



# The Sizewell C Project

9.65/ Outline Vessel Management Plan -  
10.23 Clean Version

---

Book 9 Revision: 4.0  
Book 10 Revision: 1.0  
Applicable Regulation: Regulation 5(2)(q)  
PINS Reference Number: EN010012

---

October 2021

Planning Act 2008  
Infrastructure Planning (Applications: Prescribed  
Forms and Procedure) Regulations 2009



## CONTENTS

1	INTRODUCTION.....	4
1.1	General .....	4
1.2	Spatial Extents of Plan .....	5
2	VESSEL MOVEMENT RESTRICTIONS .....	7
3	VESSEL ROUTING.....	8
3.1	Principles.....	8
3.2	Preferred & Alternative Routes.....	9
4	MONITORING, MANAGEMENT AND MITIGATION .....	17
4.1	Background .....	17
4.2	Vessel Disturbance Mitigation .....	17
5	REFERENCES.....	18

## TABLES

Table 3.1:	Source-Destination Table .....	10
Table 3.2:	Percentage Increased Vessel Movements (Maximum Capacity) ..	14
Table 3.3:	Percentage Increased Vessel Movements (Anticipated Deliveries) .....	14

## PLATES

Plate 1.1:	Extent of SPA.....	6
Plate 3.1:	Source – Destination Map .....	10
Plate 3.2:	Indicative Delivery Routes – Local Ports.....	12
Plate 3.3:	Indicative Delivery Routes – Local Ports.....	13
Plate 3.4:	Indicative Delivery Routes – Isle of Grain .....	15
Plate 3.5:	Indicative Delivery Routes – International .....	16

## APPENDICES

APPENDIX A:	VESSEL MOVEMENTS AND REQUIREMENTS .....	19
-------------	---	----



**NOT PROTECTIVELY MARKED**

---

APPENDIX B: ESTIMATED VESSEL MOVEMENTS ..... 23

**NOT PROTECTIVELY MARKED**

## EXECUTIVE SUMMARY

Level 1 control documents will either be certified under the DCO at grant or annexed to the DoO. All are secured and legally enforceable. Some Level 1 documents are compliance documents and must be complied with when certain activities are carried out. Other Level 1 documents are strategies or draft plans which set the boundaries for a subsequent Level 2 document which is required to be approved by a body or governance group. The obligations in the DCO and DoO set out the status of each Level 1 document.

This Outline Vessel Management Plan (OVMP) is a Level 1 document which concerns the construction and operational phases of the Sizewell C Project. Condition 31A of the Deemed Marine Licence in Schedule 20 of the dDCO (Doc. Ref. 3.1(l)) requires a vessel management plan in general accordance with this OVMP to be approved by the MMO in the event that SZC Co. requires vessels to traverse the Outer Thames Estuary Special Protection Area (SPA) during the winter months. “Winter months” is means the period between 1 November and 31 March inclusive.

Where further documents or details require approval, this document states which body or governance group is responsible for the approval and/or must be consulted. Any approvals by East Suffolk Council, Suffolk County Council or the MMO will be carried out in accordance with the procedure in Schedule 23 of the DCO. The DoO establishes the governance groups and sets out how these governance groups will run and, where appropriate, how decisions (including approvals) should be made. Any updates to these further documents or details must be approved by the same body or governance group and through the same consultation and procedure as the original document or details.

Where separate Level 1 or Level 2 control documents include measures that are relevant to the measures within this document, those measures have not been duplicated in this document, but cross-references have been included for context. Where separate legislation, consents, permits and licences are described in this document they are set out in the **Schedule of Other Consents, Licences and Agreements** (Doc Ref. 5.11(B))

For the purposes of this document the term ‘SZC Co.’ refers to NNB Nuclear Generation (SZC) Limited (or any other undertaker as defined by the DCO), its appointed representatives and the appointed construction contractors.

## 1 INTRODUCTION

### 1.1 General

1.1.1 This Outline Vessel Management Plan (OVMP) provides details of the proposed approach to managing deliveries to the Marine Bulk import Facility (MBIF) and Permanent Beach Landing Facility (BLF) at the main development site via the marine route over the period of construction and deliveries to the permanent BLF during operation if these deliveries are required during the winter months.

1.1.2 For the purposes of this OVMP and the final Vessel Management Plan, “winter” means the period between 1 November and 31 March inclusive, “summer” means the period between 1 April and 31 October inclusive.

1.1.3 This OVMP outlines the proposed restrictions to vessel movements and routes and provides the strategy to protect the Outer Thames Estuary Special Protection Area (SPA) from vessel movements during the winter months. As set out in Section 3, there must be no vessel movements through the SPA during the winter months unless a Winter Vessel Management Plan has been submitted to and approved by the MMO, pursuant to DML Condition 31a.

1.1.4 The Winter Vessel Management Plan must include details of:

- The proposed vessel movement schedule, route and any measures that may be necessary to avoid impacts on red throated divers, along with the monitoring of vessel movements to ensure the minimum disturbance to wintering red-throated divers.
- Tug movements and marine works for outfall/intake tunnels: these movements will be concentrated around the SZC site area and are not expected to impinge significantly on the wider SPA area compared to the import of AIL’s and of bulk aggregate import.
- Delivery of rock armour for Hard Coastal Defence Feature: these movements will follow the same route selection hierarchy, protocols and routings as those presented in the OVMP, depending on the origin of the rock armour. An estimate of these movements is, however, included in Table 3.1.
- Shingle import/ recharge for Soft Coastal Defence Feature: these movements will follow the same route selection hierarchy, protocols and routings as those presented in the OVMP. Initial shingle import will ideally be completed during the fair weather periods which are more prevalent in summer months. Shingle recharge is expected to

be infrequent (typically 10-year intervals) during the operational and decommissioning phases of SZC. An estimate of these movements is, however, included in Table 3.1.

1.1.5 The vessel count presented in this OVMP includes both the inbound and outbound legs of the journey, i.e. each vessel will have an inbound and outbound leg.

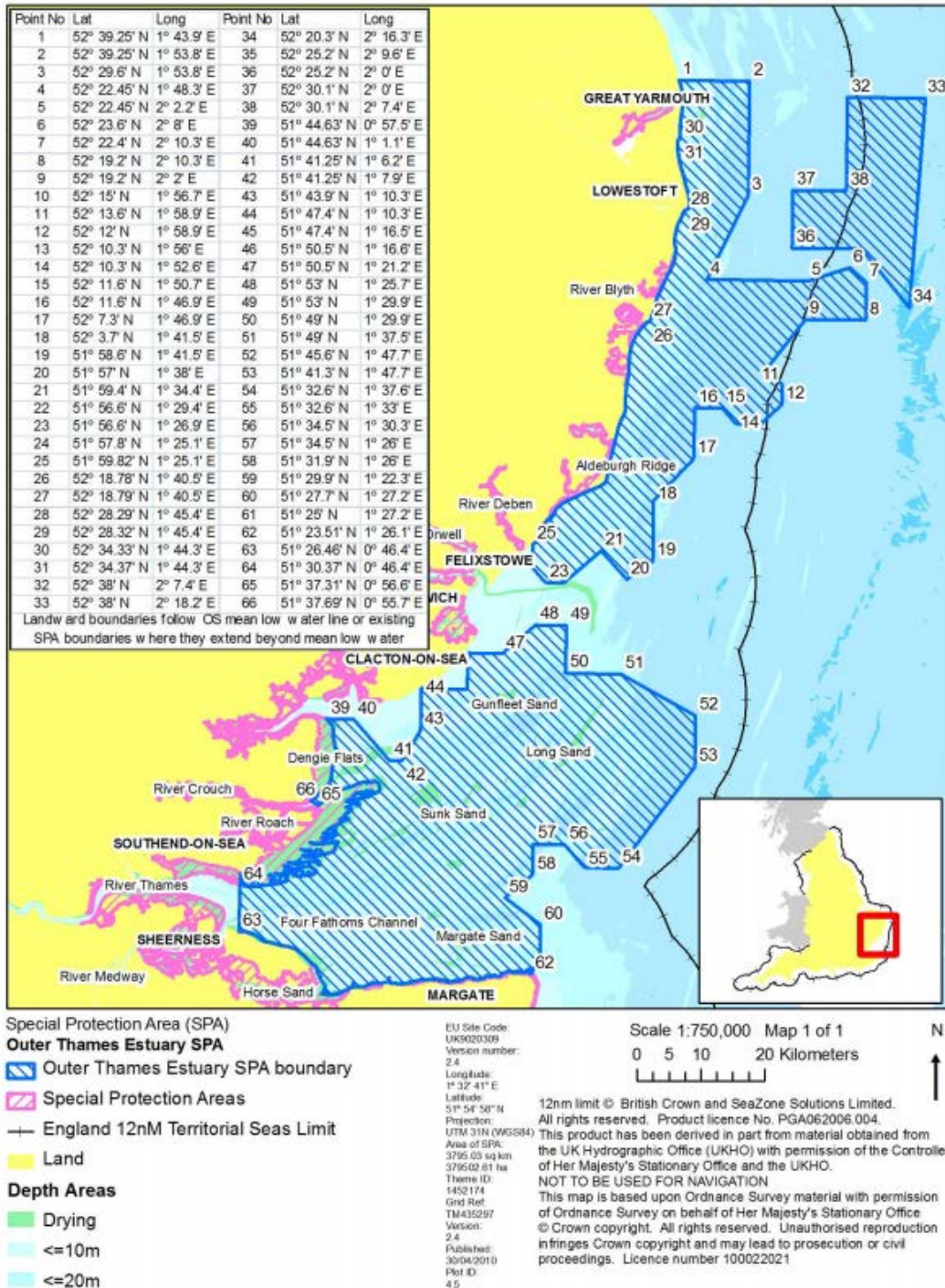
## 1.2 Spatial Extents of Plan

1.2.1 This OVMP outlines the proposed restrictions to vessel movements associated with the Sizewell C Project during the winter months and those movements that would otherwise go through the Outer Thames Estuary SPA. The extent of the SPA is shown on **Plate 1.1**.

1.2.2 This OVMP therefore relates to the following vessel movements during the winter months:

- any vessel leaving London ports and traversing the southern sector of the SPA and traversing the northern sector to Sizewell C;
- any vessel departing the ports of Harwich or Felixstowe and entering the northern sector of the SPA at its southern extent offshore of the Deben Estuary;
- any vessel departing Lowestoft for the entirety of the journey, in the northern sector of the SPA, to Sizewell C; and
- any international movements which enter the SPA. These are likely to enter the northern sector(s) of the SPA from the east and traverse the sector in a westerly direction to Sizewell C.

Plate 1.1: Extent of SPA



---

## 2 VESSEL MOVEMENT RESTRICTIONS

- 2.1.1 The BLF and MBIF will be operated during the summer period.
- 2.1.2 There must be no winter vessel movements unless or until a Winter Vessel Management Plan has been submitted to and approved by the MMO, pursuant to DML Condition 31a, following consultation with the ERG, Natural England and the RSPB.
- 2.1.3 The Winter Vessel Management Plan must set out the proposed vessel movement schedule, route and any measures that may be necessary to avoid impacts on red throated divers. The Winter Vessel Management Plan must be implemented as approved.
- 2.1.4 Appendix A sets out the types of vessel movements and requirements and Appendix B sets out a summary of the estimated vessel movements per season associated with the permanent BLF and the MBIF.



## 3 VESSEL ROUTING

### 3.1 Principles

3.1.1 A number of preferred and potential alternative routes that may be suitable for winter vessel movements have been identified to mitigate potential disturbance impacts on red throated divers within the Outer Thames Estuary SPA.

3.1.2 Route selection in any Winter Vessel Management Plan must be determined in accordance with the following a hierarchy of requirements (in descending order):

- Maritime safety considerations;
- Avoid traversing SPA, if not possible to avoid, then minimise the time vessels are travelling through the SPA to minimise exposure to red-throated divers; and
- Prioritise use of existing shipping lanes, where practicable.

3.1.3 For the avoidance of doubt, route selection will prioritise those routes that avoid and reduce the amount of time spent in the SPA as far as practicable, subject to any overriding marine safety considerations that would arise.

3.1.4 It should be noted that routes are indicative corridors and are not intended to be prescriptive for the purposes of navigation and will not be followed precisely by every vessel. All vessels must passage plan as per the International Regulations for the Safety of Life at Sea (SOLAS) (Ref. 2).

3.1.5 Vessels may deviate from these routes for a variety of health and safety reasons at the discretion of the vessel's Master, including:

- Compliance with COLREGS (Ref. 1) or SOLAS (Ref. 2);
- Traffic density;
- Prevailing weather, tidal or sea state conditions;
- Navigational hazards as indicated on charts or notified through Notices to Mariners or other such sources;
- Due to a vessel originating from or being bound for a destination not indicated by the transit routes, although for clarity, it is noted that whilst the preferred routes may not be appropriate for these movements,

vessels would be required to apply the route selection principles in 3.1.2; and

- Such other reasons as the Master of a vessel may deem relevant for the purposes of ensuring the safety of his vessel or another vessel.

## 3.2 Preferred & Alternative Routes

3.2.1 This section defines the preferred routes from the north (Lowestoft) and the south (Ipswich/ Harwich, Lowestoft, Isle of Grain) and proposed alternative routings.

3.2.2 **Plate 4-1** shows candidate locations for the sources and destinations of material supplies to the Sizewell C project. **Table 4.1** describes the materials and their likely source / destinations.

3.2.3 Routes for any winter vessel movements would be set out and approved in a Winter Vessel Management Plan, as set out in section 2.

Plate 3.1: Source – Destination Map



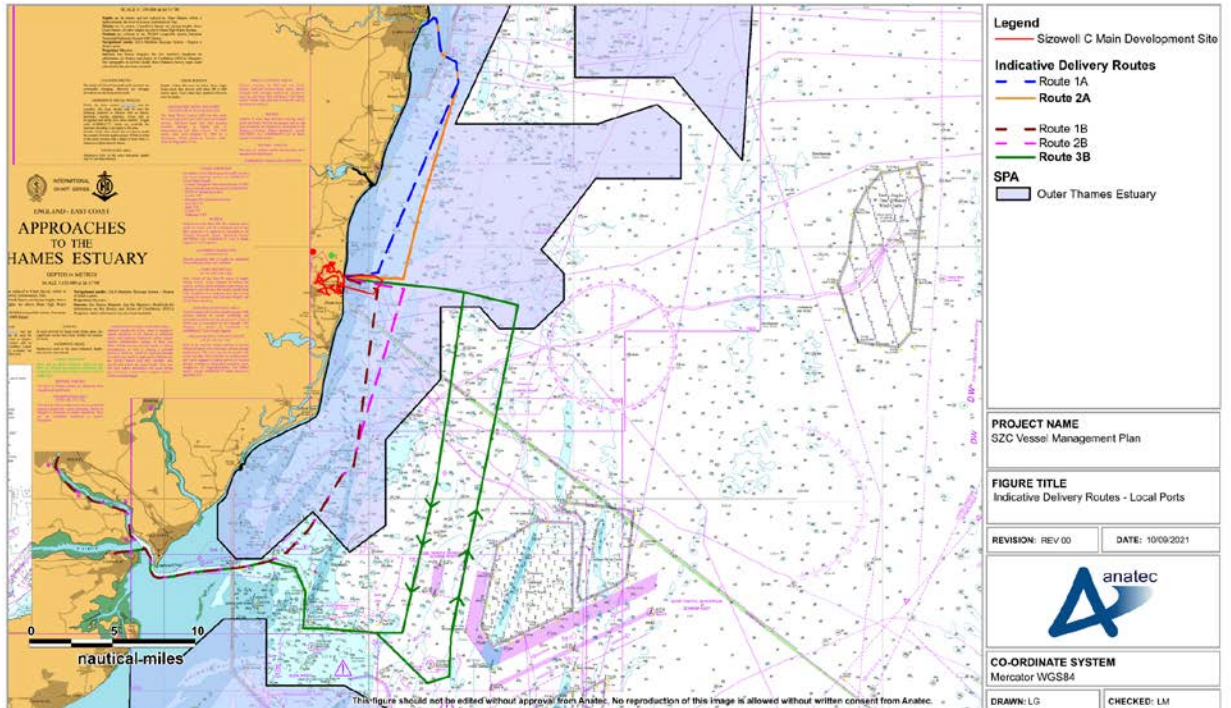
Table 3.1: Source-Destination Table

Description	Source		Destination	
	Ref	Location	Ref	Location
AILs	2	Lowestoft	SZC	Permanent BLF
Bulk Aggregates for blending	1	Ipswich/ Harwich/ Isle of Grain	SZC	Temporary BLF (MBIF)
	2	Lowestoft		

**NOT PROTECTIVELY MARKED**

- 3.2.4 The delivery routes are indicative and have been defined taking into consideration a number of factors, including shallow waters, existing routing, navigational features and existing offshore developments or areas to be avoided.
- 3.2.5 The focus is on routes taken by vessels delivering AILs to the permanent BLF and bulk aggregates for blending to the MBIF. The ports of Lowestoft, Ipswich, Harwich and the Isle of Grain have been identified as the most likely source of these materials.
- 3.2.6 For the local ports of Lowestoft, Ipswich and Harwich, indicative routes are presented in **Plate 4.2**. Routes designated with the suffix “A” approach the site from the north, and routes designated with the suffix “B” approach the site from the south. Routes in bold in the text, and shown as solid lines in **Plate 4.2** are the preferred routes which will minimise adverse impacts to the SPA:
- Route 1A/1B – direct route from local ports. There are no existing movements on these routes as Sizewell is not a marine destination. However, it is noted that the area around these routes is not devoid of commercial vessel activity, as commercial vessels are currently navigating alternative routes within this area.
  - Route **2A/2B** – semi-direct route from local ports using an existing coastal route with approximately 172 existing vessel movements per year, and with vessels turning off the existing route to approach Sizewell C. Route 2A is Natural England’s preferred route for vessels from Lowestoft to minimise adverse impacts to the SPA.
  - Route **3B** – alternative route from Ipswich/ Harwich is Natural England’s preferred route to minimise impacts on the the SPA, but may lead to potential increase in navigational safety associated with the additional time required to transit to and from the permanent BLF or MBIF in busier traffic. There are approximately 3285 existing vessel movements per year on this route.
- 3.2.7 It is noted that there is no route 3A from Lowestoft as there is no reasonable route for vessels to take that will avoid the SPA without significantly increasing the safety risk to the vessels from increased journey time, increased interaction with other vessels and less favourable weather conditions experienced further offshore, particularly in the case of barges being towed. In addition, any such route 3A alternative would significantly increase the emissions associated with the deliveries.

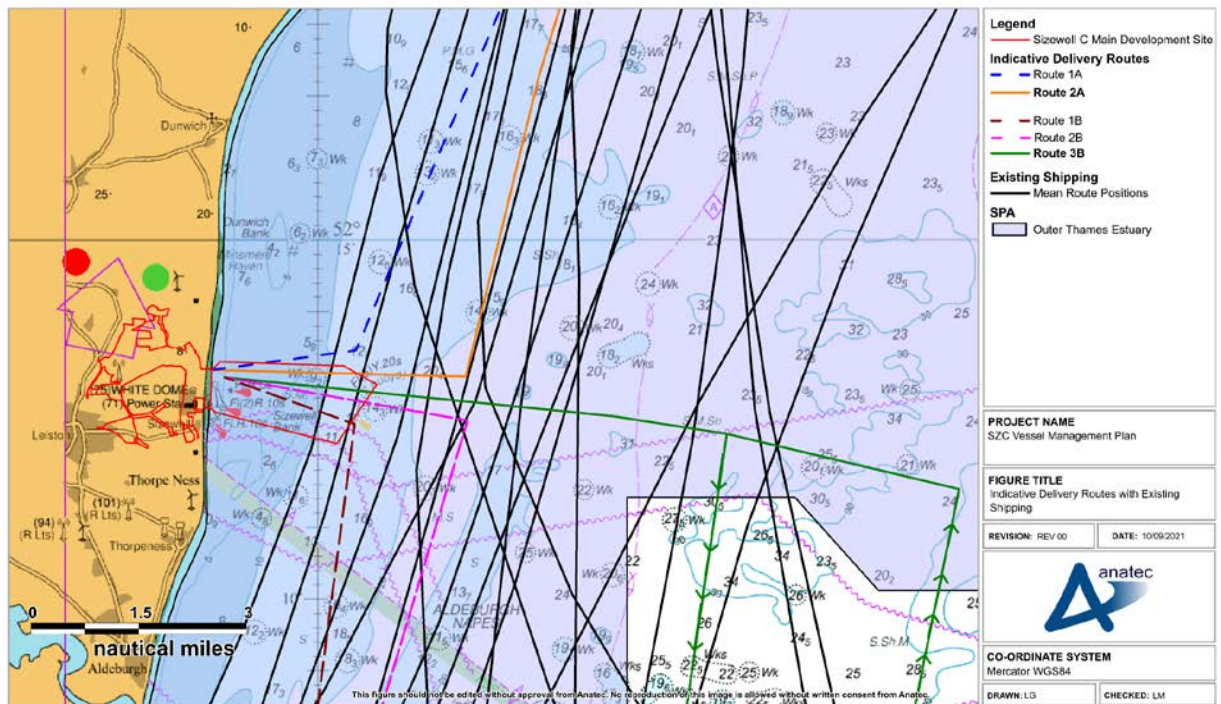
Plate 3.2: Indicative Delivery Routes – Local Ports



3.2.8

In order to provide a comparison of these routes with existing vessel movements in proximity to the Sizewell red line boundary, **Plate 4-3** shows the mean route positions of all commercial vessels within approximately 5nm of the Sizewell site.

Plate 3.3: Indicative Delivery Routes – Local Ports



- 3.2.9 Based on the approximate number of vessels on the existing shipping routes 2 and 3, **Table 4.2** presents the maximum percentage increase in vessel movements for these routes, above the existing baseline levels, for the maximum capacity of cargo landings per season, as described in **Table 3.1** (i.e. 100 for the Permanent BLF in summer, 400 for the MBIF in summer and 200 for MBIF in winter, noting that each landing represents 2 movements).
- 3.2.10 Although the maximum availability of winter movements for the MBIF will be 200, the currently anticipated number of deliveries is 0. **Table 4.3** presents the percentage increase for the highest number of currently anticipated deliveries in any one season (i.e. 100 for the Permanent BLF in summer, 160 for the MBIF in summer and 0 for both the permanent BLF and the MBIF in winter).
- 3.2.11 For routes 1A and 1B, there are no vessels currently taking the exact routes through the area, and therefore a percentage increase in vessel movements cannot be calculated. However, it is noted that there are existing commercial vessels navigating alternative routes in the area, albeit on a slightly different bearing to routes 1A and 1B.

**Table 3.2: Percentage Increased Vessel Movements (Maximum Capacity)**

Route	Current Movements (summer)	Current Movements (winter)	BLF (summer)	MBIF (summer)	BLF (winter)	MBIF (winter)
1 <sup>1</sup>	N/A	N/A	N/A	N/A	N/A	N/A
2	101	71	198%	793%	0%	562%
3	1926	1359	10%	42%	0%	29%

**Table 3.3: Percentage Increased Vessel Movements (Anticipated Deliveries)**

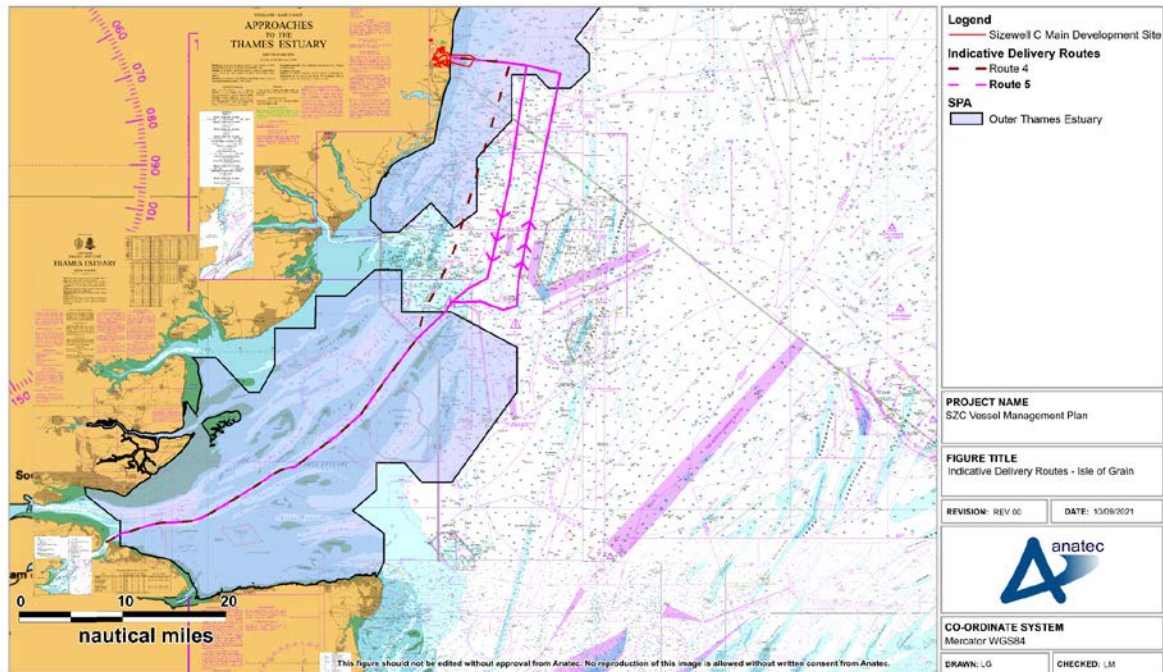
Route	Current Movements (summer)	Current movements (winter)	BLF (summer)	MBIF (summer)	BLF (winter)	MBIF (winter)
1 <sup>1</sup>	N/A	N/A	N/A	N/A	N/A	N/A
2	101	71	198%	317%	0%	0%
3	1926	1359	10%	17%	0%	0%

3.2.12 Two indicative delivery routes from the Isle of Grain are presented in Plate 4.4:

- Route 4 – direct route using existing shipping routes
- **Route 5** – less direct route using chartered routing measures which minimises adverse impacts to the SPA

<sup>1</sup> Route 1 would be a new route directly to the BLF / MBIF from the local ports and therefore a percentage increase is not applicable

Plate 3.4: Indicative Delivery Routes – Isle of Grain



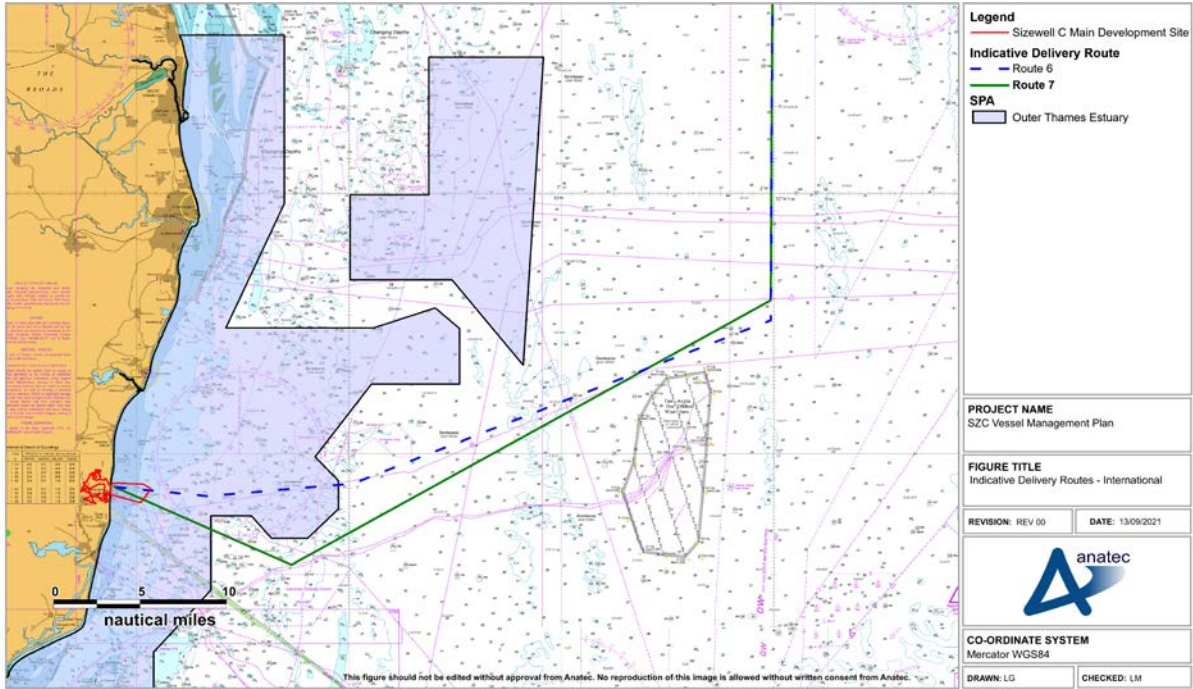
3.2.13 It is noted that vessels transiting to the permanent BLF and the MBIF from further south are expected to join the Sunk Traffic Separation Scheme (TSS)<sup>2</sup> from the south and then follow a similar route as Route 5 above.

3.2.14 Indicative routes for vessels travelling from international ports to the north and east are presented in **Plate 4.4**. Route 6 is a direct route using existing shipping lanes, while Route 7 is a less direct route which minimises adverse impacts to the SPA. It is noted that routing may be required to change depending on the approval and construction of offshore wind farms in the area. These routes are predominantly for vessels expected from international ports further afield to supply specific AILs and materials.

<sup>2</sup> Traffic Separation Schemes are areas in the sea where navigation of ships is highly regulated and designed to create *lanes* in the water with ships in a specific lane all travelling in (roughly) the same direction. The Sunk TSS is TSS for the approaches to the Thames Estuary.



Plate 3.5: Indicative Delivery Routes – International



## 4 MONITORING, MANAGEMENT AND MITIGATION

### 4.1 Background

4.1.1 Red-throated divers are only present in the Outer Thames Estuary SPA in the winter period. There are no currently planned vessel movements in the winter periods. There is significant available capacity in the summer months and currently planned vessel movements, and potential increases in vessel movements and compensation for poor weather conditions are unlikely to require movements in winter. ***There is therefore no expected interaction between the planned vessel movements and the presence of Red-throated divers in the Outer Thames Estuary SPA.***

4.1.2 Should exceptional vessel movements in the winter period become necessary during the course of the Sizewell C project then specific vessel routings and Vessel Management Plans must be prepared at that time and submitted to the MMO for approval. Those routings and associated monitoring/mitigations must be developed according to the hierarchy described in Section 1.1.1, and must be subject to approval by the MMO pursuant to DML Condition 31a, following consultation with the ERG, Natural England and the RSPB.

### 4.2 Vessel Disturbance Mitigation

4.2.1 The following measures to minimise vessel disturbance must be implemented:

- Vessel routing must be in accordance with the principles set out in section 3 of this Plan;
- Where it is necessary to go outside of established navigational routes, avoid rafting birds and where possible avoid disturbance to areas with consistently high diver density;
- Avoid over-revving of engines to minimise noise disturbance; and
- Brief the vessel crew on the purpose and implications of these vessel management practices (through, for example, tool-box talks).

## 5 REFERENCES

- Ref. 1. IMO (1972), *COLREGS*, IMO, London.
- Ref. 2. IMO (1974). *SOLAS*, IMO, London.

## APPENDIX A: VESSEL MOVEMENTS AND REQUIREMENTS

A.1.1. Vessels will support the construction and operation of Sizewell C, but cross the SPA on their way to and from Sizewell C. The infrastructure and works required is explained in the **Construction Method Statement** (Doc Ref. 6.3 3D(D)) (secured pursuant to Requirement 8 of the **dDCO**). The four vessel requirements are:

- Permanent Beach Landing Facility (BLF): allows for the import and export of Abnormal Indivisible Loads (AILs) during construction and operation of the Sizewell C project. It is served by a North Sea Barge with tug.
- Temporary Marine Bulk Import Facility (MBIF): allows for import of bulk aggregate during the Sizewell C construction phase. It is served by self-discharging coaster vessels. It may be possible to deliver other cargos to the temporary MBIF once bulk aggregate import is complete during the construction period.
- General site access is required for dredging and mooring
- Construction vessels will be required for the construction of the marine works.

### A.2. Permanent BLF

A.2.1. The Permanent BLF is described in the CMS (Doc Ref. 6.3 3D(D)) (secured pursuant to Requirement 8 of the **dDCO**). The Permanent BLF design is optimised for a particular size of North Sea Barge (NSB) which, when ballasted correctly, provides a smooth graded transition to the land via the in-built roll-on / roll-off mechanism.

A.2.2. The NSB will be unpowered and will be towed and manoeuvred using a tug power unit. Due to low draft, specific shallow water vessels are expected to be necessary, at least for parts of the berthing/ offload/ departure process (e.g. Shoalbuster tugs). Details of typical vessels and a grounded landing operation are provided in **Plates 2.1 to 2.3** below:

Plate 2.1: North Sea Barge

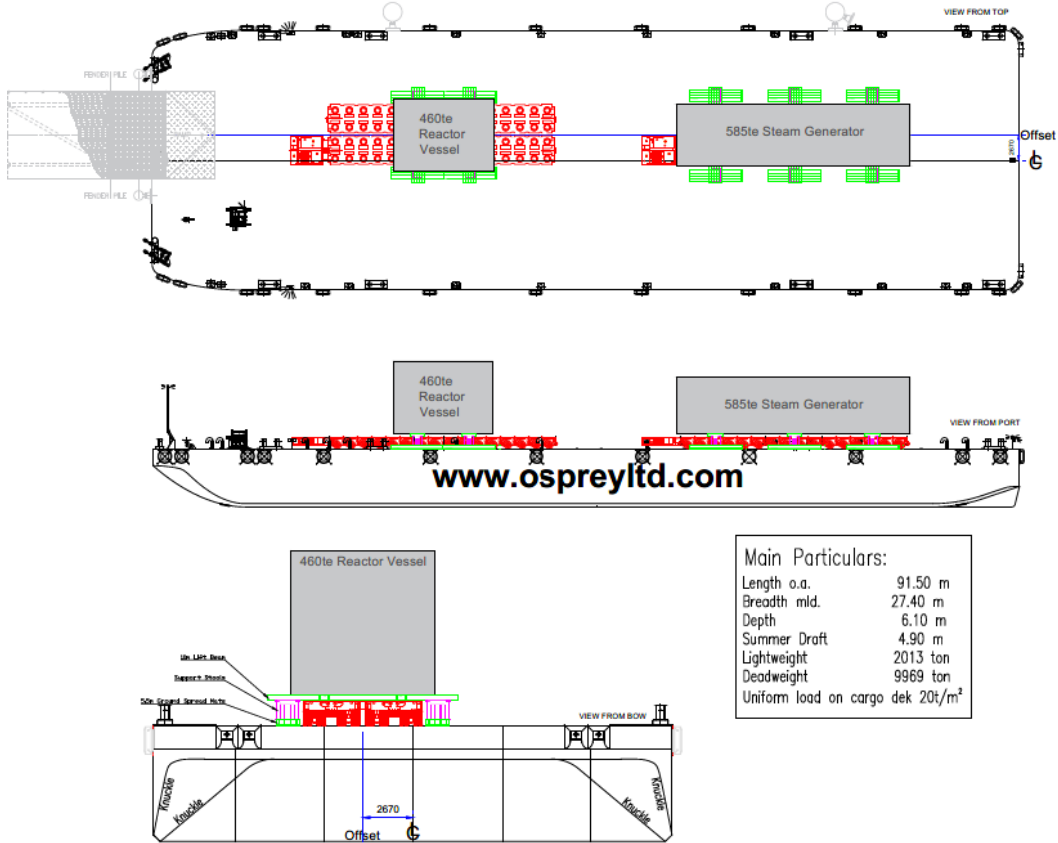
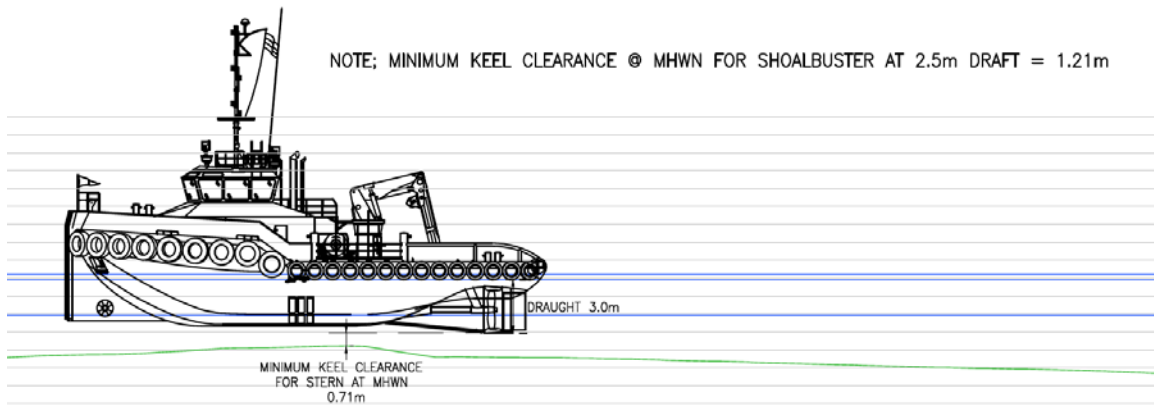


Plate 2.2: Shoalbuster Tug Power Unit



### Plate 2.3: Typical NAABSA landing

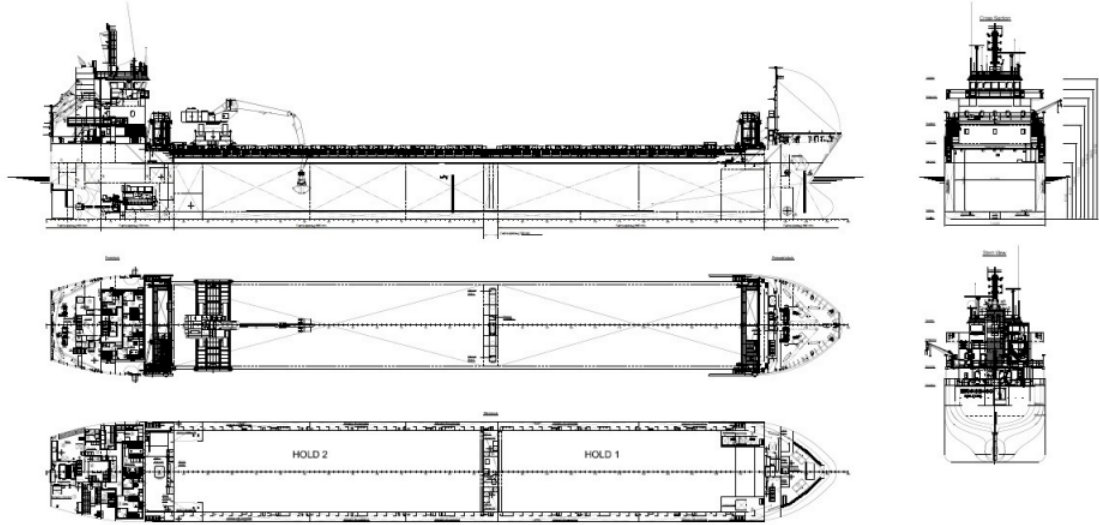


#### A.3. Temporary BLF (MBIF)

A.3.1. The Temporary BLF, also referred to as the Marine Bulk Import facility (MBIF) is described in the CMS (Doc Ref. 6.3 3D(D)) (secured pursuant to Requirement 8 of the **dDCO**). The design of the facility is optimised for a typical coastal cruiser in the 6 – 7000 tonne class, nominally loaded to 4500 tonnes as permitted by the draft available at the landing position. All vessels will be self-powered and rigged for self-unloading into the receiving hopper.

A.3.2. Details of a typical vessel are provided below in **Plate 2.4**:

Plate 2.4: Indicative Bulk Carrier Vessel



## APPENDIX B: ESTIMATED VESSEL MOVEMENTS

- B.1.1. **Table 3.1** presents a summary of the estimated vessel movements per season associated with the permanent BLF and the MBIF.
- B.1.2. The figures in the body of **Table 3.1** represent the estimate of the number of landings of each type in each year. These represent estimates only, and are expected to vary to reflect factors such as the achievable degree of consolidation of AILs on individual barges, compensation for weather-related delays, changes to quantities for import, etc.
- B.1.3. Each “landing” comprises two journeys: one inbound and one return journey.
- B.1.4. The “Inshore Support Vessels per Landing” column in **Table 3.1** indicates the number of ancillary vessels required in attendance at each landing. These insure support vessels will be the harbourmaster’s craft and/or a shallow-draft tug. For a single Permanent BLF landing, the seagoing journey will be attended by two local support vessels: a shallow-draft tug and the harbourmaster’s craft. For a MBIF delivery, the seagoing journey will be attended by one local support vessel: the harbourmaster’s craft. The inshore support vessels may remain on station pending subsequent deliveries or may return to a local base for fuelling, maintenance, crew change, etc. Mooring facilities for inshore support vessels remaining on station are incorporated into the design of the permanent BLF and MBIF.

**Table 3.1: Seasonal capacity and anticipated deliveries**

Cargo deliveries SZC Marine Facilities											
Summer Season											
Facility			Season								2042-2142 (10 yearly)
			2025	2026	2027	2028	2029	2030	2031	2032	
	Maximum availability of Cargo deliveries	Inshore support vessels per landing	Current assessment								
BLF (AIL, Sea Defence)	100	2	0	0	7	28	28	20	1	100	30
MBIF	400	1*	160	160	0	0	0	0	0	40	0
<b>Total</b>	<b>500</b>		160	160	7	28	28	20	1	140	30
Winter Season											
Facility			Season								2042-2142 (10 yearly)
			2025	2026	2027	2028	2029	2030	2031	2032	
	Maximum availability of Cargo Landings	Inshore support vessels per landing	Current assessment								
BLF	0	2	0	0	Facility unavailable						
MBIF	200	1*	0	0	Retained for resilience						Decommissioned
<b>Total</b>	<b>200</b>		0	0	0	0	0	0	0	0	0



- B.1.5. Support vessels at or near the shore will be required to attend each cargo delivery as follows:
- Permanent BLF: the towed barge and tug power unit operating as a joined pair are counted as a single vessel combination.
  - For Permanent BLF, each cargo will be attended by an additional shallow water tug on standby at the dock for additional control during mooring.
  - For MBIF operations, a tug will not normally required to be in attendance. A vessel which is unable to manoeuvre from the berth will continue to discharge and then ride out the low tide on station. It will then be repaired and depart under its own power or will be towed and moored offshore using the Marine Works tug and wait for a larger tug from a local port to take it back to a port for repair. Where no Marine Works tug is available, a bespoke tug will be provided.
  - A vessel which is unable to discharge will self-manoeuvre off station under its own power. Should tug towage be required (in case of a concurrent discharge and propulsion failure on a fully laden vessel), the Marine Works tug will be called off station from the marine heads location to manoeuvre a crippled vessel into deeper water. Where no Marine Works tug is available, a bespoke tug will be provided.
  - For all manoeuvres at the marine facilities the Harbour Master's vessel may be in attendance
  - Winter availability of the MBIF is not currently expected but the potential for availability is retained for resilience and, therefore, included in this OVMP.