

THE PROPOSED A122 (LOWER THAMES CROSSING) DEVELOPMENT CONSENT ORDER

DEADLINE 1

WRITTEN REPRESENTATIONS
submitted on behalf of
the **PORT OF LONDON AUTHORITY**

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1. Introduction

1.1 These Written Representations are made on behalf of the Port of London Authority (**PLA**) in respect of an application for development consent (the **Application**) submitted by National Highways (the **Applicant**) for the Lower Thames Crossing (the **Order Scheme**). The application is accompanied by a draft of the proposed DCO (**dDCO**). These Written Representations are 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 structure of these Written Representations is as follows:

Section 1 – Introduction

Section 2 – The PLA

Section 3 – Ports policy

Section 4 – Port development

Section 5 – Tunnelling considerations

Section 6 – General construction matters

Section 7 – Art. 2 dDCO – Extent of “authorised development”

Section 8 – Art. 8 dDCO – Transfer of undertaking

Section 9 – Art. 18 dDCO – Interference with the river

Section 10 – Art. 28 dDCO – Land over which rights may be acquired for permanent outfall

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Section 16 – Art. 48 dDCO – Explosives anchorage

Section 17 – Sch. 2 dDCO – Approval of documents

Section 18 – Sch. 14 dDCO Protective provisions – ground investigation works

Section 19 – Sch. 14 dDCO Protective provisions – requests for design information

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Section 21 – Sch. 15 dDCO – Lighting

Section 22 – Environmental Statement

Section 23 – Concluding remarks

Annex A – PLA Cargo Origins and Destinations

2. The PLA

- 2.1 The PLA is the statutory harbour authority for the tidal River Thames (the **river**) between Teddington and the outer Thames Estuary. The Port of London (the **Port**) spans the entirety of the river, from the stone pillar (obelisk) at Teddington on the Surrey bank just downriver from Teddington Lock, to the North Sea. It is governed by the Port of London Act 1968 (the **1968 Act**). It falls within the definition of “statutory undertaker” for the purposes of s.8 of the Acquisition of Land Act 1981 as applied by s.127 of the Planning Act 2008.
- 2.2 The PLA’s statutory functions include responsibility for conservancy, hydrographic surveying, dredging, managing the public navigation and controlling vessel movements. These duties, in particular the conservancy duty, mean that the PLA must ensure the river is fit to be used safely for navigation by all users. The PLA also has duties under section 48A of the Harbours Act 1964 to have regard to environmental matters and the environmental impact of works for which it has a consenting function.
- 2.3 Any third party wanting to carry out any works in, on, under or over the river must first obtain the PLA’s consent, in the form of a licence under section 66 of the 1968 Act. A licence from the PLA is also required, under section 73, for the carrying out of dredging or other comparable operations. The PLA provides moorings in the river and licenses their provision by others. As the body responsible for licensing river works and moorings, the PLA must have special regard for the unimpeded use of and access to licensed works by the PLA’s existing licensees.
- 2.4 The PLA’s general functions also include the promotion of the use of the river for freight and passengers as an important and sustainable transport corridor.
- 2.5 The PLA owns approximately 95% of the bed and foreshore of the river, with most of the rest being owned by the Crown Estate. The PLA owns all of the riverbed and foreshore within the Order limits as shown on sheets 15, 16 and 19 of the Works Plans (doc APP-019).
- 2.6 The PLA is a trust port. Accordingly, it manages the river for the benefit of all river users and is obliged to turn its assets to account for the benefit of its statutory undertaking. As part of this obligation, it must also minimise the conservancy and other charges payable under the 1968 Act by river users. The PLA is wholly funded by such charges and the other funds it generates: it does not receive any central or other Government subsidy.
- 2.7 The PLA has no in principle issue with a tunnel in this general location as provided for in the Application. However, it has concerns about the development for which authorisation is sought under the dDCO in the wider Application documents, insofar as the development relates to the river, including particularly in respect of the feasibility of the tunnel design and the impacts of the proposals on use of the river. Details of the PLA’s concerns are set out in these Written Representations.
- 2.8 The Port is the country’s largest port, and the UK’s busiest inland waterway, handling a range of cargoes including oil products, construction materials (including aggregates,

cement, metals and forest products, vehicles, food products and all manner of containerised/trailer goods with worldwide cargo, origins and destinations. 57.7m tonnes of goods were handled in the Port in 2022 and its contribution to international trade is critical (see Annex A – PLA Cargo Origins and Destinations). Facilities in the Port, upstream of the proposed tunnel location, include nationally significant fuel terminals, Europe’s largest sugar refinery and the UK’s largest grain terminal.

2.9 Unlike many other large ports, the Port is spread over 70 separate independently run terminals. In 2022, 79% of vessel arrivals to the Thames were to berths upstream of the Order Scheme. See Figure 1 for terminal locations and the indicative route of the proposed tunnel. 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.

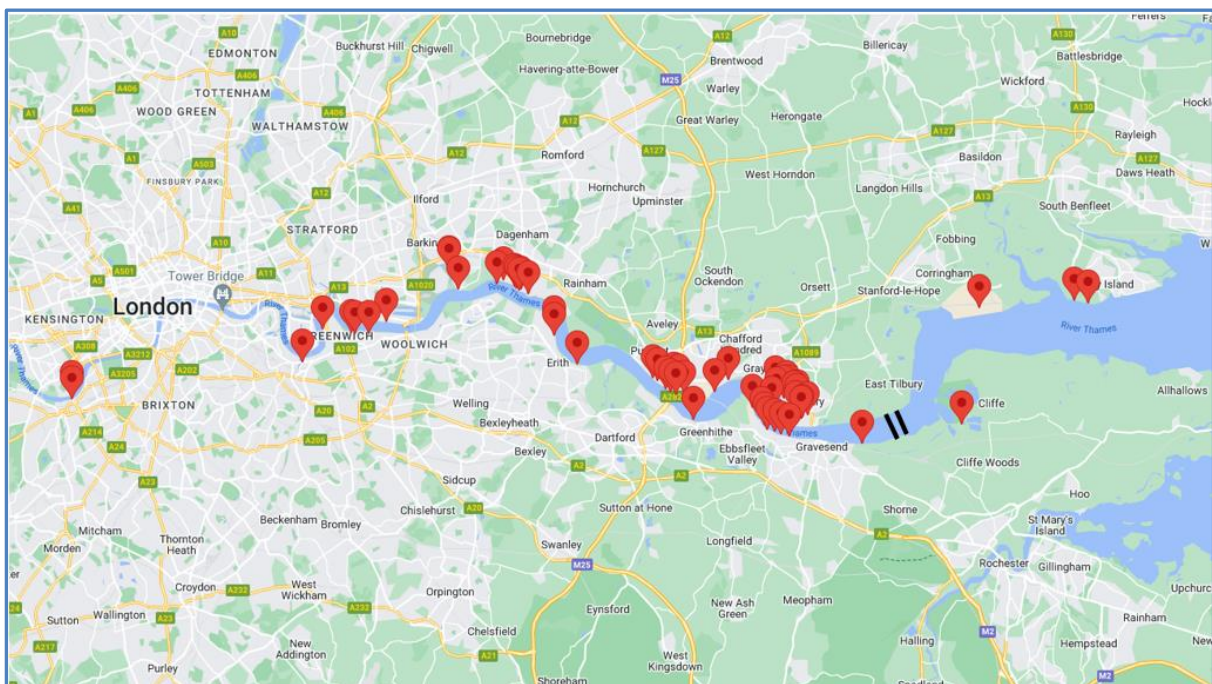


Figure 1: Terminal Locations and indicative route of LTC tunnel shown in black

3. Ports policy

3.1 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. It was announced in March 2023 that a review of the NPS-Ports is to be undertaken and that the existing NPS-Ports will remain in full effect during the period of the review.

- 3.2 In addition to the NPS-Ports, regard must be had to the UK Marine Policy Statement (the **MPS**), 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 and the relevant Marine Plan for the river is the South East Inshore Marine Plan (the **SEIMP**).
- 3.3 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). The SEIMP highlights how the plan area “*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 [...] 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.*”
- 3.4 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. Port development

- 4.1 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.

- 4.2 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 2021 London Gateway announced a £350 million investment in berth 4 and PoTLL set out at paragraph 3.11 of its Relevant Representation that it will be expanding its operations and plans, with around £1 billion of investment in the coming years.
- 4.3 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.
- 4.4 In light of the above, it is therefore critical that the existing and future capacity and operation of the Port are not compromised during construction and operation of the Order Scheme. With the Lower Thames Crossing passing under the river in tunnel, it should be possible to ensure that the capacity and operation of the Port is not compromised. However, the dDCO and the application documents submitted by the Applicant do not at this time sufficiently reassure the PLA that this can be achieved.
- 4.5 The PLA is concerned that the Order Scheme as built out may cause economic disbenefits to the Port. To accommodate existing and predicted future vessel sizes, the PLA needs to safeguard a navigation channel capable of being dredged, as it has done previously with the Dartford and Silvertown Tunnels. In the event that it is not possible to dredge to the agreed level of 12.5m below chart datum (plus 0.5m overdredge allowance) (see section 5 below), it will limit the passage of vessels over the tunnel and, consequently, the quantum of trade within the Port. The impact of this restriction could be significant because so many vessel arrivals on the river are upstream of the Order Scheme.
- 4.6 Furthermore, in the absence of certainty that the PLA will be able to dredge to the agreed dredge level, an adjustment to the economic benefits case is necessary because the Order Scheme would, as currently designed, and with the flexibility sought in the dDCO, detrimentally impact the future of the UK's largest port.

5. Tunnelling considerations

- 5.1 For the reasons above, the depth of the tunnel and the ability to which the PLA is able to dredge above it, is a critical issue for river users, in particular trade users. There remains uncertainty about the interface between the design of the tunnel – including the reference design and the limits of deviation permitted by the dDCO – and the preservation of the river as an essential commercial shipping corridor.
- 5.2 The PLA must be confident that the tunnel will be constructed at a sufficient depth, and with sufficient competent ground cover, such that it does not prejudice current and future river trade by compromising the PLA's ability to dredge to a depth which accommodates future development of the Port and ensures safe navigation.
- 5.3 The PLA has engaged extensively with the Applicant pre-submission in order to secure safeguards within the Order scheme with regard to works proposed in the river and

matters such as channel depths. The depth of 12.5m below chart datum (plus 0.5m overdredge) has been agreed by the Applicant and is included within the dDCO. However, the PLA continues to have significant concerns about the reference design, the upwards limits of deviation and the drafting of the dDCO, which taken together would seem to mean that it may not be possible for the agreed dredge depth to be achieved.

- 5.4 Discussions are on-going with the Applicant but at the time of writing, the PLA remains concerned about the design of the tunnel and the impacts of the other elements of the dDCO.

Tunnel cover

- 5.5 Paragraphs 99(1) and (2) of Schedule 14 (Part 8) to the dDCO provide that the navigable channel of the river can be dredged to a depth of 12.5m below chart datum (with a 0.5m over-dredge allowance). There is a straightforward relationship between the upper limit of the tunnel, and the tunnel cover required, and the PLA's ability to dredge and deepen the riverbed. In short, if the tunnel is too close to the surface of the riverbed, the PLA will be unable to dredge to the agreed depth, with the concomitant adverse economic and strategic consequences for the commercial activities of the Port.
- 5.6 The PLA considers that the details provided in the Application, particularly the Tunnel Limits of Deviation Plan (doc APP-046) have not adequately demonstrated that it is possible to construct the tunnel on the alignment shown as, if the Applicant exercises its powers to deviate upwards when constructing the tunnel, the Applicant could not achieve the minimum cover required for the tunnel without impacting detrimentally on the PLA's ability to dredge the navigable channel of the River to the agreed depth of 12.5m below chart datum (plus 0.5m overdredge).
- 5.7 Exacerbating this issue is the fact that it is fundamentally unclear to the PLA *what* extent of protection for the tunnel is required by the Applicant. A layer of cover of at least 0.9 times tunnel diameter is referenced in paragraph 9.5.6 in Chapter 9 of the Environmental Statement (**ES**) (doc APP-147). With a reference design tunnel of 16.040m external diameter this would equate to 14.4m of cover that is required. However, the River Restrictions Plan (doc APP-045) shows as little as approximately 12.5m of cover once the PLA has dredged to 12.5m below Chart Datum and allowing for 0.5m overdredge.
- 5.8 The Applicant has sought to reassure the PLA that this should not pose an issue for the PLA by producing a Flotation Sensitivity Check. The Flotation Sensitivity Check only addresses the static "as-built" state and does not consider the tunnel construction activity and in particular the application of face pressures. In addition, the Sensitivity Check makes no allowance for the construction of the tunnel utilising the upward limits of deviation and is therefore not consistent with the works for which authorisation is sought under the dDCO.
- 5.9 While the preparation of the Sensitivity Check is welcomed, the PLA needs to see an assessment that is based on the full extent of what the dDCO would permit, not on the reference design. The type of Tunnel Boring Machine (**TBM**) that is used is very important: the currently proposed TBM is a slurry TBM which our tunnelling advisers agree is the most appropriate method if it is correctly managed. Given the different impacts of different types of TBM, the Applicant should confirm that a slurry TBM is to be used and that the Main Contractor will not propose a change to an alternative, such as an Earth Pressure Balance Machine which would alter the risks of the works to be carried out under the dDCO. The Sensitivity Check highlights that the cover/diameter ratio is lower than normal but does not provide any further commentary or justification about this.

- 5.10 The PLA had concerns about the dredge cut on the north shore of the Order scheme as shown on the River Restrictions Plan (doc APP-045), which shows a vertical line for part of the cross-section of the riverbed and does not allow for a side slope. The Applicant has shared an updated River Restriction Plan with the PLA which it is understood will be submitted at deadline 1. The updated plan shows a 1:10 slope which satisfies the PLA's concern.
- 5.11 Without sight of the Applicant's DCO stage design risk register, it is hard to see how all these tunnelling risks and the reliance on cover will be adequately addressed while accommodating the PLA's future dredging requirements.

Scour protection

- 5.12 The PLA has sought confirmation or evidence from the Applicant that it has considered the potential for scour to occur above the tunnel due to the dynamic nature of the river. The PLA has asked the Applicant to clarify that if scour were to occur, at what level might an intervention need to be made and what any likely interventions would be (fill and/or scour protection). Whilst the Application documents state that "*the main tunnels would be constructed so that the crown of the tunnel is at sufficient depth below the bed of the River Thames to avoid the need for any works within the river to provide scour protection*" (see paragraph 5.3.2 of the Water Framework Directive (doc APP-478), para 14.5.14(w) of Chapter 14 of the ES (doc APP-152) and the register of environmental actions and commitments "REAC" RDWE041 (doc APP-336)), it is unclear how the Applicant has determined what is acceptable in terms of a reduced cover over the tunnel and what, if the riverbed drops below this acceptable level, the anticipated mitigation measures would be. In the event that scour protection is required there needs to be sufficient space to install the necessary scour protection and maintain the agreed limits. The Applicant has assumed scour protection of 0.5m in the Sensitivity Check but the details of the Scour Protection Study which lead to this assumption are omitted from the Sensitivity Check. Further, the Applicant must ensure that installation of scour protection is appropriately environmentally assessed (as it is not currently assessed or reported in the ES submitted in support of the Application – doc APP-138 to 155).

Anchor penetration

- 5.13 The Preliminary Navigational Risk Assessment (**pNRA**) (doc APP-548)) provides for an estimated maximum depth of anchor penetration of 4.9 metres in the navigable channel, noting that the tunnel protection zones will provide sufficient depth of cover to protect against accidental impact loading from anchor drag. However, as noted above, based on the design of the tunnel as shown in the Application, dredging the navigable channel to the agreed depth will impact upon the tunnel cover which will, in turn, result in anchor penetration occurring within the first protection zone as shown on the River Restrictions Plan (doc APP-045). The first protection zone is the zone under the dDCO within which the PLA is not able to undertake or licence works without the consent of the Applicant due to the potential for unacceptable stresses being placed on the tunnel. Additionally, the use of jack up barges (**JUB**) for the ground investigation work could result in the legs of the JUB penetrating the first protection zone. Whilst the depth of penetration depends on the JUB, the PLA is aware of another recent major project where the JUB leg extended approximately 14m below the riverbed level.
- 5.14 The validity of the first protection zone in the design will be subject to the effects of construction performance, such as ground movements or over abstraction. To assure both future tunnel safety and dredging depth requires recognition of this and assurance that these construction effects will be investigated and addressed during construction.

Unexploded ordnance

- 5.15 There is the potential for unexploded ordnance (**UXO**) to be located in close proximity to the tunnel. A clear strategy is therefore required in relation to UXO in the river to ensure that any UXO does not become an impediment to the PLA dredging the channel to the agreed dredge depth. This could occur, for example, if the Applicant decides not to remove UXO over the route of the tunnel and instead use avoidance as the risk mitigation plan, leaving the UXO in situ and transferring the risks to the PLA when the PLA dredges the navigable channel. If the risk of disturbing the UXO is too high from the dredging activity because of potential damage to the tunnel, it could prevent dredging from occurring or result in the PLA incurring significant additional costs from having to use lower risk but more costly dredging techniques.
- 5.16 The UXO Desk Study and Risk Assessment (doc APP-433) identifies several potential sources of UXO hazard on the part of the Site encompassing the river comprising hazards from deep-buried air-dropped unexploded bombs (UXB); unexploded anti-aircraft (UXAA) shells and shallow-buried UXO. The larger UXO (such as UXB and UXAA shells) may have penetrated the riverbed at an estimated maximum depth of 19m for UXB and 2.5m for 4.5" UXAA shells. Buoyant UXO (e.g. some marine mines), smaller, lighter items of UXO (such as small and medium sized shells) and SAA could roll as bed load particles during high river flow, flood, storm or tidal surge conditions i.e there is a pathway for UXO migration onto the Site. The UXO Desk Study and Risk Assessment (doc APP-433) therefore recommends that when the construction design is finalised, a detailed UXO risk mitigation strategy is commissioned. In moderate hazard zones (such as the river) non-intrusive UXO surveys are recommended in advance of intrusive works. Where piling or boreholes/cone penetration tests are proposed in an area with a UXB hazard, deep UXB detection is recommended. It is not clear how any of this is secured through the dDCO or whether the PLA would be able to view and comment on UXO risk mitigation strategy. Given the PLA's responsibilities and experience when it comes to UXO, it would expect to be given sight of such a strategy and expect its views to be taken into account.

6. General construction matters

- 6.1 As noted above, the PLA has a general function to promote the river for transport of freight and passengers. The PLA has identified a lack of clarity in the Application in relation to use of the river and insufficient commitment to such use. The PLA also considers that greater use could be made by the Applicant of transport of both materials and people by water during construction of the Order Scheme. This relates to both the transport of materials for construction of the Order Scheme and of workers employed in the construction of it. There are also questions concerning the monitoring and reporting of performance against the targets set out in the Application.

Use of the river - materials

- 6.2 By way of illustration, the Application provides for only 80% by weight of bulk aggregates imported to the north portal construction area to be by water – which represents 35% of the Order scheme's total requirement for bulk aggregates (doc APP-338). The Application does not explain, nor justify, why a greater proportion of bulk aggregates for the Order Scheme are not proposed for river-based transport, including to the south worksites or explain why other bulk materials cannot be transported by water or sourced from nearby wharves. Whilst the Outline Materials Handling Plan (**oMHP**) (doc APP-338) states that the Contractor would engage with aggregate and materials suppliers to proactively maximise utilisation of river transport (paragraph 6.2.11) this is only in relation to the import of bulk aggregates for the north portal construction area and the definition

of bulk aggregates has been narrowly defined so that it is subject to a number of exclusions including cement, notwithstanding that two of the largest cement import terminals are on the river.

- 6.3 The requirement is for the Contractor to explain in the Second iteration of the Environmental Management Plan (**EMP2**) how the baseline and better than baseline commitment are addressed. There is no commitment to sharing the Contractors investigations and why they are discounting certain materials or use of certain wharves and there would appear to be significant opportunities available during construction for the baseline commitment and better than baseline commitment not to be met. It is not clear from paragraph 6.2.15 of the oMHP (doc APP-338) whether the Secretary of State's consent (and consultation with the PLA) is required on missed commitments only where delay is likely to give rise to danger to persons or property. It would also appear that where the exemptions apply, the imported material is to be excluded from determination of compliance with the commitments thereby not giving a true reflection of compliance against the stated commitments.
- 6.4 To promote and secure river use, robust monitoring and reporting procedures should be put in place in order that stakeholders are clear on what the Applicant is committing to and what specific targets are set - these can then be monitored and reported on regularly, and it can be seen whether these targets are being met. Importantly regular reporting allows for the early identification of the potential for targets to be missed allowing for additional measures to be put in place. For materials, the Applicant appears to be committing to a baseline and then the better than baseline targets are a voluntary extra. The PLA has experience on other projects where – in similar circumstances – contractors work only to the baseline and as there has been no requirement to meet the voluntary extra target then the opportunity has not been taken. In these examples due to the absence of a requirement to engage with stakeholders, it has simply been down to the Contractor to decide what additional opportunities for river use they wish to investigate and then they can discount them without any further recourse to stakeholders resulting in missed opportunities to take further vehicle movements off the road.
- 6.5 It is of note that the Applicant has not been able to provide data to the PLA concerning its reporting procedures for other DCOs that it has promoted. It is important that stakeholders have visibility of how the Applicant is performing during construction against its stated commitments and targets. Taken with the absence of commitments to water use in the Application, the PLA cannot see how the river may be used to its maximum potential during construction of the Order Scheme.

Use of the river - people

- 6.6 The PLA considers that inadequate thought has been given in the Application to potential use of the river to transport people to or from the Order Scheme worksites; the Framework Construction Travel Plan (**FCTP**) (doc APP-546) does not provide for any transport of construction workers by water. Whilst the river is referenced in the FCTP no shuttle buses are proposed from Tilbury; this means that there is no encouragement for workers to travel cross-river by ferry. Whilst shuttle buses from Gravesend are proposed in the FCTP at the hub (Bus, HS1, National Rail) workers arriving in Gravesend by water would presumably be expected to walk to the hub from the ferry. The Applicant appears to have ruled out workers using the river to travel to worksites, as there is no provision from them to reach their final destination once they get off the ferry. See also Gravesham Statement of Common Ground (**SoCG**) (doc APP-125) (consideration of effects on the Tilbury-Gravesend Ferry 2.1.110 [Gravesham #0190]) which states “*NH do not anticipate that*

construction workers would use the Ferry to commute to construction compounds.” This would be a significant missed opportunity for the sustainable transport of people.

- 6.7 Further, there is no requirement for the PLA to be consulted on the construction travel plans. The Applicant has proposed only that these are reviewed by the Secretary of State in consultation with the relevant highway authority or where different the relevant planning authorities. The PLA consequently has no means by which to ensure that river use and sustainable transport is secured.
- 6.8 Further, use of the river for transport – both of materials and of workers – can have a notable effect on air quality, as journeys that would otherwise be taken by road would instead be taken by water. The Applicant’s air quality commitments relate only to road vehicles; there are substantial opportunities to make air quality commitments in relation to vessels that could be utilised during construction. Further, the Carbon and Energy Management Plan (doc APP-552) appears to focus on road vehicles and road transport and sets no minimum requirements in relation to carbon and river transport.

7. Art. 2 dDCO – Extent of “authorised development”

- 7.1 As currently drafted, “authorised development” is defined in Art. 2 (*Interpretation*) as:

“the development described in Part 1 of Schedule 1 (authorised development) and any other development authorised by this Order, or any part of it, which is development within the meaning of section 32 (meaning of development) of the 2008 Act”.

- 7.2 The PLA considers that this definition is too broad and imprecise for a scheme which engages the river. The PLA would like the definition of “authorised development” to be restricted so the works and development authorised by the dDCO are restricted only to what is described in Schedule 1 (*authorised development*). The PLA appreciates that this has not been the Applicant’s approach on some previous DCOs, but it *is* the standard approach for DCOs that affect the river. This is in order to protect both the PLA, in the execution of its functions and duties, and other river users.
- 7.3 Drafted as it is, the definition of authorised development leaves uncertainty as to what development will be authorised by the dDCO. This is of concern to the PLA as the Port needs to remain operational and needs to understand – and plan for – any impact or potential restriction on port operations and rights of navigation.

8. Art. 8 dDCO – Transfer of undertaking

- 8.1 Controls on the transfer of the whole, or part, of the benefit of the Order are limited. The PLA as a regulator has a direct interest in securing that any transfer would be to a suitable party and that the tunnel would not be left half built or poorly maintained.
- 8.2 Art. 8(5) of the Order allows the transfer of any or all the Order powers, including powers of compulsory acquisition, to any or all of the twenty-four parties listed in the article so far as they relate to that party’s current or future undertaking, without further consent. While the current scope of the parties’ undertakings is known, there is no limit on how the scope of those undertakings will change in future. The PLA therefore has little certainty on what powers may be passed on, or indeed on which entities will be authorised to exercise which powers. This uncertainty is concerning for the PLA. The PLA also does not see why it is necessary, for the completion of a road scheme, to transfer powers to such a wide range of bodies. If the Applicant can demonstrate that it is necessary to be able to

transfer powers to each of the bodies listed, then the Applicant should at the least specify which powers may be transferred to each and limit those powers to those necessary.

9. Art. 18 dDCO – Interference with the river

9.1 Art.18(1)(a) to (d) of the dDCO provide for a wide range of powers to use or interfere with any part of the river, including moorings, which, in connection with the carrying out and maintenance of the Order scheme, “*may appear to it to be necessary or reasonably convenient*”. The PLA considers the threshold of “reasonably convenient” to be far too low in the context of the powers which the Applicant may exercise, and further what may “appear” to be the case to the Applicant is entirely subjective. This is, consequently, an arbitrary and unacceptable threshold and could result for example in moorings being removed because it is more convenient for the Applicant to remove them rather than find a solution which would allow them to be retained.

9.2 Furthermore, the Applicant acknowledges in its *Additional submission accepted at the discretion of the Examining Authority – Applicant’s response to Annex A of the ISH2 Agenda* (EV-015) that the reason the power in relation to moorings is needed is to address “circumstances [where] a mooring of any kind is established in the period between the examination and the implementation of the Order.” While the PLA has no intention of licensing or placing moorings within limits – and indeed those moorings it has recently placed have been deliberately located outside of the proposed limits – it seems reasonable for the Applicant to adjust the drafting of Article 18 to provide only the power it says it needs, rather than the much wider interference that is currently envisaged by Art. 18.

10. Art. 28 dDCO – Land over which rights may be acquired for permanent outfall

10.1 The PLA made submissions at ISH1 regarding the extent of the area over which powers are being sought for a temporary and permanent outfall. Since the close of the ISH’s the PLA has been in discussions with the Applicant and it is understood that the Applicant will be reducing the area sought for the permanent acquisition of rights relating to the permanent outfall at Deadline 1. Whilst the PLA has not seen the full drafting and plans that the Applicant is proposing to submit at Deadline 1 it is understood that a change will be made to an area currently shown for temporary possession of land and permanent acquisition of rights, and this land will be subject to temporary possession only. The area for permanent acquisition of rights will now correspond to the co-ordinates for the permanent outfall in the Deemed Marine Licence (the **DML**).

11. Art. 35 and Sch. 11 dDCO –Temporary possession of land

11.1 As set out in Schedule 11 of the Order temporary possession could be taken of riverbed plots 16-45; 16-46; 16-47 and 16-64 in relation to the temporary and permanent outfall (Work No. 5A) and plot 19-37 for the construction of a new water inlet with self-regulating valve (Work No. 5X). The PLA is concerned that as currently drafted Art. 35 of the dDCO (*Temporary use of land for carrying out the authorised development*) could result in the riverbed being temporarily possessed, but if the works are not completed as provided for in the dDCO, the practical effect would be that the land may be occupied indefinitely.

11.2 During ISH2 Mr Humphries KC on behalf of Kent County Council made the submission that pursuant to Requirement 2, the authorised development must begin no later than the expiration of five years from when the Order comes into force, and that preliminary works are sufficient to begin the development. From this point, even though only preliminary

works such as GI may have taken place, the DCO has effect indefinitely and there is no requirement on when the development must commence. By carrying out the most minimal of works, the Applicant could put itself in a position of being able to construct the project at any future time, leaving the PLA uncertain as to if and when the Order Scheme would be constructed. This uncertainty is likely to have a dampening effect on development of the Port.

12. Art. 35 and Art. 36 dDCO – Compulsory acquisition and temporary works

- 12.1 Art. 35 of the dDCO would authorise the Applicant to take temporary possession of and use land in connection with carrying out the authorised development. Art. 36 (*Temporary use of land for maintaining the authorised development*) would also authorise temporary possession and use, in this case for the purposes of maintaining the authorised development. The areas of land taken under these powers would be limited to what is required for constructing the authorised development or for maintaining.
- 12.2 Specifically, the PLA is concerned in respect of the provisions of Art. 35(5)(a) to (g) which provide that the undertaker must remove all temporary works and restore the land to the reasonable satisfaction of the PLA save as the undertaker is not required to restore the land to its previous condition in certain circumstances listed under conditions (a) to (g).
- 12.3 The PLA requires further clarification as what specific temporary works will be in these temporary areas of PLA foreshore and has written to the applicant requesting specific detail.
- 12.4 This matter is further complicated by the fact that in Part 8 of Schedule 14 (*Protective Provisions*), paragraph 102 (*removal of temporary works*) should apply to temporary works, but the wording refers only to the removal of temporary tidal works following “completion of the construction of the whole or any part of a *permanent* specified work”, which suggests that there is no protection for works that are only temporary and are not part of a permanent work. This issue could be resolved by removing the work “permanent” in paragraph 102(1).
- 12.5 The PLA, based on its experience in similar schemes, would anticipate that the undertakers use of these areas of foreshore can be adequately captured in a land’s agreement for the temporary possession period and then post completion of the project under the PLA’s river licensing regime for any works left within the PLA’s legal title.

13. Art. 37 – Statutory undertakers

- 13.1 This article provides very wide powers to:
- “(1)(a) acquire compulsorily, or acquire existing or new rights or impose restrictive covenants over, any Order land belonging to statutory undertakers; and*
- (b) extinguish the rights or the benefit of a restrictive covenant of, or remove or reposition apparatus belonging to, statutory undertakers over or within the Order land”.*
- 13.2 In the PLA’s view, this is part of the wider picture of very wide powers being taken that are greater than those needed to deliver the project. It should be clear to the Applicant what apparatus it needs to interfere with and what land, rights and restrictive covenants it does not require. To some extent the effect of this article is tempered by Art. 28 (*Land over which rights may be acquired for permanent outfall*), but that article does not limit the full extent of what is permitted by Art 33. Interference with the PLA’s land, rights,

restrictive covenants and apparatus should be limited to what could reasonably be said to be required by an applicant to deliver the proposed scheme.

14. Art. 44 dDCO – Apparatus in the tunnel

- 14.1 The purpose of the dDCO is to authorise construction, operation and maintenance of a road tunnel and the powers sought should reflect that. It is appropriate, therefore, that the Applicant does not seek powers in the dDCO which go demonstrably beyond this purpose. However, the power to use the tunnel at Art. 44 applies equally to all those potential transferees listed in Art. 8(5) (*Consent to transfer benefit of Order*).
- 14.2 The PLA understands that the dDCO will be redrafted such that use and operation of the tunnel under Art.44(1) will be restricted to the functions of a highway authority. Whilst this change is welcomed, Art.53(4) (*Disapplication of legislative provisions, etc.*) disappplies the need for a works licence under s66 of the 1968 Act, following expiry of the maintenance period, for any works within the tunnel in connection with the operation or maintenance of the Order scheme or for “*any other function of the undertaker*”. Consequently, the dDCO would for example allow a telecommunications undertaker with the benefit of the dDCO under Art. 8 to install apparatus in the tunnel without having to obtain a licence under the 1968 Act. The PLA would normally require a river works licence for a cable tunnel, with associated best consideration sought. The Applicant is constructing a road tunnel for use by vehicles, and any third party utilities should be licensed by the PLA in the usual way through its river works licensing process, under the 1968 Act.
- 14.3 By way of example, The SoCG for each of Virgin Media (doc APP-118) and Thurrock Council (doc APP-130) highlight a desire to use the tunnel for cabling (internet and 5G). The Applicant has not said no, suggesting it is leaving open the option of using its powers under the dDCO for these purposes. The Design Principles document (doc APP-516) identifies the new bridge structures which will include spare ducts for communications infrastructure by others.
- 14.4 The PLA appreciates that the Applicant will need to run its own apparatus through the tunnel for the purposes of its use as a road tunnel and it is clearly the Applicant’s intent to consider and charge for any apparatus that they consent in the tunnel - see paragraph 113 of the PLA’s protective provisions which requires the Applicant to inform the person interested in placing apparatus of the possible need for a PLA licence and requires the Applicant to inform the PLA within 5 business days of consent being given.
- 14.5 The PLA’s key concern is that various undertakers with the benefit of the dDCO under Art. 8(5) would be able to install unrelated cabling or other conduits in the tunnel without having to obtain the river works licence that would usually be required. The PLA would like the dDCO to be clear that the disapplication of the licensing provision does not extend to, for example, data. The PLA accepts the position that no RWL would be required by the Applicant for anything done within the tunnel when undertaken by the Applicant in its capacity and for the purposes of its functions as a Highways Authority.

15. Art. 48 dDCO – Acquisition of rights over the riverbed and second protection zone

- 15.1 The PLA and the Applicant have agreed certain low risk activities that can take place above the route of the tunnel. Art. 48 (*Protection of the tunnel area, etc.*) of the dDCO secures the ability for the PLA to undertake and to licence those low-risk activities within the second protection zone as shown on the river restriction plan (doc APP-045). The PLA was concerned that notwithstanding the agreement has been reached between the

PLA and the Applicant in relation to Art. 48 (*Protection of the tunnel area, etc.*), Art. 28 (*Compulsory acquisition of rights and imposition of restrictive covenants*) and Art. 33 (*Acquisition of subsoil or airspace only*) as drafted could allow the Applicant to impose easements, other new rights and restrictive covenants on or over the second protection zone. Following discussions with the Applicant it is understood that an amendment will be proposed by the Applicant at Deadline 1 which will make it clear that the undertaker may not acquire easements or other new rights or impose restrictive covenants on, over or under the river bed of the river Thames for the protection of the tunnels. If this amendment is made, the PLA's concern on this point would be resolved.

16. Art. 48 dDCO – Explosives anchorage

- 16.1 The proposed alignment of the tunnel passes directly under one of the PLA's licensed explosives anchorages on the river at Higham Bight. Explosives anchorages are used by vessels carrying explosives either to wait until a licensed explosives berth becomes available or as a location to transfer explosives to/from vessels to be handled elsewhere. Higham Bight is licensed to handle up to 70 tonnes of explosives and has a size limit of vessels of 100m LOA (length overall). Explosives anchorages are, by their nature, relatively rare and difficult to relocate; there are evidential restrictions on the types of location in the vicinity of which explosive cargo may be moored.
- 16.2 Art. 48(9) (*Protection of the tunnel area etc*) of the dDCO seeks to disapply the provisions of the licence for this anchorage insofar as they relate to explosive material. It is entirely inappropriate for the Applicant to seek to disapply the explosives licence in whole or in part for Higham Bight, without giving adequate consideration to a suitable replacement, particularly given its location and distance from other available anchorages of a similar type.
- 16.3 Para 1.5.4 of the pNRA (doc APP-548) proposes the disapplication of the explosives licence at Higham Bight such that it ceases to have effect over any area in, on, under or over the part of the river to ensure the safe construction and operation of the tunnel infrastructure. No specific risk assessment in relation to the explosives licence continuing to be located at Higham Bight has been carried out and reported within the Application, to determine whether the explosives anchorage does in fact need to be relocated. While it is assumed that it will need to be relocated, this has not been evaluated, and the PLA would suggest that it would be appropriate for the Applicant to prepare and share with the PLA such a risk assessment at the earliest opportunity.
- 16.4 Following discussions with the PLA, work was commissioned by the Applicant to identify potential alternatives for the Higham Bight Explosives Anchorage. The subsequent report identified two sections downriver of the existing anchorage where there is potential for explosives anchorages. The PLA concluded that there was not any benefit in pursuing one of the areas due to more exposed environmental conditions, but there was an option (opposite another licensed explosives anchorage) which merited further consideration. The PLA has instructed maritime consultants to further investigate this possible alternative, including drafting of the licence application and safeguarding plan and liaison with the Health and Safety Executive. As applications are rare, the exact timeline for completion of this work is unknown but the Examining Authority will be updated regularly on progress.
- 16.5 In terms of timing, Art. 48(9) provides that the existing explosives licence will cease to have effect at the time of the dDCO coming into force. This seems particularly onerous in that it is not contingent on authorised works being undertaken at that location. What, for example, would be the consequence if the Order Scheme were not implemented? Or

it was begun through the carrying out of preliminary works such as vegetation clearance but then not commenced for another 10 years (or longer). Further, a rephasing of construction of the Order Scheme by two years invites further questions at disapplication of the licence at the making of the dDCO. Any alternative anchorage would be a compromise and the PLA's clear preference would be to retain the existing Higham Bight explosives anchorage should the Project not commence; additionally given the uncertainties in time to obtain an explosives anchorage licence, if the Order Scheme is commenced then the PLA requires as much time as possible to obtain the licence for the alternative location. The PLA therefore considers that work No. 4A should not commence until a licence is obtained from the HSE for an alternative location for an explosives anchorage.

17. Sch. 2 dDCO – Approval of documents

- 17.1 As outlined in the PLA's Relevant Representation and raised by various parties during ISH1, there is concern about the approval process for documents and specifically (i) the very limited consultation requirements, (ii) the documents which are approved and the documents which are simply required to be produced but have no approval process, and (iii) monitoring and compliance.
- 17.2 The documents secured by Schedule 2 (*Requirements*) to the dDCO have extremely limited consultation requirements and the Applicant is not required to engage with the same range of stakeholders that a local planning authority would consult with when discharging planning conditions. As an example, Requirement 9 requires a site-specific written scheme for the investigation of areas of archaeological interest. Consultation is required with the relevant planning authority and Historic England. There is no requirement to consult the PLA. Given the concerns raised by the PLA in relation to the Draft Archaeological Mitigation Strategy and Outline Written Scheme of Investigation (**AMS-OWSI**) (doc APP-367) (see para 22.17 22.17below), and that archaeological discoveries could be made on the PLA's land, it would be appropriate for the PLA to be consulted on the site-specific written schemes of investigation for the River Thames.
- 17.3 Similarly, the PLA is not a consultee for the construction travel plans (Requirement 11) where the PLA could play an important role in assessing what can be achieved through river transport.
- 17.4 There is also uncertainty in respect of the production and approval of a marine biodiversity security plan. Paragraph 9.5.11f of Chapter 9 of the ES (doc APP-147) and REAC MB006 (doc APP-336) advise that a marine biodiversity security plan will be prepared and that this is secured through Requirement 4(2). However, a marine biodiversity security plan is not listed as a document for inclusion in EMP2, and therefore it is not required to be approved by any regulator. The PLA would wish to be consulted on any marine biodiversity plan that is produced given its environmental responsibilities.
- 17.5 EMP2 is required to be produced through condition (4) of Schedule 2 (Requirements). It has to be produced following consultation with the parties identified in table 2.1 of the Code of Construction Practice, First Iteration of Environmental Management Plan (**CoCP**) (doc APP-336) and this includes the PLA.
- 17.6 As set out in the CoCP (doc APP-336) certain matters will form part of EMP2 and will therefore form part of the submission to the Secretary of State for approval, but others will be addressed following the approval of EMP2 (paragraph 2.3.10). For the matters that will be addressed following the approval of EMP2 it would appear that Contractors are able to produce plans without any subsequent sign off. One such plan which is of

particular relevance to the PLA relates to lighting. A lighting plan is not required to be produced as part of EMP2, instead as set out in paragraph 6.8.5 of the CoCP, EMP2 must require the production of a River Safety Lighting Management Plan (**RSLMP**). This means that a RSLMP does not need to be produced for the preliminary works and as it is the production and approval of EMP2 that is required prior to the commencement of the authorised development, it would be possible for lighting to be installed prior to a RSLMP being produced.

- 17.7 In addition, it is for the Contractor to decide whether a RSLMP needs to be produced if they reasonable expect it to adversely affect any vessels using the river. It is unclear whether the Contractor will have the expertise to make that judgement and if the Contractor concludes that vessels will not be adversely affected, no plan is produced. If impacts subsequently occur, the PLA will need to act retrospectively via paragraph 110 of its protective provisions and issue a direction to the undertaker to ensure the lighting is not a hazard to navigation. Furthermore, whilst there is a consultation requirement, and the Contractor must have due regard to representations made by the PLA (paragraph 6.8.6) ultimately there is no approval of the RSLMP.
- 17.8 The PLA have raised the need for a comprehensive lighting plan in the vicinity of the river as part of EMP2 for both environmental and navigational reasons with the plan being consulted on prior to sign off, The PLA considers that such a lighting plan should be added to the Schedule 2 Part 1 (requirements) at condition (4)(3) so that it is produced, submitted, consulted on and approved in the same way as other plans.
- 17.9 Another example relates to construction logistics. As set out at paragraph 6.1.1 of the CoCP (doc APP-336) EMP2 will require Contractors to produce Construction Logistics Plans (**CLP's**). This means that CLP's are not consulted upon on or approved by the Secretary of State. It is assumed that Contractor's proposals for use of the river will be contained within a CLP because as stated at paragraph 6.1.6 of the CoCP "*Contractors will investigate the use of multimodal transport including use of the River Thames via port facilities adjacent to the Project Order Limits.*" Given that there is no consultation requirement for the CLP's or approval process it could be very easy for opportunities to use the river to be missed or not be taken forward by the Contractor because it will be their plan and their decision.

Controls during construction

- 17.10 The Preliminary Works Environmental Management Plan (doc APP-339) sets out at section 1.14 Emergency preparedness arrangements and section 1.15 Environmental incident control. Similar detail is provided at sections 6.9 and 6.10 of the CoCP. It is of note that there is no reference to the PLA which is surprising given the role that the PLA would have if there was an incident that involved or affected the river such as a spill at a worksite with material entering the watercourse or contact with a JUB used for the GI works. It is also not clear that the Emergency Preparedness Plan would consider the issues associated with working over and near water.
- 18. Sch. 14 Protective provisions – ground investigation works**
- 18.1 It is imperative that ground investigation (**GI**) works are covered by the protective provisions. This is for two reasons.
- 18.2 Firstly, GI works are a potentially significant activity within the river. Previous GI works undertaken in connection with the Project in 2019, which were consented by way of a river works licence under section 66 of the 1968 Act, required the use of JUB at each

borehole location for 4-5 days at a time with the risk mitigations including a minimum passing distance from a JUB, speed reductions, one way working (i.e. not allowing overtaking or head on passing vessels) and adjusting the proposed locations of the JUBs to avoid effective closure of the navigable channel to larger vessels. Given that the dDCO removes the requirement for the Applicant to obtain a river works licence for GI works, these works should be covered by protective provisions.

- 18.3 Secondly, the PLA is wary of the Applicant's approach to GI. The 2019 GI resulted in a borehole casing snapping off in the riverbed, leaving an unauthorised work in the river. Despite frequent repeated requests by the PLA to the Applicant over the following four years to address the situation, doing so was not a priority for the Applicant. It was only on 26 June 2023, after the first issue specific hearings, that the Applicant applied for a licence to leave the borehole casing in situ in the riverbed.
- 18.4 GI is not currently included within the protective provisions; the PLA has had various exchanges with the Applicant on this subject and, having had sight of the amendment proposed by the Applicant following the June hearings the PLA is hopeful that this issue can be resolved subject to a revised dDCO with suitable wording being submitted to the Examination.
- 18.5 There is also ambiguity about the extent to which a navigational risk assessment (**NRA**) will apply to GI works. As currently drafted the protective provisions provide for the production of NRA(s) but this requirement is only engaged on commencement. Paragraph 98(3) of Part 8 of Schedule 14 to the dDCO provides that where works in the river require a NRA, that NRA must be undertaken in all material respects in accordance with an existing pNRA dated 2019 (doc APP-548). The pNRA however states at paragraph 1.7.1 that GI works must be undertaken in accordance with an existing NRA also dated 2019 that was developed for the previous GI works, and consequently it is unclear which is the governing document.

19. Sch. 14 Protective provisions – requests for design information

- 19.1 There is no capacity within the dDCO as drafted to revert on the outcome of, or responses to, requests for information regarding the design of the tunnelling works. As the drafting currently stands, para 99(5) of Part 8 of Schedule 14 to the dDCO provides for a 10 business day period for the PLA to request further information. If on receipt of that additional information the PLA is not reasonably satisfied within 20 business days that the design requirement will be met, there is no further mechanism by which further detail, or refinement, can be obtained. As a consequence of which, the drafting then requires the PLA to go straight to arbitration. If the PLA can make further requests, it will enable a more collaborative approach and, therefore, avoid arbitration.
- 19.2 The PLA has explained based on its experience with similar schemes that the paragraph is interpreted by those who benefit from the relevant order to mean that the only option is arbitration. The drafting is not being interpreted by those using it as allowing for further requests. An example of this could be arbitration being necessary for something as simple as a document submitted in response to a PLA request for further information has not been signed by all the relevant parties. The wording of the DCO does not permit further requests and therefore the PLA has to decide whether to go to arbitration on this point. A more collaborative approach would allow the PLA to obtain documents with all the relevant signatures. Another example would be the undertaker partially responding to the PLA's request for information: only responding to the design risk and not addressing the construction risk when considering monitoring to detect tidal pressure

influence. Being able to obtain the missing information avoids the need for arbitration on a point which is capable of being addressed and closed out.

- 19.3 The PLA also considers that the timeframe set out in paragraph 99 is too short for what is a complex review requiring the use of a specialist tunnelling contractor. The PLA experience of submissions is that significant quantities of material can be produced by the undertaker and more time is required for the PLA's review. The PLA has previously amended the drafting of paragraph 99 to allow for 40 business days (rather than 30) but this has not been accepted by the Applicant.

20. Sch. 14 Protective provisions – general

- 20.1 The dDCO disapplies the PLA's usual licensing regimes under the 1968 Act. While the PLA understands the need to streamline the delivery of the scheme, it believes that the protective provisions are not sufficient to afford a level of protection which approaches that afforded by its existing licensing regime. Particularly given the wide scope of powers sought by the Applicant, it is important to ensure that the protective provisions align with the protections afforded by licensing under the 1968 Act.
- 20.2 It is important, for example, that the protective provisions take into account not just the navigable channel (being the deepest part of the river) but the full width of the river. While larger vessels use the navigable channel, plenty of smaller vessels and recreational users will navigate either side of the navigable channel in order to avoid larger vessels. The protective provisions should not disadvantage these categories of river users.
- 20.3 In a similar way, the protective provisions should not be limited to construction and maintenance, because the powers in the Order relate not only to construction and maintenance, but also *use* of the tunnel. The extent of the protections afforded by Part 8 of Schedule 14 (*Protective Provisions*), should mirror the extent of the powers sought by the Applicant within the wider dDCO.
- 20.4 There are also references in the protective provisions that are not correct, for example to provisions of the 1968 Act; these will need to be amended before the final version of the dDCO is submitted.

21. Sch. 15 dDCO – Lighting

- 21.1 Lighting has the potential to impact detrimentally on both navigation and the ecology of the river. Table 4.5 of the Design Principles document (doc APP-516) addresses "Project-wide design principles: Lighting, design and technology" but does not refer to the riverscape. Chapter 9 of the ES (doc APP-147) reports that lighting of marine construction works will be subject to regulation under the DML (Schedule 15 to the dDCO), in respect of certain construction works.
- 21.2 The Applicant appears to misunderstand the PLA's environmental duties. Paragraph 10 of Schedule 15 to the dDCO requires the submission of a lighting management plan (i) only to the MMO and (ii) only if 24-hour working is proposed. The PLA has no ability to comment on, or influence, any lighting management plan which may affect the river.
- 21.3 Further, construction works which require lighting, for example in the winter months during the hours of darkness, would not require the submission and approval of such a lighting management plan so long as the works are undertaken for less than 24 hours a day. As set out in table 6.1 of the CoCP (doc APP-336) standard working hours for all works authorised under the DCO are 0700 to 1900 weekdays and 0700 to 1600 Saturday

with one hour before and/or after for mobilisation procedures. Extended working hours apply to tidal river working allowing them to take place in accordance with tidal cycle any time within a 24 hour period. It is therefore highly likely that lighting will be required.

- 21.4 The PLA is constrained through the CoCP (doc APP-336) and the Requirements at Schedule 2 to the dDCO to commenting only on lighting insofar as it may adversely affect vessels; this ignores the PLA's environmental duties. As set out in paragraph 17.6 above there is no approval process for the document that the PLA is consulted on.

22. Environmental Statement

Inadequacies of and ambiguity in the ES and supporting Application documents

- 22.1 The PLA has identified general inconsistencies and inaccuracies across the chapters of the ES, including discrepancies between the conclusions set out in the assessment(s) reported in the ES and REAC (including the effect of noise and vibration of the tunnelling operations and any required piling) as provided for the in the CoCP (doc APP-336).

Air Quality

- 22.2 The PLA encourages the use of the river for transport of materials, equipment and construction waste as an alternative to road transport, but this has not been considered in the air quality assessment. Given the potential efficiencies of river transport, this should be considered in the ES for transport during the construction phase. There are precedents for the transport of waste arising from existing tunnelling operations, with arisings from the Thames Tideway Tunnel being transported by barge to the Inner Thames Marshes SSSI for habitat restoration.
- 22.3 The air quality assessment identifies adverse effects on Air Quality Management Areas (AQMAs) as a consequence of construction, some of which are already in exceedance of air quality limits. Use of the river for transport could alleviate adverse air quality effects on AQMAs, which reinforces the argument for it being considered in the air quality assessment.

Commitments in the REAC

- 22.4 Commitments included in the REAC (doc APP-336) are only relevant to road vehicles and non-road mobile machinery. There are no commitments made in relation to the transport of materials, equipment or waste by river, or in relation to vessel emissions where the river is used during construction. Activities that could have adverse effects on air quality during the construction phase are not included in the air quality assessment.

The effects of nitrogen deposition on sensitive intertidal habitats

- 22.5 The air quality assessment in the ES (APP-143) does not evaluate the potential effects of increased nitrogen deposition, either during the construction or operational phases, on sensitive habitats, such as intertidal habitats, and their role in supporting features of designated sites. This also relates to any compensation sites identified to be necessary under the Habitat Regulations Assessment (**HRA**) (doc APP-487). Newly created compensation sites are likely to have a lower resilience to changes in air quality which may result in their failure to function as adequate compensation.

Biodiversity

- 22.6 As described in paragraph 21 above in relation to lighting, the dDCO does not require the PLA's approval of a lighting plan, despite the potential adverse effects of inappropriate lighting could have on the ecology of the river and the PLA's environmental duties.
- 22.7 Predicted biodiversity net gain of river units currently stands at 7%, which does not meet the minimum 10% biodiversity net gain under the Environment Act 2021. Where offset of river units is required, the PLA is likely to be the owner of the foreshore and riverbed in the estuary and agreement needs to be reached as to how this will be delivered.
- 22.8 There are limitations to the HRA (doc APP-487), including the lack of assessment of the effects of underwater noise and vibration generated by tunnelling activity on underwater feeding waterfowl, and the effects of emissions – particularly nitrogen – on intertidal habitats, which are important feeding areas for species that are part of the Special Protection Area and Ramsar designations (both within the designated sites and on land functionally-linked to them). The HRA should include all sensitive receptors: terrestrial, marine, and intertidal and all effects and mitigation and/or compensation designed considering the precautionary principle. Any assessment should consider the specific sensitivities of each of the ecological receptors. For example, different waterfowl species have different feeding behaviours and sensitivities and are therefore likely to have differing responses to underwater noise and vibration. The HRA also needs to consider visual disturbance from working on the foreshore during winter. This relates to disturbance of feeding birds in the intertidal area.
- 22.9 Mitigation and/or compensation is likely to be required to address significant effects on European designated sites. Any compensation sites need to be ecologically functional (providing an equivalent role to the areas affected by the proposals) before construction commences. Depending on the location of these compensation areas, they may raise additional issues for the PLA.
- 22.10 Given the scale of the proposals there is the potential for construction activities to have significant adverse effects on compensation areas. There is a general over-reliance on compensation areas to maintain the integrity of the European sites network, given that the compensation sites are yet to be secured and/or created.
- 22.11 The PLA would expect the Applicant to prepare a detailed method statement outlining all mitigation measures to be monitored and overseen by relevant parties. Other major projects, e.g., London Gateway, have agreed mitigation, including deployment of bubble curtains to mitigate the effects of underwater noise from piling, which are monitored and overseen by an Environmental Advisory Group, the members of which include the PLA.
- 22.12 Natural England have raised issues relating to the proposed mitigation and compensation to avoid effects on wintering birds resulting in effects on the breeding bird assemblage which is a feature of the South Thames Estuary & Marshes SSSI.

Noise and vibration

- 22.13 The Noise and Vibration chapter of the ES (doc APP-150) does not specifically assess noise from piling on the marine ecology from the installation of the cofferdam, sheet piling monopiles etc that are proposed in connection with the construction of the temporary and permanent outfalls and inlet at Coalhouse Point (Works 5A and 5X). This is surprising given the construction phase measures set out in other chapters of the ES, the REAC

and in the HRA (doc APP-487) which specifically make reference to noise mitigation measures.

- 22.14 In addition, the noise mitigation measures set out in the ES Chapters, appendices and REAC need to be consistent and reflect the HRA. As an example, paragraph 9.5.11(d) of Chapter 9 of the ES (doc APP-147) appears to imply that work could be undertaken to construct the northern compound drainage pipeline and outfall where the work area is either fully submerged, or partially covered by water, including piling with a test of whether it “*would result in the transmission through the water column of noise and vibration*” This is consistent with the wording in REAC MB001 but is inconsistent with REAC HR011 and paragraph 5.3.10 of the Water Framework Directive Assessment (APP-478) which state “... *All piling works will be completed during periods of low water to avoid transmission of underwater noise.*” and “*Works would be undertaken at low tide to reduce the transmission of noise and vibration*”
- 22.15 REAC MB001 identifies the securing mechanism in the DCO being the DML. The DML states in relation to piling technique “*works to construct the water management pipeline and outfall, including any piling, must not be undertaken when the work area is either fully submerged, or partially covered by water*” and a further inconsistency is found at paragraph 9.6.157 of Chapter 9 of the ES (doc APP-147) which states that piling operations would take place at low water at which point the transfer of noise into the water column would be minimal.
- 22.16 In short, across the application documents there is a discrepancy as to whether the piling works are limited to being *undertaken* in the dry; at low water, partially submerged or fully submerged. It is also not clear if the test is no transmission of noise through the water column, or whether some level of noise is permitted.

Archaeology

- 22.17 Whilst there is a requirement through Requirement 9 of Schedule 2 of the dDCO for the Applicant to produce a detailed archaeological written scheme of investigation, based on the outline scheme, the outline scheme does not specifically consider the river, nor any marine or maritime archaeology therein, and it does not commit to doing so when the detailed scheme is produced. Whilst the river is located within construction zone B: A122 Lower Thames Crossing Tunnel the draft scheme does not for example identify the GI in the river that could take place as preliminary works; neither are there any references to the temporary or permanent outfall or works in the river at coalhouse point. There is also no requirement to consult the PLA on the detailed scheme prior to its approval by the Secretary of State.
- 22.18 It is not clear that Chapter 6 of the ES (doc APP-144) has also considered all the river works (dredging, cofferdams, piles etc). It does not identify an inter-relationship with marine biodiversity where the in-river works are detailed. Chapter 6 considers south of River Thames, north of River Thames and whilst there are references to the River Thames it is not clear that both the temporary and the permanent outfall have been considered and there is no reference to the works in the river at coalhouse point. At paragraph 6.6.308 there is reference to the decommissioning of East Tilbury jetty which it is no longer proposed to use.

Dredging under the Order Scheme

- 22.19 There is ambiguity in the Application as to whether what is proposed in the Application constitutes dredging or not. Art.53 of the dDCO (*Disapplication of legislative provisions,*

etc.) disapplies sections 66 to 75 inclusive of the 1968 Act, which includes the provision which allows the PLA to license dredging (s73). This disapplication applies to both construction and the maintenance period. It is not unusual for a DCO to disapply s73 of the 1968 Act, but unless dredging is an authorised work, it will not be consented under the PLA's protective provisions and so the PLA will not be allowed to give consent for a specified work or a specified function.

- 22.20 The ES does not report any assessment of dredging and the Marine Management Organisations SoCG (doc APP-098) states that no dredging is proposed. Chapter 9 of ES (APP-147) reports at paragraph 9.3.30 that there are no dredging operations but then states at paragraph 9.6.30 in connection with Work 5A that a 300-400m long shallow sheet piled trench would be required across the intertidal zone, within which a 1,000m (maximum diameter) pipe would be buried by cut and cover. It is further stated that sheet piling would be installed on either side of a 2m wide trench using vibropile. The trench would then be excavated and material side cast with sections of pipe then installed and backfilled as the pipeline progressed. Whilst the ES does not report this as dredging, the PLA is of the opinion that it does constitute an activity that would otherwise be considered dredging for the purposes of s73 of the 1968 Act. The PLA define dredging as "*including any operation to cleanse, scour, cut, deepen, widen, dredge or take up or remove material from the bed and banks of the Thames.*" The creation of trenches through the taking up of material would therefore be dredging.
- 22.21 The Consents and Agreement Position Statement (doc APP-058) makes reference on page 19 to a "Self service marine licence" for specified activities, which include dredging. Given that s73 of the 1968 Act has been disapplied, and it is not clear that dredging is an authorised work, it is unclear how the PLA would approve any dredging activity that takes place in the river.

Road drainage and water environment

- 22.22 It is unclear when the permanent outfall will be permitted to discharge to the river. Chapter 9 of the ES (doc APP-152) refers at paragraph 9.5.12 to operational discharges for the permanent outfall being restricted to high tide conditions and makes reference to REAC RDWE026 which also references restricting discharges to high tide conditions. This is consistent with paragraph 14.5.15(c) of Chapter 14 of the ES (doc APP-152). The inconsistency arises through conversations with the Applicant who advised the PLA in writing that "*the outfall will also require an environmental permit from the EA for the discharge, which will determine whether the discharge can be into high or low tide (this will only be fully determined once the environmental permit has been granted).*" It would therefore appear that despite what is written in the application documents and included as commitments, the Applicant may seek to discharge water from the permanent outfalls at times that are not limited to high tide.

Population and Human Health

- 22.23 Chapter 13 of the ES – Population and Human Health (doc APP-151) contains a number of inaccuracies and the Chapter has not been updated in line with the feedback previously provided by the PLA:
- it includes reference at paragraph 13.4.11 to activities that take place a significant distance away from the study area (for example the Great River Race which starts in Greenwich and finishes in Ham) and the Barge Race (which takes place in Central London) but omits activities such as the Shorne Mead Chase (a rowing race from Gravesend to Shorne Mead light and back).

- it includes references at paragraph 13.4.13 to some river infrastructure in the area for example the PLA's Denton Wharf, but the list is extremely limited and when viewed alongside figure 13.1 (doc APP-317) (page 2 of 7) it is clear that not all river infrastructure has been identified. It does not identify all infrastructure and the businesses that own that infrastructure for example Port Health's pier, Clubb's jetty, the National Sea Training Centre Pier, Cory's shipyard and the mid stream moorings. Whilst Town Pier is shown as community land and assets there is no reference to the Gravesend to Tilbury Ferry. The Embankment Marina and Sailing Club is referenced but not Gravesend Rowing Club.
- Paragraph 13.4.26 makes reference to the East Tilbury Jetty and says it will be operating at full capacity for Tideway and Silvertown but these projects will be complete by the time that LTC commences.
- Chapter 13 concludes that there are no impacts on marine or riparian assets to the South of the River Thames. This does not take into account the disapplication of the explosives anchorage.

Survey data

- 22.24 The adequacy of the assessment set out in the ES (doc APP-138 to 155) and the HRA (doc APP-487) is dependent on a valid environmental baseline, for which accurate and up-to-date surveys are required. The surveys that have been carried out for terrestrial biodiversity (doc APP-146), marine biodiversity (doc APP-147), plants and habitats (doc APP-391), ornithology (doc APP-396) and air quality (doc APP-356) have a finite lifespan and will become less reliable over time because of the changing nature of the environment and other developments that have been carried out. The Chartered Institute for Ecology & Environmental Management have issued an advice note regarding the lifespan of ecological survey data, which limits their validity to 3 years in most cases.
- 22.25 Most of the baseline included in Chapter 9 (Marine Biodiversity) of the ES was collated from data and reports carried out for other projects and dating from 2002 to 2020. Some primary benthic surveys were carried out, but these were limit in extent and duration.
- 22.26 The Biodiversity Metric Calculations (doc APP-417), used to determine the required Biodiversity Net Gain under the Environment Act 2021, requires baseline surveys that reflect the current habitats on site and their condition. These calculations would need to be updated to reflect any changes in the baseline.
- 22.27 The validity of the environmental baseline and updates to the classification of the water body (under the Water Framework Directive) also has implications for the adequacy of the Water Framework Directive Assessment (doc APP-478).
- 22.28 Given the two-year delay in construction, the PLA has concerns about the ongoing validity of survey data used to support the assessments in the ES. This is particularly in the context that there is no commitment in the REAC or ES to update the surveys to take account of any delays. In such circumstances - and given that commencement of construction of the Order Scheme will now be two years further into the future - the PLA requires justification of how the baseline reported in the ES remains relevant.
- 22.29 The PLA has reviewed the ES and looked at survey dates for the marine biodiversity chapter, ornithology (where it relates to the SPA species), which informs the HRA, the air quality chapters and the REAC to determine any future commitments to updating the

environmental baseline. Requirements for the WFD assessment in relation to data/survey validity have also been considered.

- 22.30 The surveys informing the marine biodiversity chapter and HRA are potentially already out-of-date, with the most recent surveys being carried out in 2019. The data for seals is even older, coming from 2013-2014. The PLA would argue that this makes the two-year delay problematic: the baseline could have altered significantly in the six years between the surveys being carried out and work commencing. The PLA would expect an updated baseline to address any potential changes in the baseline and therefore the assessments based on them.
- 22.31 In relation to the WFD assessment, an updated assessment would be required if there are significant changes to the Order Scheme and/or if the water body classification is updated. This updates the status of the water body and last happened in 2019.
- 22.32 The air quality chapter may also be more problematic and whilst there are no guidelines for the lifespan of air quality baseline data, the validity of data is reliant on location, timeframe and use of the same techniques. Like any environmental baseline it is subject to change and the older the data, the less relevant the baseline.

Environmental conclusion

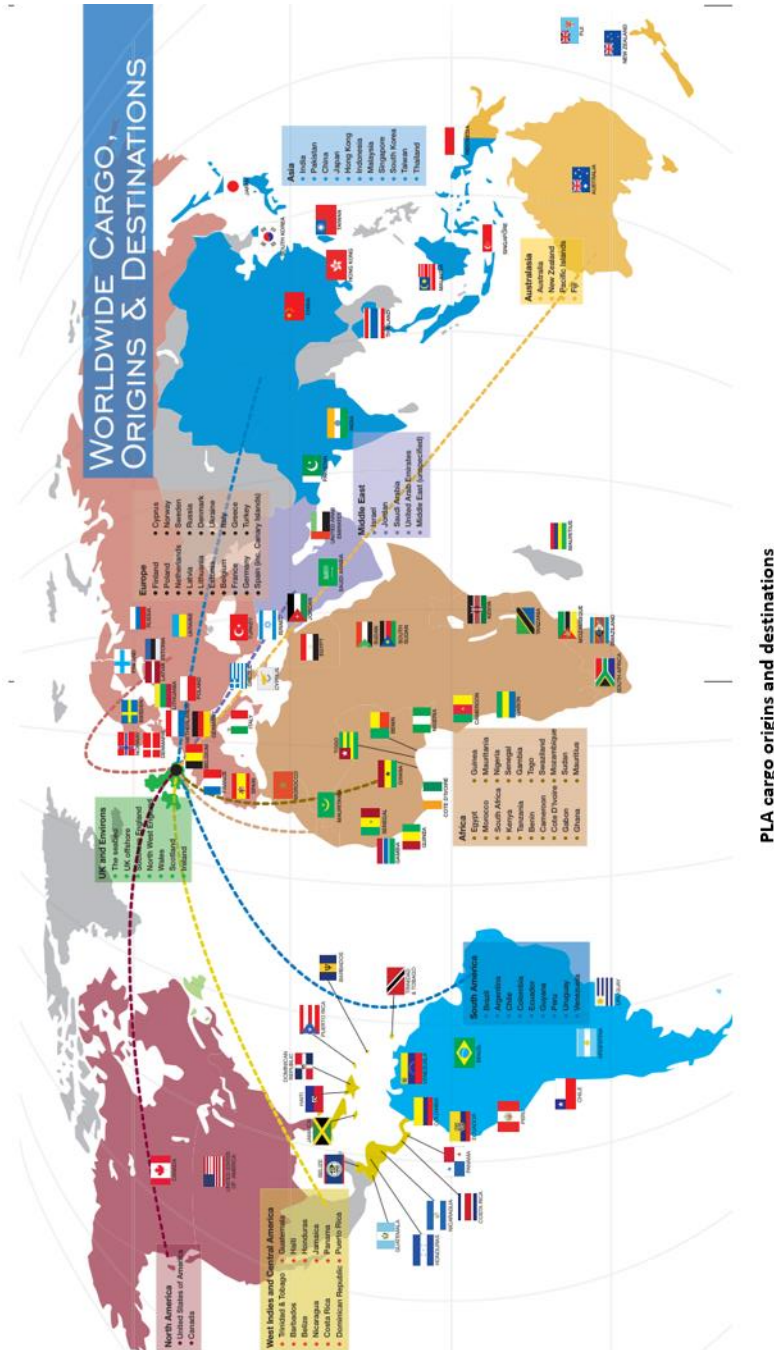
- 22.33 There are a number of inconsistencies within the ES and between the ES and other Application documents, and a number of other points where the assessment is not sufficiently clear or robust, leaving the PLA uncertain as to the effects of the Order Scheme. These inconsistencies and uncertainties should be resolved and clarified by the Applicant.

23. Concluding remarks

- 23.1 The Applicant accords a greater weight to the need for road transport than to the need to protect the functioning of key ports. The PLA and the Applicant have been through the issues set out within these Written Representations in some detail, but the PLA has to date been unable to persuade the Applicant that, notwithstanding the Applicant's previous experience in obtaining highway DCOs, it should deviate from its standard provisions to provide suitable protections for a major port authority and its users.
- 23.2 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 the Order scheme. It is of particular concern to the PLA that the Order Scheme as built out may cause economic disbenefits to the Port in the event that it is not possible to dredge to the agreed level of 12.5m below chart datum (plus 0.5m overdredge) and so limit the passage of certain vessels upstream of the tunnel and, consequently, the quantum of trade within the Port.
- 23.3 From the acquisition of rights to the transfer of the undertaking, the Applicant has sought to design so much flexibility into the Order Scheme that it would place unnecessary constraints on the PLA, users of the river and river trade. The various inconsistencies between the documents submitted or otherwise prepared by the Applicant mean that it is not possible to form a coherent view of what the Order Scheme may look like. The PLA would suggest that the powers sought by the Applicant should be limited to those that are genuinely required to deliver the Order Scheme and that the documents provided by the Applicant should provide a coherent and consistent understanding of the project as a whole.

Annex A – PLA Cargo Origins and Destinations

Source: “A Brief Guide to the PLA”¹



¹ <https://www.pla.co.uk/assets/plabriefguidejuly2015.pdf>