

DOGGER BANK D WIND FARM

Preliminary Environmental Information Report

Volume 2

Appendix 26.3 Abnormal Indivisible Load Access
Report

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APPENDIX 26.3 ABNORMAL INDIVISIBLE LOAD ACCESS REPORT

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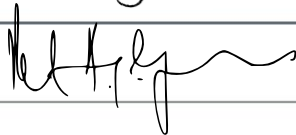
Abnormal Indivisible Load Access Report for Dogger Bank D Offshore Wind Farm

Prepared for Dogger Bank D Offshore
Wind Farm (PEIR)





I 24-1301 Dogger Bank D I AIL Access Summary Report (PEIR) I 14.05.25 I V2.

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DOCUMENT REVISIONS

Issue	Date	Details
0	05.02.25	Summary Report
1	11.04.25	Updated after client comments
2	14.05.25	Updated after client comments



1. Introduction

- 1.1. The contents of this desktop summary report include a review of the current status of marine and land transport access to for the development of the Dogger Bank D Offshore Wind Farm (hereafter 'the Project' or 'DBD'). The onshore elements of the Project forming the Onshore Development Area will include the landfall, onshore export cables and other infrastructure components within the onshore export cable corridor (ECC) and the Onshore Converter Station (OCS) and Energy Storage and Balancing Infrastructure (ESBI). A full description of the Project is provided in **Volume 1, Chapter 4 Project Description**.
- 1.2. The proposed transport routes are presented in **Appendix 1** (Map 1) of this document. Currently, there are two locations identified for the OCS zones in which the OCS and ESBI will be co-located (OCS Zone 4 and OCS Zone 8), which are presented in the PEIR. Only one OCS zone will be taken forward to development.
- 1.3. This report is a summary of the status of the Abnormal Indivisible Load (AIL) access investigations to the OCS zones and seeks to present the situation as it currently stands based on Wynns historical knowledge of AIL routes in the area and the ongoing investigations specific to the Project.
- 1.4. This investigation considers the possible land transport routes from the port of Hull at Albert Dock as well as marine access requirements at Albert Dock. Formal movement applications will be necessary upon appointment of a haulage contractor by the transformer manufacturer.
- 1.5. The issues highlighted in this report as risks to achieving AIL access in the future will need to be revisited and progressed as the scheme develops.
- 1.6. The report is intended to be a summary of the AIL route access at the current time and is not a guarantee that the route will be cleared in the future. Specific movements will need to be assessed at the time on an individual basis.

2. Desktop Review of Access to Dogger Bank D Offshore Wind Farm Onshore Converter Station AIL Access

Site	Dogger Bank D Offshore Wind Farm Onshore Converter Station Zones AIL Access
Existing Substation or Potential New Site	Currently, there are two locations identified for the OCS zones (OCS Zone 4 and OCS Zone 8) and presented in the PEIR. Only one OCS zone will be taken forward to development.
Route Inspection and AIL Access Report Recently undertaken by Wynns?	This is a desktop summary only, Wynns have undertaken surveys during February 2024 and a more detailed report will be presented at ES stage which will outline the proposed delivery routes.
Has Agreement in Principle (AIP) been provided by National Highways in line with the Water Preferred Policy	<p>The National Highways AIL Special Order loads team would expect that an Agreement In Principle (AIP) is required to allow the use of the port facilities at Albert Docks, subject to agreement with Associated British Ports (ABP). However, as stated within this document (refer to proposed port/marine access point of delivery section), this is not presently available and more works are required before a formal AIP from the National Highways AIL Special Order loads team can be secured.</p> <p>Appendix 2 includes the National Highways Aide Memoire explaining movement thresholds and permission requirements for AIL.</p>
National Highways AIP Reference Number	To be determined and agreed at a later date.
Proposed Port/Marine Access Point of Delivery	<p>Albert Dock Hull</p> <p>ABP changed their requirements for heavy lifts at all UK ports in April 2024 and this has resulted in additional geotechnical ground engineering studies being needed to confirm access from a marine perspective at Albert Dock, Hull. The geotechnical ground engineering studies are currently being undertaken by other similar developments. It is envisaged that the results of the ground investigation studies will be made available to interested parties on request, although it is understood specific load calculations related to the other developments will not be made available and any additional load cases will need to be revisited with specific calculations undertaken by the consulting engineers. The current ABP guidance document available, updated in March 2025, is included in Appendix 3 of this document.</p> <p>Despite the fact that 255te transformers for recent projects, Dogger Bank A and B, have offloaded at the port in recent years, ABP are requesting detailed engineering studies to assess the possible structural capacity of the quayside for lifting operations. This is posing a risk of not being able to use the Albert Dock site for AIL activities.</p>

Site	Dogger Bank D Offshore Wind Farm Onshore Converter Station Zones AIL Access
	<p>The results of the geotechnical ground engineering studies at Albert Dock will be understood in Spring 2025. This will determine as to whether the port can be used or whether remedial works are necessary to provide a marine access solution. It is expected remedial works would be needed for transformers of 330te weight required for the Dogger Bank D project. Further discussion with third party consulting engineers and ABP is needed to understand the port's protocols for heavy lift operations.</p> <p>Heavy lifts are not restricted at the eastern Hull Docks. However, there is no known route to cross the A63 East Docks via the A63 Myton Swing Bridge. Other routes via the north east of the city of Hull to the A1079 are not suitable to take heavy load access either when investigated in recent years and would need further investigation but are not expected to be readily available.</p> <p>The port availability at Hull will be discussed in more detail in the detailed report presented in the ES.</p>
Transformer Transport Weight considered during the most recent report in line with future project requirements	<p>330te weight</p> <p>6.0m width</p> <p>5.0m height or 5.50m height</p> <p>The Project is at an early design stage and has not yet selected a supplier for the infrastructure within the OCS zone. The above dimensions and weights are based on early supplier engagement activities to obtain maximum values and is subject to ongoing design work.</p>
Typical trailer used in Route Clearance works	<p>Girder frame trailers would be expected to be considered for the transformer of 330te. This would be subject to additional structural assessment works and also subject to confirmation of overall headroom clearances. The final size of trailer will be determined by further structural assessment works but a minimum of 28 axle girder frame trailer is expected to be necessary.</p>
Expected delivery date of next planned transformer if known	To be confirmed
Known Maximum Transformer Weight (according to available records)	<p>Although the OCS zone is a new development, the transformers delivered to the nearby Dogger Bank A & B Offshore Wind Farm Onshore Converter Stations on the northern side of the A1079 have been in the region of 255te.</p>

Site	Dogger Bank D Offshore Wind Farm Onshore Converter Station Zones AIL Access
	<p>The existing Creyke Beck Substation is understood to have had requirement for transformers of circa 183te in the past. These deliveries were approached from the south via the village of Cottingham.</p> <p>There are other developments in the vicinity of the Dogger Bank D which will require the delivery of large transformers including the new National Grid Birkhill Wood Substation, Dogger Bank South (RWE) Offshore Wind Farm Onshore Converter Stations and Hornsea 4 Offshore Wind Farm Onshore Substation. All these projects will require transformer deliveries, the anticipated weight, dimensions and delivery routes of these should be monitored for reference.</p>
Last Recorded Special Order Movement (according to available records)	The route detailed below and referenced in Appendix 1 is understood to have been used for 2022 and 2023 delivery of transformers to the existing Dogger Bank A and B Onshore Converter Stations on a 24-axle girder frame trailer.
Nearest Common Heavy Load Route	Albert Dock Hull and A63
Suggested route based on historical information	<p>Route from Albert Dock Hull (refer to Appendix 1 for plan of route)</p> <p>Exit Hull Port Complex onto Manor House Street At the roundabout take the 1st exit onto Kingston Street Continue English Street Continue Jackson Street Merge onto Clive Sullivan Way A63 Continue A63 (Use slip roads at A1166 junction) Take the A1034 exit towards York/Market Weighton/South Cave At the roundabout continue onto A1034 At the roundabout take the 3rd exit, A1079.</p> <p>From this point, accesses to Access Point (AP) AP49a and AP49b at OCS Zone 4 and AP42a at OCS Zone 8 are detailed below.</p> <p><u>AP49a</u> Turn left A164 slip road and then right A164 towards Beverley Turn right A164 to second roundabout and turn right at potential AP49a site access.</p> <p><u>AP49b</u> Turn left A164 slip road and then right to potential AP42b site access.</p>

Site	Dogger Bank D Offshore Wind Farm Onshore Converter Station Zones AIL Access
	<p><u>AP42a</u></p> <p>Turn right A164 (at new Jocks Lodge Roundabout when completed) towards Hull</p> <p>Turn right Dunflat Lane</p> <p>Bear left Coppleflat Lane</p> <p>Turn left at potential AP49b site access.</p>
Is a map available of the proposed route(s)?	Yes – See attached in Appendix 1
Any Known Problems for AIL Access in terms of structures?	<p><u>Proposed Route via A1079</u></p> <p>Although the route to the A1079/A164 junction has been used for 255te nett transformers on 24 axles in the past, it is expected that loads in excess of this weight will require further assessment checks to be undertaken by National Highways Yorkshire and North East on the A63.</p> <p>Two specific structures have been identified as potentially needing further assessments: Cliff Mill Railway (OS Ref TA020255) and South Cave Junction, (OS Ref SE924303) which carries the A63 slip road to the A1034. Further work is ongoing along the rest of the route to confirm the status of the remaining structures. Additional input is required from National Highways and East Riding of Yorkshire Council transport team to support this work.</p> <p><u>Potential Route via A164</u></p> <p>The suggested route via the A1079 is initially proposed as historical information indicating that East Riding of Yorkshire Council have concerns about the structural suitability of the A164 Eppleworth Road Bridge (west of Cottingham). These concerns have previously restricted route options and are expected to limit access from the south to Dunflat Lane. However, the status of the A164 from the south remains under investigation.</p> <p>The overall route clearance remains in progress and will be detailed further in the final reporting.</p>
Any Known Problems for AIL Access in terms of Negotiability and other Route Comments?	<p>The suggested route identified in Appendix 1 is understood to have been used for the 2022 and 2023 delivery of transformers to the Dogger Bank A and B Onshore Converter Stations. AIL movements were undertaken on a 24-axle girder frame trailer with street furniture removal as far as the A1079/A164. A copy of the formal route with details of the transport vehicle can be requested from National Highways if required. Further Swept Path Assessments are necessary for trailers exceeding this which may be needed due to the weight of the Project's proposed 330te load.</p>

Site	Dogger Bank D Offshore Wind Farm Onshore Converter Station Zones AIL Access
	<p>This is larger than any load previously transported on this route to date. Locations which would specifically need to be considered are:</p> <ul style="list-style-type: none"> i. Manor House Street, Hull, turn left into English Street, various street furniture items at traffic island. ii. A1034 at approximate OS Grid reference SE 89980 39529 left hand bend with concrete post and metal railings alongside verge to the left. iii. Access through the village of Bishop Burton at the left bend on approach to the village and at the Duck Pond in the centre. iv. Access from the A1079 to the A164 (both north and south) depending on which OCS zone would be selected for development. <p><u>AP49a</u></p> <ul style="list-style-type: none"> v. The new Jocks Lodge Roundabout layout (when completed) vi. Three roundabouts between A1079 and site access <p><u>AP42a</u></p> <ul style="list-style-type: none"> vii. Exit from A164 to Dunflat Lane and series of bends to site <p>Confirmation of headroom clearance would be needed for the transformer at 5000mm transport height. Careful consideration of the final transformer transport height including positioning of carrying lugs should be undertaken as part of the detailed design to ensure that standard UK motorway and trunk road headroom clearances of 4.95m can be met.</p> <p>Available information and advice from National Highways Yorkshire and North East indicate that there are of five structures with height constraints and limited clearance as follows:</p> <ul style="list-style-type: none"> i. Welton Junction (OS Grid Ref SE 95661 27049) - 5.1m headroom ii. Elloughton Footbridge (OS Grid Ref SE 94687 28229) - 5.01m headroom iii. Dale Road Diversion (OS Grid Ref SE 94826 27995) - 5.06m headroom

Site	Dogger Bank D Offshore Wind Farm Onshore Converter Station Zones AIL Access
	<p>iv. The Outgang (OS Grid Ref SE 93875 29185) - 5.11m headroom</p> <p>v. Brantingham Road (OS Grid Ref SE 93232 29905) - 5.12m headroom</p> <p>No information is presently available in terms of the headroom clearances on the A1079 on the Beverley Bypass prior to the proposed site accesses at OCS Zone 4 and Zone 8. This information is being sought but no structures are signed as low so it is assumed that there will be 5.03m clearance as a minimum.</p> <p>Therefore, it is assessed that the potential 5.5m transformer heights will not be able to negotiate the proposed route in terms of headroom.</p>
Any Known Problems for AIL Access in terms of Onsite issues?	No review of site access has been undertaken within this report, but this would be required at ES stage.
Do routing issues currently present a serious risk that access to the site may be restricted?	<p>Yes.</p> <p>The situation at ABP Hull Albert Dock does present a significant risk to access in terms of marine delivery and engagement with ABP is needed.</p> <p>Structural assessments would be needed on the route.</p>
<p>Any other Relevant Information and Notes:</p> <p><u>A164/A1079 Jocks Lodge Improvement Scheme</u></p> <p>In order for vehicles to travel between the A164 and A1079 it is necessary to pass through Jocks Lodge junction. The existing junction is formed of a grade separated layout with the A1079 passing beneath the A164.</p> <p>The scheme is now under construction and at the time of the route survey taking place (February 2025) it was not possible to view all of the existing road layout. The final design layout is to be revised upon completion of the Jocks Lodge scheme late 2026. This will confirm AIL access requirements ahead of any required AIL deliveries associated with the Project.</p> <p><u>National Grid Creyke Beck Substation</u></p> <p>It is important to note that the A164 northbound has been used for AIL deliveries up to the junction with the B1233 Harland Way roundabout where the route then diverges east to Cottingham for the existing substation. The last transformer delivery to Creyke Beck took place in 2013 and it involved a unit of approximately 183te nett, transported on a 16-axle girder frame trailer. A copy of the formal route with details of the transport vehicle can be requested from National Highways if required.</p> <p><u>A63 Castle Street Improvement Scheme (Hull)</u></p> <p>Excavation works began in summer 2021 to construct the new underpass, lowering the A63 at the Mytongate Junction as a part of the £355 million scheme. A63 Castle Street and Myton Swing bridge in Hull are</p>	

Site	Dogger Bank D Offshore Wind Farm Onshore Converter Station Zones AIL Access
<p>undergoing improvements until autumn 2025. This is not expected to impact the proposed AIL route as the loads will exit Albert Dock to the west of these road works, but the status of the scheme should be checked before movement.</p> <p>There is a weight limit of 110te that remains in place on Myton Swing bridge and until works are completed the final loadings and weight limits cannot be confirmed. This restricts any access both now and in the future from the eastern docks. Access from Port of Hull will in turn have to be from Albert Dock as described previously due to the limitations of access from the main port area to the A63 Castle Street over the Myton Swing Bridge. The current proposed route avoids the new A63 flyover, and it is proposed will continue to do so, providing access to the A63 to the west of the current improvement scheme.</p> <p>To avoid the current roadworks, transformers being transported to Dogger Bank A and Creyke Beck substations have exited the port via Manor House Street prior to turning left onto English/Jackson Street and continuing to merge A63. Once works are completed (which is forecast to be Spring 2026) it would be advisable to see if continuing along Manor House Street onto Mytongate Junction to merge A63 will be feasible. This could remove a pinch point with street furniture removal requirements on the roundabout on Manor House Street.</p> <p>In summary the A63 Castle Street scheme can be avoided, and it is not considered to be a major risk to AIL access.</p>	

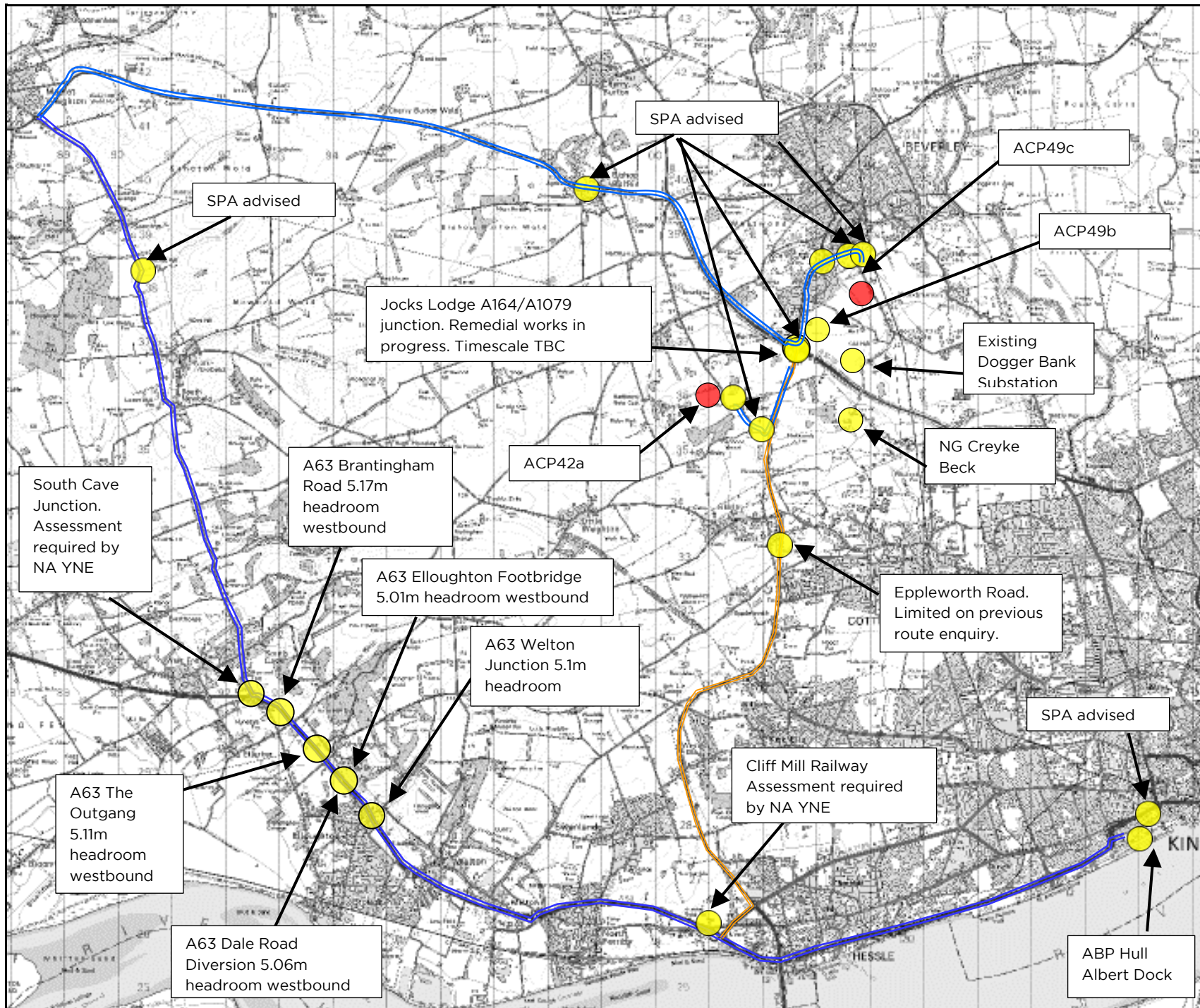
3. Summary and Next Steps

- 3.1. The National Highways Abnormal Loads Team are expected to require that transformers are delivered via Albert Docks in line with the Department for Transport's Water Preferred Policy.
- 3.2. The situation at Albert Dock, Hull, does present a significant risk to access in terms of marine delivery and engagement with ABP is needed. At this time of writing, it is expected remedial works would be needed for transformers of 330te weight required for the Project. Further discussion with third party consulting engineers and ABP is needed to understand the port's protocols for heavy lift operations.
- 3.3. Structural assessments would be needed on the route from Hull to site. Two specific structures have been identified as potentially needing further assessments by National Highways Yorkshire and North East area to date and these are Cliff Mill Railway on the A63 and South Cave Junction which carries the A63 slip road to the A1034. Further work is ongoing along the rest of the route to confirm the status of the remaining structures. Additional input is required from National Highways and East Riding of Yorkshire Council to support this work.
- 3.4. Swept Path Assessments are necessary for trailers exceeding 24 axles due to the weight of DBD's proposed 330te load being significantly larger than any load previously transported on this route to date. The locations where Swept Path Assessments are required are detailed in the report. It should be noted that until the final structural status of the route is confirmed it is not possible to confirm the size of trailer required to enable AIL delivery. Therefore, any Swept Path Assessments undertaken now may be subject to change in the future.





Appendix 1

Maps



Key		
—	Proposed Route to ACP42a & ACP49c via A1079	
—	Route via A164	
●	Point of Interest	
●	Proposed Dogger Bank D Substation locations	

B		
A	11.04.25	Second Issue
O	04.03.25	First Issue
Rev	Date	Amendments:

Revisions		
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Client:  www.doggerbankd.com		
Project: Dogger Bank D Connection Project		
Title: Map 1 - Routes to proposed Dogger Bank D Sites		
Drawing Status: Final Report		
Scale (A4): NTS	Drawn by: BD	Checked by: ARP
Ref No.: 24-1301-Map1	Sheet: 1	Rev.: 0

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Appendix 2

National Highways Aide Memoir

Aide Memoire for notification requirements for the movement of Abnormal Indivisible Loads or vehicles by road when not complying with The Road Vehicles (Construction and Use) Regulations 1986 (commonly known as C & U)

Weight

Gross weight of vehicle carrying the load exceeding C & U limits up to 80,000kgs (78.74 tons)	2 clear days notice with indemnity to Road and Bridge Authorities.
Gross weight of vehicle carrying the load exceeding 80,000kgs up to 150,000kgs (147.63 tons)	2 clear days notice to Police and 5 clear days with indemnity to Road and Bridge Authorities.
Gross weight of vehicle carrying the load exceeding 150,000kgs (147.63 tons)	Highways England Special Order* plus 5 clear days notice to Police and 5 clear days notice with indemnity to Road and Bridge Authorities

Width

C & U loads:- width exceeding 2.9m (9ft 6ins) up to 4.3m (14ft 1 ins)	2 clear days notice to Police
STGO loads:- width exceeding 3.0m (9ft 10ins) up to 5.0m (16ft 5ins)	
Width exceeding 5.0m (16ft 5ins) up to 6.1m (20ft)	Highways England form VR1** plus 2 clear days notice to Police
Width exceeding 6.1m (20ft)	Highways England Special Order* plus 5 clear days notice to Police and 5 clear days notice with indemnity to Road and Bridge Authorities

Length

C&U loads:- length exceeding 18.65m (61ft 2in) up to 27.4m (90ft) - See C&U Regulations 1986 for definition of length	2 clear days notice to Police
STGO loads:- length exceeding 18.75m (61ft 6 ins) - See part 2, article 12 of the Road Vehicles (Authorisation of Special Types) (General) Order 2003 (Commonly known as STGO) for definition of length	
Overall length of a part 2 vehicle-combination exceeding 25.9m (85ft)	2 clear days notice to Police
Maximum length exceeding 30.0m (98ft 5ins) – see STGO Schedule 1, part 4, paragraph 25 for definition of maximum length	Highways England Special Order* plus 5 clear days notice to Police and 5 clear days notice with indemnity to Road and Bridge Authorities.
NB For some very light loads, such as yacht masts, that are moved on conventional motor vehicles not exceeding 12 tonnes gross weight or trailers not exceeding 10 tonnes gross weight, a Highways England Special Order* will be required if the rigid length exceeds 27.4m (89ft 11ins)	

NOTE 1 "Clear days Notice" excludes Saturdays, Sundays or a public holiday in any part of Great Britain in relation to movements authorised by the Special Types General Order only, there being no such exclusion in Special Orders unless specifically stated.

NOTE 2 There is no statutory limit governing the overall height of a load, however, when applying for a Special Order or VR1 it should, wherever possible, not exceed 4.95m (16ft 3ins) in order that the maximum use can be made of the motorway and trunk road network.

NOTE 3 The notification requirements for mobile cranes can be found in the Road Vehicles (Authorisation of Special Types) (General) Order 2003, statutory instrument number 1998 (Part 2 Articles 10 to 18), which is available on the OPSI website:
<http://www.legislation.gov.uk/ukSI/2003/1998/contents/made>

NOTE 4 Application to move Special Types or Special Purpose vehicles, such as very large agricultural vehicles, that may not be fully permitted by the Construction & Use (C&U) Regulations or fall outside the scope of the Special Types General Order should be made to the Vehicle Certification Agency (VCA). Their website is at <http://www.dft.gov.uk/vca/>

*A Special Order application can be completed and submitted online at www.highways.gov.uk/esdal. The Special Order application form BE16 can also be downloaded and e-mailed to the address below. Approval is not automatic and is at the discretion of the Highways England abnormal loads team acting on behalf of the Secretary of State for Transport. To ensure that the necessary clearances can be obtained in good time from the Police, Highway and Bridge Authorities, you should request permission for the move by returning the completed form 10 weeks prior to the scheduled date of the move. In fact you cannot apply too early and we invite manufacturers or hauliers to contact us at pre tender stage, before making a financial commitment to supply the load, to check whether permission would be granted.

** A VR1 application can be completed and submitted online at www.highways.gov.uk/esdal. The form can also be downloaded but must not be e-mailed or faxed because the VR1 form is a legal document and so we must receive the original signed form. Approval is not automatic and is at the discretion of the Highways England abnormal loads team acting on behalf of The Secretary of State for Transport. To ensure that the necessary formalities can be completed in good time, you should request permission for the move by posting the completed form 2 weeks prior to the date of the scheduled move. Again, you cannot apply too early and we invite manufacturers or hauliers to contact us at pre tender stage, before making a financial commitment to supply the load, to check whether permission would be granted.

Forms and enquiries to:
Highways England
Abnormal loads team
9th Floor, The Cube
199 Wharfside Street
Birmingham B1 1RN

E-mail: abnormal.loads@highwaysengland.co.uk
Tel: 0300 470 3004



Appendix 3

ABP Heavy Lift and Abnormal Load Guidance Policy Document



Heavy Lift and Abnormal Load Guidance

1. How to approach a Heavy Lift operation at an ABP port

This document is written to provide guidance and technical assistance to terminal operators, customers transporting heavy loads and the haulage industry when considering using ABP infrastructure for heavy lift operations.

Project cargoes and heavy lifts present a risk to ABP infrastructure: cranes, heavy axles and large loads can damage port infrastructure and must be carefully managed to minimise the risk to ABP's assets.

Early engagement with the ABP engineering team is essential to ensure that the operations are conducted safely and with minimal risk to ABP infrastructure. To prevent unnecessary costs it is recommended that the customer obtains acceptance to proceed from the ABP engineering team in accordance with this Guidance Document before booking any services or transport.

In order to complete a heavy lift operation at an ABP Port you will need to:

- a) Ascertain if the operation falls within the scope of a Heavy Lift, as set out in this Guidance Document, at Section 2 below.
- b) Engage with the relevant ABP Engineering and Commercial teams to arrange the practicalities for the proposed lift.
- c) Complete the engineering review and reporting requirements set out in Section 3.
- d) Enter into ABP's standard Heavy Lift Agreement.

2. Scope: what constitutes a Heavy Lift?

Any operation which meets any of the criteria set out below shall be deemed a Heavy Lift operation and the customer shall be required to comply with all the requirements set out in this Guidance Document.

- All crane lifts of cargoes above 120Te
- All mobile cranes rated at or above 350Te on the port estate including for construction work.
- All cranes with super lift ballast
- All mobile cranes rated at or above 35Te on suspended quays
- Abnormal weight loads (loads in excess of 44Te or with axle loads in excess of 11.5Te) shall be reviewed individually but may require a report (as further specified in Section 2) where they transit across a bridge, linkspan, suspended quay, level crossing or within the zone of influence of a retaining or quay wall
- Any other operation deemed as required by ABP

Any such operation is referred to in this Guidance Document as a **Heavy Lift**.

3. Engineering Requirements

3.1 Report and Role of Engineer:

Any Heavy Lift will require a report to be procured by the customer from a Chartered Civil or Structural Engineer (who shall be referred to in this Guidance Document as the “**Engineer**”) with relevant experience on similar projects. The report must review the loading of the infrastructure and certify that the project is safe to proceed.

The Engineer must share their CV with ABP prior to starting work on the project to demonstrate their relevant experience on similar projects. The CV will be reviewed and if appropriate experience, competence and qualifications are demonstrated, the CV shall be accepted by ABP. For projects which have different specialisms, such as bridges and marine structures, separate CVs from separate Engineers may be required.

The Engineer shall document and request all relevant information required from the port engineering team and shall note any omissions in the information that has been shared. If the Engineer deems information is missing or incomplete, the customer must carry out its own investigations to complete such information and propose an approach with the ABP engineering team, which may involve ground or other investigations.

Site visits are recommended and can be arranged through ABP. ABP will also act reasonably to provide as much information as possible regarding the location of the proposed Heavy Lift. However, it should be noted that much of the port infrastructure is in excess of 100 years old. As such, whilst we aim to provide the relevant background information related to construction details of relevant infrastructure, ABP gives no warranty as to the accuracy of such information and the customer must undertake relevant investigations to satisfy themselves that the information is suitable and accurate.

Meetings may be required between ABP and the customer to agree details of the operation. If the Engineer is required to send a representative, they must also be a Chartered Engineer unless otherwise agreed with ABP.

The report must be clear and confirm, without caveat, that the ground and infrastructure is adequate and that the lift is safe to proceed. It should also highlight any limitations to the lift, which may include the position of the crane outriggers or mats. On receipt of the report, ABP will review and revert with comments within 10 business days.

3.2 Report Technical Requirements:

The report must confirm that the ground conditions are adequate and that the lift is safe to proceed.

The report containing the ground condition information shall inform the selection of equipment to perform the operation, which bearing capacity must be considered and reduced where underground hazards exist. Refer to the latest version of BS 7121-3 – Code of Practice for Safe Use of Crane Part 3: Mobile Cranes.

The Engineer must document all relevant considerations including the bearing capacity of the soil, any settlement and the capability of quay walls or suspended quays and where this capability may be reduced by hazards such as underground services which may not be documented on port service plans. If the loading is beyond the zone of influence of a quay wall then this shall also be demonstrated. The Engineer shall consider any effects water shall have on the structures including but not limited to buoyancy, hydrostatic pressure and tidal lag.

The report shall consider the loading from the crane during all phases of the lift, cargo and any ballast used by the crane. It is not uncommon for the super lift ballast loading scenario to be critical.

The report shall consider both the strength and stiffness of any matting used to verify that they are adequate to spread the loading. These shall be included in the calculation pack.

The report must review the onward transport routes within the port estate and shall certify that the ground or any structures are adequate to support the onward transport of the load. This may include, but is not limited to, the assessment of walls, suspended quays, bridges, culverts and level crossings. Axle loads are to be limited to 16T unless special permission is granted.

Where applicable, the report must consider the ground under which the load is temporarily stored.

Cargoes discharged by ships cranes shall consider the load when in the zone of influence of a quay or retaining wall. When the cargoes are discharged beyond the zone of influence of a retaining wall a full report may not be required.

Roll on roll off cargo shall consider the load from the vessel ramps on the quayside and the cargo when it is within the zone of influence of a quay or retaining wall. Where an ABP linkspan is used the load on the linkspan shall be considered.

Calculations shall be given a check as defined in clause 12.7 of BS 5975-1, the minimum category of check will be a category 2 check. The calculations must be undertaken by a Chartered Engineer not involved in the design (CV to be provided to ABP for review). The Engineer will propose a category of check and submit the calculation pack. The check may be raised to a category 3 check by ABP upon receipt of the report depending on the methodology used by the engineer or if there is higher utilisation of the asset. ABP will have the final decision on the category of check required. Calculations are to be shared as part of the report to demonstrate the methodology used. ABP will not undertake formal checking of the calculations, this is the duty of the checker.

4. Third parties engaged in the Heavy Lift

The customer must review all risks associated with the Heavy Lift in line with the latest version of BS 7121 (Code of practice for the safe use of cranes) and put in place mitigations to ensure that the Heavy Lift can progress with minimal risk. The customer must comply, or must ensure that the contractor engaged to carry out the Heavy Lift complies fully with Lifting Operations Lifting Equipment Regulations.

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All staff working on the port shall be appropriately trained for working on the port estate and as a minimum have attend the IOSH accredited “Cargo Handling in Ports” course or other similar directly relevant course.

5. Witness of Operation

A Marine Warranty Surveyor (MWS) will be appointed by the customer to review the methodology and witness the Heavy Lift operation and shall have authority to stop work if they deem any aspect to be unsafe, their decision shall be final.

6. Change Management

If there is a change to the methodology this must be documented and accepted in writing by the Engineer and MWS. It is recommended that the Engineer is available at least on telephone and email during the period when the works are on site. If the change cannot be verified, then the project cannot proceed.

7. Enabling Works

Where enabling works are required to be undertaken to facilitate a project cargo the works are to be carried out by ABP and charged back to the customer.

8. Repeat Cargo

Where multiple lifts are expected on the same quay, an overarching report may be shared together with each crane application.

The overarching report must document parameters for the initial project as well as those that would be acceptable for future projects.

The report must show the position of outriggers and mats together with minimum and maximum loads on each crane outrigger, superlift ballast and onward transportation.

The report should note that lower outrigger loads on the wall can reduce the capability for some load combinations.

Overarching reports must be reviewed and revised every five years or as required by ABP.

9. ABP Technical Review

ABP will review the civil engineering reports submitted and assist in gathering information for the project. There will be a charge for the technical review of the proposed project, including where ABP engage consultants to act on their behalf. The charges for ABP to undertake the review of the documentation are available on request from the ABP Commercial Team.

Acceptance of the operation can be granted by the ABP Group Technical Authority or a person deemed competent by the ABP Head of Engineering and Asset Management for the respective region.

Submissions of a good standard undertaken by an experienced team are unlikely to require extensive reviews. Submissions of a low standard, operations on lower capability structures or technically complex projects are likely to require substantial review time from ABP.

10. Heavy Lift Agreement: Key Contract Terms

Prior to the Heavy Lift, ABP and the customer shall enter into the Heavy Lift Agreement. This sets out in more detail the obligations upon the parties in respect of the Heavy Lift (including the obligations set out in this Guidance Document), but in particular please note the following key requirements:

10.1 Liability

The customer shall be entirely liable for the lift and any losses to ABP resulting from the Heavy Lift. A cap on the customer's liability may be considered on individual projects with a minimum level of £50m.

10.2 Insurance

The customer shall have in place insurance for the Heavy Lift operation to an appropriate level, as agreed with ABP. This may be up to £50m of third-party liability cover depending on the nature of the Heavy Lift. Insurance certificates must be shared with ABP at least 10 working days prior to the Heavy Lift taking place.

1. References

Document
L148 – Safety in Docks
BS 7121 - Code of Practice for Safe Use of Cranes
BS 6349 – Suite of Standards on Maritime Works
L113 - Lifting Operations and Lifting Equipment Regulations
C703 – Crane Stability on Site: an introductory guide.
Mobile Crane Support Handbook , David Duerr

Document Control Information

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Accountable Owner

The Accountable Owner for this document.

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