PLANNING ACT 2008

THE INFRASTRUCTURE PLANNING (EXAMINATION PROCEDURE) RULES 2010

APPLICATION BY NATIONAL GRID ELECTRICITY TRANSMISSION

FOR AN ORDER GRANTING DEVELOPMENT CONSENT FOR THE SEA LINK PROJECT

(REF: EN020026)

DEADLINE 1

WRITTEN REPRESENTATION BY THE PORT OF LONDON AUTHORITY

GOWLING WLG

1 INTRODUCTION

1.1 This Written Representation is made on behalf of the Port of London Authority ("**PLA**") in respect of an application for development consent ("**the Application**") submitted by National Grid Electricity Transmission ("**the Applicant**") for the Sea Link Project. This Written Representation is submitted in pursuance of Rules 8(1)(a), and 10(1), (2) and (4) of the Infrastructure Planning (Examination Procedure) Rules 2010.

1.2 The PLA has recently engaged in the examination of the nearby Five Estuaries Offshore Wind Farm Project and the North Falls Offshore Wind Farm Project both of which raised largely similar issues to those set out in this representation. This Written Representation and the recommendations it contains are consistent with the approach taken to Five Estuaries and North Falls.

1.3 The structure of this Written Representation is as follows:

Section 1 – Introduction

Section 2 – The Port of London Authority and the Port of London

Section 3 – Port Development

Section 4 – Policy

Section 5 – Permanent impacts because of cable depths

Section 6 – Temporary impacts from cable laying and repair

Section 7 – Permanent impacts from interaction with third party schemes - cable crossings

Section 8 – Temporary and permanent impacts from pre and post construction surveys and activities

Section 9 – Temporary impacts from interaction with third party schemes (simultaneous operations)

Section 10 – Mitigating potential impacts to shipping and navigation

Section 11 – Comments on the dDCO

Section 12 – Protective Provisions; and

Section 13 – Concluding Remarks.

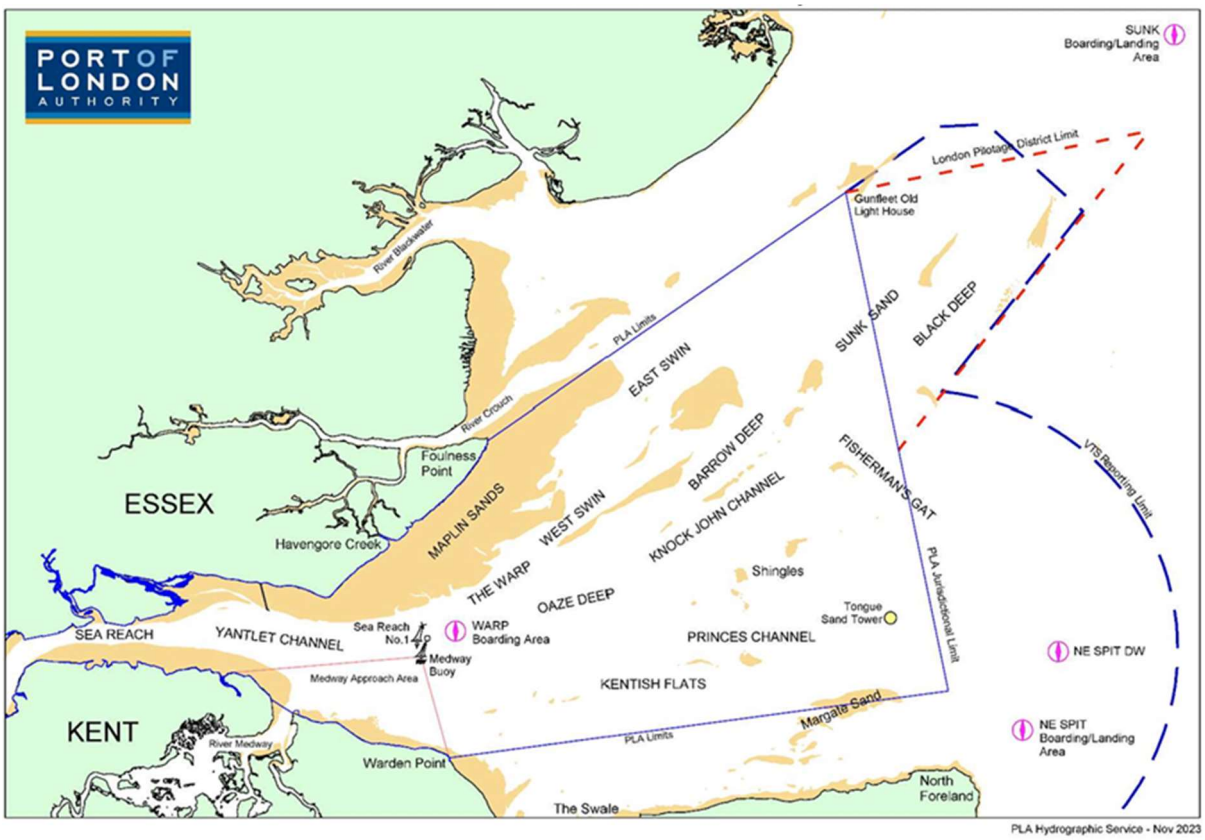
2 THE PORT OF LONDON AUTHORITY AND THE PORT OF LONDON

2.1 The PLA is the statutory harbour authority for the tidal Thames ("**the River**"). The River covers approximately 95 miles from Teddington to the North Sea between Clacton in Essex and Margate in Kent. The PLA's statutory functions include responsibility for conservancy, including dredging and improvement of the River; managing public navigation and ensuring navigational safety and controlling vessel movements. The PLA's functions include the promotion of the use of the River for freight and passengers as an important and sustainable transport corridor and access to the River is therefore a key concern for the PLA.

2.2 Its consent is required for the construction or carrying out of all works in the River, which includes dredging of the River. The PLA's area of jurisdiction and regulatory powers are found primarily in the Port of London Act 1968 (the "**1968 Act**"). Figure 1 "*Schematic of the Thames Estuary*" is provided for context and shows the PLA's Jurisdictional Limits. The

Seaward Limit is shown towards the East of the plan running north west to south east from Gunfleet Lighthouse towards North Foreland.

Figure 1: Schematic of the Thames Estuary



2.3 While the Sea Link project lies outside of the PLA's landownership and limits under the 1968 Act, including its licensing area, as a Harbour Authority, the PLA is responsible for navigational safety both within its jurisdictional limits and in respect of the approaches to its area of jurisdiction. In compliance with the requirements of the Port & Marine Facilities Safety Code, as a harbour authority the PLA has to discharge its general and specific statutory duties in respect of the conservancy of the harbour and its seaward approaches.

2.4 The PLA is also a competent harbour authority under the Pilotage Act 1987 and as a direct consequence of the criticality of the approaches, has a pilotage district which extends beyond its jurisdictional limits, boarding and landing marine pilots at the Sunk (for northern approaches) and North East Spit (for southern approaches). For similar reasons, the southern part of the cable route is also within the PLA's Vessel Traffic Services ("**VTS**") area where the PLA oversees traffic management.

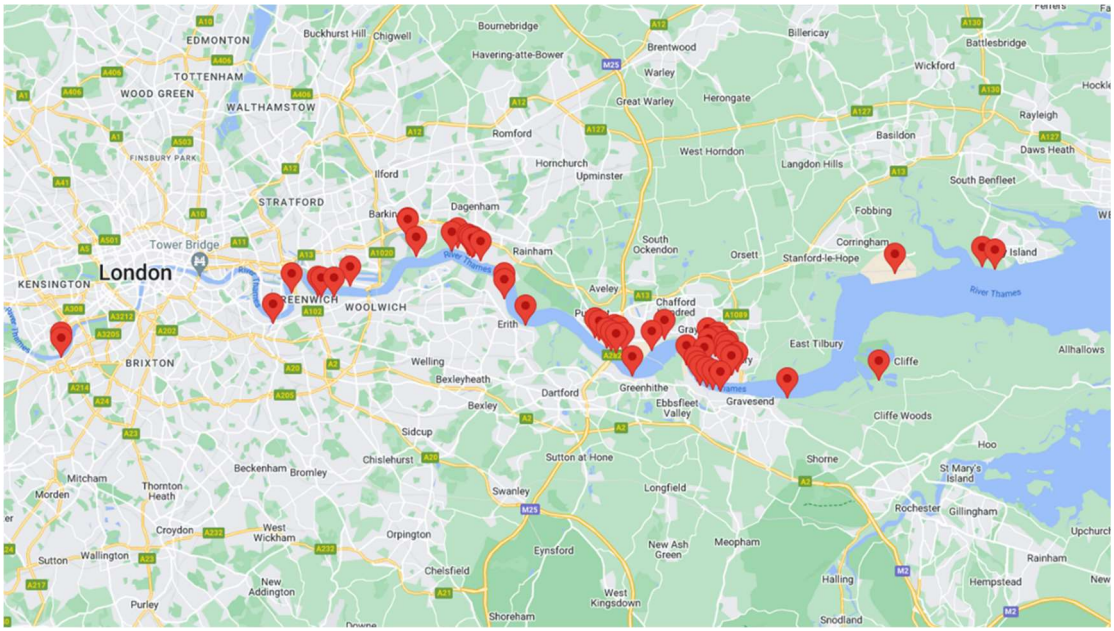
2.5 Therefore the PLA considers that Sea Link passes through waters of navigational significance and whilst these waters are outside of the PLA's landownership and limits, they are areas which vessels must pass through to get into and out of the Port of London.

2.6 The River is home to the Port of London which is the country's biggest port and its contribution to international trade is critical, handling over 50 million tonnes of goods each year. The range of cargoes includes oil products, construction materials (including aggregates and cement), metals and forest products, vehicles, food products and all manner of containerised/trailered goods with worldwide cargo, origins and destinations.

2.7 Unlike many other large ports, the Port is spread over 70 separate independently run terminals. Facilities in the Port include nationally significant fuel and container terminals,

Europe's largest sugar refinery and the UK's largest grain terminal. Figure 2 shows the terminal locations. Over 48,000 jobs depend on the Port and this figure rises to in excess of 140,000 jobs across port and other operations, tourism and recreation. The Port generates more than £6 billion in economic value added annually. It is therefore imperative that the existing and future capacity and operation of the Port of London and access to the River are not compromised during construction and operation of Sea Link and that over the lifetime of the project the Port can adapt to changing vessel sizes and accommodate deeper draught vessels.

Figure 2 - Port of London Terminal Locations



3 PORT DEVELOPMENT

3.1 The PLA's Thames Vision 2050 sets out the future development and ambitions for the Port and the River, including the specific priority to enable future growth of the Port as a net zero hub. The long-term port trade forecast (Future Trade Through the Port of London Alternative Decarbonisation and Growth Pathways which was commissioned by the PLA to underpin the Thames Vision and was undertaken by Oxford Economics) sets out that between now and 2050 trade will continue to rise to meet growing demand and that by 2050 between 70 - 90m tonnes will be handled at the Port annually, around a 30-60% increase on 2022 levels. Current investments and developments underline this growth expectation. An Economic Impact Study carried out in spring 2020 by SQW on behalf of the PLA showed that 72% of port sector businesses interviewed anticipated growth over the next five years and almost £950m of investment was planned over the same five year period.

3.2 London Gateway and the Port of Tilbury London Limited ("**PoTLL**") together handle over 50% of trade in the Port and their continued investment in port infrastructure is significant. In October 2024 DP World announced a £1 billion expansion of London Gateway to make the facility the largest container port in Britain within five years and PoTLL will be expanding its operations and plans, with around £1 billion of investment in the coming years.

3.3 In 2021, the government designated the area stretching from and including the Ford plant at Dagenham to and including London Gateway as Thames Freeport. This emphasises further the importance of ports and river-based trade as a hub for UK trade and a conduit for economic growth. It is anticipated that the Thames Freeport will create 21,000 new jobs, result in £400 million in port investment, contribute £2.6 billion additional gross value added and result in over £4.5bn in new public and private investment.

3.4 In light of the above, it is therefore critical that the existing and future capacity and operation of the Port and access to the River are not compromised during construction and operation of Sea Link. For the reasons highlighted throughout this document, the PLA is concerned that the Application as submitted may cause economic disbenefits to the Port. To accommodate existing and predicted future vessels the PLA needs to safeguard minimum water depths at pilot boarding and landing areas, entries and exits to the Port and safeguard other essential infrastructure such as anchorages. If this does not happen then it will not be possible for vessels to enter or exit the Port or Sea Link will place restrictions on the maximum draught of vessel that can enter or exit the Port and/or when vessels can enter or exit the port, limiting the quantum of trade within the Port. The impact of this restriction could be significant, detrimentally impacting the future of the UK's largest port.

3.5 It is important to emphasise that the PLA considers that all of the issues raised within this Written Representation are capable of resolution and this document sets out what application documents need to be produced or amended in order to resolve the PLA's concerns.

4 POLICY

Ports policy

4.1 The National Policy Statement for Ports ("**NPS-Ports**") (January 2012) sets out the essential role of ports in the UK economy – with ports in England and Wales handling 95% of the total volume of UK trade and 75% of its value (para 3.1.3). The NPS-Ports recognises that "*shipping will continue to provide the only effective way to move the vast majority of freight in and out of the UK, and the provision of sufficient sea port capacity will remain an essential element in ensuring sustainable growth in the UK economy*" (para 3.1.4). The promotion of successful major port developments is encouraged because they are recognised as being essential for trade and economic growth long-term. A consultation was undertaken between 4 June 2025 and 29 July 2025 on the proposals for a revised NPS-Ports. It is understood that the existing NPS-Ports will remain in full effect during the period of the review.

Energy policy

4.2 The overarching National Policy Statement for Energy (EN-1) (January 2024) with the National Policy Statement for Renewable Energy Infrastructure (EN-3) (January 2024) provide the primary policy for decisions by the Secretary of State on applications for nationally significant renewable energy infrastructure. This includes interconnectors.

EN-1 sets out national policy for major energy infrastructure. It includes at chapter 4 the assessment principles. At para 4.1.7 in relation to the mitigation of impacts, it is set out how it is likely that the need case will outweigh the residual effects in all but the most exceptional cases. Para 4.1.7 goes on to state that this presumption does not apply to residual impacts which present an unacceptable interference offshore to navigation. Furthermore, para 4.2.15 states the exemption to the presumption of consent are residual impacts which present an unacceptable risk to, or unacceptable interference offshore to navigation.

4.3 EN-3 covers, amongst other things, offshore transmission infrastructure projects and this can include interconnectors. It states at paragraph 2.8.5 in relation to offshore wind that "*this section on offshore wind makes many references to cabling and offshore transmission. Applicants bringing forward proposals for that infrastructure should note all such references; cabling refers to all types of electricity network infrastructure"*

4.4 In relation to offshore wind impacts: navigation and shipping it is stated:

(a) "*it is inevitable that there will be an impact on navigation in and around the area of the site*" (para. 2.8.178);

(b) applicants *"should reduce risks to navigational safety to as low as reasonably practicable*" (para. 2.8.179);

(c) "*Impacts on navigation can arise from the wind farm or other infrastructure and equipment creating a physical barrier during construction and operation*" (para. 2.8.182); and

(d) "*Engagement should seek solutions that allow offshore wind farms, offshore transmission, and navigation and shipping users of the sea to co-exist successfully*" (para. 2.8.185).

4.5 In relation to Secretary of State decision making, EN-3 goes on to state (emphasis added):

(a) "*The Secretary of State should be satisfied that the site selection has been made with a view to avoiding or minimising disruption or economic loss to the shipping and navigation industries, with particular regard to approaches to ports and to strategic routes essential to regional, national and international trade, lifeline ferries and recreational users of the sea*." (para. 2.8.328);

(b) "*Where after carrying out a site selection, a proposed development is likely adversely to affect major commercial navigation routes, for instance by causing appreciably longer transit times, the Secretary of State should give these adverse effects substantial weight in its decision making*" (para. 2.8.329);

(c) "*The Secretary of State should be satisfied that risk to navigational safety is as low as reasonably practicable (ALARP). It is government policy that wind farms and all types of offshore transmission should not be consented where they would pose unacceptable risks to navigational safety after mitigation measures have been adopted*" (para. 2.8.331); and

(d) "*The Secretary of State should have regard to the extent and nature of any obstruction of or danger to navigation which (without amounting to interference with the use of such sea lanes) is likely to be caused by the development in determining whether to grant consent for the construction, or extension, of an offshore wind farm, and what requirements to include in such a consent*" (para. 2.8.335).

4.6 A consultation on revised Energy National Policy Statements EN-1, EN-3 and EN-5 took place between 24 April 2025 and 29 May 2025. It is understood that as Sea Link was accepted for examination before the energy NPS's have been amended, the current suite of energy NPS', published in 2024 should have effect. However, as set out in the consultation document "*any emerging draft NPSs (or those amended by not having effect) are potentially capable of being important and relevant considerations in the decision-making process. The extent to which they are relevant is a matter for the relevant Secretary of State to consider within the framework of the Planning Act 2008 and with regard to the specific circumstances of each development consent order application*."

Marine Policy Statement and Marine Plans

4.7 Regard must also be had to the UK Marine Policy Statement ("**the MPS**") (March 2011), the framework for preparing Marine Plans and taking decisions affecting the marine environment, as provided for in the Marine and Coastal Assess Act 2009. The MPS provides the high level policy context within which national and sub-national Marine Plans are developed. There are eleven marine plan areas in England. The relevant Marine Plan for the river Thames is the South East Inshore Marine Plan ("**the SEIMP**") (June 2021). The East Inshore and East Offshore Marine Plans ("**the East Plans**") are also of relevance given the location of the proposed development.

4.8 The MPS emphasises the importance of ports and shipping in the marine environment and their essential role in the UK economy including for the transport of goods and people (section 3.4). Paragraph 3.4.4 highlights how the operation of ports is enabled through the creation, maintenance and development of channels and paragraph 3.4.7 sets out how decision makers should take into account and seek to minimise any negative impacts on shipping activity, freedom of navigation and navigational safety.

4.9 The MPS also recognises that submarine cables are part of the backbone of the world's power, information and international telecommunications infrastructure, and are socially and economically crucial to the United Kingdom (para 3.7.1) and that the marine environment will make an increasingly major contribution to the provision of the UK's energy supply and distribution. It recognises their importance and states at paragraph 3.7.4 *"Cables are buried deep in the sea bed where possible and operators promote marine safety and protection."* (emphasis added)

4.10 The SEIMP highlights how the plan area has:

"*many important activities competing for a small amount of space. This includes shipping activity of international significance and important shipping lanes to Europe that lie in close proximity to offshore wind installations"* and *"is home to the highest number of ports and harbours in England, contributing the greatest amount of gross value added to the national economy of all the English marine plan areas from ports and shipping. These include the Port of London, with high volumes of traffic [...] Associated activities such as dredging of ports, harbours and approaches are essential to ensure safety of navigation, ensuring the viability of ports and harbours, along with the ability to compete in the global maritime sector*."

4.11 The SEIMP has three main objectives: (i) a sustainable marine economy; (ii) ensuring a strong, healthy and just society; and (iii) living within environmental limits. The SEIMP's policies support delivery of the SEIMP objectives and whilst it is clear that individual marine policies must not be read in isolation, policy SE-PS-1 is of note due to its support for sustainable port and harbour development. It states:

"*Only proposals demonstrating compatibility with current port and harbour activities will be supported. Proposals within statutory harbour authority areas or their approaches that detrimentally and materially affect safety of navigation, or the compliance by statutory harbour authorities with the Open Port Duty or the Port Marine Safety Code, will not be authorised unless there are exceptional circumstances.*

Proposals that may have a significant adverse impact upon future opportunity for sustainable expansion of port and harbour activities, must demonstrate that they will, in order of preference:

- Avoid

- Minimise

- Mitigate

adverse impacts so they are no longer significant.

If it is not possible to mitigate significant adverse impacts, proposals should state the case for proceeding."

4.12 Other SEIMP policies of relevance (SE-CAB-1, SE-DD-1, SE-PS-2 and SE-PS-3) are set out in the table at Appendix 1 to this Written Representation.

4.13 There are eleven objectives in the East Plans which are supported by detailed policies. The East Plans recognise that the plan area "*has almost 20% of the submarine cables in English*

waters…with a high traffic value and anticipated further growth" and "*has high levels of shipping traffic passing through the offshore area but also coming into busy ports*" (para. 33).

4.14 Policies relating to ports and shipping are set out in section 3.12 which emphasise, "*how the ports and shipping are critical to the effective movement of cargo and people, and form an essential part of the United Kingdom and global economies*" (para. 342) and "*In the East marine plan areas there are increasing levels of activity encroaching on navigable space (for example, offshore wind farms), making it ever more important to indicate the area essential for navigation*" (para. 344).

4.15 Policy relating to subsea cabling is set out in section 3.15 of the East Plans. Interconnectors are specifically referenced at para 411 and at paragraph 416 it is highlighted that "*the single most important factor in reaching a successful outcome for any cable project is early and open engagement between key stakeholders, and consideration of this guidance."* The relevant cable policy CAB1 is set out in Appendix 1 to this Written Representation alongside the relevant Ports and Shipping policies (PS1, PS2 and PS3).

4.16 The Applicant's Planning Statement [AS-058] includes an assessment against the policies referenced above and concludes in relation to Shipping and Navigation that "*there will be no significant residual effects on shipping and navigation*" (para 9.2.41). The PLA is unable to agree with this conclusion at this time in the absence of amongst other things a certified plan and design requirement, agreed protective provisions for the PLA and the production and submission into the examination of documents such as an outline Cable Specification and Installation Plan ("**oCSIP**") and outline Sediment Disposal Management Plan ("**oSDMP**") (the PLA's comments on the outline Navigation and Installation Plan ("**oNIP**") are set out below). Amendments are also required to the Deemed Marine Licence ("**DML**"). Currently there is no certainty that minimum water depths at pilot boarding and landing areas, entries and exits to the Port and other essential infrastructure such as anchorages will be safeguarded and therefore there would be a clear constraint on current activities and the expansion of the Port of London in the future.

Port of London Cable Statement

4.17 Whilst not planning policy, due to the number of cables planned within or on approach to the Port, the PLA has published a Cable Statement setting out the broad issues that must be considered by developers. The Statement also documents the detail and mitigation that the PLA would expect to see as a minimum within applications. The Cable Statement draws on the experiences of the PLA across a number of Development Consent Orders and other consenting regimes and is entirely relevant to the Sea Link application. A copy of the Statement is attached at Appendix 2.

5 PERMANENT IMPACTS BECAUSE OF CABLE DEPTHS

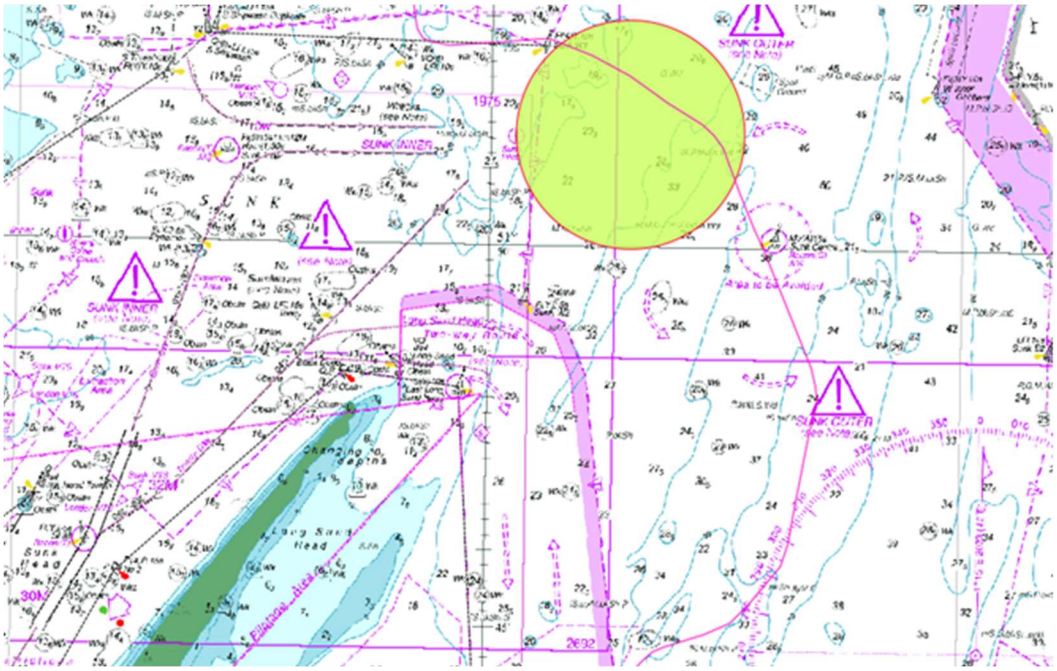
5.1 The offshore scheme comprises three components which are set out in paragraph 4.4.4 of Chapter 4 Description of the Proposed Project [AS-094]. The PLA is concerned with the marine high voltage direct current ("**HVDC**") cable route only and has no comments to make on either the Suffolk or Kent landfall. The marine cable route will contain two HVDC 100-150mm cables (one bundled pair) and one 10-15mm fibre optic cable which would be bundled together with the HVDC cables within the same trench. For the purposes of this Written Representation all three cables will be referred to as "**the cables**".

5.2 The Marine HVDC cable route is shown as Work No. 6 on the Work Plans - Offshore [APP-023]. The Marine HVDC cable route passes close to the Sunk Pilot Diamond (approximately 2 km at the closest point at KP37) as shown on figure 6.4.4.7.A.2 of the ES Figures Marine Navigational Risk Assessment Part 1 of 2 [APP-283]. Pilotage is compulsory for large vessels within the London Pilotage District and this area is critical for entry and exit of deeper draughted vessels into/from the Port of London with the boarding and landing of pilots taking place in the vicinity of the Sunk Pilot Diamond rather than at the specific point shown on

figure 6.4.4.7.A.2. The actual location will be based on a number of factors, including traffic density, wind strength and direction and tidal conditions.

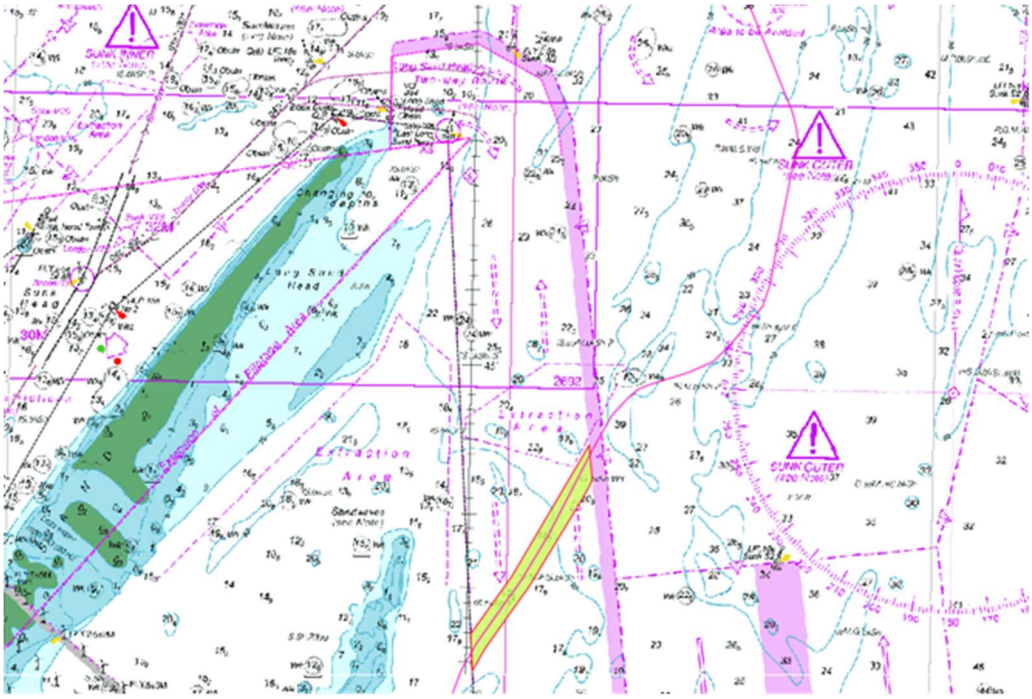
5.3 The depth of the cables in the vicinity of the Sunk Pilot Diamond; the approach to cable laying and repair; cable protection and cable crossings are all critical in this area. Consistent with other cable schemes in the area, the PLA requires future access for vessels with a draught of 20m and accounting for 10% under keel clearance this means that a water depth of 22m below Chart Datum ("**CD**") must be maintained by Sea Link in the vicinity of the Sunk Pilot Diamond. The ability to maintain this depth is required regardless of existing water depths. Figure 3 below shows the cables in red and an area in green where a water depth of 22m below CD must be protected to allow the boarding and landing of deeper draughted vessels to take place unconstrained at the Sunk. If water depths of -22m CD are not safeguarded then this will significantly reduce the area within which the boarding and landing of deeper draughted vessels can take place and may severely restrict their access in and out of the port. There would be an increased risk of collision for very large vessels if they are required to manoeuvre for boarding and landing within a more restricted area. This area is exactly the same as safeguarded in the North Falls Offshore Windfarm Project (see Project EN010119 Deep Water Route Cable Installation Areas (Future Dredging Depth) Plan [REP6-055]).

Figure 3 – Sunk Pilot Diamond where a water depth of -22m CD must be safeguarded



5.4 Continuing south, the cables then cross the Long Sand Head Two Way Route between approximately KP60 and KP65. This route feeds into the Trinity Deep Water Route and allows less deep draughted vessels that are entering or exiting the Port of London to take a pilot at the North East Spit and avoid travelling up to the Sunk pilot station via the Sunk roundabout. This flexibility is particularly important during periods of disruption to the Sunk routes, either due to adverse weather closing the Sunk pilot station or due to construction and maintenance activities of various planned cables. The depth of the Sea Link cables where they cross the Long Sand Head Two Way Route; the approach to cable laying and repair; cable protection and cable crossings are all critical in this area. A water depth of 12.5m below CD must be maintained by Sea Link in the area shown in green on figure 4 in order for vessels that use this route to continue operating without additional constraint to those already in existence around the Long Sand Head.

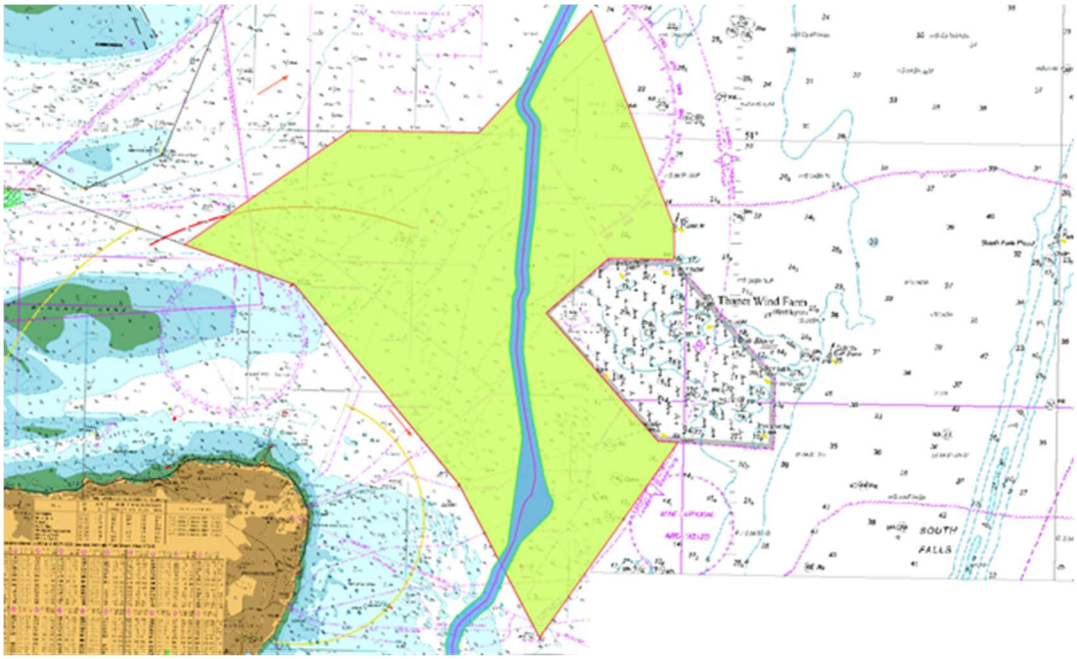
Figure 4 – Long Sand Head where a water depth of -12.5m CD must be safeguarded



5.5 Continuing further south again, the cables pass through an area known as the North East Spit. Within this area the Tongue Pilot Diamond is located approximately 80m to the east of the offshore scheme at KP 90 and the North East Spit Pilot Diamond is located 3.9 km to the west at KP 97. As outlined above, boarding and landing of pilots takes place in the general vicinity of these pilot diamonds and not at the specific points shown on the plans. The depth of the cables at the North East Spit; the approach to cable laying and repair; cable protection and cable crossings are all critical in this area. Figure 5 below shows in green the area where a water depth of 12.5m below CD must be protected. The ability to maintain this depth is required regardless of existing water depths. If water depths of -12.5m CD are not safeguarded then this will significantly impact the area where the boarding and landing of vessels can take place and may ultimately prohibit some vessels from using the North East Spit for boarding and landing.

5.6 The Tongue deep water and hazardous anchorages are used as a staging area by vessels coming to and from the Port. Depths in the vicinity of the anchorages must be preserved so as not to compromise the ability of deep draughted vessels to enter and exit the anchorages

Figure 5 – North East Spit where a water depth of -12.5m CD must be safeguarded



5.7 The PLA is concerned that the application documents do not provide the certainty that is required on the critical issue of water depths. The future baseline set out in paragraph 7.7.53 of Chapter 7 Shipping and Navigation [APP-080] does not recognise the future requirements of the ports, to safeguard depths for vessels up to 20m draught, citing Brexit and COVID-19 related uncertainty.

5.8 Chapter 4 Description of the Proposed Project [AS-094] states the minimum depth of lowering ("**DOL**") to the top of the cable is 0.5m in areas of bedrock with a target DOL for the project of approximately 1-2.5m to be achieved where possible dependent on the seabed geology (para 4.6.236) (emphasis added). Table 4.15 sets out the target DOL. The table itself states 'required cable burial'. It needs to be clear whether the target DOL is just that, a target or whether it is a specific requirement and what happens if this target/required DOL is not met. It would not be appropriate for remedial works in the form of rock protection to be used where the target DOL is not reached at the areas set out in figures 3-5 above where this results in the water depths that the PLA requires safeguarding being reduced. This is why the PLA requires a certified plan and a design requirement alongside a clear remediation clause in protective provisions which ensures that the cable is installed and then maintained, operated and decommissioned at the required depth. Unfortunately the PLA has experience with cable schemes where target depths are not achieved during installation or cables become exposed over time and then Applicants try to place constraints on navigation rather than undertaking remedial works which rebury the cable to the required depth.

5.9 Another example is Table 4.16 of Chapter 4 Description of the Proposed Project [AS-094] which sets out minimum and maximum trench parameters with rock backfill depth relative to target DOL. Again there would appear to be nothing to prevent the Applicant from not meeting its target DOL and then using rock backfill in a way that reduces water depths. Furthermore para 4.6.242 recommends that the busiest section for marine traffic utilises backfill (below the original seabed level) along its entire length at the earliest opportunity (KP38-58 and KP81.5-96.5).

5.10 There must be certainty in the Sea Link application that the requirements detailed above will be met to ensure that there will be no significant permanent effects on shipping and navigation arising from the cables, in isolation or cumulatively with other projects, during construction, operation, maintenance and decommissioning. Consistent with its approach

to Five Estuaries and North Falls, the PLA seeks to secure an agreed position in relation to the areas outlined above and for the agreed position to be clear and consistent within the application documents including the draft development consent order ("**dDCO**"). Amongst other things there needs to be a certified plan and a design requirement relating to the cables; the PLA requires protective provisions which include for remediation if the cable is not installed at the required depth, and there must be the production and submission into the examination of documents such as an oCSIP and oSDMP (the PLA's comments on the oNIP are set out below). Amendments are also required to the DML.

6 TEMPORARY IMPACTS FROM CABLE LAYING AND REPAIR

6.1 As set out in section 5 above, the cables are located in areas which are critical to the functioning of the Port of London. These include port approaches, pilot boarding and landing areas and anchorages.

6.2 Construction and maintenance vessels must not hinder access into the Port, the ability to board or land pilots or the use of essential infrastructure such as anchorages. Deep drafted vessels to terminals within the Port of London are tidally constrained, so a small deviation to their schedule could result in them not having enough water for their passage to the berth, thus delaying them until the next tide approximately 12 hours later.

6.3 With the continued growth of the Port there will be greater need to ensure vessels can arrive and depart at all states of the tide, in order for the terminals and the wider port to operate efficiently. For example, if a vessel leaving London Gateway was tidally constrained at the Sunk and missed her deadline for leaving the berth, the vessel may have to remain alongside for a number of hours until there was sufficient water again, which would also impact any inbound vessel planned for the same berth.

6.4 The largest, deepest vessels into and out of the Port tend to manoeuvre off the berths towards high water, when there is more available deep water for swinging. Their passages between the container or tanker berths and the Sunk can be up to five hours, which is a significant proportion of the approximately 6hr tidal window between high water and low water. This means they are usually planned to be in the vicinity of the Sunk at the lower end of the tide.

6.5 If the tidal window at the Sunk was restricted due to lack of safe water for the boarding and landing of pilots, the safety and efficiency of vessel movements could be compromised. For example, a vessel which was planned to be at the Sunk before low water, could, if delayed, find itself unable to complete its passage out of the Thames. The vessel would have to either slow down or try and anchor to await the rising tide, both of which could create a hazard to itself and other vessels. Alternatively, if delayed at the berth the vessel would not be permitted to sail until the tide had risen sufficiently, causing further delay to that vessel and any vessel due to take its berth. Large vessels navigating to and from London Gateway are required to have some separation for safety reasons, so with six berths operating in the future it will be necessary for more than one vessel deep draughted vessel to be navigating on any tide. Avoiding the low water period at the Sunk would make it difficult to achieve multiple vessels safely navigating in and out of the port with the required separation on each tidal cycle, leading, once again to vessel delays and potentially compromising navigational safety.

6.6 Similarly disruption to the Long Sand Head Two Way route due to cable installation or repair could, if not managed appropriately, have significant implications for vessels entering and leaving the Port as it would force vessels to use the Sunk increasing the distance that these vessels have to travel and thereby subjecting them to increased fuel costs and increasing their journey time. In some poor weather conditions the North East Spit continues to operate when it is too rough to board and land pilots at the Sunk. As well as being used routinely for vessels arriving from the south in rough conditions, the Long Sand Head Two Way Route is a vital route for transiting from the North East Spit to the northern deep water channels.

6.7 At the North East Spit if the tidal window was restricted due to a lack of safe water for the boarding and landing of pilots, the safety and efficiency of vessel movements could be compromised. Alternatively, vessels may be forced to change their passage to use the Sunk instead, increasing the distance that the vessel has to travel and thereby subjecting them to increased fuel costs and increasing their journey time.

6.8 The above highlights the importance of utilising the most effective method of cable laying in terms of speed and ability to achieve the required cable burial depth. The oNIP is the mechanism to provide and agree the relevant details in relation to this matter. Comments on the oNIP are provided in section 11 below.

6.9 Chapter 4 Description of the Proposed Project [AS-094] highlights how the offshore cables would be installed in sections and that it may be the case that no field joints would be required during construction (para 4.6.220). However, the document then goes on to state at para 4.6.224 that Sea Link is anticipated to have one omega joint (outwith the SUNK). The Shipping and Navigation Chapter of the ES [APP-080] states in table 7.10 that there is the 'possibility of multiple cable joints." Field joints require the cable lay vessel to hold station for a number of days while the jointing is performed. The PLA seeks a commitment that no planned field joints would be located within the areas which it has identified where water depths need to be safeguarded and disruption to existing activities minimised.

7 PERMANENT IMPACTS FROM INTERACTION WITH THIRD PARTY SCHEMES - CABLE CROSSINGS

7.1 As shown on page 5 of ES Figures Marine Other Sea Users [APP-286] there are a number of existing and proposed cables in the vicinity of Sea Link. These include Five Estuaries, North Falls, Neuconnect, BritNed, GridLink and Nemo Link. In addition, ES Figures Marine Descriptions of Other Projects [APP-288] identifies Nautilus (expected to be submitted 2028) and Lion Link (expected to be submitted Q4 2025) as having the potential to be located within the offshore scheme boundary. Chapter 4 Description of the Proposed Project [AS-094] also identifies Mercator, Cronos, Tarchon and Q&E North (tables 4.18 and 4.19). Parties need to work together wherever possible to minimise impacts and to maximise the potential for other projects to come forward in the future.

7.2 Chapter 4 Description of the Proposed Project [AS-094] sets out in table 4.20 that the crossing height could be up to 1.5m. The Shipping and Navigation Chapter of the ES [APP-080] states at para 7.9.80 *"Similarly, anticipated reductions in water depth greater than 5%, especially near areas like cable crossings, shorelines, key navigation routes, or areas where ships have limited room to maneuver, will be discussed with relevant stakeholders (like Statutory Harbour Authorities (SHA), Competent Harbour Authorities (CHA), and the MCA*." Mitigations are set out in para 7.9.81 and include notifying mariners and marine authorities and marking subsurface hazards. The document goes on to identify addition mitigation and enhancement measures at section 7.10 which include "*Avoiding disruption to the Sunk anchorage area Sunk pilot boarding station, Tongue anchorages and Tongue pilot station during operation by considering appropriate cable burial depth and protection measures, and aiming for minimal reduction in under keel clearance, as well as carefully considering the location of cable joints*"

7.3 These mitigations are not sufficient and do not give the PLA the certainty that it requires. In areas where depths must be safeguarded, the Application must be designed, constructed, operated, maintained and decommissioned to ensure that those critical depths are not impacted. The PLA must have confidence that where Sea Link crosses existing cables that the required water depths will be maintained and that the Sea Link cable will be buried at sufficient depth or placed in areas of deeper water so that any cables that cross Sea Link in the future also maintain the required water depths and do not prevent these schemes from coming forward. At this stage the PLA has specific concerns about GridLink (KP 101.27) and Q&E North (KP 100.151). Across the Order Limits in this location water depths vary and with cable installation only proposed 0.5m below bed level and cable crossings which

could be up to 1.5m in height without close co-operation between schemes and the installation of the Sea Link cable in locations with deeper water it may not be possible for GridLink to be brought forward or the crossing of Q&E North not to impact the water depths that need to be safeguarded. The PLA is liaising closely with GridLink and understands that they will be making a submission to the examination. The PLA considers that if the deeper water is targeted there should be sufficient space for Sea Link to be crossed by GridLink and the 12.5m water depth to be maintained however this should be demonstrated to the ExA and the PLA. It will also need to be secured given the current Order Limits mean that Sea Link could be installed in an area of shallower water depth thereby prohibiting GridLink from crossing it.

8 TEMPORARY AND PERMANENT IMPACTS FROM PRE AND POST CONSTRUCTION SURVEYS AND ACTIVITIES

8.1 As is common with the installation of cables, a number of pre-construction activities including pre-construction surveys and monitoring may need to be carried out in order to obtain detailed information to inform for example, the final cable route and burial depth or to allow for the installation of the cable on the chosen route (e.g. boulder clearance, unexploded ordnance ("**UXO**") clearance etc).

8.2 Chapter 4 Description of the Proposed Project [AS-094] sets out the likely surveys that would be required prior to installation. The PLA needs to be consulted on any surveys or monitoring that could affect the areas identified by the PLA for safeguarding as a survey vessel may pass slowly over the area or even stop to place/remove monitoring equipment which could affect shipping.

8.3 Chapter 4 Description of the Proposed Project [AS-094] provides an outline in relation to cable route clearance activities at para 4.6.207 onwards. Restrictions need to be placed on how the cable route clearance can be undertaken. In particular:

- Boulder/debris clearance - whilst it is stated no boulder removal is anticipated it states that if boulders are identified and are considered an impediment these would be removed by grab or displacement plough (para 4.6.208) (emphasis added). It would not be appropriate within the areas identified by the PLA for the boulders to be displaced along or into the route and they must be removed.

- UXO – it is noted that a detailed UXO survey is planned to be carried out in 2025 and that whilst avoidance would be the preferred approach, if UXO clearance is necessary, the activity would be undertaken in accordance with approved industry practices. It is stated that this may include lifting and relocating the UXO. As with boulder/debris clearance it would not be appropriate within the areas identified by the PLA for UXO to be relocated and they must be removed.

- Sand wave lowering – table 4.13 advises that there is no designated disposal area and approximately 250,000m3 of sand would be deposited within the Order Limits. It is stated that the sand would be deposited in such a way that the local currents would not backfill the pre sweep area prior to cable installation and protection but it also goes on to say the mechanism to infill the rock trench is natural backfill and sediment circulation/deposition. The PLA is concerned about the lack of controls in relation to the placing of inert material given the implications of this for navigable depths. The PLA supports the approach taken at Five Estuaries and North Falls and therefore recommends the production of an oSDMP.

- Wet Storage - para 4.6.221 refers to the wet storage of cables. There should be a commitment to no wet storage within the areas which the PLA has identified where water depths need to be safeguarded.

- Archaeological finds – there is no clear commitment in relation to not relocating archaeological finds within the areas which the PLA has identified where water depths need to be safeguarded. Para 6.9.3 of Marine Chapter 6 Archaeology [APP-079] refers to 'reburial' to limit further impact and mitigation MA01 makes reference to conserving any objects that have been disturbed however it is not clear whether this could result in preservation in a location close to its original location. The PLA has experience of another cable project wanting to do this but the location that the Applicant wanted to relocate the find to was not appropriate from a shipping and navigation perspective.

8.4 Consistent with the approach taken at Five Estuaries and North Falls, the PLA would expect the Applicant to produce an oCSIP and for all the Applicant's commitments in relation to the above matters to be to be detailed within the oCSIP.

9 TEMPORARY IMPACTS FROM INTERACTION WITH THIRD PARTY SCHEMES (SIMULTANEOUS OPERATIONS)

9.1 As set out above, there are various cables that could cross Sea Link and depending on the timings of each of these projects, there is potential for simultaneous operations occurring during installation and maintenance. For the reasons set out above, construction and maintenance vessels must not hinder access into the port. The Navigational Risk Assessment ("**NRA**") [APP-203] states at para 7.6.20 that if *"simultaneous operations occur during installation, maintenance or decommissioning activities…the Project will have project vessel management procedures and planned protocols…as well as where appropriate, joint engagement with relevant stakeholders such as harbour authorities*." Section 7.7 identifies the NIP as an additional risk reduction measure and the PLA's comments on the oNIP are set out in section 11 below.

9.2 The PLA would emphasise here that given the importance of the NIP in managing vessel activities in complex areas of navigation that there needs to be a clear mechanism for the PLA (and other interested parties) to review and approve the NIP and any updates to the NIP. Currently the only requirement is for the NIP to be submitted and approved in writing by the MMO prior to any licensed activities (or any part of those activities under Works no. 6) commencing. The PLA would wish to approve the NIP prior to its submission to the MMO. It should also be clarified if any activities are proposed which are exempt from a Marine Licence and therefore fall outside of the definition of licensed activities and could therefore take place without a NIP being in place. Finally, there should be a clear approvals process for any updates to the NIP.

10 MITIGATING POTENTIAL IMPACTS TO SHIPPING AND NAVIGATION

10.1 Various documents have been produced (e.g oNIP) or will be produced (e.g CSIP) or will need to be produced (e.g oSDMP) in order to mitigate potential impacts to shipping and navigation.

oNIP [AS-104]

10.2 The oNIP provides a mechanism for managing project vessel traffic. The oNIP advises at para 1.1.1 that it relates to construction and at para 1.1.3 it is stated "*the requirement for a NIP during operations and maintenance will be discussed in due course*." Consistent with the approach taken for Five Estuaries and North Falls, the PLA considers that the NIP needs to extend to the operation and maintenance phase and that decommissioning works need to be considered as part of any decommissioning plan.

10.3 The scope of the NIP is set out in section 1.2 and shown on plate 1.1, it must include the crossing of the Long Sand Head two way route (between approximately KP60 and KP65).

10.4 Other amendments required to the oNIP include:

- Para 1.1.5 states that the NIP has a key focus on preserving access to approaches to ports and harbours, including Harwich and PLA, but there is no further reference to this within the oNIP and the PLA's required depths are not referred to anywhere in the document. Section 3.3.1 states that where there will be a reduction which may affect under keel clearance ("**UKC**") it will be highlighted within the NIP, but later references to notification of reduction in UKC only appear in section 3.8 in relation to Pegwell Bay.

- Para 1.2.8 – the PLA's concerns also extend to the Tongue Pilot Boarding area which is located approximately 80m to the East of the offshore scheme at KP90. This should be shown on plate 1.1 and the PLA is content that the Southern Offshore OSI covers the necessary area that needs to be safeguarded in relation to the Tongue Pilot Boarding area.

- At 1.2.13 it is stated that the oNIP applies to the construction phase of the Sea Link project and comes into force once Sea Link construction begins. Table 1.4 helpfully provides a list of construction activities, but it must be ensured that this list is comprehensive and also covers any/all relevant 'pre-commencement operations.' For example, wet storage is a construction activity that is not included in table 1.4 and environmental (including archaeological) investigations and surveys are a pre-commencement activity which require careful management but these do not appear to be captured in table 1.4 with surveys being limited to UXO surveys.

- At para 1.2.18 the list of interested parties should include London Gateway and the Port of Tilbury London Limited.

- Para 1.3 – there should be a clear mechanism for the PLA to be consulted upon and approve the NIP and any updates to the NIP. Given the complex issues that the NIP is covering it is not appropriate simply for Sea Link to update the document and provide it to interested parties at regular intervals. This approach could result in changes being made to the NIP which are not appropriate and is why the PLA seeks approval of the NIP before its submission to the MMO and any revisions. Also see para 2.6.6 of the Five Estuaries oNIP where updates relating to project vessel activities will be reviewed by interested parties ("**IPs**") to agree changes and where they cannot be agreed they will be submitted to MMO.

- All the tables in section 2 should include a 'Traffic Management' parameter and an 'Additional parameters as required'. The PLA would have expected some elements of some of the tables to be populated rather than every table being TBC. There is no reference in the tables to cable repair or reburial and cable joints.

- It should be confirmed if any freespan clearance is proposed.

- Para 2.3.3 it is concerning that the oNIP states the cable will be buried where practicable. However, where Target DOL cannot be achieved, rock backfill may be installed. This would not be appropriate in the areas which the PLA has identified where water depths must be maintained if it would impact on the depths that need to be safeguarded.

- 2.3.5-2.3.8 Cable Crossings – this section is very light and does not provide much detail. This should be compared to the Five Estuaries oNIP section 3.1.7-3.1.9 which provides assurance of areas to be avoided and depths to be maintained.

- Para 2.4.2 refers to possible updates to the NRA, post consent, if routeing has changed significantly prior to construction. There is no reference to further consultation with IPs, which will be required prior to installation activities commencing (See Five Estuaries oNIP para's 3.3.2-3.3.3)

- 3.3 It is deeply concerning to the PLA that this section has been included and identifies that there may be reduction in water depths in the very areas that the PLA has advised Sea Link water depths must be protected.

- The essential point of the oNIP in relation to concurrent activities is to define and have certainty over where this can and cannot occur. It is therefore concerning that para 3.4.6 states simultaneous RAM operations with other offshore projects will be avoided where possible (emphasis added).

- There is no proposal for any meetings or workshops to discuss protocols for restricted vessel movements prior to construction works commencing. The Five Estuaries oNIP at para 4.2 outlines details of a HAZOP workshop with IPs and others and there should be something similar in place for Sea Link to ensure all potential risks have been identified and mitigations agreed. The Sea Link oNIP focuses on notification rather than consultation.

oCSIP

10.5 An oCSIP needs to be produced and submitted early into the examination which sets out information in relation to cable installation and maintenance, cable crossings, cable protection and temporary works such as boulder relocation and archaeological finds. The oCSIP and CSIP will essentially provide a technical specification of offshore cables, including a desk-based assessment of cable burial depth in accordance with good industry practice. It should also include a detailed cable laying plan which demonstrates how cable installation and maintenance will ensure that the water depths in the areas shown in figures 3 to 5 above are safeguarded over the lifetime of the project. The application documents, dDCO and the Deemed Marine Licence need to be clear and consistent regarding what is required in these specific locations and what might be possible in other locations – for example, currently there are references to a 5% reduction in water depths (and potentially more than 5% reductions with the agreement of the MMO), but this would not be appropriate in the areas outlined above. The PLA seeks approval of the CSIP prior to its submission to the MMO.

oSDMP

10.6 As outlined above, an oSDMP needs to be produced and submitted into the examination which set out the key constraints and measures proposed in relation to the management and disposal of dredged material that may be produced during the construction of the offshore elements of Sea Link. The PLA seeks approval of the oSDMP prior to its submission to the MMO.

Register of Environmental Actions and Commitments ("REAC")

10.7 The REAC records all the Applicant's commitments in relation to the Project. It includes embedded, good practice (also referred to as control and management measures) and additional mitigation measures. The REAC forms Appendix B to the outline onshore construction environmental management plan ("**CEMP**") [APP-342]. It is not clear why offshore mitigations are set out in an appendix to an onshore plan particular when an outline offshore CEMP has also been produced. This should be clarified.

10.8 The REAC advises at paragraph 1.1.4 that compliance with the REAC is secured through Schedule 3 Requirement 6 of the dDCO. Whilst this would appear to be the case as the construction of the authorised development and mitigation works must be carried out in accordance with the CEMP (which contains the REAC), it is not clear who would be responsible for approving the CEMP – it is assumed that in the context of the onshore CEMP this would be submitted to the Local Planning Authority. It is therefore unclear whether any Ports would be consulted on this document and given the opportunity to provide comments, particularly given that they are not a named body in the Requirement. All commitments

within the REAC must be clear and compliant and precise so that the relevant discharging authority is able to determine whether the commitments are being complied with.

10.9 Table 1.4 contains the REAC for the Offshore Scheme. The PLA has the following initial comments on the table:

- Entry GM04 proposes sensitive routeing and siting of infrastructure and temporary works. It is stated that this is secured through DCO Schedule 1 and 16. How do these schedules result in sensitive routing and siting of infrastructure? The PLA would have expected much more specific commitments for example signposting to a Requirement which provides specific commitments on seabed levels where these need to be safeguarded over the lifetime of the project. Instead the Applicant signposts to Schedule 1 the Authorised Development i.e. the whole route, not even just the offshore element of Schedule 1 and to the whole of the DML at Schedule 16.

- GM05 refers to early and continued stakeholder engagement. It is stated that this is secured through the offshore construction environmental management plan (AS-127). The outline plan refers to external notifications but notification is very different from the level of engagement that would be required with the Port of London Authority and others on this project.

- A significant number of entries refer back to the offshore CEMP as the securing mechanism but it is not clear who will approve the document – the document itself says "the relevant licensing authority" and the PLA would have expected at the very least to be identified as a consultee (along with other port authorities).

- The SN entries relate to Shipping and Navigation. There are no references to the oNIP which is being produced or to the subsequent NIP as a securing measure for mitigation. For example in relation to SN04 disturbance to other sea users, the NIP will be an important mechanism to reduce the potential for other sea users to be disturbed by the construction and maintenance of Sea Link. In relation to SN11 the need to co-ordinate planned operations within the Sunk region are highlighted but the NIP is not identified as the mechanism to do this. Again in relation to SN34 simultaneous operations, the NIP will be the mechanism to manage these.

- SN01 sets out a risk based approach to cable burial. There is no in principle objection to this but it need so be clear what happens when cable burial is unsuccessful (either to full depth or to minimum depth of lowering). Constraints cannot be placed on the UK's largest port through for example the placing of cable protection if the cable is not installed with the required depth of cover. Remedial steps must be clear and must involve burial of the cable (during installation and over the lifetime of the project). There is no reference to the CSIP (or the associated CBRA) which the PLA would expect to cover this matter.

- SN08 refers to special attention being given to the routing through the Sunk TSS and when in proximity to the Sunk Deep Water anchorage area and Sunk pilot station, as well as when routeing in proximity to the Tongue anchorages and pilot station. The PLA has set out above the areas which it requires special attention to be given to. It is also noted that Harwich and Sandwich Port and Haven authorities are referenced but not the PLA.

- SN22 worryingly refers to anticipated reductions in water depth greater than 5%. A specific requirement is needed which sets out the riverbed depths that must be maintained and where there can be no reductions in water depth.

- There is no mitigation in relation to designing out planned cable joints in the areas shown in figures 3 to 5 above.

- The usual suite of mitigations are not identified in relation to UXO, archaeological finds, wet storage, freespan clearance etc. The approach to cable protection and cable crossings (and in particular areas to avoid) are not set out. As highlighted above, these should all be set out in an oCSIP.

11 COMMENTS ON THE DDCO

11.1 The PLA has identified several matters of concern in relation to the dDCO. The main concerns are summarised below.

11.2 Schedule 3 Requirements - Akin with Five Estuaries and North Falls the PLA would wish to see a requirement and associated certified plan to the effect of:

> *"That any part of Work No.6, including any associated development or ancillary works, located within the Areas of Interest must be installed at a level which would not impede the dredging of those parts of the Areas of Interest to the following depths:*
>
> *(a) Labelled "Sunk Pilot Boarding area", to a level of 22 metres below Chart Datum; and*
>
> *(b) Labelled "Long Sand Head Two-Way Route crossing", to a level of 12.5 metres below Chart Datum; and*
>
> *(c) Labelled " North East Spit area" to a level of 12.5 metres below Chart Datum;*
>
> *and in all cases (a) to (c) makes allowance for an 'over-dredge' tolerance of 0.5 metres in addition to the stated depths attributable to standard dredging methodology*." ("the Requirement")
>
> The final form of the wording for the Requirement and reference to the same in the Deemed Marine Licence and the Protective Provisions will need to be the subject of further review given the need to also accommodate GridLink.

11.3 Schedule 16 Deemed Marine Licence - Whilst the PLA would expect its own approvals, the PLA had a number of broad comments as set out in its Witten Representation on the DML. A marked up copy of the DML with these changes tracked is attached at Appendix 4 and a broad summary of the changes are highlighted below.

(a) PLA contact details need to be listed at paragraph 4 and notification and consultation provisions included at various points in the DML;

(b) Paragraph 2 allows for disposal of up to 250,000m3 of material within the cable corridor disposal site. This term is not defined and it is not marked on the plans. The PLA assumes that this means that it could be disposed within Work No 6. This must be coupled with checks and balances to make sure that there is no reduction in water depths in the areas identified by the PLA.

(c) Part 2 Condition 1 - The PLA request that a design parameter consistent with the Requirement is an express condition within the DML.

(d) Part 2 Condition 4 – (Pre-construction plans and documentation)

- A CSIP is required to be submitted and approved by the MMO – the PLA considers that an outline plan should be submitted into the examination (consistent with the approach taken with Five Estuaries and North Falls) and then the CSIP should substantially accord with the outline plan. The PLA also considers that the plan must include

commitments relating to no relocation of boulders, UXO or archaeological finds, wet storage, freespan clearance or planned field joints in the areas where water depths need to be protected.

- The pre construction plans are to be approved by the MMO but there is no requirement to consult with the PLA or other port authorities or for the Applicant to demonstrate that they have consulted the PLA on any relevant plans prior to their submission nor a requirement to explain how those comments have been addressed.

- In sub-paragraph (1)(a) of Condition 4 the Applicant has to provide details of cable burial depth in accordance with industry best practice. Compliance with the requested Requirement should also be demonstrated.

- Sub paragraph (1)(k) requires a navigation and installation plan for the relevant stage which accords with the principles set out in the outline navigation and installation plan. The comments made regarding the oNIP, as cited previously in this Written Representation including in relation to consultation and approval must be taken into account for this to be acceptable by the PLA.

(e) Part 2 Condition 12 (Maintenance) the PLA's comments above regarding maintenance are equally applicable to the DML. There needs to be a requirement when undertaking maintenance to protect water depths and it needs to be clear that there can be no reduction in water depths in the Areas of Interest.

(f) Part 2 Condition 14 (Post Construction) It is concerning that the Applicant considers that they may construct the scheme in a way that could cause a possible danger to navigation and that it is for the MMO on the basis of as built plans, which must be submitted within three months of completion of licensed activities to decide if there is possible danger to navigation. If there is a danger of navigation it cannot be left to three months post completion of licensed activities to draw that to the MMO's attention and the solution cannot simply be to mark it with an aid to navigation. If cable burial depths have not been met, the Applicant must carry out remediation until such time that the cables are at the correct depth. In the PLA's experience cable installation depths are not always achieved on initial installation but can be with remedial works. This must be the approach at Sea Link if the Project is not to have a long term impact on the Port of London.

(g) Part 2 Condition 15 (Offshore Preparation works, construction monitoring and post construction monitoring). The PLA has added a new condition which requires the PLA to be consulted about any offshore preparatory works, surveys and monitoring and on any application for the clearance of UXO.

(h) Part 2 Condition 16 (Remediation). The PLA has added a new condition concerning remediation.

12 PROTECTIVE PROVISIONS

12.1 The dDCO [AS-088] does not include any protective provisions for the benefit of the PLA however the PLA is in discussions with the Applicant and draft protective provisions have been shared with the PLA. The PLA's requested form of protective provisions are annexed to this Written Representation at Appendix 3. The PLA will update the Examining Authority at each relevant deadline regarding progress towards agreement on protective provisions.

12.2 The essential matters the PLA seeks to address through protective provisions are approval of relevant documents and consultation on certain pre commencement activities (to make

sure the scheme has been designed to meet the necessary offshore requirements and will be carried out in a way that will reduce impacts); clear requirements where water depths must be safeguarded, a remediation clause that sets out what will happen if the cable is not installed or maintained at the correct depth and an indemnity.

13 CONCLUDING REMARKS

13.1 In light of the importance of ports, it is imperative that the existing and future capacity and operation of the Port are not compromised during construction and operation of Sea Link. For the reasons highlighted throughout this document, the PLA is concerned that currently Sea Link may cause economic disbenefits to the Port.

13.2 To accommodate existing and predicted future vessel sizes, the PLA needs to safeguard water depths. In the event that these water depths are not safeguarded it will limit the quantum of trade within the Port. The impact of this restriction could be significant, detrimentally impacting the future of the UK's largest port.

13.3 The depth of the Sea Link cables; the approach to cable laying and repair; cable protection and cable crossings are therefore all critical if the Port of London is not going to be impacted by Sea Link. There are areas of the Marine HVDC cable route where certainty is required at this stage on cable burial depths, cable protection and cable crossings to ensure that there will be no significant effects on shipping and navigation arising from the cables, in isolation or cumulatively with other projects, during construction, operation, maintenance and decommissioning.

13.4 The Sea Link application needs to provide clarity and confidence that long term access/egress to the Port of London would be maintained and that short term impacts during construction and maintenance would be kept to a minimum. Currently, the mitigations relating to shipping and navigation place significant weight on documents that are yet to be produced, and they do not provide the certainty that is required. The documents also need to be supported by factual information such as ground investigations rather than intentions which may have no realistic prospect of being delivered.

13.5 The PLA's concerns need to be addressed through:

Activity	**Summary of PLA's Position**	**Securing Mechanism**
Cable installation, maintenance, operation and decommissioning	Safeguarding of current and future depths: 22m Sunk Pilot Boarding Area 12.5m Long Sand Head 12.5m North East Spit And in all cases making allowance for an over-dredge tolerance of 0.5m	Design Requirement DML Protective Provisions for the PLA Certified Plan
Cable installation and maintenance	The most effective method of cable laying in terms of speed and ability to achieve the required cable burial depth must be used	oNIP
Cable Crossings	Safeguarding of current and future depths: 22m Sunk Pilot Boarding Area 12.5m Long Sand Head 12.5m North East Spit And in all cases making allowance for an over-dredge tolerance of 0.5m	Design Requirement DML Protective Provisions for the PLA Certified Plan

	Further information and controls required in relation to the Sea Link - GridLink crossing point to ensure that if Sea Link is installed first, Grid Link can still be brought forward and water depths safeguarded	Amendment to Order Limits so that Sea Link and GridLink can only cross in the area of deepest water
Use of cable protection	Safeguarding of current and future depths: 22m Sunk Pilot Boarding Area 12.5m Long Sand Head 12.5m North East Spit And in all cases making allowance for an over-dredge tolerance of 0.5m	Design Requirement DML Protective Provisions for the PLA Certified Plan
Surveys and Monitoring	Consultation with the PLA prior to any surveys or monitoring taking place	Protective Provisions for the PLA DML oNIP
Boulder relocation	Boulders / Debris cannot be displaced within or to the Areas of Interest and must be removed	oCSIP and/or Design Requirement DML
Archaeology relocation	Archaeological relocation cannot occur within or to the Areas of Interest and must be removed	oCSIP and/or Design Requirement DML
UXO relocation	The PLA must be consulted on any application for marine licensing for the clearance of UXO within or which may affect the Areas of Interest before such applications are submitted to the MMO. With regard being had to any request made by the PLA for reasonable amendment to the proposed application. The PLA must be notified of the final programme for any clearance of UXO within the Areas of Interest	oCSIP oNIP DML
Dredging / Disposal of sediment	Dredging cannot lead to a reduction in navigable depth within the Areas of Interest as a result of dredged material being placed directly into these areas of migrating into these areas from disposal site	oSDMP
Wet storage	Wet Storage of materials and/or equipment cannot occur within the Areas of Interest	oCSIP and/or Design Requirement DML
Field joints	Planned field joints should not be located in the Areas of Interest	oCSIP
Freespan Clearance	There must be a clear commitment to no freespans over the Areas of Interest	oCSIPand/or Design Requirement

Remediation	It needs to be clear what will happen if cable burial depths are not achieved during installation or maintenance.	Protective Provisions for the PLA DML

APPENDIX 1

SOUTHEAST INSHORE MARINE PLAN

Other Relevant policies

Policy		**Policy Aim**
SE-CAB-1	*"Preference should be given to proposals for cable installation where the method of protection is burial. Where burial is not achievable, decisions should take account of protection measures for the cable that may be proposed by the applicant. Where burial or protection measures are not appropriate, proposals should state the case for proceeding without those measures."*	*encourages cable burial where possible to meet the needs of the sector while enabling co-existence with other users of the south east inshore marine plan area*."
SE-DD-1	"*In areas of authorised dredging activity, including those subject to navigational dredging, proposals for other activities will not be supported unless they are compatible with the dredging activity*."	*SE-DD-1 ensures continued safe access by vessels to ports and harbours over the lifetime of the South East Marine Plan. This policy discourages proposals that would cause significant adverse impacts on dredge activities*"
SE-PS-2	"*Proposals that require static sea surface infrastructure or that significantly reduce under-keel clearance must not be authorised within or encroaching upon International Maritime Organization routeing systems unless there are exceptional circumstances*."	"*Within the south east inshore marine plan area, there are International Maritime Organization routeing systems that are essential for shipping activity, freedom of navigation and navigational safety. SE-PS-2 confirms that proposals that compromise these important navigation routes should not be authorised. SE-PS-2 enables and supports safe, profitable and efficient marine businesses. SE-PS-2 specifies that developments should not be authorised where the use of International Maritime Organization routeing systems may be compromised. Authorisation of proposals that impact on the use of*

Policy		Policy Aim
		International Maritime Organization routeing systems are very rare"
SE-PS-3	"*Proposals that require static sea surface infrastructure or that significantly reduce under-keel clearance which encroaches upon high density navigation routes, strategically important navigation routes, or that pose a risk to the viability of passenger services, must not be authorised unless there are exceptional circumstances*."	*The south east inshore marine plan area is very busy with respect to high-density navigation routes, strategically important navigation routes and passenger services. SE-PS-3 confirms that proposals that pose a risk to safe navigation or the viability of these routes and services should not be authorised. SE-PS-3 aims to protect these routes and services by enabling and promoting safe, profitable and efficient marine businesses. SE-PS-3 focuses on minimising negative impacts on shipping activity, protecting the economic interests of ports, harbours, shipping and the UK economy overall, and affording protection to the areas used by high intensities of traffic (UK Marine Policy Statement, Section 3.4.2). It also gives effect to provisions in the National Planning Policy Framework (Section 37), which aims to encourage sustainable transport*."

EAST INSHORE AND EAST OFFSHORE MARINE PLANS

Other Relevant policies

Policy		**Justification/Explanation**
PS1	"*Proposals that require static sea surface infrastructure or that significantly reduce under-keel clearance should not be authorised in International Maritime Organization designated routes*."	Para 354 ***"****The East marine plan areas incorporate policies that are subject to international maritime law and articulate an approach that ensures international obligations are met with regards to maintaining particular navigational requirements"*
PS2	*"Proposals that require static sea surface infrastructure that encroaches upon important navigation routes (see figure 18) should not be authorised unless there are exceptional circumstances. Proposals should*: *a) be compatible with the need to maintain space for safe navigation, avoiding adverse economic impact* *b) anticipate and provide for future safe navigational requirements where evidence and/or stakeholder input allows and* *c) account for impacts upon navigation in-combination with other existing and proposed activities."*	Para 358 **–** "*The East marine plan areas are home to nationally significant levels of coastal, short-sea and international shipping. As other activities seek to capitalise on the resources of the area, these should be carried out in such a way as to afford protection of safe and competitive shipping, particularly where important routes can be described***."** (emphasis added) Para 359 – "*Given the prevailing national and marine plan area context, important navigation routes will be protected for navigation purposes unless conditions are met as set out in PS2. It should be demonstrated that the outcomes of consultation with harbour and other navigation authorities, public authorities and commercial shipping have informed the application proposed."*
PS3	"*Proposals should demonstrate, in order of preference:* *a) that they will not interfere with current activity and future opportunity for expansion of ports and harbours* *b) how, if the proposal may interfere with current activity and future opportunities for expansion, they will minimise this* *c) how, if the interference cannot be minimised, it will be mitigated* *d) the case for proceeding if it is not possible to minimise or mitigate the interference*."	Supporting paragraph 368 explains the importance of accommodating not only the existing requirements of ports but also their future requirements: "*In most cases, ports and harbours are seeking to grow in future in relation to the number of vessels and/or the size of vessels utilising them. Therefore, the need for capacity to accommodate these craft will rise. Ports and shipping growth is responsive to global markets and as such the extent of such growth is difficult to predict. In that context this policy provides clarity on the importance of protecting the economic interest of ports and seeks to prevent encroachment through development or other activities around ports and harbours that may restrict the ability to respond to future growth opportunities*." (emphasis added)

		Supporting paragraph 369 refers to the need to have regard to access and approach channels into ports: *"In understanding where future port or harbour use may need to be accommodated, developments and other activities in and around ports and harbours must have regard to access and approach channels into ports."* Supporting paragraph 371 highlights the importance of engagement with Ports and consideration of their requirements: "*In identifying current activity and future opportunity for port or harbour expansion, it is important that applicants demonstrate that ports and harbours' representations are considered in proposals. Such representations should include the matters listed in these plans but may also include other considerations that may be important where relevant, for example anchorages."*
Policy CAB1	*Preference should be given to proposals for cable installation where the method of installation is burial. Where burial is not achievable, decisions should take account of protection measures for the cable that may be proposed by the applicant*."	Para 419 **–** *"The prevalent view from stakeholders throughout the marine planning process is that cable burial, where possible, is preferred in order to minimise impact and protect cables. This has the additional benefit of increasing co-location and co-existence opportunities eg; fishing, shipping and recreation (leisure boating). Therefore, a policy in preference of cable burial seeks to meet the needs of the sector whilst maximising the potential opportunity for other uses of the marine plan areas."* Para 422 – *"Cable owners should also take note that navigation lanes and deep water channels should be kept free of cabling in order to allow for maintenance dredging (see plan policies GOV1, DD1 and PS2). An associated increase in cabling from Offshore Wind Farm development may have implications for navigation channels where cables come to shore. Ports and marinas should be kept free of cabling where possible to allow for future development including capital dredging as set out in policies PS2 and TR2."*

APPENDIX 2

Cable Statement

1. Overview

The river Thames is home to the Port of London which is the country's biggest port handling over 50 million tonnes of freight each year. The Port plays an essential role in the UK and global economies and in the sustainable transport of cargo and people. It is critical therefore that the existing and future capacity and operation of the Port are safeguarded and that proposed developments are appropriately designed, implemented, operated, maintained and decommissioned to ensure that constraints are not placed on the existing or future functioning of the Port.

The Port of London Authority (PLA) is the statutory harbour authority for the tidal Thames. Its consent is required for all works within its area of jurisdiction. The PLA's functions include the promotion of the use of the river for freight and passengers as an important international gateway and sustainable transport corridor.

The PLA recognises the need for energy projects such as windfarms and interconnectors. A number of these projects are currently proposed in the Thames Estuary reflecting available onshore connection points and the need to transport electricity within the UK and between the UK and Europe.

The PLA have the primary responsibility for maintaining safe access and managing the safety of vessels, the general public and all users of the tidal River Thames. The PLA will work proactively with developers and stakeholders including the ports and terminals within the Port of London to enable these projects to be delivered wherever possible, whilst at all times ensuring navigational safety is maintained; ensuring that the Port of London can continue to grow and remain the largest port in the Country; and supporting the Port's transition to net zero.

Anyone considering placing cables within the Thames Estuary either within or outside its area of jurisdiction should contact the PLA at the earliest opportunity to discuss the PLA's requirements. This cable statement sets out the broad issues that must be considered by developers and the documents and mitigation that the PLA would expect to see as a minimum within applications.

2. Cable Route

The PLA will provide advice on the route for the proposed cable and in particular any areas that must be avoided. This will include navigation channels and pilot boarding areas, where depths for current and future vessels need to be protected and any temporary disruption to navigation minimised.

Projects should avoid placing cables within navigation channels. If cables must cross a navigation channel, the shortest route should be taken i.e. at 90 degrees to the channel.

Cables must not be placed in a navigation channel following the route of the channel.

If a cable is to be located outside of a navigation channel, the PLA will provide the distance the cable must be placed as a minimum from the channel, taking into account the potential for the channel to migrate and the need for the channel to be widened in the future.

Along the route of the cable, the need for a planned cable field joint in or close to the navigation channel must be avoided.

3. Cable depth

Along the route of the cable, the PLA will provide details on the riverbed level(s) that will need to be maintained over the lifetime of the project. These level(s) will be provided with reference to Chart Datum (equating roughly to the level of lowest astronomical tide) and might be different to the existing riverbed levels reflecting:

- Current and future vessel sizes
- Existing and proposed dredging
- Changes to the bed of the river (migration of the channel)

The developer will need to carry out an assessment to determine the distance that any cables need to be placed under the given riverbed level(s). The cables will need to be designed, installed, operated and maintained so as not to preclude or impede the provided riverbed levels(s). For any Development Consent Order (DCO) projects, the PLA would expect a Requirement in the DCO linked to a Certified Plan that secures the required riverbed level(s). This Requirement should also be included in any Deemed Marine Licence.

A remediation clause must clearly set out the measures that will be taken if, during installation of maintenance of the cable, the cable is not installed at the correct depth. This should include attempts at re-burial and if not successful, removal of the cable. The PLA also expects to be indemnified by the developer for any impacts of the cable.

4. Cable Crossings and Cable Protection

Cable crossings and cable protection both have the potential to reduce navigable depths and whilst the Maritime and Coastguard Agency generally accept reductions in navigable depth of up to 5% Chart

Datum, where the PLA has provided details on the riverbed level(s) that will need to be maintained over the lifetime of the project, the PLA will not accept any reductions in water depth in these location(s).

When designing a project, other emerging projects should be considered and the likely location(s) of any cable crossing(s). Projects should be designed not to prejudice other emerging projects from coming forward for example, it might be necessary for a project to install its cable at a greater distance under the riverbed to enable an emerging project to cross it and still maintain the required riverbed level.

Cable crossings and cable protection should be located outside of navigation channels and away from any pilot boarding stations. Where a cable becomes exposed or depth of burial is significantly reduced, attempts must be made to re-bury the cable to the required depth.

5. Pre Construction and Construction Activities

Pre-construction and construction activities have the potential to impact on shipping and navigation.

The PLA would expect to be consulted and for its comments to be taken into account when any pre-construction surveys or monitoring is proposed. Any surveys or monitoring undertaken within the PLA's area of jurisdiction will require its statutory consent under the Port of London Act 1968 (as amended).

To mitigate and manage pre-construction and construction activities key documents should be produced. These documents must be clear in their scope, applying to both installation and maintenance. Final versions of documents must be produced in strict accordance with any outline versions of the documents. The documents should be clear on the procedure should any updates be required to the documents during the lifetime of the project.

Examples of these documents can be provided on request.

Navigation and Installation Plan (NIP) This document is a mechanism for managing working, including concurrent working within any areas of navigational interest. Following, consultation with the PLA the document must set out the 'area of interest' and provide details on the activities and associated restricted in ability to manoeuvre (RAM) vessels used for those activities. It must set out which concurrent activities are possible and which are not possible and must give indicative details including duration, spatial extent, speed when undertaking activity, whether it is a continuous or discontinuous activity etc. Planned protocols and actions which will be implemented must also be provided.

Cable Specification and Installation Plan (CSIP) This document must set out the activities that need to take place in order to install and maintain the cable and the commitments relevant to those activities. It should include as a minimum, details and commitments relating to pre-construction surveys, riverbed preparation, unexploded ordinance (UXO) clearance, boulder clearance, archaeology, pre lay works

(e.g pre-lay grapnel run, sandwave clearance), sediment disposal, cable installation, cable jointing, cable protection, cable crossings, cable burial and monitoring, including any post-construction surveys.

The document must meet the requirements set out above in relation to the cable (route, depth, crossings, protection etc) and commit to not relocating to or within navigation channels any boulders, archaeological finds or UXO and to no wet storage within navigation channels.

Sediment Disposal Management Plan (SDMP) This document sets out the proposed plan and management for the disposal of riverbed and other relevant material (e.g sub-bottom geological material) that might be generated during the construction and maintenance of the project. This document must clearly set out the approach to disposal at any navigation channels and in proximity to boarding and landing areas and must clearly commit to not placing material where deeper cable burial is required (i.e. where the PLA has provided a riverbed level that must be safeguarded which is deeper than existing bed level) and in proximity to pilotage boarding areas.

If produced pursuant to a DCO, the PLA would expect to secure approval of the final documents in its protective provisions. Otherwise they will form a condition on the RWL.

6. Decommissioning

The PLA understand that energy projects can have long life spans and that it may also be possible to extend a projects expected life span. It may therefore not be possible when designing a project to make clear commitments relating to the projects de-commissioning. However, there must be a clear mechanism for securing a decommissioning plan with input from relevant stakeholders at the appropriate time.

7. Protective Provisions

For DCO applications, regardless of whether a project is located within or outside of the PLA's area of jurisdiction, the PLA expects protective provisions to be provided for the PLA. A copy of model protective provisions can be provided on request.

8. Environmental Considerations

For all proposals, the potential for significant environmental effects must be considered.

Where there is the potential for the installation and/or operation of the cable to adversely affect a European designated site (Special Area of Conservation, Special Protection Area and/or Ramsar), a Habitats Regulations Assessment is required under the Conservation of Habitats & Species Regulations 2017 (as amended). This should follow Government guidance. Sufficient information should be provided

by the applicant to allow the Competent Authority to carry out the assessment, a shadow HRA can be submitted for approval and adoption by the Competent Authority.

Cabling projects may require an Environmental Impact Assessment, under either the Town and Country Planning (Environmental Impact Assessment) Regulations 2017, the Marine Works (Environmental Impact Assessment) Regulations 2007, or the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017. Projects should be screened to determine whether an EIA is required, and a screening report submitted to the appropriate regulator. If an EIA is deemed to be required, this should follow the relevant process and guidance and an Environmental Statement prepared assessing the environmental impacts and identifying avoidance, mitigation and/or compensation measures.

A Water Framework Directive (WFD) Assessment should be carried out in accordance with the Water Environment (Water Framework Directive) (England and Wales) Regulations 2017 and following Government guidance. This should assess the potential effects on the relevant waterbody.

July 2025

APPENDIX 3

FORM OF PROTECTIVE PROVISIONS FOR THE PLA

SCHEDULE 15

PART [X]

FOR THE PROTECTION OF THE PORT OF LONDON AUTHORITY (OFFSHORE)

Application

1. For the protection of PLA the following provisions will, unless otherwise agreed in writing between the undertaker and PLA, have effect in relation to the construction, operation and maintenance of any specified work .

Interpretation

2. In this Part of this Schedule—

“Areas of Interest” means the areas, or any part thereof, shown shaded in blue on the PLA Areas of Safeguarded Depth plan which displays the Port of London Authority’s Areas of Safeguarded Depth, which comprises three areas: Sunk Pilot boarding area, Long Sand Head Two-Way Route crossing area, and North East Spit area;

“cable burial risk assessment” means the cable burial risk assessment appended to the cable specification and installation plan;

“cable specification and installation plan” means the cable specification and installation plan together with the cable burial risk assessment to be approved by the MMO under condition 4 of the Deemed Marine Licence;

“construction” includes execution, placing, altering, replacing, relaying, removal, renewal works of maintenance and decommissioning, in its application to a specified work which includes or comprises any operation, means the carrying out of that operation, and “construct” and “constructed” are to be construed accordingly;

"commencement" for the purpose of this Part of Schedule 15 means the carrying out of any authorised development and surveying and monitoring activities;

“Deemed Marine Licence” means the marine licence granted by this Order as set out in Schedule 16;

"installation" has the same meaning as construction and installed is to be construed accordingly;

"maintain" has the same meaning as in Article 2 save that it includes surveying and monitoring within the Areas of Interest and maintenance shall be construed accordingly;

"Navigation Installation Plan" means the Navigation Installation Plan (NIP) to be approved under condition 4(k) of the Deemed Marine Licence;

"plans" includes navigational risk assessments, plans, sections, elevations, drawings, specifications, programmes, construction methods and descriptions including, where applicable, relevant hydraulic information and other documents that are reasonably necessary to properly and sufficiently describe and assess the works to be executed;

“specified work” means the works in relation to the construction, maintenance and operation of Work No. 6, and any other part of the offshore works forming part of the authorised development (which for this purpose includes the maintenance and decommissioning of any part of the authorised development);

“PLA” means the Port of London Authority.

“undertaker” means the undertaker as defined in article [2] (interpretation) of this Order.

Consultation and Notice

3. The undertaker will, prior to commencement of a specified work, obtain the approval of the PLA on:

(1) the cable specification and installation plan (in so far as that plan relates to any specified work within or which may affect the Areas of Interest) before any application for approval of that plan may be submitted by the undertaker to the MMO in compliance with condition 4 of the Deemed Marine Licence and any revisions arising from such application (in so far as those revisions relate to any specified work within or which may affect the Areas of Interest) ; and

(2) a Navigation Installation Plan (in so far as that plan relates to any specified work within or which may affect the Areas of Interest) before any application for approval of that plan may be submitted by the undertaker to the MMO in compliance with condition 4(k) of the Deemed Marine Licence and any revisions arising from such application (in so far as those revisions relate to any specified work within or which may affect the Areas of Interest).

4.The undertaker will consult the PLA on the proposed activities and programme for any pre-construction monitoring, construction monitoring, post construction monitoring or surveying and related reporting within or which may affect the Areas of Interest no less than 20 business days before such monitoring work is programmed to commence. The undertaker must have regard to any request made by the PLA for reasonable amendment to the programme, provided that the request is made to the undertaker within 5 business days of receipt of the details of the proposed activities and programme.

5.The undertaker must notify the PLA of the final planned programme for any pre-construction monitoring, construction monitoring, postconstruction monitoring or survey work to be undertaken under this Order within or which may affect the Areas of Interest no less than 5 business days before such survey work is programmed to begin.

6.The undertaker will consult the PLA on any application for marine licensing for the disposal of unexploded ordnance within or which may affect the Areas of Interest before such applications are submitted to the MMO. The undertaker must have regard to any request made by the PLA for reasonable amendment to the proposed application, provided that the request is made to the undertaker within 10 business days of receipt of the details of the proposed application.

7.The undertaker must notify the PLA of the final programme for any clearance of unexploded ordnance to be undertaken within the Areas of Interest no less than 10 business days before such disposal is programmed to begin.

8.The undertaker will consult the PLA on the activities and programme for any specified work within or which may affect the Areas of Interest which is not covered by the cable specification and installation plan no less than 20 business days before such specified work is programmed to commence. The undertaker must have regard to any request made by the PLA for reasonable amendment to the activities or programme, provided that the request is made to the undertaker within 5 business days of receipt of the details of the proposed activities and programme.

9.The undertaker must notify the PLA of the final method statement and programme for any for any specified work to be undertaken under this Order which is not covered by the cable specification and installation plan and which is within the Area of Interest no less than 5 business days before such work is programmed to begin.

Cable Specification and Installation Plan

10. The cable specification and installation plan referred to in paragraph 3 must be informed by a cable burial risk assessment, and set out for Work No.6, in so far as it applies to the Areas of Interest:

(1) That any part of Work No.6, including any associated development or ancillary works, located within the Areas of Interest must be installed at a level which would not impede the dredging of those parts of the Areas of Interest to the following depths:

(a) Labelled “Sunk Pilot Boarding area”, to a level of 22 metres below Chart Datum;

(b) Labelled “Long Sand Head Two-Way Route crossing”, to a level of 12.5 metres below Chart Datum; and

(c) Labelled " North East Spit area" to a level of 12.5 metres below Chart Datum;

(d) and in all cases (a) to (c) makes allowance for an 'over-dredge' tolerance of 0.5 metres in addition to the stated depths attributable to standard dredging methodology.

(2) The proposed cable installation methods and measures for management of construction risks;

(3) Cable protection measures proposed including type, volume and locations;

(4) Arrangements to consult the PLA on matters regarding the construction of cables and cable protection measures within the Areas of Interest, including provision of a point of contact for continuing liaison and co-ordination throughout the construction of these works;

(5) The proposed programme of work for cable installation and arrangements for notification of any changes to the programme to the PLA;

(6) The programme and methodologies for monitoring and the arrangements for the results of these surveys or other construction evidence being made available to the PLA within 10 business days of the undertaker receiving reports of the survey results or evidence to demonstrate compliance with the depths referred to in sub paragraph (1) of this paragraph; and

(7) A requirement for a process (subject to paragraphs 12 and 13) and timescales (both the undertaker and PLA acting reasonably) for cable re-installation should the level of the cable be such that the under keel clearance specified in Outline CSIP cannot be achieved over the lifetime of the authorised development.

Monitoring

11. The undertaker shall notify the PLA as soon as reasonably practicable, and in an event within 2 business days, in the event that any geophysical survey conducted using a multi-beam echo sounder confirms the exposure of any cable within the Areas of Interest.

12. The PLA must notify the undertaker of any potential cable exposure that is identified by the PLA in the relation to the Areas of Interest as soon as reasonably practicable, and in any event within 2 business days of the exposure being identified.

Remediation

13. Where the undertaker identifies, or is notified by the PLA following inspection, that any installed cable forming Work No. 6 in the Areas of Interest does not achieve the levels specified in paragraph 10(1), or that the cable has subsequently moved such that those requirements are no longer met:

(1) Unless initially identified by the PLA, the undertaker shall notify the PLA of that non-compliance being identified as soon as reasonably practicable, and in any event within 2 business days; and

(2) Unless otherwise agreed in writing with the PLA, the undertaker shall then carry out reburial of the cable in accordance with the cable specification and installation plan, subject to paragraph 14.

14. Where remediation works are required under paragraph 13, the undertaker shall:

(1) Consider whether any revisions to the cable specification and installation plan are required to ensure that the cable complies with the levels specified in paragraph 10(1);

(2) Obtain the approval of the PLA on any revisions to the cable specification and installation plan; and

(3) Carry out the remediation works in accordance with the cable specification and installation plan, including any revisions, such that the levels specified in paragraph 10(1) are achieved.

15. The steps in paragraph 14 shall be repeated until the levels specified in paragraph 10(1) are achieved or the cable is permanently removed from the Areas of Interest.

Provision of as built details

16. As soon as reasonably practicable following the completion of the installation of cables forming Work No. 6, and after any works or maintenance which would result in changes to the position, depth and/or cable protection measures installed as part of Work No.6, the undertaker must provide (on a strictly confidential basis) to the PLA as built drawings of Work No. 6 in a form and scale to be agreed between the undertaker and the PLA to show the position, depth and any cable protection measures installed as part of Work No. 6 in relation to the Areas of Interest.

17. The PLA must not disclose (without the written consent of the undertaker) any information that has been provided by the undertaker to the PLA on a confidential basis or which is marked as commercially sensitive and must hold such information on a confidential basis only, except that the PLA may provide the information to contractors and agents acting on its behalf (including but not limited to contractors engaged to carry out dredging operations) provided that such agents and contractors are required by the PLA to treat such information as confidential.

Transfer of the benefit

18. The undertaker must within 7 days after the completion of any sale, agreement or other transaction under article 7 (Consent to transfer benefit of Order) in relation to which any powers, rights and obligations of the undertaker are transferred to another party, notify the PLA in writing, and the notice must include particulars of the other party to the transaction under article 7, the general nature of the transaction and details of the extent, nature and scope of the works or functions sold, transferred or otherwise dealt with.

Arbitration

19. Any dispute arising between the undertaker and the PLA under this Part of this Schedule is to be escalated in the first instance to senior representatives from the PLA and the undertaker, and the PLA and undertaker must seek to resolve the dispute through a meeting between the parties promptly and in any event within 10 business days.

20. Any difference or dispute arising between the undertaker and PLA under this Part of this Schedule which has not been resolved within 10 days under paragraph 18 above must, unless otherwise agreed in writing between the undertaker and PLA, be determined by being referred to and settled by a single arbitrator to be agreed between the parties, or failing agreement, to be appointed on the application of either party (after giving notice in writing to the other) to the President of the Institute of Civil Engineers.

Indemnity

21. The undertaker will pay to the PLA its proper and reasonable legal costs, professional fees and disbursements incurred in connection with reviewing the details submitted to the PLA pursuant to this Part 9B of Schedule 9 and Part 9A of Schedule 9. (2) The undertaker is responsible for and must make good to the PLA all financial costs, charges, damages losses or expenses which may be incurred reasonably or suffered by the PLA by reason of—

(1) the construction or operation of Work no 2(c), any specified work or its failure or a failure to adhere to the requirements of this Part 9B of Schedule 9 or Part 9A of Schedule 9; or

(2) any act or omission of the undertaker, its employees, contractors or agents or others whilst engaged on the construction or operation of a specified work or Work no 2(c) or with any failure, and the undertaker must indemnify the PLA from and against all claims and demands arising out of or in connection with a specified work, Work no 2(c) or any such failure, act or omission or any failure to adhere to the requirements of the this Part 9B of Schedule 9 or Part 9A of Schedule 9.

22. The fact that any act or thing may have been done—

(1) by the PLA on behalf of the undertaker; or

(2) by the undertaker, its employees, contractors or agents in accordance with plans or particulars submitted to or modifications or conditions specified by the PLA, or in a manner approved by the PLA, or under its supervision or the supervision of its duly authorised representative, does not (if it was done or required without negligence on the part of the PLA or its duly authorised representative, employee, contractor or agent) excuse the undertaker from liability under the provisions of this paragraph.

23. The PLA must give the undertaker reasonable notice of any such claim or demand as is referred to in paragraph 21 and no settlement or compromise of it is to be made without the prior consent of the undertaker.

Notices

24. Any plans submitted to PLA by the undertaker pursuant to this Part of this Schedule must be sent to PLA by e-mail to [X] or such other address as PLA may from time to time appoint instead for that purpose and notify to the undertaker.

APPENDIX 4

REQUIRED UPDATES TO SCHEDULE 16 DEEMED MARINE LICENCE

SCHEDULE 16 Article 47

DEEMED MARINE LICENCE UNDER THE 2009 ACT

PART 1

LICENSED MARINE ACTIVITIES

1 (1) In this licence—

"the 2009 Act" means the Marine and Coastal Access Act 2009[a];

"the 2017 Offshore Regulations" means the Conservation of Offshore Marine Habitats and Species Regulations 2017[b];

"the 2017 Regulations`" means the Conservation of Habitats and Species Regulations 2017[c];

"Areas of Interest" means any part of those areas shown shaded [ ] on the [Cable Installation Area (Future Dredging Depths) Plan];.

"authorised deposits" means the substances and articles specified in paragraph 6 of Part 1 of this licence;

"authorised scheme" means Work Nos. 6 and 12 described in paragraph 3 of Part 1 of this licence or any part of that work;

"red-throated diver protocol" means the document certified as the red-throated diver protocol by the Secretary of State for the purposes of the Order under article 60;

"buoy" means any floating device used for navigational purposes or measurement purposes, including LiDAR buoys, wave buoys and guard buoys;

"cable crossings" means the crossing of existing sub-sea cables authorised by the Order together with physical protection measures including cable protection;

"cable protection" means measures to protect cables from physical damage and including, but not limited to, the use of bagged solutions filled with grout or other materials, protective aprons or coverings, mattresses, flow energy dissipation devices or rock and gravel burial;

"Cefas" means the Centre for Environment, Fisheries and Aquaculture Science or any successor body to its function;

"commence" means the first carrying out of any licensed marine activities authorised by this licence, save for operations consisting of offshore preparation works or pre–construction surveys and monitoring approved under this licence and the words "commencement" and "commenced" must be construed accordingly;

"condition" means a condition in Part 2 of this licence;

"outline marine mammal mitigation plan" means the document certified as the outline marine mammal mitigation plan by the Secretary of State for the purposes of this Order under article 60;

[a] 2009 c. 23
[b] S.I. 2017/1013
[c] S.I. 2017/1012

"outline invasive non-native species management plan" means the document certified as the outline invasive non-native species management plan by the Secretary of State for the purposes of this Order under article 60;

"enforcement officer" means a person authorised to carry out enforcement duties under Chapter 3 of Part 4 (marine licensing) of the 2009 Act;

"environmental statement" means the document certified as the environmental statement by the Secretary of State for the purposes of the Order under article 60;

"European offshore marine site" has the meaning given in regulation 18 of the 2017 Offshore Regulations;

"European site" has the meaning given in regulation 27 of the 2017 Offshore Regulations;

"Historic England" means the Historic Buildings and Monuments Commission for England;

"intertidal area" means the area between MHWS and MLWS;

"JNCC Guidance" means the statutory nature conservation body 'Guidance for assessing the significance of noise disturbance against Conservation Objectives of harbour porpoise SACs' Joint Nature Conservation Committee Report No.654, May 2020 published in June 2020 as amended, updated or superseded from time to time;

"Kingfisher Bulletin" means the bulletin published by the Humber Seafood Institute or such other alternative publication approved in writing by the MMO for the purposes of this licence;

"LAT" means lowest astronomical tide;

"licensed activities" means the activities specified in Part 1 of this licence;

"maintain" includes inspect, upkeep, repair, adjust, and alter and further includes remove, reconstruct and replace any part of the authorised development, provided such works do not give rise to any materially new or materially different environmental effects to those identified in the environmental statement; and "maintenance" must be construed accordingly;

"mean high water springs" or "MHWS" means the highest level which spring tides reach on average over a period of time;

"mean low water springs" or "MLWS" means the lowest level which spring tides reach on average over a period of time;

"Marine Management Organisation" or "MMO" means the body created under the 2009 Act which is responsible for the monitoring and enforcement of this licence;

"MCA" means the Maritime and Coastguard Agency;

"offshore Order limits" means the limits shown on the works plans within which the authorised scheme may be carried out;

"offshore preparation works" means surveying and monitoring activities seaward of MHWS undertaken prior to the commencement of construction to prepare for construction, including pre-lay grapnel run;

"the Cable Installation Areas (Future Dredging Areas) plan" means the document certified such by the Secretary of State for the purposes of the Order under article [ ] (certification of plans etc.);

"the Order" means the National Grid (Sea Link) Order 202[xx];

"outline navigation installation plan" means the document certified as the outline navigation installation plan by the Secretary of State for the purposes of the Order under article 60;

"outline offshore written scheme of investigation" means the document certified as the outline offshore written scheme of investigation by the Secretary of State for the purposes of the Order under article 60;

"PLA" means the Port of London Authority;

"relevant site" means a European offshore marine site or a European site;

"SAC" means special area of conservation;

"SPA" means special protection area

"statutory historic body" means Historic England or its successor in function;

"statutory nature conservation body" means the appropriate nature conservation body as defined in regulation 5 of the 2017 Regulations;

"Trinity House" means the Corporation of Trinity House of Deptford Strond;

"Trenchless landfall techniques" means cable installation techniques at a landfall which do not involve a trench and which may include Horizontal Directional Drilling (HDD), Microtunnelling or DirectPipe;

"undertaker" means National Grid Electricity Transmission plc (registered company number 2366977)

"vessel" means every description of vessel, however propelled or moved, and includes a non-displacement craft, a personal watercraft, a seaplane on the surface of the water, a hydrofoil vessel, a hovercraft or any other amphibious vehicle and any other thing constructed or adapted for movement through, in, on or over water and which is at the time in, on or over water;

"UK Hydrographic Office" means the UK Hydrographic Office of Admiralty Way, Taunton, Somerset, TA1 2DN;

"UK Standard Marking Schedule for Offshore Installations" means the Standard Marking Schedule for Offshore Installations published by the Department of Energy & Climate Change with reference DECC 04/11; and

"works plans" means the plans certified as the works plans by the Secretary of State for the purposes of the Order.

(2) A reference to any statute, order, regulation or similar instrument is construed as a reference to a statute, order, regulation or instrument as amended by any subsequent statute, order, regulation or instrument or as contained in any subsequent re-enactment.

(3) Unless otherwise indicated—

(a) all times are taken to be Greenwich Mean Time (GMT);

(b) all coordinates are taken to be latitude and longitude degrees, minutes and seconds to three decimal places in WGS84 Datum.

(4) Except where otherwise notified in writing by the relevant organisation, the primary point of contact with the organisations listed below and the address for returns and correspondence are—

(a) Marine Management Organisation

Marine Licensing Team

Lancaster House
Hampshire Court
Newcastle Business Park
Newcastle upon Tyne
NE4 7YH
Tel: 0300 123 1032;

(b) Marine Management Organisation (Lowestoft office)

Pakefield Road
Lowestoft
Suffolk
NR33 0HT
Tel: 0208 026 6094;

(c) Marine Management Organisation (Hastings office)

Muriel Matters House
Breeds Place
Hastings
East Sussex
TN34 3UY
Tel: 0208 026 9180

(d) Trinity House

Tower Hill
London
EC3N 4DH
Tel: 020 7481 6900;

(e) Maritime and Coastguard Agency

Admiralty Way
Taunton
Somerset
TA1 2DN
Tel: 01823 337 900;

(f) Maritime and Coastguard Agency

Navigation Safety Branch
Bay 2/20 Spring Place
105 Commercial Road
Southampton
SO15 1EG
Tel: 020 3817 2426;

(g) Natural England

Navigation Safety Branch
Bay 2/20 Spring Place
105 Commercial Road
Southampton
SO15 1EG
Tel: 020 3817 2426;

(h) Historic England

Brooklands
24 Brooklands Avenue
Cambridge
CB2 8BU
Tel: 01223 582749.;

(i) Port of London Authority
London River House
Royal Pier Road
Gravesend
Kent
DA12 2BG
Tel: 01474 562200

(5) Unless otherwise advised in writing by the MMO, the address for electronic communication with the MMO for the purposes of this licence is marine.consents@marinemanagement.org.uk, or where contact to the Local Office of the MMO is required, hastings@marinemanagement.org.uk and lowestoft@marine.management.org.uk.

(6) Unless otherwise advised in writing by the MMO, the Marine Case Management System ("MCMS") must be used for all licence returns or applications to vary this licence. The MCMS address is: https://marinelicensing.marinemanagement.org.uk/.

Details of licensed marine activities

2 Subject to the licence conditions, this licence authorises the undertaker (and any agent or contractor acting on their behalf) to carry out the following licensable marine activities under Section 66(1) of the 2009 Act—

(a) the deposit at sea within the Order limits seaward of MHWS of the substances and articles specified in paragraph 6 below and within—

(i) the cable corridor disposal site of up 250,000 cubic metres (being a maximum, not an approximate upper figure) of inert material of natural origin produced during construction drilling or seabed preparation for cable installation preparation and excavation of trenchless entry/exit pits works within Work No. 6;

(b) the construction of works in or over the sea or on or under the sea bed;

(c) dredging for the purposes of seabed preparation for cable laying through sandwave clearance and removal of material from the seabed required for the construction of Work No. 6;

(d) debris clearance works;

(e) boulder clearance works either by displacement ploughing or subsea grab technique or other equivalent method;

(f) the removal of out of service cables;

(g) pre-lay grapnel run;

(h) the removal of sediment samples for the purposes of informing environmental monitoring under this licence during pre-construction, construction and operation; and

(i) removal of static fishing equipment; and

(j) site preparation works.

3 Such activities are authorised in relation to the construction, maintenance and operation of Work No. 6, 12.

Work No. 6 – marine electric line works –

Works seaward of MHWS comprising the laying of a marine electric cable, which may include—

(a) temporary work areas and laydown areas associated with the installation and pulling of the cables;

(b) works to lay marine electric cables and fibre optic cables within the Order limits seaward of MHWS between Work No. 5 and Work No.7 within the area shown on Sheet 6 of the Works Plans – Suffolk, Sheets 1, 2 and 3 of the Works Plans – Offshore and Sheets 3, 4 and 5 of the Works Plans, Kent;

(c) trenchless entry/exit pits and associated temporary construction compounds in the Suffolk landfall; and

(d) trenchless entry/exit pits and associated temporary construction compounds in the Kent landfall;

(e) temporary work areas for vessels to carry out intrusive and non-intrusive activities; and

(f) marine cable protection works.

Work No. 12- Kent Overhead Line Works –

4 Works below MHWS comprising removal and modification works to existing overhead electric line, and the construction and installation of new overhead electric line from Work No.11 near Minster and the existing Richborough to Canterbury overhead electric line, which may include—

(a) temporary culverts and/or bridges over other water courses;

(b) drainage works;

(c) removal of and modification works to the existing overhead electric line; and

(d) installation of overhead electric line between Work No. 11 and the existing Richborough to Canterbury overhead electric line.

5 In connection with such Work No. 6 and Work No.12 and to the extent that they do not otherwise form part of any such work, further associated development comprising such other works below MHWS as may be necessary or expedient for the purposes of or in connection with the relevant part of the authorised scheme and which fall within the scope of the work assessed by the environmental statement, including but not limited to —

(a) cable protection measures such as rock placement, including rock bags, and the placement of concrete mattresses and frond mattresses;

(b) temporary diversion of existing overhead electric line and associated works;

(c) the removal of material from the seabed required for the construction of Work No. 6 and the disposal of seabed sediments produced during construction drilling and seabed preparation for cable laying; and

(d) temporary landing places, moorings or other means of accommodating vessels in the construction and/or maintenance of the authorised development.

6 In connection with such Work No. 6 and Work No. 12, ancillary works within the Order limits and below MHWS which have been subject to an environmental impact assessment recorded in the environmental statement comprising—

(a) temporary landing places, moorings, anchoring or other means of accommodating vessels or construction material used in the construction and/ or maintenance of the authorised scheme; and

(b) marking buoys, beacons, fenders and other navigational warning or ship impact protection works.

7 The substances or articles authorised for deposit at sea are—

(a) iron, steel, copper and aluminium;

(b) stone and rock;

(c) concrete and grout;

(d) sand and gravel;

(e) plastic and synthetics;

(f) bentonite drilling mud;

(g) anchors and weights used for the calibration of vessels, consisting of a hessian sack, metal shackles or chains;

(h) material extracted from within the offshore Order limits during construction, drilling and seabed preparation for the Works; and

(i) marine coatings and other chemicals.

8 The grid coordinates for the authorised scheme are specified below—

Table 1: Limits of deviation for marine cable area

Point	*Latitude (DMS)*	*Longitude (DMS)*	*Point*	*Latitude (DMS)*	*Longitude (DMS)*
1	52°9' 51.024"	1°36' 28.212"	382	51°18' 49.422"	1°23' 1.877"
2	52°9' 51.022"	1°36' 28.216"	383	51°18' 42.071"	1°23' 29.111"
3	52°9' 50.697"	1°36' 28.959"	384	51°18' 26.101"	1°24' 31.213"
4	52°9' 46.458"	1°36' 27.018"	385	51°18' 10.122"	1°25' 33.304"
5	52°9' 45.864"	1°36' 29.353"	386	51°18' 9.106"	1°25' 37.004"
6	52°9' 44.063"	1°36' 35.823"	387	51°18' 8.090"	1°25' 40.704"
7	52°9' 42.206"	1°36 42.495"	388	51°18' 7.108"	1°25' 44.133"
8	52°9' 37.403"	1°36' 59.746"	389	51°18' 6.125"	1°25' 47.561"
9	52°9' 10.971"	1°38' 34.634"	390	51°18' 5.649"	1°25' 49.217"
10	52°9' 9.934"	1°38' 35.579"	391	51°18' 5.173"	1°25' 50.872"
11	52°9' 9.080"	1°38' 36.358"	392	51°18' 4.772"	1°25' 52.300"
12	52°8' 54.481"	1°38' 49.671"	393	51°18' 4.371"	1°25' 53.727"
13	52°8' 54.129"	1°38' 50.011"	394	51°18' 3.998"	1°25' 55.126"
14	52°8' 25.709"	1°39' 19.082"	395	51°18' 3.651"	1°25' 56.435"
15	52°8' 17.615"	1°39' 25.616"	396	51°18' 3.472"	1°25' 57.133"
16	52°7' 52.944"	1°39' 45.935"	397	51°18' 3.376"	1°25' 57.519"
17	52°7' 38.010"	1°39' 57.401"	398	51°18' 3.036"	1°25' 58.904"

18	52°7' 26.814"	1°40' 4.575"	399	51°18' 2.860"	1°25' 59.658"
19	52°7' 16.168"	1°40' 5.285"	400	51°18' 2.554"	1°26' 1.034"
20	52°7' 4.369"	1°40' 3.703"	401	51°18' 2.385"	1°26' 1.834"
21	52°7' 2.877"	1°40' 4.411"	402	51°18' 2.212"	1°26' 2.702"
22	52°7' 0.826"	1°40' 3.228"	403	51°18' 2.078"	1°26' 3.405"
23	52°6' 55.845"	1°40' 2.560"	404	51°18' 1.905"	1°26' 4.366"
24	52°6' 42.749"	1°39' 57.501"	405	51°18' 1.832"	1°26' 4.786"
25	52°6' 42.564"	1°39' 57.437"	406	51°18' 1.737"	1°26' 5.345"
26	52°6' 42.378"	1°39' 57.373"	407	51°18' 1.694"	1°26' 5.605"
27	52°6' 42.024"	1°39' 57.264"	408	51°18' 1.496"	1°26' 6.828"
28	52°6' 41.935"	1°39' 57.236"	409	51°18' 1.391"	1°26' 7.490"
29	52°6' 41.845"	1°39' 57.209"	410	51°18' 1.309"	1°26' 8.011"
30	52°6' 32.654"	1°39' 55.091"	411	51°18' 1.230"	1°26' 8.518"
31	52°6' 9.412"	1°39' 49.072"	412	51°18' 1.078"	1°26' 9.502"
32	52°5' 45.382"	1°39' 43.448"	413	51°18' 0.908"	1°26' 10.610"
33	52°5' 31.011"	1°39' 40.928"	414	51°18' 0.734"	1°26' 11.758"
34	52°5' 18.712"	1°39' 39.029"	415	51°18' 0.560"	1°26' 12.921"
35	52°5' 17.738"	1°39' 38.850"	416	51°18' 0.389"	1°26' 14.078"
36	52°5' 17.215"	1°39' 38.823"	417	51°18' 0.225"	1°26' 15.209"
37	52°5' 17.066"	1°39' 38.793"	418	51°18' 0.072"	1°26' 16.298"
38	52°5' 9.519"	1°39' 38.487"	419	51°17' 59.930"	1°26' 17.340"
39	52°4' 35.492"	1°39' 33.308"	420	51°17' 59.800"	1°26' 18.331"
40	52°4' 34.155"	1°39' 33.285"	421	51°17' 59.683"	1°26' 19.277"
41	52°4' 29.622"	1°39' 33.815"	422	51°17' 59.650"	1°26' 19.551"
42	52°4' 27.020"	1°39' 34.841"	423	51°17' 59.576"	1°26' 20.183"
43	52°3' 59.170"	1°39' 54.185"	424	51°17' 59.545"	1°26' 20.458"
44	52°3' 57.758"	1°39' 54.643"	425	51°17' 59.481"	1°26' 21.049"
45	52°3' 57.592"	1°39' 54.385"	426	51°17' 59.443"	1°26' 21.404"
46	52°3' 55.391"	1°39' 51.057"	427	51°17' 59.331"	1°26' 22.524"
47	52°3' 52.934"	1°39' 48.506"	428	51°17' 59.198"	1°26' 23.940"
48	52°3' 51.513"	1°39' 47.565"	429	51°17' 59.079"	1°26' 25.259"
49	52°3' 50.091"	1°39' 46.623"	430	51°17' 59.017"	1°26' 25.962"
50	52°3' 49.427"	1°39' 46.288"	431	51°17' 58.908"	1°26' 27.254"
51	52°3' 48.762"	1°39' 45.952"	432	51°17' 58.806"	1°26' 28.555"
52	52°3' 43.605"	1°39' 44.121"	433	51°17' 58.715"	1°26' 29.843"
53	52°3' 38.448"	1°39' 42.290"	434	51°17' 58.635"	1°26' 31.140"
54	52°3' 36.882"	1°39' 41.989"	435	51°17' 58.616"	1°26' 31.495"
55	52°3' 28.413"	1°39' 41.712"	436	51°17' 58.569"	1°26' 32.416"

56	52°3' 19.879"	1°39' 41.433"	437	51°17' 58.507"	1°26' 33.760"
57	52°3' 19.815"	1°39' 41.431"	438	51°17' 58.450"	1°26' 35.058"
58	52°3' 7.962"	1°39' 41.347"	439	51°17' 58.420"	1°26' 35.759"
59	52°2' 56.109"	1°39' 41.263"	440	51°17' 58.355"	1°26' 37.353"
60	52°2' 24.763"	1°39' 42.407"	441	51°17' 58.285"	1°26' 39.138"
61	52°2' 11.143"	1°39' 37.346"	442	51°17' 58.177"	1°26' 42.077"
62	52°1' 52.773"	1°39' 30.312"	443	51°17' 58.065"	1°26' 45.410"
63	52°1' 52.107"	1°39' 30.107"	444	51°17' 57.994"	1°26' 47.682"
64	52°0' 43.431"	1°39' 13.834"	445	51°17' 57.888"	1°26' 51.346"
65	52°0' 43.058"	1°39' 13.760"	446	51°17' 57.839"	1°26' 53.211"
66	52°0' 38.767"	1°39' 13.072"	447	51°17' 57.769"	1°26' 56.251"
67	52°0' 1.481"	1°39' 7.093"	448	51°18' 10.936"	1°26' 58.247"
68	51°59' 8.364"	1°38' 58.579"	449	51°18' 11.214"	1°27' 6.328"
69	51°58' 4.958"	1°38' 45.835"	450	51°18' 11.599"	1°27' 17.568"
70	51°57' 24.627"	1°38' 37.734"	451	51°18' 12.089"	1°27' 34.435"
71	51°56' 55.039"	1°38' 31.793"	452	51°18' 12.579"	1°27' 51.301"
72	51°55' 54.858"	1°38' 19.433"	453	51°18' 12.855"	1°28' 0.526"
73	51°55' 9.629"	1°38' 10.150"	454	51°18' 13.131"	1°28' 9.752"
74	51°54' 45.460"	1°38' 5.191"	455	51°18' 18.656"	1°28' 17.405"
75	51°54' 35.061"	1°38' 2.794"	456	51°18' 21.391"	1°28' 49.685"
76	51°54' 24.662"	1°38' 0.397"	457	51°18' 22.379"	1°29' 6.535"
77	51°54' 23.031"	1°38' 0.290"	458	51°18' 24.798"	1°29' 18.412"
78	51°54' 1.179"	1°38' 2.430"	459	51°18' 27.551"	1°29' 36.768"
79	51°53' 39.328"	1°38' 4.570"	460	51°18' 30.024"	1°29' 54.112"
80	51°53' 26.614"	1°38' 4.349"	461	51°18' 34.672"	1°30' 10.865"
81	51°53' 14.807"	1°38' 4.143"	462	51°18' 51.465"	1°30' 29.126"
82	51°53' 14.411"	1°38' 4.136"	463	51°19' 59.009"	1°31' 42.633"
83	51°53' 13.521"'	1°38' 4.270"	464	51°20' 1.800"	1°31' 42.227"
84	51°53' 12.067"	1°38' 4.385"	465	51°20' 5.721"	1°31' 40.284"
85	51°53' 10.321"	1°38' 4.755"	466	51°20' 7.341"	1°31' 39.982"
86	51°53' 9.467"	1°38' 4.936"	467	51°20' 10.522"	1°31' 40.953"
87	51°53' 7.970"	1°38' 5.253"	468	51°20' 14.056"	1°31' 43.686"
88	51°53' 6.984"	1°38' 5.591"	469	51°20' 24.559"	1°31' 47.656"
89	51°53' 1.870"	1°38' 7.648"	470	51°20' 25.970"	1°31' 49.039"
90	51°52' 56.393"	1°38' 10.111"	471	51°20' 29.181"	1°31' 52.187"
91	51°52' 50.684"	1°38' 12.197"	472	51°20' 39.200"	1°32' 8.762"
92	51°52' 47.941"	1°38' 13.434"	473	51°20' 51.259"	1°32' 31.175"
93	51°52' 46.758"	1°38' 13.985"	474	51°20' 56.034"	1°32' 39.915"

94	51°52' 45.677"	1°38' 14.534"	475	51°20' 58.908"	1°32' 43.274"
95	51°52' 41.604"	1°38' 15.590"	476	51°21' 20.733"	1°32' 58.413"
96	51°52' 39.995"	1°38' 16.285"	477	51°21' 21.727"	1°32' 58.982"
97	51°52' 39.076"	1°38' 16.904"	478	51°21' 31.250"	1°33' 3.342"
98	51°52' 36.891"	1°38' 19.129"	479	51°22' 8.898"	1°33' 31.804"
99	51°52' 36.674"	1°38' 19.508"	480	51°22' 40.774"	1°34' 21.429"
100	51°52' 36.237"	1°38' 20.421"	481	51°22' 44.516"	1°34' 25.729"
101	51°52' 34.299"	1°38' 24.224"	482	51°22' 44.650"	1°34' 25.880"
102	51°52' 32.174"	1°38' 28.241"	483	51°22' 45.035"	1°34' 26.278"
103	51°52' 29.497"	1°38' 41.918"	484	51°22' 45.433"	1°34' 26.641"
104	51°52' 29.254"	1°38' 43.497"	485	51°22' 45.843"	1°34' 26.967"
105	51°52' 27.087"	1°39' 2.546"	486	51°22' 46.263"	1°34' 27.255"
106	51°52' 26.984"	1°39' 6.026"	487	51°22' 46.694"	1°34' 27.505"
107	51°52' 29.576"	1°39' 54.917"	488	51°22' 47.133"	1°34' 27.715"
108	51°52' 32.703"	1°40' 27.274"	489	51°22' 47.578"	1°34' 27.886"
109	51°52' 34.415"	1°40' 42.540"	490	51°22' 47.756"	1°34' 27.942"
110	51°52' 36.330"	1°40' 57.465"	491	51°22' 53.988"	1°34' 29.802"
111	51°52' 37.081"	1°41' 6.346"	492	51°22' 54.261"	1°34' 29.876"
112	51°52' 37.046"	1°41' 8.500"	493	51°22' 54.716"	1°34' 29.965"
113	51°52' 21.894"	1°42' 0.486"	494	51°22' 55.173"	1°34' 30.013"
114	51°52' 6.716"	1°42' 47.929"	495	51°22' 55.631"	1°34' 30.019"
115	51°51' 52.313"	1°43' 21.776"	496	51°22' 56.088"	1°34' 29.984"
116	51°51' 46.345"	1°43' 35.425"	497	51°22' 56.544"	1°34' 29.908"
117	51°51' 37.930"	1°43' 58.087"	498	51°22' 56.996"	1°34' 29.791"
118	51°51' 29.513"	1°44' 20.747"	499	51°22' 57.443"	1°34' 29.633"
119	51°51' 22.397"	1°44' 33.340"	500	51°22' 57.884"	1°34' 29.435"
120	51°51' 14.299"	1°44' 43.322"	501	51°22' 58.317"	1°34' 29.197"
121	51°50' 39.589"	1°45' 4.974"	502	51°22' 58.741"	1°34' 28.920"
122	51°50' 26.046"	1°45' 14.228"	503	51°22' 59.154"	1°34' 28.606"
123	51°50' 12.743"	1°45' 23.323"	504	51°22' 59.556"	1°34' 28.255"
124	51°50' 12.417"	1°45' 23.560"	505	51°22' 59.737"	1°34' 28.081"
125	51°49' 58.283"	1°45' 34.437"	506	51°23' 5.870"	1°34' 22.005"
126	51°49' 28.626"	1°45' 54.953"	507	51°23' 28.073"	1°34' 11.377"
127	51°49' 13.775"	1°46' 5.085"	508	51°23' 43.030"	1°34' 6.548"
128	51°48' 44.008"	1°46' 25.320"	509	51°23' 58.269"	1°34' 1.047"
129	51°48' 23.543"	1°46' 39.181"	510	51°24' 18.161"	1°33' 54.554"
130	51°48' 10.890"	1°46' 44.167"	511	51°24' 26.552"	1°33' 51.311"
131	51°48' 1.426"	1°46' 46.114"	512	51°24' 41.830"	1°33' 46.508"

132	51°47' 56.726"	1°46' 45.005"	513	51°24' 57.605"	1°33' 41.976"
133	51°47' 50.929"	1°46' 42.666"	514	51°25' 10.378"	1°33' 39.373"
134	51°47' 48.489"	1°46' 41.646"	515	51°25' 19.738"	1°33' 37.151"
135	51°47' 45.780"	1°46' 40.523"	516	51°25' 25.834"	1°33' 35.498"
136	51°47' 35.887"	1°46' 36.968"	517	51°25' 36.822"	1°33' 32.411"
137	51°47' 6.370"	1°46' 28.380"	518	51°25' 48.880"	1°33' 29.644"
138	51°46' 38.729"	1°46' 20.351"	519	51°25' 54.674"	1°33' 28.861"
139	51°46' 37.060"	1°46' 19.868"	520	51°26' 0.014"	1°33' 29.534"
140	51°46' 34.877"	1°46' 19.287"	521	51°26' 17.234"	1°33' 31.144"
141	51°46' 34.582"	1°46' 19.229"	522	51°26' 34.360"	1°33' 32.308"
142	51°46' 34.146"	1°46' 19.093"	523	51°26' 35.658"	1°33' 32.229"
143	51°46' 33.557"	1°46' 18.936"	524	51°26' 42.032"	1°33' 31.017"
144	51°46' 30.748"	1°46' 18.189"	525	51°26' 47.025"	1°33' 31.165"
145	51°46' 30.664"	1°46' 18.167"	526	51°26' 53.928"	1°33' 35.160"
146	51°46' 30.536"	1°46' 18.133"	527	51°26' 56.736"	1°33' 37.342"
147	51°46' 30.501"	1°46' 18.124"	528	51°26' 59.235"	1°33' 38.527"
148	51°46' 28.142"	1°46' 17.525"	529	51°27' 7.621"	1°33' 39.115"
149	51°46' 27.956"	1°46' 17.447"	530	51°27' 8.932"	1°33' 38.837"
150	51°46' 27.448"	1°46' 17.312"	531	51°27' 13.492"	1°33' 38.292"
151	51°46' 26.251"	1°46' 17.006"	532	51°27' 18.401"	1°33' 37.329"
152	51°46' 22.962"	1°46' 16.182"	533	51°27' 19.041"	1°33' 37.160"
153	51°46' 22.287"	1°46' 16.013"	534	51°27' 21.415"	1°33' 36.373"
154	51°46' 21.238"	1°46' 15.750"	535	51°27' 33.297"	1°33' 36.969"
155	51°46' 20.357"	1°46' 15.530"	536	51°27' 40.117"	1°33' 37.858"
156	51°46' 19.283"	1°46' 15.261"	537	51°27' 54.386"	1°33' 39.701"
157	51°46' 10.789"	1°46' 13.134"	538	51°28' 29.484"	1°33' 45.871"
158	51°45' 54.419"	1°46' 4.742"	539	51°28' 32.134"	1°33' 46.316"
159	51°45' 24.692"	1°45' 25.913"	540	51°29' 9.371"	1°33' 49.500"
160	51°45' 11.957"	1°45' 5.743"	541	51°29' 44.103"	1°33' 52.073"
161	51°45' 3.605"	1°44' 36.083"	542	51°29' 51.013"	1°33' 52.676"
162	51°44' 53.281"	1°43' 45.786"	543	51°30' 9.571"	1°33' 54.294"
163	51°44' 53.017"	1°43' 44.673"	544	51°30' 11.388"	1°33' 53.781"
164	51°44' 49.372"	1°43' 31.199"	545	51°30' 13.454"	1°33' 53.547"
165	51°44' 47.930"	1°43' 27.618"	546	51°30' 14.764"	1°33' 52.897"
166	51°44' 44.251"	1°43' 21.127"	547	51°30' 17.325"	1°33' 51.626"
167	51°44' 40.002"	1°43' 13.725"	548	51°30' 19.323"	1°33' 50.132"
168	51°44' 36.327"	1°43' 8.412"	549	51°30' 23.299"	1°33' 45.878"
169	51°43' 35.773"	1°42' 17.154"	550	51°30' 25.782"	1°33' 42.380"

170	51°42' 46.697"	1°41' 31.855"	551	51°30' 27.737"	1°33' 39.973"
171	51°42' 28.054"	1°41' 14.537"	552	51°30' 29.882"	1°33' 37.406"
172	51°42' 9.950"	1°40' 57.649"	553	51°30' 33.266"	1°33' 33.733"
173	51°41' 53.621"	1°40' 39.411"	554	51°30' 36.580"	1°33' 31.977"
174	51°41' 19.604"	1°40' 2.227"	555	51°30' 41.702"	1°33' 34.284"
175	51°41' 18.929"	1°40' 1.564"	556	51°30' 58.032"	1°33' 46.372"
176	51°41' 18.221"	1°40' 0.943"	557	51°31' 43.901"	1°34' 20.979"
177	51°41' 13.774"	1°39' 57.045"	558	51°31' 43.993"	1°34' 21.047"
178	51°40' 57.238"	1°39' 42.551"	559	51°32' 15.637"	1°34' 44.162"
179	51°40' 56.015"	1°39' 41.682"	560	51°32' 55.621"	1°35' 14.279"
180	51°40' 2.639"	1°39' 11.953"	561	51°33' 35.602"	1°35' 44.411"
181	51°40' 2.134"	1°39' 11.701"	562	51°34' 27.414"	1°36' 23.011"
182	51°39' 7.005"	1°38' 47.364"	563	51°34' 41.157"	1°36' 34.329"
183	51°38' 13.821"	1°38' 24.719"	564	51°34' 58.260"	1°36' 48.519"
184	51°36' 19.016"	1°37' 22.343"	565	51°35' 15.398"	1°37' 1.171"
185	51°35' 30.657"	1°36' 46.420"	566	51°35' 26.171"	1°37' 9.240"
186	51°34' 59.611"	1°36' 20.335"	567	51°35' 50.996"	1°37' 27.791"
187	51°34' 34.660"	1°35' 59.787"	568	51°36' 15.600"	1°37' 46.179"
188	51°33' 42.466"	1°35' 20.899"	569	51°36' 19.402"	1°37' 49.987"
189	51°33' 2.471"	1°34' 50.763"	570	51°38' 8.892"	1°38' 49.494"
190	51°32' 22.389"	1°34' 20.578"	571	51°39' 2.755"	1°39' 12.466"
191	51°31' 50.747"	1°33' 57.469"	572	51°39' 57.593"	1°39' 36.683"
192	51°31' 4.896"	1°33' 22.882"	573	51°40' 27.351"	1°39' 53.259"
193	51°30' 47.902"	1°33' 10.306"	574	51°40' 36.339"	1°39' 58.267"
194	51°30' 46.699"	1°33' 9.595"	575	51°40' 44.731"	1°40' 1.916"
195	51°30' 38.576"	1°33' 5.937"	576	51°40' 46.746"	1°40' 4.067"
196	51°30' 36.203"	1°33' 5.457"	577	51°40' 50.084"	1°40' 5.927"
197	51°30' 33.846"	1°33' 6.110"	578	51°41' 10.838"	1°40' 24.122"
198	51°30' 26.878"	1°33' 9.804"	579	51°41' 44.427"	1°41' 0.842"
199	51°30' 24.482"	1°33' 11.841"	580	51°42' 0.993"	1°41' 19.347"
200	51°30' 14.034"	1°33' 24.734"	581	51°42' 19.958"	1°41' 37.090"
201	51°30' 11.475"	1°33' 27.384"	582	51°42' 38.830"	1°41' 54.623"
202	51°30' 9.575"	1°33' 28.326"	583	51°42' 39.282"	1°41' 55.013"
203	51°29' 44.883"	1°33' 26.177"	584	51°43' 14.418"	1°42' 28.213"
204	51°29' 10.204"	1°33' 23.614"	585	51°43' 49.825"	1°42' 57.731"
205	51°28' 33.222"	1°33' 20.457"	586	51°44' 12.510"	1°43' 16.691"
206	51°27' 55.804"	1°33' 13.891"	587	51°44' 23.970"	1°43' 25.574"
207	51°27' 35.191"	1°33' 11.224"	588	51°44' 31.855"	1°43' 33.447"

208	51°27' 34.005"	1°33' 11.086"	589	51°44' 35.073"	1°43' 43.597"
209	51°27' 20.964"	1°33' 10.434"	590	51°44' 44.830"	1°44' 20.916"
210	51°27' 19.070"	1°33' 10.697"	591	51°45' 0.786"	1°45' 24.613"
211	51°27' 16.077"	1°33' 11.689"	592	51°45' 6.581"	1°45' 33.791"
212	51°27' 12.087"	1°33' 12.486"	593	51°45' 14.201"	1°45' 45.777"
213	51°27' 7.037"	1°33' 13.111"	594	51°45' 45.415"	1°46' 26.552"
214	51°27' 4.772"	1°33' 13.591"	595	51°45' 48.072"	1°46' 28.793"
215	51°27' 2.568"	1°33' 13.113"	596	51°45' 49.501"	1°46' 29.593"
216	51°27' 0.726"	1°33' 11.644"	597	51°46' 6.477"	1°46' 38.294"
217	51°27' 0.083"	1°33' 11.203"	598	51°46' 7.688"	1°46' 38.754"
218	51°26' 59.869"	1°33' 11.057"	599	51°46' 16.083"	1°46' 40.857"
219	51°26' 52.636"	1°33' 6.873"	600	51°46' 24.477"	1°46' 42.961"
220	51°26' 47.656"	1°33' 6.547"	601	51°46' 34.366"	1°46' 45.592"
221	51°26' 39.535"	1°33' 5.836"	602	51°47' 3.447"	1°46' 54.044"
222	51°26' 37.534"	1°33' 5.793"	603	51°47' 32.528"	1°47' 2.499"
223	51°26' 35.785"	1°33' 6.465"	604	51°47' 42.125"	1°47' 5.948"
224	51°26' 32.255"	1°33' 6.245"	605	51°47' 46.568"	1°47' 7.805"
225	51°26' 17.984"	1°33' 5.278"	606	51°47' 46.903"	1°47' 7.945"
226	51°26' 3.627"	1°33' 3.939"	607	51°47' 46.968"	1°47' 7.971"
227	51°25' 53.970"	1°33' 2.974"	608	51°47' 50.078"	1°47' 9.227"
228	51°25' 47.145"	1°33' 4.442"	609	51°47' 50.937"	1°47' 9.574"
229	51°25' 25.893"	1°33' 10.216"	610	51°47' 52.471"	1°47' 9.464"
230	51°25' 11.657"	1°33' 14.009"	611	51°47' 52.960"	1°47' 9.533"
231	51°24' 50.218"	1°33' 19.871"	612	51°47' 53.458"	1°47' 9.521"
232	51°24' 34.276"	1°33' 24.120"	613	51°47' 54.029"	1°47' 9.420"
233	51°24' 17.499"	1°33' 28.685"	614	51°47' 55.904"	1°47' 9.085"
234	51°24' 11.596"	1°33' 30.058"	615	51°48' 0.768"	1°47' 8.141"
235	51°24' 10.391"	1°33' 30.136"	616	51°48' 4.663"	1°47' 7.799"
236	51°23' 25.342"	1°33' 21.829"	617	51°48' 12.188"	1°47' 6.569"
237	51°22' 5.760"	1°33' 6.941"	618	51°48' 15.112"	1°47' 6.057"
238	51°22' 0.566"	1°33' 2.152"	619	51°48' 18.538"	1°47' 6.022"
239	51°21' 46.470"	1°32' 48.623"	620	51°48' 20.556"	1°47' 5.568"
240	51°21' 40.758"	1°32' 42.650"	621	51°48' 21.825"	1°47' 5.049"
241	51°21' 38.222"	1°32' 40.217"	622	51°48' 22.775"	1°47' 4.510"
242	51°21' 37.528"	1°32' 39.498"	623	51°48' 24.034"	1°47' 3.686"
243	51°21' 36.343"	1°32' 38.784"	624	51°48' 25.492"	1°47' 2.667"
244	51°21' 26.694"	1°32' 34.368"	625	51°48' 26.464"	1°47' 1.918"
245	51°21' 25.238"	1°32' 33.358"	626	51°48' 27.326"	1°47' 1.438"

246	51°21' 7.029"	1°32' 20.730"	627	51°48' 40.720"	1°46' 52.723"
247	51°21' 3.475"	1°32' 14.223"	628	51°48' 43.979"	1°46' 50.817"
248	51°20' 51.007"	1°31' 51.084"	629	51°48' 54.507"	1°46' 43.701"
249	51°20' 40.112"	1°31' 33.062"	630	51°48' 57.044"	1°46' 42.048"
250	51°20' 38.524"	1°31' 31.025"	631	51°49' 1.912"	1°46' 38.847"
251	51°20' 31.921"	1°31' 24.551"	632	51°49' 6.370"	1°46' 35.928"
252	51°20' 29.550"	1°31' 22.989"	633	51°49' 10.004"	1°46' 33.590"
253	51°20' 10.305"	1°31' 15.718"	634	51°49' 12.834"	1°46' 31.843"
254	51°20' 7.707"	1°31' 15.425"	635	51°49' 16.873"	1°46' 29.085"
255	51°19' 56.877"	1°31' 17.002"	636	51°49' 21.772"	1°46' 25.496"
256	51°19' 54.143"	1°31' 14.414"	637	51°49' 24.406"	1°46' 23.459"
257	51°19' 44.221"	1°31' 2.941"	638	51°49' 26.555"	1°46' 21.854"
258	51°19' 22.248"	1°30' 37.476"	639	51°49' 29.325"	1°46' 19.779"
259	51°19' 21.878"	1°30' 37.071"	640	51°49' 29.559"	1°46' 19.610"
260	51°19' 17.489"	1°30' 32.556"	641	51°49' 31.217"	1°46' 18.481"
261	51°19' 16.621"	1°30' 29.330"	642	51°49' 31.437"	1°46' 18.271"
262	51°19' 12.226"	1°30' 8.241"	643	51°49' 31.862"	1°46' 17.852"
263	51°19' 1.695"	1°29' 13.708"	644	51°49' 32.358"	1°46' 17.408"
264	51°18' 43.443"	1°27' 41.147"	645	51°49' 32.932"	1°46' 16.938"
265	51°18' 40.537"	1°27' 26.469"	646	51°49' 33.571"	1°46' 16.448"
266	51°18' 38.361"	1°27' 15.755"	647	51°49' 34.341"	1°46' 15.980"
267	51°18' 32.698"	1°27' 5.361"	648	51°49' 35.765"	1°46' 15.044"
268	51°18' 30.084"	1°27' 0.160"	649	51°49' 36.855"	1°46' 14.279"
269	51°18' 30.118"	1°26' 57.986"	650	51°49' 37.455"	1°46' 13.868"
270	51°18' 30.181"	1°26' 55.230"	651	51°49' 53.229"	1°46' 3.357"
271	51°18' 30.225"	1°26' 53.549"	652	51°50' 3.386"	1°45' 57.066"
272	51°18' 30.290"	1°26' 51.267"	653	51°50' 14.644"	1°45' 50.122"
273	51°18' 30.323"	1°26' 50.175"	654	51°50' 17.898"	1°45' 48.283"
274	51°18' 30.390"	1°26' 48.030"	655	51°50' 19.219"	1°45' 47.266"
275	51°18' 30.491"	1°26' 45.023"	656	51°50' 32.380"	1°45' 38.269"
276	51°18' 30.590"	1°26' 42.309"	657	51°50' 45.540"	1°45' 29.271"
277	51°18' 30.653"	1°26' 40.695"	658	51°51' 3.374"	1°45' 18.151"
278	51°18' 30.714"	1°26' 39.222"	659	51°51' 21.207"	1°45' 7.028"
279	51°18' 30.742"	1°26' 38.573"	660	51°51' 23.200"	1°45' 5.226"
280	51°18' 30.793"	1°26' 37.391"	661	51°51' 27.997"	1°44' 59.315"
281	51°18' 30.834"	1°26' 36.490"	662	51°51' 32.793"	1°44' 53.403"
282	51°18' 30.867"	1°26' 35.852"	663	51°51' 33.327"	1°44' 52.613"
283	51°18' 30.897"	1°26' 35.349"	664	51°51' 33.861"	1°44' 51.824"

284	51°18' 30.936"	1°26' 34.783"	665	51°51' 42.012"	1°44' 37.399"
285	51°18' 30.997"	1°26' 34.003"	666	51°51' 42.973"	1°44' 35.314"
286	51°18' 31.080"	1°26' 33.025"	667	51°51' 50.568"	1°44' 14.870"
287	51°18' 31.121"	1°26' 32.549"	668	51°51' 53.048"	1°43' 57.342"
288	51°18' 31.218"	1°26' 31.480"	669	51°51' 55.350"	1°43' 54.404"
289	51°18' 31.305"	1°26' 30.548"	670	51°52' 19.004"	1°43' 5.199"
290	51°18' 31.385"	1°26' 29.745"	671	51°52' 19.469"	1°43' 4.305"
291	51°18' 31.415"	1°26' 29.468"	672	51°52' 50.135"	1°41' 19.585"
292	51°18' 31.457"	1°26' 29.110"	673	51°52' 54.614"	1°40' 13.491"
293	51°18' 31.509"	1°26' 28.685"	674	51°52' 59.084"	1°39' 7.393"
294	51°18' 31.577"	1°26' 28.165"	675	51°52' 59.571"	1°39' 1.476"
295	51°18' 31.664"	1°26' 27.524"	676	51°53' 0.058"	1°38' 55.559"
296	51°18' 31.774"	1°26' 26.743"	677	51°53' 0.134"	1°38' 54.840"
297	51°18' 31.904"	1°26' 25.844"	678	51°53' 0.271"	1°38' 54.145"
298	51°18' 32.048"	1°26' 24.868"	679	51°53' 0.467"	1°38' 53.487"
299	51°18' 32.200"	1°26' 23.855"	680	51°53' 0.717"	1°38' 52.880"
300	51°18' 32.354"	1°26' 22.839"	681	51°53' 1.017"	1°38' 52.336"
301	51°18' 32.505"	1°26' 21.853"	682	51°53' 1.427"	1°38' 51.797"
302	51°18' 32.648"	1°26' 20.930"	683	51°53' 1.743"	1°38' 51.474"
303	51°18' 32.776"	1°26' 20.106"	684	51°53' 24.971"	1°38' 32.626"
304	51°18' 32.844"	1°26' 19.678"	685	51°53' 39.441"	1°38' 30.729"
305	51°18' 33.011"	1°26' 18.651"	686	51°54' 1.604"	1°38' 28.595"
306	51°18' 33.048"	1°26' 18.432"	687	51°54' 23.190"	1°38' 26.485"
307	51°18' 33.143"	1°26' 17.916"	688	51°54' 43.236"	1°38' 31.109"
308	51°18' 33.276"	1°26' 17.317"	689	51°56' 53.011"	1°38' 57.773"
309	51°18' 33.476"	1°26' 16.500"	690	51°59' 6.470"	1°39' 24.608"
310	51°18' 33.569"	1°26' 16.139"	691	52°0'41.276"	1°39' 39.826"
311	51°18' 33.788"	1°26' 15.314"	692	52°1' 49.429"	1°39' 55.987"
312	51°18' 34.007"	1°26' 14.490"	693	52°2' 5.757"	1°40' 2.162"
313	51°18' 34.650"	1°26' 12.200"	694	52°2' 19.229"	1°40' 7.258"
314	51°18' 35.549"	1°26' 9.073"	695	52°2' 38.252"	1°40' 7.750"
315	51°18' 37.685"	1°26' 1.611"	696	52°2' 41.321"	1°40' 8.050"
316	51°18' 39.919"	1°25' 53.476"	697	52°2' 56.146"	1°40' 7.509"
317	51°18' 47.920"	1°25' 22.394"	698	52°3' 19.680"	1°40' 7.680"
318	51°19' 11.908"	1°23' 49.130"	699	52°3' 35.762"	1°40' 8.210"
319	51°19' 22.775"	1°23' 8.870"	700	52°3' 44.620"	1°40' 11.357"
320	51°19' 26.409"	1°22' 55.404"	701	52°3' 45.442"	1°40' 11.902"
321	51°19' 30.327"	1°22' 41.426"	702	52°3' 46.491"	1°40' 13.489"

322	51°19' 31.196"	1°22' 38.329"	703	52°3' 47.702"	1°40' 15.403"
323	51°19' 32.594"	1°22' 33.339"	704	52°3' 48.441"	1°40' 16.329"
324	51°19' 34.246"	1°22' 27.448"	705	52°3' 49.181"	1°40' 17.255"
325	51°19' 34.829"	1°22' 24.877"	706	52°3' 50.490"	1°40' 18.532"
326	51°19' 34.802"	1°22' 24.793"	707	52°3' 53.685"	1°40' 20.313"
327	51°19' 33.482"	1°22' 21.370"	708	52°3' 57.051"	1°40' 20.975"
328	51°19' 33.191"	1°22' 20.388"	709	52°3' 59.607"	1°40' 20.817"
329	51°19' 32.987"	1°22' 19.529"	710	52°4' 3.162"	1°40' 19.667"
330	51°19' 32.941"	1°22' 19.095"	711	52°4' 4.762"	1°40' 18.862"
331	51°19' 32.964"	1°22' 18.666"	712	52°4' 32.139"	1°39' 59.850"
332	51°19' 33.103"	1°22' 17.945"	713	52°4' 34.649"	1°39' 59.557"
333	51°19' 33.472"	1°22' 16.474"	714	52°5' 8.283"	1°40' 4.682"
334	51°19' 33.505"	1°22' 16.107"	715	52°5' 33.094"	1°40' 5.721"
335	51°19' 33.460"	1°22' 15.813"	716	52°5' 55.307"	1°40' 11.070"
336	51°19' 33.360"	1°22' 15.595"	717	52°6' 11.802"	1°40' 14.740"
337	51°19' 32.982"	1°22' 15.022"	718	52°6' 39.189"	1°40' 23.141"
338	51°19' 32.919"	1°22' 14.885"	719	52°6' 52.695"	1°40' 28.361"
339	51°19' 31.947"	1°22' 13.479"	720	52°6' 53.902"	1°40' 28.673"
340	51°19' 31.554"	1°22' 13.299"	721	52°7' 15.334"	1°40' 31.551"
341	51°19' 31.424"	1°22' 13.172"	722	52°7' 28.843"	1°40' 30.751"
342	51°19' 31.330"	1°22' 13.012"	723	52°7' 31.480"	1°40' 29.846"
343	51°19' 31.267"	1°22' 12.781"	724	52°7' 37.837"	1°40' 25.774"
344	51°19' 31.259"	1°22' 12.516"	725	52°7' 40.081"	1°40' 22.840"
345	51°19' 31.264"	1°22' 12.493"	726	52°7' 46.142"	1°40' 18.870"
346	51°19' 26.603"	1°22' 5.757"	727	52°7' 54.029"	1°40' 14.183"
347	51°19' 25.258"	1°22' 3.868"	728	52°7' 59.972"	1°40' 9.621"
348	51°19' 25.167"	1°22' 3.741"	729	52°8' 0.202"	1°40' 9.437"
349	51°19' 25.085"	1°22' 3.626"	730	52°8' 8.481"	1°40' 2.552"
350	51°19' 24.808"	1°22' 3.225"	731	52°8' 16.761"	1°39' 55.667"
351	51°19' 24.883"	1°22' 0.411"	732	52°8' 33.272"	1°39' 42.342"
352	51°19' 24.852"	1°22' 0.351"	733	52°8' 33.982"	1°39' 41.695"
353	51°19' 24.512"	1°21' 59.398"	734	52°9' 2.575"	1°39' 12.451"
354	51°19' 24.380"	1°21' 59.113"	735	52°9' 19.621"	1°38' 58.526"
355	51°19' 24.199"	1°21' 58.859"	736	52°9' 20.639"	1°38' 57.375"
356	51°19' 23.707"	1°21' 58.339"	737	52°9' 21.536"	1°38' 55.985"
357	51°19' 23.518"	1°21' 58.053"	738	52°9' 40.583"	1°38' 21.585"
358	51°19' 23.115"	1°21' 56.959"	739	52°9' 41.245"	1°38' 20.216"
359	51°19' 22.453"	1°21' 55.626"	740	52°9' 41.790"	1°38' 18.717"

360	51°19' 22.187"	1°21' 55.159"	741	52°9' 42.478"	1°38' 16.503"
361	51°19' 21.940"	1°21' 54.813"	742	52°9' 59.120"	1°37' 15.816"
362	51°19' 21.329"	1°21' 54.081"	743	52°10' 5.676"	1°36' 51.897"
363	51°19' 20.728"	1°21' 53.247"	744	52°10' 6.497"	1°36' 48.902"
364	51°19' 19.742"	1°21' 52.317"	745	52°10' 6.936"	1°36' 47.300"
365	51°19' 19.145"	1°21' 51.535"	746	52°10' 7.674"	1°36' 44.608"
366	51°19' 18.944"	1°21' 51.363"	747	52°10' 7.699"	1°36' 44.514"
367	51°19' 18.360"	1°21' 50.981"	748	52°10' 8.210"	1°36' 42.649"
368	51°19' 17.711"	1°21' 50.413"	749	52°10' 8.650"	1°36' 41.044"
369	51°19' 14.953"	1°22' 1.124"	750	52°10' 8.864"	1°36' 40.262"
370	51°19' 13.936"	1°22' 0.539"	751	52°10' 9.282"	1°36' 38.739"
371	51°19' 12.275"	1°21' 59.585"	752	52°10' 9.302"	1°36' 38.664"
372	51°19' 7.341"	1°21' 56.750"	753	52°10' 8.161"	1°36' 38.074"
373	51°19' 4.216"	1°22' 8.087"	754	52°10' 3.687"	1°36' 35.840"
374	51°19' 4.096"	1°22' 8.515"	755	52°10' 1.232"	1°36' 34.433"
375	51°19' 3.671"	1°22' 10.031"	756	52°10' 1.671"	1°36' 33.128"
376	51°19' 3.594"	1°22' 10.305"	757	52°10' 1.719"	1°36' 32.950"
377	51°19' 3.380"	1°22' 11.069"	758	52°10' 0.186"	1°36' 32.072"
378	51°19' 2.627"	1°22' 13.756"	759	52°9' 59.073"	1°36' 31.526"
379	51°19' 2.181"	1°22' 15.344"	760	52°9 57.364"	1°36' 30.852"
380	51°18' 56.818"	1°22' 34.474"	761	52°9' 53.755"	1°36' 29.252"
381	51°18' 49.449"	1°23' 1.778"	762	52°9' 51.024"	1°36' 28.212"

Table 2: Limits of deviation for access bridge and overhead cables over the River Stour

Point	*Latitude (DMS)*	*Longitude (DMS)*	*Point*	*Latitude (DMS)*	*Longitude (DMS)*
1	51° 18' 58.905"	001° 19' 35.189"	292	51° 19' 1.006"	001° 18' 38.515"
2	51° 18' 58.742"	001° 19' 34.839"	293	51° 19' 1.018"	001° 18' 38.646"
3	51° 18' 59.071"	001° 19' 34.295"	294	51° 19' 1.038"	001° 18' 38.869"
4	51° 18' 59.187"	001° 19' 34.118"	295	51° 19' 1.061"	001° 18' 39.093"
5	51° 18' 59.370"	001° 19' 33.816"	296	51° 19' 1.090"	001° 18' 39.312"
6	51° 18' 59.513"	001° 19' 33.568"	297	51° 19' 1.121"	001° 18' 39.485"
7	51° 18' 59.615"	001° 19' 33.384"	298	51° 19' 1.155"	001° 18' 39.658"
8	51° 18' 59.726"	001° 19' 33.133"	299	51° 19' 1.195"	001° 18' 39.831"
9	51° 18' 59.825"	001° 19' 32.944"	300	51° 19' 1.242"	001° 18' 40.016"
10	51° 18' 59.880"	001° 19' 32.845"	301	51° 19' 1.292"	001° 18' 40.195"
11	51° 18' 59.965"	001° 19' 32.603"	302	51° 19' 1.345"	001° 18' 40.374"
12	51° 19' 0.084"	001° 19' 32.286"	303	51° 19' 1.381"	001° 18' 40.491"
13	51° 19' 0.266"	001° 19' 31.783"	304	51° 19' 1.435"	001° 18' 40.663"
14	51° 19' 0.343"	001° 19' 31.581"	305	51° 19' 1.490"	001° 18' 40.755"

15	51° 19' 0.393"	001° 19' 31.425"	306	51° 19' 1.639"	001° 18' 40.908"
16	51° 19' 0.509"	001° 19' 30.984"	307	51° 19' 1.696"	001° 18' 40.969"
17	51° 19' 0.546"	001° 19' 30.842"	308	51° 19' 1.756"	001° 18' 41.004"
18	51° 19' 0.602"	001° 19' 30.458"	309	51° 19' 1.792"	001° 18' 41.007"
19	51° 19' 0.638"	001° 19' 30.109"	310	51° 19' 1.824"	001° 18' 41.004"
20	51° 19' 0.666"	001° 19' 29.905"	311	51° 19' 1.857"	001° 18' 40.996"
21	51° 19' 0.663"	001° 19' 29.889"	312	51° 19' 1.876"	001° 18' 40.992"
22	51° 19' 0.658"	001° 19' 29.868"	313	51° 19' 1.896"	001° 18' 40.983"
23	51° 19' 0.651"	001° 19' 29.857"	314	51° 19' 1.915"	001° 18' 40.980"
24	51° 19' 0.642"	001° 19' 29.851"	315	51° 19' 1.936"	001° 18' 41.069"
25	51° 19' 0.603"	001° 19' 29.848"	316	51° 19' 1.847"	001° 18' 41.104"
26	51° 19' 0.590"	001° 19' 29.853"	317	51° 19' 1.821"	001° 18' 41.107"
27	51° 19' 0.577"	001° 19' 29.852"	318	51° 19' 1.798"	001° 18' 41.116"
28	51° 19' 0.548"	001° 19' 29.865"	319	51° 19' 1.778"	001° 18' 41.135"
29	51° 19' 0.521"	001° 19' 29.879"	320	51° 19' 1.768"	001° 18' 41.155"
30	51° 19' 0.492"	001° 19' 29.887"	321	51° 19' 1.764"	001° 18' 41.186"
31	51° 19' 0.440"	001° 19' 29.894"	322	51° 19' 1.760"	001° 18' 41.211"
32	51° 19' 0.411"	001° 19' 29.886"	323	51° 19' 1.753"	001° 18' 41.302"
33	51° 19' 0.376"	001° 19' 29.879"	324	51° 19' 1.757"	001° 18' 41.372"
34	51° 19' 0.346"	001° 19' 29.887"	325	51° 19' 1.773"	001° 18' 41.416"
35	51° 19' 0.298"	001° 19' 29.883"	326	51° 19' 1.895"	001° 18' 41.670"
36	51° 19' 0.272"	001° 19' 29.876"	327	51° 19' 2.223"	001° 18' 42.312"
37	51° 19' 0.243"	001° 19' 29.869"	328	51° 19' 2.364"	001° 18' 42.570"
38	51° 19' 0.218"	001° 19' 29.852"	329	51° 19' 2.435"	001° 18' 42.704"
39	51° 19' 0.196"	001° 19' 29.829"	330	51° 19' 2.505"	001° 18' 42.849"
40	51° 19' 0.174"	001° 19' 29.802"	331	51° 19' 2.576"	001° 18' 42.999"
41	51° 19' 0.159"	001° 19' 29.765"	332	51° 19' 2.643"	001° 18' 43.148"
42	51° 19' 0.147"	001° 19' 29.728"	333	51° 19' 2.698"	001° 18' 43.266"
43	51° 19' 0.142"	001° 19' 29.665"	334	51° 19' 2.749"	001° 18' 43.383"
44	51° 19' 0.146"	001° 19' 29.640"	335	51° 19' 2.804"	001° 18' 43.496"
45	51° 19' 0.153"	001° 19' 29.614"	336	51° 19' 2.940"	001° 18' 43.743"
46	51° 19' 0.167"	001° 19' 29.590"	337	51° 19' 3.075"	001° 18' 44.006"
47	51° 19' 0.177"	001° 19' 29.570"	338	51° 19' 3.207"	001° 18' 44.264"
48	51° 19' 0.194"	001° 19' 29.550"	339	51° 19' 3.311"	001° 18' 44.488"
49	51° 19' 0.207"	001° 19' 29.530"	340	51° 19' 3.415"	001° 18' 44.707"
50	51° 19' 0.224"	001° 19' 29.511"	341	51° 19' 3.518"	001° 18' 44.932"
51	51° 19' 0.254"	001° 19' 29.498"	342	51° 19' 3.634"	001° 18' 45.178"
52	51° 19' 0.312"	001° 19' 29.492"	343	51° 19' 3.747"	001° 18' 45.419"
53	51° 19' 0.396"	001° 19' 29.508"	344	51° 19' 3.863"	001° 18' 45.670"

54	51° 19' 0.437"	001° 19' 29.526"	345	51° 19' 3.955"	001° 18' 45.873"
55	51° 19' 0.476"	001° 19' 29.550"	346	51° 19' 4.049"	001° 18' 46.076"
56	51° 19' 0.514"	001° 19' 29.578"	347	51° 19' 4.134"	001° 18' 46.294"
57	51° 19' 0.551"	001° 19' 29.617"	348	51° 19' 4.224"	001° 18' 46.559"
58	51° 19' 0.618"	001° 19' 29.664"	349	51° 19' 4.268"	001° 18' 46.696"
59	51° 19' 0.646"	001° 19' 29.702"	350	51° 19' 4.325"	001° 18' 46.876"
60	51° 19' 0.662"	001° 19' 29.713"	351	51° 19' 4.384"	001° 18' 47.061"
61	51° 19' 0.678"	001° 19' 29.720"	352	51° 19' 4.444"	001° 18' 47.241"
62	51° 19' 0.694"	001° 19' 29.710"	353	51° 19' 4.488"	001° 18' 47.389"
63	51° 19' 0.705"	001° 19' 29.696"	354	51° 19' 4.533"	001° 18' 47.532"
64	51° 19' 0.705"	001° 19' 29.680"	355	51° 19' 4.577"	001° 18' 47.680"
65	51° 19' 0.742"	001° 19' 29.414"	356	51° 19' 4.621"	001° 18' 47.859"
66	51° 19' 0.802"	001° 19' 29.010"	357	51° 19' 4.658"	001° 18' 48.037"
67	51° 19' 0.852"	001° 19' 28.709"	358	51° 19' 4.675"	001° 18' 48.124"
68	51° 19' 0.890"	001° 19' 28.428"	359	51° 19' 4.680"	001° 18' 48.146"
69	51° 19' 0.929"	001° 19' 28.167"	360	51° 19' 4.695"	001° 18' 48.221"
70	51° 19' 0.948"	001° 19' 27.838"	361	51° 19' 4.729"	001° 18' 48.378"
71	51° 19' 0.980"	001° 19' 27.411"	362	51° 19' 4.763"	001° 18' 48.541"
72	51° 19' 1.003"	001° 19' 26.932"	363	51° 19' 4.794"	001° 18' 48.698"
73	51° 19' 1.023"	001° 19' 26.572"	364	51° 19' 4.845"	001° 18' 48.970"
74	51° 19' 1.030"	001° 19' 26.324"	365	51° 19' 4.867"	001° 18' 49.106"
75	51° 19' 1.061"	001° 19' 25.701"	366	51° 19' 4.896"	001° 18' 49.260"
76	51° 19' 1.085"	001° 19' 25.197"	367	51° 19' 4.911"	001° 18' 49.383"
77	51° 19' 1.092"	001° 19' 25.052"	368	51° 19' 4.920"	001° 18' 49.410"
78	51° 19' 1.138"	001° 19' 24.353"	369	51° 19' 4.926"	001° 18' 49.431"
79	51° 19' 1.155"	001° 19' 24.080"	370	51° 19' 4.938"	001° 18' 49.458"
80	51° 19' 1.220"	001° 19' 22.834"	371	51° 19' 4.953"	001° 18' 49.485"
81	51° 19' 1.271"	001° 19' 21.831"	372	51° 19' 4.972"	001° 18' 49.502"
82	51° 19' 1.305"	001° 19' 21.306"	373	51° 19' 5.017"	001° 18' 49.536"
83	51° 19' 1.365"	001° 19' 20.349"	374	51° 19' 5.042"	001° 18' 49.543"
84	51° 19' 1.390"	001° 19' 19.932"	375	51° 19' 5.065"	001° 18' 49.539"
85	51° 19' 1.401"	001° 19' 19.664"	376	51° 19' 5.269"	001° 18' 49.544"
86	51° 19' 1.440"	001° 19' 18.846"	377	51° 19' 5.418"	001° 18' 49.548"
87	51° 19' 1.467"	001° 19' 17.782"	378	51° 19' 5.477"	001° 18' 49.548"
88	51° 19' 1.147"	001° 19' 17.704"	379	51° 19' 5.473"	001° 18' 49.745"
89	51° 19' 1.168"	001° 19' 17.552"	380	51° 19' 5.415"	001° 18' 49.745"
90	51° 19' 1.488"	001° 19' 17.639"	381	51° 19' 5.264"	001° 18' 49.734"
91	51° 19' 1.534"	001° 19' 17.116"	382	51° 19' 5.183"	001° 18' 49.734"
92	51° 19' 1.564"	001° 19' 16.860"	383	51° 19' 5.154"	001° 18' 49.726"

93	51° 19' 1.636"	001° 19' 16.152"	384	51° 19' 5.122"	001° 18' 49.724"
94	51° 19' 1.899"	001° 19' 13.758"	385	51° 19' 5.095"	001° 18' 49.738"
95	51° 19' 1.984"	001° 19' 12.927"	386	51° 19' 5.069"	001° 18' 49.762"
96	51° 19' 2.126"	001° 19' 12.033"	387	51° 19' 5.048"	001° 18' 49.791"
97	51° 19' 2.262"	001° 19' 11.206"	388	51° 19' 5.031"	001° 18' 49.831"
98	51° 19' 2.297"	001° 19' 10.996"	389	51° 19' 5.017"	001° 18' 49.866"
99	51° 19' 2.444"	001° 19' 10.056"	390	51° 19' 5.010"	001° 18' 49.902"
100	51° 19' 2.526"	001° 19' 9.571"	391	51° 19' 5.005"	001° 18' 49.938"
101	51° 19' 2.572"	001° 19' 9.306"	392	51° 19' 5.000"	001° 18' 50.005"
102	51° 19' 2.661"	001° 19' 8.780"	393	51° 19' 5.005"	001° 18' 50.072"
103	51° 19' 2.711"	001° 19' 8.499"	394	51° 19' 5.016"	001° 18' 50.140"
104	51° 19' 2.756"	001° 19' 8.192"	395	51° 19' 5.041"	001° 18' 50.509"
105	51° 19' 2.803"	001° 19' 7.912"	396	51° 19' 5.070"	001° 18' 50.847"
106	51° 19' 2.911"	001° 19' 7.256"	397	51° 19' 5.079"	001° 18' 50.992"
107	51° 19' 2.931"	001° 19' 7.136"	398	51° 19' 5.077"	001° 18' 51.085"
108	51° 19' 2.710"	001° 19' 7.058"	399	51° 19' 5.089"	001° 18' 51.319"
109	51° 19' 2.581"	001° 19' 7.038"	400	51° 19' 5.090"	001° 18' 51.629"
110	51° 19' 2.451"	001° 19' 7.019"	401	51° 19' 5.099"	001° 18' 51.888"
111	51° 19' 2.451"	001° 19' 7.000"	402	51° 19' 5.098"	001° 18' 52.167"
112	51° 19' 2.478"	001° 19' 6.872"	403	51° 19' 5.094"	001° 18' 52.290"
113	51° 19' 2.498"	001° 19' 6.875"	404	51° 19' 5.082"	001° 18' 52.481"
114	51° 19' 2.591"	001° 19' 6.892"	405	51° 19' 5.073"	001° 18' 52.682"
115	51° 19' 2.692"	001° 19' 6.912"	406	51° 19' 5.058"	001° 18' 52.985"
116	51° 19' 2.955"	001° 19' 6.987"	407	51° 19' 5.053"	001° 18' 53.068"
117	51° 19' 2.968"	001° 19' 6.865"	408	51° 19' 5.027"	001° 18' 53.407"
118	51° 19' 2.982"	001° 19' 6.721"	409	51° 19' 4.990"	001° 18' 53.911"
119	51° 19' 3.015"	001° 19' 6.465"	410	51° 19' 4.975"	001° 18' 54.085"
120	51° 19' 3.043"	001° 19' 6.188"	411	51° 19' 4.954"	001° 18' 54.368"
121	51° 19' 3.138"	001° 19' 5.331"	412	51° 19' 4.926"	001° 18' 54.686"
122	51° 19' 3.228""	001° 19' 4.568"	413	51° 19' 4.848"	001° 18' 55.399"
123	51° 19' 3.259"	001° 19' 4.250"	414	51° 19' 4.809"	001° 18' 55.727"
124	51° 19' 3.394"	001° 19' 2.937"	415	51° 19' 4.551"	001° 18' 57.967"
125	51° 19' 3.441"	001° 19' 2.516"	416	51° 19' 4.482"	001° 18' 58.592"
126	51° 19' 3.502"	001° 19' 1.973"	417	51° 19' 4.461"	001° 18' 58.761"
127	51° 19' 3.565"	001° 19' 1.358"	418	51° 19' 4.310"	001° 19' 0.305"
128	51° 19' 3.616"	001° 19' 0.912"	419	51° 19' 4.219"	001° 19' 1.229"
129	51° 19' 3.655"	001° 19' 0.568"	420	51° 19' 4.109"	001° 19' 2.280"
130	51° 19' 3.685"	001° 19' 0.312"	421	51° 19' 4.055"	001° 19' 2.793"
131	51° 19' 3.911"	001° 18' 58.297"	422	51° 19' 3.947"	001° 19' 3.762"

132	51° 19' 3.950"	001° 18' 57.928"	423	51° 19' 3.859"	001° 19' 4.557"
133	51° 19' 4.016"	001° 18' 57.303"	424	51° 19' 3.794"	001° 19' 5.167"
134	51° 19' 4.099"	001° 18' 56.570"	425	51° 19' 3.751"	001° 19' 5.515"
135	51° 19' 4.207"	001° 18' 55.621"	426	51° 19' 3.729"	001° 19' 5.741"
136	51° 19' 4.252"	001° 18' 55.284"	427	51° 19' 3.688"	001° 19' 6.136"
137	51° 19' 4.333"	001° 18' 54.463"	428	51° 19' 3.671"	001° 19' 6.285"
138	51° 19' 4.343"	001° 18' 54.334"	429	51° 19' 3.696"	001° 19' 6.312"
139	51° 19' 4.365"	001° 18' 54.150"	430	51° 19' 3.770"	001° 19' 6.343"
140	51° 19' 4.379"	001° 18' 53.991"	431	51° 19' 3.886"	001° 19' 6.367"
141	51° 19' 4.393"	001° 18' 53.847"	432	51° 19' 3.872"	001° 19' 6.501"
142	51° 19' 4.400"	001° 18' 53.698"	433	51° 19' 3.785"	001° 19' 6.510"
143	51° 19' 4.418"	001° 18' 53.410"	434	51° 19' 3.756"	001° 19' 6.503"
144	51° 19' 4.423"	001° 18' 53.244"	435	51° 19' 3.733"	001° 19' 6.491"
145	51° 19' 4.436"	001° 18' 53.013"	436	51° 19' 3.711"	001° 19' 6.489"
146	51° 19' 4.446"	001° 18' 52.895"	437	51° 19' 3.688"	001° 19' 6.498"
147	51° 19' 4.445"	001° 18' 52.791"	438	51° 19' 3.668"	001° 19' 6.512"
148	51° 19' 4.450"	001° 18' 52.048"	439	51° 19' 3.651"	001° 19' 6.536"
149	51° 19' 4.451"	001° 18' 51.918"	440	51° 19' 3.637"	001° 19' 6.566"
150	51° 19' 4.454"	001° 18' 51.691"	441	51° 19' 3.626"	001° 19' 6.607"
151	51° 19' 4.443"	001° 18' 51.375"	442	51° 19' 3.619"	001° 19' 6.653"
152	51° 19' 4.445"	001° 18' 51.205"	443	51° 19' 3.614"	001° 19' 6.694"
153	51° 19' 4.442"	001° 18' 51.091"	444	51° 19' 3.598"	001° 19' 6.812"
154	51° 19' 4.436"	001° 18' 50.961"	445	51° 19' 3.582"	001° 19' 7.048"
155	51° 19' 4.429"	001° 18' 50.847"	446	51° 19' 3.561"	001° 19' 7.202"
156	51° 19' 4.423"	001° 18' 50.619"	447	51° 19' 3.533"	001° 19' 7.499"
157	51° 19' 4.419"	001° 18' 50.536"	448	51° 19' 3.497"	001° 19' 7.864"
158	51° 19' 4.386"	001° 18' 50.090"	449	51° 19' 3.472"	001° 19' 8.063"
159	51° 19' 4.353"	001° 18' 49.757"	450	51° 19' 3.459"	001° 19' 8.176"
160	51° 19' 4.343"	001° 18' 49.673"	451	51° 19' 3.378"	001° 19' 8.744"
161	51° 19' 4.336"	001° 18' 49.564"	452	51° 19' 3.341"	001° 19' 9.015"
162	51° 19' 4.327"	001° 18' 49.522"	453	51° 19' 3.293"	001° 19' 9.353"
163	51° 19' 4.303"	001° 18' 49.371"	454	51° 19' 3.260"	001° 19' 9.609"
164	51° 19' 4.280"	001° 18' 49.215"	455	51° 19' 3.230"	001° 19' 9.756"
165	51° 19' 4.270"	001° 18' 49.151"	456	51° 19' 3.041"	001° 19' 10.823"
166	51° 19' 4.237"	001° 18' 48.952"	457	51° 19' 2.753"	001° 19' 12.414"
167	51° 19' 4.208"	001° 18' 48.826"	458	51° 19' 2.678"	001° 19' 13.101"
168	51° 19' 4.182"	001° 18' 48.695"	459	51° 19' 2.547"	001° 19' 14.079"
169	51° 19' 4.154"	001° 18' 48.569"	460	51° 19' 2.389"	001° 19' 15.292"
170	51° 19' 4.098"	001° 18' 48.353"	461	51° 19' 2.254"	001° 19' 16.424"

171	51° 19' 4.043"	001° 18' 48.143"	462	51° 19' 2.187"	001° 19' 17.215"
172	51° 19' 3.984"	001° 18' 47.932"	463	51° 19' 2.146"	001° 19' 17.698"
173	51° 19' 3.928"	001° 18' 47.736"	464	51° 19' 2.063"	001° 19' 18.699"
174	51° 19' 3.869"	001° 18' 47.541"	465	51° 19' 2.025"	001° 19' 19.332"
175	51° 19' 3.806"	001° 18' 47.350"	466	51° 19' 2.015"	001° 19' 19.456"
176	51° 19' 3.737"	001° 18' 47.149"	467	51° 19' 2.009"	001° 19' 19.569"
177	51° 19' 3.665"	001° 18' 46.948"	468	51° 19' 1.986"	001° 19' 19.702"
178	51° 19' 3.586"	001° 18' 46.756"	469	51° 19' 1.930"	001° 19' 20.194"
179	51° 19' 3.502"	001° 18' 46.553"	470	51° 19' 1.914"	001° 19' 20.626"
180	51° 19' 3.410"	001° 18' 46.350"	471	51° 19' 1.913"	001° 19' 20.668"
181	51° 19' 3.319"	001° 18' 46.153"	472	51° 19' 1.890"	001° 19' 20.888"
182	51° 19' 3.193"	001° 18' 45.885"	473	51° 19' 1.879"	001° 19' 21.058"
183	51° 19' 2.936"	001° 18' 45.360"	474	51° 19' 1.867"	001° 19' 21.160"
184	51° 19' 2.878"	001° 18' 45.248"	475	51° 19' 1.845"	001° 19' 21.335"
185	51° 19' 2.820"	001° 18' 45.130"	476	51° 19' 1.840"	001° 19' 21.401"
186	51° 19' 2.659"	001° 18' 44.849"	477	51° 19' 1.836"	001° 19' 21.453"
187	51° 19' 2.564"	001° 18' 44.657"	478	51° 19' 1.831"	001° 19' 21.509"
188	51° 19' 2.362"	001° 18' 44.244"	479	51° 19' 1.833"	001° 19' 21.561"
189	51° 19' 2.255"	001° 18' 44.025"	480	51° 19' 1.831"	001° 19' 21.597"
190	51° 19' 2.148"	001° 18' 43.800"	481	51° 19' 1.834"	001° 19' 21.639"
191	51° 19' 2.066"	001° 18' 43.628"	482	51° 19' 1.839"	001° 19' 21.675"
192	51° 19' 1.983"	001° 18' 43.452"	483	51° 19' 1.854"	001° 19' 21.718"
193	51° 19' 1.901"	001° 18' 43.281"	484	51° 19' 1.876"	001° 19' 21.755"
194	51° 19' 1.827"	001° 18' 43.136"	485	51° 19' 1.897"	001° 19' 21.788"
195	51° 19' 1.750"	001° 18' 42.991"	486	51° 19' 1.922"	001° 19' 21.826"
196	51° 19' 1.416"	001° 18' 42.348"	487	51° 19' 1.947"	001° 19' 21.859"
197	51° 19' 1.302"	001° 18' 42.118"	488	51° 19' 1.975"	001° 19' 21.887"
198	51° 19' 1.232"	001° 18' 41.978"	489	51° 19' 2.001"	001° 19' 21.899"
199	51° 19' 1.161"	001° 18' 41.844"	490	51° 19' 2.027"	001° 19' 21.906"
200	51° 19' 1.113"	001° 18' 41.745"	491	51° 19' 2.053"	001° 19' 21.903"
201	51° 19' 1.080"	001° 18' 41.676"	492	51° 19' 2.308"	001° 19' 21.921"
202	51° 19' 0.986"	001° 18' 41.464"	493	51° 19' 2.336"	001° 19' 21.930"
203	51° 19' 0.856"	001° 18' 41.592"	494	51° 19' 2.395"	001° 19' 21.948"
204	51° 19' 0.659"	001° 18' 41.678"	495	51° 19' 2.430"	001° 19' 21.950"
205	51° 19' 0.656"	001° 18' 41.609"	496	51° 19' 2.469"	001° 19' 21.964"
206	51° 19' 0.654"	001° 18' 41.517"	497	51° 19' 2.507"	001° 19' 21.987"
207	51° 19' 0.862"	001° 18' 41.444"	498	51° 19' 2.542"	001° 19' 22.005"
208	51° 19' 0.956"	001° 18' 41.350"	499	51° 19' 2.586"	001° 19' 22.044"
209	51° 19' 0.859"	001° 18' 40.954"	500	51° 19' 2.630"	001° 19' 22.089"

210	51° 19' 0.738"	001° 18' 40.429"	501	51° 19' 2.674"	001° 19' 22.139"
211	51° 19' 0.684"	001° 18' 40.167"	502	51° 19' 2.749"	001° 19' 22.253"
212	51° 19' 0.644"	001° 18' 39.978"	503	51° 19' 2.846"	001° 19' 22.378"
213	51° 19' 0.607"	001° 18' 39.789"	504	51° 19' 2.807"	001° 19' 22.474"
214	51° 19' 0.574"	001° 18' 39.600"	505	51° 19' 2.757"	001° 19' 22.424"
215	51° 19' 0.547"	001° 18' 39.407"	506	51° 19' 2.710"	001° 19' 22.353"
216	51° 19' 0.523"	001° 18' 39.220"	507	51° 19' 2.679"	001° 19' 22.304"
217	51° 19' 0.503"	001° 18' 39.027"	508	51° 19' 2.651"	001° 19' 22.261"
218	51° 19' 0.472"	001° 18' 38.746"	509	51° 19' 2.623"	001° 19' 22.228"
219	51° 19' 0.450"	001° 18' 38.491"	510	51° 19' 2.592"	001° 19' 22.195"
220	51° 19' 0.443"	001° 18' 38.377"	511	51° 19' 2.566"	001° 19' 22.172"
221	51° 19' 0.437"	001° 18' 38.268"	512	51° 19' 2.538"	001° 19' 22.149"
222	51° 19' 0.426"	001° 18' 38.081"	513	51° 19' 2.509"	001° 19' 22.137"
223	51° 19' 0.426"	001° 18' 38.071"	514	51° 19' 2.458"	001° 19' 22.108"
224	51° 19' 0.413"	001° 18' 37.951"	515	51° 19' 2.394"	001° 19' 22.077"
225	51° 19' 0.407"	001° 18' 37.837"	516	51° 19' 2.366"	001° 19' 22.060"
226	51° 19' 0.400"	001° 18' 37.717"	517	51° 19' 2.337"	001° 19' 22.047"
227	51° 19' 0.394"	001° 18' 37.593"	518	51° 19' 2.305"	001° 19' 22.040"
228	51° 19' 0.395"	001° 18' 37.345"	519	51° 19' 2.276"	001° 19' 22.032"
229	51° 19' 0.393"	001° 18' 37.278"	520	51° 19' 2.250"	001° 19' 22.036"
230	51° 19' 0.395"	001° 18' 37.211"	521	51° 19' 2.221"	001° 19' 22.039"
231	51° 19' 0.394"	001° 18' 37.138"	522	51° 19' 2.143"	001° 19' 22.038"
232	51° 19' 0.400"	001° 18' 37.040"	523	51° 19' 2.065"	001° 19' 22.043"
233	51° 19' 0.409"	001° 18' 36.943"	524	51° 19' 2.013"	001° 19' 22.039"
234	51° 19' 0.415"	001° 18' 36.840"	525	51° 19' 1.961"	001° 19' 22.051"
235	51° 19' 0.421"	001° 18' 36.773"	526	51° 19' 1.912"	001° 19' 22.084"
236	51° 19' 0.426"	001° 18' 36.701"	527	51° 19' 1.875"	001° 19' 22.127"
237	51° 19' 0.428"	001° 18' 36.634"	528	51° 19' 1.847"	001° 19' 22.182"
238	51° 19' 0.434"	001° 18' 36.542"	529	51° 19' 1.823"	001° 19' 22.242"
239	51° 19' 0.443"	001° 18' 36.454"	530	51° 19' 1.805"	001° 19' 22.288"
240	51° 19' 0.448"	001° 18' 36.362"	531	51° 19' 1.794"	001° 19' 22.333"
241	51° 19' 0.458"	001° 18' 36.233"	532	51° 19' 1.771"	001° 19' 22.487"
242	51° 19' 0.468"	001° 18' 36.110"	533	51° 19' 1.743"	001° 19' 22.676"
243	51° 19' 0.479"	001° 18' 35.982"	534	51° 19' 1.722"	001° 19' 23.057"
244	51° 19' 0.502"	001° 18' 35.725"	535	51° 19' 1.596"	001° 19' 25.347"
245	51° 19' 0.555"	001° 18' 35.212"	536	51° 19' 1.575"	001° 19' 25.966"
246	51° 19' 0.616"	001° 18' 34.669"	537	51° 19' 1.539"	001° 19' 26.532"
247	51° 19' 0.647"	001° 18' 34.392"	538	51° 19' 1.510"	001° 19' 26.995"
248	51° 19' 0.713"	001° 18' 33.870"	539	51° 19' 1.493"	001° 19' 27.247"

249	51° 19' 0.351"	001° 18' 33.740"	540	51° 19' 1.459"	001° 19' 27.771"
250	51° 19' 0.371"	001° 18' 33.595"	541	51° 19' 1.433"	001° 19' 28.100"
251	51° 19' 0.375"	001° 18' 33.561"	542	51° 19' 1.425"	001° 19' 28.270"
252	51° 19' 0.728"	001° 18' 33.700"	543	51° 19' 1.357"	001° 19' 28.963"
253	51° 19' 0.786"	001° 18' 33.353"	544	51° 19' 1.318"	001° 19' 29.409"
254	51° 19' 0.903"	001° 18' 32.669"	545	51° 19' 1.293"	001° 19' 29.630"
255	51° 19' 0.945"	001° 18' 32.414"	546	51° 19' 1.258"	001° 19' 29.942"
256	51° 19' 0.991"	001° 18' 32.164"	547	51° 19' 1.248"	001° 19' 30.045"
257	51° 19' 1.037"	001° 18' 31.909"	548	51° 19' 1.225"	001° 19' 30.183"
258	51° 19' 1.083"	001° 18' 31.659"	549	51° 19' 1.181"	001° 19' 30.469"
259	51° 19' 1.132"	001° 18' 31.414"	550	51° 19' 1.162"	001° 19' 30.581"
260	51° 19' 1.164"	001° 18' 31.254"	551	51° 19' 1.077"	001° 19' 31.061"
261	51° 19' 1.679"	001° 18' 31.537"	552	51° 19' 1.019"	001° 19' 31.393"
262	51° 19' 1.603"	001° 18' 31.929"	553	51° 19' 0.986"	001° 19' 31.540"
263	51° 19' 1.557"	001° 18' 32.194"	554	51° 19' 0.953"	001° 19' 31.682"
264	51° 19' 1.465"	001° 18' 32.715"	555	51° 19' 0.916"	001° 19' 31.830"
265	51° 19' 1.407"	001° 18' 33.051"	556	51° 19' 0.890"	001° 19' 31.931"
266	51° 19' 1.345"	001° 18' 33.393"	557	51° 19' 0.865"	001° 19' 32.027"
267	51° 19' 1.290"	001° 18' 33.735"	558	51° 19' 0.836"	001° 19' 32.124"
268	51° 19' 1.274"	001° 18' 33.853"	559	51° 19' 0.825"	001° 19' 32.169"
269	51° 19' 1.254"	001° 18' 33.971"	560	51° 19' 0.811"	001° 19' 32.210"
270	51° 19' 1.238"	001° 18' 34.088"	561	51° 19' 0.800"	001° 19' 32.250"
271	51° 19' 1.205"	001° 18' 34.344"	562	51° 19' 0.716"	001° 19' 32.502"
272	51° 19' 1.152"	001° 18' 34.857"	563	51° 19' 0.663"	001° 19' 32.643"
273	51° 19' 1.138"	001° 18' 34.975"	564	51° 19' 0.603"	001° 19' 32.799"
274	51° 19' 1.125"	001° 18' 35.098"	565	51° 19' 0.530"	001° 19' 32.995"
275	51° 19' 1.115"	001° 18' 35.216"	566	51° 19' 0.492"	001° 19' 33.075"
276	51° 19' 1.088"	001° 18' 35.504"	567	51° 19' 0.405"	001° 19' 33.276"
277	51° 19' 1.061"	001° 18' 35.786"	568	51° 19' 0.315"	001° 19' 33.481"
278	51° 19' 1.036"	001° 18' 36.073"	569	51° 19' 0.190"	001° 19' 33.777"
279	51° 19' 1.009"	001° 18' 36.345"	570	51° 19' 0.119"	001° 19' 33.911"
280	51° 19' 0.985"	001° 18' 36.623"	571	51° 19' 0.012"	001° 19' 34.126"
281	51° 19' 0.971"	001° 18' 36.896"	572	51° 18' 59.923"	001° 19' 34.310"
282	51° 19' 0.972"	001° 18' 36.973"	573	51° 18' 59.861"	001° 19' 34.420"
283	51° 19' 0.970"	001° 18' 37.050"	574	51° 18' 59.786"	001° 19' 34.564"
284	51° 19' 0.971"	001° 18' 37.128"	575	51° 18' 59.739"	001° 19' 34.633"
285	51° 19' 0.970"	001° 18' 37.262"	576	51° 18' 59.667"	001° 19' 34.752"
286	51° 19' 0.976"	001° 18' 37.531"	577	51° 18' 59.478"	001° 19' 35.022"
287	51° 19' 0.978"	001° 18' 37.671"	578	51° 18' 59.229"	001° 19' 35.350"

288	51° 19' 0.984"	001° 18' 37.816"	579	51° 18' 59.076"	001° 19' 35.558"
289	51° 19' 0.989"	001° 18' 37.956"	580	51° 18' 58.915"	001° 19' 35.211"
290	51° 19' 0.990"	001° 18' 38.153"	581	51° 18' 58.905"	001° 19' 35.189"
291	51° 19' 0.994"	001° 18' 38.256"			

9 This licence remains in force until the authorised scheme has been decommissioned in accordance with a methodology and programme approved by the MMO and the completion of such programme has been confirmed by the MMO in writing.

10 The provisions of section 72 of the 2009 Act apply to this licence except that the provisions of section 72(7) and (8) relating to the transfer of the licence only apply to a transfer not falling within article 6 (benefit of the Order).

11 With respect to any condition which requires the licensed activities be carried out in accordance with the plans, protocols or statements approved under this licence, the approved details, plan or scheme are taken to include any amendments that may subsequently be approved in writing by the MMO.

12 Any amendments to the details, plan or scheme must be in accordance with the principles and assessments set out in the environmental statement, and approval for an amendment may be given only where it has been demonstrated to the satisfaction of the MMO that the amendment is unlikely to give rise to any materially new or materially different environmental effects from those assessed in the environmental statement.

PART 2

CONDITIONS

Design parameters

1 (1) The total length of the marine cables, volume and area of cable protection areas between the respective MHWS at each of the Suffolk and Kent landfall for Work No. 6 must not exceed the following—

Table 2. Design parameters

Length of cable (km)	*Area of cable protection (m2)*	*Volume of cable protection (m3)*
122196,100	196,100	582,200

(2) The total pre-sweeping volume must not exceed 250,000 cubic metres.

(3) Any part of the authorised development located within the following areas shown on the Cable Installation Area (Future Dredging Depths) Plan, must be designed, installed, operated and maintained at a level which would not preclude dredging:

(a) of the area shown shaded [ ] and labelled "Sunk Pilot Boarding Area" to a level of 22 metres below Chart Datum;

(b) of the area shown shaded [ ] and labelled "NE Spit", to a level of 12.5 metres below Chart Datum;

(c) to the area shown shared [ ] an labelled "Long Sand Head 2 Way Routing Crossing", to a level of 12.5 metres below Chart Datum;

(d) and in all cases (a) to (c) makes allowance for an 'over-dredge' tolerance of 0.5 metres in addition to the stated depths attributable to standard dredging methodology..

(4) The undertaker must not carry out wet storage or relocate any boulders or archaeological finds to or within the three areas referred to in sub paragraph (3).

Extension of time periods

2 Any time period given in this licence given to either the undertaker or the MMO may be extended with the agreement of the other party in writing such agreement not to be unreasonably withheld or delayed.

Notifications and inspections

3 (1) The undertaker must ensure that—

(a) a copy of this licence (issued as part of the grant of the Order) and any subsequent amendments or revisions to it is provided to—

(i) all agents and contractors notified to the MMO in accordance with condition 5; ~~and~~

(ii) the masters and transport managers responsible for the vessels notified to the MMO in accordance with condition 5; and

(iii) the PLA;

(b) within 28 days of receipt of a copy of this licence those persons referred to in (a) above must confirm receipt of this licence in writing to the MMO.

(2) Only those persons and vessels notified to the MMO in accordance with condition 5 are permitted to carry out the licensed activities.

(3) Copies of this licence must also be available for inspection at the following locations—

(a) the undertaker's registered address;

(b) any site office located at or adjacent to the construction site and used by the undertaker or its agents and contractors responsible for the loading, transportation or deposit of the authorised deposits; and

(c) on board each vessel or at the office of any transport manager with responsibility for vessels from which authorised deposits or removals are to be made.

(4) The documents referred to in sub-paragraph (1) must be available for inspection by an authorised enforcement officer at the locations set out in sub-paragraph (3) above.

(5) The undertaker must provide access, and if necessary appropriate transportation, to the offshore construction site or any other associated works or vessels to facilitate any inspection that the MMO considers necessary to inspect the works during construction and operation of the authorised scheme.

(6) The undertaker must inform the MMO Coastal Office in writing at least seven days prior to commencement of the licensed activities or any part of them, and within fourteen days of completion of the licensed activities.

(7) The undertaker must inform the Kingfisher Information Service of Seafish by email to kingfisher@seafish.co.uk of details regarding the vessel routes, timings and locations relating to the construction of the authorised scheme or relevant part—

(a) at least seven days prior to the commencement of offshore activities, for inclusion In the Kingfisher Bulletin and offshore hazard awareness data; and

(b) as soon as reasonably practicable and no later than 24 hours after completion of construction of all offshore activities.

(c) Confirmation of notification must be provided to the MMO within seven days.

(8) A notice to mariners must be issued at least seven days prior to the commencement of the licensed activities or any part of them, such notice is to include a description of the project, a description of the activity the notification relates to, start date and anticipated completion date of the activity and the expected vessel routes from the local construction ports to the relevant location(s). Copies of all notices must be provided to the MMO and the PLA within 24 hours of such notification.

(9) The undertaker must notify HM Coastguard (HMCG) (Zone11@hcmg.gov.uk, Zone13@hcmg.gov.uk and Zone14@hcmg.gov.uk) prior to commencement of licensed cable installation activities and the undertaker must send a copy to the MMO and the PLA within seven days of the issue of such notification.

(10) The undertaker must notify The Source Data Receipt team at the UK Hydrographic Office of commencement of the licensed activities at least seven days prior to commencement of each licensed activity, such notice is to include the start data and end date, a description of the works, the positions of the work area (WGS84) and details of any marking arrangements and the undertaker must send a copy to the MMO the PLA within seven days of the issue of such notification.

(11) In case of damage to, or destruction or decay of, the authorised scheme seaward of MHWS or any part thereof the undertaker must as soon as possible and no later than 24 hours following the undertaker becoming aware of any such damage, destruction or decay, notify MMO, MCA, Trinity House, Kingfisher Information Service of Seafish, the PLA and the UK Hydrographic Office.

(12) In case of exposure of cables on or above the seabed, the undertaker must, within five days following identification of a cable exposure, notify mariners by issuing a notice to mariners and by informing Kingfisher Information Service of the location and extent of exposure. Copies of all notices must be provided to the MMO, MCA, Trinity House, Kingfisher Information Service of Seafish, the PLA and UK Hydrographic Office within seven days of the exposure identification.

Pre-construction plans and documentation

4 (1) The licensed activities or any part of those activities under Works No. 6 must not commence until a cable specification and installation plan document in respect of those licensed activities, has been submitted to and approved in writing by the MMO, such approval to be within sixteen weeks of submission (in consultation with Natural England, the Joint Nature Conservation Committee, MCA, the EA, the PLA and Cefas), which shall include details of—

(a) technical specification of offshore cables below MHWS, including a desk-based assessment of attenuation of electromagnetic deviation of the high voltage cable route, shielding and cable burial depth in accordance with industry good practice;

(b) location and timings;

(c) timings and duration of intertidal works;

(d) a detailed cable laying and burial plan, incorporating a burial risk assessment to ascertain suitable burial depths and cable laying techniques and demonstrating compliance with condition 1(3) within the Areas of Interest;

(e) a detailed cable protection plan;

(f) details of intended boulder removal;

(g) a marine pollution contingency plan;

(h) a waste management plan;

(i) An offshore construction environment management plan (CEMP) including a Marine Mammal Management Plan, a Marine Non-Native Species (MNNS) Plan, a marine bio-security plan,

(j) a Fisheries Liaison and Co-existence Plan (FLCP);

(k) a navigation installation plan for the relevant stage which is in ~~general~~substantial accordance with the principles set out in the outline navigation installation plan; and

(l) details of cable protection, any obstructions in the intertidal area and any clumping of disused cables for the updating of charts. Licensed activities must not commence until written approval of the cable specification and installation plan document is provided by the MMO (in consultation with the PLA).

(2) The licensed activities or any part of the activities must not commence unless a written scheme of archaeological investigation has been submitted to and approved by the MMO, in accordance with the marine archaeology outline offshore written scheme of investigation, and in accordance with industry good practice and in consultation with the statutory historic body. The written scheme of archaeological investigation is to include –

(a) details of responsibilities of the undertaker, archaeological consultant and contractor;

(b) methodology for any further project investigation including specifications for geophysical, geotechnical and diver or remotely operated vehicle investigations;

(c) archaeological analysis of survey data, and timetable for reporting, which is to be submitted to the MMO;

(d) delivery of any mitigation including the use of archaeological construction exclusion zones in agreement with the MMO;

(e) the preparation of a reporting and recording protocol for archaeological discoveries, including reporting of any wreck or wreck material during delivery of the authorised scheme; and

(f) a requirement for the undertaker to ensure that a copy of any agreed archaeological report is deposited with the National Marine Heritage Record, by submitting a Historic England OASIS ('Online Access to the Index of archaeological Investigations') form with a digital copy of the relevant report within six months of completion of construction of the authorised development, and to notify the MMO that the OASIS form has been submitted to the National Marine Heritage Record within fourteen days of the submission.

(3) Each programme, statement, plan, protocol or scheme required to be approved under condition 4 must be submitted for approval at least sixteen weeks prior to the intended commencement of the part of the licensed activities to which it relates. Any programme, statement, plan, protocol or scheme can be submitted under the following phases of works—

(a) Landfall installation;

(b) Seabed preparation;

(c) Cable lay and burial;

(d) Post lay cable protection.

(4) Save in respect of any plan which secures mitigation to avoid adversely affecting the integrity of a European Site, where the MMO fails to determine that application for approval under condition 4 within the period referred to in sub-paragraph (1), the programme, statement, plan, protocol or scheme is deemed to be approved by the MMO.

(5) The licensed activities must be carried out in accordance with the approved plans, protocols, statements, schemes and details approved under condition 4, unless otherwise agreed in writing by the MMO~~.~~ (provided that the MMO has consulted with any party that it was required to consult with in relation to a relevant plan, protocol, statement, or details pursuant to condition 4)..

Reporting of engaged agents, contractors and vessels

5 (1) The undertaker must provide the following information in writing to the MMO—

(a) the name and function of any agents, contractors or sub-contractors that will carry on any licensed activity listed on behalf of the undertaker, no less than 24 hours before the commencement of the licensed activity; and

(b) any vessel that will carry on any licensed activity listed on behalf of the undertaker, no less than 24 hours before the commencement of the licensed activity, which shall include the master's name, vessel type, vessel IMO number and vessel owner or operating company.

(c) Any changes to the supplied details must be notified to the MMO in writing prior to the agent, contractor or vessel engaging in the licensed activities.

Compass deviation

6 (1) The licence holder must undertake a desk study to establish the levels of electromagnetic deviation affecting ship compasses and other navigation systems caused by the cable which must be provided to the MMO no less than eight weeks prior to cable installation activities.

(2) There must be no more than a 3 degree electromagnetic compass deviation for 95% of the cable route and for the remaining 5% of the cable route there must be no more than a 5 degree electromagnetic compass deviation in water depths of approximately 5 m and deeper ('the MCA requirement').

(3) If the MCA requirement cannot be met, a post installation actual electromagnetic compass deviation survey should be conducted for the cable in areas where compliance has not been achieved. This data must be provided to the MCA and UK Hydrographic Office (UKHO) in order to update Admiralty Charts accordingly, and the undertaker must send a copy of such data to the MMO within seven days.

Aids to navigation

7 (1) Any vessels utilised during the licensed activities, when jacked up, must exhibit signals in accordance with the UK Standard Marking Schedule for Offshore Installations;

(2) The undertaker must during the whole period from the commencement of the licensed activities to completion of decommissioning of the authorised development exhibit such lights, marks, sounds, signals and other aids to navigation, and take such other steps for the prevention of danger to navigation as Trinity House may from time to time direct.

Chemical, drilling and debris

8 (1) Unless otherwise agreed in writing by the MMO, the carriage and use of chemicals in the construction of the authorised scheme must comply with the International Convention for the Prevention of Pollution from Ships.

(2) The undertaker must ensure that any coatings/treatments are suitable for use in the marine environment and are used in accordance with guidelines approved by Health and Safety Executive and the Environment Agency Pollution Prevention Control Guidelines.

(3) The storage, handling, transport and use of fuels, lubricants, chemicals and other substances must be undertaken so as to prevent releases into the marine environment, including bunding of 110% of the total volume of all reservoirs and containers.

(4) The undertaker must ensure that only inert material of natural origin, drilling mud and dredged material, produced during the landfall installation or seabed preparation works is disposed of within the disposal site reference(s) to be provided by the MMO within the extent of the Order limits seaward of MHWS.

(5) The undertaker must inform the MMO of the location and quantities of material disposed of each month under the Order, by submission of a disposal return by 15th February each year for the months August to January inclusive, and by 15th August each year for the months February to July inclusive.

(6) The undertaker must ensure that any rock material used in the construction of the authorised scheme is from a recognised source and free from contaminants.

(7) The undertaker must ensure that any oil, fuel or chemical spill within the marine environment is reported to the MMO, Marine Pollution Response Team within 12 hours.

(8) All dropped objects must be reported to the MMO using the Dropped Object Procedure Form as soon as reasonably practicable and in any event within 6 hours of the undertaker becoming aware of an incident. Immediate notification must be made to HMCG via telephone where there is a perceived danger or hazard to navigation. On receipt of the Dropped Object Procedure Form, the MMO may require relevant surveys to be carried out by the undertaker (such as side scan sonar) if reasonable to do so and the MMO may require obstructions to be removed from the seabed at the undertaker's expense if reasonable to do so.

Force majeure

9 (1) If, due to stress of weather or any other cause the master of a vessel determines that it is necessary to deposit the authorised deposits within or outside of the Order limits because the safety of human life and/or of the vessel is threatened, within 48 hours full details of the circumstances of the deposit must be notified to the MMO.

(2) The unauthorised deposits must be removed at the expense of the undertaker unless written approval is obtained from the MMO.

Trenchless Landfall Techniques

10 (1) Landfall installation must only use trenchless landfall techniques.

(2) No exit to trenchless landfall techniques must occur within 50m of saltmarsh habitat within Pegwell Bay

(3) No exit to trenchless landfall techniques must occur within 50m of MLWS at Leiston to Aldebrugh SSSI.

Red Throated Diver

11 (1) Unless otherwise agreed in writing with the MMO, none of the following activities relating to cable laying are permitted to take place on the seabed within the Outer Thames Estuary SPA between 1 November and 31 March inclusive—

(a) Pre-sweeping dredging;

(b) Boulder clearance, out-of-service cable removal, and cable crossing preparation;

(c) Cable installation (specifically mechanical ploughing or cutting and/or water jetting and post lay burial operation);

(d) Cable protection (specifically rock placement);

(2) Unless otherwise agreed in writing with the MMO, none of the following activities relating to landfall installation are permitted to take place on or under the seabed within the Outer Thames Estuary SPA between 1 January and 31 March inclusive—

(a) Trenchless landfall techniques for landfall installation;

(3) The provisions of paragraph (1) and (2) do not apply in respect of emergency cable repair works.

(4) The undertaker will comply with the red-throated diver protocol during the construction of the authorised development.

Maintenance

12 (1) The undertaker may at any time maintain the authorised development, except to the extent that this licence or an agreement made under this licence provides otherwise.

(2) Maintenance works include but are not limited to—

(a) marine growth removal;

(b) cable remedial burial;

(c) cable repairs and replacement;

(d) cable protection replenishment for areas of existing cable protection established within 10 years from the date of the grant of the order, unless otherwise agreed by the MMO in writing.

(3) In undertaking activities under condition 12(2)(b)(c) and (d), other than within the Areas of Interest where navigable depth may not be reduced to any extent the undertaker must not reduce water depth by more than 5% unless agreed with the MMO in writing.

(4) An operation and maintenance plan must be submitted to the MMO for approval (in consultation with the PLA) at least six months prior to the commencement of the operation of the licensed activities. All operation and maintenance activities must be carried out in accordance with the approved plan.

Deployment of Cable Protection

13 Any new cable protection in areas previously not subject to cable protection authorised under this licence must be deployed within 10 years from the date of the grant of the order unless otherwise agreed by the MMO in writing.

Post construction

14 (1) The undertaker must submit to the MMO within three months of completion of licensed activities, an 'as built' plan which will display—

(a) the location of the cable as laid with specific details of the achieved burial depths,

(b) locations of buried and surface-laid cables,

(c) the placed location and quantity of rock placement or concrete mattressing used in these licensed activities; and

(d) final clearance depths over the protected cables and clumped disused cables.

(2) Any programme, statement, plan, protocol or scheme under part (1) may be submitted under the following phases of works—

(a) Cable lay and burial;

(b) Post lay cable protection.

(3) Any area which is identified as a possible danger to navigation on assessment of the 'as built plan' in consultation with the MCA, may require marking with aids to navigation at the licence holder's expense, unless otherwise agreed with the MMO.[d]

(4) A written decommissioning plan must be submitted to the MMO for approval no less than six months prior to when decommissioning is due to commence. Any cable protection located within marine protected areas must be removed upon decommissioning, unless a decision is made at the time that it is best to leave it in situ.

(5) All equipment, temporary structures, waste and/or debris associated with the licensed activities must be removed within seven days of completion of the licensed activities.

(6) The undertaker must submit to the MCA and UK Hydrographic Office the post laid cable International Hydrographic Office (IHO1A) approved sonar or Multi Beam Echo Sounder survey data and the undertaker must send a copy of such notification to the MMO within seven days.

(7) The undertaker must notify the Source Data Receipt team of the UK Hydrographic Office on completion of the licensed activities no later than fourteen days after the completion of the licensed activities, which should include latitude and longitude coordinates in WGS84 of the installed works on and or above the seabed, any changes to engineering drawings and details of new or changed aids to navigation where applicable, and the undertaker must send a copy of such notification to the MMO within seven days of the notification being issued.

Offshore Preparation works, construction monitoring and post construction monitoring.

15 (1) The undertaker must consult the PLA on the proposed activities and programme for any Offshore Preparation Works, postconstruction monitoring and related reporting within the Areas of Interest no less than 20 business days before such survey work is programmed to commence. The undertaker must have regard to any request made by the local harbour authorities for reasonable amendment to the proposed activities or programme, which request must be made to the undertaker within 5 business days of receipt of the details of the proposed activities and programme.

(2) The undertaker must notify the PLA of the final planned programme for any pre-construction monitoring, construction monitoring, postconstruction monitoring within the Areas of Interest no less than 5 business days before such survey work is programmed to begin.

(3) The undertaker must consult the local harbour authorities on any application for marine licensing for the clearance of unexploded ordnance within or which may affect the Areas of Interest before such applications are submitted to the MMO. The undertaker must have regard to any request made by the PLA for reasonable amendment to the proposed application, which request must be made to the undertaker within 10 business days of receipt of the details of the proposed application.

(4) The undertaker must notify the PLA of the final programme for any clearance of unexploded ordnance to be undertaken within the Areas of Interest no less than 20 business days before such disposal is programmed to begin.

Remediation

16. (1) Where, following the installation or maintenance of cables located within the Areas of Interest it is identified by the undertaker (who shall notify the MMO and the PLA as soon as reasonably practicable of this fact and in any event within 2 business days) or, following inspection by the PLA (and the same is notified to the undertaker as soon as reasonably practicable), that the level of any cable is such that the condition 1(3) has not

[d] The PLA would also expect this to be amended in light of the comments at paragraph 11(f) of the Written Representation.

been achieved or at any time following installation or maintenance the cable has moved such that the requirements of condition 1(4) are no longer being achieved, then, unless otherwise agreed in writing with the MMO and the PLA, the undertaker is required to carry out remediation works as specified in the cable specification and installation plan subject to subject to sub paragraph (2) below.

(2) Unless otherwise agreed in writing with the MMO and the PLA, the undertaker will carry out the following arrangements for the carrying out the remediation works:

(a) the undertaker will re-bury the cable to the required specification to achieve the requirements of condition 1(3); and

(b) following the completion of the works in sub-paragraph (2)(a), if it is identified by the undertaker or the PLA (following inspection) that the required specification is not achieved, then the undertaker will remove the cable without unreasonable delay and thereafter relay a new cable pursuant to an updated cable specification and installation plan approved by the MMO and the PLA which updated cable specification and installation plan specifically identifies and addresses why the previous cable burial was not successful, how that has been addressed and what measures are to be used in relaying the cable to prevent the failure reoccurring.

(3) The steps in this paragraph shall be repeated until the requirement in condition 1(3) is achieved or the cable is permanently removed from the areas referred to in paragraph 16(1).