

The Great Grid Upgrade

Sea Link

Sea Link

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Pegwell Bay Seal Survey Report

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Version History

Date	Version	Status	Description / Changes
March 2025	A	Final	For DCO submission
November 2025	B	Final	Updates following additional seal survey in August 2025

1. Pegwell Bay Seal Survey Report

1.1 Introduction

- 1.1.1 The Sea Link Project (hereafter referred to as the 'Proposed Project') is a proposal by National Grid Electricity Transmission plc (hereafter referred to as National Grid) to reinforce the transmission network in the South East of England and East Anglia. This would be achieved by reinforcing the network with a High Voltage Direct Current (HVDC) Link between Aldeburgh in Suffolk and Pegwell Bay in Kent.
- 1.1.2 Both harbour and grey seals have been recorded in Pegwell Bay, with harbour seals in particular known to haul out and occur in relatively high numbers within the River Stour, which discharges into Pegwell Bay. Seals 'haul-out' on shore for pupping, nursing, moulting and resting (SCOS, 2022). The highest number of hauled-out seals occurs during the pupping and subsequent moulting season. For harbour seal, pupping occurs in June and July, with moulting occurring in August (SCOS, 2022). Pupping for grey seals typically occurs in August to December with moulting between December to April.
- 1.1.3 As part of the assessment of potential impacts on marine mammals resulting from the Proposed Project, consultation has been undertaken with consultees including Kent Wildlife Trust (KWT). KWT have raised concerns about the effects of the Proposed Project on harbour seals (*Phoca vitulina*) and grey seals (*Halichoerus grypus*) likely to be present in Pegwell Bay, Kent.
- 1.1.4 Data on seal abundance in Pegwell Bay were fairly readily available but information regarding where the seals were most likely to be found was not. To reflect the concerns of KWT and to collect additional information for the assessment of potential impacts to seals, some seal location observation surveys were undertaken in Pegwell Bay and the River Stour.
- 1.1.5 The specific purpose of the seal surveys was to establish the exact locations where seals haul-out at low tide, in order to identify the proximity of hauled-out seals to Proposed Project activities in Pegwell Bay. Whilst seal counts were made at both low and high tide, this was not the main purpose of the survey, particularly as the most effective means of counting hauled-out seals is through aerial surveys, as undertaken by Zoological Society of London (ZSL)¹ (Zoological Society of London, 2021). Aerial surveys were not deemed necessary as the focus of the survey was on location and distribution of seals rather than determining abundance as numbers of seals at Pegwell have been recorded by ZSL.

1.2 Methodology

- 1.2.1 Seal observation surveys were conducted mostly in the River, largely just upstream from the mouth of the River Stour, where seals were known to haul-out². This region of

¹ A more recent 2024 survey has also been conducted but the results for this survey are not yet publicly available.

² An initial assessment of Pegwell Bay was conducted and no suitable haul-out habitats were identified. In addition, discussion with the local seal watching boat, River Runner, indicated that seals are hauled out on the banks of the River Stour rather than the wider bay area. Therefore, the survey focused on the River Stour.

the river has a distinct channel with several sand and mudflats visible at low tide, and several areas easily accessible to seals for hauling out. The river channel rapidly narrows a small distance upstream and the riverbanks are steep sided and not suited to hauling-out. Thus, haul-out locations within the river are distinct and only present in a relatively small area. There were no haul-out locations, or areas of habitat that could be suitable for haul-out observed within the main bay.

- 1.2.2 Seal observations were conducted from a vessel proceeding slowly down the river, passing multiple locations on both banks where seals were observed congregating. Binoculars were used to record the location and number of seals hauled-out on the several different sandbank areas within the river. A note was also taken of seals in the water but due to the movement of seals under the water surface it was difficult to accurately record the number of seals present in the water. Therefore, the number of seals in water at high tide may underrepresent the total animals present. Species were identified where possible, with the presence of pups noted, and any notable behaviours systematically recorded.
- 1.2.3 To establish a good understanding of the use of the river during haul-out, surveys were initially conducted once a month over a three-month period from September to November 2024 (Table 1.1). The surveys were planned to coincide with the end of the moulting season for harbour seals, when the number of hauled-out seals have been reported to be highest and therefore allow a good assessment of haul-out locations in the river. Variability in location over the tidal cycle was also incorporated by taking observations during both the low and high tides on each survey. An additional survey was also completed in August 2025 to ensure the period of peak abundance for harbour seal was covered.
- 1.2.4 Dates were chosen for each survey to ensure the surveys occurred on similar tides. The tidal heights for each survey are shown in Table 1.1.

Table 1.1 Survey dates and tidal conditions

Survey	Dates	Approximate tide times (24 hour)	Approximate tide heights (m)
September 2024	19 th September 2024	Low – 0600 High – 1300	Low – 0.49 High – 5.35
October 2024	15 th October 2024	High – 1015 Low – 1550	Low – 0.53 High – 4.87
November 2024	19 th November 2024	Low – 0809 High – 1330	Low – 0.69 High – 5.06
August 2025	13 th August 2025	Low – 0951 High – 1452	Low – 0.57 High – 5.24

1.3 Findings

Location and abundance of seals

- 1.3.1 On all four surveys, seals were most concentrated in the mouth of the River Stour, hauled-out on the banks (**Figure 6.4.4.A1 (B) Harbour seals observed during September – November 2024 and August 2025 Surveys in Application Document 6.4.4.4.A ES Figures Marine Pegwell Bay Seal Survey Report**). During the September and November 2024 surveys, seals were only observed on the western bank of the river. However, during the October 2024 and August 2025 surveys, seals were resting on both the western and eastern banks. The highest numbers of hauled-out seals were recorded during low tide across all surveys, with the exception of the August 2025 survey, during which similar numbers were observed across both tidal states (see Table 1.2). A small number of seals were observed in the water in the river during all surveys and occasional seals were also observed in the wider Pegwell Bay.
- 1.3.2 The findings of each survey have shown a similar number of seals present during September 2024 (maximum 66 seals), October 2024 (maximum 60 seals) and November 2024 (maximum 22 seals) (Table 1.2). It is assumed that the same individuals were present on low and high tides. However, the numbers of hauled-out seals in August 2025 were considerably higher on both the low tide and the high tide, with a maximum of 108 seals recorded, thought to be a result of peak abundance typically occurring in August.
- 1.3.3 The most abundant species observed was harbour seals, with only a small number (maximum four) of grey seals observed in the water of the River Stour on each survey (Table 1.2). The number of seals observed in September and October were similar. However, during the November surveys, the numbers of seals present on both the low tide and the high tide were much lower in comparison. This may be due to poor weather conditions which occurred during the November survey compared to September and October.

Table 1.2 Abundance of hauled-out seals during September to November 2024 and August 2025 surveys in River Stour

Survey	Tide	Number of harbour seals	Number of grey seals	Total number of seals
September 2024	Low	66	0	66
	High	44	0	44
October 2024	Low	60	0	60
	High	38	0	38
November 2024	Low	22	0	22
	High	9	0	9
August 2025	Low	108	0	108
	High	96	0	96

Seal behaviour

September 2024

- 1.3.4 During low tide on the September survey, the majority of seals were observed resting on the sandy, muddy, northern banks of the River Stour. At high tide seals were observed further up the shore within the saltmarsh habitat, resting in shallow waters with their heads and hind flippers raised in the air.
- 1.3.5 Small numbers of seals were present within the water, seemingly socialising with each other.
- 1.3.6 No disturbance behaviours were observed due to the presence of the vessel, even when in close proximity to the haul-out locations.

October 2024

- 1.3.7 During the October survey, seals were observed resting on both the northern and southern banks of the River Stour particularly during low tide. The seals appeared to be slightly more active, with more movement between the banks and the water observed. Seals were also observed moving around on the banks more compared to September, when seals present on the banks were resting.
- 1.3.8 Seals present in the water were observed socialising with each other, similarly to the September survey.
- 1.3.9 No disturbance behaviours were observed due to the presence of the vessel, even when in close proximity to the haul-out locations.

November 2024

- 1.3.10 During the November survey, seals were only observed on the northern banks of the River Stour. During low tide seals were observed mostly resting on the banks, However, during the high tide, there was a higher proportion of seals present in the water, socialising with each other.
- 1.3.11 No disturbance behaviours were observed due to the presence of the vessel, even when in close proximity to the haul-out locations.

August 2025

- 1.3.12 During the August survey, seals were present on both banks of the river during both low and high tide. Throughout the tidal cycle, seals were observed mostly resting on the mudflat banks of the river, with small numbers of seals present in the water during high tide, foraging and socialising.
- 1.3.13 It is noteworthy that during the high tide phase of the survey, three seal tour boats, including the survey vessel, were operating simultaneously in close proximity to the seals, with members of the public audibly engaging and taking photographs. During this time, the seals did not demonstrate any disturbance behaviour, remaining hauled-out on the banks or continuing to socialise and forage in the water, even when in close proximity to a boat (i.e. within a few meters).
- 1.3.14 It is also of note that during the high tide survey (when a maximum of 96 seals were hauled-out on the river banks), an increased level of airborne sound was observed, seemingly produced by an unidentified industrial source in Port Richborough which

borders the seal haul-out site. This noise was not present during the low tide survey conducted a few hours before. The noise being produced was a low pitch continuous droning sound. The seals hauled-out in the River Stour showed no behavioral response to the increased level of airborne sound, remaining asleep and resting on the mudflat.

1.4 Summary

- 1.4.1 The highest concentration of seals during all three surveys was identified in the River Stour, with only a very small number of in-water seals occasionally present outside of the river in Pegwell Bay. Seals were hauled-out in the river on mudflats during all surveys, below a ridge of saltmarsh which provides a physical barrier between the seals and the location of proposed construction activities in Pegwell Bay. This indicates that the mouth of the River Stour provides important habitat for seals, particularly harbour seals. The surveys also demonstrated that the seals in the River Stour are habituated to the visual presence and air-borne sound produced by vessels that come within close proximity to the seal haul-out locations.
- 1.4.2 The results of the survey also indicated that seal presence in the location of the Kent landfall and within the red line boundary of construction activities is negligible.

1.5 References

- SCOS. (2022). *Scientific Advice on Matters Related to the Management of Seal Populations: 2022*. Natural Environment Research Council - Special Committee on Seals.
- Zoological Society of London. (2021). *Report on 2021 Seal Surveys in the Greater Thames Estuary*. . Retrieved from https://www.thanetcoast.org.uk/wp-content/uploads/2022/11/Report_2021_Seal-Surveys_GTE_Final.pdf

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