered further in the appropriate assessment.

| Conclusion: Impact In-combination                |                                               |                                                             |
|--------------------------------------------------|-----------------------------------------------|-------------------------------------------------------------|
| Pressure                                         | Feature                                       | Is an adverse effect possible                               |
| Underwater noise (impulsive: geophysical survey) | Harbour porpoise ( <i>Phocoena phocoena</i> ) | No, provided the mitigation measures outlined are employed. |

## Conclusion of Habitats Regulations Assessment

An assessment has been undertaken to determine whether the geophysical survey at Pegasus West by INEOS could significantly impact the conservation objectives of any site within the UK National Site Network. The likelihood of a significant effect on the conservation objectives of the following site and features could not be ruled out:

### **Southern North Sea SAC – Harbour porpoise (*Phocoena phocoena*)**

An appropriate assessment was undertaken to ascertain whether the project could adversely affect the site's integrity considering its conservation objectives:

#### **Conservation Objectives:**

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

The appropriate assessment has determined that the project will have some effect on the SAC and without mitigation there is the potential for adverse effects on harbour porpoise when impacts from other plans and projects are considered in-combination. However, the SNS SAC Developers Coordination Forum provides a coordinated approach whereby the permits and consents issued to operators include conditions limiting cumulative displacement/disturbance



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to 20% of the summer area. If it is estimated that the thresholds are to be exceeded, then no work can be undertaken. INEOS are part of this forum and have committed to participating and coordinating with other operators to meet the forum's goal.

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

## Annex

### Application documents

SA/2095 GS/1886/0

### Statutory Nature Conservation Body (SNCB) Consultation

Consultation Response Received 08/04/2025

| SNCB | Comments                                                | Response |
|------|---------------------------------------------------------|----------|
| JNCC | Agree with conclusions of the<br>Appropriate assessment |          |

### References

JNCC (2017). Statutory nature conservation agency protocol for minimising the risk of injury to marine mammals from geophysical surveys.

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



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