

FIRST WRITTEN QUESTIONS: RESPONSE OF HISTORIC ENGLAND

1.13.4 Historic England asserts in its relevant representation [RR-002] that Tilbury Fort is of exceptional significance and that the impact of the Proposed Development on its setting would cause severe harm to its significance:

a) Would Historic England state what in its view should be done by way of mitigation to minimise this harm?

The National Policy Statement states that in considering the impact of a proposed development on any heritage assets, the decision-maker should take into account the particular nature of the significance of the heritage assets and the value that they hold for this as well as future generations. This understanding should be used to avoid or minimise conflict between conservation of the significance and proposals for development (5.12.11).

Although policy advocates the avoidance of harm to the significance of heritage assets in formulating development proposals and resorting to mitigation only if harm is unavoidable, the proposed development is one where the ability to avoid harm to the significance of the scheduled monument is limited because the nature of the proposals is such that the effects of mitigation would be peripheral to what could be generally achieved.

We consider that the scope for mitigation includes the expansion of measures which are set out in the DCO including: securing programmes of terrestrial and marine

archaeological investigation, Historic England's engagement in the process of agreeing external building materials and finishes and lighting; enhancement measures to be secured by a S106 agreement and the consideration of additional mitigation measures, which we will deal with in turn.

1.0 Improvements to Proposed Mitigation

1.1 To secure the terrestrial archaeological mitigation strategy, we suggest that the wording in the DCO (Schedule 2, Part 1,6) should be amended as follows:

(1) No stage of pre-construction or construction ground works may commence until for that stage a written scheme of archaeological investigation (which accords with the outline scheme of investigation has, after consultation with the Historic Buildings and Monuments Commission for England and Thurrock Borough Council, been submitted to and approved in writing by the relevant planning authority.

(2) In the event that site investigation is required, the scheme must include details of the following-

(a) an assessment of significance and research questions; and

(b) the programme and methodology of site investigation and recording;

(c) the programme for post investigation assessment;

(d) provision to be made for the analysis of the site investigation and recording;

(e) provision to be made for publication and dissemination of the analysis and records of the site investigation;

(f) provision to be made for archive deposition of the analysis and records of the site investigation; and

(g) nomination of a competent person persons/organisation to undertake the works set out within the written scheme of investigation.

(3) Any archaeological works or watching brief must be carried out in accordance with the approved scheme.

(4) In the event that site investigation is required, the site investigation and post-investigation assessment must be completed for that stage in accordance with the programme set out in the written scheme of archaeological investigation and provision made for the analysis, publication and dissemination of results and archive deposition secured for that stage.

1.2 To secure the programme of marine archaeological investigations, we suggest that the draft deemed Marine Licence within the draft DCO (Ref: 3.1) be worded as follows:

1. Pre-construction plans and documentation

1.1 A written scheme of archaeological investigation in relation to the Order limits seaward of mean low water, which must be submitted at least six months prior to commencement of the licensed activities and should accord with the draft written scheme of investigation and industry good practice, in consultation with Historic England and the relevant planning authority to include—

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

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

(iii) archaeological analysis of survey data, and timetable for reporting, which is to be submitted to the MMO within three months of any survey being completed;

(iv) any archaeological reports produced in accordance with these conditions are to be agreed with the Historic Buildings and Monuments Commission for England and the relevant planning authority.

(v) delivery of any mitigation including, where necessary, identification and modification of archaeological exclusion zones;

(vi) monitoring of archaeological exclusion zones during and post construction;

(vii) a requirement for the undertaker to ensure that a copy of any agreed archaeological report is deposited with the National Record of the Historic Environment, by submitting a Historic England OASIS (Online Access to the Index of archaeological investigationS') form with a digital copy of the report within six months of completion of construction of the authorised scheme, and to notify the MMO and the relevant planning authority that the OASIS form has been submitted to the National Record of the Historic Environment within two weeks of submission;

(viii) a reporting and recording protocol, including reporting of any wreck or wreck material during construction and operation of the authorised scheme;

(ix) a timetable for all further site investigations, which must allow sufficient opportunity to establish a full understanding of the historic environment within the Order Limits and the approval of any necessary mitigation required as a result of the further site investigations prior to commencement of licensed activities. The Consent Holder shall not commence construction of a relevant work until the Consent Holder has appointed the Retained Archaeologist to ensure the delivery of the Scheme; and carried out the pre-construction archaeological work applicable to that relevant work. During construction of a relevant work, the Consent Holder will secure the implementation of the measures on its part set out in or from time to time agreed pursuant to the Scheme applicable to that relevant work (other than the pre-construction and the post-construction archaeological work).

(x) Following the completion of construction of a relevant work, the Consent Holder will secure the implementation of all the post-construction archaeological work applicable to that relevant work; and

(xi) Any work executed or undertaken by or on behalf of the Consent Holder in accordance with the Scheme approved or deemed to be approved by MMO shall not relieve the Consent Holder of any liability.

2. Plans and documentation

2.1 Pre-construction archaeological investigations and pre-commencement material operations which involve intrusive seabed works must only take place in accordance with a specific written scheme of investigation which has been submitted to and approved by the MMO.

2.2 Each programme, statement, plan, protocol or scheme required to be approved under Condition 2 must be submitted for approval at least four months prior to the intended commencement of licensed activities, except where otherwise stated or unless otherwise agreed in writing by the MMO.

1.3 As currently drafted, the DCO provides that details of the external materials to be used in the construction of the following works: No 8A (i), 8C (ii) and fencing in Work Nos. 9 or 12, which must be submitted to, and approved in writing by, the relevant planning authority in consultation with Historic England and Gravesham Borough Council. We would expect to this requirement to cover all elements of the of the development which visually impinge on the setting of Tilbury Fort in order to support the principles of good design and the careful consideration of materials and colours for structures where this may help to mitigate the impacts of the development. Even though such measures would only achieve a softening of the visual impact which the development would have, rather than leading to any material reduction in the level of harm which would be caused to the significance of the scheduled monument, it remains desirable that all measures which could help to moderate the visual impact of the development should be implemented.

1.4 We welcome the similar provision for Historic England to engage in agreeing the lighting strategy for the same reasons.

1.5 The embedded mitigation provides for the retention of trees and vegetation (as far as is operationally possible) on the western boundary of the development site, as well as the landscape planting associated with the surface access corridor. We consider that such planting (which is, in any case, alien to marshland character) would have limited potential for screening the appearance of the proposed development. Ultimately this would be more effective in relation to the surface access corridor than the Tilbury 2 site, and would, at best, soften the appearance of the lower elements of the development. It would not materially reduce the harm which would be caused to the significance setting of the Fort.

1.6 The proposed enhancements to be secured via S 106 Agreement have the potential to bring heritage benefits to Tilbury Fort. While they would not reduce the harm that the development would cause to the setting of the Fort, they would have the potential to enhance other elements of its significance in line with NPS 3.3.3 and 5.12.12. Historic England considers that proposals relating to the implications for tourism etc. on Tilbury Fort are matters that The English Heritage Trust may wish to comment on.

2.0 Scope for Additional Mitigation

2.1 Scope of Development: In First Written Questions the applicants have been asked whether the CMAT development is justified. This component of the

development is particularly harmful to the significance of the scheduled monument and its exclusion from the scheme would remove two of visually most intrusive structures: the CMAT processing building and the silo. Since giving consideration to reducing the scope of a development is an important form of mitigation, we ask that this is considered, since it would reduce the adverse impacts of the development on the setting of Tilbury Fort and minimise the harm which would be caused to its significance in line with NPS para. 5.11.16.

2.2 North of Fort Road there is an area of marshland very close to the northern extent of the landward defences within the development boundary limit, where subsidiary compound uses are under consideration. In view of the proximity of this land parcel to the landward defences, we request consideration should be given to siting these facilities elsewhere and retaining this land as grazing marsh. Though the use would be temporary, the construction period would be lengthy (15 months), its relocation would reduce proximity and visual prominence of works in views to and from the water defences.

2.3 Permitted Development Rights: The Panel should consider whether and how the permitted development rights which would subsequently arise, should be qualified and/or restricted. The applicants have used the 'Rochdale Envelope' as a means of assessing the worst case scenario in terms of impacts and this would form the basis for PD rights. However, as an example, were the container storage area to be replaced by buildings, of the same height and area as consented in the DCO, the impact of subsequent development on the significance of the Fort would not in our

view, have been properly assessed. Future development proposals should be can be considered by the relevant planning authority.

1.13.8. The applicant has stated in the ES [APP-031} Chapter 12 Table 12.2 that tidal dynamic modelling was undertaken prior to the Scoping Opinion, and the results have now been discussed with Historic England:

a) Would Historic England provide comment on the tidal dynamics modelling presented in the baseline assessments?

We have checked our records and we confirm that we were supplied with a redacted copy of the “Scope of Work” for the HR Wallingford technical report, via email on 12/05/2017, which explained the computational modelling techniques that could be employed, but not which dredging methodologies were to be tested. This was a topic discussed at the meeting on 23/05/2017 and we expressed particular interest in how this work was done given the western extent of the proposed jetty lies within the scheduled monument boundary of Tilbury Fort. We add that the completed HR Wallingford technical report was not subsequently provided to us or specifically addressed at meetings held on 11/07/2017, 30/08/2017 or 24/01/2018.

To summarise the present outline detail provided by the Applicant regarding the proposed capital dredge programme in the vicinity of a bulk handling berth and a western RO-RO berth. We understand that the dredge pockets are to be dredged to -15 m Chart Datum (CD) at the bulk handling berth, and -7.9 mCD at the RO-RO berths. Presently, the minimum pre-dredge depths in these areas are approximately -8.0 mCD and -3.9 mCD respectively.

We offer the following comments on Appendix 16.D *Hydrodynamic and Sediment Study* (HR Wallingford, Ref: DDR5733-RT001-R05-00, dated October 2017) provided as part of the above referenced application:

1) We note that in Chapter 12 (Historic Environment) that the HR Wallingford report is referenced as August 2017, but the submitted copy in Appendix 16.D is dated October 2017. We are therefore uncertain if the assessment provided by the Applicant was based on a draft report produced by HR Wallingford rather than a final version (see Appendix 16.D Section: "Document history" which includes a version dated 17/08/2017).

2) The HR Wallingford report (as referenced above) states that it is anticipated that in terms of hydrodynamics there will be "...comparatively local impact upon the flow conditions and will not affect the overall hydrodynamic regime of the Thames Estuary." In reference to influence on sedimentation the development "...will have minor and local effect on the sediment regime of the Thames Estuary." The study considers it likely that dredged areas will infill with fine silt sediment and that "...dredging of the berth pocket to the proposed depth may challenge the integrity of adjacent side slopes (dredged or intertidal)."

3) The HR Wallingford report states that the dredging methodology has not been selected and that for the purposes of the report two modes of dredging are considered:

- Back-hoe; and
- Water Injection.

4) The report states that back hoe dredging has "...extremely low sediment release rate...compared to the ambient suspended sediment concentrations in the area any

effect of the sediment released by the dredging is considered negligible.” However, the use of Water Injection Dredging (WID) would be limited to mobilisation of finer silty material found in the upper stratum of the material to be dredged. The assessment determines through modelling that a sediment plume associated with WID could occur 15 km either side of the dredging areas with a maximum increase of suspended sediment concentration of up to 200 mg/l within 2 km of the dredging areas. Furthermore, it is thought that any sediment plume will be mostly “...confined to the subtidal areas with limited increase in suspended sediment concentration or sediment accumulation on the intertidal areas.”

5) It is apparent from the HR Wallingford report that it was an objective to determine any potential changes to erosion or accretion at the intertidal foreshore e.g. as might affect nature conservation designations, nearby vessel berths and other riparian activities. No specific and direct reference was made to any implications for Tilbury Fort e.g. status of any foreshore structures and how they might be affected – positively through sediment accumulation or negatively by foreshore lowering.

6) When determining any possible negative impact associated with this proposed dredging we must consider the associated capital dredging programme which downstream of the CMAT jetty will necessitate lowering the riverbed by approximately 1m to 5.8m. The RoRo berthing pocket (next to the western end of the existing jetty and around its westward extension) will require dredging to lower the riverbed by approximately 0.10m to 2m and that the adjoining approaches to the berth pockets will also be dredged. However, Section 2.8 (Layout of proposed works simulated) within the HR Wallingford report describes the basis for the computational

modelling of “Up to 4 m of dredging is required to bring the western berth to the target depth; about 7 m of dredging is required to bring the eastern end of the berth area adjacent to the existing jetty to the target depth. Additionally up to 2 m of dredging would be needed to provide the dredged approaches.” Elsewhere in the report, see section 3.3.2 (result) it states that at the eastern end of the bulk berth “...dredging, up to 6m below the present bed level so notable infill would be expected here.” These different descriptions of the proposed capital dredging programme do not appear to tally with other detail we have seen in the submitted Application and is a matter that should be clarified by the Applicant.

7) The report is clear that dredging the berth pocket “...to several metres below the natural regime depth in an area which is known to be sensitive to sedimentation is likely to lead to the dredged areas being subject to ingress of sediment.” The issue therefore is whether this ingress of sediment might be from associated with drawdown of foreshore adjacent to Tilbury Fort. For example, Figure 3.5 seems to suggest that loss of sand infill will occur extending west to Tilbury Fort and Figure 3.11 seeming to show modelled scour at the extreme western end of the proposed development.

8) We appreciate that this technical report directs particular attention at how the dredged areas will infill and that to inform the computational modelling exercise two dredging techniques were considered. In particular, it seems that the technique of back hoe dredging was selected as the spatial area for the capital dredge was considered to be a relatively small area. Furthermore, the attention given to WID seems to be because it is frequently used for maintenance dredging requirements

(see section 4), given the likelihood that on-going maintenance dredging will be required post capital dredge. In the Environmental Statement (ES), Chapter 5 (Description of the Proposals), section 5.11 (berth pockets and approach dredging) it states that "...proposals are currently progressing several dredging options including Back Hoe Dredging and Water Injection Dredging (WID)." It therefore seems that the HR Wallingford report should have considered other dredging techniques in order to identify different worst case scenarios.

9) The report describes that if WID is employed sediment remains within the tidal river and modelling results are produced to show sedimentary dynamics on both ebb and flood tides. It therefore seems that such consideration should have considered the implications to heritage assets such as Tilbury Fort and whether capital dredging at a particular state of the tide might have measurable influence on sedimentary dynamics as may affect the adjacent foreshore.

10) Section 7.3 states that "Alternatively the overlying soft silts and finer sands found in the boreholes could be removed by water injection dredging (WID) with any stronger or coarser sediment found at depth removed by backhoe." We therefore request that attention is directed at understand how a combination of dredging techniques might affect sedimentary dynamics and therefore what the worst case scenario might be in reference to identified sensitive receptors such as Tilbury Fort and seabed anomalies of possible archaeological interest. We note that the report does mention the use of cutter suction dredger (loading into barges) or trailer hopper dredger both of which would seem to merit more attention given the statement made in Chapter 5 (as referenced above).

11) From our review of the ES it seems that consideration of potential effects on coastal process within and adjacent to the proposed development area should have been included in Chapter 16 (Water Resources and Flood Risk) and that the assessment is based on the HR Wallingford *Hydrodynamic and Sediment Study* (Appendix 16.D). However, this report does not specifically and directly include geomorphological evaluation of foreshore changes as might affect Tilbury Fort. Furthermore, in Chapter 16, Table 16.22 (Water Resources and Flood Risk – NPS Compliance), in response to NPS paragraph 5.3.5, it states that: “It is considered that there are minimal additional adverse impacts to coastal processes and geomorphology assuming the proposed mitigation measures of this chapter are implemented.” We cannot find these mitigation measures, other than reference to provision made within the Development Consent Order (deemed Marine Licence) (see section 16.99).

12) It is our advice that such matters are addressed by the Applicant, for example in reference to what is presently known about elements of the proposed design, such as detailed in paragraph 16.122 regarding the Ro-Ro berth comprising “...a sheet piled wall to be installed offshore, approximately 130 m from the bank to depths of c.30 m below the bed of the River Thames. The piles will form a wall c.330 m long.” We therefore, cannot support at this stage statements made elsewhere in Technical Appendix 12.A (Archaeological Statement) that there will be a negligible effect on sedimentary conditions as might be considered to be “...protecting archaeological receptors outside the Site boundary including that part of the Scheduled fort that extends into the Thames”. The only means to demonstrate

anticipated negligible effects is to set out viable options for mitigation including an associated monitoring programme against an established foreshore elevation baseline adjacent to Tilbury Fort.

1.14.19. The NPS for Ports, paragraph 3.5.2 explains that consideration of applications for ports should start with a presumption in favour of granting consent to applications for port developments. That presumption applies unless any more specific and relevant policies set out in this or another NPS clearly indicate that consent should be refused. In section 5.12 it goes on to explain that the decision maker should “*seek to identify and assess the*

significance of any heritage asset that may be affected by the proposed development, including by development affecting the setting of a heritage asset, taking account of ...” and then lists various sources of information, including the Applicant’s own assessment. In paragraph 5.12.12- 5.12-13 it explains that significance can be harmed or lost through development within its setting. Loss affecting any designated heritage asset should require clear and convincing justification. Substantial harm to or loss of designated assets of the highest significance (including scheduled monuments) should be wholly exceptional.

b) Please can Historic England confirm whether, in their view, the Proposed development would lead to “*substantial harm*” to the scheduled monument, giving reasons?

Historic England judge that the harm which the proposed development would cause to the significance of Tilbury Fort would be severe. The measurement of harm is on a spectrum, and the harm in this case would be at the upper end of “less than substantial”.

In determining whether the proposed development would cause substantial harm, we have considered the impact on the significance of the heritage asset. As the NPS makes clear, significance derives not only from a heritage asset’s physical presence, but also from its setting.

The Planning Policy Guidance (Conserving and Enhancing the Historic Environment, HCLG 2018) states that the terms 'special architectural or historic interest' of a listed building and the 'national importance' of a scheduled monument are used to describe all or part of the identified heritage asset's significance. Some heritage assets may be affected by direct physical change or by change in their setting. Being able to properly assess the nature, extent and importance of the significance of a heritage asset, and the contribution of its setting, is very important to understanding the potential impact and acceptability of development proposals

A thorough assessment of the impact on setting needs to take into account, and be proportionate to, the significance of the heritage asset under consideration and the degree to which proposed changes enhance or detract from that significance and the ability to appreciate it.

The setting of a historic asset is the surroundings in which it is experienced, and may therefore be extensive. All heritage assets have a setting, irrespective of the form in which they survive and whether they are designated or not. The extent and importance of setting is often expressed by reference to visual considerations.

Although views of or from an asset will play an important part, the way in which we experience an asset in its setting is also influenced by other environmental factors such as noise, dust and vibration from other land uses in the vicinity, and by our understanding of the historic relationship between places.

When assessing any application for development which may affect the setting of a heritage asset, the decision maker may need to consider the implications of cumulative change. They may also need to consider the fact that developments

which materially detract from the asset's significance may also damage its economic viability now, or in the future, thereby threatening its on-going conservation.

As we have explained in our written representations (3.3) its setting is an essential component of the significance of Tilbury Fort. Its open historic setting was fundamental to the fort's purpose; and even in its now impaired form, the Fort's setting is critical to the visitor's understanding of its significance.

What matters in assessing if proposal causes harm is the impact on the significance of the heritage asset. In this case, we judge that harm would be severe, that is the upper end of "less than substantial" to the significance of Tilbury Fort.

It remains essential to apply the policy in NPS 5.12.16, that in considering applications which do not preserve those elements of the setting that make a contribution to, or better reveal the of the asset, the greater the negative impact on the significance of the asset, the greater the benefits that will be needed to justify approval (NPS 5.12.16). The question for the decision maker should not be addressed as a simple balancing exercise, but whether there is justification for overriding the presumption in favour of conserving a designated heritage asset.

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