

Thurrock Flexible Generation Plant – responses to Natural England Response to Examining Authority’s Further Written Questions (REP5-026)

Date: 08/07/21
Regarding: Thurrock Flexible Generation Plant

Subject	No.	Comment in REP5-027	TFGP response
Habitats Regulations Assessment	1	Whilst there is some uncertainty as to the precise area of direct habitat loss (accounting for incremental accretion over time from mudflat to saltmarsh), the area of habitat directly lost is not expected to be >1% of the available functionally linked land resource in this area of the estuary (including some on the south side of the river).	<p>The Applicant has provided additional clarification to NE of the areas of habitat loss in the additional analysis supplied with this response. In summary, direct habitat losses comprise:</p> <ul style="list-style-type: none"> • 0.38 ha of mudflat for the causeway (duration of impact: lifetime of causeway) • 1.42 ha of mudflat for dredging of barge pocket (duration of impact: approximately 2 years after barge deliveries cease, after which the barge pocket is expected to have recovered to mudflat) • 1.10 ha of mudflat for saltmarsh accretion (duration of impact: the 1.10 ha is the maximum amount of saltmarsh accretion that may occur over the 35-year lifetime of the causeway. Habitat loss would therefore start at zero when the causeway is constructed and increase gradually to 1.10 ha over the next 35 years). <p>Section 4.1 and Table 21 of the additional analysis submitted with this response demonstrates that direct habitat loss is <1% of the available mudflat resource regardless whether this impact is measured at a local scale (i.e. for Mucking Flats SSSI and FLL only) or at the full SPA level.</p>
	2	Nevertheless our calculations indicate that for avocet and ringed plover, birds are present within the disturbance zone at densities comparable to the wider SPA / Ramsar site, which justifies the approach to consider this area as functionally linked to the SPA / Ramsar site.	The Applicant agrees that the area of mudflat affected by causeway construction and use comprises Functionally Linked Land, and the HRAR (REP2-022) has been written on that basis.
	3	An additional recent third party data set is available from Goshem’s Farm (under Thurrock Council reference 17/00224/FUL) which also contains a helpful intertidal invertebrate prey density sampling report which references high prey density in the area affected by the project.	<p>Our HRAR does not specifically refer to the Goshem’s Jetty wintering bird survey report. However, this report was reviewed in the PoTLL document which we do review and refer to in the HRAR (Bioscan, 2018¹). The conclusion of the PoTLL Bioscan review of this survey was:</p> <p><i>“In summary the findings were consistent with Bioscan’s over the same period, and similarly reflect the position reported by WYG in 2012, with low numbers of birds being found in proximity to the Tilbury2 site, as against greater numbers closer to Coalhouse Fort.”</i></p> <p>The Goshem’s survey was undertaken between Nov-Feb in the 2016-2017 wintering bird season and therefore overlapped with the Bioscan survey which we do review and include in Table 6.2 of the HRAR. We therefore do not consider that the Goshem’s survey provides any additional data of particular significance.</p> <p>With regards to the invertebrate report, contrary to Natural England’s statement, this Goshem’s Farm report <u>does not</u> include intertidal invertebrate prey density sampling. As the report makes clear, surveys were not undertaken and the report instead drew from figures in the published literature for unrelated locations to provide assumptions. Section 2.1 of the report states that:</p> <p><i>“This document was prepared in the absence of recent, site specific data regarding the intertidal assemblages present at the proposed pontoon site and their status. The discussion and conclusions outlined here are based on the likely invertebrate community</i></p>

¹ <https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/TR030003/TR030003-000995-Port%20of%20Tilbury%20London%20-%20Habitats%20Regulations%20Stage%20%20report%20-%20Clean.pdf>

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			<p><i>compositions given the location of the site within the Thames Estuary and communities documented at similar intertidal sites situated elsewhere within the Lower Thames Estuary system. Whilst we are confident that the data presented and discussed in Section 5 of the report are representative of the habitat conditions and communities that occur at the proposed jetty site, the assessment of the ecological and conservation values of the mudflat habitats, and hence, the potential impacts of the proposed works, are presented on the understanding that this limitation is acknowledged.</i> [our emphasis]</p> <p>The report goes on to say (Section 6.2, "Bird food resources"):</p> <p><i>"In the absence of a site specific survey, the abundance of the resident invertebrate species is not known. However, a number of key prey species for birds can reach very high densities. Examples include the mudshrimp <i>Corophium volutator</i> that has been recorded at densities of up to 100,000 per metre² on stable, accreting muddy shores (see Green, 1968; Gerdol and Hughes, 1994). Similarly, the polychaete <i>Hediste diversicolor</i> can reach densities of 100,1000 per metre² (Barnes, 1994). It is therefore likely that the mudflat habitat at and in the vicinity of the proposed jetty represents a food resource for the bird species observed."</i> [our emphasis]</p> <p><i>"The ecological value of the site as a local food resource for bird species is dependent on the relative abundance of invertebrate prey species that the Goshems Farm site supports compared to other intertidal habitats within this reach of the Thames. Without such data, an informed judgment of the value of the intertidal habitat for birds cannot be made. However, preliminary results from the ongoing winter bird survey indicate that fewer birds were feeding in the vicinity of the Goshems Farm jetty site than at locations further east with the majority concentrated around the Coalhouse Fort area. This observation was interpreted as indicating that the habitats in the immediate vicinity of the Goshems Farm jetty site were of lesser significance for wetland birds than other intertidal sites in the area."</i></p> <p>The Applicant further notes that the references in the second paragraph quoted from the report are:</p> <p>Barnes (1994). The brackish-water fauna of northwestern Europe. Cambridge University Press, Cambridge. Green (1968). The biology of estuarine animals. Sidgwick & Jackson, London. Gerdol & Hughes (1994). Effect of <i>Corophium volutator</i> on the abundance of benthic diatoms, bacteria and sediment stability in two estuaries in south eastern England. Mar. Ecol. Prog. Ser. 114, 103-108.</p> <p>The estuaries assessed in the Gerdol & Hughes report were the Blackwater Estuary and the Crouch Estuary, rather than the Thames.</p> <p>The Applicant does not therefore agree with Natural England that the Goshem's Farm invertebrate report supports the conclusion that there are high densities of invertebrate prey species for birds in the area affected by the project. The Applicant undertook site-specific surveys of intertidal invertebrate communities at the location of the proposed causeway and the results of these were included in the application document Appendix 17.1: Phase 1 Intertidal Survey Report and Benthic Ecology Desktop Review (APP-119). Chapter 17: Marine Environment Environmental Statement (PDC-019) which states that "overall both intertidal and subtidal assemblages were typical of those found throughout the Thames Estuary, with consistency across the site specific survey data and historic datasets from the area" (Para 3.1.35).</p>
	4	<p>We have some concerns that 0 counts for qualifying species during the survey period may not be representative of typical usage (those species being generally found within the SPA / Ramsar site during the same period), and although we recognise that any survey is a sampling exercise, this may under-represent the bird usage of the area.</p>	<p>The bird surveys were based on standard accepted methodology for wintering foreshore bird surveys (two counts per month, one at high tide and one at low tide). Our calculations are all based on the highest counts recorded by surveys each month, and therefore it is reasonable to assume that zero counts within the impact area recorded during these surveys are representative.</p> <p>By sampling through the survey period and then choosing the highest monthly counts as the basis of our analysis, we are taking a more precautionary approach than using a simple mean value of counts across the whole survey period.</p> <p>Zero counts are part and parcel of that calculation; we consider them to be reflective of the use of that FLL outside the SPA, especially with reference to the other surveys reviewed in the HRAR (REP2-022), which in fact all recorded lower numbers of birds in the impact</p>

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	5	<p>The HRA does not fully account for the decommissioning phase of the project, noting that the ease of removal of the causeway was a matter of some debate at ISH1. The applicant has offered to clarify and expand on this in due course.</p>	<p>Further information about the causeway conceptual design and decommissioning has been submitted at Deadline 5 (in REP5-016) and this confirms that the decommissioning process would be undertaken using similar work and plant and over a similar timescale as the construction work.</p> <p>Requirement 19 of the DCO requires the production of a decommissioning plan, on which NE are due to be consulted. This plan will include details of the restoration of mudflat and coastal saltmarsh habitat and so NE will be consulted in more detail on that aspect in due course.</p> <p>The effect of the decommissioning phase, therefore, would be an impact of broadly identical scale to the effect assessed for the construction of the causeway. Given that the HRAR concludes no AEOI for causeway construction, the same conclusion is reached for causeway decommissioning.</p>
	6	<p>The importance of inner estuary areas during severe weather means that a precautionary approach should be taken (noting that recent surveyed winters have been either average or milder and may not fully represent these conditions).</p>	<p>We refer to our previous responses on this matter (Ref. 1a in REP2-056 and Ref 2 in REP3-009):- while it is acknowledged that different parts of an estuary may provide habitat for birds associated with a SPA at different times depending on weather conditions, this general principle does not make it possible to quantify importance of the Functionally Linked Land during periods of severe weather at the project site in the absence of evidence that it is favoured by birds during periods of harsh weather conditions.</p> <p>Furthermore, in the event of severe weather conditions during the subsequent lifetime of its presence (i.e. when not in use), the causeway is extremely unlikely to displace waterbirds from the surrounding mudflats under such conditions when birds tend to be increasingly tolerant of active or passive disturbance.</p> <p>We would again note that Table 6.2 of the HRAR reviews surveys from two other wintering survey periods in addition to the surveys undertaken by the Applicant, both of which recorded birds at lower densities during those winters.</p>
	7	<p>More fundamentally, if an alternative for delivery of AIL exists which is less harmful (which we understand from the Examination is the case), then this option should be selected as a preference. Such 'avoidance' is in line with the EIA and HRA assessment frameworks.</p>	<p>The Applicant is actively pursuing the alternative option and will update the Examination in due course.</p>