



Portland  
energy recovery  
facility

Supplemental planning supporting statement  
August 2021



**PORTLAND ENERGY RECOVERY FACILITY (ERF)**  
SUPPLEMENTAL PLANNING SUPPORTING STATEMENT  
POWERFUEL PORTLAND LIMITED  
AUGUST 2021



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## SUMMARY

- S1. In September 2020, Powerfuel Portland Ltd submitted a full planning application to Dorset Council for the construction of an energy recovery facility (ERF) on land at Portland Port, Portland.
- S2. Having assessed the application Dorset Council has formally requested that additional information and clarification be provided, some of which is deemed to be 'further environmental information' in accordance with Regulation 25 of the EIA Regulations and Section 62(3) of the Town and Country Planning Act 1990.
- S3. Dorset Council has provided 35 points, covering various topics, where further information is requested. The applicant has responded to this request through the following documents:
- An ES Addendum, with associated appendices (dealing with matters specifically deemed to be covered under Regulation 25 of the EIA Regulations).
  - A Consultation Response Summary Document (CRSD) and this Supplemental Planning Supporting Statement (SPSS), which refer to the original planning submission, the ES Addendum and technical appendices, and stand-alone supporting documents (dealing with aspects not deemed to be covered under Regulation 25 of the EIA Regulations).
- S4. The case for the development is multi-faceted but in summary the ERF will:
- Represent a sustainable form of waste management, reducing landfill and managing waste further up the waste hierarchy.
  - Enable Dorset to manage more of its residual waste in the county reducing the existing reliance upon the export of waste to other facilities in neighbouring waste authority areas, or outside of the UK, and in doing so Dorset's residual waste management system will become better aligned with the self-sufficiency and proximity principles.
  - Deliver sufficient residual waste management capacity in Dorset to meet the existing and future shortfall.
  - Accord with the Dorset Waste Plan (DWP) spatial strategy and policy approach, which provides flexibility for unallocated sites to come forward where sites deliver advantages over allocated sites. Advantages include its large scale, its ability to provide shore power to the port and district heating to the two local prisons. Furthermore, its location enables materials to be imported and exported by ship and provides future potential for the implementation of a carbon capture and storage (CCS) scheme.
  - Be located on brownfield previously developed land safeguarded for industrial use, located within an operational port, and upon which an extant planning consent exists permitting the development of an energy plant, fuelled in part by waste materials (waste oils and tyres).

- Meet the requirements of all relevant policies in the Dorset Waste Plan, West Dorset, Weymouth & Portland Local Plan, Dorset Minerals Strategy, and the Portland Neighbourhood Plan.
- S5. Furthermore, it has been demonstrated that all of the refuse derived fuel (RDF) produced at the Canford mechanical biological treatment (MBT) facility in Dorset (around 82,000 tonnes per annum) would be made available to the Portland ERF. A planned increase in capacity at Canford, would supply over 80% of Portland's RDF requirements from Dorset waste. It was made public on 6 August 2021 that Beauparc has been awarded the 3-6 year contract by BCP Council to process household, commercial and litter bin waste. This will be processed at the Canford Magna facility, and the residue will be used to produce RDF which will be suitable for treatment at the ERF<sup>1</sup>. This would be the most rational and efficient solution for Dorset, and more sustainable than exporting this material around 120 km to the Bridgwater ERF in Somerset or other locations.
- S6. There is insufficient capacity to treat all of Dorset's residual waste at existing ERFs within the defined catchment area and, even accounting for planned capacity, there is still a capacity gap greater than the proposed capacity of the ERF. The ERF would not prejudice other waste management facilities from coming forward in Dorset, including the much smaller scale Eco-Sustainable Solution ERF, Parley, if this is consented, and investment was able to be raised so it could be built.
- S7. The ERF would have little impact on the European RDF market. European ERFs will instead focus their capacity on the large volumes of European waste still sent to landfill. The ERF, by means of its CHP capability, will be of equal standing to European ERFs in terms of its efficiency.
- S8. The scheme will deliver renewable/low carbon energy responding to local and national climate emergency declarations, contributing towards various targets for carbon reduction, and increasing energy security.
- S9. The ERF will deliver shore power to Portland Port to meet its existing demands and will also help the UK shipping industry meet national targets to reduce carbon emissions and other air pollutants.
- S10. The Portland ERF will deliver a better carbon outcome against all of the alternative scenarios assessed. It performs better than current waste management practice and also future waste management practice in Dorset (relating to the transfer of some waste to the Bridgwater ERF in Somerset).
- S11. The applicant's net zero commitment will ensure that the ERF achieves net zero carbon emission during its operational lifetime. Furthermore, the applicant is committed to an emission reduction route-map to ensure that emissions are physically reduced in preference to off-setting. As part of this route-map the ERF is 'CCS ready' and the applicant is willing to implement carbon capture and storage (CCS) technology, as and when this becomes technically and commercially viable.

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<sup>1</sup> Please note due to the timing of this announcement it has not been possible to include this in particular in the Waste Need Paper, as part of the wider response to Dorset Council's request letter

- S12. In respect to district heating, whilst the ERF is 'CHP ready' the applicant has gone further and identified a near term credible anchor district heating scheme supplying the prisons on the island with heat.
- S13. The ERF has significant advantages in respect to its ability to deliver both shore power and district heating. In carbon and economic value terms this outperforms other allocated Dorset waste sites, where such potential is, in the case of shore power not relevant, and in the case of district heating much more limited. This must be considered to be a specific site advantage.
- S14. There is a need for new economic investment at Portland to help address existing socio-economic concerns and generate sustainable regeneration by taking advantage of Portland's assets, opportunities, and excellent growth potential. The ERF will provide new jobs and provide opportunities for training and education to increase skills, and knowledge for local people, and help to address existing pockets of social deprivation at Portland.
- S15. The ERF will help achieve transformational change to unlock key employment sites, such as within Portland Port, exploit the area's strengths and potential opportunities in respect to the development of renewable energy and low carbon technologies and support tourism related activities. The provision of shore power will enable the port to remain commercially competitive in the cruise sector, avoiding the future loss of cruise liner visits if shore power cannot be secured, safeguarding existing jobs and supporting future economic growth,
- S16. An assessment of potential plume visibility has been undertaken and this has concluded that the plume would only be visible for very short periods of time, on a limited number of occasions and in limited months of the year (all of which are outside the main tourist season). This has not changed the original conclusions of the landscape, seascape and visual impact assessment and the ES. Whilst the development would result in some impact, overall, this is deemed to be acceptable.
- S17. Information has been provided that demonstrates the proposed PVC cladding is robust and fully capable, through the use of tonal variations (such as camouflage), of achieving its objective of ensuring that the main building is recessive against its context when viewed from key locations.
- S18. Additional air quality modelling has been undertaken to take account of the net change in emissions of several pollutants due to the use of shore power provided by the ERF to ships berthed at the port. Its findings were used to update the original human health risk assessment and health impact assessment, which did not identify any significant health effects. The additional modelling demonstrates that the ERF, combined with shore power, will result in a reduction in emissions and pollutants in many cases due to the reduced use of diesel engines onboard vessels at Portland port. In all cases the proposed development will not lead to any significant effects on air quality and the ES conclusions remain valid.
- S19. A framework heritage mitigation strategy has been devised that will result in works to the E Battery East Weare scheduled monument, to enable its removal from the Historic England Heritage at Risk Register. Other benefits include enhanced public access through the extension of the footpath at East Weare and enhanced opportunities for public appreciation through the provision of interpretation for the group of related heritage assets at East Weare. These significant public heritage benefits more than



outweigh any harm caused to the setting of local heritage assets arising from the ERF development.

- S20. The heritage benefits will result in other secondary benefits including the removal of scrub allowing former habitats, such as lowland calcareous grassland, to re-establish once the scrub is removed, contributing towards the objective to return the Isle of Portland Site of Special Scientific Interest (SSSI) to a favourable condition. Some tourism benefit is achieved by allowing an “around the island” circuit of the coastal path by creating a new section of permissive footpath through currently inaccessible parts of the secure port estate to connect to the existing public accessible land/rights of way.
- S21. The original shadow Appropriate Assessment conclusion, that the process emissions arising from the ERF, and its associated transport movements, would not result in an adverse impact on the integrity of any designated national site network (NSN) site, remains unchanged. There would be no significant effects on the nationally designated SSSI or other local designated areas.
- S22. There would be no significant effects associated with the proposed ERF in respect to the marine environment, and protected species and habitats. An assessment undertaken by marine consultant ABPmer has considered the potential impacts on the marine environment, and human health, arising from potential ERF emissions to the air and water. It concludes that there are no significant risks associated with the human consumption of local fish or shellfish and on that there should be no rational basis to anticipate a negative impact on fish and shellfish related businesses and employment.
- S23. The proposed Portland ERF is fully compliant with DWP Policy 4 criterion a, in that the proposed Portland ERF site has demonstrated many advantages over the DWP allocated sites.
- S24. The analysis of the waste capacity gap in the ERF’s catchment area (ignoring the potential availability of waste being exported to Europe and passing the site by sea), demonstrates that the objectors’ comments that there is insufficient waste available for the facility, and that Portland ERF would prejudice the delivery of DWP allocated sites are inaccurate and unfounded. The proposed ERF fully accords with Policy 4 criterion b.
- S25. The Portland ERF accords with the DWP vision and its spatial strategy to manage Dorset’s waste in Dorset, in line with the self-sufficiency and proximity principles and fully accords with Policy 4 criterion c.
- S26. The Portland proposal complies with the requirements of Policy 6 in respect to its contribution to meeting the DWP identified waste treatment need, its spatial strategy, the provision of CHP (through both shore power and district heating), the safeguarding of protected NSN ecological sites and the transport of residual materials by sea.
- S27. The additional information submitted in response to the council’s letter confirms the original conclusion that the Portland ERF is compliant with other relevant DWP policies in respect to amenity, quality of life and health, heritage, landscape, flood risk and natural heritage.
- S28. In considering the original planning application material, together with updated and further supporting information, it is clear that the compelling planning and environmental case remains, and that this is becoming stronger given the pressing need to take action to deliver the above benefits.

- S29. The benefits of the proposed ERF are significant and should be afforded significant weight, outweighing any identified adverse effects, such that in the planning balance permission should be granted.



## 1. Introduction

### **Dorset Council's request for further information and clarification**

- 1.1 In September 2020, Powerfuel Portland Ltd submitted a full planning application to Dorset Council for the construction of an energy recovery facility (ERF) with ancillary buildings and works including administrative facilities, gatehouse and weighbridge, parking and circulation areas, cable routes to ship berths and existing off-site electrical sub-station, with site access through Portland Port from Castletown (application reference: WP/20/00692/DCC) on land within Portland Port.
- 1.2 The application was accompanied by an environmental statement (ES) prepared in accordance with the Town and Country Planning (Environmental Impact Assessment) Regulations 2017 (as amended; hereafter the EIA Regulations), which provides an assessment of the likely significant effects associated with its construction and operation.
- 1.3 Dorset Council has consulted on the application and also appointed Tetra Tech to undertake a review of the ES, which ensured that the council had access to sufficient expertise to examine the ES. Representations have been submitted to Dorset Council by consultees, members of the public and other interested parties in response to the consultation on the planning application. Dorset Council has taken these representations into account in its consideration of the application.
- 1.4 Following the consultations, the council formally requested additional information and clarification in a letter dated 30 April 2021. The council confirms that it considers some of the information requested constitutes 'further environmental information' and, where this is the case, it is requested in accordance with Regulation 25 of the EIA Regulations.
- 1.5 An ES Addendum has been prepared to review the council's letter and provide the information that is considered to be 'further environmental information' under Regulation 25 of the EIA Regulations. It forms an addendum to the submitted ES.

### **The purpose of this report**

- 1.6 The review of the council's letter also identified that some of the information requested, while it may not constitute 'further environmental information' within the remit of Regulation 25 of the EIA Regulations, is deemed necessary for the waste planning authority to comprehensively assess the planning and environmental effects of the proposed development and to enable it to robustly determine the application.
- 1.7 This Supplemental Planning Supporting Statement (SPSS) provides clarification and supporting information (not covered under Regulation 25 of the EIA Regulations), by highlighting relevant sections of the documents already submitted, summarising key aspects of the additional information provided in supporting stand-alone technical documents, and where appropriate setting out clarification for matters specifically referenced to in the council's letter.
- 1.8 In addition to this document, the applicant has prepared a separate Consultation Response Summary Document (CRSD), which provides a summary response to the principal topics raised during the consultation by statutory consultees, other non-statutory consultees, and local interest groups. It also provides a summary response to topics of concerns raised by the wider public.

**The applicant's response to the council's letter of 30 April 2021**

1.9 The submission comprises the following components:

***Regulation 25 further environmental information***

- ES Addendum, together with
- Appendix 1.1: Dorset Council's letter (30.04.21)
- Appendix 2.1: Potential district heating connection routes (point 12)
- Appendix 3.1: Additional dispersion modelling (point 18)
- Appendix 3.2: Update tables for technical Appendix D2 (point 19)
- Appendix 3.3: Modelling results at discrete receptor locations (point 35)
- Appendix 4.1: Updated carbon assessment (point 22)
- Appendix 5.1: Human health risk assessment (HHRA) addendum (point 5)
- Appendix 5.2: Health impact assessment (HIA) addendum (point 5)
- Appendix 6.1: Framework heritage mitigation strategy (point 7)
- Appendix 7.1: Preliminary slope stability assessment (point 29)
- Appendix 8.1: Plume visibility modelling results (point 1)
- Appendix 8.2: Replacement ES figures 9.16 and 9.17 and new ES figures 9.38 to 9.47 (point 1)
- Appendix 9.1: DERC report (point 10)
- Appendix 9.2: Phase 1 walkover of East Weare heritage features for proposed remedial vegetation clearance works (point 10)
- Appendix 9.3: Potential marine impacts of the proposed Portland ERF (point 10)

***Other supporting technical information***

- Supplemental planning supporting statement (this document)
- Consultation response summary document
- Updated shadow appropriate assessment
- Design and access statement (DAS) addendum
- District heating paper
- Updated shore power strategy report
- Waste need paper
- Portland ERF post combustion capture plant - Pre-feasibility assessment
- Flood risk assessment addendum
- Incinerator bottom ash (IBA) paper

- Grid connection paper
- BS41442 noise impact assessment
- Fire prevention plan
- Access path strategy paper

### **The scope of this Supplemental Planning Supporting Statement (SPSS)**

- 1.10 Section 2 of this supplemental statement provides a summary overview of the planning and environmental case for the proposed Portland ERF focusing on its key benefits.
- 1.11 Section 3 of this document provides a summary of the information provided in respect to the following topic areas. Where appropriate this provides a reference to the specific points in the Dorset Council letter where further information is requested.
- Landscape – interpretive background detail and external materials (points 2 and 3)
  - Health – impact on public health (point 5)
  - Historic environment – heritage benefits (point 7)
  - Ecology – improvement of habitat (points 10 and 11)
  - District heating (point 12)
  - Electricity generation (point 14)
  - Shore power (point 16)
  - Carbon balance and climate change (including carbon capture and storage) (point 22)
  - Traffic – export of IBA (point 24)
  - Surface water discharge (point 27)
  - Waste need (points 30, 31 and 32)
  - Environmental permit (point 35)
- 1.12 Section 4 of this report, which should be read in conjunction with the submitted Planning Supporting Statement, clarifies and confirms why the proposed development is compliant with the development plan. It specifically addresses point 34 of the council's letter in respect to the applicant's interpretation of planning policies.
- 1.13 Section 5 of this report addresses the relevant planning conditions and planning obligations in so far as these relate to the matters raised in the council's letter.
- 1.14 Section 6 provides a conclusion in respect to both the information originally submitted with the planning application and the further information and clarification (including further environmental information) now submitted in response to the context of the council's letter, in the context of the planning balance to be struck by the decision maker.

### **The scope of the Consultation Response Summary Document (CRSD)**

- 1.15 The council's letter also requests that further responses be given to topic-based issues raised in the representations to the first consultation. In some cases, reference is made in the council's letter to a specific consultee response, or aspects that are most relevant to the consideration of that topic area.
- 1.16 To address these requests, the applicant's response is provided in the CRSD to the range of detailed technical points that were raised by statutory consultees and technically competent consultees during the first consultation. Specifically, the CRSD covers the following:
- Design and materials (point 3) - also covered in detail in the DAS Addendum and summarised in chapter 3 of the SPSS
  - Landscape (point 4)
  - Health (point 6)
  - Historic environment (point 9)
  - Ecology (point 11)
  - Combined heat and power (CHP) District heating (point 13)
  - Electricity generation and distribution (point 15)
  - Shore power (point 17)
  - Air quality (point 21)
  - Carbon balance and greenhouse gas emissions – including UKWIN (points 22 and 23), also covered in detail in the ES Addendum and summarised in chapter 3 of the SPSS
  - Traffic (point 26)
  - Surface water drainage (point 28)
  - Contamination and geology (point 29) covered in detail in the ES Addendum
  - Economic effects and jobs (point 33)
  - Need and waste arisings (points 30, 31 and 32) – also covered in detail in the Waste Need Paper and chapter 3 of the SPSS
  - Compliance with development plan policy (point 34) – also covered in detail in chapter 4 of the SPSS
- 1.17 For completeness, the CRSD also covers some other topic areas where consultees have made comments, but these are not covered by the council's request for further information.
- Alternative sites
  - Fall back scheme
  - World heritage site

- 1.18 Annex A to the CRSD provides the applicant's response to UKWIN's comments on the planning application submission (point 23).
- 1.19 Annex B to the CRSD provides a summary response to a wide range of topic areas raised by the public

## 2. Summary of the case for the development

### *Overview*

2.1 The planning case for the development is set out in full in the original Planning Supporting Statement. However, with the submission of further 'environmental information' under the provisions of Regulation 25 (of the EIA Regulations), and the provision of other clarification and supporting information, the applicant considers it is helpful to reiterate the core aspects of its case that together justify the grant of planning permission.

2.2 The proposed Portland ERF will:

- Use residual waste in the form of RDF as a fuel to generate low carbon energy representing a sustainable form of waste management, diverting waste from landfill disposal, and managing waste further up the waste hierarchy (without impacting negatively on Dorset's admirable recycling rates) in accordance with paras 152 and 155 of the NPPF (2021) and the Government's overarching National Planning Policy Statement for Energy (NPS-EN1).
- Enable Dorset to manage more of its residual waste in the county, reducing the existing reliance upon the export of waste to other facilities in neighbouring waste authority areas, or outside of the UK, and in doing so Dorset's residual waste management system will become better aligned with the self-sufficiency and proximity principles.
- Play an important part in delivering the Dorset Waste Plan (DWP) vision and objectives to deliver sufficient residual waste management capacity in Dorset to meet the existing and future shortfall.
- Accord with the DWP's spatial strategy and policy approach, which provides flexibility for unallocated sites to come forward (Policy 4 criterion a) where sites deliver advantages over allocated sites. The key advantages of the Portland location are:
  - proximity to, and ability to supply a local heat network serving the two Portland prisons. The Ministry of Justice has confirmed an interest in taking heat, enabling its fossil fuelled boilers to be taken off-line, delivering carbon savings and local air quality benefits
  - ability to provide shore power to the port, which cannot viably be provided by alternative means, enabling visiting cruise liners and the stationed Royal Fleet Auxiliary (RFA) to turn off their fossil fuelled engines when in port delivering carbon savings and net air quality benefits in terms of particulates and other pollutants. Portland Port's chief executive officer has confirmed in writing that the port is aware that it needs to offer shore power capability in order to maintain the existing levels of business, the loss of which in relation to the cruise ships would have knock-on adverse impacts for the broader Dorset tourist economy.
  - facilitation of the import of RDF and export of residual materials (IBA). This would also facilitate Carbon Capture and Storage (CCS), when this

becomes technically and commercially viable, through the transfer of captured carbon by ship.

- proximity to adjoining employment land within the port that can accommodate linked activities, including the future provision of recycling and CCS technologies.
  - land availability on commercial terms and of a size that is capable of delivering an ERF with sufficient capacity to make a substantial contribution towards meeting Dorset's residual waste needs, using proven and bankable technology with economies of scale.
- Comply with all of the provisions of DWP energy recovery policy (Policy 6), including the provision of CHP capable of supplying electricity to shore power and the local grid and heat to a local heat network serving identified heat customers. Specifically, further information provided in the District Heating Paper has confirmed that a heat network route has been identified to serve the two prisons, without causing any significant environmental effects, and is also technically and economically viable, further supported by both economic and environmental policy drivers.
  - Located on vacant, brownfield previously developed land specifically allocated for industrial use in the West Dorset, Weymouth & Portland Local Plan and Neighbourhood Plan, within an operational port, and upon which an extant planning consent exists permitting the development of an energy plant, fuelled in part by waste materials (waste oils and tyres).
  - Meet the requirements of all relevant policies in the Dorset Waste Plan, West Dorset, Weymouth & Portland Local Plan, Dorset Minerals Strategy, and the Portland Neighbourhood Plan.

### *Waste*

2.3 The evidence presented confirms that the ERF will meet a demonstrable waste need in respect to the following:

- Large volumes of residual waste arisings in Dorset, the region and nationally (both municipal and commercial and industrial), a significant proportion of which could be diverted from landfill to energy recovery.
- Dorset has a predicted shortfall in residual waste treatment capacity of 234,000 tonnes by 2033, in the absence of any additional treatment capacity. An ERF at Portland with a capacity to process around 183,000 tonnes per annum of residual waste (and up to a maximum of 202,000 tonnes per annum) would help meet these needs.
- Dorset has no remaining landfill capacity and no energy recovery facilities to manage existing and future waste. Almost all of Dorset's residual waste is either managed by intermediate MBT to create RDF which is currently exported to Europe or other energy from waste facilities or landfill outside of Dorset. The provision of this ERF in Dorset would provide a higher degree of sustainability and self-sufficiency and accord with the proximity principle. Specifically:



- All of the RDF produced at the Canford facility (around 82,000 tonnes per annum), is currently sent to European ERFs. It is understood that this may shortly be sent to the Bridgwater ERF in Somerset, some 120 km from Canford. The Portland ERF would provide a more logical and closer Dorset facility providing carbon and cost benefits.
  - The operator of the Canford facility (Panda Beuparc), and Geminor (an associate fuel supplier) have both confirmed that they would prioritise the supply of RDF material derived from Dorset waste to the Portland ERF, if it is consented.
  - Additionally, by the time the ERF becomes operational it is expected that Canford facility would have increased from the existing Environment Agency permitted level of 125,000 tonnes per annum to 200,000 tonnes per annum, increasingly RDF production from around 82,000 tonnes per annum to around 150,000 tonnes per annum.
  - It should therefore be possible to supply over 80% of Portland's RDF requirements from Dorset waste processed at Canford alone. If the Portland ERF is available, we expect this would lead to further RDF production within Dorset, as opposed to export of pre-treated waste outside the country as is currently the case. Full processing of waste in Dorset would be the most rational and efficient solution for Dorset waste and far more sustainable than exporting this material to other facilities outside of the county, including the Bridgwater ERF in Somerset.
- There is insufficient capacity to treat all of Dorset's residual waste at existing ERFs within the defined catchment area, with many required to prioritise their local authority collected waste under contract. Even accounting for planned ERF (which may or may not be developed), there is still sufficient waste available for the ERF. This does not account for the 195,000 tonnes and 310,000 tonnes per annum of RDF being exported by sea from the UK and Ireland that passes in close proximity to Portland.
  - The ERF would not prejudice other waste management facilities from coming forward on DWP allocated sites, including the Eco-Sustainable Solutions ERF at Parley, which if consented and built would deliver 50,000 tonnes per annum of thermal treatment capacity (noting that this represents only 30% of the capacity envisaged by the DWP).
  - The proposed ERF would have little impact on the European RDF market, with the amount of RDF exported from the UK expected to continue to fall due to a number of factors, including the provision of more RDF processing capacity in the UK. European ERFs will instead focus their capacity on the large volumes of European waste still sent to landfill. The proposed Portland ERF, by means of its CHP and shore power capability, will be of equal standing to other European ERF in terms of its efficiency.

### *Energy*

2.4 The evidence presented in this application supports the following conclusions in respect to energy and need:

- There is a need in Dorset for more renewable and low carbon energy generation infrastructure to contribute towards meeting the Dorset target of 7.5% of all energy generation to be from renewable sources, to support the Dorset and UK local authority climate emergency declaration.
- There is a need to provide shore power, supplied by lower carbon energy facilities, both nationally and locally at Portland Port in Dorset, to meet the existing demand and help the UK shipping industry contribute towards meeting national targets to reduce carbon emissions and other pollutants. Portland Port has confirmed that it requires shore power to provide a lower carbon source of electricity to maintain its existing customer base and meet their expectations, and also to support national efforts to decarbonise the marine sector. Failure to provide this source of lower carbon power so will have economic consequences for the port and the wider local economy.
- There is a need at the local and national levels for a wide mix of energy infrastructure, including energy from waste facilities, to increase national energy security.
- There is a national need for urgent action to reduce the emission of greenhouse gasses in accordance with international agreements, such as the 2015 Paris Agreement.
- There is a need for new renewable and low carbon energy infrastructure that will contribute towards meeting the UK's statutory carbon reduction targets, enshrined within the 2008 Climate Change Act (as amended) to reduce the UK's net greenhouse gases emissions by 100% by 2050 relative to the 1990 baseline.
- There is a need for more investment in energy efficiency and clean energy technologies, and to grow the low carbon economy by rolling out low carbon heating, by building and extending heat networks across the country and by delivering clean, smart, and flexible power encouraging renewable and low carbon energy, in accordance with the 2009 UK Low Carbon Transition Plan and the 2017 Clean Growth Strategy.

### *Socio-economic*

2.5 The evidence set out within this planning application supports the following conclusions in respect to socio-economics and need:

- There is a need for new economic investment at Portland to help address existing socio-economic concerns and generate sustainable regeneration by taking advantage of Portland's assets, opportunities, and excellent growth potential.
- There is a need to create more high quality and well paid jobs to help retain and attract younger people to the Portland area and provide

opportunities for training and education to increase skills, and knowledge for local people.

- There is a need for investment in Portland to improve overall standards of living, including helping to address relatively low levels of pay, diversifying the mix of employment opportunities, and reducing a dependence on lower paid seasonal sectors, also providing job opportunities locally that reduce the need to out commute for work.
- There is a need for investment and stimulation of economic growth to help address the existing pockets of social deprivation that are evident on some parts of Portland.
- There is a need for transformational change at Portland to unlock key employment sites, such as within Portland Port, to exploit the area's strengths and potential opportunities in respect to the development of renewable energy and low carbon technologies and support other tourism related activities such as the cruise ship sector.
- There is a need at the UK level for new development that is capable of delivering economic growth and supporting the drive to transform the UK into a dynamic economy through investment in low carbon infrastructure, and a focus on skills and knowledge to increase productivity and generate greater prosperity for all.
- There is a need for the planning system to support the delivery of sustainable development, especially development that can contribute towards building a strong, responsive, and competitive economy, support strong, vibrant, and healthy communities and protect the environment, whilst also supporting the move towards a low carbon UK economy.

### *Carbon and greenhouse gasses*

- 2.6 The applicant acknowledges that the Portland ERF would need to reduce its carbon intensity over its operational life. To demonstrate how the Portland ERF can meet more stringent emission standards the applicant has set out a road-map to support its transition to the Government's 2050 Net Zero target and show how the facility would contribute to a reduction in carbon emissions associated with waste management on its day of opening and progressively reduce these emissions up to 2050. The road map identifies a mix of the technologies that the applicant is exploring across its business with full decarbonisation of the Portland ERF likely to be achieved using one of, or a combination of, the three longer term measures.

#### *Day 1 of Operations (assumed 2025)*

- The Portland ERF will operate with R1 compliance, reducing greenhouse gas emissions by diverting waste from landfill and export abroad.
- The Portland ERF will generate low carbon electricity for the Port (shore power) and for export to the grid.
- The Portland ERF is designed to be 'CHP ready' for connection to a district heating scheme. Unlike other facilities, the Portland ERF benefits from two high demand heat users (being the adjoining prison and young offenders centre) that could cornerstone the upfront capital investment

required for a district heat network and, in due course, this could expand to include other potential local end users already identified, to use lower carbon energy and heat generated by the facility.

- The Portland ERF will be designed to allow fuel flexibility should the nature of the incoming waste change over time and recycling levels increase.

#### *Short Term (assumed 2025–2035)*

- The Portland ERF can accommodate changes to the composition of the fuel mix to reduce the non-biogenic carbon contained in the incoming waste stream driven by Government policy on recycling; and
- The Portland ERF can promote the potential co-location of a facility(facilities) within the Port to recycle/reuse products extracted from the incoming waste stream (circular economy) reducing the non-biogenic content of the fuel mix and displacing CO<sub>2</sub> emissions associated with the production of products or feedstocks which the extracted products replace.

#### *Longer Term (assumed 2030–2050)*

- The Portland ERF could accommodate Carbon Capture Storage and Use either within the port or for export by sea once this technology becomes technically and commercially viable.

2.7 The updated carbon assessment confirms that the Portland ERF will deliver a better carbon outcome against all of the alternative scenarios assessed. Specifically:

- In comparison with the other scenarios (export to UK ERF, European ERF or DWP allocated sites with equivalent ERF), the Portland ERF performs best with shore power and district heating capable of saving a further 8,749 tCO<sub>2</sub>e when compared to the base case scenario (baseline being Portland exporting electricity only to the grid).
- On the basis of shore power only the Portland ERF significantly outperforms all UK options for waste processing, including potential options within Dorset.
- The benefit of the proposed Portland ERF over the current residual waste management approaches for Dorset's waste is estimated to be around 7,200 tCO<sub>2</sub>e per year, increasing to 15,000 tCO<sub>2</sub>e per year in the maximum case with lower NCV waste. These calculations do not take account of the additional benefits that would be provided by shore power from the proposed Portland ERF, which would displace around 4,500 to 5,500 tCO<sub>2</sub>e per year, or the potential benefit of district heating, which would displace around a further 3,000 tCO<sub>2</sub>e per year.
- The lifetime carbon benefit of the Portland ERF has been calculated compared to the current baseline for Dorset's waste and is estimated to be 157,548 tCO<sub>2</sub>e, with a net benefit in each year.

- The Portland ERF has significant advantages in respect to its ability to deliver both shore power and district heating. In carbon terms this option outperforms other allocated Dorset waste sites, where such potential is more limited. This must be considered to be a specific site advantage.
- Whilst the proposals are based on ensuring that the ERF would at worst be net-zero carbon, the proposed Portland site is well located in a commercial port with access to shipping and land to facilitate the implementation of CCS as this becomes technically and commercially viable.

### *Landscape and visual - plume*

2.8 Further information has been provided in respect to the plume modelling undertaken (using the accepted ADMS dispersion modelling software and appropriate local weather data for Portland). Specifically:

- Based on a 5 year study period of hourly weather data (using the ADMS dispersion model which is an industry leading model and is approved by the Environment Agency), the percentage of daylight hours annually with any visible plume when the cloud cover is not high would be 0.55% (24.2 hours). This 5 year period includes the 2018 “Beast from the East” and “Storm Emma” weather patterns which were abnormal weather events and we include normalised figures adjusted for this in the detail below.
- The plume length is typically relatively short, being less than 50m for over 50% of the total visible time. The longest predicted plumes of over 100m only likely to occur for four hours per year. The plume montage images published by the local campaign groups are inaccurate, and in some cases over predict the maximum length of the plume and visibility by a factor of 21 times. This misleading visual material should not be attributed any weight.
- The ES Addendum confirms the conclusions of the original landscape, seascape, and visual impact assessment, that the plume is likely to produce only a very minor alteration to the view for a very limited number of hours in a very limited number of months (all of which are outside the main tourist season).
- The DAS Addendum visualisations further demonstrate that the plume, on the limited occasions it would be visible, would be variable in length and would not cause any unacceptable visual impact from the key viewpoints.
- The additional environmental information provided in the ES Addendum and further supporting information in the DAS Addendum on plume visibility demonstrates that whilst the development would result in some impact, overall, this is deemed to be acceptable.

### *Air quality and public health*

2.9 The air quality assessment has been updated to take account of the net change in emissions of nitrogen oxides (NO<sub>x</sub>), nitrogen dioxide (NO<sub>2</sub>), particulate matter (PM<sub>10</sub> and PM<sub>2.5</sub>) and sulphur dioxide (SO<sub>2</sub>) due to the use of shore power provided by the ERF to

ships berthed at the port. The findings were used to update the HHRA and HIA. The analysis has shown that:

- For particulate matter, there will be a net benefit associated with the proposed development at all points modelled. For NO<sub>2</sub> and SO<sub>2</sub>, there will be a net benefit for the majority of the area modelled. Where there is a net increase, the increase will be extremely small.
- The proposed development will not lead to any significant effects on air quality and the ES conclusions remains valid.
- The additional information and assessment provided in the updated HHRA and HIA did not identify any significant health effects.

### *Heritage*

2.10 The ES Addendum (appendix 6.1) includes the framework for the proposed heritage mitigation strategy, which will deliver the following benefits:

- Works to the E Battery scheduled monument and grade II listed building to enable its removal from the Historic England Heritage at Risk Register.
- Enhanced public access through the extension of the footpath at East Weare (known as Cemetery Road).
- Enhanced opportunities for public appreciation through the provision of interpretation for the group of related heritage assets at East Weare.

2.11 In addition to the above heritage benefits this work will also result in other secondary benefits:

- Ecological benefits, achieved by the clearance of some scrub from around the E Battery East Weare monument within the Isle of Portland SSSI. This will allow former habitats, such as lowland calcareous grassland, to re-establish once the scrub is removed, contributing towards the objective to return the SSSI to a favourable condition.
- Tourism benefits, achieved by allowing an “around the island” circuit of the coastal path by creating a new section of permissive footpath through currently inaccessible parts of the secure port estate to connect to the existing public accessible land/rights of way.

### *Ecology*

2.12 The ecological information submitted with the original application has been reviewed and updated. Specifically:

- The original shadow Appropriate Assessment conclusion, that the process emissions arising from the ERF, and its associated transport movements, would not result in an adverse impact on the integrity of any designated national site network (NSN), remains unchanged.
- There would be no significant effects on the nationally designated SSSI or other local designated areas.

- There would be no significant effects associated with the proposed ERF in respect to the marine environment, and protected species and habitats.
- The implementation of the heritage mitigation strategy will lead to some ecological benefits arising from scrub removal around the scheduled monument and improving access into the area so that other ecological management activities (such as establishment of grazing units) can take place in the future.

### *Conclusion*

- 2.13 The original planning application robustly demonstrated that there is a compelling planning case for the proposed ERF.
- 2.14 In terms of waste management this was based on its ability to meet Dorset's current needs for the provision of significant new residual waste management capacity (234,000 tonnes), reduce the need for landfill, and address the existing practice of exporting residual waste to other areas, outside of county to landfill or to other ERFs in the UK or Europe. This is much more closely aligned to the waste hierarchy and the self-sufficiency and proximity principles.
- 2.15 Further clarification is provided in the Waste Need Paper demonstrating that there is more than sufficient waste available in the ERF catchment, even when taking account of the limited existing or planned capacity. It also confirms that the Canford Magana facility can supply around 82,000 tonnes per annum (tpa) of Dorset derived RDF to Portland, increasing to around 150,000 tpa as Canford's planned RDF production increases, such that the facility could supply over 80% of the ERF's capacity requirement, using Dorset-derived residual waste. If the Portland ER is approved, it is reasonable to assume that further RDF production will occur using Dorset waste. Finally, the ERF would have little effect on the European RDF market as existing ERF capacity would be redeployed to divert other European residual waste away from landfill, whilst the Portland ERF is planned to have a high efficiency because of shore power and district heating and therefore would be of comparable efficiency and would have a reduced carbon impact given the reduction in transport required.
- 2.16 From an energy perspective the proposed ERF would be highly efficient providing energy for the provision of a shore power facility at the port and heat to a future district heating network serving identified local heat customers such as the two Portland prisons. In doing so it would meet the need for renewable and low carbon energy generation and derive carbon savings by displacing existing fossil fuels. This would contribute towards meeting national and local targets for reductions in carbon and greenhouse gases.
- 2.17 The updated carbon assessment has shown that the Portland ERF, with shore power and district heating, outperforms all of the other ERF alternative scenarios considered. It will also deliver significant carbon benefits against the existing, and the future baseline, for Dorset waste management practice. Furthermore, potential exists at the site to accommodate CCS, when this becomes technically and commercially viable, facilitated by the port location.
- 2.18 The ERF would also bring a series of other socio-economic benefits to the area, arising from a circa £100 million investment, and associated creation of construction and



operational jobs, helping to deliver transformational change at Portland and unlocking potential opportunities in the renewable/low carbon sector and promoting tourism by supporting cruise sector growth.

- 2.19 In respect to landscape and visual impact associated with the plume, the assessment concludes that the plume is likely to produce only a very minor alteration to the view for a very limited number of hours in a very limited number of months (all of which are outside the main tourist season). Whilst the development would result in some limited impact, overall, this is considered to be acceptable.
- 2.20 In respect to air quality matters, it is concluded that the provision of shore power will result in net benefits in respect to reducing particulates and other pollutants relative to the existing position. In respect to ecology the ERF there would be no significant impact upon protected ecological habitats and species. In terms of heritage, the previously identified impact on the setting of the East Weare heritage assets arising from the ERF would be off-set by the public heritage benefits resulting from the mitigation works to remove a scheduled monument from the at risk register and facilitating public access for appreciation and interpretation of the wider group of heritage assets on the East Weare. There would also be some secondary ecological and tourism related benefits arising from the heritage mitigation.
- 2.21 In considering the original planning application material, together with updated and new supporting information provided in response to the council's letter, it is clear that this compelling case remains and indeed is becoming stronger given the pressing need to take action to deliver the above benefits.

### 3. Further submitted information

#### Landscape

##### *Introduction*

3.1 The council's letter requested the following information and clarification in relation to landscape (points 1, 2 and 3 in the council's letter):

- Additional detail and assessment in relation to the vapour plume from the stack and its visibility. This should include additional photomontages and/or visualisations which show the likely plume in different meteorological conditions (point 1).
- Further interpretive background detail in relation to the scale of the development, and its context in relation to the existing Port (point 2).
- More detail of the proposed PVC coating, its durability, and potential issues in respect of degradation during the design life of the facility (point 3).

3.2 A DAS Addendum has been prepared and is submitted to provide the information requested above and this is summarised below, together with the findings of the ES Addendum.

##### *Plume visibility (point 1)*

3.3 The technical modelling and landscape and visual assessment of the predicted plume is specifically addressed through chapter 8 of the ES Addendum and appendices 8.1 (Plume visibility modelling results) and 8.2 (updated ES figures 9.16 and 9.17 and new ES figures 9.38 to 9.47).

3.4 The additional plume visibility modelling report provided in the ES Addendum (appendix 8.1) states that, in an average year, the percentage of daylight hours with any visible plume when the cloud cover is not high (seven to eight oktas<sup>2</sup>) would be 0.55% (24.2 hours). The plume would be obscured by cloud on cloudy days. Excluding the 'Beast from the East' and 'Storm Emma', which were abnormal weather events, the maximum percentage of hours with any visible plume would be 0.51% (22.2 hours).

3.5 While the plume would be visible for an average of 24.2 hours per year, its length would not be consistent for the entire duration, which would change the visual impact it would have from the various locations being considered. Therefore, the number of daylight hours the plume would be visible has been broken down by plume length, as follows:

- 0-20 m in length: 6.4 hours (6.2 hours excluding the 'Beast from the East' and 'Storm Emma')
- 20-50 m in length: 7.4 hours (6.6 hours excluding the 'Beast from the East' and 'Storm Emma')

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<sup>2</sup> A unit used to express the extent of cloud cover, equal to one-eighth of the sky.

- 50-100 m in length: 6.4 hours (5.8 hours excluding the 'Beast from the East' and 'Storm Emma')
  - 100-200 m in length (although it should be noted that the maximum predicted length was 187.89 m for one hour in February 2016): 4.0 hours (3.6 hours excluding the 'Beast from the East' and 'Storm Emma')
- 3.6 The ES Addendum states that these results confirm the conclusions set out in the original landscape, seascape, and visual impact assessment that the plume is likely to produce only a very minor alteration to the view for a very limited number of hours.
- 3.7 Section 2 of the DAS Addendum provides supporting information and illustrative material derived from the results of the additional plume modelling undertaken, in respect of the predicted plume occurrence and length using the ADMS dispersion model.
- 3.8 A series of visualisations are provided to assist Dorset Council to assess the visual impact of the likely plume, on the limited occasions when this would be visible. Views are provided from the key viewpoints that were agreed with landscape officers at the Osmington White Horse, Nothe Fort and Ferrybridge Inn. The visualisations show a worst case scenario with the maximum length of plume (187.89m) and the wind direction blowing at 90 degrees to the observer, in clear summer weather conditions. Visualisations are also provided showing plume visibility in winter conditions. These are based on the maximum predicted plume length and with the wind blowing to the north-east as this represents the predominant south-westerly wind conditions when the plume is most likely to form.
- 3.9 The DAS Addendum visualisations further demonstrate that the plume, on the limited occasions it would be visible, would be variable in length and would not cause any unacceptable visual impact from the key viewpoints.
- 3.10 Furthermore, as shown in section 2 of the DAS Addendum, this visual material (based on Environmental Agency approved modelling software, using 5 year hourly local weather data for Portland), demonstrates that the plume montage images published by the local campaign groups are inaccurate, and in some cases over predict the maximum length of the plume and visibility by a factor of 21 times. Therefore, this misleading visual material should not be attributed any weight.
- 3.11 The further environmental information provided in the ES Addendum and additional supporting information in the DAS Addendum on plume visibility demonstrates that whilst the development would result in some limited impact, overall, this is deemed to be acceptable and would accord with the provisions of DWP Policy 14 (landscape and design quality).

***Interpretive background detail (point 2)***

- 3.12 As requested by Dorset Council, further analysis has been undertaken to interpret the scale of the Portland ERF in the context and setting of the wider port. A contextual island elevation drawing has been prepared to demonstrate this, which forms part of the DAS Addendum (Introduction).
- 3.13 The elevation shows the proposed ERF's scale sitting comfortably within the context of the existing port development area, which is characterised by a range of other large

scale and tall buildings and structures. These include the coaling shed, dock cranes, inner coaling pier, ship docks and associated shipping. The wider context view also shows the tall nature of the former naval block (Prince Andrew House) and the Ocean Views apartments.

- 3.14 The contextual analysis also illustrates the presence of a series of other large scale buildings, located off Incline Road associated with the Glencore operations. It show that substantial industrial style buildings already exist, set midway up the East Weare undercliff. These are at a higher elevation than the ERF, which sits within the main port area, at the base of the East Weare undercliff and some way below the East Weare cliff face above.
- 3.15 The further contextual elevation clearly demonstrates that the scale of the proposed ERF building can comfortably sit within the context of the range of existing large-scale structures and buildings and the man made harbour area, associated with the operational port area and the wider port domain. The presence of the ERF at this location, by means of its scale would not, as is suggested by some objectors, be out of context with the existing industrial background of development in this brownfield location.
- 3.16 The proposal is deemed to accord in this respect with DWP Policy 14 (landscape and design quality).

***Additional detail on the proposed PVC mesh (point 3)***

- 3.17 Dorset Council has requested more information on the external cladding materials and specifically the proposed PVC mesh, and its durability over time. The DAS Addendum (section 1) provides supplementary information on the approach to the areas of 'green wall'. The design approach is to ensure that the green wall is recessive (not invisible), by providing sufficient tonal and colour variation to ensure the form of the ERF building is not immediately obvious, particularly from the more sensitive viewpoints in the world heritage site (WHS) and area of outstanding natural beauty (AONB) to the east.
- 3.18 In order to create a water-tight envelope, the building will be enclosed using a sheet metal cladding, which will be fixed back with cladding rails to the steel frame. It is proposed that this cladding will be dark green (similar to that used at the Glencore development at the Upper Osprey site) to create a suitable backdrop colour. The proposed PVC mesh will then be installed on a sub-frame that is spaced slightly off the surface of the façade and securely fixed to the steel frame. The fabric will be attached to the building using a tensioned system with aluminium profiles. Should the mesh need to be temporarily removed, for example for maintenance, the underlying dark green cladding would ensure that the building remained recessed within the landscape.
- 3.19 The PVC mesh is provided with a 10-year warranty. It is designed with a high tenacity base cloth to prevent deformation and top coatings to prevent elongation and tearing and provide resistance to dirt and UV fading. These will help to enhance the material's durability, protect it from environmental and chemical influences, repel dirt and intensify colours and image depth. To ensure that the PVC mesh camouflage remains effective throughout the ERF's lifespan, Powerfuel Portland Ltd is committed to reviewing the effectiveness and structural integrity at the end of the 10-year warranty period and each year afterwards, and to replacing the wrap after a maximum of 15 years for the life of the building.

- 3.20 Further details of the PVC fabric material's weathering capabilities are provided in the DAS Addendum (section 1.4) and these confirm that the material's resistance to UV light is high and that the degree of degradation, shown through accelerated weathering testing, is negligible.
- 3.21 The DAS Addendum gives further consideration to the image types that could be applied to the PVC mesh, including military camouflage and an alternative tourism-based image approach (using well-known images from the Jurassic Coast). It also considers their ability to provide tonal variation and their seasonal effectiveness, concluding that these options can ensure that the building is recessive from long distance views from the AONB and WHS.
- 3.22 The DAS Addendum confirms that the underlying green cladding and the overlying printed PVC mesh material are suitably durable and resistant to weathering. Suitable safeguards will also be put in place by the applicant (and subsequently enforced by Dorset Council) to ensure that the material continues to be effective over its lifespan. Furthermore, it has been shown that an appropriate image, such as camouflage can be applied to the PVC mesh to provide tonal variation to successfully deliver the recessive green wall, and that the details of this can be considered further and agreed by means of a suitably worded planning condition.
- 3.23 The proposal therefore accord with DWP Policy 14 (landscape and design quality) in respect to the use of materials.

## **Public health**

### ***Introduction***

- 3.24 Dorset Council's letter requested the following additional information and clarification in relation to public health (points 5 in the council's letter):
- Additional detail responding to issues in respect of potential benefits or impacts upon public health as a result of changes in air quality. In particular, this should address outstanding issues raised by PHD.
- 3.25 ERM, who undertook both the human health risk assessment (HHRA) and health impact assessment (HIA) for the original ES, has prepared addenda to these documents to provide the further information requested by the council in relation to the potential benefits or impacts on public health due to changes in air quality and to address the issues raised by Public Health Dorset. Their findings are summarised in section 5 of the ES Addendum and the full reports are contained in appendices 5.1 (HHRA) and 5.2 (HIA) to the ES Addendum.

### ***Human Health Risk Assessment (point 5)***

- 3.26 As explained in section 3 of the ES Addendum, the air quality assessment has been updated to take into account the net change in emissions of NO<sub>x</sub>, NO<sub>2</sub>, PM<sub>10</sub>, PM<sub>2.5</sub> and SO<sub>2</sub> due to the use of shore power provided by the ERF to ships berthed at the port. The results of the updated air quality assessment have been used to update the HHRA. The emissions of metals and dioxins will not be affected by the provision of shore power, so only the assessment of health effects associated with changes in NO<sub>2</sub>, PM<sub>10</sub>, PM<sub>2.5</sub> and SO<sub>2</sub> has been updated.

3.27 The analysis has shown that, for particulate matter, there will be a net benefit associated with the proposed development at all points across the modelling domain. For NO<sub>2</sub> and SO<sub>2</sub>, there will be a net benefit for the majority of the area. Where there is a net increase in emissions, the increase will be extremely small such that any impact is concluded to be negligible. Therefore, the overall conclusion of the ES that the proposed development will not lead to any significant effects on air quality and health remains valid.

***Health impact assessment (point 5)***

3.28 The HIA addendum took account of the findings of the updated air quality assessment and HHRA and addressed the following topics that were raised by stakeholders during the consultation:

- Potential for differential or disproportionate impacts on the mental health and wellbeing of the local population
- Potential for differential or disproportionate impacts as a result of existing health inequalities within the local population
- Potential for impacts on the resident 'static' inmate population at HMP The Verne

3.29 Chapter 5 of the ES Addendum summarises the main findings of the HIA in respect to the potential impact of the construction of the ERF in terms of anxiety and mental well-being and sets out a series of measures that would be implemented to minimise any effects. These include:

- A local liaison group will be established, which will meet on a regular basis to discuss the operation of the ERF and any potential issues or queries from members of the local community
- Measures that will be put in place through the framework construction environmental management plan (CEMP; see technical appendix C of the original ES) to minimise construction noise will ensure that there will be no significant health effects on the occupants of HMP The Verne during construction.

3.30 The updated noise assessment confirmed that the proposed development will not generate significant operational noise, as levels will be controlled through the design of the building and the site layout. The low levels of operational traffic mean that no significant traffic noise effects are predicted. The updated HIA confirms that no significant adverse effects are predicted on health and wellbeing as a result of noise.

3.31 The health of local communities, particularly those of an older demographic or experiencing other health inequalities, may be marginally impacted as a result of increased HGV movements on the local road network. During construction, as set out in the framework CEMP, the contractor will be responsible for liaising with the local community to ensure that there is awareness of when and what HGV deliveries will be required and to identify any constraints or mitigation required to address the specific needs to the community. However, the worst case scenario of an additional 80 HGV movements per day (40 each way) during and post-construction equates to an average of one additional HGV every 15 minutes and the traffic and transport assessment

confirmed that there will be negligible effects on pedestrian severance, delay and amenity. As a result, it is not expected that traffic associated with the proposed development will exacerbate mental health issues or current health inequalities within the local communities.

- 3.32 The updated HIA states that the visual presence of industry can lead to feelings of dissatisfaction, as well as stress, anxiety and concern. As the proposed development is located in an industrial port that is not accessible to the public, where there is already constant activity, and construction works will be temporary, no significant effects are predicted on local mental health and wellbeing, including at HMP The Verne. The design of the building has been carefully considered to minimise visual impacts and no significant adverse effects are predicted on population health and wellbeing post-construction as a result of changes to views.
- 3.33 Health benefits will be experienced for the duration of the employment generated by the proposed development, both during and post-construction, and would be most beneficial to those currently experiencing socio-economic deprivation, economic inactivity or unemployment within the area. Opportunities to target employment within these sections of the community should be maximised wherever possible. In addition to income and improved socio-economic status, health benefits such as delayed mortality, decreased illness and improved wellbeing can be experienced by those employed during the operational phase and will be of longer term benefit. This could contribute to reducing some of the current health inequalities present in the area.
- 3.34 The updated HIA sets out recommendations for ongoing engagement with local communities and wider stakeholders and concludes that advance visibility, engagement and ongoing liaison should mitigate potential increases in anxiety arising from project-related activities. It highlights that mitigation measures will be integrated into the building design, the CEMP and construction management planning to minimise the potential for adverse effects on health and wellbeing. This will include the publication of the CEMP, adoption of contact mechanisms during construction and advance notification of proposed works.
- 3.35 In advance of construction, specific engagement will be undertaken with HMP The Verne to minimise the potential for adverse effects on health and wellbeing. In particular, this will address the potential for anxiety over proposed construction activities. The proposed development will be subject to strict regulatory controls and the requirement for ongoing monitoring of various activities, including emissions. To reduce potential anxiety, consideration should be given to the periodic publication of environmental monitoring data that local communities, and wider stakeholders, can access via the project website.
- 3.36 The additional information and assessment provided in the updated HHRA and HIA has identified the potential benefits or impacts upon public health as a result of changes in air quality address and addressed the comments made by Public Health Dorset. It did not identify any significant health effects.
- 3.37 The proposed Portland ERF fully accords with the provisions of DWP Policy 13 in respect to airborne emissions (amenity and quality of life) and other relevant policies.



## Historic environment

### *Introduction*

- 3.38 Dorset Council's letter requested the following additional information and clarification in relation to the historic environment (point 7 in the council's letter):
- Further detail and assessment in respect of specific mitigation measures proposed to mitigate potential harm caused to the historic environment from the proposal, which should have regard to impacts on the setting of designated heritage assets. Proposals for mitigation should include the consideration of a footpath link on Port land immediately beneath the prison.

### *Framework heritage mitigation strategy (point 7)*

- 3.39 A framework heritage mitigation strategy has been prepared and submitted in response to this Regulation 25 request (provided as ES Addendum appendix 6.1), based on guidance provided by both the Dorset Council conservation officer and Historic England officers. The framework strategy provides details of the proposed mitigation and how this would be delivered to off-set the effect of the setting of the East Weare heritage assets, in terms of the overall objectives, the proposals for staged works, future management, and monitoring and review.
- 3.40 The overall framework strategy objectives broadly cover the following:
- E Battery East Weare (scheduled monument and listed building grade II) – undertake clearance and agreed repairs and removal of risk factors to enable its removal from the Historic England Heritage at Risk Register and appropriate public presentation of the monument.
  - Enhanced public access through the extension of the footpath at East Weare (known as Cemetery Road) to allow an “around the island” circuit of the coastal path by creating a new section of permissive footpath through currently inaccessible parts of the secure port estate to connect to the existing public accessible land/rights of way.
  - Enhanced opportunities for public appreciation through the provision of interpretation for the group of related heritage assets at East Weare (the A-E batteries, the former detention camp and the undesignated WWII features).
- 3.41 The framework heritage mitigation strategy demonstrates that the harm to the setting of the East Weare heritage assets identified in the ES (and deemed to be less than substantial harm) can suitably be off-set through the proposed mitigation and that this will deliver significant heritage related public benefits, in full accordance with NPPF (2021) guidance (specifically paragraph 202).
- 3.42 The deliverability of the framework heritage mitigation strategy, from a heritage perspective is supported by the findings of a preliminary visual site inspection of the E Battery, undertaken by an accredited specialist conservation engineer. This concluded that vegetation removal could progress, with a suitable methodology being defined, and that the benefits of undertaking the work far outweigh any very small (and manageable) risk to the monument.

- 3.43 Consideration has been given to potential ecological implications relating to the removal of invasive scrub vegetation around the structure and access paths. A Phase 1 walk over ecological survey has been undertaken.
- 3.44 The survey concluded that the vegetation clearance works to enable permanent access and restoration of the E Battery will result in the loss of small amounts of scrub. Whilst the removal of this habitat itself will not have any significant effects on the interest features of the designated sites, there is potential for impacts on nesting birds and reptiles in the absence of suitable mitigation. Provided suitable mitigation is deployed, the ecological impacts of the works will be considered negligible.
- 3.45 In addition to the heritage benefits outlined above this work will also deliver secondary ecological benefits associated with the clearance of some scrub from around the E Battery monument within the Isle of Portland SSSI unit (which is currently in an unfavourable condition). This will allow former habitats, such as lowland calcareous grassland, to re-establish once the scrub is removed, contributing towards the objective to return the SSSI to a favourable condition.
- 3.46 The proposed heritage mitigation strategy is deliverable and will ensure that the ERF can be deemed to be compliant with heritage asset policies: DWP Policy 19, West Dorset, Weymouth & Portland Local Plan Policy ENV4, and Portland Neighbourhood Plan Policy Port/EN4. Adherence to the agreed strategy should be included in a planning condition see chapter 5 of this document.
- 3.47 In addition to enabling public access to view and interpret all of the heritage features present within the East Weare area, the creation of an 'around the island' enhanced coastal path connection across the port estate will deliver wider public benefits in relation to recreation and local tourism, specifically contributing to the sustainable tourism objectives of Policy Port/ST1 of the adopted Portland Neighbourhood Plan.

## **Ecology**

### ***Introduction***

- 3.48 Dorset Council's letter requested the following additional information and clarification in relation to ecology (point 11):
- Further consideration and information in respect of general ecology related issues raised through representations on the first consultation as appropriate, including the potential for management or improvement of habitat within the Port below the prison site.
- 3.49 The applicant's response to general ecological issues raised in respect to the shadow Appropriate Assessment and the ES, through representation on the first consultation, is addressed in the CRSD.

### ***Improvement of habitat (point 11)***

- 3.50 The applicant has given further consideration to the potential for management or improvement of habitat within the port below the prison. This potential ecological benefit relates to:

- Vegetation clearance required by the framework heritage mitigation strategy
  - The allocation of biodiversity net gain funds to off-site projects within the local area
- 3.51 The removal of existing scrub, located on and around the E Battery scheduled monument and the access paths to it, will lead to some ecological benefits. For example, it will allow former habitats now lost, such as lowland calcareous grassland to re-establish once the scrub is removed, contributing towards the objective to return the SSSI to a favourable condition. It will also open up access to the area for future ecological management.
- 3.52 An ecological walk over survey has been undertaken and demonstrates that the heritage mitigation framework can be implemented, provided that suitable ecological mitigation measures are put in place.
- 3.53 The proposed ERF will result in the loss of some open mosaic habitat on-site, and whilst some on-site mitigation is possible, it is recognised that the majority of this mitigation and the need to demonstrate biodiversity net gain will be met through off-site enhancements.
- 3.54 A Biodiversity Plan has been submitted to, and been agreed by, Dorset Council Natural Environmental Team (DNET), which includes a financial contribution towards delivering off-site enhancement.
- 3.55 A Statement of Common Ground, between the applicant, Natural England, DNET and Portland Port is being progressed in respect to ecological enhancements arising from both the heritage mitigation works and also a range of potential local projects that could benefit from the funds secured by DNET under the Biodiversity Plan. The allocation of funds will be determined by DNET but could include contributions towards schemes to reintroduce grazing at sites on the Isle of Portland including if possible “Portland” breed sheep, or contributions towards schemes for control of scrub within sites of nature conservation importance.
- 3.56 The applicant is fully supportive of the opportunities to introduce measures for the management or improvement of habitat within the port below the prison site, and is committed to working with the port, as landowner, and other partners to maximise this benefit.

## **District heating**

### ***Introduction***

- 3.57 Dorset Council’s letter requested the following additional information and clarification in relation to district heating (point 12):
- Further detail in respect of how the prison and young offender institution could be connected to a district heating system supplied from the development. This should include the required infrastructure, technical supporting information, and description of the environmental (including climate change) and economic (for both for the supplier and purchaser) impacts

- 3.58 The District Heating Paper provides further clarification in respect to what district heat networks are and how they operate. It reiterates that the key benefits of district heating are carbon reductions, reduced heating costs for users and improvements in air quality. It further explains the technical work that has been undertaken to date in relation to the opportunity to provide District Heating from the proposed ERF, and the unique position of the proposed ERF relative to other sites in the Dorset Waste Plan or the UK generally.

***District heating information (point 12)***

*The existing situation*

- 3.59 The UK is some way behind its European counterparts in the context of delivering heat networks, with over 50% of the population of some countries served by district heating. The Committee for Climate Change Net Zero Technical Report published in May 2019 confirms that direct emissions from buildings resulting primarily from the use of fossil fuels for heat contributed 85mtCO<sub>2</sub>e in 2017, accounting for 17% of UK GHG emissions. Given the success achieved in decarbonising the electricity system over the past decade the UK focus is now shifting to other sectors, including provision of heat.
- 3.60 Currently, heat networks of all types provide only around 2% of the UK's heat. Full decarbonisation of heat is one of the biggest challenges in reducing emissions from the energy system to net zero by 2050.
- 3.61 The Committee on Climate Change's central scenario for the fifth carbon budget assumes heat networks will need to provide at least 18% of the UK's heat by 2050 if the net-zero ambition is to be achieved. As a result, Government policy has focussed on improving this area, both in requiring the public sector to find routes to decarbonise where possible and putting in place subsidy and incentive programmes to bring forward private investment capital in heat networks, in the same way that the Government initially provided subsidy/incentives to enable the power generation carbon transition.
- 3.62 Figures provided by Tolvik Consulting show that of the 54 ERFs in the UK in 2020 only 12 currently provide any form of heat offtake. In 2020 the UK ERF sector exported 7,762 GWh<sub>e</sub> and 1,651 GWh<sub>th</sub>. This means that 82% of energy produced was power export with only 18% heat export. Contrasting this with the European position, where on average almost 50% of the energy produced is heat leads to the conclusion that existing UK ERFs are losing significant potential value by only being able to run their facilities in power-only due to the lack of district heating network infrastructure and local, high demand, bankable off-takers.
- 3.63 In addition to lower revenues, operating in power-only mode also results in higher overall emissions and higher carbon impact, in both cases because the offset that a district heating network provides on reducing high-emitting gas boilers is not realised.
- 3.64 For those limited number of facilities that do currently provide a district heat network offtake, in the majority of cases the heat offtake was developed in a phased approach post the construction of the ERF facility. This is because it is necessary to identify and contract with heat off-takers prior to making the significant capital investment required to install the district heat network, and it is only possible to progress formal contractual discussions with off-takers once they are confident that the source of the heat (i.e. the ERF facility) will be delivered.

*Barriers to district heating network*

- 3.65 To date there have been barriers to achieving ERF heat offtake in the UK. The majority of ERFs do not export heat because there are no available off-takers with sufficient heat demand and financial standing locally to support the upfront capital investment in the district heating network.
- 3.66 Historically many ERF facilities have been located in rural areas, away from large housing or industrial communities. This means that a heat connection is not viable as the distance to the end users is too great. Again, this contrasts with Europe where government and municipal authorities influence waste and energy planning, resulting in the development of ERF facilities close to end heat users (in many cases within large cities).
- 3.67 Where the geographical location is not a challenge, the investment risk must also be considered. A district heating network is a high capital expenditure project with uncertain returns where the supply is to a disparate group of off-takers. From an investment perspective whilst the capital expenditure is understood the revenues can be very uncertain in this scenario.

*Portland locational advantages for district heating*

- 3.68 The proposed Portland ERF site has a significant advantage due to its location close to HMP The Verne and HMP YOI Portland (referred to in the District Heating Paper as the cornerstone off-takers). Both have significant demand for heat and the financial standing to support an investment in a district heating system that could benefit the wider community. Specific advantages include:
- Location – both HMP The Verne and HMP YOI Portland are very close to the proposed ERF location. This means that the capital expenditure is much lower than would be the case for the majority of UK ERFs
  - Demand – both HMP The Verne and HMP YOI Portland are large heat demand users and, importantly, this demand is expected to be required over the long term.
  - Financial Standing - a key concern when considering investment in a district heating network is the certainty of future cashflows. A long term contract for heat (and potentially power) with HMP The Verne and HMP YOI Portland would generate the long term, contracted and therefore bankable cashflows that would allow external finance to be raised to fund the upfront capital investment.
- 3.69 The existence of the cornerstone heat off-takers is a key differentiator of the proposed ERF from other facilities in the UK, and also other allocated sites in the Dorset Waste Plan, which rarely have such an advantage. Once the cornerstone heat off-takers are in place, there is clear potential for the expansion to supply other customers on the island including community infrastructure and social and private housing both existing and proposed/planned.
- 3.70 The proposed ERF provides an opportunity to use a merchant ERF facility to provide heat offtake to a local community. Whilst this is common in Europe this would be a key step-forward for Dorset, and the UK as a whole, in demonstrating its commitment to net zero and the circular economy.

- 3.71 This approach accords with national waste strategy (2007), with paragraph 28 recognising that:

*“Any given technology is (where applicable) more beneficial if both heat and electricity can be recovered. Particular attention should therefore be given to the siting of plant to maximise the opportunities for Combined Heat and Power.”*

- 3.72 None of the other allocated sites identified in the Dorset Waste Plan would be capable of delivering a similar opportunity and this represents a significant advantage in context of DWP Policy 4.

#### *Planning and implementation*

- 3.73 The District Heating Paper also considers the planning approach to implementation of the district heating network.
- 3.74 Neither the planning application, nor the environmental permit (“EP”) application currently includes details of the physical infrastructure required for a district heat network. The majority of the infrastructure required for a district heating network will be located outside of the planning application “red line” boundary. This approach is standard for ERF applications of this type in the UK, where the primary purpose is not heat supply and where contractual agreements with heat off-takers are usually not in place upfront.
- 3.75 Potential heat customers will need to do significant work to understand technically how they could participate in the district heating network. Until the heat source has been consented and is certain to be delivered, that work could be premature and without completing this they cannot contract their participation.
- 3.76 The applicant has engaged with the Ministry of Justice over the past 12 months and feedback suggests that a heat offtake would be an attractive option, specifically given the UK Government focus on reducing the carbon impact of its estate and wider UK carbon reduction targets.
- 3.77 The applicant has also completed an initial technical and planning review of the potential district heat network to confirm there are no overriding risks to delivery of the district heat network on the assumption that an appropriate contract can be agreed with the Ministry of Justice.

#### *Potential route appraisal*

- 3.78 The applicant has identified a route that can convey the heat from the ERF to the potential heat customers using the existing road network. The EIA Addendum has considered the potential environmental effects of constructing the required district heating network infrastructure and indicates that this would not lead to any significant adverse environmental effects.

#### *Implementation*

- 3.79 The applicant would expect to implement the district heat network in phases, beginning with the two cornerstone heat off-takers. This approach will enable the infrastructure and benefits of heat supply to be realised quickly but also allow for expansion of the

district heat networks to other users over time. Appropriate technology specification would facilitate future modular extensions and can therefore be seen as “future proof”.

- 3.80 The initial installation will be along the “southern route” to provide heat to the two prisons with further expansions of the “southern route” and delivery of the “northern route” to follow.
- 3.81 In each case, prior to implementation a separate planning application will need to be submitted and approved by Dorset Council and appropriate investment funding be identified, supported either by contracted cashflows from the heat customers or by Government grant funding.
- 3.82 The applicant has engaged with the Ministry of Justice, AECOM (their external engineering consultants), the Cabinet Office and BEIS over the past 12 months to ensure that the key technical requirements for the district heat network were understood by all.
- 3.83 It should be noted that it is unusual for an ERF developer and potential heat off-takers to engage in this way at this (pre-planning) stage, but in this case all parties recognise the unique opportunity at Portland to develop and implement a merchant CHP ERF facility that will deliver low carbon heat over the long term to the Ministry of Justice that will reduce the carbon impact of the estate.
- 3.84 The applicant would be willing to agree an appropriate commitment with Dorset Council that would oblige the applicant to take reasonable steps to look to implement the district heating network, subject to agreement of commercial terms with the heat off-takers that mean the project is commercially viable. This is addressed further in chapter 5 of this statement.

#### *Technical infrastructure*

- 3.85 Chapter 6 of the provides more technical design information in respect to the process and the key technical infrastructure required to connect the heat network to the prisons.
- 3.86 Key equipment on the network side includes the primary heat exchangers and substations, insulated pipework, distribution pumps, pressurisation pumps and valves. On the customer side the technology primarily involves a secondary heat exchanger which transfers heat from the network so that it can be used by the customer building, without any direct contact between the district heating network hot water and the customer network hot water.
- 3.87 In addition to providing heat via a district heating network, the proposed ERF would also be capable of supplying electricity direct to the prisons over a private network, thereby avoiding costs and losses arising in the public transmission and distribution system.

#### *Potential carbon savings*

- 3.88 The implementation of a district heating network will lead to significant carbon reductions. The revised Carbon Assessment compares the carbon impact of the proposed ERF to a number of comparators, including scenarios where the proposed ERF operates in power-only mode, CHP mode and where it provides shore power electricity supply. This forms appendix 4.1 to the ES Addendum.

- 3.89 The calculated carbon benefit of the proposed ERF increases by around a further 3,000 tCO<sub>2</sub>e emissions per annum when the proposed ERF is operated in CHP mode, as opposed to power-only mode. This reduction in CO<sub>2</sub>e emissions is due to the avoided emissions produced by natural gas boilers at customers of the district heat network, which will no longer be required.

*Economic viability*

- 3.90 Chapter 8 of the District Heating Paper provides a further explanation in respect to the economic viability of the district heating network in context of the environmental permit application and commercial analysis.
- 3.91 As part of the environmental permit application an assessment of the costs and revenues associated with the construction and operation of the proposed district heating network was undertaken by Fichtner using the Environment Agency's CBA template. This is within the CHR-Ready Assessment document (CHP-r Assessment).
- 3.92 The CHP-r Assessment takes account of the assumed district heat network capital and operating costs, heat sales revenue and lost electricity revenue as a result of diverting energy to the heat network. The analysis assumes a capital investment cost for the district heating network of £9.42m spread over a 3 year investment horizon which is based on Fichtner's experience from various reference projects that it has worked on previously.
- 3.93 The output of the economic analysis is that the nominal project internal rate of return (IRR) for the district heat network at the proposed ERF is calculated to be 11.7%. The IRR is a metric used by investors to determine the future profitability of an investment. The upfront capital expenditure will need external financing and the investor will have a specified return hurdle rate that it will need to exceed in order to conclude the investment is attractive. The 11.7% IRR means that an investor will recover their upfront investment and earn an average of 11.7% interest on this investment amount, every year for the full 30 year period.
- 3.94 The CHP-r Assessment uses an investment hurdle rate of 17%. This is the rate that is suggested by the Environment Agency and is used across the market by all consultants when completing this analysis for the purposes of applying for an environmental permit. The result is that the CHP-r Assessment concludes that the project is economically unviable. This is because whilst it delivers an 11.7% return on investment for every year over a 30 year term, this is lower than the 17% that the CHP-r Assessment assumes is required by an investor.
- 3.95 Based on the CHP-r Assessment, objectors have concluded that the proposed Portland district heating network is unviable, and this is contrary to the applicant's stated planning position.
- 3.96 The District Heating Paper clarifies the difference between the 17% hurdle used as standard practice for the CHP-r Assessment, and the commercial hurdle that would be required given the specific risk profile of the district heating investment opportunity at Portland. The applicant's commercial analysis demonstrates that the commercial viability of the Portland ERF differs significantly from a standard ERF in two key ways:



- Firstly, it is located near to two major users of heat where it is reasonable to expect that this heat will continue to be required for the lifetime of the district heat network (so there is no volume or demand risk)
- Secondly, the potential customer (Ministry of Justice) has the appropriate financial standing to enter into long term contracts to support the upfront capital investment (so there is no credit risk)

- 3.97 A “standard” ERF district heat network does not have these significant advantages. Typically, a standard scenario would need to contract with a disparate group of off-takers, all of varying credit quality, with no guarantee that these off-takers will survive the full operational life of the district heat network.
- 3.98 This uncertainty results in the 17% -return hurdle assumed to be required by a district heat network investor under the CHP-r analysis.
- 3.99 However, in this case the proposed ERF this would benefit from certain volume and contracted long term cashflows, backed by UK Government credit. For reference, BEIS currently applies a 7.6% investment hurdle rate for EfW CHP3. It is therefore commercially logical to assume that a district heating network investment that relies on the underlying performance of the EfW CHP would attract a similar hurdle rate, perhaps with a small increase given the increased functional risk of the district heat network over and above the proposed ERF.
- 3.100 In any case, the hurdle return that an investor would need to provide the district heat network funding will be below the 11.7% IRR, and therefore will mean the project is investable and economically viable.

### **Summary conclusions**

- 3.101 The District Heating Paper has shown that the UK is substantially behind other European countries in maximising the benefit of heat from ERFs for use in district heat networks and that the challenge of heating buildings must be overcome if the UK is to meet its target for net-zero carbon by 2050. Relatively few ERFs are currently exporting heat to heat networks, and this is much less efficient. There are often locational barriers to implementation, such as the absence of viable heat off-takers or the distance to heat off-takers is too great. Also, uncertainty in respect to heat off-takers undermines the ability to secure finance.
- 3.102 A heat network route has been identified using existing road corridors and this has been found to be deliverable from a technical, environmental, and economic perspective. It would also deliver significant carbon and emissions savings, allowing the existing prison heating systems to be largely retired and used only to provide backup when the ERF is not operational. The heat network, in common with other networks, would be implemented in a phased approach with the southern route provided first to serve the two prisons, with opportunities for the network to be extended further in the future.
- 3.103 Although the CHR-Ready Assessment document (CHP-r Assessment) states that the district heat network is unviable, this is based on a ‘standard’ industry investment hurdle rate of 17%. This ‘standard’ rate does not reflect the ‘actual’ risk profile where

the Portland site is located near to two major users of heat (which will continue to require heat for the lifetime of the district heat network), and the Ministry of Justice has the appropriate financial standing to enter into long term contracts to support the upfront capital investment.

- 3.104 The output of the economic analysis is that the nominal project internal rate of return (IRR) for the district heat network at the proposed ERF is calculated to be 11.7%. The applicant confirms that the hurdle return that an investor would need to provide the district heat network funding will be below the 11.7% IRR, and therefore will mean the project is investable and economically viable.
- 3.105 The Portland site has significant key advantages in so far as it is located close to cornerstone heat off-takers, which have a large heat demand and are of a financial standing that provides certainty to investors to support the upfront capital expenditure to implement the network. These locational advantages are highly sought after and none of the other allocated sites identified in the Dorset Waste Plan would be capable of delivering a similar opportunity, thus representing a significant advantage in context of DWP Policy 4.
- 3.106 In these circumstances there is a high probability that a district heating network will be implemented from a technical, environmental, and economic perspective and this would give rise to significant carbon benefits. As such, the site's potential to provide a district heating network should be afforded substantial weight in the planning balance.

## **Shore power**

### ***Introduction***

- 3.107 Dorset Council's letter requested the following additional information and clarification in relation to shore power (point 16):
- Further clarification and additional detail in respect of how the shore power element of the proposal would work. This should include a response to issues raised in representations, and justification of any assumptions made in respect of modelling of carbon savings which might result.
- 3.108 Information on the provision of shore power was provided in the originally submitted Shore Power Strategy Report. However, as the request of Dorset Council, this has been reviewed and updated to provide additional information in respect to how this would work, how shore power sits in relation to other alternative sources of ship power, recent relevant policy announcements in relation to the provision of shore power in the UK and reflections upon the carbon savings that could be derived from the implementation of shore power at Portland.

### ***Shore power need, alternatives and carbon savings (point 16)***

- 3.109 The Shore Power Strategy Report (Updated July 2021) highlights comments made in the Commission on Climate Change (CCC) Sixth Carbon budget (December 2020) in respect to shore power. It reinforces the views on shore power in the Clean Maritime Plan. It states that:

*“The emissions reductions in our scenarios result from some acceleration in efficiency improvements and electrification” and*

*“By 2050, 3 TWh/year of electricity is used in electric propulsion and shore power”*

3.110 It has been suggested by some objectors that there are already available alternatives to the provision of shore power. The Sixth Carbon Budget indicates that while it sees ammonia as the main zero carbon fuel, its commercial deployment will not even start until 2030.

3.111 The importance of shore power and the need for its implementation is further evidenced in the UK Government’s recently published Decarbonising Transport<sup>4</sup> document. It includes a commitment:

*“We will consult this year on the appropriate steps to support and, if needed, mandate the uptake of shore power in the UK.”* (our emphasis)

3.112 This commitment is justified by the following statements:

*“Plugging in domestic and international vessels while in port and ensuring charging capacity is provided for the roll out of electric ships has the potential to quickly reduce greenhouse gas and pollutant emissions from the ports and shipping sector.*

*Shore power has a role to play in immediately reducing emissions from vessels visiting ports, and is an option that is likely to be ‘low/no regrets’ as vessels utilising the less energy dense alternatives will look to plug in where they can.”*

3.113 This recognises that policy is moving to adopt shore power as a means to “*quickly reduce greenhouse gas and pollutant emissions*”. Shore power’s role in early reduction of greenhouse gases will have a disproportionate benefit in climate change mitigation compared to other solutions which will take longer to be introduced and to adopted.

3.114 Research In the ‘Barriers and Solutions for UK Shore-Power<sup>5</sup>, produced by the Tyndall Centre for Climate Change Research identifies the following practical advantages of shore power:

*“shore-power is a proven technology that can be implemented now. Many of the other highly-touted alternatives in shipping to tackle air pollution or climate change, such as ammonia and hydrogen, are years away at best from commercial deployment at scale.*

*“it is one of the few technologies which deliver strongly on both air quality and climate change. For example, ammonia could be net-zero GHG, but has issues with NO<sub>x</sub> pollution; LNG cuts local air pollution, but as many interviewees pointed out, is still very high carbon”*

*“it fits with the general drive in ports and shipping towards greater electrification.”*

3.115 This provides further evidence, based on government reports and academic research in the climate change field, that the objectors’ claim that alternative methods should be

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<sup>4</sup> Department for Transport, ‘Decarbonising Transport’, A Better, Greener Britain, UK Government, July 2021

<sup>5</sup> Barriers and solutions for UK shore-power. Bullock, S, Tyndall Centre for Climate Change Research, University of Manchester, December 2020

adopted now, instead of implementing shore power, is highlight optimistic and not based in fact or reality.

- 3.116 There are challenges to the introduction of shore power. Two challenges are specifically identified in the Barriers and Solutions for UK Shore-Power report relate to grid provided electricity. These are:

*“The UK’s industrial electricity prices are among the highest in Europe, in part due to electricity network charges, environmental taxes and VAT.”*

*“...there may not be grid capacity to supply sufficient power.”*

- 3.117 As evidenced in the original and updated Shore Power Strategy reports, and supporting application documents, such as the Energy Need Statement and Planning Supporting Statement, both of these barriers to the successful implementation of shore power in the UK will be successfully addressed at Portland through the provision of energy from the proposed ERF. Without the proposed ERF, the provision at Portland Port is deemed to be prohibitively expensive due to the high reinforcement cost of the local distribution system that would be required.
- 3.118 Some objectors suggest that shore power could be provided by some other form of energy generation but these suggestions propose intermittent technology that is either unproven (e.g. tidal or wave power) or that is not feasible for Portland given the limited available land area (e.g. solar or onshore wind).
- 3.119 The Shore Power Strategy Report (updated July 2021), includes information derived from the updated Fichtner’s Carbon Assessment Report and its carbon modelling. This concludes that the use of shore power will add to the ERF’s carbon emission saving by 4,500 to 5,500 tCO<sub>2</sub>/annum.
- 3.120 In addition to carbon savings, additional air quality modelling has shown that provision of shore power will reduce emissions of NO<sub>x</sub>, particulate matter and SO<sub>2</sub> whilst ships are connected to it.
- 3.121 Furthermore, Fichtner’s Additional Dispersion Modelling Report (ES Addendum Appendix 3.1), which plots emissions of particulate matter, NO<sub>2</sub> and SO<sub>2</sub>, describes the overall emission impact of the ERF taking shore power into account. It shows that shore power use alongside the operation of the ERF will provide a net benefit in the emission of particulate matter throughout the modelled area, as the reduction in vessel diesel generation more than off-sets emissions from the ERF.
- 3.122 For NO<sub>2</sub> reductions the report shows that shore power use will provide a net benefit in the majority of the modelled area, leaving an extremely small increase over the remaining. There is a similar conclusion for SO<sub>2</sub>.
- 3.123 The Fichtner modelling on carbon and air quality together demonstrate that the provision of shore power at Portland, facilitated by the proposed Portland ERF, will lead to net savings in both carbon emissions and other airborne pollutants, that arise from existing ship exhausts
- 3.124 It is suggested by some objectors that shore power is no longer needed, and that if implemented it would soon become redundant being superseded by other technologies and fuels. The applicant disagrees with this view, which is not supported by the facts.

- 3.125 Whilst shore power is a benefit in Portland and for climate change mitigation now, it will continue to be a benefit in the future when other propulsion fuels become available. It can supply shipping with electric propulsion, it can allow engines supplied by carbon-based fuels such as Compressed Natural Gas (CNG) or Liquefied Natural Gas (LNG) to be shut down when in port, removing their emissions. It may even be used to avoid NO<sub>x</sub> emissions from net-zero carbon ammonia fuel, an issue noted in Barriers and Solutions for UK Shore-Power.
- 3.126 The submitted updated information on shore power and air quality together further demonstrates that ERF-enabled shore power can provide real and important carbon reductions and air quality benefits for Portland and the wider Dorset area, both now and in the future, as efforts to decarbonise the maritime sector begin to step up to address the challenge of climate change.
- 3.127 Portland Port provide further evidence for the provision of shore power. In its response to the application consultation in November 2020, it confirms that shore power meets an important part of the port's operational needs which will provide an alternative to on-board diesel generation with its associated airborne pollution and carbon emissions. It confirmed that the RFA's main driver for using shore power was governmental policy to reduce carbon emissions from its estate and activities, whilst the main driver for cruise liner operations is a commercial one with their customers demanding a greener experience, underlined by a rapidly changing legislative and policy framework around fuels and emissions. It has also recognised the potential impact on local tourism that would arise if shore power were not provided, associated with a reduction in cruise ship visits to the port.
- 3.128 Some objectors suggest that the port's future projections for cruise liner visits are overly optimistic, and that the UK cruise industry would fail to recover following the Covid-19 pandemic. Portland Port has confirmed in its further letter of support dated July 2021 (appendix A to this document), that there has been a surge in cruise ship visits for 2021 and bookings for 2022 and beyond. This evidence confirms that the objector's claims are made without basis.
- 3.129 The updated Shore Power Strategy Report further reinforces the conclusion of the Planning Supporting Statement, in that the Portland site's ability to host an ERF to facilitate a shore power system serving Portland Port (and helping to safeguard its commercial future) is a significant locational advantage in accordance with Policy 4 criterion a.
- 3.130 No other DWP allocated site can deliver shore power or achieve these benefits. The proposed ERF and shore power provision fully aligns with recent policy, strategies and action plans, at the national and local levels, to reduce carbon emissions from the maritime sector. This should be afforded great weight in the decision making process.

## **Carbon balance and climate change**

### ***Introduction***

- 3.131 Dorset Council's letter requested the following additional information and clarification in relation to carbon balance, climate change and carbon capture and storage (point 22):
- Additional information on the baseline scenarios requested by the council. These should have particular reference to points raised through the consultation on the

robustness of the carbon balance scenarios set out in the current version of the ES. Additional clarification should also be provided in respect of the approach to carbon capture for the facility itself, and the circumstances under which it might be installed and operated.

### ***Carbon balance and assessed scenarios (point 22)***

- 3.132 A carbon balance and greenhouse gas emissions assessment was submitted as part of the original ES. An updated assessment report has been prepared to provide the additional information on the baseline scenarios requested by the council (point 22 in the council's letter). This updated report replaces the original assessment that formed technical appendix E to the ES. Its findings are summarised in section 4 of the ES Addendum and the full report is also contained in ES Addendum appendix 4.1.
- 3.133 As requested by Dorset Council, the carbon emissions from the proposed ERF have been compared with four alternatives:
- Sending the RDF to other ERFs in the UK
  - Sending the RDF to other ERFs overseas
  - Sending the RDF to an ERF constructed at one of the four alternative sites allocated in the adopted Bournemouth, Christchurch, Poole and Dorset Waste Plan (2019)
  - Continuing to manage the waste under Dorset Council's existing arrangements

### *Other ERF options*

- 3.134 The assessment recognises that direct carbon emissions from combusting waste are the same whether it is combusted at Portland or elsewhere. This means that, from a carbon perspective, the only differences between ERFs at different locations are the impacts from transporting waste and any differences in the carbon displaced by generating power or heat.
- 3.135 The results for the different ERFs are set out in the revised carbon assessment. It shows that there is relatively little difference between the UK options. While the Portland ERF (base case of exporting electricity to the grid only) has higher emissions than the other allocated sites in the DWP, this difference is more than compensated for by the potential benefits of shore power. Similarly, while the additional transport emissions for shipping waste to Europe are outweighed by the benefits of district heating, the final Portland ERF option incorporating both shore power and district heating has the lowest emissions of all compared scenarios. The Portland ERF with shore power and district heating is capable of saving 8,749 tCO<sub>2</sub>e when compared to the base case scenario.

### *Existing management of Dorset's waste*

- 3.136 The revised carbon assessment also considers the relative carbon performance of the Portland ERF against the existing management of Dorset waste, which assumes a new baseline with some residual waste being sent to other ERFs in the UK and some sent to landfill.

3.137 In summary, the benefit of the proposed Portland ERF over the current residual waste management approaches for Dorset's waste is estimated to be around 7,200 tCO<sub>2</sub>e per year, increasing to 15,000 tCO<sub>2</sub>e per year in the maximum case with lower net calorific value (NCV) waste. It should also be noted that these calculations do not take account of the additional benefits that would be provided by shore power from the proposed Portland ERF, which would displace a further 4,500 to 5,500 tCO<sub>2</sub>e per year, or the potential benefit of district heating, which would displace around a further 3,000 tCO<sub>2</sub>e per year.

*Future management of Dorset's waste*

3.138 Once the Bridgwater ERF is operational, it is understood that the RDF from Canford Magna will be transported to Bridgwater rather than to Europe. Therefore, an alternative baseline has been considered for Dorset's waste where 80,000 tonnes per year of RDF is sent to the Bridgwater ERF rather than Europe. This future baseline is compared with the proposed development.

3.139 The benefit of the proposed Portland ERF over the future residual waste management approaches for Dorset's waste is estimated to be around 10,500 tCO<sub>2</sub>e per year, increasing to 18,000 tCO<sub>2</sub>e per year in the maximum case with lower NCV waste. Again, it should also be noted that these calculations do not take account of the additional benefits that would be provided by shore power from the proposed Portland ERF, which would displace a further 4,500 to 5,500 tCO<sub>2</sub>e per year, or the potential benefit of district heating, which would displace around a further 3,000 tCO<sub>2</sub>e per year.

*Lifetime benefit*

3.140 The lifetime benefit of the proposed ERF compared to the baseline of sending waste to landfill remains as originally assessed in paragraph 5.34 of the ES at around 62,000 tCO<sub>2</sub>e based on an illustrative, conservative calculation. The lifetime benefit compared to the current baseline for Dorset's waste has also now been calculated and is estimated to be 157,548 tCO<sub>2</sub>e, with a net benefit in each year. The original ES conclusion that the proposed development will have a significant beneficial effect as a result of reduced carbon emissions compared to the baseline therefore remains valid and unchanged.

3.141 The updated carbon assessment demonstrates that the Portland ERF has significant advantages in respect to its ability to deliver both shore power and district heating and that in carbon terms this option outperforms other allocated DWP sites, where such potential is more limited.

3.142 The carbon assessment fully supports the applicant's view that the Portland site has advantages over the allocated DWP sites and can fully comply with the requirements of DWP Policy 4 criterion a.

***Carbon capture and storage (point 22)***

3.143 The applicant has commissioned Fichtner Consulting Engineers Ltd to prepare a Portland ERF Pre-feasibility Assessment, to assess the feasibility of integrating a post combustion carbon capture (PCCC) plant into the proposed Portland ERF. It outlines the technical and commercial challenges of developing a PCCC plant alongside and connected to the proposed ERF. This is submitted to Dorset Council to set out the

applicant's approach to PCCS and the circumstances upon which it might be installed and operated.

*The applicant's road map to zero carbon*

- 3.144 The operation of a PCCC at the Portland ERF would provide a means of capturing approximately 95% of the CO<sub>2</sub> produced. The CO<sub>2</sub> would then be transported by ship for utilisation and/or storage offsite.
- 3.145 The Pre-feasibility Assessment finds that no ERF or EfW plant anywhere in world currently has a commercial scale PCCS attached, and it is not currently commercially feasible. It is also not a requirement of current law or policy to impose PCCS on a plant like the proposed Portland ERF.
- 3.146 However, the applicant is aware of some early stage policy activities that may evolve and mature and become part of Government policy in the future. Most notably recent advice from the Committee on Climate Change (a Government advisor) which considers "providing support to enable existing EfW plants to begin to be retrofitted with CCUS from the late 2020s and introducing policy to ensure that any new EfW plants are built either with CCUS or are 'CCUS ready'".
- 3.147 Due to the significant upfront capital cost and substantial operational costs, it is not considered commercially feasible to deploy CCUS or CCS at plants like the proposed ERF at this time. The increased cost of processing the waste in a PCCC equipped plant will need to be borne somewhere and the applicant is aware that, via the BEIS ongoing consultation on "Energy from Waste with CCUS", the Government is considering this issue and potential financial support regimes based on a "contract for differences" structure to support the deployment of CCUS.
- 3.148 The requirement for CCUS and CCS is still some considerable distance from becoming official government policy, but the applicant is prepared to make a planning commitment that will be proposed to and negotiated with Dorset Council to be set out in an appropriately worded S.106 planning obligation to achieve a route map to net zero or carbon positive operations. This matter is addressed further in chapter 5 of this statement in relation to planning obligations.
- 3.149 The road map identifies a mix of the technologies that the applicant is exploring with full decarbonisation of the Portland ERF likely to be achieved using one of, or a combination of, these longer term measures.

*Day 1 of Operations (assumed 2025)*

- The Portland ERF will operate with R1 compliance, reducing greenhouse gas emissions by diverting waste from landfill and export abroad or out of county;
- The Portland ERF will generate low carbon electricity for the Port (shore power) and for export to the grid.
- The Portland ERF is designed to be 'CHP ready' for connection to a district heating scheme, initially to the adjoining prison and young offenders centre, to use lower carbon energy and heat generated by the facility
- The Portland ERF will be designed to allow fuel flexibility should the nature of the incoming waste change over time and recycling levels increase.



*Short Term (assumed 2025–2035)*

- The extension of the district heating network to other potential local end users already identified, to use lower carbon energy and heat generated by the facility
- The Portland ERF can accommodate changes to the composition of the fuel mix to reduce the non-biogenic carbon contained in the incoming waste stream driven by Government policy on recycling; and
- The Portland ERF can promote the potential co-location of a facility (facilities) within the Port to recycle/reuse products extracted from the incoming waste stream (circular economy) reducing the non-biogenic content of the fuel mix and displacing CO<sub>2</sub> emissions associated with the production of products or feedstocks which the extracted products replace.

*Longer Term (assumed 2030–2050)*

- The Portland ERF could accommodate Carbon Capture Storage and Use either within the Port or for export by sea. CCS may become technically and commercially viable earlier should appropriate support regimes become available along with new necessary legal and policy changes.

3.150 This approach is consistent with the applicant's pledge to achieve net-zero carbon, through carbon off-setting measures. In any period where the ERF is net carbon positive the applicant will make a base financial commitment of £[100,000] to fund "voluntary offsetting measures" targeted at measures with higher social impact and fuel poverty alleviation.

*The advantage of port locations for CCS*

3.151 The International Energy Agency (IEA) recommends that, where a PCCC plant is located close to a port, the captured gases are liquefied and discharged directly to a vessel. This avoids the need for road tankering or extensive pipeline connections. This would be the preferred approach for a PCCC solution for the Portland ERF, given its port based location.

3.152 This port location creates a significant relative advantage over any inland waste sites. None of the allocated sites in the DWP at which an ERF may be brought forward are located at a port. At those inland locations a CCS solution associated with any ERF which may be delivered would appear to be much less achievable than the Portland Port location. Any CO<sub>2</sub> that is captured and liquefied at those sites would need to be road tankered or pipeline conveyed to a long-term repository or industrial user, which is likely to be much more disruptive and less environmentally sustainable than transport by sea.

3.153 Fichtner estimates that an appropriate scale PCCC plant would require a footprint of up to 4,000 m<sup>2</sup>. Less land may be required for containerised solutions, which are a feature of certain technology options that may be available, or if some of the equipment, in particular storage can utilise vessels located at the port. Powerfuel and Portland Port has confirmed that sufficient additional land is available at the port proximate to the location for the proposed ERF, so the ERF can be considered to be "CCS-ready".

- 3.154 The ERF's location within a commercial port, with its ability to transport captured CO<sub>2</sub> by sea and the availability of sufficient land, both of which are necessary to implement a future CCS scheme represents a significant advantage over other DWP allocated sites, in accordance with DWP Policy 4 criterion a. This should be afforded significant weight in the planning decision.

## **Traffic - export of IBA**

### ***Introduction***

- 3.155 Dorset Council's letter requested the following additional information and clarification in relation to opportunities to export IBA by sea (point 24)

- Further clarification in respect of opportunities to export of IBA by sea, including the identification of specific sites that could accept the material when transported using this method

### ***Approach to IBA movement (point 24)***

- 3.156 When IBA is exported by sea, it will be loaded into a sheeted trailer and transported to the quayside, where it will be loaded onto large dedicated vessels using a mechanical grab machine. A banksman on the quayside will assist the delivery trucks and ensure there is no conflict between the grab operations and the trucks. Once the ship has been loaded, bi-fold doors will close over the top for protection and to prevent any escape of material. Any spillage of the inert IBA would be dealt with promptly and appropriately. The process is highly regulated and all parties will need to ensure that compliance is achieved with existing legislation.
- 3.157 The applicant is in discussions with the Day Group, which operates several IBA processing plants in the UK and has extensive experience of IBA transport by sea. The Day Group has indicated that it would be willing to enter into a long term contract to enable IBA to be collected from the proposed ERF by vessel and transported to its facility at Greenwich.
- 3.158 While it is envisaged that the Day Group's Greenwich plant will be the chosen location for export of IBA by sea, there are other plants within the UK and northern Europe that are accessible by sea, including two in Avonmouth and one in Middlesbrough, one in Ireland, two in the Netherlands, two in Belgium and one in Germany.
- 3.159 Further information in respect to the options for sea based transfer and processing / recycling of IBA is given in the Incinerator Bottom ash (IBA) Paper. These provisions demonstrate that the ERF accords with the provisions of DWP Policy 6 in respect to the sustainable transport of IBA by sea.

## **Surface water discharge**

### ***Introduction***

- 3.160 Dorset Council's letter requested the following additional information and clarification in relation to the proposed use of sea outfalls (point 27)
- Further detail in respect of the acceptability of the sea outfall, addressing the comments of Dorset Council Flood Risk management Team explaining how the issues raised will be addressed and overcome.

### ***Surface water drainage strategy (point 27)***

- 3.161 Dorset Council in its role as Lead Local Flood Authority raises matters relating primarily to the condition of existing drainage infrastructure at the port which was to be re-used.
- 3.162 Further investigations have been carried on the points of connection for surface water that are to be re-used and as a result a revised surface water drainage strategy is now proposed. This now provides appropriate surface water attenuation tank storage with a volume of up to 230m<sup>3</sup> to account for the limited capacity of the northern outfall pipe and provide capacity to manage flows up to the 100 year return period (plus 40% climate change).
- 3.163 The information gained through further investigations and the revised surface water drainage strategy together with responses to the matters raised by DCLLFA are set out in the Flood Risk Assessment Addendum.
- 3.164 All of the matters raised are addressed in the Flood Risk Assessment Addendum and it is expected that the usual planning conditions relating to submission of further drainage details prior to commencement will be applied.
- 3.165 There are no overriding development constraints in respect to surface water drainage and the development can therefore accord with DWP policies 16 (natural resources) and 17 (flood risk).

## **Waste need**

### ***Introduction***

- 3.166 Dorset Council's letter requested the following additional information and clarification in relation to waste need (point 30, 31 and 32):
- Further clarification and explanation in respect of potential alternative treatment facilities within three hours' drive by road, in respect of the need for the capacity the facility provides. Further detail in respect of likely sources of the RDF proposed to be managed should be provided, which should have regard to existing contracts for the management of RDF which are in place with competing facilities.
  - Further detail in respect of the potential impacts (or lack of) of your proposal upon the potential delivery of an RDF operation at Eco Sustainable Solutions, should the planning authority be minded to grant planning permission for it.

- Further detail in respect of the impact of the development on the future process of RDF in mainland Europe, and future issues surrounding exporting UK waste to these facilities. The information provided should include discussion of the likely differences in respect of overall efficiency between the proposed plant and those plants in mainland Europe for which it may compete in relation to future feedstock.

### ***Alternative treatment facilities (point 30)***

#### *Waste capacity and alternatives*

- 3.167 Section 3 of the Waste Need Paper provides further information in respect to the amount of residual waste that is available within the defined catchment area and how much capacity already exists and may potentially exist (either with planning permission or with planning applications submitted and awaiting determination). From this, the existing capacity gap between existing/planned and required capacity in the catchment area has been calculated.
- 3.168 Market analysis by Tolvik identified around 910,000 tonnes per annum of residual waste arising within the defined catchment, comprising around 570,000 tonnes per annum of residual municipal collected waste and around 340,000 tonnes per annum of residual C&I wastes. This is in addition to the 195,000 tonnes and 310,000 tonnes per annum of RDF currently being exported from the UK and Ireland that passes in close proximity to Portland.
- 3.169 There are four certain ERF facilities within the defined catchment area (Marchwood, Chineham, Exeter and Bridgwater). Whilst these have a combined capacity of around 400,000 tonnes per annum, with the exception of the Bridgwater ERF, all are subject to existing local authority municipal waste contracts that take up the vast majority of their available capacities. In the case of the Hampshire ERFs (Marchwood and Chineham), these are required under planning conditions to prioritise the treatment of waste arising from Hampshire and in the face of rising county demand have little spare capacity and cannot be relied upon by Dorset to manage its residual waste in future.
- 3.170 While there are a number of other merchant ERF projects either with planning consent or in the planning system seeking consent, the Waste Need Paper demonstrates that these could provide a capacity of around 200,000 tonnes per annum. The proposed Eco-Sustainable Solutions ERF at Parley is one such proposal, together with an ERF at Alton in Hampshire. However, even where planning permission is granted and the facilities are built (and it is not certain that all of the proposed facilities would achieve a consent or be funded to delivery), the analysis shows that there is still a significant capacity gap (even accounting for greater recycling) that would facilitate an ERF one and a half times bigger than that proposed at Portland.
- 3.171 The above assumes that 100% of the RDF feedstock is sourced from the defined catchment area. If the potential for 25% of the Portland ERF's feedstock to be imported by sea is taken into account then there is sufficient waste in the catchment area to supply an ERF over twice the capacity of the Portland ERF.
- 3.172 The above analysis is based on waste arisings today. The Waste Need Paper includes figures from the Bournemouth, Dorset and Poole Waste Plan, Background Paper 3 that that total waste arisings from LACW and C&I waste will increase by c. 20% from the existing 840,000 tonnes to 1,000,000 tonnes by 2033. Even under the most bullish

scenarios based on major societal behaviour change, strong Government policy, adherence to circular economy principles, and further significant increases in recycling (above the already high level in Dorset), there will clearly be sufficient volume of residual waste arising in Dorset during the life of the proposed ERF that will require a treatment solution.

*Expected sources of RDF*

- 3.173 The Waste Need Paper (section 3) confirms that the Canford Magna facility received 118,484 tonnes of residual waste in 2020 and, post processing, exported 82,017 tonnes of RDF to Europe. In July 2020, the plant operators (Beuparc) were awarded a contract with Dorset Council to continue to manage its residual waste. Beuparc has stated in writing that if the Portland ERF were to be built, in the context of the processing of its RDF, it would provide the most efficient route to market to manage waste and generate energy.
- 3.174 Geminor has an existing relationship with Beuparc, having worked with it to manage waste demand/supply across a number of projects. Geminor has also entered into a long term waste supply contract with the Bridgwater ERF project in Somerset to supply approximately 80,000 tonnes of RDF per annum. If the proposed Portland ERF does not receive planning permission from Dorset Council, then it is likely that Geminor will satisfy its supply obligations to Bridgwater by allocating a portion of the RDF produced at the Canford Magna facility. This would necessitate Dorset's waste to travel around 120 km to Somerset, with associated financial and carbon costs.
- 3.175 However, Geminor has confirmed that, subject to the proposed Portland ERF receiving planning permission, it intends to enter into a similar supply contract with the Portland project, supplying the full volume of around 180,000 -200,000 tonnes per annum of RDF. Contractual terms for this fuel supply contract are well advanced and this will be entered into subject to planning permission being awarded for the ERF.
- 3.176 If the proposed Portland ERF receives planning permission, then it is expected that Geminor/Beuparc will allocate 100% of the Canford Magna RDF (currently around 82,000 tonnes per annum) to the Portland facility, given its proximity advantage.
- 3.177 However, by the time the ERF becomes operational it is expected that Canford Magna RDF production would have increased from the existing Environment Agency permitted processing level of 125,000 tonnes per annum to 200,000 tonnes per annum. This reason for this increase is to allow Canford Magna to process additional local authority collected waste and, in particular, C&I waste arising in Dorset. The impact of this would be an increase the RDF production at Canford Magna from the existing level to allow it to provide over 80% of Portland's RDF requirements from Dorset waste.
- 3.178 It was made public on 6 August 2021 that Beuparc has been awarded the 3-6 year contract by BCP Council to process household, commercial and litter bin waste. This will be processed at the Canford Magna facility, and the residue will be used to produce RDF which will be suitable for treatment at the ERF, as discussed above. Please note that due to the timing of this announcement it has not been possible to include this in particular in the Waste Need Paper, as part of the wider response to Dorset Council's request letter.

- 3.179 Processing the Dorset-produced waste in Dorset (as opposed to Somerset or Europe) will reduce costs and the carbon impact, relative to the existing position. It will also free up capacity at Bridgwater for other RDF supplies and therefore will increase energy recovery on a UK wide basis.
- 3.180 The net result of this will be a reduction in UK waste that is either landfilled and/or exported for energy recovery to Europe.
- 3.181 If the proposed ERF is granted planning permission, then this implies that it should be possible to supply over 80% of its RDF requirements from Dorset waste that is processed at Canford Magna in Dorset. This would be the most rational and efficient solution for Dorset. If this RDF processing capacity is available in Dorset this should lead to further investment in RDF supply facilities, and therefore reduce the volumes of untreated waste being exported from the county.
- 3.182 This approach accords with DWP Policy 4, in enabling Dorset waste to be managed in Dorset, reducing the need for the export of residual waste to other areas outside of Dorset, in line with the proximity and self-sufficiency principles, and helping to reduce landfill in line with the waste hierarchy.

***Impact on Eco-sustainable solutions (point 31)***

- 3.183 Section 4 of the Waste Need Paper considers the effect of granting planning permission for the Portland ERF on the proposed Eco-Sustainable Solutions ERF at Parley. The Parley proposal involves a 60,000 tonnes per annum project, with c.20% of the waste recycled and the remainder processed via moving grate technology to generate energy. The net impact on residual waste arisings within our defined catchment area is therefore 50,000 tonnes per annum.
- 3.184 The expectation of delivering a large-scale ERF at Parley has not been realised and having been proposed for a large scale facility with a capacity of up to 220,000 tonnes per annum during the preparation of the DWP, it was subsequently reduced to 160,000 tonnes per annum. At the current proposed scale of 60,000 tonnes per annum it is now providing 30% of its assessed capacity in the DWP, primarily as a consequence of its very constrained location.
- 3.185 Based on the assessment of waste capacity and need, and assuming that (a) the project is granted planning permission and (b) that it can raise investment funding and can be successfully delivered, it can be shown that in this scenario there are sufficient waste arisings in Dorset and the catchment area to meet the waste need case for the ERF, without prejudicing the Parley scheme.
- 3.186 In the context of DWP Policy 4 criterion b (Applications for waste management facilities not allocated in the Waste Plan), the granting of planning to the proposed ERF would not have a material impact on the potential to deliver the Eco-Sustainable Solutions site. It would not therefore sterilise or prejudice the delivery of this allocated site that would otherwise be capable of meeting waste needs, by reason of cumulative or other adverse impacts.

***Processing of RDF in Europe (point 32)***

- 3.187 Section 5 of the Waste Need Paper provides detailed information in respect to the development of the UK RDF export market to Europe and the key economic and policy drivers behind its growth, and more recently the reduction in the volume of RDF exported. This is due to various factors including higher transport costs, increased European competition, the application of UK waste policy measures (such as the proximity principle and self-sufficiency), European waste policy and taxation and carbon and climate considerations. It is also influenced by an increase in UK RDF processing capacity.
- 3.188 The Waste Need Paper refers to UK market analysis and concludes that despite increases in UK RDF processing capacity, large volumes of UK residual waste are still being landfilled and there remains more than sufficient UK waste to justify further facility investment.
- 3.189 As such there is no “spare” capacity in the UK; and whilst there may be over supply of capacity in certain regions, other regions (like Dorset) have no capacity and therefore are essentially exporting their waste responsibilities, ultimately to either a landfill or RDF export route. This does not sit comfortably with the principles of sustainable waste management, these being the waste hierarchy and the self-sufficiency and proximity principles.
- 3.190 Further analysis of the European RDF market is provided in the Waste Need Paper, which concludes that export of RDF for the UK to Europe remained attractive despite higher overall costs, because of a lack of capacity in the RDF processing capacity in the UK, and the higher relative cost of landfill.
- 3.191 Historically, a key difference between European and UK facilities has been that European facilities typically operate in CHP mode, utilising both heat and power. This compares to the UK ERF fleet which has traditionally focussed on power only, in part due to the relative sparsity of commercial heat offtakers and the lack of policy and financial support for district heating in the UK. The result of this is that European plants are able to export a significantly higher level of total energy per tonne of waste than their UK counterparts, i.e. they are more efficient and have a competitive advantage, which, in addition to greater carbon benefits, allowed European facilities to accept lower gate fees and therefore subsidise the additional transport costs in an environment when the only other option was landfill (with the associated tax).
- 3.192 The development of the UK ERF market in recent years has provided another option for UK waste management and, going forward it is expected that new UK facilities, including the proposed Portland ERF, will be CHP ready and will take steps to identify and connect to existing heat off-takers to improve the carbon outcome and generate additional revenues. As such the attractiveness of European export is likely to continue to reduce.
- 3.193 European facilities do not need to attract UK RDF export to remain viable, given the existing on continent demand and significant increase in demand anticipated as a result of policy requirements. According to data published by the European Commission, in 2019 53 million tonnes of municipal waste was sent to landfill and 60 million tonnes was incinerated.

- 3.194 Further in line with the EU Landfill Directive (EU, 1999, 2018a), Member States must reduce the amount of municipal waste sent to landfill to 10% or less of the total amount of municipal waste by 2035.
- 3.195 In 2019 only 10 Member States had achieved this target, with several of these countries incinerating a significant amount of municipal waste. The remaining 17 Member States required further changes to their waste management approach, and 12 of these had landfill rates that were four times or more the EU target (in Eastern Europe it is still typical for over 50% of municipal waste to be landfilled).
- 3.196 This suggests that there is more than enough waste available to keep all of the ERF plants in Europe operating at full capacity, which is the most economically sensible approach as opposed to reducing gate fees to look to continue to attract UK waste.

## **Environmental permit**

### ***Introduction***

- 3.197 Dorset Council's letter requested the following additional information and clarification in relation to the Environmental Permit (point 35):
- We note that you are making some updates to your Environmental Permit application, and request that the additional detail and assessment you are undertaking in respect of air quality, noise and fire prevention is incorporated into your planning application and EIA, so the assessment of the project is consistent across both regulatory regimes
- 3.198 The applicant submitted an application to the Environment Agency in December 2020 for an Environmental Permit, which will be required before the ERF would be permitted to operate. Further information and clarification has been submitted in respect to air quality, noise and fire prevention matters, and this is summarised further below.

### ***Air quality (point 35)***

- 3.199 The additional air quality information requested by the Environment Agency related to the modelling of impacts at specific human health receptors. Fichtner Consulting Engineers Ltd prepared a technical note to provide this, which is provided in the ES Addendum appendix 3.3.
- 3.200 This presented the impact at a number of residential properties, including HMP The Verne and these are summarised in the air quality section of ES Addendum (chapter 3). The additional modelling confirms that there will be no significant adverse air quality effects at sensitive receptors in the vicinity of the proposed ERF as a result of process emissions from the plant.

### ***Noise (point 35)***

- 3.201 The Environment Agency requested that a further assessment of noise impact for the proposed ERF be undertaken. Specifically, a more detailed assessment was requested in line with British Standard 4142:2014+A1:2019 Methods for rating and assessing industrial and commercial sound.



- 3.202 This request was made because the original noise assessment submitted with the application was undertaken during the Covid-19 lockdown period, which prevented a baseline survey from being undertaken at that time. Furthermore, it was likely that any survey undertaken during that period would have been unrepresentative of more typical conditions due to the general reduction in economic and commercial activity. Consequently, that previously submitted noise assessment used baseline survey data collected around the port as part of on-going environmental monitoring using an approach agreed with Dorset Council.
- 3.203 The updated noise assessment, submitted as requested as part of this response, concludes the predicted rating sound levels from the ERF to be below the background levels at the locations assessed. In absolute terms the levels are also low, indicating that the effect of noise from operation of the ERF would be not significant.

***Fire prevention plan (point 35)***

- 3.204 It was necessary to submit a preliminary Fire Prevention Plan (FPP) for the proposed ERF to the Environment Agency as part of the Environmental Permitting process. The objective of the FPP is to identify the provisions which have been taken into account during the development phase of the facility. In addition, provisional operational measures have also been identified where these are available. The preliminary FPP report will be subject to review following completion of the detailed process design.
- 3.205 The preliminary FPP provides information in respect to fire prevention and the management and storage of waste. The Environment Agency requested some additional information under its 'duly made' checking procedures comprising a site location plan, a drawing showing sensitive receptors and updated table of receptors with a reference number added to each receptor. The full preliminary FPP has been submitted to Dorset Council (including the additional information requested by the Environment Agency).
- 3.206 Whilst the FPP is the subject of consideration by the Environment Agency under Environmental Permitting regulations, some consultees to the planning application have raised concerns about fire risk. The FPP provides Dorset Council and consultees with details of measures to be taken to ensure that any fire risk would be effectively managed under the remit of the Environmental Permit, and demonstrates that fire risk is not a significant planning concern.

## 4. Compliance with the development plan

### *Introduction*

- 4.1 The submitted Planning Supporting Statement provides a summary of the development plan framework (chapter 5) and other material considerations considered to be relevant to the proposals.
- 4.2 Chapter 6 of the Planning Supporting Statement provides a comprehensive and robust planning assessment of the ERF's compliance with the development plan, especially the Dorset Waste Plan (DWP: 2019) and other material considerations, including directives, regulations, policies, strategies, and guidance in respect to both waste management and renewable energy.
- 4.3 In the context of the DWP, the Planning Supporting Statement fully assesses the proposals in respect to the following core waste management principles and policy matters:
- The waste hierarchy
  - Self-sufficiency principle
  - Proximity principle
  - Spatial strategy
  - Sustainable waste management (Policy 1)
  - Allocated waste sites (Policy 3)
  - Unallocated waste sites (Policy 4)
  - Recovery facilities (Policy 6)
  - Transport and access (Policy 12)
- 4.4 The Planning Supporting Statement also considered other relevant policies in the DWP, West Dorset, Weymouth & Portland Local Plan, Dorset Minerals Strategy, and Portland Neighbourhood Plan and the assessment of compliance is summarised in tables 6.1 to 6.4.
- 4.5 It is not the intention of this document to duplicate the policy assessment previously undertaken and set out in full within the Planning Supporting Statement. Rather this chapter provides clarification, as requested by Dorset Council, as to the applicant's interpretation of key principles and policies in context of representations made to the planning application.

### *Interpretation of planning policies (point 34)*

- 4.6 This section provides a response to the request made by Dorset Council in its letter (point 34), which states:
- *"It would be useful if you could provide further comment and perspective in respect of representations received on way in which you have interpreted planning policies as set out in your supporting statement"*.
- 4.7 The applicant's response to policy points raised by consultants acting on behalf of local objector groups (principally Stop Portland Waste Incinerator (SPWI) and The Portland Association) is provided in the Consultation Response Summary Document (CRSD). The CRSD is intended to assist Dorset Council by providing clarification in respect to

policy points raised during consultation, rather than new environmental information under Regulation 25 of the EIA Regulations. However, the remainder of this chapter focuses in more detail on the key strategic policies and principles in the DWP that objectors believe have been misinterpreted.

4.8 The majority of consultation comments made were in relation to the ERF's compliance with the adopted DWP and principally the following listed policies in so far as they cover key guiding principles for sustainable waste management, the DWP spatial strategy and other key planning considerations in respect to both allocated and unallocated sites in the DWP:

- Policy 1 (sustainable waste management)
- Policy 3 (sites allocated for waste management development)
- Policy 4 (applications for waste management facilities not allocated in the Waste Plan)
- Policy 6 (recovery facilities)

4.9 Many objectors focused upon the Portland ERF's compliance with Policy 4 and criteria a to g, which are to be met if waste management facilities on unallocated sites are to be permitted. Whilst objections were raised in respect to all of the criteria, the majority have been directed at criterion a (availability of allocated sites or locational advantages), criterion b (prejudice of delivery of allocated sites) and criterion c (spatial strategy, need and the waste hierarchy).

***Policy 4 criterion a)***

4.10 The response submitted by Adams Hendry (on behalf of SPWI) suggests that the applicant has not provided evidence that the DWP allocated sites are not available or would not be capable of serving the waste management need that the proposal is designed to address. It also states that the applicant has purposefully misinterpreted Policy 4 criterion a) in an attempt to ensure compliance, stating that this criterion does not require an assessment to determine whether it is capable of accommodating the applicant's proposal, but rather the requirement is whether the allocated sites could serve the same waste management need that the proposal is designed to address.

4.11 In response to these points and to further clarify, the applicant is not primarily seeking to demonstrate that there is no 'available' site allocated for serving the waste management need that the Portland ERF is expected to serve. However, the Planning Supporting Statement (paragraphs 6.77 to 6.84) states there are significant doubts as to whether sufficient capacity will, or can, come forward on the DWP allocated sites to meet Dorset's expected shortfall in residual waste management capacity. This is primarily because of the planning and environmental constraints to development identified and set out within the DWP itself, and the findings of the applicant's DWP Allocated Sites Assessment study.

4.12 Policy 4 criterion a), states:

*"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"* (our emphasis added).

- 4.13 Whilst the applicant has concluded that there are significant doubts as to whether the DWP allocated sites (Policy 3) would be capable of delivering facilities with sufficient capacity to meet Dorset's expected residual waste treatment need, it is not suggesting that such sites are not available in the context of criterion a. Rather the comparative assessment of DWP allocated sites was undertaken to demonstrate that the Portland site provides advantages over the allocated sites, as required by Policy 4 (criterion a), and as requested by officers in pre-application advice. The relevant policy test under criterion a in this instance is whether the unallocated Portland site provides advantages over the allocated sites.
- 4.14 The proposal is specifically for a large-scale ERF with a maximum capacity of 202,000 tpa to meet Dorset's waste management needs. It is entirely reasonable for the applicant to consider whether the delivery of such a facility at the Portland site would deliver advantages over the allocated sites. The DWP does not exclude incineration at allocated sites but rather indicates that there is potential for adverse impact. The DWP adopts a flexible approach and does not preclude any technologies from coming forward on the allocated sites, as has been confirmed by the recent planning application for a smaller scale incineration-based ERF on the Eco-Sustainable Solutions site at Parley (Inset 7).
- 4.15 On that basis it is entirely appropriate for the applicant to consider the relative merits of a larger scale ERF at the Portland site against DWP allocated sites to demonstrate that clear advantages exist.
- 4.16 The Portland ERF site clearly and demonstrably provides significant advantages over the DWP allocated sites, as follows:
- It is of a sufficient size that is capable of accommodating a large-scale ERF, that is commercially viable, technically proven, and deliverable and with capacity to meet Dorset's existing and future waste management needs. Other DWP allocated sites are either of insufficient size to accommodate a large-scale ERF of the type proposed at Portland, or are subject to planning or environmental constraints that limit their scale. Smaller scale ERF plants, and/or alternative advanced thermal technologies generally carry a higher risk of failure because of difficulties in securing funding due to either low investment returns or, in the case of alternative advanced thermal technologies, the technical risks that have resulted in numerous project failures and losses for investors. There are multiple examples of UK sites that were previously consented for advanced thermal technologies that are now adjusting their technology such that it is similar to the proposed ERF.
  - It is able to provide power directly to a shore power facility to serve visiting cruise liners and Royal Fleet Auxiliary (RFA) and other shipping equipped with shore power capability. This enables ships to turn off their engines when in port reducing associated ship emissions to air. Other DWP allocated sites cannot provide direct power supply to the port, due to electrical supply infrastructure constraints at Portland, and could not deliver shore power and reduce ship emissions to air.
  - It is able to supply heat to a future district heating network, through its inbuilt CHP capability, and is very well located in relation to specific heat customers in the immediate vicinity (the two Portland prisons). The prisons have a large

heating requirement, and the Ministry of Justice (MoJ) has indicated that it is interested in taking heat once the network is implemented. Whilst some DWP allocated sites have potential for CHP, no heat customers have indicated that they would take heat even if a heat network were to be provided. Other DWP allocated sites are too geographically remote from potential heat users and have no realistic CHP potential given the inability of off-takers to stand behind the long term contracts required to justify the upfront capital investment.

- It is located in a commercial port with direct access to existing port related infrastructure, enabling it to import RDF fuel and export residual materials such as IBA sustainably by ship. The site has a unique locational advantage, in the Dorset context, of having flexibility to import and export materials by sea, a sustainable mode of transport, and is not reliant upon the transport of material by road only. None of the DWP allocated sites enjoy the benefits of a port location and this inherent flexibility. In contrast they are reliant upon the transport of waste and residual materials by road, a distinct disadvantage in comparison to the Portland site.
- It is located adjoining other available employment land where emerging green technologies in connection with circular economy initiatives which would have synergies with the Portland ERF, such as recycling of plastics can be located.
- It has excellent potential to incorporate carbon capture and storage (CCS) when this becomes technically and commercially viable, because of its port location. Portland Port has significant land available within its demise to facilitate the installation of carbon capture technology, and the site's location within a commercial port provides opportunities for captured carbon to be stored and transported by sea to disposal locations, once these have been developed and become available. Other DWP sites are likely to be either too small to accommodate CCS on site or are constrained by existing waste management uses that would need to be reconfigured or removed. Critically, none of the other DWP sites benefit from a port location and they do not have the potential to transport captured carbon in bulk vessels by sea, instead being entirely reliant upon transporting captured carbon by road, which is less sustainable and would be much less commercially viable.
- It has scored highly in the DWP Allocated Sites Assessment against a set of operational and planning and environmental criteria and has outperformed all of the four DWP allocated sites identified for strategic residual waste management. Irrespective of the study outcomes and objector criticism of the criteria applied, none of the DWP allocated sites can deliver all of the advantages set out above that the Portland ERF site can.

4.17 The objectors' suggestion that the applicant has purposefully misinterpreted Policy 4 criterion a is strongly rejected for the reasons given. The information presented in the Planning Supporting Statement, DWP Allocated Sites Assessment, other supporting technical documents, and further in this supplemental statement, provides compelling evidence that the Portland ERF site has clear and substantial advantages over the other DWP allocated sites.

- 4.18 It is firmly considered by the applicant that the proposed Portland ERF is fully compliant with Policy 4 criterion a, in that the proposed Portland ERF site has demonstrated many advantages over the DWP allocated sites.

***Policy 4 criterion b)***

- 4.19 Objections submitted by Adams Hendry and Freeth on behalf of opposition groups claim that no evidence has been submitted to demonstrate that the proposal would not sterilise or prejudice the delivery of a DWP allocated site and that this is contrary to Policy 4 criterion b).
- 4.20 The applicant's position in respect to compliance with criterion b) is set out in the Planning Supporting Statement (paragraphs 6.97 to 6.99). The objectors' comments place considerable weight on the fact that the Portland ERF will meet a substantial proportion of the DWP residual waste capacity and that this would prejudice delivery of one or more of the allocated sites.
- 4.21 The Planning Supporting Statement concludes that the proposed ERF at Portland would not preclude a range of waste management uses from coming forward on the DWP allocated sites. However, given that residual waste, post recycling, can only be managed by means of landfill or energy recovery, it is assumed that objectors consider that the DWP sites could deliver a thermal treatment facility (either traditional or ACT). To assess whether this concern is valid it is necessary to consider whether the allocated sites could realistically deliver a large-scale residual waste treatment facility and how much of the 'assessed' capacity of the DWP allocated sites is likely to be delivered in reality given current evidence, in the context of the Portland ERF and the shortfall of residual waste capacity.
- 4.22 The DWP (paragraph 7.76) states that the plan allocates three sites for the provision of new facilities for the management of residual waste, plus additional capacity at the existing MBT facility at Canford Magna.
- 4.23 These four sites combined have a total assessed capacity of 385,000 tpa. It is further explained that this exceeds the identified needs of the plan area, to ensure 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 DWP adopts a flexible approach, with paragraph 6.9 stating that, although the allocated sites may currently be available for waste uses, circumstances may change during the plan period, and these may not come forward as expected. It also adds that private sector businesses and commercial considerations will determine whether facilities will actually be built and what types of technology will be brought forward.
- 4.24 The Eco-Sustainable Solutions site (Inset 7) is assessed to provide 160,000 tpa of residual waste treatment capacity, based on evidence presented to the draft DWP indicating that a facility of this scale was feasible. The current proposal for this site is a small scale ERF with a residual thermal waste capacity of 50,000 tpa. Assuming this facility is consented, financed, and built (which the applicant doubts will be the case given its size based on feedback from experienced industry investors) this would represent a shortfall of 110,000 tpa against the DWP assumed capacity for this site. This reduced residual waste treatment capacity is symptomatic of the challenging planning and environmental constraints at this location. It is therefore site constraints that are prejudicing the delivery of 'assessed' additional capacity, rather than the

Portland ERF. The DWP's over-provision capacity figure of 385,000 tpa would be significantly reduced to 275,000 tpa.

- 4.25 The potential impact of the proposed Portland ERF on the proposed Eco-Sustainable Solutions ERF at Parley in respect to waste capacity and waste arisings is addressed in more detail in the Waste Need Paper and above in the direct response to point 31 of the council's letter.
- 4.26 The Canford Magana site (Inset 8), is assessed as providing a further 25,000 tpa of treatment capacity from the existing facility MBT facility. Whilst the MBT is expected to significantly increase its capacity to manage more of Dorset's waste (refer to the submitted Waste Need Paper), this is an intermediate waste process that removes some recyclable materials from the waste stream but produces significant quantities of RDF, which ultimately requires management at other facilities. Although planning permission was granted for an advanced combustion facility (ACT) at the Canford site, it was only part implemented and was never completed. The site owner has no plans to complete or operate the ACT facility given the technical challenges noted with this technology.
- 4.27 Whilst the Canford facility will continue to provide an important waste management function by processing increased volumes of Dorset's residual waste and producing higher volumes of RDF, an outlet is required for the RDF before it can be said that the residual waste has been finally treated. The Portland ERF will provide that outlet. The operator of the Canford MBT facility has stated that its RDF output would be supplied to the Portland ERF, if it secures planning permission and is constructed, because it would be the nearest appropriate facility.
- 4.28 Given that the Canford site is expected to continue to focus its operations on increasing its intermediate residual waste treatment activity and RDF production, it is difficult to understand how the proposed ERF would prejudice additional capacity coming forward at this site. Conversely, by providing a Dorset based outlet for its RDF output, the Portland ERF is likely to stimulate and support increased waste management capacity at the Canford site and potentially other intermediate processing locations within Dorset.
- 4.29 The Mannings Heath site (inset 9) is assessed to have a potential capacity of 100,000 tpa. It is a relatively small site that is currently in use for other waste management uses. There is no evidence to suggest that this site is likely to come forward with an alternative residual waste treatment facility of the scale that is suggested in the DWP. The provision of 100,000 tpa of capacity at this site therefore would appear to be highly optimistic. Investment for a project of this size is again challenging – a conventional technology (such as the proposed ERF) does not meet return hurdles at this size due to high fixed capital costs and an ACT technology project is unlikely to be able to raise investment due to the technical failures and investment losses experienced elsewhere in the UK market.
- 4.30 The Binnegar Quarry site (Inset 10) is assessed in the DWP as having a potential residual waste treatment capacity of 100,000 tpa. The site is located in a remote area, adjacent to sensitive ecological habitats and with no opportunities for implementing CHP. It therefore realistically offers very little potential as a location for establishing a new residual waste treatment facility. Whilst a materials recycling facility exists on the site, this was mothballed for many years and the operator Viridor has since moved to dispose of the site. The applicant considers it highly unlikely that this site will deliver the

assessed capacity. Again, the considerations regarding the investment case for a site of this size are relevant, even in the unlikely scenario that planning was approved.

- 4.31 Under the scenario that neither the Manning's Heath nor the Binnegar Quarry sites are likely to deliver any of the significant residual waste treatment capacity expected in the DWP, and that the proposed Eco-Sustainable Solutions ERF at Parley will only provide 50,000 tpa (some 110,000 tpa less than was expected in the DWP), there would remain a significant residual waste management capacity shortfall in Dorset of around 184,000 tpa, against the 234,000 tpa requirement. This shortfall would of course increase if the Eco-Sustainable Solution ERF does not obtain planning permission or cannot raise funding and therefore is not built.
- 4.32 It is for precisely these reasons that the DWP recognises that flexibility is required to account for sites not coming forward. As the DWP states (paragraph 6.9), the plan allows for other acceptable sites to come forward for waste uses. Such provision will provide additional flexibility, including in circumstances where allocated sites do not come forward for waste development.
- 4.33 It is therefore entirely appropriate that new sites, such as the Portland ERF site, can be considered on their merits, particularly as it appears that the assessed capacity for the DWP allocated sites is likely to be much less than envisaged at the plan making stage.
- 4.34 Nonetheless, the applicant considers that the DWP allocated sites can still play an important role in meeting Dorset's waste management needs. However, rather than accommodating large scale thermal treatment facilities in highly constrained areas, they are deemed to be more suited to the production of RDF (to support facilities such as the Portland ERF), or to accommodate other waste management activities such as waste transfer and recycling.
- 4.35 When considered from a waste arisings perspective, the Waste Need Statement confirms that based on analysis undertaken of Dorset's residual waste arisings, the potential available feedstock for the Portland ERF (comprising both LACW and C&I) is around 320,924 tonnes. Given that the nominal capacity of the Portland ERF is 183,000 tpa (with a maximum capacity of 202,000 tpa), and around 25% of the plant capacity (approximately 50,000 tpa) might be expected to come by sea, the amount of residual waste potentially available to the Portland ERF from Dorset alone far exceeds its capacity, and would not prejudice other facilities coming forward on allocated sites.
- 4.36 Given these considerations, the objectors' concerns that the Portland ERF would prejudice the delivery of DWP allocated sites are unfounded and the proposal fully accords with Policy 4 criterion b.

***Policy 4 criterion c)***

- 4.37 The main thrust of the objectors' case is that the proposed ERF at Portland does not comply with the DWP spatial strategy because the site is less well related to the Poole, Bournemouth and Christchurch conurbation (as a significant source of waste arisings) than the allocated DWP sites and does not comply with the proximity principle. It also suggests that the facility does not comply with the proximity principle because the ERF has the capability to manage waste arising from within a defined three hour HGV drive time terrestrial catchment, and also has the ability to bring waste into the facility by sea from further afield.



- 4.38 Chapter 6 of the Planning Supporting Statement (paragraphs 6.35 to 6.59) sets out the case for the proposed ERF in respect to the proximity principle. However, to provide further clarification the applicant considers that the objectors are applying the proximity principle in a very narrow sense.
- 4.39 The proximity principle requires waste to be recovered or disposed of as close as possible to where it is produced. However, in the context of decision making the proximity principle requires that waste be managed at 'one of the nearest appropriate installations' (our emphasis) but not necessarily at the nearest appropriate installation. The objectors fail to recognise that the Portland ERF would enable Dorset's waste to be managed in Dorset as one of the nearest installations for the treatment of Dorset's residual waste.
- 4.40 This would remain the case even if one of the allocated sites were developed to provide additional residual waste management capacity. The objectors also fail to recognise that the proximity principle is a guiding principle, that must be applied flexibly, given that waste markets are dynamic and complex. The proximity principle should not be applied in an overly restrictive way.
- 4.41 Some objectors have suggested that Dorset's waste should instead go to the Marchwood ERF as this is geographically closer to the south east Dorset conurbation (and more proximate) than the Portland site. Notwithstanding that this would result in Dorset continuing to rely upon the export of all of its residual waste to other areas, contrary to the self-sufficiency principle, it doesn't consider the realities of the waste market and the availability of capacity.
- 4.42 All of Hampshire's ERFs are contracted to manage Hampshire's local authority collected waste, are operating at or close to their capacities, and are subject to planning conditions that require priority to be given to managing Hampshire's waste over waste derived from other waste authority areas. For these reasons they may not be available to manage any of Dorset's residual waste need in future. Paragraphs 6.40 to 6.44 of the Planning Supporting Statement set out how the Portland ERF will comply with the proximity principle at the Dorset level.
- 4.43 Objectors also suggest that because the Portland ERF could manage residual waste arising from within the sub-region, or the UK or elsewhere, that this is in some way contrary to the proximity principle. This again looks to apply the proximity principle in an overly restrictive way which fails to recognise that the proximity principle can apply at various geographical scales.
- 4.44 Paragraphs 6.45 to 6.50 of the Planning Supporting Statement demonstrate that the Portland ERF could manage some of the large volume of RDF material that is currently being produced (both in the south west region and nationally) that is being exported to other European countries for management in other ERFs. The Portland ERF will provide one of the nearest appropriate installations for this material in accordance with the proximity principle (and also UK self-sufficiency) and is more proximate than continuing to export to Europe.
- 4.45 In all of these respects the objectors look to apply and interpret the proximity principle in an overly rigid and narrow way that fails to recognise the dynamics of waste flows, waste markets and the fact that the Portland ERF does not need to be the closest available geographically to the source of the waste arisings (as it would be one of the nearest appropriate facilities) to accord with the provisions of the proximity principle.

- 4.46 Paragraphs 6.60 to 6.72 of the Planning Supporting Statement consider the proposal in context of the DWP spatial strategy. These demonstrate how the proposed Portland ERF will help Dorset to ensure that its residual waste is managed within Dorset, as opposed to the current practice of exporting waste out of county to landfill or other ERF in the UK or Europe.
- 4.47 The DWP Inspector recognised that the purpose of allocating sites (albeit close to the urban area) was to “facilitate the treatment of an increased tonnage of waste to enable recovery within the County instead of transporting waste to landfill or recovery facilities outside Dorset, as happens at present”.
- 4.48 Whilst the Inspector noted that the DWP had identified strategic requirements for residual waste management and recycling, and allocated sites to meet those requirements, which are well related to the sources of waste, it is explicitly made clear in the DWP that some or all of those allocated sites might not come forward and deliver the necessary capacity. The DWP explicitly recognises that additional residual waste treatment capacity may be appropriate elsewhere to ensure that the capacity gap is adequately addressed.
- 4.49 To address this, Policy 4 permits waste management facilities to come forward on unallocated sites where these can demonstrate significant advantages over allocated sites and meet specified criteria. The DWP Inspector (paragraph 56) fully recognises the need for this flexibility and supports the approach, provided allocated sites are not prejudiced and the unallocated sites offer advantages such as the provision of heat and energy sources.
- 4.50 Whilst the DWP has identified sites near to the south east Dorset conurbation, as this is where a significant proportion of Dorset’s residual waste arises, it also accepts that these sites are constrained and therefore some or all of these allocations might not deliver the required capacity. Given the level of uncertainty over the deliverability of allocated sites, the DWP adopts a positive and flexible approach to ensuring that sufficient waste capacity is provided in Dorset to meet its needs over the plan period. This is entirely sensible planning.
- 4.51 Whilst it is recognised that the Portland ERF site is not as close to the south east Dorset conurbation as the DWP allocated sites, this does not mean that the proposed development is contrary to the proximity principle or is not capable of supporting the delivery of the spatial strategy.
- 4.52 The Portland ERF site would result in significant heat and power advantages by facilitating shore power and district heating and would provide a final treatment facility in Dorset for RDF material produced at facilities located on the DWP allocated sites (such as at Canford).
- 4.53 In this way residual waste arising from the main conurbation can be subject to further pre-treatment to remove recyclable materials close to its point of arising, further reducing its weight and volume prior to transporting the final RDF to Portland. As set out in the carbon assessment, the benefits of capturing heat and power at Portland outweigh any modest carbon emissions associated with transporting RDF to Portland. The proposal does not fundamentally undermine the spatial strategy as is being suggested by objectors, but rather supports it, contributing to meeting the residual waste management needs identified in the DWP, helping to achieve more sustainable waste management by moving this further up the waste hierarchy, reducing the need

for landfill, and adhering to the proximity principle by providing a Dorset facility for Dorset waste.

- 4.54 Whilst regard has to be given to the DWP spatial strategy, it is not correct for objectors to conclude that the spatial strategy must be afforded overwhelming weight in the planning balance to the exclusion of all other factors. Paragraphs 6.67 to 6.69 of the Planning Supporting Statement refer to the Avonmouth Resource Recovery Centre appeal decision from 2011 (Appeal Reference APP/Z0116/A10/2132294). As set out in paragraph 6.67, this is an example where the Inspector considered a project's compliance with a spatial strategy with a wider set of sustainability considerations. This example demonstrates that absolute compliance with a spatial strategy must be balanced with the strategic objectives that inform and direct the overall spatial strategy for waste management. In that case the Inspector concluded that waste miles are not an overriding factor when balanced against other benefits of reduced landfill and low carbon energy.
- 4.55 The objectors seem to be suggesting that decision makers, including Inspectors are bound to give priority to consideration of spatial strategy over other considerations. Clearly, given this appeal decision that is not correct. Furthermore, in referring to this example the applicant is not recognising that the proposed development does not accord with the DWP spatial strategy, but rather is highlighting that in this case waste miles should not be an overriding factor when balanced against other important benefits. In this case the carbon savings derived from the provision of shore power and district heating at Portland would more than off-set any additional carbon associated with transport miles.
- 4.56 The applicant concludes that the Portland ERF fully accords with the provisions of Policy 4 criterion c.

### ***Policy 6***

- 4.57 Objectors have suggested that the proposals conflict with Policy 6 (recovery facilities), specifically that the facility does not comply with the requirement for processing facilities for IBA to be located at or close to source of the waste arising. The applicant's position is clearly set out in the Planning Supporting Statement (paragraphs 6.152 to 6.158).
- 4.58 However, for clarity the residual materials arising from the ERF (IBA and APCr) will be sent to specialist reprocessing facilities, with the port location enabling residual material to be transported sustainably by water. The proximity principle requires waste to be disposed of, or recovered, in one of the nearest appropriate installations by means of the most appropriate methods and technologies. The Portland ERF in sending residues to the nearest appropriate installation fully accords with the proximity principle.
- 4.59 A small number of specialist IBA facilities exist that receive and process the residual material taking advantage of economies of scale. Whilst some larger scale ERFs have on site IBA processing facilities, the majority do not and transport material to a specialist facility by road.
- 4.60 The Portland site enables IBA to be transferred sustainably by water to specialist recycling facilities. This accords with the underlying objectives of the policy, which is to ensure the most sustainable treatment of residues both in terms of the method of treatment (in this case recycling) and method of transport (in this case transport by sea). The DWP and specifically Policy 6 could not have reasonably anticipated that a site,

located within a commercial port, would come forward for an ERF and its wording does not recognise the sustainability advantages of moving IBA by sea, which would reduce the need for transportation of residual material by road and its associated environmental effects.

- 4.61 The applicant is willing to accept a suitably worded planning condition, requiring the transportation of IBA to specialist reprocessing facilities by sea. Notwithstanding this, the applicant is committed to a planning obligation to review future options to establish a IBA/APCr reprocessing facilities at or in close proximity to the site (see above). Furthermore, the objectors ignore the clear future potential at Portland for establishing local facilities to treat residues.
- 4.62 The applicant therefore maintains its stated view that the Portland proposal broadly complies with the requirements of Policy 6 in respect to treatment of residual materials.

#### ***Other DWP policies***

- 4.63 Objections were made in respect to many of the DWP development management policies, principally these were:
- Policy 12 (transport and access)
  - Policy 13 (amenity and quality of life)
  - Policy 14 (landscape and design quality)
  - Policy 15 (sustainable construction and operation of facilities)
  - Policy 16 (natural resources)
  - Policy 17 (flood risk)
  - Policy 18 (biodiversity and geological interest)
  - Policy 19 (historic environment)
- 4.64 The Planning Supporting Statement (chapter 6) provides an assessment against these DWP policies and concludes that the Portland ERF is compliant with their requirements. However, where additional environmental information has been provided under this submission, further consideration has been given to compliance with the relevant policies.

#### ***Policy 13 – amenity and quality of life***

- 4.65 The applicant has submitted revised air quality assessment information to address comments made during the consultation on the application and to reflect the findings of additional technical air quality modelling work undertaken to quantify the effect of delivering shore power, which would result in shipping turning off its marine diesel engines when docked in port. The overall conclusion of the original ES, that the proposed development will not lead to any significant effects on air quality, remains valid and in fact for some emissions the position post development of the ERF will be an improvement on the existing air quality. The updated HHRA and HIA also did not identify any significant health effects arising from the proposed development.
- 4.66 Overall, the proposed development remains in accordance with Policy 13 criterion b (airborne emissions).

- 4.67 The applicant has submitted to the Environment Agency, through its Environmental Permit application (reference: EPR/AP3304SZ/A001), a revised noise impact assessment. This was required to ensure that more representative baseline noise conditions were captured, post-Covid 19 pandemic restrictions on activity. The updated noise assessment concludes the predicted noise levels from operation of the ERF would be below background levels at the locations assessed and low in absolute terms. The conclusion of the original assessment that the ERF would not cause any adverse noise impact remains valid.
- 4.68 The proposed development therefore remains in line with the requirements of Policy 13 criterion a (noise and vibration).
- 4.69 As described in chapter 8 of the ES Addendum (LVIA) and the DAS Addendum, further modelling and visualisations have been provided in respect to the predicted plume on the limited occasions when this would be visible. The additional assessment has concluded that the findings of the original ES and LVIA are unchanged. It is therefore considered that the Portland ERF would not give rise to unacceptable landscape, seascape and visual impacts.
- 4.70 The proposed development is therefore considered to accord with Policy 13 criterion h (visual impact).
- 4.71 Additional ground stability assessment has been undertaken and this has concluded that the risk of any ground instability is acceptable and can be minimised through careful design and construction.
- 4.72 The proposed development therefore remains in accordance with the requirements of Policy 13 criterion j (stability of the land at and around the site, both above and below ground level).

#### ***Policy 14 Landscape and design quality***

- 4.73 The applicant has submitted further detailed information in respect to the technical plume modelling undertaken, visualisations showing the plume in various meteorological conditions, the proposed ERF viewed in the context of the existing port development, and the proposed external cladding system, addressing points 1, 2 and 3 in the council's letter. As requested by the Dorset Council landscape officer, further consideration has been given to the potential visual effects of the proposed ERF development at night time, through the submission of night time photomontages. These are summarised in chapter 2 and addressed in full within the DAS Addendum and the ES Addendum.
- 4.74 The additional plume modelling confirmed the conclusions set out in the original landscape, seascape and visual impact assessment that the plume is likely to produce only a very minor alteration to the view for a very limited number of hours in a limited number of months. As a result, the assessment of visual effects remains unchanged. Similarly, the additional night-time visualisations produced of the proposed development confirmed the conclusions set out within the lighting report and the landscape, seascape and visual assessment that the night-time effects of the proposed development on views will be negligible and not significant.

- 4.75 The additional information demonstrates that the proposed ERF has been carefully designed to ensure that it is compatible with its setting and complies with the requirements of Policy 14.

***Policy 17 Flood risk***

- 4.76 Further information has been submitted in respect to comments made by Dorset Council in its role as Lead Local Flood Authority (LLFA) in respect to the capacity, condition and suitability of the existing surface water network and associated outfalls.
- 4.77 Awcock Ward Partnership (AWP), who prepared the original flood risk assessment (FRA) and surface water drainage strategy, has produced a FRA Addendum. This illustrates a revised drainage strategy that demonstrates that the existing drainage network is suitable for use and that surface water from the site can be drained via existing outfalls to Balaclava Bay and Portland Harbour, with the use of appropriate surface water attenuation storage when required (point 27 in the council's letter).
- 4.78 The proposed development therefore fully accords with the relevant requirements of Policy 17.

***Policy 18 Biodiversity and geological interest***

- 4.79 The applicant has provided additional assessment of effects on off-site designated nature conservation sites and proposals for the management of habitat within the port (points 10 and 11 in the council's letter) in chapter 9 of the ES Addendum. In addition an updated version of the shadow appropriate assessment has also been prepared and submitted, providing additional information requested by Natural England and other ecological stakeholders (point 10 in the council's letter). Furthermore, a technical note prepared by ABPmer provides additional assessment of the potential for marine impacts, including on designated sites (point 10 in the council's letter). The full technical note is provided in appendix 9.3 of the ES Addendum and its findings are summarised in section 9.
- 4.80 The additional information does not change the conclusions of the original ES and shadow appropriate assessment, such that the proposed ERF fully complies with the provisions of Policy 18.

***Policy 19 Historic environment***

- 4.81 A framework heritage mitigation strategy has been prepared and submitted (provided as ES Addendum appendix 6.1), based on guidance provided by both the Dorset Council conservation officer and Historic England officers. The framework strategy provides details of the proposed mitigation proposed and how this would be delivered to off-set effects on the setting of the heritage assets at East Weare, in terms of the overall objectives, the proposals for staged works, future management, and monitoring and review.
- 4.82 The heritage framework would comprise works to remove the E Battery East Weare (scheduled monument and listed building) from the Historic England Heritage at Risk Register, to provide enhanced public access by means of a new permissive linking path across currently inaccessible parts of the secure port estate to connect to the existing public accessible land/rights of way, and to create enhanced opportunities for public appreciation of the wider group of heritage assets at East Weare.

4.83 The framework heritage mitigation strategy demonstrates that the harm to the setting of heritage assets at East Weare identified in the ES (and deemed to be less than substantial harm) can suitably be off-set through the proposed mitigation and that this will deliver significant heritage related public benefits. As such the proposed ERF is in full accordance with Policy 19 requirements.

### **Conclusion**

4.84 As requested by Dorset Council, further comment and perspective has been provided in respect to the applicant's interpretation of planning policies, with particular attention paid to DWP Policy 4 and 6, as these relate specifically to the consideration of core waste management principles and how these are applied in the context of Dorset, its spatial strategy and site allocations.

4.85 The applicant maintains that the proposed Portland ERF is fully compliant with these policies and considers that objector claims that the policies have been misinterpreted are without basis.

4.86 In respect to Policy 4 criterion a, the proposed Portland ERF site has many significant and clear advantages over the DWP allocated sites, principally relating to the following:

- It is of a sufficient size that is capable of accommodating a large-scale ERF, that is commercially viable, technically proven and deliverable, with capacity to meet Dorset's waste management needs
- It can provide power directly to a shore power facility to serve visiting cruise liners and Royal Fleet Auxiliary (RFA) and other shipping equipped with shore power capability, enabling ships to turn off their engines when in port, reducing associated ship emissions to air.
- It can supply heat to a district heating network, through its CHP capability, and is very well located to heat customers in the immediate vicinity, with the MoJ in discussion with the applicant to take heat to supply the two local prisons.
- It is located in a commercial port with direct access to existing port-related infrastructure, enabling it to import RDF fuel and export residual materials such as IBA sustainably by ship.
- It has excellent potential to incorporate carbon capture and storage (CCS) and other green technologies such as recycling of plastics when this becomes commercially viable, because of its port location, land availability and the associated potential for the storage and transport of captured carbon by sea.
- It has scored highly in the DWP Allocated Sites Assessment against a set of operational and planning and environmental criteria and has outperformed all of the four DWP allocated sites identified for strategic residual waste management.

4.87 The Portland ERF site therefore accords with the requirements of Policy 4 criterion a.

4.88 In respect to Policy 4 criterion b, the Portland ERF would not sterilise, or prejudice the delivery of an allocated site that would otherwise be capable of meeting Dorset's waste needs. This is because:

- There is potential available feedstock (comprising both LACW and C&I) in Dorset of around 320,924 tonnes. Taking account of the ERF capacity, and with around 25% of the RDF expected to come by sea, the amount of residual waste potentially available to the Portland ERF from Dorset alone far exceeds its capacity.
- The Bournemouth, Dorset and Poole Waste Plan, Background Paper 3 that total waste arisings from LACW and C&I waste will increase by c. 20% from the existing 840,000 tonnes to 1,000,000 tonnes by 2033, reinforcing the need for new additional treatment capacity to be secured.
- Whilst the DWP over allocates 'assessed' capacity at 385,000 tonnes across four allocated sites, it is clear that even with this over provision these sites are unlikely to meet expectation and deliver the significant residual waste capacity required to meet the shortfall.
- There is more than sufficient waste available for the proposed 60,000 tpa (50,000 tpa residual waste) Eco-Sustainable Solutions ERF to come forward (if consented and built) together with the Portland ERF.
- Other DWP allocated sites are either focusing on existing intermediate waste management activities to produce RDF (Canford Magna), or are unlikely to deliver the scale of residual waste management capacity required (Mannings Heath and Binnegar Quarry) due to restrictions on size which result in a challenging investment case.
- The Portland ERF would not physically preclude any of the allocated sites from accommodating the expansion of existing or providing new waste management activities.
- The DWP specifically allows for other acceptable sites to come forward for waste management uses. Such provision will provide additional flexibility, including circumstances where allocated sites do not come forward for waste development.

4.89 Given these considerations, the objectors' concerns that the Portland ERF would prejudice the delivery of DWP allocated sites are unfounded and the proposal fully accords with criterion b.

4.90 In respect to Policy 4 criterion c, the Portland ERF supports delivery of the spatial strategy, meets the needs of the plan and moves waste up the waste hierarchy and adheres to the proximity principle. Specifically by:

- Providing residual waste management capacity in Dorset, enabling it to meet its needs and reduce the existing need for this waste to be transported out of Dorset (as required by the DWP Inspector) aligns with the Dorset spatial strategy and principle of self-sufficiency
- Providing waste management capacity for residual waste that would otherwise be sent to landfill in accordance with the need to push waste management up the waste hierarchy



- Supporting the waste management activities at DWP allocated sites (such as Canford), which is producing RDF, and providing a destination for this material within Dorset
  - Applying the proximity principle in the correct way to reflect the dynamics of waste markets, rather than in the narrow sense applied by objectors, with the Portland ERF providing one of the nearest appropriate installations for managing Dorset's waste, but also regional and national residual waste where this is being sent to Europe for treatment.
  - Recognising that the DWP provides flexibility and supports unallocated sites that offer advantages such as the provision of heat and energy sources
- 4.91 Furthermore, planning Inspectors have held that waste miles should not be considered an overriding factor when balanced against other significant benefits such as reduced landfill and generation of low carbon energy.
- 4.92 The applicant concludes that the Portland ERF fully accords with the provisions of Policy 4 criterion c.
- 4.93 For the reasons set out above, the ERF is considered to comply with Policy 6 (criteria a and b) by supporting the delivery of the spatial strategy and meeting the needs identified in the DWP and not displacing the management of waste, already managed further up the waste hierarchy. It also fully accords with criterion c (enclosed buildings), criterion d (provision of CHP) and criterion f (effects on the integrity of European sites). The Portland ERF broadly complies with Policy 6 in respect to treatment of residual materials, by managing these sustainably by ship transport. The proposals therefore fully accord with Policy 6.
- 4.94 The revised and additional information submitted in response to the council's letter also confirms the original conclusion that the Portland ERF is compliant with other relevant DWP policies in respect to amenity, quality of life and health, heritage, landscape, flood risk and natural heritage.

## 5. Planning conditions and obligations

### Introduction

- 5.1 Chapter 8 of the Planning Supporting Statement sets out the applicant's position in relation to planning conditions and obligations, when the application was submitted in September 2020. These proposals still stand and have not been repeated here.
- 5.2 The remainder of this chapter sets out those conditions that have been proposed by consultees and conditions that the applicant has put forward to address some of the matters identified during the consultation process, specifically relating to the source of waste feedstock and materials. It also provides further statements in respect to obligations building upon those aspects set out in the original Planning Supporting Statement.

### Planning conditions

#### *Conditions proposed during consultation*

- 5.3 The consultation response from technical consultees has suggested the use of planning conditions in respect to the following:

#### *Heritage (Dorset Council Conservation)*

- A revised site layout is to be provided and approved in writing demonstrating the retention of the extant tracks of the Breakwater Branch Railway.
  - Details of proposed temporary protection works to the Inner Breakwater (e.g. commemorative plaque) and Dockyard Offices (if required) are to be provided and approved in writing.
  - Additional verified views are to be provided and approved in writing showing the impacts of the proposed lighting scheme in night-time conditions.
  - Samples and/or product details of the proposed roofing, walling and cladding materials are to be provided and approved in writing.
  - The final designs for the proposed printed photographic elements of the buildings' cladding are to be provided and approved in writing.
  - Before commencement, a Heritage Strategy outlining a programme of heritage-related mitigation is to be agreed with the Local Planning Authority in writing. Any agreed works are to be undertaken and completed before completion of the main works on site, taking into account the need for any consents.
- 5.4 The applicant has developed its thoughts on this topic with Dorset Council conservation and Historic England officers and includes its proposed approach to mitigation in the framework heritage mitigation strategy which is expected to be subject to a planning condition, described above in chapter 3. This also links to the access path strategy which should be linked to a planning obligation.

*Flood risk and drainage (Dorset Council LLFA)*

- Potential request for planning condition/s and informative/s to cover detailed design, future maintenance and potential requirement for other permissions

*Contamination (Environment Agency)*

- No development approved by this planning permission shall commence until a remediation strategy to deal with the risks associated with contamination of the site in respect of the development hereby permitted, has been submitted to, and approved in writing by, the local planning authority. This strategy will include the following components:
  1. A preliminary risk assessment which has identified:
    - all previous uses
    - potential contaminants associated with those uses
    - a conceptual model of the site indicating sources, pathways and receptors
    - potentially unacceptable risks arising from contamination at the site
  2. A site investigation scheme, based on (1) to provide information for a detailed assessment of the risk to all receptors that may be affected, including those off-site.
  3. The results of the site investigation and the detailed risk assessment referred to in (2) and, based on these, an options appraisal and remediation strategy giving full details of the remediation measures required and how they are to be undertaken.
  4. A verification plan providing details of the data that will be collected in order to demonstrate that the works set out in the remediation strategy in (3) are complete and identifying any requirements for longer-term monitoring of pollutant linkages, maintenance and arrangements for contingency action.

Any changes to these components require the written consent of the local planning authority. The scheme shall be implemented as approved.

- Prior to any part of the permitted development being brought into use, a verification report demonstrating the completion of works set out in the approved remediation strategy and the effectiveness of the remediation shall be submitted to, and approved in writing, by the local planning authority. The report shall include results of sampling and monitoring carried out in accordance with the approved verification plan to demonstrate that the site remediation criteria have been met.

- If, during development, contamination not previously identified is found to be present at the site then no further development (unless otherwise agreed in writing with the local planning authority) shall be carried out until a remediation strategy detailing how this contamination will be dealt with has been submitted to, and approved in writing by, the local planning authority. The remediation strategy shall be implemented as approved.
- Piling using penetrative methods shall not be carried out other than with the written consent of the local planning authority. The development shall be carried out in accordance with the approved details.

*Biodiversity (Environment Agency)*

- No development approved by this permission shall be commenced until a Construction Environmental Management Plan, incorporating pollution prevention measures, has been submitted to and approved by the Local Planning Authority. The plan shall subsequently be implemented in accordance with the approved details and agreed timetable.

5.5 The applicant considers these suggested conditions to be reasonable and expects these can all be captured in suitably worded planning conditions. It is also recognised that additional conditions will be applied by Dorset Council as deemed appropriate.

***External cladding materials***

- 5.6 The DAS Addendum provides further clarification on the proposed approach to the ERF external cladding system.
- 5.7 The building will be enclosed using a sheet metal cladding, which will be fixed back with cladding rails to the steel frame. It is proposed that this cladding will be dark green to create a suitable backdrop colour. The proposed PVC mesh will then be installed on a sub-frame that is spaced slightly off the surface of the façade and securely fixed to the steel frame. The fabric will be attached to the building using a tensioned system with aluminium profiles.
- 5.8 The DAS Addendum identifies potential options for the image to be printed onto the PVC mesh. This includes variations of military camouflage pattern, or the use of images from the Dorset Jurassic coast, using colours and patterns that help the ERF become recessive to its surroundings.
- 5.9 Whilst the strategy is to use these types of disruptive patterns and images to ensure that the ERF blends into its surroundings, some consultees have suggested that the use of a photographic image of the East Weare background, as suggested in the DAS, may not be capable of providing the required tonal variation throughout the various seasons and as vegetation changes. To address this, the DAS Addendum considers potential alternative options.
- 5.10 The applicant suggests that a suitably worded planning condition be applied that requires details of proposed external cladding materials and finishes be submitted to and approved by Dorset Council. This will enable council officers to consider potential options and agree with the applicant the most suitable option in terms of achieving its recessive objective.

- 5.11 If required the applicant considers that a planning condition and/or planning obligation can also be applied requiring the cladding material to be inspected at appropriate time intervals (expected to be not less than 5 years unless there is damage caused by unforeseen weather events) to assess its condition and effectiveness, with replacement undertaken when this is considered necessary.

#### ***Incinerator bottom ash (IBA)***

- 5.12 Further details are provided in the IBA note in respect to the opportunities to export IBA by sea, including specific sites that could accept the material by these means (refer to council point 24). The applicant believes that transportation of IBA material by sea, represents a sustainable and viable option for movement for this material, facilitated by the site's port location.
- 5.13 The applicant is willing to accept a suitably worded planning condition or obligation, requiring IBA material to be transported off-site by means of ship, whilst providing flexibility for road transport to be used in specific circumstances when sea transportation is not possible, for example if required infrastructure is unavailable or during periods of extreme weather conditions that would temporarily preclude its use.

#### ***Capacity of site***

- 5.14 The following condition is proposed in respect to the control of waste capacity.

*The maximum combined total tonnage of refuse derived fuel imported on to the site in any calendar year shall not exceed 202,000 tonnes. For the avoidance of doubt a calendar year shall comprise the period between 1 January and 31 December. The site operator shall maintain a record of the tonnage of refuse derived fuel delivered to the site per day, the numbers of HGVs delivering waste and the number of HGVs exporting residues and their destinations, and/or the volume of waste and residues imported and exported by sea per day. Within 14 days of a written request, a copy of the waste input report shall be provided to the WPA to demonstrate compliance or otherwise with the capacity limit of the site.*

*Reason To ensure that the total volume of refuse derived fuel managed on site does not exceed the permitted maximum annual capacity.*

#### ***Recovery status of the development***

- 5.15 The following condition is proposed in respect to the recovery status of the development.

*Prior to the facility being brought into commercial use, details confirming verification that the facility has achieved Stage R1 Status through Design Stage Certification from the Environment Agency, shall have been submitted to and approved in writing by the WPA.*

*Reason To confirm the recovery status of the development and ensure that the facility manages waste at a higher level of the waste hierarchy to comply with Policy 6 of the Dorset Waste Local Plan.*

***Residual heat recovery***

- 5.16 The following condition is proposed in respect to the recovery of heat derived from the development.

*Prior to the commissioning of the development hereby approved:*

*i. a scheme shall be submitted to and approved in writing by the WPA to identify a route for the supply of heat to the boundary of the site. Thereafter, the proposed route of the heat connection to the boundary of the site shall be safeguarded throughout the operational life of the development.*

*ii. a review of the potential to utilise the residual heat from the process shall be carried out. The review shall incorporate further evaluation of the options to export recoverable heat from the process, developing the options identified within the Environment Statement Addendum or other suitable alternative options, specifically incorporating feasibility/market analysis/market testing and any legal constraints. The conclusions/findings of this appraisal shall be submitted to the WPA for its written approval.*

*iii The operator shall thereafter undertake all reasonable endeavours to apply for planning permission for all viable options in writing by the WPA.*

*iv In the event that the WPA conclude that viable heat recovery options are not currently available in the local area at the time of this review,*

*Once the plant is operational:*

*v. The operator shall repeat the heat investigation process every three years during the operational life of the development.*

*Reason: To ensure that potential to recovery heat energy from the process is not prejudiced, thus satisfying the objectives of European and National Policy, notably the revised EU Waste Framework Directive the Waste (England and Wales) Regulations 2011.*

**Planning obligations**

- 5.17 As set out in chapter 8 of the Planning Supporting Statement (paragraph 8.15), the applicant expects the S106 to cover the following topics, with the addition of waste source and access path:

- Waste source
- Route-map to achieving net-zero carbon
- Shore power
- Off-site ecology
- Access path
- Training and education
- Treatment of residual material (IBA/APCr)
- Vehicle routing
- Local community or municipal power

- Community liaison and monitoring

5.18 The applicant remains committed to addressing the above topic areas, subject to discussion and agreement with Dorset Council.

### ***Waste source***

- 5.19 As set out in paragraphs 8.6 to 8.9 of the Planning Supporting Statement, the Portland ERF is proposed as a merchant waste management facility that requires flexibility to secure waste commercially from a range of sources and locations. It is also clearly stated that whilst the facility is located in Dorset and is ideally placed to manage all of Dorset's waste, the facility would accept suitable RDF material delivered from within its 3 hour HGV drive time catchment area and/or diverted RDF delivered to the site by sea from elsewhere.
- 5.20 The applicant has previously stated that the imposition of restrictive planning conditions that unreasonably restrict the source of waste would not be considered acceptable. Such conditions would interfere in the commercial waste market and have not been deemed acceptable by decision makers, such as Inspectors and the Secretary of State in appeal decisions.
- 5.21 However, the applicant recognises the concerns expressed by some consultees that the Portland ERF is being provided specifically to serve waste authority areas outside of Dorset and the UK and will therefore not make any meaningful contribution to meeting Dorset's waste needs.
- 5.22 Whilst the applicant maintains the position that it must retain the required flexibility to source waste from within the market, it believes that the Portland ERF is very well placed to manage Dorset's waste, should it be awarded residual waste contracts by Dorset Council and/or BCP Council. Whilst it cannot be guaranteed that the applicant would secure these residual waste contracts, the applicant is confident that given its location in Dorset, its advantages in terms of proximity to the source of waste arisings and its partnership with fuel suppliers, it will secure significant volumes of residual waste derived from Dorset.
- 5.23 To address local concerns on waste sources, the applicant is willing to enter into an appropriately worded planning obligation that would require the applicant to commit to making reasonable endeavours to source RDF from Dorset where such waste is available and can be secured on acceptable commercial terms. Once the ERF is eligible to participate in public procurement, run by Dorset waste authorities in respect to residual waste, Powerfuel would commit to do so (with or without partners). Where this is not possible, the applicant would be free to secure suitable residual waste from other commercial sources, to make use of any spare ERF capacity. Powerfuel would be willing to discuss the wording of such an obligation with Dorset Council officers.
- 5.24 Such an approach demonstrates the applicant's commitment to managing local Dorset waste, where this becomes possible, but also ensures that the ERF can operate to its full capacity and can maximise the environmental benefits of diverting residual waste from landfill and generating heat and power for the shore power facility and a local heat network.

### **Route map to achieving net zero carbon**

#### *Our net-zero commitment*

- 5.25 The applicant acknowledges that the Portland ERF would need to reduce its carbon intensity over its operational life. As set out in chapter 8 of the Planning Supporting Statement (paragraph 8.16):

*“The applicant commits that the Portland ERF will operate as a net-zero carbon infrastructure asset. It is believed that this would be the first such facility in the UK to commit to achieving net-zero carbon and carbon neutrality for its operational life. This means that all process derived greenhouse gas (GHG) emissions from the combustion of the fossil-fuel derived component of the residual waste RDF would be off-set by other measures and activities avoiding the emission of or removing an equivalent amount of GHG from the atmosphere.”*

- 5.26 The Planning Supporting Statement (paragraphs S11 and S12) summarises the approach:

*“The ERF will be capable of achieving more sustainable treatment of Dorset’s residual waste and delivering local benefits through the supply of low carbon energy and reducing carbon. The ERF is predicted to lead to a net reduction in greenhouse gas emissions of approximately 30,000 tonnes of CO<sub>2</sub>-equivalent (CO<sub>2</sub>e) per annum when exporting heat to a district heating scheme and power to ships moored in the Port, against the current baseline. In future years the net reduction will likely be less on an annual basis, given changes in the wider regulatory context and possible societal behaviour shifts towards greater circularity, but over the full lifetime, the expectation is that the ERF will still be net positive. In periods where the plant is net negative in operations it will offset the net emissions as described below as part of its net zero carbon pledge.”*

and

*“In order to create certainty on the long term net carbon position, the applicant commits that the Portland ERF will operate as a net-zero carbon infrastructure asset for its operational life. It is believed that this would be the first such facility in the UK to commit to achieving net-zero carbon. This means that all process derived greenhouse gas (GHG) emissions from the combustion of the fossil-fuel derived component of the residual waste RDF, in excess of emissions from the counterfactual baseline, would be off-set by other measures and activities avoiding the emission of or removing an equivalent amount of GHG from the atmosphere. The applicant is committed to funding additional carbon off-setting measures in each year that the ERF reduces GHG emissions (compared to baseline), and in each year that the ERF increases GHG emissions (compared to the baseline) will compensate for this by purchasing carbon offsets. This means the ERF will reduce GHG emissions over its lifetime and will achieve carbon neutrality, or better in every operating year. A minimum financial contribution of £100,000 per annum will be available for offsetting activity, aggregating to £2.5m over the expected operational life.”*

#### *Emission reduction route map*

- 5.27 To demonstrate how the Portland ERF can meet more stringent emission standards the applicant has set out below a route-map to support its transition to the Government’s



2050 Net Zero target and show how the facility would contribute to a reduction in carbon emissions associated with waste management on its day of opening and progressively reduce these emissions up to 2050. It identifies a mix of the technologies that the applicant is exploring with full decarbonisation of the Portland ERF likely to be achieved using one of, or a combination of, these longer term measures.

*Day 1 of Operations (assumed 2025)*

- The Portland ERF will operate with R1 compliance, reducing greenhouse gas emissions by diverting waste from landfill and export abroad or out of county;
- The Portland ERF will generate low carbon electricity for the Port (shore power) and for export to the grid.
- The Portland ERF is designed to be ‘CHP ready’ for connection to a district heating scheme, initially to the adjoining prison and young offenders centre, to use lower carbon energy and heat generated by the facility.
- The Portland ERF will be designed to allow fuel flexibility should the nature of the incoming waste change over time and recycling levels increase.

*Short Term (assumed 2025–2035)*

- The extension of the district heating network to other potential local end users already identified, to use lower carbon energy and heat generated by the facility.
- The Portland ERF can accommodate changes to the composition of the fuel mix to reduce the non-biogenic carbon contained in the incoming waste stream driven by Government policy on recycling; and
- The Portland ERF can promote the potential co-location of a facility (facilities) within the Port to recycle/reuse products extracted from the incoming waste stream (circular economy) reducing the non-biogenic content of the fuel mix and displacing CO<sub>2</sub> emissions associated with the production of products or feedstocks which the extracted products replace.

*Longer Term (assumed 2030–2050)*

- The Portland ERF could accommodate Carbon Capture Storage and Use either within the Port or for export by sea. CCS may become technically and commercially viable earlier should appropriate support regimes become available along with new necessary legal and policy changes.

5.28 Consistent with the net zero commitment described in paragraph 5.25, the active emission reduction steps outlined above would reduce net emissions and therefore reduce off-setting requirement. This is consistent with good practice to reduce emissions before off-setting.

*Carbon capture and storage*

5.29 The CCS Pre-feasibility Assessment, states that the Portland site is ideally located to accommodate CCS, by means of its location within a commercial port and ability to utilise ship based carbon storage and transport. There are also large areas of vacant

industrial land available within the port that could accommodate the land based elements of the system. The Portland Port has agreed to make the required land available. The Portland ERF can therefore be considered to be 'CCS ready'.

- 5.30 It is recognised by both government and the waste industry that CCS is not currently commercially viable, without some form of financial support. The Department for Business, Energy, and Industrial Strategy (BEIS) is giving consideration to potential mechanisms for supporting the application of CCS in the waste sector in respect to new and existing ERF.
- 5.31 As set out in the CCS paper, the applicant is willing to commit in principle to installing CCS at Portland, given that the site has unique locational advantages in the Dorset context that would enable it to accommodate CCS, provided this is technically feasible and commercially viable.
- 5.32 The above route map can be encapsulated in the legal agreement, ensuring that the ERF becomes zero carbon during its lifetime, alongside the net-zero commitment.

### ***Shore power***

- 5.33 As set out in the Planning Supporting Statement (chapter 8), the applicant and Portland Port have reached an agreement that the proposed ERF, if consented, would provide power to this facility. As such, the applicant and Portland Port are willing to enter into an obligation that would encourage visiting shipping to make use of the shore power facility, if they are equipped to do so. It is envisaged that this will predominantly be used by visiting cruise liners and the resident RFA fleet but would also be available to other shipping as appropriate.
- 5.34 The applicant and the port believe that the price at which shore power could be provided will create a great incentive to encourage its use i.e. there will be a material cost reduction in meeting their customer's power needs.
- 5.35 The applicant reaffirms this commitment and the details of such an obligation can be discussed further with Dorset Council officers.

### ***Off-site ecology***

- 5.36 As discussed in chapter 3 of this statement, a Biodiversity Plan has been agreed with the Dorset Natural Environment Team (DNET), to mitigate for the loss of on-site habitat. This will comprise the re-provision of some compensatory habitat on the ERF site, but the majority of this will be achieved off-site. The Biodiversity Plan uses a standardised methodology that calculates the required off-site biodiversity compensation cost. The Biodiversity Plan also sets out the measures that would be implemented to achieve a biodiversity net gain.
- 5.37 The approved Biodiversity Plan includes an agreed biodiversity payment of £82,231.28. This is expected to be used by DNET to secure the restoration of associated habitats. Whilst the allocation of funding to projects will ultimately be determined by DNET, the applicant is supportive of this being applied to projects in the Portland area, which may include measures to improve habitats within the port estate at East Weare below the prisons.

- 5.38 The applicant expects the agreed Biodiversity Plan to be reflected within the legal agreement to address habitat compensation and biodiversity need gain requirements arising from the development.

***Access path***

- 5.39 The applicant has provided a framework heritage mitigation strategy, which is expected to be secured by means of a heritage planning condition (see paragraph 5.3). The provision of a new permissive access path, linking existing footpath routes together across currently inaccessible private land, is driven by and forms part of the proposed framework heritage mitigation strategy.
- 5.40 The purpose of the access path, as set out in the access path strategy paper, is to primarily provide heritage benefit by enabling the public to appreciate and interpret (including education) the various heritage assets located within the East Weare area. However, the access path will also facilitate secondary ecological and leisure and recreation benefits associated with removal of invasive scrub and linking up existing public footpaths, to fill in the 'missing link' enabling a round island route to be achieved.
- 5.41 The applicant and Portland Port (as land owner) are together willing to enter into a planning obligation to enable the access path to be delivered, and the details of such an obligation can be discussed further with Dorset Council officers.

***Other obligations***

- 5.42 Please refer to Planning Supporting Statement (chapter 8), for information relating to other proposed obligations, which are still applicable.

## 6. Conclusions and the planning balance

### *Introduction*

- 6.1 In September 2020, Powerfuel Portland Ltd submitted a full planning application to Dorset Council for the construction of an energy recovery facility (ERF) on land at Portland Port, Portland.
- 6.2 Having assessed the application Dorset Council has formally requested that additional information and clarification be provided, some of which is deemed to be ‘further environmental information’ in accordance with Regulation 25 of the EIA Regulations and Section 62(3) of the Town and Country Planning Act 1990.
- 6.3 Dorset Council has provided 35 points, covering various topics, where further information and clarification is requested. The applicant has responded to this request through the following documents:
- An ES Addendum, with associated appendices (dealing with matters specifically deemed to be covered under Regulation 25 of the EIA Regulations)
  - A Consultation Response Summary Document (CRSD) and this Supplemental Planning Supporting Statement (SPSS), which refer to the original planning submission, the ES Addendum and technical appendices, and stand-alone supporting documents (dealing with aspects not deemed to be covered under Regulation 25 of the EIA Regulations).

### *The summary case for the development*

- 6.4 The case for the development is multi-faceted but in summary the ERF will:
- Represent a sustainable form of waste management, reducing landfill and managing waste further up the waste hierarchy
  - Enable Dorset to manage more of its residual waste in the county reducing the existing reliance upon the export of waste to other facilities in neighbouring waste authority areas, or outside of the UK, and in doing so Dorset’s residual waste management system will become better aligned with the self-sufficiency and proximity principles
  - Deliver sufficient residual waste management capacity in Dorset to meet the existing and future shortfall
  - Accord with the DWP’s spatial strategy and policy approach, which provides flexibility for unallocated sites to come forward where sites deliver advantages over allocated sites. Advantages include its large scale, its ability to provide shore power to the port and district heating the two local prisons. Furthermore, its location enables materials to be imported and exported by ship and provides future potential for the implementation of a carbon capture and storage (CCS) scheme.

- Be located on brownfield previously developed land safeguarded for industrial use, located within an operational port, and upon which an extant planning consent exists permitting the development of an energy plant, fuelled in part by waste materials (waste oils and tyres)
  - Facilitate the delivery of low carbon shore power to Portland Port and supply heat to a viable and deliverable district heating network, capable of serving the existing prison and young offenders institute, with future expansion to other local heat customers
  - Meet the requirements of all relevant policies in the Dorset Waste Plan, West Dorset, Weymouth & Portland Local Plan, Dorset Minerals Strategy, and the Portland Neighbourhood Plan
- 6.5 Furthermore, it has been demonstrated that all of the RDF produced at Canford in Dorset (around 82,000 tonnes per annum) would be made available to the Portland ERF. A planned increase in RDF capacity at Canford to around 200,000 tonnes processing capacity per annum would supply over 80% of Portland's RDF requirements from Dorset waste. It was made public on 6 August 2021 that Beuparc has been awarded the 3-6 year contract by BCP Council to process household, commercial and litter bin waste. This will be processed at the Canford Magna facility and the residue will be used to produce RDF which will be suitable for treatment at the ERF<sup>6</sup>. This would be the most rational and efficient solution for Dorset, and more sustainable than exporting this material around 120 km to the Bridgwater ERF in Somerset, or further afield to other ERFs (including potentially Europe).
- 6.6 There is insufficient capacity to treat all of Dorset's residual waste at existing ERFs within the defined catchment area and, even accounting for planned capacity, there is still a capacity gap greater than the proposed capacity of the ERF. The ERF would not prejudice other waste management facilities from coming forward in Dorset, including the much smaller scale Eco-Sustainable Solution ERF, Parley, if consented and built.
- 6.7 The ERF would have little impact on the European RDF market. European ERFs will instead focus their capacity on the large volumes of European waste still sent to landfill. The ERF, by means of its CHP capability, will be of equal standing to European ERFs in terms of its efficiency.
- 6.8 The scheme will deliver renewable/low carbon energy responding to local and national climate emergency declarations, contributing towards various targets for carbon reduction, and increasing energy security.
- 6.9 The ERF will deliver shore power to Portland Port to meet its existing demands, and nationally also help the UK shipping industry meet national targets to reduce carbon emissions and other air pollutants.
- 6.10 The Portland ERF will deliver a better carbon outcome against all of the alternative scenarios assessed. It performs better than current waste management practice in and future waste management practice in Dorset (relating to the transfer of some waste to the Bridgwater ERF in Somerset).

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<sup>6</sup> Please note due to the timing of this announcement it has not been possible to include this in particular in the Waste Need Paper, as part of the wider response to Dorset Council's request letter

- 6.11 The applicant has committed to meeting net-zero carbon during the ERF's lifetime and will look to implement CCS technology, as and when this becomes technically commercially viable (enabled by its port location).
- 6.12 The ERF has significant advantages in respect to its ability to deliver both shore power and district heating. In carbon terms this outperforms other allocated Dorset waste sites, where such potential is more limited. The strategic and carbon advantages of providing shore power and district heating must be considered to be a specific site advantage.
- 6.13 There is a need for new economic investment at Portland to help address existing socio-economic concerns and generate sustainable regeneration by taking advantage of Portland's assets, opportunities, and excellent growth potential. The ERF will provide new jobs and provide opportunities for training and education to increase skills, and knowledge for local people, and help to address existing pockets of social deprivation at Portland.
- 6.14 The ERF will help achieve transformational change to unlock key employment sites, such as within Portland Port, to exploit the area's strengths and potential opportunities in respect to the development of renewable energy and low carbon technologies and support tourism related activities.
- 6.15 An assessment of potential plume visibility has been undertaken and this has concluded that the plume would only be visible for short periods of time and at limited times of the year, all of which are outside the main tourist season. This has not changed the original conclusions of the landscape, seascape and visual impact assessment and the ES, that whilst the development would result in some impact, overall, this is deemed to be acceptable.
- 6.16 Information has been provided that demonstrates the proposed PVC cladding is robust and fully capable, through the use of tonal variations (such as camouflage), of achieving its objective of ensuring that the main building is recessive against its context when viewed from key locations.
- 6.17 Revised air quality modelling has been undertaken to take account of the net change in emissions of NO<sub>x</sub>, NO<sub>2</sub>, PM<sub>10</sub>, PM<sub>2.5</sub> and SO<sub>2</sub> due to the use of shore power provided by the ERF to ships berthed at the port. Its findings were used to update the original HHRA and HIA, which did not identify any significant health effects. The proposed development will not lead to any significant effects on air quality and in fact should lead to an improvement across a number of emissions relative to the existing position. As such the ES conclusions remain valid.
- 6.18 A framework heritage mitigation strategy has been devised that will result in works to the E Battery East Weare scheduled monument, to enable its removal from the Historic England Heritage at Risk Register. Other benefits include enhanced public access through the extension of the footpath at East Weare and enhanced opportunities for public appreciation through the provision of interpretation for the group of related heritage assets at East Weare. These significant public heritage benefits more than outweigh any harm caused to the setting of local heritage assets arising from the ERF development.

- 6.19 The heritage benefits will result in other secondary benefits including the removal of scrub allowing former habitats, such as lowland calcareous grassland, to re-establish once the scrub is removed, contributing towards the objective to return the Isle of Portland SSSI to a favourable condition. Some tourism benefit is achieved by allowing an “around the island” circuit of the coastal path by creating a new section of permissive footpath through currently inaccessible parts of the secure port estate to connect to the existing public accessible land/rights of way.
- 6.20 The original shadow Appropriate Assessment conclusion, that the process emissions arising from the ERF, and its associated transport movements, would not result in an adverse impact on the integrity of any designated NSN site, remains unchanged. There would be no significant effects on the nationally designated SSSI or other local designated areas.
- 6.21 There would be no significant effects associated with the proposed ERF in respect to the marine environment, and protected species and habitats. The ABPmer report also concludes that there should be no adverse impact on the local shellfish industry and other water based activities.
- 6.22 The proposed Portland ERF is fully compliant with DWP Policy 4 criterion a, in that the proposed Portland ERF site has demonstrated many advantages over the DWP allocated sites.
- 6.23 The analysis of the waste capacity gap in the ERF’s catchment area (notwithstanding the potential availability of waste being exported to Europe and passing the site by sea), demonstrates that the objectors’ concerns that there is insufficient waste available for the facility, and that Portland ERF would prejudice the delivery of DWP allocated sites are unfounded, and that the proposed ERF fully accords with Policy 4 criterion b.
- 6.24 The Portland ERF accords with the DWP vision and its spatial strategy to manage Dorset’s waste in Dorset, in line with the self-sufficiency and proximity principles and fully accords with Policy 4 criterion c.
- 6.25 The Portland proposal complies with the requirements of Policy 6 in respect to its contribution to meeting the DWP identified waste treatment need, its spatial strategy, the provision of CHP (through both shore power and district heating), the safeguarding of protected NSN ecological sites and the transport of residual materials by sea.
- 6.26 The additional clarification submitted in response to the council’s letter confirms the original conclusion that the Portland ERF is compliant with other relevant DWP policies in respect to amenity, quality of life and health, heritage, landscape, flood risk and natural heritage.

### ***Conclusion***

- 6.27 The original planning application robustly demonstrated that there is a compelling planning case for the proposed ERF. In considering the original planning application material, together with new information provided under the Regulation 25 request and further supporting clarifications, it is clear that this compelling case still remains and indeed has become even stronger given the urgent need to take action to deliver the above benefits.

***The planning balance***

- 6.28 The Portland ERF accords with the provisions of the development plan as a whole and is subject to many significant material considerations to which substantial weight should be afforded. It is considered that the benefits of the proposed development far outweigh the limited dis-benefits (all of which have been further reduced through appropriate mitigation) and that the planning balance must come down strongly in favour of the scheme. In light of the urgent need and clear benefits, planning permission should be granted without delay.



Appendix A: Portland Port Letter of Support November 2020

# PORTLAND PORT LIMITED

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Head of Planning  
Planning and Community Services  
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Dorset  
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23 November 2020

Dear Sir

## **Portland Energy Recovery Facility - WP/20/00692/DCC**

Portland Port supports Powerfuel's request for planning permission to build a 15 MW power station on a brownfield site on port land that is recognised in the West Dorset Weymouth and Portland Local Plan area as a "Key Employment Site". This project is vital to the future development, growth and continued success of the port. The maritime services sector is important for the local area and includes the shipping, ports and maritime business services industry as well as supporting other industries in Dorset. Portland Port is the only deep water port in Dorset and is also of national and international importance. The land and water space combined is in excess of 2400 hectares. It is a vital part of the local economy and the south west region. The port has been very successful over the last 24 years in attracting and supporting a broad range of tenants and port users, including both large and small companies. The port attracts employment and investment to the area and is a major asset to the local community.

If we are to continue to grow, we will need more electrical power, whether that be for tenants or ships. The existing power supply to the island has a capacity of 18 MW. The current peak demand is 11 MW, and another 2 MW is reserved for projects in process, whilst a further 0.8 MW will be used by a project under construction when it comes online in 2021. That leaves only 4.2 MW spare capacity if the power station is not built. If you then take the potential power requirements of ships at berth, and focus solely on demand from cruise vessels, there is a clear shortage of capacity. Neither the port nor local government can afford the multi-million pound investment required to secure the additional supply across the causeway.

To illustrate the issue, a single small cruise ship requires more than the available spare capacity, needing around 6 MW. The largest cruise ships currently in operation require up to 12 MW at berth. Scale that up to multiple ships at berth and include non-cruise shipping and you have some idea of the Port's challenge, and why Powerfuel offers the first viable solution. Having worked on potential offshore wind, tidal and other energy projects for in excess of a decade we have experienced significant disappointment and therefore hope this project will be seen as an essential local solution. Clearly, without the power station the port will not be

able to provide shore power to the cruise lines. From the discussions that we have had with our cruise line customers it is equally clear that in the next few years they will reach a point where they start to plan their itineraries around the ports which can provide shore power. Thus, the provision of this service at Portland Port is both an opportunity and a threat.

In considering the need for environmental compliance, ports are without question one of the most highly regulated industries in the world. We engage frequently with a number of regulatory bodies, including the Local Planning Authority, Environment Agency, Natural England, Maritime and Coastguard Agency, and Marine Management Organisation. We have a high degree of respect for these organisations and are confident that the project can be delivered such that it complies with all applicable regulations. We must stress the point that, having secured planning permission Powerfuel must also secure an environmental permit to operate the facility from the Environment Agency and is subject to ongoing scrutiny for the lifetime of the operation. This will require the operator to continuously monitor the emissions and report any breaches. Failure to meet the strict air quality conditions results in severe penalties, including the closure of the facility.

Regarding landscape considerations, we stress our earlier point that the port is a key employment site comprising an industrial operational business park. We have welcomed the engagement between the Powerfuel project team and the key decision-makers on this matter through the planning process, and can see the evidence of this in how the design of the facility has evolved taking account of its surroundings i.e. the industrial nature, the landscape, geology and heritage.

On the matter of transport, our sea and road links are fundamental to the operation of the port, and a reason why the port proactively engages with the local authority on an ongoing basis. It is an obvious location for the Powerfuel project, on a site with pre-existing consent for a power station and offering land and sea transport options. We hope that the key decision-makers won't be deterred by a marginal increase in traffic which, based on the worst-case scenarios, equates to only 0.4% of vehicle movements per day across the causeway. It is vital that we all continue the good work to improve access to Portland and Portland Port with the significant wider benefits that form part of the Western Growth Corridor.

This project is absolutely vital to the future of Portland Port and will provide essential electrical power headroom for the continued development of businesses on the island of Portland.

Yours faithfully



pp.

**W T REEVES**  
**Chief Executive**

Appendix B: Portland Port Letter of Support July 2021



# PORTLAND PORT LIMITED

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WTR/PPL 710/8

Adrian Lynham  
Planning Officer  
Dorset Council  
Planning and Community Services  
County Hall  
Colliton Park  
Dorchester  
DT1 1XJ

30 July 2021

Dear Mr Lynham

The recent intensification of effort by governments globally in dramatically reducing their nations CO2 emissions that are associated with industry and bulk transportation of goods and passengers, allied with the general public's increased awareness of the issues, is now impacting upon commercial decisions being made by organisations as diverse as the Royal Fleet Auxiliary (RFA) and cruise line operators. These trends directly affect Portland Port's future operational needs in terms of infrastructure and the provision of shore power as an alternative to on-board diesel generation with its attendant airborne pollution and CO2 contribution.

The RFA's fleet is already capable of accepting shore power, and many of the cruise ships that are visiting Portland Port Limited (PPL) are, or will be shortly, shore power capable. In the case of the RFA, the driver is a governmental policy to reduce CO2 emissions from the HMG Estate and activities. In the case of cruise line operators, the decision is a commercial one with their cruising clientele demanding a "greener" experience, which is underscored by rapidly changing legislation on fuels and emissions.

Portland Port is aware that some objectors to the application to build a power station have suggested that our cruise business is gone for good as a result of the pandemic. Nothing could be further from the truth. The cruise industry has seen a surge in bookings and the port is hosting 54 cruise passenger visits in 2021, all of which are cruises around the UK. We already have bookings for a further 66 day visits for 2022 and we are taking bookings for 2023. These numbers are in excess of those that were used in the shore power and socio-economic modelling that forms part of the planning application.

I also take this opportunity to confirm the RFA numbers. There are commercial, client confidentiality and national security issues relating to our arrangements with the MOD. However, the model used in shore power air quality analysis includes for 260 berth days per annum and I can confirm that this is significantly below the actual days that the RFA ships berth with us. In the last few years, the number of berth days would normally be in the range 20-30% more (depending on the year). The MOD is interested in using future shore

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power sources at the port and the pricing of the shore power provision of electricity will be set at a level that will be significantly incentivising to potential users.

In order to maintain both customer bases, Portland Port must move with the times and provide a low carbon source of electricity at the port. Work has been carried out to establish the cost of augmenting the limited power supply to the Island of Portland, and the cost of a new dedicated electricity supply is measured in the tens of millions of pounds, rendering an off-island solution commercially unviable.

Portland Port currently has planning consent for the development of a power station, and a plant generating electricity and heat could already have been built on site, but we believe that a Refuse Derived Fuel (RDF) fuelled power station that could help Dorset, our host county, out of its ongoing waste disposal crisis is a far better option than importing Tyre Crumb and Palm Oil to be burnt for energy production.

I can confirm that PPL fully supports the efforts being made in the provision of a "round island" walkway, to be enjoyed by visitors and give a boost to the local economy. Where the path traverses the Port's land a Permissive Path will be created, subject to contract and to that path not adversely affecting the Port's commercial operations, or precluding Port expansion/development, and also meeting stringent security standards for the protection of the Port and its lawful users. PPL also supports the "path" initiative as part of multi-agency efforts to create safe working environments for activities that include ecology works and works associated with heritage assets that are otherwise inaccessible.

Furthermore, I understand that Powerfuel intend to monitor the fast-evolving status of carbon capture and storage technology that could potentially be fitted to capture carbon emissions directly and that such technology may require additional land of up to 4,000m<sup>2</sup> for the related infrastructure. We have land available within the port close to the power station site and will, subject to contract, make that available to Powerfuel.

Yours sincerely



**W T REEVES**  
Chief Executive