

Consultations Team

Natural England
W4, County Hall
Colliton Park
Dorchester
Dorset
DT1 1XJ

12th February 2021



Dear Madam or Sir

Energy from Waste Incinerator

Planning Application WP/20/00692/DCC Portland Port, Castletown, Portland DT5 1PP UK

the Climate and Ecological Emergency is being caused by emissions of greenhouse gases and pollutants on unprecedented scales. We look to Natural England to protect our England by objecting to this planning application and thereby helping to prevent unnecessary greenhouse gas emissions and consequential air and water pollution.

You must be aware there is a current planning application to build a large energy from waste incinerator on Portland, Dorset. Over 7,000 residents have signed a petition and many of these have written heartfelt letters opposing the plant which will burn 208,000 tons of waste to generate electricity that is already four times as carbon intensive as energy from the national grid. Thus far there has been a comfort blanket applied by the Government that repeats that these plants are controlled by Environment Agency environmental permits and that Public Health England position is that there is not a significant risk to public health. Experts are publishing evidence illuminating that that both these comforts are from narrow studies and have insufficient scrutiny. The public watched the power of the tobacco industry delay Government legislation to reduce harm. We ask that Natural England seeks the data behind the headlines and establishes its credibility before supporting this planning application.

The developers are a merchant company who have publicly stated they will not build or run the plant but sell on the planning approval achieved to an unidentified company for profit. A simultaneous application for an Environmental Permit is, we understand, in preparation and yet the planning applicant does not fulfil the obligations of a legal operator or have the technical competence¹. Local people can see the damage that the consequential plant life time of thirty years of burning waste will do to the environment. There is already an over capacity in the South West of EfW incineration². George Eustice from Defra has called attention to the landmark Environment Bill requirement for a countrywide consistent 65% municipal waste recycling by 2035. A plant located in the Port of Portland would be in the market to import waste from any destination. This proposed plant has no justification to exist to treat residual waste in the South West and it is not envisaged in the 2019 Dorset Waste Plan³.

Mindful of the level of pollution caused by ERF incinerators, the EU has removed Energy Recovery Facilities Incineration from their Taxonomy list of sustainable activities. Discussing the impact of the EU's rejection of ERF incineration as a "green", sustainable industry Janek Vahk of Zero Waste Europe, commented: "The taxonomy regulation will help bring clarity to what constitutes an environmentally sustainable waste management activity."⁴.

A British approved plant is required to operate to best available technology BAT. The label provided of "modern and well run" does not mean that BAT is the Climate and Ecological safeguard standard we all need; especially now that we are time short for any chance of mitigation and thus we have the reality an Emergency.

The Environment Agency make no checks on the constituents of RDF the fuel that residual waste is. Defra and the EA have not sought to introduce a treatment requirement, but have instead introduced a definition for RDF: "Refuse derived fuel (RDF) consists of residual waste that complies with the specifications in a written contract between the producer of the RDF and a permitted end-user for the thermal treatment of the waste in an energy from waste facility. . . The written contract must include the end-user's technical specifications relating as a minimum to the calorific value, the moisture content, the form and quantity of the RDF." There is no clear basis in UK legislation for the regulators to impose prescribed treatment requirements that waste must meet⁵. There is consistent use of the caveat: Records that have been deemed commercially confidential are not included. This industry does not welcome questions from the public.

The fact is that unlike a coal power station with a steady fuel of the same stuff these EfW Plants run on whatever is thrown in a black bag or what is contaminated and cannot be recycled. Human nature makes short cuts, inconvenient objects like the domestic broken first aid mercury thermometer "just chuck it in" the black bag route and on it goes. The widespread use of brominated flame retardants in household products add to the toxic burden in municipal solid waste. Nothing is opened to scrutiny; it is all passed as an estimation with pre-agreed factors. BAT reporting requirements stipulate annual mass releases estimation techniques (RETs) of specified substances on calculated daily averages of continuously emissions measurements (CEMs) but for only a few chemicals. The rest is calculated releases based on periodic samples for the many and all based on mass balance or emission factors⁶.

Our Campaign does not consider BAT to be good enough given that it only requires sampling emission to air and water for very serious chemicals – lead, arsenic, cadmium, mercury, dioxins every 6 months⁷ absolutely not continuously. The latest Pollution Inventory details ERF plants reporting 64 pollutants and the worst only 8 pollutants. There is no consistency in operation with the single and best operating with all levels below threshold reporting and yet the majority function with up to 76% of pollutants exceeding thresholds and are yet left running⁸. The Government must also be concerned since it has instigated a national consultation about these standards issued 25th January 2021 – response required by 18th April 2021⁹.

The Government¹⁰ does not put a limit on the CO2 emitted by waste incinerators and it does not monitor CO2 produced at a local level.

Our Campaign stresses that this plant would for every ton of the 208,000 tons a year waste, for the 30 years of life of the plant, fed into the plant emit 1 tone of CO2 plus other chemical to air and water together with the arising 1/3 ton of toxic waste ash. There is already capacity for incineration in the South west and a falling quality of residual waste. It should not be built.

The EA refer to Public Health England who refer back to research with narrow fields of study. Professor C V Howard, Consultant Toxicologist report in relation to Environmental Health Effects in respect to at the constituents of the residual waste. This finding that pollution is a major cause of respiratory and heart disease and possibly foetal abnormalities concludes "Public concern over these inadequacies is, in my opinion, understandable and justified." ¹¹ .

Consider the rare lichens on Portland good at absorbing mercury and the calcareous grasses prevalent on Portland they will be similarly affected. We are all looking to reduce food miles and grow our own. Other papers such as the Congruence Evaluation of Mercury Pollution Patterns Around a Waste Incinerator over a 16-Year-Long Period Using Different Biomonitors¹². add to SPWI deep concern that the health of the environment, the contamination of land and sea will have on the rare flora and fauna that characterizes Portland and of course us living here. Peter W Tait's report advised that "older incinerator technology and infrequent maintenance schedules have been strongly linked with adverse health effects. More recent incinerators have fewer reported ill effects, perhaps because of inadequate time for adverse effects to emerge. A precautionary approach is required. Waste minimisation is essential."¹³ .

Greater London Council comments: 'Health risks associated with MSWIs may not be limited to direct exposure to air and soil pollution. For example, consumption of locally grown food may be a significant exposure route to PCDD/Fs and heavy metals such as mercury from MSWIs.'¹⁴ .

Birds have similarly been shown to be affected by fine particulate matter the reactive atmospheric gases and aerosols. Research shows that: unlike mammals, birds inhale oxygen, exchange it for carbon dioxide, and exhale the by-products all in one breath; they don't have to contract or expand their lungs repeatedly. The unique technique allows them to breathe and oxygenate at a rapid rate, which is optimal for flight. This constant air flow might bring in a variety of particles that lead to health issues. Indeed, respiratory illness was the most frequent problem Sanderfoot¹⁵ found followed by increased stress levels, poor immune systems, reduced reproductive success, population decline.

The applicant for the Portland EfW Incinerator is the same Giles Frampton of British Solar Renewables who was granted permission by Dorset Council to build on SSIS protected land on Rampisham Down which was then overruled by the Government Minister. The press releases from British Solar Renewables extoll their excellent working relationship with Natural England. A solar farm must be a very different pollution risk to an EfW incinerator. We seek to be reassured that Natural England retains its full independency from previous working relationships.

The decision to approval the building of this plant is a local planning matter and we look to Natural England to underline that emitting unnecessary CO2 and toxic pollutants even if they are current BAT compliant it is still unnecessary. We have attached your wonderful report on Portland and would point out the many paragraphs highlighting the rare flora and fauna, the incomparable views that will be blighted by the 85m high chimney and plume of emissions

under the noises of the nearby residents living above. Portland is such a special and unique place. It has been chosen by Portland Eden who have written an excellent letter opposing the incinerator.

We ask you and if necessary, to reopen your deliberations and to think again, to support us in our campaign to preserve this unique habitat-the first landing point for migrating birds and butterflies, steeped in history back to the Mesolithic period.

We as residents love our island and wish to preserve it as an echo-friendly destination. To blight Portland with the toxic industrialization that invariably flows from the construction of a chemically diverse fuelled incinerator with its attendant transport in and out, foul odours, light and sound pollution is an insult to us and the UNESCO world heritage status.

Yours faithfully,



Paula Klaentschi BA Hons Dip Arch retired Architect
Coordinator
Stop Portland Waste Incinerator Campaign

cc Natural Environment Research Council, Polaris House, Swindon.

Reference Notes:

1. <https://www.gov.uk/guidance/legal-operator-and-competence-requirements-environmental-permits>
2. The recently published Waste Management Plan for England January 2021
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/955897/waste-management-plan-for-england-2021.pdf Waste Incineration data from [Summary waste tables for England and the former planning regions](#) found in <https://ea.sharefile.com/share/view/sd8fd3ec9e7245abb> gives area by area throughput and capacity updated 15.09.2020 showing that the South West has big available margin 14% in capacity in EfW Incineration.
3. <https://www.dorsetcouncil.gov.uk/planning-buildings-land/planning-policy/dorset-county-council/waste-planning-policy/2019-waste-plan.aspx>

stopportlandwasteincinerator.co.uk stoppwi@gmail.com



4. 'The EU has reached a deal on its [Sustainable Finance Taxonomy](#), categorising activities contributing to the increase in incineration as harmful to the environment 'Imogen Benson | 20 December 2019

5. <https://www.rfindustrygroup.org.uk/code-of-practice/>

6. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/923125/Pollution-inventory-reporting-incineration-activities-guidance-note.pdf Pg 19 BS EN14385 for extractive monitoring for As Cd Cu Cr Hg Mn Ni Sb V Zn

Pg 23 Each dioxin congener is assigned a toxic equivalency factor.

monitoring data representative of annual releases, you can get the resulting toxic equivalents TEQ of the mixture by Multiply the concentration (per m3) of each released congener by its Toxic equivalency factor. TEF and then by the total volume released in that year (in m3) to provide the TEQ

7. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/297004/geho0209bpio-e-e.pdf Pg 82 – 84 Annex Emissions benchmarks.

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/923125/Pollution-inventory-reporting-incineration-activities-guidance-note.pdf

Table 4.1 Benchmark emission limit values for releases to air					Table 4.2 Benchmark emission limit values for releases to water				
Parameters	Units	1/2 Hour average –100% compliance (figure in brackets is 1/2 hour average – 97% compliance over a year, unless otherwise specified)	Average of 1/2 Hour averages over a 24-hour day (100% compliance unless specified)	Periodic	Frequency requirements	Parameters	Units	Emission Limit Values	Frequency requirements
Particulate matter	mg/m ³	30 (10)	10	N/A	CEM ¹ and bi-annual spot	Total suspended solids (from APC effluents) as defined in Directive 91/271/EEC	mg/l	<30 (95% of measurements) <45 (100% of measurement)	Spot daily sample or 24-hour flow proportional on a daily basis
VOCs (as total organic carbon, TOC)	mg/m ³	20 (10)	10	N/A	CEM and bi-annual spot	Mercury and its compounds expressed as mercury (from APC effluents)*	mg/l	0.03	24-hour flow proportional sample on a daily basis
Hydrogen chloride	mg/m ³	60 (10)	10	N/A	CEM and bi-annual spot	Cadmium and its compounds expressed as cadmium (from APC effluents)*	mg/l	0.05	24-hour flow proportional sample on a daily basis
Hydrogen fluoride	mg/m ³	4 (2)	1 (or N/A)	N/A (or 4)	CEM and bi-annual spot (or, if HCl is abated and the plant is compliant for HCl: 6 monthly sampling (3 monthly in first 12 months of operation). Average value over sample period of 1/2 - 8 hours.	Thallium and its compounds expressed as thallium (from APC effluents)*	mg/l	0.05	24-hour flow proportional sample on a daily basis
Carbon monoxide	mg/m ³	100 (150 for 95% of all 10 minute averages)	50 (97% over a year)	N/A	CEM and bi-annual spot	Arsenic and its compounds expressed as arsenic (from APC effluents)*	mg/l	0.15	24-hour flow proportional sample on a daily basis
Sulphur dioxide	mg/m ³	200 (50)	50	N/A	CEM and bi-annual spot	Lead and its compounds expressed as lead (from APC effluents)*	mg/l	0.2	24-hour flow proportional sample on a daily basis
NOx (NO and NO ₂ expressed as NO ₂) – existing plant > 6 th or new plant	mg/m ³	400 (200)	200	N/A	CEM and bi-annual spot	Chromium and its compounds expressed as chromium (from APC effluents)*	mg/l	0.5	24-hour flow proportional sample on a daily basis
NOx (NO and NO ₂ expressed as NO ₂) – existing plant > 6 th or new plant	mg/m ³	N/A	400	N/A	CEM and bi-annual spot	Copper and its compounds expressed as copper (from APC effluents)*	mg/l	0.5	24-hour flow proportional sample on a daily basis
Nitrous oxide ¹ mg/m ³	mg/m ³	Note 3	Note 3	Note 3	CEM and bi-annual spot	Nickel and its compounds expressed as nickel (from APC effluents)*	mg/l	0.5	24-hour flow proportional sample on a daily basis
Ammonia ¹ mg/m ³	mg/m ³	Note 3	Note 3	Note 3	CEM and bi-annual spot	Zinc and its compounds expressed as zinc (from APC effluents)*	mg/l	1.5	24-hour flow proportional sample on a daily basis
Cadmium and thallium and their compounds (total)	mg/m ³	N/A	N/A	0.05	6 monthly sampling (3 monthly in first 12 months of operation). Average value over sample period of 1/2 - 8 hours.	Total dioxins and furans (as I-TEQ) (from APC effluents)	ng/l	0.3	24-hour flow proportional sample on a daily basis
Mercury and its compounds	mg/m ³	N/A	N/A	0.05	6 monthly sampling (3 monthly in first 12 months of operation). Average value over sample period of 1/2 - 8 hours.	Total dioxins and furans (as WHO-TEQ) (from APC effluents)	ng/l	^	24-hour flow proportional sample on a daily basis
Sb, As, Pb, Cr, Co, Cu, Mn, Ni and V and their compounds (total)	mg/m ³	N/A	N/A	0.5	6 monthly sampling (3 monthly in first 12 months of operation). Average value over sample period of 1/2 - 8 hours.	pH range #		Site specific	Continuous
Dioxins and furans (I-TEQ)	ng/m ³	N/A	N/A	0.1	6 monthly sampling (3 monthly in first 12 months of operation). Average value over sample period of 1/2 - 8 hours.	Temperature #		Site specific	Continuous
Dioxins and furans (WHO-TEQ)	ng/m ³	N/A	N/A	Note 3	6 monthly sampling (3 monthly in first 12 months of operation). Average value over sample period of 1/2 - 8 hours.	Flow #		Site specific	Continuous

Reference conditions: temperature 273K, pressure 101.3kPa, 11% O₂ (except when burning waste oil only – 3%), dry gas.
 Note 1: CEM is Continuous Emission Monitoring
 Note 2: Applies to plants using SCR or SNCR to limit NOx releases
 Note 3: Monitoring results to be reported for the first year of operation, and an ELV set on the basis of the results

Emissions to Water and Sewer

- Where automatic sampling systems are employed, not more than 5% of samples shall exceed the benchmark value.
- Where spot samples are taken, no spot sample shall exceed the benchmark value by more than 50%.

How to comply with your environmental permit
 Additional guidance for:
The Incineration of Waste (EPR 5.01)

8. 2018 Pollution Inventory updated 11.09.2020

<https://environment.data.gov.uk/portalstg/home/item.html?id=972525652487430185a69836ec4a71ef>

compare Ecopark, Advent Way, London N18 3AG with 64 Pollutants 0 over reporting threshold with Hull Energy Works, Cleveland Street, East Yorkshire, HU8 8AD with 8 Pollutants or Slough Heat and Power 342 Edinburgh Avenue Berkshire, SL1 4TU with 37 Pollutants and 28 over reporting threshold

stopportlandwasteincinerator.co.uk stoppwi@gmail.com

9. https://consult.defra.gov.uk/airquality/industrial_emissions_bat/supporting_documents/bestavailabletechniquesconsultationdocument.pdf
10. Lord Goldsmith answered 21.10.20 <https://questions-statements.parliament.uk/written-questions/detail/2020-10-07/HL8855>
11. [http://www.gloucestershire-against-incinerators.org.uk/resources/V+HOWARD+Proof+of+Evidence+v2\\$281\\$29-2.pdf](http://www.gloucestershire-against-incinerators.org.uk/resources/V+HOWARD+Proof+of+Evidence+v2$281$29-2.pdf) 3.3.3: The level of organo-brominated wastes in the waste stream is increasing. This is because of the widespread use of brominated flame retardants over the past decades, for example in furniture, carpets and electronics. These will lead increasingly to the formation of polybrominated and chloro-brominated dioxins, of which there are over 5,000 possible congeners. These are not routinely measured or modelled as part of the pollutant emissions from waste incinerators (Howard (2009) Ringaskiddy, Section 4.9). Therefore any estimates offered of dioxin emissions from the proposed plant are underestimates. This will also apply to any discussions about the current body burdens of dioxins in the local population.
12. <https://www.mdpi.com/2073-4433/10/4/183>
13. <https://onlinelibrary.wiley.com/doi/full/10.1111/1753-6405.12939> Peter W Tait MBBS, DipRACOG, FRACGP, MClimChng, FPHAA, Senior Lecturer (Clinical), Medical School, Australian National University, ACT; General Practitioner, Interchange General Practice, ACT
14. https://www.london.gov.uk/sites/default/files/gla_efw_study_final_may2020.pdf
15. <https://iopscience.iop.org/article/10.1088/1748-9326/aa8051/meta> Olivia V Sanderfoot and Tracey Holloway 2017 *Environ. Res. Lett.* 12 083002 Air pollution impacts on avian species via inhalation exposure and associated outcomes