

Customer & Engagement, Wessex

**Environment Agency**

Rivers House,  
East Quay,  
Bridgwater,  
Somerset,  
TA6 4YS

[PSCpublicresponse@environment-agency.gov.uk](mailto:PSCpublicresponse@environment-agency.gov.uk)  
[wessexenquiries@environment-agency.gov.uk](mailto:wessexenquiries@environment-agency.gov.uk)



11th July 2022

Dear Assessment Team Permitting and Support Centre

**RE: EA Permit application no: EPR/AP3304SZ/A001**  
**Briefing 9: Portland Energy Recovery Facility (ERF), Portland Port, Dorset, DT5 1PP**

**1.** we comment on the applicant's document supplied by the EA on 20<sup>th</sup> June 2022:  
**Additional Document - 2nd\_ES\_Addendum\_Appx\_5\_1\_Dioxins 13.05.22.pdf**  
Para 3.1 . . . . states: *"The assessment presented here considers the impact of certain substances released by the ERF plant on the health of the local population. These substances are those that are 'persistent' in the environment and have several pathways from the point of release to the human receptor. These are generically referred to as 'Contaminants of Potential Concern' (COPCs). The COPCs of interest are dioxins/furans and some metals."*  
We contend that the COPCs must include PCBs, Polybrominated diphenyl ethers, mercury and indeed all hazardous chemicals as set out in <https://environment.data.gov.uk/catchment-planning/WaterBody/GB680805270000?cycle=2><sup>1</sup> especially the priority ones which as yet have not been addressed by the applicant.

This Environment Agency data<sup>1</sup> for the Portland Harbour Water Body, updated on 20 May 2022, includes the river basin wash down and the monitoring sites for shellfish; the very same is available for Weymouth Bay. What we at SPWI find very concerning is the lack of any reasons for the sources of contamination and the recent changes in the water of Portland and Weymouth Harbour.

## Portland Harbour Water Body Moderate ecological status

Viewing latest data (Updated on 20 May 2022). [Switch to draft river basin management plan data](#)



### Get Portland Harbour data

- [Download water body \(Shapefile\)](#)
- [Download water body \(GeoJSON\)](#)
- [Download classifications \(CSV\)](#)
- [Download investigations \(CSV\)](#)
- [Download challenges \(CSV\)](#)
- [Download objectives \(CSV\)](#)
- [Download protected areas \(CSV\)](#)

### Related links

- [Draft plan maps on ArcGIS online](#)
- [Draft flood risk management plans](#)

## Classifications

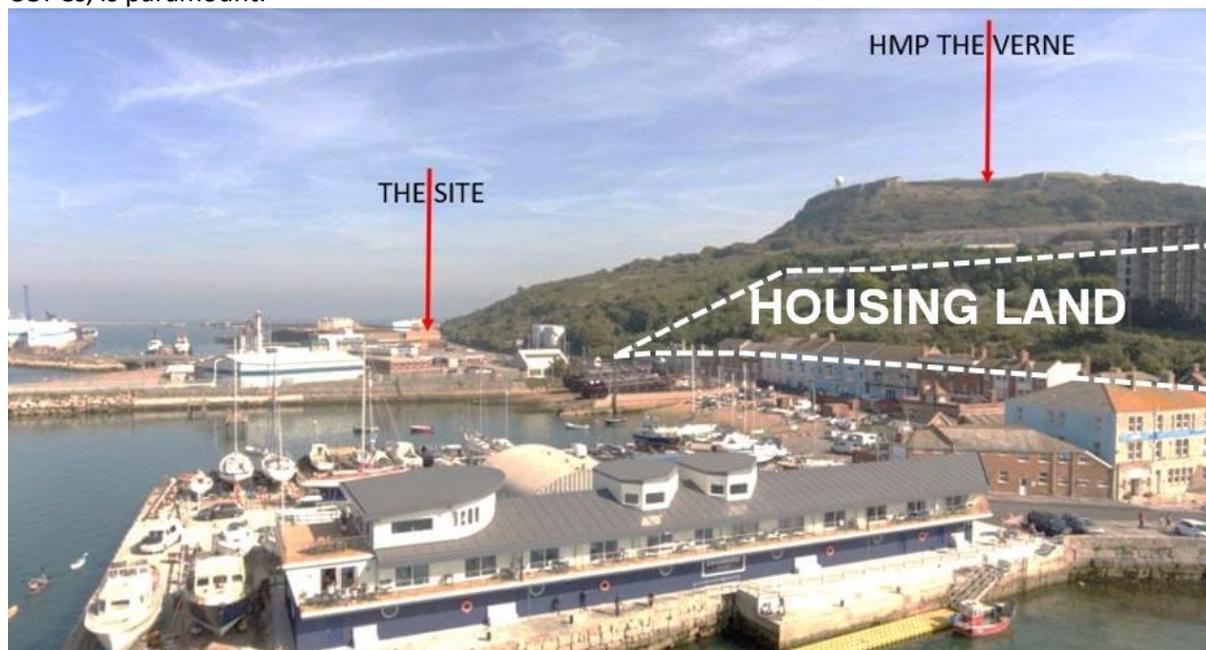
Time period:

Classification Item	2013	2014	2015	2016	2019
<b>Ecological</b>	Good	Good	Moderate	Moderate	Moderate
Biological quality elements	High	High		High	High
Phytoplankton	High	High		High	High
Physico-chemical quality elements	High	High	Good	Good	Good
Dissolved Inorganic Nitrogen			Good	Good	Good
Dissolved oxygen	High	High	High	High	High
Supporting elements (Surface Water)	Good	Good	Moderate	Moderate	Moderate
Mitigation Measures Assessment	Good	Good	Moderate or less	Moderate or less	Moderate or less
Specific pollutants	High	High	High	High	High
Arsenic	High	High	High	High	High
Copper	High	High	High	High	High
Zinc	High	High	High	High	High
<b>Chemical</b>	Good	Good	Good	Good	Fail
Priority hazardous substances	Good	Good	Good	Good	Fail
Benzo(a)pyrene					Good
Cadmium and Its Compounds	Good	Good	Good	Good	Good
Dioxins and dioxin-like compounds					Good
Hexabromocyclododecane (HBCDD)					Good
Hexachlorobenzene					Good
Hexachlorobutadiene					Good
Mercury and Its Compounds					Fail
Perfluorooctane sulphonate (PFOS)					Good
Polybrominated diphenyl ethers (PBDE)					Fail
Priority substances	Good	Good	Good	Good	Good
Fluoranthene					Good
Lead and Its Compounds	Good	Good	Good	Good	Good
Nickel and Its Compounds	Good	Good	Good	Good	Good
Other Pollutants	Does not require assessment				

We also find that the applicants Figure 3.1 entitled “All Possible Exposure Pathways for Receptors” - has no baseline and does not address all the relevant COPCs. We remind the Environment Agency that impact assessment requires a true localised baseline data of actual contamination containing all the existing sources of pollutants to be certain that no “tipping points” are reached with the additional load of this application. We question the provenance of the applicant’s statement: *“the marine environment sea water is continually circulated away from the port so accumulation does not occur”*. What evidence is there that this is correct?

The Food Standards Agency when considering the Runcorn 2011 permit application was concerned that in that case the Applicant’s dioxin impact assessment did not adequately take background intake into account. The FSA stated that the predicted maximum process contribution (PC) of 8% of the COT-TDI in that instance might be considered significant if the background dioxin intake is found to be high "in view of the industrial nature and history of the area". Portland Port itself has been industrially active for many many years and had an adjacent extensive Fuel Depot on Osprey Quay <https://www.portlandhistory.co.uk/mere-oil-fuel-depot.html>. Since the Port privatised this area has

had a significant increase in development with a further large area of adjacent housing land planned; all receptors need to be properly protected.  
For us this issue of fact checking baseline data for all chemicals already in this locality, especially all COPCs, is paramount.



The applicant's Scenario 2 lacks attention to the locally grown and community food that is a very central activity for established groups such as the Wyke Regis Horticultural Society, ICA@islandcommunityaction, Portland4thePlanet and Tumbledown Farm in Weymouth who are all local food resilience providers. <https://www.weymouthtowncouncil.gov.uk/projects/tumbledown-project/> There are 361 allotment plots spread across 9 sites in Weymouth. With an additional 9 plots at Tumbledown Farm for Community Groups and Charities. Portland Town Council manages 48 allotment plots on the site at the rear of Grove Road, one of which is a group plot. There are other allotment sites on Portland privately owned and managed. HMP Prison The Verne and HMP YOI Portland cultivate food.

Fancys Farm very close by the application site <http://www.fancysfarm.co.uk/eggs.html> sells eggs, sheep and goat meat. Fancys Farm have restricted grazing land, they buy in hard feed from Duffields who are supplied by Viterra from Portland Port, they source hay locally from a farm in Chickerell. The Jailhouse Café located directly above the application site puts locally grown produce on their menu. Local food resilience with the reality of food miles is now a determining factor driving increased local food production. Craigs Dairy and Farm Shop at Osmington <https://www.craigsfarmdairy.co.uk/> being downwind is particularly vulnerable.

We have difficulty with the term significant in reference to livestock rearing in the study area, and the dismissal therefore of consumption of locally grown meat. There are small holdings on Portland, Wyke Regis and Chickerell. There is locally produced vegetables, fruits, chickens (+ eggs), ducks (+ eggs), pigs, sheep, goats, land at Portland Bill is grazed by cows, as well as bee hives located in various Portland locations. We all have the right to produce, sell and eat uncontaminated produce, whatever the scale of the production; this right is significant. The HMP YOI Portland Prison stopped operating Grove Pig Farm in 1996 and it is now privately operated, the applicant has overlooked that during the life of the proposed incinerator pig production could possibly become substantial. Limiting future livestock rearing by placing an incinerator here is unreasonable.

This is a coastal marine area with important fish spawning grounds with many species which bottom feed. The local shellfish and fish economy together with the very active angling and recreational fishing all year round is all part of Dorset's aquaculture. <https://www.dorsetaquaculture.co.uk/case-studies/jurassic-sea-farms-ltd/> This case study sets out the proposed kelp farm to be located in Portland Harbour; kelp has uses in cosmetics, health food, and pharmaceutical products. The raised acidity (or rather lower pH) caused by CO2 depositions that will accompany a built waste incinerator will lead to less carbonate in the sea, which shellfish rely on to build their shells, as acidity increases,

shells become thinner, growth slows down and death rates rise. With softer shells these fish are also more vulnerable to predation. The EA should be aware of the Dorset Sea Salt company <https://www.dorsetseasalt.co.uk/> that uses local water to produce sea salt for the kitchen table, so again another potential pathway into our food. The applicant has not explained why local consumption of caught fish can appropriately be described as "sporadic" for all members of the public. The consequence of cumulative concentrations of COPCs in food has been brought to public attention by toxicwatch.org and Zero Waste Europe; we ask that the Environment Agency gives regard to this study <https://zerowasteurope.eu/library/the-true-toxic-toll-biomonitoring-of-incineration-emissions/>

Para 3.2.3 Emission Concentrations for the COPCs . . . especially given the "Fail" already recorded in current harbour water we question the validity of this statement: *"In terms of mercury, the worst case assumption is made that there are no losses to the global cycle, and all mercury is available for deposition from the vapour phase."*

#### Para 3.2.4 Input Parameters for the IRAP Model

*"However, a child's exposure is less significant for cancer outcomes given the shorter exposure time in childhood compared to whole lifetime exposure."* we contend that dermal contact adding to food consumption is not so sporadic as to be irrelevant. Not only do people interact with the soil and the locally sourced food from land and sea but also that many local people enjoy hours of leisure activities in and on the sea. The local children, with very little other free entertainments, start sea swimming before you or I would dream of going in. We have watched the same local children swimming for hours a day almost every day from local beaches in this harbour. Beache goers play in the sand. The EA monitor the water at Sandsfoots Beach so records are available. Children grow up and do not necessarily move away. This incinerator has a 30+ year operational life and it is the cumulative impact that we are also concerned about.

Powerfuel state: *"Any spillage of the inert IBA would be dealt with promptly and appropriately"*. It is unacceptable to mislead, this statement is incorrect, IBA is not inert until treated and thus must be considered toxic on removal from the plant. Powerfuel do not provide any information on how to deal with toxic ash, or toxic ash leachate once a spillage into coastal waters has occurred - it would be the equivalent of trying to remove milk from a cup of tea. Powerfuel's intention to *"transfer the IBA to the ship's hold using a mechanical grab"* would indicate there is every likelihood of IBA spillage during transfer. Spillage into the marine environment is of grave concern considering the heavy metals content of IBA, including mercury and cadmium (albeit small amounts), both of which could have a serious impact on the local fishing and shellfish industry. Mercury and heavy metals are cumulative and permanent, building up in the sediments of the seabed where fish feed, allowing mercury to move into the food chain.

We ask that the EA assessment to review whether there are significant consequences to health from the contamination of grain arriving in the Port and being stored. Viterra Portland grain facility comprises of 2 warehouses sites totalling 20,346m<sup>2</sup> with a portside presence for discharging and loading vessels by crane; the route to the warehouse passes right next to the proposed waste incinerator building. Grain cargo ships take up to 4 days to transfer their cargo from open holds and travel in open lorries to the storage sheds. This animal feed then, obviously, goes into the food chain. Another local reality reported by a groundworker is that the grain transfer spillages have fed an amazing exploded population of pheasants within the Port. People eat pheasants.

The applicant's decision to not consider "farmer" receptors has led to the calculated dioxin intakes being small. We consider that the applicant has ignored the full range of pathways for contaminants to impact on our health.

**2.** we comment on the applicant's document supplied by the EA on 20<sup>th</sup> June 2022:  
**Application - Bespoke - Human Health Risk Assessment.pdf**

Pg 8 Box 2.1 ship emissions: *"One of the key reasons for the siting of the proposed ERF is the provision of shore to ship power for vessels in the Portland harbour. Currently, it is not possible to provide power due to limitations in the capacity of the transmission network to Portland."*

This planning application is to generate 15.2 mega watts to provide 2 berths with onshore power. RFA vessels at berth use about 2.75 Mega Watts.

Large cruise ships can require 12 Mega Watts when in port, which means if both the cruise terminals have a cruise ship in, this incinerator power output is unlikely to be able to supply both.

This email Wed 01/12/2021 14:48 from SSEN to SPWI answers questions about network readiness:

Hi Paula,

Yes I'm aware of the report – I put Dorset LEP in touch with Regen on the basis of work they have carried out for us in the past.

Dorset does have a number of grid constraints that will need to be addressed to support new generation and an increase in low carbon technologies. Under the existing regulatory price control structure networks have been unable to address these constraints ahead of need because of the risk of spending customer money on what could become stranded assets. Reinforcements are only undertaken once a customer triggers them through applying for a new connection. Having said that, when we make improvements to the network we do forecast future load growth and ensure we take the opportunity to cater for that as part of the reinforcement. The work that Regen carries out for us is key to informing those decisions.

In the next price control (ED2 – 2023/28) the regulatory approach is changing to accommodate strategic investment and we have recently published our ED2 Business Plan which details our plans to spend almost £4bn in that period on improving the network to facilitate net zero - [Home - SSENFuture](#).

The flexibility that low carbon technologies offer will play a critical role in helping balance growing electrical demand (EVs, Heat Pumps, Electrolysis etc.) and intermittent generation peaks ensuring we only reinforce the network when absolutely necessary.

Once you have had a chance to view the plan if you have any questions please contact our dedicated RIIO-ED2 stakeholder team directly by emailing [YourED2Plan@sse.com](mailto:YourED2Plan@sse.com). Any queries may well come back through to myself but it ensures we direct it to the correct person and we record it as part of our formal input.

Regards

**Steve Atkins**  
DSO Transition Manager (Future Networks)  
Scottish and Southern Electricity Networks  
M: 0750 091 2637  
T: 0173 834 0972  
[ssen.co.uk/SmarterElectricity/](http://ssen.co.uk/SmarterElectricity/)  
[@ssen\\_fn](mailto:@ssen_fn)



We submit that the applicant is misrepresenting the situation. This Portland application will be running for 30+ years and is to provide only 2 shore power berths. There is no evidence provided of the number of cruise ships which can actually connect to shore power in the current fleet afloat. This application is in contravention of the Governments Clean Maritime Plan.

[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/815664/clean-maritime-plan.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/815664/clean-maritime-plan.pdf) Para 38: *"...this Clean Maritime Plan sees zero emission shipping as a future whereby no GHGs or air quality pollutants are emitted by vessels (of any type) operating in UK water or in the ship-to-shore activities required to facilitate those operations."*

The port has a need for clean shore power and they have chosen the wrong source for that power. Future-proofing 2 berths with an extendable solution from the national grid is the way forward, this proposal is founded on bad logic and will cause a bad outcome for the environment.

In 2018 Scottish Southern Energy Network, our local provider, completed new electricity supply cable to Portland with ready spare duct cable provision. The future networks manager Steve Atkins

has confirmed that as for all new developments SSEN await a need, then levy a charge, and then facilitate the connection. For power to the 2 shipping berths this requires a measure of investment at the Chickerell Grid Supply Point. Having achieved this there would also be significant benefits to 8 other substations in Dorset as well as other local businesses. Improved connectivity would obviate all the negative environmental impacts. Southampton Port with assistance from the LEP now can provide national grid power to 2 of the 5 cruise ship terminals.

We object to the Applicants statement Para 38 : *“Emissions from ships delivering RDF to the proposed development have not been modelled because of the negligible number of vessel movements, the fact that impacts would be limited to the short period they would be in the dock while material was being unloaded and the small amount of power needed to maintain supply to the ship during berthing.”* This proposal has a storage Hall sized to accommodate an entire cargo hold of RDF. It is expected that the quantity of RDF arriving by sea will be significant. The EA assessment must include checking the accuracy of the current and the projected berthing times of all shipping in the Port and Harbour evaluating the duration and output from their diesel engines in this proximity.

The Annual Performance Reports from functioning energy from waste incinerators make sobering reading. The occurrences that can be expected for Abnormal Operation with the subsequent in practice likely duration of emissions that are not monitored are all matters of concern. Peak emissions may have more consequences than averages, we the public do not know. The reality of the cumulative emissions building up over the lifetime of operation we consider need to be part of the assessment.

We are very concerned that the applicant has used many default parameters together with the nominal capacity not the full 202,000 tonnes/year in their modelling. These parameters are not worst case scenarios (chapter 8 of the EPA HHRAP makes it clear that only some of the assumptions are “protective”) and therefore the predicted dioxin intake may be larger, perhaps very significantly larger, than predicted. An appropriately precautionary approach demands that all assumptions should be evidenced worst case assumptions. The applicant has said that their risk assessment is based on the US EPA Human Health Risk Assessment Protocol (HHRAP) so we consider that the uncertainty should be quantified and assessed as described by the HHRAP. We have been advised that human intake uncertainties will be significantly higher than soil dioxin level uncertainties; the Environment Agency must assess these risks.

The applicant’s identification of Site Specific Parameters and choice of representative Receptors is in our considered opinion totally inadequate. The baseline for a population with a high proportion of preexisting conditions is not provided. The unique topography and site specific weather patterns are ignored.

We remind the Environment Agency that local GPs and Public Health Dorset have objected to this application.

**3.** As RDF residual derived fuel is prepared under a Code of Practice and you at the Environment Agency are not privy to the day-to-day constituents because they are commercial confidential contracts between the provider and the end user - how can the Environment Agency assess the implication of this plant? The applicants have defined that only 25% of RDF will come from overseas, from Northern Ireland and the Channel Islands. Of course, this may be subject to revision; a worst case needs to be considered especially as Dorset and the South West are embracing the circular economy. Clearly since the input RDF will be coming by sea from potentially very different regimes and contents our concern is justified. This undisclosed content is of concern since no one knows what is being put into the burner what comes out of the flue remains an unknown especially as many toxic chemicals are only sampled for periodically under the permit regime. Current BAT reporting requirements stipulate annual mass releases estimation techniques (RETs) of specified substances on calculated daily averages of continuous emissions measurements (CEMs) but for only a few chemicals. The rest are calculated releases based on periodic samples for the many and all based on mass balance or emission factors

[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/923125/Pollution-inventory-reporting-incineration-activities-guidance-note.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/923125/Pollution-inventory-reporting-incineration-activities-guidance-note.pdf) Pg 19 states “for As Cd Cu Cr Hg Mn Ni Sb V Zn BS EN14385 for extractive monitoring is acceptable.” Pg 23 states: “Each dioxin congener is assigned a toxic equivalency factor. By 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”. The prevalence of estimations and use of pre-agreed factors is not what the public considers is best practice. The applicants own conclusion admits there will be aerial deposition and planned and accidental discharges.

Adding to our concerns is the FOI confirmation that the most up to date EA soil and herbage data is June 2007. <https://www.gov.uk/government/publications/uk-soil-and-herbage-pollutant-survey> Studying the spreadsheet data file **Appendix4MetalsIndustrialSoil.xls** you read of the impact of waste incineration. It is clearly shown that downwind contamination from incinerators is evident over a spectrum of chemicals. What the toxic impact has been after 14 years is conjecture but we can rationally expect that the concentration will have increased day by day in the intervening years. It is impossible to verify the actual location of these data samples within these records and by hiding the locations it frustrates independent review of what has happened over time. The lack of attentiveness by the EA to ensure that these records are refreshed all reduces confidence in the EA permitting process. It is therefore reasonable to raise the question: Has the EA ignored these contamination facts for so long that reviewing and gathering new data is considered to be too problematic? Failing to identify or record a problem does not make it go away.

The local reaction from businesses, who rely on our clean and high-quality environment, is constrained by commercial reality. Perhaps more local businesses have raised their concerns to the Environment Agency than we are aware of. However, from our off-the-record discussions we realise that local businesses are not going to “shoot themselves in the foot”. To be seen to object, to activate a high profile media coverage by speaking out and be quoted, would inform your entire client base that your product is compromised and that would be the end of your business; whatever happens. Once built it will do what it does under EA permitting protocols; any harm to local businesses will have to be ignored or underplayed to keep such other local businesses viable.

All these businesses are relying on the Environment Agency to keep us all and our environment safe. We as campaign researchers have opened-up the issues, studied the processes and realise that legislative constraints have been formed by commercial agreements with the industry. BAT is in effect led by industry with commerce defining what is possible for profit. However, the EA is empowered by the obligations of the EA 25 Year Environment Plan to ensure that the targets are

achieved with real improvements to our damaged environment.

The Environment Agency has an enormous responsibility to get this right. This permit evaluation is not a decision that decides that businesses of a certain magnitude are more important than an individual allotment. Surely all impacts, one or a million are significant, be it to the struggling Portland slow-worm, a local food producer or a family eating local food. My life is certainly significant to me, and I would say to you as the person making this assessment that you must consider your life as significant too. We do not agree with the idea of “significance” as defined by the applicant.

Looking at the complexity of the current situation where the Environment Agency has not controlled pollution going into Portland and Weymouth harbour waters why should we have any confidence about suitable controls in the future? If you were local, you would know that in Castletown the Port has a slipway working area right next to the public slipway with dwellings meters away. This is where industrial cargo ships are pulled out from the water and have their hulls sandblasted clean. Not only is the air filled with the most horrendous toxins right next to homes, but the noise is also unbearable, and where does all that wash-down go? In an area of deprivation and vulnerability biting the hand that feeds you constrains whistle blowing. Who has the power to stop pollution and who is looking after our environment? The public knows it is you.

**4.** We have taken considerable time to focus on these particular aspects of this application. It is difficult to deal with the unbelievable deep littering of information that the applicant has so far provided but it is no bad thing to review the review. You, the assessment team, do not live here so it is our task to bring local understanding and very important issues up to the surface so that you can evaluate best. It would be horrendous that the reason that planning maybe approved is due to certain members of the planning decision making body being swayed by a potential green light from the Environment Agency. An EA minded to approve permit notice may be considered by some, incorrectly, to absolve them of their responsibility when deciding on planning. We worry that the mind set may be: “it is all too complicated - the EA are happy why not us”?

Your chair Emma Howard Boyd, addressing the UK Centre for Greening Finance and Investment Annual Forum 04.07.22, presented a prescient urgency: *“If we fail to identify and address greenwashing, we allow ourselves false confidence that we are already addressing the causes and treating the symptoms of the climate crisis.”* She advises that the danger is that people *“won’t realise this deception until it is too late”*. *“As with the government’s ambition for net zero by 2050, delivering on climate resilience and nature recovery requires robust, consistent and trusted data,”* Given that greenwashing is not just energy but also a “washing” or pretence that the knock-on effect to our ecosystems damage will not happen. In this particular Port location with restricted access, this particular topography and weather conditions we ask that the EA are very careful in their assessments and listen to the locals’ concerns.

Climate change is entwined with the consumption of resources *“thought to be responsible for at least half of the world’s carbon emissions and more than 90% of biodiversity loss.”* . Burning resources is not a sustainable solution and undermines the move to the circular economy. What we need is recovery of the environment not more of the same – greenwashed.

Yours sincerely

Paula Klaentschi

Coordinator SPWI