

The Drax Power (Generating Stations) Order

Land at, and in the vicinity of, Drax Power Station, near Selby, North Yorkshire

Environmental Statement

Appendix 6.1 - Air Quality Policy and Legislation



The Planning Act 2008
The Infrastructure Planning (Applications: Prescribed Forms and Procedure)
Regulations 2009 – Regulation 5(2)(a)

Drax Power Limited

Drax Repower Project

Applicant: DRAX POWER LIMITED
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Appendix 6.1: Air Quality Policy and Legislation

6.1 National Planning Policy

National Policy statements

- 6.1.1. DECC has published six National Policy Statements (NPS) for Energy in 2011 (see Chapter 2). Whilst EN-4 and EN-5 are relevant to the Proposed Scheme, EN-1 and EN-2 are the most relevant in regards to air quality.
- 6.1.2. Paragraphs 4.10.1 and 4.10.2 of NPS EN-1 state that "Issues relating to discharges or emissions from a proposed project which affect air quality...may be subject to separate regulation under the pollution control framework or other consenting and licensing regimes. The planning and pollution control systems are separate but complementary. The planning system controls the development and use of and in the public interest."
- 6.1.3. Paragraph 4.10.3 goes on to make clear that the SoS "should focus on whether the development itself is an acceptable use of the land, and on the impacts of that use, rather than the control of processes, emissions or discharges themselves. The [SoS] should work on the assumption that the relevant pollution control regime and environmental regulatory regimes, will be properly applied and enforced by the relevant regulator."
- 6.1.4. Paragraph 4.10.8 makes it clear that the SoS "should not refuse consent on the basis of pollution impacts unless it has good reason to believe that any relevant necessary operational pollution control permits or licences or other consents will not subsequently be granted."
- 6.1.5. Accordingly, it is not for the DCO process to control the emissions from the Proposed Scheme, rather it is for the DCO Application to demonstrate that the emissions from the Proposed Scheme are acceptable in planning terms and that there is no reason why the EA would not grant an Environmental Permit for the Proposed Scheme. For this reason, the applicant is engaging early with the EA.
- 6.1.6. NPS EN-1 supports the use of Combined Heat and Power (CHP) as using "less fuel to generate the same amount of heat and power reduces emissions, particularly CO₂." Paragraph 4.6.7 states that "developers should consider the opportunities for CHP".
- 6.1.7. NPS1 EN-1 also supports the use of Carbon Capture and Storage (CCS) and paragraph states that "All commercial scale fossil fuelled generating stations have to be carbon capture ready." Further, paragraph 4.7.10 states that "To ensure that no foreseeable barriers exist to retrofitting carbon capture and storage (CCS) equipment on combustion generating stations, all applications for new combustion plant which are of generating capacity at or over 300 MW and of a type covered by the EU's Large Combustion Plant Directive (LCPD) 88 should demonstrate that the plant is "Carbon Capture Ready" (CCR) before consent may be given."
- 6.1.8. Part 5 of NPS EN-1 details the potential impacts of energy infrastructure including air quality and emissions. Paragraph 5.2.1 of NPS EN-1 advises that the construction, operation and decommissioning of infrastructure development can "involve emissions to air which could lead to adverse impacts on health, on protected species and habitats, or on the wider countryside." Paragraph 5.2.7 of NPS EN-1 states that an assessment should be undertaken, as part of the ES, detailing:

- “Any significant air emissions, their mitigation and any residual effects distinguishing between the project stages and taking account of any significant emissions from any road traffic generated by the project;
- The predicted absolute emission levels of the proposed project, after mitigation methods have been applied;
- Existing air quality levels and the relative change in air quality from existing levels; and
- Any potential eutrophication impacts.”

6.1.9. Paragraph 2.3.16 of NPS EN-2 states that, “Applicants should demonstrate good design particularly in respect of landscape and visual amenity ...and in the design of the project to mitigate impacts such as ... air emissions.” Section 2.4 of NPS EN-2 details policy requirements for assessing the potential impacts of energy infrastructure projects for fossil fuel generating stations including air emissions. Section 2.5 of NPS EN-2 sets out specific considerations on air quality that apply to fossil fuel generating stations. Paragraphs 2.5.3 and 2.5.4 state that fossil fuel generating stations are likely to emit NO_x but that these emissions are regulated by the EA through the Environmental Permit Regulations.

National Planning Policy Framework (NPPF)

6.1.10. The Government’s overall planning policies for England are described in the NPPF5. The core underpinning principle of the NPPF is the presumption in favour of sustainable development, defined as:

"Development that meets the needs of the present without compromising the ability of future generations to meet their own needs"

6.1.11. One of the 12 core planning principles in the NPPF is that planning should "contribute to conserving and enhancing the natural environment and reducing pollution."

6.1.12. In relation to air quality, the following paragraphs in the document are relevant:

- Paragraph 109, which states *"The planning system should contribute to and enhance the natural and local environment by:...preventing both new and existing development from contributing to or being put at unacceptable risk from, or being adversely affected by unacceptable levels of soil, air, water, or noise pollution."*
- Paragraph 110, which states *"In preparing plans to meet development needs, the aim should be to minimise pollution and other adverse effects on the local and natural environment. Plans should allocate land with the least environmental or amenity values, where consistent with other policies in this Framework."*
- Paragraph 122, which states *"...local planning authorities should focus on whether the development itself is an acceptable use of the land, and the impact of the use, rather than the control of processes or emissions themselves where these are subject to approval under pollution control regimes. Local planning authorities should assume that these regimes will operate effectively. Equally, where a planning decision has been made on a particular development, the planning issues should not be revisited through the permitting regimes operated by pollution control authorities."*
- Paragraph 124, which states *"Planning policies should sustain compliance with and contribute towards EU limit values or national objectives for pollutants, taking into account the presence of Air Quality Management Areas and the cumulative impacts on air quality from individual sites in local areas. Planning decisions should ensure that any new*

development in Air Quality Management Areas is consistent with the local air quality action plan."

- Paragraph 203, which states "*Local Planning Authorities should consider where otherwise unacceptable development could be made acceptable through the use of conditions or planning obligations. Planning Obligations should only be used where it is not possible to address unacceptable impacts through a planning condition.*"

6.1.13. The draft NPPF (Ref. 6.3) published in March 2018 includes some minor amendments to the existing air quality considerations. The draft NPPF states the need to consider air quality and potential mitigation at the plan making stage rather than when determining applications. The relevant paragraphs of the draft NPPF are:

- Paragraph 129, which states "*Planning policies and decisions should sustain and contribute towards compliance with relevant limit values or national objectives for pollutants, taking into account the presence of Air Quality Management areas and Clean Air Zones, and the cumulative impacts from individual sites in local areas. Opportunities to improve air quality or mitigate impacts should be identified, such as through traffic and travel management, and green infrastructure provision and enhancement. So far as possible these opportunities should be considered at the plan-making stage, to ensure a strategic approach and limit the need for issues to be reconsidered when determining individual applications. Planning decisions should ensure that any new development in Air Quality Management Areas and Clean Air Zones is consistent with the local air quality action plan.*"
- Paragraph 168, which states "*Planning policies and decisions should contribute to and enhance the natural local environment by: ...e) preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by unacceptable levels of soil, air, water or noise pollution or land instability. Development should wherever possible, help to improve local environmental conditions such as air quality.*"
- Paragraph 178, which states "*Planning policies and decisions should also ensure that new development is appropriate for its location taking into account the likely effects (including cumulative effects) of pollution on health and living conditions, as well as the potential sensitivity of the site or the wider area to impacts that could arise from the development.*"
- Paragraph 181, which states "*The focus of planning policies and decision should be on whether proposed development is an acceptable use of land, rather than the control of processes or emissions (where these are subject to separate pollution control regimes). Planning decisions should assume that these regimes will operate effectively. Equally, where a planning decision has been made on a particular development, the planning issues should be revisited through the permitting regimes operated by pollution control authorities.*"

LOCAL PLANNING POLICY

Selby District Council Local plan 2013

6.1.14. SDC's Local Plan, Policy SP18 Protecting and Enhancing the Environment, states that: "The main elements of the diverse range of assets that exist in the District (and which Policy SP18 seeks to protect and enhance) are: Air quality".

6.1.15. A number of saved policies from the 2005 Selby District Local Plan⁷ have been retained, including Policy ENV2 Environmental pollution and Contaminated land that states: “Proposals for development which would give rise to, or would be affected by, unacceptable levels of noise, nuisance, contamination or other environmental pollution including groundwater pollution will not be permitted unless satisfactory remedial or preventative measures are incorporated as an integral element in the scheme.”

[Selby Air Quality: Planning Guidance Note](#)

6.1.16. SDC has published an air quality planning guidance note⁸ to support developers when preparing air quality assessments. The guidance includes a checklist that enables applicants to check all relevant information have been included in detailed air quality impact assessment.

[Legislation](#)

UK AIR QUALITY STRATEGY

6.1.17. The Government's policy on air quality within the UK is set out in the Air Quality Strategy for England, Scotland, Wales and Northern Ireland (AQS). The AQS provides a framework for reducing air pollution in the UK with the aim of meeting the requirements of European Union legislation.

6.1.18. The AQS also sets standards and objectives for nine key air pollutants to protect health, vegetation and ecosystems. The standards and objectives for the pollutants considered in this assessment are given in Table A6.1-1.

Table A6.1-1 - Air Quality Objectives Relevant to the Air Quality Assessment of Impacts from the Proposed Scheme

Pollutant	Objective	Measured As	Set for
Nitrogen Dioxide (NO ₂)	200µg/m ³	1 hour mean, not to be exceeded more than 18 times a year	Human Health
	40µg/m ³	Annual mean	Human Health
Particulate Matter (PM ₁₀)	40µg/m ³	Annual mean	Human Health
	50µg/m ³	24 hour mean, not to be exceeded more than 35 times a year	Human Health
Particulate Matter (PM _{2.5})	25µg/m ³	Annual mean	Human Health
Carbon Monoxide (CO)	10,000µg/m ³	8 hour mean	Human Health
Ammonia (NH ₃)	180µg/m ³	Annual mean	Human Health ²
	2,500µg/m ³	1 hour mean	Human Health ²

Pollutant	Objective	Measured As	Set for
Ammonia (NH ₃)	3µg/m ³ (1µg/m ³) ¹	Annual mean	Ecosystems ²
Hydrogen Chloride (HCl)	750µg/m ³	1 hour mean	Human Health ²
Sulphur Dioxide (SO ₂)	266µg/m ³	15 minute mean, not to be exceeded more than 3515 minute periods	Human Health
	350µg/m ³	1 hour mean, not to be exceeded more than 241 hour periods	Human Health
	125µg/m ³	24 hour mean, not to be exceeded more than 324 hour periods	Human Health
	20µg/m ³ (10µg/m ³) ¹	Annual mean	Ecosystems ²
	10/20µg/m ³	Annual mean	Ecosystems ²
	10/20µg/m ³	Annual mean	Ecosystems ²
Nitrogen Oxides (NO _x)	30µg/m ³	Annual mean	Ecosystems
	75µg/m ³	24 hour mean	Ecosystems ²
¹ Applicable where lichens or bryophytes are present ² EA guidance			

- 6.1.19. The air quality standards are levels recommended by the Expert Panel on Air Quality Standards (EPAQS) and the World Health Organisation (WHO) with regards to current scientific knowledge about the effects of each pollutant on health and the environment.
- 6.1.20. The air quality objectives are medium-term policy based targets set by the Government, which take into account economic efficiency, practicability, technical feasibility and timescale. Some objectives are equal to the EPAQS recommended standards or WHO guideline limits, whereas others involve a margin of tolerance, i.e. a limited number of permitted exceedances of the standard over a given period.
- 6.1.21. For the pollutants considered in this assessment, there are both long-term (annual mean) and short-term standards (hourly). In the case of NO₂, the short-term standard is for a 1-hour averaging period, whereas for PM₁₀ it is for a 24-hour averaging period. These periods reflect the varying impacts on health of differing exposures to pollutants, for example temporary exposure on the pavement adjacent to a busy road, compared with the exposure of residential properties adjacent to a road.

6.1.22. The AQS contains a framework for considering the effects of a finer group of particles known as 'PM_{2.5}' as there is increasing evidence that this size of particles can be more closely associated with observed adverse health effects than PM₁₀. Local Authorities are required to work towards reducing emissions/concentrations of particulate matter within their administrative area. However, there is no statutory objective given in the AQS for PM_{2.5} at this time.

AIR QUALITY REGULATIONS

6.1.23. Many of the objectives in the AQS have been made statutory in England with the Air Quality (England) Regulations 2000 and the Air Quality (England) (Amendment) Regulations 2002 for the purpose of Local Air Quality Management (LAQM).

6.1.24. These Regulations require that likely exceedances of the AQS objectives are assessed in relation to: "...the quality of air at locations which are situated outside of buildings or other natural or man-made structures, above or below ground, and where members of the public are regularly present..."

6.1.25. The Air Quality Standards Regulations 2010 transpose Directive 2008/50/EC on ambient air quality and Directive 2004/107/EC relating to the concentration of certain heavy metals and polycyclic aromatic hydrocarbons in ambient air. Both Directives were amended by Commission Directive 2015/1480 and the 2016 Amendment Regulations amends the definition of "Directive 2008/50/EC" so that each reference to the Directive in the Regulations is a reference to the Directive as amended by Commission Directive 2015/1480.

6.1.26. Directive 2008/50/EC sets legally binding limit values for concentrations in outdoor air of major air pollutants that impact public health such as PM₁₀, PM_{2.5} and NO₂. The limit values for NO₂ and PM₁₀ are the same concentration levels as the relevant AQS objectives and the limit value for PM_{2.5} is a concentration of 25 µg/m³.

ENVIRONMENTAL PROTECTION ACT 1990 - CONTROL OF DUST AND PARTICULATES ASSOCIATED WITH CONSTRUCTION

6.1.27. Section 79 of the Environmental Protection Act 1990 (as amended) gives the following definitions of statutory nuisance relevant to dust and particles:

- "Any dust, steam, smell or other effluvia arising from industrial, trade or business premises or smoke, fumes or gases emitted from premises so as to be prejudicial to health or a nuisance"; and
- "*Any accumulation or deposit which is prejudicial to health or a nuisance*".

6.1.28. Following this, Section 80 says that where a statutory nuisance is shown to exist, the local authority must serve an abatement notice. Failure to comply with an abatement notice is an offence and if necessary, the local authority may abate the nuisance and recover expenses.

6.1.29. There are no statutory limit values for dust deposition above which 'nuisance' is deemed to exist. Nuisance is a subjective concept and its perception is highly dependent upon the existing conditions and the change which has occurred.

ENVIRONMENT ACT 1995

- 6.1.30. Under Part IV of the Environment Act 1995 (as amended), local authorities must review and document local air quality within their area by way of staged appraisals and respond accordingly, with the aim of meeting the air quality objectives defined in the Air Quality Regulations. Where the objectives are not likely to be achieved, an authority is required to designate an Air Quality Management Area (AQMA). For each AQMA the local authority is required to draw up an Air Quality Action Plan (AQAP) to secure improvements in air quality and show how it intends to work towards achieving air quality standards in the future.

INDUSTRIAL EMISSION DIRECTIVE (IED)

- 6.1.31. Directive 2010/75/EU on industrial emissions (IED) recast seven earlier EU directives related to industrial emissions, in particular Directive 2008/1/EC of 15 January 2008 concerning integrated pollution prevention and control (the Integrated Pollution Prevention and Control (IPPC) Directive) and Directive 2001/80/EC on the limitation of emissions of certain pollutants into the air from large combustion plants (the Large Combustion Plant Directive (LCPD)), into a single legislative instrument to improve the permitting, compliance and enforcement regimes adopted by Member States.
- 6.1.32. IED requires that permit conditions for new plant shall be set with reference to the latest reference documents on Best Available Techniques (BAT), and the associated BAT conclusions, and that existing permits shall be regularly reviewed in light of updated BAT conclusions.
- 6.1.33. The latest BAT conclusions for large combustion plants were adopted on 31 July 2017 (Commission Implementing Decision (EU) 2017/1442). For the purpose of this report, it is assumed that permit conditions for the existing plant will be set to meet the 2017 BAT conclusions. Conditions for the new plant will be the subject of further consultation with the Environment Agency.