

**Application by Port of Tilbury London Limited for an Order Granting Development Consent
for a Proposed Port Terminal at the Former Tilbury Power Station ('Tilbury2')**

DCO Reference: TR030003

Representation on behalf of The English Heritage Trust

March 2018



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EXECUTIVE SUMMARY

Carter Jonas LLP acts on behalf of the English Heritage Trust (English Heritage).

The English Heritage Trust is licensed to manage Tilbury Fort as part of the National Heritage Collection by the Historic Monuments & Buildings Commission for England.

This representation should be read in conjunction with that of Historic England: Statutory consultee on all planning proposals which would impact designated and non-designated heritage assets.

This representation is structured as follows:

1. A brief description and history of the site and its setting including significant links with other local heritage assets.
2. Responses to the Inspectors' First Written Questions – supported by further analysis and comment within the rest of this document.
3. A brief overview of relevant planning policy
4. A review of the economic performance, viability and relative sustainability of Tilbury Fort.
5. A review and analysis of the Environmental Statement that was submitted to support the Tilbury2 DCO application.
6. Our conclusion.

Our opinion of the matters at issue and our replies to the Inspectors' questions can be summarised as:

1. The impacts of the Tilbury2 proposals have not been fully assessed in the information submitted with the application. In particular, the need for the Fort to remain in its most viable use and for English Heritage to operate and manage the Fort in a successful way, reinvesting in its preservation and enhancement, is missing from the analysis.
2. There will be a permanent effect upon the setting of the Fort that we consider to be very significant but 'less than substantial' harm.
3. In the case that such harm has been identified paragraph 134 of the NPPF is engaged. A balancing exercise of harm to the Fort vs. the public benefit of the scheme has not clearly been undertaken as it should have been.
4. The mitigation identified within the proposals goes some way to reducing the effects of the proposed development (especially in visual terms) but it is not effective enough.
5. Even with the mitigation proposed, there will still be a significant negative effect upon the Fort. English Heritage therefore consider it reasonable that additional compensation is included with the proposals if permitted, as conditions or Section 106 obligations.

English Heritage has been in discussion with the applicant and has begun to draft a Statement of Common Ground. We have also started to engage with Thurrock District Council regarding the S106.

1.0 THE SITE

- 1.1 Tilbury Fort on the Thames estuary has protected London's seaward approach from the 16th century through to the Second World War. The fort is immediately to the south of the town of Tilbury in southern Essex, adjacent to Tilbury docks, on the opposite bank of the Thames to Gravesend.
- 1.2 There is a guidebook to the site included at Appendix C.
- 1.3 The Fort is a Scheduled monument: 1021092
<https://historicengland.org.uk/listing/the-list/list-entry/1021092>
- 1.4 Henry VIII built the first fort here; it was one of a series of "Device Forts" built to defend the English and Welsh coast in a move away from local militia control to that of the monarch / state. Queen Elizabeth I rallied her army nearby (in West Tilbury – possible at St James's Church) to face the threat of the Armada. The fort remained in service through the English Civil War, and the 18th and 19th centuries, but never saw active defensive use. During both World Wars the fort served as an anti-aircraft and local fire control position. The present fort is the best example of its type in England, with its circuit of moats and bastioned outworks defending the batteries from the rear is principally a Dutch design, extremely rare in England, and Tilbury is the best preserved and most complete example of the type.
- 1.5 The fort still retains many of its original internal features with most of the main buildings surviving as standing structures. The magazines are especially notable, as they are rare survivals of a very unusual building type. The buried remains of further structures, associated both with the operation of the 17th century fort and the Tudor blockhouse, will also survive within the fort. The remains of the blockhouse, and of features related to its operation, are important as they represent one of the earliest types of structure built exclusively for the use of artillery in warfare.
- 1.6 Within the fort there is also the Grade II* listed Officers barracks: 1375568
<https://historicengland.org.uk/listing/the-list/list-entry/1375568>
- 1.7 The barracks is a terrace of approx. 22 officers' houses in within the fort, now 7 houses and a museum. It was initially constructed in 1772, by the Board of Ordnance and altered in the early 19th century. The current design importance is concentrated upon the yellow stock brick with brick ridge stacks and a steep slate hipped valley roof of Mid Georgian style.
- 1.8 The English Heritage Trust is landlord to three tenants who are residents within the Officers barracks.
- 1.9 Tilbury Fort's historic significance is also linked to the nearby (4.5 - 5km to the east) Coalhouse Fort battery and artillery defences built in 1860.
This complex of buildings is also scheduled: 1013943
<https://historicengland.org.uk/listing/the-list/list-entry/1013943>
And is on the Heritage at Risk register:
<https://historicengland.org.uk/advice/heritage-at-risk/search-register/list-entry/48239>
- 1.10 There are also links to two existing parish churches, St Mary's at Chadwell St Mary and St James's at West Tilbury. These churches served the fort in earlier times as births, deaths and

marriages are registered in their respective church. The parish boundary runs north - south across the middle of the parade, dividing the soldiers barracks (barracked on the Chadwell parish side of the fort), from the officer's quarters on the West Tilbury side of the parade. The links to St James's continue to this day with the restored pews from the closed church now furnishing the chapel at Tilbury Fort.

2.0 INSPECTORS' FIRST WRITTEN QUESTIONS (FWQ)

2.1 Below, we respond to each of the Inspectors' questions and reference our assessments and further comments from the rest of this document and its appendices. We shall be in attendance at the hearing sessions to take part in discussions and to answer any further questions that the Inspectors may have about our replies or any other information that we have supplied.

Question 1.13.1.

a) Would EH state what it sees to be the deficiencies in the current Tilbury 2 proposals, and what EH would expect the Applicant to produce for consistency with best practice guidelines, notably with regard to Tilbury Fort?

2.2 English Heritage believes that the Environmental Statement (and previous Preliminary Environmental Information Report) has failed to fully recognise the scale of impact that the proposals would have on the significance and setting of Tilbury Fort. Critically, we believe that the viability and sustainability of the commerciality of Tilbury Fort has not been fully considered. The commercial viability and sustaining of heritage assets is recognised in the National Planning Policy Framework at paragraph 131 and the National Planning Statement for Ports at paragraphs 3.3.3 and 5.12.12. To be clear, revenue that is created by the Fort, through English Heritage, is reinvested into the Fort to preserve and enhance its heritage significance to the benefit of visitors and to help better reveal that significance to the benefit of the nation. Therefore, the level of mitigation that has been presented, to date, does not fully engage with the scale and range of impacts.

2.3 A key deficiency in the proposals is a comprehensive balancing exercise of harm to the designated heritage assets (including Tilbury Fort) vs. the public benefits of the proposal. We acknowledge that the likely harm caused to the Fort is less than substantial but maintain that it would be very significant. This being the case paragraph 134 of the NPPF is engaged and a balancing exercise should be undertaken. It is not clear what the public benefits of the Tilbury2 proposals are, what the costs of its construction and operation are or how these have been balanced against the harm to the designated heritage assets of Tilbury Fort and the viable sustainability of them.

b) What matters remain to be resolved?

2.4 As we have outlined in section five below, there are a number of areas of the Environmental Statement – in particular regarding tourism, landscape and heritage significance – that have gaps in the analysis. We have suggested improvements to this and to the conclusions about the necessary mitigation and additional compensation.

2.5 There is unavoidable harm to the setting of the Fort and the balancing exercise of NPPF 134 should be undertaken (as we suggest at our 2.2.2 above). The harm should be mitigated as far as possible, but its impact will not be entirely avoided, therefore compensation for the preservation and enhancement of the Fort is necessary. Also, compensation that would support the continued viability of the site to better reveal its significance is necessary.

c) How does EH envisage its needs being met in the dDCO?

2.6 We do not have access to all the information required to undertake a balancing exercise, and in any case this requirement falls on the applicant. We have provided a considered list of

appropriate additional mitigation and compensation measures. These measures could also provide elements of public benefit to the scheme.

- 2.7 Quality of visitor experience is fundamental to the commercial success of the Fort and to its financial sustainability. We seek adequate and proportionate mitigation and compensatory measures through conditions to the development permission and s106 terms to make enhancements to Tilbury Fort to offset the very significant harm that would be caused by the Port of Tilbury's expansion. Those proposed measures are:

No.	Item	Description of Mitigation / Compensatory Measure	Estimated Cost
1.	Driveway	Re-surfacing of the existing driveway approach to the Water Gate to enhance the current approach to the Fort.	£75,000
2.	Traffic Calming	Design and implementation of an agreed scheme of traffic calming measures along Fort Road. Currently the volume of HGVs parked along this narrow road approaching the Fort impacts on the sense of arrival and welcome to the monument and detracts from Visitor Experience. EH anticipates this will only increase once the new access corridor is in place and increase in traffic caused by the expansion of the Port.	Scheme to be proposed by PoT
3.	Signage and Interpretation Scheme	The installation of a re-designed signage and interpretation scheme would allow visitors to better understand the legibility of the monument in the new setting. Where key views have been impacted or entirely lost by the development, an innovative interpretation scheme would be vital to ensuring quality of visit.	£110,000 - £150,000
4.	Original Car Park	Surfacing of the original car park to the North of the site would allow EH to realise a long-held ambition to re-orientate the site. This would need to be seen in conjunction with items 5 and 6 below for the scheme to be possible.	£110,000
5.	Outer Bridge	Reconstruction of the bridge over the Outer Moat would allow access by visitors via the original approach to the Fort from the North. This would need to be seen in conjunction with items 4 (car park) and 6 (inner bridge) in order to be fully possible.	£206,000

6.	Inner Bridge	Reconstruction of the bridge over the Inner Moat would allow access by visitors via the original approach to the Fort from the North. This would need to be seen in conjunction with items 4 (car park) and 5 (outer bridge) in order to be fully possible.	£587,000
7.	Outer Moat	Repairs to and dredging of the outer moat would represent a significant improvement to the setting of the Fort and would be seen as proportionate compensatory measure to offset the harm to the Fort's wider setting.	£3.6 million
8.	Inner Moat	Repairs to and dredging of the inner moat would represent a significant improvement to the setting of the Fort and would be seen as proportionate compensatory measure to offset the harm to the Fort's wider setting.	£3.6 million

- 2.8 We are in discussion with the applicant and there is a draft Statement of Common Ground in front of the Inspectors regarding mitigation and compensation. We are also engaging with Thurrock District Council regarding the S106 obligations for the proposal.

Question 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?

- 2.9 English Heritage would like to support the views of Historic England in this matter, and make it clear that we are working proactively with the applicants to identify appropriate mitigation and compensatory measures. We are also working with Thurrock District Council and the applicants to draw up an appropriate section 106 agreement.

Question 1.13.8.

The Applicant has stated in 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?

- 2.10 English Heritage has been made aware (on Monday 19 March) of additional flood risk and tidal modelling that may have some impact upon Tilbury Fort. We are engaging with the applicants to better understand the significance of this work and the potential impacts. Should there need to be any mitigation regarding this we will respond in due course.

Question 1.13.20.

According to ES [APP-031] Chapter 12 paragraphs 12.151, 12.181 and 12.229, the contractor will develop and implement a monitoring and mitigation regime for vibration effects of piling on historic assets, in consultation with English Heritage and Historic England.

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- 2.11 English Heritage is particularly concerned about the potential impacts of vibration and request the consideration of a laser scan survey and vibration monitoring. This should be set up well in advance of any works to record background vibration levels so that any changes and damage during construction (and potentially operation) can be attributed.

Question 1.14.19.

b) Please can English Heritage Trust and Historic England confirm whether, in their view, the Proposed Development would lead to “substantial harm” to the Scheduled Monument, giving reasons?

- 2.12 We consider the matter of the impact of setting in response to the Environmental Statement in our section five below. Suffice to say, the setting of the fort will be permanently affected. Views of linked heritage assets and across the Thames will be significantly affected or lost, and the eastward approaches will be significantly impacted. It is our belief that this would constitute very significant harm (but less than substantial). Therefore the balancing exercise (NPPF paragraph 134) of this harm with any public benefit must be undertaken.
- 2.13 The proposed scheme also jeopardises the long-term viability of the Fort, the proposed mitigation measures are considered largely ineffective and are unlikely to reduce the overall harm sufficiently. This risks the harm being increased to ‘substantial’ as the proposals will compromise the assets optimum viable use. The applicant must, therefore, introduce compensatory measures to enhance and better reveal the assets significance as well as ensuring the assets long term viability.
- 2.14 The mitigation (as is outlined in the Tilbury2 Environmental Statement) and compensation (as we outline in this response) are both necessary to make the proposals acceptable in planning terms.

3.0 PLANNING POLICY CONTEXT

3.1 Tilbury Fort, as a Scheduled Monument including listed buildings, must be considered as a heritage asset in national planning policy terms. As well as this, it is a thriving tourist, employment and commercial asset upon which the impacts of the proposal must also be fully considered. Paragraphs regarding heritage value and tourism activities from the National Planning Policy Framework (NPPF), Planning Practice Guidance (PPG) and the National Policy Statement for Ports (NPS) are of particular relevance to this representation. These, together with relevant policies from the Thurrock Local Plan (Local Development Framework) are included at Appendix A.

3.2 We shall particularly draw on:

- NPPF paragraphs 131 – 134, 137 & 140 with associated PPG that consider heritage impacts, their most viable use and balancing harm with public benefit;
- NPS paragraph 3.3.3 referring to sustainable development, section 4.6, “Tourism” & section 5.12, “Historic Environment;” and,
- Thurrock Local Development Framework policies CSTP24: Heritage Assets and the Historic Environment and PMD4: Historic Environment.

4.0 THE FINANCIAL SUSTAINABILITY OF TILBURY FORT

4.1 The heritage significance of the Fort is closely linked to its continued financial viability and sustainability. This principle is also recognised in NPPF paragraph 131. In order for the Fort to continue to be understood for its historical importance, to better reveal its significance and for it to be enjoyed by visitors, it is important that revenue can be raised. That revenue comes from tourists who visit to appreciate the setting that is linked directly to the heritage significance and also film companies who use the setting for locational film shooting. Both of these activities are currently put at risk by the Tilbury2 proposals. It should be noted that money raised at the Fort is reinvested directly into its upkeep, preservation and enhancement.

4.2 Tilbury Fort is forecasting to generate an income of around £451,000 in 2017/18. Offset against costs of £165,000, this means that the site is budgeted to make an overall surplus of £286,000 this financial year. In 2017/18 filming has made the strongest income contribution to the site at £346,000.

4.3 Visitor numbers have remained largely static over the last ten years, but in the last four years non-paying visitor numbers have exceeded paying visitor numbers, and are budgeted to do so again this year, showing that Tilbury is popular amongst English Heritage members.

4.4 In addition to the standard income streams, Tilbury Fort has three properties that are let to tenants (and potential for more), providing a steady income stream for the site.

4.5 Tilbury Fort has also been used for filming several films and television dramas. The Fort has been chosen as a filming location for its structures and architectural fabric but also, critically, for the views from the Fort – particularly across the Thames estuary – and its setting in general. Notably, “Sharpe” was filmed in part at the Fort, and still brings visitors to the site now due to re-runs on cable TV channels. Further filming in 2016, which included Tom Hardy’s production of “Taboo”, Warner Brother’s blockbuster “Wonder Woman”, and “SSGB” brought considerable attention to the site.

- 4.6 Below are the key reasons, cited by the filming industry, for Tilbury Fort as such a successful and key site:
- Proximity to central London
 - Large areas of controllable hardstanding – both the parade ground, old visitor car park and surrounding marshland are essential in allowing us to facilitate large scale set builds and house unit bases/crew parking.
 - Secluded location – Based in a quiet industrial estate Tilbury Fort does not suffer with noise pollution nor close/overlooking neighbours. This also allows us to comfortably facilitate low flying aerial filming with helicopters and drones.
 - Uninterrupted views – Visually there is very little that disrupts the eye line looking out from the fort, this means the requirements for post-production editing is vastly reduced for production companies.
 - An incredibly diverse portfolio of locations within the site – Controllable roads, controllable waterways, parade ground, residential interiors, military interiors and exteriors, tunnels, uninterrupted marshland.
- 4.7 The Tilbury2 proposals have the potential to particularly affect the latter three points above, and we seek assurances that these matters can be mitigated and compensated as necessary. These points also illustrate the range of ‘commercial assets’ on the site that help sustain the site, and that will continue to help maintain the viability and significance of the Fort in the future as long as they are not compromised, and indeed are improved, as part of the overall proposal.
- 4.8 As well as revenue from the filming itself there are additional benefits for the Fort and the English Heritage. We have allocated £15,000 funding to put towards a temporary filming exhibition which we are intending to launch in April of 2019. This will tell the story of Tilbury Fort’s use as a location for both TV and film productions which current visitors show great interest in. This will also look to deliver volunteer-led guided tours of the locations used during filming.
- 4.9 Visitor numbers and financial performance across the past 11 years is presented at Appendix E. It should be noted that whilst there are some significant peaks (particularly in income related to filming) there is a generally positive trend. This is despite the Fort’s current situation in a relatively isolated location amongst industrial operations. As mentioned above, the recent filming has helped increase visitor interest as well as income. Therefore, any increase in the industrial operations – with the associated increase in traffic – would make access more challenging, and the impact on the setting could result in a loss of filming opportunities. This has the potential to reverse the current positive visitor and income trends and thus severely threaten the financial sustainability of the Fort.

5.0 SUPPORTING ENVIRONMENTAL STATEMENT (ES) AND PRELIMINARY ENVIRONMENTAL INFORMATION REPORT (PEIR) FOR 'TILBURY2.'

- 5.1 We have reviewed the ES and PEIR in support of the DCO that consider impacts to a wide spectrum of environmental indicators. Of particular relevance to English Heritage and Tilbury Fort are the socio-economic, landscape and heritage factors. The site is also potentially impacted by noise and vibration created by the construction and operation of Tilbury2 and there could also be ecology implications.
- 5.2 Tilbury Fort is considered in most detail in the ES and PEIR under three 'headings.' The socio-economic value of the tourism offer is noted, and the landscape and significance of the heritage setting are considered. The conclusions are generally that Tilbury Fort has a high level of sensitivity to change and that there would be impacts through the construction and operation of Tilbury 2. We welcome this recognition, but do not consider it to contain sufficient detail of the impacts or reasonable mitigation for them.
- 5.3 We are concerned that the impacts of vibration, from construction and operation, on the fabric of the whole Tilbury Fort site has not been fully considered.
- 5.4 It should be noted that the residents of the Tilbury Fort were not considered in the PEIR, but were eventually part of the consideration in the Environmental Assessment.
- 5.5 In the following paragraphs we consider elements of the ES and PEIR responding to each, and suggesting appropriate mitigation and/or compensation where necessary.

Socio-economic

- 5.6 We note at paragraph 7.101 of the ES (and 7.100 of the PEIR) the following comments:
- "...The 16th century fort is popular with visitors and is a designated English Heritage (EH) site. Whilst the receptor has been considered as part of the LVIA and Cultural Heritage chapters, it is also considered as a business in this socio-economic assessment, with the potential to be affected by indirect amenity impacts. It should be noted that the receptor is already affected by amenity impacts from existing and longstanding operation of the Port of Tilbury. The LVIA and Cultural Heritage chapters have stated at this stage that this receptor is expected to be affected indirectly from amenity and cultural heritage impacts. Access to the fort for both staff and visitors is not expected to be affected by the proposals. **The effect of the proposals on Tilbury Fort has been assessed as being Indirect, Negative, Permanent, but Negligible.**"*
- 5.7 It is our view that this assessment and those included in tables 7.22 and 7.25 do not fully recognise the socio-economic value of Tilbury Fort nor do they appropriately mitigate the impacts. Tilbury Fort is an education facility, tourist attraction and filming location. As noted above, at section 4, and in Appendix E we include a breakdown of visitor numbers annual income that demonstrates the scale of economic investment and value that there is in the site. The value of this revenue is directly related to the continued preservation and enhancement of the scheduled monument, listed buildings and their setting.
- 5.8 The landscape assessments have considered the significance of the setting of the heritage assets, but as is noted above at our section 4, the landscape (and seascape) setting is also directly related to the ability of the English Heritage to realise revenue opportunities from

filming. Therefore, there are two elements that ought to be considered, mitigated and compensated as appropriate.

- 5.9 We contest the implication of the comment made at paragraph 7.101/7.100 that there are already impacts to setting and the Fort's viability. Our visitor numbers and filming opportunities are restricted in relation to existing port activities, and additional development at Tilbury2 would increase any adverse impacts. We note above at our section 4 that the views to the east and especially over the water were of particular importance to film locations. The films and dramas listed – e.g. Sharpe and SSGB – used a period setting that would not be possible (or would become expensive to recreate and therefore reduce the appeal of the Fort as a location) if the Fort becomes surrounded by industrial development, especially on the estuary side. It is very likely that any further development would reduce filming opportunities.
- 5.10 It is our view that the socio-economic impacts go beyond purely the landscape setting and heritage challenges mentioned above, but also include 'amenity' impacts from vibration and noise that would detract visitors and investors, and also threaten the fabric of the buildings they come to see and use. We recommend that additional and continued monitoring of the effects of vibration on the Tilbury Fort tunnel system are included in the necessary package of mitigation for the scheme. We comment on this further below at paragraphs 5.75 to 5.77.
- 5.11 Access to the Fort has a clear and tangible effect on economic sustainability. If visitors, commercial users and residents find it difficult to get to the site, or are completely put off by the challenges then the revenue that they would have brought will be reduced or lost. It is unclear from the plans and transport surveys that we have seen so far what impact the proposals will have on Fort Road. We are not convinced by the statement that access to the fort will not be affected. A changed road alignment and increased HGV movements will change traffic flows, also there is a risk that lorries will park along Fort Road and create problems for access. We would like to see commitment to avoiding any adverse impacts to the access arrangements at the Fort and suggest that appropriate mitigation and compensation should be included in the Tilbury2 proposals, for example:
- prohibiting parking on the verges along Fort Road;
 - traffic calming to reduce the desirability of Fort Road to HGV and make it more attractive to visitor traffic – this should not however restrict access for film crews;
 - improvement to the driveway access to the Fort; and,
 - improvement to the northern car-parking arrangements at the Fort.

Landscape and visual impact (setting)

- 5.12 Views of Tilbury Fort, and from it, are included within the ES and PEIR.
- 5.13 Table 9.15 of the ES identifies 'embedded landscape and visual mitigation' within the proposals as follows:

Mitigation	Reason
Lowest elements of proposed development (container and trailer storage) located in closest proximity to the waterside and Tilbury Fort	Reduce potential adverse effects on visual amenity, the setting of the fort and the historic visual connection between Tilbury fort and New Tavern Fort.
Structural landscape comprising scrub woodland, scrub grassland and ditches associated with the proposed	Mitigate adverse effects on landscape character, visual amenity and the setting of Tilbury Fort south of the route caused by the

infrastructure corridor incorporating SUDS features and wildlife habitat.	introduction of road and rail traffic. Mitigate loss of wildlife habitat. This is illustrated within Figure 9.9 Landscape Strategy and its maintenance and management will be secured through a Landscape and Ecological Management Plan, compliance with which will be secured through the DCO.
Artificial lighting designed in accordance with guidance supplied by the Institute of Lighting Professionals.	Reduce potential effects of obtrusive light and skyglow. Reduce or avoid the potential for the site to become an 'island of light' in an otherwise relatively dark area. Details of the lighting will be approved by Thurrock

- 5.14 At table 9.16 of the ES (and 9.13 of the PEIR) the visual amenity impact at Tilbury Fort (to residents and users of recreational and/or tourism facilities) is assessed as follows:

Reference	Location	Sensitivity	Magnitude	Significance	Nature
<i>Residents</i>					
-	Tilbury Fort (former officers' quarters)	Medium	Low	Moderate - slight	Adverse
<i>Users of recreational and/or tourism facilities</i>					
27,59,62	Tilbury Fort	Medium	High	Substantial - moderate	Adverse

- 5.15 At table 9.18 of the ES (updated from 9.14 of the PEIR) a range of potential further mitigation is listed:

Mitigation	Purpose
Retain existing mature Monterrey Pine trees located at the western boundary.	Reduce and potentially screen views of container operations on nearby receptors to the west including Tilbury Fort. The trees are partially screened to external view by deciduous vegetation within the adjoining water treatment works and will continue to grow to reach the required height for screening the upper levels of proposed container operations and other taller structures in the medium term.
Colour proposed cement silo and all taller buildings and built structures light grey.	Reduce potential visual impact and adverse effects on the setting and relationship between Tilbury and New Tavern forts. Taller structures are likely to be seen against the sky and lighter colouration would reduce their presence. To secure this, surface treatment of these buildings will be required by the DCO to be approved by Thurrock Council, in consultation with Historic England and Gravesham Borough Council.
Provide low key lighting to illuminate waterside elements of the development.	Reduce potential effects on the setting of Tilbury Fort, provide an appropriate level of

	lighting for users of Footpath 146 and improve the appearance of the site from the southern side of the Thames. This will be secured through the DCO requirement for a detailed lighting strategy to be approved by Thurrock Council, to be in general accordance with the Preliminary Lighting Strategy and Impact Assessment.
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- 5.16 A further statement about the changes from the PEIR to the ES is made at paragraph 9.233 of the ES:

“It was recommended during the scoping and draft PEIR stages that measures to reduce potential effects associated with the proposed cement silo were included (relocate approximately 0.5km north and split into two 50m high units) and the western RoRo berth (kept as short and low key as possible). These measures have been reviewed by the applicant but cannot be applied due to essential operational constraints as set out in the Masterplanning Statement.”

- 5.17 We have reviewed the Masterplanning Statement and the reasons why the recommendations of the PEIR – to reduce the height of the silos and alternatives for the RoRo berth – have not been included in the final ES. The essential operational reasons argued, are coincidental in nature, and there does not appear to have been a robust balancing exercise undertaken. At paragraphs 4.8, 4.11 and 4.25 – 4.27 of the ES “APPENDIX 5.A: MASTERPLANNING STATEMENT” the need for the RoRo is identified as an operational requirement, the fact that the proposal site already has a such a facility makes it a candidate for the development and it is explained that “[i]t was concluded early in the design process that the retention of the jetty would be a fixed parameter. This was because the jetty structure includes water intakes that were previously used by RWE for the coal fired power station. The acquisition of the site by PoTLL was conditional on the retention of these water intakes and as such, PoTLL is contractually required to retain them.” And also that “it was both environmentally and commercially sensible to retain this structure. Removing it in order to replace it with a new structure would have not only been an option with much greater construction cost but would have caused a significant extension to the construction programme (hence increasing the temporal scope of construction related environmental impacts) as well as requiring greater intervention in the marine environment as a result of the demolition of the existing jetty and its replacement.”

- 5.18 The proposed need for the RoRo berth in the locations intended is understood, however, for this consideration to be in accordance with national policy (NPPF paragraphs 132 – 134) its impacts – upon the significance of the Fort – should be directly balanced against any identified benefits. Benefits to the operation of the proposed port are noted but nothing in the public benefit. We suggest that an assessment of alternative options and the monetary cost should be made, and this should be weighed against the impacts upon the fort and the costs of the mitigation and compensation measures outlined in the ES and this representation.

- 5.19 We note the comments at paragraph 5.17 of the masterplanning statement that the process “considered lower but a larger number of silos in order to consider whether this might be beneficial in environmental or operational terms. However, the Landscape and Visual Impact Assessment has concluded that the additional bulk that would be created by having a greater number of silos would off-set the benefits of a lower height. Moreover, from an operational

perspective, a larger number of silos would consume a greater area of the site.” And again, we understand the benefits of this exercise to the viability and commerciality of the proposal and accept the opinions stated in the LVIA, but the viability and sustainability of the Fort should be considered in the public benefit because 100m high silos will have an impact on the setting of the Fort and the ability of visitors to understand the significance of it and for filming opportunities in general.

- 5.20 English Heritage welcomes the statement at paragraph 9.234 of the ES that “more imaginative solutions” may be appropriate forms of mitigation and look forward to constructive engagement to this end through any S106 negotiations and potential continued design and construction stages.
- 5.21 According to table 9.20 of the ES the further mitigation reduced the visual impacts to residents of the Fort to “low-very low” and to the recreation/tourist users of the Fort the magnitude of the impact is reduced to “medium to very low” and the significance is reduced to “Moderate to slight.”
- 5.22 The summary conclusions of impacts are then included at table 9.22 of the ES (updated from 9.17 of the PEIR):

Impact Description	Temporary, Permanent Cumulative	Significance of Effect
Conservation interests-cultural heritage	Permanent and cumulative	Substantial to Moderate
Residential areas and occupiers of individual residential property	Permanent and cumulative	Substantial-moderate to slight-imperceptible
Users of recreational and/or tourism facilities	Permanent and cumulative	Substantial-moderate to slight-imperceptible

- 5.23 English Heritage disagree with the assessments at tables 9.20 and 9.22 of the ES and suggest that the impact, particularly to tourists *and other commercial users*, will continue to be substantial. The screening mitigation presented as embedded within the proposal and the further mitigation suggested are necessary but do not go far enough. There will still be a significant landscape impact to the setting of the Fort, particularly to the links between the Fort and the church of St. James in West Tilbury, the Fort and Coalhouse Fort (viewpoint PEIR 59 – our viewpoint 9), the Fort and the line of fire across the Thames (our viewpoints 7 and 8) and the distant setting of the Fort seen from the opposite bank of the Thames and from the ferry (our viewpoints 1 and 2).
- 5.24 It is English Heritage’s opinion that the significance of the impact has been underestimated, and the mitigation proposed is therefore largely ineffective. It is unlikely that any additional mitigation could reduce the impact of the proposals so – using the balancing exercise of paragraph 134 of the NPPF – it would be difficult to avoid this harm. Also public benefit that better reveals the significance of the setting of the Fort is an added positive dimension to consider. The setting could be demonstrated to visitors through improved interpretive signage at the fort that explains the links to local landmarks and views as explained in our appendices B and D.
- 5.25 It should also not be forgotten that that the setting of the Fort is an important part of its commercial value in terms of filming. The permanent and significant effects upon the setting

of the Fort should also be compensated for these reasons. The enhancement of access engendered by the proposed works to the car park and bridges would go some way to offset the impacts to setting. The public benefit in continued filming opportunities at the Fort is realised through reinvestment of all income in the conservation of the heritage assets and an improvement of the visitor experience of them.

Heritage sensitivity and impact

5.26 Table 12.9 of the ES (12.7 of the PEIR) - Built Heritage Assets Sensitivity - includes Tilbury Fort with the identified sensitivity / value indicators recorded as “very high,” and for the Officers Barracks Tilbury Fort the sensitivity / value is recorded as “high.”

5.27 There is some “Embedded mitigation” cited in the ES (Paragraph 12.144 carried over from the PEIR: 12.107) as follows:

“...Maximum height of container storage will be six containers high; however, the short dwell times of containers within the RoRo terminal are such that in general, stacking will be two containers in height. This measure will help to reduce potential adverse effects on the setting of heritage assets with a higher level of inter-visibility with the Site, including Tilbury Fort, Coalhouse Fort and the numerous heritage assets on the southern side of the river.”

5.28 Through paragraphs 5.12 to 5.25 above, we discuss the impacts of the Tilbury2 proposals on the landscape setting and views to and from the Fort (with our viewpoints 7, 8 and 9 at particular risk). In addition to our comments above we raise significant concerns about the maximum container heights, and the dwell times cited in the ES. There does not appear to be a robust argument to necessitate a maximum container height of six, particularly if the general stacking height is expected to be two. Obviously the fewer containers that are stacked on top of each other, the lesser the impact. We seek assurances, and request the opportunity to discuss future agreements, that have the ability to restrict container stacking heights especially at times of filming at the Fort.

5.29 Paragraph 12.148 of the ES states: *The ‘Two Forts Way’ public footpath runs through the Tilbury2 Site along the river front between Tilbury Fort and Coalhouse Fort. This Public Right of Way (PRoW) will be retained within the scheme, helping to preserve the historic connection between the two forts.*

5.30 The retention of the Two Forts Way PRoW is welcomed, and considered by English Heritage as essential to the continued tourist value of Tilbury Fort. It is also considered that the link between the two forts – both physical, viewed and educational – remain vitally important in aiding how the significance of the relationship between the two forts is better revealed.

5.31 English Heritage welcome the commitment at paragraph 12.150 of the ES:

“An Active Travel Study forms part of the DCO application and includes improvements to the footpaths and network surrounding Tilbury Fort. This includes resurfacing of footpaths and car parking to improve their appearance. This measure will help to improve connectivity to Tilbury Fort and thus open up new pedestrian links and encourage visitors towards both the Scheduled Monument and its landscape setting. Design and materials of the surface treatments will be in consultation with Thurrock, Historic England and English Heritage.”

We request that the details of these improvements are discussed and included in the S106 agreement as necessary mitigation.

5.32 We also note the comments at paragraph 12.151 of the ES:

“Prior to the commencement of any piling activities (either terrestrial or marine), if deemed necessary in consultation with English Heritage and Historic England, the Contractor will develop and implement a monitoring and mitigation regime to monitor and mitigate the vibration effects of piling on historic assets, in consultation with English Heritage and Historic England. This is secured through the CEMP.”

English Heritage consider this to be a very necessary part of the proposals, implementation and monitoring of this scheme.

Construction phase

5.33 The potential construction impacts on the Fort are described at paragraph 12.177 as follows:

“...Construction of Tilbury2, including the extension of the jetty and the infrastructure corridor, will likely have an impact upon the setting of Tilbury Fort through potential visual intrusion and increased noise, vibration, construction traffic and lighting. This is likely to impact on views both of and from Tilbury Fort and its landscape setting to the north.”

5.34 English Heritage agree with this statement regarding the impact to views to the north, but also wish to highlight impact on seaward views, as discussed at paragraphs 5.12 to 5.25 above and Appendix B and Appendix D. The construction traffic will also have an impact upon the ability of visitors and staff to access the site. The traffic calming and access improvement measures that we have outlined in response to the Inspectors’ question 1.13.1 c) will go some way to mitigating the impacts of this, and because there will be an impact through the construction phase these mitigation measures should be a pre-commencement or very early condition to any potential development comment.

5.35 Paragraph 12.177 goes on to state:

“...The construction of the lower elements of the scheme within the main Tilbury2 Site are likely to be largely screened from view by existing vegetation and intervening built development, including the Anglian Water Recycling Centre and the Stobart’s wood processing site.”

5.36 Our opinion is that the screen provided by the existing development to the east will be negligible. Activities on the site, from the commencement of the project, will have an impact in terms of visual intrusion, visitor amenity and access. The views to St James church in West Tilbury and to Coalhouse Fort will be affected, and so the additional compensation measures of interpretive signage should be a pre-commencement condition of the development.

5.37 The impact of the proposals is better described in the following paragraph 12.118:

“...construction of the higher elements of the proposals are likely to be visibly prominent, including the 100m high silo (above a ground level of a worst case maximum of 4m AOD), warehouse buildings and CMAT facilities in the northwest area of the Tilbury2 Site, as well as of the construction of the infrastructure corridor, situated to the north of Tilbury Fort. The CEMP and CTMP, which form embedded mitigation, will ensure that construction activities and working hours are appropriately controlled. The construction of the proposals

will alter the setting of Tilbury Fort through increasing the industrial character surrounding Tilbury Fort.”

5.38 English Heritage believe that this should be robustly mitigated for heritage and commercial reasons. The embedded and further mitigation that is discussed below goes some way to mitigating the effects of the proposal but do not rule out a significant impact to the setting of heritage assets. Therefore, because the impact cannot be ruled out, it is reasonable to expect some compensation should the proposal be given consent.

5.39 Paragraph 12.118 goes on to state:

“...Whilst Tilbury Fort is already experienced within an industrial context, the construction of the proposals will bring this character closer to the Scheduled Monument. This is likely to be principally through visual and noise impacts; the latter relating to the temporary increase in construction traffic using Fort Road to enable the construction of the infrastructure corridor”

5.40 It is our view that the impact of the ‘industrial context’ is over stated and the proposal should be considered on its own merits. Tilbury2 will bring with it significant impacts to the landscape setting of the fort and therefore to its heritage value and commercial sustainability. These impacts will be felt from the commencement of operations, should the proposal be permitted. Therefore interpretive signage and access improvements should be a pre-commencement condition with the surfaces of Fort road monitored during construction to avoid deterioration caused by machinery and plant related to the construction of the infrastructure corridor and the proposed port areas themselves.

5.41 Table 12.12 of the ES: Potential Likely Significance of Effects on Built Heritage Assets during Construction contains the following assessment:

Receptor	Designation	Value	Magnitude of Effect	Likely Significance of Effect
Tilbury Fort	Scheduled Monument	Very	Medium Adverse	Moderate to Major Adverse
Officers Barracks, Tilbury Fort	Grade II*	High	Medium Adverse	Moderate to Major Adverse

5.42 English Heritage are pleased to note that the magnitude of effects has been better recognised than in table 12.10 of the PEIR, but consider this to still be inadequate, as discussed above. The significance of the effects is very much at a level that, we suggest, must be robustly mitigated as far as possible and also compensated if the proposals are allowed (as outlined in our response to the Inspectors’ question 1.13.1 c).

Operational phase

5.43 The following ES paragraphs identify the potential visual impacts of the Tilbury2 proposal:

12.191 ...The proposals are likely to have an impact upon the setting of Tilbury Fort, through extending the existing industrial built context and character in which the asset is currently

experienced. The alteration of its setting will occur principally through visual impacts of berthed vessels, the infrastructure corridor and new buildings, structures and lighting on Site.

12.192 ...Visual impacts upon the setting of Tilbury Fort during the operational phase are likely to principally derive from the highest elements of the proposals...

12.193 ... the most visually prominent aspects of the proposals are likely to be the vessels at the extended jetty and the 100m (above a ground level of a worst case maximum of 4m AOD) high silo...

12.194 ...Tilbury Fort is already experienced within the context of frequent shipping movements, including large industrial vessels associated with the existing Port of Tilbury and substantial cruise liners...

12.195 ...higher buildings and structures associated with the CMAT processing facilities and bulk storage area in the northern section of the Tilbury2 Site are also likely to be visible...

12.196 ...the upper levels of the RoRo storage containers and warehouse are also likely to be visible in views from and surrounding Tilbury Fort, in particular in views from the bastions, ramparts or sea wall...

12.197 ...The main landscaped setting to Tilbury Fort lies to its north and is defined by areas of open flat marshland on either side of Fort Road. The proposed infrastructure corridor will be built within the northern part of this landscaped area, in close proximity to the existing railway line which is screened by existing vegetation...

5.44 English Heritage has provided a viewpoints assessment and map at Appendix B, and the Conservation Plan at Appendix D that demonstrate that during the operational phase there will be an adverse impact on views, particularly from the Fort to West Tilbury and to Coalhouse Fort and also to the Fort from the south bank of the Thames and from the ferry between Tilbury and Gravesend.

5.45 Our assessment of views at and the Conservation Plan also demonstrate that the proposal at Tilbury2 have an additional impact over what is already built. These impacts will be significant and proposed mitigation (or any mitigation), whilst necessary to soften the impacts would be largely ineffective. Therefore the additional compensation measures that we outline in response to the Inspectors' question 1.13.1 c) must be a condition of development and included in the S106 agreement.

5.46 Paragraph 12.199 goes on to suggest:

"...However, the contribution of this landscape to the significance of the Scheduled Monument has already been somewhat reduced through the introduction of the Anglian Water Recycling Centre and Stobart's wood processing site which has further industrialised the area and physically, visually and experientially served to separate the Tilbury2 Site from the immediate landscape setting of Tilbury Fort. As such, Tilbury Fort and its landscaped setting survive within an existing appreciable industrial and built context defined by the surrounding land uses, buildings and structures. The wirelines show that whilst the infrastructure corridor will, in part, further reduce Tilbury Fort's landscape setting to the north, the proposals will be consistent with the existing industrial character that forms part

of the heritage assets setting. Crucially, an appreciation and understanding of the landscape setting and its contribution towards the significance of Tilbury Fort will not be entirely lost, as the proposals will only occupy a small part of this land and will be appropriately mitigated to reduce visual and noise effects.”

5.47 The retained open space to the north is recognised, but demonstrates the very much reduced vista that are now afforded from the Fort. In particular, the impact upon views 1, 2, 5, 8 and 9 shown in Appendix B mean a significant reduction in the setting of the Fort. The risk to the viewed connection between the Fort and the church of St James in West Tilbury; the Fort and Coalhouse Fort; and, the Fort and the wider Thames estuary are all significant. We seek appropriate mitigation as outlined in the ES for this and also the additional compensation include in the response to the Inspectors’ question 1.13.1 c).

5.48 The concluding paragraphs, 12.204 and 12.205, to this section of the ES state the following:

“Overall, it is considered that the proposals will represent an alteration to the wider setting of Tilbury Fort through increasing the industrial character and activity within its setting, however, this will importantly be experienced as an extension of the existing industrial character surrounding Tilbury Fort and therefore will not fundamentally change the existing wider context in which the heritage asset is experienced. Whilst the 100m (above a ground level of a worst case maximum of 4m AOD) high silo on the river front will likely form a new landmark structure, it will be slender in appearance to reduce its overall massing and will not be out of character with other tall structures that lie within Tilbury Fort’s setting, such as the wind turbines to the west of the Fort. Shipping activity in proximity to Tilbury Fort will increase as a result of the proposals and in particular the scheme will introduce large stationary vessels in close proximity to Tilbury Fort at the extended jetty. Together with the RoRo terminal, CMAT facilities and 100m (above a ground level of a worst case maximum of 4m AOD) silo, this will result in an overall increased industrial character to the east of Tilbury Fort, within its setting. The wirelines indicate that this has the potential to have an impact upon views both to and from Tilbury Fort. Furthermore, berthed vessels will have some impact on disrupting the historic crossfire sightlines between Tilbury Fort and New Tavern Fort. However, this is not considered to be significantly harmful to the significance of Tilbury Fort given that the key sightlines will be retained and thus the visual connection between the two assets will remain understood. In addition, vessels will not be berthed constantly and therefore the visual disruption of these sightlines will be temporary.

The proposed infrastructure corridor will impact upon the historic landscape setting to the north of Tilbury Fort and lead to a reduction of this land. However, the marshland character and connection with Tilbury Fort will remain appreciable surrounding Fort Road and the embedded mitigation will reduce the visual and noise impacts of the infrastructure corridor. Whilst the proposed infrastructure corridor will harm the setting of Tilbury Fort through reducing the historic marshland to its north, it will also result in a reduction of HGV traffic on Fort Road which passes Tilbury Fort in close proximity. This change in character to Fort Road will have a beneficial impact on the landscape setting immediately surrounding Tilbury Fort.”

5.49 English Heritage raise significant concerns about this conclusion, as we have discussed above the permanent and significant impact of any increased industrialisation upon setting, views and access to the Fort. The mitigation must be robust, however, there will be an inevitable need for additional compensation as a result of unavoidable effects if the proposal is permitted.

- 5.50 The operational effects on the Grade II* listed Officers Barracks are considered at paragraph 12.207 of the ES:

“...The operational phase of the proposals is likely to have a potential impact upon the setting of the Officers Barracks, which is principally derived by Tilbury Fort itself, through a likely increase in noise, lighting and visual effects of high structures on site, specifically including the 100m (above a ground level of a worst case maximum of 4m AOD) high silo, and visibility of vessels berthed at the extended jetty...

...The listed building has thus long been experienced within a wider built industrial context defined by tall structures and shipping movements. Whilst Tilbury B will have been removed by the operational phase and the 100m (above a ground level of a worst case maximum of 4m AOD) high silo in proximity to the river will likely be visible in views from the Parade Ground, this will appear as a slender structure on the skyline and visually separate in central views of the listed building from the Parade Ground..

...Nonetheless, the proposals will increase the proximity of industrial uses during operation and alter the wider setting of the listed building...”

- 5.51 As demonstrated in Appendix D and Appendix D English Heritage believe that there continues to be the potential for significant visual effects. The barracks are viewed in context from our viewpoints 5 (PEIR 62) and 6, and the other amenity and access impacts will also be felt, and this will affect our tenants and our ongoing commercial and tourist performance. The effects cannot be entirely mitigated and ruled out so it is therefore appropriate in the balancing exercise to consider additional compensation to the Fort in this case, should the proposals be given permission.
- 5.52 Given what we have noted and responded to above, it is English Heritage’s opinion that the summarised effects recorded at table 12.13 of the ES (below) underplay the significance of the effect and that these are better described as major adverse. We are pleased to note, however, a better recognition of the magnitude of effects from the PEIR but believe that this further demonstrates the greater need for mitigation and compensation.
- 5.53 Therefore, the viewpoints at Appendix B should be further considered in mitigation. Also, our proposals at in response to the Inspectors’ question 1.13.1 c) should also be included as conditions to the development permission and as part of the S106.

Table 12.13 Archaeology and Built Heritage - Likely Significance of Effects during Operation

Receptor	Designation	Value	Magnitude of Effect	Likely Significance of Effect
Tilbury Fort	Scheduled Monument	Very High	Medium Adverse	Moderate to Major Adverse
Officers Barracks Tilbury Fort	Grade II*	High	Medium Adverse	Moderate Adverse

Potential Further Mitigation or Compensation

- 5.54 The ES outlines a range of mitigation and compensation measures at the conclusion of the Archaeological and Cultural Heritage chapter. Below we consider each in turn, and also in our response to the Inspectors’ question 1.13.1 c) we provide details of additional/alternative

necessary measures to ensure the proposals remain acceptable and allow the continued viable use, enjoyment and understanding of Tilbury Fort.

Built Heritage

5.55 ES paragraph 12.228 states:

“The following potential mitigation proposals are subject to consultation and agreement with Historic England, Thurrock Council and Gravesham Borough Council.”

5.56 English Heritage also expect to be involved in these discussions, and is included in later paragraphs, so we assume that this is simply a typo. It should be noted that English Heritage has begun engagement with Thurrock District Council and the applicants regarding the agreement of S106 obligations.

5.57 ES paragraph 12.229 states:

“Prior to the commencement of any piling activities (either terrestrial or marine), if deemed necessary in consultation with English Heritage and Historic England, the Contractor will develop and implement a monitoring and mitigation regime to monitor and mitigate the vibration effects of piling on historic assets, in consultation with English Heritage and Historic England.”

5.58 As outlined in paragraphs 5.75 – 5.77 below, we consider this to be of vital importance.

Operational Phase

5.59 ES paragraph 12.230 states:

“Possible further mitigation measures to potentially reduce the effects on the settings of the surrounding built heritage assets during the operational phase could include the following. These are subject to both operational viability and further consultation with stakeholders.

- *Retention of mature Monterrey Pine trees located at the western boundary to reduce and potentially screen low level views of the RoRo container operations from Tilbury Fort, thus potentially reducing the impact of an increased industrial character without altering the existing landscape. This is secured through the Landscape and Ecological Management Plan, compliance with which is secured by a DCO requirement.*
- *Colour proposed 100m high silo and other taller buildings and built structures light grey to potentially reduce the visual impacts of these elements on the setting of Tilbury Fort and in views from heritage assets to south of the river in Gravesend. Taller structures are likely to be seen against the sky and lighter colouration would reduce their presence. To secure this, surface treatment of the silo and the CMAT facilities will be required by the DCO to be approved by Thurrock Council, in consultation with Historic England and Gravesham Borough Council.*
- *Provide low key lighting, where appropriate, and health and safety allows, to illuminate waterside elements of the proposals to help reduce impacts on the setting of Tilbury Fort and heritage assets within Gravesend. This will be secured through the DCO requirement for a detailed lighting strategy to be approved by Thurrock Council, in consultation with Historic England, MMO and Gravesham Borough Council, to be in general accordance*

with the Preliminary Lighting Strategy and Impact Assessment (Document Reference 6.2 9.J)."

- 5.60 The effect of retaining the trees is recognised in reducing the impact of the proposals, particularly in the views of St James's church West Tilbury and Coalhouse Fort. This, however, does not resolve the impact so it is considered that additional compensation is reasonable and necessary.
- 5.61 The effect of these silos on the views away from the Fort will continue to be significant even with this mitigation. This both impacts the heritage setting and the commercial viability (visitors and filming) of the Fort. We believe, therefore that the mitigation is necessary, but also that additional compensatory measures must be considered.
- 5.62 Lighting proposals will affect the heritage setting and the commercial operations. Therefore we seek additional compensation measures to manage this and also would like the consideration of agreements that lighting can be completely switched off, particularly in advance of filming.
- 5.63 ES paragraph 12.231 states:
- "Mitigation for potential dust impacts during operation will be secured in the Operational Management Plan (OMP) and, where appropriate, through the environmental permitting regulations for individual facilities. The OMP includes an air quality and dust management plan which sets out the approach to monitoring. This will include regular visual inspections at the site boundary and dust deposition monitoring at off site sensitive receptors. There will be a mechanism for complaints to be registered and addressed."*
- 5.64 We have no particular comments to make on this point.
- 5.65 ES paragraph 12.232 states:
- "It was recommended within the PEIR that measures to reduce potential effects associated with the proposed cement silo were included (split into two 50m high units or three 35m high units) and the jetty to be extended to the east rather than the west. Other measures such as splitting the silo have been considered by the Applicant but cannot be applied due to essential operational constraints; as explained further in the Masterplanning Statement (Document Reference 6.2 5A)."*
- 5.66 English Heritage maintain particular concerns that a full balancing exercise – as required by NPPF 134 – has not been carried out with reference to this and the likely effects of the RoRo jetty. It is not clear what the public benefits of the Tilbury2 proposals are, what the costs of its construction and operation are or how these have been balanced against the very significant (albeit less than substantial) harm to the designated heritage assets of Tilbury Fort and the viable sustainability of them.
- 5.67 ES paragraph 12.233 states:
- "PoTLL is continuing to engage with the relevant key stakeholders for the historic environment in relation to mitigation measures, and will continue to do so following the DCO submission."*

- 5.68 English Heritage welcome this commitment and look forward to continued constructive discussions and the delivery of robust mitigation and compensation

Potential Heritage Enhancements

- 5.69 ES paragraph 12.234 states:

“Further direct engagement will be undertaken with Historic England, English Heritage, Thurrock Council and Gravesham Borough Council in regard to potential heritage enhancements that could be offered by the Applicant.”

- 5.70 English Heritage welcome this commitment and look forward to continued constructive discussions and the delivery of robust mitigation and compensation.

- 5.71 ES paragraph 12.235 states:

“Enhancement measures could include improvements to access, wayfinding, car parking and visitor experience to Tilbury Fort. Initial meetings with HE and EH were held on 29 November 2016 and 23 August 2017 (the latter also with Thurrock Council) on this topic. Whilst further engagement is required, opportunities to improve the footpaths and wayfinding in proximity to Tilbury Fort were discussed and have the potential to enhance both visitor experience and the setting of the heritage asset. Enhanced car parking and improvements to the surface treatment and approach to Tilbury Fort could also be explored.”

- 5.72 In response to the Inspectors’ question 1.13.1 c) we outline the mitigation and compensation that we consider to be reasonable and necessary. We look forward to continued constructive discussions and the delivery of robust mitigation and compensation.

- 5.73 ES paragraph 12.236 states:

“Further heritage enhancements may also be appropriate on the southern river bank. The assessment of impact indicates that the main impacts of the proposals upon heritage assets in Gravesend will be visual and could potentially disrupt the outer historic crossfire sightlines between New Tavern Fort and Tilbury Fort which could result in a low level of less than substantial harm to the significance of New Tavern Fort. Likely appropriate enhancements could therefore be in the form of new heritage interpretation boards at New Tavern Fort and Tilbury Fort to visually map and explain the historic crossfire and relationship between the two defences in further detail, thus introducing a new element of interpretation to enhance public appreciation of the crossfire that the two forts were built for. This has been raised with Gravesham Borough Council and further engagement is required to agree appropriate enhancements. PoTLL will seek to secure any heritage enhancements through a Section 106 agreement and this is subject to further discussions with GBC.”

- 5.74 English Heritage have significant concerns about the potential loss of these sightlines, which we have discussed above. We give some details about appropriate ‘interpretive signage,’ and other reasonable mitigation and compensation, in response to the Inspectors’ question 1.13.1 c). We look forward to continued constructive discussions and the delivery of robust mitigation and compensation.

Vibration

- 5.75 We note that in the ES at paragraph 12.203, it is stated that:

“The Noise and Vibration Chapter of the ES (Chapter 17) considers the potential likely significant effects with respect to noise and vibration as a result of the operation (including maintenance) of the proposals. Within the assessment Tilbury Fort has been identified as a Noise Sensitive Receptor (NSR). The assessment concludes that there are unlikely to be any significant noise impacts upon Tilbury Fort.”

- 5.76 The tunnels in the South East and South West bastions of the Fort are closed and have been for several years due to safety and conservation concerns. The proximity of the tunnels to the river have caused significant cracking in the structure of the tunnels as well as water ingress - these are underlying faults which we have been assessing and repairing periodically as needed. There is a real risk that the construction phase of the Tilbury2 development in particular may cause such a significant increase in vibration levels as to exacerbate the deterioration of the tunnels’ condition. We would expect that the Port of Tilbury install a system of monitoring both before and during construction so that the effect of the vibration and any deterioration directly caused can be accurately measured. Advice from Stuart Ellis, Head of Civil and Structural Engineering at Historic England (19 March 2018) is:

“It would be worth having a [laser scan] survey done and vibration monitoring set up well in advance of any works to record background vibration levels so that any changes and damage during construction can be attributed.”

- 5.77 Therefore, as we comment in our paragraph 5.6.5 above, we consider that continued monitoring of vibration, particularly in the tunnels at the Fort, is necessary. Should this monitoring show any effects to the fabric of the Fort, appropriate mitigation should be provided as necessary. We note that the vibration monitoring baseline considered points close to the Fort but not within the complex. We would be pleased to grant access to the applicant to install monitoring equipment and agree a surveying programme before and during construction and also through operation as necessary.

Ecology

- 5.78 The marshland and moats, partly managed by the English Heritage, are recognised as significant elements of the setting of the Fort scheduled monument. These are also a Local Wildlife Site (LWS). The preservation and enhancement of these will also provide for the added benefit of no net loss in biodiversity.
- 5.79 Paragraph 9.43 of ES identifies the value of the moats in a landscaping opportunity by suggesting that consideration should be given to *“soften the edges of developments with areas of open water and reed beds reflecting the moats at Tilbury Fort.”* Thus recognising the landscape and by inference the setting value of the moats. The improvements of these has direct heritage, and indirect ecological, improvement benefits.
- 5.80 The ecological value of the moats are further considered through chapter 10 of the ES, as part of the Tilbury Marshes LWS. In particular at paragraph 10.110 where it is stated that:

“In addition to the counts of the inter-tidal area, counts for waterfowl and waders were also undertaken for the moat around Tilbury Fort and for the area of grazed common land to the north of the Fort in order to establish any use by these species of areas directly or indirectly affected by the proposals for the infrastructure corridor”

5.81 We note the following at paragraphs 10.372 and 10.373 of the ES:

“As it was identified at an early stage in the design process that off-site compensation would be required, this also, somewhat unusually, forms a part of the embedded mitigation, albeit that work is continuing to provide the requisite security of delivery of off-site compensation prior to the Examination, and this will form part of the EMCP to be submitted shortly.

Over and above these embedded measures, the scope for further mitigation and compensation would be considered on a reactive basis and where identified as appropriate, pursued, as part of the process of implementing the project, with the overarching aim of securing minimal or no net loss of biodiversity.”

5.82 If the mitigation and compensation that we suggest – especially the moat dredging – is included as part of the conditions and S106 then the offsite improvements to biodiversity as considered in the ES can, in part, be realised. This will aid the proposal in its aims to have the least possible adverse impact upon biodiversity and build towards no net loss.

6.0 CONCLUSION

6.1 In conclusion, it is the opinion of English Heritage that the impacts of the Tilbury2 proposals have not been fully assessed in the information submitted with the application. In particular, the need for the Fort to remain in its most viable use and for English Heritage to operate and manage the Fort in a successful way, reinvesting in its preservation and enhancement, is missing from the analysis.

6.2 We believe that there will be a permanent effect upon the setting of the Fort that we consider to be very significant but ‘less than substantial’ harm.

6.3 In the case that such harm has been identified paragraph 134 of the NPPF is engaged. A balancing exercise of harm to the Fort vs. the public benefit of the scheme has not clearly been undertaken as it should have been.

6.4 The mitigation identified within the Tilbury2 proposals goes some way to reducing the effects of the proposed development (especially in visual terms) but it is not effective enough.

6.5 Even with the mitigation proposed, there will still be a significant negative effect upon the Fort. English Heritage therefore consider it reasonable that additional compensation is included with the proposals if permitted, as conditions or Section 106 obligations.

6.6 We have submitted details of the additional compensation in response to the Inspectors’ First Written Question 1.13.1 c) and have begun discussion with the applicant and Thurrock District Council regarding a Statement of Common Ground and the S106 negotiations respectively.

APPENDICES:

A: PLANNING POLICY CONTEXT – RELEVANT EXCERPTS

B: TILBURY FORT SETTING, VIEWS AND HISTORIC LINKS

C: TILBURY FORT GUIDEBOOK

D: CONSERVATION PLAN

E: COMMERCIAL PERFORMANCE DATA TABLES AND GRAPHS

APPENDIX A: PLANNING POLICY CONTEXT – RELEVANT EXCERPTS

National Planning Policy Framework

131. In determining planning applications, local planning authorities should take account of:
- the desirability of sustaining and enhancing the significance of heritage assets and putting them to viable uses consistent with their conservation;
 - the positive contribution that conservation of heritage assets can make to sustainable communities including their economic vitality; and
 - the desirability of new development making a positive contribution to local character and distinctiveness.
132. When considering the impact of a proposed development on the significance of a designated heritage asset, great weight should be given to the asset's conservation. The more important the asset, the greater the weight should be. Significance can be harmed or lost through alteration or destruction of the heritage asset or development within its setting. As heritage assets are irreplaceable, any harm or loss should require clear and convincing justification. Substantial harm to or loss of a grade II listed building, park or garden should be exceptional. Substantial harm to or loss of designated heritage assets of the highest significance, notably scheduled monuments, protected wreck sites, battlefields, grade I and II* listed buildings, grade I and II* registered parks and gardens, and World Heritage Sites, should be wholly exceptional.
133. Where a proposed development will lead to substantial harm to or total loss of significance of a designated heritage asset, local planning authorities should refuse consent, unless it can be demonstrated that the substantial harm or loss is necessary to achieve substantial public benefits that outweigh that harm or loss, or all of the following apply:
- the nature of the heritage asset prevents all reasonable uses of the site; and
 - no viable use of the heritage asset itself can be found in the medium term through appropriate marketing that will enable its conservation; and
 - conservation by grant-funding or some form of charitable or public ownership is demonstrably not possible; and
 - the harm or loss is outweighed by the benefit of bringing the site back into use.
134. Where a development proposal will lead to less than substantial harm to the significance of a designated heritage asset, this harm should be weighed against the public benefits of the proposal, including securing its optimum viable use.
137. Local planning authorities should look for opportunities for new development within Conservation Areas and World Heritage Sites and within the setting of heritage assets to enhance or better reveal their significance. Proposals that preserve those elements of the setting that make a positive contribution to or better reveal the significance of the asset should be treated favourably.
140. Local planning authorities should assess whether the benefits of a proposal for enabling development, which would otherwise conflict with planning policies but which would secure the future conservation of a heritage asset, outweigh the disbenefits of departing from those policies.

Planning Practice Guidance

A clear understanding of the significance of a heritage asset and its setting is necessary to develop proposals which avoid or minimise harm. Early appraisals, a conservation plan or targeted specialist investigation can help to identify constraints and opportunities arising from the asset at an early stage. Such studies can reveal alternative development options, for example more sensitive designs or different orientations, that will deliver public benefits in a more sustainable and appropriate way.

Paragraph: 019 Reference ID: 18a-019-20140306

Public benefits may follow from many developments and could be anything that delivers economic, social or environmental progress as described in the National Planning Policy Framework (paragraph 7). Public benefits should flow from the proposed development. They should be of a nature or scale to be of benefit to the public at large and should not just be a private benefit. However, benefits do not always have to be visible or accessible to the public in order to be genuine public benefits.

Public benefits may include heritage benefits, such as:

- sustaining or enhancing the significance of a heritage asset and the contribution of its setting
- reducing or removing risks to a heritage asset
- securing the optimum viable use of a heritage asset in support of its long term conservation

Paragraph: 020 Reference ID: 18a-020-20140306

National Policy Statement for Ports

3.3.3 In addition, in order to help meet the requirements of the Government's policies on sustainable development, new port infrastructure should also;

- contribute to local employment, regeneration and development;
- ensure competition and security of supply;
- preserve, protect and where possible improve marine and terrestrial biodiversity;
- minimise emissions of greenhouse gases from port related development;
- be well designed, functionally and environmentally;
- be adapted to the impacts of climate change;
- minimise use of greenfield land;
- provide high standards of protection for the natural environment;
- ensure that access to and condition of heritage assets are maintained and improved where necessary; and
- enhance access to ports and the jobs, services and social networks they create, including for the most disadvantaged.

4.6 Tourism

4.6.1 Port developments that include a passenger or cruise terminal may have a positive impact on tourism in the local area by increasing accessibility, particularly in outlying regions. This should be taken into account in assessing the overall benefits. Where increased tourism is likely significantly to affect demand for local services, this impact should be assessed. Additional benefit should also be identified through promoting the historical legacy of working ports; this

is important in terms of the changing economic life of ports and how such change is compatible with conserving heritage assets.

- 4.6.2 Port development may have an adverse impact on tourism, for example if it severs or diverts footpaths or bridleways, has a detrimental impact on the surrounding landscape or seascape, or affects the space available for local leisure activities such as windsurfing or wildfowling. (See section 5.13 on open space.)

Applicant's assessment

- 4.6.3 The WebTAG methodology (and WelTAG in Wales) for appraisal of wider economic impacts may be used where tourism benefits or adverse impacts appear potentially significant. Mitigation
- 4.6.4 Good design can deliver benefits for tourism and minimise any adverse impacts.
- 4.6.5 Good environmental quality of water bodies and beaches may also support local tourism and associated businesses, supporting the weight that should be attached to fulfilment of Water Framework Directive requirements.

5.12 Historic environment

- 5.12.1 The construction, operation and decommissioning of port infrastructure has the potential to result in adverse impacts on the historic environment.

5.12.10 In considering applications, 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:

- evidence provided with the application;
- any designation records;
- Rapid Coastal Zone Assessments by English Heritage where relevant;
- the Historic Environment Record and similar sources of information;
- the heritage assets themselves;
- the outcome of consultations with interested parties; and
- where appropriate and when the need arises to understand the significance of the heritage assets, expert advice.

5.12.12 The decision-maker should take into account the desirability of sustaining and, where appropriate, enhancing the significance of heritage assets, the contribution of their settings and the positive contribution they can make to sustainable communities and economic vitality.⁷² The decision-maker should take into account the desirability of new development making a positive contribution to the character and local distinctiveness of the historic environment. The consideration of design should include scale, height, massing, alignment, materials and use. The decision-maker should have regard to any relevant local authority development plans or local impact report on the proposed development in respect of the factors set out in footnote 72 below.

Footnote 72: This can be by virtue of: • heritage assets having an influence on the character of the environment and an area's sense of place; • heritage assets having a potential to be a catalyst for regeneration in an area, particularly through leisure, tourism and economic development; • heritage assets being a stimulus to inspire new development of imaginative and

high quality design; • the re-use of existing fabric, minimising waste; and • the mixed and flexible patterns of land use in historic areas that are likely to be, and remain, sustainable.

- 5.12.14 Any harmful impact on the significance of a designated heritage asset should be weighed against the public benefit of development, recognising that, the greater the harm to the significance of the heritage asset, the greater the justification will be needed for any loss. Where the application will lead to substantial harm to or total loss of significance of a designated heritage asset, the decision-maker should refuse consent unless it can be demonstrated that the substantial harm to or loss of significance is necessary in order to deliver substantial public benefits that outweigh that loss or harm. Not all elements of a World Heritage Site or Conservation Area will necessarily contribute to its significance. The policies in the previous paragraphs apply to those elements that do contribute to the significance. When considering proposals, the decision-maker should take into account the relative significance of the element affected and its contribution to the significance of the World Heritage Site or Conservation Area as a whole.
- 5.12.15 Where loss of significance of any heritage asset is justified on the merits of the new development, the decision-maker should consider imposing a condition on the consent or requiring the applicant to enter into an obligation that will prevent the loss occurring until it is reasonably certain that the relevant part of the development is to proceed.
- 5.12.16 When considering applications for development affecting the setting of a heritage asset, the decision-maker should treat favourably applications that preserve those elements of the setting that make a positive contribution to, or that better reveal the significance of, the asset. When considering applications that do not do this, the decision-maker should weigh any negative effects against the wider benefits of the application. The greater the negative impact on the significance of the asset, the greater the benefits that will be needed to justify approval.

Thurrock Local Plan (Local Development Framework)

<p>POLICY: CSTP24 – HERITAGE ASSETS AND THE HISTORIC ENVIRONMENT</p> <p>1. Protecting and Enhancing Heritage Assets</p> <p>I. The Council will preserve or enhance the historic environment by:</p> <ul style="list-style-type: none">i. Promoting the importance of the heritage assets, including their fabric and their settings;ii. Encouraging the appropriate use of heritage assets and their settings;iii. Supporting increased public access to historic assets, including military and industrial heritage;iv. Reviewing the designation of local heritage assets, including considering the designation of new Conservation Areas;v. Retaining non-designated heritage assets which are considered locally important as well as those with statutory protection; andvi. Encouraging proposals that include enhancement of surrounding landscapes and integration between priority heritage assets and the Green grid. <p>2. Proposed Development</p> <p>I. All development proposals will be required to consider and appraise development options and demonstrate that the final proposal is the most appropriate for the heritage asset and its setting, in accordance with:</p>

- i. The objectives in part 1 above;
- ii. The requirements of PMD 4 Historic Environment;
- iii. Conservation Area Character Appraisals and Management Proposals as appropriate; and
- iv. Relevant national and regional guidance.

3. Priorities for Heritage Regeneration and Enhancement

I. The Council will work collaboratively with owners and partners to encourage the appropriate regeneration and use of priority heritage assets to secure their long-term future. The Council will identify priority heritage assets from:

- i. English Heritage's national Heritage at Risk Register;
- ii. The Thurrock Heritage at Risk Register, which will be reviewed annually;
- iii. The Conservation Area Management Proposals, which will be reviewed at least every five years, and
- iv. A local list of heritage assets once produced.
- v. The Historic Environment Record

II. Of priority heritage assets already identified, the Council will:

- i. Ensure that the setting of Tilbury Fort, including views of it from the river, are appropriately protected and enhanced, and that encroachment on the open land around it is not permitted.
- ii. Ensure that the setting of Coalhouse Fort is appropriately protected from development and that its fabric is conserved.
- iii. Resist development that undermines an understanding of the role the river Thames has played in the historic development of Thurrock.
- iv. Promote public access between Tilbury Fort and Coalhouse Fort through riverside links.
- v. Ensure that any new development close to, or within, Bata Village or the Bata Factory complex is well designed and contributes positively to their settings.
- vi. Ensure that Thurrock's historic landscapes, and the contribution made to them by ancient woodland, hedgerows and trees, are appropriately considered in all development proposals.

POLICY: PMD4 - HISTORIC ENVIRONMENT

The Council will ensure that the fabric and setting of heritage assets, including Listed Buildings, Conservation Areas, Scheduled Monuments and other important archeological sites, and historic landscape features are appropriately protected and enhanced in accordance with their significance.

1. The Council will also require new development to take all reasonable steps to retain and incorporate non-statutorily protected heritage assets contributing to the quality of Thurrock's broader historic environment.

2. Applications must demonstrate that they contribute positively to the special qualities and local distinctiveness of Thurrock, through compliance with local heritage guidance including:

- i. Conservation Area Character Appraisals;
- ii. Conservation Area Management Proposals;
- iii. Other relevant Thurrock-based studies, including the Landscape Capacity Study (2005), the Thurrock Urban Character Study (2007) and the Thurrock Unitary Historic Environment Characterisation Project (2009).
- iv. Further local guidance as it is developed.

3. The Council will follow the approach set out in the NPPF in the determination of applications affecting Thurrock's built or archaeological heritage assets including the

expectation that the relevant historic environment record will be consulted and the heritage asset(s) assessed using appropriate expertise where necessary. This will include consideration of alterations, extensions or demolition of Listed Buildings or the demolition of unlisted buildings within Conservation Areas, and requirements for pre-determination archaeological evaluations and for preservation of archaeology in situ or by recording.

APPENDIX B: TILBURY FORT SETTING, VIEWS AND HISTORIC LINKS

Tilbury Fort was built in a riverside location on the edge of low-lying marshy land, drained by managed creeks. The marshland extended northwards inland for a mile before a pronounced rise to dry ground, a continuous ridge (a former terrace of the Thames) where villages were located – West Tilbury being the nearest. It also extended along the river to east and west. To the south, across the river, was the important town of Gravesend. The location was important because:

- Of its connection to the town of Gravesend, where the river formed an important anchorage. The link was marked from the medieval period by a ferry crossing. Later, it was the nearest place with proper facilities for the fort garrison.
- Of its location at a pronounced narrowing of the river, making defence by a battery of riverside guns easier.
- Of the flat marshland on three sides, which meant that the riverside battery would be difficult to attack from the landward side: the enemy would be visible, the ground difficult to cross and the fort's low profile a challenge to hit with artillery fire.
- Of its views downstream, along the river.

Today, something remains of the original views and setting:

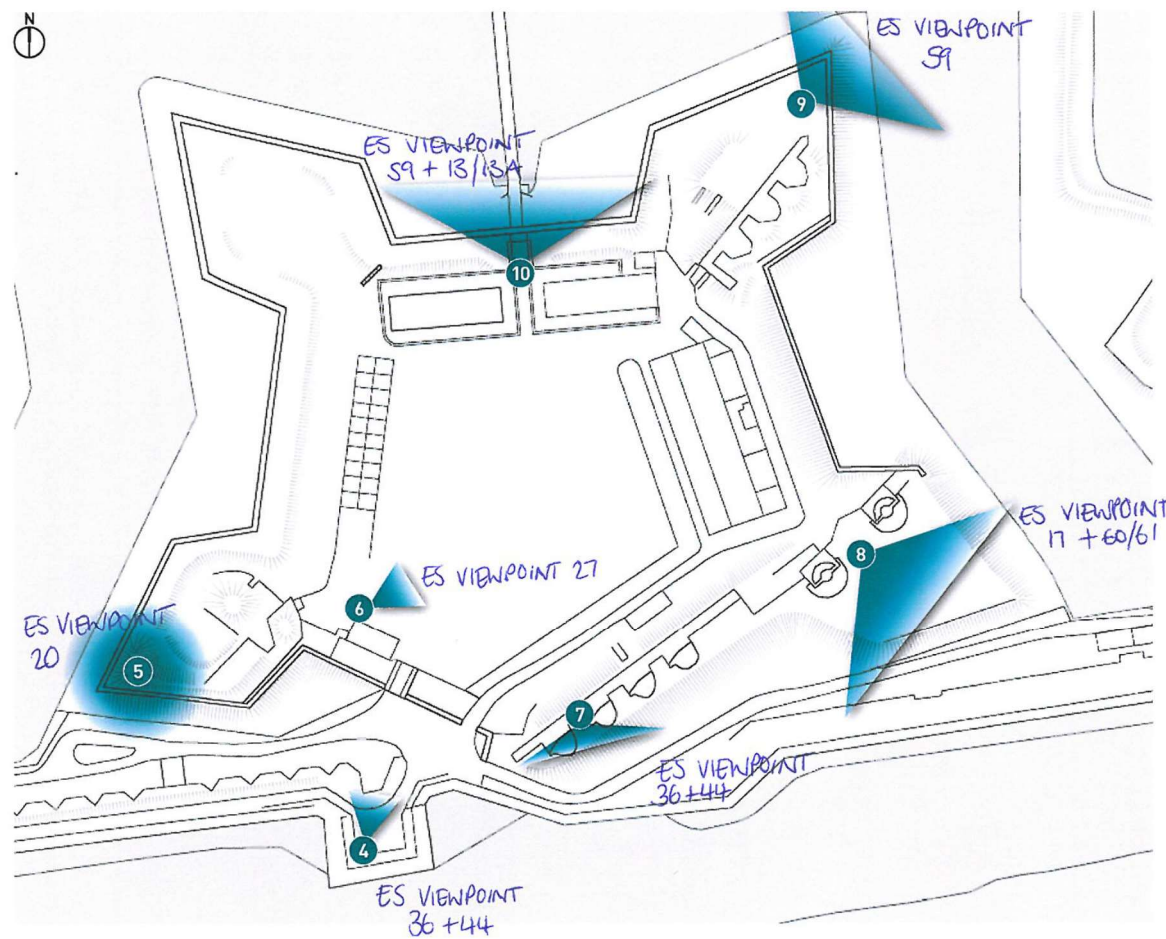
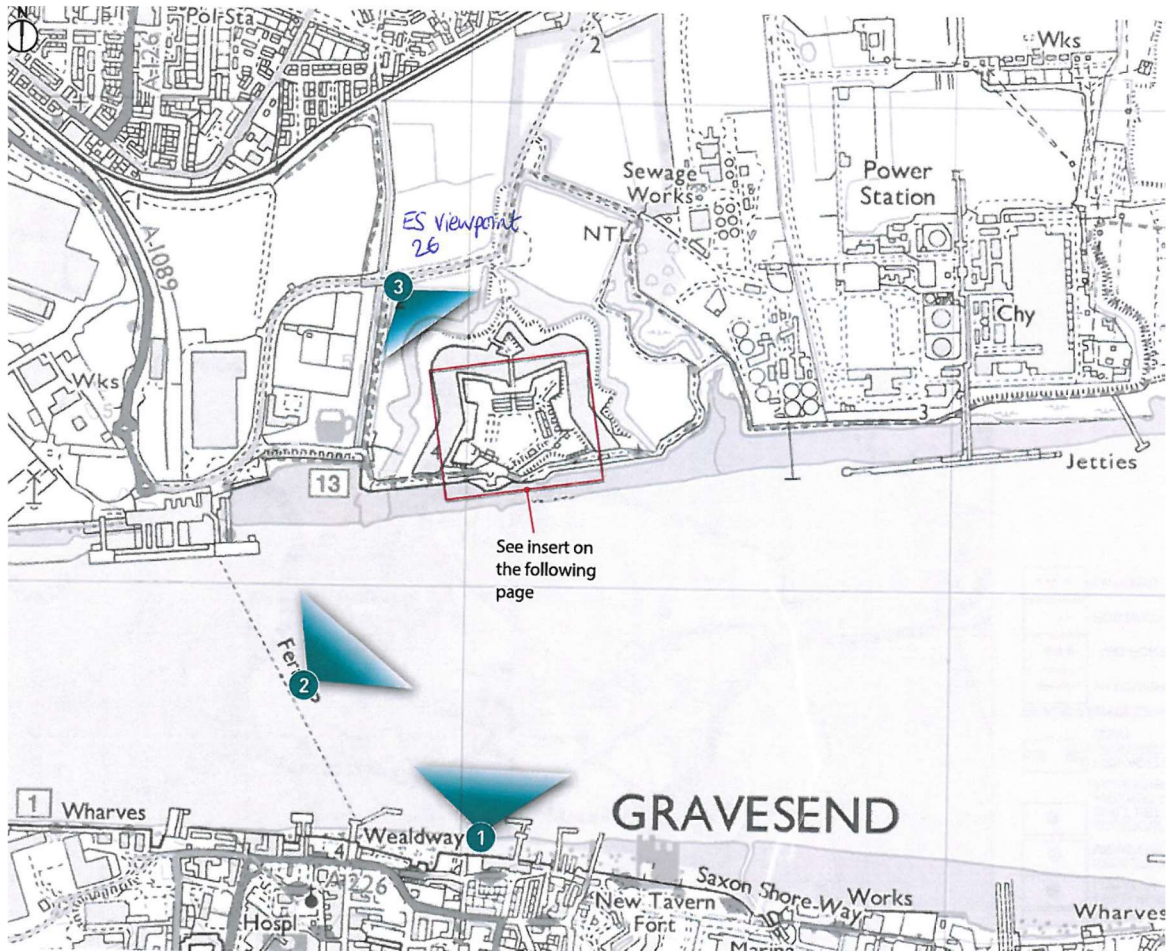
- The riverside view, though compromised when viewed from the riverside battery because of the high river wall, is still a fine one from the fort ramparts.
- There is still a corridor of marshland to the north, and a little to the east towards Bill Meroy Creek, providing the original landwards context, and an established view to the ridge along both sides of Fort Road, and particularly to West Tilbury.
- The view east, down the Thames, is not entirely obscured by industrial development and partially survives. This is significant when considering the change in orientation of the defences in later Victorian and Edwardian defences (in the NE, SE and SW bastions and along the SE curtain wall), the purpose of which was to fire a long way downstream (using indirect fire). This can still be appreciated from Tilbury Fort today.
- The westward view still provides the fort's association with the World's End Inn and the site of the ancient ferry crossing adjacent to it.

From 1539, the Thames defences included forts at Tilbury and Gravesend. The ruin of Gravesend blockhouse survives and is visible from Tilbury Fort, as is New Tavern Fort, which is extant and open to the public. From the 18th century, Tilbury and New Tavern forts operated as a pair, setting up crossfires on the river. Both had 18th-century Board of Ordnance magazines and storage facilities, serving to supply warships anchored on the river, and to unload their gunpowder when returning from a voyage. This was a very important security measure for the defence of London.

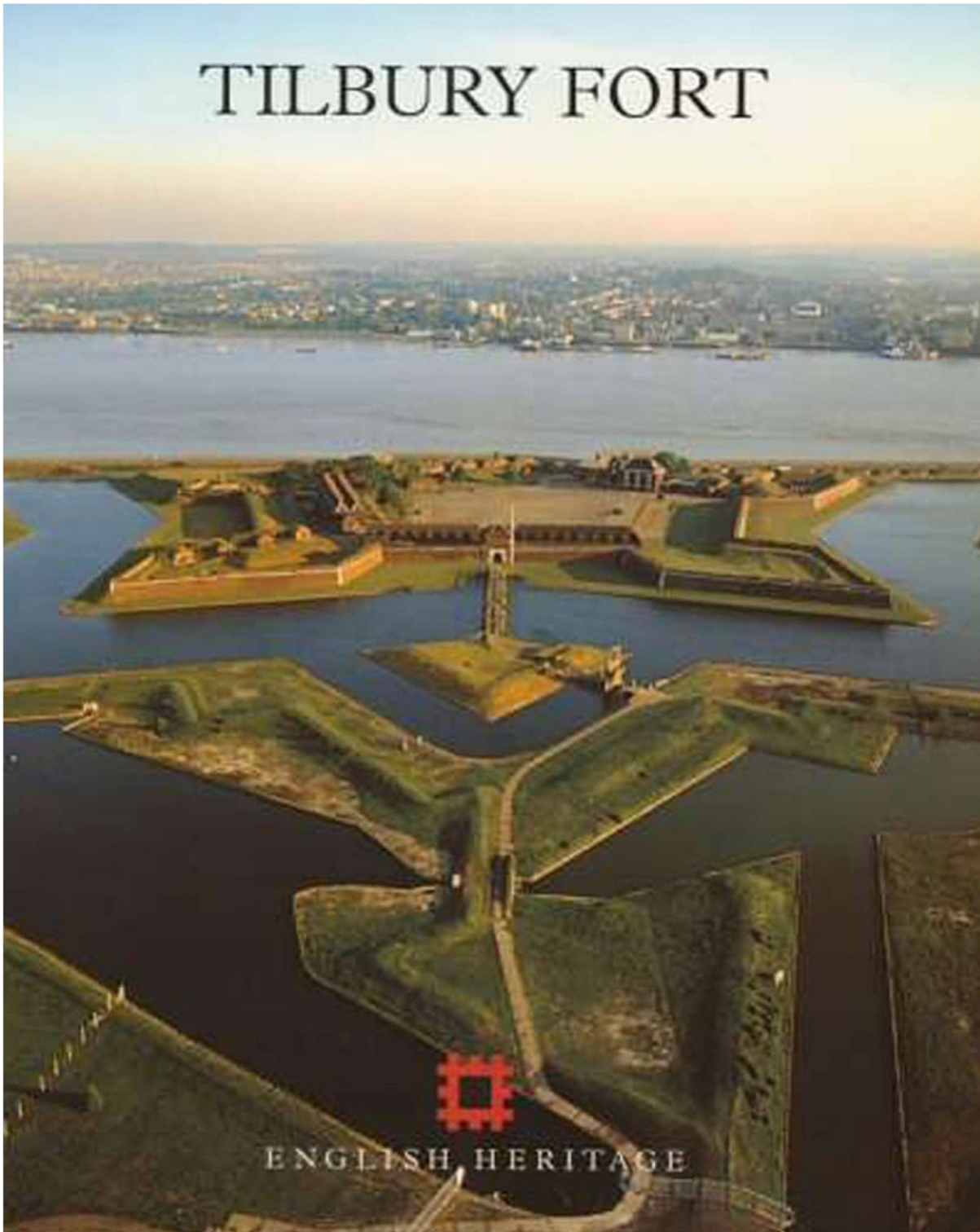
The view eastward downstream from Tilbury along the river is also a vital link with former defences. In Tudor times, Milton and Higham blockhouses (though no longer extant) were in view while in the later-19th century, Shornmead Fort, Coalhouse Fort and Cliffe Fort were constructed and acted in concert with Tilbury and New Tavern Forts. The ruins of Shornmead Fort are still in direct view from Tilbury Fort, and perhaps even the position of Cliffe Fort.

Paul Pattison
Senior Properties Historian
9 March 2018

Maps of Important views:



APPENDIX C: TILBURY FORT GUIDEBOOK



** Full guidebook to be provided on site visit – it is unavailable in electronic format.*

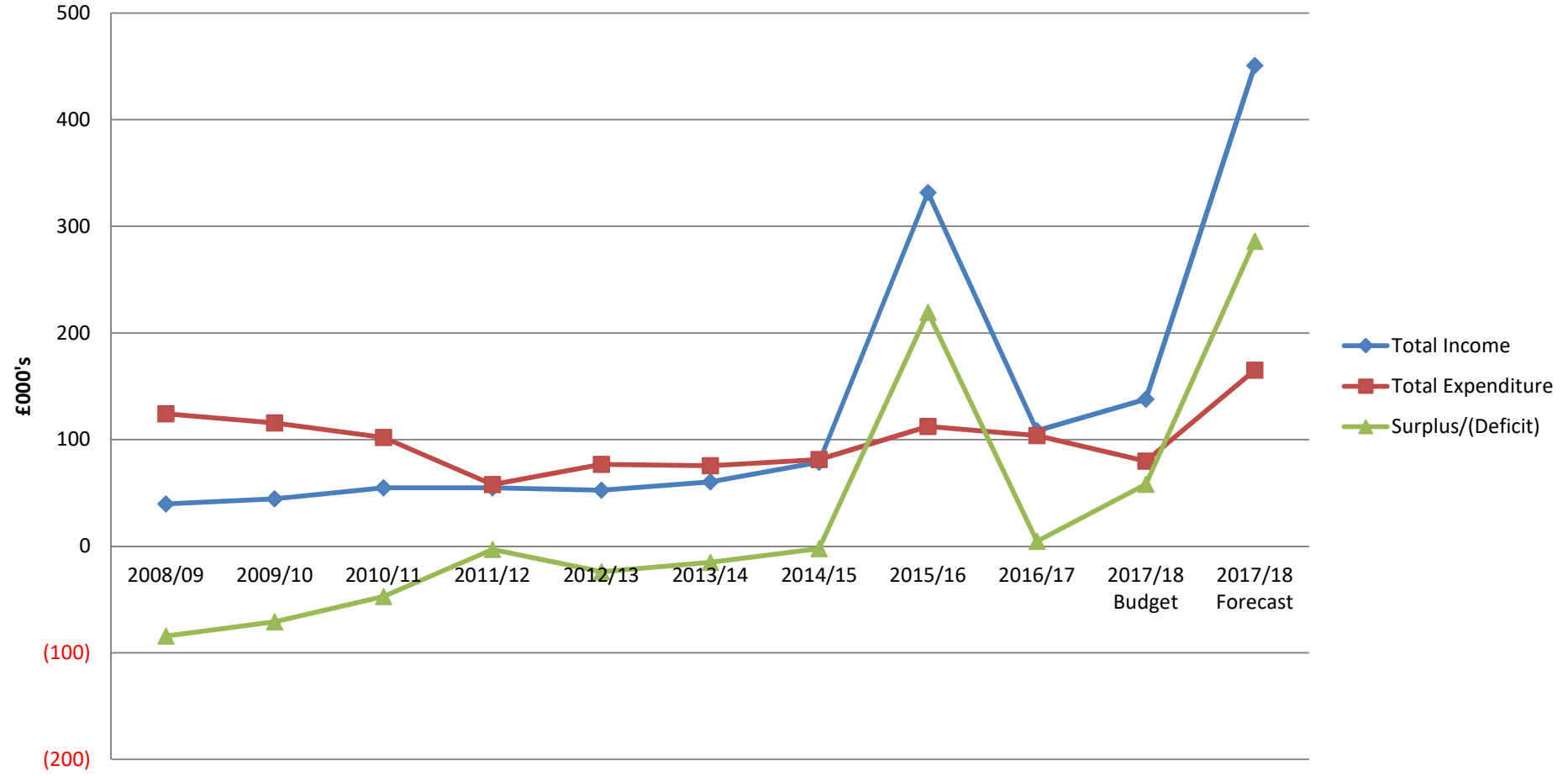
APPENDIX D: CONSERVATION PLAN

* *Sent a as a separate electronic PDF file.*

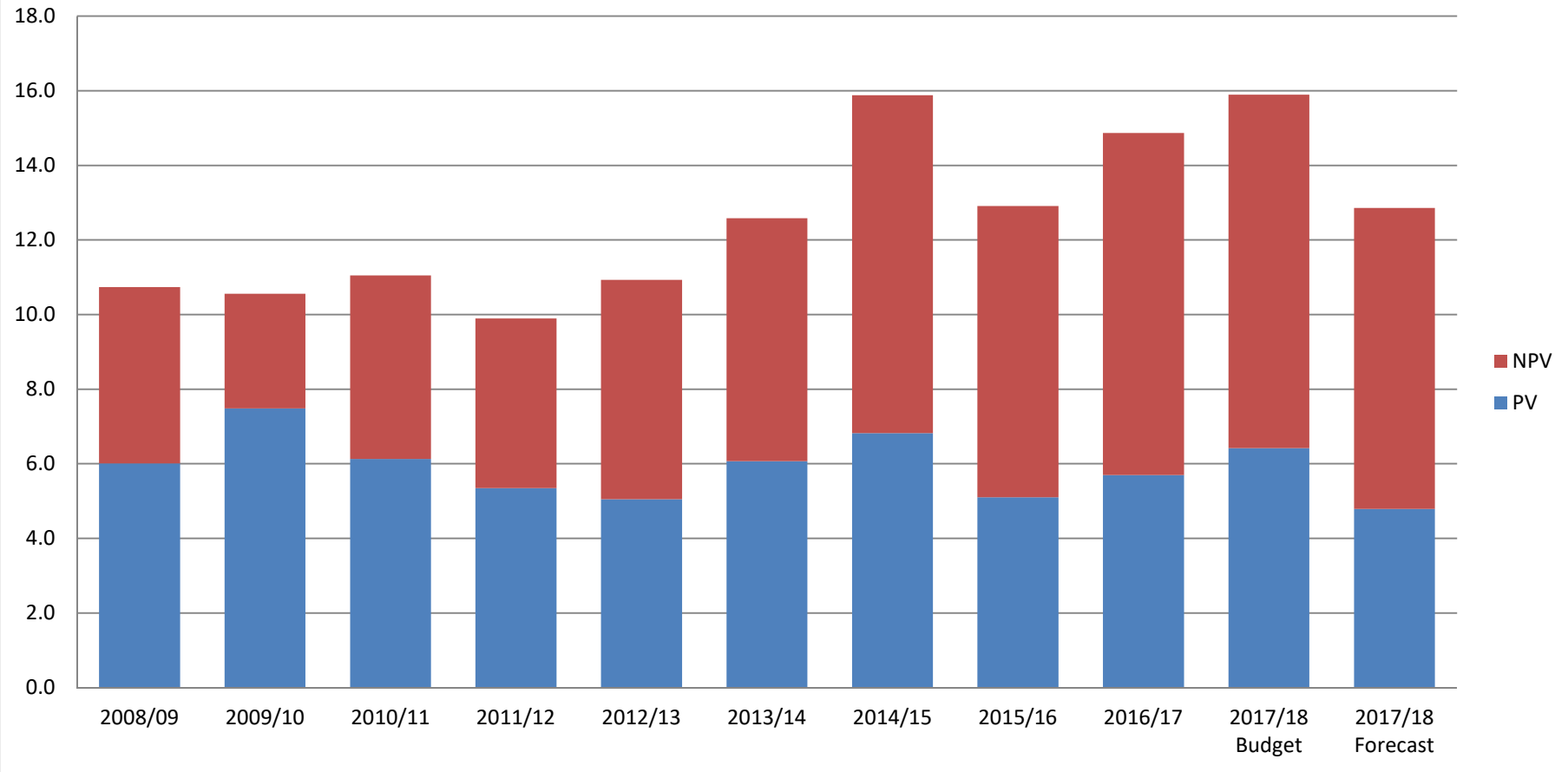
APPENDIX E: COMMERCIAL PERFORMANCE DATA TABLES AND GRAPHS

	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2017/18
	Actual	Actual	Actual	Actual	Actual	Actual	Actual	Actual	Actual	Budget	Forecast
	£000's	£000's	£000's	£000's	£000's	£000's	£000's	£000's	£000's	£000's	£000's
Income											
Admissions	18	20	18	16	17	19	22	19	21	26	20
Retail	14	13	14	14	18	23	27	21	24	30	22
Catering	0	0	0	0	0	0	0	0	0	0	0
Membership	1	2	2	2	5	7	8	8	8	10	7
Facilities	7	9	21	23	13	11	22	273	56	72	402
Hospitality	0	0	0	0	0	0	0	0	0	0	0
Other Income (incl. Donations on Admissions)	0	0	0	(0)	0	0	0	10	(1)	0	0
Total Income	39	44	55	55	52	60	79	332	108	138	451
Expenditure											
Operational Costs	28	29	31	2	4	3	3	12	18	2	36
Sales & Promotions	6	7	9	8	11	13	15	13	10	16	13
Payroll	69	60	51	38	49	45	51	71	57	48	66
Running Costs	20	20	10	9	10	15	11	16	18	12	48
Other Expenditure	0	0	0	0	2	1	1	1	1	0	1
Total Expenditure	124	116	102	58	77	75	81	112	104	80	165

Tilbury Fort - Financial Trend



Tilbury Fort - Visitor Trend



* NPV = Non-paying visitors (EH members). PV = Paying visitors.

Tilbury Fort - Surplus/(Deficit)

