Briefing to Portland Town Council

Questions raised during Weymouth Town Council Planning Meeting on 20th October 2020 and by Portland Town Council Councillors

Dear Portland Town Council

Thank you for inviting Powerfuel Portland to present our proposal for an Energy Recovery Facility at your meeting on 11th November.

Following our previous presentation to Weymouth Town Council's Planning Meeting, we received a number of questions to which we did not have time to respond during the meeting. To provide Councillors with access to background information on the project prior to the forthcoming Portland Town Council meeting, we have put together brief responses to the points raised which we trust will be helpful for Councillors when considering our application.

We thought it may be helpful to share this ahead of the meeting on 11th November.

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1. General

With proposals of this nature it is not unexpected that members of the public seek clarity on the impact of the project. There is a lot of misinformation being put out by some individuals who are against the proposal but there seem to be many who are interested in understanding the facts, and we expect that the committee is in the latter category. It is important to recognise, as a number of the Town Councillors did during the meeting, that there is a compelling need for a modern, efficient, technologically advanced and sustainable method of treatment to meet Dorset's requirements in accordance with the Dorset Waste Local Plan. All waste management options have some environmental consequences and generate greenhouse gas emissions – there are no "zero emission" options available – but the project will significantly reduce the GHG emissions associated with Dorset's waste management.

Our proposal represents the only effective and sustainable solution to this challenge and the proposed £100+ million investment in the new ERF will bring significant employment and wider economic benefits to the Port and local area during this time of unprecedented global economic crisis (see Economic Impact Assessment in the planning application).

Powerfuel is committed to working with Dorset Council, Portland and Weymouth Town Councils, the Dorset LEP and local educational bodies to ensure that local residents will benefit from new job creation through training and apprenticeship programmes. Far from detracting from the tourist potential of the area, the provision of low carbon energy and shore power will allow visiting cruise ships to comply with increasingly stringent controls on emissions and therefore ensure these visitors continue to visit the Weymouth & Portland area and bolster the island's tourism potential.

We now deal with some of the key points raised by speakers at the Planning Committee meeting.

All of these were considered by Powerfuel and its advisers and are detailed in the planning application and Environmental Statement, but summarised for convenience below.

2. Emissions

2.1 Emissions

- Concerns expressed over pollution.
- Concerns expressed over P2.5 and P2.1 particulate matter emitting from the ERF.
- It was suggested that there is no safe limit for small particulate emissions.

Powerfuel Response:

Emissions controls are based upon Air Quality Standards set by the European Union and UK Government and guidelines set out by the Environment Agency and other bodies, including Public Health England.

This is a technologically advanced modern plant that uses best available techniques to control emissions. It would be the newest in the UK fleet, designed to meet the toughest ever performance standards set by the Environment Agency that were updated in December 2019.

In order to receive a permit to operate the project will need to provide evidence that it complies with these standards, both upfront and on an ongoing basis every three months. To demonstrate compliance, we will use a combination of continuous emission monitoring systems (CEMS) that monitor emissions 24 hours a day, seven days a week and perform regular stack testing. To assist with transparency, we will release results provided to the Environment Agency to the Community Liaison Panel, which we hope will include, amongst others, local councillors.

The risks associated with emissions from the UK's Energy from Waste plants, such as that proposed at Portland, are discussed by a range of authorities. Public Health England, the Environment Agency and the UK Government (through Defra) jointly stated in October 2019 (after reviewing all the latest evidence) : "*modern, well-managed incinerators make only a small contribution to local concentrations of air pollutants… while it is possible that such small additions could have an impact on health, such effects, if they exist, are likely to be very small and not detectable*". They also state "*well run and regulated modern Municipal Waste Incinerators are not a significant risk to public health*".

Most recently, Rebecca Pow The Parliamentary Under-Secretary of State for Environment, Food and Rural Affairs confirmed in Parliament in February 2020 that: "*[a]s part of the permitting process, the Environment Agency consults Public Health England and the local director of public health on every energy-from-waste application that it receives and takes their comments into account when deciding whether to issue a permit. […]*

Hon. Members should note that Public Health England's position remains that modern and well run and regulated municipal waste incinerators are not a significant risk to public health. That is what that body itself has said. […]

Of course there is a place for commercial waste incinerators, […]. We have in place an entire system of structures, permits, and checks and balances, but it is essential that they are seen to function properly and that they are monitored closely and conducted in the right way. […]

…but I hope I have made it clear that harnessing energy from residual waste has its place as part of a wide, holistic waste management system. That will deliver value from waste as a resource. I wanted to be very clear,"

The fuel used in the project is Refuse Derived Fuel (RDF) which is pre-treated before use and is more homogenous than municipal solid waste, limiting the risk of foreign material. The project will enter into waste supply contracts that will govern the materials that can be supplied for processing but, in the event that unsuitable material is included, the project's air emissions control technology will ensure that any exhaust gasses generated are neutralised prior to venting such that the project will always be compliant with Environment Agency regulations.

In a recent briefing note the Environment Agency confirms that all EfW plants (like our ERF) continuously monitor emissions of total PM (TPM) which includes particles of all sizes including PM10, PM2.5, PM1 and ultrafine and nano particles. Plant operators report their continuous monitoring results (including TPM) to the Environment Agency (EA) every 3 months and these are all placed on the public register. In line with our transparency commitment, we will be making this information available to the Community Liaison Panel, which we hope will include, amongst others, a representative from WTC.

For the proposed ERF a detailed air quality assessment was carried out which compared the impact of the ERF to the levels set by Government to protect human health. The methodology from the Institute of Air Quality Management and the Environment Agency has been used to determine the significance of effect. The Environmental Impact Assessment also considered the impact of traffic emissions associated with deliveries and collections to and from the site during the construction and operational phases. This showed that the impact of pollutants would be negligible.

On particulates in particular: over 99.9% of all particulates will be removed from the exhaust gases. At the point of maximum impact (which occurs at sea) the impact is 0.11% of the health criteria for PM_{10}s and 0.18% of the health criteria for $PM_{2.5}$s. The impact at residential properties is significantly lower.

In addition, a human health risk assessment was carried out which considered the increase in pollution concentration and coefficients of health outcomes from COMEAP (Committee on the Medical Effects of Air Pollutants). This was used with population data and background rates of relevant health outcomes to calculate the health effect from exposure to the additional pollutants arising from the operation of the ERF. It examined the potential for health effects as a result of increased emissions of nitrogen dioxide, sulphur dioxide and particulate matter. The modelling found that the proposed development will not lead to a single additional case of any of the relevant health conditions examined, including heart disease, heart failure and stroke.

The assessment also modelled the potential lifetime health risks associated with substances that can build up in the environment, including dioxins and metals. All the risks were found to be substantially below the thresholds at which a significant health effect could occur. The assessment therefore concluded that there will be no significant adverse health effects as a result of the proposed development.

Further, these emission modelling results reported in the EIA are conservative. The project will provide shore power to ships and this will reduce emissions of NO2, SO2 and PM10 from docked ships (whereas the EIA included only a qualitative analysis of this, so the EIA AQA assessed a "worst case"). In Castletown or Harbour View Road for example, nitrogen dioxide levels contributed by the plant will be more than outweighed by a reduction in shipping emissions.

Context is important here (extract below is from the **ES Health Impact Assessment by ERM)**:

Table 1.1 sets out the emissions of $PM_{0.1}$, PM_1, $PM_{2.5}$ and PM_{10} from ERF plants, based on the latest 2018 data. In 2018, over 11 million tonnes of wastes were treated by the 42 ERF plants operating in the UK. For comparative purposes, the UK's total emissions from ERF plants are set out along with emissions for some other common activities [1].

Table 1.1 ERF contribution to PM_1 and $PM_{0.1}$

Activity	Emissions (tonnes per year)				Emissions (as percentage of the total)			
	$PM_{0.1}$	PM_1	$PM_{2.5}$	PM_{10}	$PM_{0.1}$	PM_1	$PM_{2.5}$	PM_{10}
Total	13047	46889	87247	96474	#	#	#	#
Waste incineration	16	73	84	84	0.12%	0.16%	0.10%	0.09%
Road transport	3129	4798	11983	18586	24%	10%	14%	19%
Domestic combustion	5037	21118	46791	47864	39%	45%	54%	50%
Bonfire night	145	526	1288	1386	1.1%	1.1%	1.5%	1.4%

Of note is that for PM0.1, for example, ERF plants contribute just 0.12% of the total emissions. Bonfire night alone results in emissions of 10 times more PM0.1 than released by all of the ERF plants in a whole year.

Please refer to the planning application in general and in particular the Environmental Statement (ES), the ES Heath Impact Assessment (incorporating Human Health Risk Assessment) and the ES Air Quality Assessment reports for further detail.

2.2 Emissions

- An enquiry was received about the impact of CO_2 emissions from the ERF on shellfish and seahorses
- A separate enquiry was also made which raised concerns regarding shellfish.

Powerfuel Response:

Whilst the modelling has shown that the peak emission impact occurs out to sea away from any residential properties or sites of ecological importance, the effects of tidal and current mean that the already very low levels of any deposited pollutants will be rapidly diluted and the waters continually refreshed.

The effect of CO_2 emissions from the plant on the local marine environment is considered to have an infinitesimally small effect and needs to be put into context:

The plant will be releasing 500 tonnes of carbon dioxide per day. The harbour has a surface area of around 520 hectares, or 5.2 million m^2, and a depth of around 12m, so contains a total of 62 million tonnes of water. Hence, all the carbon dioxide released for a year is 0.29% of the weight of the water in the harbour. In addition, the permitted release rate of NO_2 (which has the highest emission limit) is 405 kg per day, or 148 tonnes per year, which is 0.00012% of the mass of water in the harbour, or just over 1 part per million.

The volume of water in the bay is clearly many times greater than this and as the bay is filled with seawater, the water in the bay is continually mixing and changing. Hence, the carbon dioxide or NO_2 and other releases from the plant will have an infinitesimal effect on the local marine environment and ecology.

To put this into context, a recent article in The Guardian stated that all the fossil fuel released into the atmosphere since the industrial revolution has managed to change the ph of the ocean from 8.2 to 8.1.

Please refer to the planning application in general and in particular the Environmental Statement (ES) and the ES Air Quality Assessment reports for further detail.

2.3 Emissions

How will the ERF be a net zero carbon project/how will carbon be offset?

Powerfuel Portland will be net-zero carbon for the lifetime of the project (up to 30 years). A comprehensive carbon assessment has been submitted as part of Powerfuel's environmental

impact assessment (EIA), which provides accurate figures to demonstrate the facility's projected annual carbon footprint. The Environmental Impact Assessment can be accessed via Dorset Council's planning portal.

The proposed ERF will already have a CO2 benefit as it will reduce the need to use traditional fossil fuels such as gas for electricity generation, and it will reduce the need for landfill (which results in significant GHG emission).

Further, a portion of the electricity produced (and heat in due course, when produced in DH mode) is properly classified as being produced from "renewable sources" due to its biogenic content. However, we agree that not every MWh of power generated can be 100% classified as renewable and have no sought to claim this. The ERF will still produce CO2 and we believe that in the current era of climate change it is important that the facility operates as carbon neutral.

The net-zero commitment will include a minimum financial contribution that will go towards strategies to either offset carbon emissions or fund other emission reducing activities. This will contribute at least £3,000,000 over the operational life of the plant, ring-fenced for greenhouse gas reduction activities. The total sum expended could be much higher as the "baseline" will be adjusted dynamically over the operational lifetime of the facility. The offsetting will be fully monitored and verified and we hope Dorset Council will take an important part in "policing" the commitment, to ensure that it is met.

Powerfuel Portland is working with carbon offsetting specialist charity Pure Leapfrog to identify how to achieve net-zero carbon, and is currently exploring a range of offsetting and carbon sequestration options. The range of qualifying options is explained in the report. All will meet 3rd party standards to show the emissions have been reduced, sequestered or offset, as appropriate. This could include anything from local community energy projects (for example, a school energy refurbishment) to afforestation or rewilding and on to international carbon offsets (kerosene to solar lamp replacements or clean cook stove stoves projects, for example).

In the future, once suitable carbon capture technology is available, Powerfuel Portland will investigate opportunities to retrofit such equipment at the Energy Recovery Facility to reduce rather than offset.

For further information about how the facility will be net-zero carbon, there are two key documents that we would refer you to in the application: (1) Chapter 5 of the Environmental Statement (Carbon balance and greenhouse gas emissions) and the supporting detailed technical report to that chapter,and (2) the Achieving Carbon Neutrality report. Both of these documents can be viewed on the Dorset Council planning portal.

3. Energy & Heat Supply

3.1 Energy & Heat Supply

- It was suggested that it is not possible to provide supply for 30k homes and shore power and heating at same time – therefore PF is making claims it cannot substantiate.

Powerfuel Response:

Powerfuel has not "claimed" the cumulative benefits. The ERF will generate 15.2MW (net of parasitic load) which will be capable to be exported to the National grid. 15MW is sufficient to power around 30,000 homes (assuming average use) and this figure has been used to quantify electricity production. This is an industry accepted practice when discussing decentralised generation to help the public understand – in general - the scale of power produced by an energy project. One of the comments made recently by the group calling itself the "The Portland Association" uses a similar approach, suggesting that "*5 wind turbines could power Portland's 6,500 homes".* This is a generalized calculation based on power over a period of time and averages, rather than comparing the power produced in any given "instant" to the power consumed by houses at that same time. Wind and PV as classic "intermittent" technology regularly produce no power. But over an average year their contribution can be understood using this kind of comparative tool.

On occasions when ships are connected to the shore power part of the 15MW will be diverted. The use of shore power will significantly improve the air quality and reduce carbon emissions relative to the status-quo diesel engine approach. For those hours that the power is used to reduce shipping emissions, the proportion that is exported to grid will probably not at that time be sufficient to power the full 30,000 homes referred to. That will bring down the overall "total homes powered" figure by a percentage. Based on the conservative modelling forming part of the application that 30,000 figure might come down by c.16-20% (so even then, producing power on an average for 24,000 homes). However, avoiding shipping power production avoids the emissions from the ship generators and that is an overall environmental benefit.

Similarly, if the plant exports heat to a District Heating system, it will export slightly less power. The ratio for heat to power dictates that for every 1MWh of electricity "sacrificed" the plant can supply 6-7 MWh of heat energy which would in the normal course be produced by use of fossil fuels.

Diversion of power to either or both shore power or district heating delivers a material boost to overall carbon emission reduction compared to grid export and enhances sustainability. Whilst also dealing with Dorset's residual waste.

Please refer to the planning application in general and in particular the Energy Need Statement, Shore Power Strategy Report and the ES Carbon Assessment.

3.2 Energy & Heat Supply (cont)

- The point was made that one ship would take all power.

Powerfuel Response:

The proposed 12MW shore power substation will be able to provide capacity for the largest cruise ship that can dock, or several smaller ships simultaneously. So, no it would not take all the power and this would be for the period of the cruise call.

Please refer to Shore Power Strategy Report for further detail.

3.3 Energy & Heat Supply (cont)

- It was suggested that is not possible to provide district heating due to the engineering challenges of pipework

Powerfuel Response:

Whilst there are certainly details to be worked through associated with the district heating pipe network and related infrastructure, Powerfuel is exploring a number of different potential routes that all appear viable from an engineering point of view. Some routes, such as to the Leisure Centre, are very straightforward. Pumping heat up to the prisons is more involved, but our engineering advice is that it is viable, and should be commercially rational. Our intent is to progress a separate planning application for a connected district heating system, having done the detailed technical work on routes. Clearly the district heating must follows the ERF.

Please refer to CHP Heat Plan report for further detail.

3.4 Energy & Heat Supply (cont)

- The point was made that Cruise companies are turning to liquid natural gas to power their vessels, thus removing the need for them to pay for expensive shore power.

Powerfuel Response:

A small number of cruise ships are converting to LNG, but in our view it will take decades for the technology/adoption to become widespread (if at all). LNG is a fossil fuel and its production, liquefaction, transportation and storage are not "emission free" activities. Gas is often talked about as a "transition fuel" for this reason (it is better than diesel on some sustainability metrics but not necessarily "green"). Consequently, it is by no means certain that a ship burning LNG will not also choose (or be compelled) to use low carbon shore power.

There is likely to be a need for shore power for most (if not all) of the life of the plant and for charging batteries on ships for the remainder. The Royal Fleet Auxiliary (RFA) ships are already "shore power" enabled and are not LNG equipped. The RFA is expected to be the most substantial customer of the shore power provision. The provision of low carbon energy and shore power will allow visiting cruise ships to comply with increasingly stringent controls on emissions and therefore ensure these visitors continue to visit the area and bolster the island's tourism potential.

Please refer to Shore Power Strategy Report and ES Economic Assessment for further detail.

3.5 Energy & Heat Supply (cont)

- Which local businesses and community venues will be receiving the local district heat you mention?

Powerfuel Response:

We are eager to work with potential heat users. Potential heat consumers have been identified and their heat profiles, along with peak and average loads, have been estimated. These consumers are an adult prison, a Young Offenders Institute, a sports centre, a hospital and a new housing development.

Until planning consent has been granted it is not possible to finalise detailed contractual arrangements with potential heat consumers, although Powerfuel Portland is currently in discussion with the Ministry of Justice concerning supplying the adult prison and the YOI on the isle.

Please refer to the CHP Heat Plan for further details.

3.6 Energy & Heat Supply (cont)

- Will actual homes receive any of the energy you produce, if so which ones?

Powerfuel Response:

The plant would produce energy as both electricity and heat. The Energy Need Statement states that electricity generated at the ERF and exported onto the grid will, due to its location on the electrical network, provide electricity to consumers in the vicinity. This will displace electricity flowing from the national grid and will reduce losses in the electrical system. As such, it will provide a benefit for all consumers. The ERF has the capacity to meet the maximum demand for electricity from Portland's Primary Substation. The excess will feed to the Chickerell Bulk Supply Point and be distributed to Weymouth and other local Primary Substations. As to heat, we refer to the answer above on local district heating.

See Energy Need Statement for more information.

4. Planning Considerations

4.1 Planning Considerations

- It was suggested that the ERF should not be sited in UNESCO World Heritage site.
- It was stated that stated the project is in contravention of the Dorset local plan, states clearly that developments that harm the character, special qualities and natural beauty of the Dorset AONB and Heritage Coast including uninterrupted panoramic views, tranquillity and remoteness, will not be permitted.

Powerfuel Response:

Portland Port is not part of the UNESCO World Heritage site, which was designated for its geological attributes but not for its aesthetic importance, although it is also an AONB. The Dorset and East Devon Coast World Heritage site wraps around most of the Isle of Portland, but, by design, excludes the area of coast in the vicinity of the site which has been used for industrial and military purposes for over 100 years.

The impact on the "setting" of the WHS has been fully assessed as part of the planning application.

The proposed project site is a brownfield site that is situated in a designated employment zone. The site and much of the surrounding Port land is designated in the West Dorset, Weymouth and Portland Local Plan (2015) as a key protected employment site suitable for B1 (light industrial), B2 (general industrial), B8 (storage and distribution) and other similar uses.

The principle that the site could be used for an energy generation project including a range of fuels including waste oil and waste tyres was established in 2010.

Please refer to the Planning Application, Design and Access Statement, including relevant illustrations / plans, Environmental Statement (ES) reports for further detail

4.2 Planning Considerations

- It was noted that, notwithstanding extant planning permission, this site was not included in Dorset Waste Plan and concluded that the reason for this was because it is clear this site is not suitable for this type of activity.

Powerfuel Response:

It is incorrect to draw the conclusion that the site was not included in the Dorset Waste Plan because the site was assessed as not being suitable for this type of activity.

The Waste Plan recognises that suitable waste management sites, not identified or considered during preparation of the Dorset Waste Plan, may subsequently become available for development. The Dorset Waste Plan states that proposals on such unallocated sites will be considered on their merits and specific criteria are included in the Waste Plan. That is the basis of this application and the criteria are discussed in detail in the planning application. The site was not assessed in the plan making process which began with a call for sites in 2012 and when the draft plan was first consulted on in 2013.

Dorset Council officers reported to Powerfuel that neither the Port nor any other waste sector participant had promoted the site when the Council was "calling for sites" and so the Council were not aware that its use for a waste operation was supported by the landowners and hence it was not included in assessment.

However, whilst the Waste Plan was progressing through the latter stages of the plan making process, officers from the former Dorset Waste Partnership (DWP) and former Dorset County Council (DCC) economic development team and their consultants had a series of meetings and site visits with the Port in 2017-2018 as part of an options feasibility for sites to potentially support the early stages of a procurement exercise for residual waste disposal. During those discussions it was proposed that Dorset municipal collected waste (once the tonnages had been aggregated from the entire County) could be brought to and processed at the Port with recycling and production of baled RDF for export by ship, and it was suggested that use of the Port would form part of future waste plan considerations and assessment.

In addition, the site benefits from being brownfield land with an extant planning consent for an energy plant fuelled by vegetable oil, later varied to allow for use of rubber crumb as an additional fuel to be transported by road.

The Waste Plan also confirms generally that modern waste management facilities for recycling, transfer, recovery and treatment of waste are appropriate on industrial sites, sites identified for employment uses and previously developed sites.

Please see Planning Supporting Statement (s. 6) and the Waste Need Report for further detail.

4.3 Planning Considerations

- It was stated that according to the Waste Plan unallocated sites are only permitted if they meet ALL criteria, including that no other site is available that could be used for this activity.

Powerfuel Response:

Criteria a) of Policy 4 of the 2019 Waste Plan permits the use of unallocated sites where there is no available site allocated for serving the waste management need that the proposal is designed to address or where the non-allocated site provides advantages over the allocated site.

The Waste Plan identifies a number of sites for waste management facilities. These are not technology specific but theoretically could include incineration with energy recovery. However, no planning applications have yet been made in respect of the allocated sites and there are concerns as to the availability, viability and deliverability of these sites.

Even if proposals do come forward on allocated sites, given the significant planning and environmental constraints, these facilities are likely to be smaller in scale and there is no certainty that planning permission would be secured. Furthermore, proposals would need to secure funding for implementation. Proposals for small scale facilities are less likely to be viable and deliverable, or fully meet Dorset's needs. Neither of the advanced thermal treatment facilities consented at Canford and Winfrith were deemed to be viable and were not delivered (which is a very common issue with so called "advanced conversion technologies"). It is relevant that former waste plans, covering previous plan periods (prior to the extant plan), also identified specific potential sites and yet with the exception of the Canford MBT facility (which is an intermediate facility that creates a refuse derived fuel) no other significant residual waste treatment facility has been delivered across the entire County.

Irrespective of the availability of allocated sites, the proposed site at Portland has significant advantages over the allocated sites.

The proposed Portland ERF therefore fully complies with all the criteria a) to g) of Policy 4 of the Waste Local Plan.

Please refer to Planning Supporting Statement (s. 6) for further detail.

4.4 Planning Considerations

- A written statement suggested that the proposed ERF contravenes local and national plans, specifically LPENV1 and NPPF172.

Powerfuel Response:

This is incorrect. The proposed Portland ERF fully accords with national and local policy and the relevant development plan and is strongly supported by other significant material planning considerations. Specifically, the proposal fully accords with the provisions of the Dorset Waste Plan. The ERF site has specific advantages over allocated site and has an extant consent for an 'energy plant' using waste materials.

Portland Port has previously been identified by the Dorset Waste Partnership as a potential location for a strategic waste management facility.

The proposal also fully accords with the provisions of all relevant applicable plan policies relating to carbon and energy at all levels from national level through to Portland Town Council and the neighbourhood plan.

Powerfuel also believes that given the immediate and material reduction in greenhouse gas emissions that the project will deliver, compared to baseline alternative waste management options, it is consistent with steps required to deal with a climate emergency. The Environment Agency is expediting ERF applications (in the environmental permitting regime) because they are consistent with the "green growth" strategy.

A comprehensive environmental impact assessment has been undertaken and the results are presented in the Environmental Statement. The ES concludes that with appropriate mitigation, the impact of the development on interests of acknowledged importance are acceptable.

Please refer to Planning Supporting Statement (section 6) and the Environmental Impact Assessment for further detail.

4.5 Planning Considerations

- It was stated that there is UK legislation that requires waste miles to be limited by the proximity principle.

Powerfuel Response:

This is broadly accurate as a general statement. The proximity principle is a key driver in waste management planning in the UK and across the EU. It sits alongside the waste hierarchy which requires waste to be diverted from landfill and pushed up the hierarchy. At present Dorset Council exports 100% of its residual waste outside of the county, and a proportion also out of the country, for processing. The ERF at Portland Port will enable Dorset to be more aligned with the proximity principle as well as ensuring greater self-sufficiency.

National and County policy supports diversion from disposal at landfill (we still landfill millions of tonnes of waste every year).

The Waste Hierarchy:

Please refer to Planning Supporting Statement (section 6) and the Environmental Statement and Waste Need Statement for further detail.

5. Tourism

5.1 Tourism

- A number of speakers raised concerns about the local tourist industry being negatively impacted by the ERF.

Powerfuel Response:

It is expected that without the provision of shore power cruise ships would gradually stop using the port over the period to 2050. The impact of this loss of business would be felt by Portland Port and its suppliers, as well as trip and transport operators in the form of lost income and, potentially, lost employment. There is also the potential for an associated effect on the area's tourism-related businesses if shore power cannot be provided by the ERF. In 2019, approximately 54,000 cruise passengers came through the port, spending an average of £71 per head, an estimated spend of £3.8million over the year.

The loss of cruise business as a result of shore power not being provided would lead to an average decrease in spending in the Weymouth, Portland and wider Dorset area of £2.38 million per year (following displacement), with an associated loss of 45 jobs.

The project provides the only available and commercially viable source of shore power and therefore would safeguard this spending and the associated jobs.

Please refer to the Environmental Statement (section 6) Shore Power Strategy Report and the Economic Assessment for further detail

5.2 Tourism

- It was stated that the Eden Portland Project would, in comparison, deliver significantly more employment opportunities and provide a positive boost to the tourist economy in the local area.

Powerfuel Response:

There is no reason why the ERF would have a negative impact on the potential Eden Project at Portland. In fact, the economic benefit of Eden using heat and power from the ERF could make the project more likely to come to fruition.

6. Traffic

6.1 Traffic

- A number of speakers raised concerned about HGV and CO2 emissions.

Powerfuel Response:

The planning application includes a comprehensive traffic impact assessment, the scope of which was informed by consultation with Dorset Council and Highways England. This looks at impact on the road network and the air quality and health analysis also looks at the emission consequences.

As part of our planning application, we have modelled the traffic impacts based on the worst-case scenario for our Transport Assessment. The site at Portland Port has a great advantage in that Refuse Derived Fuel (RDF) can be delivered by both road and sea, giving it the flexibility to be able to bring in wrapped and baled RDF by sea, which gives greater resilience. Shipped waste is considered as an additional part of a resilient supply strategy on top of the local waste market.

This report concludes that total vehicle flows and HGV flows are predicted to increase by less than 2.5% (far less in most locations and less than 0.5% on average) as a result of the proposed development on all road links modelled, even in the worst-case scenario of 100% of deliveries to the site being made by road.

Further afield, development traffic and its associated impacts will be dissipated across the road network and therefore traffic flows would be predicted to change by less than 2.5% (far less in most locations). As a result, negligible effects that will not be significant are predicted on severance, driver and pedestrian delay, and pedestrian amenity on all road links.

It is also worth noting that these will not be 'new' vehicle movements – the RDF is already being moved by road, usually much further afield, so the number of overall movements will be the same, but by having a local solution the overall length of HGV movements will be significantly shortened, thus producing fewer emissions and ensuring the waste is treated in line with national and local policy.

In terms of accidents whilst clearly any accident is regrettable the Traffic & Transport report (clause 11.47) notes that over the past 5 years (to 31 Jan 2020) a total of 48 incidents has occurred but only one of these involved a HGV where a cyclist lost control while cycling on the pavement and fell into the road under a HGV.

A health impact assessment was also carried out which concluded that there will be no significant adverse health effects as a result of increased pollution, traffic or noise both during and post-construction.

Please refer to the Environmental Statement Traffic and Transport Assessment and the ES Heath Impact Assessment (incorporating Human Health Risk Assessment) for further detail.

6.2 Traffic

- Will your plant still require 40 lorry loads of waste per day (80 journeys a day) – or will it be more?

Powerfuel Response:

For planning purposes, we have to work on the worst-case scenario of 100% of the RDF being delivered to the site by road, which would result in a maximum additional 40 lorries into the Port (80 vehicle movements).

As outlined in the application this assumes 100% deliveries with a further buffer for movements to ensure it presents a fully comprehensive worse-case but, in reality, is unlikely to be experienced.

If all the waste was delivered by road, 23 deliveries of RDF would need to occur per day, with a further nine HGVs removing ash and one HGV providing consumables, giving a total of 33 HGV trips each way (66 HGV movements in total).

To allow for variations in the total amount of RDF required per day, and therefore ensure a realistic worst-case assessment, the Environmental Impact Assessment has been based on a total of 40 HGV trips each way (80 HGV movements in total).

6.3 Traffic

- Will lorries be coming to your plant every day or just weekdays?

Powerfuel Response:

The ERF would be operating on a 24/7 basis, but we would expect most road deliveries will be during a normal working day.

Please refer to Traffic and Transport section of the Environmental Statement.

7. Waste Source

7.1 Waste Source

- It was claimed that a percentage of RDF required will be from outside UK.
- It was noted that Powerfuel was requesting no planning restriction regarding waste source.

Powerfuel Response:

The plant (c200kt pa) is scaled to deal with a majority of Dorset's residual waste and as illustrated below there is ample waste available from local and regional sources:

- Dorset produces over c1.6 million tonnes of waste of all categories each year.
- Dorset currently exports 100% of its residual waste outside of the county and some of that travels outside the country.
- Our analysis and the Dorset Waste Plan official data shows that there is around 310,000 tonnes of suitable residual waste from Dorset that could be converted to RDF and be suitable for the plant. This is expected to continue to grow over time given increasing population and consumerism, despite Dorset's high recycling rate.

More broadly:

- The South West generates around 345,000 tonnes of RDF a year, only 9,200 tonnes of which are managed within the region.
- The UK exports 2.7 million tonnes of RDF to Europe each year and continues to landfill c.45 million tonnes of waste per annum (which generates significant volumes of methane a potent greenhouse gas).

There is ample waste available from local and regional sources for the proposed facility without the need to take RDF from outside the county, outside the SW region or outside the UK.

However, the proposed ERF is a merchant facility and has not been procured by, funded by or developed in partnership with a local waste authority, as with the majority of ERFs in the UK. The plant has no public financial subsidy. As such it will need to tender for waste on the open market and cannot do this until the facility is approved for planning, so from a commercial viewpoint we are requesting no restrictions on waste source. This is a "chicken and egg" situation. i.e. we can't bid for local waste until we have a plant and it's difficult to build a plant without local waste contracts. It is relevant that with several market participants in the waste sector in the County, none have chosen to deliver a plant in the County to deal with residual waste arisings in a modern facility. This has been at a significant cost to the County.

Powerfuel is committed to sourcing all, or at least a very significant amount of waste from Dorset if available and has entered a contracted partnership with Geminor, a company specialising in the supply of waste products to recycling and energy recovery. Through this partnership and Geminor's contracted arrangements with the operators at Canford MBT facility (Panda), the ERF already has access to 60,000 tonnes of RDF waste produced there under its residual waste

contract with Dorset Council, which was renewed in 2020. As the ERF didn't have planning permission, Powerfuel could not compete in the DWP procurement to lock-in Dorset waste, but Powerfuel has been in discussions with Panda and supported Panda's bid, offering a solution for the processing of Dorset's waste at the ERF.

The 60,000 tonnes of household waste (after recycling) that currently goes to Panda's plant at Canford is already processed into RDF for export. Once the ERF is available, Canford and other locations will be able to produce more RDF with the confidence that it would have a local energy recovery route.

Brian McCabe, Managing Director Panda UK stated: *"We are delighted to have been awarded the contract to continue managing Dorset's waste for the next 6 years. The Group has had numerous discussions with Powerfuel regarding new UK based infrastructure for the processing of our RDF which complements the existing, longstanding fuel supply arrangements with offtakers in Europe. If planning was to be achieved, Portland would provide the most efficient route to market to manage waste and generate energy."*

The facility will also be well placed to secure future residual waste contracts for Dorset which should reduce the overall cost for Dorset due to avoided transport and export costs and ensure that compliance waste management policy requirements.

Please refer to the Dorset Waste Plan, Environmental Statement and Waste Need Statement for further detail.

7.2 Waste Source

- Concerns were raised that if recycling rates improve then could be a white elephant for Dorset that requires waste from overseas to operate.

Powerfuel Response:

Recycling rates in Dorset are high and Powerfuel hopes that these continue to rise in the coming years but there is still, and will remain, a large amount of residual waste that is not recycled. At the same time, with population growth and consumerism, the overall amount of waste produced continues to increase.

The Dorset Waste Plan states that the total waste arisings across the County were 1.6 million tonnes per year in 2015, and rising. Non-hazardous waste was 862,000 in 2018, and the Council project that will grow to over 1 million tonnes in the next few years. As much as everyone desires more reuse and recycling and a fully circular economy, there will be ample waste left over after recycling in Dorset for many years to come and the project will provide Dorset with a cost-effective solution that complies with waste management policy requirements.

The Cllr's concern is understood but it appears unrealistic to assume that Dorset will stop generating waste at the levels required to operate the plant at full efficiency.

Please refer to the Dorset Waste Plan, Environmental Statement and Waste Need Statement for further detail.

7.3 Waste Source

- Where will the 202,000 tonnes of waste come from?

Powerfuel Response:

Please refer to the Planning Statement and the Waste Need Statement for further information.

7.4 Waste Source

- The 14m tonnes of waste which you say is landfilled every year – is this waste suitable for incineration?

Powerfuel Response:

Please refer to the Waste Need Statement for further information.

7.5 Waste Source

- The 100% of Dorset waste that is shipped out of the country – can you break this down please – type of waste and where to?

Powerfuel Response:

Please refer to the Environmental Statement Chapter 12 and the Waste Need Statement for further details.

7.6 Waste Source

- Whilst you say the UK exports around 2.7 million tonnes of RDF to Europe each year, I am aware that RDF from other countries is also imported into the UK – can you confirm this, or otherwise please?

Powerfuel Response:

There is very little information available about RDF imports into the UK in the public domain.

Looking at the 2018 EA Waste Interrogator, there is only one line item referring to the import of RDF (waste code 19 12 10) from outside the UK – around 24 tonnes was managed by a Material Recycling Facility in Sandwell WPA.

The only other EA dataset we could find that alluded to the imports of RDF can be found here - https://data.gov.uk/search?q=RDF&filters%5Bpublisher%5D=Environment+Agency&filters%5Btopic%5D=&filters%5Bformat%5D=&sort=best - however when you open the dataset, it doesn't contain any figures, only NA.

We also found some information about the export of RDF from NI - https://www.daera-ni.gov.uk/publications/export-records-rdf-shipped-northern-ireland - however, upon review of the data, it doesn't seem like any was exported to the other parts of the UK between 2014-2019.

8. Visual Impact

8.1 Visual Impact

- It was suggested that the visual impact of the ERF would be catastrophic for the local area, particularly the area of outstanding natural beauty, and the Jurassic and Heritage coast.

Powerfuel Response:

The site at Portland Port is a brownfield site set in an industrial area within a working port that is purposefully set outside the AONB and has allocation for employment use and so allows for development of this type. Powerfuel has gone into great detail with its Design and Access statement to develop a design that is sympathetic to its surroundings, and one that will have an acceptable visual impact.

A detailed landscape and visual impact assessment has also been undertaken. Powerfuel held pre-submission discussions and consultation meetings with the relevant officers of Dorset Council and The Jurassic Coast Trust and this substantially informed the visual impact assessment work.

Illustrations being circulated by objectors make material exaggerations of the visual impact of the facility.

Please refer to the Design and Access Statement for further detail and the Environmental Statement (ES) (including Landscape, Seascape and Visual Impact Assessment).

8.2 Visual Impact (cont)

- It was suggested that there will be a constant visible plume with smoke constantly across the bay, visible for a 10k radius.
- It was suggested that the plume will be widespread, the development will be visible for miles and miles around.

Powerfuel Response:

There will not be a constant visible plume. The “visibility” arises from condensing water vapour and not “smoke”. Whether a plume is visible or not depends on the moisture content of the release and the atmospheric conditions.

Illustrations being circulated by objectors make material exaggerations of the visual impact of the plume.

Fichtner has undertaken a detailed Plume Visibility technical assessment as part of their sophisticated ADMS dispersion model that is used for the detailed modelling of process emissions. It accurately models when the plume is visible given the location characteristics, applying several years of meteorological data. We have also considered the cloud conditions when plumes are predicted to be visible.

The analysis demonstrates:

In summary:

- Over the five years of weather data, we predicted 205 hours in total when the plume would be visible during daylight hours, being 41 daylight hours per year.
- There are predicted to be a small number of visible plumes, but these are generally short with most being less than 50 m in length (so just over half of the length of the stack).
- These almost entirely occurred in January to April, with the odd day in December (so not in the main tourist seasons).
- Of these hours, 34 were during the long cold periods covering “the Beast from the East” and Storm Emma which followed each other in 2018 where temperatures were below 0°C for a few consecutive days.
- Of the remaining hours, 61 were on very cloudy days (where monitored cloud cover was 7 octas or above) when the plume would not be distinguishable from the cloud cover from viewpoints.
- Hence, excluding the period of very cold weather covering the periods of “the Beast from the East” and Storm Emma in 2018 and excluding very cloudy days, there were only 110 daylight hours over the entire five years when a plume was predicted to be visible. These are generally short in length, with the longest visible plume length under these circumstances was predicted to be 188m.
- The main wind directions which caused a visible plume were those from the south-west and north-west, so the plume would be visible travelling from the stack towards the north-east and south-east.

We are preparing some additional analysis and visual representations to provide better context and will provide this as soon as practicable.

Please refer to the Environmental Statement (ES) (including Landscape, Seascape and Visual Impact Assessment, and the technical appendix dealing with the Plume Modelling).

9. Financial Impact

9.1 Financial Impact

- How many apprenticeships will you be creating?

Powerfuel Response:

Prior to opening Powerfuel will be using its influence to encourage its construction contractors to operate an apprenticeship scheme so that two apprentices can be trained in construction trades on a rolling basis.

After opening, Powerfuel will create a long-term apprenticeship scheme to train an ongoing group of apprentices. It is anticipated that the proposed ERF will offer two apprenticeship positions, ongoing during its operation.

Please refer to the Planning Supporting Statement for more information.

9.2 Financial Impact

- What is the list, by job title, of the 30 jobs that you will create?

Powerfuel Response:

The proposed development is expected to create between 30 and 35 full-time equivalent permanent jobs. The assessment for the planning application has been based on the worst-case assumption of 30 jobs being created. These are anticipated to break down into the following occupation types:

- Managers and directors: 3
- Professional occupations: 3
- Skilled trades: 8
- Process, plant and machine operatives: 12
- Administrative and secretarial: 4

As well as the direct jobs created at the plant, significant numbers of additional jobs will be created through spending in the supply chain.

Chapter 6 of The Environmental Statement and the Non-Technical Summary of the Environmental Statement provide further details on job creation.

9.3 Financial Impact

- Can you explain how you will create a potential saving of several million pounds to Dorset Council every year please?

Powerfuel Response:

Please refer to the Economic Impact Assessment, which suggests that Dorset Council has been paying some £130/tonne to landfill waste. If this figure also applies to BCP, this would imply a landfill bill in the region of £6.6m for 2018 for the combined authorities. You should be able to confirm this information with those authorities. With the ERF's gate fee likely to be in the region of £80/tonne, there is potential to save Dorset Council and BCP Council considerable sums for this landfill element, perhaps in excess of £2.5million per annum. Over the 25-year lifespan of the plant, this would add up to a net present value of approximately £43 million.

-Ends-