



## Portland Energy Recovery Facility

Representations on behalf of Stop Portland Waste Incinerator

Adams Hendry Consulting Ltd.

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Air Quality Review: Portland Energy Recovery Facility WP/20/00692/DCC - Review of Environmental Statement - Air Quality Consultants (October 2020)

Ecology and Biodiversity: Portland Energy Recovery Facility – Review of Environmental Statement & Habitats Regulations Assessment - Jonathan Cox Associates (October 2020)

# 1 Introduction

- 1.1 This representation is submitted on behalf of Stop Portland Waste Incinerator a campaign group of local residents concerned at Powerfuel Portland's plans to build an energy recovery facility on the iconic and highly visible north east coast of Portland.
- 1.2 The Applicant, Powerfuel Portland Ltd, is seeking planning permission for the construction and operation of an Energy Recovery Facility (ERF) fuelled by refuse-derived fuel (RDF) on land within Portland Port. The supporting material submitted with the planning application confirms that the facility has been designed to treat 183,000 tonnes of RDF a year, with a 10% design tolerance to treat up to 202,000 tonnes a year should this be necessary to maintain the efficiency of the plant.
- 1.3 The facility would generate around 18.1 MW of electricity, around 15.2 MW of which will be available for export to the local grid, with the remainder used within the plant. Cables will be provided to the berths at Queens Pier and Coaling Pier to allow the provision of power to moored ships. Up to 15 MW will be available for berthed ships, although the maximum demand is only likely to be reached when a large cruise ship is docked. The proposals will also allow for the future export of heat, should a practical off-site local user be identified.
- 1.4 The ERF would comprise two main buildings. The larger one would house the ERF plant and RDF storage area and the smaller building to the east will house office and welfare facilities. The main ERF building will have a height between 19m and 47m, while the office building will be between 6m and 17m high. An 80m high emission stack would be located around 10m to the north of the main building.
- 1.5 Other buildings and structures on the site will include a gatehouse, weighbridges and substation for transferring the energy generated by the facility to the local grid and to berths within the port.
- 1.6 All vehicles will access the site through the main vehicular entrance to Portland Port, from Castletown. The RDF will be delivered by sea in the form of wrapped bales and / or by road in loose or baled form in HGVs.

## 2 Need for the Proposal

- 2.1 The need for the proposal being advanced by Powerfuel is that there is a pressing need for Dorset to reduce its reliance on the export of residual waste, become more self-sufficient and treat most of its residual waste in Dorset closer to where it arises, in accordance with the proximity principle. The reason given for this is due to the closure of landfill sites in Dorset, resulting in Dorset's residual waste that is not sent for energy recovery being exported to Hampshire and Somerset. Furthermore, there are no Energy Recovery Facilities (ERFs) located in Dorset capable of managing its residual waste and most is therefore exported out of the county for treatment or disposal.
- 2.2 On this basis, 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. However, this is not the case. Rather, great weight is given to the fact that the facility is located at Portland Port which will enable it to deal with waste brought in by sea. Indeed, the Waste Need Statement makes it clear that the Portland ERF would manage 15,000 tonnes per annum of residual waste from the States of Guernsey (albeit that this would arrive via ferry to Poole and then be transported by road to Portland – see paragraph 6.19 of the Waste Need Statement), as well as 10,000 tonnes per annum from neighbouring energy from waste facilities while they undertake planned maintenance and approximately 40,000 tonnes per annum of overspill residual waste from other neighbouring authorities (see paragraphs 6.19 – 6.20). No information is provided to support these figures. Aside from being contrary to the applicant's justification for the plant in terms of self-sufficiency and the proximity principle, it is clear, on Powerfuel's own admission, that it is planning on importing at least 65,000 tonnes of residual waste per annum, despite this being the very reason that a new facility is purportedly required. The Waste Need Statement suggests that as much as 25% of the waste would come by sea, with most likely to be travelling from Northern Ireland, the Republic of Ireland and other UK ports, clearly contrary to the proximity principle.
- 2.3 The Applicant commissioned Tolvik Consulting to analyse the waste market to determine whether there was likely to be sufficient waste in the market with an appropriate catchment area. A 2-3-hour drive time is generally considered to be a reasonable catchment area. Given Portland's coastal location and position within a relatively rural county, Tolvik concluded that a 3-hour drive time was appropriate. This includes 50% of the area of Devon, Somerset, Wiltshire and Hampshire. As the justification for the proposal is to avoid residual waste being sent to facilities in Hampshire and Somerset, it is unclear why it would be acceptable to import waste from Hampshire and Somerset. The fact that this extended catchment is necessary demonstrates the unsuitability of the site.
- 2.4 The Tolvik assessment suggests that there would be 0.57 Mt of local authority collected residual waste in the catchment area available to the proposed Portland ERF by 2035. It is not clear how this figure has been arrived at or what market share Portland could reasonably be expected to get. As a number of authorities in the waste catchment are already tied into long term contracts to deal with residual waste, further information is required to determine at what point this waste would potentially become available.

- 2.5 It is understood that Dorset Council's residual waste contract was awarded to New Earth Solutions in July 2020. The contract will commence in 2021 and will run for six years with an option to extend by an additional three years. The waste will be treated at the Canford MBT plant, where it will be turned into RDF, following which it will be sent to Bridgwater Resource Recovery Facility under a long-term supply contract.
- 2.6 The Environment Bill presented to Parliament in January 2020, seeks to 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. Extended producer responsibility schemes are also proposed to make producers responsible for the full net costs of managing their products at end of life. The powers are intended to incentivise producers to design their products with re-use and recycling in mind, as those that make their products easier to recycle will pay less. To support citizens' efforts to recycle more, the Environment Bill stipulates a consistent set of materials that must be collected from all households and businesses, including food waste, to help make services more consistent across the country.
- 2.7 The implications of the Environment Bill on future waste forecasts, namely that the generation of residual waste will be significantly reduced, must be taken into account.

*National need*

- 2.8 As well as contributing to Dorset's energy recovery capacity requirements, the Applicant is clearly also relying on the contribution the facility 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.
- 2.9 Although the application for the Portland ERF does not comprise a Nationally Significant Infrastructure Project, relevant National Policy Statements are capable of being a material consideration in the determination of the planning application. The National Policy Statement for Renewable Energy Infrastructure (EN-3) makes it clear at paragraph 2.5.70 that the decision making body 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.
- 2.10 Paragraph 7 of the National Planning Policy for Waste (NPPW) makes it clear that 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.
- 2.11 Without this information, it is not possible to determine whether the proposal will displace alternative (preferable) proposals for waste treatment.

*Dorset Waste Plan*

- 2.12 The Bournemouth, Christchurch, Poole and Dorset Waste Local Plan (hereafter referred to as the Dorset Waste Plan (DWP)) was adopted on 31<sup>st</sup> December 2020 and is therefore an up to date statement of planning policy and should be attributed significant weight in the determination of this planning application.
- 2.13 Self-sufficiency and the proximity principle underpin the strategy set out in the DWP. It has been prepared to ensure that there is sufficient capacity available within the plan area to deal with its waste arisings and that waste should be recovered or disposed of as close as possible to where it is produced (paragraphs 3.15-3.16).
- 2.14 As well as demonstrating self-sufficiency and proximity, Policy 1 of the DWP also requires proposals for the development of waste management facilities to demonstrate how they contribute to moving waste up the waste hierarchy and that waste is being managed at the highest appropriate level. Further information is required on the source of waste to determine whether the site is the most appropriate in terms of the proximity principle.
- 2.15 By 2033, the DWP anticipates that there will be a shortfall in capacity of 234,000tpa in the plan area in terms of residual non-hazardous waste (see Table 7 of the DWP). This figure does not include the capacity from the Low-Carbon Energy Facility (Low CEF) permitted at Canford Magna. Paragraph 7.65 of the DWP states that this facility can be developed to deal with approximately 100,000tpa of RDF/SDF arising within the Plan area. It is not 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.
- 2.16 Two materials recovery facilities have been permitted in Poole to manage recyclates. The DWP acknowledges that there is unlikely to be a need for both of these facilities to be developed, providing the potential for one of them to manage non-hazardous wastes including residual waste. Potential capacity amounting to 150,000tpa at Canford Recycling Centre may also be available to deal with residual waste (paragraphs 7.66 and 7.75 of the DWP). These sites should also be considered as alternatives by the applicant.
- 2.17 The DWP allocates three specific sites for the provision of new facilities for the management of residual waste, plus additional capacity at the existing MBT facility at Canford Maga. 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 approach ensures that the Plan remains 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.
- 2.18 Paragraph 7.78 of the DWP makes it clear 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.
- 2.19 Paragraphs 6.13 and 6.14 of the DWP require proposals for waste management facilities on unallocated sites to be supported by a satisfactory level of evidence. In particular, it confirms that information on 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, should be included as part of the planning application. This level of detail has not been provided by the applicant.

- 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.
- 2.21 In line with the waste hierarchy, recovering energy from waste is appropriate for waste that cannot be prevented, reused or recycled with less greenhouse gas emitted. Paragraph 9.15 of the DWP makes it clear that the co-location of energy recovery facilities with potential users of low carbon energy, heat and fuels is encouraged (Policy 2) in order to maximise opportunities for the use of energy from waste and the production of CHP. It is therefore expected that applicants will actively seek opportunities for the provision of CHP and build it into their proposals wherever practical.
- 2.22 Paragraph 9.21 of the DWP states that proposals for stand-alone facilities to manage RDF or SRF should be sited in locations near to the RDF or SRF production facility, with good transport links and where the utilisation of heat can be maximized.
- 2.23 The proposed ERF does not include provision for CHP and no information is provided on where the RDF production facilities are located.
- 2.24 Policy 6 makes it clear that proposals for the recovery of non-hazardous waste including thermal treatment will be permitted where it is demonstrated that they meet all of the identified criteria. The policy also requires that any residues arising from the facility must be managed in accordance with the waste hierarchy and the proximity principle and processing facilities for incinerator bottom ash must be located at or close to the source of the waste arising.
- 2.25 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.
- 2.26 Paragraph 6.82 of the ES makes it clear that the incinerator bottom ash will be sent to a company in either London or Avonmouth, while the Air Pollution Control residues will be sent to a company in Avonmouth. This will require residues arising from the facility to be transported a considerable distance, clearly contrary to Policy 6.

#### *Alternative Sites*

- 2.27 The DPW acknowledges that there could be a shortfall of approximately 232,000 tpa in capacity for managing non-hazardous residual waste at the end of the Plan period (see Identified Need 7 in the DWP). It proposes to make provision for facilities to manage residual waste through allocation of sites for intensification or development (Insets 7 to 10). The application site is not one of these allocated sites.
- 2.28 Paragraph 9.29 makes it clear 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, given the allocated sites' proximity to these



- habitats. The WPA considers that there are other residual waste management technologies, such as advanced thermal treatment, where adverse effects may be able to be ruled out with much greater confidence (paragraph 9.30).
- 2.29 Paragraph 9.32 of the DWP states that where there are appropriate allocated sites, proposals will be expected to come forward on these sites in accordance with Policy 3. Proposals for unallocated sites will need to demonstrate that allocated sites are not available in accordance with Policy 4. Where there are no appropriate allocated sites, proposals should carefully consider the locational requirements set out in Policy 4 and other relevant policies.
- 2.30 Policy 4 makes it clear that waste management facilities on unallocated sites will only be permitted where it is demonstrated that they meet all of the following criteria:
- a. 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
  - b. The proposal would not sterilise, or prejudice the delivery of an allocated site that would otherwise be capable of meeting waste needs, by reason of cumulative or other adverse impacts
  - c. The proposal supports the delivery of the Spatial Strategy, in particular contributing to meeting the needs identified in this Plan, moving waste up the waste hierarchy and adhering to the proximity principle
  - d. The proposal complies with the relevant policies of this Plan.
- 2.31 The DWP was adopted less than a year ago, at which point all of the allocated sites were confirmed as being available. There is no suggestion by the applicant that the allocated sites are no longer available.
- 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. Indeed the DWP makes it clear at paragraphs 9.29 – 9.30 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.
- 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 therefore 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.
- 2.34 Notwithstanding the above, the operational criteria used in the comparative assessment

- submitted by the applicant 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.
- 2.35 Similarly, 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.
- 2.36 However, 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.
- 2.37 As it stands, the proposal does not meet criterion (a) of Policy 4.
- 2.38 Criterion (b), of Policy 4 requires it to be demonstrated that a proposal would not sterilise or prejudice the delivery of an allocated site that would otherwise be capable of meeting waste needs. In the event that the Applicant's 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 therefore been demonstrated that the ERF would not prejudice the delivery of an allocated site and therefore the proposal also fails criterion (b).
- 2.39 The requirement to deliver the spatial strategy, meeting the needs identified in the Plan, moving waste up the waste hierarchy and adhering to the proximity principle is set out in criterion (c).
- 2.40 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.
- 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 examined before an independent Inspector. To seek to undermine the strategy in the Local Plan within a year of it being adopted is unacceptable.
- 2.42 It is clear that 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.

- 2.43 Similarly, 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.
- 2.44 The assessment is also 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.
- 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.
- 2.46 Regulation 18 (3)(d) of the Town and Country Planning (Environmental Impact Assessment) Regulations 2017 makes it clear that environmental statements must include a description of the reasonable alternatives studied by the developer, which are relevant to the proposed development and its specific characteristics, and an indication of the main reasons for the option chosen, taking into account the effects of the development on the environment.
- 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.

#### *Fallback Position*

- 2.48 Construction of an energy plant adjoining Balaclava Bay was permitted in 2010 (ref 09/00646/FULES) for the pre-treatment of 40,000 tpa of imported vegetable oils to be used as an alternative fuel source. The exhaust fumes would be discharged via two 27m tall stacks. In 2013, the application was varied to allow waste rubber crumb to be used as an alternative fuel source. This was a significantly smaller facility than the current ERF proposals which would have a throughput of up to 202,000 tpa and require a stack of 80m.
- 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). As it was not the subject of a Lawful Development Certificate, it is questionable as to whether it is extant. No information on either application is currently available on the Council's planning application portal and therefore it is difficult to understand the position. 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.

- 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.

## 3 The Proposed Development

### Scoping Opinion

- 3.1 It is noted that the proposed development differs from the one that was the subject of the Scoping Opinion, specifically in relation to the stack height, which has increased from 50m at the scoping stage, to 80m. This is a significant change and therefore the conclusions set out in the Scoping Opinion in relation to air quality, landscape and visual impact and heritage, need to be treated with extreme caution.

### Design

- 3.2 It is noted that the materials of the building have been chosen to reflect the vegetated cliffs of East Weare that form the backdrop. The ES notes at paragraph 9.110 that the building will have a combination of printed PVC mesh with an image of the cliff face vegetation and profiled metal cladding. As this PVC mesh will not reflect any seasonal changes in the surrounding vegetation, it will still represent an alien feature in the landscape.
- 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.
- 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.
- 3.5 It is noted that both the Landscape Officer at Dorset Council and the Dorset AONB Landscape Planning Officer raised concerns about the use of the PVC mesh in pre-application advice to the applicant.

### District heating network

- 3.6 Much is made of the potential of the proposed ERF to provide heat however it is noted that the district heating network does not form part of the application and therefore limited weight should be given to this potential.
- 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.

### Electrical distribution

- 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.

## Shore Power

- 3.9 The benefits of the ERF in providing shore power are set out in the submitted Shore Power Strategy Report.
- 3.10 In 2019, despite it being a record-breaking year for cruise calls to Portland Port, only 5% of calls were cruise ships (41 out of 794 calls). The Shore Power Strategy Report suggests that the number of cruise ships calling at Portland Port will increase marginally in 2020 and 2021 (43 and 45 calls respectively) but will then significantly increase to 65 by 2025 (a 58% increase on 2019 levels). 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.
- 3.11 Even if Portland Port manages to maintain the level of cruise trade in 2019, the Shore Power Report (section 2) makes it clear that only half of those 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.
- 3.12 The Applicant makes it clear that 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.
- 3.13 The Shore Power Report states that Portland Port has a contract with the UK Navy to provide berthing for Royal Fleet Auxillary (RFA) ships. All 13 ships which use the port are equipped with facilities for connecting to Shore Power. However, 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.
- 3.14 Section 5 of the Shore Power Report suggests 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 earlier in the report, which are predicted in the absence of shore power.
- 3.15 When it comes to assessing the emissions from ships bringing waste to the site, paragraph 4.94 of the ES suggests that 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.

- 3.16 As it stands, 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.

## 4 Assessment Chapters

### Air Quality

- 4.1 The only emission sources considered in the assessment are from the main exhaust stack; no assessment has been undertaken of the backup diesel generators. 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. 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 stacks (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 emitted, are likely to be much higher than those of the main stack. By excluding the emissions from diesel generators from the assessment, the impacts of the scheme will have been underpredicted.
- 4.2 The Applicant also fails to correctly consider ‘in-combination’ impacts. Whilst the combined impacts upon the SACs of traffic from the scheme with stack emissions have been considered, these results do not take into account the ‘in-combination’ traffic impacts with other plans and projects. If this had been undertaken, the areas of the SACs where impacts could be screened out on the basis that the impacts would be insignificant would be much smaller.
- 4.3 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.
- 4.4 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.
- 4.5 The use of a coarse 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.
- 4.6 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.
- 4.7 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 limit presented in the ES is appropriate.

- 4.8 There is potential for a combined impact of stack and ship emissions upon maximum 24-hour NO<sub>x</sub> 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. This issue requires assessment.
- 4.9 Further detailed technical comments on the air quality chapter are included as an appendix to this report.

### **Community, Health and Economic Effects**

- 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.
- 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.
- 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.
- 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.
- 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.

### **Carbon balance and greenhouse gas emissions**

- 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.

- 4.16 The applicants acknowledge in paragraph 5.20 of the ES that the residual waste produced in Dorset does not all go to landfill at present and so the specific waste that may be processed at the Portland ERF, may not currently all go to landfill. As requested by Dorset Council, the following alternative scenarios have also been examined:
- Sending the RDF to other ERFs in the UK
  - Sending the RDF to other ERFs overseas
  - Sending waste to an ERF constructed at one of the four alternative sites allocated in the adopted DWP
  - Continuing to manage the waste under Dorset Council's existing arrangements.
- 4.17 The applicants effectively dismiss the conclusions of these 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.
- 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 of 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.
- 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.
- 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.

- 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.
- 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.
- 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.
- 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.

## Cultural Heritage

- 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).
- 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.
- 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.
- 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.
- 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.
- 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.
- 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*'.
- 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.

## Ground Conditions and Hydrology

- 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.
- 4.34 As discussed previously, 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.

- 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.
- 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.
- 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.

## **Landscape and visual effects**

- 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.
- 4.39 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.
- 4.40 The conclusions in the ES 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.
- 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.
- 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. It is also noted that none of the photomontages include the plume despite this being specifically requested by Dorset Council in pre-application advice.

- 4.43 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.
- 4.44 The photograph for viewpoint 3 (Portland Port and breakwaters, including the Sailing Academy and Portland Marina) 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.
- 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.
- 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.
- 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.
- 4.48 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.

## Natural Heritage

- 4.49 The assessment of air quality impacts of the proposed ERF has been shown to contain major flaws and deficiencies. These have been carried over into the Shadow Appropriate Assessment. As a consequence, the predicted impacts on internationally and nationally designated wildlife sites cannot be relied upon. In particular, there are grave concerns over the impact of increased levels of air pollution on the integrity of both the Isle of Portland to Studland Cliffs SAC and the Chesil and The Fleet SAC.
- 4.50 The lack of a proper in combination assessment of other plans or projects in the Shadow Appropriate Assessment also raises concern over potential impacts of air pollution on the Chesil and the Fleet SPA and Ramsar site.
- 4.51 Dorset Council, as competent authority, will be unable to make a proper assessment of this proposal in accordance with the UK Habitats Regulations until the identified major flaws in the Air Quality assessment and Shadow Appropriate Assessment have been



addressed.

- 4.52 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.
- 4.53 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.
- 4.54 The Environment Bill (2020) will require that all development provides a net gain in biodiversity. The current proposals for the development of the ERF will result in a significant net loss of biodiversity within the application site. Substantially more habitat compensation and biodiversity gain should be provided as part of this proposed development.
- 4.55 There have been no nocturnal bat surveys of the proposed development site. These were deemed unnecessary, although no justification for this decision has been provided. The lack of any nocturnal bat survey for the site is considered a significant short-fall in the provision of baseline ecological information. The conclusions reached in the ES in relation to bats cannot be relied upon in the absence of such information.
- 4.56 More detailed technical comment on the shadow Appropriate Assessment and natural heritage chapter is included as an appendix to this report.

## Transport Assessment

- 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.
- 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.
- 4.59 The information presented on baseline flows in 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.

- 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.
- 4.61 Future baseline flows at 2023 are included at 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 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.

**Table 1: % change in baseline AADT 2019-2023**

<b>Link Ref</b>	<b>Link</b>	<b>% increase in baseline AADT 2019 – 2023 Outbound</b>	<b>% increase in baseline AADT 2019 – 2023 Inbound</b>
1	Castletown (at port access)	89%	90%
2	A354 Portland Beach Road	30%	30%
3	A354 Portland Road (south of Foord's Corner Roundabout)	28%	30%
4	A354 Buxton Road (north of Foord's Corner Roundabout)	41%	41%
5	A354 Buxton Road (Boot Hill)	17%	20%
6	A354 Weymouth Way (south of Granby roundabout)	22%	20%
7	A354 Weymouth Relief Road (south of Stadium roundabout)	14%	30%
8	B3157 Granby Way	18%	13%
9	B3156 Portland Road	14%	14%

- 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.

Table 2: % change in baseline AADT 2023-2033

<b>Link Ref</b>	<b>Link</b>	<b>% change in baseline AADT 2023 – 2033 Outbound</b>	<b>% change in baseline AADT 2023 – 2033 Inbound</b>
1	Castletown (at port access)	-5%	6%
2	A354 Portland Beach Road	15%	-2%
3	A354 Portland Road (south of Foord's Corner Roundabout)	-3%	-17%
4	A354 Buxton Road (north of Foord's Corner Roundabout)	-6%	-8%
5	A354 Buxton Road (Boot Hill)	28%	-9%
6	A354 Weymouth Way (south of Granby roundabout)	15%	-9%
7	A354 Weymouth Relief Road (south of Stadium roundabout)	4%	4%
8	B3157 Granby Way	8%	-16%
9	B3156 Portland Road	-16%	2%

- 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.
- 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.

## 5 Compliance with the Statutory Development Plan

- 5.1 Section 38(6) of the Planning and Compulsory Purchase Act (2004), requires that planning applications are to be determined in accordance with the statutory development plan unless material considerations indicate otherwise.
- 5.2 The relevant part of the statutory development plan against which the planning application for the proposal has to be considered, comprises the following:
- Bournemouth, Christchurch, Poole and Dorset Waste Plan (2019)
  - West Dorset, Weymouth and Portland Local Plan 2011- 2031 (2015)
  - Neighbourhood Plan for Portland 2017-2031 (Referendum Version January 2020)
- 5.3 The National Planning Policy for Waste was published in October 2014 and is a material consideration in the determination of this planning application.

### **Bournemouth, Christchurch, Poole and Dorset Minerals and Waste Plan (adopted 31<sup>st</sup> December 2019) – the Dorset Waste Plan**

- 5.4 Policies relating to the need for additional waste management capacity as set out in the adopted Dorset Waste Plan (DWP) have been considered previously in this report and are therefore not repeated here.
- 5.5 Policy 1 of the Dorset Waste Plan makes it clear that proposals for waste management facilities must conform and demonstrate how they support the underlying principles of the Waste Plan, namely the waste hierarchy, self-sufficiency and proximity.
- 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. As set out in Section 2 of this report, 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.
- 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.
- 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 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 of the DWP in respect of sites allocated for recovery.

- 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.
- 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.
- 5.11 As discussed throughout this report, the proposed ERF is entirely inconsistent with the proximity principle and is therefore contrary to criterion (c) of Policy 4.
- 5.12 Consideration of the proposal against Policy 6 – recovery facilities, is set out in section 2 of this report.
- 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.
- 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.
- 5.15 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 manner appropriate to their significance.
- 5.16 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.

## **Weymouth and Portland Local Plan: Joint Core Strategy (JCS) (adopted by EHDC May 2014)**

- 5.17 Policy ENV1 relates to landscape, seascape and sites of geological interest. It makes it clear that development which would harm the character, special qualities or natural beauty of the Dorset Area of Outstanding Natural Beauty (AONB), or Heritage Coast, including their characteristic landscape quality and diversity, uninterrupted panoramic views, individual landmarks and sense of tranquillity and remoteness, will not be permitted. It further requires development to be located and designed so that it does not detract from and, where reasonable, enhances the local landscape character.
- 5.18 The Applicants acknowledge that the character of the site will be changed by the introduction of the ERF. The conclusions in the ES that the ERF will enhance a currently derelict site within the industrial port underplay the significance of the impacts.
- 5.19 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. It is concluded that the construction of a 47m high building with an 80m high stack will detract from local landscape character, contrary to Policy ENV1.
- 5.20 Criterion (d) of Policy ENV1 states that development that significantly affects local geological features will not be permitted. The site lies within a regionally important geological and geomorphological site which covers the whole of the Isle of Portland. No assessment has been undertaken of the impact of the development on local geological features.
- 5.21 Policy ENV2 relates to wildlife and habitats. It broadly states that internationally designated wildlife sites will be safeguarded from development that could adversely affect them and that development that is likely to have an adverse effect upon nationally designated wildlife sites will not be permitted unless the benefits clearly outweigh the impacts.
- 5.22 The application site lies in a highly sensitive area. The cliffs to the immediate south west of the site form part of the Isle of Portland to Studland Cliffs Special Area of Conservation (SAC) and Isle of Portland Site of Special Scientific Interest (SSSI) and there are several other designated nature conservation sites within 2 km of the site. These include the Nicodemus Heights SSSI 590 m to the south, Chesil and The Fleet SAC and SSSI and Chesil Beach and Stennis Ledges Marine Conservation Zone (MCZ) 1.3 km to the west, and Studland to Portland SAC 1.5 km to the south west. There are also several locally designated sites of nature conservation interest
- 5.23 Due to the flaws in the air quality assessment discussed previously, the Applicant's predicted impacts on internationally and nationally designated wildlife sites cannot be relied upon. There are serious concerns over the impact of increased air pollution on the integrity of both the Isle of Portland to Studland Cliffs (SCA) and the Chesil and The Fleet SAC. The Applicant has failed to provide sufficient information to demonstrate that the proposals are in accordance with Policy ENV2.

- 5.24 The construction of the ERF will necessitate the loss of 8,700sqm of open mosaic habitat types, to be replaced by only 1,270sqm of relevant habitat. The loss of open mosaic habitat, a priority habitat in the NERC Act, is also a significant issue which requires proper assessment.
- 5.25 Policy ENV4 requires that the impact of development on a designated or non-designated heritage asset and its setting must be thoroughly assessed against the significance to the asset. Development should conserve and where appropriate enhance the significance.
- 5.26 The site is in close proximity to a number of designated heritage assets. The nearest listed buildings / structures to the site are the grade II listed breakwater next to the north eastern boundary, the Dockyard offices to the north west, East Weare batteries to the south west and other batteries to the south. There are several other listed buildings / structures in the area, including a cluster at the prison. Underhill conservation area is around 600 m to the west of the main site and contains a large number of grade II listed buildings.
- 5.27 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 contrary to Policy ENV4.
- 5.28 Criterion (ii) of Policy ENV4 states that applications affecting the significance of a heritage asset or its setting will be required to provide sufficient information to demonstrate how the proposals would positively contribute to the asset's conservation. 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, contrary to the requirements in Policy ENV4.

### **Neighbourhood Plan for Portland 2017-2031 (Referendum Version January 2020)**

- 5.29 Following the successful examination of the Portland Neighbourhood Plan, Dorset Council agreed to enable the plan, as amended, to proceed to referendum. However, the Coronavirus Act 2020 prevents elections or referendums taking place until the 6<sup>th</sup> May 2021, meaning that neighbourhood plans may come into force later than they would have done. With this in mind, the Government has updated current planning guidance to make it clear that neighbourhood plans awaiting referendums can be given significant weight in decision-making.
- 5.30 Policy Port/EN7 relates to design and character. It makes it clear that development proposals will be expected to be of a design which complements the prevailing size, height, scale and mass, materials, layout, density and access of the existing surrounding development.
- 5.31 The proposed ERF is completely out of scale with the existing surrounding development and is therefore contrary to Port/EN7.

## 6 Summary and Conclusions

- 6.1 The need for the proposal being advanced by Powerfuel is that there is a pressing need for Dorset to reduce its reliance on the export of residual waste, become more self-sufficient and treat most of its residual waste in Dorset closer to where it arises, in accordance with the proximity principle. However, the application documents make it clear that at least 65,000 tonnes of residual waste per annum is likely to be imported including from Northern Ireland, the Republic of Ireland and other UK ports, clearly contrary to the proximity principle. In reality, as a merchant facility, the level of imported waste could be significantly greater unless the WPA include a condition limiting the proportion of imported waste.
- 6.2 A three-hour drive time has been used to define the waste catchment area for waste brought in by road due to Portland's coastal location and position within a relatively rural county. This results in waste being transported significant distances, contrary to the proximity principle.
- 6.3 The Tolvik assessment suggests that there would be 0.57 Mt of local authority collected residual waste in the catchment area available to the proposed Portland ERF by 2035. It is not clear how this figure has been arrived at or what market share Portland could reasonably be expected to get. The implications of the Environment Bill on future waste forecasts must also be taken into account.
- 6.4 The Applicant is relying on the contribution the ERF would make to meeting the needs of surrounding waste planning authorities and others 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, taking into account the relevant waste strategies and plans, whether the proposed facility is in accordance with the waste hierarchy and whether it is of an appropriate type and scale so as not to prejudice the achievement of local or national waste management targets. Without this information, it is not possible to determine whether the proposal will displace alternative (preferable) proposals for waste treatment.
- 6.5 By 2033, the DWP anticipates that there will be a shortfall in capacity for dealing with residual non-hazardous waste of 234,000tpa in the plan area. It therefore allocates three specific sites for the provision of new facilities for the management of residual waste, plus additional capacity at the existing MBT facility at Canford Maga. The total potential capacity within the four allocated sites amounts to 385,000tpa, significantly exceeding the identified needs of the plan area. The site at Portland Port is not allocated in the DWP.
- 6.6 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 therefore necessary to demonstrate that the proposal provides advantages over the allocated sites.
- 6.7 The operational criteria used in the comparative assessment submitted by the applicant are flawed. The sites have been included in the DWP to meet Dorset's waste needs and

not those of other authorities. Meeting these needs does not require access to a port. The site assessment submitted by the Applicant is contrived to ensure that the application site is ranked highest.

- 6.8 The DWP requires proposals for waste management facilities on unallocated sites to include information on 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 applicant.
- 6.9 The DWP states that proposals for stand-alone facilities to manage RDF or SRF should be sited in locations near to the RDF or SRF production facility, with good transport links and where the utilisation of heat can be maximized. The proposed ERF does not include provision for CHP and no information is provided on where the RDF production facilities are located.
- 6.10 Contrary to Policy 6 which requires processing facilities for the incinerator bottom ash to be located at or close to the source of the waste arising, the incinerator bottom ash will be sent to a company in either London or Avonmouth, while the Air Pollution Control residues will be sent to a company in Avonmouth.
- 6.11 The proposed development differs from the one that was the subject of the Scoping Opinion, specifically in relation to the stack height, which has increased from 50m at the scoping stage, to 80m. This is a significant change and therefore the conclusions set out in the Scoping Opinion in relation to air quality, landscape and visual impact and heritage, need to be treated with extreme caution.
- 6.12 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.
- 6.13 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.
- 6.14 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.
- 6.15 The Shore Power Strategy Report suggests that the number of cruise ships calling at Portland Port will increase from a record high of 41 in 2019 to 65 by 2025 (a 58% increase on 2019 levels). The long-term effects of the coronavirus pandemic on the cruise industry are not known at this stage, but a 58% rise in cruise ships calling at Portland Port by 2025 seems highly improbable.
- 6.16 Only half of the cruise ships calling at Portland Port 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.
- 6.17 Further information is also required on the number of RFA ships likely to be docked at Portland Port per annum and the likely average duration of their stay.
- 6.18 The Shore Power Report suggests 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 goes against the forecast increase in cruise ships visits suggested earlier in the report, which are predicted in the absence of shore power.
- 6.19 When it comes to assessing the emissions from ships bringing waste to the site, paragraph 4.94 of the ES suggests that 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.
- 6.20 As it stands, very little weight should be given to the benefits of shore power unless further credible information can be provided.
- 6.21 No assessment has been undertaken of the backup diesel generators and therefore the air quality impacts of the scheme will have been underpredicted. The Applicant also fails to correctly consider 'in-combination' impacts resulting in the impacts over large areas of the SAC being incorrectly screened out as being insignificant.
- 6.22 The under-prediction of the local baseline has the potential to affect the overall conclusions of the air quality assessment as has the use of a coarse grid to model impacts.
- 6.23 The omission of NO<sub>x</sub> and ammonia emissions from additional traffic generated by the scheme means that the Shadow Appropriate Assessment has failed to consider the entire impacts of the scheme.
- 6.24 The assessment of economic effects suggests that 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.
- 6.25 The assumptions behind the number of additional jobs generated by the development need to be justified.
- 6.26 The conclusions reached on the cost of waste management are 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.
- 6.27 Landfill has been used as the comparator in the carbon assessment also on the basis that the UK does not have enough ERF capacity to treat all residual waste. This is contrary to the Applicant's acknowledgement that the residual waste produced in Dorset does not all go to landfill at present and so the specific waste that may be processed at the Portland ERF may not currently all go to landfill. Dorset Council itself states that only a small proportion of its residual waste now goes to landfill with the majority of waste being treated at the Canford Magna MBT with any RDF generated being incinerated at



Bridgwater from 2021.

- 6.28 No evidence has been put forward to support the assertion that any ERF currently processing residual waste from Dorset would alternatively secure waste that would otherwise go to landfill.
- 6.29 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.
- 6.30 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.
- 6.31 As the supply of heat does not form part of the planning application and there is no certainty that this will come forward it should not form part of the Environmental Impact Assessment. The carbon balance and greenhouse gas emissions assessment should therefore be disregarded.
- 6.32 The methodology used in the cultural heritage assessment is vague and ambiguous and seems to be designed to underplay the significance of heritage impacts.
- 6.33 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.
- 6.34 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 '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.
- 6.35 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 over 10 years ago to support the application for an energy plant. 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 acknowledged by the Applicant. This information should be included in the ES to enable proper consideration of the likely effects of the proposed ERF.
- 6.36 The conclusions in the ES that the ERF will enhance a currently derelict site within the industrial port underplay 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 Landscape Character Area.

- 6.37 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. It is also noted that none of the photomontages include the plume.
- 6.38 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.
- 6.39 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.
- 6.40 The ES 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.
- 6.41 Future baseline traffic flows at 2023 are included at Table 11.4 for all vehicles and 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). No explanation is provided to justify such an increase, suggesting an error in the reporting of baseline flows.
- 6.42 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.
- 6.43 The application site is not allocated in the recently adopted DWP and the application is not consistent with key policies. The benefits claimed by the Applicants are in the main unsubstantiated and the harm is significantly downplayed.
- 6.44 In conclusion, there is no justification for an ERF in this location and the harm arising from its construction would significantly and demonstrably outweigh any benefits.

# Appendices



**Air Quality Review:**  
Portland Energy Recovery  
Facility WP/20/00692/DCC  
– Review of Environmental  
Statement

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October 2020



Experts in air quality  
management & assessment

## Document Control

<b>Client</b>	Stop Portland Waste Incinerator	<b>Principal Contact</b>	Lucy Grieve
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<b>Job Number</b>	J4291
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<b>Report Prepared By:</b>	Penny Wilson
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### Document Status and Review Schedule

Report No.	Date	Status	Reviewed by
J4291/A/D2	29 October 2020	Final Report	Dr Ben Marner (Technical Director)

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# 1 Introduction

1.1 Air Quality Consultants Ltd (AQC) has reviewed Chapter 4 (Air Quality) and its associated appendices, and relevant sections of Chapter 10 (Natural Heritage) of the Environmental Statement ('ES') for the Powerfuel Portland Energy Recovery Facility (the 'Scheme'). It has also considered the relevant sections of the Shadow Appropriate Assessment. This review has considered:

- whether the air quality assessment is robust;
- whether the reported conclusions are supported by the evidence provided; and
- whether the information presented is sufficient to understand the likely air quality impacts of the scheme.

1.2 Where errors or omissions have been identified, they have been categorised as either a:

- **Major Issue** - in the opinion of the reviewer, any one individual failing would be highly likely to invalidate the reported conclusions;
- **Moderate Issue** - weaknesses have been identified which, individually, may or may not affect the conclusions; or
- **Minor Issue** - weaknesses have been identified but the professional experience of the reviewers suggests that each one, in isolation, would be unlikely to affect the conclusions of the assessment. There remains, however, the potential for multiple minor issues to combine to invalidate the reported conclusions. Minor issues have also been identified where the material presented is misleading or otherwise inappropriate to inform consultation.

1.3 Only limited attention has been paid to the assessment of dust during the construction phase and to the release of odours. Both of these impacts can be effectively controlled and so the planning authority should ensure that sufficient mitigation is in place. If local complaints are received then it will indicate that the mitigation has not be effective and, if this happens, the planning authority should ensure that additional mitigation measures are applied.

1.4 The Human Health Risk Assessment in Technical Appendix G (Appendix B) sets out the cancer risk caused by exposure to certain persistent organic pollutants that may be emitted from the proposed scheme, as well as addressing hazards such as infant exposure through breast milk which might be contaminated as a result of emissions from the proposed plant entering the food chain. Although the assessment has failed to mention possible fishing along the coastline, the overall methodology (defined by the United States Environmental Protection Agency) is considered robust for UK conditions. The review has not, therefore, focused on this appendix.

1.5 A large number of failings with the remainder of the ES have been identified. Furthermore, the information presented within the ES is frequently misleading. For these reasons, the failure of this

current note to highlight additional issues does not mean that no further issues exist or that the assessment is, in other respects, accepted.

## 2 Review

### Major Issues

#### *Exclusion of On-site Emissions*

- 2.1 The only emission sources considered in the assessment are the main exhaust stack<sup>1</sup>. 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 fuelled 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<sup>2</sup>.
- 2.2 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 assessment<sup>3</sup>. 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 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).
- 2.3 By excluding the emissions from diesel generators from the assessment, the impacts of the Scheme will have been underpredicted.

#### *Failure to Correctly Consider 'In-Combination' Impacts*

- 2.4 Article 6(3) of the Habitats Directive requires the identification of any potential significant effects of a development both on its own ('in-isolation') and 'in-combination' with other plans and projects.

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<sup>1</sup> 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*".

<sup>2</sup> For example, John Deere typically recommend that standby engines supplied by them are run at a rated speed for 30 minutes every two weeks.

<sup>3</sup> Even periodic testing has the potential to cause exceedances of the 24-hour critical level for NOx concentrations and, when combined with emissions from the main stack might trigger issues in terms of the 1-hour and annual mean objectives.



- 2.5 The ES has quantified the effect of emissions from the main stack of the Scheme 'in isolation' (this is termed the Process Contribution, or 'PC') and applied screening criteria to this. Ultimately, the approach relies on the assumption that impacts will be insignificant anywhere where the PC 'in-isolation' amounts to less than 1% of the relevant critical level or critical load.
- 2.6 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.

### ***Use of Spatially-averaged 'Background' Values to Represent Location-specific 'Baseline' Values***

- 2.7 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.
- 2.8 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.
- 2.9 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.
- 2.10 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/m<sup>3</sup>, whereas the measured value at a roadside site on Portland

in 2018 was 31  $\mu\text{g}/\text{m}^3$ . The concentrations used in the assessment are thus much too small to represent roadside conditions.

- 2.11 These values have fed through to the Shadow Appropriate Assessment which has underpredicted the PECs associated with the Scheme.

### ***Incorrect Process Contributions Stated in Shadow Appropriate Assessment***

- 2.12 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 NO<sub>x</sub> 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.
- 2.13 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 NO<sub>x</sub> 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.
- 2.14 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.

### ***Model Grid Resolution***

- 2.15 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.
- 2.16 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.

### ***Stack Height Analysis and Ammonia Emissions Limit***

- 2.17 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.
- 2.18 Section 5 of Appendix D2 also considers the effect of a reduced ammonia emissions limit of 8 mg/Nm<sup>3</sup> (compared with a BAT level of 2-10 mg/Nm<sup>3</sup>). 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/Nm<sup>3</sup> 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.
- 2.19 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.

### ***Failure to consider combined impact with ship emissions on maximum 24-hour NO<sub>x</sub> concentrations***

- 2.20 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 NO<sub>x</sub> 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.

## **Moderate Issues**

### ***High-rise Receptors***

- 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.

### ***Traffic Impacts on Portland***

- 2.22 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.
- 2.23 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.

### ***Stack Impacts on Boot Hill***

- 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  $\mu\text{g}/\text{m}^3$  where the objective is 40  $\mu\text{g}/\text{m}^3$ ).

### ***Canyons on Boot Hill***

- 2.25 Section 3.2.2 explicitly states that, "*no roads have been identified as street canyons within the study area*". Boot Hill is typical of the type of location where elevated concentrations are measured relative the traffic flow, due to the influence of buildings restricting the dispersion of pollutants. Therefore the Advanced Canyon Module of ADMS-Roads should have been used. However, in this instance the model outputs were verified against monitoring data from within the canyons where the worst-case receptors are located and therefore this effect will have been accounted for and thus use of the canyon module is unlikely to have affected the conclusions of this assessment.

### **Queuing Traffic on Boot Hill**

- 2.26 The model results presented for Boot Hill in Table 5 of Appendix D3 of the ES are significantly higher (up to 60  $\mu\text{g}/\text{m}^3$ ) than those measured on Boot Hill (maximum of 39.6  $\mu\text{g}/\text{m}^3$ ) and shown at the verification sites in Table 4. This suggests that the additional emissions due to queuing traffic have been added to the 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.

### **Incorrect Values in Tables**

- 2.27 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  $\text{ng}/\text{m}^3$ , the PC 0.46  $\text{ng}/\text{m}^3$  and the PEC 10.03  $\text{ng}/\text{m}^3$ . The PEC should equal the background plus the PC, but in this case it does not. A similar scenario occurs for lead in Table 19.
- 2.28 In Table 19, the PCs presented for all metals are higher than the PECs, which is not possible.
- 2.29 Table 22 of Appendix D2 states that the sulphur dioxide results are in  $\text{ng}/\text{m}^3$ , whereas in Table 23 values 1,000 times higher are also stated to be in  $\text{ng}/\text{m}^3$ .
- 2.30 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.

### **Minor Issues**

#### **Offsetting Ship Emissions Removed by Shore Power**

- 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 the 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.

#### **Non-residential receptors**

- 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.

### ***Misquoted Guidance***

2.33 The Shadow Appropriate Assessment misquotes the Environment Agency's guidance, stating:

5.9 The Environment Agency's Operational Instruction 67-12 states that if the PC is less than 1% critical level and load then emissions from the application are not significant, and if the predicted environmental contribution (PEC) is less than 70% critical level and load it can be concluded 'no likely significant effect' (alone and in-combination).

2.34 The above 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'.

### ***Crookhill Brick Pit SAC***

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, 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.

### ***Reference to incorrect version of IAQM Position Statement***

2.36 Appendix D3 of the ES makes reference to the October 2016 IAQM Position Statement on Dealing with Uncertainty in Vehicle NO<sub>x</sub> Emissions within Air Quality Assessments. An update to this statement was published in July 2018 and therefore this reference has now been superseded. However, this would not alter the conclusions of the assessment.

### ***Correlation coefficient***

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.

### 3 Conclusion

- 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.
- 3.2 It is considered that any one of the issues identified in this review as 'Major' is sufficient to invalidate the conclusions presented in the ES. The large number of 'Moderate' and 'Minor' issues might also, when combined, affect these conclusions. It is thus considered that the air quality assessment within the ES is not fit for purpose and that significant additional information is required in order to adequately inform consultation on the Scheme. At the present time, the conclusions of the ES must be disregarded.

# Ecology and Biodiversity: Portland Energy Recovery Facility – Review of Environmental Statement & Habitats Regulations Assessment

Jonathan Cox

Version 2  
30<sup>th</sup> October 2020

**Jonathan Cox Associates**  
ecological consultancy

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# Ecology and Nature Conservation: Portland Energy Recovery Facility – Review of Environmental Statement & Habitats Regulations Assessment

## 1.0 Introduction

- 1.1 This report has been prepared by Jonathan Cox MCIEEM on behalf Stop Portland Waste Incinerator to provide a review of the ecology and biodiversity assessments of the proposed Portland Energy Recovery Facility.
- 1.2 This report is based upon the review of the following chapters of the submitted Environmental Statement and its accompanying appendices.
  - Portland ERF ES Chapter 10: Natural heritage
  - Portland ERF ES Technical Appendix K Natural heritage part 1 - 3
  - Portland ERF Shadow Appropriate Assessment
  - Portland ERF ES Chapter 4: Air quality
  - Portland ERF ES Technical Appendix D Air quality part 1 – 3.

## 2.0 Competence

- 2.1 Jonathan Cox BSc MCIEEM has over 35 years of experience working in ecology and nature conservation. Between 1985 and 1992 he was employed by the Nature Conservancy Council/English Nature as Conservation Officer for Hampshire and the Isle of Wight.
- 2.2 Jonathan has worked as an ecological consultant since 1993. He has worked widely throughout Europe and the UK and has undertaken a number of contracts for the European Commission related to the conservation of Natura 2000 sites and the implementation of the European Habitats and Birds Directives.
- 2.3 Much of his work in the UK has been focussed on counties of central southern England, in particular Hampshire, Dorset and the Isle of Wight where he has been involved in the assessment of a range of development projects on behalf of both applicants and regulators. He has undertaken many ecological surveys and assessments and is regularly invited to present at conferences and lectures. He has undertaken contracts for Environment Agency, Natural England, Scottish Natural Heritage, National Trust, MoD (in UK and Cyprus) and many Local Authorities. He is a Council Member of the New Forest Association, vice chair of the Hampshire and IW Wildlife Trust's Conservation Committee and an advisor to the Peoples Trust for Endangered Species.

## 3.0 Air Quality Impacts

### Assessment methodology

- 3.1 Impacts of the proposed development on designated wildlife sites is considered in both the Environmental Statement (ES) and through the Habitats Regulations Assessment (HRA). There are fundamental differences in the purpose and methodology for these two assessments.

- 3.2 The Habitats Regulations Assessment is undertaken to consider impacts of the proposed development on internationally designated wildlife sites<sup>1</sup>. It places the responsibility for the assessment on the decision-making authorities referred to as Competent Authorities. Developers are required to supply sufficient information to the Competent Authority such that they can undertake the Habitats Regulations Assessment. The HRA is a step-wise process first requiring a screening stage which identifies plans or projects that are likely to have significant effects on internationally designated sites. This is considered a ‘coarse filter’ to remove plans or projects from further assessment where it can be determined with confidence that they will not have a significant effect on these protected sites. The likely significant effect can occur as a result of the proposed plan or project either alone or in combination with other plans or projects.
- 3.3 Where plans and projects are likely to have a significant effect on an internationally designated wildlife site, it is necessary for the Competent Authority to undertake an Appropriate Assessment. As with the screening stage, the Appropriate Assessment must consider the proposal alone and in combination with other plans or projects.
- 3.4 Regulation 63 of the Habitats Regulations (2017) states  
*“63.—(1) A competent authority, before deciding to undertake, or give any consent, permission or other authorisation for, a plan or project which—  
(a) is likely to have a significant effect on a European site or a European offshore marine site (either alone or in combination with other plans or projects), and  
(b) is not directly connected with or necessary to the management of that site,  
must make an appropriate assessment of the implications of the plan or project for that site in view of that site’s conservation objectives.”*
- 3.5 The applicants for the proposed ERF facility have submitted a ‘Shadow Appropriate Assessment’ report to accompany their application. Although termed a shadow appropriate assessment, it actually provides information on both the screening stage and appropriate assessment stage of a Habitats Regulations Assessment. This is information they have provided to the Competent Authority (Dorset Council) to assist them in making their HRA. However, this Shadow Appropriate Assessment has been found to be fundamentally flawed in a number of aspects, particularly in relation to air quality impacts (Penny Wilson, AQA).
- 3.6 The most significant flaw in the Shadow Appropriate Assessment has been the lack of any 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 development plans for Portland Harbour that could increase ship movements. The Appropriate Assessment must add these additional sources of air pollution to the assessed quantum of pollution derived from the proposed development to provide the necessary ‘in combination’ assessment required by the Habitats Regulations. 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.

### Internationally designated site sensitive to air pollution

#### Isle of Portland to Studland Cliffs SAC

- 3.7 This SAC lies immediately to the south of the proposed development and is therefore in a potentially highly sensitive location. The SAC has been designated for its representation of a

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<sup>1</sup> Special Areas of Conservation (SAC) and Special Protection Areas (SPA) which form the Natura 2000 network of European protected sites and by UK policy Ramsar sites listed under the Ramsar Convention on the Conservation of Wetlands of International Importance.

number of habitats listed on Annex I of the EU Habitats Directive including Semi-natural dry grasslands and scrubland facies: on calcareous substrates. This comprises calcareous grassland and scrub habitats developed on the outcrops of Portland Limestone that occur around the coast of Portland. The steep limestone slopes to the south of the proposed development are known as Verne Common. These have become invaded with scrub over recent years and the extent of open grassland has been much reduced. However, a survey of this area is referred to in Appendix K part 1 of the ES. This records the presence of two very rare liverworts growing on rocky outcrops in this area in 1996. Although scrub growth has made access difficult this rocky outcrop is still visible in air photographs and it is possible, if not probable, that these species persist.

- 3.8 In addition, the mature scrub that has developed also has its own interesting lower plant flora that includes two species of beard lichen (*Usnea articulata* and *U. esperantiana*). The report in Appendix K states that both these lichen species are very sensitive to air pollution in particular Ammonia, NOx and Sulphur dioxide.
- 3.9 These lower plant and lichen species are components of the wider calcareous grassland and scrub habitat for which this SAC has been designated. They are highly vulnerable features of the habitat in close proximity to the proposed development.
- 3.10 Although the balance between scrub and open grassland in this part of the SAC may currently be resulting in it being assessed as having unfavourable condition, it will be a responsibility of Natural England to secure favourable condition through removal of scrub and potentially improved grassland management. The impact of air pollution from the proposed development may prevent this part of the SAC being restored to favourable condition.
- 3.11 Despite the major short-comings in the air quality assessment, identified by Penny Wilson AQA, the assessment of air quality provided in the ES found that emissions from the proposed development will result in the appropriate Annex I habitat 1% threshold being triggered for a number of pollutants as listed in ES paragraph 10.127 as follows:
- NOx 1.3% of Critical Limit
  - SO<sub>2</sub> 0.9% of Critical Limit
  - Ammonia 2.5% of Critical Limit
  - Acid deposition 1.0% of Critical Load
  - Nitrogen deposition 1.1% of Critical Load
- 3.12 The applicants rely on Environment Agency guidance that this is not likely to be a significant effect if the Predicted Environmental Contribution (PEC) remains less than 70% of the Critical Level or Load. However, there are a number of concerns with the use of the 70% threshold in this location. Reference has already been made to the coarse grid used to calculate the existing background pollution levels and the consequent underrecording of impact that might result (Penny Wilson, AQC). In addition, advice on the use of the 70% threshold is now several years old and may not be reliable. It assumes that the Critical Level or Load is sufficiently precautionary to allow pollution levels to rise to within 30% of this without causing damage. This may not be sufficiently precautionary in situations where the combined effect of raised levels of several pollutants, each of which breach the 1% threshold, will have a much greater impact than raised levels of just one pollutant. In otherwise low pollution environments, such as Portland, relatively small increases in air pollution can result in proportionately large total increases pollutant load, for example, using the figures provided in the ES, the SO<sub>2</sub> concentration within the SAC will increase by 12.8% and the Ammonia concentration will be increased by 4.8% as a result of the development.

- 3.13 As Appendix K and the ES states, the lichens and bryophytes that are a feature of the SAC habitat are vulnerable to increases in NO<sub>x</sub>, ammonia and acid deposition, all of which will be raised by the proposed development.
- 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. These are typical species of this habitat that need to be considered as part of the Appropriate Assessment. Both of these species require a grassland of specific structure to support their complex life-cycle that is dependent on the presence of specific larval food plants and ant hosts. Increased air pollution could have a devastating impact on this habitat if its structure and composition are altered.
- 3.15 As consequence of the vulnerability of the SAC habitat in close proximity to the proposed waste incinerator, the short-falls in the air quality assessment process and the predicted increases in a number of air pollutant concentrations there is a high potential for the proposed development to have adverse effects on the integrity of the Isle of Portland to Studland Cliffs SAC. These have not been fully and properly assessed in the submitted Shadow Appropriate Assessment.

#### Chesil and The Fleet SAC

- 3.16 Despite the deficiencies in recording the level of pollutants affecting the internationally important wildlife sites, the Shadow Appropriate Assessment report identifies that the Process Contribution (PC) from the proposed development will exceed the 1% Critical Level threshold for Ammonia and will reach 0.9% of the Critical Load for nitrogen deposition within this SAC.
- 3.17 As a consequence, it considers in more detail the impact of the proposed development on the Conservation Objectives for Chesil and The Fleet SAC. It 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 (para 5.54). This conclusion is based on an erroneous use of the EU Interpretation Manual to relate NVC communities to Annex 1 habitat types. Firstly, the vegetated shingle classification provided in the NVC is very limited and has been greatly expanded by more recent survey, including for example, the work referred to in the Shadow Appropriate Assessment report. Secondly, 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. Thirdly, 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.
- 3.18 This wider view of the vegetation of the Annex I habitat is provided in the description of the habitat published on the JNCC website<sup>2</sup> which states that the habitat;  
  
“supports the most extensive occurrences of the rare sea-kale *Crambe maritima* and sea pea *Lathyrus japonicus* in the UK, together with other grassland and lichen-rich shingle plant communities typical of more stable conditions, especially towards the eastern end of the site” (emphasis added).

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<sup>2</sup> <https://sac.jncc.gov.uk/site/UK0017076>

- 3.19 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<sup>3</sup>.
- 3.20 As a consequence of the approach taken in the Shadow Appropriate Assessment, it fails to assess the impacts of air pollution on locations within the SAC where maritime grassland vegetation occurs within the Annex 1 habitat type.
- 3.21 The Shadow Appropriate Assessment report relates the effects of nitrogen deposition on Chesil Beach with its effects on sand dune vegetation on acid and calcareous substrate. There is no evidence that shingle vegetation responds to differing substrate pH in the same way as sand dunes, this is particularly so when the full expression of vegetated shingle habitat is considered, not just the SD1 pioneer communities included in the Shadow Appropriate Assessment.
- 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, for example, Groom and Crowther (2005)<sup>4</sup> found 13 species of lichen and bryophyte in samples of MC5 maritime grassland on Chesil Beach.
- 3.23 Increases in ammonia deposition also threaten the habitat of other typical species of the SAC, including the very rare moth *Scythris scicella*.
- 3.24 The erroneous understanding of vegetation communities that contribute to the Annex I habitats of this SAC has resulted in the Shadow Appropriate Assessment restricting its scope and ignoring impacts on a number of potentially more sensitive vegetation types within this habitat. Given the short-falls in the air quality assessment process and the predicted increases in nitrogen deposition and ammonia concentrations there is a high potential for the proposed development to have adverse effects on the Chesil and The Fleet SAC.

#### Chesil and the Fleet SPA and Ramsar Site

- 3.25 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 that the extent of these seagrass beds has declined in recent years<sup>5</sup>. The SPA and Ramsar site conservation objectives require that air pollution levels are maintained below critical loads and levels.
- 3.26 The Shadow Appropriate Assessment concludes that the increased levels of air pollution affecting the SPA and Ramsar habitat will have no adverse effect on the integrity of these sites. However, as has been identified, the air quality assessment has some major faults and the Shadow Appropriate Assessment has used incorrect data on which to predict impacts (Penny Wilson, AQA). As a consequence, the conclusion that there will be no adverse effect on the SPA and Ramsar site cannot be relied upon until these errors have been addressed.

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<sup>3</sup> <http://publications.naturalengland.org.uk/publication/46007>

<sup>4</sup> Groom, G. and Crowther, K.C. (2005) National Vegetation Classification Survey of Annex 1 and listed habitats at Chesil and The Fleet SAC, Dorset.

<sup>5</sup>

<https://designatedsites.naturalengland.org.uk/Marine/SupAdvice.aspx?SiteCode=UK9010091&SiteName=chesil&SiteNameDisplay=Chesil+Beach+and+The+Fleet+SPA&countyCode=&responsiblePerson=&NumMarineSeas onality=2>

## 4.0 Environmental Statement (ES)

### Habitats and vegetation on site

- 4.1 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.
- 4.2 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.
- 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)<sup>6</sup>. The presence of Priority habitat types such as this must be given particular weight in planning decisions.
- 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<sup>7</sup>. 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.
- 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 Bill<sup>8</sup>, 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.
- 4.6 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.
- 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).

### Birds

- 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.
- 4.9 The winter bird surveys also record the presence of a significant population of up to nine of the nationally rare Black Redstart (ES Appendix K part 2). Black Redstarts are given full legal

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<sup>6</sup> <https://data.jncc.gov.uk/data/a81bf2a7-b637-4497-a8be-03bd50d4290d/UKBAP-BAPHabitats-40-OMH-2010.pdf>

<sup>7</sup> <https://www.buglife.org.uk/resources/habitat-hub/brownfield-hub/>

<sup>8</sup> <https://www.gov.uk/government/publications/environment-bill-2020>

protection in the UK being listed on Schedule 1 of the Wildlife and Countryside Act (1981, as amended). They are on the Red List of Birds of Conservation Concern due to wintering and breeding population declines. There are an estimated 58 breeding pairs of this species in Britain with a wintering population of 400 birds.

4.10 Black Redstarts are species associated with sparse vegetation and stony ground, which is necessary for feeding. They occur on a variety of brownfield sites where the combination of bare ground, sparse vegetation and complex structure provides ideal habitat for them. Open Mosaic Habitats on previously developed land are ideal for this species.

4.11 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 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](http://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.”

4.12 Given the lack of survey effort, it is not surprising that no evidence of breeding Black Redstart was found at the proposed development site.

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.

4.14 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.

## 5.0 Bats

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.



- 5.2 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.
- 5.3 The absence of any nocturnal bat survey is considered a significant flaw in the ES. The nearby scrub and calcareous grassland habitats within the SSSI/SAC habitat could well provide valuable foraging and commuting habitat for bats. The diversity of flower and invertebrate rich habitat within the proposed development could also provide foraging habitat for bats. The un-supported statement that Portland is known to be poor for bats and assumptions about the likelihood of nocturnal lighting undermine confidence in the decision not to undertake nocturnal bat surveys of the site.
- 5.4 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.

## 6.0 Invertebrates

- 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.
- 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.
- 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.



## 7.0 Conclusion

- 7.1 The assessment of air quality impacts of the proposed ERF has been shown to contain major flaws and deficiencies. These have been carried over into the Shadow Appropriate Assessment. As a consequence, the predicted impacts on internationally and nationally designated wildlife sites cannot be relied upon. In particular, there are grave concerns over the impact of increased levels of air pollution on the integrity of both the Isle of Portland to Studland Cliffs SAC and the Chesil and The Fleet SAC.
- 7.2 The lack of a proper in combination assessment of other plans or projects in the Shadow Appropriate Assessment also raises concern over potential impacts of air pollution on the Chesil and the Fleet SPA and Ramsar site.
- 7.3 Dorset Council, as competent authority, will be unable to make a proper assessment of this proposal in accordance with the UK Habitats Regulations until the identified major flaws in the Air Quality assessment and Shadow Appropriate Assessment have been addressed.
- 7.4 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 not be permitted without full and comprehensive compensation.
- 7.5 The proper assessment of impacts on the open mosaic habitat 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.
- 7.6 The Environment Bill (2020) will require that all development provides a net gain in biodiversity. The current proposals for the development of the ERF will result in a significant net loss of biodiversity within the application site. If it is to proceed, significantly more habitat compensation and biodiversity gain should be provided as part of this proposed development.
- 7.7 There have been no nocturnal bat surveys of the proposed development site. These were deemed unnecessary, although no justification for this decision have been provided. The lack of any nocturnal bat survey for the site is considered a significant short-fall in the provision of baseline ecological information. The conclusions reached in the ES in relation to bats cannot be relied upon in the absence of such information.

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30<sup>th</sup> October 2020

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