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Telephone: 07798 653897

25<sup>th</sup> July 2018

Dear Ms Gailey,

#### MARINE ARCHAEOLOGICAL WRITTEN SCHEME OF INVESTIGATION V4 -TRACKED CHANGES TILBURY2 DOCUMENT REF: PoTLL/T2/EX/150 REVISED VERSION OF DOCUMENT SUBMITTED AT DEADLINE 4 TO EXAMINING AUTHORITY Ref: TR030003

Further to your email of 5<sup>th</sup> July 2018 we hereby send you the following comments and advice. We add that our focus for attention are the sections and paragraphs of the draft outline marine WSI that appear to have been amended following our previous advice letter to you, dated 25<sup>th</sup> June 2018.

We have copied this correspondence to the Examining Authority as we offer this advice as part of our submission to Deadline 6 (due 3<sup>rd</sup> August 2018).

# Chapter 1 (Introduction)

Paragraph 1.2.9 –We have no further comment to offer regarding this matter as we stand by our advice to you as set out in our letters of 27<sup>th</sup> April 2018 and 25<sup>th</sup> June 2018. In your explanatory email of 5<sup>th</sup> July 2018 you explain that the WSI is a high level document containing mitigation strategies for each possible capital dredging technique and that following consent whichever dredging option is chosen will be addressed in the WSI with a subsequent detailed method statement prepared in accordance with this document. We therefore appreciate the clarity provided that this draft "high level" WSI will be revised post-consent, should permission be obtained, and that the necessary provision for its production and delivery should be directly specified within the Conditions of any deemed Marine Licence, as might be obtained.





1.2.10 – It would appear that the methodological approach explained in this paragraph vis. "closed bucket excavation" would not be permissible as explained within Table 4.

1.2.11 – We are prepared to concur that the document provided to us is "high level" and should therefore be considered as an outline (or draft) WSI, which follows established practice employed by other National Significant Infrastructure Projects through the examination process.

1.4.2 – This document cannot be considered to be in accordance with Schedule 9 (deemed Marine Licence) of the draft Development Consent Order as it does not reference any Conditions within the deemed Marine Licence (dML) that will stipulate its production in consultation with Historic England. It is important to highlight that document "agreement" as a Consent Condition can only be achieved through the regulatory authority i.e. the Marine Management Organisation (MMO).

# Chapter 3 (Aims and Objectives)

3.2.1 – The objectives should also include all necessary liaison with the local curatorial authority and also should be added to the figure under 4.1.1.

#### Chapter 4 (Roles, Responsibilities and Communication)

4.2.5 – States that, should consent be obtained for this proposed development, Port of Tilbury London Ltd. (PoTLL) will provide the MMO and the Environmental Consultant with the "programme of construction". It is thought that such a programme should be prepared in reference to specific Conditions within the dML for which agreement with the regulatory authority, the MMO, will be required.

4.3.2, first bullet point – To say "enough warning" does not provide sufficient clarity and a time period should be offered. We note the amendment to bullet point six regarding open bucket backhoe dredging methodology.

4.3.3 – We note the amendment made to the second bullet point regarding participation of staff in briefings etc. However, other statements in this paragraph e.g. familiarisation with generic requirements of the WSI remain somewhat vague.

4.4.2, fifth bullet point – We acknowledge amendment to reference a reporting protocol. However, any reference to "approval" can only be made through the regulatory authority in accordance with the Conditions of the dML. The preparation of Method Statements, derived from any finalised WSI, are to be done in consultation with curatorial bodies, national and local, prior to agreement with the MMO.

4.5.1 – This paragraph is incomplete given our previous request and should be amended to: "The Historic England is the Archaeological Curator providing advice for the historic environment within the English Inshore and offshore marine planning areas. In consideration of this project within the tidal Thames, Historic England will coordinate advice with the relevant local authority regarding the activities to be undertaken in the delivery of a WSI produced as a condition of any deemed Marine Licence secured for this proposed development."





4.5.2 – The identification of specific staff is no longer considered relevant; this paragraph should be revised to acknowledge the relevant local planning authority. The same matter regarding identification of staff members is not necessary.

4.5.6 – If the requirement is for "agreement" then this can only be done through the regulatory authority and any timeframe suggested should be agreed with the MMO.

 $4.6.2 - 6^{\text{th}}$  and 7<sup>th</sup> bullet points, amendment to the text in reference to generic archaeological matters is noted insofar as it now states "all archaeological requirements". 8<sup>th</sup> bullet point mentions a draft programme and timescales for site investigations. However, paragraph 4.4.2, 4<sup>th</sup> bullet point mentions a Construction Method Statement, which should be referenced accordingly in paragraph 4.6.2. 8<sup>th</sup> bullet point explains that "...a draft programme and timescale for site investigations which must allow sufficient time to complete fieldwork in accordance with the WSI." These are matters which should be detailed within any dML as might be secured for this proposed project as only the MMO can offer "agreement". 16<sup>th</sup> bullet point – amendment to the text of the second sentence is acknowledged incorporating text supplied previously by us.

# Chapter 5 (Archaeological baseline summary)

Section 5.3 (data limitations)

5.3.1 – Mention is made of a "criteria table" which does not appear to be included in this version of the draft "high level" marine WSI.

5.3.4 – Mentions that the 3D chirp data was rated as "...average for the identification of possible buried objects." This paragraph should be expanded to explain the relative depth of penetration as might be expected from an "average" quality data set.

5.4.9 – Describes how foreshore timbers were encountered<sup>1</sup> to the south of Tilbury Fort, but that it was unlikely that any similar material would be located within the proposed development area located to the east. We acknowledge your comments regarding this matter in your email (dated 5<sup>th</sup> July 2018). However, the issue here is whether the proposed development programme might have a wider influence on foreshore gradient, such as immediately adjacent to Tilbury Fort. This detail is not expanded on in reference to a baseline foreshore elevation model.

5.4.22 – We note that the revised text mentions Figures 4 and 5 to show locations of anomalies in relation to dredge pockets and we have no further comment to offer.

# Chapter 6 (Potential Impacts)

Table 3 (impact zone of influence) – As we noted previously, dredging that may cause "indirect changes to sedimentary regimes…" uses the conclusions of the HR Wallingford report (2017<sup>2</sup>) as "minor and localised". However, we stand by our previous advice that the illustration of the foreshore and adjacent tidal riverbed (vis. LiDAR survey of intertidal zone of MSA and bathymetry of subtidal zone of MSA), should inform the production of a pre-construction elevation model against which any

<sup>1</sup> Excavations and surveys of the intertidal zone south of Tilbury Fort by the Passmore Edwards Museum ahead of the restoration of the fort's outer defences in 1988-89

<sup>2</sup> Proposed Port Terminal at Former Tilbury Power Station Tilbury2 TR030003 Volume 6 Part B ES Appendix 16.D: Hydrodynamic Sediment Modelling Document Ref: 6.2 16.D





change might be measured. In this regard we concur with the statement made in paragraph 6.3.1 to 6.3.3 and as we advised previously, we consider it important that specific attention is given to establishing adjacent foreshore levels prior to any commencement of dredging, should consent be obtained, especially to the west of the proposed order limits and immediately adjacent to Tilbury Fort.

# Chapter 7 (Mitigation)

Table 4 (mitigation measures)

Box 1 – Describes a protocol system that will be similar to ones employed by different seabed industries, we therefore appreciate that as this document functions as an outline high level WSI for supporting the examination of this application, we require a specific set of Conditions to be included within the draft dML that will support the production of a protocol as a separate document to the marine WSI.

Box 2 – We note the amendment to text and we add that formal agreement of any Method Statement can only be obtained from the MMO. We also note amendment to the text in Box 3 and we have no further comment to offer at this stage.

Box 5 – Contains amended text and describes a "systematic programme of sampling of alluvial riverbed sediments and their buried archaeological potential..." prior to any dispersal dredging. However, we acknowledge that our previous advice requires reconsideration as it is now apparent to us that by definition a "task specific Method statement" cannot both define and outline. It is important that clarity is provided about the role of a WSI and the purpose of a Method Statement. We must therefore refer you to our position set out in our letter of 25<sup>th</sup> June, that geophysical anomalies should be investigated as part of any seabed investigation campaign, for example, as might be associated with UXO clearance. Box 5 also appears to explain the application of a Watching Brief should "Minor and Intermediate Archaeological Finds" or "Major Archaeological Finds" be recovered during a programme of "sampling" which is to be repeated following the removal of an agreed depth of sediment e.g. 0.75m and repeated thereafter until the required capital dredge depth is achieved or river terrace deposits are encountered. It is our advice, as explained at the Issue Specific Hearing on 27<sup>th</sup> June and in our response to Deadline 5, that the investigation strategy should focus on repeat geophysical survey at agreed phases of dredging. We offer this approach based on our experience of survey data acquisition that satisfied UXO risk assessment and archaeological investigation criteria.

Box 6 – We note the amended text, but we again question the viability of the approach set out to conduct artefact recovery from sediments dredged within contamination areas. It does not appear to be practical or feasible given the explanation that any decontamination is likely to remove any archaeological analysis potential.

Box 7 – The term "safe areas" is used here which we suggest should be removed as it would be inappropriate for confusion to occur between matters as relevant to determining the presence or absence of archaeological materials and any other assessment as necessary to determine "safety" as relevant to any other applicable Health and Safety matters (such as described within Chapter 14 of this draft WSI).

Box 8 and 9 – There are matters explained here which require further clarity. For example, Box 8 describes how an archaeological watching brief will be used during





"...all open bucket backhoe dredging work close to identified receptors of archaeological potential..." which is not the same as any grab/targeted backhoe excavation sampling strategy. It is also not entirely clear why this should occur prior to the establishment of a Protocol for Reporting Archaeological Discoveries as tailored to this project. The explanation of the intertidal Watching brief should also be produced in conjunction with advice obtained from the relevant local authority in reference to the actual design and practicalities of conducting any intertidal watching brief during the proposed construction of the Ro-Ro ramp and outfall.

Box 10 – The second sentence of this proposed mitigation measure should come first including any employment of Temporary Exclusion Zone (TEZ).

Box 11 – It would seem that the application of a second protocol to be established for the operation and maintenance phase of this proposed project should be predicated on completion of the capital dredge phase and if any Archaeological Exclusion Zones (AEZs) are identified and agreed.

Table 5 (mitigation measures for different dredging scenarios) – All use of the term "safe areas" should be removed, as per the explanation provided above. We do not concur with the mitigation measures proposed vis. systematic grab sampling or targeted backhoe excavation sampling of alluvial sediments at up to 30 sampling points after an agreed depth of dredging (e.g. 0.5-0.75m). We have explained the experience gained to date with the port sector and capital dredging programmes, whereby the primary investigation technique is repeat geophysical survey at agreed dredge depth levels prior to each phase of capital dredge. The interpreted results of these data should inform any subsequent programme of recovery of items of possible archaeological interest. This table also appears to describe mitigation measures, such as investigation of contaminated sediments that have previously been discounted as impractical.

# Chapter 8 (Method Statements)

The information provided to us appears to merge the role of a WSI and the role of task specific and detailed Method Statements. We have explained the effective procedures which should be adopted in reference to our experience with the port sector and our published guidance. In particular, the statement made in paragraph 8.1.7 appears to undermine the central principle that archaeological advice directly utilises survey data acquired to support delivery of this proposed project.

# Chapter 9 (Scheme of Investigations)

We are not satisfied by the contents of this (draft) high level WSI whereby it states in a text box prior to this chapter that the "Scheme of Investigations provides a structure for implementing any additional mitigation that may subsequently be required in response to unexpected discoveries..." It appears that this conflates the separate roles of a WSI and a reporting protocol for finds of possible archaeological interest. All methodological information as necessary to support archaeological investigations should be set within a WSI and the protocol deals with emergency action if materials of possible archaeological interest are encountered during project delivery.

Section 9.3 (Overview) – The measures described in this section are inadequate to allow regulatory enforcement by the MMO.





Section 9.4 (structure of proposed investigations) – In our advice to you, dated 25<sup>th</sup> June 2018, we stated that the high level nature of this document could be considered sufficient for the purposes of this examination. We acknowledge that some edits have been made, but we must stand by our advice – as detailed within the draft Statement of Common Ground – that the marine WSI produced during examination should be considered as "draft" (or "outline") as appropriate to inform the examination of this proposed development project. For example, it seems that our advice to you regarding a phased programme of geophysical survey as might help inform the deployment of any watching brief is not accepted. You appear to favour a watching brief, based on a sampling strategy, with its associated limitations, during a continual programme of capital dredging. We must add that the proposal to implement a watching brief during intertidal works (section 9.12) should be referred to the relevant local authority, especially in reference to any associated practicalities of implementation, especially if it is hoped to be able to identify archaeological deposits of Mesolithic date as highlighted.

Section 9.5 (archaeological reporting, data management and archiving) – In your email of 5<sup>th</sup> July you explain that it is not possible to produce an exact timetable at this stage, but that such detail will be addressed through any retained archaeological services. We add that similar provision for such information should be prescribed through relevant documentation produced to satisfy dML Conditions.

Figure 2 (CAD drawing of Proposed Development, we acknowledge the explanation provided to us regarding proposed dredge areas, berthing dolphins and upgrades to jetty, as set out in your email of 5<sup>th</sup> July 2018.

#### **Conclusion**

We acknowledge that this draft or outline high level WSI now includes a number of possible mitigation strategies which could be employed depending on the dredging scenario(s) adopted. However, overall document clarity is required and It is therefore our advice that delivery of a marine WSI should be made subject to Conditions within a deemed Marine Licence, such as offered previously. This regulatory mechanism will steer timely production and implementation of a project specific marine WSI post consent, in consultation with national and local curatorial bodies and in agreement with the MMO as the regulatory authority.

Yours sincerely,



Christopher Pater Head of Marine Planning

cc. Debbie Priddy (Inspector of Ancient Monuments, East of England, Historic England) Heather Hamilton (Marine Management Organisation, Newcastle upon Tyne) Peter Ward (Port of Tilbury London Ltd.)

Robert Ranger (Case Manager, Planning Inspectorate)



