

Permitting Decisions- Bespoke Permit

We have decided to grant the permit for Royal Hallamshire Hospital operated by Sheffield Teaching Hospitals NHS Foundation Trust.

The permit number is EPR/WP3623MF.

The permit was granted on 27/08/2026

The application is for:

18 medium combustion plant (MCP) with a combined thermal input capacity of 51.63MW_{th}, comprising:

- 9 natural gas fired boilers (all new MCPs)
- 3 dual fuel (natural gas and diesel) fired standby boilers (all existing MCPs)
- 6 back-up emergency diesel fired generators which provide electrical power to the hospital in the event of a failure of power supply from the national grid (existing and new MCPs)

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:

- summarises the decision making process in the decision considerations section to show how the main relevant factors have been taken into account
- highlights key issues in the determination
- shows how we have considered the consultation responses

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

Read the permitting decisions in conjunction with the environmental permit.

Key issues of the decision

Air quality assessment

Air quality impacts (human health)

The Applicant's assessment of the impact of air quality is set out in the *Detailed Dispersion Modelling Assessment* dated December 2025 of the Application. The assessment comprises:

- Dispersion modelling of emissions to air from the operation of the installation.
- A study of the impact of emissions on nearby sensitive conservation sites.

The air dispersion modelling carried out by the applicant used the ADMS 6 software which we consider an appropriate air quality modelling tool for regulatory purposes. The model used 5 years meteorological data (2019-2023) sourced from Open Weather. The assessment states that Open Weather utilises a sophisticated weather model that integrates multiple data sources and methodologies to provide accurate weather predictions. The model also considered the potential effects of buildings and terrain in the modelling domain on the dispersion of the emitted pollutants. The Applicant's assessment considered impacts from emissions of NO_x, SO₂ and CO.

The Applicant modelled 2 operating scenarios:

- Scenario 1 – all combustion plant operates for all 8760 hours per year.
- Scenario 2 – all combustion plant operates for the number of hours listed in Table 1.1 of the AQA:
 - The three Ruston boilers – 200 hours each.
 - The nine Ideal boilers – 1,500 hours each.
 - The six standby diesel generators – 50 hours each.

The way in which the Applicant used dispersion models, its selection of input data, use of background data and the assumptions it made have been reviewed by the Environment Agency to establish the robustness of the Applicant's air impact assessment. The output from the model has then been used to inform further assessment of health impacts and impact on habitats and conservation sites.

Our audit of the Applicant's assessment concluded that for Scenario 1 there are predicted exceedances of annual mean NO₂ predicted environmental contributions (PECs) at human receptor locations. However, scenario 1 is considered a highly conservative assumption. The Applicant has told us that the standby generators will operate for <50 hours for testing and maintenance per annum under normal operation. Also, the predicted operational hours for the boilers are also significantly less than the scenario assumes.

For Scenario 2 which reflects a more realistic operational scenario we have concluded that annual NO₂ process contributions (PCs) are all insignificant when the operating hours for each combustion plant is operating in line with the hours of operation listed above.

As part of our audit, we considered a 3rd Scenario, which comprised all boilers operating 8760 hours per year and the generators operating for 50 hours per year. For this scenario we concluded that annual mean NO₂ PCs are not insignificant at human receptors when all boilers operate 8760 hours per year, however, the PECs are not predicted to exceed an environmental standard (ES). We also concluded that process contributions of SO₂ and CO are likely to be insignificant.

Based on the conclusions from Scenario 2 & 3 we are satisfied that during normal operation the emissions from the combustion plan will not result in the exceedance of an ES. This is reliant on the operation of the standby generators being <50 hours testing per year and no more than 2 generators being tested at any one time. We have therefore restricted the standby generators to these operating conditions in table S1.1 of the permit. We have also restricted the operating hours of the 3 Ruston Boilers (6MW_{th}) to no more than 500 hours per annum.

Air quality impacts (habitats)

We identified the following European sites within the 10 km screening distance of the facility:

- Peak District Moors (South Pennine Moors Phase 1) Special Protection Area (SPA)
- South Pennine Moors Special Area of Conservation (SAC)

The following non-statutory local wildlife and conservation sites are located within 2 Km of the installation:

- Lynwood Gardens Local Wildlife Site (LWS)
- Botanical Gardens LWS
- Lower Porter (Hunters Bar to City Centre) LWS
- Endcliffe Park LWS
- Blake Street Nature Park LWS
- Bole Hills, Walkely LWS
- Oak Brook (inc. Smith Woods) LWS
- Clough Fields LWS

- The Reaps LWS
- Wardsend Cemetery LWS
- Kelham Island LWS
- Middle River Don (Hillsborough to City Centre) LWS
- Sharrow School Green Roof LWS
- Bingham Park LWS
- River Sheaf (Archer Rd to City Centre) LWS
- Parkwood Springs LWS
- Millstone Edge Rough and Fields LWS
- Lower Rivelin Valley LWS
- Cattle Dock Sidings LWS
- Walkley Bank Plantation LWS
- Smith Wood Ancient Woodland
- Sheffield General Cemetery Local Nature Reserve (LNR)
- Sharrow School Green Roof LNR
- Porter Valley Woodlands LNR
- Sunnybank LNR

We have assessed the impact from the proposed Installation on the Habitat sites that are within the relevant screening distance. As required under the Habitats Regulations we have completed a Habitats Regulation Assessment (HRA). This is a two-stage process. The Stage 1 HRA is where it is identified whether process contribution (PC) will have a likely significant effect on the integrity of the habitat site. For any habitat site where we are unable to conclude that there will be no likely significant effect on the integrity of the site a detailed 'appropriate assessment' of the impacts is carried out under the Stage 2 HRA to determine if the impacts will have an adverse effect on the habitat site.

The AQ assessment and our audit of it shows that for all the operating scenarios the process contributions of NO_x, nitrogen deposition and acid deposition at the Peak District Moors SPA & South Pennine Moors SAC when compared to the relevant critical levels and loads are likely to be insignificant. We have therefore concluded no likely significant effect on the integrity of the habitat sites. We have completed a stage 1 HRA detailing our assessment and this was sent to Natural England for information only.

Assessment of other conservation sites

Conservation sites are protected in law by legislation. The Habitats Directive provides the highest level of protection for SACs and SPAs and domestic legislation provides a lower but important level of protection for SSSIs. Finally the Environment Act provides more generalised protection for flora and fauna rather than for specifically named conservation designations. It is under the Environment Act that we assess other sites (such as local wildlife sites) which prevents us from permitting something that will result in significant pollution; and which offers levels of protection proportionate with other European and national legislation. However, it should not be assumed that because levels of protection are less stringent for these other sites that they are not of considerable

importance. Local sites link and support EU and national nature conservation sites together and hence help to maintain the UK's biodiversity resilience.

For SACs SPAs, Ramsar and SSSIs we consider the PC and the background levels in making an assessment of impact. In assessing these other sites under the Environment Act we look at the impact from the Installation alone in order to determine whether it would cause significant pollution. This is a proportionate approach, in line with the levels of protection offered by the conservation legislation to protect these other sites (which are generally more numerous than Natura 2000 or SSSIs) whilst ensuring that we do not restrict development.

Critical levels and loads are set to protect the most vulnerable habitat types. Thresholds change in accordance with the levels of protection afforded by the legislation. Therefore, the thresholds for SAC SPA and SSSI features are more stringent than those for other nature conservation sites.

Therefore, we would generally conclude that the Installation is not causing significant pollution at these other sites if the PC is less than the relevant critical level or critical load, provided that the Operator is using BAT to control emissions.

The Operator's assessment shows that the PCs at the non-statutory local wildlife and conservation sites listed above will be below the relevant critical levels or loads. We are therefore satisfied that the Installation will not cause significant pollution at the sites. The Operator is required to prevent, minimise and control emissions using BAT, this is considered further in Section 5.

Point source emissions to water and sewer

There are no point source emissions to water or sewer.

Fugitive emissions

All combustion units are located within a building. The standby generators are fitted with bunded drip trays. The buildings also contain day tanks storing fuel for the standby generators. These tanks are not individually bunded however the Applicant has confirmed that any spillage from the tanks would be contained within the building. The internal diesel storage tanks do not have high level alarms however the Applicant has stated that the tanks are only filled to 40% of the maximum capacity using the tanks contents gauge. The maximum capacity of gas oil/ diesel stored on site for the Weston Park generator is 1,476 L, and 3,420 L for the Jessop Wing.

Waste lubricants, coolants and cleaning liquids arising from the maintenance of the boilers and generators are stored in dedicated containers on spill pallets. Spill kits are stored near combustion units. The combustion units are regularly serviced, and the storage tanks are inspected annually by a third party.

The installation also has 4 external bulk storage tanks for diesel. The tanks are located within bunds and have high levels alarms to prevent overfilling. Diesel deliveries occur approximately twice per year. The tanks are not filled to maximum capacity due to low turnover and to minimize fuel degradation over time. The maximum stock likely to be held on-site is 140,000 L for standby generators and 50,000 L for boilers located in the RHH building.

The Applicant has stated that deliveries are carried out on impermeable surfacing, drain covers will be used to prevent spillages entering the surface water drainage system and deliveries are supervised by trained staff with spill kits located close by.

The Applicant provided a recent tank inspection report (December 2025) carried out by a third party. The report indicated that the external bulk tanks do not currently comply with requirements of the Oil Storage Regulations 2001. For this reason, we have included an improvement condition (IC3) in the permit that requires the Operator to carry out remedial works so the tanks comply with the regulations within 12 months of the issue of the permit.

Best available techniques

The operator has completed a BAT assessment against the Large Combustion Plant (LCP) BAT conclusions. Whilst the size of the new combustion plant means LCP does not apply, the assessment provides sufficient information to demonstrate the techniques used are in line with BAT for the proposed combustion activity.

With specific reference to the standby generators, the following guidance applies:

[Emergency backup diesel engines on installations: best available techniques \(BAT\) - GOV.UK](#)

The guidance states that the default generator specification as a minimum for new plant to minimise the impacts of emissions to air (NO_x) is 2g TA-Luft (or equivalent standard) or an equivalent NO_x emission concentration of 2000mg/m³ at reference conditions and 5% O₂. The generator specifications on the site have emissions higher than this, and the Applicant has confirmed that the generators do not comply with the guidance.

Standby generators A13 (0.97 MW_{th} Volvo) & A14 (3.145MW_{th} Perkins) were first put into operation before 2018, and which precedes the introduction of the guidance on minimum emission standards for standby generators we acknowledge that it would not be practicable to require the operator to upgrade this plant to BAT standards. However, generators A15, A16 & A17 (3 x 5.02MW_{th} Pramack); and A18 (1.408MW_{th} Pramack) were first put into operation after 2018 and therefore should comply with the specification. We however do not consider it appropriate to require the Operator to upgrade the generators due to the relatively small number and size of generators; and the AQ impacts are likely to be insignificant.

With regard to other aspects of BAT in this guidance the Applicant has confirmed that they are compliant, with the exception of BAT guidance to test only one generator at a time. The Applicant has stated that they are required to test two generators at a time this is because one generator on its own does not have the electrical capacity to facilitate the whole of the hospital. As the air quality assessment shows that air quality impacts from the testing is likely to be insignificant we are satisfied that the requirement to test the standby generators individually is unnecessary in this case.

Monitoring

Monitoring requirements have been set for the new combustion plant that are in line with the Medium Combustion Plant Directive (MCPD). We have limited the operation of the standby generators to <50 hours for testing and Ruston boilers to less than 500 hours operation, this in line with the Applicant's proposed usage. This means that ELVs have not been set. ELVs have been set for the other boilers for NO_x and CO as these boilers will operate more than 500 hours per year.

Monitoring for NO_x and CO is required for all combustion plant with the exception of the <1MWth generator. For the 3 dual fuel boilers we have decided not to set a separate monitoring requirement when firing on diesel or equivalent. We are satisfied that the monitoring when firing on natural gas will be sufficient to ensure the combustions units are operating as described in the application. The Applicant has stated that the boilers will only be fuelled by gas oil in emergency situations when the gas supply is interrupted. We have set a requirement to report on how many hours the dual fuel boilers run on gas oil to monitor its usage.

Emission Limits

Emission limits have been set for the new combustion plant that are in line with the Medium Combustion Plant Directive (MCPD).

Noise

Based upon the information in the Application we are satisfied that the appropriate measures will be in place to prevent or where that is not practicable to minimise noise and vibration and to prevent pollution from noise and vibration outside the site.

The Applicant proposed the following key measures to minimise noise emissions and impacts:

- All generators are serviced by experienced staff and that continual pre-planned maintenance is carried out.
- The generators are fitted with a silencer. The silencers reduce the noise of the generators exiting the building.
- The generators are located within a building.
- Doorways which could allow noise to travel from the gas generators to sensitive receptors are closed where possible/appropriate.

The combustion plant are spread over a wide area of the hospital. Weston Park and Jessop Wing house one small standby unit each, both of which are located within a building. Each of which are existing and will operate <50hours per year for testing. Residential receptors are located 80m away. Therefore, noise pollution is unlikely to be significant.

The 4 larger standby units located at RHH will also operate for <50 hours annum for testing. The 12 boilers located in the RHH Boiler house are all existing. Residential receptors are located over 100m away. Our noise advisory tool indicates that the risk of noise pollution is low.

The local authority has been consulted they indicated that the site did have a previous noise issue associated with noise from one of the exhaust stacks, this was resolved and no recent noise issues have been identified. The variation does not require alterations to the existing stacks.

Energy Efficiency

Having considered the information submitted in the Application, we are satisfied that the appropriate measures will be in place to ensure that the Operator will use energy efficiently.

The proposed operating techniques include:

- The generators and boilers on site are managed through an online Planned Preventative Maintenance (PPM) system ensure the units are regularly checked and maintained to ensure the units are running efficiently.
- Preheating of combustion air takes place.
- The site management system includes requirements to optimise energy consumption.
- Regular surveys are carried out to identify energy efficiency measures.

The Permit includes the following condition:

1.2.1 The operator shall:

- (a) take appropriate measures to ensure that energy is used efficiently in the activities;

- (b) take appropriate measures to ensure the efficiency of energy generation at the permitted installation is maximised;
- (c) review and record at least every four years whether there are suitable opportunities to improve the energy efficiency of the activities; and
- (d) take any further appropriate measures identified by a review.

Avoidance, recovery and disposal of wastes

The facility will not generate significant quantities of waste. Waste oil, coolant and contaminated rags from servicing is stored in drums on banded pallets and is sampled and disposed of by a licensed waste contractor.

Based upon the information in the application, we are satisfied that the appropriate measures will be in place to prevent or where that is not practicable to minimise pollution from waste.

Raw materials

Having considered the information submitted in the Application, we are satisfied that the appropriate measures will be in place to ensure that the Operator will make efficient use of raw materials and water.

The raw materials used on site is natural gas for the 12 boilers, approximately 45,666,124 kwh/annum. Under normal operation the site will also use diesel (gas oil) for the 3 dual fuel fuelled Ruston boilers and six standby generators (for testing), approximately 8,200 litres per annum. The site will also use small amounts of lubricating oils for the engines and water for the boilers.

The permit includes the following condition:

1.3.1 The operator shall:

- a) take appropriate measures to ensure that raw materials and water are used efficiently in the activities;
- b) maintain records of raw materials and water used in the activities;
- c) review and record at least every four years whether there are suitable alternative materials that could reduce environmental impact or opportunities to improve the efficiency of raw material and water use; and
- d) take any further appropriate measures identified by a review.

Decision considerations

Confidential information

A claim for commercial or industrial confidentiality has not been made.

The decision was taken in accordance with our guidance on confidentiality.

Identifying confidential information

We have not identified information provided as part of the application that we consider to be confidential.

The decision was taken in accordance with our guidance on confidentiality.

Consultation

The consultation requirements were identified in accordance with the Environmental Permitting (England and Wales) Regulations (2016) and our public participation statement.

The application was publicised on the GOV.UK website.

We consulted the following organisations:

- Local Authority – Environmental Protection Department
- Local Authority – Planning
- Director of PH/UKHSA
- Health and Safety Executive
- Sewerage Authority

The comments and our responses are summarised in the [consultation responses](#) section.

Operator

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.

The regulated facility

We considered the extent and nature of the facility at the site in accordance with RGN2 'Understanding the meaning of regulated facility', Appendix 2 of RGN2 'Defining the scope of the installation', Appendix 1 of RGN 2 'Interpretation of Schedule 1'

The extent of the facility defined in the site plan and in the permit. The activities are defined in table S1.1 of the permit.

The site

The operator has provided a plan which we consider to be satisfactory.

This show the extent of the site of the facility.

The plan is included in the permit.

Site condition report

The operator has provided a description of the condition of the site, which we consider is satisfactory. The decision was taken in accordance with our guidance on site condition reports and baseline reporting under the Industrial Emissions Directive.

Nature conservation, landscape, heritage and protected species and habitat designations

We have checked the location of the application to assess if it is within the screening distances we consider relevant for impacts on nature conservation, landscape, heritage and protected species and habitat designations. The application is within our screening distances for these designations.

We have assessed the application and its potential to affect sites of nature conservation, landscape, heritage and protected species and habitat

designations identified in the nature conservation screening report as part of the permitting process.

We consider that the application will not affect any site of nature conservation, landscape and heritage, and/or protected species or habitats identified.

We sent the completed HRA to Natural England for information only.

The decision was taken in accordance with our guidance.

Environmental risk

We have reviewed the operator's assessment of the environmental risk from the facility.

The operator's risk assessment is satisfactory.

Operating techniques

The operating techniques that the applicant must use are specified in table S1.2 in the environmental permit.

National Air Pollution Control Programme

We have considered the National Air Pollution Control Programme as required by the National Emissions Ceilings Regulations 2018. By setting emission limit values in line with technical guidance we are minimising emissions to air. This will aid the delivery of national air quality targets. We do not consider that we need to include any additional conditions in this permit.

Raw materials

We have specified limits and controls on the use of raw materials and fuels.

Improvement programme

Based on the information on the application, we consider that we need to include an improvement programme. See key issues section for details of the improvement conditions that have been included in the permit.

Emission Limits

Emission limits have been set for the new combustion plant that are in line with the Medium Combustion Plant Directive (MCPD).

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. Monitoring is in line with the Medium Combustion Plant Directive (MCPD).

Reporting

We have specified reporting in the permit.

We made these decisions in accordance with the requirements of MCPD.

Management System

We are not aware of any 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.

We only review a summary of the management system during determination. The applicant did not submit their full management system. We have therefore only reviewed the summary points. We have set an improvement condition in the permit requiring the Operator to a written report to the Environment Agency for approval that demonstrates that their Environmental Management System complies with the requirements of condition 1.1.1 of the permit and Environment Agency guidance document [Develop a management system: environmental permits - GOV.UK](#).

Also, a full review of the management system is undertaken during compliance checks.

Growth duty

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.

Paragraph 1.3 of the guidance says:

“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.”

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.

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.

Consultation Responses

The following summarises the responses to consultation with other organisations and our notice on GOV.UK for the public and the way in which we have considered these in the determination process.

Responses from organisations listed in the consultation section:

- Response received from Environmental Protection Dept - Sheffield Council

Brief summary of issues raised: The site has a history of noise complaints relating to noise from the main. The Council worked with the Hospital to resolve the issue and the Hospital installed mitigation. The Council consider it is no longer an issue. There only current concern would be if there would be a requirement in the permit to make adjustments to the main stack or an increase in noise at a certain frequency band.

Summary of actions taken: The permit does not require any changes to the stack and the existing noise levels from the installation should not change following permit issue.

- Response received from UKHSA

No issues raised