POWERFUEL

Portland energy recovery facility

Consultation response summary document

August 2021

PORTLAND ENERGY RECOVERY FACILITY

CONSULTATION RESPONSE SUMMARY DOCUMENT

POWERFUEL PORTLAND LIMITED

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TERENCE O'ROURKE

Contents

1. Introduction

Dorset Council's request for further information and clarification

1.1 In September 2020, Powerfuel Portland Ltd submitted a full planning application to Dorset Council for the construction of an energy recovery facility (ERF) with ancillary buildings and works including administrative facilities, gatehouse and weighbridge, parking and circulation areas, cable routes to ship berths and existing off-site electrical sub-station, with site access through Portland Port from Castletown (application reference: WP/20/00692/DCC) on land within Portland Port.

1.2 The application was accompanied by an environmental statement (ES) prepared in accordance with the Town and Country Planning (Environmental Impact Assessment) Regulations 2017 (as amended; hereafter the EIA Regulations), which provides an assessment of the likely significant effects associated with its construction and operation.

1.3 Dorset Council has consulted on the application and also appointed Tetra Tech to undertake a review of the ES, which ensured that the council had access to sufficient expertise to examine the ES. Representations have been submitted to Dorset Council by consultees, members of the public and other interested parties in response to the consultation on the planning application. Dorset Council has taken these representations into account in its consideration of the application.

1.4 Following the consultations, the council has formally requested additional information and clarification in a letter dated 30 April 2021. The council confirms that it considers some of the information requested constitutes 'further environmental information', and where this is the case, it is requested in accordance with Regulation 25 of the EIA Regulations and Section 62(3) of the Town and Country Planning Act 1990.

1.5 An ES Addendum has been prepared to review the council's letter and provide the information that is considered to be 'further environmental information' under Regulation 25 of the EIA Regulations. It forms an addendum to the ES.

The purpose of this document

1.6 The council's letter also requests that further responses be given to topic-based issues raised in representations to the first consultation. In some cases, reference is made in the council's Regulation 25 letter to a specific consultee response, or aspects that are most relevant to the consideration of that topic area.

1.7 To address these specific requests, the applicant's response is provided in this Consultation Response Summary Document (CRSD) to the range of detailed technical points that were raised by statutory consultees and technically competent consultees during the first consultation.

1.8 Specifically, the CRSD covers the following topic areas requested by the council's request for further information:

- Design and materials (point 3) - also covered in detail in the DAS Addendum and summarised in chapter 3 of the SPSS
- Landscape (point 4)
- Health (point 6)
- Historic environment (point 9)
- Ecology (point 11)
- Combined heat and power (CHP) - District heating (point 13)
- Electricity generation and distribution (point 15)
- Shore power (point 17)
- Air quality (point 21)
- Carbon balance and greenhouse gas emissions – including UKWIN (points 22 and 23) also covered in detail in the ES Addendum and summarised in chapter 3 of the SPSS
- Traffic (point 26)
- Surface water drainage (point 28)
- Contamination and geology (point 29) covered in detail in the ES Addendum
- Economic effects and jobs (point 33)
- Need and waste arisings (points 30, 31 and 32) – also covered in detail in the Waste Need Paper and summarised in chapter 3 of the SPSS
- Compliance with development plan policy (point 34) – also covered in detail in chapter 4 of the SPSS

1.9 For completeness, the CRD also covers some other topic areas where consultees have made comments but are not covered by the councils request for further information.

- Alternative sites
- Fall back scheme
- World heritage site

1.10 Annex A provides the applicant's response to UKWIN comments on the submission (point 23).

1.11 Annex B to this CRSD provides a summary response to a wide range of topic areas raised by the public

2. Consultation response schedules

1. Need and waste arisings

Other consultees

Item	Topic	Summary of consultation comment	Applicant response
	Adams Hendry (on behalf of SPWI)		
1.1	Need for the ERF in context of managing Dorset residual waste and residual waste arising from outside of the Dorset area by road and or sea. Evidence to support waste arising figures provided. The importation of residual waste by sea from outside of Dorset and compliance with the proximity principle.	Paragraph 2.2 It would be reasonable to assume that the proposed Portland ERF would be limited to treating residual waste from within Dorset only and will not import waste from elsewhere. This does not appear to be the case given the volumes of waste that could be brought in by sea. No evidence is provided to support the volumes of RDF (arising from outside of Dorset), that are stated in the application as being available to the ERF. Great weight is given to the site's location at a port and the intention to import residual waste from outside of the Dorset area by sea or by road is contrary to the applicant's stated need case and is contrary to the proximity principle.	The Portland ERF is well located to manage Dorset's residual waste, reducing the need for the export of residual waste out of the county and out of the country to other ERF facilities. It will also help to reduce the amount of residual waste that is sent to landfill for disposal, the least sustainable method of management. The Waste Need Statement and Planning Supporting Statement demonstrate that there are already large volumes of residual waste arising within Dorset and this is expected to increase in future. These figures are derived from public statements issued by Dorset Council, including in the 2019 Dorset Waste Plan. The ERF will provide capacity to help Dorset to meet its own residual waste management needs and will also contribute towards meeting the regional and national waste need. The ERF will also contribute towards meeting a local, regional, and national need for low carbon energy and economic growth. The Waste Need Paper presents analysis in respect to the waste availability in the defined catchment area, taking account of existing capacity and potential planned capacity. It concludes that there is more than enough waste available with the catchment than could be managed by the Portland ERF, not accounting for potential sources of waste passing by Portland by sea. The proposed ERF is a merchant plant, not tied to a specific local authority contract. It is unreasonable to assume that such a plant would be restricted to waste arising in an administrative area. Whilst it is incorrect to say that 'great weight' is attributed to a port location, it is clearly a desirable attribute for an ERF to have direct access to a port facility to provide commercial flexibility and to enable waste to be brought to the site sustainably by sea [and the weight attached to the port location is also due to the opportunities to use the energy generated to provide shore power and district heating, both of which are not possible at other sites]. It is therefore a factor that should be given weight in the planning balance, among many other positive benefits associated with the proposed location at Portland Port. Figures provided in respect to potential waste sources are derived from the applicant's market analysis and sector knowledge and expertise provided by its fuel supply partner. The proximity principle requires that an adequate network of waste disposal installations be established, and that waste should be disposed of 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 of the environment and public health. The importation of residual waste by sea or road from outside of Dorset to the Portland ERF, as one of the nearest appropriate installations, would therefore be entirely in accordance with the proximity principle.
1.2	Extent of ERF catchment area and importation of waste	Paragraph 2.3 Given that the justification for the proposal is to avoid residual waste being sent to facilities in Hampshire and Somerset, why would it be acceptable to import waste	The Dorset Waste Plan strategy is to reduce the export of its residual waste by providing residual waste management capacity in Dorset in line with proximity and self-sufficiency principles.

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		from Hampshire and Somerset. The extended catchment necessary demonstrates the unsuitability of the site.	However, this comment fundamentally misunderstands the dynamic nature of the waste market, where waste frequently crosses administrative boundaries where it is appropriate to do so. Under the principle of self-sufficiency, if waste is being exported from Dorset, then waste can also be imported. In Dorset the balance is heavily skewed such that Dorset exports all of its residual waste due to the absence of capacity. The ERF will significantly reduce the export of Dorset waste to other counties, but equally is able to import waste secured from the catchment area market where deemed appropriate and necessary. The 3 hour catchment area is considered to be entirely appropriate for a facility of this type. The catchment area simply indicates from where residual waste might reasonably be sourced and this would apply to any ERF. It does not in any way indicate whether a location is suitable or not, as is being suggested here.
1.3	Availability of RDF from the New Earth Solutions Canford MBT	Paragraph 2.5 Given that Dorset Council's residual waste is contracted to the Canford MBT facility with the resultant RDF sent to the Bridgwater Resource Recovery Facility under a long-term supply contract. The RDF derived from the Dorset Council area is therefore not available to the Portland ERF.	Both Beauparc (the owner of the Canford MBT) and Geminor (the RDF supplier to both Bridgwater and, it is anticipated, to the ERF), have confirmed that should the Portland ERF be consented, the RDF derived from its Dorset residual waste contract would be diverted away from Bridgwater to Portland as the nearest appropriate facility to manage this waste, in line with the proximity principle and self-sufficiency. We understand that Geminor would replace the RDF that would have travelled over 120 km from Dorset to Bridgwater with other supplies. As set out in the Waste Need Paper, Beauparc will be increasing the RDF capacity of its Canford MBT facility from 125,000 to around 200,000 tpa. This will enable the facility to further increase its RDF production, and supply far more RDF to the Portland ERF (potentially supplying over 80% of the ERF feedstock from Dorset derived RDF). In addition, the location of an RDF processing plant in Dorset should encourage further investment in pre-treatment plants (like Canford) to ensure that more of the 321kt residual waste currently produced by Dorset (a figure that is expected to increase) is managed within Dorset, reducing the volumes sent to landfill or energy recovery at facilities located outside of the county or the UK.
1.4	The effect of the Environment Bill on waste arisings and the need for residual waste treatment capacity	Paragraph 2.6 The Environment Bill is expected introduce resource-efficiency standards for products to drive a shift in the market towards products that can be more easily recycled, as well as products that last longer and which can be re-used and repaired more easily. Furthermore, extended producer responsibility schemes and the introduction of a requirement for collection of certain waste materials, such as food waste will have an impact on future waste forecasts.	Powerfuel Portland welcomes the measures to be introduced by the Environment Bill and supports the intention to prevent waste and recover waste materials for re-use, thus reducing residual waste. The effect of such measures is not yet known and will inevitably take some time to have an effect on levels of residual waste. Irrespective of this, as the Waste Need Statement demonstrates, there are large volumes of residual waste currently arising in Dorset that far exceeds the capacity of the Portland ERF and the total volumes of residual waste arisings from LACW and C&I waste are projected (by Dorset council) to increase by 20% over the next 10 years. A need will therefore remain for the ERF capacity. Furthermore, the ERF has been robustly designed to operate at a range of calorific values, such that should the level of plastics in the residual waste stream fall in future, as is hoped to be the case, the facility would continue to operate successfully. Furthermore, the ERF has been robustly designed to operate at a range of calorific values, such that should the level of plastics in the residual waste stream fall in future, as is hoped to be the case, the facility would continue to operate successfully.
1.5	Reliance upon meeting the needs of other local waste authorities.	Paragraph 2.8 Whilst meeting Dorset's energy recovery capacity requirements, it is ERF is reliant upon the contribution it would make to meeting the needs of surrounding waste planning authorities as well as those further afield. Without understanding the facilities currently available in the waste catchment, it is impossible to determine whether the application site is best located to meet that need.	The Portland ERF is appropriately sized to manage a large proportion of Dorset's residual waste and is well placed to do so. As a merchant plant, the ERF would be capable of accepting waste from within its catchment area, depending on the market. The proposed ERF (sized at 183,000 tonnes per annum – nominal capacity) will be able to provide the opportunity to process a significant volume of Dorset's current residual waste (being 321,000 tonnes per annum) but, if spare capacity exists, then this could reasonably be used to manage residual waste arising from its catchment area, as is common practice across the UK.

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			Whilst there are other ERF facilities located within the catchment, the management of waste is subject to the market and available capacity. Where residual waste is not tied to contracts or cannot be managed by existing facilities due to capacity constraints, this could be sent to Portland where it is economically and practicably viable to do so.
1.6	Compliance with The National Policy Statement for Renewable Energy Infrastructure (EN-3) in respect to waste hierarchy and need	Paragraph 2.9 Decision making bodies 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 in England. No information has been provided on the proposal in relation to waste strategies and plans within the waste catchment area outside Dorset.	The ERF is positioned to meet a significant proportion of the residual waste treatment capacity requirements of Dorset, and this is fully addressed in the planning application. The ERF will manage RDF, which is waste where all recyclable and recoverable materials have been removed. Currently Dorset exports 100% of its RDF, either to out of county landfill solutions or to out of county/country processing facilities similar to the ERF. The ERF is therefore fully in accordance with the waste hierarchy by helping to reduce landfill and would not compromise recycling targets at the national or local levels for Dorset or any other authorities located within the waste catchment area.
1.7	Compliance with National Planning Policy for Waste (NPPW) in respect to existing and permitted facilities.	Paragraph 2.10 Waste planning authorities should consider the extent to which the capacity of existing operational facilities should satisfy any identified need. Information is therefore required on the capacities of facilities within the 3-hour drive catchment area. It is also important to consider future capacity with reference to permitted but not yet operational facilities. It is not possible to determine whether the Portland ERF will displace other preferable proposals for waste treatment.	As set out in the Waste Need Statement and Planning Supporting Statement, Dorset does not currently have any capacity for the final treatment of residual waste – the Canford MBT is an intermediate processing facility which requires the output to be exported to out of county landfill or processing facilities similar to the ERF. The Dorset Waste Plan strategy is based on the need for additional capacity to be provided in Dorset so that less residual waste exported to landfill, or other facilities located in neighbouring waste authority areas. There are no operational or permitted ERFs in Dorset. The existing ERFs in Hampshire (Marchwood, Portsmouth and Chineham are at capacity and as contracted facilities under Project Integra are required to give priority to dealing with Hampshire's residual waste arisings. The proposed Alton ERF is proposed as a merchant plant but is intended to provide additional capacity to serve Hampshire's needs. No planning permission has yet been granted for an ERF at Alton. The Exeter ERF is a relatively small scale facility (60,000 tpa) and also serves a specific local authority contract. The Bridgwater facility is under construction and is a merchant plant, albeit with a relatively small capacity of 100,000 tpa. The Waste Need Paper presents a capacity analysis taking account of other ERF in the catchment area that have planning permission but have not yet been built. It concludes that even accounting for this capacity and ignoring future projected increases in waste arisings in Dorset or the volumes that could be imported by sea, there is more waste available within the catchment than could be managed by the Portland ERF. Where plants are proposed, there is no guarantee that planning permission would be granted. Equally, where new facilities are permitted, there is no guarantee that they would be constructed or become operational. Our understanding from large waste investors is that the ability to raise capital to fund small ERFs (<100ktpa) or advanced conversion technology (ACT) (including pyrolysis and gasification plants) projects is very limited given (a) the low returns offered in the case of small ERFs (due to high capex per tonne of RDF) and (b) the numerous failures and significant losses suffered by investors in the case of ACT plants in the UK. This includes examples in Dorset. The planning application has demonstrated that there is no ERF capacity in Dorset and limited capacity available at existing ERFs located outside of Dorset, but within its catchment. As such the Dorset Waste Plan requires residual waste capacity to be provided in Dorset to meet Dorset's needs.
1.8.	Need in context of the Low-Carbon Energy Facility (Low CEF) permitted at Canford	Paragraph 2.15 The Dorset Waste Plan states that the Canford Low CEF can be developed to deal with approximately 100,000tpa of RDF/SDF arising within the Plan area. It is not	Refer to PSS paragraph 4.33. The Canford Low CEF consent (approved in 2018) was partly implemented and then subsequently abandoned on the basis that this used ACT technology which has proven to be technically and commercially unviable (see comment above). Powerfuel Portland is not aware of any plans to complete this facility or progress any other form of thermal treatment facility at the site.

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		clear to what extent this facility has been taken into account in the Applicant's arguments on the need for the Portland ERF. Further information is required.	The Low CEF capacity is unlikely to make any contribution towards meeting Dorset's needs. Rather, the Canford site will serve as a focal point for the intensification of RDF production, which as confirmed by the owner, Beauparc, in the Waste Need Paper, is planning to increase its RDF capacity to around 200,000 tpa, for use at other treatment facilities such as the Portland ERF. It has been suggested by some consultees that the Low CEF plant is operational and contributing towards meeting Dorset's residual waste capacity needs. That is incorrect.
1.9	Need in context of potential capacity of allocated sites in the DWP	Paragraph 2.17 The total potential capacity within the four allocated sites amounts to 385,000tpa, exceeding the identified needs of the plan area by over 150,000tpa. This ensures that the DWP is flexible in the event that one or more of the allocations does not come forward for the treatment of residual waste. The site allocations are existing waste management facilities.	The comment is correct in so far as the DWP identifies potential capacities for allocated sites, in excess of the capacity requirement. However, as set out in detail in the Planning Supporting Statement, this is only theoretical or potential capacity that may not come forward. The recent proposal for a small scale ERF at the Parley site of 60,000 tpa (or 50,000 tpa after recycling) provides only 30% of the capacity envisaged by the DWP due to site constraints. This may not gain planning permission and other sites may not come forward at all with any new capacity. As set out in the Supplemental Planning Supporting Statement there are significant challenges to fund the development of small scale (<100ktpa) ERF projects or ACT projects. As the projects identified in the DWP are all of this size it is unlikely that these will provide a credible solution for Dorset. Sensibly, the DWP provides flexibility for other sites to come forward (other than allocated sites) where this would have clear advantages over the allocated sites. This is clearly demonstrated in the Planning Supporting Statement, the Supplemental Planning Supporting Statement, and other supporting technical documents.
1.10	Need in context of DWP reference to existing surplus capacity.	Paragraph 2.18 The DWP states that the capacity of facilities in southern England with surplus capacity that could deal with Bournemouth, Christchurch, Poole and Dorset's residual waste will be considered on the basis that it makes little sense to build additional facilities where existing facilities have surplus capacity.	The response to section 7 above makes clear that there is no ERF capacity in Dorset and limited ERF capacity elsewhere within neighbouring local waste authority areas. The Waste Need Paper analysis shows that there is little existing surplus capacity in the catchment areas that could be relied upon to manage Dorset's residual waste, as most is tied to local authority contracts. Whilst it is right for Dorset Council to consider whether surplus treatment capacity already exists in southern England, the DWP (paragraph 7.78) recognises that if new facilities are not brought forward during the plan period then the Dorset area would need to rely on facilities outside of the plan area to manage its residual waste and that there is no guarantee that facilities would have capacity to meet projected arisings, this being contrary to the proximity principle and self-sufficiency. The clear intention is for the DWP to bring forward new facilities in the plan area given a demonstrable lack of existing capacity.
1.11.	Provision of satisfactory evidence to support proposals on unallocated sites.	Paragraph 2.19 The DWP require proposals for waste management facilities on unallocated sites to be supported by a satisfactory level of evidence, including the nature and origin of the waste to be managed, the levels of waste arising, the existing or permitted operating capacity and the potential shortfall in capacity or market need that the proposal seeks to address. This level of detail has not been provided by the applicant.	The Waste Need Statement identifies the nature and origin of the residual waste to be managed as far as is possible for a merchant plant of this type. It identifies the level of waste arising in Dorset, regionally and nationally with refence to published DEFRA data. The DWP clearly identities the potential shortfall of capacity for residual waste management and the need for new waste management infrastructure to be provided within Dorset. All of this evidence is fully set out in the Waste Need Statement. Further evidence on existing and permitted waste capacity, the waste capacity gap and sources of RDF are provided in the Waste Need Paper.
1.12	Capacity of existing residual waste treatment facilities within the 3 hour catchment area	Paragraph 2.20 No information has been provided by the Applicant on the capacity of existing facilities, particularly those within the defined 3-hour drive waste catchment	The applicant's market analysis, set out within the Waste Need Paper identifies only four ERFs that are deemed to be 'certain' within the defined 3-hour catchment. Three of these are operational (Marchwood, Exeter and Chineham) and the fourth is still under construction (Bridgwater). All these ERFs manage significant tonnages of residual local authority collected

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			waste under contract with limited merchant capacity for additional residual waste (household or C&I wastes). Veolia operates the existing ERFs at Marchwood and Chineham with a combined capacity of around 300,000 tpa. These ERFs are committed to long term waste contracts with Hampshire County Council for managing local authority collected waste. Policy 25 of the adopted Hampshire Minerals and Waste Plan (2013) states that the long term aim is to enable net-self-sufficiency in waste movements and divert 100% of waste from landfill. The ERFs are required under planning condition to give priority to the management of Hampshire's residual waste, above residual waste from other waste authorities. They are therefore unlikely to have any significant capacity available in future to manage Dorset's residual waste The Exeter ERF has a capacity of 55,000tpa and this is under contract with Devon County Council to manage the residual waste collected from households in Exeter, east Devon and Teignbridge. Devon County Council's contract with the Exeter ERF runs until July 2044. The ERF is therefore unlikely to have any capacity available to serve Dorset's needs. Veolia operates three existing ERFs at Marchwood, Portsmouth and Chineham with a combined capacity of around 300,000 tpa. All these ERFs are committed to long term waste contracts with Hampshire County Council for managing local authority collected waste. Policy 25 of the adopted Hampshire Minerals and Waste Plan (2013) states that the long term aim is to enable net-self-sufficiency in waste movements and divert 100% of waste from landfill. The ERFs are required under planning condition to give priority to the management of Hampshire's residual waste, above residual waste from other waste authorities. They are therefore unlikely to have any significant capacity available in future to manage Dorset's residual waste. The Bridgwater resource recovery facility is expected to be commissioned in 2021. It will have capacity to manage 100,000 tpa of commercial and municipal RDF. The facility is under contract with Geminor, who would supply 75,000 tonnes of RDF per annum. Whilst the RDF arising from the Dorset Council area (produced at the Canford MBT facility) is likely to be sent to the Bridgwater facility in the short term, the MBT operator (Beauparc) and Geminor has confirmed that this RDF would be diverted to the Portland ERF as the nearest suitable installation if planning was approved and the Portland ERF was constructed. We understand that Geminor would replace the RDF that would have travelled over 120 km from Dorset to Bridgwater with other supplies. Even if the Bridgwater facility had capacity to manage some or all of Dorset's residual waste (which it does not, providing potential for management of only 75,000 of the total 321,000 Dorset residual waste arisings), the transportation of RDF by road from Dorset to Somerset, would not fulfil the policy objectives of the DWP. It would not support Dorset to become self-sufficient in managing its own residual waste and would perform less well under the proximity principle, given that the proposed Portland ERF is in Dorset. The only other relevant residual waste treatment facility in the catchment area is the Canford MBT facility in Dorset. However, it is an intermediate facility in so far as it processes untreated residual waste and creates RDF, which is currently managed at out of county facilities but is expected to be processed at the Portland ERF in the future.

2. Alternative sites

Other consultees

Item	Topic	Summary of consultation comment	Applicant response
	Adams Hendry (on behalf of SPWI)		
2.1	Interpretation of Policy 4 part a in respect to allocated waste sites	Paragraph 2.32 The Applicant has misinterpreted Policy 4 in an attempt to demonstrate compliance. Criterion (a) does not require an assessment to determine whether it is capable of accommodating the Applicant's proposal, rather the requirement is whether the allocated sites could serve the same waste management need that the proposal is designed to address. The DWP (paragraphs 9.29 – 9.30) indicates that the development of energy from waste facilities involving incineration within the allocated sites has the potential to adversely affect European and internationally protected sites, suggesting that there are other residual waste treatment technologies such as advanced thermal treatment where adverse effects may be ruled out with much greater confidence.	This is incorrect. The assessment submitted in support of the application is not an alternative site assessment. The applicant selected the proposed site based on its advantages such as its location within a commercial port, the presence of an extant planning permission for an energy facility fueled by waste materials, its status in the development plan as a key industrial employment site, its potential to provide shore power, its potential for operation as a combined heat and power facility (via a local heat network to supply high demand, established adjacent heat users), and other site specific advantages. The assessment of DWP allocated sites was undertaken to demonstrate that the Portland site and the proposed ERF has advantages over the allocated sites in being capable of delivering an ERF of the type and capacity proposed, as required by Policy 4 (criteria a), and as requested by planning officers in pre-application advice. In doing so it also highlights the relative disadvantages of the DWP allocated sites because of the identified constraints (development considerations) listed in the DWP site allocations. The assessment was not undertaken to demonstrate that the allocated sites could not contribute towards meeting Dorset's waste management needs as is being suggested in this objection. The proposal is specifically for an ERF capable of meeting Dorset's residual waste management needs. The DWP does not specifically exclude incineration at allocated sites but rather indicates that there is potential for adverse impact. The DWP adopts a flexible position and does not preclude any technologies on the allocated sites. The recent submission of a planning application by Eco-Sustainable Solutions for an ERF at Parley shows that proposals can come forward for incineration on DWP allocated sites, provided this does not adversely impact protected European sites. However, its relatively small scale (50,000tpa for thermal treatment) confirms the assessment's conclusions that the Parley site is heavily constrained and cannot deliver the 160,000 tpa of treatment capacity envisaged in the DWP. Even at this smaller scale there is doubt as to whether planning permission would be granted, given the constraints imposed by protected heathland habitats and airport safeguarding. This also reinforces the assessment conclusion that the Portland site has the significant advantage of being less constrained and capable of accommodating a larger scale ERF that is capable of meeting Dorset's needs. The potential to raise funding to develop ACT (also known as advanced thermal treatment or ATT) projects in the UK is severely limited given the numerous technical failures that have occurred for these projects where RDF is the feedstock. We note that ACT/ATT is a potential technology for more homogenous feedstock (such as waste wood) but even in these circumstances operational performance is often significantly below projections (which impacts investment returns and risk). We further note that there are multiple examples in the UK of projects that were previously approved for ACT/ATT technology now seeking amendments to the approval to permit conventional ERF technology, similar to that proposed at the Portland ERF, further demonstrating that the broader market does not believe that ACT/ATT is a credible technology for treatment of RDF feedstock.

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			On that basis and in the context of the proposed ERF, it is entirely appropriate to consider the relative merits of the Portland site against allocated sites to demonstrate that clear advantages exist.
2.2	The role of DWP allocated sites in meeting the Dorset shortfall in residual waste management capacity.	Paragraph 2.33 No information has been provided to demonstrate that the allocated sites could not manage the shortfall in non-hazardous residual waste arising in Dorset. It is necessary to demonstrate that the proposal provides advantages over the allocated sites. The correct comparison should be a proposal for managing non-hazardous residual waste against the Applicant's proposal for an ERF. It would be perverse if the comparison was an ERF on the allocated sites when the DWP makes it clear that this is unlikely to be acceptable.	The applicant has not sought to demonstrate that the DWP allocated sites could not manage the predicted shortfall residual waste. However, from its assessment of the allocated sites and their constraints relative to the Portland site, it is clear that there must be significant doubt as to whether the allocated sites will be able to deliver sufficient capacity to meet all of Dorset's stated needs. The proposed ERF at Parley (50,000tpa residual waste), if granted permission and funded, would provide only 30% of the capacity that was assessed in the DWP allocation (160,000 tpa). As detailed in the Waste Need Paper, future waste activity at the Canford site is expected to be focused on increased RDF production at the MBT as an intermediate activity, with RDF production expected to increase to around 200,000 tpa. The Mannings Heath site is small and in use for other waste uses and is unlikely to deliver any significant residual waste treatment capacity, whilst the Binnegar Quarry site is very remote, is environmentally constrained and has no potential for establishing CHP. In addition, as noted in earlier responses, there are significant challenges to the ability to fund projects of this size given the high fixed capital costs per tonne of RDF processed (i.e. there are significant volume economies of scale associated with ERF projects). Whilst some parties have suggested that ACT/ATT technology could be used at a smaller scale, recent market experience of significant technical failures has meant this is no longer considered an investable solution (noting even ACT/ATT projects that were awarded significant Government subsidy support under the ROC and/or Contracts for Difference regime have failed to procure investment due to the identified technical risks). The planning application focuses on demonstrating the advantages of the Portland site over DWP allocated sites in delivering the proposed ERF technology. The applicant is proposing an ERF as a deliverable, robust and proven technology and is not proposing any other form of advanced thermal treatment technology. As such a comparison would be meaningless in this context. Furthermore, the DWP does not exclude incineration on allocated sites but highlights potential constraints and defers this for detailed application to address. This fact is demonstrated by the Eco-Sustainable Solution ERF proposal at Parley which comprises incineration technology.
2.3	DWP allocated sites assessment - operational criteria Access to waste outside of Dorset by sea (port) and by road	Paragraph 2.33 The operational criteria used in the comparative assessment are flawed. The sites have been included in the DWP to meet Dorset's waste needs. This is specifically set out as a guiding principle in paragraph 3.1 where it states that the Waste Plan's role is to identify sufficient opportunities to meet the identified needs of Bournemouth, Christchurch, Poole and Dorset for waste management. Meeting these needs does not require access to a port. It is not the purpose of the DWP to meet the waste management needs of authorities within a 3-hour drive time or potentially from further afield for waste transported by sea.	The ERF is a merchant facility that is well placed to manage Dorset's waste but given that it is not specifically tied to any local authority waste contract it also requires flexibility to manage waste from its wider catchment. Access to a port is not stated as a requirement or deemed necessary to meet Dorset's waste management needs. However, it does offer the potential for waste to be moved sustainably by water and must be considered a locational advantage over sites that do not have port access. The location at Portland also provides other significant advantages as detailed elsewhere, including the ability to provide shore power and district heating to local users. This comment aims to limit the ERF's role to managing Dorset waste only. This fails to recognise that the application makes it very clear that this is a merchant facility, which in common with other UK merchant facilities, can serve a wider waste market within its catchment area as well as its host administrative area. Furthermore, whilst the DWP sites may be allocated to provide capacity to meet Dorset's needs, waste regularly flows across administrative borders as part of a commercial waste market depending upon what commercial contracts are in place. The suggestion that such sites could not manage waste

Item	Topic	Summary of consultation comment	Applicant response
			from other areas does not reflect the reality of waste movement or the dynamics of the waste market. The comment also fails to recognise that the DWP seeks to provide sufficient capacity that is equivalent to meet Dorset's needs, but it does not necessarily follow that all of this treatment capacity would be used to manage waste arising in Dorset only. Ideally, the ERF would manage most or all of Dorset's residual waste, being very well placed commercially to do so being located within Dorset. Support from Beauparc and Geminor noted in the Waste Need Paper should provide comfort that the RDF produced at Canford will be made available to the Portland ERF should planning be approved. If there is not sufficient residual waste made commercially available to the Portland ERF then other waste would be secured by sea or elsewhere within its catchment. Provided that Dorset provides sufficient capacity overall to meet its needs, it will be able to achieve net-self-sufficiency. If residual waste continues to move out of Dorset to other treatment facilities under contract, then an equal amount of waste secured from elsewhere can be secured to compensate achieving net self-sufficiency. The operational criteria used are therefore appropriate for a merchant facility of this type and the assertion that this is flawed is incorrect.
2.4	DWP allocated sites assessment	Paragraph 2.35 There is no requirement for a facility dealing with the WPA's non-hazardous residual waste to contribute specifically to meeting Portland's electricity needs, rather the assessment should consider whether the facility would contribute to meeting Dorset's electricity needs.	The applicant was invited to consider a proposal by Portland Port to deliver energy to the Port and Portland. The need for shore power at the Port is set out in the application and is a legitimate operational requirement of the project. The ability to deliver shore power is a significant advantage of this site over the DWP allocated sites. The DWP cannot identify all potential advantages that a non-allocated site might have and DWP paragraph 6.11 requires proposals on unallocated sites to be considered on their merits. However, it is clear that the opportunities to provide power (and district heating) are important considerations in respect to site advantages and DWP paragraph 6.11 reflects this, stating that 'the provision of sustainable localised heat and energy sources could also be a positive consideration in appropriate locations'. The suggestion that Dorset's energy requirements should be assessed is not relevant in this context, although it should be recognised that the ERF would also contribute towards meeting Dorset's energy needs indirectly by first serving Portland. The ability to provide shore power to the port, in the absence of other viable means of providing electricity for shore power from the mainland, is a significant locational advantage and this comment seeks to downplay the importance of this operational ERF requirement and this significant site advantage.
2.5	DWP allocated sites assessment	Paragraph 2.36 There is a specific policy requirement for residues arising from the facility to be managed in accordance with the waste hierarchy and the proximity principle. This should be reflected in the operational criteria used in the assessment but yet it is not.	As set out in the planning application the proposal is for IBA to be transported by sea (an advantage over other DWP allocated sites due to reduced traffic impact) to a specialist processing facility that will recycle the material. This approach is entirely in accordance with the waste hierarchy and proximity principle in terms of transporting material sustainably by sea. There is no requirement for a treatment of residue criterion, however, given the site's port location, the potential to partner with local quarrying businesses to develop an IBA processing facility on site and its ability to transport by sea, it would likely score better than DWP allocated sites which do not have direct port access.
2.6	Consideration of the Portland site together with other allocated sites through the preparation of the DWP.	Paragraph 2.41 It clearly was not in the Applicant's interests to promote the proposed Portland ERF through the Waste Local Plan as it is seeking to meet a need over and above that required in Dorset. Sites such as this should have been considered through the Local Plan process so that they could be assessed on a consistent basis and	The site was not considered in the DWP even though the site was known to the Dorset Waste Partnership and was actively being discussed as a potential location for a strategic waste management facility to serve Dorset. The DWP had reached an advanced stage in its preparation and nearing the point of adoption at the time the applicant began progressing its proposals for the site. It was not possible to promote or include the Portland site at that advanced stage. It is therefore speculative, highly misleading and completely incorrect to

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		examined before an independent Inspector. To seek to undermine the strategy in the Local Plan within a year of it being adopted is unacceptable.	suggest that the applicant did not promote the site in the DWP on purpose, as is being suggested here. Irrespective of the above, the DWP recognises that the delivery of waste infrastructure is dependent on the market and the industry and therefore adopts a flexible approach to delivery, accepting that some or all of the allocated sites may not come forward, or that other sites may come forward with advantages over allocated sites (Policy 4). It is therefore entirely reasonable for unallocated sites to come forward, outside of the development plan process and for these to be considered on their merits in context of the development plan policy, through a planning application. Indeed, the DWP specifically makes provision for this. This is especially the case given the assumptions applied to the allocated sites in the DWP now appear to be challenging, noting the significantly reduced size of the Parley proposal (c. 30% of allocation volumes), the Canford proposals to expand its intermediate RDF production facility (as opposed to provide an RDF processing solution), the planning constraints identified in the Planning Support Statement and the broader commercial challenges to procuring finance to build projects to the small size specified for the allocated sites in the DWP. It is incorrect to claim that the promotion of an unallocated site with clear advantages over allocated sites is unacceptable, or in some way undermines the adopted DWP and deviates the proper planning process, irrespective of its age.
2.7	DWP allocated sites assessment – Operational criteria 'site size'	Paragraph 2.42 The site assessment submitted by the Applicant is contrived to ensure that the application site is ranked highest. There is no policy requirement for residual waste to be managed through incineration and therefore scoring each of the allocated sites on their suitability for an ERF is inappropriate. Sites have been assessed as being less suitable than the application site because they are less than 2ha when in reality the area of the site depends on the technology employed and the likely throughput of waste. There is no reason why a network of smaller sites utilising different technologies would be any less suitable than a single ERF.	The assessment of allocated sites is not contrived but rather is a reflection of the operational requirements of an ERF. The DWP is not technology specific and there is no policy requirement for any specific technology, ERF or otherwise. The suitability of allocated sites for an ERF and the consideration of the relative advantages and disadvantages between Portland and other allocated sites is a legitimate consideration for decision makers. The suggestion that this is inappropriate is misleading. Theoretically a network of smaller sites with different technologies could meet need, however it is unlikely that such a strategy, dependent on advanced thermal treatment technologies or smaller scale traditional thermal treatment technologies would be deliverable or meet the urgent need in Dorset. Dorset has a track record of failed proposals for higher risk technologies or small scale facilities that have left the county with no significant residual waste management facilities and a significant shortfall in capacity. The investment market appetite for ACT/ATT for RDF treatment has further reduced in the past 2-3 years given increasingly number of technical failures and the ability to finance conventional ERF at small scale (<100ktpa) is limited as the returns achieved do not provide adequate return for the risk profile (due to high fixed capital costs). The purpose of the assessment was to demonstrate that the Portland site is capable of accommodating a larger-scale ERF, with greater certainty of delivery, greater treatment capacity and energy recovery potential that this would bring, as an advantage over those sites less than 2ha in size which could not deliver those benefits.
2.8	DWP allocated sites assessment – Operational criteria 'proximity to primary road network'	Paragraph 2.43 The decision to score sites on their proximity to the primary road network fails to take account the nature of local roads. The nature of the road system connecting Portland to the mainland means that hold-ups or bottlenecks can have an effect which extends back through Wyke and the edges of Weymouth.	The function of the primary road network is to provide linkages between settlements and ports/airports with A roads intended to provide large-scale transport links between areas. The assessment considers at a strategic scale proximity to the primary road network. Local matters such as junction capacities, congestion or pinch points in the network are likely to occur across the entire primary road network and assessment of this is a matter for detailed transport assessment. A transport assessment has been undertaken for the proposal to consider this matter.

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2.9	DWP allocated sites assessment – Weighting of criteria	Paragraph 2.44 The assessment is flawed in that it assumes each criterion has the same weight when in reality this is not the case. There is a legal requirement to ensure that the integrity of European sites is not adversely affected by development. This clearly should carry much more weight in the assessment process than meeting Portland's electricity needs for example, for which there is no such legal requirement	The methodology applied applies equal weighting to criteria as a more objective approach than arbitrarily seeking to apply weighting. The methodology has been tested by Inspectors and the Secretary of State through examination at numerous public inquiries and has been found to be sound.
2.10	DWP allocated sites assessment – Consented scheme as an alternative	Paragraph 2.45 It is unclear why the previously consented scheme, which the applicants are relying on as a fallback, is not considered as an alternative.	The assessment considers the proposed ERF at Portland against DWP allocated sites. The consented scheme, whilst setting a precedent for an energy plant use at the application site, comprises a different technology to that adopted by the proposed ERF and would not provide a solution to Dorset's waste challenge. It does not represent a fallback as is suggested and therefore is not a realistic alternative and does not need to be considered as such, but it does evidence that development of an energy plant on this brownfield port location was previously deemed appropriate.
2.11	DWP allocated sites assessment – Consideration of compliance in relation to EIA regulations	Paragraphs 2.46 and 2.47 The comparative assessment against waste local plan allocated sites is not sufficient to meet the terms of the EIA Regulations. It is far too high level to understand, even in basic terms, what the likely effects would be on the environment	This is not correct. The approach adopted for the comparative assessment has been applied to many similar projects and has been tested by Inspectors and the Secretary of State through public inquiry and found to be sound and in accordance with EIA regulations. The EIA Regulations require 'an indication of the main reasons for selecting the chosen option, including a comparison of the environmental effects', which the report provides.
	Freeths (on behalf of the Portland Association)		
2.12	DWP allocated sites assessment – absence of weighting criteria	Page 4 The comparative assessment (CA) document explains that the methodology is to appraise the sites against each of the criteria on an equal basis and no weighting will be applied to any of the criteria. This is suggested by the Applicant that it makes the assessment more objective and robust and removes subjectivity. We strongly disagree. On the contrary it dilutes the credibility of the assessment in that all criteria are treated as equal when in reality this is evidently not the case. As an example, criteria 11 'Proximity to designated ecologically sensitive areas', which includes impacts on integrity of European sites for which there is a legal requirement to ensure that development does not adversely affect should have substantial weight in any decision making process. By comparison this is likely to be significantly more important than if a site is 3km or 5km from a primary road network (criterion 3 relates to proximity to primary road network). Whilst the CA claims that a non-weighting system reduces subjectivity, the reality is that the exercise is already highly subjective through a range of assumptions on how the parameters are set in respect of whether an impact falls within the 'Meets criterion', 'Partially meets criterion' or 'Does not meet criterion' categories.	As stated in the comparative assessment document, the methodology applied to the study applies equal weighting to criteria as a more objective approach than arbitrarily seeking to apply weighting. The methodology has been tested by Inspectors and the Secretary of State through examination at numerous public inquiries and has been found to be sound and robust. In trying to apply weighting this is more likely to introduce subjectivity and debate as to why particular weightings have been applied. The parameters set are considered to be reasonable and appropriate.
2.13	DWP allocated sites assessment – proximity principle criteria	Page 4 There is no category which analyses the proximity of the sites to the sources of waste. The principle of proximity means that waste should be recovered or disposed of, as close as possible to where it is produced. This is a key policy factor in decision making and forms part of the wider consideration of assessment under Policy 4 of the Waste Plan. It is central to the sustainability argument and therefore its absence from any comparison assessment is a significant omission	The role of the proximity principle, alongside the waste hierarchy and self-sufficiency principles is fully recognised and addressed in the Planning Supporting Statement. It is acknowledged that the DWP spatial strategy identifies and allocates three sites for strategic residual waste management in and around the south east Dorset conurbation to reflect that a significant proportion of Dorset's waste arises in this area. However, the DWP also allocates Binnegar Quarry, which is located outside of and some distance from the conurbation, reflecting the fact that there are also significant volumes of residual waste arising outside of the conurbation. Even if a criterion were to be added to reflect proximity to waste arisings and sites 7, 8 and 9 were deemed to fully meet that criterion, the Portland ERF site (site 13) is also located in close proximity to the Weymouth and Portland conurbation and capable of serving the towns of Dorchester and Bridport. It would therefore also be deemed to be well placed in respect to

Item	Topic	Summary of consultation comment	Applicant response
			centres of waste arising and so would potentially meet the criterion or, as an absolute minimum, would partially meet the criterion. Irrespective of the scoring of such a criterion, this would not alter the conclusions of the DWP allocated sites assessment or diminish the fact that the Portland ERF site can demonstrate significant advantages over the DWP allocated sites. These significant advantages are set out in the Planning Supporting Statement and are re-affirmed in the Supplemental Planning Supporting Statement.
2.14	DWP allocated sites assessment – site size limit	Page 5 The CA document advises that the site size has been chosen on the basis that a minimum of 2ha is required to accommodate a ERF building, circulation and car parking. Herein lies a fundamental misinterpretation of the tests of the policy. This is not an exercise to see whether any sites could accommodate the exact scheme proposed by the application. It is a comparison of advantages of the proposed development over allocated sites to meet the requirements of managing the non-hazardous waste. If therefore the proposed development site is larger and potentially may generate a higher output, then that may in theory be an advantage, but it should not automatically rule out a comparison to a smaller site. An example of this is that Site 9 – Land at Mannings Heath Industrial Estate, Poole, which has been excluded from the second sift of analysis on the basis that it is under 2ha. However, it is an allocated site within the Waste Plan that has been tested at examination. Although we have concerns about the Applicant's methodology it is noteworthy that it scores second in their 'league table' of sites. To dismiss this site on the basis of it being under 2ha, again undermines the comparison assessment.	The Proposed Portland ERF has a nominal residual waste capacity of 183,000 tonnes per annum and a maximum capacity of 202,000 tpa. As such the facility is of a scale that is economically viable and deliverable and is capable of managing a significant proportion of Dorset's residual waste arisings and recovering significant amounts of electricity to meet an identified local requirement (being shore power) whilst also being capable of producing heat for supply to local users via a district heating network. In waste management terms this is a significant advantage, and this is recognised in this comment. To deliver that benefit the site area required for such a facility is deemed to be a minimum of 2 ha. The purpose of the DWP allocated sites assessment is to compare the advantages of the Portland site against allocated sites. The ability of allocated sites to accommodate a larger scale facility, of the scale and type proposed at Portland, in terms of site size and land availability is a legitimate consideration. In the context of site 9, the Portland site has a distinct advantage in that it has the capability to accommodate a larger scale facility with the benefits that arise from that efficiency. We further note the comments regarding the commercial viability of smaller volume sites, and whether, even if progressed and approved through planning, this would in practice be able to attract the investment capital required to be built and provide an actual solution to Dorset's waste management challenges.
2.15	DWP allocated sites assessment – potential to meet Portland's energy needs	Page 5 This criterion for a comparative exercise of sites across the Dorset planning authority area is outright bizarre. The proposed development site is the only site in Portland and therefore evidently it has an unfair advantage over other sites. Clearly, if a 'meeting electricity needs' criterion is justified it should be based on a sites ability to contribute to Dorset's electricity needs to allow fair assessment.	The DWP allocated sites assessment (paragraphs 2.27 to 2.29), together with other supporting documents (Energy Need Statement and Shore Power Strategy Report) explain why there is a specific need for an economically viable electricity supply to Portland Port to provide shore power, given the supply constraints. The purpose of the comparative assessment is to demonstrate the advantages of the Portland site over other allocated sites, as required by policy 4 of the DWP. The site's location on Portland and its ability to directly supply electricity to the port for shore power is a significant locational advantage that other sites located on the Dorset mainland do not have. Indeed it is illogical that this comment suggests that a locational advantage is in some way 'unfair' simply because the alternative allocated sites do not possess that advantage and odd that a Dorset wide energy need criterion should be suggested as an alternative to make this 'fair'. This comment fails to recognise the very specific circumstances and need for additional electricity supply capacity on Portland to meet a specific Portland need. Furthermore, whilst the Portland site can meet a Portland energy need and contribute towards a wider Dorset energy need, the other DWP allocated sites conversely can only contribute to the latter. In addition, the opportunity for the Portland ERF to provide heating to local heat users is a further differentiator versus other allocated sites (as outlined in the District Heating Paper) and national policy specifically states that plant should be sited to allow benefit from opportunities to provide combined heat and power, an opportunity that is only realistically achievable at Portland given the high demand and credit quality of local off-takers.

Item	Topic	Summary of consultation comment	Applicant response
2.16	DWP allocated sites assessment – flawed exercise	Page 5 In summary the comparative assessment exercise is flawed and the Applicant has not met the requirements of criterion 'A'.	As set out in responses above to the comments made on the assessment criteria, the comparative assessment exercise is sound, robust and the comments made in respect to individual criteria are either entirely unfounded and/or would make no difference to the outcome of the assessment, which concludes that the Portland site has significant advantages over the DWP allocated sites.

3. The fall back scheme

Other consultees

Item	Topic	Summary of consultation comment	Applicant response
	Adams Hendry (on behalf of SPWI)		
3.1	Consented scheme – fall back position (consented energy plant)	Paragraphs 2.48 and 2.49 In October 2019, Dorset Council issued a Certificate of Lawful use or Development confirming that the 2010 permission had been lawfully implemented and the consent remained extant. No information has been provided on the position of the accompanying listed building application (ref 09/00648/LBC). Further information is required on the implications of the listed building application on the purportedly extant consent. If the listed buildings application has lapsed, it is questionable as to whether the consent approved under 09/00646/FULES is in fact implementable.	Dorset Council's position is that the relevant consents have been implemented through a material start on site and that the permission is extant. The applicant is now seeking planning permission to construct the proposed ERF. However, the planning permission granted for an energy plant fueled by vegetable oil and/or waste tyres and the subsequent Certificate of Lawful Development together confirm the principle of locating an energy recovery facility in this allocated brownfield industrial port location.
3.2	Consented scheme – fall back position (likelihood of implementation)	Paragraph 2.50 On the assumption that the applications are extant, the likelihood of them being implemented is low given the passage of time that has elapsed since consent was issued. Whilst any extant consent is capable of being a material consideration, limited weight should be attached to it in these circumstances.	Dorset Council's position is that the relevant consents have been implemented through a material start on site and that the permission is extant. This is not an assumption. Furthermore, the extant consent could theoretically be implemented at any time (for example if market conditions were to become more favourable), and the period of time passed since the consent was granted is irrelevant in terms of the degree of weight that should be attributed to it. The extant consent continues to act as a precedent demonstrating that the site has been deemed suitable in principle for an energy plant use with waste derived material as a fuel, and of a similar nature to the proposed ERF. Accordingly, this should be afforded significant weight in the decision making process.

4. Combined Heat and Power (CHP) – District Heating

Other consultees

Item	Topic	Summary of consultation comment	Applicant response
	Adams Hendry (on behalf of SPWI)		
4.1	Provision of CHP	Paragraph 2.23 The proposed ERF does not include provision for CHP	The ERF is specifically designed to provide both heat and power and will be equipped to deliver CHP, through the provision of electricity to the shore power facility and/or the wider electricity distribution network and energy in the form of heat to a district heating network. The proposed ERF does make provision for CHP. Discussions have been advanced with local creditworthy off-takers but, as outlined in the District Heating Paper, it is not logical or market practice to advance the technical or planning considerations for a CHP scheme where the energy source required is subject to planning approval. We further note that other allocated sites do not have the potential to provide heat to off-takers with a similar volume demand, or the financial standing to support the upfront capital investment required for a district heating network and therefore the potential to actually deliver CHP at Portland should positively impact the consideration of the Portland site relative to other DWP allocated sites.
4.2	District heating network – likelihood of implementation	Paragraph 3.6 Much is made of the potential of the proposed ERF to provide heat however the district heating network does not form part of the application and therefore limited weight should be given to this potential	The ERF is designed to enable connection to a local heat network (district heating – DH) and therefore makes provision for CHP. Few, if any, similar facilities in the UK directly provide the local heat network together with the ERF facility at planning stage, but instead are designed to connect to the heat network when that is provided. It has been demonstrated through the Heat Report, Planning Statement and Environmental Statement that there are identified heat customers near the site with significant heat demands, that have already expressed interest in joining a network as and when this is delivered. They also have the financial standing to enter into long term contracts for offtake to support the upfront capital investment. Further supporting information has been submitted through the District Heating Strategy Paper, that demonstrates that the district heating network, whilst not part of the application, is fully deliverable and viable in policy, technical and commercial terms. It is expected that the heat network will initially provide heat to the two Portland prisons, with the network expanding in future as other users come forward for connection to the system. The potential environmental effects of constructing the required district heating infrastructure are considered in the EA Addendum, which indicates that this would not have an unacceptable environmental impact. Therefore, it is entirely misleading to suggest that the proposals do not make provision for CHP, or that the weight to be applied to the benefits of district heating should be reduced simply because it does not form part of the ERF application. The Portland ERF will be CHP equipped from the outset and there is a high probability that the district heating network will be delivered because of the environmental policy and financial incentives to do so, coupled with the absence of any technical or environmental constraints that would preclude its delivery. On that basis the potential for supplying a district heating network should be afforded great weight.
4.3	District heating network – impact of terrain	Paragraph 3.7 Not only does the heat network not form part of the planning application, it is unclear how it could be connected to HM Prison The Verne given the terrain.	Further supporting information has been submitted through the District Heating Strategy Paper, that demonstrates that the district heating network is fully deliverable and viable in policy, technical and financial terms. In respect to terrain the report provides an indicative route between the ERF and the two prisons, utilising existing road corridors (which already provide a conduit for other utilities and services). As such terrain is not a constraint to implementation of the heat network infrastructure. The ES Addendum has also concluded that there are no overriding environmental constraints.

5. Electrical generation and distribution

Other consultees

Item	Topic	Summary of consultation comment	Applicant response
	Adams Hendry (on behalf of SPWI)		
5.1	Method of connection to the grid network	Paragraph 3.8 The ES sets out the route of the grid connection, but no information is provided on how this grid connection will be constructed. Bearing in mind that 4.5ha of the application site relates to the cable routes, this is a significant omission. It is not clear whether the cables will be buried or whether they will be overground or what, if anything, has been assessed in relation to the grid connection. Further information is required.	The grid connection will comprise a new cable that will be buried beneath the existing public highway similar to other utilities infrastructure. The potential environmental effects of this has been considered in the ES and the impact is not deemed to be significant. Any potential effects would be temporary during the construction phase. Further details are provided in the Grid Connection Paper submitted as further information in connection to the council's request letter.

6. Shore power

Other consultees

Item	Topic	Summary of consultation comment	Applicant response
	Adams Hendry (on behalf of SPWI)		
6.1	Cruise liner visits - impact of Covid 19 pandemic on expected cruise liner visits	Paragraph 3.10 The coronavirus pandemic has had a significant impact on the cruise industry, with services suspended for much of 2020. The anticipated rise in cruise ships docking at Portland Port is therefore highly unlikely in 2020/21. The long-term effect of the pandemic on the cruise industry is not known at this stage, but a 58% rise in cruise ships calling at Portland Port by 2025 seems highly improbable. Further justification is required to support these assumptions before the benefits of shore power for the cruise industry can be given any weight in the decision-making process for the ERF.	The figures for cruise ship calls were provide by the Port and the basis for the numbers is as described in the application documentation. Whilst the Covid 19 pandemic has inevitably had an impact on the cruise industry, this has had a temporary impact. During the Covid restrictions a number of cruise liners were berthed at Portland Port for longer periods of time and could have benefitted from the provision of shore power had it been available. Looking ahead, Portland Port has confirmed that, post easing of Covid 19 restrictions, the cruise industry has seen a surge in bookings with the port hosting 54 cruise passenger visits in 2021 and a further 66 visits planned for 2022 – in each case numbers that are in excess of those used in the shore power and socio-economic modellings for the planning application. As a result, the evidence suggests the “highly improbable” conclusion made by the report writer is not accurate, and with the provision of shore power this will only mean that Portland becomes increasingly attractive as a destination port.
6.2	Cruise liner visits – proportion of cruise visits benefitting from shore power	Paragraph 3.11 Only half of cruise ships have the facilities for connecting to shore power. As some cruise ships may call into Portland Port more than others, it is not possible to determine what proportion of calls to Portland Port would benefit from shore power. Further information is required.	The figures for cruise ship calls were provide by the Port and the basis for the numbers is as described in the application documentation. The information provided is the Port’s expectation of its cruise liner business. It is expected that the number of cruise liners (equipped with shore power) visiting Portland will increase over time as new ships join the fleet with in-built shore power capability and older ships are refitted and retrofitted with shore power capability. Irrespective of the actual proportion of cruise liners visiting Portland with shore power capability, the provision of Shore Power facilities at Portland will clearly support the UK’s Clean Maritime Plan objectives and comply with recent Government strategies such as ‘Decarbonising Transport’.
6.3	Cruise liner visits – number and duration of stay of large ship visits	Paragraph 3.12 The maximum demand for electricity is only likely to be reached when a large cruise ship is docked. In order to understand the benefits of this shore power, information is required on the number of occasions a large cruise ship has docked over the last year, and the duration of the stay.	The figures for cruise ship calls were provide by the Port and the basis for the numbers is as described in the application documentation. The information provided is the Port’s expectation of its cruise liner business and is further supplemented in the revised Shore Power report.
6.4	Royal Fleet Auxiliary –Royal Navy contract, number and duration of RFA ship docking.	Paragraph 3.13 No information is provided on what proportion of calls to the port are made up of RFA ships. Section 5 of the report suggests that Portland Port’s contract with the Royal Navy provides for RFA ships to be docked ‘for a large proportion of days per year’. This is particularly ambiguous. Further information is required on the length of the contract with the Royal Navy and on the number of ships likely to be docked at Portland Port per annum and the likely average duration of their stay.	As would be expected the Port’s contract with the Royal Navy is confidential. However, the figures for RFA ship calls were provided by the Port and the basis for the numbers is as described in the planning application documentation. For assessment purposes the assumed number of days that RFA ships will be docked at the Port is 260. Portland Port has confirmed that this is a highly conservative figure and that in the last few years the number of berth days has typically been 20-30% higher than this figure. Again, the provision of shore power will only make Portland a more attractive destination for the Royal Navy given the UK Government’s drive to reduce emissions from the HMG estate and activities.
6.5	Cruise liner visits – loss of visits due to absence of shore power	Paragraph 3.14 The applicant states that there is a risk to the port if shore power cannot be provided and that it will potentially reduce the number of cruise ship visits. This statement is unsubstantiated and goes against the forecast increase in cruise ships visits suggested, which are predicted in the absence of shore power.	The Port is seeking to attract more cruise liner visits to Portland and secure greater economic benefit for Portland and the wider Dorset area, from growth in the cruise sector. However, the cruise industry recognises that it must also make a significant contribution to reducing its carbon footprint. Its customers are increasingly aware of climate concerns and are demanding that action be taken to improve its environmental credentials. In response the cruise industry is looking for ways in which it can demonstrate a reduction in carbon and other

Item	Topic	Summary of consultation comment	Applicant response
			emissions to the atmosphere. The ability to connect to shore power is one such measure and ports are being asked to provide this facility. This demand will increase further. Cruise liners have a choice of destination and port and the availability of shore power will become increasingly important in continuing to attract cruise liners to Portland. The Port is a commercial organisation which must compete on the global stage for its business. It must remain competitive and if it cannot provide what the industry requires it will simply begin to lose business to other ports. Whilst the Port is aiming to increase ship visits the absence of shore power is expected to reduce cruise ship calls in the future. Therefore, the predicted increase in ship visits is unlikely to be sustained over future years if the Port cannot meet the requirement to provide Shore Power.
6.6	Deliveries of RDF fuel by ship	Paragraph 3.15 The ES suggests that in respect to ships bringing RDF fuel to the site, the onboard engines would only be used during the transportation and manoeuvring into the docks and that smaller auxiliary engines would be used when the ship is docked requiring minimal power consumption. This suggests that they would not benefit from the proposed shore power solution.	Shore Power is not provided to the primary quay where waste is intended to be unloaded, it should be noted that the Port Authority will use various quays on the Port at their discretion in response to wind/tide conditions. The fuel supply ships are relatively small in terms of power requirement and would only be docked for a short period of time (a few hours) and it has never been claimed that Shore Power would be made available for these vessels. The benefit of Shore Power is related to larger cruise liners and RFA shipping that will be in dock for longer periods of time (days) and will have significantly greater power demands.
6.7	Number of visits of cruise ships and RFA ships	Paragraph 3.16 Very little weight should be given to the benefits of shore power unless further credible information can be provided on the number of calls by cruise ships and RFA ships.	Disagree. The figures for ship calls were provided by Portland Port, and the basis for the numbers is as described in the planning application documentation. As noted above the numbers used for modelling purposes is highly conservative. The information on cruise liner business provided in the original application was the port's expectation of its future cruise business and updated confirmations from the port evidence that the report authors' expectation of a deterioration in cruise vessel business is not being realised in practice. The evidence submitted confirms that Shore Power will be of great benefit in respect to safeguarding cruise liner visits in future and the contribution these make to the local tourism sector (spend and related jobs) and reducing emissions to air from ship exhausts (including carbon) that result in an overall improvement in general air quality for Portland, relative to the existing pre-ERF position. Contrary to this comment, the provision of Shore Power and its associated environmental and economic benefits should be afforded substantial weight in the planning balance.

7. Design and materials

Statutory consultees

Item	Topic	Summary of consultation comment	Applicant response
	Dorset Council Landscape		
7.1		Two reservations over the use of PVC mesh: a. Durability of the PVC mesh. b. The main concern with the building treatment is the use of a 'printed image of the green wall to replicate the vegetation and tones.	Further information in respect to durability and environmental performance is provided in respect to external cladding material in the DAS addendum. The DAS Addendum considers potential alternative approaches to the use of a printed photograph of the backdrop, including potential use of camouflage patterns. Further discussion will be held with officers to consider the most appropriate materials, including use of samples and further information on durability and maintenance, and this can be controlled by means of condition.

Other consultees

Item	Topic	Summary of consultation comment	Applicant response
	Adams Hendry (on behalf of SPWI)		
7.2	Use of profiled cladding and printed PVC mesh	Paragraph 3.2 The PVC mesh will not reflect any seasonal changes in the surrounding vegetation, it will still represent an alien feature in the landscape.	The type of vegetation at Portland is not of a type that demonstrates significant seasonal change and the approach is intended to enable the facility to blend into the receiving landscape, rather than become invisible. The proposed PVC mesh has been suggested as a potential option, however other options exist such as the use of printed cladding and the adoption of relevant camouflage patterns that will be capable of reflecting any seasonal variation. Further information is provided in respect to external cladding material in the DAS Addendum.
7.3	Durability of the printed PVC mesh	Paragraph 3.3 It is not clear how well the PVC mesh will weather overtime. Evidence is required to demonstrate how this will work in practice and assurances given to ensure that any measures relied upon to mitigate landscape impacts can be secured in perpetuity. The long-term durability of this building treatment option needs to be demonstrated, preferably by showing that it has been successfully used on a building of this scale and in an exposed coastal location.	Further information in respect to durability and environmental performance is provided in respect to external cladding material in the DAS Addendum. Further discussion will be held with officers to consider the most appropriate materials, including use of samples and further information on durability and maintenance, and this can be controlled by means of condition.
7.4	Assessment of alternative options	Paragraph 3.4 As the proposed building treatment is critical to the mitigation of landscape and visual impact, if the long-term durability cannot be satisfactorily demonstrated, then an assessment should be undertaken of an alternative option or without the PVC mesh in place.	Further information in respect to durability and environmental performance is provided in respect to external cladding material in the DAS Addendum. Irrespective of this the landscape and visual assessment has considered the effects of the development based on a design approach using the PVC mesh or similar materials to achieve the same camouflage effect.

8. Air quality

Other consultees

Item	Topic	Summary of consultation comment	Applicant response
	Ministry of Justice		
8.1	Air quality - Impacts on staff and inmate health	The MoJ is naturally concerned about the potential effects on its staff and inmates. Specifically, the concerns relate to reduced air quality from the facility's emissions and increased traffic. Having reviewed the application submission and supporting Environmental Statement (ES), the MoJ questions the robustness of the assessment of likely air quality effects, including cumulative effects. It is apparent that the ES does not consider all the likely air quality effects of the development in combination and against a reliable baseline of existing air quality. As such, the current analysis may have significantly underestimated the likely impacts on air quality in the local area and in turn the potential effects on the human health of nearby residents and occupiers, including those residing and working at HMP The Verne.	Updated analysis has been provided to the MoJ, noting that the analysis assumes a highly conservative set of assumptions that any occupant would be present and exposed to any perceived risk relating to the operational of the Portland ERF for the full operational life. In addition, in response to the regulation 25 request further detailed modelling has been carried out to quantify the impact of the emissions from engines on board ships which would be connected to shore power as a result of the proposal. Ships are a significant source of oxides of nitrogen, sulphur dioxide and particulate matter. The updated analysis concludes, consistent with the original submitted analysis, that the impact on occupants at HMP The Verne would be negligible. We note that Public Health England responded to the original analysis, confirming the modelling and assessment criteria used were in line with UK guidance and good practice and further that it was satisfied the approach taken was conservative, but not over-precautionary in terms of approaches to assessing the potential risks. HMP The Verne is located away from any major roads and as such it is likely that baseline concentrations are similar to background concentrations. DEFRA has produced maps of background concentrations on a 1km2 grid across the UK for key pollutants where baseline monitoring is not available. This has been produced from models of key sources (and would include the port) and validated against background monitoring sites. Given that HMP The Verne is away from main roads the use of this data set to describe baseline concentrations is appropriate. For other pollutants not included in the DEFRA mapped background datasets very conservative estimates have been made of the likely concentrations from UK wide monitoring networks. The dispersion modelling calculate the impact of the process emissions from the ERF. The impact was then compared to the Air Quality Assessment Levels set for the protection of human health which have been set by the Environment Agency based on the scientific understanding of the health effects of each pollutant. Additional modelling was carried out to determine the impact at specific receptors to support the EP application this included a receptor (R4) to represent HMP The Verne. This has been included as Appendix 3.3 (Modelling results at discrete receptors) to the ES Addendum. The modelling assumed the ERF operates for the whole year and continually releases emissions at the emissions limits, both of which are conservative assumptions. The results show the impact of emissions of the ERF at HMP The Verne is very small – the increase in NOx is 1.8% above baseline levels and the increase in PM_{10} and $PM_{2.5}$ in both cases being less than 0.2%. This level of impact is determined as being "negligible" using industry standard guidance from the Institute of Air Quality Management. As a further measure an assessment of the impact on health has been carried out which considered the overall impact of emissions from the ERF on health. This concludes that the carcinogenic and non-carcinogenic health risks associated with the Portland ERF are deemed to be negligible and that there should be no impact on the mental wellbeing for occupants at HMP The Verne or HMP YOI Portland. If the impact of Shore Power is included in the analysis, then this generally results in an improvement in air quality relative to the position today. The analysis again used conservative assumptions basing the modelling on a lower berth days than is experienced in practice and assuming that vessels are fairly modern (with newer vessels having lower emissions than older engines).

Item	Topic	Summary of consultation comment	Applicant response
			The modelling (ERF with Shore Power) demonstrates that there would be a net benefit associated with the proposed development in all areas. This is because emissions would not be emitted from the engines on board vessels if they were connected to Shore Power. For nitrogen dioxide, there is a net benefit for the majority of the area. Where there is a net increase, the increase is extremely small (0.05 µg/m3 at the point of greatest increase on land), which can be compared with current background concentrations of around 22 µg/m3. For sulphur dioxide, there is a net benefit for the majority of the area. Where there is a net increase the increase is extremely small (0.05 µg/m3 at the point of greatest increase on land), which can be compared with current background concentrations of around 2 µg/m3. As a further measure an assessment of the impact on health has been carried out which considered the overall impact of emissions from the ERF on health taking into account the impact of Shore Power. This concludes that consideration of all impacts would lead to an overall beneficial effect on health.
	Public Health Dorset		
8.2	HIA – health effect of emissions and risk	The Health Impact Assessment states that: 'The Human Health Risk Assessment (HHRA) has concluded that the health effects associated with emissions of NO2, SO2, PM10 and PM2.5 from the ERF are shown to be very small and could reasonably be described as negligible.' It should be noted that this does not mean that there will be no impact on human health associated with emissions from the operation of the proposed development. In 2013 the World Health Organisation (WHO) concluded that 'there is no evidence of a safe level of exposure to PM (particulate matter) or a threshold below which no adverse health effects occur'. The proposed development, and associated increased traffic and transport, will lead to increased exposure of the local population to this pollutant, and others, even if they are, as the applicant asserts, 'very small'	Further information, which addresses these comments, is provided in the submitted update to the Human Health Risk Assessment (HHRA) and Health Impact Assessment (HIA), appended to the ES Addendum.
8.3	Emissions from shipping – evidence of potential health benefits	The application refers to the potential for the proposed development to provide 'shore to ship' power for vessels in Portland harbour. The applicant highlights that this would lead to a reduction in emissions levels by negating the need for vessels to use their own engines for power while in harbour. Providing a means of reducing emissions from vessels in Portland Harbour would, in principal, be beneficial but as detail of the current impact on air quality of this source is not provided it is not possible to understand the degree of potential benefit. We would welcome baseline information on emissions levels and health impacts of vessels in Portland Harbour, and modelled data on how the proposed development would reduce overall emissions levels.	The original submitted ES concluded that the impact of the ERF operating was deemed to be negligible to air quality and human health. The provision of Shore Power would result in a reduction in impacts of existing emissions from vessels docked in port which would otherwise be using onboard engines to provide power which generally results in an improvement to air quality and human health, relative to the existing position. The original ES included a qualitative analysis explaining that an additional benefit would be the offset of the emissions from onboard engines. A separate technical note to the ES Addendum has been provided and the results discussed in the ES Addendum. This confirms the qualitative analysis set out in the original ES. Further information, which addresses these comments, is provided in the submitted additional to air quality assessment], Human Health Risk Assessment (HHRA) and Health Impact Assessment (HIA), appended to the ES Addendum.
8.4	HIA – recommendations and communication of impacts	The Health Impact Assessment (HIA) included in the application emphasises the need to consider the impact of the proposed development on both physical and mental health. As the community profile in the HIA notes, the site is located within a community characterised by higher levels of deprivation than much of Dorset, and a population that experiences worse outcomes than Dorset's wider population across a number of health indicators. This includes levels of depression higher than the England average with 22.9% of adult primary care patients in Weymouth & Portland living with depression. The site of the proposed development is also, as detailed throughout the application, unique in its topography and built environment. For example, the site's near sea level location would result in the proposed stack	Further information, which addresses these comments, is provided in the submitted update to the Human Health Risk Assessment (HHRA) and Health Impact Assessment (HIA), appended to the ES Addendum.

Item	Topic	Summary of consultation comment	Applicant response
		terminating below the height of nearby residential areas. With these observations in mind, the recommendations of the HIA (paragraph 7.2) are generally welcome, but we recommend that the applicant extends their intention to 'communicate the findings of the Air Quality Assessment' (as a means of allaying public concern) to encompass communication to the community of how assessment of the potential impact of the development on air quality during construction and operation has taken account of the specific characteristics of the site (e.g. topography, weather conditions etc) prior to determination of the application.	
8.5	HIA – potential impact on physical and mental health and well being.	The HIA includes an assessment of the potential impacts of the proposed development on vulnerable groups and health inequalities. The proposed development is sited in close proximity to neighbourhoods which are among the 10% most deprived in England. Research demonstrates ongoing inequalities in exposure to air pollution, with deprived areas worst affected by high concentrations of particulate matter and nitrogen dioxide. Given that the proposed development has the potential for cumulative adverse impacts on the physical and mental health and wellbeing of the local population, potentially exacerbating existing health inequalities, we would welcome more detailed consideration of the likely impacts and mitigations. It is not clear whether the applicant has specifically considered the potential impact of emissions on the resident population of HMP Verne, and to a lesser extent, HMP/YOI Portland. Prisoners face particular challenges to leading healthy lives[4] and, in comparison to the wider population, are more likely to be exposed to any emissions associated with construction and operation of *the proposed* development. We would suggest that the applicant clarifies how they have taken account of 'static' prisoner populations in the Environmental Statement prior to determination of the application.	Further information, which addresses these comments, is provided in the submitted update to the Human Health Risk Assessment (HHRA) and Health Impact Assessment (HIA), appended to the ES Addendum.
	Adams Hendry / Air Quality Consultants (on behalf of SPWI)		
8.6	Exclusion of on-site emissions – back up diesel generators	Paragraph 4.1 Part B Air Quality Paragraph 2.1 The only emission sources considered in the assessment are the main exhaust stack[1]. It is routine practice on schemes such as this to include a backup source of electrical power in order to avoid major accidents during emergency shut down. This is typically achieved by including diesel generators. The proposed Scheme appears to be no exception, since paragraph 2.19 of the ES clearly states that a diesel fueled standby generator will provide electricity during grid outages. Standby diesel generators require regular operation in order to ensure their continued function, and given the importance of ensuring an emergency back-up power supply, it is common practice for generators to thus be run periodically While no details of these on-site emission sources has been given, experience of sufficiently-sized diesel generators elsewhere has shown that they can give rise to very high levels of nitrogen oxides (NOx) emissions; particularly if plant are used which are not fitted with Selective Catalytic Reduction technology. The emissions can be sufficient that even just periodic testing (for example for 30 minutes every two weeks) can, when added to other onsite emissions, affect the outcomes of an assessment3. Similarly, while no details have been given as to the release height of the generator exhausts, unless they are routed to the top of the main exhaust stack (which seems unlikely given the position of the generator shown in Figure 2.3 of the ES) the plumes from the generators will be subject to less effective dispersion than has been modelled. This means that the impacts, per mass of NOx	Diesel generators will only be used when the main plant is offline and when power is not available from the grid to provide the power for the site. The probability of this event occurring is very low and if this does occur it would only be for a short period when the main plant is offline. It is acknowledged that the diesel generators would be tested during the year but testing would only occur for approximately 30 minutes every 2 weeks, or 13 hours in total. This is less than 0.2% of the time that the main plant would be running. Even if emissions are five times larger than for the main plant, this would only be 1% of annual emissions. As the stack would be shorter, the impacts would occur in different locations so this would not make a significant difference to local impacts. The diesel generators are also located on the shore side of the main building with a short stack. Therefore, the building would act as a barrier to minimise the impact of emissions from the diesel generators at areas of relevant exposure to both humans and ecology. The ES Addendum includes additional clarification on this point. The inclusion of the operation of the back-up diesel generators would not change the conclusions of the assessment that "the impact on air quality is not significant".

[1] Furthermore, Chapter 8 of the ES (Paragraph 8.4.17) specifically states that: "The only source of process emissions from the Proposed Development would be from the AAERF".

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		emitted, are likely to be much higher than those of the main stack (in other words, even though the total annual NOx and particulate matter emissions from the diesel generators are likely to be much lower than those from the main stack, their impacts will be disproportionate). By excluding the emissions from diesel generators from the assessment, the impacts of the scheme will have been underpredicted.	
8.7	In-combination impacts – traffic and process emissions	Paragraph 4.2 Part B Air Quality Paragraph 2.1 The combined impacts upon the SACs of additional traffic due to the scheme, with stack emissions have been considered, as set out in Section 6 of Appendix D3 of the ES. Therefore the 'in-isolation' impacts of these two aspects of this scheme have been considered. However, these results do not take into account the 'in-combination' traffic impacts with other plans and projects. In order to address this, the impact of additional traffic generated by the identified cumulative schemes should have been modelled with the additional traffic due to the Scheme, the resultant concentration added to the PC, and this value compared with the 1% screening criterion. If this had been carried out, the areas of the SACs where impacts could not be screened out as insignificant would be much larger.	This has been addressed as part of the ES Addendum. A separate technical note has been produced which includes transects showing the impact of emissions from road and the ERF at the Isle of Portland to Studland Cliffs SAC and Chesil and The Fleet SAC. These results have been fed into the Shadow Appropriate Assessment.
8.8	Use of spatially averaged background values	Paragraph 4.3 Part B Air Quality Paragraph 2.7 to 2.11 The use of spatially-averaged background values to represent location specific baseline values is not appropriate where there are significant localised sources of emissions within the study area, for example, when predicting concentrations alongside roads or near to areas affected by ship emissions. This under-prediction of the local baseline has the potential to affect the overall conclusions of the air quality assessment. Where the assessment has predicted total ambient concentrations (Predicted Environmental Concentrations or 'PECs') this has been done by adding the increment from the Scheme (the PC) to spatially-averaged background values. This is appropriate for those pollutants which, without the Scheme, are expected to be relatively spatially homogenous. It is not appropriate where there are significant localised sources of emissions within the study area; for example when predicting concentrations alongside roads or near to areas affected by ship emissions Failure to do this will have led to a large under prediction of the PEC alongside roads, especially the A354 alongside the Chesil Beach SAC and to a lesser extent at the Isle of Portland SAC near Castletown (which will also be influenced by ship emissions). In this area, the total modelled roadside concentrations from all traffic using the road (from ADMS-Roads) should have been added to the spatially-averaged background values, to derive an appropriate 'baseline' value to which the additional concentrations due to the scheme and other plans and projects should have been added to calculate the PEC. Given that there are sections of the Chesil Beach and Isle of Portland SACs alongside roads where the 1% screening criterion is exceeded, it is important that the PEC is calculated correctly. This under-prediction of the local baseline has the potential to affect the overall conclusions of the air quality assessment, and it is reasonable to expect the applicant to have assessed it robustly. This has not been done.	In terms of the impact on human health; a spatially averaged background concentration was used and then where the impact is predicted to be greater than 0.5% of the AQAL consideration made to the choice of baseline concentration. This included a discussion as to whether the mapped background data was suitable for the area in question. Therefore, consideration was included on the potential for the choice of baseline to affect the conclusions of the assessment. In terms of impacts on ecology, the ecological sites which are close to roads where this may be an issue are Isle of Portland Cliffs to Studland Cliffs SAC (and Isle of Portland SSSI) and Chesil and The Fleet SAC, SPA and Ramsar. A separate technical note has been produced which includes transects showing the impact of emissions from road and the ERF at the Isle of Portland to Studland Cliffs SAC and Chesil and The Fleet SAC. These results have been fed into the Shadow Appropriate Assessment. The dispersion modelling of these transects has included the contribution from baseline traffic emissions and mapped background data. Although the port operations have not been specifically modelled at the transects used the contribution from the port is likely to be similar to the mapped background. As such the variability in baseline concentrations has been considered in the assessment. The original shadow HRA should have referenced Section 6 of Appendix D3 of the ES

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		The extent of this underestimation is demonstrated by the results of nitrogen dioxide monitoring carried out on Portland by Weymouth and Portland Borough Council. The background value for the area, used to calculate PECs is 22 µg/m3, whereas the measured value at a roadside site on Portland in 2018 was 31 µg/m3. The concentrations used in the assessment are thus much too small to represent roadside conditions. These values have fed through to the Shadow Appropriate Assessment which has underpredicted the PECs associated with the Scheme.	
8.9	Process contributions – traffic NOx and ammonia emissions	Paragraph 4.4 Part B Air Quality Paragraph 2.12 to 2.14 The Process Contributions (PC) included in the shadow Appropriate Assessment do not take into consideration NOx and ammonia emissions from additional traffic generated by the scheme. The omission of these values means that the shadow Appropriate Assessment has failed to consider the entire impacts of the scheme. Scheme-generated ship emissions have not been modelled at all, and neither road traffic nor ship emissions are included in the concentrations considered, contrary to what is claimed in paragraph 5.97 of the shadow Appropriate Assessment The Process Contributions due to the scheme quoted in the Shadow Appropriate Assessment are those due to emissions from the stack in isolation, which appear to be taken from Technical Appendix D2 of the ES. These values do not take into consideration NOx and ammonia emissions from additional traffic generated by the scheme. The correct values are shown, graphically, in Section 6 of Technical Appendix D3 of the ES. The omission of these values means that the Shadow Appropriate Assessment has failed to consider the entire impacts of the scheme. This is particularly important as the graphs in Section 6 of the Technical Appendix D3 of the ES suggest that even with the project in-isolation, the combined impact of stack emissions and additional traffic on NOx and ammonia concentrations, and nitrogen deposition upon the Island of Portland SAC exceed the 1% screening criterion being used. As no numerical values are presented, the information provided is insufficient to determine whether there is a risk that the PECs will also be exceeded. The conclusions based on this erroneous information have been copied into the Natural Heritage chapter (Chapter 10) of the ES and to the Shadow Appropriate Assessment Furthermore, paragraph 5.97 of the Shadow Appropriate Assessment states that, “road traffic emissions, and those generated by ships in scenarios which have deliveries from both road and sea, have been factored into the modelling work and the impact on the increases in nitrogen oxides, ammonia and nitrogen deposition as a result of the operation of the facility have been assessed above”. This statement is plainly incorrect. Scheme-generated ship emissions have not been modelled at all (see Paragraph 2.20), and neither road traffic nor ship emissions are included in the concentrations considered in the Shadow Appropriate Assessment. The Shadow Appropriate Assessment is therefore highly misleading since it claims to cover emissions that have not been included.	The Shadow Appropriate Assessment has been updated to include the contribution of oxides of nitrogen and ammonia from emissions from additional traffic generated by the scheme.
8.10	Model grid resolution	Paragraph 4.5 Part B Air Quality Paragraph 2.15 and 2.16	The choice of grid has been selected to balance the computational time whilst ensuring that the grid is suitable to capture the peak impacts. The grid resolution is 60m, with a stack height of 80m. It is common practice that the grid resolution is at least 1.5 times the stack height, which would be 120m by 120m. The chosen grid size is half this and therefore considered to

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		The use of a course grid to model impacts is likely to have caused the near-field and maximum impacts to have been under-predicted and thus there may be areas of the SAC where impacts are greater than presented in the ES. The modelling presents the maximum predicted impacts anywhere on the receptor grid. However, these maxima values are dependent on the grid resolution chosen. It is highly likely that greater impacts would have been predicted if a finer receptor grid had been used. The grid resolution used is 60 m x 60 m even close to the stack. This is a particularly coarse grid and it is common and best practice to use a much finer resolution than this close to an emission source. The topography in the vicinity of the stack is complex, with the nearby receptors being located level with or higher than the stack. This includes areas of the SAC, some of which are very close to the stack. Therefore the choice to use a coarse grid is likely to have caused the near-field and maximum impacts to have been under-predicted and thus there may be areas of the SAC where impacts are greater than presented in the ES.	be appropriate. Changing the grid resolution is not expected to change the conclusions of the assessment.
8.11	Stack height analysis and ammonia emissions limits	Paragraph 4.6 and 4.7 Part B Air Quality Paragraph 2.17 to 2.19 It is not clear that the stack height is the optimum for minimising the adverse air quality impacts of the scheme as the effects of existing emissions from the road and shipping have not been quantified, and the combined effects of scheme-generated traffic, on-site diesel generator emissions, and emissions from the main stack have also not been considered. Section 5 of Appendix D2 details how the requirement for an 80 m stack was determined. The justification for an 80 m stack appears to be that most (but notably not all) impacts can, with this stack, be described as 'negligible' or 'not significant'. However, because the effects of existing emissions from the road and shipping have not been quantified, and the combined effects of Scheme-generated traffic, on-site diesel generator emissions, and emissions from the main stack have also not been considered, it is not possible to make this assessment. As a result, it is not at all clear that the stack height chosen is the optimum for minimising the adverse air quality impacts of the Scheme. Section 5 of Appendix D2 also considers the effect of a reduced ammonia emissions limit of 8 mg/Nm3 (compared with a BAT level of 2-10 mg/Nm3). This, in conjunction with an 80 m stack, would avoid stack impacts of greater than 1% of the critical level at the Chesil Beach SAC. However, such impacts would remain at the Portland SAC. BAT states that emissions as low as 2 mg/Nm3 are achievable. However, in order to achieve this, selective catalytic reduction (SCR) is required, rather than selective non-catalytic reduction (SNCR) (direct injection of ammonia solution into the combustion zone) which is proposed in the ES. Considering the high sensitivity of the receiving environment, i.e., a European designated site in unfavourable condition, with nitrogen sensitive features and the potential for further nitrogen deposition to hinder recovery, there is insufficient information presented to suggest that the ammonia emission limit presented in the ES is appropriate.	The stack height assessment considered the operation of the plant in isolation to determine that the stack height is appropriate for the building configuration. As set out in technical appendix D2, the stack height was chosen based on the change in the angle of the slope at the Isle of Portland to Studland Cliffs. Including existing emissions from road and shipping (or the diesel generators) would not change the justification of the stack height. As set out in Section 5 (Stack height assessment) of technical appendix D2, the ammonia limit is sufficient to ensure that the impact of the plant is less than 1% of the Critical Load at Chesil and the Fleet SAC where the baseline N deposition exceeds the Critical Level. In reducing it to 8 mg/Nm3, the ammonia contribution at the Isle of Portland to Studland Cliffs is reduced to a level at which the PEC remains below 70% of the Critical Level and therefore in both instances the impact is deemed not significant. In addition, this comment demonstrates a fundamental misunderstanding of emission limits. If the limit is set to 8 mg/Nm3, then actual emissions will be lower than this; the modelling is specifically worst case. The lower limits of the relevant critical loads and levels for semi-natural dry grasslands and scrubland facies: on calcareous substrates will not be exceeded if the proposals go ahead. The unfavourable condition of unit 33 is not due to nitrogen or ammonia deposition. The supplementary advice on conserving and restoring site features for the Isle of Portland to Studland Cliffs SAC notes that air quality for the qualifying features are currently within acceptable limits.
8.12	Combined impact with ship emissions	Paragraph 4.8 Part B Air Quality Paragraph 2.20	There will be periods whilst the ships are docking that the ship engines would be operating but this would only occur for a short period (less than an hour). Figure 13 of technical appendix D2 shows the area where the contribution from the plant is greater than 10% of the Critical Level.

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		Although there would only be an additional 2 ships per week as a result of the Scheme which would have a minimal impact on annual mean concentrations, there is potential for a combined impact of stack and ship emissions upon maximum 24-hour NOx concentrations. This is particularly important within the Portland SAC, as there is an area that could be directly downwind of both of these at the same time and thus impacts would combine. This issue requires assessment	Emissions from the ships would be at a much lower level than the plant and for the majority of the time these would be blown away from the cliffs. In the unusual event that the wind is from the north-east and blowing directly to the shore any emissions from the ships would impact at a much lower level than the stack emissions. On the lower flanks of the hill the stack emissions are <5% of the Critical Level, so including a contribution from ships (for an hour over a 24-hour period) would not significantly change the predicted impacts.
8.13	High-rise receptors	Part B Air Quality Paragraph 2.21 There are a number of tall residential buildings at the Ocean Views complex of Castle Road. The modelled grid would not have taken into account the height of these receptors. The modelled annual mean nitrogen dioxide concentration contour (labelled Figure 6.4 in Appendix D2) indicates that the stack is having an influence in this area. However, ground-level concentrations could be lower than those at upper floors and thus the impact will have been under-predicted.	The Ocean Views complex of Castle Road is located 1.2km to the west of the plant. Ground level concentrations were predicted to be well below 0.5% of the AQAL. Whilst the concentration could be greater at height the conclusions of the assessment would remain the same in that the impact would be not significant even at these elevated points. Additional clarification has been provided in the ES Addendum over the choice of receptors and impacts at specific receptors as requested by the EA as part of the EP determination process.
8.14	Traffic impacts on Portland	Part B Air Quality Paragraph 2.22 and 2.23 The Scheme would lead to an additional 72 HGV movements and 38 car (staff) movements per day. Whilst these traffic impacts fall below individual screening criteria for requiring detailed assessment (100 LDVs and 500 cars), these impacts would combine on Castletown which is very narrow, with receptors close to the kerb which means that annual mean nitrogen dioxide concentrations could be elevated. In addition, the impact of the stack on annual mean nitrogen dioxide concentrations appears to be only slightly less than 0.5% of the objective in this area (based on Figure 6.4 showing a small area above 0.5% just to the north of Castletown). Therefore, there could be the potential for the combined impact of stack emissions and those from additional traffic due to the Scheme to lead to a greater than 0.5% impact on annual mean nitrogen dioxide concentrations for residents of Castletown, which has not been quantified. Any consideration of impacts on Castletown would need to take into account the localised influence of all traffic on Castletown and emissions from ships using the nearby berths. Figures 1 and 2 of Appendix D3 of the ES appear to show roads model receptors along Castletown and Castle Road but no reference is made to them in the report and no results are presented.	Additional information has been provided in the ES Addendum and associated technical appendices to confirm the in combination impact of process and road traffic emissions in Castletown. This shows that the in combination impact is not significant and the conclusions of the original ES do not change.
8.15	Stack impacts on Boot Hill	Part B Air Quality Paragraph 2.24 Paragraph 4.78 of the ES notes that the impact of emissions from the stack on receptors on Boot Hill would be ‘miniscule’. However, this is not quantified. Taking into account that the maximum impact of emissions from additional road traffic in this area is 0.47% of the objective, and the screening threshold is 0.5%, a ‘miniscule’ impact could potentially alter the conclusions and thus further information should have been provided. This is particularly important as annual mean nitrogen dioxide concentrations on Boot Hill in 2018 were only marginally below the objective (measured concentration of 39.6 µg/m3 where the objective is 40 µg/m3).	Although not quantified in the ES it can be seen from Figure 6.4 that the contribution from the plant will be very small. The Boot Hill area was outside the initial modelling domain. However, it was captured in the wider modelling carried out for the health impact assessment. This predicted the contribution to be <0.06% of the AQAL. Therefore, this additional contribution would not alter the conclusions of the assessment.
8.16	Queuing traffic on Boot Hill	Part B Air Quality Paragraph 2.26 The model results presented for Boot Hill in Table 5 of Appendix D3 of the ES are significantly higher (up to 60 µg/m3) than those measured on Boot Hill (maximum of 39.6 µg/m3) and shown at the verification sites in Table 4. This suggests that the additional emissions due to queuing traffic have been added to the	The emissions due to queuing were included in the verification. Table 5 sets out the worst-case assumption that there is no change to the fleet composition from 2017 levels together with the increase in vehicle flows for the 2023 assessment year. The results presented in Table 6 are the more “realistic” scenario which assumes that the fleet mix changes in line with the projections.

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		concentrations following verification. This approach is incorrect as queuing traffic will be having an influence on existing concentrations and thus should have been included in the verification process. Based on a comparison with measured values, this approach appears to have resulted in unrealistically high predicted concentrations on Boot Hill.	
8.17	Incorrect values in tables	Part B Air Quality Paragraph 2.27 to 2.30 There appear to be a number of incorrect values in Table 18 and 19 of Appendix D2 of the ES. For example, in Table 18, the background lead concentration is stated as 9.80 ng/m3, the PC 0.46 ng/m3 and the PEC 10.03 ng/m3. The PEC should equal the background plus the PC, but it this case it does not. A similar scenario occurs for lead in Table 19. In Table 19, the PCs presented for all metals are higher than the PECs, which is not possible. Table 22 of Appendix D2 states that the sulphur dioxide results are in ng/m3, whereas in Table 23 values 1,000 times higher are also stated to be in ng/m3. These errors highlight a lack of care that could be replicated in some other aspects of the model which it is not possible to review without the model inputs and outputs themselves	There was an error in the calculation of the PEC in tables 18 and 19. However, the conclusion of the assessment does not change. Table 22 of Appendix D2 should state µg/m^3 for sulphur dioxide results. The model inputs and outputs can be provided. However, each of the points raised above could have been calculated from other data in the report and identifying minor transcription errors does not undermine an entire assessment. These amendments have been made and updated tables provided as part of the ES Addendum. These are minor transcription errors and do not undermine the assessment. The conclusions of the original ES do not change.
8.18	Offsetting ship emissions removed by shore power	Part B Air Quality Paragraph 2.31 Paragraph 4.64 of the ES states that, “it should be noted that no allowance has been made for the offset of emissions from shipping that will use shore power by ERF, which this development enables”. This statement ignores that fact that no emissions from ships have been explicitly modelled (either existing or associated with the Scheme), so it would not be possible to ‘offset’ any of these emissions within the assessment as they have not actually been quantified.	The impact of the proposed development should be based on the impact that the burning of the waste, and the vehicles used to import and export material, which is what has been done. However, a major benefit of the scheme is that power would be provided to ships which currently operate onboard engines to provide power when they are docked. A separate technical note to the ES Addendum has been provided and the results discussed in the ES Addendum. This confirms the qualitative analysis set out in the original ES.
8.19	Non-residential receptors	Part B Air Quality Paragraph 2.32 Where process contributions exceed the screening criteria, consideration has been given to the maximum concentrations, ‘at any point’, ‘land’ and ‘residential’. No explicit consideration has been given to non-residential receptors such as the cruise terminal or footpaths. However, in this case the maxima at ‘residential’ appear to be the overall maxima and therefore this would not alter the conclusions of the assessment.	Additional clarification has been provided in the ES Addendum over the choice of receptors and impacts at specific receptors as requested by the EA as part of the EP determination process.
8.20	Misquoted guidance	Part B Air Quality Paragraph 2.33 The Shadow Appropriate Assessment misquotes the Environment Agency’s guidance. The statement is incorrect for two reasons. First, the guidance referred to states that where the PC is greater than 1% of the critical level and the PEC is more than 70% of the critical level, a detailed assessment is required. It does not explicitly state that it can be concluded that there would be no significant effect. Secondly, no specific reference is made to this being ‘alone or in combination’.	The Shadow Appropriate Assessment considers the impacts of the proposals both alone and in-combination as required by the relevant Regulations. By inference, those projects not requiring a detailed assessment are likely to be able to be screened out as having no likely significant effect. This is irrelevant to this application.
8.22	Crookhill Brick Pit SAC	Part B Air Quality Paragraph 2.35 Appendix D2 of the ES states that no further consideration is given to Crookhill Brick Pit because it is designated due to geological importance and thus not sensitive to air quality impacts. Whereas paragraph 4.82 of the ES states that has been designated for great-crested newts and ‘while sensitive to air quality impacts,	Crookhill Brick Pits is covered by over lapping designations. It is notified as a SSSI for both biological and geological interest and designated as a SAC for great crested newts. The assessment of the biological interest of the site is covered in the shadow appropriate assessment.

Item	Topic	Summary of consultation comment	Applicant response
		no critical loads have been set' and this is stated as the reason for no assessment of impacts upon the site. This inconsistency indicates a lack of care and lack of understanding of the ecological impacts.	
8.23	Correlation coefficient	Part B Air Quality Paragraph 2.37 Under Graph 5 in Appendix D3 of the ES it is stated that the "correlation coefficient is 1.5364". This is incorrect, as this value is shown on the graph as being the slope of the best-fit line, which is not the same as the correlation coefficient.	This point is agreed, but this does not change the conclusions of the assessment.
8.24	Overall air quality assessment conclusions	Part B Air Quality Paragraph 3.1 It is clear that the air quality assessment presented in the ES is inadequate. This is important because, even though insufficient consideration has been given to combined and cumulative impacts within the assessment, it has still identified potentially significant air quality impacts on the SACs. In addition, the Shadow Appropriate Assessment has been based on incorrect information. Impacts upon human health may also have been under-predicted.	The air quality assessment has provided sufficient consideration of the combined impacts of process and traffic emissions associated with the proposed development. Potentially significant air quality impacts on the SAC were identified but this has been fully considered in the shadow Appropriate Assessment.

9. Carbon balance and greenhouse gas emissions

Other consultees

Item	Topic	Summary of consultation comment	Applicant response
	Adams Hendry (on behalf of SPWI)		
9.1	Use of landfill as the comparator for carbon assessment	Paragraph 4.15 Landfill has been used as the comparator in the carbon assessment also. The justification for this as set out in paragraph 5.13 of the ES, is that the UK does not have enough ERF capacity to treat all residual waste so a considerable amount goes to landfill. For this assumption to be reasonable, it would need to be demonstrated that there is sufficient landfill capacity in the UK to treat all residual waste both now and for the next 25 years. This is highly unlikely to be the case as landfill capacity is decreasing across the country. This assumption is no more realistic than assuming all future residual waste is treated through ERFs.	Residual waste, being that which cannot be practicably recycled, can only be treated by ERF or landfill. Therefore, comparing with landfill is realistic. If insufficient ERF plants are built, then more landfills will be required.
9.2	Alternative carbon assessment scenarios	Paragraph 4.17 The applicants effectively dismiss the conclusions of the additional scenarios on the basis that any ERF currently processing residual waste from Dorset would need to secure waste from elsewhere and it is likely that the replacement waste will be currently going to landfill. No evidence is put forward to suggest that this assertion is reasonable. As a merchant facility, waste will be drawn from a wide catchment based on commercial terms.	The conclusions are not dismissed as the scenarios are fully considered. The statement in paragraph 5.21 merely notes that there is insufficient ERF capacity in the UK and so any new ERF plant will ultimately lead to a reduction in landfill. However, the revised Carbon Assessment includes a more detailed comparison of the current treatment methods for Dorset's waste with the proposed Portland ERF and demonstrates that there is carbon benefit.
9.3	Alternative carbon assessment scenarios – Marchwood or Lakeside ERF	Paragraph 4.18 Sending RDF to the Marchwood ERF or Lakeside EfW has been considered on the basis that they are both used by BCP Council. Lakeside EfW shows a benefit over Portland ERF but this is dismissed on the basis that it does not take into account the potential benefits of exporting power to ships. Both the Lakeside and Marchwood plants export energy to the grid and so it seems disingenuous to suggest this electricity is less beneficial in reducing carbon, simply because it does not directly export its power to ships. Similarly, the potential benefit to provide heating is suggested as providing an added benefit for the Portland ERF. As the current proposals do not include CHP, it is no better than the plants at Lakeside or Marchwood.	This comment fails to appreciate that there is currently insufficient power capacity available at the port to export power to ships. Hence, power generated at Lakeside and Marchwood, while beneficially displacing power from other power stations, cannot displace diesel engines used on ships. This can only be done by generating power at the port. The slight benefit of Lakeside over Portland is not dismissed, but the potential benefits of shore power need to be considered as well. Similarly, the potential for CHP is greater at Portland.
9.4	Alternative carbon assessment scenarios – export to European ERF	Paragraph 4.19 Exporting waste to European ERF plants would have a carbon benefit over sending waste to the Portland plant as the additional carbon savings from heat displacement would outweigh the additional transport emissions. The applicant suggests that importing waste from the UK would result in other European waste being landfilled. Again, this statement is entirely unsubstantiated and therefore cannot be relied upon. It seems unlikely that European ERFs are all operating at capacity and would not be able to process an additional 200,000 tonnes per annum, the amount of residual waste proposed to be treated at Portland Port	According to data published by the European Commission[2], in 2018 52 million tonnes of municipal waste was sent to landfill and 58 million tonnes was incinerated. This suggests that there is more than enough waste available to keep all of the ERF plants in Europe operating at full capacity, which is the most economically sensible approach.

[2] https://ec.europa.eu/eurostat/statistics-explained/index.php/Municipal_waste_statistics

Item	Topic	Summary of consultation comment	Applicant response
9.5	Alternative carbon assessment scenarios – Dorset Waste Plan (DWP) allocated sites	Paragraph 4.20 The comparison with sites allocated in the DWP did not produce a favourable outcome for the ERF at Portland. Given the distances involved from the major centres of population in Dorset, carbon emissions associated with transporting waste by road would be greater than for the allocated sites. The applicants suggest that the advantages of a facility at Portland, namely the potential for district heating, shore power and the delivery of waste by ship, would outweigh this disadvantage. Again, CHP does not form part of the application so this should not be taken into account and as before, all sites would be capable of providing electricity into the grid, which could offset any additional electricity required by the Port. Whilst delivering waste by ship would reduce carbon emissions associated with road transport, it does not eliminate carbon emissions from transport. Depending on where the waste is being transported from (on the assumption that there will be an element of road transport to take the waste to the port), the carbon emissions may in fact be higher.	It is acknowledged that transporting waste to Portland would lead to higher carbon emissions from transport, but the supporting application documents have explained that this is outweighed by the benefit of generating power at the port. As explained above, there is currently insufficient power capacity available at the port to export power to ships. It is also outweighed by the ERF's ability to supply a district heat network which, as explained further in the District Heating Paper, is a viable and deliverable prospect given the clear national policy and economic drivers to do so, and the identification of the Ministry of Justice as a likely anchor network customer.
9.6	Alternative carbon assessment scenarios – do nothing	Paragraph 4.21 The continuation of Dorset's current waste management operations has also been considered. The applicant has not assessed this scenario in isolation, rather it assumes that additional commercial waste from within Dorset (in sufficient quantity to use up spare capacity at the proposed ERF plant) would be managed in the same proportions as Dorset's residual local authority collected waste. This would result in 82,000 tonnes of waste being sent to landfill. This assumption is not supported by any evidence. Further information is required on what proportion of commercial waste is currently landfilled in order to properly assess this scenario.	In Appendix E, it is explained that over 92,000 tonnes of commercial and industrial waste is reported to be sent to landfill from Bournemouth, Dorset and Poole.
9.7	Emissions from the transportation of waste	Paragraph 4.22 It is unclear how the emissions associated with the transport of waste have been calculated as no information has been provided on the source of waste. A one-way distance of 160km for waste to site has been used in the assessment, but no explanation is given for this figure. If this is a reasonable proxy for the distance waste is transported, it cannot be said to accord with the proximity principle. Similar distances are quoted for the transport of IBA and APCr to recovery.	Table 13 in Appendix E states that this is the maximum transport distance. It was used as a conservative figure. In section 4.4.3 of Appendix E, it is noted that Dorset waste would travel an average of 55 km to the facility, emphasizing that 160 km is conservative. In the revised Carbon Assessment, this distance is used when considering the treatment of Dorset's waste.
9.8	Carbon assessment - CHP	Paragraph 4.23 It is noted that the carbon balance and greenhouse gas emissions assessment has assumed that a heat network is constructed to supply the Osprey Leisure Centre, HM Prison The Verne, HM Prison Young Offenders Institute Portland and the Ocean Views development. As the supply of heat does not form part of the planning application and by the Applicant's own admission a heat network would only be implemented should a practical off-site local user be identified, there is no certainty that this will come forward and therefore it should not form part of the Environmental Impact Assessment. The carbon balance and greenhouse gas emissions assessment should therefore be disregarded.	The assessment has been undertaken both with and without the provision of heat, thereby providing an estimate of the minimum beneficial effect if heat is not provided, together with an indication of the additional beneficial impact that could occur if heat is provided (one of several potential alternative scenarios assessed). The facility, with the provision of Shore Power, has a carbon benefit over landfill and all other identified UK based ERF options in both cases, with the benefit further increasing if heat is exported. The conclusion that there will be a significant beneficial effect is valid whether CHP is provided or not and it is incorrect to state that the assessment should be disregarded
9.9	Carbon assessment – CHP and environmental effects from construction	Paragraph 4.24 If the Waste Planning Authority accept the carbon balance and greenhouse gas emissions assessment as submitted, the full environmental effects of the construction of the heat network must be assessed.	The Carbon Assessment provides information on the impacts without heat generation, which is only assessed as a possible additional benefit that could occur if heat is to be provided in future. In the unexpected event that heat was not provided the Portland ERF (with Shore Power provision) would nevertheless outperform all other identified UK processing options, including landfill and other existing and potential ERFs.

Item	Topic	Summary of consultation comment	Applicant response
			However, as explained in the District Heating Paper there is a high likelihood that a district heating network will be implemented given the compelling economic, environmental and policy drivers in effect and the likelihood that the Ministry of Justice would become a heat taker. The report identifies viable routes for the heat network to provide connections to the HM Prison The Verne, HM Prison Young Offenders Institute Portland and other potential customers. The effects of constructing the network via these routes has been assessed through the Regulation 25 ES addendum, in respect to potential cumulative effects. This has concluded that its construction would not give rise to any significant adverse effects.
	UKWIN		
9.10	ES – reference to Committee on Climate Change position	The applicant's ES contains a mischaracterisation of the position of the Committee on Climate Change	These comments are specifically addressed in the Fichtner technical response document (Appendix A to this document).
9.11	Biogenic CO_2 release incineration v landfill	There is a failure to account for differences in the amount of biogenic CO2 that would be released through incineration compared to landfill	These comments are specifically addressed in the Fichtner technical response document (Appendix A to this document).
9.12	Use of landfill as the counterfactual	There is a flawed use of 'sending waste untreated to landfill' as the waste treatment counterfactual	These comments are specifically addressed in the Fichtner technical response document (Appendix A to this document).
9.13	Use if CCGT as the energy generation counterfactual	Inadequate use of CCGT as the energy generation counterfactual.	These comments are specifically addressed in the Fichtner technical response document (Appendix A to this document).
9.14	Carbon neutrality and position on carbon capture and storage	The applicant's document entitled 'achieving carbon neutrality' does not actually demonstrate that the proposed facility would achieve carbon neutrality. Despite the applicant's claims, if approved, the proposed development appears likely to result in significant adverse climate impacts. Whilst the applicant notes the possible potential for carbon capture in section 6.311 of their Planning Supporting Statement, it should be noted that the planning application is for a facility without carbon capture. The applicant states in section 3.111 of their Planning Supporting Statement that they might not employ carbon capture technology on the grounds of economic viability. This implies that the applicant's stated ambitions for achieving carbon neutrality could be hampered by cost considerations.	As stated in the Planning Supporting Statement (paragraph 6.311) Powerfuel is prepared to consider carbon capture and storage technologies as and when these become technically and economically viable. Since the submission of the planning application, there have been further developments in respect to carbon capture and storage and it is known that the Government is keen to explore options as to how existing and new ERF can apply carbon capture technologies. At this time, carbon capture and storage is a premature technology but could in future provide an opportunity to further mitigate carbon emissions from waste management, working alongside heat and energy recovery. The ERF site at Portland has the significant advantage of being located within a commercial port. Potential exists to utilise existing port infrastructure for carbon capture, storage and transportation. As an emerging technology, carbon capture and storage is not technically proven at scale for facilities of this type and carries a significant economic cost at this time such that it is not commercially viable without external financial support. However, the Government is keen to ensure that as carbon capture technologies develop technically to scale they can be applied to existing and proposed ERF, where possible, and is considering how the sector might be supported to stimulate the adoption of this new technology where potential exists. The Portland ERF is a project that has significant potential to adopt carbon capture and storage and is likely to attract interest from Government in terms of the provision of economic support to realise this potential. Further information on the applicant's approach to carbon capture is provided in the Carbon Capture Pre-feasibility Assessment.
9.15	Counterfactual baseline	As noted in section 6.306 of the applicant's Planning Supporting Statement, the applicant anticipates that the counterfactual baseline against which emissions will be assessed is expected to initially be the same as that "broadly established in the Fichtner Carbon Assessment". That would not be an appropriate starting point.	As set out in the Fichtner technical response document (Appendix A to this document), the counterfactual baseline (landfill) is appropriate as the UK does not have enough capacity to treat all residual waste, so quite a lot of residual waste goes to landfill. If a new EfW is built in the UK, this means that less waste overall will be sent to landfill and therefore, at a national level, the correct comparator is landfill. This approach is supported by national guidance, specifically "Energy from Waste: A Guide to the Debate" and "Energy recovery for residual waste – A carbon based modelling approach" both published by DEFRA in 2014.

Item	Topic	Summary of consultation comment	Applicant response
9.16	Dynamic adjustment	Section 6.306 talks about "dynamically" adjusting the baseline to take account of changes such as a future ban on landfill, but does not explain how the impacts of the facility would be calculated were that to occur. The applicant similarly does not make it clear whether or not, once carbon capture becomes more widespread, the proposed dynamic adjustment process would result in incineration with carbon capture and heat export being used as the baseline against which the proposed development's GHG impacts should be compared.	The Applicant would agree the dynamic adjustments with the local authority. It is not appropriate to determine the approach in advance, when future policy is not known.
9.17	Unaffordability of mitigation	It is also not explained what would happen in the event that the applicant considered any mitigation measures to be unaffordable, which we consider to be plausible given the level of emissions anticipated from the facility set out above.	See response to point 9.18.
9.18	Mitigation of full emissions of CO_2	The global warming effects of CO_2 last for considerably longer than those for methane and some climate mitigation methods may take many years for their impacts to be seen. As such, to ensure net carbon neutrality it would necessary for the full emissions of CO_2 (fossil and biogenic) to be mitigated through contemporaneous reduction in CO_2 released from other sectors (that would themselves be likely to be reducing in any case on the route to Net Zero 2050) or the immediate removal of CO_2, rather than just the relative net release of CO_2e. Indeed, the measures set out at paragraph 6.309 of the Planning Supporting Statement appear to be the sort of measures one could expect to be occurring in the absence of the proposal as part of the move towards Net Zero 2050, and as such it is unclear what added value the proposed facility could offer throughout the 2030's and beyond.	The arguments made here appear to undermine carbon offsetting entirely. The Applicant does not accept them and can only restate paragraph 6.310 of the planning statement: *"Objectors may question the validity of carbon off-setting and suggest that such proposals do not actually deliver on achieving carbon neutrality, or simply represent a statistical exercise. Such criticisms do not apply to this application because the applicant is prepared to back up its net-zero commitment by entering into a legal agreement with Dorset Council to ensure that the proposed ERF does achieve carbon neutrality. Whilst the precise measures to be applied have yet to be determined, carbon neutrality will be achieved through supporting a number of projects which may include those mentioned above, or sequestration through tree planting or re-wilding off-site or otherwise the use of verified carbon credits such as those marketed as Gold standard carbon credits by retail off-setters, or through supporting local community scale energy efficiency measures."*
9.19	Cost estimates	No indicative cost estimates for mitigation or estimates regarding the profitability of the facility are provided to demonstrate that the operator would be in a financial position to pay for the full mitigation necessary to achieve carbon neutrality based on the costs of mitigating their plant's CO2e emissions based on: a) the applicant's own central assumptions, as set out in Chapter 5 of the Environmental Assessment; b) the sensitivity scenarios set out in Technical Annex E; c) the assumptions set out by UKWIN (e.g., accounting for biogenic carbon sequestration, lower grid factors, higher landfill gas rates, and/or using recycling as an alternative treatment option). d) a dynamic adjustment to the baseline based on changes in the generation mix feeding the UK grid (in line with the decarbonisation anticipated in the applicant's 'achieving carbon neutrality' report); e) a dynamic adjustment to the baseline based on increases in landfill gas capture rates (in line with the increase to 75% anticipated in the applicant's 'achieving carbon neutrality' report); f) a dynamic adjustment to the baseline based on landfill bans; and/or g) a dynamic adjustment to the baseline to compare the plant with the counterfactual of a carbon capture facility with combined heat and power.	This is not a planning consideration.
9.20	Weight to be attributed to carbon neutrality measures	Given the significant deficiencies and uncertainties associated with the applicant's stated intention to achieve carbon neutrality and the absence of a draft planning condition or obligation, it is not surprising that the applicant is not arguing that any weight should be given to their proposed measures for 'achieving carbon neutrality' within the planning balance.	It is not clear why UKWIN chooses to mis-represent the Applicant's position. The Applicant states, in paragraph 6.313 of the planning statement (our emphasis): *"Given that the applicant is committed to funding additional carbon off-setting measures in each year that the ERF reduces GHG emissions (compared to baseline), and in each year that the ERF increases GHG emissions (compared to the baseline) will compensate for this by purchasing carbon offsets, the proposed plant will reduce GHG emissions over its lifetime and will achieve carbon neutrality, or better in every operating year.* ***This should be afforded great positive weight in the planning balance.***"

10. Economic effects and jobs

Other consultees

Item	Topic	Summary of consultation comment	Applicant response
	Adams Hendry (on behalf of SPWI)		
10.1	Public perception	Paragraph 4.10 Chapter 6 of the ES seeks to address the public perception of energy recovery facilities. This appears as more of a public relations exercise than a proper consideration of the effects of the proposed Portland Port ERF on the local community and it is questionable as to whether it should form part of the ES.	The public perception section of this chapter identifies public concerns set out in published research and provides an objective and evidence-based response to these issues, using both published data and project-specific assessment findings, with sign-posting to where more detail can be found in other parts of the ES and other application documents. It is therefore appropriate for this to form part of the ES and incorrect to dismiss it as a public relations exercise.
10.2	Economic benefit	Paragraph 4.11 The assessment of economic effects suggests that the vast majority of spend will be directed to mainland Europe. The ES acknowledges that benefit of the proposed ERF to existing and new businesses in the Dorset area (levels 1 and 2) as a result of increased expenditure will be slight and will be negligible nationally. Similarly, the benefit of increased employment during construction to residents of Dorset will be slight.	This comment simply repeats the findings of the economic assessment. It does not however, recognise the positive contribution that such investment will make to the local economy, particularly given the evidence of local deprivation and the growth objectives of relevant economic development strategies.
10.3	Employment creation – use of multiplier	Paragraph 4.12 Once the ERF is operational, the ES suggests that a minimum of 17 jobs will benefit Weymouth and Portland with a further three jobs in the wider Dorset area. This is on the basis of using a multiplier that assumes an equal split between jobs in the Electricity, Gas, Steam and Air Conditioning (SIC 35) and the Sewerage, Waste Collection and Treatment (SIC 37-38) set out in the UK Input- Output Analytical Tables (ONS 2020). As the multiplier for SIC35 of 6.919 is significantly higher compared to the multiplier for SICs 37- 38 of 1.933, this can distort the results. Further justification is required to support the assumption that the jobs created would be equally split between the two sectors as it would seem more likely that the jobs would be heavily concentrated in the Sewerage, Waste Collection and Treatment SIC, resulting in fewer additional jobs.	This comment is not correct. The 17 jobs in Weymouth and Portland (or 20 in the wider area) do not depend on the multiplier or include its effects. The estimate of 17 (20) is obtained by reducing the original 30 direct jobs (expected to be required at the plant) downwards to account for workers who are likely to live outside of the target area and for jobs that would have existed anyway, both of which we have excluded so that we can identify the net effects. The multiplier effect will be applied to the 17 (or 20) jobs and will be additional to them. However, the effect of the multiplier, though it will be real and positive, has not been included at the local level.
10.4	Economic effects of shore power (cruise business)	Paragraph 4.13 The conclusions reached on the impact of shore power on the cruise business at Portland Port are totally unsubstantiated and contrary to the current projections quoted in the Shore Power Report for a 58% increase in cruise ships calling at the port in the near future in the absence of shore power. It is not reasonable to assume that shore power will not be made available at Portland Port in the next 25 years if the proposed ERF is not consented.	It is not correct to state that the conclusions reached on the impact of shore power on the cruise business are totally unsubstantiated. They are based on significant research and economic analysis. It is acknowledged that the forecast cruise ship calls in the two different reports are different. This is because they have been prepared for different purposes. The Shore Power report takes the Port's (higher) forecasts as its basis because it is necessary to ensure that sufficient energy supplies are planned such that the future demand for shore power can be accommodated. The use of lower figures here would risk under forecasting, the result of which would be inadequate energy supplies for visiting ships and artificially low costs of shore power at the planning stage. On the other hand, it is more appropriate for the economic analysis to use a more conservative estimate of cruise calls. The economic impact estimates are driven by a loss of tourism revenue (without the plant), which is estimated by considering the net differences between cruise ship visits under the with/without shore power scenarios. If higher figures were used under the 'with shore power' scenario, the differences between the with/without shore power scenarios would be greater, and the economic impact of the plant would be shown to be larger. While future cruise calls are likely to turn out to be more than envisaged in the economic analysis (and we note that the actual number is higher than the higher assumption used in the Shore Power report), the applicant and its technical consultants adopted a conservative approach. Doing so ensures that neither energy

Item	Topic	Summary of consultation comment	Applicant response
			infrastructure and associated costs are under-estimated, nor the economic impact of the scheme is exaggerated.
10.5	Waste management costs	Paragraph 4.14 The conclusions reached on the cost of waste management set out in paragraphs 6.137 - 6.138 are also misleading. Whilst 51,244 tonnes of residual waste were sent to landfill in 2018, it is not reasonable to assume that this level of residual waste would go to landfill for the next 25 years. The saving of £43 million quoted is spurious to say the least.	The paragraphs highlighted here are intended to show that local authorities are expected to be able to realise significant monetary savings if they substitute their current use of landfill for waste treatment at the proposed plant instead. This is because landfill rates are likely to be more expensive than the plant gate fees. The gate fee for the new plant is not yet known but, in the report, an example (which is clearly stated as such) estimated that if gate fees are pitched in the region of £80/tonne, then there is the potential for Dorset and BCP to save in excess of £2.5m per annum, relative to using landfill. Over the 25 year life of the plant, such a saving would add up to a net present value in the region of £43m. It is true that the councils may not continue to send their waste to landfill over the whole life of the plant, but it is the current situation and, for as long as the councils send waste to landfill, it will continue to cost them an estimated minimum of £2.5m pa beyond the cost of alternative treatment. The Local Authorities do not have a viable alternative to landfill at present and until such a viable (and preferably local) alternative is provided they will continue to send waste to landfill, incurring extra costs. If nothing is done the default option will continue resulting in a total cost (over the with project scenario) of £43m (NPV). Even if the amount of waste disposed of to landfill reduced over time, this is still likely to result in significant financial cost, aside from the environmental costs associated with landfill being the least sustainable waste management option under the waste hierarchy (given the resultant methane production).

11. Cultural heritage

Statutory consultees

Item	Topic	Summary of consultation comment	Applicant response
	Historic England		
11.1	Impact on heritage assets – visual and associated relationship	Concerns regarding the potential impact on both visual and associative relationship of the proposed development on the significance of several nationally important heritage assets: Verne Citadel, Portland Castle, East Weares Camp, Battery 200yds (180m) E of the Naval cemetery, Underhill Conservation Area, Dockyard Offices and Dorset and East Devon Coast World Heritage Site including a number of listed buildings and non-designated assets..	Effects on heritage assets are considered in chapter 7 of the ES which found significant effects to the Inner breakwater and Dock Office, the East Weare battery, The Verne Citadel and Portland Castle. Effects on the WHS are considered in chapter 13 which found significant effects to OUV. The proposals included in the framework mitigation strategy, developed in consultation with DC conservation and Historic England (HE), aims to provide significant public heritage benefits to off-set any identified harm.
11.2	Impact on heritage assets – dominance and impact on views	Whilst it is acknowledged that the area has been a working naval base and in most recent years a working port, it is felt that the proposed development is too dominant a presence and will intrude in views to and from the heritage assets. Considers the impact on the individual assets within the area and the cumulative impact both close to the development and from distant views would be harmful from the introduction of a dominating and visually intrusive chimney and large industrial scale buildings.	The assessment of effects in chapter 7 of the ES included the effects on particular views to, from and of the heritage assets, making use of the range of site photographs and the visualisations included in chapter 9, landscape, seascape and visual effects. These images illustrate the relative scale of the proposed ERF structures and stack. Additional visualisations have been produced as part of the ES Addendum. The proposals included in the framework mitigation strategy, developed in consultation with DC conservation and HE, aims to provide significant public heritage benefits to off-set any identified harm.
11.3	Impact on heritage assets - heritage benefits	It is for your authority to establish if any heritage benefits could be achieved that would offset any harm (NPPF 200).	The framework mitigation strategy, developed in consultation with DC conservation and HE, aims to provide significant public heritage benefits to off-set any identified harm to heritage assets as a result of the proposed development.
	Dorset Council Conservation		
11.4	Impact on heritage assets – degree of harm and heritage-related benefits	We have identified less than substantial harm to the significance of the following designated heritage assets: • Battery 200 yds E of the Naval Cemetery (Scheduled Monument, 1002412; and • Grade II as 'East Weare Batteries at SY 694741', 1281863); • Verne Citadel (Scheduled Monument, 1002411), including associated designated heritage assets within; • Portland Castle (Scheduled Monument, 1015326; and Grade I, 1205262), including associated designated heritage assets; • The Citadel, North Entrance (Grade II*, 1206120); • Dockyard Offices (Grade II, 1203099); • Inner and Outer Breakwater, including Coaling Shed, Jetties and Forts (Grade II, 1205991); • Battery approximately 160m NE of East Weare Camp (Grade II, 1447946); • East Weare Camp (Grade II, 1205814); • Battery approximately 80m SE of East Weare Camp (Grade II, 1444030); and • Underhill Conservation Area. Taking into account the assessments of significance, the scale and nature of harm caused and the weight of public benefits, it is considered that, with the addition of	It is noted that the Dorset Council heritage officer has undertaken a comprehensive and robust assessment of the proposed ERF and has broadly agreed with the conclusions of the heritage impact assessment in the ES, finding that there would be less than substantial harm to the identified heritage assets. It also concludes that the harm caused to the heritage assets could be outweighed by public benefits and heritage-related benefits secured through a programme of mitigation. Further discussion has been held with the Dorset Council heritage officer, also with input from Historic England, to identify suitable heritage related benefits and this is set out in the submitted Framework Heritage Mitigation Strategy. The strategy is focused on a programme of works to the E Battery scheduled monument (1002412), that will remove invasive scrub vegetation and enable the asset to be managed such that it will be removed from Historic England's 'Heritage at risk register'. The heritage benefits will also include the provision of a new permissive footpath link across the Portland Port estate (currently not publicly accessible), completing the 'around Portland' walking path and enabling the public to view and fully appreciate the scheduled monument and other heritage assets that are located in this part of the Island, assisted by the provision of new interpretation information about the various heritage assets. The Framework Heritage Mitigation Strategy, intended to deliver heritage-related benefits, is considered to off-set any harm caused by the proposed development to local heritage assets, and the proposal is in accordance with national and local policy. Specifically, the proposals can demonstrate that the potential harm caused to the setting of heritage asset (less than

Item	Topic	Summary of consultation comment	Applicant response
		heritage-related benefits secured through a programme of mitigation, the public benefits will be made sufficiently substantial to outweigh the harm caused to the above heritage assets. Without this mitigation, it is not considered that the proposals meet the requirements of national and local plan policies.	substantial harm) can be suitably off-set by heritage-benefits, as required by NPPF (200) and directed by Historic England.

Other consultees

Item	Topic	Summary of consultation comment	Applicant response
	Adams Hendry (on behalf of SPWI)		
11.5	Heritage assessment - Use of 1km study area	Paragraph 4.25 It is noted that the study area for the assessment is only 1km from the boundary of the main site. This is not considered sufficient for a proposal with an 80m stack that has the potential to affect the setting of heritage assets much further afield. Despite this very tightly drawn study area, there are still 200 records listed in the Historic Environment Record (HER).	As effects on archaeology (terrestrial and marine) were scoped out of the assessment the HER data is included for completeness only. As stated in paragraph 7.14 of the ES chapter, the study area was extended where necessary to consider individual assets outside the 1km radius with the potential for setting effects.
11.6	Heritage assessment - methodology	Paragraph 4.26 The methodology used in the assessment is vague and ambiguous and seems to be designed to underplay the significance of heritage impacts. By way of example is the consideration of the sensitivity of receptors shown in Figure 7.4. A number of receptors e.g. Conservation Areas span the full range of sensitivities from high to negligible and is therefore of little use in informing the assessment. Table 7.2 seeks to identify the importance of receptors and concludes that listed buildings and schedule monuments are high and conservation areas are medium. No explanation is given for this assessment other than a reference back to Figure 7.4, which as discussed is meaningless. Given the statutory protection given to listed buildings and conservation areas, it is not clear why they have been assessed as having a different level of importance.	This is the standard Terence O'Rourke methodology applied to heritage assessments, which has been scrutinised by planning Inspectors at appeal on numerous occasions, most recently in Spring 2020. The assessment methodology is therefore considered to be appropriate, comprehensive and robust. Dorset Council's conservation officer raised no fundamental concerns in the formal consultation response in respect to the methodology. The comment also misinterprets the methodology, as it is the location of the text in the figure that shows the primary level of importance – for example, the 'conservation area' text is under the 'medium' header. The shading allows for some flexibility in interpretation according to individual circumstances, which would be explained in the text. Therefore, the assertion made here in respect to the methodology has no merit and carries no weight.
11.7	Heritage assessment – effect on listed buildings	Paragraph 4.27 Table 7.3 of the ES concludes that the proposed ERF will have a long term significant adverse effect on a number of listed buildings including the breakwater and former dock offices and the East Weare batteries as well as the Grade II* Verne Citadel and Portland Castle.	This comment simply repeats the assessment conclusions.
11.8	Heritage assessment – NPPF	Paragraph 4.28 The National Planning Policy Framework (NPPF) makes it clear at paragraph 193 that when considering the impact of a proposed development on the significance of a designated heritage asset, great weight should be given to the asset's conservation and the more important the asset, the greater the weight should be. Paragraph 194 states that any harm to, or loss of, the significance of a designated heritage asset, including from development within its setting should require clear and convincing justification.	Noted. This statement is covered in the legislation and policy section, paragraphs 7.2-7.12 of the ES chapter.

Item	Topic	Summary of consultation comment	Applicant response
11.9	Heritage assessment – impact on setting of heritage assets	Paragraph 4.29 It is not clear how the impact on setting has been assessed as the ES only includes images of the views in the absence of the proposal (see Figures 7.1 – 7.10). Further information is required to clearly show what impact the proposed ERF would have on these important heritage assets.	This is explained in the ES chapter methodology section (paragraphs 7.13-7.24 and figures 7.4 – 7.6). The ES chapter also refers to the ZTVs and visualisations in ES chapter 9.
11.10	Heritage assessment – impact from cable route	Paragraph 4.30 As information on the construction of the cable route has been omitted, it is not clear what has been assessed in relation to cultural heritage. Further information is required.	The reasons for scoping out the cable runs are explained in the ES chapter paragraph 7.72.
11.11	Heritage assessment – preservation of listed buildings	Paragraph 4.31 Section 66 of the Planning (Listed Buildings and Conservation Areas) Act 1990, places a statutory duty on local planning authorities to have special regard to the desirability of preserving listed buildings and their setting or any features of special architectural or historic interest which they possess. A similar duty is set out in section 72 of the Act in relation to development within conservation areas, which states that, *'….special attention shall be paid to the desirability of preserving or enhancing the character or appearance of the area'*.	Noted. This is covered in the legislation and policy section, paragraphs 7.2-7.12 of the ES chapter.
11.12	Heritage assessment – weight to be applied to impact on setting of heritage assets	Paragraph 4.32 The courts have held that '*preserving means doing no harm'* and have established that the desirability of preserving listed buildings and their settings should not simply be given careful consideration but should be given *'considerable importance and weight'* when the decision-maker carries out the planning balance. The fact that the ERF would have an adverse impact on the setting and significance of a range of heritage assets weighs heavily against it.	This is covered in the legislation and policy section, paragraphs 7.2-7.12 of the ES chapter. The Planning Supporting Statement sets out the clear justification for the project and the public benefits in relation to waste management, energy and carbon, socio-economics and other aspects, which giving the required weight to any harm to heritage assets, together outweigh the harm and tilt the planning balance in favour of the proposal. Furthermore, the submitted ES Addendum provides further information on heritage related mitigation, which it is considered provides significant heritage related public benefits that minimise and/or off-set any adverse effects on affected heritage assets. The wider public benefits (set out in the planning submission), together with the proposed heritage-related benefits are substantial. Given that the harm to heritage assets is accepted to be less than substantial, any adverse impact on heritage assets would be outweighed by public and heritage related benefits.

12. Ground conditions and hydrology

Statutory consultees

Item	Topic	Summary of consultation comment	Applicant response
	Dorset Flood Risk Management		
12.1	Site drainage – viability and capacity	The applicant has not demonstrated the viability of the existing outfalls or how, legally and technically, a new outfall could be created. The following points need to be addressed: • The applicant has not demonstrated in their application that the existing outfall pipes have adequate capacity for the unattenuated flows coming from the Waste Recovery Site. • Although a free discharge to the sea is allowable at this location, as it will have no discernible impact on downstream tidal flood risk, the conveyance of this free discharge needs to be sized accordingly. Where existing connections are to be used, this should consider, not only the size of the pipe but any contributions from development elsewhere. If a full, unattenuated discharge cannot be achieved due to capacity issues, then some attenuation might be needed to reduce peak flows. • Also due to the lack of survey information there can be no certainty that the current condition of the existing network is suitable for discharge of surface water from the site. • Surcharge of the system needs to be avoided during normal conditions as exceedance flows directly to tidal waters could conceivably convey contaminants off site.	Further investigations have been carried on the points of connection for surface water that are to be re-used and as a result a revised surface water drainage strategy is now proposed. This now provides appropriate surface water attenuation storage where the capacity of the outfall pipe is limited. The information gained through further investigations and the revised surface water drainage strategy together with responses to the matters raised by DCLLFA are set out in the submitted Flood Risk Assessment Addendum. In summary, all of the matters raised are addressed and it is expected that the usual planning conditions relating to submission of further drainage details prior to commencement will be applied.

Other consultees

Item	Topic	Summary of consultation comment	Applicant response
	Adams Hendry (on behalf of SPWI)		
12.2	Extent of the study area	Paragraph 4.33 No information has been provided on the extent of the study area and therefore it is not clear whether the cable route has been assessed. Further information is required as this is an intrinsic part of the proposal.	The extent of the study area is discussed in the desk study report in technical appendix I1, which states that the main development site was the focus of the study as the works along the cable routes only comprise shallow linear excavations within the existing road network.
12.3	Impact of cable routing	Paragraph 4.34 It is not clear whether the grid connection will be buried or will be overground. Clearly, if it is intended to be underground, there is potential for significant impacts during construction.	The principles of the connection are indicated in the Utilities Report which accompanies the application. This includes the fact that cables are buried and that an order has been placed with SSE. Notwithstanding this, further information on the grid connection is provided in the Grid Connection Paper for clarity.
12.4	Suitability and extent of ground investigation	Paragraph 4.35 It is noted that no intrusive investigations were carried out to establish the baseline condition of the site and its surrounds, rather a desktop study was undertaken based on reports produced by RPS to support the application for an energy plant. Not only is this data over 10 years old, it is not clear what study area was used by RPS given that the previous proposals were of a significantly smaller scale.	As is typical for such a development, and in accordance with good practice, a comprehensive desk study has been prepared to inform the EIA and planning application that uses existing ground investigation data and other published sources of information. The extent of the RPS ground investigation (GI) is shown on figure 4 in the desk study report in technical appendix I1, which shows that the GI locations are within the main development area. Whilst it is acknowledged that the RPS GI is over 10 years old, the polluting potential of site activities since the RSK GI has been relatively low. As noted in the desktop study, an extensive ground

Item	Topic	Summary of consultation comment	Applicant response
			investigation will be required to fully assess risks associated with contamination, to inform a remediation strategy and to satisfy environmental regulators.
12.5	Need for further ground investigation works	Paragraph 4.36 The need for further ground investigation works to provide additional information on ground contamination conditions at the site to refine the risk assessment and if necessary, produce a remediation strategy, is set out in paragraph 8.68. Further information is also required to characterise the ground gas prior to development (see paragraph 8.73 of the ES). If required, a scheme of ground gas protection will be incorporated into the remediation implementation plan and the new buildings will incorporate measures to prevent ingress of gases into confined spaces. It is not clear what these measures might entail or whether they will have an impact on the appearance of the building. Further information is required. It is noted that the design will follow BS 8485:2015. It is understood that this guidance has been withdrawn and replaced by BS 8485:2015+A1:2019. Confirmation is required that the design will follow current guidance.	The ground investigation will include ground gas monitoring, as identified in the desk study report in technical appendix I1. Gas monitoring will comply with British Standard BS8576 Guidance on investigations for ground gas – permanent gases and volatile organic compounds (VOCs) BSI, 2013. Gas risk assessment and if necessary gas protection measures will comply with BS 8485:2015+A1:2019 Code of practice for the design of protective measures for methane and carbon dioxide ground gases for new buildings. If gas protection measures are required, the design will be confirmed on completion of the risk assessment. Preliminary assessment indicates ground gas risks are likely to be low, as no significant source has been identified. If required, gas protection measures will most likely comprise a membrane which is installed beneath the ground floor slab and therefore will not impact on the appearance of the building.
12.6	Validity of ES conclusions	Paragraph 4.37 In the absence of further information on ground conditions as discussed above, the validity of the conclusions set out in the ES and therefore compliance with the EIA Regulations, is questionable.	Sufficient information has been submitted to support the ES assessment and conclusions, at this planning stage. As noted above further extensive ground investigation will be required to fully assess risks associated with contamination, to inform a remediation strategy and to satisfy environmental regulators. This will be addressed through suitable planning conditions and other regulation. This is a standard approach and accords with the requirements of the EIA Regulations.
	GS Pettifer		
12.7	ES – consideration of ground instability	The site is located towards the toe of a major coastal landslip in Kimmeridge Clay, as shown on the local 1:50,000 scale Geological Map (i). Brunsden et al (ii) note that the toe of the landslide at this location is exposed to the full force of easterly winds and that the Kimmeridge Clay is undercut. Movements in this area are known to have occurred in the late 17th century and, more recently, in the 1960s and 1970s. Rates of movement of about 5mm per year have been calculated. It is possible that excavation work at this site, particularly in the southern part, and subsequent additional loading from new large structures, will reactivate the landslip at this location, potentially affecting both the ERF and adjacent buildings, roads and services. The possibility of ground instability at this location, and therefore any planned mitigation measures, has not been adequately considered in this planning application	The applicant has commissioned a Preliminary Slope Stability Assessment, which is submitted to Dorset Council as part of its response to the Regulation 25 request (point 29 in the Council's letter). This assessment examines the potential for land instability in and around the proposed ERF site, taking account of available historical records, data from technical studies, and the nature and scale of historical land uses at the site associated with its former military and civil activities. It also considers the potential risk of landslip in this location based on the current baseline position and in respect to the construction of the proposed ERF, based on accepted safety factors. This has concluded that the proposed ERF site lies at a position on the Portland coast where the risk of substantive landslip is deemed to be relatively low (compared to other locations on Portland) because of the presence of made ground and port structures at the toe of the cliff which forms a buttress protecting the area from coastal erosion and limiting natural movement. It concludes that the risk of triggering any significant landslip from construction activity is also relatively low, and that this risk can be minimised through the use of appropriate construction techniques. The assessment finds that the proposed development would not give rise to any significant ground stability issues that would preclude the construction of the ERF in this location.
	Portland Association		
12.8	Geotechnical stability – need for a cliff stability assessment	'ES Tech Appendix I1 Ground Conditions and water quality pt1', which states… *'Long term stability of the hillside, which could potentially affect the completed development, has not been considered in detail. However, it is noted that the former railway that ran along the side of the site at the toe of hillside, was in place for over 100 years and does not appear to have been affected by large-scale slope movements.'*	This comment draws upon the comments of GS Pettifer above in respect to ground stability. The applicants response is set out in relation to point 12.7 above and is addressed through the submitted Preliminary Slope Stability Assessment.

Item	Topic	Summary of consultation comment	Applicant response
		Therefore it seems that, based on the fact that nothing appears to have happened for over 100 years, this has led Powerfuel to the conclusion that nothing will happen in the future, appearing to be unaware that landslides are not predictable, and are dependent on many factors, including disturbance to the ground strata. Under para '6.1.2 Geotechnical risks', Powerfuel states… '*The assessment of the risk of future instability of the hillside to the west of the site is outside the scope of this report. However, it is considered that the proposed development should not significantly affect this risk, as any excavations that may remove toe weight will be of relatively local extent and will be supported in the temporary and permanent conditions.*' Given the environmental impact that a landslip could cause at the site of a 850 degree turbine waste incinerator, with toxic ash, ammonia and lime storage, all within a few metres of coastal waters, it would seem remiss of Powerfuel not to have commissioned a cliff stability assessment….Powerfuel needs to undertake these assessments/surveys and provide evidence that this site is a safe location.	

13. Landscape, seascape and visual effects

Statutory consultees

Item	Topic	Summary of consultation comment	Applicant response
	Dorset AONB		
13.1	Visual impact – introduction of industrial element to AONB setting	Visible emissions would lead to a notable industrial element being added to the AONB's setting, in prominent position.	It is important to note that the site currently has an extant planning permission for the development of an energy plant fuelled by vegetable oil and waste rubber crumb from end-of-life tyres, which could be implemented in the absence of the proposed development. This would also have a stack with visible emissions if built.
13.2	Visual impact - impact of visible emissions on AONB	There are concerns about the effect of visible emissions on views out from the AONB and perceptions of the areas exceptional undeveloped coastline.	The reference made here to an undeveloped coastline is questionable. The site lies within Portland Port which is a key employment site and within the Northern Arc identified in the Portland Neighbourhood Plan as an area which is intended to 'cement' the location as a vital employment zone. The AONB officer acknowledges that the site has large-scale quasi-industrial buildings and other built development therefore this small part of the coastline is developed. The port is a working port with a number of large industrial buildings and permission for industrial buildings at Glencore Upper Osprey. There are also large vessels berthed within the Port and currently within Portland harbour. Queens View Apartments and the former naval block 'Prince Andrew House' lie just outside the port area and the ERF will lie at a similar elevation to these existing developments. The assessment in paragraph 9.141 of the ES addressed the impacts of the plume from the AONB. The effects were described as negligible and not significant. A DAS addendum on the plume has been produced as well as figures 9.38 to 9.41 of the ES illustrating verified photomontages of the plume. The analysis concludes that the plume will only be visible on average for 24.2 hours each year which represents only 0.56% of non-cloudy daylight hours, and all of these hours will occur outside the main tourist months. Of these hours for only 4 hours each year the plume would be between 100-200m in length, which is less than the length of the building. Figures 9.40 and 9.41 from two locations within the AONB illustrate the largest plume which would have been visible for just 1 hour in February 2016 within the last 5 years of weather data. The additional information supplied confirms that the assessment of negligible and not significant from the AONB is correct.
	Dorset Landscape Officer		
13.3	Photomomtage – inclusion of plume	The photomontages should represent a worst-case scenario of the visual impacts. With the plume not being included in the photomontages I would suggest they are not a fully accurate representation.	A DAS addendum on the plume has been produced as well as figures 9.38 to 9.41 of the ES illustrating verified photomontages of the worst case scenario for the plume, noting this would have occurred for just 1 hour in February 2016.
13.4	Plume model – consideration of coastal location	The Fichtner report explains how the 'model' used for the detailed modelling of process emission includes a function to model when the plume is visible, based on the water content of the plume'. What is not apparent is if that model considers the coastal location with its dynamic weather conditions or if the results are based off a generic algorithm?	Full details of the dispersion model are provided in Appendix D2 of the ES. This explains that the local conditions have been accounted for in the model. This includes the local terrain, variances in surface roughness between the land and sea, and the meteorological data has been taken from the Portland meteorological site. As such the model considers the coastal location and is not a generic algorithm.
13.5	Plume visibility – assessment of visual effects	In the Landscape, seascape & visual effects of the Environmental Statement the plume is described in many of the selected viewpoints as a minor impact. For instance, in section 9.139 of the LVIA Viewpoint 9 the Visual Effects at Completion are noted as 'likely to only produce a very minor alteration to the view for a very limited number of hours.' The eventuality the plume will be visible only for a limited time is understood, but I question if when the plume is visible that it will only have minor landscape and visual impacts.	The additional information supplied within the DAS addendum on the plume and the ES addendum figures 9.38 and 9.41 confirms that the assessment of the visual effects of the plume within the ES is correct.

13.6	Cumulative effects	There will be a cumulative landscape and visual effect with the proposed ERF and industrial units. There is also a concern for inter-project cumulative effects with other proposed industrial units in this area. An assessment of these in relation to the proposed ERF would have been useful to address these concerns.	The LVIA chapter 9 within the ES addresses the landscape and visual cumulative effects. Chapter 3 of the ES sets out the full details of the cumulative schemes.
13.7	Viewpoint and photomontage 9 – magnitude of effect	Viewpoint 9 & Photomontage viewpoint 9, Figure 9.26 & 9.33 - Taken from Sandsfoot Castle. The conclusion of the view in the LVIA states the magnitude of effect is negligible adverse and the significance of visual impacts is negligible & significant. My judgment is that the significance should be greater, before the consideration of a plume which will increase the landscape and visual impacts further.	The LVIA chapter 9 paragraph 9.139 has been misread. The visual effects from Sandsfoot Castle are considered to be medium adverse at completion and therefore moderate adverse rather than negligible adverse as stated. The plume is not considered to increase the visual effects from those that are stated within the ES.
13.8	Visual impact – lighting from the car park	I do have reservations over the proposed lighting and its potential visual impacts…. The proposed columns in the car park and service yard are the largest proposed at 6-8 metres as described in section 4.3 and 4.5 of the Lighting Statement. To ease concern, I would like to propose these are no more than 6 metres and have the Flat glass luminaires fitted as specified in section 7.0 and a lighting cowl if this will also help prevent any light spill? In addition a verbal request was made for night-time photomontages from Sandsfoot Castle and Ringstead Bay car park.	ARUP have adjusted the light columns to 6m along the access road and service yard and 5-6m in the car park as requested. The lighting statement confirms that “The use of luminaires with very low or no upward distribution will minimise contribution to ‘sky glow’. Light will be tightly controlled and considered to avoid light spill” and “Zero tilt and provision of accessories that will limit upward light spill with the use of flat glass lanterns and back shields to further mitigate light spill beyond the intended areas” will be incorporated into the lighting design. Night-time baseline photos and montages have been produced [from Sandsfoot Castle and Ringstead Bay car park] in the ES addendum figures 9.42 to 9.45 as requested. These confirm the conclusions of the night-time assessment at completion within chapter 9 of the ES. Refer to ES Addendum for additional information on night-time effects.
	Jurassic Coast Trust		
13.9	Visual impact – visible plume and introduction of industrial element to the setting of the WHS.	The overall impact of an operational ERF is not restricted to the presence of the building within the landscape. In spite of the sincere efforts to reduce its visual impacts, there is no escaping that it is a very large industrial building, beyond the scale of what is already at the port. For example, the lighting necessary for a facility of this size, particularly on the stack, means there will inevitably be a change to the balance in how the views out of the WHS are perceived to be of an industrial or natural coastline. Of more significant concern is the potential impact of a visible plume. The LVIA describes a visible plume as having minor effects for a limited time. I would not dispute the limited time element, but it is hard to accept a visible plume as having minor effects, considering that there are no other industrial facilities of this type or scale along the WHS. It would be helpful if the visual impacts of a visible plume were modelled in more detail using existing viewpoints with perhaps additions from the top of Portland itself. This would help greatly in understanding more fully the operational reality of the ERF. In summary, the application deals with impacts on the WHS fairly, with the exception of a detailed model for the visual impacts of a visible plume. My concern is whether or not an industrial development of this scale is appropriate within the setting of the WHS. The impacts of the structure itself on setting are not considered significant, but I question whether this reflects the ways in which an operational ERF might change how people perceive its surroundings as a natural or industrialised landscape	The site lies within Portland Port which is a key employment site and within the Northern Arc identified in the Portland Neighbourhood Plan as an area which is intended to ‘cement’ the location as a vital employment zone. The AONB officer has acknowledged that the site has large-scale quasi-industrial buildings and other built development and therefore the addition of the building within the landscape should not materially change how views out of the WHS are perceived, noting that there are often large vessels berthed at Portland, with associated lighting, etc. which are often larger in size than the proposed development. A DAS Addendum on the plume has been produced as well as figures 9.39 to 9.41 of the ES illustrating verified photomontages of the plume. Figures 9.39 (viewpoint 9 Sandsfoot Castle) is from a location within the WHS. This illustrates the largest plume which would have been visible for just 1 hour in February 2016 within the last 5 years of weather data. The additional information supplied confirms that the assessment of slight and not significant from the WHS is correct. The analysis concludes that the plume will only be visible on average for 24.2 hours each year which represents only 0.56% of non-cloudy daylight hours, and all of these hours will occur outside the main tourist months. Of these hours for only 4 hours each year the plume would be between 100-200m in length, which is less than the length of the building. ARUP has adjusted the light columns to 6m along the access road and service yard and 5-6m in the car park. Night-time baseline photos and montages have been produced in the ES Addendum figures 9.42 to 9.45. Figure 9.43 (viewpoint 9 Sandsfoot Castle) is a photomontage of the night-time effects from within the WHS. The stack will be lit in accordance with CAA and MOD requirements. Although this will be located at the top of the stack there are lights at the top of the Verne on the highest point of the Isle of Portland associated with the prison and the satellite dish clearly visible from Sandsfoot Castle. The traffic lights at the entrance to the Verne that alternate between green, amber and red are also clearly visible from Sandsfoot Castle. These will be significantly higher than the light at the top of the stack. The lighting will be seen in the context of the existing lighting at the port facilities (and lighting from vessels berthed at

			the port) and has been designed with minimal light spill. This confirms the conclusions of the night-time assessment at completion as negligible from the WHS within chapter 9 of the ES. Refer to ES Addendum for additional information on night-time effects. Further comment in respect to the JCT response and the ES assessment is provided in table 17 below.
	Osmington Parish Council		
13.10	Visual impact from scheme lighting and aircraft warning light	There will be light pollution from the aircraft warning light on top of the stack as well as from the car park and the building.	See 13.8 above. Night-time montages have been produced in the ES addendum figures 9.42 and 9.43. these confirm the conclusions of the night-time assessment at completion within chapter 9 of the ES.

Other consultees

Item	Topic	Summary of consultation comment	Applicant response
	Adams Hendry (on behalf of SPWI)		
13.11	Landscape character area (LCA) - description	Paragraph 4.38 The application site lies within the Harbour / Wetland / Lagoon landscape character type. The Dorset Landscape Character Assessment (LCA) describes it as a large scale, open, tranquil and generally unspoilt landscape with important vistas and views of historic and cultural importance. It provides important and popular open space and recreational value and open and extensive views are available towards the Osmington Coast and Portland. The detrimental features described in the LCA include visually prominent development and the intrusive presence of heavy traffic on the A354.	The application site does not lie within the Harbour Wetland / Lagoon landscape character type as stated, but rather lies within the Limestone Peninsula. Therefore, everything subsequently described in this comment is incorrect.
13.12	Landscape character area (LCA) – impact on key land management features	Paragraph 4.39 and 4.40 The LCA includes key land management features for the Harbour / Wetland / Lagoon landscape character type. These include reducing and controlling diffuse pollution and maintaining the open, uncluttered and dramatic coastal landscape character of the area. The ES concludes that the ERF will enhance a currently derelict site within the industrial port underplays the significance of the impacts. It is implied that the current open nature of the site is having a negative effect on landscape character, but no evidence has been provided to support this conclusion. Rather, maintaining the open coastal landscape character is a key landscape management feature for this LCA.	The application site does not lie within the Harbour / Wetland / Lagoon landscape character type (rather the Limestone Peninsula) and therefore the commentary and management features described are incorrect.
13.13	Landscape and visual effects – legibility	Paragraph 4.41 The assessment of landscape and visual effects is difficult to follow and the need to print the photomontages and photowires at A1 makes it very difficult for members of the public to properly understand the likely impact of the proposal.	The photomontages and photowires have been produced in accordance with the Landscape Institute Technical Guidance Note 06/19, Visual Representation of Development Proposals, 17 September 2019. A hard copy of the complete planning application, including the LVIA has been available to view at the Portland Town Council.
13.14	Landscape and visual effects – viewpoints, meteorological conditions and plume photomontages	Paragraph 4.42 The way in which landscape and visual effects have been presented downplays their significance. The photographs from the various viewpoints have all been taken on days where low cloud is the prevailing meteorological condition. None of	The photographs have not all been taken on days where low cloud is the prevailing meteorological condition. Each photograph has a date and time and as can be seen in viewpoint 5 (fig 9.22) the photo was taken on the 16 March 2020 on a sunny day compared to viewpoint 8 (fig 9.25) taken on the 18 March 2020 taken in cloudy conditions. These are representative of different weather conditions at Portland.

Item	Topic	Summary of consultation comment	Applicant response
		the photomontages include the plume despite this being specifically requested by Dorset Council in pre-application advice.	Additional photomontages (from those viewpoints where non-plume photomontages have already been provided) showing the expected plume have been prepared and have been submitted to Dorset Council as part of the revised LVIA addendum. These comprise part of the submitted ES Addendum. These photomontages have been prepared in accordance with the Landscape Institute Technical Guidance Note 06/19, Visual Representation of Development Proposals, 17 September 2019 and therefore provide an accurate visual representation of the plume, based on modelled technical plume data provided by Fichtner. In addition, further information is provided in the Design and Access Statement (DAS) Addendum in respect to the frequency, duration, length and appearance of the plume.
13.15	Landscape and visual effects – viewpoints (before and after views)	Paragraph 4.45 It is common practice to show the viewpoints both with and without the proposal. As it stands, it is not possible to understand precisely how the view will be affected as the only information included is the approximate extent of the proposals.	Viewpoints 8, 9, 11 and 12 show the viewpoint with and without the proposals. These were agreed with Dorset Council and the AONB officer as the viewpoints from which to undertake photomontages and photowires. The remaining viewpoints are also in accordance with the Landscape Institute Technical Guidance Note 06/19, Visual Representation of Development Proposals, 17 September 2019.
13.16	Landscape and visual effects – viewpoint 3 (Portland Port and breakwaters, including the Sailing Academy and Portland Marina)	Paragraph 4.44 The photograph for viewpoint 3 looks like it was taken at dusk and is not representative of daytime conditions. The bulk and the massing of the ERF from this point (shown only by a line demarking the approximate extent of the site) will be dominant in the view and not as suggested in the table of page 9-55 that it will be of medium prominence and will cause a partial alteration to the composition of the view.	This photograph was not taken at dusk but was taken at 11.30am on the 18 March 2020. This is detailed on the photograph viewpoint 3 figure 9.20. This is an illustrative view from the port. The table referred to on page 9-55 (paragraph 9.132) is an assessment table of the visual receptors from Portland Port and breakwaters, including the Sailing Academy and Portland Marina and Portland Harbour. It is not an assessment table of that single viewpoint and therefore describes the visual experience of the receptors from the area
13.17	Landscape and visual effects – viewpoint 3 (Portland Port and breakwaters, including the Sailing Academy and Portland Marina - sensitivity of receptors	Paragraph 4.45 The conclusion that the receptor (local residents, workers and visitors using the harbour and marina facilities and taking part in water sports within the harbour) is of medium sensitivity is based on the assumption that their attention is likely to be on the surrounding landscape and therefore they would be less susceptible to the specific change associated with the ERF. This is nonsensical; the ERF will dominate the view and will not be considered a small change.	The table referred to on page 9-55 (paragraph 9.132) is an assessment table of the visual receptors from Portland Port and breakwaters, including the Sailing Academy and Portland Marina and Portland Harbour. It is not an assessment table of that single viewpoint and therefore describes the visual experience of the receptors from the area. The assessment that the receptors are of medium sensitivity is based on the value of the receptors as well as the susceptibility to change. While the ERF may be prominent in that particular view (viewpoint 3 which is a private view from the port not available to the public) there are many other viewpoints available to the receptors. The susceptibility to the change is considered to be medium and therefore the sensitivity will be medium.
13.18	Landscape and visual effects – viewpoint 3 (Portland Port and breakwaters, including the Sailing Academy and Portland Marina – magnitude of visual effects	Paragraph 4.46 It is not accepted that the magnitude of visual effects at completion will be small adverse with the significance of visual effects being slight.	This comment is incorrect. The table on visual effects from Portland Port and breakwaters, including the Sailing Academy and Portland Marina and Portland Harbour in paragraph 9.132 does not state that the magnitude of visual effects at completion will be small adverse with the significance of visual effects being slight. It states that the magnitude of visual effects at completion will be medium adverse with the significance of visual effects being moderate.
13.19	Landscape and visual effects – viewpoint 3 (Portland Port and breakwaters, including the Sailing Academy and Portland Marina – significance of the visual effect	Paragraph 4.47 Even if it was accepted that the receptor is of medium sensitivity (which it is not) and that there would be a partial alteration to the composition of the view (again which it is not) then by applying the criteria set out in Figure 9.6, the significance of the visual effect would be moderate to substantial and not slight as stated in the assessment.	This statement is incorrect. Either the author has been looking at a different table or they have misinterpreted the table in paragraph 9.132. The significance of the visual effect has already been assessed as moderate, not slight.
13.20	Landscape and visual effects – methodology and conclusions on likely significance	Paragraph 4.48	The assumptions on likely effects are not flawed and we have used the methodology correctly to reach conclusions on significance. The conclusions reached in the author's response (paragraphs 4.45 to 4.47) have been misinterpreted (possibly reading a different table to paragraph 9.132).

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		Not only are the assumptions on likely effects flawed, the applicant fails to follow its own methodology in reaching a conclusion on likely significance. The conclusions of the ES on landscape and visual effects should therefore be disregarded.	The conclusions of the ES on landscape and visual effects are robust and should not be disregarded.
	Coe Design (on behalf of SPWI)		
13.21	ZTV – zoomed in versions	Paragraph 2.3 It is requested that the ZTVs are produced at a closer distance of 1.5km and that PROW are added.	Figures 9.46 and 9.47 in appendix 8.2 of the Regulation 25 ES Addendum illustrate these zoomed in ZTVs.
13.22	ZTV – certainty of visibility and baseline photography	Paragraphs 2.3 and 2.5 There are a number of key locations at short-medium distance where we consider it critical, to enable consideration of the proposals, to be certain whether visibility is likely or not or where visibility is indicated to be likely based on the ZTVs. Baseline photography from a selection of these, would be necessary to include within the study. It is difficult to understand why some of the locations were not included in the scope of the baseline photography enabling them to be considered for photo-wire / photomontage analysis.	It is acknowledged that a baseline photograph is not provided from every location. To illustrate all potential viewpoints from which the proposals will be seen by the different visual receptors within the study area is not practical and is unnecessary for the purposes of the EIA. While it is important to have some baseline photography it is not the photographs that are assessed but the visual receptors. The baseline photographs are intended as a representative, specific or illustrative selection to aid the assessment process. To illustrate all potential viewpoints from which the proposals will be seen by the different visual receptors within the study area is not practical and is unnecessary for the purposes of the EIA. The visual receptors, methodology and viewpoints and photomontages/photowire locations were agreed with Dorset Council and the AONB Partnership. The photomontage / photowire locations were also discussed with the Jurassic Coast Trust in August 2020. The assessment tables consider the visual effects from specific visual receptors. Paragraph 9.132 assesses the visual effects from visitors to Portland Port and breakwaters, including the Sailing Academy and Portland Marina and Portland Harbour. Paragraph 9.135 assesses the visual effects for users of public rights of way S3/68, S3/70, S3/72 and S3/81. The Rodwell Trail is illustrated on figure 9.16 and 9.17 revision A in the ES addendum. As can be seen from these figures there will be extremely limited potential visibility from the Rodwell Trail other than from between the Ferrybridge Inn and Sandsfoot Castle. These are assessed in paragraphs 9.136 and 9.139. The official published circular walk of the Rodwell Trail does not extend down to the Ferrybridge Inn but stops at Sandsfoot Castle, and therefore will have even more limited visibility.
13.23	Plume modelling – need for plume modelling and photomontages	Section 3 Although it is predicted that a visible plume may be present for a limited time, it is agreed that the potential significant adverse visual effects associated with the plume warrants its inclusion in the selected photomontage studies. It is reasonable that the study would provide photomontages with and without the plume, to enable both scenarios to be considered separately. There are concerns that the assumption that that the visible plume will result in only minor landscape and visual effects, when visible, is under-estimated and that evidence should be provided within the study to allow more detailed judgements to be reached, with the opportunity for these to be scrutinised through the application process.	A DAS addendum on the plume has been submitted in addition to figures 9.38 to 9.41 of the ES addendum illustrating verified photomontages of the plume. The analysis concludes that the plume will only be visible on average for 24.2 hours each year which represents only 0.56% of non-cloudy daylight hours, and all of these hours will occur outside the main tourist months. Of these hours for only 4 hours each year the plume would be between 100-200m in length, which is less than the length of the building. The assessment tables therefore remain unaffected and the conclusions unchanged.
13.24	Assessed viewpoints and photomontage / photo-wire visualisation studies	Paragraph 4.6 The weather conditions present in the recorded photography do not enable a worst-case scenario to be assessed, either of the proposed building when seen against a backdrop of sky or of the plume, should it have been modelled.	It is not the photographs that are assessed but the visual receptors. The photographs give a range of different weather conditions typical of the area during winter. A qualified landscape professional is deemed able to undertake a landscape and visual assessment using their experience without the need for a photomontage or photowire from every location and it is the written assessment that should be considered not just the photography or visualisations. Chapter 9 of the ES fully assesses the closer range visual receptors in the visual assessment tables.

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13.25	Efficacy of the proposed visual mitigation	Paragraph 5.3 Further assurance is sought of the efficacy of the proposed visual mitigation applied to areas of the building as photo printed PVC mesh.	The DAS addendum gives further detailed information on the PVC mesh including what the building would be like without the PVC mesh.
13.26	Summary of significance judgements	Paragraph 6.2 It would be of benefit if there was a summary of the judgements and effects that included all those judged to be non-significant together with those judged to be significant and for this to be able to be referenced back to viewpoint studies.	This suggested approach would be contrary to all the other chapters in the ES where the requirement of the ES is to determine the significant residual effects that remain after mitigation.
13.27	Visual effect of plume length	Page 1 The plume will be potentially 280m in length	This statement is not accurate. The maximum length of visible plume in daylight hours during non-cloudy day is 187.89m based on hourly data analysed at Portland over the past 5 years. Detailed technical information, derived from advanced plume modelling software, on plume length, duration and orientation is provided in the DAS plume addendum. The potential 280m length was during daylight hours but not taking into account how cloudy the skies were i.e. on a cloudy day the plume would be obscured by the cloud cover and therefore would not be visible.
13.28	Visual impact – effectiveness of printed PVC mesh	Page 1 The use of PVC mesh to camouflage the building in an attempt to blend it into the background will create an unnatural, unrealistic look, the PVC mesh printed with an image of the cliff face vegetation was chosen by Powerfuel Portland (PfP) to reflect the vegetated cliffs of East Weare, and the profiled metal cladding to imitate the exposed cliff face, yet the cliff face it is imitating is some 80m or so above the height of the proposed plant. There are flaws in the PVC mesh imaging - it will not reflect any seasonal changes in the surrounding vegetation, it will therefore still represent an alien, unnatural feature in the landscape. Nor will it reflect the daily change in weather conditions, for example on a stormy day whilst all vegetation in the area has movement with changing shades of colour, the plant will remain obstinately static and unchanging, again highlighting this alien and unnatural feature in the landscape. There is no evidence to show how it will weather over time particularly in such an exposed coastal location, nor if it will be durable and effective in the long term.	Further information is now contained within the DAS addendum on the proposed PVC mesh and various options that could successfully achieve the objective of blending the building in with its background. It is not intended to try to make the building invisible, but rather soften views particularly from longer distance views from the Dorset AONB and surrounding area. The DAS addendum on materials provides further information in respect to the durability of the materials, including impact of sunlight. It is considered that the precise approach to camouflage imagery and materials can be addressed by means of suitable planning condition relating to external materials and finishes.
13.29	Visual impact – night-time lighting	Page 2 With no photomontages provided of the effects of the lighting at night, there is no evidence presented of how much effect the lights will have. It is likely that the stack lighting, however, will be visual from many different viewpoints, day and night, and will have an adverse visual effect.	A lighting statement was submitted as part of the application. This was undertaken by Arup and informed the lighting assessment in the LVIA chapter 9 of the ES. Night time photomontages have been prepared and are included in the DAS addendum in figures 9.42 and 9.43 (submitted as part of the Regulation 25 ES addendum). The two viewpoints from which these were produced were agreed with the Dorset landscape officer and Tetra Tech consultant. These illustrate that the conclusions reached within the LVIA are correct.
13.30	Landscape character type (Limestone Peninsula) - characteristics and management objective	Page 4 and 13 The site lies within the Limestone Peninsula character type with the key characteristics including “a dramatic and distinctive wedge shaped limestone peninsula at the end of Chesil Beach with prominent cliffs”, “a unique coastal landmark with sweeping views along the coast” and “many key nature conservation sites of importance”. The overall management objective should be to maintain the integrity of the skyline. The proposal is not compatible with these characteristics or overall management objective.	This comment fails to include a number of other key characteristics noted for the character type including *“an open skyline dominated by manmade structures and features”* and *“a disjoined, untidy and neglected feel”.* They state that the overall management objective should be to maintain the integrity of the skyline. The proposed ERF has been carefully designed to ensure that it does not break the skyline from many views within the wider landscape such as from the AONB as illustrated in figures 9.34 to 9.37. When viewed from closer viewpoints such as Sandsfoot Castle and Ferry Bridge the narrowest part of the building will be visible and it will be seen within the context of tall structures within the port, including cranes, ship funnels, lighting columns and radar equipment and therefore is not considered to be inappropriate development.
13.31	Viewpoints – Abbotsbury Hill and Hardy’s monument.	Pages 4 and 13	The Abbotsbury Hill viewpoint is approximately 18km from the application site and therefore 8km beyond the study area. The Hardy’s monument is approximately 15.5km from the site and therefore 5.5km beyond the study area. The views and photomontage locations were agreed with Dorset Council and the AONB Partnership. The intention of an ES is to determine

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		An Abbotsbury Hill viewpoint has not been included in the ES "Landscape, seascape and visual effects environmental assessment", this is a major omission. It also fails to mention another well-known viewpoint, Hardy's Monument.	the significant residual effects after mitigation. Given the distance the visual effects from these viewpoints are considered to be not significant and therefore it would not be appropriate to include them within the ES.
13.32	Landscape character type (harbour/wetland/lagoon) - characteristics and management objective	Page 5 Importance is placed upon the harbour/wetland/lagoon landscape character type. The proposal will represent a breach of this character type objective in the control of development at the fringes to minimise its landscape, ecological and visual impacts, maintain key views and maintain the undeveloped character along the coast.	This comment fails to mention that this is a specific management objective of the harbour/wetland/lagoon character type from the Dorset County Landscape character assessment. The boundary of this character type does not extend along the Portland peninsula but stops at the northern end around Ferry Bridge as illustrated on figure 9.10 of the ES. Therefore, the management objective of controlling development at its fringes is restricted to the edges of its boundaries which are approximately 3.2km from the site and will not be affected. The management objectives are specific to the boundary of this character type and the key viewpoints described in the Dorset landscape character assessment are the views towards the old chapel on top of St. Catherine's Hill near Abbotsbury. These views will remain unaffected as the proposals are in the opposite direction. The Weymouth and Portland landscape Character Assessment February 2013 has a different boundary to the Dorset County harbour/wetland/lagoon landscape character type that extends further south across the causeway. It does state that wedge-shaped mass of Portland peninsula is visually prominent, forming the southern skyline from much of the area. However, it also describes that towards the northern and southern extents, the urban influences of Wyke Regis and Osprey Quay are notable. It goes on to state that "the remaining land use is predominantly urban, with a major transport corridor running the length of the area and large scale development at Osprey Quay" and that "built development is predominantly clustered towards the south" and that "the visual unity is weakened by modern industrial and residential development with varying architectural styles and materials." There are no management objectives described within the Weymouth and Portland landscape Character Assessment.
13.33	Landscape effects on the man-made harbour	Page 6 The LVIA conclusions on the magnitude of landscape and seascape effects is questioned and represents and under estimation.	The magnitude of change was considered to be medium and the degree of landscape effects was slight and not significant based on the methodology which was agreed with Dorset Council and the AONB Partnership. A low sensitivity receptor with a medium magnitude of change results in a slight degree of effect, which is not significant.
13.34	Viewpoints – times that viewpoints were taken	Page 7 Viewpoints 2 and 3 in the ES were "taken in the evening preventing the image from being 'read'.	This assertion is incorrect as the date and time of the photographs are recorded on figures 9.19 and 9.20. These were taken at 1.25pm and 11.30am on the 18th March 2020 and reflects one set of potential weather conditions at Portland. The photographs were taken over a number of days from the morning through to the afternoon in both sunny and cloudy conditions.
13.35	Viewpoint – A534 and Ridgeway Hill	Page 10 The applicant selected the visual effects from the A354 represented by one single point on an approximately 16 miles stretch of road that connects Dorchester, via Weymouth, to the Isle of Portland, choosing Ferrybridge on the extreme western edge of Portland, viewpoint 8. To only consider one viewpoint over 16 miles is another omission. This area has been given the landscape effect ranking of negligible and not significant, but this does depend on which point in the 16 mile stretch is being referred to. As you travel down Ridgeway Hill, this provides the first chance to see Portland and there is a certain wow factor, each and every time you travel down this road towards Weymouth.	With a LVIA it is not the viewpoints that are assessed but the experience of the visual receptors using the A354. The entire length of the A354 within the study area has been assessed in paragraph 9.136 using viewpoint 8 as an illustrative example of one representative view. The photographs have all been taken in accordance with the Guidelines for Landscape and Visual Impact Assessment, (GLVIA) 3rd Edition, Landscape Institute (LI) and Institute for Environmental Management and Assessment (IEMA) (2013) and the Landscape Institute Technical Guidance Note 06/19, Visual Representation of Development Proposals 17 September 2019. The LI requires the camera to be a Full Frame Sensor and 50mm focal length prime lens to be used and this is what has been used throughout the LVIA chapter 9 of the ES. Ridgeway Hill is over 10km from the site and therefore would have a negligible visual effect as illustrated by the assessment table in paragraph 9.130 on the visual effects from the South Dorset Ridgeway and Osmington White Horse. The ZTVs clearly demonstrate how little visibility there will be from the A354 from the study area boundary to Ferry Bridge where there will then be potential views across the causeway.

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13.36	Visual – mapping of the World Heritage Site (WHS)	Page 11 The mapping of the WHS (figure 9.8) is incorrect. The area of WHS from near Smallmouth beach all the way along to Nothe Castle and Weymouth Stone Pier has been omitted from the map in two key visually effected areas, namely Sandsfoot Castle and Nothe Fort.	This assertion is incorrect. This is illustrated as a narrow horizontal blue hatched area all along the coastline. The objection queries why the assessment separates the West Dorset Heritage Coastline from the Dorset and East Devon Coast UNESCO WHS despite the fact that they are the same area. This is incorrect. They are two separate areas sometime overlapping. Figure 9.8 illustrates the West Dorset Heritage Coastline as a blue diagonal hatch which extends out into the sea and the Dorset and East Devon Coast UNESCO WHS as a horizontal blue hatch. Each of these areas is assessed in paragraphs 9.142 and 9.143. The viewpoints themselves are not assessed as it is the experience of the receptors to the whole of these areas that are assessed. The views are only used as representative examples.
	Ramblers		
13.37	Visual impact on the England Coast Path	Section 5 The developers make no mention of the England Coast Path which is important both for the health and recreation of Portland residents but is part of the attraction of the island to visitors and will become of increasing importance in the future, both nationally and internationally, once the England Coast Path is completed and runs to the west of Weymouth as well as to the east. The Environmental Statement refers to the South West Coast Path rather than the England Coast Path, although they are largely synonymous, the England Coast Path has the important additional feature of the approved coastal margin.	This comment appears to focus on the approved coastal margin that is part of the England Coast Path. It is important to note that a large area of the coastal margin is private land associated with Portland Port and the East Weare where there is no public access or land within the prison which is not accessible to the general public. The England Coast Path, coastal margin and private (inaccessible) land is illustrated on figures 9.46 and 9.47 in the ES addendum. This shows that much of the coastal margin is not accessible to the public within 1.5km of the site. The ES while not specifically assessing the coastal margin assesses views from the South West Coast Path, Weymouth beachfront, Portland Port, Portland Marina and the sailing academy and the footpaths S3/68, S3/70, S3/72 and S3/81 on the steep cliff face to the west and south of the site as well as the West Dorset Heritage Coastline and the Dorset and East Devon Coast UNESCO World Heritage Site. These visual receptors cover the same area as the coastal margin and therefore the ES has assessed the visual impacts from the England Coast Path and coastal margin.
13.38	Assessment of views - National Sailing Academy and Portland Marina	Section 5 The National Sailing Academy and Portland Marina are places of public resort to which access on foot and bicycle has been provided and the views from those locations do not appear to have been adequately considered.	The ES chapter 9 paragraph 9.132 assesses the visual effects from these two areas and the building design has been carefully considered in terms of views from this area as set out in the DAS with the narrowest part of the building facing this direction.
13.39	Impact on local landscape and nature conservation designations	Section 7 The proposed development will impact upon an area of land immediately to the south which is designated as a site of National Importance for Nature Conservation and Land of Local Landscape Importance. These designations alone mean that a development of this kind would be contrary to numerous planning policies.	This comment fails to mention that the site is located within a key employment site and the Northern Arc within the Portland Neighbourhood Plan which is intended to 'cement' the location as a vital employment zone. In addition to this the site is a brownfield site located within an industrial port that currently has an extant planning permission for the development of an energy plant fuelled by vegetable oil and waste rubber crumb from end-of-life tyres, which could be implemented in the absence of the proposed development.
13.40	West Dorset, Weymouth and Portland Local Plan (2015) – vision	Section 7 The proposal does not comply with the vision (bullet points) in the West Dorset, Weymouth and Portland Local Plan (2015). Stated as: • Have maintained and enhanced the unique character of the island in terms of its built and natural assets, whilst thriving economically and socially for the benefit of residents and visitors; • Be the home of specialist maritime industries … • Have a broad tourist offer including activity based in sustainable tourism (water sports, climbing, walking and bird watching) that capitalises on its unique location.	This comment fails to include the full text in the second bullet point which should read: *"is the home of specialist maritime industries and other growth sectors that benefit from its unique location, providing it with a good supply of well-paid jobs that benefit the local community and wider area. Portland Port will have maintained and expanded its role as a port of national and international importance as a location for sustainable job creation"*. There is also a fourth bullet point that has been omitted which states: "*has reduced the levels of multiple deprivation and has good education and skills provision'.* The comment therefore presents an incomplete picture of the plan's wider vision.

14. Natural Heritage

Other consultees

Item	Topic	Summary of consultation comment	Applicant response
	Freeths (on behalf of the Portland Association)		
14.1	SHRA – lack of sufficient detail and signposting	Paragraphs 12 and 13 Where supporting information is provided in other supporting application documents this has not been explained in sufficient detail in the shadow HRA. Nor has there been any, or any sufficient signposting in the shadow HRA of other relevant data / evidence / paragraph numbers of other documents / sources to assist anyone reading it to understand the basis for the conclusions drawn.	The Freeths consultation response (see paragraph 8) makes clear that the observations made by its legally qualified professionals are based on the shadow HRA document alone. The fact that the legally qualified professionals have not undertaken a review of other relevant documentation, submitted as part of the application, to determine if they support the conclusions of the shadow HRA perhaps reflects the limited nature of the review commissioned, rather than any short-comings of the shadow HRA and its supporting information. Dorset Council, as the competent authority, will have access to all of the relevant supporting documents when undertaking its HRA and will no doubt take the necessary time to carefully review all the supporting documents to ensure they support the conclusions of the shadow HRA they will undertake. The legally qualified professionals will also be fully aware there is no framework for an appropriate assessment that a competent authority has to follow. Therefore, to suggest a lack of signposting (see paragraph 12) is a fundamental problem (see paragraph 13) is inaccurate. The scope and content of an appropriate assessment will depend on the nature, location, duration and scale of the proposed plan or project and the interest features of the relevant site. 'Appropriate' is not a technical term. It indicates that an assessment needs to be proportionate and sufficient to support the task of the competent authority in determining whether the plan or project will adversely affect the integrity of the site. (https://www.gov.uk/guidance/appropriate-assessment#what-is-a-habitats-regulations-assessment)
14.2	SHRA – approach to the likely significant effects (LSE) test	Paragraph 20 There is no explanation as to the basis for the decision to consider European / Ramsar sites only within 10km of the ERF. The 10km search area has not been explained or justified. Why have the authors not considered European sites further afield (given that stack emissions / traffic emissions / water pollution impacts may well be felt further away than 10km from the proposed stack). Justification and explanation is needed. The justification must be linked to and evidenced by the potential pathways of impact that are relevant, including stack emissions, other sources of emissions from the proposed ERF and traffic emissions.	The next closest SPA/Ramsar/SAC is the Dorset Heaths/Dorset Heathlands. The air quality modelling undertaken by Fichtner demonstrates that critical levels and loads related to emissions from the ERF are below 1% within 1km of the site for the closest NSN site. Based on the very limited zone of impact it makes no logical sense to extend the search area beyond 10km. This approach has been confirmed as acceptable with Natural England. There are no credible impact pathways for traffic or water pollution impacts on terrestrial NSN sites over 10km from the site. The comments regarding zones of impact potentially occurring beyond 10km are purely hypothetical. The likely significant effect test must be based on objective information and the risks must be real, not hypothetical (Boggis vs Natural England 2009). This comment does not appear to be applying the relevant case law to the likely significant effects test for this application. The 10km search area was taken from the EA guidance and is standard for these types of applications. In addition, the 10km search area was discussed and agreed with Natural England prior to the preparation of the documentation as an appropriate zone of influence for this application.
14.3	SHRA – road traffic emissions beyond 10km	Paragraph 23 In the case of traffic emissions, there must be consideration of likely routes of traffic to / from the ERF and then a search for European / Ramsar sites along those routes which might be affected (and hence the area of impact may well be more than 10km from the ERF facility).	A revised assessment looking at in-combination effects has been undertaken for those NSN sites where plausible in-combination effects relating to traffic emissions may occur has been submitted to Natural England (the statutory nature conservation organisation) and Dorset Council as the competent authority.

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14.4	SHRA - omission of any assessment of impacts on the Studland to Portland SAC European marine site	Paragraph 24 The shadow HRA gives no consideration of impacts on the Studland to Portland SAC European marine site. This is the case even though it is mentioned on Figure 1 as being within the 10km search area selected in the shadow HRA and even though marine pollution is a clear pathway of impact from the ERF and there is discussion of potential marine pollution impacts e.g. in section 5 (5.88) and section 6 (6.6, 6.9).	No critical levels or loads are available for this marine site. Pollutant levels from ERF likely to be negligible as site either downwind or 6km to east of site. ABPmer have reviewed the information provided for the application and has concurred with the view that aerial and marine pollution presents no credible risk to the Studland to Portland SAC (appendix 9.2 to the ES Addendum).
14.5	SHRA - failure to consider all qualifying features for European site	Paragraphs 27 to 30 A HRA must be undertaken “in view of the conservation objectives” of the relevant European sites (see regulation 63(1)) and also must consider each and every qualifying feature of each of the relevant European sites (see the case of C-461/17 Holohan v An Bord Pleanála). The shadow HRA fails to consider all the qualifying features even of the European sites that the author has selected to consider. Paragraph 4.9 lists the qualifying features of Chesil and the Fleet SAC but it omits two qualifying habitats: (i) Coastal vegetation outside reach of waves; and (ii) Mediterranean saltmarsh scrub. This means that there can be no confidence that all qualifying features of the other relevant European sites have been included.	The shadow appropriate assessment assesses impacts where there is considered to be a credible risk pathway that may result in an LSE. It has not listed all the reasons why qualifying features have been excluded from consideration. The receptors where impacts were considered likely was discussed with Natural England prior to submission of the SHRA. For the benefit of the competent authority details of all the qualifying features have been included in the revised document.
14.6	SHRA - relevant impact pathways in relation to all the relevant qualifying features	Paragraphs 32 to 46 There is a failure to consider/address adequately all relevant impact pathways in relation to all the relevant qualifying features. The shadow appropriate assessment omits assessment of functionally linked land (mobile species – bird and great crested newt). The assessment omits details of noise, odour, visual and the stack obstructing bird flights. No explanation is provided of why possible impacts have been dismissed. The assessment doesn’t assess the risk of untreated IBA and contamination of the marine environment. The assessment doesn’t explain why pathways have been screened out. Crookhill Clay Pits SAC –suggested failure to consider impact of road traffic.	The legal author has identified a long list of hypothetical impacts that do not reflect the location of the application site, the surrounding non-designated habitats, the ecology of qualifying species or the interest features of the NSN sites. They do however recognise that the likely significant effect test must be based on objective information and the risks must be real, not hypothetical (Boggis vs Natural England 2009). The author does not appear to be applying the relevant case law to the likely significant effects test for this application. For example, the Marine Accident Investigation Branch report on the incident of the explosion on a ship carrying IBA (referenced in paragraph 37) shows that the incident did not cause any environmental impact. The report also notes that the vessel did not suffer any structural damage. Identifying the presence of IBA as a potential LSE based on the cited evidence appears to be stretching the definition of real risks beyond the uppermost limits. It is unclear how the legal author has identified impacts on functionally linked land as a key issue for the shadow HRA (see paragraph 34) for great crested newts, or how odour (paragraph 35) may impact on Annex 1 habitats. As highlighted by the legal author in paragraph 38, caselaw requires that Dorset Council may only conclude “no LSE” in relation to a pathway of impact to any NSN site where, based on objective information, there is no risk (*with the exception only of hypothetical risks*) to the NSN site (emphasis added). The competent authority should apply this advice when considering the content of paragraphs 34 to 37 which are dedicated to identifying a range of hypothetical risks associated with the proposal. It is perfectly possible for a screening decision to be made based on an insignificant process contribution and low background levels of pollutants (significantly below relevant critical levels and loads). As highlighted earlier the observations made by the legal author are based on the shadow HRA document alone. The competent authority will have access to all the supporting documents when undertaking their HRA and will no doubt take the time to carefully review the supporting documents to ensure they support the conclusions of their shadow HRA.

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			Crookhill Clay Pits SAC is adjacent to the B3157 Chickerell Road which is not predicted to have any significant increases in traffic as the lorries will follow a proscribed one-way system that does not run past Crookhill Clay Pits SAC . At the closest point the SAC is over 275m from the affected roads. In respect to the comments made in Paragraphs 42.1 and 42.2 on impact on the Crookhill Clay Pits SAC, it is clear that the author has based their comments on the shadow HRA document alone, overlooking the information relating to the routing of traffic which would have clearly shown that there is no LSE relating to emission from traffic. These criticisms have no credible basis. There is no indication as to why the author believes that the improved grassland and developed land around the junction of Fleet Lane and the B3156 is functionally linked to the Crookhill Clay Pits SAC. These are further examples of the reviewers identifying hypothetical risks for assessment contrary to case law.
14.7	SHRA - clarity of screening out pathways in respect to LSE	Paragraphs 43 to 46 There is a failure to provide any clarity as to exactly which pathways of impact for which European sites are being screened out as having “no LSE”; and which are being taken forward to the stage 2 appropriate assessment stage of HRA.	To assist the competent authority information on the impact pathways screened in and out have been provided in the updated assessment document.
14.8	SHRA – application of Natural England’s air quality (traffic) guidance	Paragraphs 47 and 48 One of the pathways of impact acknowledged by the authors is air quality impacts from traffic. On this basis NE’s air quality guidance on the LSE screening test must be followed. The shadow HRA’s screening assessment makes no mention of this guidance and there is no evidence that the screening assessment has followed it.	The updated air quality assessment prepared by Fichtner addresses in-combination traffic and ammonia. This has been addressed as part of the ES Addendum. A separate technical note has been produced which includes transects showing the impact of emissions from road and the ERF at the Isle of Portland to Studland Cliffs SAC and Chesil and The Fleet SAC. These results have been fed into the Shadow Appropriate Assessment
14.9	SHRA – consideration of in combination effects at the LSE stage	Paragraphs 49 to 56 There has been no attempt to address the issue of “in combination effects” at the LSE stage. The authors seek to argue that there is no LSE from the project on the Crookhill Brick Pit SAC. Quite apart from the fact that no / no adequate reasoning has been provided, the explanation fails completely to address in combination effects. This is a particular concern with regard to emissions from the proposed ERF. The screening section of the shadow HRA does not explain how the proposed stack meets the requirements of the guidance and in any event fails to address impacts of the stack emissions “in combination with other plans and projects”. The requirement for an “in combination” air quality assessment at the HRA screening stage is well known, ever since the High Court decision in Wealden District Council v Secretary of State for Communities and Local Government, Lewes District Council and South Downs National Park Authority [2017] EWHC 351). The screening assessment in this shadow HRA fails to comply with these requirements. This is a major error.	Revised air quality modelling has been undertaken for relevant SACs, which details changes in concentrations or deposition rates for relevant pollutants both alone and in-combination with other plans and projects. As there are no other significant point-source emitters on the Isle of Portland and emissions from ships in the port has been included in the air quality modelling, emissions from traffic are the only likely in-combination effect for on NSN sites off the Isle of Portland.
14.10	SHRA – compliance with the CJEU decision in “People Over Wind”	Paragraphs 57 to 59 The well-known CJEU case of People Over Wind confirms that mitigation measures (measures which avoid or reduce impacts on European sites) may not	The Crookhill Clay Pits SAC has been added into the assessment. This is not a significant issue as there are no significant effects on this site predicted.

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		be relied upon at the HRA LSE screening stage. Instead mitigation measures may only be considered and relied upon at the appropriate assessment stage. Paragraph 5.12 of the shadow HRA confirms that the shadow HRA author regards the proposed stack height as a mitigation measure. Yet at 5.15 and 5.16 the author screens out air quality impacts in relation to certain (unspecified) qualifying habitats and The Crookhill Brick Pit SAC. No explanation has been given. However in any event this appears to have been concluded in the light of the stack size, which the author has stated must be regarded as mitigation. On that basis the conclusion contravenes People over Wind.	The amendments to the revised assessment document ensure that the requirements not to include mitigation at LSE screening stage (in this case increased stack height) is complied with, in line with the PoW judgement.
14.11	SHRA – requirements for the LSE stage	Paragraphs 60 and 61 What is required for the LSE assessment is actually completely standard in shadow HRAs produced by developers; and it is a real concern that this shadow HRA has not provided what is standard. Once there has been presented a clear, evidenced and justified approach to selecting the European / Ramsar sites which must be considered then what is needed, for each European / Ramsar site, is a table showing qualifying features, all possible pathways, assessment of these alone plus explanation of whether there is LSE alone or in-combination.	The legal author should be fully aware that there is no standard for LSE assessment that a competent authority has to follow, and therefore to suggest a table is the standard is inaccurate. This comment (paragraph 61) represents the author's view on how an LSE assessment might be done.
14.12	SHRA – HRA stage 2 appropriate assessment and no adverse impact on integrity test	Paragraphs 62 to 68 Under HRA rules, where it is concluded that there is a LSE from the ERF on any European / Ramsar site qualifying feature through any impact pathway then Dorset Council must conduct an appropriate assessment. Dorset Council must then decide if it can be certain that "there will be no adverse effect from the ERF on the integrity of any European site either alone or in combination with other plans or projects". As a matter of law, consent for the ERF may not be granted unless Dorset Council can be certain that that "there will be no adverse effect from the ERF on the integrity of any European site either alone or in combination with other plans or projects". This is a legal requirement. It is not a matter of planning discretion. Dorset Council will no doubt be aware of the caselaw relating to the strict standard of assessment required for an appropriate assessment and the subsequent "adverse effect on integrity test". Reference is made to best scientific knowledge and no reasonable scientific doubt remaining (CJEU C-127/02 paras 54 and 61) and there cannot be lacunae (CJEU-164/17 para 39). The plan or project in question may be granted authorisation only on the condition that the competent national authorities are convinced that it will not adversely affect the integrity of the site concerned (CJEU case C-127/02, paragraph 56). The shadow HRA (appropriate assessment) is considered to fail to meet these strict requirements.	The requirements are noted. However, the conclusion that the shadow HRA fails these tests is rejected.

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14.13	SHRA –consideration of all qualifying species and also other species necessary to the conservation of these qualifying features	Paragraphs 69 to 71 The CJEU decision in Holohan requires an appropriate assessment to consider all qualifying species of each relevant European site and also any other species which are "necessary to the conservation of the qualifying features". The shadow appropriate assessment does not meet either requirement.	As the legal author of this comment will be fully aware, there were very specific ecological requirements for the Annex II species in the Holohan case. The Annex II species in question relied on the presence of another species to allow it to complete its reproductive cycle. The Isle of Portland to Studland Cliffs SAC supports populations of the Annex II species early gentian. This species is not known to rely on any particular species of insect, bird or mammal to complete its lifecycle. Potential air quality impacts on the Annex II species (great crested newt) at Crookhill Clay Pits SAC have been ruled out as discussed earlier in the response ((see response to point 14.6). Despite the hypothetical impacts identified by the legal author of this comment, it is not considered there are any other plausible impact pathways on the interest features of the Crookhill Clay Pits SAC that require consideration. For example, with no impacts relating to changes in air quality identified, the marginal and aquatic vegetation used for egg-laying by great crested newts would therefore be unaffected by the proposed development. It is not considered necessary to assess impacts where no realistic impact pathway exists. ABPmer has reviewed the information provided for the application and has concurred with the view that aerial and marine pollution presents no credible risk to the Studland to Portland SAC (appendix 9.2 to the ES addendum).
14.14	SHRA – consideration of all relevant European sites and all impact pathways	Paragraph 72 There is a failure to consider / address all relevant European sites and all impact pathways. The failures in relation to these points are carried through into the shadow appropriate assessment which is also therefore deficient.	The applicant sought to agree all relevant impact pathways with Natural England in pre-application discussions. The impacts covered in the shadow appropriate assessment are those where there is a realistic impact pathway. It is correct that the shadow appropriate assessment does not cover the wide range of hypothetical impact pathways identified as requiring consideration by the legal author of this comment. As supported by relevant caselaw, and as set out earlier in this response to this criticism (see response to 14.6) there is no requirement to assess hypothetical impacts.
14.15	SHRA – consideration of functionally linked habitat outside of European/Ramsar sites.	Paragraphs 74 There is a failure to consider impacts on functionally linked habitat outside the European / Ramsar sites. As is the case in the screening assessment, this is also omitted from the shadow appropriate assessment.	At the time of preparation of the sHRA it was not believed there was any functionally linked land outside the NSN sites that need to be considered. It is correct that the shadow appropriate assessment does not cover the wide range of hypothetical impact pathways identified as requiring consideration by the legal author of this comment. As supported by relevant caselaw, and as set out earlier (see response to 14.6) in this response to this point there is no requirement to assess hypothetical impacts. In July 2021 Natural England notified the applicant that potential supporting habitat (calcareous grassland) had been identified in a new study undertaken by Dorset Environmental Records Centre). This grassland (not surveyed at the time of this response) is situated within the grounds of HMP The Verne. The air quality consultants have confirmed that the modelling work undertaken covers this area. The information currently available is sufficient to conclude that there will be no adverse impacts on integrity of the SAC
14.16	SHRA – reference to bird survey data	Paragraphs 76 and 77 No reference is made to any bird survey data collected to support the shadow appropriate assessment in relation to the Chesil Beach and the Fleet SPA/ Ramsar. It is standard that development applications such as this would be supported by bird survey data to assist in assessing impacts of the ERF on the qualifying species of the SPA / Ramsar both when in the SPA / Ramsar and when using other land / sea outside the SPA / Ramsar site. Claims are made by Powerfuel in the shadow appropriate assessment about the behaviour of certain qualifying bird species but this is without any supporting evidence / data (e.g. 5.82 and 5.83). This is not adequate.	As a legally qualified professional, the author should be fully aware that the Habitat Regulations do not set any standards for bird surveys to inform assessment of impacts on SPA and Ramsar sites. To imply that there are standards and that have not been followed is inaccurate. The comments made regarding a lack of survey data demonstrates a lack of understanding of the amount of baseline data for the site that is freely available and the ecology of the relevant SPA species and the habitat impacted by the development. The information on SPA species contained in paragraphs 5.82 and 5.83 could have easily been checked. The location of the little tern colony is well documented and even a basic knowledge of the feeding ecology on wigeon would allow the comment in 5.83 to be substantiated.

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			The legally qualified author who undertook this review does not appear to have enlisted any professional ecological advice when preparing this response. The competent authority will no doubt seek ecological input when undertaking their HRA.
14.17	SHRA – "in combination" shadow appropriate assessment of the ERF project with other plans and projects, and omission of agricultural plans and projects	Paragraphs 78 to 86 There is a failure to undertake correctly an "in combination" shadow appropriate assessment of the ERF project with other plans and projects. The shadow appropriate assessment must consider the impacts of the ERF project both alone and in combination with other plans and projects. Section 6 of the shadow appropriate assessment purports to undertake an "in combination" assessment. But it is incorrect and / or inadequate. An in combination assessment under HRA requires the assessor to identify a zone of influence around each of the European / Ramsar sites of concern to reflect the maximum distance from which each impact pathway of concern might affect that European site. The zones will differ depending on the pathway of impact. It is therefore not correct to identify a zone of influence around the proposed project location i.e. here around ERF. This is because the law is requiring an assessment of the impacts on the European site that the subject project is having together with any similar impacts on that same European site from other plans or projects. The author has not explained at all how the in combination projects listed in 6.2 have been identified. Table 3 is described as looking at "other projects in the area" which is unclear. It does not seem however that the author has identified the zone of influence of each relevant pathway of impact, as is required, nor does it seem that the author has considered zones of influence by reference to the locations of the European / Ramsar sites. Table 3 makes no mention of any agricultural plans or projects which may well give rise to air quality impacts which should be considered in combination with the ERF project. Table 3 and paragraph 6.3 rely on "distance" as the apparent basis for why there is no "in combination" effect between the ERF and certain other projects. But no distance figures or reasoning has been provided. This is wholly inadequate. An appropriate assessment "may not have lacunae and must contain complete, precise and definitive findings and conclusions capable of removing all reasonable scientific doubt as to the effects of the proposed works on the protected area concerned". The ERF's air quality impacts are a very significant issue for this project and the approach to "in combination" air quality effects is of paramount importance. Yet paragraph 5.20 of the appropriate assessment states that where a particular "PC" threshold is not met then Powerfuel concludes "no adverse effect on integrity of the site". This is inadequate and fails to comply with the legal requirements because no in combination assessment of other plans or projects (as required by Wealden and the Dutch nitrogen cases) has been mentioned or undertaken. Paragraph 5.20 states that the approach taken is in accordance with national guidance, but fails to inform the reader to which guidance it is referring. The shadow HRA discusses critical levels and critical loads in the shadow appropriate assessment at paragraphs 5.22 – 5.87. Again there is no mention / explanation of how "in combination" effects have been taken into account.	It is incorrect to state that the application of a zone of influence around the site is required under HRA to determine in-combination effects. The legislation and case-law does not set out any such requirement. This comment simply represents the view of a legal reviewer on how an in-combination assessment might be done. The scope and content of an appropriate assessment will depend on the nature, location, duration and scale of the proposed plan or project and the interest features of the relevant site. 'Appropriate' is not a technical term. It indicates that an assessment needs to be proportionate and sufficient to support the task of the competent authority in determining whether the plan or project will adversely affect the integrity of the site. The applicant contends that the competent authority can determine what is an appropriate method for determining in-combination effects. Further information on the identification of projects identified for the "in-combination" assessment will be provided in the revised shadow AA. The reference to agricultural plans and projects demonstrates a clear misunderstanding of the context of the sites and represents another example of the legal author highlighting hypothetical risks. No significant agricultural projects have been identified as being proposed along the Fleet. Further information on the rationale used to determine no likely in-combination effects as set out in Table 3 of the shadow HRA has been added to the revised document. This response highlights this as an omission.

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14.18	SHRA – consideration of critical levels and critical loads	Paragraphs 87 and 88 The discussion of critical levels and critical loads in the shadow appropriate assessment is incomplete / not sufficiently evidenced. There is no presentation of the underlying modelling data or any isopleth information to show how the conclusions have been drawn. There is merely a reference in the text to the "Fichtner" modelling. There is no Fichtner report listed in the References at the back of the shadow HRA. There is no explanation as to how in combination effects have been taken into account The analysis fails to address each qualifying feature of each European / Ramsar site, the analysis fails to address other species necessary for the conservation of the qualifying features The shadow appropriate assessment relies on supposed emission levels expressed as PC or PEC in relation to critical levels and critical loads but in most cases does not then go on to consider ecological impacts in relation to the qualifying features. This is contrary to the High Court judgment in Compton Parish Council. The shadow appropriate assessment lacks required detail / data e.g., one sees time and time again "given the distance of the European site from the ERF….", but without any presentation of what the distance actually is.	As highlighted in the author's review (see paragraph 8) the observations made by a legally qualified author are based on the shadow HRA document alone. Much of the information highlighted as lacking could be found in the supporting documentation, referenced in the shadow HRA, and available to the author and the competent authority. The details of critical levels/loads thresholds are taken off APIS. The Compton Parish Council judgment (para 207) EWHC 3242 related to an SPA where background critical loads/levels were exceeded. This is not the case for this application for the majority of the interest features within the NSN sites. The legal author fails to note (as set out in paragraphs 5.6 and 5.7 of the shadow HRA) that if critical levels (alone or in-combination) are above those given, direct adverse effects on receptors may occur according to current knowledge. It follows therefore that if the critical level is below that given direct adverse effects on receptors will not occur. The same rationale applies where critical loads (alone and in-combination) fall below the thresholds given. If there is no chance of direct adverse effects on receptors according to current knowledge because the critical level/load remains below identified thresholds there are no impacts on qualifying features to assess. Where exceedance does occur, this is fully assessed.
14.19	SHRA – impacts relating to traffic and ship emissions	Paragraphs 89 to 92 The shadow appropriate assessment in relation to traffic / ship emissions impacts is unclear. The shadow appropriate assessment contains discussion of traffic / ship emission impacts at paragraphs 5.94-5.97. Whilst concerns are raised regarding potential impacts, no data or evidence is presented to support the conclusions and the conclusions themselves are not clear.	The revised air quality modelling sets out the impacts related to traffic. The assessment has been carried out on the basis of the impact of the ERF excluding the reduction in emissions from shipping as a result of the provision of shore power which would mean that shipping when berthed would not need to use their on board engines for power. Thus the results presented in the HRA are precautionary. The impact of the ERF is not significant and the provision of shore power would reduce emissions of NOx and SO2 (of which would have impacts on ecology).
14.20	SHRA – Chesil Beach and the Fleet SPA/Ramsar – consideration of acid deposition	Paragraphs 93 and 94 There is an omission of consideration of acid deposition impacts on Chesil Beach and the Fleet SPA / Ramsar sites.	The APIS website clearly states that neither wigeon or little tern are sensitive due to acidity impacts on broad habitats and there would be no expected negative impact on the species due to impacts on the species broad habitat.
14.21	SHRA – Portland to Studland Cliffs SAC and Studland to Portland Marine SAC – consideration of impacts on water pollution	Paragraphs 95 and 96 There is an omission of consideration of impacts of water pollution on Isle of Portland to Studland Cliffs SAC / Studland to Portland SAC. It is acknowledged that there may not be marine impacts on the Isle of Portland SAC but, if not, then this should be explained and if the screening assessment had been conducted as required then this would have been made clear).	Impacts on Studland to Portland Marine SAC excluded on the basis of distance from site. ABPmer have reviewed the information provided for the application and has concurred with the view that aerial and marine pollution presents no credible risk to the Studland to Portland SAC (appendix 9.2 to the ES addendum). There is no feasible impact pathway for Isle of Portland to Studland Cliffs SAC, this is another example of the legal author highlighting hypothetical risks.
14.22	SHRA – Portland to Studland Cliffs SAC – consideration of dust pollution impacts	Paragraphs 97 to 98 There is an omission of consideration of impacts of dust pollution on Chesil and the Fleet SAC even though its boundary appears on Figure 1 to abut the redline of the ERF.	Although the application red line extends towards the A354 it does not abut Chesil and the Fleet SAC and a clear gap is discernible on Figure 1 between the red line and Chesil and the Fleet SAC. Due to the distance between the red line and the SAC no impact pathway for dust exists. This comment is based on a misreading of the submitted information.

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	Adams Hendry/Jonathan Cox (on behalf of SPWI)		
14.23	SHRA – cumulative assessment	Part C Ecology and Biodiversity Paragraph 3.6 There is a lack of meaningful assessment of the proposed development with other proposed plans and projects in the area. This might include housing development resulting in increased road traffic and the development plans for Portland Harbour which could increase ship movements. The competent authority cannot determine their appropriate assessment of the proposed ERF until other plans or projects have been identified and the contribution these have to air quality has been assessed in combination with that derived from the development.	There are no other large permitted processes on the Isle of Portland. The assessment has been carried out on the basis of the impact of the ERF excluding the reduction in emissions from shipping as a result of the provision of shore power which would mean that shipping when berthed would not need to use their on board engines for power. Thus the results presented in the HRA are precautionary. The air quality modelling and likely significant effects (LSE) screening has shown the impacts of the proposed development are localised and only potentially significant in the vicinity of the proposed development and where the A354 crosses Chesil Beach. The traffic modelling and revised air quality modelling captures traffic growth from projects on Portland and future growth. It is also noted that the Portland Neighbourhood Plan (June 2019) Appropriate Assessment considers in-combination effect of 4 policies on the Chesil and the Fleet SAC (EN8 – The Verne, BE3 – New business premises BE4 – New business centres and BE6 The Northern Arc). The approved document, which will have addressed increased traffic flows along the A354 and potential impacts on the European sites, did not recommend any mitigation related to air quality impacts for the growth on Portland covered by this plan.
14.24	SHRA – Isle of Portland to Studland Cliffs SAC – presence of lower plants (liverworts and lichen)	Part C Ecology and Biodiversity Paragraph 3.7 to 3.9 Records indicate the presence of two rare liverworts on rocky outcrops in 1996 and two species of beard lichen on mature scrub (Usnea articulata and Usnea esperantiana). Lower plants are components of the wider calcareous grassland and scrub habitat for the site. They are highly vulnerable features of the habitat in close proximity to the proposed development.	The critical levels for ammonia, NOx and SO2 are below relevant levels set for protection of lower plants. Usnea articulata is known to be particularly sensitive to SO2 . The loss of this species from much of lowland England is believed to be due to SO2 pollution. Usnea articulata is found in areas defined as having ‘pure’ air on the Hawksworth and Rose scale (1970) designed to estimate mean winter sulphur dioxide levels in England and Wales using lichens growing of acidic tree bark . SO2 levels before and after the development remain well below those set for the protection of lower plants. Usnea articulata is believed to show a similar sensitivity to air pollution. The example of Usnea articulata is the only record from Portland but it is found on mature shrubs and in the canopy of woodland trees in the west of the county where it can be locally frequent. The example of Usnea esperantiana is also the only known record on Portland. This species has been recorded from another six sites in the county. The lack of records of either species from the W21 and W22 scrub communities across both the Isle of Portland and the Isle of Portland to Studland SAC raises questions whether either can be considered a typical species of the lichen communities of the SAC. Information on the distribution of calcareous grassland communities within an area of search defined by the air quality modelling provided by Dorset Environmental Records Centre (B Edwards, 2021) demonstrates that the most important calcareous grassland community for terricolous lichens is not present within the zone of impact. The report states that “CG1 is by far the most important for lower plants providing a habitat for several of key Mediterranean bryophytes and lichens”.
14.25	SHRA – Isle of Portland to Studland Cliffs SAC -use of Predicted Environmental Contribution (PEC) and the precautionary principle	Part C Ecology and Biodiversity Paragraph 3.10 to 3.13 The use of the PEC, below 70% of the critical level or load, may be several years old and is not reliable. The approach is not precautionary enough given small rises in levels of various pollutants.	The competent authority’s attention is drawn to work undertaken by Jonathan Cox Associates as recently as November 2017 where the Environment Agency thresholds were used for assessing impacts on the interest features of European sites. These thresholds, now being identified as potentially unreliable, were considered by the author of the note (Jonathan Cox) to be based on a suitable precautionary approach. The note states “it can be assumed that these thresholds have been set by Environment Agency and Natural England taking the precautionary approach required to conclude no likely significant effect”.

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			No evidence to support the assertion that the Environmental Agency guidance cannot now be safely relied upon has been provided by Jonathan Cox. The same author has previously applied this thresholds in the same way as has been done in the submitted shadow appropriate assessment. In that case, the author considered that making an assumption, regarding the precautionary approach to setting of thresholds by Environment Agency and Natural England, was entirely appropriate. There is no evidence provided to support the suggestion that the impact of air pollution may prevent this part of the SAC being restored to favourable condition. Levels of relevant critical levels and loads remain below those recommended on APIS for calcareous grassland.
14.26	SHRA - Isle of Portland to Studland Cliffs SAC – impact on important invertebrates	Part C Ecology and Biodiversity Paragraph 3.14 The SAC calcareous grassland habitat also supports important invertebrate populations characterised by the presence of the Silver studded blue and Adonis blue butterflies. Potential impact of changes from air pollution on the structure and composition of grassland	The Adonis blue is found on south-facing short chalk and limestone grassland where there is an abundance of the larval foodplant horseshoe vetch Hippocrepis comosa. Information provided by Dorset Environmental Records Centre highlight the localised nature of the colonies on Portland. The largest colonies seem to be in the centre and north at High Angle Batteries, Penn's Weare and Tout Quarries. Within the Isle of Portland to Studland Cliffs SAC there are important colonies around Lulworth and on Ballard Down. It should be noted that Unit 33 of the SAC is currently dominated by scrub and is north-facing. This does not currently provide suitable habitat for Adonis blue. The critical load for calcareous grassland within the SAC is not exceeded so there should be no impacts on Adonis blue. Silver-studded blue has declined significantly and is only known now from less than 10 colonies, the main ones being at Broadcroft Quarries and near Nicodemus Knob, with smaller ones at High Angle Batteries, King Barrow Quarries and Tout Quarries. At Broadcroft Quarry surface scraping has been employed to create the conditions favoured by Silver-studded blue and the ants (primarily Lasius niger, also L. alienus). Given the limited mobility of adults (generally circa. 50m) this area is outside most of the key areas known to support this species. As with Adonis blue it is typically found in sheltered conditions and south-facing slopes. Food plants comprise black medick, common bird's-foot trefoil, common rock-rose, gorse and horseshoe vetch. A paper in conservation evidence indicates that successional vegetational changes within Broadcroft Quarry necessitated intervention (de Whalley et al, 2006)[3]. It should be noted that Unit 33 of the SAC is currently dominated by scrub and is north-facing. This does not currently provide suitable habitat for silver studded blue. The critical load for calcareous grassland within the SAC is not exceeded so there should be no impacts on silver studded blue. There is a single record of Portland Ribbon Wave. This species inhabits open grassland and scrubby areas on coastal limestone in Britain. Larval foodplants are unknown but captive larvae have been recorded feeding on bramble, lady's bedstraw, travellers joy, honeysuckle and dandelion (Waring and Townsend, 2017)[4]. Given the range of foodplants larvae have been recorded feeding on and the nature of the habitat used by this species, the changes in air quality are not considered likely to impact on this species.

[3] De Whalley, L., de Walley, B., Green, P., Gammon, N and Shreeves, W (2006) Digging scrapes to enhance silver-studded blue Plebejus argus habitat at Broadcroft Quarry, Isle of Portland, Dorset, England. Conservation Evidence, 2006. 3. 39-43.

[4] Waring, P and Townsend, M (2017) Field Guide to the Moths of Great Britain and Ireland. Third Edition. Bloomsbury Wildlife Guides. London.

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			The grey bush-cricket Platycleis albopunctata has been recorded from Castletown area. The critical load for calcareous grassland not exceeded so there should be no impacts on the habitats that support the invertebrate populations referred to.
14.27	SHRA – Chesil Beach and the Fleet SAC – assessment of vegetation communities	Part C Ecology and Biodiversity Paragraph 3.16 to 3.20 The process contribution (PC) for ammonia will exceed 1% of the critical level and is 0.9% of critical load for nitrogen. The assessment correctly identifies that the site supports areas of the Annex I habitat type referred to as Perennial Vegetation of Stony Banks, but considers this to consist only of the vegetation communities described by the National Vegetation Classification as SD1 Rumex crispus-Glaucium flavum shingle community. It dismisses other maritime grassland vegetation on Chesil Beach (MC5 and MC8) as not being a component of the Perennial Vegetation of Stony Banks habitat type (paragraph 5.54). This conclusion is based on an erroneous use of the EU Interpretation Manual to relate NVC communities to Annex 1 habitat types. The EU Interpretation Manual only provides a guide to those national vegetation classifications that equate to the Annex I habitat type, it does not provide an exhaustive or exclusive list of equivalent vegetation communities. The NVC describes vegetation types and not habitats. Although a vegetation community may be described as a maritime cliff vegetation, it is not confined to that habitat, but can occur in other habitats. For example, the Annex 1 Vegetated Shingle habitat can include examples of saltmarsh and even woodland NVC communities. A better understanding of the relationship between vegetation communities and vegetated shingle habitat is available in the Natural England commissioned report NECR054 on Coastal Vegetated Shingle The applicant has therefore not assessed the MC5 and MC8 communities as vegetated shingle but rather treated them as maritime cliff.	It is assumed that the correct paragraph reference here should be 5.64 (rather than 5.54 as is stated in this comment). The reference to the EU Interpretation Manual attributing MC5 and MC8 to the Annex 1 habitat vegetated sea cliffs of the Atlantic and Baltic coasts was purely to highlight to the competent authority the difference in critical loads given on APIS for the two habitat types, therefore it may not be appropriate to apply a blanket critical load across all the habitat types of the Annex 1 habitat perennial vegetation of stony banks community. This Annex 1 habitat type covers a wide range of NVC communities. Paragraph 5.64 does not actually state that MC5 and MC8 grassland are not part of the Annex 1 habitat perennial vegetation of stony banks. It simply states "*The EU interpretation manual identifies the NVC communities SD1 community as the community characteristic of the Annex 1 habitat type perennial vegetation of stony banks. The manual attributes the MC5 and MC8 maritime grassland communities to the Annex 1 habitat vegetated sea cliffs of the Atlantic and Baltic Coasts*. ". Both statements are factually correct. Para 5.63 highlights the different vegetation communities considered to fall into the Annex 1 habitat perennial vegetation of stony banks by Footprint ecology. Site specific advice is only provided for the N critical load for one SAC in the UK - Dungeness. This recommends a site relevant critical load for perennial vegetation of stony banks (H1220) of 10-15kg/N/ha/yr. (same as acid grassland) with the lower end of the range used to protect lichen-rich communities. Table 2 of the NERC054 Coastal vegetated shingle report (Murdock et al, 2010)[5] list the vegetation types relevant to H1220 recorded at Dungeness as being: SD1, MG1/MG1a, U1/U1a, MC8/MC8c/MC5. Crowther and Groome (2005) list the NVC communities recorded along the western side of the A354: SD1 (various), SM25, MC5, MC8 and MC11. Footprint Ecology (2018) list the NVC communities recorded along the western side of the A354: SD1 (various), SM25, MC5, MC8, MC11, SM14 and SM25. SD1, MC5 and MC8 communities occur at both Chesil and Dungeness. The applicant draws the competent authority's attention to the site relevant critical load supplied by Natural England for perennial vegetation of stony banks (H1220) at Dungeness, which supports a number of the same vegetation communities as Chesil. The critical load for that site is 10-15kg/N/ha/yr. with the lower end of the range used to protect lichen-rich communities. Crowther and Groome note that the MC5 grasslands support some element of fine-grained material within the shingle matrix, although almost never as great as that noted for the MC8 stands. The report notes that MC8 grassland requires a relatively high sand/silt component in the shingle matrix before coming into its own. All this would suggest that the lower end of the critical load range given for vegetated shingle may not be appropriate for those parts of the SAC supporting maritime grassland communities. As this comment recognises, the Annex 1 habitat type perennial vegetation of stony banks (H1220) includes a wide range of NVC communities. It does not seem credible that a single critical load for nitrogen would be applicable to all the varied communities listed in the NERC054 Coastal vegetated shingle report (Murdock et al, 2010).

[5] Murdock, A., Hill, A.N., Cox, J. & Randall, R.E. (2010) Development of an evidence base of the extent and quality of shingle habitats in England to improve targeting and delivery of the coastal vegetated shingle HAP. Natural England Commissioned Report, Number 054. Natural England. Peterborough.

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			APIS information for Portland Harbour Shore SSSI (the area east of the A354) lists 2 habitats SM14 (littoral sediment – Atriplex portulacoides saltmarsh) and MC8 (Supralittoral rock – Festuca rubra – Armeria maritima grassland) listing lichens and bryophytes as not present and a N critical load of 20-30 for saltmarsh habitat and no N critical load for MC8 grassland, but noting that it is sensitive to N deposition. Information on Hamm Beach provided by Dorset Environmental Records (Edwards, 2021) notes the more open stands of MC8 and the few very small stands of SD19 support the moss Syntrichia ruralis var. ruraliformis which is typical of more calcareous sand dunes, with Hypnum cupressiforme var. lacunosum forming extensive patches in places. Most notable is the acrocarpous Pleurochaete squarrosa (NS) which is found as small scattered patches among the Syntrichia. Pleurochaete is a moss of open calcareous grassland and is currently known from two sites on Portland with around 15 scattered populations in Dorset in short chalk turf. In Britain it is mainly found in Southern England and the coasts of Wales with outlying populations north to Morecombe Bay. This information shows that lower plants are not a major component of the vegetation communities along Hamm Beach. Photos of these communities are provided in the shadow appropriate assessment. Ammonia and NOx critical levels are exceeded within 4m of carriageway but rapidly fall away. The modelling for ammonia supports the conclusion of the NERC199 report (Smithers et al, 2016)[6] which states. “Gaseous ammonia is thus unlikely to be a key issue, and effects on vegetation are more likely to arise from enhanced deposition of nitrogen to the soil environment. This elevation in soil nitrogen will be limited to areas within tens of metres of roads due to the high rates of deposition of this gas.” Critical levels for NOx and NH3 will be exceeded with or without the project as will background N deposition (if the 8kg/N/ha/yr. critical load is applied). If any exceedance of these critical levels are deemed significant it would mean developments on the Isle of Portland could not legally be consented.
14.28	SHRA – Chesil Beach and the Fleet SAC – effect of nitrogen deposition	Part C Ecology and Biodiversity Paragraph 3.21 The shadow appropriate assessment relates the effects of N deposition on Chesil Bach with its effects on sand dune vegetation on acid and calcareous substrate. There is no evidence that shingle communities respond to differing substrate in the same way as sand dunes.	The shadow appropriate assessment does not directly link shingle communities to sand dune vegetation. It just highlights the differences in Ellenberg scores for pH for plants found in acid dunes and those found on Chesil Beach suggesting that the plant communities of Chesil Beach are not indicative of strongly acid communities. The Ellenberg scores also suggest that many of the species that occur in the SD1 communities are typical of sites with above intermediate fertility. The further information on lower plants supplied by Dorset Environmental Records Centre (Edwards, 2021) would support this conclusion with mosses typical of calcareous dunes or grassland occurring along Hamm Beach.
14.29	SHRA – Chesil Beach and the Fleet SAC – impacts of ammonia on lower plant communities	Part C Ecology and Biodiversity Paragraph 3.22 The impact of ammonia deposition is of considerable concern, particularly in relation the lichen and bryophyte communities present on Chesil Beach. These lower plants are a significant feature of the Annex I vegetated shingle habitat on Chesil Beach. The Shadow Appropriate Assessment dismisses them as not occurring within the pioneer shingle vegetation it considers is a component of the Annex I habitat type (Perennial vegetation of stony banks). However, lichens and bryophytes are frequent in some of the maritime grassland communities present,	The revised AQ modelling submitted has addressed this. The ammonia levels set for the protection of higher plants are below the relevant critical level except within a few metres of the carriageway. The vegetation surveys undertaken by Crowther and Groome and Footprint Ecology have shown the MC5 grassland stands are located some distance from the A354, with the closest recorded stands over 90m from the A354. Rodwell notes that bryophytes occur at low frequencies throughout MC5 grasslands but in some sub-communities they and lichens may attain up to 20% cover.

[6] Smithers, R., Harris, R and Hitchcock, G. (2016) The ecological effects of air pollution from road transport: an updated review. Natural England Commission Report, Number 199. Natural England. Peterborough.

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		for example, Groom and Crowther (2005)7 found 13 species of lichen and bryophyte in samples of MC5 maritime grassland on Chesil Beach. The impacts of ammonia on lower plant communities of MC5 grassland are not considered.	Lower plants recorded from the closest area of MC5 grassland were: Hypnum lacunosum, Campylopus introflexus, Cladonia furcata, Cladonia foliacea and Peltigera cf canina. Campylopus introflexus is a pioneer species of bare peat, burning or ploughing for forestry. First recorded in 1941 it is now widespread across British Isles. Peltigera cf canina has a scattered distribution with a concentration of records in Hampshire and Dorset. It is widespread but local in turf on dunes and on gravelly and sandy soils inland. Additional information provided by Dorset Environmental Records Centre (Edwards, 2021) notes that Chesil Bank – the stabilised sandy-shingle area at Ferrybridge is well vegetated and dominated by Red Fescue Festuca rubra and Thrift Armeria maritima (MC8) with a much more diverse flora in the more open patches (MC5). The pleurocarpous moss Hypnum cupressiforme var. lacunosum is abundant and terricolous lichens are present locally particularly Cladonia rangiformis and Peltigera canina, with smaller quantities of Cladonia foliacea, C. furcata subsp. furcata, C. pyxidata and Peltigera hymenina. The uncommon Thelenella muscorum was found overgrowing the moss Ceratodon purpureus in 2009. None of these species are Red Listed or Nationally Scarce. The best areas of stabilised shingle are to the north of the area of search beyond the Tern colony enclosure. Photos are provided in the shadow appropriate assessment. The pebbles around Ferrybridge are generally poor for lichens due to disturbance and the lack of stability, with the common Xanthoria parietina the only species found with any frequency. Xanthoria parietina is widespread across all of England and Wales. It is extremely common and widespread and very pollution tolerant. Ammonia critical levels are exceeded within 4m of carriageway but rapidly fall away. The modelling for ammonia supports the conclusion of the NERC199 report (Smithers et al, 2016) which states. “Gaseous ammonia is thus unlikely to be a key issue, and effects on vegetation are more likely to arise from enhanced deposition of nitrogen to the soil environment. This elevation in soil nitrogen will be limited to areas within tens of metres of roads due to the high rates of deposition of this gas.”
14.30	SHRA – Chesil Beach and the Fleet SAC – impact of ammonia on a rare moth species	Part C Ecology and Biodiversity Paragraph 3.23 Increases in ammonia deposition threaten the habitat of the very rare moth Scythris scicella.	The micromoth Scythris siccella Least Owlet (S41) is only known in the UK from Hamm Beach where it is found in sparsely vegetated sandy habitats. The larvae feed on various herbaceous plants making a silken tube covered in sand grains down into the sand. Despite recent small-scale management and survey work there have been records of the moth in recent years, however it is too early to say whether the species is extinct or not. None of the species recorded are particularly rare or localised suggesting they are not particularly sensitive to changes in air quality. Ammonia critical levels are exceeded within 4m of carriageway but rapidly fall away. The modelling for ammonia supports the conclusion of the NERC199 report (Smithers et al, 2016) which states. “Gaseous ammonia is thus unlikely to be a key issue, and effects on vegetation are more likely to arise from enhanced deposition of nitrogen to the soil environment. This elevation in soil nitrogen will be limited to areas within tens of metres of roads due to the high rates of deposition of this gas.”
14.31	Chesil and the Fleet SPA and Ramsar – air quality effect on widgeon	Part C Ecology and Biodiversity Paragraph 3.25 and 3.26 The intertidal areas of The Fleet are important for wintering flocks of wigeon. These ducks feed on the seagrass beds that are exposed at low tide. There is evidence	Reference is made to relevant critical levels and loads. APIS provides a N critical load range of 20-30kg/N/ha/yr. for littoral sediment. APIS shows that current levels of N and acid deposition for habitats are below minimum critical loads.

[7] Groom, G. and Crowther, K.C. (2005) National Vegetation Classification Survey of Annex 1 and listed habitats at Chesil and The Fleet SAC, Dorset.

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		that the extent of these seagrass beds has declined in recent years. The SPA and Ramsar site conservation objectives require that air pollution levels are maintained below critical loads and levels. The proposal may have an impact on sea grass beds affecting wigeon.	EMODNet[8] shows the extent of sea grass beds across the Fleet and clearly demonstrates that there is no seagrass present within 200m of the A354. (accessed 10/5/21).
14.32	ES - On-site ecology – value of open mosaic habitat	Paragraph 4.52 Part C Ecology and Biodiversity Paragraph 4.7 The Environmental Statement has ignored the value of open mosaic habitat within the proposed development site. This is a Priority habitat referred to in Section 41 of the NERC Act (2006) as a habitat of principal importance for the purpose of conserving biodiversity. The destruction of this habitat should be minimised and if possible avoided. The Applicant has failed to provide sufficient compensation to not only offset the loss of this habitat, but also to provide a net increase in biodiversity value.	The UK habitats classification of open mosaic habitat is very general and here applies to limited areas of short perennial, ephemeral and coastal grassland habitats, formed recently on a brownfield site. The value of this habitat type here is low in the context of its limited distribution and short timespan of establishment. There is significant provision of open mosaic habitat included in the proposed Biodiversity Plan and also significant off-site financial provision for local schemes relevant to the habitats present on site. This has all been agreed through consultation with Dorset Natural Environment Team (DNET).
14.33	ES - On-site ecology – description of habitat types and areas	Part C Ecology and Biodiversity Paragraphs 4.1 and 4.2 The ES describes the development site as being composed of three habitat types; Colonised hard-standing, Improved grassland and Scrub. It concludes that all three of these habitats are of Local/Low value. This description contradicts the vegetation and habitat description provided in Appendix K and paragraph 10.153 of the ES. Appendix K states that the development of the ERF would result in the loss of 0.5 hectares of open mosaic habitat together with areas of Scrub and Ephemeral/Short perennial vegetation. It makes no mention of Improved grassland. Chapter 10 of the ES (Natural Heritage) states that the development will result in the loss of 0.87ha of calcareous mosaic habitat.	The original assessment was undertaken using phase 1 classifications. The Defra metric uses UK Habs to attribute values to habitats. The definition of mosaic type habitats in simple terms is a combination of habitat types forming a contiguous area. This can include any habitat type, such as those listed. Definitions are likely to vary due to the differences in assessment types for habitat descriptions and then assessment through the BNG metric.
14.34	ES - On-site ecology – weight to be applied to open mosaic habitat	Part C Ecology and Biodiversity Paragraph 4.3 The presence of open mosaic habitat within this site is a significant feature as this is a Priority Habitat type as identified by Section 41 of the NERC Act (2006)9. The presence of Priority habitat types such as this must be given particular weight in planning decisions.	DNET have approved the Biodiversity Plan that provides significant areas of this habitat type on the site post development in perpetuity
14.35	ES - On-site ecology – value of open mosaic habitat in respect to breeding bird and invertebrate survey	Paragraph 4.53 Part C Ecology and Biodiversity Paragraph 4.4 The presence of open mosaic habitat on this site is further supported by the results of bird and invertebrate surveys. This habitat type is known to be particularly rich in invertebrates. This has been supported by the results of invertebrate surveys undertaken as part of the ES and reported in Appendix K part 3 of the ES. The bird surveys also found a significant population of Black Redstart, another species typically found in open mosaic habitats. The proper assessment of impacts on the open mosaic habitat and the requirement for compensation for its loss can only be undertaken on the basis of full ecological survey. The levels of breeding bird and invertebrate survey submitted with the application are inadequate to permit such an assessment.	The breeding bird habitat within the footprint of the proposed works is of negligible value due to a lack of vegetation and constant disturbance. The invertebrate survey effort was confirmed as suitable by the Dorset Natural Environment Team.

[8] https://www.emodnet-seabedhabitats.eu/access-data/launch-map-viewer/?activeFilters=&zoom=13&center=-2.553,50.614&layerIds=502&baseLayerId=-3&activeFilters=

[9] https://data.jncc.gov.uk/data/a81bf2a7-b637-4497-a8be-03bd50d4290d/UKBAP-BAPHabitats-40-OMH- 2010.pdf

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14.36	ES - On-site ecology – loss of priority habitat type and need to achieve biodiversity net gain	Part C Ecology and Biodiversity Paragraph 4.5 The destruction of 0.87 hectares of a Priority Habitat type represents a significant loss of biodiversity value on this site. The Environment Bill10, currently in Parliament, will require that development should result in at least a 10% Biodiversity Net Gain. This will be calculated by reference to the Defra Biodiversity Metric. Open Mosaic Habitat is considered a habitat of 'high' biodiversity value in the Metric, of equivalent value to Calcareous Grassland. Its loss and destruction should not be permitted unless sufficient compensatory habitat is provided, not only to offset the loss of this habitat, but also to provide a net increase in biodiversity value.	A detailed Biodiversity Plan for the site has been agreed in conjunction with Dorset Natural Environment Team. This includes significant relevant on-site provisions and financial contributions to relevant local off-site projects.
14.37	ES - On-site ecology – provision of sufficient habitat compensation	Paragraph 4.54 Part C Ecology and Biodiversity Paragraph 4.6 The current proposals for the development of the ERF will result in a significant net loss of biodiversity within the application site. The current mitigation proposals provide for the creation of 0.062 ha of mosaic habitat (ES Chapter 10, Table 10.9) to offset the loss of 0.87 ha of this habitat. This represents a significant decline in the biodiversity value. Substantially more habitat compensation and biodiversity gain should be provided as part of this proposed development.	A detailed Biodiversity Plan for the site was agreed in conjunction with Dorset Natural Environment Team. This includes significant relevant on-site provisions and financial contributions to relevant local off-site projects Whilst there is an overall loss of habitat area, the Biodiversity Plan enhancement proposals will provide habitats of a significantly better quality than those currently present in perpetuity, which cannot be impacted by the daily port activities.
14.38	ES - On-site ecology – biodiversity value, avoiding habitat loss, habitat compensation and biodiversity net gain.	Part C Ecology and Biodiversity Paragraph 4.7 The ES fails to recognise the current biodiversity value of habitat within the proposed development. It also fails to demonstrate how the proposals have sought to avoid or minimise habitat destruction and fail to provide sufficient compensation to offset the loss of this. Furthermore, the proposals have failed to provide any biodiversity net gain, as required by the Environment Bill (2020).	As of July 2021, the new Environment Bill has not been passed through parliament. There are therefore also no statutory requirements to provide a biodiversity net gain of 10% as specified in the bill. The policy for achieving biodiversity enhancements in Dorset, is specified through Dorset Council Natural Environment Team (DNET) Biodiversity Appraisal Protocol (BAP). This requires a Biodiversity Plan (BP) to be produced, which provides detailed mitigation and enhancement strategies for the site. Unless this BP is approved by DNET, with a certificate of approval provided, an application cannot progress. Lindsay Carrington Ecological Services have worked closely with DNET on the Dorset BAP since its inception. DNET have been consulted at every stage of this applications progress, from initial design through to final proposals. The biodiversity enhancement measures included in the site BP are focussed on mitigation for the loss of on-site habitats and ensuring an overall net gain, with site and local-specific ecology in mind. This includes mosaic type habitats, black redstart and coastal type vegetation communities. The BP was approved by DNET as part of this application.
14.39	ES - Bird survey - populations of importance to the Chesil and The Fleet SPA and Ramsar site.	Part C Ecology and Biodiversity Paragraph 4.8 The ES provides a substantial amount of information on wintering birds present in the vicinity of the proposed development. Bird counts are presented for the period October to March 2019. The results of these surveys do not indicate the presence of species populations of importance to the Chesil and The Fleet SPA and Ramsar site.	No qualifying bird species in relation to the nearby SPA sites were recorded during winter bird surveys.
14.40	ES - Bird survey – Presence of Black Redstart and survey methodology	Part C Ecology and Biodiversity Paragraphs 4.9 to 4.12 Black Redstarts were recorded on the development site throughout the winter and into March. The winter bird survey, reported in Appendix K of the ES suggests that they may have also bred on this site, with a singing male heard in March. The ES Chapter contradicts this view and specifically states that these birds were not thought to have bred on the site. This conclusion may have been reached as a	Whilst potential evidence of breeding black redstart was recorded within the boundary of the proposed development area, there is no suitable breeding habitat for black redstart within this boundary. Black redstart nest sites are typically within structures, or on external ledges of structures. No features of this type are within the areas of habitats to be lost. Suitable nesting sites for black redstart are included within the biodiversity enhancement proposals for the site.

[10] https://www.gov.uk/government/publications/environment-bill-2020

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		result of the breeding bird survey undertaken in the summer of 2020. This was based on two survey visits in June and July. Breeding bird surveys undertaken this late in the summer are unlikely to record the full diversity of breeding birds. Two survey visits is too few to record rare and often elusive species such as Black Redstart. Good Practice advice for survey of breeding Black Redstart is provided on by blackredstarts.org.uk. They state: "The following survey criteria has been drawn up by the BLACK REDSTART Action Plan Working Group for London and are recommended by the lead conservation agencies in London. • In principle a known breeding site or likely breeding site should be surveyed throughout the breeding season; from May to August. • At least one visit a week of 3hrs should be undertaken under favourable weather conditions (warm, windless days) in the early hours of the morning. Black redstarts are notorious for singing an hour before dawn and the visits should be timed to begin 1 hour before dawn. • During 3rd and 4th week of May further visits should be undertaken during the day to locate nesting sites." Given the lack of survey effort, it is not surprising that no evidence of breeding Black Redstart was found at the proposed development site.	
14.41	ES - Bird survey – Black Redstart assessment and conservation	Part C Ecology and Biodiversity Paragraph 4.13 Whereas a population of wintering and breeding Black Redstarts could be integrated into the proposed development, it is important that their presence is fully assessed in the Environmental Statement both in their own right and as a component of the Open Mosaic Habitat in which they live. Retaining and enhancing this population of rare birds should be fundamental to the development, as required by planning and nature conservation policy. This will require a full commitment to incorporate their conservation into the future of the development.	Black redstart were considered within the proposals. There will be extensive foraging habitat provided for the species through the BP, in addition to the extensive foreshore habitat already present. Furthermore, new nesting sites for the species are also to be included as part of the proposals.
14.42	ES - On-site ecology – presence of important bat species	Part C Ecology and Biodiversity Paragraph 5.1 The ES provides little information on the use of the proposed development site by bats. It is accepted that there are no bat roosts on the site, however, the cliffs and caves of the Dorset coast provide important roosts for rare bats, most particularly the Greater Horseshoe Bat, a species listed on Annex II of the EU Habitats Directive for which the nearby St Albans Head to Durlston Head Cliffs SAC has been designated. The ES states that Portland is known to have a relative paucity of bats, although provides no evidence to support this assertion.	The "nearby" sites for greater horseshoe bats referred to are approximately 30km north east over the sea in the Purbecks and are winter hibernation sites for this species. There are no open caves or tunnels within the scope of the proposed ERF site and a lack of suitable foraging habitat for this species within it. The desktop search returned very few records of bats within 2km of the site. The proposals will be very low impact for bats, due to an overall reduction in light levels on existing bat foraging habitats and through the creation of extensive new foraging habitats for this group of species. DNET approved the bat section within the BP for the site.
14.43	ES - On-site ecology – nocturnal bat surveys	Paragraph 4.55 Part C Ecology and Biodiversity Paragraph 5.2 and 5.3 The ES considers the habitat within the site unsuitable for bats although concedes that the south west fringe of the site could provide an attractive foraging and commuting route for bats. However, it considers the 'likelihood' of constant nocturnal lighting would deter bat use. The ES further states that nocturnal bat surveys were 'deemed unnecessary'. It is not clear how or why it reaches this conclusion. The lack of any nocturnal bat survey for the site is considered a significant short-fall in the provision of baseline ecological information.	The habitats within the proposed works area are of low value to foraging and commuting bats. The exposed nature of the site further degrades its suitability. The site has only been colonized by vegetation recently and would have historically been of very low value to bats. The data search did not return any significant nearby records for bat species. The undercliff does provide suitable foraging and commuting habitat, however it is currently well lit at night. The proposed renewed lighting scheme for the site will lower existing light levels on the undercliff and therefore improve its suitability for foraging and commuting bats.

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		It must be concluded that further survey is required to demonstrate the true value of the proposed development for bats. The conclusions in relation to bats cannot be relied upon in the absence of such information.	
14.44	ES - On-site ecology – presence of invertebrates and importance of the habitat	Part C Ecology and Biodiversity Paragraph 6.1 The invertebrates survey of the site was confined to a short survey period in the summer of 2020 (ES Appendix K part 3). Despite the short survey window, the survey recorded four nationally scarce species and 35 locally distributed species. Although not reaching SSSI qualifying levels, the report confirms the importance of the site for the priority Open Mosaic habitat.	Whilst the site did support nationally scarce and locally distributed invertebrate species, the low extent of suitable habitats for those species within the site boundary does not make the site significant at a local scale.
14.45	ES - On-site ecology – invertebrates survey	Part C Ecology and Biodiversity Paragraph 6.2 The level of survey undertaken is insufficient to fully characterise the value of the site for invertebrates. Further survey across the invertebrate recording season is very likely to reveal the presence of many more important species and further confirm the value of the habitat for invertebrate species. This is important in understanding the condition of the habitat within the development site and hence the quantum of compensation required to offset its loss.	DNET were satisfied that invertebrate surveys at the site were undertaken with appropriate frequency and scope to approve the Biodiversity Plan for the proposals. The proposed mitigation and enhancement habitats will provide a higher extent of suitable habitat for invertebrates, including those identified during the surveys in perpetuity.
14.46	ES - Off-site ecology – invertebrates and impact on Silver studded blue butterfly	Part C Ecology and Biodiversity Paragraph 6.3 The impact of the development on invertebrate habitats outside of the development site is also considered in the ES Chapter 10. This confirms the importance of the SSSI habitat for invertebrates in particular the Silver studded blue butterfly. Portland is important for its population of this butterfly where it occurs in atypical calcareous grassland habitat, in contrast to its more common heathland habitat. The calcareous grassland form of Silver studded blue uses different larval food-plants to its heathland form. This is not appreciated in the ES which mistakenly states that its food plant is heather (para 10.90). The larval food plant of the calcareous form of Silver studded blue includes a variety of vetch species including Bird's foot trefoil, a species that appears to be widespread on the development site.	Silver studded blue is not present in the SSSI area on the undercliff above the proposed development site, as confirmed by the DERC Isle of Portland SSSI interest features document. Limestone grassland is very sparse above the SSSI site due to the habitat being almost entirely encroached by scrub. The proposed enhancement habitats will include larval food plants for silver studded blue, which may allow them to colonise the site in the future. In addition to this, off-site payments will contribute to scrub clearance works on the undercliff, which will increase the availability of habitat for this species within the SSSI.
	SPWI		
14.47	Impact on the marine environment, protected areas and human health	Preserving the quality of the marine environment is critical in order to ensure the shellfish and other varieties of fish harvested from Portland Harbour and the nearby areas are fit for human consumption. In addition, the interdependency between the marine life inhabiting the waters and the conservancy of the marine environment is essential. Much of the sea around and to the south of Portland is protected as part of the *Studland to Portland Marine Protected Area (MPA).* The site has been made an MPA to protect reef habitats in the waters around the island, which are regarded as being of excellent quality and supporting a high number of plant and animal species. The *Studland to Portland SAC* covers a lot of the area and wraps around much of Portland. There is also the *South of Portland Marine Conservation Zone* off Portland Bill, as well as the *Chesil Beach and Stennis Ledges Marine Conservation Zone* in the Lyme Bay area. Concern is raised over the potential impact of pollution from the facility in respect to the following: • Oyster beds and a range of other shellfish species in the marine environment	The potential impacts of the proposed ERF on the marine environment have been assessed by specialist marine consultancy ABPmer, and their report is submitted to Dorset Council as further environmental information under Regulation 25 of the EIA Regulations. The report has considered potential impact on the marine environment from emissions to air. Its principal conclusion is that 'The assessment demonstrates that emissions from the development during both construction and operation, do not exceed relevant AQALs for the protection of human health, and generally emissions do not exceed critical levels or critical loads from ecologically important pollutants such as NO_x, SO_2, and ammonia air quality standards either alone or in combination with other plans or projects. The critical levels and critical loads are precautionary and have been designed to provide high levels of protection to ecological features including those features protected within designated nature conservation sites'. Also in respect to potential marine impact from emissions to air: • The contribution to ocean acidification as a result of emissions (SO_2 and CO_2) from the ERF is assessed as negligible • On the basis of the relative concentrations of nitrogen (NO_x and ammonia) in marine waters (which is of many orders of magnitude greater than any process emissions from the ERF) it is inconceivable that the small process contribution from the ERF will

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		• The impact of carbon dioxide emissions (and associated acidity) and particulates on marine ecology • The economic impact on people who depend on the marine environment for their living • The release of pollutants, such as heavy metals and persistent organic pollutants from the burning of plastics via emissions and ash • Potential for an increased amount of mercury and impact on fishermen • Areas of important seagrass	materially contribute to nutrient concentrations in adjacent marine waters and thus will contribute negligibly to any eutrophication. There is thus no risk to marine features such as seagrass that would potentially be sensitive to increases in dissolved nitrogen. • There is no risk to the seagrass feature associated with the Chesil Beach and the Fleet SAC, SPA and Ramsar sites, nor is there any risk to features such as Mute Swan or Little Tern that are, to some extent, dependent on seagrass habitat. Similarly, there are no significant risks to features associated with the Portland to Studland Cliffs SAC or to local Marine Conservation Zones (Purbeck Coast, South Dorset, South of Portland and Chesil Beach and Stennis Ledges). • The air quality assessment presented in the ES has demonstrated that concentrations of mercury at ground level will not exceed relevant AQALs for the protection of human health. • There are no significant risks to any of the local designated sites or to shellfish or fish populations associated with mercury emissions either in terms of risk to marine water quality standards or as a result of sediment contamination. Nor are there risks associated with human consumption of local fish or shellfish. • The air quality assessment presented in the ES has demonstrated that concentrations of dioxins at ground level will not exceed relevant AQALs for the protection of human health • There are no significant risks to any of the local designated sites or to shellfish or fish populations associated with dioxin emissions as a result of sediment contamination. Nor are there risks associated with human consumption of local fish or shellfish. Consequently, there should be no rational basis to anticipate a negative impact on fish and shellfish related businesses and employment. There are example of other edge of water locations which host similar energy from waste facilities to the proposed ERF (including for example a much larger EfW plant at Copenhagen Harbour where fishing is an active pursuit.) Also in respect to potential marine impact from emissions to water: • There are no planned process effluent or foul water discharges direct to the marine environment during operation of the ERF. All such discharges will be made to sewer. These will be treated at Weymouth wastewater treatment works (WWTW) and discharged to the sea one kilometre offshore, west of Portland Harbour. The process and foul water effluent from the ERF will be a minor component of the overall discharge from the WWTW. On this basis there will be no significant risks to the marine environment or to any local designated sites from process effluent or foul water discharges from the plant. Nor will there be risks to people associated with sea bathing. • The handling of IBA will be subject to conditions in the Environmental Permit issued by Environment Agency governing the operation of the ERF. This will ensure that risks to the environment, including the marine environment are adequately managed. Any mitigation and monitoring requirements will be incorporated within the site's Environmental Management System. This will ensure that risks to any local designated sites or the wider marine environment associated with spillages or leakages of IBA can be effectively managed. On this basis, taking account of the mitigation measures that will be applied, the risks to the marine environment from this pathway are assessed as insignificant. Overall, the ABPmer report considers that the concerns raised in this comment are unfounded and that the proposed ERF would not have any significant effects (in respect to potential emissions to the air or water) on the marine environment, protected areas or associated human health.

15. Traffic and transport

Other consultees

Item	Topic	Summary of consultation comment	Applicant response
	Adams Hendry (on behalf of SPWI)		
15.1	Movements during scheduled shut-down and waste storage	Paragraph 4.57 It is noted in paragraph 11.17 of the ES that the ERF would only operate for approximately 11 months with scheduled periods of shut-down and that these periods of non-operational time were not included in the trip generation calculations to provide a robust assessment. In order for the conclusions of the assessment to be robust, confirmation is required that there would be no vehicle movements during these periods of shut-down and that the site would not simply stock-pile waste during this time pending the facility resuming operations	Annual shut down periods are programmed to allow for periods of annual maintenance. The size of the fuel store allows for management of fuel flows in the ERF which will accommodate fluctuations in supply and stock piling during shut down periods. Vehicle movements will occur during periods of shut down and may include some stocking of RDF as well as contractors vehicles undertaking maintenance. During periods of shut down there would be no ash removal which accounts for 20 vehicles of the 80 anticipated movements a day (on the basis of the Transport Assessment under which, conservatively, it is assumed that all RDF supply and ash removal occurs by road) and so overall during shut down periods there is anticipated to be fewer vehicle movements than when the plant is operational.
15.2	Scale and extent of the assessment	Paragraph 4.58 Given that the route to the site passes a Conservation Area, considered in the Institute for Environmental Assessment's Guidelines for the Environmental Assessment of Road Traffic as a sensitive area, the scale and extent of the assessment should include those areas where traffic flows increase by 10% or more.	Traffic flow increases are considered in Ch11 of the Environmental Statement which has been undertaken in general accordance with the IEMA Guidelines for the Environmental Assessment of Road Traffic and National Planning Practice Guidance. That assessment concludes that the impact is minimal with the 80 forecast traffic movements a day equating to an increase of approx. 0.4% on Portland Beach Road. All links where increases are over 10% have been assessed within the EIA.
15.3	Baseline traffic flows – use of 2017 and 2019 data	Paragraph 4.59 The information presented on baseline flows in ES Table 11.3 appears to include data collected in both 2017 and 2019. It is not clear whether the data presented is an average of the baseline flows for the two years or whether some links used 2017 and others 2019. Further explanation is required. Where 2017 data has been used in particular, confirmation is required that there have been no material changes in traffic flows as a result of new development in the intervening period.	Paragraph 11.1 of the Environmental Statement points readers towards the Transport Assessment (TA) for further information on the derivation of traffic flows. Paragraphs 3.21 – 3.36 of the Transport Assessment set out in detail the methodology used to derive baseline traffic flows. The usual traffic growth factors from TEMPro were applied to 2017 data, as outlined in the Transport Assessment, and those growth rates include planned development traffic. In addition the appraisal included cumulative traffic from a series of local developments including everything promoted for development within the Port, much of which has yet to be implemented.
15.4	Baseline flows – annual average daily traffic and total daily traffic figures	Paragraph 4.60 The baseline flows reported in the Transport Assessment (TA) included at Appendix L1 of the ES are inconsistent with those included at Table 11.3 in respect of Link ref 6 (A354 Weymouth Way south of Granby roundabout). It is not clear how the annual average daily traffic (AADT) figures in the ES (Table 11.3) have been calculated or how they relate to the total daily traffic movements quoted in the TA.	It is noted that a transcription error occurred in table 11.3. This has been corrected and does not change the conclusion of the Transport Assessment. A revised table 11.3a rectifying this transcription error is submitted within the Regulation 25 ES addendum document.
15.5	Future baseline flows - justification	Paragraph 4.61 Future baseline flows at 2023 are included at ES Table 11.4 for all vehicles and Table 11.5 for HGVs. It is surprising to note that in the space of four years, the AADT figures for all links are assessed as increased significantly (see table below). For example, in Table 11.3 outbound AADT at Castletown (at port access) (Link Ref 1) has increased by 89% from 333 at the baseline (either 2017 or 2019) to	The large increases in traffic are due to the development already permitted to be able to take place in the Port and are explained in detail in the Transport Assessment paragraphs 6.37-6.40 and Tables 6.8 & 6.9. The future year traffic flows have therefore been correctly derived and take account of the increases in traffic flow due to committed development, notably at Portland Port, in the future baseline. The effects of committed development are fully considered in the Transport Assessment.

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		2,927 by 2023. A similar increase in inbound AADT is also predicted from 333 to 3,877 or 90%. No explanation is provided to justify such an increase, suggesting an error in the reporting of baseline flows.	
15.6	Annual average daily traffic 2023 to 2033	Paragraph 4.62 In contrast to the massive changes in AADT flows in the four years between 2019 and 2023, the change in AADT over the 10 years 2023 to 2033 is much less significant, with flows on most links decreasing (see Table 2 below). The greatest change is on outbound AADT on link 4, A354 Buxton Road (Boot Hill) which sees a 28% increase in flows, all the other flows show a less than 20% change (in most cases, significantly less than 20%). Link Ref 1 sees a 5% reduction in outbound flows between 2023 and 2023 and a 6% increase in inbound flows.	The long term future growth of traffic to 2033 takes into account general background traffic growth since the impacts of both the proposed development and the committed development in the Port and on the Island are considered in the impact assessment to 2023. It is likely that some of the modelled Port development will occur in the period 2023 – 2033 so spreading the traffic impacts over a longer period and reducing the year on year impacts.
15.7	HGV baseline flows	Paragraph 4.63 Whilst future HGV baseline flows are included in the ES (Tables 11.5 and 11.7), no information is included on current baseline flows and therefore it is not possible to determine whether the estimate of future baseline flows is reasonable.	Whilst it is correct that the baseline HGV data was not shown in the reporting, the data itself is included within Appendix B of the Transport Assessment. This indicates the existing HGV flows and % HGV and for site 307 Portland Beach Road shows a 2 way 24hr HGV percentage as 11.2%.
15.8	Baseline flow reporting and assessment conclusion	Paragraph 4.64 On the assumption that baseline flows have been reported incorrectly, it follows that the assessment of traffic impact with the proposed ERF will be incorrect and should not therefore be relied upon.	As outlined in response to earlier points the baseline flows used are reliable and taken from council counts with logical assumptions made to bring data to a common baseline. Dorset Council highways officers will review the calculations and conclude whether or not the assessment of traffic impacts has been undertaken correctly and make recommendations as appropriate.
	Ramblers		
15.9	England Coast Path – impact on traffic	We note that the Stop Portland Waste Incinerator Campaign estimates that there could be an increase in articulated lorry movements of 200% at Castletown. This is the point at which England Coast Path users must cross the road. It is unacceptable for users of a nationally important path to have to contend with such traffic movements.	The additional anticipated lorry movements amount to only around 80 per day as set out in the submitted Transport Assessment. The high increases in traffic quoted are due to potential traffic generation from already permitted development at the Port which may occur in the future. The path crossing the road at Castletown has dropped kerbs and an island which will aid pedestrians crossing on the path but the proposed ERF will cause only one vehicle every 15 minutes to pass the location of the route of any ramblers, which is considered to be a normal level of interaction with traffic and significantly less than that experienced on Portland Beach Road. It is therefore considered that Ramblers would not need to “contend” with the proposed vehicle movements and be able to follow their route in a safe manner.

16. World Heritage Site

Statutory consultees

Item	Topic	Summary of consultation comment	Applicant response
	Jurassic Coast Trust		
16.1	Visual impact – visible plume and introduction of industrial element to the setting of the WHS.	The overall impact of an operational ERF is not restricted to the presence of the building within the landscape. In spite of the sincere efforts to reduce its visual impacts, there is no escaping that it is a very large industrial building, beyond the scale of what is already at the port. For example, the lighting necessary for a facility of this size, particularly on the stack, means there will inevitably be a change to the balance in how the views out of the WHS are perceived to be of an industrial or natural coastline. Of more significant concern is the potential impact of a visible plume. The LVIA describes a visible plume as having minor effects for a limited time. I would not dispute the limited time element, but it is hard to accept a visible plume as having minor effects, considering that there are no other industrial facilities of this type or scale along the WHS. It would be helpful if the visual impacts of a visible plume were modelled in more detail using existing viewpoints with perhaps additions from the top of Portland itself. This would help greatly in understanding more fully the operational reality of the ERF. In summary, the application deals with impacts on the WHS fairly, with the exception of a detailed model for the visual impacts of a visible plume. My concern is whether or not an industrial development of this scale is appropriate within the setting of the WHS. The impacts of the structure itself on setting are not considered significant, but I question whether this reflects the ways in which an operational ERF might change how people perceive its surroundings as a natural or industrialised landscape	The Jurassic Coast trust response finds that the submitted EIA "deals with impacts on the WHS fairly". Chapter 13 of the ES concerning the WHS, which was based on the conclusions of chapter 7 cultural heritage and chapter 8 landscape, seascape and visual effects, concluded that the proposed development would result in a moderate adverse effect on the OUV of the WHS. The response to the concerns raised in relation to the visibility of the plume is given in the table relating to landscape, seascape and visual effects (table 13). This outlines the additional material and visualisations provided in relation to the appearance of the plume and the night-time effects. The ES Addendum chapter 8 concludes that there will be no change to the significance of effects as originally assessed and as incorporated into the WHS assessment in chapter 13.

Other consultees

Item	Topic	Summary of consultation comment	Applicant response
	The Portland Association		
16.2	World Heritage Site - Incorrect mapping of designations and the WHS	The map produced for 'Fig 9.8 Designations' is not only incorrect, but also misleading. …The mapping of the WHS is also incorrect, the area of WHS from near Smallmouth beach all the way along to Nothe Castle and Weymouth Stone Pier has been omitted from the map in two key visually effected areas, namely Sandsfoot Castle and Nothe Fort.	The WHS boundary shown on figure 9.8 uses the data from Historic England, which shows the correct inscribed area. The section of the WHS between Smallmouth beach and Nothe Fort is shown on the map; the designation at this point consists of a very narrow band along the coast so may not be clearly visible on the map showing the full list of relevant designations. The data is also shown on figure 13.1 in chapter 13 of the submitted ES, for the same 10km radius study area, on which the full extent of the WHS can be seen.
16.3	World Heritage Site - Omission of viewpoints from other areas of the WHS	Although Sandsfoot Castle and Nothe Fort are at least listed as viewpoints, other key areas from this part of the WHS have been omitted, for example the elements omitted from within the Portland Harbour Shore WHS stretch including Rodwell Trail, Castle Cove and Newtons Cove, all popular areas for both residents and tourists and that all enjoy glorious views of the Isle of Portland. Having ignored the WHS/Dorset Heritage Coastline at the closest viewpoints to the proposed site, PfP uses viewpoints much further afield to represent the visual effects from the West Dorset Heritage Coastline and the Dorset and East Devon Coast UNESCO World Heritage Site (VPs 1, 5, 7, 11, 12, and 14). These have	This comment, and subsequent ones, appear to conflate the two separate designations of the West Dorset Heritage Coastline and the Dorset and East Devon Coast WHS. The visual receptors, methodology and viewpoints and photomontages/photowire locations were agreed with Dorset Council and the AONB Partnership. The photomontage / photowire locations were also discussed with the Jurassic Coast Trust in August 2020. The objection queries why the assessment separates the West Dorset Heritage Coastline from the Dorset and East Devon Coast UNESCO WHS despite the fact that they are the same area. This is incorrect. They are two separate areas sometime overlapping. Figure 9.8 illustrates the West Dorset Heritage Coastline as a blue diagonal hatch which extends out into the sea and

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		been rather bizarrely treated as two different study areas, despite the fact that they are the same area, as can be seen by the fact the VPs 7, 11, 12 and 14 are covered in both studies, the only viewpoints not in both, are VPs 1 & 5, yet all of these VPs are part of the same WHS designation. Once again PfP images are taken in a poor light making it impossible to get a true visualisation. As the WHS site study concentrates on only those VPs at the furthest point of the 10km zone, ignoring the closer WHS sites at VP 9 and 10, the WHS is written off as the incinerator "will cause a very minor alteration to the composition of these distant views from the heritage coast, altering a negligible proportion of the field of view", therefore PfP rank the degree of effect as "slight and not significant". Not only is the closest section of WHS omitted, so too is all of the WHS to the west of Portland, which includes the Chesil Beach and The Fleet up to Abbotsbury and beyond. PfP only touch on this area to a very slight degree under their ANOB study, but again there are no VPs in the west.	the Dorset and East Devon Coast UNESCO WHS as a horizontal blue hatch. Each of these areas is assessed in paragraphs 9.142 and 9.143. The photographs have been taken on a number of different days in different meteorological conditions. Each photograph has a date and time and as can be seen in viewpoint 5 (fig 9.22) the photo was taken on the 16 March 2020 on a sunny day compared to viewpoint 8 (fig 9.25) taken on the 18 March 2020 taken in cloudy conditions. These are representative of different weather conditions at Portland. The viewpoints themselves are not assessed as it is the experience of the receptors to the whole of these areas that are assessed. The views are only used as representative examples. Each of these areas is assessed in paragraphs 9.142 and 9.143. The table at paragraph 9.143 describes the geographical extent of views from the WHS as "The visual effects at completion will be localised, with the ERF visible from a number of locations along the Jurassic Coastline, including areas between Weymouth and east beyond the 10 km study area. There will be closer views along the Chesil spit between Weymouth and Portland and parts of the South West Coast Path. The ERF will not be central to the focus of views." The magnitude of change is assessed taking into account a combination of the size/scale, geographical extent, duration and reversibility. The magnitude of visual effects on the experience of receptors visiting the WHS are assessed as negligible adverse and therefore the significance of visual effects are slight and not significant. Abbotsbury is approximately 18km from the application site and therefore 8km beyond the study area. The intention of an ES is to determine the significant residual effects after mitigation. Given the distance the visual effects from Abbotsbury are considered to be not significant and therefore it would not be appropriate to include them within the ES.
16.4	UNESCO – Jurassic Heritage Coast experiential setting	*Guidance from UNESCO describes the need to protect an area around the World Heritage Site, generally referred to as its setting*. In an applied sense, the setting of the Jurassic Coast provides the functional and experiential context for the Site's attributes and should therefore be sensitively managed as part of the protection of OUV. WHS Experiential setting: The setting should be regarded as the surrounding landscape and seascape, and concerns the quality of the cultural and sensory experience surrounding the exposed coasts and beaches. Building a massive plant 201m long by 51m (max) wide by 47m (max high) which is 6m higher than Portland Bill Lighthouse, together with an 80m stack breaking the skyline that from the N/NW direction will be viewed against a backdrop of the sky together with a plume potentially 280m long, will impact upon the experiential setting of the Portland Harbour Shore as well as the Chesil, Fleet and Portland Coast stretches of the WHS.	The relevant UNESCO guidance (Operational Guidelines for the Implementation of the World Heritage Convention, 2019), and material from the Jurassic Coast Partnership Plan 2020-2025; Management Framework for the Dorset and East Devon Coast World Heritage Site is outlined in chapter 13 of the submitted ES which provides an assessment of effects on the experiential setting of the WHS. That chapter concludes that the proposed development would result in a moderate adverse effect on the OUV of the WHS. The Jurassic Coast Trust response finds that the submitted EIA "deals with impacts on the WHS fairly".
16.5	World Heritage Site viewpoints	PfP downplay the value of Sandsfoot Castle, Park and Gardens, and do not mention it is within the Jurassic Heritage Coast. PfP admit the views at VP9 have historical importance as a scheduled monument and Grade II* listed building, ranking the value of the visual receptor as high to medium, but then underestimate the value of the view to visitors, claiming 'receptors' have a moderate interest in the views. PfP's justification for this claim is that the attention of visitors to the castle, park and garden is likely to be on the surrounding landscape, which is of relative importance to the setting of Sandsfoot Castle. PfP underestimate the importance of the view across Portland Harbour to the Isle of Portland, as being an integral and important part of that surrounding landscape. UNESCO states that "the health benefits of spending time in natural environments and near 'blue	The assessment of the receptors visiting Sandsfoot Castle describes that the sensitivity of the visual receptors are high to medium. The LVIA acknowledges that the ERF will break the skyline and will be viewed against the backdrop of the sky, however it will be seen within the context of tall structures within the port, including cranes, ship funnels, lighting columns and radar equipment. The building will form a new visible element to the port and will alter the horizon; however, it is a similar height to the largest ships that berth at the port and does not detract from the height of the Isle of Portland and The Verne, which tower above it.

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		spaces' (the sea) are becoming increasingly clear. Encouraging people to explore the beauty and diversity of the Jurassic Coast offers tremendous opportunities to promote active and healthy lifestyles." Building a massive waste incinerator within this surrounding landscape cannot be considered to be conducive to these values. From Sandsfoot Castle, the waste incinerator will break the skyline and will be viewed against a backdrop of the sky so will stand out as an alien silhouette against the skyline and as such also does not comply with the DC Dorset Landscape Character Type overall management objective to maintain the integrity of the skyline. PfP incorrectly claim this mass will only partially alter the composition of the views, and will form a new visible element to the port, that will alter the horizon but will not detract from the height of the Isle of Portland and The Verne. This is a nonsense, as both with or without the plume, it's size will become the focal point, taking the eye away from Portland Castle a Grade I listed heritage site. The view, is part of the reason people visit this area, to take pictures of the views towards Portland, and is photographed time and time again, however with an incinerator in the middle of it all, this will detract from the view and visitors enjoyment of it. PfP suggests the proposed low illumination levels for the incinerator expects that any obtrusive light in the direction of Sandsfoot Castle to the north would be barely noticeable in comparison to that of the existing port infrastructure, however they have underpredicted the additional impact from red aviation lighting indicators mounted at high level on the stack to meet CAA and MOD requirements.	Night-time baseline photos and montages have been produced in the ES Addendum figures 9.42 to 9.45. Figure 9.43 (viewpoint 9 Sandsfoot Castle) is a photomontage of the night-time effects from within the WHS. The stack will be lit in accordance with CAA and MOD requirements. Although this will be located at the top of the stack there are lights at the top of the Verne on the highest point of the Isle of Portland associated with the prison and the satellite dish clearly visible from Sandsfoot Castle. The traffic lights at the entrance to the Verne that alternate between green, amber and red that are also clearly visible from Sandsfoot Castle. These will be significantly higher than the light at the top of the stack. The lighting will be seen in the context of the existing lighting at the port facilities and has been designed with minimal light spill. This confirms the conclusions of the night-time assessment at completion as negligible from the WHS within chapter 9 of the ES. Refer to ES Addendum for additional information on night-time effects.
16.6	UNESCO – Jurassic Coast	The experiential setting of Chesil, The Fleet & Portland Coast and the Portland Harbour Shore stretches of the WHS Jurassic Heritage Coast will be compromised by the addition of such a large incongruous industrial building in such close proximity these stretches of the WHS. The setting should be regarded as the surrounding landscape and seascape, and concerns the quality of the cultural and sensory experience surrounding the exposed coasts and beaches.	Chapter 13 of the submitted ES provides an assessment of effects on the experiential setting of the WHS. That chapter concludes that the proposed development would result in a moderate adverse effect on the OUV of the WHS. The Jurassic Coast Trust response finds that the submitted EIA "deals with impacts on the WHS fairly".
16.7	World Heritage Site viewpoints & visualisations	Yet another heritage site to be effected and downplayed by PfP is Nothe Fort, which is not acknowledged as being situated within the Jurassic Heritage Coast. PfP acknowledge Nothe Fort is a scheduled monument and listed building and is located at the entrance to Weymouth Harbour, with views towards across Portland Harbour. The views are panoramic, including views of the proposed waste incinerator site, and PfP acknowledge these views are from a landscape containing a heritage asset, ranking the value of the visual receptor as high to medium. However, PfP underestimate the value of the view to visitors, claiming 'receptors' have a moderate interest in the views. PfP's justification for this claim is that the attention of visitors to the castle, park and garden is likely to be on the surrounding landscape, which is of relative importance to the setting of Nothe Fort. PfP underestimate the importance of the view across Portland Harbour to the Isle of Portland, as being an important part of the surrounding landscape. PfP claim the ERF will create very minor alterations to the composition of the view. The ERF will	The LVIA does not state that 'receptors' have a moderate interest in the views from Nothe Fort. We assume that the objector is getting confused between the assessment of Sandsfoot Castle and Nothe Fort. The LVIA acknowledges that there will be panoramic views with views on the southern side towards the site across Portland Harbour. The LVIA assesses the sensitivity as high to medium. The proposals will lie approximately 4.5km from Nothe Fort and will create very minor alterations to the composition of the view, with the development visible in the context of Portland Port, with a steep cliff backdrop. The magnitude of visual effects at

Item	Topic	Summary of consultation comment	Applicant response
		be visible from a small number of locations within the gardens. The degree of effect will therefore be moderate to slight and significant. PfP have underestimated the impacts on this heritage site, and once again have not provided the requested photomontages with and without plume, offering a better visualization of the impact on a waste incinerator at this site. PfP expect that any obtrusive light in the direction of Nothe Fort to the north would be barely noticeable in comparison to that of the existing port infrastructure. The only additional impact would be from aviation lighting indicators mounted at high level on the stack that are needed to meet CAA and MOD requirements, therefore the effects will therefore be negligible and not significant. Once again no photomontage with night lighting has been provided.	completion will be small and therefore the significance of visual effect will be moderate to slight and significant. There were no requests for photomontages from Nothe Fort. The photomontages/photowire locations were agreed with Dorset Council and the AONB Partnership. The photomontage / photowire locations were also discussed with the Jurassic Coast Trust in August 2020. Photomontages from Sandsfoot Castle have been undertaken including plume and night-time montages contained in the ES addendum.

17. Compliance with development plan

Other consultees

Item	Topic	Summary of consultation comment	Applicant response
	Adams Hendry (on behalf of SPWI)		
17.1	Compliance with DWP Policy 1 (sustainable waste management)	Paragraph 5.6 The Dorset Waste Plan allocates sufficient sites to enable waste to contribute to moving waste up the waste hierarchy and for the Bournemouth, Christchurch, Poole and Dorset area to move towards net self-sufficiency in line with the proximity principle. There is no need for the proposed ERF to enable Dorset to become self-sufficient. As a merchant facility, the proposed ERF will result in Dorset becoming a net importer of waste, with waste being brought to the site from within a three-hour drive time or from further afield by ship and with IBA and APCr being transported to Avonmouth or London. The proposals for the Portland ERF are therefore contrary to Policy 1.	Dorset exports almost all of its residual waste out of county. This is contrary to Dorset being self-sufficient. The allocation of sites in the DWP to provide residual waste treatment does not in itself mean that sufficient (or any) capacity will be delivered to meet the shortfall in capacity as has been proven over recent plan periods. Consents granted for advanced thermal treatment facilities in Dorset have not been delivered. Furthermore, despite allocating sites for residual waste management facilities in previous waste local plans, little significant treatment infrastructure or capacity has been delivered (the only example being the Canford MBT which is an intermediate technology). Theoretically a network of smaller sites with different technologies (as proposed in the DWP) could meet need, however it is unlikely that such a strategy, dependent on advanced thermal treatment technologies or smaller scale traditional thermal treatment technologies would be deliverable. As noted above Dorset has a track record of failed proposals for higher risk technologies and the investment market appetite for ACT/ATT for RDF treatment has further reduced in the past 2-3 years given the increasing number of technical failures which has led to significant losses for investors. We further note that there are multiple examples in the UK of projects that were previously approved for ACT/ATT technology now seeking amendments to the approval to permit conventional ERF technology, similar to that proposed at the Portland ERF, further demonstrating that the broader market does not believe that ACT/ATT is a credible technology for treatment of RDF feedstock. It could be possible that a network of smaller volume ERF plants across the allocated sites could meet the need (i.e. repeats of the Parley proposal, which we note is 30% of the volume allocated in the DWP). However, the ability to finance conventional ERF at small scale (<100ktpa) is limited as the returns achieved do not provide adequate return for the risk profile (due to high fixed capital costs). Given the long term failure to deliver an effective solution for Dorset's residual waste, other than to export this out of the county, it is incorrect to state that there is no need for an ERF to enable Dorset to become self-sufficient. The ERF will enable a significant proportion of Dorset's residual waste to be managed in Dorset and reduce the amount of waste sent to landfill or facilities further away from the waste source, thus being complaint with the waste hierarchy, and proximity principle and self-sufficiency. This fully accords with Policy 1.
17.2	Compliance with DWP Policy 2 (Integrated waste management facilities)	Paragraph 5.7 The positive benefits of co-location and intensification of waste management activities are acknowledged by Policy 2 and the Waste Planning Authority has sought to maximise such opportunities through the allocation of sites in the DWP. In contrast, the proposed ERF will not intensify an existing waste management activity, and neither will it incorporate different types of waste management activities at the same location resulting in waste outputs (IBA and APCr) having to be transported a significant distance to be processed.	The proposed site provides opportunities to link with existing and future complementary activities at the port and energy businesses, with the potential to co-locate with IBA processing in the future if a proposal was progressed. Equally, the intensification of existing waste management sites could lead to the loss of some existing waste management uses.
17.3	Compliance with Policy 4 (Applications for waste management facilities not allocated in the Waste Plan) – criterion a	Paragraph 5.8 Applications for waste management facilities not allocated in the Waste Plan are covered by Policy 4. It makes it clear that proposals for waste management facilities will only be permitted where it is demonstrated that they meet all of the	The applicant does not primarily seek to demonstrate that there is no available site allocated for serving the waste management need that the Portland ERF would also serve, although as presented in the Planning Supporting Statement, there are significant doubts as to whether sufficient treatment capacity will or can come forward on the DWP allocated sites to meet the expected shortfall in residual waste management capacity, given the constraints to

Item	Topic	Summary of consultation comment	Applicant response
		criteria listed in the policy. These include that there is no available site allocated for serving the waste management need that the proposal is designed to address or the non-allocated site provides advantages over the allocated site. The DWP was adopted less than a year ago at which point all of the allocated sites were available (see paragraph 6.9 of the DWP). No evidence has been put forward by the applicant to demonstrate that the allocated sites are no longer available or that they would not be capable of serving the waste management need that the proposal is designed to address. This does not mean that the allocated sites should be capable of accommodating an ERF of a similar scale to the proposed Portland facility, rather that it must be demonstrated that the allocated sites are not capable of accommodating a facility e.g. advanced thermal treatment, capable of managing non-hazardous residual waste. The potential for residual waste treatment technologies not involving incineration is specifically noted in paragraph 9.30.	development set out in the DWP itself and the findings of the DWP allocated sites assessment study. This is evidenced by the Eco-Sustainable Solutions proposal for a small scale ERF of around 60,000 tonnes per annum (50,000 tonnes residual waste), on a site which the DWP expects to deliver 160,000 tpa (so c. 30% of allocated level). The Canford site is expected to focus on increasing its RDF production to around 200,000 tpa, providing an intermediate facility for fuel production for an ERF, rather than its own ERF facility and we note the previously consented ACT/ATT project has not been progressed since consent in 2018. There is currently no evidence to suggest that either the Mannings Heath Industrial Estate or the Binnegar Quarry sites will deliver any significant additional residual waste treatment capacity. The assessment of DWP allocated sites was undertaken to demonstrate that the Portland site has advantages over the allocated sites, as required by Policy 4 (criteria a), and as requested by officers in pre-application advice. The proposal is specifically for an ERF to meet Dorset's waste management needs. The DWP does not exclude incineration at allocated sites but rather indicates that there is potential for adverse impact. The DWP adopts a flexible approach and does not preclude any technologies on the allocated sites. On that basis it is entirely appropriate to consider the relative merits of an ERF at the Portland site against allocated sites to demonstrate that clear advantages exist.
17.4	Eco-Sustainable Solutions site	Paragraph 5.9 It is noted that Eco Sustainable Solutions have recently announced proposals for an energy from waste plant at one of the DWP allocated sites at Parley (Inset Map 7) with a throughput of 60,000 tonnes per annum.	Whilst a planning application has been submitted to BCP Council, this is only a proposal at this stage and there is no commitment in planning terms. There is no certainty that permission would be granted or that the facility would be viable and deliverable, and it is noted that the proposals are subject to objections from Bournemouth Airport, on a number of grounds including aerodrome safeguarding. As recognised in the DWP the site is subject to a number of constraints and development considerations that would need to be overcome and there are likely to be significant concerns in respect to the potential for emissions on adjacent Dorset heathlands (protected European sies). If the above planning constraints are mitigated/resolved such that planning is achieved, then there is still significant doubt whether the site will actually be built. Our understanding, from discussions with a number of major waste investors, suggest that raising finance to build a facility of this size would be very challenging as the returns achieved do not provide adequate return for the risk profile (due to high fixed capital costs). Even in the event that planning is achieved, and finance can be procured, such a facility would only address a small proportion of Dorset's residual waste treatment capacity shortfall.
17.5	Compliance with Policy 4 (Applications for waste management facilities not allocated in the Waste Plan) – criterion b	Paragraphs 2.38 and 5.10 No information has been provided to demonstrate that the proposal would not sterilise or prejudice the delivery of an allocated sites that would otherwise be capable of meeting waste needs contrary to criterion (b) of Policy 4. In the event that the proposal for an ERF is successful in dealing with residual waste in Dorset, it may well prejudice the delivery of the allocated sites as they would be required to import waste from greater distances. It has not been demonstrated that the ERF would not prejudice the delivery of an allocated site and therefore the proposal fails criterion (b).	The DWP allocated sites have been allocated because they are deemed to have potential to provide capacity to meet Dorset's residual waste management needs. It is not an absolute requirement that these sites be developed if an acceptable unallocated site comes forward that has significant advantages over allocated sites and can help meet Dorset's needs. The DWP has been written to be flexible to enable sufficient treatment capacity to come forward and recognises that some or none of the capacity attributed to allocated sites may came forward and be delivered. Nonetheless, the planning application demonstrates that there are substantial volumes of residual waste available in Dorset (both municipal and C&I) and elsewhere within the catchment and by sea that far exceeds the capacity of the ERF, such that it would not prejudice the development of other similar facilities on allocated sites. DWP paragraph 6.12 requires proposal for unallocated sites not to sterilise or prejudice their development for 'other or similar waste management needs'. Assuming that the Eco-Sustainable Solutions proposed ERF at Parley is permitted, funded and constructed, this would provide a modest contribution of 50,000 tpa of residual waste treatment capacity (c. 30% of the 160,000 tpa expected), against a stated DWP need of

Item	Topic	Summary of consultation comment	Applicant response
			234,000 tpa, Some 174,000 tpa of capacity would still need to be found for manging Dorset's residual waste alone. Given the nominal capacity of the Portland ERF is 183,000 tpa, and around 25% of the plant capacity might be expected to come by sea, it is clear that the amount of residual waste potentially available to the Portland ERF far exceeds its capacity and would not prejudice other facilities coming forward on allocated sites. This conclusion is reinforced by the capacity gap analysis detailed in the Waste Need Paper in respect to the ERF waste catchment. Furthermore, the application makes clear that the proposed Portland ERF would not physically sterilise the allocated sites or prevent other waste management uses from occurring on those sites. The allocated sites will have an important role to play in terms of maintaining and expanding existing operations for waste recycling and recovery and potentially to process residual waste to produce RDF. The operator of the existing Canford MBT facility, and fuel supply partner to the applicant, is preparing to increase the RDF throughput of the facility from 125,000 tpa to around 200,000 tpa, demonstrating how existing waste management sites, facilities and activities can be expanded, as part of an appropriate integrated network of waste management facilities linked to the proposed Portland ERF, if consented and built. The proposed ERF is more likely to stimulate investment and delivery of waste uses on DWP allocated sites, then prejudice it. The assertion that the ERF would prejudice delivery of facilities on allocated sites is therefore speculative, as is the claim that they would need to secure waste from greater distances. The proposed ERF accords with Policy 4 criterion b.
17.6	Compliance with Policy 4 (Applications for waste management facilities not allocated in the Waste Plan) – criterion c Compliance with the proximity principle	Paragraph 2.39, 2.40 and 5.11 As a merchant facility, the ERF would take in waste from outside Dorset, indeed, it would appear that the majority of waste processed at the site would be from outside Dorset. The fact that the waste catchment has been set at a 3-hour drive time certainly does not accord with the proximity principle. A facility at Portland would not only draw in waste from outside the county, 75% of the waste managed on the site would arrive by road. A coastal location for a facility that is mainly served by the road network cannot be considered to be the most appropriate in terms of the proximity principle. An inland location would likely have a smaller waste catchment, as acknowledged by Tolvik. The proposal does not therefore meet criterion (c) of Policy 4.	The waste need statement confirms that there are large volumes of residual waste arisings in Dorset that would fulfil the ERF capacity. However, as a merchant facility if there is spare capacity available this could be used for residual waste derived from the wider catchment, as is common with many similar UK facilities. All ERF have a defined potential catchment area by road, beyond which it is entirely reasonable to expect that waste would be managed by other facilities due to higher transportation costs, and in line with the proximity principle. The 25/75 ratio between sea and road delivery provides a reasonable likely scenario, although the ratio between road and sea will depend on the commercial availability of waste and the amount of waste arriving by road will vary and may be less than 75%. Conversely the amount of waste arriving by sea may be more than 25%. It is incorrect to say that most waste would be derived from outside Dorset given the significant predicted shortfall of required capacity in Dorset. Waste typically flows across waste authority administrative boundaries depending on the waste market. The Portland ERF will provide sufficient capacity for a significant amount of Dorset's residual waste to be managed in Dorset but there will remain some volumes that will continue to need to be managed out of county (as is currently the case for 100%). It is possible that the Canford RDF facility expansion could result in this facility supplying c. 80% of the ERF's capacity, derived from Dorset waste. The Portland ERF has received letters of intent from Beauparc, as owner of the Canford facility, that indicate RDF produced at Canford would be supplied to the Portland ERF if that facility was available. However, if for whatever reason some or all of Dorset's residual waste continues to be exported out of county, it is entirely reasonable for the Portland ERF to manage residual waste arising from outside of Dorset on the basis that Dorset would be able to demonstrate that it is achieving overall net-self-sufficiency in managing its residual waste arisings. A coastal location with access to a port is a significant locational benefit and the proposed site is well placed to serve Dorset in line with the proximity principle. Dorset's current practice of exporting waste out of county is clearly contradictory to the proximity principle and also self-

Item	Topic	Summary of consultation comment	Applicant response
			sufficiency. The application demonstrates compliance with the proximity principle and spatial strategy in line with Policy 4 criterion c.
17.7	Compliance with Policy 6 (Recovery facilities) Treatment of IBA and APCr)	Paragraph 2.24 to 2.26 and 5.12 The Planning Statement suggests that the facility is compliant with Policy 6 on the basis that IBA and APCr will be transported to appropriate licensed facilities as close as possible to the site. This is not what is required by the policy, rather it specifically requires processing facilities for IBA to be located at or close to the source of the waste arising. Incinerator bottom ash (IBA) will be sent to a company in either London or Avonmouth, while the Air Pollution Control residues (APCr) will be sent to a company in Avonmouth. This will require residues arising from the facility to be transported a considerable distance. The proposal is not compliant with Policy 6 because it requires processing facilities for IBA to be located at or close to the source of the waste arising.	Residual materials will be sent to specialist reprocessing facilities, with the port location enabling residual material to be transported by water sustainably and therefore avoiding the traffic movements that would be experienced at any of the allocated sites. The proximity principle requires waste to be disposed of, or recovered, in one of the nearest appropriate installations by means of the most appropriate methods and technologies. The ERF in sending residues to the nearest appropriate installation fully accords with the proximity principle.. A small number of specialist IBA facilities exist that receive and process the residual material taking advantage of economies of scale. Whilst some larger scale ERFs have on site IBA processing facilities, others commonly do not and transport material to a specialist facility by road. The Portland site provides the opportunity for IBA to be transferred sustainably by water to specialist recycling facilities. This is entirely in accordance with the principle of the policy, which is to ensure the most sustainable treatment of residues both in terms of the method of treatment (in this case recycling) and method of transport (in this case transport by sea). The DWP and specifically Policy 6 could not have reasonably anticipated that a site located within a commercial port would come forward for an ERF and its wording does not recognise the sustainability advantages of moving IBA by sea, reducing the need for transportation of material by road and its associated environmental effects, which is the clear driver behind this policy requirement. Further information on the transportation of IBA by ship and potential destinations is provided in the submitted IBA note. The applicant is willing to accept a suitable worded planning condition, requiring the transportation of IBA to specialist reprocessing facilities by sea. Notwithstanding this, the applicant is committed to a planning obligation to review future options to establish a IBA/APCr reprocessing facilities at or in close proximity to the site (see above). Furthermore, the objection ignores the clear future potential at Portland for establishing local facilities to treat residues.
17.8	Compliance with Policy 12 (Traffic and access) Baseline reporting	Paragraph 5.13 Policy 12 relates to transport and access. Given the suspected anomalies regarding the reporting of baseline flows, it is not possible to understand the impact of the proposed development on the road network.	Refer to response provided to Table 15, Items 15.3 to 15.8 (paragraphs 4.59-4.64)
17.9	Compliance with Policy 14 (Landscape and design quality) Durability and effectiveness of PVC mesh, and form, scale and mass of the plant	Paragraph 5.14 Landscape and design quality are covered by Policy 14. It states that proposals for waste management will be permitted where they are compatible with their settings and would conserve and/or enhance the character and quality of the landscape. This should be achieved through, among other things, appropriate use of scale, form, mass and materials. The use of PVC mesh to screen the building needs further evidence to show that it will be durable and effective in the long term. As discussed in the previous section on landscape and visual effects, the scale, form and mass of the proposed plant are entirely inappropriate for this prominent and sensitive location. This is contrary to Policy 14 of the DWP.	As stated in the Planning Supporting Statement (Table 6.1), the ERF has been carefully and sensitively designed, with guidance from Dorset Council landscape officers, to minimise visual impact on the local setting and character and wider views from designated landscape areas such as the AONB and the WHS. The design reflects the local geology of Portland and its immediate cliff setting, with this also translated into the use of appropriate cladding materials to provide a high quality building that provides a landscape feature, but also successfully blends into its surroundings to limit visual impact. The ES (Landscape and Visual Impact Assessment) recognises that whilst the development would result in some impact, overall this is deemed to be acceptable and to statutory consultees. Further information in respect to durability and environmental performance is provided in respect to external cladding material in the DAS addendum. Further discussion will be held

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			with officers to consider the most appropriate materials, including use of samples and further information on durability and maintenance, and this can be controlled by means of condition. The proposals are considered to accord with Policy 14.
17.10	Compliance with Policy 19 (Historic environment)	Paragraph 5.15 and 5.16 Policy 19 relates to the historic environment. It requires applicants for proposals for waste management facilities to demonstrate that heritage assets and their settings will be conserved and/or enhanced in a matter appropriate to their significance. Table 7.3 of the ES shows that the proposed ERF will have an adverse effect on a number of designated heritage assets including the breakwater and former dock offices and the East Weare batteries as well as the Grade II* Verne Citadel and Portland Castle. This is contrary to Policy 19 of the DWP.	As stated in the Planning Supporting Statement (Table 6.1), the ERF will result in some change to the setting of heritage assets, with this being within the slight to moderate range of significant adverse effects. Overall, the proposed ERF would not lead to any substantial adverse effects on heritage assets. Where harm does exist to the setting of heritage assets this is considered to be less than substantial harm in context of the NPPF. Further discussion with Dorset Council's heritage officer has identified potential for mitigation that will deliver significant public and heritage related benefits that will off-set any harm caused to heritage assets as a result of the proposed development. A framework heritage mitigation strategy has been submitted to Dorset Council, and these measures are now included in the ES Addendum as appropriate mitigation. These measures comprise a programme of works that will enable the East Weare E Battery scheduled monument and listed building grade II to be removed from the Historic England 'at risk register' and provision of a permissive public right of way, reconnecting existing rights of way, to facilitate public views and interpretation of the heritage features present along the East Weare, and facilitating an around Portland walking route. On this basis the proposed ERF would not be contrary to the provisions of Policy 19.
	Freeths (on behalf of The Portland Association)		
17.11	Compliance with Policy 4 (Applications for waste management facilities not allocated in the Waste Plan) – criterion b	Page 5 The key component of this test is whether the proposed development would prejudice the delivery of allocated sites that are otherwise capable of meeting waste needs. The Applicant provides no evidence for meeting this part of the criterion. After concluding that the scheme would not sterilise an allocated site they simply remark "Neither would the proposed ERF prejudice the existing activities taking place at any of the four sites identified as being suitable for the management of non-hazardous wastes or preclude the development of future management activities." It is important to remember that the Waste Plan is recently adopted and is less than a year old. The sites allocated in the Waste Plan have been done so to meet an identified need. The shortfall identified is 232,000 tpa. Total potential capacity within the four Allocated Sites amounts to 385,000 tpa, exceeding the identified needs of the Plan area. If you compare the potential residual waste capacity for each of the four sites allocated for the management of non-hazardous waste to the proposed development, it is clear that there is significant potential for the proposed development to prejudice the delivery of one or more allocated sites. • 7 - Eco Sustainable Solutions, Chapel Lane, Parley: 160,000 tpa • 8 – Land at Canford Magna, Magna Road, Poole: 25,000 tpa • 9 – Land at Mannings Heath Industrial Estate, Poole: 100,000 tpa • 10 – Binnegar Environmental Park, East Stoke: 100,000 tpa	The DWP allocated sites have been allocated because they are deemed to have potential to provide capacity to meet Dorset's residual waste management needs. It is not an absolute requirement that these sites be developed if an acceptable unallocated site comes forward that has significant advantages over allocated sites and can help meet Dorset's needs. The DWP has been written to be flexible to enable sufficient treatment capacity to come forward and recognises that some or none of the capacity attributed to allocated sites may came forward and be delivered. Nonetheless, the planning application demonstrates that there are substantial volumes of residual waste available in Dorset (both municipal and C&I) and elsewhere within the catchment and by sea that far exceeds the capacity of the ERF, such that it would not prejudice the development of other similar facilities on allocated sites. DWP paragraph 6.12 requires proposal for unallocated sites not to sterilise or prejudice their development for 'other or similar waste management needs'. Assuming that the Eco-Sustainable Solutions proposed ERF at Parley is permitted and was able to raise finance to allow construction, this would provide a modest contribution of 50,000 tpa of residual waste treatment capacity (c. 30% of the 160,000 tpa expected), against a stated DWP need of 234,000 tpa, Some 174,000 tpa of capacity would still need to be found for manging Dorset's residual waste alone. Given the nominal capacity of the Portland ERF is 183,000 tpa, and around 25% of the plant capacity might be expected to come by sea, it is clear that the amount of residual waste potentially available to the Portland ERF far exceeds its capacity and would not prejudice other facilities coming forward on allocated sites. Furthermore, the application makes clear that the proposed Portland ERF would not physically sterilise the allocated sites or prevent other waste management uses from occurring on those sites. The allocated sites will have an important role to play in terms of maintaining and

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		• Proposed Development at Portland: 202,000 tpa The proposed development has the capacity to meet 86% of the total identified shortfall and amounts to 52% of the capacity that could be derived from allocated sites. It is far larger than 3 of the 4 allocated sites and if permitted will clearly have a prejudicial impact on some or all of the allocated sites coming forward, as a significant proportion of need will be met by the proposed development. The proposed development is contrary to criterion B.	expanding existing operations for waste recycling and recovery and potentially to process residual waste to produce RDF that could be processed at Portland. Indeed, it is understood that Beauparc, the owner of the existing Canford MBT facility, is planning to increase the throughput of the facility from 125,000 tpa to around 200,000 tpa, demonstrating how existing waste management sites, facilities and activities can be expanded, as part of an appropriate integrated network of waste management facilities - we refer to the Beauparc letter of intent which makes it clear Beauparc expect to supply a large volume of RDF to the Portland ERF that will be local source waste. The proposed ERF is more likely to stimulate investment and delivery of waste uses on DWP allocated sites, then prejudice it. The assertion that the ERF would prejudice delivery of facilities on allocated sites is therefore speculative, as is the claim that they would need to secure waste from greater distances. The proposed ERF accords with Policy 4 criterion b.
17.12	Compliance with Policy 4 (Applications for waste management facilities not allocated in the Waste Plan) – criterion c Compliance with the proximity principle -	Page 6 It is evident that the site's location does not support the spatial strategy of the Waste Plan. Its location is far removed from the area where strategic provision should be concentrated and the scale of the proposed development fundamentally undermines the strategy. The proposed development is of a size that should have been considered as part of the development plan process. To approve a development with a capacity of managing residual waste accounting for approximately 86% the size of the need for the Waste Plan area up to 2033, in a location at odds with the spatial strategy within a year of adoption of the Waste Plan, would unarguably undermine both the spatial strategy itself and any public confidence in the Plan led system.	Chapter 6 of the Planning Supporting Statement (paragraphs 6.35 to 6.59) addresses the proximity principle generally and at the Dorset, regional and national context. Paragraphs 6.60 to 6.72 then consider the proposal in context of the DWP spatial strategy. These demonstrate how the proposed Portland ERF will help Dorset to ensure that its residual waste is managed within Dorset, as opposed to the current practice of exporting waste out of county to landfill or other ER in the UK or Europe. The DWP Inspector recognised that the purpose of allocating sites was to "facilitate the treatment of an increased tonnage of waste to enable recovery within the County instead of transporting waste to landfill or recovery facilities outside Dorset, as happens at present". Whilst the Inspector noted that the plan has identified strategic requirements for residual waste management and recycling and allocates sites to meet those requirements, which are well related to the sources of waste, it is explicitly made clear in the DWP that some or all of those allocated sites might not come forward and deliver the necessary capacity. The DWP also recognises that additional capacity may be appropriate elsewhere to ensure that the capacity gap is adequately addressed, and Policy 4 specifically permits waste management facilities to come forward on unallocated sites where these can demonstrate significant advantages over allocated sites and meet specified criteria. The DWP Inspector (paragraph 56) fully recognises the need for this flexibility and supports the approach provided allocated sites are not prejudiced and where unallocated sites offer advantages such as the provision of heat and energy sources. This comment seeks to apply the proximity principle in a rigid and inflexible way that fails to recognise that most of Dorset's residual waste is exported out of county to landfill or ERF facilities elsewhere in the UK or abroad. This clearly contrary to the proximity principle (and self-sufficiency). This is specifically what the DWP inspector sought to address. Whilst the DWP identified sites near to the main south east Dorset conurbation, as this is where a significant proportion of residual waste arises, it also accepts that these sites are constrained and therefore some or all of these allocations, might not deliver the required capacity. To address this the DWP provides further flexibility in recognising that other unallocated sites may bring significant advantages. The DWP takes a positive and flexible approach to ensuring that sufficient waste capacity is provided in Dorset to meet its needs over the plan period. Whilst it is recognised that the Portland ERF site is not as close to the south east Dorset conurbation as the allocated sites, this does not mean that the proposed development is contrary to the proximity principle or the spatial strategy, in so far as this would result in significant advantages by facilitating shore power and district heating and would provide a final treatment facility for RDF material produced at facilities located on allocated sites (such as Canford). It is noted that the allocated sites, for the planning and investment challenges noted elsewhere, are unlikely to be able to provide such a treatment facility for significant volume of Dorset source RDF and therefore, absent the Portland ERF, this will continue to be exported much

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			further to out of county facilities, therefore displacing waste from those areas that would need to be processed in other out of county areas and, ultimately, resulting in additional landfill volumes in the UK context. Residual waste arising from the main conurbation can be subject to further pre-treatment to remove recyclable materials close to its point of arising, further reducing its weight and volume prior to transporting the final RDF to Portland. As set out in the revised Carbon Assessment, the benefits of providing shore power and/or heat at Portland outweigh any modest carbon emissions associated with transporting RDF to Portland. The proposal does not fundamentally undermine the spatial strategy as is being suggested. This comment also questions the scale of the proposed ERF in respect to the DWP need to 2033. The ability of the proposed ERF to meet much of Dorset' need should be considered as a positive in providing certainty that Dorset's residual waste can in future be managed in Dorset subject to commercial contracts. This comment also fails to recognise that whilst the facility has been sized to meet Dorset's residual waste needs (and is well located in Dorset to do so) it is also a merchant plant with capability to accept waste from within its catchment area and by sea from other locations. In respect to the proposed ERF's scale in context of the development plan process and adoption date, it is entirely reasonable for unallocated sites to come forward for consideration through the planning application process, where they were not identified or deemed to be available at the time that the development plan was being prepared and was adopted. The DWP process could only take account of the available evidence at the time that the plan was being prepared.
		It is noted that the PS in assessing compliance with criterion 'c states *"Planning Inspectors have placed importance on the ability of EfW proposals to contribute to the underlying objectives of national and local waste policy and plans as a part of a balance. Less importance is placed on whether proposals accords precisely with a prescribed or envisaged spatial strategy".* Firstly, we would suggest that this statement is contradictory as an underlying objective of local waste policy would be compliance with a spatial strategy. A spatial strategy is the bedrock on which a development plan is based and the development plan is the first consideration of any development proposal. Secondly, it is clear from this statement that the Applicant recognises that the proposed development does not accord with the Waste Plan's spatial strategy. Finally, the suggestion of Planning Inspector's placing weight on certain factors is a completely generic statement with no reference to appeal decisions demonstrating any evidence to support this contention. Paragraph of 3.16 of the Waste Local Plan states *"The principle of proximity means that wastes should be recovered or disposed of as close as possible to where it is produced (our emphasis) and has been another important driver for the Waste Plan".* It is apparent from the geography of the site and its relationship with the wider district that the scheme fails the principle of proximity. This is perhaps best illustrated by the application of a 3 hour HGV drive time catchment area, in which the Applicant base their Need Assessment (Figure 6.1). This includes a number of large urban areas, including the Bournemouth, Christchurch and Poole conurbation, Weymouth and Portland, Exeter, Taunton, Yeovil, Salisbury, Southampton, Winchester, Eastleigh and Havant. The Need Assessment comments *"There is a pressing need for Dorset to reduce its reliance on the export*	Paragraph 6.67 to 6.69 of the Planning Supporting Statement refer to the Avonmouth Resource Recovery Centre appeal decision from 2011 and includes a footnote appeal reference (Appeal Reference APP/Z0116/A10/2132294). As per paragraph 6.67, this is an example where the Inspector considered compliance with a spatial strategy with a wider set of sustainability considerations. The reference to this example is intended to demonstrate that compliance with a spatial strategy, which as paragraph 6.69 states must be balanced with the strategic objectives that inform and direct the overall spatial strategy for waste management. In that the Inspector held that waste miles are not an overriding factor when balanced against other benefits of reduced landfill and low carbon energy. This comment seems to be suggesting that decision makers, including Inspectors are bound to give priority to consideration of spatial strategy over other considerations. Clearly, given this appeal decision that is not correct. Furthermore, in referring to this example the applicant is not recognising that the proposed development does not accord with the DWP spatial strategy (as is being suggested by this comment) but highlighting that in this case waste miles should not be an overriding factor when balanced against other benefits. It simply recognises that just because a site (such as an allocated DWP site) is closer to the main area of waste arisings than the Portland site, the latter is not necessarily contrary to the spatial strategy as waste miles should not be an overriding factor. The application identifies a 3 hour HGV drive time catchment area from which the proposed ERF could reasonably attract residual waste, on the basis that the facility could represent one of the nearest appropriate installations (as per the proximity principle). That is not to say that waste from within all of this area and the urban areas, would come to the Portland ERF but rather it could if the market dictates that to be economically viable to do so. Given the confirmations provided by Beauparc, the owner at Canford and the only significant producer of RDF in Dorset, that it plans to increase its capacity and that it would expect to supply a large volume to the Portland ERF, it is possible that c. 80% of the Portland ERF RDF supply could be provided from Dorset waste (ignoring any potential for increase in RDF

Item	Topic	Summary of consultation comment	Applicant response
		of residual waste, become more self-sufficient and treat more of its residual waste in Dorset closer to where it arises, in accordance with the proximity principle". However, the need argument is based on a much wider catchment and further the site's coastal location and distance from the main urban areas of the district mean that it is ill placed to deal with the waste derived from Dorset. The application seeks to give weight to addressing issues of waste management wider than the Dorset authority area. It sets out that the split of waste management is *"likely to be around 75% by road and 25% (around 50,000 tonnes) by sea. This would equate to around 20 ships a year and these ships would most likely be travelling from Northern Ireland, Republic of Ireland and other UK ports".* In short the application presents a clear contradiction. On the one hand it professes to adhere to the proximity principle by resolving outsourcing of Dorset's waste, despite it being poorly located to the principal urban areas of the District, but it is also reliant on a catchment area for need that covers 50% of the area of Devon, Somerset, Wiltshire and Hampshire. It is clear that the above strategy does not adhere to the proximity principle and the application seeks to address deficiencies in compliance with the Waste Plan by purporting to contributing to addressing wider issues of waste management on a more regional or national scale.	production elsewhere in Dorset in the future). As such it is reasonable to assume that if local parties act economically rationally, then a significant proportion of the Portland RDF supply should be Dorset source waste. It is incorrect to state that the need case is predicated in securing waste from the wider 3 hour HGV drive time catchment, given that the Waste Need Statement clearly demonstrates that there are large volumes of residual waste arising in Dorset alone to serve the proposed ERF, irrespective of the potential for residual waste to be secured from its defined terrestrial catchment area and from further afield by sea. The Waste Need Paper provides a detailed analysis of the residual waste arisings and capacity in the catchment area to demonstrate this. The application is very clear that whilst the proposed Portland ERF is located in Dorset and has been sized to meet Dorset's residual waste need in Dorset (as opposed to current practice to export waste to other counties) in line with the proximity principle. However, as a merchant plant is also has the capability to secure residual waste from its catchment and from elsewhere by sea. There is no contradiction here in respect to need (as this comment suggests), in so far as the proposed ERF can meet Dorset's need, and contribute towards meeting regional and national need. This comment fundamentally fails to understand the nature of a merchant plant, which must be free to secure its waste from within the waste market, recognising that because of its location within Dorset it is extremely well placed to secure waste from Dorset (depending on future contracts). However, this does not prevent the Portland ERF from managing waste from its defined catchment area or from further afield where this waste might otherwise go to landfill or be exported to Europe, contrary to the waste hierarchy, self-sufficiency and the proximity principle.
17.13	Compliance with Policy 4 (Applications for waste management facilities not allocated in the Waste Plan) - conclusion	Policy 4 requires compliance with each criteria. It is evident that the scheme fails against each of criteria a-c of the policy. The proposed development would substantially harm the spatial strategy of the development plan and would prejudice the ability of other recently allocated sites to come forward to meet a waste need. The comparison exercise between allocated sites and the proposed development has not been undertaken in a fair and rational manner and there are significant flaws in the methodology and hence the conclusions of that exercise	As set out in the responses above the proposed Portland ERF is compliant with Policy 4 (criteria a to c), in so far as it would be complementary to the spatial strategy, in line with the requirements of the proximity principle and would certainly not be harmful. Neither would it prejudice the ability of the allocated sites to come forward to provide waste management treatment capacity. The comparative assessment for the reasons given has been undertaken using a robust methodology that has been tested at inquiry and found to be sound and the suggestion in this comment that the methodology, outcome and conclusions are flawed is strongly refuted.

Appendix A: Response to UKWIN Planning Application submission

Appendix B: Summary response to public comments

Appendix B: Summary response to public comments

Item	Topic	Summary of consultation comment	Applicant response
1.	*Air Quality*		
		• There will be a continuous stream of poisonous residue, hazardous to local residents whichever way the wind blows • The increase in gaseous air pollutants, produced as a direct result of road traffic, contribute to the formation of other air pollutants such as ozone, acid rain and particulate matter • The proposed site is unsuitable given the close proximity of houses and the prison area, which appears to be above the proposed chimney height. During certain meteorological conditions pollution will blow over residences rather than be dispersed, with higher concentrations of pollutants increasing the incidence and severity of respiratory illnesses. • There are numerous risks to public health associated with these plants, from various pollutants and particulate some of which are extremely hazardous, and highly toxic/ carcinogenic at very low concentration levels. The siting of such a facility close to a local population including schools, a hospital, elderly residents, people with breathing difficulties and allergies is considered to be a high risk as is the potential exposure of young children and babies to extremely toxic substances. • There are serious concerns over the validity of the air quality monitoring submitted with the application and whether this properly accounts for the geography of Portland. • There is no evidence of any comprehensive wind studies of the impact on emissions plume that is directly influenced by an adjacent 'cliff' face, which also rises above the top height of the chimney and no evidence that the height of the chimney has been modelled to ascertain the best plume outcomes. The air quality assessment is therefore not robust. • The direction of the wind has been modelled incorrectly and the modelling is flawed by the meteorological date used and so cannot be relied upon • The meteorological conditions encountered at Portland, such as low lying cloud, sea mists, fog etc will prevent the effective dispersion of toxic particles and emissions, leading to the deposition of pollutants • The air quality modelling does not employ the ADMS complex terrain option. • Emission control is most effective when the feedstock is of a consistent composition. In practice, the operator will use whatever waste streams they can secure, resulting in less efficient pollution control. • Incinerator plants emit more sulfur dioxide, nitrogen oxides and carbon dioxide per unit of electricity generated than power plants burning natural gas • Diesel emissions from the waste transfer lorries would add to the already high levels of emissions on Boot Hill (Rodwell Road)	The effects of emissions from the proposed ERF have been fully assessed through the submitted ES (refer to chapter 4 of the ES) and Human Health Risk Assessment (HHRA) and Health Impact Assessment (HIA) have also been submitted. The flue gases will undergo a series of treatments that will clean the gases to a safe level before they are released to the environment. Modelling undertaken for a range of pollutants that will be emitted from the ERF showed that there will be no significant effects on air quality because of emissions from the proposed development. The submitted ES addendum, with updated air quality information and HHRA/HIA provides further information in these respects, demonstrating that the shore power provision will result in a reduction in pollutants arising from ship engines. The air quality modelling has been undertaken using an advanced model (ADMS 5.2). ADMS is routinely used for modelling of emissions for planning and Environmental Permitting purposes to the satisfaction of the Environment Agency and local authorities. The air quality model applies meteorological data for Portland and takes account of the topography and meteorological conditions at the proposed development site. The model does not indicate any concerns in respect to emission levels to air or impact on public health in respect to residential areas or the Portland prisons. Whilst the health concerns raised are noted, the emissions will also be subject to stringent controls under the Environmental Permit with input from Public Health England (PHE) in respect to safeguarding public health, to ensure these are well within permitted levels. It is not for the planning regime to seek to replicate or depart from this position. PHE's position (October 2019) is that modern, well run and regulated municipal waste incinerators are not a significant risk to public health. While it is not possible to rule out adverse health effects from these incinerators completely, any potential effect for people living close by is likely to be very small. This view is based on detailed assessments of the effects of air pollutants on health and on the fact that these types of facilities make only a very small contribution to local concentrations of air pollutants. The proposed ERF is designed to meet the new BREF Guidance and as such will be one of the most modern and up to date facilities of its kind in the UK. It will also need to comply with the BAT requirement. The ERF has been designed to manage RDF as its feedstock and therefore all RDF will need to be provided to an agreed composition and specification. Fuels outside of this will not be used.

Item	Topic	Summary of consultation comment	Applicant response
2.	*Carbon Dioxide and Greenhouse Gases*		
		• Off-setting the vast amount of CO_2 this development would produce is not credible, could not be enforced and is not a solution to this environmentally destructive proposal • The release of more than 550 tonnes per annum of CO_2 will be released each day onto the land and seas • Off-setting is unrealistic and immoral. Tree planting may not be successful and off-setting via purchase of carbon credits is likely to occur remotely from where the impact is caused impacting on those who are not responsible for causing climate change • The generation of huge amounts of CO_2 is a threat to national recycling goals and will require the importation of waste from other countries • Tree planting is impractical, and trees do not grow on Portland • Incineration can never be considered 'low carbon' as the process of burning waste results in high levels of greenhouse gas emissions with a higher carbon intensity than the conventional use of fossil fuels. • There is no commitment to carbon capture and storage • The project should aim to be 'zero-carbon dioxide equivalent' rather than net-zero	Paragraphs 6.302 to 6.313 of the Planning Supporting Statement set out the applicant's approach to achieving net-zero carbon. Whilst the proposed ERF will give rise to CO_2 emissions, the comments made in respect to CO_2 ignore the fact that the recovery of energy from waste can significantly reduce net GHG emissions in comparison to the alternative of landfill. Furthermore, the provision of shore power and the ability to supply a district heating network will lead to further net reductions in carbon. The applicant has committed to ensuring that the ERF will be net zero carbon over its lifetime. Whilst the facility is expected to operate as net carbon positive (it off-sets more carbon that it emits) at the point it is determined that it is operates as net carbon negative, the applicant would commit to purchasing carbon credits to off-set its carbon emissions. This can be achieved in various ways as set out in the submitted Achieving Carbon Neutrality Report. There are many different carbon credit generating projects across various sectors and whilst tree planting is one option there are many others. Carbon-offsetting through the use of carbon credits is a credible and recognised method for helping to reduce carbon emissions. It is not impractical or immoral as has been suggested. The applicant is willing to back up its net zero commitment by entering into a legal agreement to ensure that the proposed ERF actually does achieve carbon neutrality. The applicant has previously stated in the Planning Supporting Statement that it is prepared to consider the incorporation of appropriate carbon capture and storage (CC&S) technologies to the ERF should these prove to be technically and economically viable. Further consideration has been given to carbon capture and further information is provided in the carbo capture paper submitted as part of the Regulation 25 submission to Dorset Council. This confirms that as and when CC&S technology has matured to a sufficient stage and becomes commercially viable, the proposed site at Portland is ideally located to accommodate CC&S, because of its location advantage at a port for the storage and transport of captured carbon and the availability of industrial port land to accommodate land based infrastructure. Other alternative locations in Dorset do not enjoy these benefits. The introduction of CC&S when viable, which is supported by the applicant in principle, would allow the Portland ERF to move towards zero-carbon equivalent rather than net-zero carbon. In respect to low carbon, government policy is to move to zero landfill, and energy recovery from residual waste is regarded as part of the range of measures which are to be deployed to reach that aim. It should be recognised that ERFs are for planning policy purposes, a 'low carbon' energy source, even if they are not a 'no carbon' energy source and therefore are encouraged by existing policy as part of the move to address the climate change emergency. It must also be recognised that energy recovery from residual waste forms part of a set of initiatives designed to de-carbonise energy compared to the burning of fossil fuels and also treat residual waste that would otherwise be going to landfill. Whilst it is accepted that a proportion of residual waste will be fossil fuel derived, it must also be recognised that this waste and its associated carbon already exists

			as a waste and therefore must be managed. By managing this waste through ERF, this existing carbon can be beneficially used to replace energy derived from more conventional fossil fuels.
3.	*Natural Heritage*		
		• Heavy metals build up inside living organisms over a lifetime creating both physiological and psychological effects. Not only will this effect human life but also plants marine life wildlife their environment and diverse sites of ecological importance • Emissions to air from the plant will impact upon areas of conservation where wildlife, animals and plants live • This area is extremely rich in rare lichens and bryophytes (mosses) and these ecosystems are sensitive to nitrogen. The proposals will have an adverse impact on the SAC/SPA and a precautionary approach should be adopted given the risk to local ecology and biodiversity • Portland is home to several protected species. These include scarce and threatened moths and the protected Silver studded blue butterfly. Nitrogen emissions from the plant and the extra traffic will adversely affect grasslands and the habitat of these protected species. • The Fleet is a nature reserve, with migrating birds and rare species, the proposed facility could have an adverse impact on this habitat • The assessment of air quality impacts of the proposed ERF has been shown to contain major flaws and deficiencies. As a consequence, the predicted impacts on internationally and nationally designated wildlife sites cannot be relied upon. • The ES has ignored the value of open mosaic habitat within the proposed development site. • Portland Sea Lavender, Limonium recurvum, has evolved to grow in the cliffs of Portland and exists nowhere else. This will be severely impacted upon by emissions (both gases and particulates). • The chimney stack will vent directly onto rare and precious limestone and grasslands • The migration of birds is something that could be seriously affected by this proposed development • The plant is close to several SSSI, areas of SAC and Marine Conservation Zones • There has been no bat survey • The proposal could impact upon the Chesil and Fleet SAC and protected eel grass species	Potential impact on ecology, including protected habitats and species has been assessed through the ES (chapter 10). This has concluded that the proposed development would not give rise to any significant adverse effects on designated sites by means of its construction or operation. This takes account of the detailed air quality modelling undertaken to consider the potential levels of emissions to air and deposition. The air quality modelling has been undertaken by specialist consultants, using accepted methodology and modelling by the Environment Agency, and is considered robust for purposes of considering potential impact on human health and ecology. A shadow Appropriate Assessment, required under the Habitats Regulations has been submitted and this has concluded that the proposed development would not have an adverse impact the integrity of any of the relevant European designated sites (SPA/Sac and Ramsar). Following a review of the original consultation response the applicant has updated the ES chapter and shadow Appropriate Assessment, both of which have been submitted as part of the Regulation 25 response to Dorset Council. This has not however changed the original conclusion that the proposed development would not have an adverse impact on natural heritage or protected species and habitats, including those cited by consultees. The proposals include an agreed contribution with the Dorset Natural Environment Team (NET) to the provision of on-site and off-site ecological mitigation designed to mitigate for the loss of on-site habitats (such as the open mosaic habitat), through an agreed Biodiversity Plan. This will deliver a 10% biodiversity net gain against existing. Consideration has been given to potential impacts on the marine environment from the proposed ERF and the findings of this are presented in the marine paper prepared by specialist marine consultants ABPmer. This concludes that there would be no significant impact on marine ecology from either emissions to air or water.
4.	Economy, *jobs and the housing market*		
		• The plant will have a direct detrimental economic effect on Weymouth and Portland as tourist destinations and impact on small businesses. • Jobs suggested are vague and highly speculative. It's likely that construction crews will be brought in by buses and vans and there is no guarantee that the operating jobs will go to local people • Local people will not be employed to build it • There will be a fall in local property prices and houses could be left derelict • Will the local taxpayers have to bear the decommissioning costs for this incinerator? • The vast majority of spend will be directed to mainland Europe. The benefit of the proposed ERF to existing and new businesses in the Dorset area as a result of increased expenditure will be slight and will be negligible nationally • The conclusions reached on the cost of waste management are misleading as landfill will not all go to landfill over the next 25 years • The old naval accommodation block will never be developed	There is no evidence that the proposed ERF will have an adverse economic effect on Weymouth and Portland as destinations. There are examples of ERFs being located in tourist locations, including the Spittelau facility in Austria and Amager Bakke facility in Denmark, which through their designs have become local tourism attractions in their own right. The Portland facility has been carefully designed to be recessive in its setting, and whilst it is clearly not a tourist destination in its own right, it will as a consequence of its unique architectural design be a feature of some interest. The proposed jobs to be crated during construction and operation are deemed to be conservative and accurate, based on technical assessment provided in the Economic Impact Assessment. The ERF is a private waste management facility and there would be no local taxpayer liability for decommissioning at the appropriate time that this is required.

		• The air and water borne pollution would affect the health and wellbeing of residents, with the most affected in the top 10% and 20% Index of Multiple Deprivation areas.	The applicant has set out in the Planning Supporting Statement its intention to employ local people where possible for construction and operation of the facility and also its commitment to encouraging construction contractors to operate an apprenticeship scheme. The applicant's ambition is to develop a longer term apprenticeship scheme, working with local colleges and companies such as Weymouth College and Manor Marine. A commitment is offered through a s106 legal agreement to support training, apprenticeships and education, through construction and operational phases, and its policy is set out in Appendix H. The project will create over £100m of investment in the construction and operation of the Portland ERF, resulting in significant economic benefits in terms of local business, direct, indirect and induced job creation, training and education opportunities, support for local tourism (through the provision of shore power at the port) to support the retention and growth of the cruise liner sector and provision of greater efficiency in the local energy networks, to support future economic growth. All of these would benefit local communities and help to raise living standards and address existing pockets of deprivation. It is not correct to state that most of the economic benefit would go to areas outside of Dorset and the Weymouth and Portland area. The costs for continued landfill of Dorset waste simply provide a cost for continuing to landfill residual waste in the way that Dorset has been doing, and is not misleading. Without addition residual waste treatment capacity being provided, there will be no alternative but to continue to send waste to landfill, the least sustainable waste management option. The proposed ERF would provide an alternative option to landfill and could help to reduce future waste management costs. Potential effect on property values is not a planning issue. Nonetheless, it is not expected that the ERF would result in any significant change in property values, based on experience from other UK locations where ERFs have been developed. The revised HHRA and HIA documents, appended to the ES Addendum consider impact on public health and well-being in areas affected by deprivation. They, together with other supporting documents, conclude that the project would not affect the health of local people.
5.	*Environment/Climate Change*		
		• Would contribute to global warming predicted to bring a 2.5 metre sea level rise even if the Paris climate goals are met • Breaches the UK's legal commitment under the Paris Climate accord to cut net emissions of greenhouse gases by 100% - relative to 1990 levels - within the next 30 years - and Dorset's low carbon policies • Particularly regrettable at a time when a separate proposal is being developed for a Dorset National Park, with all the funding and benefits to the local economy this could be expected to bring.	As set out in the Planning Supporting Statement and Carbon and Greenhouse gas Assessment, the proposed ERF is deemed a low carbon source of energy and is supported by government as part of a range of measures intended to reduce national carbon emissions to meet national and international carbon reduction commitments. The revised Carbon Assessment sets out how the proposed Portland ERF will off-set carbon emissions, in the context of other scenarios for waste management and across the lifetime of the facility, as a result of its CHP ability to provide energy to shore power for shipping and heat to a local district heating network serving the two Portland prisons. The proposed ERF would not impact upon a Dorset National Park if and when that might be designated.

6.	*Explosions and fire*		
		• If there was a serious incident the impact on Portland and the surrounding area could be considerable • The applicants mention sprinklers, the submission is vague what type and where these will be installed. Is it site wide or only in specific areas. Is there a Fire Water retention pond or where will any fire water be stored pending discharge • A recent fire at Chickerell depot illustrates the potential fire risk and potential for pollution • The local fire service does not have the capability to deal with a fire at the plant • The proposed plant is adjacent to fuel supply pipelines and therefore represents a significant fire risk	A preliminary Fire Prevention Plan (FPP) for the proposed ERF has been submitted to the Environment Agency as part of the Environmental Permitting process. This provides information in respect to fire prevention measures and the management and storage of waste. A copy of the FPP has been submitted to Dorset Council for consideration, under the Regulation 25 request, as part of the planning process. Fire prevention will be strictly managed under the Environmental Permit process and the applicant is confident that this will ensure that fire risk is minimised and in the unlikely event that a fire occurs that appropriate procedures will be put in place to manage this effectively. No concerns have been raised by relevant statutory consultees, in terms of proximity to fuel supply pipelines.
7.	*Fuel supply and need*		
		• The capacity of the incinerator is around 3 times the current volume of refuse derived fuel (RDF) dealt with by Dorset Waste Partnership, a vast quantity of RDF would need to be brought to the island from elsewhere, either by road or ship for the plant to be economically viable, contrary to the proximity principle • The incinerator would be a threat to national and local recycling goals • The 3 hour drive time takes in areas that cannot be said to be local and Powerfuel will not accept any condition restricting the geographical source of the RDF. • Very little of Dorset Council's waste now goes to landfill. The true comparison is with the actual situation which, from 1 September 2021, is that Dorset Council's RDF will go for incineration to Bridgwater in Somerset. Whilst this is indeed a longer journey from CM than the journey to Portland Port, against this must be weighed the fact that PfP wish free rein to import RDF from anywhere in the world and even RDF transported by road could come from as far afield as Gloucester, Hammersmith or Worthing. • There is now a shortage of RDF due to overcapacity of incineration in Europe as a whole • England has sufficient capacity, either already operating or planned to 2020, to manage the country's residual waste requirements, and additional capacity would not necessarily be needed to meet the country's ambition of no more than 10% municipal waste to landfill by 2035 • The Dorset Waste Strategy (2017) covering the period until 2033 does not identify energy recovery as a need for waste in Dorset, and allocates four sites, which Portland is not one • No information has been given as to where the RDF)which the plant would burn would come from. The site certainly makes no logistical sense in the management of Dorset Council's black bin waste • It is far removed from Canford where the RDF from our waste is created and therefore does not comply with the 'proximity principle'.	The applicant's position on waste need is set out in the Waste Need Statement and the Planning Supporting Statement. Additional information has been submitted in the form of the Waste Need Paper, providing further information on need requested by Dorset Council's letter. These confirm that there are large volumes of residual waste being generated in Dorset that would provide potential feedstock for the Portland facility. The Waste Need Paper confirms that the Canford facility is currently producing around 83,000 tpa of RDF, derived both from municipal and commercial and industrial waste arising in Dorset. This is higher than the 60,000 tpa figure initially stated in the application as a conservative figure. The Canford facility is expected to significantly expand its RDF production capability in the near future to around 150,000 tpa and this waste is expected to be diverted to the Portland facility. As such there is a considerable volume of Dorset derived RDF available and the Portland ERF is suitably sized. It is also likely that, with additional RDF processing capacity at Portland, other existing waste operators will look to invest in RDF production capacity to supply Portland, avoiding the more expensive option of exporting out of county to landfill or other ERF facilities. The Supplemental Planning Supporting Statement and other supporting documents clearly demonstrate that the facility is in accordance with the proximity principle. The ERF would manage RDF, in so far as this is residual waste from which no further recycling or value can be gained other than energy. In encouraging more of Dorset's waste to be processed to RDF, more material will be recovered from waste that would otherwise go to mass burn ERF or landfill, increasing recycling rather than competing with it. As a merchant facility, the applicant cannot accept conditions limiting waste sources but the applicant is willing to enter into an appropriately worded planning obligation that would require the applicant to commit to making reasonable endeavours to source RDF from Dorset where such waste is available and can be secured on acceptable commercial terms (see chapter 5 of the Supplemental Planning Supporting Statement). Whilst RDF produced in Dorset is shortly expected to be transferred to the Bridgwater ERF, this is a significant distance from Dorset and further than Portland. It also represents an out of county solution contrary to the self-sufficiency principle and the DWP strategy to manage Dorset's waste in Dorset. The Carbon

			Assessment also concludes that this is less beneficial in carbon terms than an ERF at Portland that provides shore power benefits. . The UK does not have sufficient capacity to manage residual waste as evidenced by the high volumes of waste that are still being landfilled or sent to Europe for treatment in ERFs. The planning policy case for the Portland ERF project in terms of its compliance with the DWP need and site allocations is set out in the Planning Supporting Statement and the Supplemental Planning Supporting Statement. These conclude that energy recovery is part of the DWP residual waste strategy and that unallocated sites can come forward where these have advantages over the allocated sites. The Portland ERF site can fully demonstrate such advantages. The Carbon Assessment demonstrates that the additional carbon emissions derived from transporting RDF from Canford to Portland is off-set by carbon savings derived from the provision of shore power and/or district heating and outperforms all other Dorset based and identified UK based alternative facilities. Further, on the basis that district heating is also provided it outperforms European facilities which historically have been significantly more efficient than UK operations.
8.	*Grid Connection*		
		• The ES sets out the route of the grid connection, but no information is provided on how this grid connection will be constructed. It is not clear whether the cables will be buried or whether they will be overground or what, if anything, has been assessed • If there were to be a need this could be met by upgrading the existing supply from the mainland	The grid connection would be constructed with underground cables, similar to other infrastructure. Further details as to how the ERF would be connected to the electricity grid and shore power is provided in the submitted Grid Connection Paper. The Shore Power Strategy report and the Energy Need Statement provide details as to the constraints to the existing supply network and why it is not economically feasible for the mainland supply to be upgraded to meet the Port's requirement for shore power.
9.	*District Heat Network*		
		• Powerfuel have not specified an actual customer for district heat. They use the words 'potential' or 'expected' which might give the impression of an agreement where in fact none exists. They mention the prisons. • How are you going to get the pipes there? • The heat would have to be ducted underground to the prisons and it is hard to conceive of any viable route which would not cross protected areas (SSSIs etc). The location of the site adjacent to a steep hill with cliffs also makes ducting of heat pipes unviable. District Heating is one of the pillars on which PfP try to argue that their plant would be carbon neutral. • Local and national guidance requires that new incineration plant should be able to supply a local heat network • The pipes will be ugly and potentially accessed by terrorists • The construction footprint for this scheme would be huge and would cancel out any gain in terms of use of heat • Any consent should have clause inserted ensuring the plant has the relevant technical equipment (PHE, Controls, Underground Piping etc) installed during construction and run to the boundary fence ready for future use. Only ~25% UK WtE plants currently utilise heat off take. There is precedent for this type of condition in any planning consent or via a S106 agreement • Installing underground ducted pipes to the prison via the road network would not be viable as it would involve the pipes travelling along Castletown, Castle Road and Verne Common Road, a distance which would mean that most heat would be lost en-route.	The applicant has held extensive discussions with the Ministry of Justice (MoJ) in respect to the potential opportunity to meet its heat demand for the two Portland prisons, including technical feasibility. The applicant and the MoJ are working towards an agreed memorandum of Understanding (MoU) confirming that the MoJ would take heat from a heat network if this is provided. The prisons would therefore provide the anchor tenants for the network, with potential for future expansion to other heat customers. The District Heating report provides details on a route that is viable from a technical and planning perspective, using existing roads and land within Port control, without crossing any ecologically designated areas. With a Government backed heat customer identified and a MoU in progression, the ERF is highly likely to deliver the required heat network. The ERF would be capable of supplying a local heat network, as required in local and national guidance. The heat pipes will be installed underground and would not be visible. We do not understand the reference to "a terrorist attack" noting the pipes will be transporting 80ºC hot water which is unlikely to be a key target.

		• PfP's carbon calculations repeatedly include supply of district heat they should be discounted • It is not clear that there is a good business case for siting the incinerator plant in this location. • The suggestion of a local domestic heating network is economically unrealistic, as evidenced by the lack of commercial interest • Powerfuel Portland have no plans to build infrastructures for heat transfer to the community. No community beneficiaries have been identified, and underground heat pipes to HMS Verne & Grove Prisons, identified as 'potential customers' are unfeasible	The applicant has stated that the ERF will be CHP ready and will be designed and constructed with equipment in place enabling the heat network to be connected. It has also offered to commit to an obligation in the s106 legal agreement for the ERF to supply such a local network with heat, subject to suitable commercial agreement being reached. The MoU being progressed with the MoJ makes this more likely to be achieved. The District Heating report provides details on the technical viability of implementing the heat network to serve the prisons. The heat pipelines are insulated and connection between the ERF and the prisons is achievable without significant heat loss. The installation of the heat network and long term supply and associated carbon benefits of heat to the prisons and potentially other users would far outweigh the relatively limited carbon input required during construction. The Carbon Assessment demonstrates that the Portland ERF with shore power capability outperforms all other identified facilities from a carbon perspective. There are additional carbon benefits of establishing a local heat network, which is supported by national and local policy frameworks. As demonstrated in the District Heating report, the MoJ interest in taking heat from a network confirms the credibility of the proposal and underlines the technical and commercial viability of its implementation. The applicant has demonstrated that there is high probability that the heat network will be delivered and that substantial weight should be attributed to the advantage of delivering a local heat network and carbon reductions.
10.	*Health Impacts*		
		• Health of residents exposed to the toxic residue of the incineration process will be adversely affected. • I fear that the air quality in the immediate area would be affected by the increase of congestion to a narrow road due to increased traffic due to HGV's and any employed at the site • There is published evidence in peer reviewed medical journals that fine particulate pollution is responsible for both cardiovascular and cerebrovascular mortality. The danger is greater than previously realised. • There are concerns around start-up and shut-down of incinerators as most assumptions around their safety are taken from data based on emissions during standard operating processes • The type of waste incinerated will be continually changing, this means unknown unidentified compounds will increase the potential for acute toxic effects on the immediate neighbourhood and further afield • The authorities have a duty of care to its citizens, which, I feel, would be breached should they grant permission for this waste plant. • Given the population carries a disproportionate level of ill health, we should not expose the population to further risk through adding a significant direct pollution source to the area. • A recent study (2020) of more than a thousand adults in south east London by researchers at Kings College, London (led by Dr Bakolis) found that 'an incremental increase in nitrogen dioxide, heightens the risk of common mental disorders by 39% and that people living in places with higher levels of particle pollution are twice as likely to experience mental health problems as those in the least polluted areas.' The other health impacts would be respiratory. That conclusion must raise serious concerns regarding this proposal • Incinerators are associated with an all round linear increase in mortality - Higher incidences of all cancer and congenital abnormalities Incinerators are a major source of carcinogenic dioxins, mutagens and other hazardous fine particles in the air. The evidence is irrefutable. • The health of thousands of residents and 1200 prisoners deteriorate	The emissions from the ERF have been modelled using sophisticated air quality modelling and this is subject to independent checking by Dorset Council's own technical consultants and is also subject to rigorous review by the Environment Agency under the Environmental Permitting regulations, the statutory authority for controlling emissions. The potential risk to human health from the proposed ERF has been assessed based on the air quality modelling dispersion, which concludes that pollutants in emissions are well below permitted levels set to protect human health. The Human Health Risk Assessment (HHRA) and Health Impact Assessments (HIA) and updates together demonstrate that the proposal will not have an adverse impact on public health. The references made to diseases and academic papers by consultees are ultimately considered by Public Health England (PHE), the Government's statutory advisors on such matters. PHE has reviewed all academic research and papers in relation to health impacts from such facilities and has adopted the following stated position. 'modern, well managed incinerators make only a small contribution to local concentrations of air pollutants. It is possible that such small additions could have an impact on health but such effects, if they exist, are likely to be very small and not detectable'. PHE's consultation response has considered the submitted information and in respect to air quality and human health has concluded that: *"The submitted assessments does not specify specific human sensitive receptors but identifies the maximum predicted process contribution for residential areas. No significant impacts have been identified in the documentation, and PHE is satisfied*

			that the applicant is using a model and assessment criteria that are in line with UK guidance and good practice…. *PHE is satisfied that the approach taken in the assessment and the operator has adopted conservative but not over-precautionary approaches to assessing the potential risks."* Also in respect to traffic: *"It is, therefore, expected that any increased vehicle movements will not have a significant impact on local air quality, including at locations identified as being sensitive to traffic emissions."* In respect to fugitive emissions to air (dust and odour) PHE concludes that: *"We would expect that the use of a construction environmental management plan (CEMP) employing appropriate mitigation measures would ensure that dust does not have a significant impact on health during the construction phase. PHE note that the operation of the ERF will be subject to an Environmental Permit, the conditions of which would ensure that fugitive emissions beyond the site boundary are kept to a minimum."* Overall, PHE concludes that: *"PHE is satisfied that the applicant has approached the Environmental Impact Assessment (EIA) in a manner consistent with the UK requirements. They have utilised a satisfactory approach and methodology to predict the likely emissions, distribution of a range of key pollutants, and the impact on the local environment and receptors. The proposed facility will be regulated through the pollution prevention and control regime and we would recommend that the regulatory authority ensures that it will operate to Best Available Techniques (BAT)."* The PHE conclusion based on the technical information provided in the planning application and associated EIA confirms that the ERF would not have an adverse impact on public health and this will be further considered and regulated under the Environmental Permitting process.
11.	*Cultural Heritage*		
		• There are grade I and II listed buildings in the area who's settings would be adversely impacted by the plant. • Castletown is a conservation area and recently there have been many positive contributions and investments to the improvement of the area from residents and businesses. This development will seriously detract from the local landscape area. The detrimental visual impact will irreversibly damage the seascape • The effects and impacts of the proposed industrial building and plume, located on a site within the port has a significant effect on the settings of designations that have been awarded to the local landscapes, coastline and seascape including the World Heritage Site, AONB, and also to a Scheduled Ancient Monument, listed structures at sea, and architectural listings and conservation areas. • The methodology used in the cultural heritage assessment is vague and ambiguous and seems to be designed to underplay the significance of heritage impacts • the proposed ERF will have a long term significant adverse effect on a number of listed buildings including the breakwater and former dock offices and the East Weare batteries as well as the Grade II* Verne Citadel and Portland Castle • The courts have established that the desirability of preserving listed buildings and their settings should not simply be given careful consideration but should be given	The potential impact on local heritage assets, including Scheduled monuments, listed buildings and structures and conservation areas has been fully assessed by the heritage assessment that formed part of the EIA. This has been considered by Dorset Council's conservation officer who has concluded that there would be some harm caused to the setting of designated and undesignated heritage assets, but this harm was 'less than substantial'. On that basis any harm would need to be considered in the context of any public heritage-related benefits in line with NPPF guidance. The applicant has held further discussions with Dorset Council's conservation officer, in association with Historic England, to develop a Framework Heritage Mitigation Strategy that would facilitate works to be undertaken to remove scrub and stabilise the structure's condition, with future management, to enable the E Battery (scheduled monument) to be removed from the Historic England At Risk Register. Other benefits would include the establishment of a permissive public path across the Portland Port land estate, linking up existing paths and facilitating an around island route, to enable public appreciation of the heritage assets in this part of East Weare, together with the provision of interpretive information in respect to the various heritage assets.

		'considerable importance and weight' when the decision-maker carries out the planning balance. The fact that the ERF would have an adverse impact on the setting and significance of a range of heritage assets weighs heavily against it • I agree with the concerns raised by Historic England regarding the potential impact of this proposal on the setting and significance of several nationally important scheduled monuments that form a key component of the historic port • Locality the potential for any development to have direct and indirect and cumulative impact will need to be balanced against other sustainable development objectives	The principles of the Framework Heritage Mitigation Strategy have been discussed and developed with input from Dorset Council conservation, ecology, Historic England and Portland Port and broadly supported by all parties as deliverable. The Framework Heritage Mitigation Strategy will ensure that any harm caused to the setting of heritage assets is more than off-set by the public heritage-related benefits.
12.	*Light Pollution*		
		• Objections to the light pollution which I am informed is often on for 24 hrs of the day. • Red aviation warning lights will be provided on or near the top of the chimney stack in accordance with CAA and international guidance. Do the Civil Aviation authority have any observations which would be material considerations on this application? • Will safety needs of those flying in the area will be satisfied with the provision of just a night light at the top? • At present there is no provision in the design for highly conspicuous painted manifestation included in the design which might make it highly visible to emergency flights attending to an incident in the area	The planning application is accompanied by a Lighting Statement that considered the potential for light spill taking account of the exiting lighting conditions and the proposals for lighting at the ERF. It sets out a range of mitigation measures to minimise the potential for light spill and a lighting strategy. It concludes that operational requirements can be met whilst minimising light spill beyond the site and the surrounding area. In addition additional photo views and montages have been submitted at the request of the Dorset Council landscape officer to determine the longer view visibility. These are provided in the ES Addendum and also the DAS Addendum and demonstrate that the proposed lighting would not cause any unacceptable visual impact from key viewpoints Statutory consultees have confirmed that a red warning light would be required on the stack, but no other concerns or requirements have been raised in respect to safety for aircraft.
13.	*Noise and Odour*		
		• What about the noise of the plant, which will be running continuously? • What about odours coming from the waste being transported into the plant? • What happens to unbundled waste being transported? Surely it can easily be blown into the sea and onto the land? • Prevailing winds are from the South West and will carry smell to the mainland as well as the island. • Increased noise will come from construction, operation and transport, the noise from operation and transport will be infinite • There are many homes, schools and businesses along the only route on and off Portland. Each and every one of these properties will be affected 24 hours a day by noise, vibration, odours and pollution from the increase in heavy goods vehicles • I also live near to Portland harbour and am already aware that noise from the port travels across the water on a calm day. Therefore this incinerator will increase noise levels • The direction of the wind will mean we will likely frequently be able to smell the fumes in Wyke Regis • The smell will drift over Weymouth and lower tourism • It will be necessary to keep household windows closed at times when the wind is blowing fumes and dust in their direction • There will be increases in noise pollution, leading to lost productivity • The noise from the incinerator will affect many residents in Castletown • 14.I object to these plans on the grounds that they would constitute a nuisance detrimental to the mental health and wellbeing of nearby residents through excessive, constant noise. Further to the noise, dirt, vibration and pollution from the 80 HGV movements per day required to service the incinerator, I believe the plans include 3 x industrial cooling fans, with no acoustic insulation. These fans will produce a noise level of	Although noise and vibration were scoped out of the EIA and not being significant, the original planning application was accompanied by a stand alone Noise Impact Assessment. This concluded that the noise effects on local residents and businesses, from the construction and operation of the facility were not considered to be significant. It also highlighted that construction noise would be controlled through best practice means of working and operational noise through the ERF building design. An updated Noise Impact Assessment has been undertaken to consider potential noise impact, with the benefit of baseline noise survey information (not possible at the time of the application due to Covid-19 restrictions), reflecting more normal transport and commercial activity. This assessment concludes that the predicted rating sound levels from the ERF would be below the background levels at the locations assessed. In absolute terms the levels are also low, indicating that the effect of noise from operation of the ERF would be not significant. The submitted Health Impact Assessment (HIA) has also considered the potential for health impacts associated with noise during construction and operation of the ERF and concluded that this would not give rise to any significant health impacts. Based on the submitted technical information the ERF would not result in any significant impacts arising from noise and vibration. Noise levels will be further controlled through the use of planning condition and the Environmental Permit Odour was scoped out of the EIA as not significant. Chapter 2 of the ES sets out the mitigation measures that would be put in place to control odour. The

		approx. 80-100 Db each. This constant noise, 24 hours a day, will have a significant detrimental effect on the mental health and wellbeing of close residents, especially at night.	Environmental Permit will also include conditions to prevent fugitive emissions beyond the boundary of the site. The information submitted demonstrates that the concerns expressed in respect to noise and odour are unfounded.
14.	*Planning Policy*		
		• The proposal does not comply with the NPPF • The development does not comply with the development plan objectives and policies (Dorset Waste Plan, West Dorset, Weymouth and Portland Local Plan and Portland Neighbourhood Plan) in respect to sensitive landscape designated areas (AONB and WHS), heritage assets (scheduled monuments listed buildings and conservation areas), important and designated ecological sites (European protected sites, SSSI, local designations and marine designated areas), highways, recycling, and emissions to air (including carbon dioxide). • Does not comply with Dorset waste policy of locating incineration facility near to a facility for treating the ash generated • Does not comply with Dorset waste policy that waste incineration development should be at one of the allocated sites under Policy 3. • Eco Sustainable Solutions have announced their intention to submit a planning application for the Parley site which IS one of the allocated sites. That incinerator would be less than a third of the size and would still be larger than necessary for the burning of RDF generated from Dorset Council residual waste • The proposal does not meet the criteria set out in Policy 4 in respect to the location of waste management sites • Contradicts the Dorset Council's Declaration of a Climate and Ecological Emergency' and the associated draft Strategy and Action plan • Does not reflect the UK Government objective to become the world leader in low cost clean power generation • The application is not in compliance with the Dorset Waste Plan in terms of either the location or the importing of waste from outside the area • The original extant planning consent was not for a Wte plant and traffic movements of this scale • The proposal will fail to 'safeguard and enhance local amenity, landscape and natural resources, environmental, cultural and economic assets, tourism and the health and wellbeing of the people.' • The availability of such a facility in Dorset can only serve to distract from what is rightly the main focus of this objective to ensure sustainability, to reduce waste (the top level of the hierarchy). Moreover, when Dorset is successful in achieving this objective, there will be insufficient waste available in the county to supply the facility, necessitating the importation of waste from other areas. • The proposed plant will emit a huge amount of the key climate change gas, carbon dioxide, and this conflicts with the Waste Plan • The siting of a waste incineration plant on Portland seems to destroy the proximity principle. If this plant goes ahead it will compromise sites and plans that Dorset Council have made in their current Waste Plan. • This contravenes the National Government climate change targets: it is not situated close to a source of fuel; there is insufficient UK waste for the plant's lifetime; and the location contravenes government policy in that it discourages recycling • This would seriously damage the area's visitor economy. • The incinerator does not contribute in any way to the local plan, nor does it contribute to the operations of a successful port	The applicant has fully explained within the submitted Planning Supporting Statement and the Supplemental Planning Supporting Statement how the proposed ERF complies with the relevant policies of the local development plan, including the Dorset Waste Local Plan, Weymouth and Portland Local Plan and Portland Neighbourhood Plan, together with support from other plans, strategies, and frameworks that are important material considerations lending further weight to the case for the development. These documents explain how the proposals accord with the key waste management principles of the waste hierarchy, self-sufficiency and the proximity principle and how these should be applied. The Dorset ERF will provide residual waste treatment capacity in Dorset that is capable of meeting Dorset's needs, removing the current need for Dorset's waste to be exported out of county and reducing the need for landfill. This accords fully with these key waste management principles. The submitted information also sets out how the proposed ERF at Portland will provide advantages over DWP allocated sites including provision of shore power, district heating, port location and ability to accommodate carbon capture and storage when this becomes viable. It also fully demonstrates how the proposed ERF would not prejudice other DWP allocated sites coming forward (including the Eco-Sustainable Solutions facility at Parley), should that be granted planning permission and be successful in raising funding, and would support delivery of the spatial strategy through provision of a proximate outlet for RDF currently being produced from Dorset's residual waste. The Waste Need Statement clearly demonstrates that there is a need for additional treatment capacity to meet Dorset's needs and more waste feedstock available in Dorset than what the ERF capacity could deliver. As set out in the revised Carbon and Greenhouse Gas Assessment, the Portland ERF would deliver significant carbon reduction benefits by off-setting carbon through recovery of energy to supply shore power and district heating in comparison to the existing waste management scenario and other scenarios, which off-sets any modest additional carbon emissions arising from transportation of RDF material. The technology provides a low carbon source of energy and fully complies with the national and local strategies, declarations and action plans for carbon reduction. The potential to support carbon capture and storage, as a consequence of land availability and port location, further demonstrates the potential for further carbon reductions and the locational advantage of the Portland site over other DWP allocated sites. The ERF will support the production of more RDF, from which recyclables are extracted prior to management at the ERF, therefore increasing Dorset' existing high levels of recycling and managing waste that cannot be recovered. It would support more recycling rather than less recycling as is suggested in some comments, as it would avoid untreated waste being exported direct to landfill or mass burn incinerators.

			The submitted Economic Impact Assessment demonstrates that the ERF will deliver substantial economic benefits for Portland, Weymouth and Dorset and the provision of shore power at Portland Port will safeguard existing jobs and support future local economic growth in tourism and other related activities associated with the cruise liner visit business. The extant consent for the WtE facility on the application site was proposed to be fuelled by vegetable oils (including waste oils), supplemented by waste tyres. Whilst the facility was termed an 'energy plant' it was intended and consented to be fuelled in part by waste materials and therefore is a relevant material consideration.
15.	*Shore Power*		
		• Given the main driver is to supply shore power (up to 15MW for shipping), this electricity would often not be available to the national grid, as was originally claimed. • On a practical level how will funders ensure compliance with the plant Power Purchase Agreement to sell all the electricity, if they plan to periodically offer shore power to the port. • AMP is a credible emission reduction technology provided only that the electrical power supplied to the vessel is generated from zero-carbon or renewable sources (wind, solar or nuclear). • The proposed Portland incinerator merely shifts the carbon/GHG pollution from the visiting ship's funnel, a few hundred metres to the incinerator smokestack; whilst contributing absolutely nothing to the reduction of local air pollution; thereby defeating all of the forthcoming regional (EU) and UK National objectives to improve air quality	Information in respect to the provision of shore power is provided in the original Shore Power Strategy report and the updated Shore Power Strategy report. The ERF will have an export capacity of 15.2MW and this power will be distributed between the shore power and the grid (subject to limited reduction if the facility operates in CHP mode). As demand will vary over time (ships will not be in port all the time), the excess energy will be sent to the local distribution grid. Appropriate financial mechanisms will be put in place to enable power to be distributed to shore power at the port. The ES Addendum and air quality assessment, provides quantitative information on the effects of shore power on air quality, resulting directly from shipping (cruise liners and RFA shipping) turning off their engines when docked in port. This demonstrates that the provision of shore power will deliver benefits in terms of net reductions in NO_x and particulates, and to a lesser degree sulphur. The revised Carbon Assessment concludes that shore power, facilitated by the ERF, would make a significant contribution towards achieving carbon emission reductions, by off-setting existing sources.
16.	*Tourism*		
		• Tourism (so important to the area) will be adversely affected. • Portland is a popular area for rockclimbers and several climbing areas are near the proposed site for this incinerator, which could be ruined by pollution and smell • Portland is home to the National Sailing Academy, which frequently hosts major international sailing regattas including the Olympics, because Weymouth Bay is one of the best sailing areas in the whole world. The incinerator would damage this reputation • We are seriously concerned with how people may experience the character of the local landscape and seascape and how this would impact on future visitor numbers and water sports businesses	The submitted Economic Impact Assessment demonstrates that the ERF will deliver substantial economic benefits for Portland, Weymouth and Dorset and the provision of shore power at Portland Port will safeguard existing jobs and support future local economic growth in tourism and other related activities associated with the cruise liner visit business. The applicant does not envisage that the ERF, by means of its location within a commercial port sited so that it is not visible from most parts of Portland, would dissuade rock climbers of sailors from continuing their activities and visiting Portland. There is no evidence that the provision of ERFs causes any reputational damage and it is considered that the ERF would form part of the industrial development associated with the existing commercial port. The site is a safeguarded employment site in the local development plan and is subject to an extant planning permission for an energy plant, comprising large industrial structures and stacks.
17.	*Traffic and transport*		
		• Road infrastructure is insufficient feeding • The incinerator accessed by lorry would make traffic congestion through Weymouth and on to Portland even worse than it is already daily	Potential impacts on road infrastructure and human health are considered in the submitted EIA and associated Transport Assessment, Air Quality Assessment and Health Impact Assessment.

		• HGV's are almost 7 x's more likely than cars to be involved in fatal collisions on the roads, in particular minor roads • Objector group counts of articulated lorries show that the number would increase by about 80% at Fords Corner and about 200% at Castletown • The increase in traffic, particularly lorries, is deeply concerning for roads that can already be extremely over-crowded in the summer. There is only one road route on and off Portland and access to the causeway is through residential areas. • Further congested from extra HVG vehicles is damaging to the local areas, to the quality of life of people and children living there, as well as having a detrimental effect on pollution, the environment and health as well as increased noise levels and damage to the road surfaces and adds to the likelihood of more accidents • There will also be an increase in traffic and the associated negative impacts during the construction phase. In an area which is trying to grow its tourism, for visitors to be faced with HVG vehicles moving on and off Portland, along with the congestion, particularly, in the summer months, will be greatly off-putting and not something that is conducive to nurturing this important local industry. • Any further traffic to and from Portland is going to have a negative effect • This traffic will also likely put air quality at Boot hill over the air quality limit and possibly in Chideock too if importing RDF from the West. • Surely a responsible Council should be asking, what is the very least we can do to ensure accidents are avoided in future? What are the very smallest measures we can take - now, today - to ensure there are safe, environmentally-sound routes to and from school for local children? • According to Public Health England, in the UK, between 28,000 and 36,000 deaths per year are attributed to long-term exposure to air pollution • The cycle route, the only "green" access to Portland, is adjacent to the road. It is already unpleasant, dangerous in bad weather, and the traffic intimidating for pedestrians and cyclists • The proposed Eden project will also attract extra traffic to the area. The existing Helicopter base is also an additional air polluter combined with the proposed increased traffic is not going to have a positive effect on our air	This has concluded that a safe access can be achieved and that the HGV movements associated with the facility when considered in the context of the overall highway network and traffic levels would not give rise to any significant highway impact. As such the concerns cited regarding the potential impact of the development on highway congestion and adverse impact tourism are without foundation. It also confirms that there would be no significant health related impacts arising either from the construction or the operation of the ERF, including from vehicle movements. Potential air quality impacts on Boot Hill and Chideock were considered as part of the original EIA and reported in the ES. Further consideration has been given to these aspects in the ES Addendum and associated air quality assessment and HHRA in respect to traffic and process emissions. In respect to Boot Hill, this found that the original ES assessment conclusion, that the effects would not be significant, was unchanged. The Chideock AQMA lies to the west of the proposed development, along the A35. As set out in technical appendix A (scoping) of the original ES, the HGV routing breakdown set out in ES chapter 11 (traffic and transport) confirms that the additional HGV movements on the wider Dorset road network will be below the levels that would trigger the requirement for detailed analysis. Only eight of the 80 HGV trips are predicted to be along the A35 westbound. For this reason, the impact of the proposed development on any AQMA was scoped out from the assessment.
18.	*Landscape and Visual Impact*		
		• This will destroy the view for which many visitors come (and return year after year). Visually the incinerator is hideous • This area of the south coast is a national heritage site and the buildings which will be visible from much of the cost line around Weymouth would decimate the natural landscape • It would have a detrimental effect on the landscape of Portland Island and the setting of the Jurassic coast world heritage site, as well as impinge on the Dorset AONB (potentially a new National Park) • The building looks very over-sized compared to anything else in the area and would spoil the area of specific interest and the Jurassic coast which the town and council should be promoting rather than spoiling. • The building would be a major eyesore • Such a large industrial plant, with a stack and plume which would be visible from Weymouth Bay and Portland Harbour, would have a detrimental effect on the landscape of the local area • The plan to ‘camouflage’ the stack with a photograph mimicking the landscape is, frankly, laughable , it demonstrates how ignorant the applicants are about Portland’s specific geography; nobody local to the island would believe a photograph stands a chance of surviving the salt and high winds of a Portland winter. • The proposed architectural style is that of brutalism, which certainly doesn't complement the landscape	The ERF has been carefully and sensitively designed, with guidance from Dorset Council landscape officers, to minimise visual impact on the local setting and character and wider views from designated landscape areas such as the AONB and the WHS. The design reflects the local geology of Portland and its immediate cliff setting, with this also translated into the use of appropriate cladding materials to provide a high quality building that provides a landscape feature, but also successfully blends into its surroundings to limit visual impact. The ES (Landscape and Visual Impact Assessment) recognises that whilst the development would result in some impact, overall this is deemed to be acceptable. Further information has been requested by Dorset Council in respect to the potential effects of the plume, and night-time visibility associated with lighting. This has been provided by means of an update to the original LVIA, as part of the ES Addendum. Further information is provided in the DAS Addendum document in covering the likely number of occurrences and the timing of these, together with the duration of any visible plume based on meteorological data and the relative (and maximum) length of plume expected, together with additional visualisations These results confirm the conclusions set out in the original landscape, seascape and visual impact assessment that the plume is likely to produce only a very minor alteration to the view for a very limited number of hours. As a result, the visual

		• The building will have a combination of printed PVC mesh with an image of the cliff face vegetation and profiled metal cladding. As the PVC mesh will not reflect any seasonal changes in the surrounding vegetation, it will still represent an alien feature in the landscape. • The long-term durability of this building treatment option needs to be demonstrated, preferably by showing that it has been successfully used on a building of this scale and in an exposed coastal location. As the proposed building treatment is critical to the mitigation of landscape and visual impact, if the long-term durability cannot be satisfactorily demonstrated, then an assessment should be undertaken of an alternative option or without the PVC mesh in place. • This mesh concept can only work when it is viewed from particular viewpoints. Other viewpoints will reveal a massive structure out of scale with every other building within at least a 30 mile radius. • This development is of a size and scale completely incompatible with its setting. The main building is absolutely enormous and will dwarf all other structures in the Port area, while the chimney at 87m above sea level would constitute an eyesore totally out of keeping with the rest of the environment • PfP have refused to comply with the instruction that they should produce images with the stack plume showing, as the visual impact of the plant is atrocious from all viewing angles without it; a 200m visual plume would highlight even further that that this development is completely out of scale with its surroundings • This massive plant would be a major eyesore, significantly damaging not only the iconic character of the Isle of Portland but also views from miles around, including the impressive views of the Isle as approached along the A354 causeway, distant views from Dorset's Area of Outstanding Natural Beauty and views from the sea. This would fundamentally harm the setting of the Jurassic Coast World Heritage Site and the landscape character of the whole region	effects for each of the receptors assessed in the ES chapter remain as originally assessed. The design approach is set out in the original DAS and the approach to develop a building that appears recessive through the use of a cladding system reflective of its setting and context is supported by Dorset Council's landscape officers. Further information is provided in the DAS Addendum in respect to the use of the pvc mesh cladding, and its durability and effectiveness with options identified for achieving the required tonal variation. The proposal is to apply this treatment to the main building (not the stack). The applicant is confident that the proposed approach will be successful and the details of cladding can be agreed with Dorset Council officers by planning condition. Whilst it is recognised that the scale of the ERF is large, further contextual analysis has been undertaken to consider the proposed building in the context of existing built development associated with the operational port area and its wider context. A wrap-around elevational drawing is provided in the DAS Addendum, illustrating that the proposed development sits comfortably within the scale of Portland and the existing large structures at the port and other buildings located within the East Weare. The development is therefore not out of scale when viewed in the context of existing development and buildings, as is being suggested by some comments.
19.	*Water Pollution*		
		• As a sailor and fisherman I am hugely concerned about the risk of water pollution • At present we have great diversity of marine life in the bay. Local restaurateurs, pub and café owners gain significant income from promoting and serving the local catch of fish and crab. Increased pollution in Weymouth Bay and the waters around Portland will affect marine life. Even if this were not the case, would visitors really want to eat fish or crab that has been caught in the waters around an incinerator burning toxic waste? • The increase in cargo to ship waste and removal of the resultant toxins increases the risk of pollutants from oil and from toxic waste. This will have a serious impact on marine life and to the health of our entire coastline and residents • As a fishing family we rely on making our living from the sea. We do not know what the impact of particles or run off would have to marine life. Have long term studies been done? • Pollution of sea and marine creatures around Weymouth and Portland could be irreversible should this go ahead, shellfish and fishing industries could be hit as fish shellfish, such as prawns razor fish winkles cockles breeding fish in Portland harbour could become subject to many changes in pollutants and the effects of tonnes of carbon dioxide mixing with salt water • The marine area around Portland harbour and the seas which surround Weymouth and Portland and very sensitive areas bursting with a multitude of marine inhabitants and the potential risk of adding residual contaminants into the tidal flows could be catastrophic to these delicate eco systems that are around our shores , we have a number of marine conservation areas as well. • The impact of low level but long term mercury emissions over coastal fisheries has not been adequately studied by consultant authorities • Humans bathing and engaging in water-sports, would be at potential risk from residual contaminants in water discharged from the plant into the sea	The potential environmental effects of the proposed ERF are considered in the original ES, taking account of the measures proposed to protect the water environment. These control measures, relating to the control of surface water drainage and waste water are set out in Chapter 2 of the ES. Potential environmental impacts form the proposed development are also addressed in chapter 8 of the ES (ground conditions and water quality). This details a number of measures that will be taken as part of an environmental management system to safeguard water quality. The assessment has also considered the potential for spillages form vehicles and from the delivery of RDF material to the site by ship. A framework Construction and Environmental Management Plan (CEMP) has been submitted, to be agreed with the Environment Agency and Dorset Council, to ensure that there are no adverse impacts on coastal water or ground water quality. The operation of the site will also be controlled through the Environmental Permit. As such the potential for any pollution of the water environment is considered to be negligible and not significant. The applicant has noted the concerns raised by local people in respect to the potential for pollution, and specifically the effect that emissions to air and water this might have on shellfish and the wider marine environment. The potential impacts of the proposed ERF on the marine environment have been assessed by specialist marine consultancy ABPmer, and its report is submitted to Dorset Council as further environmental information under Regulation 25 of the EIA Regulations. Overall, the ABPmer report considers that the concerns raised are unfounded and that the proposed ERF would not have any significant effects (in respect to

		• The potential for heavy metal build up in marine life cannot be ignored if the run off becomes contaminated. • There is also a high risk that the sea will be polluted as the rubbish cannot be 100% contained and this will kill birds, fish and marine mammals • The increase in shipping also causes concern for the state of the harbour and local dive sites if large ships are constantly disturbing the sea bed • Sea Grass is a necessary breeding ground for rare and vulnerable species such as seahorses and increased pollution and sea traffic will affect these and other species • there are no contingencies in case of a complete failure of the plant and no mention how one of England's most important Sea Bass spawning ground would be protected	potential emissions to the air or water) on the marine environment, protected areas or associated human health.

FICHTNER
Consulting Engineers Limited

Powerfuel Portland Ltd

Portland ERF

Response to UKWIN Planning Application Submission

1 Introduction

UK Without Incineration Network (UKWIN), a national group which campaigns against energy-from-waste (EfW) plants, has made a submission to the planning authority (Dorset Council) dated February 2021.

We have responded to each section of UKWIN's submission below. We have not necessarily responded to every word, but the failure to comment on something does not mean that we agree with it.

2 Committee on Climate Change

In paragraphs 7-32, UKWIN argues that the Environmental Statement (ES) which was submitted with the planning application misrepresents the position of the Committee on Climate Change (CCC).

The ES explained the CCC's position in its statement of 2 May 2019, which was the latest statement when the ES was prepared. UKWIN does not present any evidence to dispute the statement within the ES. The Applicant continues to consider that the CCC's position in May 2019 was that it was critical to divert waste from landfill, which the Facility would support.

UKWIN then include a variety of quotes from the CCC which post-date the ES. The Applicant agrees that the CCC's position supports an increase in recycling and a decrease in landfill, and that there is general support for the application of CCS to EfW plants in the future. However, it is important to acknowledge that the CCC notes that government support is required.

This is most obvious in "The Policies for the Sixth Carbon Budget Report", where UKWIN quotes some but not all of the primary policy. On page 188, the CCC states the following, where the points in bold were excluded by UKWIN:

> *"If EfW plants under construction and granted planning approval in the UK were all built, and plant utilisation rates remain unchanged, this would add3-10 MtCO2e/year to UK emissions. To prevent this major increase, either a substantial fraction –potentially a majority –of the EfW plant pipeline will have to remain unbuilt, EfW fleet utilisation rates will have to fall, or else carbon capture and storage (CCS) will need to be installed on plants from the mid/late-2020s onwards to mitigate the additional emissions.*
>
> ***–Falling EfW utilisation rates may only be possible in some cases via renegotiation of waste management contracts, in order to prioritise prevention and recycling efforts instead. Government support to assist Local Authorities will likely be required.***

–Government policy could also focus on EfW emissions, either through carbon taxation or inclusion in a UK ETS, and/or providing incentives for CCUS to be installed.

–For those plants not yet under construction, new energy-from-waste plants (and plant expansions) should only be constructed in areas confirmed to soon have CO2 infrastructure available, and should be built 'CCS ready' or with CCS."

The third bullet point should be read in the context of the Waste Sector Summary of the CCCs Sixth Carbon Budget Report, which notes (on page 16) that *"The costs of installing CCS on EfW plants are calculated by Element Energy modelling, factoring in energy inputs and the location/distance to sequestration points, and are typically £140-260/tCO2e."* Given that the current carbon price for the UK ETS is around £50/tCO2e, it is clear that further support may be required. This is presumably why the Balanced Net Zero Pathway scenario presented in the Waste Sector Summary assumes that *"All EfW plants are assumed to install CCS by 2050, starting from the early 2040s"*, rather than expecting CCS to be installed immediately.

Subsequently, the CCC has published a new report – "Progress in reducing emissions. 2021 Report to Parliament" (June 2021). This report takes a less positive view of EfW. Its key recommendations to government (on page 128) are as follows:

- *"The UK's combined recycling rate needs to increase from 52% to at least 59% by 2025 (45% to 50% for household waste), from which point key biodegradable waste streams should be banned from going to landfill.*
- *Energy from Waste (EfW) emissions, which have been rising rapidly, need to be constrained at approximately today's levels through increased waste prevention, re-use and recycling, and policy to enable EfW plants to be fitted with CCS from the late 2020s.*
- *Methane capture rates need to increase from 55% to 80% by 2050 to address fugitive emissions from landfill, while further actions are needed to reduce methane emissions from composting and wastewater treatment."*

The CCC also published in June 2021 its "Joint Recommendations – 2021 report to parliament." This includes a number of recommendations on waste policy, including the following priority recommendations to DEFRA:

- *Introduce the necessary planning guidance and policy to ensure any new Energy from Waste plants (including incineration, gasification & pyrolysis facilities) are built with carbon capture usage and storage (CCUS) or are 'CCUS ready'.*
- *Set out how existing Energy from Waste plants will be supported to be retrofitted with CCUS from late 2020s onwards, with 2050 a backstop date for full CCUS coverage.*
- *Set out capacity and usage requirements for Energy from Waste consistent with plans to improve recycling and waste prevention. Issue guidance to align local authority waste contracts and planning policy to these targets.*

The Applicant notes that the CCC does not make policy, but merely recommendations to government. The Applicant also notes that the CCC has decided to move from its position in December 2020 that the Balanced Net Zero Pathway requires the fitting of CCUS from 2040 to a recommendation in June 2021 for fitting of CCUS from the late 2020s, which is consistent with its "Tailwinds" scenario including much faster emissions reductions. It is not clear why the CCC has made this change. The CCC's recommendations also include gradual banning of waste from landfill, but only once there is sufficient alternative treatment capacity and CCUS has been fitted to sufficient EfW plants.

However, as explained in the Planning Statement, the Portland ERF is well placed to install CCS and export the captured CO2 by ship. Hence, the proposed Portland ERF will be CCS-ready, consistent with the CCC's recommendations.

3 Sequestration of Biogenic Carbon

In paragraphs 33 – 76, UKWIN argues that landfill should be given a credit for sequestering biogenic carbon and then carries out some calculations on the basis of this assertion. The Applicant does not accept this position and therefore does not accept the calculations.

In paragraph 37, UKWIN includes a quote from Eunomia's 2006 report for Friends of the Earth and links to a separate document which includes quotes from two further reports from Eunomia. The Applicant notes that the context of the three repo rts is important:

- The 2006 report "A changing climate for energy from waste" was written by the Chairman and founder of Eunomia for Friends of the Earth. The quotation represented the author's opinion on the correct treatment of biogenic carbon when comparing EfW with landfill. This opinion has not been generally accepted by relevant authorities or government, although it has remained Eunomia's position since then.
- The 2010 report was prepared for the European Commission but, again, represents the author's opinion on the correct treatment of biogenic carbon. The lead author from Eunomia was the same as for the 2006 report. As far as the Applicant is aware, the 2010 report did not lead to any changes in the approach to lifecycle assessment.
- The 2015 report was again prepared by the same author as the 2006 and 2010 reports. It was commissioned by Zero Waste Europe (a group which opposes the use of EfW) and was specifically intended to attack the approach taken under the United Nations Framework Convention on Climate Change (UNFCCC) to assessing the greenhouse gas emissions from the waste sector as part of the national inventories. The UNFCCC reporting guidelines currently mandate the use of the 2006 IPCC Guidelines for National Greenhouse Gas Inventories, which specifically exclude biogenic carbon. As far as the Applicant is aware, neither the UNFCCC nor the IPCC has changed its guidelines in response to the Eunomia report.

In summary, while these quotations demonstrate that the Chairman of Eunomia has held a consistent position on this point since 2006 and that UKWIN agrees with this position, the quotations do not support a change in approach by the relevant carbon authorities.

In paragraph 38, UKWIN also states that similar views have been expressed in the academic literature, but provides only one reference to an article published in the Journal of Industrial Ecology in January 2012. UKWIN provides a link to "a version of this paper", which makes it clear that the article is based on the PhD thesis of Annie Levasseur of the University of Montreal in which Ms, now Dr, Levasseur proposes a new approach to biogenic carbon in dynamic life cycle assessment. While this is an interesting thesis, the Applicant does not consider that it represents the academic literature.

The Applicant also notes that the conclusion of the thesis is counter-intuitive. The thesis considers the case study of the use of a wooden chair over 100 years and it concludes that, from a climate change perspective, it would be preferable to landfill the chair at the end of its life or to burn it with energy recovery, rather than refurbishing the chair. This conclusion does not match the waste hierarchy, as it promotes disposal or recovery over reuse.

Paragraphs 39-47 set out UKWIN's calculations on the basis of sequestering biogenic carbon. The Applicant does not accept the basis for these calculations and so has not commented on them.

In paragraphs 48-58, UKWIN disputes the suggestion that a combination of 50% sequestration and 68% landfill gas capture rate is conservative, but does not appear to understand the point which is being made, which is that the two assumptions interact.

Section 6.3 of the Defra Report "Energy Recovery from Residual Waste – A carbon-based modelling approach", read as a whole and attached as Appendix A, clearly indicates that the authors did not recommend that the potential carbon sink effect be included, as explained below:

1. While the impact of the sequestration effect on the carbon model was considered in paragraphs 172-184, the Defra 2014 Report notes that there was considerable uncertainty around the calculation. Paragraph 179 states:

   "A range of different values exist in the literature for the amount of biogenic carbon that is sequestered in landfill. The baseline assumptions used in this model result in a very high level of sequestration, around 53% for the baseline composition. The outcome will be sensitive to the level of sequestration in two ways. Reducing the level of sequestration will require less biogenic carbon to be included in the EfW side of the model and will also result in more methane being emitted from the landfill side. Both factors will favour EfW over landfill."

2. In the submitted Carbon Assessment for the facility (included as technical appendix E of the ES), the Applicant has used a sequestration rate of 50%, which is considered to be a conservative assumption. The Government report "Energy from Waste – A Guide to the Debate" suggests that up to half of the biogenic carbon would be sequestered.
3. Paragraph 184 of the Defra 2014 Report concludes that further work is required to understand sequestration levels:

   "There is an additional complicating factor regarding the assumptions around sequestration levels. The proportion of landfill gas captured is difficult to measure directly so assumed levels have previously been derived from a combination of measurement of the amount of landfill gas captured as a proportion of the amount modelled as being produced. However, the modelling for this also contains assumptions on sequestration. Therefore, any lowering in the sequestration assumptions will also inherently reduce the assumed level of landfill gas capture. This interaction has not been captured in the above analysis. As a result the scenarios outlined above will be particularly sensitive to sequestration levels with any drop in assumed sequestration significantly favouring EfW over landfill. Given all of these interactions there is a high degree of uncertainty and further work is required."

4. The Applicant considers this section of the Defra 2014 Report, taken as a whole, provides an explanation that the assumed landfill gas capture rates in the Defra 2014 Report are based on a high sequestration rate, which may not be correct, and which is at the higher end of rates in the literature (as stated in paragraph 179). If the sequestration rates are lower, then more landfill gas is being generated than expected and so the capture rates would be lower, making the impact of landfill considerably worse. Hence, the approach used in the Defra 2014 Report and in the Carbon Assessment (i.e., using high sequestration and landfill gas capture rates and not giving an additional credit for sequestered carbon) is considered to be conservative, in that it will tend to favour landfill over EfW facilities.

This can be illustrated with a simple example. The base assumptions in the Carbon Assessment are that 50% of biogenic carbon is sequestered and 68% of the released landfill gas is captured. This means that, for every 200 tonnes of biogenic carbon in the waste, 100 tonnes is sequestered, 68 tonnes is used to generate power and 32 tonnes is released as landfill gas. If, instead, only 45% of the biogenic carbon is sequestered, then 90 tonnes of the biogenic carbon would be sequestered and 110 tonnes would form landfill gas. In this example it is known, from measurements, that 68 tonnes is used to generate power and so the landfill gas capture rate would be 68/110 = 61.8%.

The carbon benefit of the Portland ERF can then be recalculated using these revised figures. The carbon benefit increases (in the nominal case) from 21,912 tCO_2e/yr to 46,713 tCO_2e/yr. At a sequestration rate of 29.5% (which is the sensitivity figure used in the Defra 2014 report), the benefit increases to 123,687 tCO_2e/yr. This is why the Applicant considers that the current assumptions are conservative.

UKWIN's arguments in paragraphs 59-65 refer to the Defra 2014 report, and so do not add anything further.

In paragraphs 66 to 67, UKWIN asserts that the sequestration rate is likely to be higher in the future because food and garden waste will be removed. Therefore, we have evaluated the sequestration rate which would be expected using the Decomposable Organic Carbon Content (DDOC) figures from Melmod, as reported in "Review of Landfill Methane Emissions Modelling (WR1908)".

- For the nominal case, the sequestration rate of biogenic carbon would be 47.6%.
- For the maximum case, with a lower CV, the sequestration rate of biogenic carbon would be 47%.
- For an adjusted nominal case, in which we have removed 80% of the food and 70% of the garden waste for illustrative purposes, the sequestration rate of biogenic carbon would be 49%.

This confirms that the assumed sequestration rate of 50% is conservative, and remains conservative even if most of the food/garden waste is removed.

In paragraphs 68 to 76, UKWIN asserts that material from the Canford MBT plant would have a lower degradability. We have no data on the output from Canford MBT. However, if we assume that there is a reduction is degradability of 30% (which was the performance of the AmeyCespa Cambridgeshire MBT? facility) and that this applies to 60,000 tonnes of waste in the nominal case, we can calculate that the adjusted sequestration rate would be 52.8%. This figure changes the net benefit of the nominal case from 21,912 tCO_2e/yr to 17,953 tCO_2e/yr.

4 Landfill as the Counter-factual

UKWIN makes a few specific points in paragraphs 77 to 87 relating to the use of landfill as a counterfactual. The Applicant notes that Dorset Council specifically asked for this case to be considered, as well as the four additional cases which are considered in section 4.4 of the Carbon Assessment.

UKWIN suggests that there is current overcapacity in incineration plants in some European countries. This is correct for individual counties. However, in the EU as a whole, large quantities of municipal waste are sent to landfill. According to Eurostat[1], 53 million tonnes of municipal waste was sent to landfill in the EU in 2019. Therefore, the Applicant continues to consider that incineration plants in the rest of Europe would replace UK waste with waste from elsewhere.

UKWIN suggests four other counterfactuals which were not considered. This is primarily because Dorset Council did not request them. However, none of the counterfactuals are realistic in any event.

1. Biowaste being stabilised and sent to landfill. This is not being done in the UK. It was done in Lancashire for a short while, but this proved to be uneconomic.
2. Increased recycling. The Portland ERF will treat residual waste, so does not compete with recycling.

[1] https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Municipal_waste_statistics#Municipal_waste_treatment, accessed 8 June 2021.

3. An alternative plant equipped with carbon capture. This is because there are no such plants operational or planned and any incentive regimes which might lead to CCS would apply equally to the Portland ERF.
4. UK plants which operate as combined heat and power (CHP). This is because none of the UK plants which are in range of Dorset's waste are equipped with CHP.

5 CCGT as the Counter-factual

In paragraphs 88-108, UKWIN asserts that it is not appropriate to use CCGT as the counterfactual electricity source. The Applicant considers that the reasons for this choice are set out in section 3.1.3.1 of the Carbon Assessment and that almost all of UKWIN's points are already addressed therein. The Applicant continues to consider that CCGT is the correct counterfactual. For completeness, however, the Applicant has presented the results using the long term marginal emissions factor for 2024, the likely opening year, in the revised Carbon Assessment submitted with the ES Addendum.

However, the Applicant notes one further point. UKWIN asks for proof that EfW plants are obtaining capacity market contracts. The capacity market auction results are available from https://www.emrdeliverybody.com. As an example, EfW plants secured 74 MW of capacity (4.5%) in the T1 Delivery Year 2021/22 auction and 629 MW of capacity (5%) in the T4 Delivery Year 2024/5 auction, both conducted in March 2021.

6 Carbon Offsetting

In paragraphs 109-118, UKWIN casts doubt on the Applicant's commitment to carbon neutrality. It is difficult to see why. In paragraph 5.53 of the ES, the Applicant commits to agreeing a carbon assessment methodology with the local planning authority and then, if necessary, using verified carbon offsets to ensure that the process emissions are net zero over the lifetime of the plant. This commitment is expanded in paragraphs 6.302 to 6.313 of the planning statement.

The Applicant makes two primary responses to UKWIN's criticisms:

1. UKWIN disputes the appropriate baseline and notes that the methodology has not been stated. This is because the Applicant has committed to agreeing this with the local planning authority, which can be enforced via a planning condition.
2. UKWIN disputes the validity of carbon offsetting. While rejecting this criticism, the Applicant can only restate paragraph 6.310 of the planning statement:

> *"Objectors may question the validity of carbon off-setting and suggest that such proposals do not actually deliver on achieving carbon neutrality, or simply represent a statistical exercise. Such criticisms do not apply to this application because the applicant is prepared to back up its net-zero commitment by entering into a legal agreement with Dorset Council to ensure that the proposed ERF does achieve carbon neutrality. Whilst the precise measures to be applied have yet to be determined, carbon eutrality will be achieved through supporting a number of projects which may include those mentioned above, or sequestration through tree planting or re-wilding off-site or otherwise the use of verified carbon credits such as those marketed as Gold standard carbon credits by retail off-setters, or through supporting local community scale energy efficiency measures."*

3. UKWIN states “it is not surprising that the applicant is not arguing that any weight should be given to their proposed measures for 'achieving carbon neutrality' within the planning balance.” Nothing could be further from the truth and it is not clear why UKWIN chooses to mis-represent the Applicant’s position. The Applicant states, in paragraph 6.313 of the planning statement (our emphasis):

   > *“Given that the applicant is committed to funding additional carbon off-setting measures in each year that the ERF reduces GHG emissions (compared to baseline), and in each year that the ERF increases GHG emissions (compared to the baseline) will compensate for this by purchasing carbon offsets, the proposed plant will reduce GHG emissions over its lifetime and will achieve carbon neutrality, or better in every operating year.* ***This should be afforded great positive weight in the planning balance****.”*

7 Conclusions

UKWIN’s conclusions depend on their earlier arguments, which the Applicant does not accept. Hence, the Applicant rejects UKWIN’s conclusions in their entirety.

Appendices

A - Extract from Defra Report

Section 6.3 of Energy recover for residual waste: A carbon-based modelling approach, February 2014.

Table 20. Central methane scenario (60% initial capture) minimum lifetime biogenic content required

	Minimum lifetime biogenic content required %						
Plant efficiency	Existing plant 1995-2020	Existing plant 2000-2025	Existing plant 2005-2030	Existing plant 2010-2035	New plant 2015-2040	New plant 2020-2045	New plant 2025-2050
30%	40.19	42.46	45.98	50.31	54.8	58.93	62.39
25%	43.47	45.51	48.63	52.46	56.44	60.08	63.12
20%	46.71	48.54	51.26	54.59	58.06	61.22	63.85
15%	49.93	51.53	53.87	56.71	59.68	62.35	64.57

170. Cells shaded green indicate where the lifetime biogenic content required is less than the 50% currently used for deeming of Renewables Obligation Certificates (ROCs). Orange indicates where the content falls in the 60-68% range currently considered likely for mixed municipal waste. This indicates that for the central set of assumptions all plants are viable for municipal waste with a biogenic content at the top end of the commonly used range. As might be expected the low methane scenario required higher biogenic content than the central scenario for a given plant while conversely the high methane scenario required lower biogenic content.

171. Once the plant reaches the end of its 25 year life it needs to still be providing a carbon benefit for that life to be extended. The minimum biogenic content to extend a plant's lifetime to a given year is shown in the table below. Higher biogenic content is required to justify extending a plant's lifetime beyond the initial 25 years under this set of assumptions.

Table 21. Central methane scenario (60% initial capture) Minimum biogenic content required to extend plant life beyond initial 25yr lifetime

	Minimum biogenic content required to extend plant lifetime beyond initial 25 year period %						
Plant efficiency	Existing plant 1995-2020	Existing plant 2000-2025	Existing plant 2005-2030	Existing plant 2010-2035	New plant 2015-2040	New plant 2020-2045	New plant 2025-2050
30%	47.12	52.86	59.67	61.93	64.53	66.48	67.61
25%	49.77	54.84	60.63	62.61	65.03	66.77	67.85
20%	52.4	56.8	61.59	63.29	65.53	67.06	68.09
15%	55.01	58.75	62.55	63.97	66.02	67.34	68.33

6.3. Treatment of biogenic CO_2

172. So far this analysis has ignored biogenic CO_2 emissions based on the assumption that it is short cycle and therefore has no net global warming impact. Impacts from factors such as changes in land use to grow the original plants are accounted for in overall carbon inventories elsewhere and are conventionally not considered as part of waste management or energy generation.

173. However, the model assumes that not all of the biogenic material decomposes in landfill but it is all converted to CO_2 in energy from waste. Landfill therefore acts as a partial carbon sink for the biogenic carbon. This is a potential additional benefit for landfill over energy from waste.

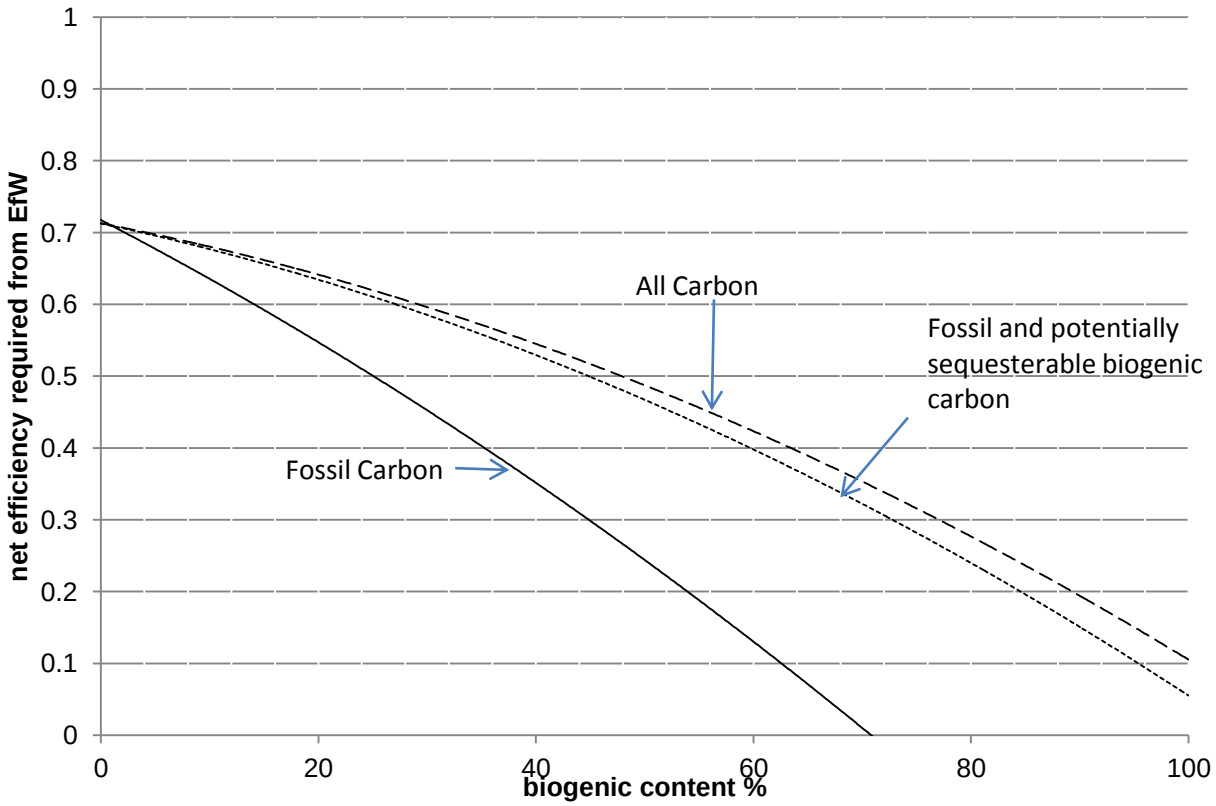
174. There are two ways to account for this additional effect:

- Estimate the amount of biogenic carbon sequestered and include the CO_2 produced from the same amount of carbon in the EfW side of the model (or subtract it from the landfill side)
- Include all carbon emissions, both biogenic and fossil on both sides of the model

175. While both approaches would address the issue of sequestered biogenic carbon the first would potentially be the better solution as it would avoid double counting carbon with other inventories.

176. Both approaches were examined in the model using the baseline set of assumptions (equivalent to the high capture low methane scenario) and the results are shown in Chart 15 below.

Chart 15. Net efficiency of EfW plant required with different biogenic content of waste considering EfW emissions of: only fossil carbon (solid line), fossil and potentially sequesterable biogenic carbon (dotted line) and all carbon (dashed line)



177. It can be seen from Chart 15 that both approaches deliver a very similar change with, as expected, EfW becoming more disfavoured relative to landfill with the greatest change at high biogenic content of the waste. Taking into account sequestered biogenic carbon in landfill will require greater EfW efficiency and/or biogenic content.

178. The similarity between the two approaches is unsurprising as biogenic carbon which is not sequestered in landfill or converted to methane becomes CO_2, as it would in EfW, so for that aspect the two sides of the model cancel out. The slight difference is due to the need for EfW to compensate for the CO_2 offset by electricity generation

from landfill gas when all emissions are considered. The small difference indicates how relatively small a contribution this energy makes to the overall balance. Given this similarity it may be better to consider only the sequestered biogenic C to avoid double counting with other inventories.

179. A range of different values exist in the literature for the amount of biogenic carbon that is sequestered in landfill. The baseline assumptions used in this model result in a very high level of sequestration, around 53% for the baseline composition. The outcome will be sensitive to the level of sequestration in two ways. Reducing the level of sequestration will require less biogenic carbon to be included in the EfW side of the model and will also result in more methane being emitted from the landfill side. Both factors will favour EfW over landfill. To examine the sensitivity of the model to changes in sequestration the baseline proportion of decomposable carbon in each waste type was increased by 50%. This changed the overall proportion of sequestered biogenic carbon from 53% to 29.5%. The values used are summarised in Table 22 below.

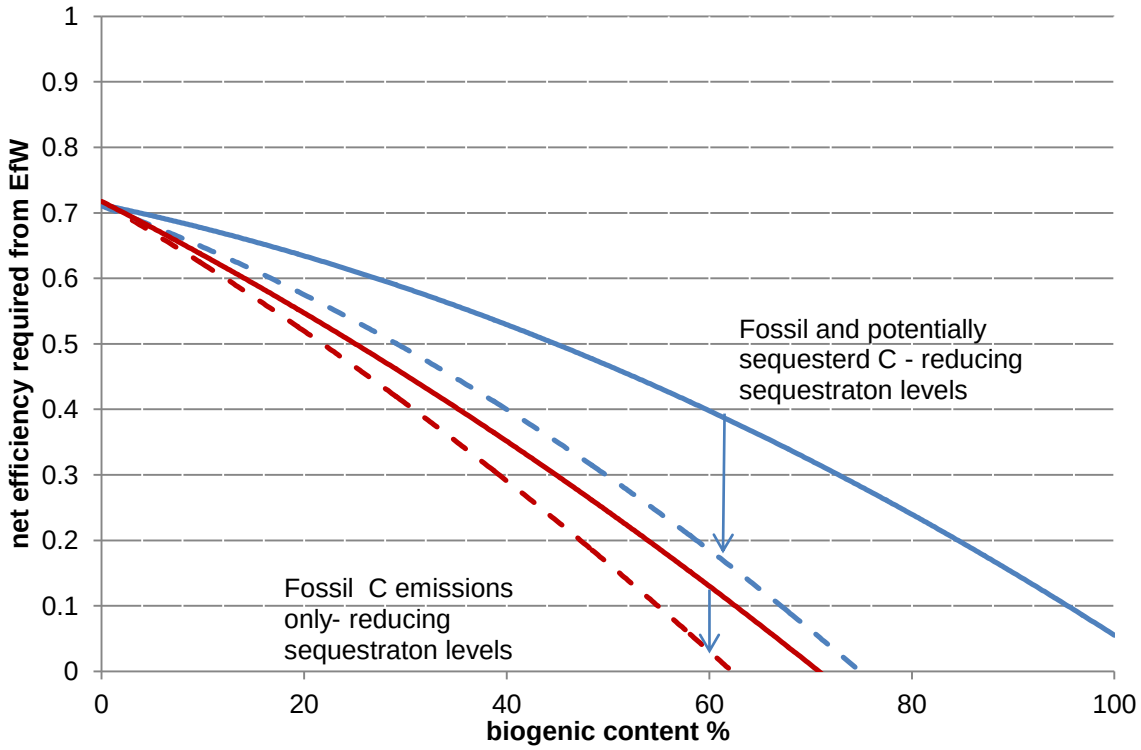
Table 22. Changes in modelled sequestration levels for each component by increasing the proportion of biogenic C considered sequesterable

Material	High sequestration % (model baseline)	Reduced sequestration %
Mixed Paper and Card	50.63	25.94
Plastics		
Textiles (and footwear)	66.65	49.98
Miscellaneous combustibles	53.21	29.82
Miscellaneous non-combustibles	100	100
Food	39.36	9.04
Garden	48.71	23.06
Soil and other organic waste	96.43	94.64
Glass	100	100
Metals, White Goods and Other Non-biodeg Products		
Non-organic fines		
Wood	71.52	57.28
Sanitary / disposable nappies	71.33	57
Total	53.00	29.50

180. By taking this approach materials which already have a high proportion of decomposable carbon are most greatly affected, i.e. Food, Paper and garden waste.

181. The impact of these changes on the model outputs is shown in Chart 16 below.

Chart 16. Impact of reducing the assumed level of carbon that decomposes on model outputs for fossil emissions (red) and fossil and potentially sequestered biogenic C (blue). Baseline model (solid line) and reduced sequestration (dashed line)



182. As noted above, changing the level of sequestration impacts on both the amount of biogenic carbon that needs to be counted on the EfW side of the model and the amount of methane emitted on the landfill side. As a consequence changing the sequestration level impacts not only when considering both fossil and sequestered carbon but also when considering fossil carbon alone.

183. In the example above for the baseline composition (61% biogenic) reducing the amount of sequestration of biogenic carbon from 50% to 30% results in a drop of 10% in the efficicncy required if just considering fossil carbon and 20% if considering both fossil and sequestered biogenic carbon.

184. There is an additional complicating factor regarding the assumptions around sequestration levels. The proportion of landfill gas captured is difficult to measure directly so assumed levels have previously been derived from a combination of measurement of the amount of landfill gas captured as a proportion of the amount modelled as being produced. However, the modelling for this also contains assumptions on sequestration, Therefore any lowering in the sequestration assumptions will also inherently reduce the assumed level of landfill gas capture. This interaction has not been captured in the above analysis. As a result the scenarios outlined above will be particularly sensitive to sequestration levels with any drop in assumed sequestration significantly favouring EfW over landfill. Given all of these interactions there is a high degree of uncertainty and further work is required.