

# Permitting decisions

## Bespoke permit

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We have decided to grant the permit for the Peak Gen Havant site operated by Peak Gen Power 18 Limited.  
The permit number is EPR/YP3732QC.

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; and
- 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/Specified Generator application. In line with the Environment Agency's guidance (<https://consult.environment-agency.gov.uk/psc/mcp-and-sg-regulations/>), we require applicants to submit detailed air dispersion modelling and impact assessment to assess the predicted impacts on both human receptors (for example dwellings, work places and parks) and ecological sites.

A methodology for risk assessment of point source emissions to air is set out in our guidance *Air emissions risk assessment for your environmental permit* and has the following steps:

- Describe emissions and receptors
- Calculate process contributions
- Screen out insignificant emissions that do not warrant further investigation using the Environment Agency's screening tool (specific to assessing impacts from Specified Generators (SG))
- Decide if detailed air modelling is needed
- Assess emissions against relevant standards
- Summarise the effects of emissions.

We use this methodology to assess the impacts on air quality in the determination of applications.

The methodology uses a concept of "process contribution (PC)", which is the estimated concentration of emitted substances after dispersion into the receiving environmental media at the point where the magnitude of the concentration is greatest. The methodology provides a simple method of calculating PC, primarily for screening purposes, and for estimating process contributions where environmental consequences are relatively low. It is based on using dispersion factors. These factors assume worst case dispersion conditions with no allowance made for thermal or momentum plume rise and so the process contributions calculated are likely to be an overestimate of the actual maximum concentrations. More accurate calculation of process contributions can be achieved by mathematical dispersion models, which take into account relevant parameters of the release and surrounding conditions, including local meteorology.

Air dispersion modelling enables the PC to be predicted at any environmental receptor that might be impacted by the emissions from a plant. Once short-term and long-term PCs have been calculated in this way, they are compared with Environmental Standards (ES).

PCs are considered insignificant if:

- the long-term process contribution is less than 1% of the relevant ES; and
- the short-term process contribution is less than 10% of the relevant ES.

The long term 1% process contribution insignificance threshold is based on the judgements that:

- It is unlikely that an emission at this level will make a significant contribution to air quality; and
- the threshold provides a substantial safety margin to protect health and the environment.

The short term 10% process contribution insignificance threshold is based on the judgements that:

- spatial and temporal conditions mean that short term process contributions are transient and limited in comparison with long term process contributions; and
- the threshold provides a substantial safety margin to protect health and the environment.

Where an emission is screened out in this way, we would normally consider that the applicant's proposals for the prevention and control of the emission to be acceptable. However, where an emission cannot be screened out as insignificant, it does not mean it will necessarily be significant.

For those pollutants which do not screen out as insignificant, we determine whether exceedances of the relevant ES are likely. This is done through detailed audit and review of the applicant's air dispersion modelling, taking background concentrations and modelling uncertainties into account.

Where the PC is greater than these thresholds, the assessment must continue to determine the impact by considering the predicted environmental concentration (PEC). The PEC is the combination of the PC substance to air and the background concentration of the substance which is already present in the environment.

The PECs can be considered 'not significant' if the assessment has shown that both the following apply:

- proposed emissions comply with associated emission levels (AELs) or the equivalent requirements where there is no AEL.
- the resulting PECs won't exceed 100% of the environmental standards.

The applicant's air dispersion model used the recognised modelling software, ADMS 5.2, developed and supplied by Cambridge Environmental Research Consultants (CERC). The report is titled, *Peak Gen Power Limited: Havant Power Plant Air Quality Impact Assessment*. The model assumes a maximum of 500 annual operating hours. The key pollutants within the combustion gas that have been modelled by the operator are nitrogen dioxide, PM<sub>10</sub> (particulates), carbon monoxide, sulphur dioxide and ammonia. We have assessed the applicant's dispersion model and we agree with the applicant's conclusion that impacts will not be significant and there will be no exceedances of the relevant environmental standards.

### Predicted impacts at human receptors

The applicant's modelling looks at the impact on a range of sensitive human locations within the proximity of the site. The model assesses the impact at 3 locations at representative locations. We have presented the predicted concentrations at the most sensitive human receptor location (H2). The applicant's predictions are summarised in the table below:

<b>Table 1 – Airborne pollutants. Maximum modelled impact at most sensitive human receptor (H2)</b>						
<b>Pollutant</b>	<b>Environmental standard</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>% of Environmental standard</b>	<b>µg/m<sup>3</sup></b>	<b>PEC % of Environmental standard</b>
NO <sub>2</sub> annual mean	40	15.9	0.55	1.4	16.45	41.1
NO <sub>2</sub> hourly mean	200	31.8	111.23	55.6	143.03	71.5
PM <sub>10</sub> annual mean	40	15.4	0.07	0.2	15.47	38.7
PM <sub>10</sub> daily mean	50	30.8	4.53	9.1	35.33	70.7
CO 8 hour mean	10,000	393	373	3.7	766	7.7
CO	30,000	786	440	1.5	1226	4.1

hourly mean						
SO <sub>2</sub> hourly mean	350	5.82	0.69	0.2	6.51	1.9
SO <sub>2</sub> daily mean	125	2.91	0.36	0.3	3.27	4.9
SO <sub>2</sub> 15 minute mean	266	5.82	0.96	0.4	6.78	2.5
Ammonia annual mean	180	1.32	0.023	<0.1	1.34	0.7
Ammonia 1 hour mean	2,500	2.64	11.31	0.5	13.95	0.6

The modelling provided by the applicant shows that impacts at H2 cannot be considered to be insignificant as the long term impacts of NO<sub>2</sub> and CO emissions are greater than 1% of the environmental standard and short term impacts of NO<sub>2</sub> emissions are greater than 10% of the environmental standard. However, as shown in Table 1, for both long term and short term impacts there is adequate headroom between the PEC and the environmental standard to indicate that an exceedance of the environmental standards is unlikely. We agree with the applicant's conclusions that the impacts from the proposed plant on human receptors will be not significant.

### Predicted impacts at ecological receptors

Our screening process identified 3 Sites of Special Scientific Interest (SSSI), 2 Special Areas of Conservation (SACs), 2 Special Protection Areas (SPAs) and 1 Ramsar site within 5km of the site. The standard screening distance of 10km for European habitats sites is reduced to 5km for SGs using natural gas or low sulphur diesel. This is defined within the Environment Agency's guidance on the Medium Combustion Plant Directive (MCPD) and Specified Generator Regulations (<https://consult.environment-agency.gov.uk/psc/mcp-and-sg-regulations/>).

The applicant's modelling looks at the impact on a range of sensitive ecological locations within the proximity of the site. The model assesses the impact at 8 locations at representative locations. We have presented the predicted concentrations at the most sensitive ecological receptor location (E7). The applicant's predictions are summarised in the table below:

<b>Table 2 – Airborne pollutants. Maximum modelled impact at most sensitive ecological receptor (E7)</b>						
<b>Pollutant</b>	<b>Environmental standard</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>% of Environmental standard</b>	<b>µg/m<sup>3</sup></b>	<b>PEC % of Environmental standard</b>
NO <sub>x</sub> annual	30	17.7	0.28	0.9	17.98	59.9

mean						
NO <sub>x</sub> daily mean	200	35.4	30.65	15.3	66.05	33.0
SO <sub>2</sub> annual mean	20	3.58	<0.001	<0.1	3.58	17.9
Ammonia annual mean	3	1.32	0.008	0.3	1.33	44.3

The modelling provided by the applicant shows that impacts at E7 cannot be considered to be insignificant as the short term impacts of NO<sub>x</sub> are greater than 10% of the environmental standard. However, as shown in Table 3, for both long term and short term impacts there is adequate headroom between the PEC and the environmental standard to indicate that an exceedance of the environmental standards is unlikely. It should be noted that when assessing the impacts of emissions on relevant habitat sites the applicant incorrectly used a daily critical level limit of 200 µg/m<sup>3</sup> for NO<sub>2</sub> emissions. Environment Agency guidance states that the daily critical level limit for NO<sub>2</sub> emissions should be 75 µg/m<sup>3</sup> (<https://www.gov.uk/guidance/air-emissions-risk-assessment-for-your-environmental-permit>). We have assessed the impacts of emissions on relevant habitat sites using the daily critical level limit of 75 µg/m<sup>3</sup> for NO<sub>2</sub> emissions and conclude that, while we do not agree with the values the operator has used, we agree with their conclusions.

### **Emission limit values**

The permit sets an emission limit value (ELV) for oxides of nitrogen (expressed as NO<sub>2</sub>). The ELV for SGs is derived from Schedule 25B of the Environmental Permitting (Amendment) Regulations 2018. While the operator is technically a 'Tranche A' SG, they have applied for a 'Tranche B' permit as they are likely to apply for a balancing market contract in an upcoming auction which will make the installation a 'Tranche B' SG. We are satisfied that the applicant is capable of complying with this lower limit.

At the time of permit issue, the operator does not have abatement installed on the diesel generators and therefore cannot meet the ELVs. However, as the site doesn't operate under a balancing services contract made after 31 October 2017 it is technically a Tranche A generator and therefore does not need to comply with the ELVs until the operator acquires a new balancing services contract for the site. We have included a footnote in table S3.1 in the permit to state that the emission limit value shall apply from the date when the specified generator becomes a Tranche B generator, and that the operator shall inform the Environment Agency 1 month prior to the specified generator becoming a Tranche B generator.

### **Energy efficiency**

Where the combustion units aggregate to an input above 20 MWth, an applicant must demonstrate that they have considered all of the requirements of Article 14 of the Energy Efficiency Directive. An installation type 14.5(a) under the directive is defined as '*New thermal electricity generation installation with a total aggregated net thermal input of more than 20 MW (e.g. power station or EfW plant)*'. In that scenario, the directive requires an applicant to perform a cost benefit analysis for the operation of the installation as a high-efficiency cogeneration installation.

Using the Environment Agency's guidance, *Draft guidance on completing cost-benefit assessments for installations under Article 14 of the Energy Efficiency Directive*, the applicant has concluded that it would not be feasible to operate as a cogeneration facility, utilising the heat energy produced during the process.

The applicant has justified this by outlining that the site operates as peaking plant that will operate for less than 1,500 hours per year over a 5 year period. This facility is planned to operate for no more than 500 hours per year.

## 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>Consultation</b>	
Consultation	<p>The consultation requirements were identified in accordance with the Environmental Permitting Regulations and our public participation statement.</p> <p>We consulted the local authority.</p> <p>No response was received.</p>
<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	The operator has provided the grid reference for the emission points from the specified generator and the activity is defined in table S1.1 of the permit.
<b>The site</b>	
Biodiversity, heritage, landscape and nature conservation	<p>The application is within the relevant distance criteria of a site of nature conservation or habitat.</p> <p>We have assessed the operator's air emissions impact modelling report and consider that emissions will not significantly affect any sites of nature conservation or habitats identified. See <a href="#">key issues</a> section above.</p>
<b>Environmental risk assessment</b>	
Environmental risk	<p>We have reviewed the operator's assessment of the environmental risk from the facility.</p> <p>The operator's risk assessment is satisfactory.</p> <p>The assessment shows that applying the conservative criteria in our guidance on environmental risk assessment [or similar methodology supplied by the operator and reviewed by ourselves], all emissions may be categorised as environmentally insignificant/not significant. See <a href="#">key issues</a> section above.</p>
<b>Operating techniques</b>	

Aspect considered	Decision
Operating techniques	We have specified the operating techniques and the operator must use the operating techniques specified in table S1.2 of the permit.
<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	ELVs have been set for the following substances:  Oxides of nitrogen. The limit set is based on the requirement specified within the Schedule 25B of the Environmental Permitting (Amendment) Regulations 2018 for specified generators. More explanation is provided within <a href="#">key issues</a> .
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.  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.  We made these decisions in accordance with specified generator technical guidance; <i>Specified Generator 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></i>
Reporting	We have specified reporting in the permit.  We made these decisions in accordance with the specified generator technical guidance; <i>Specified Generator 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></i>
<b>Operator competence</b>	
Management system	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.  The decision was taken in accordance with the guidance on operator competence and how to develop a management system for environmental permits.
Relevant convictions	The Case Management System has been checked to ensure that all relevant convictions have been declared.  No relevant convictions were found. The operator satisfies the criteria in our guidance on operator competence.
Financial competence	There is no known reason to consider that the operator will not be financially able to comply with the permit conditions.
<b>Growth Duty</b>	

Aspect considered	Decision
<p>Section 108 Deregulation Act 2015 – Growth duty</p>	<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 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.</p>