PORT OF TILBURY LONDON

PLANNING ACT 2008
INFRASTRUCTURE PLANNING (EXAMINATION PROCEDURE)
RULES 2010

PROPOSED PORT TERMINAL AT
FORMER TILBURY POWER STATION

TILBURY2

TRO30003

NOISE RESUME PAPER

TILBURY 2 DOCUMENT REF: POTLL/T2/EX/154

TILBURY2

NOISE RESUME PAPER

INTRODUCTION

1.1 This document sets out the Applicant's responses to the key noise questions at the Issue Specific Hearing on 27 June 2018. These have been separated out from the rest of the Summary of Case for that hearing as the Applicant considers that this is an important issue that is still outstanding and needs clear evidential expert submissions. As such, these responses include what was said at the hearing by Richard Turney and Rupert Thornley-Taylor, and also building on them, to give a full explanation of the Applicant's position on these matters.

3.16.1 Noise Monitoring at Mark Lane. In the Applicant's response to ExA's SWQ [PD-010] Q2.16.1, the ExA notes that the Applicant is currently arranging to undertake noise monitoring at Mark Lane as requested by Gravesham Borough Council (GBC) [REP4-013]. ***Would the Applicant confirm that the monitoring referred to is that required under requirement 10 - or is there any other work being undertaken at this stage, and if so for what purpose?***	Noise monitoring was undertaken at Mark Lane between Tuesday 5th and Friday 8th of June 2018 at the request of GBC. These results were used to update the ES assessment to include this location as an additional receptor at these residential properties. The results of the noise monitoring and the results of the updated assessment have been sent to GBC. The updated assessment shows that the impacts at Mark Lane are smaller than at the two other assessment locations in Gravesham presented in the ES. This shows that a worst-case assessment has been undertaken in the ES.

3.16.2 Adequacy of Operational Management Plan (OMP). In response to the ExA's SWQ [PD-010] Q2.16.3 regarding adequacy of the OMP, GBC puts forward [REP4-013] a number of suggestions for how to limit noise, including: ***• Require compliance with a standard;*** ***• Specify noise limit conditions/design constraints;*** ***• Specify days/hours restrictions (GBC preference in hierarchy of avoidance and mitigation);*** ***• Prohibit or restrict certain activities.*** ***GBC also refers to government guidance on minerals operations (https://www.gov.uk/guidance/minerals) and states that mineral planning authorities should aim to establish a noise limit, through a planning condition, also providing suggested limits and***	**OMP** The Applicant's position is that the OMP is the correct focus for addressing matters for noise mitigation. The focus for this site and as a matter of general principle for port development and other similar major infrastructure schemes should be on minimising noise at source. The OMP should therefore be the focus of discussion, since it seeks to manage the operation of the Port in such a way as to minimise noise impacts at noise sensitive receptors. The OMP represents normal practice and good sense for noise mitigation. The focus should not be to impose noise limits at external receptors. At present the Applicant has not found any ports where operational noise limits have been imposed. **Noise Limits** The imposition of a noise limit at an external receptor would fail the policy test for imposing a requirement since it is not necessary to make the development acceptable, given the noise assessment and proposed mitigation which includes at receptor mitigation if necessary. A noise limit would not be reasonable for this application. The port will be in operation for 24hrs a day 7 day a week, and PoTLL submitted a 24/7 Working Note at Appendix 2 to its Response to Relevant Representations (AS-049) to justify this. It is important to note, for the reasons set out in that statement, imposing any form of working hour or restrictions on certain activities at certain times arising from some form of noise related hour limitation is not feasible for a working port. For the same reasons an arbitrary noise limit which would then potentially lead to the shutting down of activities for a certain amount of time if that limit is reached, would not be acceptable. PoTLL also notes that no such controls were placed on the York Potash or Able Marine Park DCOs which dealt with noise not through a quantitative noise limit but through the use of an OMP or equivalent. Furthermore, Thurrock Council's EHO/Noise Officer has indicated that he is familiar with the existing port of Tilbury, which is much bigger than the proposed Tilbury2, and is entirely content with the approach proposed of using the OMP future control of noise. **Wendy Lane** on behalf of GBC acknowledged that there are no examples of ports where numerical noise limits have been imposed on a port operator or complaints made to PoTLL about Tilbury2 from Gravesham, but pointed out that at the existing Tilbury any noise complaints by residents may be attributed to river uses on Gravesham side by Gravesham residents. However, as set out below, this proves the point that it is difficult to accurately attribute and enforce a noise limit against one particular operation in the context of a number of other noisy activities in the vicinity.

examples of other schemes. ***Would the Applicant state its response to these proposals?***	**Enforcement** The Applicant also has concerns as to the practical enforceability of a numerical noise limit as suggested by GBC. The most important aspect of noise control of this kind is that in the event of an alleged breach of the noise condition, enforcement proceedings would be capable of been pursued in a fairly straight forward and effective manner. For the reasons set out below, a numerical noise limit would not be able to be enforced, as it would be extremely difficult to show that the noise source in question was Tilbury2, rather than from one of many background and intervening noise sources. The OMP is a far better way of imposing control on how a port is designed and operated for the purpose of minimising noise and because the action and enforcement process in the event of operator breaches would be straightforward. The requirements of the documents are easily understood by all concerned and easily capable of being dealt with through the action and enforcement process. Requirement 10 is also a key part of the Applicant's proposals as it provides for a scheme of mitigation and monitoring to be agreed with Thurrock and GBC based on the assessment and detailed design for the Port. The requirement gives the decision maker confidence that significant adverse effects will be avoided, if necessary through mitigation at the receptor. The requirement sets out re-assessment of the baseline and inclusion of known design and operation details and identifies the scope of monitoring and the trigger point for offering receptor based mitigation. The Applicant is of the view this is the appropriate approach where the exact nature of operations is not defined in detail, and where an arbitrary noise limit at external receptors cannot be set or enforced. **Site Context** The proposed site location was previously a coal fired power station, with a working jetty that operated 24hr a day 7 days a week with a conveyor system that fed coal onto the site and operated for over 30 years. The existing Tilbury port, which is 5 times the size of Tilbury2, has similar operations that operate 24hr a day 7 day a week. To date there are no recorded noise complaints from Gravesham. There are similar operations on the Gravesham side of the river with vessels discharging aggregates for 24hr a day, 7 day a week and no complaints. Attached at Appendix 1 is a plan setting out the noise environment at Gravesham which reflects these points. The reasonableness of GBC's suggested approach needs to be assessed in this context.

	Use of SOAEL in Requirement 10 Following the ISH an amendment has been made to Requirement 10 to include the SOAEL levels for operational noise from the Port. The inclusion of this provides more clarity on the re-assessment process. Once the design of the port is finalised, the noise assessment undertaken in the ES will be repeated, using the finalised positions, types and numbers of noise generating equipment and processes, taking into account all of the agreed mitigation measures. Mitigation measures could include selection of quieter plant, alterations to methods of working, the containment of noisy processes and the appropriate use of noise barriers or screens. The use of these measures ensure that adverse noise effects are minimised at all receptors. Where necessary, the re-assessment process will include iterations of mitigation design to ensure that significant effects are avoided. After this mitigation assessment process has been completed, should the re-assessed predicted noise levels from the plant and equipment within the Port be shown to exceed the SOAEL levels, then mitigation measures at the receptor would be implemented as described in Requirement 10.
3.16.3 Mitigation between LOAEL and SOAEL. In the Applicant's response [REP4-020] to the ExA's SWQ [PD-010] Q2.16.4 regarding GBC's concerns about sound between the Lowest Observed Adverse Effect Level (LOAEL) and Significant Observed Adverse Effect Level (SOAEL), the Applicant does not address whether there is any mitigation available for LOAEL. The Applicant does acknowledge that the Noise Policy Statement for England (NPSE)	**Mitigation** Mitigation is a term to describe everything which is put in place to reduce noise levels, which includes detailed design, measures on the site such as site layout and equipment selection, noise barriers. Mitigation at receptors is just one type of mitigation measure. There is a range of mitigation measures described in the ES (paragraphs 17.134 to 17.137) which will be effective at all levels of noise. These paragraphs culminate with a reference to the OMP, and these mitigation measures will benefit all receptors, irrespective of the levels at that receptor location. **Noise Change** There has to be a noise change before there can be a noise effect. The question focuses on whether a change in noise level is an important test of noise effect. The NPSP opens by reference to NPSE. NPSE is the origin of the approach to mitigate between LOAEL and SOAEL and to avoid levels above SOAEL. It is important to note that the NPSE focusses on noise levels not changes in noise levels, because its primary aim is to avoid significant adverse impacts on health and quality of life, which are related to noise levels rather than noise changes. The noise rating approach procedure in BS4142 does compare the noise rating level with the background noise level, but this is not a noise change because the indexes used for the rating level and background level are different. Rating level is expressed in terms of L_{Aeq} and background is in terms of L_{A90} and for any noise measurement the

requires mitigation and minimisation where LOAEL is exceeded. ***The ExA also notes that the Applicant states that the National Policy Statement (NPS) for Ports does not consider noise change. However, NPS paragraph 5.10.4 states that the noise assessment should include "a prediction of how the noise environment will change with the proposed development" and "an assessment of the effect of predicted changes in the noise environment on any noise sensitive areas and noise sensitive species".*** ***The ExA also notes paragraph 5.10.8 of the NPS regarding containment of noise within buildings wherever possible and optimisation of plant layout.*** ***The ExA further notes that paragraph 5.10.10 of the NPS states: the "decision-maker should***	L_{Aeq} will always be greater than the L_{A90}. Furthermore, the background noise level will change as well as the rating level, making it difficult to assign the true cause of the difference between them. The NPSP refers to containment of noise within buildings, and that approach will be followed where it is reasonably practical, as set out in the OMP. To ensure that the noise from the project does not exceed the levels described in the assessment the approach is to make worst case assumptions throughout. The consequence of this approach is that the probability of the noise predictions being reached or exceeded is actually very low. The combination of multiple worst case assumptions gives an extremely low likelihood of an under-prediction of noise levels. GBC made no response to this.

consider including measurable requirements or specifying the mitigation measures to be put in place to ensure that actual noise levels from the project do not exceed those described in the assessment or any other estimates on which the decision-maker's decision was based." ***Would the Applicant demonstrate how it has addressed these matters?***	
3.16.4 BS4142. In Gravesham Borough Council (GBC)'s response [REP4-013] to the ExA's SWQ [PD-010] Q2.16.5, GBC has proposed the method detailed in BS4142 (Method for Rating Industrial Noise Affecting Mixed Residential and Industrial Areas). ***What is the Applicant's response to including the BS4142 standard for limiting the noise?***	**BS4142** BS4142 gives a method for assessing the impacts and effects of new developments. It does not state that it is suitable for devising planning conditions. That is why it is referred to in the ES for the purposes of assessing the effects of the proposal, but not accepted by the Applicant as a suitable basis for formulating a requirement. BS4142 seeks to express in a rating procedure the prominence of a noise in the context of the background in which you would hear it. The fundamental process involves measuring the noise level and then subjectively adding a number to represent acoustic feature corrections. Corrections can be added for tonal character, impulsive character, intermittent character, or a combination. It is up to the assessor to determine the size of acoustic feature correction to be used and added to the measured level. You cannot get a sound level meter to give you a measure of the rating level, which is one of the reasons why BS4142 should not be used as an operational planning control. The background noise is measured using a different index and is always numerically lower than the index used for assessing the noise being rated. The background uses a statistical index which tells you the level that is exceeded for 90% of the time. The BS4142 assessment does not look at change, comparing like for like noise levels over time, but instead looks at the potential prominence of the noise being rated in its background.

	The consequence of that is that if you have a rating level that you cannot measure and you have to rely on the opinions of assessors, then ultimately there could be disagreements over the corrections used leading to uncertainty for all parties, and a potential delay to any mitigation being able to be applied. If the acoustic features are stripped out of the assessment, and reliance is instead placed on the measurable specific noise level, then the remaining levels would be low enough for it to be impossible to distinguish noise from the port from noise caused by other sources that are nothing to do with the port. An example of this issue can be found when one considers the night time value of 42dB used in the minerals planning guidance. The uncorrected levels from port activities are below or hardly above existing levels from non-port activities. If 42dB was agreed, and there was an alleged breach of this it would be impossible to say "*what I have measured on this meter all came from Tilbury2*" as there would be noise from existing other noise sources contributing to that measured level. BS4142 is therefore not appropriate for the purpose of setting planning conditions or DCO requirements. The Standard includes an explanatory note: "*Since the intention is to determine a background sound level in the absence of the specific sound that is under consideration, it is necessary to understand that the background sound level can in some circumstances legitimately include industrial and/or commercial sounds that are present as separate to the specific sound."* (Commentary on Section 8.1, BS4142:2014). When solving a problem with one source, all other sources would be included in the background, and use of this would lead to an unenforceable and unhelpful approach to limiting the noise from the Tilbury2 site. **GBC response:** **Wendy Lane** indicated GBC's views that CMAT is a minerals operation, and minerals guidance should apply, and defined noise limits should be set at specific locations, with a clear distinction between daytime, evening and night-time periods. Ms Lane explained that GBC have a baseline now which includes 'spikes' from non-Tilbury2 activities. As such, GBC's opinion is that if there is an issue during the night after Tilbury 2 arrives, having a limit would make it clear what everyone should do. Ms Lane stated that GBC are unsure why BS4142 is not the right approach to be used, although do acknowledge the issue about the rating level. **Applicant response:**

	It is wrong to say that CMAT is fundamentally a minerals operation. It is part of a port operation. In the CMAT paper (Appendix B to PoTLL's response to First Written Questions (REP1-016) the Applicant explains that the CMAT is an integral part of the port, and is a similar operation to that seen on the existing Tilbury port and elsewhere. In any event, the significant effects predicted in GBC's administrative area are the port operations, with ships arriving and materials being handled, not any minerals processing. Further, it should be noted that there is no reference to the minerals guidance in the Ports NPS. Whilst a quarry in Oxfordshire (an example used by GBC) can reasonably be expected to have no noisy operations at night, a 24 hour port cannot reasonably be expected to stop at 7pm each evening. The minerals guidance was brought in to deal with gravel extraction in rural areas, and night time restrictions are applicable as it would be the only activity in the area producing noise, making it feasible to separate out this noise from a measurement. It is not possible to separate out how much noise would be coming from the GBC stated minerals activities compared with the other activities at the port and near to the port. Therefore, there is no reasonable basis for applying the minerals guidance noise control recommendations to Tilbury2. One suggested approach for separating the noise from Tilbury2 from the remaining background noise is to take the current baseline and set it as the future baseline, and then assess the position once Tilbury2 is operational. However, this cannot work because the non-port background noise will change between the present day and the opening of the port. The future baseline will be different, and will include Tilbury2. As such, this would not be a technically correct method of assessing noise from the port, and would not be enforceable. It would therefore be a wholly inappropriate way to seek to control noise. It is the OMP which is an effective, workable and enforceable approach.

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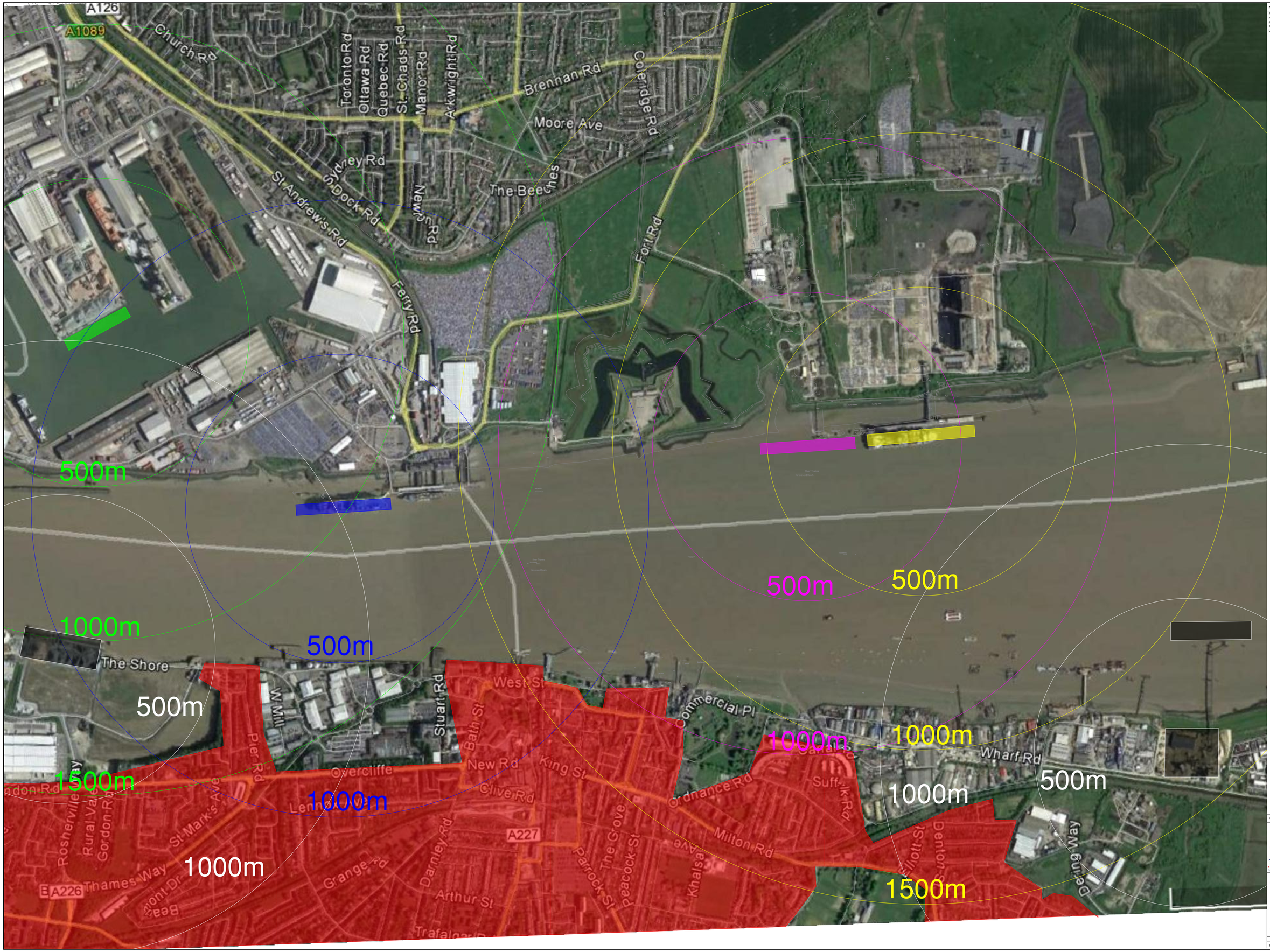
TILBURY2

TRO30003

APPENDIX 1: GRAVESHAM SITE CONTEXT

TILBURY 2 DOCUMENT REF: POTLL/T2/EX/154



Notes

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- Tilbury RoRo
- Tilbury Bulks & CMAT
- Gravesham Bulks & CMAT
- Tilbury2 RoRo
- Tilbury2 CMAT
- Gravesham Residential Receptors

REV	AMENDMENT	DATE	NAME	REV REQ

222 YEARS PORT OF TILBURY LONDON

DRAWN BY:	S Willmore
REQUESTED BY:	P Ward
CHECKED	
ENGINEER	

Location: Tilbury

Subject: RoRo and Bulks Operation distances from Gravesham receptors.

Scale: NTS

DATE	DRAWING NUMBER	REV	SHEET No.
03/07/18	TS 4131	O	1 of 1