

# Permitting decisions

## Bespoke permit

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We have decided to grant the permit for Sunseeker International Shipyard operated by Sunseeker International Limited.

The permit number is EPR/WP3200LA.

We consider in reaching that decision we have taken into account all relevant considerations and legal requirements and that the permit will ensure that the appropriate level of environmental protection is provided.

### Purpose of this document

This decision document provides a record of the decision making process. It:

- highlights [key issues](#) in the determination
- summarises the decision making process in the [decision checklist](#) to show how all relevant factors have been taken into account

Unless the decision document specifies otherwise we have accepted the applicant's proposals.

Read the permitting decisions in conjunction with the environmental permit. The introductory note summarises what the permit covers.

### Key issues of the decision

#### Air quality

This is a complex bespoke Medium Combustion Plant application. In line with the Environment Agency's guidance (<https://www.gov.uk/guidance/specified-generators-dispersion-modelling-assessment> and <https://www.gov.uk/guidance/medium-combustion-plant-apply-for-an-environmental-permit#apply-for-a-bespoke-permit>), we require applicants to submit detailed air dispersion modelling and impact assessment to assess the predicted impacts on human receptors (for example dwellings, work places and parks) and ecological sites, as appropriate.

A methodology for risk assessment of point source emissions to air is set out in our guidance <https://www.gov.uk/guidance/air-emissions-risk-assessment-for-your-environmental-permit>.

The applicant provided an assessment of the impact of emissions to air with the application which is detailed in document 'Detailed Air Quality Assessment for a Biomass Boiler operating at Sunseeker International, Osprey Quay, Portland' prepared by Environmental Visage Limited and dated May 2020.

We have reviewed the assessment and are satisfied that it has taken into account all relevant ecological and human health receptors, that the model and its inputs are appropriate and that the assessment has been carried out in accordance with our guidance.

We agree with the applicant's conclusions that the impact of the emissions at human receptors and at ecological receptors are not significant.

## Applicant modelling

The operator has provided detailed atmospheric dispersion modelling which predicts the likely impacts of emissions of oxides of nitrogen (NO and NO<sub>2</sub>).

The facility comprises of one biomass boiler burning untreated waste wood chips with a thermal rated input of 1.1 MWth. The biomass boiler is fired with chipped off-cuts of wood from the yacht building operations undertaken at the site and other Sunseeker ship yards with a capacity of 250 kilograms per hour.

The operator is permitted to operate the biomass boiler for 8,760 hours per annum, but actual operating hours are expected to be 4,380 hours. The biomass boiler discharges directly to the atmosphere via a 15.5 metre high stack.

The boiler emissions were modelled for NO<sub>x</sub>, CO and PM<sub>10</sub> emissions. As the chipped wood may have a proportion of plywood, chipboard or melamine facing, HCN and Formaldehyde were also considered. The model also considers nitrogen oxides (NO<sub>x</sub>), nitrogen deposition and acid deposition for ecological impacts.

The site is not located within an Air Quality Management Area. There are two European designated sites within 5km of the site, Chesil Beach and the Fleet (Ramsar, Special Area of Conservation, and Special Protection Area) and Isle of Portland to Studland Cliffs (Special Area of conservation). There are four designated SSSIs within 2km of the site, Portland Harbour Shore, Nicodemus Heights, Isle of Portland, Chesil and the Fleet.

ADMS Version 5.2 modelling software was used by the applicant to predict the changes in pollutant concentrations from the permitted activities. This is an appropriate computer model for assessing impact on local air quality. The model assumed that the biomass boiler operates for 8,760 hours over a year.

Modelling was undertaken using 6km x 6km grid with 20 metre grid spacing. 18 specific receptors, representing locations where members of the general public may be present for significant periods as well as nearby ecological habitat receptors were also entered into the model.

The model used five years of meteorological data (2015 – 2019) collected from the measurement station at Portland Station, approximately 5.9km from the site. The impact of the terrain surrounding the site upon plume dispersion and the surrounding buildings were considered in the dispersion modelling.

### Impact on human health receptors from the operation of the facility

The background air quality data used in the assessment was obtained from the DEFRA background maps website.

The worst case concentrations from across the modelled grid are listed below. The location of the maximum PC is in the immediate vicinity of the boiler house and not considered a sensitive receptor. It should also be noted that the modelling assumes that the boiler will operate continuously. In reality, the operator has stated that the boiler will actually be in operation for between 8 and 12 hours per day.

<b>Maximum Predicted Impact</b>						
<b>Pollutant</b>	<b>Environmental Standard (ES)</b>	<b>Background</b>	<b>Process Contribution (PC)</b>		<b>Predicted Environmental Concentration (PEC)</b>	
<b>Unit</b>	<b>µg/m<sup>3</sup></b>	<b>µg/m<sup>3</sup></b>	<b>µg/m<sup>3</sup></b>	<b>PC as % of ES</b>	<b>µg/m<sup>3</sup></b>	<b>PEC as % of ES</b>
NO <sub>2</sub> annual mean	40	6.46	10.01	25%	16.47	41%

NO <sub>2</sub> hourly mean	200	12.92	35.27	18%	48.19	24%
PM <sub>10</sub> annual mean	40	10.89	1.00	3%	11.86	30%
CO Maximum rolling 8-hour mean PC	10		0.029	0.29%		
TVOC annual mean	5	0.0828	0.60	12%	0.68	14%
Formaldehyde annual mean	5		0.149	3%		
Formaldehyde hourly mean	100		5.42	5%		
Hydrogen cyanide annual mean			0.149			
Hydrogen cyanide hourly mean	220		5.42	2%		

Results for maximum 8-hour mean Carbon Monoxide, short-term PM<sub>10</sub>, formaldehyde and hydrogen cyanide were screened out as insignificant.

The applicant's results show that emissions could be screened out as insignificant at specific sensitive receptors to human health. However, at the location of maximum process contribution:

- The long-term PC of NO<sub>x</sub>, PM<sub>10</sub>, TVOC and Formaldehyde could not be screened out as insignificant (PC>1% of the ES).
- The short-term PC of NO<sub>x</sub> could not be screened out as insignificant (PC>10% of the ES).

We therefore consider the background and look to determine whether exceedances of the relevant long-term environmental standard are likely. The long-term is considered unlikely to give rise to significant pollution in that there is adequate headroom between the PEC and the ES to indicate that an exceedance of the relevant standard is unlikely. The location of the maximum process contribution is in the vicinity of the boiler house and not in a sensitive location. Also the model is considered conservative, as the actual hours of boiler operation will be 50 – 66% than less than modelled.

#### Nature conservation assessment

With the exception of part of Chesil Beach and the Fleet (Ramsar, Special Area of Conservation, and Special Protection Area), the operators modelling shows that the maximum PCs for designated ecological sites are less than 1% of the long-term AQS and less than 10% of the short term AQS. Therefore the impact to the environment can be considered 'insignificant'.

Therefore, as for human health, we consider the background and look to determine whether exceedances of the relevant long-term environmental standard are likely. The long-term is considered unlikely to give rise to significant pollution in that there is adequate headroom between the PEC and the ES to indicate that an exceedance of the relevant standard is unlikely. Also the model is considered conservative, as the actual hours of boiler operation will be 50 – 66% than the model.

The applicant's modelling also demonstrated that the biomass boiler would have an insignificant impact of the nearest sensitive ecological habitats when modelled as direct contributions of Nitrogen deposition or acid deposition.

## Decision checklist

Aspect considered	Decision
<b>Receipt of application</b>	
Confidential information	A claim for commercial or industrial confidentiality has not been made.
Identifying confidential information	We have not identified information provided as part of the application that we consider to be confidential.
<b>Operator</b>	
Control of the facility	We are satisfied that the applicant (now the operator) is the person who will have control over the operation of the facility after the grant of the permit. The decision was taken in accordance with our guidance on legal operator for environmental permits.
<b>The facility</b>	
The regulated facility	<p>The operator has provided the grid reference for the emission points from the MCPs and the activities are defined in table S1.1 of the permit.</p> <p>The biomass boiler MCP is fuelled with clean waste wood, has an individual unit capacity of more than 1MWth and also burns less than 3 tonnes of biomass per hour. Therefore it is considered a small waste incineration plant, in line with the EP Regulations Schedule 1, Part 2, Chapter 5, Section 5.1 Part B(a)(v).</p> <p>No more than 125 tonnes of waste biomass will be stored on-site at any one time, and therefore a waste operations permit is not required.</p> <p>The biomass boiler has the capacity to burn 0.25 tonnes per hour only. This capacity multiplied by 8,760 hours (the number of hours in a year) equals 2,190 tonnes per annum. This maximum throughput is specified in table S2.1 of the permit.</p>
<b>The site</b>	
Biodiversity, heritage, landscape and nature conservation	<p>The application is within the relevant distance criteria of a European site (SPA, SAC), Ramsar site or SSSI.</p> <p>We have assessed the application and its potential to affect all known sites of nature conservation or habitats identified in the nature conservation screening report as part of the permitting process.</p> <p>We have assessed the operator's air emissions impact modelling report and consider that emissions will not affect any sites of nature conservation or habitats identified. See Key Issues section above.</p> <p>We have not consulted Natural England on the application. The decision was taken in accordance with our guidance.</p>
<b>Environmental risk assessment</b>	
Environmental risk	The facility is not located within a local authority air quality management area

Aspect considered	Decision
	<p>and is not included in the local authority's air quality management plan. Nonetheless, air dispersion modelling was undertaken and submitted by the operator.</p> <p>The assessment shows that applying the conservative criteria in our guidance on environmental risk assessment, all emissions may be categorised as environmentally insignificant/not significant.</p> <p>The applicant's assessment of predicted impacts at sensitive receptors is based on the operating hours of 8,760 hours per annum for the biomass boiler as proposed by the applicant and included in the modelling.</p> <p>We have included these operating hours in the permit (table S1.1) as the modelling shows that, at these operating hours, emissions are unlikely to cause an exceedance of the relevant ESs. See <a href="#">key issues</a> section above.</p> <p>A Best Available Techniques (BAT) Assessment was submitted by the operator, which identifies the operator's equipment and systems that are currently considered BAT for the incineration of wastes.</p>
<b>Operating techniques</b>	
Operating techniques	We have specified the operating techniques and the operator must use the operating techniques specified in table S1.2 of the permit.
Pre-operational conditions	Based on the information in the application, we consider that we do not need to impose conditions other than those in our permit template.
Waste types	<p>We have specified the permitted waste types, descriptions and quantities, which can be accepted at the regulated facility.</p> <p>The operator is only permitted to accept the wastes that are listed in table S2.1 of the permit. This limits the waste biomass to source segregated visibly clean waste wood where no chemical treatments have been applied.</p>
<b>Permit conditions</b>	
Use of conditions other than those from the template	Based on the information in the application, we consider that we do not need to impose conditions other than those in our permit template.
Emission limits	<p>The following ELVs have been set for the biomass boiler:</p> <ul style="list-style-type: none"> <li>- 500mg/Nm<sup>3</sup> (at 6% O<sub>2</sub>) for oxides of nitrogen.</li> <li>- 50mg/Nm<sup>3</sup> (at 6% O<sub>2</sub>) for PM<sub>10</sub>.</li> <li>- 225mg/Nm<sup>3</sup> (at 6% O<sub>2</sub>) for carbon monoxide.</li> <li>- 30mg/Nm<sup>3</sup> (at 6% O<sub>2</sub>) for total volatile organic compounds.</li> <li>- 7.5mg/Nm<sup>3</sup> (at 6% O<sub>2</sub>) for hydrogen cyanide</li> <li>- 7.5mg/Nm<sup>3</sup>(at 6% O<sub>2</sub>) for formaldehyde</li> <li>- No visible dark smoke.</li> </ul>
Monitoring	We have decided that monitoring should be carried out for the parameters listed in the permit, using the methods detailed and to the frequencies specified.

Aspect considered	Decision
	<p>These monitoring requirements have been imposed in order for the operator to demonstrate compliance with the emission limits specified in the permit. The operator will carry out monitoring in accordance with the relevant MCERTS methods.</p> <p>We made these decisions in accordance with MCP technical guidance; <a href="https://consult.environment-agency.gov.uk/psc/mcp-and-sg-regulations/">https://consult.environment-agency.gov.uk/psc/mcp-and-sg-regulations/</a></p>
Reporting	<p>We have specified reporting in the permit.</p> <p>The emissions from the biomass boiler are to be reported every year. This will ensure that the operator is compliant with the limits set in table S3.1 of the permit.</p> <p>We made these decisions in accordance with the MCP technical guidance; <a href="https://consult.environment-agency.gov.uk/psc/mcp-and-sg-regulations/">https://consult.environment-agency.gov.uk/psc/mcp-and-sg-regulations/</a></p>
<b>Operator competence</b>	
Management system	<p>There is no known reason to consider that the operator will not have the management system to enable it to comply with the permit conditions.</p> <p>The decision was taken in accordance with the guidance on operator competence and how to develop a management system for environmental permits.</p>
Relevant convictions	<p>The Case Management System has been checked to ensure that all relevant convictions have been declared.</p> <p>No relevant convictions were found. The operator satisfies the criteria in our guidance on operator competence.</p>
Financial competence	<p>There is no known reason to consider that the operator will not be financially able to comply with the permit conditions.</p>
<b>Growth Duty</b>	
Section 108 Deregulation Act 2015 – Growth duty	<p>We have considered our duty to have regard to the desirability of promoting economic growth set out in section 108(1) of the Deregulation Act 2015 and the guidance issued under section 110 of that Act in deciding whether to grant this permit.</p> <p>Paragraph 1.3 of the guidance says:</p> <p>“The primary role of regulators, in delivering regulation, is to achieve the regulatory outcomes for which they are responsible. For a number of regulators, these regulatory outcomes include an explicit reference to development or growth. The growth duty establishes economic growth as a factor that all specified regulators should have regard to, alongside the delivery of the protections set out in the relevant legislation.”</p> <p>We have addressed the legislative requirements and environmental standards to be set for this operation in the body of the decision document above. The guidance is clear at paragraph 1.5 that the growth duty does not legitimise non-compliance and its purpose is not to achieve or pursue economic growth at the expense of necessary protections.</p> <p>We consider the requirements and standards we have set in this permit are</p>

<b>Aspect considered</b>	<b>Decision</b>
	reasonable and necessary to avoid a risk of an unacceptable level of pollution. This also promotes growth amongst legitimate operators because the standards applied to the operator are consistent across businesses in this sector and have been set to achieve the required legislative standards.