REPORT

Boston Alternative Energy Facility

Applicant's Comments on Written Representations

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baef
Boston Alternative Energy Facility

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Table of Contents

Table of Tables

Table of Acronyms

Acronym	Definition
AUBP	Alternative Use Boston Projects Limited (The Applicant)
BAEF	Boston Alternative Energy Facility
BAT	Best Available Techniques
BBC	Boston Borough Council
CCGT	Combined Cycle Gas Turbine
CHP	Combined Heat and Power
DCO	Development Consent Order
dML	Deemed Marine Licence
EA	EA
EP	Environmental Permit
ES	Environmental Statement
GHG	Greenhouse Gas
HRA	Habitats Regulations Assessment
IEMA	Institute of Environmental Management and Assessment
LCC	Lincolnshire County Council
MMO	Marine Management Organisation
PEIR	Preliminary Environmental Information Report
RDF	Refuse Derived Fuel
SAC	Special Area of Conservation
SPA	Special Protection Area
SRF	Solid Recovered Fuel
WCS	Worst Case Scenario

1 Comments on Written Representations

1.1.1 This 'Applicant's Comments on Written Representations' document for the Boston Alternative Energy Facility (the Facility)) supports the application for a Development Consent Order (DCO) (the DCO application) that has been made to the Planning Inspectorate under Section 37 of the Planning Act 2008 (the Act) by Alternative Use Boston Projects Limited (AUBP) (the Applicant).

1.1.2 A total of six Written Representations were received by the Planning Inspectorate in respect to the Facility at Examination Deadline 1 (19th October 2021) and the responses to each are provided as follows:

- Table 1-1 Environment Agency (**REP1-051)**;
- Table 1-2 Lincolnshire Wildlife Trust (REP1-055);
- Table 1-3 Kevin Blanchard (REP1-065 to REP1-067);
- Table 1-4 Marine Management Organisation (REP1-056);
- Table 1-5 United Kingdom Without Incineration Network (UKWIN; and
- Table 1-6 RSPB (REP1-060).

1.1.3 It should be noted that Natural England combined their Relevant Representations with their Written Representations in a single submission to the Examination (RR-021) and confirmed in its Deadline 1 submission (REP1-057). The has Applicant responded to all of these representations in its submission at Deadline 1 (REP1-035). These responses have not been repeated in this document.

Table 1-1 Environment Agency (REP1-051)

ID	Written Representation	Applicant's Comments
3.0 Flood Risk		
1.1.1	*Disapplication of Environmental Permitting (England and Wales) Regulations 2016 in relation to a flood risk activity permit* 3.1 We are in discussions with the applicant to agree a form of wording for the protective provisions supported by a bespoke legal agreement to ensure that the proposed works will be carried out in a way that ensures an appropriate level of flood protection now and into the future. We will not be in a position to remove our objection until both these issues have been resolved. At this point in time we cannot give our consent under s150 Planning Act 2008 to disapplication of the flood risk permitting regime.	The Applicant is committed to working with the Environment Agency (EA) to provide the information required in relation to the management and protection of existing flood risk management infrastructure. The Applicant is currently engaging with the EA with the aim of reaching agreement on the protective provisions and any necessary legal agreements needed to enable the disapplication of the requirement to obtain an environmental permit for a flood risk activity. A draft legal agreement was provided to the EA for review on 27 October. The EA has yet to provide any comments. The Applicant has included draft provisions for the protection of the EA in Schedule 8 Part 4 of the draft DCO (document reference 2.1, APP-005), which gives the EA the power to approve works in the vicinity of flood defences. The EA agreed at a meeting on 23 September to provide a tracked change version of the protective provisions for the Applicant to review. The Applicant has yet to receive these.
1.1.2	*Flood Risk Assessment (FRA)* 3.2 We have had further discussions with the applicant regarding the content of the FRA (APP-106, Document 6.4.13, Environmental Statement Appendix 13.2) as set out in paragraph 3.8 of our Relevant Representations. Whilst they have agreed to provide further information on these matters we have not yet received sufficient information to confirm that the development will be safe from flooding.	The Applicant provided further information to the EA on 1 October 2021 in relation to a number of flood risk aspects, including the risk of flooding to the Application Site. This information was subsequently summarised and submitted to the Examining Authority at Deadline 1 in the Comments to Relevant Representations document (document reference 9.2, REP1-035) and the Wharf Construction Outline Methodology (document reference 9.17, REP1-030).

ID	Written Representation	Applicant's Comments
		The Applicant continues to engage with the EA to clarify whether it has any outstanding concerns and agree the scope of any further information required to demonstrate that the Facility would be safe from flooding.
1.1.3	3.3 We require details of finished site levels including assessment of any impact on the flow of water over the site. The applicant has indicated to us that approximately 0.5 m of surface material will be removed and replaced with 0.8 m of surcharged material across the main site. This gives a net gain of 0.3m over the whole site. We require further assessment of the impact on flood risk to third parties through the displacement of flood waters.	Information related to the finished site levels will be provided, alongside information on internal levels for critical infrastructure, in a drawing to be submitted at Deadline 3. Further to the above, the Applicant notes that the flood risk to the Facility comprises a residual rather than actual risk due to the presence of the existing defences, which are currently subject to improvement works as part of the Boston Combined Strategy (Haven Banks Project). The improvement project aims to provide protection up to and including the 1 in 300 year event, 100 years in the future, for the wider Boston area. As such, flooding of the Application Site would only occur in the event of a breach in the defences. This would affect both the Application Site and the wider area. The Applicant notes that the flood defence along the frontage of the Principal Application Site will be set to the maximum level of that proposed for the wider Haven Banks scheme (i.e. 1 in 300 year Standard of Protection up to 100 years in the future) and unlike the defences along the wider frontage there will be no requirement to increase the crest height of the defence, as part of the EA's adaptive management approach. In accordance with the guidance set out in Paragraph 060 of the Planning Practice Guidance on Flood Risk and Coastal Change appropriate resistance and resilience measures are

ID	Written Representation	Applicant's Comments
		proposed by the Applicant to manage the residual flood risk to the Facility. As the risk to the Facility comprises a residual risk that would only be realised in the event of a breach in the defences, the Applicant also notes there is an existing residual flood risk to the wider area, which the Facility would not alter. With the construction of the new flood defence along the frontage of the Application Site, the residual risk of flooding will be further minimised. Based on the existing residual risk to the wider area, the Applicant considers there to be no requirement to further assess the potential off-site impact should there be a failure in the existing defences.
1.1.4	3.4 Notwithstanding paragraphs 13.1.127 to 13.1.133 of the FRA (APP-106), we do not consider that the impacts of flooding on any critical infrastructure within the site has been adequately considered. We require further clarification about what aspects of the development are considered critical, and what mitigation measures are in place to protect them. We recommend that any features considered to be critical infrastructure should be raised above the predicted flood level to ensure it is protected in the event of a flood.	See response to 1.1.3 above. The Applicant is undertaking a review of the siting levels associated with various elements of the Facility, in comparison with the likely maximum 1 in 200 year tidal water level by the end of the lifetime of the Facility to ensure appropriate mitigation measures are implemented, as necessary. The Applicant will provide further information on critical infrastructure and levels, summarised in a Technical Note at Deadline 3.
1.1.5	3.5 We therefore maintain that the development does not pass the Exception Test as set out in Paragraph 5.7.16 of the Overarching National Policy Statement for Energy (EN-1), or the requirements of 5.8.18 of the Draft Overarching National Policy Statement for Energy in that it has not reduced flood risk overall.	The Applicant notes the EA's comment in relation to the Exception Test, in the context of Paragraph 5.8.18 of the Draft Overarching National Policy Statement for Energy (EN-1) which states:

ID	Written Representation	Applicant's Comments
		Both elements of the test will have to be satisfied for development to be consented. To pass the Exception Test it should be demonstrated that: • *the project provides wider sustainability benefits to the community that outweigh flood risk* • *the project reduces flood risk overall, where possible.* The Applicant also notes the requirement is to reduce flood risk overall, **where possible**. The site of the Proposed Development and the wider area are protected by existing flood defences, which are subject to improvement as part of the EA's Haven Banks Project. This adopts an adaptive management approach, requiring the EA to raise the levels of the defences in the future. The defences outside the frontage of the Proposed Development will be subject to a number of lifting stages. Currently, the defences have been improved to 6.5m AOD. However, as part of the Proposed Development, the Applicant has committed to adopting the maximum defence level of 7.2m Above Ordnance Datum (AOD) from the outset for the defences within its frontage. By adopting the maximum defence level from the outset of the Proposed Development, the Applicant will provide an increased Standard of Protection to the Application Site (i.e. a 1 in 300 year Standard of Protection up to 100 years in the future). This will exceed the Standard of Protection afforded by the adjacent defences. Furthermore, this protection is

ID	Written Representation	Applicant's Comments
		intended for a point in time significantly beyond the projected lifetime of the Proposed Development. As such, the Applicant considers that the adoption of the maximum defence level from the outset of the Proposed Development provides an improved standard of protection beyond that provided by the wider defences and therefore results in a reduction in flood risk overall. The Applicant therefore considers that the Facility passes the requirements of the Exception Test and commits to undertaking further engagement with the EA to ensure that its concerns have been addressed.
1.1.6	3.6 We note the applicant's assessment in their letter 'Boston Alternative Energy Facility: Geomorphology' to the Environment Agency (1st October 2021) that the increase in ship movements will result in an increase in ship wash in the Witham Haven. The applicant has assessed that the time ship wash affects intertidal mudflats will increase from 0.15% to 0.37% of the overall wave impact. Whilst we accept that this overall increase is small relative to the impact of natural wind-waves, we remain concerned that the combination of changes to the system dynamics through the creation of the wharf, the introduction of dredging and the increase in ship movements may result in increased erosion to the flood defences immediately opposite the site and to saltmarsh and mudflat habitats in the Haven (see paragraph 4.4 below).	The Applicant understands that the EA wishes to see a detailed in-combination assessment of impacts from (i) ship wash (ii) provision of the new wharf and (iii) provision of the berthing pocket. We will continue to engage with the EA to provide such an assessment and submit this information to the Examination as soon as possible.
1.1.7	3.7 We therefore request that the applicant provides further evidence of how the impacts of these changes have been assessed specifically in relation to erosion of both mudflats and saltmarsh in the area and any consequent impacts on the stability of existing flood defences.	The work set out in the response to 1.1.6 (above) will include assessment of impacts on mudflats, saltmarsh and the existing flood defences.

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4.0 Compliance with the Water Environment (Water Framework Directive) (England and Wales) Regulations 2017		
1.1.8	4.1 Since submitting our Relevant Representations we have had further discussions with the applicant, Natural England, RSPB, Lincolnshire Wildlife Trust and Marine Management Organisation regarding the need to compensate for the loss of saltmarsh and mudflat habitats in the Witham Haven.	Noted.
1.1.9	4.2 To date no proposals have come forward which fully address our concerns regarding the loss of habitat and the impact on marine ecology. We therefore maintain our objection to the proposals as we do not have sufficient evidence to show they are compliant with the Water Environment (Water Framework Directive) (England and Wales) Regulations 2017 as they may lead to a deterioration of the ecological status of the Witham Haven waterbody.	The loss of habitat will be addressed further in the updated Outline Landscape and Ecological Mitigation Strategy (OLEMS) document (to be submitted to the Examination for Deadline 3). Impacts on marine ecology have been addressed in the Environmental Statement (ES) in Chapter 17 (document reference 6.2.17, APP-055).
1.1.10	4.3 The Environment Agency has classified saltmarsh in the Witham based on surveys carried out in 2007, 2011 and 2016. We considered how much habitat has been lost, whether the saltmarsh extent is stable or changing, and the diversity of saltmarsh zones and taxa to assess the status of saltmarsh in a waterbody. Our surveys found that saltmarsh in the Witham contains diverse taxa and the extent has not decreased since the 2007 survey. However, we have classified saltmarsh as moderate status in the Witham because there has been significant historical saltmarsh loss and because most of the saltmarsh in the Witham is low-mid marsh, with only limited extents of other saltmarsh zones.	The surveys undertaken for the EA (Jacobs, 2011 Boston Barrier Saltmarsh Surveys September 2011; EA 2014 Boston Barrier Tidal Project - Volume 2b: Ecology and Nature Conservation Technical Report, Bristol) of the narrow strip of saltmarsh and the reported evidence showed that the saltmarsh was in poor condition. Saltmarsh and mudflats are of biodiversity importance, but the loss of such small areas (2.54 ha comprising 1.0 ha of saltmarsh and 1.54 ha of mudflat), and the reported poor condition of the saltmarsh and typical habitat for the mudflats are not considered to be significant in context of the wider habitats in the surrounding area. They are not located within The Wash Special Protection Area (SPA) or The Wash and North Norfolk Coast Special Area of Conservation (SAC). Can the EA confirm where it is reported that they have classified saltmarsh as moderate status as this information

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		appears to be contradictory to the reports that were available to inform the EIA process?
1.1.11	4.4 The capital dredging and wharf construction works would result in the direct permanent loss of intertidal saltmarsh and mudflat habitat. The applicant has not provided sufficient evidence to show they have also considered the risk of potential further intertidal habitat loss if changes arising from the project, such as to the tidal prism or the increase in vessel use, could result in an increase in bank erosion.	In response to the EA's Written Representation 1.1.6 (above) the Applicant has committed to undertake a detailed in-combination assessment of impacts from (i) ship wash (ii) provision of the new wharf and (iii) provision of the berthing pocket. This assessment will include assessment of the potential for bank and habitat erosion.
1.1.12	4.5 We therefore do not have confidence that the loss of saltmarsh caused during the construction phase, combined with the unquantified risk to saltmarsh during the operational phase would not cause a deterioration in saltmarsh status. The proposals would result in permanent habitat loss which would conflict with the objectives of the Anglian River Basin District River Basin Management Plan to preserve or restore habitats in this waterbody.	
1.1.13	4.6 We note paragraph 5(3)(c) of the Draft DCO requires a scheme of long term management and monitoring of the proposed mitigation. We request that this paragraph is amended to include after monitoring: ', including a monitoring and adaptive management plan (including control measures) related to any impacts on other mudflat and saltmarsh habitats.' We consider this is necessary to avoid a deterioration in the ecological status of the waterbody as a direct result of the development.	The updated Outline Landscape and Ecological Mitigation Strategy (OLEMS) document (to be submitted for Deadline 3) will include adaptive monitoring and management for the long-term success of the management measures proposed.
1.1.14	4.7 Without further evidence we therefore disagree with the applicant's conclusion that intertidal habitat loss would have negligible impacts in the Witham.	See responses to 1.1.8 to 1.1.13 above.
1.1.15	*Potential contamination from dredging activities* 4.8 Since submitting our Relevant Representations we have had further discussions with the applicant regarding the geomorphological	No material from dredging operations will be disposed to sea so this pathway for contamination does not exist.

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	assessments used to inform Chapters 15, 16 and 17 (APP-053, APP-054 and APP-055) of the Environmental Statement.	Contaminated sediment could be liberated from the activity of dredging. In recognition of concerns from the EA on this matter further information will be submitted to the Examination at deadline 3 relating to methods, volumes and sampling of dredged material to minimise the potential for contamination to affect water quality and marine ecological receptors. The response to 1.1.17 (below) is also relevant in that a condition on sampling will be included in the updated draft DCO to be submitted at Deadline 3.
1.1.16	4.9 Notwithstanding the assurances given in paragraphs 17.8.41-7 of Chapter 17 Marine and Coastal Ecology (APP-055), we remain concerned that the DCO as currently proposed will not prevent potential contaminants from the dredging activities from entering into the controlled waters of the Haven.	
1.1.17	4.10 Whilst the control measures proposed in paragraphs A13.7.2 and A13.7.3 of Appendix 13.1 to the Environmental Statement (APP-105, Water Framework Directive Compliance Assessment) are generally acceptable, we consider that a scheme of sampling, monitoring and an action plan (in the event that contaminants beyond agreed levels or previously unidentified are detected) is needed.	The Applicant is liaising with the Marine Management Organisation (MMO) regarding the inclusion of a condition in the Deemed Marine Licence relating to the sampling of dredged material and it is considered this would be a more appropriate place to address the EA's concerns than through amending Requirement 9 in Schedule 2 to the draft DCO. A condition on sampling will be included in the updated draft DCO to be submitted at Deadline 3.
	4.11 We therefore request that paragraph 9(1), Schedule 2, Part 1 of the DCO is amended to require the intrusive investigations be submitted to and approved by the relevant planning authority in consultation with the Environment Agency.	
1.1.18	4.12 We also request that paragraph 9(2), Schedule 2, Part 1 of the DCO is amended to include the following wording after 'environmental statement': '(2) The ground investigations carried out pursuant to sub-paragraph (1) must be substantially in accordance with a sampling plan that sets out the approach to sampling to gather sufficient data to undertake a generic quantitative risk assessment as set out in chapter 11 (contaminated land, land use and hydrogeology) of the environmental statement and to assess the level of contaminants to be found in material to be removed and/or dredged from within Witham Haven and the outcomes of the ground	Please see response to 1.1.17 (above) with regard to sampling of dredged material.

ID	Written Representation	Applicant's Comments
	investigations must be taken into account in the preparation of the code of construction practice submitted pursuant to paragraph 10.'	
1.1.19	4.13 We also request that paragraph 10(3)(n) Schedule 2, Part 1 of the DCO is amended to include the following wording after 'taken into account': '…including a monitoring and action plan in relation to the potential release of contaminants into the watercourse;'	Please see response to 1.1.17 (above).
1.1.20	5.0 Waste Management 5.1 We have discussed our concerns with the applicant and they have indicated that they will put forward proposals to address them.	Noted.
6.0 Surface and Waste Water Management		
1.1.21	6.1 We have no further comments to make at this time.	Noted.
7.0 Ground Water Contamination		
1.1.22	7.1 We have no further comments to make at this time.	Noted.
8.0 Environmental Permit		
1.1.23	8.1 At the current time the Environment Agency has not received an application for an Environmental Permit for the operation of the proposed facility. Formal pre-application discussions have started, but there is no requirement for an application to be submitted within a particular timescale following these discussions. We are therefore unable to confirm whether or not we would grant a permit based on the development as proposed.	The Applicant has started pre-application discussions with the EA, which were positive. The Applicant and the EA discussed the possibility of modelling data, e.g., air quality, being reviewed by the EA prior to the Environmental Permit application being submitted. This will ensure that it includes the relevant information required for the determination process. The Applicant and the EA also agreed meet on site in early December 2021.
1.1.24	8.2 If an application is submitted it will be advertised and subject to public consultation in accordance with our guidance. We anticipate that an application could take a minimum of 10 months to determine from the date of submission but this could be longer based on the content of the application including the scale and complexity of the proposal.	
1.1.25	8.3 In relation to items 8.1, 8.2 and 10.1 of the Statement of Common Ground between the Environment Agency and Alternative Use Boston	

ID	Written Representation	Applicant's Comments
	Limited, until an Environmental Permit application has been received and the issues have been considered through our processes, we are not able to provide the Examining Authority or the applicant with any advice on whether these issues have been adequately addressed to secure an Environmental Permit.	

Table 1-2 Lincolnshire Wildlife Trust (REP1-055)

ID	Written Representation	Applicant's Comments

1.2.1	**Worst-case scenarios** for the designated interest features of The Wash SPA & **W&NNC SAC.**
	1.1 Worst-case scenarios, or worst-case impacts, are not easily identified within the documentation. A table of worst-case scenarios should be included in the Examination Library. These will ensure that any compensation and mitigation measures of the proposed development can be easily and appropriately assessed against these.
	
	Worst-case scenarios should include detrimental impacts and any possible compounding issues on features e.g. further declines in breeding harbour seal and permanent loss of priority habitats.
	Worst case scenarios should be clearly defined and necessary compensation or mitigation in place for:
	• impact on harbour seal of
	  ○ piling
	  ○ ship movements
	  ○ anchorage
	• Loss of priority habitat
	  ○ Loss of saltmarsh and mudflat & the effect on protected species
	  ○ mitigation/ compensation area chosen; in relation to disturbance from construction and operational phase of the proposed development.
		Worst-case scenarios (WCS) are detailed in the relevant chapters of the ES (including Chapter 16 Estuarine Processes (document reference 6.2.16, APP-054) and Chapter 17 Marine and Coastal Ecology (document reference 6.2.17, APP-055)) /HRA (Appendix 17.1 (document reference 6.4.18, APP-111)). Section 4 of the Ornithology addendum to the ES/HRA (document reference 9.13, REP1-026) includes specific WCSs including those for wharf construction and operation and includes an additional WCS regarding vessel passage at the mouth of The Haven. Where impacts have been predicted for receptors, necessary management measures have been applied.
		
		A further assessment on habitat loss due to wharf is included within Section 4.2 of the Benthic Ecology, Fish and Habitats addendum to the ES/HRA (document reference 9.15, REP1-028).
		
		Details on the potential for disturbance to the Habitat Mitigation Area are considered within the Ornithology addendum to the ES/HRA (document reference 9.13, REP1-026).

1.2.2	**Loss of Priority Habitat** 1.2 Loss of saltmarsh and mudflats could have a major adverse effect on two priority habitats of principal importance for the	The surveys undertaken for the EA (Jacobs, 2011 Boston Barrier Saltmarsh Surveys September 2011; EA 2014 Boston Barrier Tidal Project - Volume 2b: Ecology and Nature Conservation Technical Report, Bristol) of the narrow strip of saltmarsh and the reported

ID	Written Representation	Applicant's Comments
	conservation of biodiversity under Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006. We do not agree with the applicant's assessment of the saltmarsh as low quality. Natural England consideration and assessment is that the saltmarsh in this area of The Wash is of moderate quality. Appropriate compensation of good quality saltmarsh habitat should be secured. Additionally, any area chosen for compensation of these habitats should undergo full ecological assessment for suitability and potential impacts of disturbance on designated species within The Wash SPA and W&NNC SAC due to construction, operation and maintenance activities associated with the BAEF planning proposal. Likewise, in-combination effects with the proposed project should be considered including: • Assessment of further specific flood risk management work needed • Increased boat movements • Increased maintenance dredging • Relocation of the fishing fleet • Diversion of the England coastal path • The planned solar farm immediately adjacent to the proposed site.	evidence showed that the saltmarsh was in poor condition. Saltmarsh and mudflats are of biodiversity importance but the loss of such small areas (2.54 ha comprising 1.0 ha of saltmarsh and 1.54 ha of mudflat), and the reported poor condition of the saltmarsh and typical habitat for the mudflats are not considered to be significant in context of the wider habitats in the surrounding area. They are not located within The Wash SPA or The Wash and North Norfolk Coast SAC. The updated OLEMS document (to be submitted at Deadline 3) will discuss this in further detail. Any proposed offsets or without prejudice compensation measures would assess potential impacts on designated features.
1.2.3	**Harbour Seal** 1.3 The Trust acknowledges that the applicant is aware that new information has recently become available relating to a serious and rapid decline in the east coast harbour seal population. In light of this decline, it is essential to provide a level of certainty in ensuring impacts are fully assessed and that there are no further negative effects on a population already at risk.	At the time of writing the ES, there was no evidence to suggest there was a decline in the harbour seal population within The Wash (Chapter 17 Appendix 17.1 Habitats Regulation Assessment (document reference 6.4.18, APP-111), paragraphs A17.6.91 - A17.6.93); (Chapter 17 Marine and Coastal Ecology (document reference 6.2.17, APP-055), paragraphs 17.6.86 & 17.6.87).

ID	Written Representation	Applicant's Comments
	We believe that the developer should provide noise modelling information on piling specific to the BAEF project in order for us to comment on the outcome of the assessment. At procedural meeting one; 28 September 2021, the EA confirmed that discussions about environmental permitting and flood risk management for the proposed facility had not been progressed with the DCO application. No data is therefore provided for potential impacts on harbour seal or the European designated sites and features of any works associated with removal, replacement or maintenance of EA flood defences. Impacts, specific to the BAEF project, should be identified, assessed and compensated/ mitigated for as appropriate and time given to the appropriate organisations to assess this. We support Natural England in their relevant and written representations concerning lack of data, assessment and relevant compensatory options and packages, supporting the application to provide certainty of 'no adverse effect' alone or in combination on the integrity of The Wash SPA (and underpinning SSSI); The W&NNC SAC, and The Wash Ramsar. And their representations concerning potential impacts to priority habitats protected under Section 41 of the Natural Environment and Rural Communities {NERC) Act {2006) We support the RSPB in their relevant and written representations concerning lack of data, assessment and relevant compensatory options and packages, supporting the application to provide certainty of 'no adverse effect' alone or in combination on integrity of The Wash SPA and Ramsar and on The Wash SSSI.	The Applicant acknowledges that further evidence on the overall population status has become available since submission of the DCO application. All impacts to harbour seal have been re-assessed and included in the Addendum to ES Chapter 17 and Appendix 17.1 - Marine Mammals (document reference 9.14, REP1-027), based on the updated population estimate. However, it should be noted that it is not expected that there would be any risk to the harbour seal population due to the low level of activity (i.e. the only impact being an increase in vessels within The Wash), and adequate mitigation would be put in place to ensure that there was no risk to the already declining population (including vessel speed limits and observers on all vessels). Section 2.1 of the Wharf Construction Outline Methodology (document reference 9.17, REP1-030) sets out the key elements to constructing the new flood defences integrated into the wharf. The Addendum to Chapter 17 and Appendix 17.1 – Marine Mammals (document reference 9.14, REP1-027) updates the ES and provides assessments to underwater noise from piling and dredging activities during construction in relation to the whole wharf construction (including flood defences). The assessment shows no change to the impact assessment as set out in the ES and no significant effects are predicted. Further information has been added on the applicability of using other noise modelling reports to inform the assessment of impacts at the Facility within the Addendum to Chapter 17 and Appendix 17.1 - Benthic Ecology, Fish and Habitats (document reference 9.15, REP1-028) submitted at Deadline 1. Site specific noise modelling is not considered necessary to establish potential impacts of the Facility as a result of underwater noise.

ID	Written Representation	Applicant's Comments
	We support the representations of the Marine Management Organisation {MMO) concerning maintenance dredging required for the operation of the facility. Further confirmation of the logistics of this operation and how the dredged material will be disposed of is needed.	Responses to Natural England's relevant and written representations have been provided by The Applicant in Comments on Relevant Representations (document reference 9.2, REP1-035). See **Table 1-4** and **Table 1-6** in this document for responses to the written representations from the MMO and the RSPB.

Table 1-3 Kevin Blanchard (REP1-065 to REP1-067)

ID	Written Representation	Applicant's Comments
1.3.1	1.1 The incinerator design was changed from gasification technology to thermal treatment. We were told at Phase 4 that the PEIR would be updated. It never was, why not, and surely the potential impacts on residents could be completely different. (REP1-065)	The Consultation Report (document reference 5.1, APP-022) summarises the consultation undertaken during Phase 4. Consultation materials are also available on the project website for public viewing (https://www.bostonaef.co.uk/document-library/). Through Phase 4 consultation the changes in technology were summarised. However, it was noted that the Preliminary Environmental Impact Report (PEIR) would not be updated as the effects were minor. Changes were set out in a project newsletter in July 2020[1] and via a webinar available on the project website[2]. Table 4-1 of ES Chapter 4 Site Selection and Alternatives (document reference 6.2.4, APP-042) provides a comprehensive list of the design optimisation changes that took place and assessed in the PEIR and in the ES. Changes which have resulted in additional mitigation are noted in the Applicant's Response to the Examining Authority's Written Questions, see Q1.0.3 (document reference 9.24).
1.3.2	1.2 If the facility is granted Planning permission will the consent come underpinned by legally enforceable laws, subject to compliance, with penalties for failing to meet the standards of acceptable levels of emissions, leakages and safe work practices. Based on regular and unannounced inspections at the site? And, would these same laws remain legally enforceable at any future date (regardless of who then owns or operates BAEF) when science and technology advancement may require changes to current day standards and practises? (REP1-066)	The Application seeks to obtain a DCO for the Facility. A DCO is a form of secondary legislation. As set out in Article 2 of the draft DCO, the undertaker is Alternative Use Boston Projects Limited. The ability to transfer the benefit of the DCO is subject to the provisions in Articles 8 and 9 of the draft DCO. The Local Planning Authority (LPA) has the power under the Planning Act 2008 to monitor compliance with the DCO and investigate complaints. Their powers include the right to enter the site to gather evidence. A breach carries a potentially unlimited fine if the LPA chooses to prosecute. The LPA may also seek an injunction to stop the breach from occurring or continuing. Furthermore, the Facility will not be able to operate until an Environmental Permit has been issued by the EA. The Permit can be expected to include Pre-Commencement Conditions

[1] *https://www.bostonaef.co.uk/wp-content/uploads/2020/07/FINAL-newsletter-no-crop-marks.pdf*
[2] *https://www.bostonaef.co.uk/wp-content/uploads/2020/08/PB6934-RHD-01-ZZ-PP-N-2004-Aug2020-Webinar-scheme-changes.pdf*

ID	Written Representation	Applicant's Comments
		which will need to be addressed prior to commissioning. Operational Conditions will include strict Emission Limit Values, and management system, monitoring and reporting requirements. The EA will undertake annual compliance auditing, with a stated time period for the rectification of any non-conformances. This is set in statute through the Environmental Permitting (England and Wales) Regulations 2016 (as amended), which transposed the EU Industrial Emissions Directive (IED) into law in England and Wales. The 2016 Regulations are enforceable and sanctions for breaches include fines and ultimately a cessation of operations. The Environmental Permit is assigned to the legal operator of the plant, and will need to be transferred to any future legal operational entity as appropriate. The Environmental Permit will be reviewed by the EA periodically, typically every 4-6 years, and will contain an overriding requirement to take account of new technology in accordance with the principle of the application of 'Best Available Techniques' (BAT) to prevent or minimise emissions.
1.3.3	1.3 How does the incinerator take into account future generations and the current trends of reducing, reusing and recycling and a move towards a circular economy. Would it not be more sustainable and better use of money to invest in technology to reduce waste rather than incinerate it. How does the scheme provide environmental, economic, and social benefits for future generations.	The Applicant recognises and supports the long-term drive in the UK and globally towards the full development of a circular economy. However, the technologies and systems to enable this in the medium term are not currently available. In the interim, and as technologies and systems to support circular resource use continue to develop, there is policy support for the incineration of the residual (currently unrecyclable) waste for the purpose of producing power (in this case electricity). Under National Policy Statement EN-1 the electricity generated is classed as renewable. Alternative approaches available currently for this residual waste in the UK are landfill disposal in the UK, export to landfill, and export overseas for electricity production. These less preferable options are avoided through the operation of the Facility. The Facility has an operational lifespan of at least 25 years and draws its feedstock from a commercial market in post-recyclate Refuse Derived Fuel (RDF). The Facility does not prevent ongoing optimisation of recycling of household and other waste, by local authorities or other operators, and the Facility will draw feedstock only from material available after local recycling at any point in time.

ID	Written Representation	Applicant's Comments
		The Applicant is a developer of projects intending to maximise resource use within current technological limitations through the production of electricity (waste to energy) (see Chapter 1 of the ES (document reference 6.2.1, APP-039) for information of the Applicant). The environmental and social benefits of the scheme are as set out in the ES and the Non-Technical Summary of that ES (document reference 6.1, APP-038). The economic benefits, locally and nationally, are linked with local employment, agreements between the Applicant and local authorities and service suppliers and others, and sizeable taxable revenue from this commercial operation.

Table 1-4 Marine Management Organisation (REP1-056)

ID	Written Representation	Applicant's Comments
Summary of the MMO's Written Representation – Deadline 1		
1.4.1	3.1 See below a summary of the MMO's Relevant Representation, dated 19 October 2021, not exceeding 1500 words. Please note that some of the issues below have now been resolved and the details of this will be contained in the SoCG.	Noted.
1.4.2	3.2 The MMO advised that further clarification is required on points raised in relation to a number of sections within the ES. These include: - • Marine Water and Sediment Quality [Examination Library Reference APP-053] • Estuarine Processes [Examination Library Reference APP-054] • Marine and Coastal Ecology [Examination Library Reference APP-055]	Please see the detailed responses set out in 1.4.8 to 1.4.42 (below).
1.4.3	3.3 The main potential marine impacts arising from the proposed scheme are; habitat loss/alteration, increased suspended sediment concentrations and increased noise and visual disturbance caused by piling and ship movements. The sensitive receptors include fish species, benthic communities, birds, marine mammals, saltmarsh, and mudflats.	
1.4.4	3.4 The MMO considers that there is a high likelihood for potential impacts on fish receptors to occur, and it is expected that further information should be presented on the timing and duration of the works, piling methods, and potential effects from light disturbance.	Further information on the piling methods and duration of works has been included in the Benthic Ecology, Fish, and Habitats Addendum (document reference 9.15, REP1-028).
1.4.5	3.5 The MMO considers that there may be an impact on fish species due to underwater noise. The MMO requires further consideration, by the Applicant, of noise displacement and acoustic barriers on fish species.	Further information on the potential for a barrier effect to fish species, as a result of underwater noise, has been included in the Benthic Ecology, Fish, and Habitats Addendum (document reference 9.15, REP1-028).
1.4.6	3.6 The MMO notes that the Applicant should consider taking additional surface samples before construction to ensure the surface sediment remains suitable for dredging in terms of water quality. In addition, samples for disposal operations should follow the MMO's guidance and have an MMO approved laboratory undertake the analysis.	The Applicant notes this and is liaising with the MMO regarding the wording of a condition on sediment sampling.

ID	Written Representation	Applicant's Comments
1.4.7	3.7 Following further internal review, the MMO has provided further recommended changes for all sections of the DML.	Noted. Responses to representations relating to the DML are provided in 1.4.43 to 1.4.53 below.
MMO Written Representation – Deadline 1		
1.4.8	The MMO did not receive notice under Section 56 of the PA 2008 that PINS had accepted an application made by Boston Alternative Energy Facility (BAEF) (the Applicant) for a DCO until later than the day of acceptance. As such, the RR submitted on 18 June 2021 only comprised the MMO's initial comments in respect of the DCO Application, following internal consultation and review of the submission. The MMO noted at the time, that further technical comments would be forthcoming at future deadlines following consultation with our scientific advisors as The Centre for Environment, Fisheries and Aquaculture Science (Cefas). The written representation submitted here is the outcome of this initial consultation.	Noted. The Applicant received the Cefas responses (via the MMO) on 23rd September 2021.
1.4.9	**Coastal Processes** 4.1 The main components of the Proposed Development that are most likely to impact the marine and coastal processes during both construction and operation are the proposed wharf, and the capital and maintenance dredging necessary for vessel access. Two elements of wharf construction could potentially influence estuarine processes: - • Excavation of the slope for the revetment; and Capital dredging in front of the quay wall to create the berthing areas.	The construction and operation of the wharf and associated dredged area are set out in ES Chapter 16 Estuarine Processes (document reference 6.2.16, APP-054).
1.4.10	4.2 The DCO Application states "There would be less wave reflection off the embankment, but more wave reflection off the rocks. These two effects would balance each other to effect little change to the overall wave climate". However, it is unclear how this statement is justified in the absence of any wave modelling. The MMO will require this to be clarified and explained.	This comment is related to the Habitat Mitigation Area section of the ES Chapter 16 Estuarine Processes (document reference 6.2.17, APP-054, Paragraphs 16.7.21 to 16.7.25). Here it was indicated that the gradient of the old embankment would be shallowed (or it would be removed) and the existing line of rocks in the upper intertidal part of the mitigation area near

ID	Written Representation	Applicant's Comments
		the wharf would be relocated to their landward side and raised. A numerical model has not been completed because the change in wave climate would be very small when these two local factors are combined, in that it would be essentially unchanged. Because the potential changes are very small scale and local, the balancing of less wave reflection for one element and more wave reflection for the other element was assessed conceptually. It is possible that the overall wave reflection may be slightly greater or slightly less than it is now, but the magnitude of this change would still be very small and not result in any significant effects.
1.4.11	4.3 The MMO is satisfied that the appropriate evidence base has been used in regard to coastal processes, and that sufficient information has been presented to inform decision making. The MMO notes, however, that the clarifications, as noted above, are still necessary.	Noted.
1.4.12	4.4 The main potential impacts arising from the Proposed Development are habitat loss/alteration, increased suspended sediment concentrations and increased noise and visual disturbance caused by piling and ship movements. The sensitive receptors include fish species, benthic communities, birds, marine mammals, saltmarsh, and mudflats. The MMO is satisfied with the proposed mitigation measures and note that the bathymetric surveys will be undertaken every six months to monitor any potential erosion of the intertidal habitats.	Noted.
1.4.13	4.5 The MMO would like to highlight that an accumulation of sediment of approximately 8,000m³/year is estimated around the berthing area, yet no mitigation plan has been discussed around this accumulation site.	At a meeting with MMO on 7 October 2021, this comment was deemed to be related to 'design' mitigation. In this regard, then the mitigation is maintenance dredging described in the worst case scenario of ES Chapter 16 Estuarine

ID	Written Representation	Applicant's Comments
		Processes (document reference 6.2.16, APP-054, Paragraphs 16.7.17 and 16.7.18).
1.4.14	4.6 In terms of modelled data, the MMO would also like to note that evidence derived from previous studies based on modelled data have not been statistically assessed.	The only modelling that has been used is the hydrodynamic modelling for Boston Tidal Barrier and the application of the results to the baseline for our project (ES Chapter 16 Estuarine Processes, document reference 6.2.16, APP-054, Paragraphs 16.6.23 and 16.6.24, and Figure 16.5). An assumption is made that this model was statistically assessed at the time it was run.
1.4.15	4.7 The estuarine processes effects that have been assessed for the Proposed Development alone are anticipated to result in no effect or negligible effect to The Wash European Marine Site and Havenside Local Nature Reserve receptors. However, there may be potential cumulative effects on some of the identified receptor groups arising from interaction of changes to estuarine processes with those changes generated by other plans, projects, and activities. It is likely that only the Boston Tidal Barrier project is estuary-based and close enough to the Proposed Development to act cumulatively. Cumulative effects may arise due to: • simultaneous capital dredging activities; • simultaneous operation; and • simultaneous maintenance dredging activities.	Noted.
1.4.16	4.8 These potential cumulative impacts are assessed based on high confidence data. Based on the Boston Tidal Barrier Environmental Impact Assessment (EIA) it is concluded that the cumulative impact from the plume of the two projects being dredged in this area at the same time would be negligible.	Noted.
1.4.17	**Fisheries** 4.9 The ES report has correctly identified the main fish receptors present in The Haven and The Wash, including sole (*Solea solea*), plaice (*Pleuronectes platessa*), and herring (*Clupea harengus*), as well as migratory fish species such as smelt (*Osmerus*	Noted.

ID	Written Representation	Applicant's Comments
	eperlanus), European eel (*Anguilla anguilla*), river lamprey (*Lampreta fluviatilis*) and sea trout (*Salmo trutta*). Particular attention has been given to smelt as this species has been consistently recorded in estuarine waters of Boston Docks and The Wash.	
1.4.18	4.10 The MMO has noted some discrepancies between Table 17-6 in the 'Marine and Coastal Ecology' section of the ES, and Table 4.5 within 'A17/2b - Volume 2b: Technical Report: Ecology and Nature Conservation' which has been referenced as the source for Table 17-6. For instance: • Table 17-6 shows that for river lamprey (juvenile) migration times are from July-September whereas in Table 4.5 river lamprey (juvenile) migration times are from September to October. • Similarly, for river lamprey (adults), Table 4.5 shows migrations times from September to October whereas Table 4.5 shows April to May. • Also, for sea trout, Table 17-6 shows migratory times from April to September for adults and March to April for juvenile, however, Table 4.5 states that sea trout adults migrate all year around whereas juvenile migration occurs from April to May.	These tables have been updated within the Addendum to Chapter 17 and Appendix 17.1 - Benthic Ecology, Fish and Habitats (document reference 9.15, REP1-028) submitted at Deadline 1.
1.4.19	4.11 The MMO requests that the Applicant review the migratory times and update the information provided in the ES accordingly. If known, it would be beneficial for the peak months of each species' migratory periods to be denoted on the table with '*'.	See response for 1.4.30 above.
1.4.20	4.12 Although not stated in the table legend, the MMO notes that Table 17-6 (from row 9 to 12) shows herring, sprat, cod (*Gadus morhua*) and whiting (*Merlangius merlangus*) with specific seasons highlighted in green. It is the MMO's understanding that, as The Wash has been reported as a nursery area for herring, sole, plaice, whiting and cod, their presence in table 17-6 suggests these species' nursery times in The Wash. The MMO requires clarification on this with a revision of the table legend to include the updated information.	See response for 1.4.30 above.
1.4.21	4.13 In terms of potential impacts on fish receptors, the MMO is satisfied that the description of the potential impacts to fish ecology arising from the construction and operation of the proposed scheme is appropriate.	Noted.

ID	Written Representation	Applicant's Comments
1.4.22	4.14 The MMO notes that the Proposed Development would operate 24 hours a day requiring lighting during hours of darkness. However, from the documents reviewed, it is not clear whether artificial lighting over the water column would be required for dredging or piling works. If this is the case, there is potential for artificial lighting to result in further disturbance to fish. Therefore, the MMO would expect potential effects from light disturbance on fish receptors to be scoped in for further assessment.	The Applicant addresses the question of artificial lighting effects in the HRA (document reference 6.4.18, APP-111). Lighting will be directionally targeted and minimised to only what is necessary to provide light for the operation of the facility and it is not anticipated that lighting would have an effect on fish.
1.4.23	4.15 The MMO also notes that mussel and cockle beds have been identified as economic resources for the local inshore fishermen in The Wash by Eastern Inshore Fisheries Conservation Authority (IFCA). However, an assessment of potential impacts arising from the construction and operation of the Proposed Development on commercial fisheries in the area has not been presented for review. Nonetheless, the MMO notes that the Applicant has already engaged with a representative of the fishers of Boston to address their concerns.	The Applicant considered the potential for impacts on the shellfish resources in The Wash and there is no predicted source of impact on these resources as a result of the proposed Facility.
1.4.24	4.16 The MMO considers that there is a high likelihood of potential impacts on fish receptors to occur as a result of increased suspended sediment concentrations, poor water quality from dredging works, and underwater noise from piling causing an acoustic 'barrier' to fish movement, impeding travel/migration. Whilst we appreciate the ES' acknowledgement of these impacts and the proposal for mitigation measures to protect fish species at this stage, the following points should be addressed and presented for review: - • Timing and duration of the proposed works: specific months, number of piles to be installed per day below the water line. • Piling methods: vibro vs percussive, piles diameter, hammer energy and timing to drive each pile to the design depth. • Clarification is needed on whether the project intends to undertake simultaneous piling i.e., impact or vibratory piling of more than one pile at any one time.	This additional information has been provided, where known at this stage, within Addendum to Chapter 17 and Appendix 17.1 - Benthic Ecology, Fish and Habitats (document reference 9.15, REP1-028).
1.4.25	4.17 No dredging works are anticipated to be undertaken at night-time which will minimise the exposure of some migratory species such as eels and trout smolts which migrate at night. The MMO is in agreement with the ES that avoiding dredging at night	This additional information has been provided, where known at this stage, within the Addendum to Chapter 17 and Appendix 17.1 -

ID	Written Representation	Applicant's Comments
	will allow eels and lamprey to migrate upstream and downstream during hours of darkness when they are typically active. The MMO notes however that although we agree that this mitigation in terms of spawning and migratory activity is also appropriate to reduce (not avoid) the impacts of noise and vibration on those species of concern, the information provided on migratory times within Chapter 17 of the ES is contradictory and should be reviewed. Furthermore, in order to define a temporal restriction during key migration periods, the MMO recommends that the exact timing of the construction works (i.e., months when dredging and piling works are likely to be undertaken) is presented by the Applicant to help identify potential overlaps with peak migratory seasons for sensitive fish species and to evaluate the effectiveness of the mitigation measures already proposed.	Benthic Ecology, Fish and Habitats (document reference 9.15, REP1-028).
1.4.26	4.18 The MMO appreciates the mitigation measures proposed for piling works and recognises that piling works will be undertaken above the water (i.e., in the dry) whenever possible. However, due to the likelihood of piling works being undertaken below the water line and given the narrow nature of The Haven at this location, and the results of the underwater noise (UWN) assessment, the MMO has concerns regarding the potential for an acoustic 'barrier' to occur during migratory seasons for the key sensitive fish species. Effects will still be localized, as this will be within the river, but an acoustic barrier across the river is expected from piling works below the water line (which could potentially disrupt migration). Therefore, the MMO requests that the Applicant provides further information on when dredging and piling works are likely to be undertaken to help identify the specific potential overlap with peak migratory seasons of fish.	This additional information has been provided, where known at this stage, within the Addendum to Chapter 17 and Appendix 17.1 - Benthic Ecology, Fish and Habitats (document reference 9.15, REP1-028).
1.4.27	**Shellfish Fisheries** 4.19 The MMO acknowledges that a description of the environment based on mudflat habitat surveys, data from sediment samples and fishing surveys has been provided, however, it noted that a full list of species present as found in these surveys has not been provided by the Applicant.	Where there are references to documents that have been reviewed to provide information to inform the assessments, full references have been provided to these documents. A list of benthic invertebrates recorded during the 2017 Benthic Invertebrate Survey by the EA was provided in (Table 17-4) of the ES Chapter

ID	Written Representation	Applicant's Comments
		17 Marine and Coastal Ecology (document reference 6.2.17, APP-055).
1.4.28	4.20 The MMO would expect to see a list of any commercial species or species of conservation importance present. If no shellfish species meeting this description are present, this should be noted. The MMO requests that the Applicant present information on the shellfish species recorded in the site-specific fishing survey so that these species can be considered when assessing impacts, where appropriate. The Applicant should also include the caveat of using fishing surveys to identify shellfish species present. The MMO considers that the evidence, when fully presented, is expected to be sufficient.	There were no shellfish species considered to be of conservation importance present within the surveys of the area to be affected that would be significantly affected by the proposed works. European green crab and juvenile mussels were recorded in the above reference in 1.4.27 above. The crabs are mobile and as such not expected to be affected. For the mussels, as no adults were present it is expected that the juvenile spat settled out but do not survive in this location. There is no identified requirement to undertake fishing surveys.
1.4.29	**Underwater Noise** 4.21 The MMO notes that one of the potential impacts identified on p.89 of Chapter 17 of the ES, is 'Impact 4 – Underwater noise (piling and dredging). Fish behaviour and migration'. The assessment that follows is primarily focused on the effects of recoverable injury, mortality, and potential mortal injury. Consideration has not been given to the fact that noise may displace species and may create an acoustic barrier preventing fish passage or migration, especially in a relatively narrow river. The ES states that the section of The Haven near the Application Site is approximately 40 m wide at low tide and approximately 100 m wide at high tide. The MMO requires consideration of noise displacement and acoustic barriers on fish species.	This impact has been updated in the Addendum to Chapter 17 and Appendix 17.1 - Benthic Ecology, Fish and Habitats (document reference 9.15, REP1-028).
1.4.30	4.22 *Paragraph 17.8.103, states "With regard to underwater noise impacts from dredging activities, only backhoe dredging has the potential to impact on fish species (Table 17-15), with mortality and potential mortal injury, and recoverable injury, predicted to occur less than 10 m from the dredging activities".* The MMO considers this conclusion to be too specific and may not be applicable to this Proposed Development. It is	This impact has been updated in the Addendum to Chapter 17 and Appendix 17.1 - Benthic Ecology, Fish and Habitats (document reference 9.15, REP1-028).

ID	Written Representation	Applicant's Comments
	important to note that noise modelling is case/site specific and depends on many variables.	
1.4.31	4.23 The MMO notes that a desk-based assessment of other similar projects was undertaken, to estimate the potential impact ranges for fish species and harbour seals. The impact ranges from these similar projects have been used to inform the assessment for the Proposed Development. The MMO considers that using other project specific assessments (assuming that the assessments and modelling have been undertaken appropriately and in accordance with best practice), can only provide a rough estimation of the magnitude (i.e., tens of meters or hundreds of meters) of potential effects. It is important to note that noise modelling depends on many variables and is case/site specific. Therefore, it is not appropriate to draw precise conclusions in this instance (i.e., "with regard to the underwater noise impacts from piling, the most sensitive fish species group (swim bladder is involved in hearing) would be at risk of serious injury or fatality if they were closer than 50 m to the source of the piling noise" (para 17.8.101)), particularly when it is not clear how applicable these other assessments are to the Application Site. Even if we take the worst-case effect ranges for fish species (for a stationary receptor) that are presented in Table 17-15, which is 100 m for recoverable injury, this is the entire width of The River Haven at high tide.	Further information has been added on the applicability of using other noise modelling reports to inform the assessment of impacts at the Facility within the Addendum to Chapter 17 and Appendix 17.1 - Benthic Ecology, Fish and Habitats (document reference 9.15, REP1-028). Site specific noise modelling is not considered necessary to establish potential impacts of the Facility as a result of underwater noise.
1.4.32	4.24 It is difficult to comment on the adequacy of the desk-based assessment and potential effect ranges without seeing a detailed account of the modelling and assumptions. Based on Table 17-15, the cumulative exposure modelling for piling is based on a piling period of only 1 hour.	
1.4.33	4.25 A desk-based assessment of other similar projects was undertaken, in order to estimate the potential impact ranges for fish species and harbour seals. The impact ranges from these similar projects have been used to inform the assessment for The Proposed Development. For example, see Table 17-15 in Chapter 17. Please note that using other project specific assessments (assuming that the assessments and modelling have been undertaken appropriately and in accordance with best practice), can only provide a rough estimation of the magnitude (i.e., tens of meters or hundreds of meters) of potential effects. It is important to note that noise modelling depends on many	

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	variables and is case/site specific. Therefore, it is not appropriate to draw precise conclusions in this instance (i.e., "with regard to the underwater noise impacts from piling, the most sensitive fish species group (swim bladder is involved in hearing) would be at risk of serious injury or fatality if they were closer than 50 m to the source of the piling noise" (para 17.8.101)), particularly when it is not clear how applicable these other assessments are to the Application Site. Nevertheless, even if we take the worst-case effect ranges for fish species (for a stationary receptor) that are presented in Table 17-15, which is 100 m for recoverable injury, this is the entire width of The River Haven at high tide.	
1.4.34	4.26 The MMO requests submission of further details of the proposed piling and dredging works, such as the anticipated duration of the activity per day, the anticipated months of the year when these activities will be taking place. Further information detailing whether any vibro-piling will be undertaken, or whether the piling works will just consist of impact/percussive piling should also be submitted.	This impact has been updated in the Addendum to Chapter 17 and Appendix 17.1 - Benthic Ecology, Fish and Habitats (document reference 9.15, REP1-028).
1.4.35	**Benthic Ecology** 4.27 The MMO considers that the description of the baseline situation regarding benthic ecology (invertebrates) appears suitable given the habitats in the region and the nature of the physical impacts during construction and operation. The MMO notes that the baseline description of marine ecology has been based on a desk-based assessment, augmented by benthic sampling undertaken at specific stations within a sufficiently contemporary timeframe.	Noted.
1.4.36	4.28 The MMO concurs with the proposed impacts resulting from the project during construction and operation and agree with the assessment of their overall significance on marine ecology receptors.	Noted.
1.4.37	**Dredge and Disposal** 4.29 The MMO has assumed that the requirement for no disposal site is also true for the maintenance dredged material as this is not specifically mentioned in the options for disposal. If this is incorrect, the MMO requires to be notified as soon as possible for review alongside our scientific advisors.	This is correct. The maintenance dredged material will be used in the Lightweight Aggregate Plant with no disposal to sea.

ID	Written Representation	Applicant's Comments
1.4.38	4.30 The MMO notes that within paragraph 15.6.8 of the Marine Water and Sediment Quality section of the ES, the contaminant data are based on samples and analyses undertaken in 2017. There were sixteen surface samples taken and twelve vibrocore samples taken from depths of 0.5 m, 1 m, and then maximum dredged depth. Whilst these data are still considered timely based on the results, the MMO notes that the Applicant may wish to consider taking additional surface samples before construction to ensure the surface sediment remains suitable for dredging in terms of water quality.	Please see response to 1.1.17 (above) regarding the inclusion of a condition in the Deemed Marine Licence relating to the sampling of dredged material.
1.4.39	4.31 The MMO notes that only a selection of polyaromatic hydrocarbons (PAH analytes) are presented in the ES and notes that the ES has compared the results to the Canadian Sediment Quality Guidelines where most concentrations result in an exceedance of the Threshold Effects Level, and there was one "exceedance" of the Probably Effect Level. As the dredged material is being disposed of the land, the MMO is content that these results are sufficient to characterize the material and do not preclude the material from being dredged, however the MMO defers comment to the EA regarding the adequacy of the methods and results in relation to water quality.	Noted. See the response to EA rep 1.1.15 (above) which sets out that further information will be submitted to the Examination at deadline 3 relating to methods, volumes and sampling of dredged material to minimise the potential for contamination to affect water quality and marine ecological receptors.
1.4.40	4.32 Samples for disposal operations should follow the MMO's guidance and have an MMO approved laboratory undertake the analysis. The MMO cannot find reference of the laboratory that carried out the analyses within the ES.	No disposal to sea will take place for any of the dredged material associated with the Facility.
1.4.41	4.33 Given that all dredged material is to be disposed to land, and not to sea, the MMO considers that the project is unlikely to result in significant adverse impacts on the marine environment.	Noted.
1.4.42	4.34 The MMO requires further information regarding the capital and maintenance dredge and disposal methods, alongside expected quantities, to be entered into the examination. The MMO notes that the Applicant no longer intends to use the Port of Boston's dredge powers for this task. The MMO defers making further comment on this issue until this information has been confirmed within the examination.	It is anticipated that the annual volume of material from maintenance dredging of the berthing pocket would be approximately 8,000 m^3/ year. This is based on a predicted 0.5 m accretion per year. Bathymetric surveys will be undertaken during the operation of the wharf to determine actual levels of accretion and the details of the maintenance dredging will need to be approved by the MMO under

ID	Written Representation	Applicant's Comments
		condition 12 of the draft DML (Schedule 9, of the Draft DCO (document reference 2.1(1), REP1-003). The Applicant has not amended the draft DML to include a maximum volume of maintenance dredging or specify frequency as the inclusion of these details is not consistent with the approach to maintenance dredging on other DMLs. The volumes for the initial capital dredge are set out in condition 5(b) of the draft DML (Schedule 9, of the Draft DCO (document reference 2.1(1), REP1-003). The capital dredge will be carried out mostly by land-based equipment, with some floating plant for excavation of the berthing pocket towards the edge of the channel (paragraphs 5.6.19 and 5.5.20 of Chapter 5 (Project Description) of the Environment Statement (document reference 6.2.5, APP-043). Maintenance dredging of the berthing pocket will be carried out by crane from land as set out in paragraph 5.6.88 of Chapter 5 (Project Description) of the Environment Statement (document reference 6.2.5, APP-043). Further details of the dredging methodology will be submitted to the MMO for approval under condition 12 (previously 13) of the draft DML (schedule 9 of the document reference 2.1(1), REP1-003). This condition has been amended to explicitly add that the details of the licensed activities to be approved by the

ID	Written Representation	Applicant's Comments
		MMO will include "details of the detailed dredging methodology to be employed by the undertaker".
Development Consent Order /Deemed Marine Licence matters [Examination Library Reference APP-005]		
1.4.43	4.35 The MMO considers that a number of provisions under Part 3, 4, 5 & 6 of the DML, require more detail and further justification. After further internal review of the DML, the MMO request the following changes as detailed below.	Noted.
1.4.44	4.36 Within Part 1 INTRODUCTION, the MMO requests the following changes: • 1(1) "harbour authority" – the definition should be amended to "Port of Boston Limited" • 1(1) "Licence Holder" – A company number should be included here. • 1(1) "The Haven" – This definition should be developed further, to match that included within the DCO. This is required to ensure clarity and certainty. • 1(1) A definition for "office hours" should be added to support Section 2(2). *""office hours" means the period from 09:00 until 17:00 on any business day;"*. The MMO acknowledges that business day is already defined. • 1(1) "environmental information" means the Environmental Statement and any further information as defined in the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 relating to the application for development consent in respect of the marine works; • 1(1) "Environmental Statement" means the document certified as such by the Secretary of State under article 80; • 2(1)(a) - The removal of the fax details. This is not currently relevant within MMO offices, and it not the means of preferred contact. • 2(2) – As noted above for the definition of office hours • 2(3) – Notices required by the DML should be submitted through the Marine Case Management System (MCMS). Once a DCO is granted and the DML powers handed to the MMO, a returns case will be created on MCMS allowing for the submission of all relevant post consent documents. Submission to MCMS may be followed up by an email notification from the Applicant, but primary	The Applicant will make the suggested changes to the version of the draft DCO to be submitted at Deadline 3.

ID	Written Representation	Applicant's Comments
	submission should be made through MCMS. This allows relevant discharge, audit, publication, and consultation actions to be taken.	
1.4.45	4.37 Within Part 2 LICENSED ACTIVITIES, the MMO has the following comments: - • 3. The MMO suggest the wording should be amended to the following:- Subject to the licence conditions in Part 4 of this licence, this licence authorises the licence holder (and any agent, contractor or subcontractor acting on its behalf) to carry out any licensable marine activities under section 66(1) (licensable marine activities) of the 2009 Act which— (a) form part of, or are related to, the authorised development; and (b) are not exempt from requiring a marine licence by virtue of any provision made under section 74 (exemption specified by order) of the 2009 Act; and (c) do not give rise to any new or different environmental effects to those assessed in the environmental information.	The Applicant notes that no other deemed marine licences reviewed contained the suggested wording added at (c). To address the MMO's apparent concern here, the Applicant instead proposes to add the following wording to paragraph (1) "for the purposes of, or in connection with, the construction, operation or maintenance of any of the works and other development mentioned above, ancillary or related development which does not give rise to any materially new or materially different effects than those assessed in the environmental statement, consisting of— ". This makes clear the works must be covered by the ES and is consistent with the approach taken in the deemed marine licences in both the Lake Lothing (Lowestoft) Third Crossing Order 2020 and the Great Yarmouth Third River Crossing Development Consent Order 2020.
	4. The MMO suggest that current Section 4 is simply not needed and should be removed from the DML.	The Applicant will make the suggested change to the version of the draft DCO to be submitted at Deadline 3.
	5. The MMO requires the works detailed in this section to be cross referenced with Works Numbers. The MMO requests further detail is added to provisions (a) – (i) in terms of works to be undertaken under the DML.	The Applicant will include cross-reference to the Works Numbers in the version of the draft DCO to be submitted at Deadline 3.
	5(1)(a) – A.O.D should be defined within the DML. AOD (without stops) is defined within the DCO. The MMO requests the definition is also added here, and the difference between the abbreviations rectified.	The Applicant will make the suggested changes to the version of the draft DCO to be submitted at Deadline 3.

ID	Written Representation	Applicant's Comments
	5(1)(l) - "may be necessary or convenient" – the MMO highlights that this phrase may not be appropriate. If the intended works are not covered by the ES or the current application, a further marine licence application, and EIA screening may be required. The MMO requests clarification on what is meant by "necessary or convenient works".	This wording is used in both the Lake Lothing (Lowestoft) Third Crossing Order 2020 and the Great Yarmouth Third River Crossing Development Consent Order 2020. The Applicant considers the additional wording to be included as a new sub-paragraph in paragraph (1) as set out above will address this concern as it makes clear the works will be covered by the assessment in the ES.
	5(1)(l)(i) – The MMO highlights that once specific information regarding the maintenance dredging is received, the DML may require an additional specific condition related to this activity. The MMO will provide further comment on this upon receipt of additional clarity from the applicant.	Noted.
1.4.46	4.38 The MMO considers that Part 3 – ENFORCEMENT- to be unnecessary. The issuing of a DML under MCAA ensures that the enforcement for the licence is within MCAA. The provision submitted here is superfluous to requirements.	The Applicant is content to delete this Part. It will be reflected in the version of the draft DCO to be submitted at Deadline 3.
1.4.47	4.39 Within Part 4 CONDITIONS, the MMO has the following comments: - • 8. – "Licensed marine activities" – "marine" is not required here. The condition goes on to define that it is in reference to works "in or over the sea or under the seabed". • 8. - "works" should be defined as those within the order of DML. • 8.- "the conditions below apply to any person who for the time being owns, occupies or enjoys any use of those works". – The MMO requests change to the wording of this condition. The MMO is currently unclear as to the intention of this condition and queries the use of the term "enjoy" for those who these conditions apply to.	The Applicant will delete this condition from the version of the draft DCO to be submitted at Deadline 3.
	9. – Details of the change to the licensed activities should also be submitted to the MMO. Notification should be provided in writing and should contain full details of the change to	Changes are addressed by Part 6 of the DML, therefore the Applicant will delete this condition

ID	Written Representation	Applicant's Comments
	licensed activities. The MMO notes that if changes are substantial then a DML variation, or additional marine licence, and EIA screening, may need to be submitted for the licensable activities. The MMO highlights that other organisations may require notification, such as the UK Hydrographic Office, and Trinity House. The MMO will provide further comment on this following the submission of updated representations.	from the version of the draft DCO to be submitted at Deadline 3.
	12(1) This condition does not state when the licence and revisions should be supplied. The MMO requests further information. 12(1) "Masters" should be amended to "masters". 12(2) The MMO requests the addition of "and subsequent revisions" be added, for consistency with condition 12(1).	The Applicant will make amendments to the version of the draft DCO to be submitted at Deadline 3 to address these matters.
	13(2)(a) and (d) – The MMO requires additional details of the person responsible for undertaking the licensed activity, including contractor and vessel details. This must include name, contact information, name of the company or organisation, and position within that company or organisation. This information must be provided to the MMO, in writing, no less than 24 hours before the agent, contractor or sub-contractor carries out any licensed activity.	The Applicant will make amendments to the version of the draft DCO to be submitted at Deadline 3 to address these matters.
	13(2)(f) – Environmental Statement is not a defined term within the DML. This should be defined and the definition should be used consistently throughout the DML.	The Applicant will add a definition for environmental statement in the DML in the version of the draft DCO to be submitted at Deadline 3.
	13(2)(g) – "details" is not a sufficient term for information to be submitted. For items to be placed in, or removed from, the marine environment, we will require volume, size, methods of placement and removal, types of materials, disposal information, and source of materials.	The Applicant will make amendments to the version of the draft DCO to be submitted at Deadline 3 to address these matters.

ID	Written Representation	Applicant's Comments
	• 14(1) – The Applicant should submit the piling method statement to the MMO in writing. In addition, MMO approval will be required in writing prior to any activities commencing.	The Applicant will make the suggested changes to the version of the draft DCO to be submitted at Deadline 3.
	14(1)(c) – The MMO highlights that there may be some text missing from the start of this condition.	This condition was amended in updated draft DCO (document reference 2.1(1), REP1-003) submitted at Deadline 1.
	14(3) – The addition of "as approved in writing by the MMO" is required at the end of this condition.	The Applicant will make the suggested change to the version of the draft DCO to be submitted at Deadline 3.
	• 15(2) – "contained" – the MMO requests further detail be added to this condition. The containment must be appropriate to the material and have the appropriate 110% bunding.	The Applicant will make amendments to the version of the draft DCO to be submitted at Deadline 3 to address these matters.
	17(b) – There is currently no definition for the MCA within the DML. The MMO highlights that the following definition could be included within Part 1 – "means the executive agency of the Department for Transport".	The Applicant will make the suggested change to the version of the draft DCO to be submitted at Deadline 3.
	• 17(c) – The provision should end "to contain any spillage".	The Applicant will make the suggested change to the version of the draft DCO to be submitted at Deadline 3.
	19. – Dropped objects should also be notified to the MMO licensing team. Dependant on the size and nature of the dropped object, the MMO may require surveys be undertaken, and potential removal of the object.	The Applicant will make amendments to the version of the draft DCO to be submitted at Deadline 3 to address these matters.
	22(2) – The MMO do not agree to the 30-day deadline stated here. As a regulatory body the MMO reserve the right to request further information on an application at any point during the application.	With regard to the 30 day timeframe to request further information, this wording is identical to that included in paragraph 17 of the DML at

ID	Written Representation	Applicant's Comments
		Schedule 13 of the Great Yarmouth Third River Crossing DCO 2020. This wording is considered appropriate to ensure that further information is requested in a timely manner and the condition allows information to be requested after 30 days with agreement by the Applicant.
1.4.48	4.40 The MMO notes that impact piling activities will require submission of information to the Marine Noise Registry. This will need to be secured through a condition. Suggested wording is provided below: • *Reporting of impact pile driving* *Only when driven or part-driven pile foundations or detonation of explosives are proposed to be used as part of the foundation installation the undertaker must provide the following information to the Marine Noise Registry (MNR)—* *(a) prior to the commencement of the licenced activities, information on the expected location, start and end dates of impact pile driving/detonation of explosives to satisfy the Marine Noise Registry's Forward Look requirements.* *(b) within 12 weeks of completion of impact pile driving/detonation of explosives, information on the locations and dates of impact pile driving/detonation of explosives to satisfy the Marine Noise Registry's Close Out requirements.* • *The undertaker must notify the MMO of the successful submission of Forward Look or Close Out data pursuant to paragraph (1) above within 7 days of the submission.* *For the purpose of this condition—* *(a) "Marine Noise Registry" means the database developed and maintained by JNCC on behalf of Defra to record the spatial and temporal distribution of impulsive noise generating activities in UK seas; "Forward Look" and "Close Out" requirements are as set out in the UK Marine Noise Registry Information Document Version 1 (July **2015**) or any updated information document.*	The Applicant will add the suggested condition to the version of the draft DCO to be submitted at Deadline 3.
1.4.49	4.41 The MMO highlights in Part 5 PROCEDURE FOR THE DISCHARGE OF CONDITIONS, that the term "application" should be "returns". When a submission is requested through a condition on a licence, these are submitted through MCMS as	The Applicant will make the suggested changes to the version of the draft DCO to be submitted at Deadline 3.

ID	Written Representation	Applicant's Comments
	returns, not applications. 21(a) and (b) will require updating once all conditions are secured, to ensure all returns are covered.	
1.4.50	4.42 Within Part 5, the MMO has the following further comments: - • 22(1) - insert after "such further information" "to be provided in writing". • 23. the MMO notes that this provision is a restatement of the requirements under the MCAA and may not be required here. • 24. The MMO does not consider this provision to be acceptable as per the reasons set out in points 2.3 and 2.4 of this response, the MMO will not commit to issuing a decision within 13 weeks. • 23(2)(b) – replacement of "and" with "or".	With regards to the request to remove the timeframe in paragraph 24, the Applicant addressed this in its comments on the MMO's relevant representation (document reference 9.2, REP1-035). It is considered necessary to include expected timeframes to ensure that decisions are made in a timely manner and the wording of paragraph (25)(3) provides that "The MMO will grant the variation to this licence within 13 weeks from the day immediately following that on which the variation was requested, or **as soon as reasonably practicable**." This provides a level of flexibility as to timeframes. Additionally sub-paragraph (3) provides that "Where the MMO determines it is not reasonably practicable to make a determination in accordance with sub-paragraphs (1) and (2) in 13 weeks, it must notify the undertaker as soon as reasonably practicable and provide confirmation in writing of the intended determination date." This clearly allows the MMO to exceed the 13 week timeframe where it is not reasonably practicable to make a determination in that timeframe. In relation to the other requested amendments, the Applicant will make these changes to the version of the draft DCO to be submitted at Deadline 3.

ID	Written Representation	Applicant's Comments
1.4.51	4.43 The MMO notes in Part 6 CHANGES TO THE LICENCE 25(3) the Applicant has stated "the MMO will grant the variation". This is not appropriate wording for this provision. The MMO does not predetermine applications and cannot guarantee that it will grant a variation. The MMO will provide a determination on a variation request, once the appropriate process has been followed. As noted in point 2.3 of this response, the MMO will not commit to issuing a decision within 13 weeks.	With regards to the requested wording amendment, the Applicant will amend the condition in the version of the draft DCO to be submitted at Deadline 3 as follows "The MMO must give notice of the determination of the variation to this licence". With regards to timeframes please refer to the response for 1.4.50 above.
1.4.52	4.44 As noted in point 2.6 of this response, the MMO is yet to provide wording for a CEMP condition to be included within the DML. The MMO notes that this will likely include the provision for the submission of a Marine Pollution Contingency Plan.	Noted. The Applicant notes that a condition requiring a Marine Pollution Contingency Plan was included in the updated draft DCO (document reference 2.1(1), REP1-003) submitted at Deadline 1.
1.4.53	4.45 In addition to the above and in connection with 5.2 of this response, the MMO recommends that the following conditions may be required in Part 4: *Vessels* • *The MMO must be notified in writing of any vessel being used to carry on any licensed activity on behalf of the licence holder. Such notification must be received by the MMO no less than 24 hours before the commencement of the licensed activity. Notification must include the master's name, vessel type, vessel IMO number and vessel owner or operating company. The licence holder must ensure that a copy of this licence and any subsequent revisions or amendments are provided to, read and understood by the masters of any vessel being used to carry on any licensed activity, and that a copy of this licence must be held on board any such vessel.* *Agents / contractors / sub-contractors* • *The licence holder must provide the name, address and function in writing of any agents, contractors or sub-contractors that will carry on any licensed activity*	The Applicant will add the suggested conditions to the version of the draft DCO to be submitted at Deadline 3.

ID	Written Representation	Applicant's Comments
	on behalf of the licence holder. Such notification must be received by the MMO in writing no less than 24 hours before the commencement of the licensed activity. The licence holder must ensure that a copy of this licence and any subsequent revisions or amendments are provided to, read and understood by any agents, contractors or sub-contractors that will carry on any licensed activity.	

Table 1-5 United Kingdom Without Incineration Network (UKWIN) (REP1-068)

ID	Written Representation	Applicant's Comments
1.5.1	**Introduction** 1 The United Kingdom Without Incineration Network (UKWIN) was founded in March 2007 to promote sustainable waste management.	At the present time, the exact status of UKWIN's Good Practice Guidance document, dated July 2021, is unclear. In particular, whether it has been peer-reviewed and/or adopted by organisations such as the EA, Defra, WRAP, Environmental Services Association, Chartered Institution of Waste Management, and accepted as an appropriate methodology for evaluating the performance of energy from waste plants, is uncertain. The current Government guidance document is, "Energy from waste. A guide to the debate", published by Defra in 2014.
1.5.2	2 UKWIN is objecting to the development on the following grounds: a) lack of need for the proposed incineration capacity; b) the threat to recycling posed by this scheme; and c) the adverse climate change impacts associated with the direct emission of fossil CO2.	
1.5.3	3 This submission is accompanied by the Good Practice Guidance for Assessing the GHG Impacts of Waste Incineration (UKWIN, July 2021) which is referred to below.	
Lack of Need for the Proposed Incineration Capacity and the Threat to Recycling pose by this scheme		
1.5.4	4 Government policies, such as the December 2018 Resources and Waste Strategy, emphasise the importance of moving towards a more circular economy, and of tackling plastics and food waste, meaning that these materials will increasingly no longer be available for incineration.	The Applicant recognises the importance of maximising the recycling and recovery of materials from waste streams to meet government recycling targets and keeping the materials within the circular economy, as set out in Defra's Resources and Waste Strategy published in 2018. The proposed Facility will only target sourcing feedstocks from residual wastes that have already had the recyclables removed and are destined for landfill disposal or export overseas, as detailed in Fuel Availability and Waste Hierarchy Assessment (document reference 5.8, APP-037) and the Addendum to Fuel Availability and Waste Hierarchy Assessment (document reference 9.5, REP1-018). The Applicant will not be competing for feedstocks such as food waste as the Facility will be fuelled by RDF.
1.5.5	5 This reduction in residual waste arising is expected to free up capacity at existing incinerators, and this undermine the	The Applicant recognises that increased recycling will lead to reduced residual waste, however the proposed Facility will target diverting RDF

ID	Written Representation	Applicant's Comments
	justification put forward by the applicant for this proposed new capacity.	currently being exported overseas and will divert suitable materials from landfill disposal driving these materials up the waste hierarchy. Further details and modelling is provided in the Addendum to Fuel Availability and Waste Hierarchy Assessment (document reference 9.5, REP1-018).
1.5.6	6 The circa 1.2 million tonnes of incineration capacity proposed for Boston threatens the achievement of Government recycling targets by competing for feedstock with recycling, composting and anaerobic digestion.	See response 1.5.5 above. The proposed Facility will be sourcing RDF after recyclables have been removed and will not be competing for feedstock for materials suitable for composting and anaerobic digestion.
1.5.7	7 The proposed incineration capacity would be a barrier to the circular economy, destroying valuable materials and nutrients, thus removing them from contributing to the economy.	See responses 1.5.5 and 1.5.6 above.
1.5.8	8 As the Government's Resources and Waste Strategy2 puts it: *"Our goal is to move to a more circular economy which keeps resources in use for longer – for that to happen, we must all reduce, reuse and recycle more than we do now... We want to minimise the amount of residual waste that we create because it is a loss to the circular economy and so will have to be replaced by using virgin materials with associated carbon emissions. Residual waste is also an indicator of avoidable waste in that residual waste will include material that could have been recycled".*	See responses ID 1.5.5 and 1.5.6 above. The Applicant recognises the importance of moving towards a circular economy and is providing a solution for residual waste driving the material up the waste hierarchy in line with Defra's Resources and Waste Strategy and diverting waste from landfill disposal.
1.5.9	9 Incineration is considered to be a 'leakage' from the circular economy because it results in the loss of materials and nutrients from their original cycles. Furthermore, money invested in incineration cannot then be invested in better collection, sorting and treatment infrastructure, and the presence of expensive infrastructure results in 'lock-in' into incineration that reduces the financial incentives to reduce, re-use and recycle.	

ID	Written Representation	Applicant's Comments
1.5.10	10 As explained by the Climate Change Committee, moving towards a circular economy requires a move away from incineration: *"Achieving significant emission reductions in the waste sector requires a step-change towards a circular economy, moving away from landfill and incineration (and the associated methane and fossil CO_2 emissions), and towards a reduction in waste arisings and collection of separated valuable resources for re-use and recycling. This applies at local, regional and national levels..."* [3] (emphasis added)	
Defra concerns regarding the recyclability of residual waste		
1.5.11	11 Defra's August 2020 Resources and Waste Strategy Monitoring Report revealed that most of what is currently burnt in incinerators is recyclable, stating: "*Of total residual waste from household sources in England in 2017, an estimated 53% could be categorised as readily recyclable, 27% as potentially recyclable, 12% as potentially substitutable and 8% as difficult to either recycle or substitute*". [4]	The Applicant recognises that a portion of the residual waste from household sources in England is potentially recyclable as highlighted in the 2020 Defra Monitoring Report. The proposed Facility will be targeting household and commercial and industrial wastes that are currently landfilled driving these up the waste hierarchy in line with Defra's 2018 Resources and Waste Strategy and diverting RDF from being exported overseas.
1.5.12	12 The report from Defra observed that: *"The message from this assessment is that a substantial quantity of material appears to be going into the residual waste stream, where it could have at least been recycled or dealt with higher up the waste hierarchy".*	
Secretary of State concerns regarding incineration diverting waste from recycling		
1.5.13	13 In February 2021 the Business Secretary Kwasi Kwarteng refused planning permission for the proposed Wheelabrator Kemsley North (WKN) incinerator.5	Noted.
1.5.14	14 Establishing one reason why it is necessary to consider whether or not need has been demonstrated for an incinerator	The Applicant recognises the importance of maximising the recycling and recovery of materials from waste streams to meet government recycling

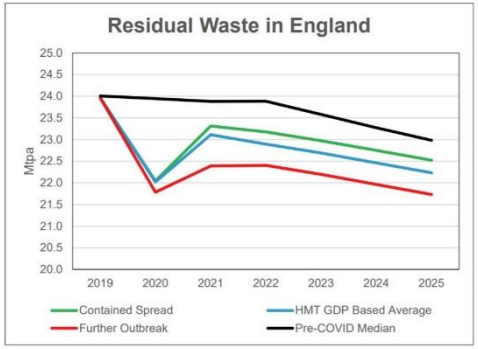
ID	Written Representation	Applicant's Comments
	proposed as part of the national infrastructure regime, Paragraph 4.13 of the decision states: *"4.1.3 The National Policy Statements set out that energy from waste is a type of infrastructure that is needed. However, the National Policy Statement for Renewable Energy Infrastructure, NPS EN-3 states that an applicant for development consent must assess "the conformity with the waste hierarchy and the effect on relevant waste plans. ". NPS* *EN-3, notes that the decision-maker should be satisfied, with reference to the relevant waste strategies and plans, that the proposed waste combustion generating station is in accordance with the waste hierarchy and of an appropriate type and scale so as not to prejudice the achievement of local or national waste management targets."*	targets and keeping the materials within the circular economy, as set out in Defra's Resources and Waste Strategy published in 2018. The proposed Facility will only target sourcing feedstocks from residual wastes that have already had the recyclables removed and are destined for landfill disposal or export overseas, as detailed in Fuel Availability and Waste Hierarchy Assessment (document reference 5.8, APP-037) and the Addendum to Fuel Availability and Waste Hierarchy Assessment (document reference 9.5, REP1-018). The Applicant will not be competing for feedstocks such as food waste as the Facility will be fuelled by RDF.
1.5.15	15 In relation to recycling, Paragraphs 4.19 and 4.20 of the decision state: "*4.19…the ExA [Examining Authority] noted that WKN would be in conflict with the National Planning Policy for Waste because it would put at risk the achievement of revised recycling and composting targets in the Kent Minerals and Waste Local Plan. 4.20 The Secretary of State sees no reason to disagree with the ExA's conclusions in this matter."*	The proposed Facility will be sourcing RDF after recyclables have been removed and will not be competing for feedstock for materials suitable for composting and anaerobic digestion. The Applicant recognises that increased recycling will lead to reduced residual waste, however the proposed Facility will target diverting RDF currently being exported overseas and will divert suitable materials from landfill disposal driving these materials up the waste hierarchy. Further details and modelling is provided in the Addendum to Fuel Availability and Waste Hierarchy Assessment (document reference 9.5, REP1-018).
1.5.16	16 In his decision letter, the Secretary of State adopted the view of the Examining Authority that *"…the projects would divert a significant proportion of waste from recycling rather than landfill"* despite the Kemsley applicant's familiar claim that the proposed incinerator would only be burning non-recyclable material.	The presumption in favour of granting consent for electricity generating projects that is set out in NPS EN-1 and NPS EN-3 applies to nationally significant infrastructure projects.

ID	Written Representation	Applicant's Comments
		The Facility is a National Significant Infrastructure Project which the National Policy Statements are the primary source of policy direction for, and with reference to which the strong need case for electricity generating projects that is set out in NPS EN-1 and NPS EN-3 applies. Other matters that the Secretary of State may consider both important and relevant to its decision-making may include Development Plan Documents or other documents in the Local Development Framework. In the event of a conflict between these or any other documents and an NPS, the NPS prevails for purposes of the Secretary of State's decision making given the national significance of the infrastructure. Lincolnshire County Council in its Local Impact Report (REP1-053, paragraph 6.1.3), confirmed that with respect to the Lincolnshire '*Minerals and Waste Local Plan 2016 sets out that there is only a modest need for additional capacity for energy recovery from waste ….. however, there is a national need for such facilities and Lincolnshire County Council accepts that the proposal does not compromise the policies of the Minerals and Waste Local Plan in terms of need and location*.' Lincolnshire County Council considered the proposal at its Planning and Regulation Committee of 26 July 2021 and determined (council minutes) '*That the Committee support this application and includes an informative that the Committee would encourage the use of carbon capture if that was feasible'*. There is no suggestion on Lincolnshire County Council's part that the Facility will put at risk the achievement of recycling and composting targets or the diversion of a significant proportion of waste from recycling rather than landfill.

ID	Written Representation	Applicant's Comments
1.5.17	**Comments on the applicant's need analysis** 17 Rather than demonstrating a genuine need for the proposed capacity, or providing a convincing justification for the proposed location, the applicant's need assessment and Fuel Availability and Waste Hierarchy Assessment serve to raise concerns regarding the adverse impact of the proposed facility on the waste hierarchy and local waste plans.	The Applicant has provided additional information at Deadline 1, see the Addendum to Fuel Availability and Waste Hierarchy Assessment (document reference 9.5, REP1-018). Appendix 3 of the document provides a review of local waste plans.
1.5.18	18 The fact that Paragraph 1.5.2 of the Fuel Availability and Waste Hierarchy Assessment focuses on national rather than local or regional need is notable, highlighting that this development proposal flies in the face of the proximity principle.	See response in written representation 1.5.140 (below) that expands on how the proposed Facility meets the requirements of the proximity principle.
1.5.19	19 The applicant refers, in Paragraph 2.2.2 of their Fuel Availability and Waste Hierarchy Assessment report, to relying on 'non-recyclable' materials from MRFs, but they do not provide the waste composition data that they believe would reflect this supposedly non-recyclable material, nor do they state how much of this waste could be expected to be available taking into account the achievement of Government recycling ambitions.	Further information on assumptions of waste composition is provided in (document reference 9.6, REP1-019).
1.5.20	20 At present, much of the material that is rejected from MRFs is rejected not because that material cannot be recycled, but rather because that material is not subject to a relevant local authority recycling contract. This is described as 'non-contract waste' or 'non-target waste'.	Noted.
1.5.21	21 Plans for greater consistency set out in the Resources and Waste Strategy can be expected to ensure that materials accepted for recycling will increase across the country, and it can be expected that manufacturers will increasingly prioritise using such materials for their packaging.	Noted.

ID	Written Representation	Applicant's Comments
1.5.22	22 Furthermore, the Fuel Availability and Waste Hierarchy Assessment appears to conflate MRF rejects with Refuse Derived Fuel (RDF) by implying, for example at Paragraph 2.2.2, that the former is 13.6 million tonnes while the figure noted in Plate 2-1 actually relates to the latter.	The Applicant has provided additional information on the potential sources of RDF at Deadline 1, see the Addendum to Fuel Availability and Waste Hierarchy Assessment (document reference 9.5, REP1-018). REP1-018 Paragraph 2.2.2 is referring to residual waste being landfilled and not RDF.
1.5.23	23 While RDF could include MRF rejects, in many cases RDF is simply residual waste that has gone through some minimal level of pre-treatment, e.g. dewatering. Contrary to the claims from the applicant at Paragraph 2.2.2, RDF is almost never sent to landfill.	
1.5.24	24 Section 2.4 ('The UK Residual Waste Infrastructure Deficit') of the applicant's need assessment dated 23rd March 2021 and Paragraph 2.2.4 of the applicant's Fuel Availability and Waste Hierarchy Assessment dated 23rd March 2021 draw upon a report from incineration trade body the Environmental Services Association (ESA) entitled 'UK Residual Waste: 2030 Market Review'.	Noted.
1.5.25	25 The ESA's review, carried out by Tolvik, was published in November 2017 and therefore predates the Resources and Waste Strategy which was published in December 2018.	Noted.
1.5.26	26 The Resources and Waste Strategy rules out the "Do nothing" / "No change" scenario relied upon in the Tolvik Waste Market Review and is more in line with Tolvik's 'High Recycling' scenario.	Noted.
1.5.27	27 Page 3 of Tolvik's Review provided by the applicant states: *"In the High Recycling scenario the analysis suggests an overcapacity of 3.8Mt [million tonnes]".*	Noted.
1.5.28	28 Page 29 of Tolvik's Review states: *"The analysis also confirms that in the Circular Economy scenario, after allowing for the construction of Additional EfWs [Energy from Waste plants, i.e.*	The Defra Resources and Waste Strategy Annex also concludes that, "*The risk of a gap in capacity is, however, still relevant, as projections on future capacity, exports and arisings are subject to uncertainty*". (P. 78)

ID	Written Representation	Applicant's Comments
	incinerators] and RDF exports by 2030 the market would be at over-capacity".	
1.5.29	29 Indeed, page 78 of the Resources and Waste Strategy's Evidence Annex specifically notes that the ESA report carried out by Tolvik *"…concluded that there would not be a gap in incineration capacity in 2030, provided the 65% MSW recycling rate ambition was met...".*	Noted. The Defra Resources and Waste Strategy Annex also concludes that, "*The risk of a gap in capacity is, however, still relevant, as projections on future capacity, exports and arisings are subject to uncertainty*". (P. 78)
1.5.30	30 As such, the Tolvik Review cited by the applicant could be said to support the case that there is no need for the proposed capacity.	See response to ID 1.5.29.
1.5.31	31 As acknowledged by the applicant in Paragraph 2.3.4 of their Need Statement and Paragraph 2.2.5 of the Fuel Availability and Waste Hierarchy Assessment, analysis from Eunomia found that: *"If all facilities were to operate at full capacity, together they would limit the UK's recycling rate to no more than 63%".*	Noted.
1.5.32	32 The applicant's citation of 2018 Tolvik analysis ('Residual Waste in London and the South East') relates to a document published in October 2018, and so it too predates the Resources and Waste Strategy.	The Applicant has provided additional information on the potential sources of wastes at Deadline 1, see the Addendum to Fuel Availability and Waste Hierarchy Assessment (Document reference 9.5, REP1-018).
1.5.33	**Impact of Covid on waste predictions** 33 None of the analysis discussed by the applicant assesses the impact of Covid on future waste arisings.	The Applicant has provided additional information at Deadline 1, see the Addendum to Fuel Availability and Waste Hierarchy Assessment (Document reference 9.5, REP1-018). The Applicant notes that the Tolvik briefing was published in November 2020 during the COVID-19 lockdown period. There is considerable uncertainty on future residual waste projections. The forecasts were made prior to the rollout of UK vaccine programmes and relaxation of
1.5.34	34 In November 2020 Tolvik published their COVID-19 and UK Waste Sector: Autumn 2020 briefing which included modelling of the impacts of COVID on residual waste arisings.	
1.5.35	35 According to the briefing: "*Figure 19 shows the impact the forecasts on the projected tonnages of total Residual Waste in England…These forecasts have been compared against Tolvik's*	

ID	Written Representation	Applicant's Comments
	median projection for England immediately prior to the COVID-19 outbreak"6 - Figure 19 is presented overleaf.  **Mt** / **2020** / **2023** / **2025** Contained Spread: 22.0 / 23.0 / 22.5 HMT GDP Based Average: 22.0 / 22.7 / 22.2 Further Outbreak: 21.8 / 22.2 / 21.7 *Pre-COVID Median*: *23.9* / *23.6* / *23.0* *Figure 19: Projected Residual Waste in England Source: Tolvik analysis*	lockdowns and only cover part of the construction phase of the proposed Facility.
1.5.36	36 According to the Tolvik briefing*: "These projections suggest that the long term impact of COVID-19 on Residual Waste in England is projected to result in a reduction of between 0.5Mtpa and 1.3Mtpa with the central scenario being 0.8Mtpa lower"*. (emphasis added)	
1.5.37	37 It should be noted that, sadly, there have been further COVID-19 outbreaks and stricter lockdown measures introduced since November 2020, meaning that Figure 19's lowest (red) line, associated with a 'Further Outbreak' (1.3Mtpa reduction) scenario, appears to be the most relevant.	
1.5.38	38 Despite having relied upon multiple pieces of earlier Tolvik analysis, the applicant has provided no consideration of that consultancy's subsequent report that indicates that these earlier	

ID	Written Representation	Applicant's Comments
	projections may have overestimated future residual waste arisings.	
1.5.39	**Achievability of meeting (or exceeding) current waste targets** 39 The applicant's Need Assessment attempts to call into question the achievability of a 65% recycling target, but does not adequately assess the Government's commitment to these targets, including Government support within the Environment Bill, and the means by which the Government has stated they would or could act so as to ensure that these targets are met.	The Applicant has provided additional information on the potential sources of RDF and undertaken modelling to confirm recycling rates are achieved or exceeded at Deadline 1, see the Addendum to Fuel Availability and Waste Hierarchy Assessment (Document reference 9.5, REP1-018). Country level modelling has assumed a minimum of 65% recycling rate will be achieved or higher where indicated in government strategies such as for Wales.
1.5.40	40 Furthermore, the applicant fails to take proper account of the potential impact of the introduction of residual waste reduction targets and additional measures that could be expected to help achieve the Government's target.	
1.5.41	41 Rebecca Pow, then Parliamentary under-Secretary of State for Environment, Food and Rural Affairs, said in February 2020 that: *"…the measures in the Resources and Waste Strategy and the Environment Bill will enable a paradigm shift, in relation to reducing, reusing and recycling our waste, that should limit the amount that ever has to go to incineration and landfill".7*	Noted.
1.5.42	42 A Government statement from October 2020 noted that with respect to the Environment Bill's Environmental Targets8: *"Residual waste generally refers to the waste collected from households or businesses in a black bag or wheelie bin. This is usually sent for incineration at an energy recovery plant or to landfill. Some is also sent overseas as refuse derived fuel. Reducing residual waste would help address the environmental impacts of treatment, which can include air (including greenhouse gases), soil and water pollution. Reducing residual waste can be*	Noted.

ID	Written Representation	Applicant's Comments
	achieved by preventing waste from occurring in the first place, or by recycling the waste we do generate into secondary materials (a more sustainable alternative to extracting and processing raw materials)... (emphasis added) "…We will explore whether a reduction in the per capita tonnage of residual waste could be the basis for a robust, meaningful target whilst continuing to support frequent and comprehensive household waste and recycling collections... *"…Other resources and waste powers sought in the Environment Bill will support attainment of long-term targets. These focus around waste prevention measures and achieving high recycling…"* (emphasis added)	
1.5.43	43 The Climate Change Committee (CCC) believes that even higher recycling targets are both achievable and desirable, stating in their Policies for the Sixth Carbon Budget and Net Zero report in December 2020 that: *"England should target 68% recycling by 2030 – household, commercial and industrial share of this are achievable". 9*	The Applicant notes that recycling targets may be higher in the long term, although recent data has indicated the UK to be at 46.2%. Modelling in the Addendum to Fuel Availability and Waste Hierarchy Assessment (Document reference 9.5, REP1-018) used a recycling rate of 65% for England to be achieved by 2035 based on the Governments Circular Economy Package.
1.5.44	44 Something that could threaten the achievement of these targets is incineration overcapacity, and so the development's proposal to introduce more than a million additional tonnes of incineration capacity.	The Applicant is providing the capacity to meet the UK need for diverting residual waste from landfill and the processing of RDF currently being exported overseas as set out in the Addendum to Fuel Availability and Waste Hierarchy Assessment (document reference 9.5, REP1-018)
1.5.45	45 In the House of Commons on 28th March 2019 John Grogan MP questioned Michael Gove, asking*: "Most studies now indicate that we have an excess of incineration capacity to deal with residual waste. Is there not a danger that, if we build more incinerators, waste that would otherwise be recycled will be diverted to those incinerators?" and the then Environment Secretary acknowledged this danger by responding: "That is a fair point".*10	The Addendum to Fuel Availability and Waste Hierarchy Assessment (Document reference 9.5, REP1-018) has undertaken modelling to demonstrate that even with significant increases in recycling achieving rates of 65% a large quantity of combustible waste will remain and will require diversion from landfill to drive it up the waste hierarchy.

ID	Written Representation	Applicant's Comments
1.5.46	46 A similar point is made by the Climate Change Committee (CCC), who warned in June 2021 that: *"If EfW usage is left to grow unchecked, EfW emissions will quickly exceed those of the CCC pathway while undermining recycling and re- use efforts".11* (emphasis added)	
1.5.47	47 As such, the proposed development is not only unnecessary, but consenting it should be considered a material threat to the achievement of local, regional and national recycling ambitions.	See response to 1.5.39 above. The Applicant recognises the importance of recycling in contributing to the circular economy, and is providing capacity to divert residual waste from landfill to avoid greenhouse gas emissions such as methane (highlighted at the recent COP26 meeting) and exports of RDF overseas.
1.5.48	**Adverse Climate Change Impacts of the C02 Emissions** **Weight to be given to the applicant's claimed climate change benefits** 48 As set out below, uncertainties regarding the claimed climate change benefits of the proposal mean that these claimed benefits should be given no weight in the assessment of this planning application.	Chapter 21 of the ES (Climate Change) (document reference 6.2.21, APP-059) and the document 'Further Greenhouse Gas Emissions Analysis and Consideration of Waste Composition Scenarios' (document reference 9.6, REP1-019), submitted as part of Deadline 1 of the Examination determines that the Facility would not result in an increase in greenhouse gas emissions compared to existing waste treatment pathways such as landfill or exporting RDF to Europe. Therefore, this representation is not consistent with the outcomes of these assessments.
1.5.49	49 This would be in line with the approach taken by the Secretary of State in the Wheelabrator Kemsley North incinerator (WKN) infrastructure decision, where at Paragraph 4.41 of the decision notice the Secretary of State explains: *"In its conclusions…, the ExA [Examining Authority] sets out that, given the uncertainties in the Applicant's assessment of carbon benefits, the matter should carry little weight in the assessment of WK3 and WKN… The Secretary of State sees no reason to take different view to the ExA in this matter."* 12	
1.5.50	50 The potential for adverse climate change impacts at the Boston plant should weigh heavily against the proposal.	

ID	Written Representation	Applicant's Comments
1.5.51	**GHG emissions as a potential ground for refusal** 51 The proposed incinerator would, if it were to become operational, exacerbate climate change by giving rise to unacceptable levels of greenhouse gas (GHG) emissions and by diverting material that would otherwise be reused, recycled or composted.	There is currently a large volume of waste material which is sent to landfill or is exported, as shown in the 'Addendum to Fuel Availability and Waste Hierarchy Assessment', (document reference 9.5, REP1-018). This assessment identifies that there is around 12.5 million tonnes of potentially combustible waste which is landfilled in the UK. In addition, there was more than 2.8 million of RDF and solid recovered fuel (SDF) exported from locations in England in 2019. Therefore, it is an incorrect representation that material used at the Facility would be reused, recycled or composted in the current policy climate. The results of the greenhouse gas (GHG) assessment (Chapter 21 of the ES (document reference 6.2.21, APP-059), detailed in paragraph 21.9.1, highlighted that the operation of the Facility would be likely to result in a decrease in GHG emissions compared to existing waste treatment routes, and the net contribution to regional and national emissions was not considered to be a material impact on the UK's ability to meet its Carbon Budgets or the requirements of the Climate Change Act.
1.5.52	52 For every tonne of mixed waste burned at an EfW incinerator around one tonne of CO2 is released into the atmosphere13,14 meaning energy from incineration has a higher carbon intensity than the conventional use of fossil fuels. The figure would be even higher for the Boston proposal because the applicant is proposing to rely on RDF as the principle feedstock. RDF typically contains less water and a greater proportion of high-carbon materials such as plastic.15	Chapter 21 of the ES (Climate Change) (document reference 6.2.21, APP-059) predicts greenhouse gas emissions arising from the Facility. The results highlight that there is less than 1 tonne of CO_2 released to the atmosphere for every tonne of mixed waste that is burnt. The document 'Further Greenhouse Gas Emissions Analysis and Consideration of Waste Composition Scenarios' (document reference 9.6, REP1-019) submitted as part of Deadline 1 of the Examination, also predicts greenhouse gas emissions from a range of waste compositions by carbon and fossil carbon content. Furthermore, the Facility includes CO_2 recovery plants which initially will be implemented on two of the lines at the Facility. The CO_2 Recovery plants will capture 5,000 kg CO_2 per hour, a total of 80,000 tonnes per

ID	Written Representation	Applicant's Comments
		year, as described in Chapter 21 of the ES (Climate Change) (document reference 6.2.21, APP-059). Further consideration will be given to adding further CO_2 recovery capacity once further studies into the potential market has been carried out.
1.5.53	53 As set out in Pages 80-85 of the Good Practice Guide: *"Energy from mixed waste incineration should not be described as 'low carbon'. Incineration involves the direct release of significant quantities of CO2…modern waste incinerators still have a significantly higher carbon intensity than the conventional use of fossil fuels (and far higher emissions than technologies like solar and wind)".*	The Facility will provide a waste treatment route which will have lower greenhouse gas emissions than landfill (see Chapter 21 Climate Change of the ES (document reference 6.2.21, APP-059) and the document 'Further Greenhouse Gas Emissions Analysis and Consideration of Waste Composition Scenarios' (document reference 9.6, REP1-019). The provision of the Facility will also result in the generation of 80MW of electricity, therefore increasing energy security of the UK. Furthermore, the Facility includes CO_2 recovery plants which initially will be implemented on two of the lines at the Facility (see 1.5.52 above).
1.5.54	54 Thus the proposed Boston incinerator could present a significant barrier to the long-term decarbonisation of the power supply and an obstacle to a low-carbon economy.	
1.5.55	55 Paragraph 2.12.20 of the Chapter 21 ('Climate Change') of the applicant's Environmental Statement claims that: *"The NPS [on Energy] states that the GHG emissions of individual applications do not need to be benchmarked against UK Carbon Budgets, and GHG emissions are not a reason to prevent project consent".*	It is not clear what the intended meaning of these comments are. It is clear from the policy documents EN-1 and EN-3 that the IPC is instructed not to compare the GHG emissions from individual applications against the UK National Carbon Budgets in reaching a decision. However, notwithstanding any mis-interpretation of EN-1 or EN-3 regarding the necessity of assessing carbon impacts of individual applications the Applicant has carried out an assessment of greenhouse gas emissions and has provided comparisons against regional and national GHG emissions and against Carbon Budgets following the recommendations of Institute of Environmental management and Assessment (IEMA) Guidance, 'Environmental Impact Assessment Guide to: Assessing Greenhouse Gas Emissions and Evaluating their Significance' (2017).
1.5.56	56 We believe this to be an incorrect interpretation of the NPS.	
1.5.57	57 Paragraphs 2.2.12 and 2.2.13 of EN-1 state that: "The EU Emissions Trading System (EU ETS) forms the cornerstone of UK action to reduce greenhouse gas emissions from the power sector...The cap set under the EU ETS translates to a finite number of allowances to emit greenhouse gases...The carbon price generated by the EU ETS makes producing	

ID	Written Representation	Applicant's Comments
	electricity from carbon intensive power stations less attractive and creates an incentive for power station operators to invest in cleaner electricity generation".	
1.5.58	58 And EN-3 Paragraph 2.5.38 states: "*CO2 emissions may be a significant adverse impact of..waste combustion plant. Although an ES on air emissions will include an assessment of CO2 emissions, the policies set out in Section 2.2 of EN- 1 will apply. The IPC does not, therefore need to assess individual applications in terms of carbon emissions against carbon budgets and this section does not address CO2 emissions or any Emissions Performance Standard that may apply to plant."* (emphasis added).	
1.5.59	59 As such, neither EN-1 nor EN-3 preclude assessment of CO2 emissions or carbon budgets for individual incinerator proposals. This is because he exclusion set out in EN-3 relates only to facilities (power plants) that are covered by the Emissions Trading Scheme (ETS) and waste incinerators are not covered by the ETS.	
1.5.60	60 We also note the Court of Appeal ruling in ClientEarth, R (on the application of) v Secretary of State for BEIS & Anor [2021] EWCA Civ 43 (21 January 2021) on the interpretation of the Overarching National Policy Statement for Energy ("EN-1").	
1.5.61	61 According to the Court, when considering a proposed development, the adverse impacts of greenhouse gas emissions from that development can be given *"significant, or even decisive" weight in the planning balance and are even capable of being "treated as a freestanding reason for refusal".*16	
1.5.62	**Failure to follow the requirements of the Scoping Opinion or to provide what was promised within the Scoping Report**	The Greenhouse Gas assessment detailed in Chapter 21 of the ES (Climate Change) (document reference 6.2.21, APP-059) was

ID	Written Representation	Applicant's Comments
	62 The applicant was provided within the following straightforward comments within Section 4.1.5 of the July 2018 Scoping Opinion: *"The Scoping Report refers to guidance applicable to the assessment [the (IEMA (2015) Environmental Impact Assessment Guide to Climate Change Resilience and Adaptation]. The Applicant should ensure that the guidance applied to the assessment and the methodology that is adopted are fully explained within the ES."* *"The ES should clearly state within the GHG assessment the lifecycles of the Proposed Development that will be included within the assessment."* " The ES should state any assumptions made in calculating the predictive GHG emission; any limitations to the calculations; and any uncertainties this presents for the assessment of GHG emissions"	undertaken in accordance with standard guidance, such as the IEMA and GHG Protocol. These guidance documents are referred to in the ES Climate Chapter, including in the methodology section (Section 21.4) where relevant, including the source of emission factors, methodological approaches and the determination of significance. The methodology section (Section 21.4) also provides the assumptions that were adopted in the assessment, and highlighted the limitations based on information that was available at the time of assessment. The 2020 version of the EIA Guide to Climate Change Resilience (IEMA, 2020, IEMA EIA Guide to: Climate Change Resilience and Adaptation 2020) is the most up to date and latest available guidance document, and was therefore used as a basis for the resilience assessment.
1.5.63	63 As set out below, the applicant has failed to follow this good advice and their resulting GHG assessment is both inadequate worrying.	
1.5.64	64 The applicant also fails to do what they promised within their Scoping Report, for example their commitment that: *"the detailed assessments for each of these topics will be undertaken in accordance with standard guidance and best practice and reported in the ES. Where significant effects are identified, mitigation measures will be described where possible to reduce the residual effects".*	
1.5.65	65 The applicant neither accords with standard guidance and best practice with respect to climate change impact (either the IEMA guidelines they cite or the good practice identified within the Guidance produced by UKWIN), nor do they identify and	

ID	Written Representation	Applicant's Comments
	adequately implement mitigation measures to minimise climate change impact.	
1.5.66	66 The applicant does not adequately explain the guidance that they claim to rely upon. The applicant refers to the 2020 version of the EIA Guide to Climate Change Resilience and Adaptation within their report, rather than the 2015 version. Unfortunately the 2020 guide is not available free of charge to the public, and the applicant's two-sentence summary is highly inadequate.	
1.5.67	67 The applicant claims within Table 21-2 that "*Guidance applied to the assessment is detailed in Section 21.2*", but the section on guidance within Section 21.2 amounts to a mere four sentences that provide nothing more than the general topics covered by the two pieces of guidance cited by the applicant.	
1.5.68	68 Tellingly, the applicant does not claim that these sentences amount to having "fully explained" the guidance applied to the assessment and the methodology that is adopted.	
1.5.69	69 The applicant claims within Table 21-2 that *"Assumptions and limitations in the calculated of GHG emissions are set out in section 21.4*", but as noted below the majority of key assumptions and limitations are not made clear within any of the applicant's documentation.	The key assumptions in the greenhouse gas assessment are listed in paragraphs 21.4.76 to 21.4.81 of Chapter 21 of the ES (Climate Change) (document reference 6.2.21, APP-059). The chapter refers to uncertainties regarding GHG emissions from different waste streams, which is further discussed in the subsequent analysis document 'Further Greenhouse Gas Emissions Analysis and Consideration of Waste Composition Scenarios' (document reference 9.6, REP1-019).
1.5.70	70 Understandably, the applicant does not claim to set out "*any uncertainties this presents for the assessment of GHG emissions*" as requested in the Scoping Opinion.	
1.5.71	**Failure to clearly explain assumptions, calculations and methodology and failure to demonstrate internal consistency** 71 The applicant provides the results of their greenhouse gas (GHG) assessment within Chapter 21 of their Environmental	The greenhouse gas assessment presented in Chapter 21 of the ES (document reference 6.2.21, APP-059) used emission data specific to the scheme to determine greenhouse gas emissions, including emissions from a design calorific value, and expected energy output. Different waste compositions in terms of carbon content were considered in the

ID	Written Representation	Applicant's Comments
	Statement, but they fail to provide sufficient information to allow third parties to determine how these results were derived, or to assess whether the various assumptions adopted were internally consistent, or to assess the extent to which the conclusions would vary if subject to sensitivity analysis.	document 'Further Greenhouse Gas Emissions Analysis and Consideration of Waste Composition Scenarios' (document reference 9.6, REP1-019). The conclusions of this analysis supported the outcome of the greenhouse gas assessment in the ES.
1.5.72	72 One of the key parameters for evaluating the climate impacts of a waste incinerator is the composition of the feedstock. The specific type of waste (paper, plastic, food, etc.) impacts on how much energy is generated, how much fossil and biogenic CO2 is released, and how much waste can be processed.	The impact of different carbon contents of waste streams is discussed further in the document 'Further Greenhouse Gas Emissions Analysis and Consideration of Waste Composition Scenarios' (document reference 9.6, REP1-019), submitted at Deadline 1. This further analysis calculates greenhouse gas emissions from a range of waste compositions by carbon and fossil carbon content. The results show that the carbon composition of the waste does have a large impact on GHG emissions arising from both the thermal treatment process and landfilled waste. However, the scenarios presented in the ES sit within the range of GHG emissions presented in this additional analysis. Furthermore, the outcomes of the Climate Change chapter in the ES which states it is "likely that GHG emissions from the Facility would be lower or similar when compared to landfilled waste streams" remain valid.
1.5.73	73 As a Defra report put it: "*One tonne of waste does not have a constant carbon content as it varies depending upon the waste components. The relative proportions of biogenic and fossil carbon also depend upon the waste components, as do other important factors such as the calorific value…* *The calorific value of the waste is how much (chemical) energy is stored in the waste per tonne that could potentially be converted into useful electrical or heat energy when burned.* *Waste such as plastic has a high calorific value whereas other wastes such as kitchen waste that is very wet have much lower values. This is due to the water adding significantly to the weight while adding nothing in energy terms. Energy is used to convert all the water to steam during combustion".*17	
1.5.74	74 As such, one cannot simply mix and match one assumption pertaining to energy generation capacity with another assumption for the level of carbon that would be emitted. Both of these figures have to be derived from a specified feedstock and from a specified tonnage of waste processed.	

ID	Written Representation	Applicant's Comments
1.5.75	75 As such, industry standard GHG assessments for incinerators start by clearly defining a range of feedstocks that the plant is likely to treat and the quantity of that feedstock that the plant could treat. The calorific and carbon content associated with these feedstocks can then be assessed taking into account the anticipated efficiency of the processes used which then determines how much energy and carbon would be released.	Assumptions relating to the volume of CO_2 released from the Facility were provided by the technology provider, based on an expected feedstock, the exact composition cannot be defined at this point. This includes the expected energy generation from the Facility. As previously mentioned, the impact of changing the carbon and fossil content was considered in 'Further Greenhouse Gas Emissions Analysis and Consideration of Waste Composition Scenarios' (document reference 9.6, REP1-019).
1.5.76	76 Rather than following this standard process, the applicant instead seems to be working backwards from assumptions that appear to come from nowhere and that might relate to anticipated performance based on different and conflicting feedstock assumptions.	
1.5.77	77 For example, at Paragraph 21.4.23 the applicant states: "*GHG emissions from the Facility were calculated based on first principles using the anticipated CO2 content of the exhaust gas from the thermal treatment process".*	
1.5.78	78 This novel approach does not in fact follow 'first principles', and instead leaves unanswered the question of how the anticipated carbon content of the feedstock was calculated.	
1.5.79	79 Additionally, the applicant's claims regarding energy generation capacity are similarly vague and unhelpful.	The connection of the Facility is rated at a maximum of 102 megawatts electric (MWe). It is acknowledged that with a range of waste compositions that there is the potential for different steam flows, which could affect power outputs. However, the Applicant will maintain a steady power output whilst providing a resilient power connection. The results presented in Chapter 21 of the ES (Climate Change) (document reference 6.2.21, APP-059) were based on the expected CO_2 content of the exhaust stack from a design point calorific value, which was provided by the technology provider for the Facility.

ID	Written Representation	Applicant's Comments
		The design point Calorific Value was 10.1 MJ/kg, with a range from8.0 MJ/kg, to14 MJ/kg. It is anticipated that after the parasitic load is accounted for, 80 MWe will be exported from the Facility.
1.5.80	80 Paragraph 6.5.48 of the Environmental Statement says: *"The thermal treatment plant would receive approximately one million tonnes of processed RDF, to generate approximately 102 MWe of…electricity. Some of the energy generated will be used to power the various elements of the Facility ('parasitic load'). Approximately 80 MWe will be exported".*	The calorific value of the waste feedstock and CO_2 content of the exhaust were based on the same assumption, which was provided by the technology provider for the Facility. This was based on an average calorific value of 10.1 MJ/kg, and an electrical output of 80MW. The design point Calorific Value was 10.1 MJ/kg range lower 8.0 MJ/kg, upper 14 MJ/kg.
1.5.81	81 Paragraph 5.4.2 of the Environmental Statement states: "The Facility would comprise the following main elements: …thermal treatment plant comprising three nominal 34 MWe combustion lines (circa 120 [sic] megawatts thermal (MWth))"	
1.5.82	82 This implies a certain calorific value of the waste feedstock, but it is unclear whether it is based on the same feedstock assumptions as the value for the CO2 content of the exhaust because neither the methodology nor the assumptions are provided, let alone the actual calculations.	
1.5.83	83 What is clear is that the applicant's figures are referred to by the applicant as approximate or nominal values, implying that there is a potential range of possible impacts. However, only a single number is provided as a result, rather than a likely range. Insufficient information is provided by the applicant regarding the degree of uncertainty of the modelling assumptions, and of how this uncertainly impacts on their results.	The impact of different carbon contents of waste streams is discussed further in 'Further Greenhouse Gas Emissions Analysis and Consideration of Waste Composition Scenarios' (document reference 9.6, REP1-019), submitted at Deadline 1. This further analysis calculates greenhouse gas emissions from a range of waste compositions by carbon and fossil carbon content. The results show that the carbon

ID	Written Representation	Applicant's Comments
1.5.84	84 The applicant's approach is unacceptable, and goes against Recommendations 2 and 3 of the Good Practice Guidance: "RECOMMENDATION #2: *Key outputs such as power export and greenhouse gas (GHG) emissions are dependent on waste composition and the processes used. When modelling future emissions it is necessary to ensure that outputs are internally consistent with inputs*." "RECOMMENDATION #3: *GHG impacts can be highly sensitive to waste composition. Waste composition assumptions should be justified and sensitivity analysis should be used to show the impacts of future changes such as increased food and biowaste collection*."	composition of the waste does have a large impact on GHG emissions arising from both the thermal treatment process and landfilled waste. However, the scenarios presented in the ES sit within the range of GHG emissions presented in this additional analysis.
1.5.85	85 The rationale for these recommendations is set out on Pages 7-16 of the guidance.	
1.5.86	86 Without the applicant providing further detail regarding their assumptions and methodology there is no way to ascertain whether or not their assumptions, calculations and methodology are reasonable, nor whether their figures are even internally consistent.	
1.5.87	87 Turning to Paragraph 21.4.23 of the applicant's Environmental Statement we read: *"The exact composition of the waste to be processed at the Facility is not currently known. GHG emissions from the Facility were calculated based on first principles using the anticipated CO2 content of the exhaust gas from the thermal treatment process. This was compared to existing waste disposal routes, using known emission factors for landfilled waste in the UK, and existing EfW facilities in Europe".*	The outcomes of the assessment using different waste compositions by the carbon and biogenic carbon content was considered further in the document 'Further Greenhouse Gas Emissions Analysis and Consideration of Waste Composition Scenarios' (document reference 9.6, REP1-019). A range of biogenic carbon contents was considered for both landfill waste, and RDF feedstock. The outcomes of the further analysis supported the conclusions of Chapter 21 of the Environment Statement (document reference 6.2.21, APP-059).
1.5.88	88 At Paragraph 21.4.27 of the applicant's Environmental Statement, under the heading 'Scenario 1: Do Nothing 1 (100%	

ID	Written Representation	Applicant's Comments
	Landfilled UK)', we read how *"…Emission factors for landfilled waste in the UK were obtained from BEIS (BEIS, 2020a). The emission factor encompasses 'gate to grave' emissions, which includes collection, transportation and landfill GHG emissions".*	
1.5.89	89 The reference to "*BEIS, 2020a*" relates to the Government's Greenhouse Gas Reporting, Conversion Factors for 2020. This reveals that the applicant is not undertaking a fair, like-for-like, comparison between landfilling and incinerating 1,200,000 tonnes of mixed waste.	
1.5.90	90 There can be significant differences regarding the assumptions associated with the carbon content, calorific value, biogenic fraction, and decomposability of the material that constitutes the waste going to landfill relative to the material to used as feedstock for the incinerator proposed for Boston.	
1.5.91	91 Furthermore, there are differences in scope between the treatment options, with no consideration appearing to have been given by the applicant to the differences in the level of biogenic CO2 that would be released through incineration that would be sequestered in landfill.	
1.5.92	92 If the assessment results in biogenic CO2 being treated as 'carbon neutral' for incineration then the avoidance of those releases from biogenic waste sequestered in landfill should be treated as a carbon saving from landfill, but the applicant appears to use inconsistent scopes for incineration and landfill resulting in an invalid assessment.	
1.5.93	93 Thus, the applicant's approach also goes against Recommendation 5 of the Good Practice Guidance: *"RECOMMENDATION #5: To produce a valid comparison when comparing waste treatment options such as landfill and*	

ID	Written Representation	Applicant's Comments
	incineration that release different quantities of biogenic CO2 it is necessary to account for these differences, especially the impact of the biogenic carbon sink in landfill."	
1.5.94	94 The rationale for this recommendation is set out on Pages 19-42 of the guidance, and includes evidence from a number of waste management professionals, academics, and government agencies.	
1.5.95	**Shortcomings in the applicant's export assumptions** 95 The applicant's 'Scenario 2' is described as 'Do Nothing 2 (50% Landfilled UK, 50% Exported to EfW Facilities in Europe)'.	In terms of the greenhouse gas assessment carried out as part of Chapter 21 of the ES (document reference 6.2.21, APP-059), we disagree with the following statement "*back-hauling RDF means that there are effectively no emissions from shipping."* The greenhouse gas assessment used the UK Carbon Budgets as significance criteria. The 6th Carbon Budget, published by the Committee on Climate Change in 2020, recommends that shipping is included within the UK's net zero target, which includes 'international export shipping'. Therefore, any outbound shipping journeys from the UK should be included within the UK's carbon budget, and if RDF is being exported, it is conventional that this would be included as part of the boundary of the assessment. Notwithstanding, marine vessel movements account for a minor component of Scenario 2 in the Greenhouse Gas assessment, contributing just 5,718 tonnes, or 0.9 – 1.4% of the total emissions in the scenario. Whether the marine vessel movements is classified as back-hauling or not is a minor point, and does not affect the conclusions of the assessment.
1.5.96	96 Setting aside the flaws associated with the applicant's approach to comparing incineration with landfill, the applicant introduces further errors in relation to assumptions surrounding the export of fuel for use in existing EfW facilities in Europe.	
1.5.97	97 One such error is to overlook the reality of backhauling, whereby ships returning to Europe can be expected to have spare capacity that would otherwise be unfilled.	
1.5.98	98 An in-depth, 57-page, report produced by Eunomia for the RDF Export Industry Group undertook an extensive analysis of the legal, economic and environmental issues associated with RDF export.	
1.5.99	99 This study concluded that, in terms of environmental impacts and benefits, the life-cycle assessment of five residual waste management scenarios suggests that: "*…back-hauling RDF means that there are effectively no emissions from shipping…"*	
1.5.100	100 They study adds that: *"Ultimately, the relative performance of RDF export scenarios and domestic scenarios depends upon the specific nature of the infrastructure used. The results of this*	

ID	Written Representation	Applicant's Comments
	*analysis, however, demonstrate that RDF export is currently unlikely to result in any net increase in CO2 emissions from residual waste treatment".*18	
1.5.101	101 The applicant's failure to acknowledge and to factor-in the impact of backhauling is a serious shortcoming that calls the value of their conclusions into question.	
1.5.102	102 Furthermore, as with the landfill assessment (and potentially the core assessment of the proposed incinerator itself), the applicant has failed to evaluate the impact of processing a specific feedstock (or a range of feedstocks) based on a justified level of energy generation performance.	See response to 1.5.87 – 1.5.94 above.
1.5.103	103 With respect to RDF export, most if not all European EfW facilities that process RDF from the UK are connected to district heating schemes (i.e. they operate as 'combined heat and power' facilities). This stands in stark contrast to the proposed Boston plant which is not currently expected to export heat.	A Combined Heat and Power (CHP) Assessment has been submitted with the DCO application (document reference 5.7, APP-036). Whilst no immediate opportunities for off-site use of heat have been identified a detailed CHP-Ready Guidance assessment of the Facility will be carried out as part of the Environmental Permit application. This will include the establishment of any opportunities to supply heat. Paragraph 21 of Schedule 2 of the draft DCO (document reference 2.1(1), REP1-003) sets out the requirement to submit to the relevant planning authority for its approval a report ("the CHP review") updating the combined heat and power assessment within 12 months of final commissioning. Discussions have been held with Boston Borough Council (BBC) and an outline understanding arrived at for working together to promote wider use for recovered renewable heat whether for heating or chilling operations either domestically or in local industry. Potential opportunities include: 1) A new local housing estate - a BBC led conversation around using renewable heat as alternative to ASHP

ID	Written Representation	Applicant's Comments
		2) Use of renewable heat main connection to major heat offtakes in food to replace gas heating in local food growing businesses. The CHP review will incorporate local industry requirements for heating, cooling or chilling applications, for collation into district circuits. The potential for attracting new industries to the Riverside Industrial Estate area may include those who have larger heat requirements and the partnership with BBC on this matter is welcomed by the Applicant.
1.5.104	**Alternative waste management options with low adverse climate impacts** 104 According to the IEMA's 2017 Environmental Impact Assessment Guide to Assessing Greenhouse Gas Emissions and Evaluating their Significance19, cited by the applicant (e.g. at Paragraph 21.4.58), the first option for any GHG emissions practitioner to consider when applying the IEMA's approach to identifying opportunities is 'do not build', i.e. to "*evaluate the basic need for the project and explore alternative approaches to achieve the desired outcome/s".*	The greenhouse gas assessment presented two 'Do Nothing' assessments, which consider the 'baseline' scenario if the Facility does not proceed. The 'Do Nothing' scenarios determine greenhouse gas emissions from landfill waste, and a scenario where 50% of the waste is transported out of the UK and processed in EfW facilities. There is currently a large volume of waste material which is sent to landfill or is exported, as shown in the 'Addendum to Fuel Availability and Waste Hierarchy Assessment', (document reference 9.5, REP1-018). This assessment identifies that there is around 12.5 million tonnes of potentially combustible waste which is landfilled in the UK. In addition, there was more than 2.8 million of RDF and solid recovered fuel (SDF) exported from locations in England in 2019. Therefore, it is an incorrect representation that material used at the Facility would be reused, recycled or composted. Therefore, the two 'Do Nothing' scenarios represent scenarios which address realistic waste treatment pathways.
1.5.105	105 The applicant only considers two alternative 'Do nothing' scenarios: sending 100% of the waste untreated to a UK landfill, or sending 50% untreated to a UK landfill and 50% to an incinerator in Europe.	
1.5.106	106 Given the drive to support the top tiers of the waste hierarchy (reduction, preparation for re-use, and recycling) and to minimise the adverse climate change impacts of waste management, it is not appropriate to simply assume that all of the waste that would not be incinerated would otherwise be sent untreated to landfill.	
1.5.107	107 As such, consideration should be given to the potential impacts of further alternative options that: a) Avoid residual waste from arising in the first place - including better source segregation of key waste streams	

ID	Written Representation	Applicant's Comments
	and increased education to ensure that people put the right things in the right bins; or that b) Minimise the impact of residual waste management - including using aerobic digestion to minimise methane emissions from landfill, both with and without using MBT/MRBT systems to extract recyclates prior to landfill.	
1.5.108	108 The rationale and evidence for considering these options are set out in UKWIN's Good Practice Guidance, especially Pages 65-79 associated with Recommendation #9 that: "*When considering how waste would be treated if it were not sent to an incinerator, account should be taken of the prospect that it might otherwise have been reduced, reused, recycled or composted. Account should also be made of how landfilled waste could be biostabilised to reduce methane emissions.*	
1.5.109	**Alternative energy generation options** 109 It is notable that according to the applicant's climate change assessment (Table 21-23) the development would result in gross GHG emissions of 623,996 tonnes of CO2eq per year, which would be higher than the anticipated emissions from landfill (533,834 tonnes of CO2eq per annum) and higher than the lower end of the range associated with sending half the waste to landfill with the rest sent to European incinerators (422,635 CO2 per annum).	It is common and accepted practice to assess the GHG emissions saved by implementing entire or partial renewable energy projects by calculating the equivalent displaced GHG emissions arising from fossil fuel generation (coal/oil/gas). However, in this case, in common with the approach to assessing the benefits of wind power generation, we have compared the displaced emissions against those arising from gas-powered Combined Cycle Gas Turbine (CCGT) electricity generation. Therefore, the approach to determine the offset of emissions by CCGT is a conventional one and is widely used for a number of energy generation markets in the UK. Electricity generated by the Facility would be exported to the National Grid. DEFRAs 'Energy from Waste – A Guide to the Debate 2014' states that "A gas fired power station (Combined Cycle Gas Turbine – CCGT) is a reasonable comparator as this is the most likely technology if you wanted to build a new power station today" (refer to footnote 29 on page 21). Therefore, using CCGT to determine as a
1.5.110	110 One explanation for the applicant's claim that the proposed incinerator would have lower net emissions than landfill, despite the proposed incinerator's higher gross emissions, is the assumed displacement of emissions from alternative means of electricity generation.	
1.5.111	111 The applicant stated that at Paragraph 26.6.10 of their Environment Statement that:	

ID	Written Representation	Applicant's Comments
	"*The Facility will provide 80 MWe to the National Grid, and it is expected that it would displace energy generated from fossil fuel sources within the UK. When estimating GHG reductions, it was assumed that electricity produced by CCGT is displaced (0.371 kg/kWh), as this is the most common form of new plant in terms of fossil fuel combustion (BEIS, 2020c)".*	comparator to determine offset emissions is considered to be an appropriate methodology. At the present time, the exact status of UKWIN's Good Practice Guidance document, dated July 2021, is unclear. In particular, whether it has been peer-reviewed and/or adopted by organisations such as the EA, WRAP, Environmental Services Association or Chartered Institution of Waste Management.
1.5.112	112 Given the UK Government's renewed and enhanced efforts to decarbonise the electricity supply, it is unreasonable to assume that the proposed facility would displace CCGT, especially for its entire operational life.	
1.5.113	113 The applicant should be expected to follow Recommendation #8 of the Good Practice Guidance which states: *"When considering the carbon intensity of displaced energy it is necessary to take account of the progressive decarbonisation of the energy supply rather than simply assuming that a new energy source would displace fossil fuels.* *The carbon intensity of electricity displaced by a new incinerator can be estimated using the average BEIS Long-Run Marginal Emissions Factor (MEF) over the lifetime of the plant".*	
1.5.114	114 The rationale and evidence for that recommendation is set out within Pages 53-64 of the guidance.	
1.5.115	**Level of energy generation, carbon emissions, and renewable energy generation** 115 The applicant claims at section 21.2.24 of their Environmental Statement that: "*The Facility will generate 102 megawatts electric (MWe) (gross) of…electricity. A proportion of this will supply the Facility (parasitic load), including the feedstock management and lightweight aggregate (LWA) facilities. Therefore, 80 MWe is planned to be exported to the National Grid".*	The connection via Western Power Distribution is rated at a maximum of 102 megawatts electric (MWe), with the range of possible calorific values in the fuel mix. Higher steam flows and therefore power are possible, with the technology meeting all Best Available Techniques (BAT) requirements and the permitted emissions as set out in the Environmental Permit. There is an increasing demand in the UK for additional power, which is an indirect benefit of the purpose of the facility, to minimise landfill after maximising indirectly collection of recyclates.

ID	Written Representation	Applicant's Comments
1.5.116	116 If these figures are intended to reflect the plated capacity of the plant then these figures are likely to be significantly higher than the actual level of generation and export that could be expected.	The Applicant will maximise the steady power output, while providing a resilient power connection as covered by the operating permits and governed by the grid connection agreements. The calculations for the parasitic load of approximately 22MW were based on initial and conservative calculations. This included some plant which has now been removed from the design, and further calculations to provide updated parasitic load figures are being carried out. It is therefore likely that the parasitic load figures represent an overestimation, and the Applicant is confident that they can meet levels of 80 MWe output.
1.5.117	117 Analysis of real world performance of incinerators contained within the Good Practice Guidance indicates that the average generation capacity is 15% below the plated capacity.	
1.5.118	118 When applied to this proposal the claimed 102 MWe generation can be expected to equate to real world performance of around only 86.7 MWe (i.e. a reduction of 15%).	
1.5.119	119 Due to the use of the CO2 recovery equipment the plant proposed for Boston can be expected to have a higher parasitic load then for a typical incinerator.	
1.5.120	120 The parasitic load claimed by the applicant is around 22 MWe (i.e. the difference between 102 MWe generated and 80 MWe exported).	
1.5.121	121 If this figure is correct, we could expect the energy generation to be on average around 86.7 MWe (102 MWe less 15%) with the anticipated average level of export falling to 64.7 MWe (i.e. 86.7 MWe generated take away the parasitic load of 22 MWe).	
1.5.122	122 The applicant has failed to assess the impact of assuming this revised lower level of energy export.	
1.5.123	123 Returning to the applicant's energy generation claims, they seem to be implying that all of the electricity generated would be classed as 'renewable' electricity.	RDF is referred to in EN-3, which serves the purpose of defining the policy for renewable energy in the UK. The waste supplier for the Facility has carried out some analysis of likely changes to waste compositions in the future. Although compositional impacts are only just starting to be modelled by experts in the sector, it is

ID	Written Representation	Applicant's Comments
		considered likely that the rise in calorific value of waste from separate food waste collections will be offset to some extent by a reduction in plastic content, driver by a decrease in consumption and an increase in recycling. Greenhouse gas emissions from a range of waste compositions (in terms of carbon contents and the biogenic / fossil carbon ratio) were considered in document 'Further Greenhouse Gas Emissions Analysis and Consideration of Waste Composition Scenarios' (document reference 9.6, REP1-019), submitted as part of Deadline 1 of the Examination. The outcomes of this analysis show that for the majority of waste compositions, greenhouse gas emissions will be less from processing RDF in Energy from Waste facilities compared to landfilled waste.
1.5.124	124 For example, Paragraph 21.2.23 states: *"The Facility will generate 102 megawatts electric (MWe) (gross) of renewable electricity…"* (emphasis added)	Whether the electricity is defined as 'renewable' or 'partially renewable', it does not change the outcome of the assessment. The greenhouse gas assessment detailed in Chapter 21 of the ES (Climate Change) (document reference 6.2.21, APP-059) calculates annual emissions from operation of the Facility, and then accounts for the 'grid offset' from the provision of electricity to the grid, to determine the 'net effect' in terms of greenhouse gas emissions of the Facility.
1.5.125	125 The applicant states in Paragraphs 21.4.22-23 of their Environmental Statement that: *"RDF contains many different waste materials, some of which contain 'carbon', which could be either biogenic carbon such as food waste, or fossil-based such as plastic…The exact composition of the waste to be processed at the Facility is not currently known".*	
1.5.126	126 Not only would the level of generation be lower, for the reasons set out above, but the electricity would only be 'partially renewable', as the applicant anticipates the feedstock to include fossil-based materials such as plastic.	Whether the electricity is defined as 'renewable' or 'partially renewable', it does not change the outcome of the assessment. The greenhouse gas assessment detailed in Chapter 21 of the ES (Climate Change) (document reference 6.2.21, APP-059) calculates annual emissions from operation of the Facility, and then accounts for the 'grid offset' from the
1.5.127	127 This, as per the Government's Energy from Waste Guide, means the electricity would be classed as 'partially renewable' at	

ID	Written Representation	Applicant's Comments
	best, meaning the energy would also be 'partially fossil-based' energy.	provision of electricity to the grid, to determine the 'net effect' in terms of greenhouse gas emissions of the Facility.
1.5.128	128 This, as per the Government's Energy from Waste Guide, means the electricity would be classed as 'partially renewable' at best, meaning the energy would also be 'partially fossil-based' energy.	
1.5.129	129 Thus, the proposed Boston facility would, in effect, be displacing wholly renewable energy with only partially renewable energy.	This is an incorrect representation, the Facility would not be displacing 'wholly renewable' energy from the National Grid. The conventional approach is that electricity generated by the Facility would be a replacement for fossil fuel generated equivalent such as CCGT (see response to 1.5.109 above). The results of the greenhouse gas (GHG) assessment in Chapter 21 of the ES (Climate Change) (document reference 6.2.21, APP-059), highlighted that the operation of the Facility would be likely to result in a decrease in GHG emissions compared to existing waste treatment routes. The Facility also will provide a source of electricity to the grid, improving the UK's energy security.
1.5.130	130 This displacement of renewable energy comes with serious and material implications regarding the decarbonisation of the electricity grid.	
1.5.131	131 The level of net renewable energy generation would need to take account of real world levels of electricity generation, the fact that only part of the feedstock is likely to be renewable, and the fact that the proposed Boston incinerator could be expected to displace wholly renewable energy.	As per the response to paragraph 1.5.120, the Applicant is confident that it can meet the stated export figures of 80MWe. As per the response to paragraph 1.5.129, it is an incorrect assertion to state that the Facility would displace wholly renewable electricity.
1.5.132	132 The applicant's climate assessment also fails to take this into account.	
1.5.133	133 The Examining Authority for Wheelabrator Kemsley North (WKN) stated in their Report of Findings that:	The approach to calculating greenhouse gas emissions in Chapter 21 of the ES (Climate Change) (document reference 6.2.21, APP-059) was

ID	Written Representation	Applicant's Comments
	"4.10.116. Further, the generation of 42MW of electricity which the WKN Proposed Development would bring about, would be a significant benefit in itself having regard to the emphasis placed on the need for all types of energy infrastructure by NSP EN-1. That said, NPS EN-1 also highlights the urgent need to speed the transition to a low carbon economy and that (paragraph 3.4.3) only waste that cannot be re-used or recycled with less environmental impact and would otherwise go to landfill should be used for energy recovery. It is not disputed that the portion of energy output attributed to non-biomass based waste input in either Project K3 or Project WKN cannot be considered renewable and therefore the plants would be partially renewable at best. *4.10.117. Clearly with the greater emphasis placed on changing the composition of waste for separate collection in accordance with policies that post-date the NPSs, the biomass content potentially reduces further…Residual waste is the mixed material typically incinerated for energy recovery but is inefficient as materials that hold value are being lost, and it is an expensive way to treat waste...* *4.10.121. However in the case of the WKN Proposed Development, the electricity generation is allied to the sourcing of some 390,000 tpa of waste fuel which is a significant amount in itself, the composition of which should be scrutinised to see whether overall the proposed generation is justified by reference to such matters as the biogenic to fossil carbon ratio and its energy content, the confidence that can be placed on the assumed biogenic content, comparisons with other methods of electricity generation, and whether avoided emissions from landfill would actually materialise. Within that process, consideration of harm to KCC's strategy that underpins its WLP [Waste Local Plan] is not excluded."* (emphasis added)	determined using the likely energy generation and feedstock specific to the Facility. Further analysis to determine greenhouse gas emissions from the Facility and landfill waste from a range of waste compositions in terms of carbon and fossil carbon content are considered in 'Further Greenhouse Gas Emissions Analysis and Consideration of Waste Composition Scenarios' (document reference 9.6, REP1-019), submitted for Deadline 1 of the Examination. This assessment supports the conclusion of Chapter 21 of the ES (Climate Change) (document reference 6.2.21, APP-059), and states it is "*likely that GHG emissions from the Facility would be lower or similar when compared to landfilled waste streams.*"

ID	Written Representation	Applicant's Comments
1.5.134	135 Despite mentioning the findings from Zero Waste Scotland that "emissions from both waste treatment options [landfill and incineration] are highly sensitive to the composition of fossil and biogenic waste" in section 21.6 of their Environmental Statement, the applicant appears to provide little information on this seemingly crucial topic whose importance was highlighted in the WKN Report of Findings.	
1.5.135	135 The applicant does not state what assumptions they used regarding the proportion of the feedstock which is fossil-based, nor do they show how their carbon assessment could be considered 'conservative'.	
1.5.136	136 This is concerning, because, as set out in UKWIN's Good Practice Guidance, comparison between predicted emissions against real world incinerator emissions revealed that: a) The proportion of CO2 that was fossil CO2 was 13 percentage points higher than predicted at the planning or permitting stage; b) The fossil carbon intensity of electricity exported to the grid was around 49% higher than predicted by the applicant at the planning or permitting stage; and the c) Reported fossil CO2 released per tonne of waste feedstock incinerated was around 20% higher than that predicted at the planning or permitting stage.	
1.5.137	137 Given the serious gaps in the information provided by the applicant, and the applicant's complete failure to provide sensitivity analysis for key modelling parameters, the real world climate and energy performance of the proposed Boston incinerator could reasonably be expected to be significantly worse than claimed.	

ID	Written Representation	Applicant's Comments
1.5.138	138 An adverse inference should be drawn from the many shortcomings of the applicant's GHG assessment, which are readily apparent from the analysis set out above and from a consideration of the proposal against the Recommendations of the Good Practice Guide, and the applicant's failure to rule out significant adverse climate change impacts from the facility should weigh heavily against the proposal in the planning balance.	The Good Practice Guide produced by UKWIN does not hold any legal weight. The assessment in Chapter 21 of the ES (Climate Change) (document reference 6.2.21, APP-059) used information specific to the Facility in terms of likely waste composition and energy output as provided by the technology provider. The impact of changing carbon contents of future feedstocks were also considered in 'Further Greenhouse Gas Emissions Analysis and Consideration of Waste Composition Scenarios' (document reference 9.6). The outcomes of these assessment support each other, whereby it is "*likely that GHG emissions from the Facility would be lower or similar when compared to landfilled waste streams.*"
1.5.139	**Conflicts with Local Development Plan Policies** 139 The grounds for refusal of the Wheelabrator Kemsley North incinerator proposal took account of, and afforded significant weight to, conflicts with the Kent Minerals and Waste Local Plan.	The application site is located in Lincolnshire. The application accords with development plan policy when read as a whole. Lincolnshire County Council's Planning and Regulation Committee determined (Lincolnshire Planning and Regulation Committee minutes 26 July 2021,) 'That **the Committee support this application** and includes an informative that the Committee would encourage the use of carbon capture if that was feasible'. LCC in its Local Impact Report (REP1-053, paragraph 6.1.3) states '*The 2016 Minerals and Waste Local Plan sets out that there is only a modest need for additional capacity for energy recovery from waste and the latest Lincolnshire Waste Needs Assessment (July 2021) confirms that there is no requirement for additional energy recovery in Lincolnshire until at least 2045. However, there is a national need for such facilities and Lincolnshire County Council accepts that the proposal does not compromise the policies of the Minerals and Waste Local Plan in terms of need and location*.'
1.5.140	140 Resonant with this, UKWIN's evidence regarding the lack of need for the proposed incineration capacity, combined with the	Background

ID	Written Representation	Applicant's Comments
	threat that the capacity poses to the waste hierarchy, and the adverse climate change impacts associated with this scheme, support the conclusions set out in Lincolnshire County Council's Relevant Representation that the development proposed for Boston would go against local development plan policies, including: a) Policy W1 of the Lincolnshire Minerals and Waste Local Plan; b) Policy SL3 of the Site Location document; and c) Policy DM2 Climate Change of the Minerals and Waste Local Plan.	The application complies with development plan policy when read as a whole. Lincolnshire County Council's Planning and Regulation Committee also reached this conclusion at its meeting (Lincolnshire Planning and Regulation Committee minutes 26 July 2021[3], 'That the Committee support this application and includes an informative that the Committee would encourage the use of carbon capture if that was feasible') . The Facility will contribute to both meeting a national need for new energy generation capacity and contribute to the provision of new capacity to recover energy from waste in a way consistent with the proximity principle as set out below, providing also for national self- sufficiency as set out in the planning statement (document reference 5.2, APP-031). Policy W1 Policy W1 of the Lincolnshire Minerals and Waste Local Plan 2016 sets out the context for locations for a range of new or extended waste management facilities within Lincolnshire where these are necessary to meet the predicted capacity gaps for waste arisings in the County up to and including 2031. The Site Location document identifies locations for waste management development. The Facility will contribute to both meeting a national need for new energy generation capacity and contribute to the provision of new capacity to recover energy from waste in a way consistent with the proximity principle, providing for national self- sufficiency. LCC in its Local Impact Report [REP1-053 paragraph 6.1.3] notes that '*The 2016 Minerals and Waste Local Plan sets out that there is only a modest need for additional capacity for energy recovery from waste and the latest Lincolnshire Waste Needs Assessment (July 2021) confirms that there is no requirement for additional energy recovery in Lincolnshire until at least 2045. However, there is a national need for such facilities and Lincolnshire County Council*

[3] *https://lincolnshire.moderngov.co.uk/ieListDocuments.aspx?CId=138&MId=5807*

ID	Written Representation	Applicant's Comments
		accepts that the proposal does not compromise the policies of the Minerals and Waste Local Plan in terms of need and location'. The Facility, as a nationally important infrastructure project, is open in the future to accept baled refuse derived fuel arising in Lincolnshire, as part of its 1.2 million tonne operational capacity. There remains a requirement for all such baled refuse to meet the RDF specification in terms of composition, baling and transport as appropriate, but such operational characteristics should not be problematic and would assist the project in further contributing towards achieving both national and local self - sufficiency. Policy SL3 The Lincolnshire County Council Waste Needs Assessment July 2021 identifies that there is no further requirement for new waste management capacity for Lincolnshire waste until 2045. The Facility development will not therefore compromise future requirements for waste sites identified by Lincolnshire Waste Local Plan policy W1. In its Local Impact Report (REP1-053, paragraph 6.1.3), Lincolnshire County Council states: 'However, there is a national need for such facilities and Lincolnshire County Council accepts that the proposal does not compromise the policies of the Minerals and Waste Local Plan in terms of need and location'. The development of the Facility, an energy recovery facility is consistent with policy SL3 and the potential waste management uses identified for the Riverside Industrial Estate site allocated by WA22-BO. The Facility therefore would not prejudice the site's allocation. Policy DM2 The Facility is not considered to conflict with the Proximity Principle or Lincolnshire Wase Local Plan policy DM2 or the plan when read as a

ID	Written Representation	Applicant's Comments
		whole. Lincolnshire County Council's Planning and Regulation Committee also reached this conclusion at its meeting on 26th July 2021 as referenced in the introductory section above and in its Local Impact Report (REP1 -053, paragraph 6.1.7). Article 16 of the EU Waste Framework Directive (2008/98/EC) in England provides for Principles of Proximity and Self Sufficiency and concerns the establishment of an integrated and adequate network of waste disposal and recovery installations of mixed municipal waste collected from private household sand other producers, taking into account best available techniques. Article 16 highlights that the network shall be designed to enable the Community as a whole to become self-sufficient in waste disposal and recovery taking into account geographical circumstances or the need for specialised installations for certain types of waste. Article 16 further provides that the network shall enable waste to be disposed of or recovered in one of the nearest appropriate installations, by means of the most appropriate methods and technologies, in order to ensure a high level of protection for the environment and public health. The DEFRA publication Energy from Waste - A Guide to the Debate (revised edition) (February 2014)[4] sets out succinctly the interpretation of the Proximity Principle. 'Councils have a duty to cooperate to ensure that waste needs across their respective areas are handled properly and appropriately. They need to have regard for the proximity principle, which requires all waste for disposal and mixed municipal waste (i.e. waste from households) to be recovered in one of the nearest **appropriate** facilities. However, this principle must not be over-interpreted. It does not require using the absolute closest facility to the exclusion of all other considerations.'

[4] *https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/284612/pb14130-energy-waste-201402.pdf*

ID	Written Representation	Applicant's Comments
		What is an 'appropriate' facility depends on factors including use of sustainable transport. The Facility is appropriate locationally given it will be accessed from the sea. The carriage of fuel by ship/ boat is encouraged NPS EN-3 (reference paragraph 2.5.25), which in respect to Biomass and Waste states: 'Government policy encourages multi-modal transport and the IPC should expect materials (fuel and residues) to be transported by water or rail routes where possible''. The DEFRA publication continues -'Where does the waste come from – the proximity principle[5] [Page 6]' further states: 'There is nothing in the legislation or the proximity principle that says accepting waste from another council, city or region is a bad thing and indeed in many cases it may be the best economic and environmental solution and/or be the outcome most consistent with the proximity principle. The ability to source waste from a range of locations/organisations helps ensure existing capacity is used effectively and efficiently, and importantly helps maintain local flexibility to increase recycling without resulting in local overcapacity.' The Facility, which provides for the recovery of energy from RDF transported by water is appropriately located and consistent with the Proximity Principle. The sourcing of RDF for the Facility is subject to letting of contracts, which is a commercial matter. RDF will be sourced from potential locations throughout the UK served by port facilities. It is helpful to refer to other determinations where the proximity principle has been considered. The decision of the Secretary of State regarding the 60 MW Lostock energy from waste generating station, confirmed that, for merchant facilities, where no contracts of waste have been obtained at the

[5] *Where does the waste come from – the proximity principle [Page 6.]*

ID	Written Representation	Applicant's Comments
		date of the application, the sourcing of fuel for the facility should be, as it is for the then fossil fuelled electricity generating stations, a matter of commercial judgment for the operator. Here the Inspector's report on the project[6] concluded: "the letting of contracts and hence the source of the waste, would be largely a commercial matter for the operators. This has been the view taken in recent decisions, which have not sought to constrain such processes." The Inspector also noted that "the waste to be used as a fuel arises everywhere". The Lostock decision was referenced in paragraphs 2.31 – 2.32 of the Proposed Ferrybridge Multifuel 2 (FM2) Order Ferrybridge Power Station Site, Knottingley, West Yorkshire Fuel Availability and Waste Hierarchy Assessment July 2014, considered as part of the ExA's findings, conclusions and recommendation in respect of the proposed generating station, known as Ferrybridge Multifuel2 (FM2) Power Station, File Ref: EN010061.
1.5.141	141 The applicant is asking for planning permission (via a Development Consent Order) to process waste from anywhere in the UK, yet they do not assess their proposal against the many local waste plans across the East Midlands, let alone across the whole of the UK.	The application is supported by a review of waste plans for waste planning authorities across the United Kingdom (document reference 5.8, APP-037 and document reference 9.5, REP1-018).
1.5.142	142 Because the applicant does not specify the areas from which they would expect to be obtaining waste to be used as feedstock it is not possible to evaluate all relevant local waste plans.	
1.5.143	143 As such, there is a realistic prospect that the proposed facility would conflict with the recycling and climate change ambitions of various Local Plans across the country.	

[6] *Application for consent to construct and operate an energy from waste-fuelled generating station at land formerly occupied by the Lostock Power Station, Lostock, Northwich, Cheshire, Letter from the Secretary of State at DECC to RPS, 2 October 2012.*

ID	Written Representation	Applicant's Comments
1.5.144	144 Given the exceptionally large proposed capacity (if it went ahead as proposed the Boston incinerator would become the largest incinerator in the UK) and given the requested unlimited geographic catchment, it appears wholly inadequate that the applicant's consideration of 'Waste Management Facilities in the Local Area' in Chapter 23 of their Environmental Statement covers a measly 10 kilometres, equivalent to only around a ten-minute drive from the proposed development site.	The proposed Facility is providing additional capacity for the UK to divert material from landfill and process RDF that is otherwise being exported overseas. The Applicant has provided further information on the potential sources of RDF at Deadline 1, see the Addendum to Fuel Availability and Waste Hierarchy Assessment (document reference 9.5, REP1-018). Modelling of waste catchments within 2-hour drive times of the indicative ports included in the ES has identified 10,437,000 tonnes of residual waste that is currently being landfilled that could be converted into RDF and transported to the proposed Facility.
1.5.145	145 It is normal for incinerator need assessments to consider all relevant waste management facilities located within a one-hour drive (isochrone), and some applicants have extended this to a two-hour isochrone.	
1.5.146	146 The applicant's approach excludes relevant nearby existing capacity, such as the 190,000 tonnes of capacity at the North Hykeham incinerator (around 56 kilometres away, i.e. a journey of less than an hour) and the 85,000 tonnes of capacity at the Peterborough incinerator (around 53 kilometres, or around a 55 minute drive from Boston).	
1.5.147	147 If the isochrone were to be extended to a two-hour drive time, then this would also scope in more than 2.3 million additional tonnes of existing capacity, including: 310,000 tonnes of capacity at the Eastcroft incinerator in Nottingham; a) 245,000 tonnes of capacity at the Sheffield incinerator; b) 56,000 tonnes of capacity at the Grimsby incinerator; c) 1,350,000 tonnes of combined capacity at the two Knottingley incinerators (Ferrybridge Multifuel 1 and 2); d) 250,000 tonnes of capacity at the Hull (Dalton Street) incinerator, and 93,600 tonnes of capacity at the Milton Keynes incinerator.	

Table 1-6 RSPB (REP1-060)

Section / Paragraph of RSPB Written Representations	Summary Heading	Applicant response
2. Summary of the RSPB's position with respect to the Application		
2.1 and 2.2		The Applicant stresses that the proposed Facility can play a role in the RSPB and other interested parties' pursuit of a coastal landscape-scale vision of ecosystem health for The Wash, through a) reducing reliance on the extraction of fossil fuels, b) no additional land or road haulage of RDF and aggregates during operation, and c) provision of a net gain in supporting habitat for birds in The Wash through management of land outside of the Facility itself.
2.3		The Applicant stresses that no damage or removal of habitat is foreseen within designated site or RSPB site boundaries due to any phase of the proposed development. It is acknowledged that there may be some functional connectivity between the SPA and the saltmarsh along The Haven and measures have been put in place to ensure that the functionality can be maintained through placement of roosting habitat in adjacent areas and habitat enhancement measures.
2.4		The Applicant has acknowledged all of the designations and status listed for the local region in this Written Representation, in the original Habitats Regulations Assessment (HRA) (ES Appendix 17.1 - Habitats Regulations Assessment (document reference 6.4.18, APP-111)).
2.5		The Applicant calls for objectivity regarding the condition of The Wash SSSI - the latest published, official condition assessment must form the basis for any assessment and the Examination. It is noted that the latest SSSI condition assessment, undertaken by Natural England in December 2019, for the SSSI units directly around the mouth of The Haven recorded these units as favourable. Cited "declines in number and increasing concern" for some features are anecdotal unless captured by the condition assessment. The Applicant also requests a citation for the source of the described declines in breeding redshank.
2.6		The Applicant has acknowledged the mechanisms of impact from development and disturbance on bird populations, via their immediate body condition and survival and via carryover effects on their condition upon entering the breeding season and their breeding success, in the HRA (ES Appendix 17.1 - Habitats Regulations Assessment (document reference 6.4.18, APP-111)) and the HRA Ornithology Addendum (document reference 9.13). Disturbance from vessel movements is a particular focus of the addendum to the HRA (ES Chapter 17 Marine and Coastal

Section / Paragraph of RSPB Written Representations	Summary Heading	Applicant response
		Ecology and Appendix 17.1 - Habitats Regulations Assessment - Ornithology Addendum (document reference 9.13, REP1-026)), specifically in Appendix A1.
2.7		The cited generic potential impacts of development are already assessed by the Applicant in the Environmental Statement (ES) (document reference 6.2.13, APP-051, document reference 6.2.15, APP-053, document reference 6.2.16, APP-054, document reference 6.2.17, document reference APP-055) and where necessary mitigation has been recommended within the updated Register of Environmental Actions and Commitments submitted at Deadline 1 (document reference 7.6, REP1-014) setting out all such commitments. WeBS Alerts for all occurrent species, including species accounts and implications, have been considered in Table 3-2 and section 3.2 of the ES Chapter 17 Marine and Coastal Ecology and Appendix 17.1 - Habitats Regulations Assessment - Ornithology Addendum (document reference 9.13, REP1-026).
2.8		The Applicant recognises the potential for localised areas of The Wash to hold disproportionate importance to some designated SPA feature waterbird species, and has used BTO WeBS and project-specific survey data to quantify relative importance of The Haven local area to SPA waterbirds and their vulnerability to/rate of disturbance in Appendix A1 to the Addendum to the ES and HRA (ES Chapter 17 Marine and Coastal Ecology and Appendix 17.1 - Habitats Regulations Assessment - Ornithology Addendum (document reference 9.13, REP1-026)).
2.9		The cited loss of habitat is to take place outside the boundary of designated sites (The Wash SPA/Ramsar/SSSI). Loss of roosting redshank from the location (Survey Sections A and B) is not a certain outcome as the species will have access to expanded roosting substrate within Section B downstream (Paragraphs 6.1.31 to 6.1.45 of the Addendum to the HRA (ES Chapter 17 Marine and Coastal Ecology and Appendix 17.1 - Habitats Regulations Assessment - Ornithology Addendum (document reference 9.13, REP1-026)).
2.10		The Applicant has collected two seasons of survey data for the spring passage, overwintering and breeding birds and one season of data for the autumn passage birds at the Application Area. Data has also been collected to survey disturbance at the mouth of The Haven for the baseline situation, information that was not available on commencing the Environmental Impact Assessment. At the time of survey design, data was available for the WeBS count sectors which included around the Mouth of The Haven and for Slippery Gowt Pits, which is close to the Principal Application Area. . The Applicant considers the geographic coverage of

Section / Paragraph of RSPB Written Representations	Summary Heading	Applicant response
		the baseline data collection to have been appropriately designed as it includes 1. the land and water adjacent to the proposed Facility and 2. the section of The Haven shipping channel that lies within the boundary of The Wash SPA/Ramsar/SSSI. These were considered to be the two critical geographic areas for assessing environmental impact and Likely Significant Effect for Appropriate Assessment for the HRA. During the initial development of the survey there was no information to indicate that there were any additional areas of importance for birds. This was also implied by the lack of any WeBS count sectors in the remainder of The Haven and the SPA boundary stopping short of the remainder of The Haven. The area of The Haven between the Application site and the mouth of The Haven was also considered in light of its habitats and width of The Haven. The interim section is narrow and does not have extensive areas of saltmarsh, it is also not recognised by any designations for its bird interest and has a footpath extending along the seawall along the stretch which has the potential for causing disturbance, particularly to roosting birds. Reference to the document produced by Natural England (2018) to provide an overview of the England Coast Path along this stretch does not identify any saltmarsh areas that were identified for exclusion zones for access and did not identify any sensitive bird areas that were not part of the survey or covered by the WeBS sectors. Should there be any birds using the interim areas they would only be subject to the increase in vessels of up to two additional large vessel movements per high tide period. Given that any birds using these areas are already subject to vessel movements along this stretch and remain in this location indicates that this level of increase would not cause them to leave the roost site. The comment concerning a lack of consideration of the full suite of conservation objectives of The Wash SPA/Ramsar/SSSI has been addressed previously by the Applicant in Comments on Relevant Representations (document reference 9.2, REP1-035), Table 1-3, row 1.
2.11		The Applicant has taken seriously the potential for impact on The Wash. A 'without prejudice' Derogation case is been prepared and will be submitted for Deadline 2. This documents the Alternatives Assessment (document reference 9.28) which includes for consideration of alternative locations. Options for compensation sites are also being investigated and are listed in the Compensation Report (document reference 9.30).
2.12		Noted by the Applicant.

Section / Paragraph of RSPB Written Representations	Summary Heading	Applicant response
2.13		The Applicant is investigating measures for biodiversity net gain. An update of the Outline Landscape and Ecological Mitigation Strategy (OLEMS) will be provided for Deadline 3. This will provide an update on the potential net gain sites but these sites will require further work and ongoing discussion during the examination process. It should be noted however, that Biodiversity Net Gain is not yet a statutory requirement and the Applicant is putting forward measures for biodiversity net gain as good practice.
2.14		The Applicant maintains the position that the Facility as assessed in the Environmental Statement, HRA and the addenda submitted at Deadline 1, does not stand to significantly impact on environmental features or have an Adverse Effect on Site Integrity of protected sites in the area.
2.15		The Applicant acknowledges that the Facility will increase the levels of disturbance. It should be noted that there is already disturbance to birds in this area, which has been highlighted by the survey work undertaken. The baseline impact causes some birds to relocate to alternative roost sites and it is expected that this would continue. The assessment has therefore considered the potential impact of additional levels of disturbance over the baseline in order to understand the potential to impact the features of interest. Noise, visual disturbance and lighting have been assessed as part of the Environmental Impact Assessment process.
3. Overview of the nature conservation interest of the area affected by the proposed Facility		
3.1 to 3.84		Paragraphs 3.1 to 3.84 are contextual and The Applicant notes this information.
3.2		The Applicant acknowledges the RSPB's acceptance that there will be no impacts on the Greater Wash SPA.
3.16		The Applicant acknowledges the RSPB's acceptance that there will be no impacts on the Greater Wash SPA.
3.21		The Applicant has since provided evidence of the availability of wetland habitat in and around the mouth of The Haven, at Deadline 1, in Figure 4-2 and Appendix A1 of Chapter 17 Marine & Coastal Ecology and Appendix 17.1 HRA - Ornithology Addendum (document reference 9.13, REP1-026). Appendix A1 of this document highlights species most prone to displacement, and quantifies for all SPA feature species the importance of the immediate area around The Haven to their Wash SPA populations. Figure 4-2 illustrates the peak counts of these species on WeBS sectors around the Haven, which demonstrate that there is ready capacity for

Section / Paragraph of RSPB Written Representations	Summary Heading	Applicant response
		surrounding wetland areas to hold numbers of each species equivalent to those recorded to have been present (and therefore 'available' to be disturbed) at the mouth of the Haven during project-specific surveys of disturbance from vessels. The Applicant acknowledges ecological consequences (survival and fitness) of displacement into potentially sub-optimal or low-preference areas of habitat in Appendix A1 species accounts, and outlines in each case how the probability and level of disturbance to each species does not lead to conclusion of an adverse effect on integrity.
3.37		Responses are covered within Section 7 below.
Table 2	Overview of the population targets and current status of species observed at the Application site and mouth of The Haven.	The Applicant queries the validity of the black-tailed godwit SPA population given at time of designation and citation. Percentage of UK population quoted in the same citation document (available at European Site Conservation Objectives for The Wash SPA - UK9008021 (naturalengland.org.uk)) does not align with this population size estimate, and suggests that either the percentage or the population size were incorrect by a factor of ten at citation. The Applicant requests Natural England address the error and clarify which specific variable is subject to error. The continued use of a potentially deflated SPA population size under the guise of an official figure creates confusion and overestimation of impact in assessments.
4. Overview of the Wetland Bird Survey data and its use in assessing impacts on The Wash		
4.1 to 4.11	Background on the Wetland Bird Survey, Conservation and Monitoring of Migratory Waterbirds and Alerts 2016/17 summary for The Wash SPA	Paragraphs 4.1 to 4.11 are contextual and The Applicant notes this information.
4.12	Table 6	Although the table in question is not identified, the Applicant presumes the table in question is Table 6.
4.13 to 4.19	Review of WeBS Alerts for species that could be significantly impacted by the Application	The Applicant highlights lack of concordance of key species between sections which could introduce confusion to Examination. The species highlighted in 3.27 that "[the RSPB] have concerns about" due to percentages observed in disturbance events are dark-bellied brent goose, shelduck, oystercatcher, black-tailed godwit, lapwing, golden plover, curlew, ruff, common tern and turnstone. Species cited in Table 6 as "potentially affected by the Application" are dark-bellied brent goose, shelduck, oystercatcher, black-tailed godwit, turnstone and redshank. The species

Section / Paragraph of RSPB Written Representations	Summary Heading	Applicant response
		addressed in 4.13 to 4.19 that "could be significantly impacted..." are dark-bellied brent goose, shelduck, curlew, black-tailed godwit, turnstone and dunlin. The Applicant maintains their position from Deadline 1 (Comments on Relevant Representations (document reference 9.2, REP1-035) (RR1-035, Table 1-3 Row 70)). WeBS Alerts for all recorded designated feature waterbird species have been considered in Table 3-2 and section 3.2 of the ES Chapter 17 Marine and Coastal Ecology and Appendix 17.1 - Habitats Regulations Assessment - Ornithology Addendum (document reference 9.13, REP1-026).
4.20	Review of WEBS Alerts for species that RSPB consider will not be significantly impacted at the Application site or mouth of The Haven	The Applicant agrees with the RSPB's consideration that the species set out in paragraphs 4.20 to 4.27 will not be significantly impacted at the Application Site or at the mouth of The Haven. WeBS Alerts concerning these designated SPA feature species were considered in section 3.2 but were not recorded in project-specific site surveys and so were screened out for Appropriate Assessment within ES Chapter 17 Marine and Coastal Ecology and Appendix 17.1 - Habitats Regulations Assessment - Ornithology Addendum (document reference 9.13, REP1-026).
4.28	Implications of WeBS Alerts	Noted and agreed. This is also acknowledged in full in section 3.2 of ES Chapter 17 Marine and Coastal Ecology and Appendix 17.1 - Habitats Regulations Assessment - Ornithology Addendum (document reference 9.13, REP1-026). The area with any potential for impact is a small localised area of The Wash and the WeBS data for these sectors have been reviewed in detail in Appendix A1 to determine the potential for impact.
4.29 and 4.30	Key WeBS sectors that are applicable to the assessment of the Boston Alternative Energy Facility	Data for all but two of the listed WeBS sectors was acquisitioned from the BTO by the Applicant. The exceptions were Freiston 30, which had last received survey coverage in 2008/9 and therefore could not provide up-to-date data, and Witham 21 which was only flagged as a sector requiring inclusion since the start of Examination (email from RSPB 05 October 2021). The analysis of the accessed WeBS data is provided in ES Chapter 17 Marine and Coastal Ecology and Appendix 17.1 - Habitats Regulations Assessment - Ornithology Addendum (document reference 9.13, REP1-026).
5. The RSPB's engagement with the Application		
5.1 and 5.2	RSPB's engagement with the Application through 2019	Noted by the Applicant. The RSPB is thanked for their constructive input to date and bringing to the Applicant's attention their concerns.

Section / Paragraph of RSPB Written Representations	Summary Heading	Applicant response
5.3		Since the discussion between the Applicant and RSPB in September 2019, the Applicant has commissioned surveys to quantify waterbird usage in the vicinity of the proposed wharf development site and studies of the behavioural response of birds using the mouth of The Haven over the high tide period to vessel traffic. The Applicant has also undertaken an analysis of waterbird WeBS count for those parts of The Haven included in the WeBS core count coverage in Chapter 17 Marine and Coastal Ecology and Appendix 17.1 - Habitats Regulations Assessment - Ornithology Addendum (document reference 9.13, REP1-026) Appendix A1.
5.4		Noted.
5.5	RSPB's engagement with the Application through 2020	Noted by the Applicant. RSPB is thanked for their further engagement through 2020 and their clarity on what they consider to be the most important issues.
5.6		See response to 5.5 above. An HRA addendum (notably ES Chapter 17 Marine and Coastal Ecology and Appendix 17.1 - Habitats Regulations Assessment - Ornithology Addendum (document reference 9.13, REP1-026)) has been issued at Deadline 1 which provides additional data and assessment of potential impacts to address the key concerns raised.
5.7	RSPB's engagement with the Application through 2021	Noted by the Applicant. RSPB is thanked for their continued engagement and advice through 2021. The Applicant is disappointed that the RSPB has been unable to find any opportunities for compensation measures (noting that compensation could be Biodiversity Net Gain if compensation is not required) to be sited on either of the two nearby RSPB reserves. Given that these reserves cover a high proportion of the estuarine habitat close to the mouth of The Haven, this decision severely constrains and potentially significantly reduces the potential for practical measures to be deployed that would reduce vessel disturbance (both existing and future) at the mouth of The Haven.
5.8		RSPB's continuing concerns are noted. Further information was submitted at Deadline 1 by the Applicant (notably ES Chapter 17 Marine and Coastal Ecology and Appendix 17.1 - Habitats Regulations Assessment - Ornithology Addendum (document reference 9.13, REP1-026)) which the RSPB will not have had chance to review for their submission.

Section / Paragraph of RSPB Written Representations	Summary Heading	Applicant response
6. The RSPB's concerns regarding the quality and limitations of the survey data collected to inform conclusions about the impact of the Facility on The Wash SPA/Ramsar/SSSI		
6.1	Failure to collect bird data to inform the PEIR	The Applicant recognises that the consultation process identified a number of information gaps and shortcomings of varying levels of importance in the baseline information available to inform the assessment of the proposed development. In response to this, the Applicant has commissioned surveys to quantify waterbird usage in the vicinity of the Principal Application Site and studies of the behavioural response of birds to vessel traffic over the high tide period at the mouth of The Haven.
6.2	Limited bird data gathered to inform the Application	Further surveys have been undertaken of the vessel disturbance at the mouth of The Haven, and these are on-going until end of November 2021. The Applicant has commissioned monthly bird surveys of north-west end of The Haven in the vicinity of the Principal Application Site. These were conducted from August to October 2021 and the report will be circulated by Deadline 3. The central part of The Haven (i.e., away from the mouth and the wharf) was not identified as an area with potential concerns for bird disturbance. For this reason bird surveys were not commissioned for these parts. However, it is correct that these central parts of The Haven have not been regularly counted as part of the national coordinated waterbird counts (WeBS). As such there is, regrettably, an information gap regarding the usage of these central parts of The Haven by waterbirds. It is relevant to point out that these central parts (and the northwest end) are not within the boundary of The Wash SPA/SSSI. The lack of WeBS coverage and lack of inclusion in the SPA/SSSI designations of these part of The Haven presumably reflect low ornithological importance. Evidence that at least some of these parts have low importance is also found in the 2005-2010 Management Plan for the Havenside Local Nature Reserve (Lincolnshire County Council 2005) (this includes some of the parts of The Haven lacking waterbird WeBS counts). This does not list any bird species as having importance for the reserve; indeed, it would appear that the reserve's primary interests are botanical.

Section / Paragraph of RSPB Written Representations	Summary Heading	Applicant response
		The Applicant maintains that the potential for project vessels transiting through the central part of The Haven to cause additional significant disturbance to birds is likely to be limited as discussed in 2.10 above.
6.3		Noted by the Applicant. See response to paragraph 2.10. above.
6.4	Limitations of the available evidence to inform the Application	Noted by the Applicant. See response to paragraph 2.10 above.
6.5		Noted by the Applicant. The Applicant agrees that their commissioned studies have identified an existing issue with vessel disturbance at the mouth of The Haven and have identified the regular presence of moderate numbers of some non-breeding waterbird species at the proposed development site (i.e., the wharf site) well outside The Wash SPA/SSSI boundary. The results of the survey work have been circulated to the stakeholder group as it has become available. Presentations of the data have also been held with the stakeholder group.
6.6		The Applicant has recently undertaken further analysis of the results of baseline vessel disturbance study and WeBS count data and prepared an updated assessment of the potential additional mouth of The Haven vessel disturbance that could result in the development went ahead. This is presented in Appendix 1 of Habitats Regulations Assessment - Ornithology Addendum (document reference 9.13, REP1-026). It should be noted that the baseline study of vessel disturbance was undertaken to characterise baseline conditions, and not to assess the existing levels of disturbance against the SPAs conservation objectives. The Applicant limits the assessment of vessel disturbance at the mouth of the Haven presented in Appendix 1 of Habitats Regulations Assessment - Ornithology Addendum (document reference 9.13, REP1-026) to the predicted additional disturbance that would result if the development of the Facility goes ahead.
6.7	Note about cold weather periods	Noted by the Applicant. The Applicant is aware of the potential physiological stress that severe weather, such as periods of prolonged freezing, can cause birds that feed on inter-tidal habitats and the increase in sensitivity to disturbance that this can cause. The Applicant also recognises the potential value of agreements for voluntary restraints of certain human activities such as wildfowling during periods of defined severe weather. Extreme weather events have been discussed further in the HRA Ornithology Addendum (document reference 9.13, REP1-026).

Section / Paragraph of RSPB Written Representations	Summary Heading	Applicant response
6.8		The Applicant requests that RSPB make available any data they hold that shows that The Haven has additional importance to wintering waterbirds during periods of severe weather. Extreme weather events have been discussed further in the HRA Ornithology Addendum (document reference 9.13, REP1-026).
6.9		Noted by the Applicant. Extreme weather events have been discussed further in the HRA Ornithology Addendum (document reference 9.13, REP1-026). The Applicant agrees that it is best practice to adopt a precautionary approach where there are uncertainties over an assessment.
7. The RSPB's concerns regarding impacts arising from the Application		
7.1	Introduction to the RSPB's concerns	While the Applicant welcomes the inventory of documents, the Appendix in question is redacted in the copy on the PINS Project Webpage.
7.2		Noted by the Applicant. Lighting is designed to minimise any disturbance and will be targeted to light up the vessel and the wharf and not the surrounding areas.
7.3		Potential impacts from the Facility and associated vessel traffic regarding water quantity and quality are discussed in the original ES Chapter 15 Marine Water and Sediment Quality (document reference 6.2.15, APP-053) and Chapter 17 Marine and Coastal Ecology (document reference 6.2.17, APP-055). The Applicant submitted an Outline Surface Water Drainage Strategy (document reference 9.4, REP1-017) at Deadline 1. The Applicant does not consider there to be a route to impact on designated sites and site features from the proposed Facility via quality or quantity of water in the terrestrial drainage system, therefore this was not included in ES Appendix 17.1 Habitats Regulations Assessment (HRA) (document reference 6.4.18, APP-111). Pollution from vessels would be subject to control measures under the Marine Pollution Contingency Plan, secured by condition 16 of the deemed marine licence in Schedule 9 to the draft DCO (document reference 2.1(1), REP1-003).
7.4		Noted by the Applicant.

Section / Paragraph of RSPB Written Representations	Summary Heading	Applicant response
7.5-7.6	Loss of saltmarsh and intertidal mudflat habitat at the wharf site	Saltmarsh quality is assessed within ES Chapter 17 Marine and Coastal Ecology (document reference 6.2.17, APP-055) and the ES Appendix 17.1 HRA (document reference 6.4.18, APP-111) using the most recently available evidence at the time. As stated in Addendum to Chapter 17 and Appendix 17.1 - Benthic Ecology, Fish and Habitats' (document reference 9.15, REP1-028) submitted at Deadline 1, "the potential to change [saltmarsh condition] from poor condition to moderate will be considered in the updated OLEMS document to be submitted to the Examination at Deadline 3 which will include an update to the biodiversity net gain calculation." The surveys undertaken for the Environment Agency included monitoring survey undertaken in 2017 which confirmed the status of the saltmarsh as of poor quality following previous surveys undertaken over a period of six years. It is recognised that the more extensive area of marsh adjacent to the Principal Application Area is more diverse and more likely to be of interest than the narrow strip of marsh affected by the proposed works. This area would not be significantly affected by the works.
7.7-7.8		Noted by the Applicant. The saltmarsh as a habitat for birds has been fully considered.
7.9		The Applicant does not consider that disturbance of birds from mudflats constitutes a 'loss', by definition, of available habitat, as 'loss' implies a permanent or long-term removal whereas disturbance is temporary. However, the Applicant recognises that displacement from habitat can have effects on birds that are akin to habitat loss. The activities potentially reducing availability of mudflat through disturbance are by nature confined to lower tide periods where mudflat is exposed and potentially available for foraging, and to months when non-breeding waterbirds are present. Such activities include on-site construction noise likely to be intermittent (and small [fishing] vessels unrelated to the proposed Facility). The Applicant therefore maintains that the area of mudflat lost is represented by the area within the permanent footprint of the proposed wharf construction as detailed in the ES Chapter 17 Marine and Coastal Ecology (document reference 6.2.17, APP-055). Additionally, the Applicant reiterates that the habitat loss is outside the boundaries of all protected sites, in particular well outside The Wash SPA/SSSI boundary.
7.10-7.11	Impact to foraging birds associated with The Wash SPA/Ramsar/SSSI	The Applicant confirms that the methodology for wintering bird counts at the site follows established methods and visit frequency used by the BTO WeBS Core Counts, and that two winter seasons of surveys have been carried out as now

Section / Paragraph of RSPB Written Representations	Summary Heading	Applicant response
		reported in the Ornithology Addendum to the ES and HRA (ES Chapter 17 Marine and Coastal Ecology and Appendix 17.1 - Habitats Regulations Assessment - Ornithology Addendum (document reference 9.13, REP1-026)).
7.12-7.13		The Applicant confirms that noise disturbance by vessels at the proposed Facility is not expected during low water periods, and so is not expected to be a factor in loss of feeding area availability. Maintenance dredging effects are covered in the original ES Chapter 17 Marine and Coastal Ecology (document reference 6.2.17, APP-055). Activities at the wharf closest to the area that birds will use for roosting and foraging and feeding during low water periods is the aggregate wharf and is only predicted to have two vessels a week at the wharf. The Waterbird Disturbance Mitigation Toolkit (Cutts et al. 2013 / Cutts, N, Hemingway, K & Spencer, J (2013). *Waterbird Disturbance Mitigation Toolkit Informing Estuarine Planning & Construction Projects Version 3.2*, March 2013 Copyright University of Hull), suggests that redshank have high resilience to visual disturbance and are unlikely to be excluded from foraging habitat close to plant or workers. The level of disturbance is therefore expected to be low.
7.14		Impacts on foraging and roosting birds, and consideration of provisions to mitigate loss of the roost site in Section A, are updated in Chapter 17 Marine and Coastal Ecology and Appendix 17.1 - Habitats Regulations Assessment – Ornithology Addendum (document reference 9.13, REP1-026). Area A and B are adjacent to each other and subject to very similar conditions. The redshank have been observed to favour roosting on the artificial habitat that is in front of the saltmarsh in both Areas A and B. This habitat occurs will be increased in width in Area B to provide additional roosting habitat.
7.15		The without prejudice derogation case will include for compensation for habitat loss and take account of bird species that could be displaced.
7.16-7.17		The area of mudflat and saltmarsh that would be lost from The Haven is minimal. This has been assessed in ES Chapter 17 Marine and Coastal Ecology (document reference 6.2.17, APP-055). The intertidal area would remain albeit with a different habitat type and vessels aground on the mudflat at low tide.
7.18-7.21	Loss of redshank roost and foraging area	The Applicant agrees that the Application Site could potentially provide a functional area of habitat for some of the SPA birds. However, not all of the birds using this area are likely to be SPA populations. It is also clear from the data that Area B, which will remain, provides habitat for a greater number of birds. Area A does not provide a consistent resource for high numbers of birds, either at low or high tide.

Section / Paragraph of RSPB Written Representations	Summary Heading	Applicant response
7.22		The Applicant acknowledges a restore objective is in place for redshank although this does not reflect the BTO WeBS information for The Wash: The most recent mean 5-year annual WeBS peak of redshank for The Wash exceeds 5,000 birds (and therefore is demonstrably greater than the target 4,331 birds), there is no WeBS Alert for the species, and there are not considered to be site-specific pressures in driving their Wash population trend. The data used to set the restore objective can be viewed on the WeBS data and clearly shows that around the time of designation there was a peak for redshank, which is part of a fluctuating cycle of abundance for this species. In addition, the whole Wash trend is showing a similar trajectory to the trend for Great Britain.
7.23		Loss of roosting redshank from Survey Sections A and B is not a certain outcome and the species will have access to enhanced and extended roosting habitat within Section B downstream through the Habitat Mitigation Area.
7.24		As can be seen from the data collated during the surveys, as summarised in RSPBs written representations, the numbers of redshank using Areas A and B fluctuate widely. It is therefore expected that there are alternative roosting sites that the birds use that can also support such high numbers. Alternative roost locations are being investigated as part of the proposed net gain for the project.
7.25		The sites being investigated to provide additional roosting locations are being considered in light of what redshank are using to roost at the existing and adjacent roosting location(s).
7.26		Counts of redshank, impacts on roosting birds, and consideration of provisions to mitigate loss of the roost site in Section A, have received updated consideration in Chapter 17 Marine and Coastal Ecology and Appendix 17.1 - Habitats Regulations Assessment – Ornithology Addendum (document reference 9.13, REP1-026).
7.27-7.28	Mitigating impacts to the redshank roost	The Applicant does not consider it necessarily the case that provision of habitat for redshank should be defined as compensation, especially as no Adverse Effect On Site Integrity has been concluded to The Wash SPA non-breeding redshank feature. The Applicant highlights that consideration of provisions for redshank is updated in Chapter 17 Marine and Coastal Ecology and Appendix 17.1 - Habitats Regulations Assessment – Ornithology Addendum (document reference 9.13, REP1-026). The rocks to be placed to provide additional roosting location would be placed in front of rocks already in this location and are not a new feature in this area.

Section / Paragraph of RSPB Written Representations	Summary Heading	Applicant response
7.29-7.30		The Applicant agrees that the outlined characteristics for an alternative roost are essential for effective provision for waterbirds. The Applicant highlights that the Habitat Mitigation Area lies within the Order limits of the Application Site and so is secured, and the measures in this area are included in the OLEMS which is secured by Requirement 5 of the draft DCO. Further information on roost design will be included in the updated OLEMS to be submitted at Deadline 3.
7.31 to 7.38	Construction and operational noise – effect of noise on birds using The Haven, definitions of daytime and night-time , impulsive noise disturbance threshold	Piling is subject to a seasonal restriction to avoid overwintering periods for birds. There is also proposed monitoring of noise levels with regard to a threshold for birds at which noisy activities would be stopped. The threshold is to be agreed with Natural England but is expected to be similar to that used for groundwork investigations undertaken by the Environment Agency in the localised area. Noise impacts are addressed in the ES Chapter 17 Marine and Coastal Ecology.
7.39	Impulsive noise disturbance threshold	The Applicant acknowledges the RSPB's preference for a specifically quantitative analysis of noise levels during construction and operation to inform the HRA and its worst-case scenario (WCS). However, the Applicant stresses that the presence and potential impacts of construction and operation-phase noise have already received consideration within the HRA (ES Appendix 17.1, document reference 6.4.18, APP-111), the Addendum to ES Chapter 17 and Appendix 17.1 - Marine Mammals (document reference 9.14, REP1-027) and Chapter 17 Marine and Coastal Ecology and Appendix 17.1 - Habitats Regulations Assessment - Ornithology Addendum (document reference 9.13, REP1-026) to the full extent necessary to inform conclusions regarding adverse effect on integrity.
7.40-7.44	Lack of noise maps to understand sound levels along The Haven	Noise monitoring and thresholds will be developed further for the updated OLEMS including noise contour plots.
7.45	Consideration of noise associated with the operation of the Wharf	Noise from the wharf and vessels during construction phase is considered for birds and marine mammals in paragraphs 17.8.65 to 17.8.91 of the ES Chapter 17 Marine and Coastal Ecology (document reference 6.2.17, APP-055) and paragraphs A17.6.4 to A17.6.12 of ES Appendix 17.1 HRA (document reference 6.4.18, APP-111). Operational noise is considered in paragraphs 17.8.204 to 17.8.206 of the ES Chapter 17 and paragraphs A17.6.23 to A17.6.24 of ES Appendix 17.1 HRA. Noise monitoring and thresholds will be developed further for the updated OLEMS.
7.46		Noted by the Applicant. Noise contour plots will be developed and included in the updated OLEMS.

Section / Paragraph of RSPB Written Representations	Summary Heading	Applicant response
7.46 [sic]	Proposed mitigation of noise impacts during construction	The noise monitoring and thresholds specifically for this project will be developed further in the updated OLEMS document.
7.48		Other sources of (lower level) noise are not explicitly outlined or discussed by the Applicant as they are not considered a significant factor in assessment of impacts on birds outside the boundary of protected sites.
7.49		Paragraph 17.8.77 of the ES Chapter 17 Marine and Coastal Ecology (document reference 6.2.17, APP-055) details the precedent successful use (Environment Agency 2019, Boston Barrier 2019 Survey Report) of a radius of 500 m (i.e. a much larger monitoring area than the currently proposed 250 m distance) for mitigating against disturbance to foraging waterbirds, and the Environment Agency's suggestion from bird monitoring that, "250 m is a more reasonable distance to consider potential disturbance effects of GI (geotechnical investigation) activities on non-breeding waterbirds. There was no evidence of any visual or noise disturbance affecting birds over this distance." The Applicant therefore considers the approach, in principle, to be sound. The Applicant acknowledges that absence of birds during periods of in-progress construction activity may in fact have a causal relationship, but also that this is impossible to either confirm or rule out on a case-by-case basis. The scale at which birds would be excluded can be seen in the counts of waterbirds present during baseline surveys and for the vast majority of species the numbers present are not significant from a Wash SPA population perspective (less than 1% of Wash SPA population, see Chapter 17 Marine and Coastal Ecology and Appendix 17.1 - Habitats Regulations Assessment – Ornithology Addendum (document reference 9.13, REP1-026)). The Applicant considers that the measure will seldom be triggered due to counts of birds present being low, but when used will see a successful reduction in disturbance to waterbirds. The Applicant does not consider it proportionate that broad changes to permitted activities be introduced for the Haven area as a result of project-specific baseline survey data.
7.50		The noise monitoring and thresholds specifically for this project will be developed further in the updated OLEMS document..
7.51	Conclusions regarding the impact of noise associated with construction and operation of the Facility	The noise monitoring and thresholds specifically for this project will be developed further in the updated OLEMS document.
7.52		The location of the roosting areas and the proposed works have been assessed in relation to distances for potential disturbance. This is reported in the Chapter 17

Section / Paragraph of RSPB Written Representations	Summary Heading	Applicant response
		Marine and Coastal Ecology and Appendix 17.1 - Habitats Regulations Assessment – Ornithology Addendum (document reference 9.13).
7.53		The Applicant agrees and considers the mitigation measure to be demonstrably suitable with applied precedent in the local area. The noise monitoring and thresholds specifically for this project will be developed further in the updated OLEMS document.
7.54-7.55	Visual disturbance on birds using The Haven adjacent to the Application site	Noted by the Applicant. The Applicant maintains that the evidence base, such as the Waterbird Disturbance Mitigation Toolkit (Cutts et al. 2013), suggests that redshank have high resilience to visual disturbance and are unlikely to be excluded from foraging habitat close to plant or workers.
7.56		Noted by the Applicant.
7.57	Clarity on the numbers of vessels using the wharf	The Applicant highlights that the quantitative baseline and worst-case-scenario vessel numbers and transits are clarified as of Deadline 1 in section 4.1 of Chapter 17 Marine and Coastal Ecology and Appendix 17.1 - Habitats Regulations Assessment – Ornithology Addendum (document reference 9.13, REP1-026).
7.58		Vessel movements quoted encompass transits relating to both RDF and aggregate.
7.59		This question has been addressed at Deadline 1 in row 84 of Table 1-3 of Comments on Relevant Representations (document reference 9.2, REP1-002). Further additional work on the turning of BAEF vessels is presented in the Navigation Risk Assessment (document reference 9.27) submitted at Deadline 2. It should be noted that the use of the wet dock at the Port of Boston will be made available and utilised for approximately 50% of vessels requiring turning (as confirmed by the Port of Boston).
7.60	Visual disturbance arising from construction and operation activities at the Application Site	Noted. The Applicant also highlights that the species for which The Haven adjacent to the proposed Facility is recorded to be of higher importance (as measured by % of The Wash SPA estimated populations) (redshank, ringed plover) are documented by Cutts et al. (2013) to be largely tolerant of visual disturbance from construction and many are furthermore tolerant of noise stimuli.
7.61	Impact of vessel movements on birds at wharf area	The Applicant agrees that the baseline situation has an impact on birds which are disturbed by vessel movements. This seems to occur due to all types of vessel. .The birds are however still using this area but it is not known how much of an effect this has had since the vessels started using The Haven. The assessment is

Section / Paragraph of RSPB Written Representations	Summary Heading	Applicant response
		about whether the increase over baseline levels is likely to cause a significant change.
7.62		Noted. The assessment is focussing on vessel movements over and above the baseline levels. There is expected to be an additional number of vessel movements up to 2 movements per tide as a result of the operational phase. This increase is small compared to the number of all vessels using The Haven on a daily basis.
7.63		Noted. The Applicant confirms that these distances are similarly reported at Deadline 1 in Chapter 17 Marine and Coastal Ecology and Appendix 17.1 - Habitats Regulations Assessment – Ornithology Addendum (document reference 9.13, REP1-026).
7.64-7.65		Noted by the Applicant. Publications by N Burton and BTO on the Cardiff Bay waterbirds have been key resources in the Applicant's assessment.
7.66		The Applicant agrees and considers that a site-specific picture of waterbird responses to disturbance factors has been collected, both at the Application Site and within the sub-area of the designated site (The Wash SPA/Ramsar/SSSI) through which project vessels would pass.
7.67	Visual disturbance at the mouth of The Haven and its approaches	The Applicant agrees with RSPB that there is significant existing vessel activity in The Wash and that this can cause disturbance of birds. The Applicant has presented a detailed analysis of the frequency and consequence of existing vessel disturbance at the mouth of The Haven in Appendix 1 of Habitats Regulations Assessment - Ornithology Addendum (document reference 9.13, REP1-026). The Applicant also agrees that conclusions relating to vessel disturbance at the mouth of the Haven is set in the context of the SPA conservation objectives and Natural England's Supplementary Conservation Advice relating to this. The assessment of vessel disturbance presented in Appendix 1 of the Ornithology Addendum only considers the additional disturbance predicted to occur as a result of the proposed development. It makes no attempt to consider whether the existing (baseline) vessel disturbance compromises The Wash SPA conservation objectives. The Applicant notes that WeBS Alerts are not mentioned in Natural England's Supplementary Conservation Advice on conservation objectives for The Wash

Section / Paragraph of RSPB Written Representations	Summary Heading	Applicant response
		SPA. However, WeBS alerts have been used to provide information to support the assessments undertaken for the Facility.
7.68		The Applicant agrees with RSPB that the existing vessel disturbance of birds at the mouth of the Haven has not previously received the attention it merits and that as a consequence its potential importance may have been under appreciated. In recognition of this the Applicant has commissioned surveys to collect systematic data on baseline vessel disturbance at the mouth of The Haven and presented a quantified analysis of baseline disturbance in Appendix 1 of Habitats Regulations Assessment - Ornithology Addendum (document reference 9.13, REP1-026).
7.69		The Applicant notes that many of recommendations in 2015 *Wash Wader Decline* report have not been taken forward. The assessment has considered where there have been declines in bird numbers and whether these have been in line with the regional or national trends. This is discussed further in the Habitats Regulations Assessment - Ornithology Addendum (document reference 9.13, REP1-026).
7.70		Noted by the Applicant. The Applicant would also like to point out that there are no local targets with respect to bird numbers for different local areas within The Wash, only for The Wash as a whole. This is relevant because The Wash covers a very large area (615 km^2) and the potential vessel disturbance from the proposed development would be highly localised.
7.71	Clarity on vessel movements on rising and falling tides along The Haven and within The Wash	Noted by the Applicant. Fundamentally, vessel movements will be restricted to one to two hours before high tide to 1.5 hours after the high tide period, when water depths in The Haven are sufficient for vessel transit, and for most species (especially waders) this coincides with the period when intertidal feeding grounds are covered by water and thus birds are generally roosting. While some disturbance or displacement of foraging birds cannot be ruled out, this is likely to be of relatively low importance compared to disturbance of roosting birds.
7.72		Noted by the Applicant. The Applicant agrees that this could be included in monitoring and will be considered further.
7.73	Impact from pilot vessels	The Applicant agrees that baseline observation demonstrate that activity by pilot vessels pilot can lead to bird disturbance. The Applicant recognises that speed restrictions on pilot vessels are likely to be effective at reducing disturbance by pilot vessels but that this is outside of the control of the Applicant. The assertion that pilot vessel activity was formerly greater is based on the assumption that there is likely to be a strong positive and causative relationship
7.74		

Section / Paragraph of RSPB Written Representations	Summary Heading	Applicant response
		between cargo vessel activity and the amount of pilot vessel activity required to ensure the safe passage of these cargo vessels. The number of pilot vessels does not corelate directly to the number of cargo vessels as the pilot vessel just takes more pilots out to the cargo vessels rather than there being more pilot vessels. There are only exceptional cases where two pilot vessels would be needed.
7.75		Noted by the Applicant. The operation of the Facility will not require pilot boats to operate outside of their current operational periods as the transiting of BAEF vessels will be the same as for the current commercial vessels using The Haven (restricted by high water times).
7.76	Assessing impacts of vessel movements across the tidal cycle	Noted by the Applicant. A more detailed analysis of the results of baseline vessel disturbance study is presented in Appendix 1 of Habitats Regulations Assessment - Ornithology Addendum (document reference 9.13, REP1-026).
7.77		The Applicant agrees that night-time observations on baseline vessel disturbance are desirable but point out the practical difficulties of observing birds during the hours of darkness. The assessment carried out assumes that night-time disturbance is similar to that which occurs during the day because many of the shorebird species in question can undertake nocturnal roosting and foraging (Rogers 2003, Lourenço *et al.* 2008). While there is often a difference in sites selected for these activities between night and day (Rogers 2003, Jourdan *et al.* 2021), it is precautionary to assume the site has suitability for some individuals and species of the relevant waterbird assemblage at both day and night time. Previously, N. Burton and the BTO's research of effects of the Cardiff Bay Barrage on redshank has highlighted nocturnal foraging in areas of mudflat which were not used during the day when disturbance [from aircraft and noise] was higher (Burton *et al.* 2003).
7.78	Assessing the impact of successive vessel movements	Noted, the Applicant agrees that the paragraph under discussion does not clearly describe the situation. The analysis of the results of baseline vessel disturbance study is presented in Appendix 1 of Habitats Regulations Assessment - Ornithology Addendum (document reference 9.13, REP1-026) shows that repeat disturbance events (i.e. within the same high tide period) were sometimes observed for some species. It should be noted that the baseline study of vessel disturbance was undertaken to characterise baseline conditions, and not to assess if the existing (baseline) levels of vessel disturbance are against the SPA's conservation objectives. It is not the

Section / Paragraph of RSPB Written Representations	Summary Heading	Applicant response
		Applicant's responsibility to assess baseline disturbance or make a judgement as to whether or not this may contravene the SPA conservation objectives. The Applicant understands that this responsibility falls to Natural England and that any failure to meet conservation objectives should be apparent through Natural England's programme of regular site conditioning monitoring. The Applicant limits the assessment of vessel disturbance at the mouth of The Haven to the predicted impact of the additional disturbance that would result if the proposed development goes ahead.
7.79		The analysis of the results of baseline vessel disturbance study presented in Appendix 1 of Habitats Regulations Assessment - Ornithology Addendum (document reference 9.13, REP1-026) shows that it is the case that in the great majority of incidents of disturbance observed, the birds affected were able to relocate to an alternative location where they resumed roosting behaviour. It is acknowledged that repeat disturbance was sometimes observed and that some species are more susceptible to this than others. The Natural England's guidance on the SPA conservation objectives defines the circumstances under which disturbance should be considered significant. The Applicant asserts that disturbance that does not categorise as significant according to the definitions in the NE guidance is necessarily acceptable, as it would not contravene the SPA conservation objectives. The Applicant has based the assessment of predicted additional vessel disturbance in Appendix 1 to the Ornithology Addendum on NE's conservation objectives guidance. The Applicant also acknowledges that even if the additional disturbance is deemed acceptable, any additional disturbance is nevertheless undesirable and should be avoided or minimised as far as is reasonably practical. Again, the Applicant wishes to point out that the assessment of vessel disturbance at the mouth of The Haven set out in Appendix 1 of Habitats Regulations Assessment - Ornithology Addendum (document reference 9.13, REP1-026)) is limited to consideration of the additional disturbance that would result from the proposed development
7.80		A more detailed assessment of the vessel disturbance observations has since been undertaken and is presented in Appendix 1 of the Habitats Regulations Assessment - Ornithology Addendum (document reference 9.13, REP1-026). This shows that the baseline level of vessel disturbance at the mouth of The Haven is high for some species either in terms of the frequency (proportion of high tides with

Section / Paragraph of RSPB Written Representations	Summary Heading	Applicant response
		disturbance) or the proportion of the SPA population affected, or both. The Applicant agrees with RSPB that repeated disturbance (i.e., within the same high tide period) materially contributes to the overall levels of baseline disturbance.
7.81		The Applicant recognises that an appropriate degree of precaution in light of uncertainty is best practice. The meaning of the sentence "*There is a trend towards birds being displaced by successive disturbance events, but there are occasions where birds displaced are equivalent or greater than on the first event (29% of events).*" is not clear.
7.82	Consideration of the number of birds using The Wash SPA	The Applicant agrees that the assessment of impacts should consider the conservation objectives for The Wash SPA and the supplementary Conservation Advice. The Applicant has examined these and did not find specific targets concerning "*maintaining or restoring the distribution of qualifying features*" (i.e. species) relating to the mouth of The Haven locality. Indeed, the Applicant is unaware of documents that present evidence that the current distribution of qualifying features in the mouth of the Haven locality is different to that at the time of SPA citation. To help identify whether restoring the distribution of any qualifying species is a relevant consideration, the Applicant requests that RSPB make available any evidence it holds that shows the current distribution of SPA qualifying species using the mouth of The Haven locality is materially different to what it was formerly (i.e. at the time of SPA citation).
7.83		The Applicant agrees on the value of establishing the baseline importance of the mouth of The Haven locality to each SPA qualifying feature. An analysis of WeBS count data for the mouth of the Haven and wider local area has recently been completed by the Applicant and is provided in Appendix 1 of Habitats Regulations Assessment - Ornithology Addendum (document reference 9.13, REP1-026).
7.84		The relevance of an 800m buffer is questioned, as this distance is greater than the distance at which most species are likely to show a significant disturbance response (for example see, "Cutts, N, Hemingway, K & Spencer, J (2013). *Waterbird Disturbance Mitigation Toolkit Informing Estuarine Planning & Construction Projects Version 3.2*, March 2013 Copyright University of Hull" https://gat04-live-1517c8a4486c41609369c68f30c8-aa81074.divio-media.org/filer_public/8f/bd/8fbdd7e9-ea6f-4474-869f-ec1e68a9c809/11367.pdf) It is acknowledged that WeBS count sector coverage for those parts of The Haven that lie outside The Wash SPA /SSSI boundary is largely lacking. The fact that

Section / Paragraph of RSPB Written Representations	Summary Heading	Applicant response
		these areas were excluded from the SPA /SSSI presumably reflects that the designating authority had knowledge that bird numbers using these parts were too low to merit designation.
7.85		The review of WeBS data for The Haven count sectors is presented in Appendix 1 of Habitats Regulations Assessment - Ornithology Addendum (document reference 9.13, REP1-026).
7.86	Assessing the effect of displacement on qualifying features of The Wash SPA/Ramsar	The Applicant agrees that the potential for additional vessel movement to lead to redistribution of qualifying species roosting at the mouth of The Haven is a key issue. An assessment of the potential for additional vessel disturbance at the mouth of The Haven to compromise The Wash SPA's conservation objectives is presented in Appendix 1 of Habitats Regulations Assessment - Ornithology Addendum (document reference 9.13, REP1-026). The Applicant asserts that NE's Supplementary Conservation Advice regarding the conservation objectives provides a good framework for judging if the consequences of additional vessel disturbance is significant, and could therefore compromise The Wash SPA conservation objectives.
7.87		The Applicant agrees that it is desirable for roost sites to be close to feeding areas, but the actual distance needs to be considered in the context of the range of distances a species typically travels between foraging sites and roost sites. An assessment of the potential for additional vessel disturbance at the mouth of The Haven to compromise the roosting potential is presented in Appendix 1 of Habitats Regulations Assessment - Ornithology Addendum (document reference 9.13, REP1-026). The addendum also provides additional information on the implications of extreme weather.
7.88		The surveys have been undertaken to gain an understanding of the behavioural responses of birds to disturbance around the high-water period. There are always limitations to any survey work but the results have shown a reasonably consistent response by the species that use this area during these periods.
7.89		The availability of potential alternative roost sites for redshank and other species roosting at the mouth of The Haven that are disturbed by vessels is examined in Appendix 1 of Habitats Regulations Assessment - Ornithology Addendum (document reference 9.13, REP1-026). The baseline study of vessel disturbance showed that redshank disturbed by vessels were able to relocate to alternative roost sites within 1 km of the mouth of The Haven. None of the redshanks that were disturbed by vessels during the study were observed to respond by moving to

Section / Paragraph of RSPB Written Representations	Summary Heading	Applicant response
		the lagoon at RSPB Freiston Shore Reserve; all birds that were disturbed moved to locations that were considerably closer. The relatively large numbers of redshank regularly recorded in WeBS sectors adjacent to the mouth of The Haven sectors also provides additional evidence that there are multiple alternative roost sites for redshank that are closer to the mouth of The Haven than the Freiston Shore Reserve lagoon. This also applies to other species.
7.90		The consequences of additional vessel disturbance at the mouth of The Haven on oystercatcher is examined in detail in Appendix 1 of Habitats Regulations Assessment - Ornithology Addendum (document reference 9.13, REP1-026). In all cases of observations of vessel disturbance of wintering oystercatcher at the mouth of The Haven, the birds affected were seen to move to alternative locations between 150 m and 800 m away.
7.91		The consequences of additional vessel disturbance on black-tailed godwit are examined in detail in Appendix 1 of Habitats Regulations Assessment - Ornithology Addendum (document reference 9.13, REP1-026). The baseline study observations of vessel disturbance of wintering black-tailed godwit at the mouth of The Haven, showed that birds that were disturbed from the roost were able to move to alternative locations between 150 m and 800 m away. Also see response to para 7.102 below.
7.92		The consequences of additional vessel disturbance at the mouth of The Haven on turnstone is examined in detail in Appendix 1 of Habitats Regulations Assessment - Ornithology Addendum (document reference 9.13, REP1-026).
7.93		The analysis of WeBS Core count data presented in Appendix 1 of Habitats Regulations Assessment - Ornithology Addendum (document reference 9.13, REP1-026) shows that the count sectors in the vicinity of mouth of The Haven have high importance for wintering shelduck. However, the analysis of the baseline observations on vessel disturbance at the mouth of The Haven presented in Appendix 1 shows that vessel disturbance affected relatively small numbers of shelduck in the context of the numbers occurring locally and in The Wash as a whole. The Applicant agrees that the causes of The Wash shelduck decline are not well understood, but point out that WeBS count data show that this species has undergone significant long-term decline across the UK.

Section / Paragraph of RSPB Written Representations	Summary Heading	Applicant response
7.94		The consequences of additional vessel disturbance at the mouth of The Haven on brent geese are examined in detail in Appendix 1 of Habitats Regulations Assessment - Ornithology Addendum (document reference 9.13, REP1-026). The Applicant requests RSPB to make available to them data that support their suggestion that brent geese are likely to occur in large numbers in the vicinity of the central parts of The Haven.
7.95		The consequences of additional vessel disturbance at the mouth of The Haven on lapwing and golden plover are examined in Appendix 1 of Habitats Regulations Assessment - Ornithology Addendum (document reference 9.13, REP1-026). The Applicant considers it is relevant to clarify here that neither lapwing nor golden plover are qualifying interests of The Wash SPA in their own right. Furthermore, although lapwing and golden plover are cited as species that contribute to The Wash SPA non-breeding waterbird assemblage feature, neither species is listed as a 'main component species' of the waterbird assemblage. Also see response to para 7.102 below.
7.96		The Applicant recognises that moderate numbers of individuals of some of The Wash SPA qualifying non-breeding species remain at The Wash through the summer months and that these birds are potentially affected by vessel disturbance. However, vessel disturbance during the summer is relatively unlikely to cause adverse energetic stress to these birds due to the warmer temperatures and longer day length (more potential feeding time) in comparison to the winter months.
7.97		Appendix 1 of Habitats Regulations Assessment - Ornithology Addendum (document reference 9.13, REP1-026) clarifies how the potential frequency of vessel disturbance is predicted to change as a consequence of the proposed development. The Applicant also notes that the future frequency of vessel disturbance incidents at the mouth of The Haven is also likely to change as a consequence of the shifting baseline in vessel traffic using The Haven.
7.98		The relevance of higher levels of historical vessel evidence is not that this may indicate a lack of impact on birds, rather that, irrespective of the proposed development under consideration, commercial vessel activity may increase in the future and that this increase could occur without regulation. In other words, even if the proposed development does not go ahead, this would not prevent a future rise in vessel activity and an associated increase in vessel disturbance to birds.

Section / Paragraph of RSPB Written Representations	Summary Heading	Applicant response
7.99		The surveys target the high water period as this is when there would be a change from the baseline in terms of disturbance levels. There would not be any change at other states of the tide. In terms of vessel movements within The Wash the numbers of vessels using the wider area are considerably higher and the relative increase is therefore much smaller.
7.100	Energy budget	In the case of golden plover and lapwing (species that are neither qualifying species of the SPA, nor considered core assemblage species) the Applicant notes that very large areas of agricultural land are available locally for foraging and roosting (unlike other wintering waders these species are not dependent on intertidal feeding grounds), and that both these species are adapted to also feed at night. Also see response to para 7.102 below.
7.101		The Applicant agrees that alternative roost sites might have higher predation risks for some species, this matter is discussed in Appendix 1 of Habitats Regulations Assessment - Ornithology Addendum (document reference 9.13, REP1-026). The Applicant notes that the colonising shrubs on the (man-made) seawalls along The Haven are likely to increase predation risk to small shorebirds, for example through the potential to provide cover to sparrowhawks and foxes. The Applicant would welcome discussion with RSPB (and other stakeholders) regarding reducing predation risks by appropriate vegetation management.
7.102		Appendix 1 of Habitats Regulations Assessment - Ornithology Addendum (document reference 9.13, REP1-026) includes additional information on the energetic costs of the additional vessel disturbance to bird roosting at the mouth of The Haven as a consequence of the proposed development. It is already apparent that the distances birds using the mouth of The Haven typically move in response to vessel movements is small and that birds typically resettle quickly. Therefore, any increase in energy expenditure as a result of the proposed development are likely to be very small in the context of baseline energy expenditure. The proposed increase in vessel movements will not affect the feeding periods as during low tide periods the vessels will not be using The Haven due to depth restrictions. Therefore, the energy inputs are not affected.

Section / Paragraph of RSPB Written Representations	Summary Heading	Applicant response
7.103	Displacement around the shipping lane	The Applicant considers that the assessment of the potential consequences of vessel disturbance on birds' energy and time budgets need to take account of the time of year. Non-breeding individuals during the summer months (such as the oystercatchers under consideration here) are relatively unlikely to experience adverse energetic stress because of the warmer ambient temperature and longer day length (more potential feeding time) in comparison to the winter months. For this reason, it is considered that the response of birds to vessel disturbance observed during the wintering months are of greatest value for informing the assessment of impacts on wintering bird populations.
7.104		Noted by the Applicant. Also see response to para 2.10 and 6.2.
7.105		It is relevant to point out that the parts of The Haven lacking WeBS count data lie outside The Wash SPA/SSSI. It is reasonable to assume that these parts did not merit inclusion in the designations (at least at the time of designation) because bird numbers using these areas was low. Also see response to paragraph 6.2.
7.106		RSPB's acceptance of 420 cargo vessels per year as the current baseline is noted. It is relevant to point out here that, irrespective of the proposed development going ahead, the future baseline vessel traffic will change in line with changes to commercial activity at Boston port and that these changes could occur without the need for EIA/HRA assessments. Based on Department for Transport (DfT, 2021) data, and as presented in the Navigation Risk Assessment (document reference 9.27) there has been a general downwards trend in commercial port callings over the period since 1994. Callings at the Port of Boston peaked in 1996 (804 callings in total), with a general decline then observed, with callings during 2017 the lowest on record (377 callings in total).
7.107		The Navigation Risk Assessment (document reference 9.27) provides further clarity on vessel movements. It is outside of the control of the Applicant to determine vessel movements. This is controlled by the Port of Boston.
7.108		The number of vessels using the Port of Boston varies on an annual basis as discussed above in paragraph 7.106. The wet dock is due for expansion as part of the Boston Barrier project (prior to the construction of the Facility) to increase the size of vessels that can access the dock gate The wet dock expansion is not

Section / Paragraph of RSPB Written Representations	Summary Heading	Applicant response
		anticipated to result in an increase in vessels, rather an increase in vessel size, which has the potential to result in a decrease in the number vessels calling at the Port of Boston.
7.109	Understanding the dynamics of birds at the mouth of The Haven	Appendix 1 of Habitats Regulations Assessment - Ornithology Addendum (document reference 9.13, REP1-026) includes a detailed account of the use of the mouth of The Haven by The Wash SPA species.
7.110		The Applicant has not attempted to examine the reasons for the low counts in 2021 and doubt this reflects more than stochastic variation. Counts of waterbirds using the mouth of The Haven are influenced by numerous factors, and small samples are naturally subject to stochastic variation. The predictions of the potential for the proposed development to cause additional disturbance presented in Appendix 1 of Habitats Regulations Assessment - Ornithology Addendum (document reference 9.13, REP1-026) takes this into consideration and bases the predictions on the numbers of birds counted in monthly WeBS counts over a five-year period.
7.111	The need to better understand the trend in bird numbers and distribution	See response to para 7.112 below.
7.112		The Applicant agrees that it is not reasonable to assume that there have been no long-term changes in the numbers of birds using the mouth of The Haven for roosting as a consequence of vessel disturbance there. This matter is discussed in Appendix 1 of Habitats Regulations Assessment - Ornithology Addendum (document reference 9.13, REP1-026). In any case, the changes that may have occurred in the past due to historical vessel disturbance are peripheral, the question that needs to be addressed is whether the additional disturbance that would result from the proposed development will lead to change from the current baseline. The list of SPA Supplementary Conservation Advice attributes that RSPB consider relevant is noted. The Applicant does not agree that all these are relevant. For example, the proposed development will not affect the extent of habitat in the vicinity of the mouth or The Haven, nor will it affect the safety of birds passing between roosting and feeding areas (this is understood to refer to risks of injury and death from shooting and collision with man-made hazards).
7.113		The Applicant agrees that consensus on the matters of importance is desirable and will continue to liaise with Natural England in relation to the matters of importance.

Section / Paragraph of RSPB Written Representations	Summary Heading	Applicant response
7.114		The information presented in Appendix 1 of Habitats Regulations Assessment - Ornithology Addendum (document reference 9.13, REP1-026) details the target SPA population sizes for the species examined in detail. The Supplementary Conservation Advice for The Wash SPA states that the target for redshank is to: "*maintain the size of the population at a level which is above 4,331 individuals*". The 2014-2019 five year mean peak WeBS count (the recognised measure of the population size for The Wash SPA) was 5,239 birds, a figure that is over 20% greater than the target figure. There is also no WeBS alert for The Wash redshank feature. See response to paragraph 7.22 for additional points.
7.115	Vessel movements	The Applicant agrees that the discussion of vessel traffic trends should focus on the types of vessels most likely to cause disturbance which appears to be the large cargo vessels at the mouth of The Haven and the pilot vessels. The assessment has focussed on the large cargo vessels as there are not predicted to be an increased number of pilot vessels as the pilot vessel just takes additional pilots out on the pilot vessels and drops them off on the vessel or takes them back to port.
7.116 **7.117** **7.118** **7.119**	Lighting impacts during construction and operation	For construction, Requirement 10, Code of Construction Practice, of the draft DCO (document reference 2.1(1), REP1-003) includes the requirement for an artificial light emissions management plan. The plan will detail the appropriate management and mitigation measures to be taken to manage artificial light emissions, with outline details provided in the Outline Code of Construction Practice (document reference 7.1, APP-120). An outline lighting strategy (document reference 7.5, APP-124) has been developed that details the lighting requirements for operation. Lighting is expected to be directional and limited as much as possible to ensure it does not affect areas outside of the required areas of the wharf and the vessel. An assessment on lighting effects will be undertaken and submitted to the Examination.
7.120 **7.121** **7.122**	Pollution impacts and control measures associated with the increased vessel movement	An Outline Surface Water Drainage Strategy (document reference 9.4, REP1-017) has been produced and was submitted for Deadline 1. This covers pollution control measures that are to be implemented to reduce risks of pollution.

Section / Paragraph of RSPB Written Representations	Summary Heading	Applicant response
7.123		
7.124		
7.125		
7.126		
7.127		
7.128	Water discharge, run-off and control measures	An Outline Surface Water Drainage Strategy (document reference 9.4, REP1-017) has been produced and was submitted for Deadline 1. This covers the surface water drainage strategy.
7.129		
7.130		
7.131		
7.132		
7.133		
7.134		
7.135	Water Supply for the Facility	No abstraction from surface or groundwaters will be required for the operation of the Facility.
7.136	Comments on the proposed mitigation for impacts on terrestrial ecology	Noted by the Applicant.
7.137		Agreed, with final terrestrial ecology measures to be set out in the OLEMS (document reference 7.4, APP-123).
7.138		Section 12.7 of the ES Chapter 12 Terrestrial Ecology (document reference 6.2.12, APP-050) presents the potential impacts on terrestrial ecological receptors (including specific species and habitats where impacts have been predicted). These impacts are identified for during construction and operation and where embedded mitigation measures have been identified for those predicted impacts, these are also referred to in Section 12.7. Details relating to the establishment of the proposed landscaping mitigation proposals are presented in updated Chapter 9 Landscape and Visual Impact Assessment (document reference 6.2.9, REP1-004) and within the OLEMS (document reference 7.4, APP-123).
7.139		Noted by the Applicant. Paragraph 7.2.7 of the OLEMS (document reference 7.4, APP-123) presents the mitigation measures that will be adopted should vegetation clearance not be possible (or fully) completed outside of the nesting bird season.

Section / Paragraph of RSPB Written Representations	Summary Heading	Applicant response
		Any additional and/or more specific requirements for particular bird species will be subject to the species in question and as provided by the appointed ecologist post consent and pre-construction.
7.140	Reliance on the RSPB's reserves at Freiston Shore and Frampton Marsh to deliver compensation	It is acknowledged that these were high level discussions regarding potential net gain/compensation sites and that this is no longer available as an option. There are ongoing discussions with regard to alternative options that could be used for biodiversity net gain or compensation sites.
7.141		
7.142		
7.143	Relocation of the Fishing Fleet to the south of the Facility	The relocation of the Boston fishing fleet to any new wharf south of the Facility is not under consideration by the Applicant either as part of the DCO application or external to it, as part of any future plans. This was previously addressed in Comments on Relevant Representations (document reference 9.2) Table 1-3, row 29.
7.144	Assessment of alternative options	The Applicant has prepared a without prejudice derogation case that will be submitted at Deadline 2. This includes an Assessment of Alternative Solutions (document reference 9.28).
7.145		
7.146		The provision of increased roosting areas in the area adjacent to the Principal Application Site is designed to increase the existing roosting area (which forms part of the existing roost site) rather than provide a new site. This is expected to provide sufficient habitat for the birds that were already using this larger roost site. The Applicant stresses that additional options for provision of alternative roost sites for redshank have been in-progress, during the period since submission of documents that are subject to the Written Representations here. These will be outlined at Deadline 3 in the updated OLEMS. The options are also outlined briefly in the Compensation report (document reference 9.30) produced as part of the 'without prejudice' derogation case.
7.147		
7.148	Summary or RSPB's position	Opinion noted by the Applicant with individual points responded to in other parts of this document.
8. Policy and Legislation Background		
8.1 to 8.13	Ramsar Convention, Birds Directive and SPA tightly drawn boundaries	Noted by the Applicant.
8.14 and 8.15	SPA tightly drawn boundaries	Comments from RSPB on the UK approach to implementation of the Birds Directive and the area designated compared to EU member states are beyond the remit and concern of the Applicant. In relation to the Facility, the Applicants HRA

Section / Paragraph of RSPB Written Representations	Summary Heading	Applicant response
		takes into account the concept of functional linkage, whereby land or sea beyond the boundary of a European site might fulfil a role in supporting the populations for which the site was designated or classified (Chapman and Tyldesley (2016). Thus, although the Facility is outside the Wash SPA boundary, the HRA considers whether effects on SPA qualifying species may affect the integrity of the SPA (section 6 of Chapter 17 Marine and Coastal Ecology and Appendix 17.1 - Habitats Regulations Assessment - Ornithology Addendum (document reference 9.13, REP1-026)).
8.16 to 8.29	The Habitats Directive, Uncertainty and the Precautionary Approach, the Habitats Regulations (including SPA and SAC Conservation Objectives, Principles of undertaking an Appropriate Assessment and Site Integrity)	Noted by the Applicant.
8.30	Functionally linked land	The Applicant agrees that the NE commissioned report on functional linkage is relevant to redshank and other waterbirds using the Application site and The Haven.
8.31		The Applicant disagrees with the statement that functional linkage is not consistently applied to SPA species. Detailed consideration is set out in section 6 of the ES Chapter 17 Marine and Coastal Ecology and Appendix 17.1 - Habitats Regulations Assessment - Ornithology Addendum (document reference 9.13, REP1-026).
8.32		The Applicant disagrees with the statement in relation to functional linkage there is a serious gap in the HRA. Detailed consideration is set out in section 6 of the ES Chapter 17 Marine and Coastal Ecology and Appendix 17.1 - Habitats Regulations Assessment - Ornithology Addendum (document reference 9.13, REP1-026).
8.33	Mitigation Measures	Noted by the Applicant.
8.34		The Applicant disagrees with the statement that the Applicant must set out how mitigation measures must be “financially secured”. PINS and DEFRA Guidance do not require this.
8.35		Noted by the Applicant.
8.36	Habitats Regulations General Duties	Noted by the Applicant.
8.37		Noted by the Applicant.

Section / Paragraph of RSPB Written Representations	Summary Heading	Applicant response
8.38		Noted by the Applicant.
8.39		Noted by the Applicant.
8.40		Noted by the Applicant.
8.41		Noted by the Applicant.
8.42		Noted by the Applicant.
8.43		Noted by the Applicant.
8.44	The Wildlife and Countryside Act 1981	Noted by the Applicant.
8.45	Sites of Special Scientific Interest	Noted by the Applicant.
8.46		Noted by the Applicant.
8.47		Noted by the Applicant.
8.48		Noted by the Applicant.
8.49		Noted by the Applicant.
8.50		Noted by the Applicant.
8.51	Energy Policy Background	Noted and agreed by the Applicant.
8.52		
8.53		We note that the RSPB's representation refers to a now superseded version of the National Planning Policy Framework (NPPF). The NPPF (July 2021), Chapter 2 sets out current NPPF policy with respect to achieving sustainable development with paragraph 8 highlighting the three interdependent overriding objectives of: economic, social and environmental and at paragraph 9, their delivery through the preparation and implementation if plans and the application of policies in the NPPF. Paragraph 10 states 'So that sustainable development is pursued in a positive way, at the heart of the Framework is a presumption in favour of sustainable development, as set out in paragraph 11.' Chapter 15 of the NPPF concerns Conservation and Enhancement of the Natural Environment. Paragraph 179 to 182 set out up to date policy with respect to Habitats and Biodiversity which adopts a common approach to now superseded policy referenced by the RSPB. It is noted at paragraph 182 those circumstances where a presumption in favour of sustainable development does not apply.
8.54		
8.55		
8.56		
8.57	The Biodiversity Duty	Noted by the Applicant.
8.58	EIA Requirements	Noted by the Applicant.

Section / Paragraph of RSPB Written Representations	Summary Heading	Applicant response
8.59	EIA Directive Preamble	Noted by the Applicant.
8.60		Noted by the Applicant.
8.61		Noted by the Applicant.
8.62	The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017	Noted by the Applicant.
8.63		Noted by the Applicant.
8.64		Noted by the Applicant.
8.65		Noted by the Applicant.
8.66		Noted by the Applicant.
8.67	The Worst Case Scenario	Noted by the Applicant.
8.68	All Aspects of the Proposed Development	Noted by the Applicant.
8.69		Noted by the Applicant.
8.70		The Applicant disagrees with the statement that potential cumulative effects and in-combination effects are lacking in the Environmental Assessment. Further detail is provided in responses to specific comments above.
8.71		The Applicant disagrees with the concerns expressed about the level of data available, the assessment and mitigation measures. Further detail is provided in responses to specific comments above.
8.72		Further detail on the assessment of impacts was provided in Deadline 1 as discussed in the specific responses provided above. The Applicant is actively working to ensure an appropriate level of detail in relation to proposed mitigation measures is provided for the DCO examination. Potential options are being discussed with relevant landowners/managers to further the development of biodiversity net gain/compensation sites.
8.73	DCO – Initial Concerns	Noted by the Applicant.
8.74		The Applicant is actively working to ensure an appropriate level of detail in relation to proposed mitigation measures/biodiversity net gain and compensation sites is provided for the DCO examination, and a without-prejudice compensation case is being prepared. This includes for an appropriate level of monitoring to ensure that the measures proposed are effective.
8.75	Legal Conclusions	Noted by the Applicant.
8.76		Further detail on the assessment of impacts was provided in Deadline 1 as discussed in the specific responses provided above. As above, the Applicant

Section / Paragraph of RSPB Written Representations	Summary Heading	Applicant response
		disagrees with the concerns expressed about the level of information provided and is actively working to ensure an appropriate level of detail in relation to proposed mitigation measures is provided for the DCO examination. Further detail is provided in responses to specific comments.
9. The RSPB's concerns regarding failure to provide an in-principle derogation case		
9.1		Further detail on the assessment of impacts was provided in Deadline 1 as discussed in the specific responses provided above. Specific comments relating to the assessments are provided in the responses above.
9.2		The 'Without Prejudice' Derogation Case will include compensation measures to be taken forward should they be required. The potential compensation options are being taken forward with site visits and ongoing consultation with landowners/managers to progress these options.
9.3		The compensation measures have been outlined as part of the 'Without Prejudice' Derogation Case (document reference 9.30).
9.4		As this is a 'without prejudice' derogation case the Applicant will set out how the compensation measures will be secured if the SoS determines that there is an AEOI. The measures won't be secured in the DCO until such a determination is made.
9.5		See response to paragraph 9.2 above.
9.6		The 'Without Prejudice' Derogation Case has been submitted to the Examination at Deadline 2 (document references 9.28, 9.29 and 9.30).
9.7		The 'Without Prejudice' Derogation Case has been submitted to the Examination at Deadline 2 (document references 9.28, 9.29 and 9.30).
9.8		Noted by the Applicant.
10. RSPB's approach to evaluating compensation measures under the Conservation of Habitats and Species Regulations 2017 (as amended)		
10.1		Noted by the Applicant.
10.2-10.8	The need to submit an "in principle" derogation package for public scrutiny	Noted by the Applicant.
10.9-10.15	The RSPB's approach to assessing compensation proposals	The Applicant notes that the Defra Guidance has been withdrawn on 15 March 2021 and has been replaced by the guide "Habitats regulations assessments:

Section / Paragraph of RSPB Written Representations	Summary Heading	Applicant response
		protecting a European site". The updated Defra guidance requires that compensatory measures will need to fully offset the damage which will or could be caused to the site" and that the "compensatory measures themselves must not have a negative effect on the national network of European sites as a whole, despite the negative effects of the proposal on an individual European site".
10.16-10.24	What level of detail is required on proposed compensation measures	The Applicant considers that the appropriate balance must be struck with regards to the level of detail required for a without prejudice habitats derogation case. For example, while it would be appropriate to demonstrate that any land and legal consents can be secured, the Applicant does not agree with the position of RSBP that is necessary to show that any land has been secured and any other consents approved where there is disagreement as to whether compensation required.
11. Assessment of cumulative and in combination impacts		
11.1		The potential for cumulative and in-combination impacts are covered at the end of each section within the ES documents.
11.2		Appendix 17.1 HRA (document reference 6.4.18, APP-111) section A17.5 covers in-combination effects and notes that "in some circumstances it may be appropriate to include plans and projects not yet submitted to a competent authority for consideration but for which sufficient detail exists on which to make judgements on their impact on the protected site", therefore, only plans and projects have been considered where sufficient detail exists. In addition, the assessment adopted the principle "for the proposed scheme to have the potential to contribute to in-combination effects, there must be sufficient cause to consider that a relevant habitat or species is sensitive to effects due to the project itself". Consequently, the list of plans and projects that have the potential to give rise to an in-combination effect were presented in Table A17-5. With regards to the specific projects the RSPB has noted, please see our comments as follows: • The ground investigation works related to the Boston Barrier are historic works that have been completed, this is covered in Table A17.5; • The Havenside Flood Defence Scheme is due for completion in 2021, this is covered in Table A17.5; • It is acknowledged that the proposed route of the England Coast Path passes through the application site, however this is considered as part of the baseline of the assessment as it uses existing footpaths. In addition,

Section / Paragraph of RSPB Written Representations	Summary Heading	Applicant response
		the England Coast Path is being diverted along existing footpaths through the Riverside Industrial Estate, and there is no change in the footpath adjacent to the Habitat Mitigation Area; • Schemes have been considered from within the South-east Lincolnshire Local Plan where sufficient detail exists; • The review of plans and projects covered project with the potential to have in-combination effects, this included shipping and discharges into the Haven, where relevant (see Section A17.5 and Table 17-5); • The supplementary information for The Wash SPA (circulated to the RSPB on 5 March 2021) was used to determine other activities that are causing disturbance pressures. This includes for people using the footpaths and has also taken consideration of the potential for predators using trees and scrub in the area.
11.3		The cumulative and in-combination assessment includes for all plans and projects that were known at the time of the assessment. It is not appropriate to include all activities that form part of the baseline situation.
11.4		As per response to 11.2 above, a comprehensive search has been made for plans and projects which may contribute to an in-combination effect and for which sufficient detail is available upon which to base an assessment. This includes plans and projects that may increase recreational pressure within the area
11.5		See response to 11.2 above in relation to the England Coastal Path
12. RSPB's concerns regarding the significant reliance on developing plans to address impacts post-consent		
12.1 to 12.3		A number of outline plans have been submitted to the Examination which appropriately set out measures to be agreed post-consent with various regulatory and key stakeholders. The Applicant disagrees that the plans lack sufficient detail in order for final plans to be compiled and agreed that are substantially in accordance with the details set out in the outline plans. There have been very few comments on the outline plans to date form the regulatory bodies and this provides further confidence that the level of information is sufficient for them. The provision of outline plans as part of the DCO process is normal practice. The Navigation Management Plan (NMP) will be compiled post consent in accordance with the DCO requirement in agreement with the Marine Management

Section / Paragraph of RSPB Written Representations	Summary Heading	Applicant response
		Organisation (MMO) and full consultation with the Port of Boston and Environment Agency. The NMP will take full account of the Navigation Risk Assessment (document reference 9.27) provided to the examination at Deadline 2.
13. Biodiversity Net Gain		
13.1	Summary of BNG Comments	Noted by the Applicant.
13.2		Noted by the Applicant. While the Environment Act has now been given royal assent, the Part relating to biodiversity net gain (BNG) is not yet in force and BNG will not be a requirement for NSIPs until such time as a biodiversity gain statement is consulted on and made. and for BNG to be required for NSIPs.
13.3		The Applicant wishes reiterate that there is currently not a statutory requirement for BNG and Advice Note 11, Annex C provides that "NSIPs can make a significant contribution to delivering the environmental ambition in the Government's 25 Year Environment Plan. This aims to deliver an environmental net gain through development and infrastructure."
13.4		The aim is to achieve a net gain for biodiversity, however this is dependent on the available measures and the requirement for compensation.
13.5		Noted by the Applicant.
13.6		Noted by the Applicant.
13.7		Noted by the Applicant.
13.8		The Landscape and Ecological Mitigation Strategy secured under requirement 5 of the draft DCO (document reference 2.1(1), REP1-003) must include "the results of the Defra biodiversity off-setting metric together with the off-setting value required, the nature of such off-setting and evidence that the off–setting value provides for the required biodiversity compensation, risk factors (including temporal lag) and long term management and monitoring."
13.9	Approach to BNG and direct adverse impact on The Wash	Noted by the Applicant.
13.10		Noted by the Applicant.
13.11		Noted by the Applicant.
13.12		Noted by the Applicant.
13.13		Noted by the Applicant.
13.14		Noted by the Applicant.
13.15		Noted by the Applicant.

Section / Paragraph of RSPB Written Representations	Summary Heading	Applicant response
13.16		The measures proposed for net gain will be outlined in the updated OLEMS document to be submitted at Deadline 3.
13.17	BNG and Landscape Strategy	Noted by the Applicant.
13.18		Noted by the Applicant.
13.19		Noted by the Applicant.
13.20		Noted by the Applicant.
13.21		Noted by the Applicant.
13.22	BNG and Protected Species	Noted by the Applicant. In addition to the complement of surveys conducted during the breeding seasons of 2020 and 2021 (which include the spring wader migration period) and wintering seasons of 2019-2021, further surveys covering autumn wader migration of 2021 have now been conducted (Aug to Oct 2021) and the report from these surveys will be circulated by Examination Deadline 3. The Applicant is therefore confident that the bird assemblage currently using the Application Site has been effectively established.
13.23		Noted by the Applicant.
13.24	Inclusion of Mitigation and Compensation measures	Noted by the Applicant.
13.25		Noted by the Applicant.
13.26		The Applicant disagrees that mitigation and compensation measures will always be 'no net loss' activities and should be excluded entirely. In particular, compensation measures may also result in a net gain that should be taken into consideration.
13.27		Noted by the Applicant.
13.28		Noted by the Applicant.
13.29		Noted by the Applicant
13.30		Noted by the Applicant.
13.31	Biodiversity Metric 2.0	Noted by the Applicant.
13.32		The Applicant will use the metric to calculate biodiversity losses and gains as it is intended.
13.33	Mechanism for Securing Net Gain	The Applicant disagrees that a 10% metric score should be included as a requirement in the draft DCO. While Environment Act has now passed, a requirement to provide 10% net gain is not yet statutorily required for NSIPs. The Applicant has agreed to provide net gain as good practice measures but the extent of gain provided will determined in through the Landscape and Ecological Mitigation Strategy (LEMS) secured under requirement 5 of the draft DCO

Section / Paragraph of RSPB Written Representations	Summary Heading	Applicant response
		(document reference 2.1(1), REP1-003), which must include "the results of the Defra biodiversity off-setting metric together with the off-setting value required, the nature of such off-setting and evidence that the off–setting value provides for the required biodiversity compensation, risk factors (including temporal lag) and long term management and monitoring." The final LEMS must be substantially in accordance with the OLEMS which will set out the potential net gain opportunities.
13.34		Noted by the Applicant.
13.35		Noted by the Applicant.
13.36		Noted by the Applicant.
13.37		See response to paragraph 13.33 above.
13.38	Baseline	The baseline for the Biodiversity Net Gain calculation was set out in the OLEMS document (document reference 7.4, APP-123).
13.39		Noted by the Applicant.
13.40		The Baseline for the BNG measures is set out in the OLEMS document (document reference 7.4, APP-123). This document is to be updated and submitted for Deadline 3.
13.41	Time for Habitats to Reach target Condition	Noted by the Applicant.
13.42		Noted by the Applicant.
13.43		Noted by the Applicant.
13.44		Noted by the Applicant.
13.45		Noted by the Applicant.
13.46		Noted by the Applicant.
13.47		Noted by the Applicant.
13.48		Noted by the Applicant.
13.49	Net % Change Calculation	Noted by the Applicant.
13.50	Evidence Base for On-Site Habitat Creation	Noted by the Applicant.
13.51	Evidence Base for Off-Site Habitat Creation	Noted by the Applicant.
13.52	Replacement of higher distinctiveness habitats with those of lower distinctiveness	Noted by the Applicant.
13.53		Noted by the Applicant.
13.54		Noted by the Applicant.

Section / Paragraph of RSPB Written Representations	Summary Heading	Applicant response
13.55		Noted by the Applicant.
13.56		Noted by the Applicant.
13.57		Noted by the Applicant.
13.58		Noted by the Applicant.
13.59	Conclusions regarding the Applicant's approach to BNG	It should be noted that the BNG is not currently a statutory requirement for NSIPs therefore any BNG are undertaken as good practice measures and not required under current planning legislation.
13.60		See response above paragraph 13.59.
14. Conclusions		
14.1-14.6		The Applicant notes the RSPB's conclusions. Our responses on each individual, salient point are provided in this document.
Appendix 1 Species Accounts		The Applicant again queries the validity of the black-tailed godwit SPA population given at time of designation and citation. Percentage of UK population quoted in the same citation document (available at European Site Conservation Objectives for The Wash SPA - UK9008021 (naturalengland.org.uk)) is not concordant and suggests that either the percentage or the population size were incorrect by a factor of ten at citation. The Applicant requests Natural England address the error and clarify which specific variable is subject to error. The continued use of a potentially deflated SPA population size under the guise of an official figure creates confusion and overestimation of impact in assessments.
Appendix 2 Detailed Account of Engagement with the Applicant		The Applicant's comments in relation to engagement with RSPB are provided in response to Section 5 above.
Appendix 3: Data table of bird disturbances from bird survey reports to inform impacts….		Table is informative and welcomed but The Applicant queries the validity of the black tailed godwit population as set out in the response to Section 3 Table 2 above. The information in this table is also set out in the addendum to the HRA (ES Chapter 17 Marine and Coastal Ecology and Appendix 17.1 - Habitats Regulations Assessment - Ornithology Addendum (document reference 9.13, REP1-026)),
Appendix: Reference list		It is unclear why redactions have been made to the reference list.

2 References

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