The Drax Power (Generating Stations) Order

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

Environmental Statement
1 – Introduction

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
Date:	May 2018
Document Ref:	6.1.1
PINS Ref:	EN010091

Document History

Document Ref	6.1.1		
Revision	001		
Author	Catherine Sugden		
Signed		Date	21/05/2018
Approved By	Chris Taylor		
Signed		Date	21/05/2018
Document Owner	WSP UK Limited		

Table of Contents

Table of Tables

Table of Figures

1 INTRODUCTION

1.1.1. This Environmental Statement (ES) has been prepared by WSP on behalf of Drax Power Limited.

1.2 The Applicant

1.2.1. The applicant is Drax Power Limited ('Drax'). Drax Power Station is owned and managed by the applicant, who is part of the Drax Group Plc, one of the UK's largest energy producers.

1.3 Background

1.3.1. Drax Power Station is located near Selby, North Yorkshire.

1.3.2. Drax Power Station began generating electricity after its first 660 MW coal fired unit was commissioned in 1974. In 1975, Drax Power Station was officially opened, with three coal fired units and a total generating capacity of just under 2,000 MW. Eleven years later, in 1986, Drax Power Station doubled in size and became the largest power station in the UK. There are now six units at Drax Power Station which include three units converted to biomass (units 1-3), with the fourth unit expected to be converted in 2018. Drax Power Station now has the capacity to meet 8% of the UK's electricity need and employs 830 people directly throughout the year. A further 4,500 jobs depend on Drax throughout Yorkshire and the Humber[1].

1.3.3. Land uses within the Existing Drax Power Station Complex are predominantly associated with the operation of Drax Power Station. This includes a coal stock yard, hard standing, contractors' compounds, car parks, access/service roads and a riverside loading / unloading jetty, which is linked to the River Ouse to the east. Other la3nd uses within the Existing Drax Power Station Complex not directly related to the operation of Drax Power Station comprise open grassland, scrub and farmland.

1.4 The Proposed Scheme

1.4.1. Drax is proposing to repower up to two existing coal-fired units (known as unit 5 and unit 6) with gas – this means the existing coal-fired units would be decommissioned and replaced with newly constructed gas-fired units utilising some of the existing infrastructure. Each unit, which is a new gas fired generating station in its own right, would comprise combined cycle gas turbine (CCGT) and open cycle gas turbine (OCGT) technology. Each new gas generating unit would use existing infrastructure, including the cooling system and steam turbines, and would each have a new capacity of up to 1,800 MW, replacing existing units each with a capacity of up to 660 MW. Each unit would also have a battery storage capability of up to 100 MW (subject to technology and commercial considerations). Should both units be repowered, the new gas-fired units / generating stations would have a combined capacity of 3,600 MW and a combined battery storage capacity of 200 MW (totalling a capacity of up to 3,800 MW).

1.4.2. Drax is seeking consent for the flexibility to either repower one unit (i.e. construct a single generating station) (with 1,800 MW generating capacity and a 100 MW battery storage

[1] https://www.drax.com/about-us/our-businesses-and-projects/

capacity) or to repower two units (two generating stations each with a 1,800 MW generating capacity and each with its own 100 MW battery storage capacity). The decision as to whether Drax repowers two units and constructs two gas fired generating stations as opposed to a single unit is a commercial decision that can only be taken post any consent being granted.

1.4.3. A connection to the electrical network via the existing National Grid Substation on the Power Station Site will be provided.

1.4.4. In order to repower to gas, a new Gas Pipeline needs to be constructed from Drax Power Station to the National Gas Transmission System (NTS).

1.4.5. The Proposed Scheme includes the construction of a generating station with a capacity of more than 50 MW and accordingly meets the criteria given in the Planning Act 2008 (as amended) (PA 2008) for being a Nationally Significant Infrastructure Project (NSIP).

1.4.6. As a NSIP, the Proposed Scheme therefore requires a Development Consent Order (DCO) from the Secretary of State (SoS).

1.4.7. The process for applying for a DCO and the policy and legislation with which the Proposed Scheme must comply is described in more detail below.

1.4.8. The location of the Proposed Scheme is shown in Figure 1.1, an aerial view is shown in Figure 1.2 and the current and proposed land uses are shown in Figure 1.3. A more detailed description of the Proposed Scheme is provided in Chapter 3 (Site and Project Description).

1.5 Environmental Impact Assessment (EIA)

The Need for EIA

1.5.1. The Proposed Scheme is considered to be “Schedule 1 Development” under the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (EIA Regulations 2017). The Proposed Scheme, therefore, automatically requires an Environmental Impact Assessment (EIA), and a Screening Opinion to determine whether an EIA was required was not needed from the SoS.

1.5.2. The Proposed Scheme falls under the category of “Thermal power stations and other combustion installations with a heat output of 300 megawatts or more”.

1.5.3. The DCO Application is therefore supported by this ES.

1.5.4. The EIA Regulations 2017 set out a procedure for assessing, consulting on, and coming to a decision on projects that are likely to have significant environmental effects.

The Scope of the EIA

1.5.5. An opinion from the Planning Inspectorate (PINS) on behalf of the SoS as to the scope and level of detail of the information to be provided in the ES was requested by the applicant on 13 September 2017 (Scoping Opinion), Appendix 1.2.

1.5.6. A report setting out what the applicant considered should be the scope of the ES was also provided to PINS with the scoping request in the form of a Scoping Report. The Scoping Report is attached at Appendix 1.1.

1.5.7. The Scoping Opinion was received by the applicant from PINS (on behalf of the SoS) on 23 October 2017, including formal responses from statutory consultees. The Scoping Opinion is attached at Appendix 1.2.

1.5.8. All issues raised in the Scoping Opinion have been considered during the EIA process and are discussed in further detail in the technical chapters.

Preliminary Environmental Information

1.5.9. Preliminary Environmental Information (PEI) was published on 11 January 2018. It was produced to inform the public and stakeholders of the applicant's preliminary assessment of the likely significant environmental effects of the Proposed Scheme. PEI is required to be published as part of the applicant's statutory consultation carried out under sections 42, 47 and 48 of the PA 2008 and regulation 12 of the EIA Regulations 2017.

1.5.10. PEI is required by the EIA Regulations 2017 and defined in Regulation 12(2) as information referred to in Regulation 14(2), which:

- Has been compiled by the applicant.
- Is reasonably required for the consultation bodies to develop an informed view of the likely significant environmental effects of the development (and of any associated development).
- All issues raised during consultation on the PEI have been considered during the EIA process. Further information is provide in the Consultation Report (document reference 5.1) and within this ES Chapters 5-16.

Environmental Statement

1.5.11. The results of the EIA have been presented in this ES, which was produced so the SoS can take account of the environmental effects of the Proposed Scheme, when deciding whether or not to grant the DCO.

1.5.12. The ES identifies and sets out any likely significant environmental effects, as well as any measures needed to mitigate likely significant adverse environmental effects, taking account of the Mitigation Hierarchy. The Mitigation Hierarchy is to first try to avoid, then prevent and then reduce likely significant adverse effects on the environment and, if possible, offset likely significant adverse effects on the environment.

1.5.13. The ES also identifies residual effects. Residual effects are the effects a proposed development is likely to have after mitigation measures are implemented.

1.5.14. The ES takes account of the potential cumulative effects of the Proposed Scheme in combination with other relevant, known, proposed or consented schemes, as well as the combined effects resulting from the interrelationship of the various environmental effects caused by the Proposed Scheme.

1.5.15. The ES has been produced in accordance with Regulation 14 of the EIA Regulations 2017, including all necessary information in order to satisfy Regulation 14(2)(a)-(f) and Schedule 4.

1.5.16. Regulation 14(2) specifies what environmental information must be included in an ES. Regulation 14(3)(b) requires that an ES must include information *"reasonably required for reaching a reasoned conclusion on the significant effects of the development on the*

environment, taking into account current knowledge and methods of assessment". A summary of the information required is given in Table 1-1.

Table 1-1 - Information provided in the ES

Location in EIA Regulations 2017	Requirement	ES Reference
Reg 14(2) (a) and Schedule 4 (1)	A description of the proposed development comprising information on the site, design, size and other relevant features of the development. A description of the development, including in particular— (a) a description of the location of the development; (b) a description of the physical characteristics of the whole development, including, where relevant, requisite demolition works, and the land-use requirements during the construction and operational phases; (c) a description of the main characteristics of the operational phase of the development (in particular any production process), for instance, energy demand and energy used, nature and quantity of the materials and natural resources (including water, land, soil and biodiversity) used; (d) an estimate, by type and quantity, of expected residues and emissions (such as water, air, soil and subsoil pollution, noise, vibration, light, heat, radiation and quantities and types of waste produced during the construction and operation phases.	Chapter 3 (Site and Project Description) Chapters 5-16
Reg 14(2) (b) Schedule 4(4) Schedule 4(6)	A description of the likely significant effects of the proposed development on the environment. A description of the factors specified in regulation 5(2) likely to be significantly affected by the development: population, human health, biodiversity (for example fauna and flora), land (for example land take), soil (for example organic matter, erosion, compaction, sealing), water (for example hydromorphological changes, quantity and quality), air, climate (for example greenhouse gas emissions, impacts relevant to adaptation), material assets, cultural heritage, including	Chapters 5-16

Location in EIA Regulations 2017	Requirement	ES Reference
	architectural and archaeological aspects, and landscape. A description of the forecasting methods or evidence, used to identify and assess the significant effects on the environment, including details of difficulties (for example technical deficiencies or lack of knowledge) encountered compiling the required information and the main uncertainties involved.	
Schedule 4(3)	A description of the relevant aspects of the current state of the environment (baseline scenario) and an outline of the likely evolution thereof without implementation of the development as far as natural changes from the baseline scenario can be assessed with reasonable effort on the basis of the availability of environmental information and scientific knowledge.	Chapter 5-16
Reg 14(2) (c) Schedule 4(7)	A description of any features of the proposed development, or measures envisaged in order to avoid, prevent or reduce and, if possible, offset likely significant adverse effects on the environment. A description of the measures envisaged to avoid, prevent, reduce or, if possible, offset any identified significant adverse effects on the environment and, where appropriate, of any proposed monitoring arrangements (for example the preparation of a post-project analysis). That description should explain the extent, to which significant adverse effects on the environment are avoided, prevented, reduced or offset, and should cover both the construction and operational phases.	Chapters 5-16
Reg 14(2) (d) Schedule 4(2)	A description of the reasonable alternatives studied by the applicant, which are relevant to the proposed development and its specific characteristics, and an indication of the main reasons for the option chosen, taking into account the effects of the development on the environment. A description of the reasonable alternatives (for example in terms of development design,	Chapter 4 (Consideration of Alternatives)

Location in EIA Regulations 2017	Requirement	ES Reference
	technology, location, size and scale) studied by the developer, which are relevant to the proposed project and its specific characteristics, and an indication of the main reasons for selecting the chosen option, including a comparison of the environmental effects.	
Reg 14(2) (e) Schedule 4(9)	A non-technical summary of the information referred to in sub-paragraphs (a) to (d) A non-technical summary of the information provided under paragraphs 1 to 8.	Non-Technical Summary to this ES
Schedule(4)(10)	A reference list detailing the sources used for the descriptions and assessments included in the environmental statement.	Chapters 1-17
Reg 14(2) (f)	Any additional information specified in Schedule 4 relevant to the specific characteristics of the particular development or type of development and to the environmental features likely to be significantly affected.	Chapters 5-16
Schedule 4 (5)(a)	A description of the likely significant effects of the development resulting from - The construction and existence of the development, including, where relevant, demolition works.	Chapter 5-14
Schedule 4 (5)(b)	A description of the likely significant effects of the development resulting from - The use of natural resources, in particular land, soil, water and biodiversity, considering as far as possible the sustainable availability of these resources.	Chapter 9 (Biodiversity) Chapter 11 (Ground conditions and contamination) Chapter 12 (Water resources) Chapter 15 (Climate)
Schedule 4 (5)(c)	A description of the likely significant effects of the development resulting from - The emission of pollutants, noise, vibration, light, heat and radiation, the creation of nuisances, and the disposal and recovery of waste;	Chapter 6 (Air quality) Chapter 7 (Noise and vibration) Chapter 9 (Biodiversity) Chapter 13 (Waste)

Location in EIA Regulations 2017	Requirement	ES Reference
		Chapter 15 (Climate)
Schedule 4 (5)(d) Schedule 4 (8)	A description of the likely significant effects of the development resulting from - The risks to human health, cultural heritage or the environment (for example due to accidents or disasters) A description of the expected significant adverse effects of the development on the environment deriving from the vulnerability of the development to risks of major accidents and/or disasters which are relevant to the project concerned. Relevant information available and obtained through risk assessments pursuant to EU legislation such as Directive 2012/18/EU of the European Parliament and of the Council(3) or Council Directive 2009/71/Euratom(4) or UK environmental assessments may be used for this purpose provided that the requirements of this Directive are met. Where appropriate, this description should include measures envisaged to prevent or mitigate the significant adverse effects of such events on the environment and details of the preparedness for and proposed response to such emergencies.	Chapter 6 (Air quality) Chapter 7 (Noise and vibration) Chapter 8 (Cultural Heritage) Chapter 11 (Ground conditions and contamination) Chapter 15 (Climate) Chapter 16 (Major Accidents) Chapter 17 (Cumulative effects)
Schedule 4 (5)(e)	A description of the likely significant effects of the development resulting from - The cumulation of effects with other existing and/or approved projects, taking into account any existing environmental problems relating to areas of particular environmental importance likely to be affected or the use of natural resources;	Chapter 17 (Cumulative effects)
Schedule 4 (5)(f)	A description of the likely significant effects of the development resulting from - The impact of the project on climate (for example the nature and magnitude of greenhouse gas emissions) and the vulnerability of the project to climate change;	Chapter 15 (Climate)
Schedule 4 (5)(g)	A description of the likely significant effects of the development resulting from - The technologies and the substances used	Chapter 3 (Site and Project Description) Chapters 5-16

Location in EIA Regulations 2017	Requirement	ES Reference
Regulation 14(4)(b)	A statement from the applicant outlining the relevant expertise or qualifications of such experts.	Chapter 1 (Introduction)

1.6 Consultation

1.6.1. Under Section 42 (Duty to Consult), Section 47 (Duty to consult local community) and Section 48 (Duty to publicise) of the PA 2008, and Regulation 13 of the EIA Regulations 2017, there is a duty placed on the applicant to consult relevant and prescribed organisations, local authorities, interested parties, local communities and any person notified to the applicant by the SoS in accordance with regulation 11(1)(c) of the EIA Regulations 2017.

1.6.2. A Consultation Report (document reference 5.1) has been prepared to accompany the DCO Application which discusses the entire consultation process, detailing how regard has been had to all comments received, and how comments may have shaped and influenced the proposals for the Proposed Scheme to accompany the DCO Application.

1.7 Relevant Expertise

1.7.1. In line with Regulation 14(4)(a) of the EIA Regulations 2017 this ES, and all technical assessments which inform it, have been undertaken by a suitably qualified project team.

1.7.2. WSP have been appointed by the applicant to undertake the EIA and are responsible for both the EIA and ES. WSP are competent experts in EIA and the Institute of Environmental Management and Assessment (IEMA) has awarded WSP the EIA Quality Mark for holistic activity around EIA. WSP have continued to maintain this following ongoing, annual examination in relation to our ongoing products, staff, innovation and promotion of EIA within the industry. WSP have and continue to support and lead nationally recognised guidance for EIA in the UK.

1.7.3. It is a combination of the EIA Quality Mark and the experience and qualifications of WSPs Practitioners that form part of the EIA team that ensure we comply with this requirement.

1.7.4. Furthermore, all technical assessments have been subject to a thorough technical review, to assure technical credibility, followed by subsequent review by the EIA coordination team. To ensure that all deliverables are produced to the necessary high standards, WSP's Business Management System is certified to ISO 9001:2015 standards.

1.7.5. In accordance with Regulation 14(4)(b) of the EIA Regulations 2017, the relevant expertise or qualifications of the WSP technical experts responsible for the preparation of this ES are outlined in Table 1-2 below.

Table 1-2 - Overview of the competence of the WSP technical experts responsible for the preparation of this ES

Location in EIA Regulations 2017	Requirement	ES Reference
Environmental Project Director	Clare Hennessey BSc (Hons) MRTPI	25 years' experience in environmental planning and EIA. Member of the Royal Town Planning Institute and Member of the National Infrastructure Planning Association. Planning Association.
Environmental Project Manager	Chris Taylor MChem PhD MIEnvSc MIAQM	15 years' experience in environmental consulting and EIA. Member of the Institution of Environmental Sciences and the Institute of Air Quality Management.
EIA Coordinator	Catherine Sugden BSc (Hons) MSc MIEMA CEnv	Nearly seven years' experience in environmental consulting and EIA. Full member of the Institute of Environmental Management and Assessment and a chartered environmentalist (MIEMA CEnv).
Transport	Vinny Holden MA (Hons) CMILT	15 years' experience in Transport Planning and EIA. Chartered Member of the Chartered Institute of Logistics and Transport.
Air Quality	Bethan Tuckett Jones MIAQM CEnv	26 years' experience working in the field of dispersion modelling and air quality.
Noise and Vibration	Pete Bushell BSc (Hons) MIOA	13 years' experience in acoustic consulting. Member of the Institute of Acoustics.
Historic Environment	Charly Vallance BA (Hons) ACIfA	Nine years' experience as an Archaeologist and four years' experience as a Heritage Consultant. Member of the Chartered Institute for Archaeologists
Biodiversity	Philip Davidson BSc CEnv MCIEEM	15 years' experience working in the field of ecological consultancy and associated areas of environmental impact assessment. Full Member of the Chartered Institute of Ecology and Environmental Management. Chartered Environmentalist.
Landscape and Visual	Maritta Boden MSc, BA Hons, ARTPI, CMLI	Over 20 years' experience in environmental consulting and landscape architecture / planning. Chartered member of the Landscape Institute and Associate member of the Royal Town Planning Institute

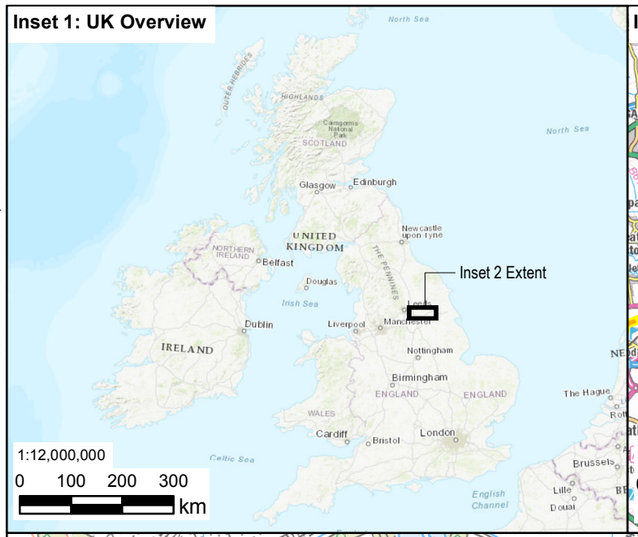
Location in EIA Regulations 2017	Requirement	ES Reference
Ground Conditions	Lisa Cook BSc (Hons) MRes MIEMA CEnv MCIWEM	Over 13 years' consultancy experience in assessment and remediation of contaminated land. Key experience includes: Site Investigation and Remediation; Auditing; Due Diligence; Planning (including EIA and DCO applications); Part 2A; Spill Response; and Detailed Quantitative Risk Assessments.
Water Resource, Quality and Hydrology	Louise Markose MA MSc MCIWEM	12 years' experience in flood risk management and the water environment. Member of the Chartered Institution of Water and Environmental Management.
Waste	Christopher Parr BSc (Hons) MSc MCIWM	Chartered Member of the Chartered Institution of Wastes Management with over 6 years' consultancy experience. Extensive experience in leading waste design and planning support to planning applications for a range of development types across numerous sectors. Specialises in providing input to EIA, masterplanning and complex waste management strategy development.
Socio-economics	Kyle Welburn BA (Hons), MA, PIEMA	Socio-economic specialist with over 7 years' experience in environmental consulting. Production of industry guidance on assessment of Peoples and Communities for Highways England (author).
Climate Change (Greenhouse Gases)	Tom Wood CEnv MCIWEM	Chartered Environmentalist with 13 years' experience in environmental consulting. Production of industry guidance on assessment of climate change in EIA for Highways England (author) and the Institute of Environmental Assessment & Management (review panel).
Climate Change (Resilience)	Paul Munday BSc MSc PhD CSci C.WEM CGeog (GIS) MCIWEM FRGS	11 years' experience in climate adaptation, risk and resilience. ISO14091 (climate vulnerability and risk assessment) and ISO14097 (climate finance and investment) committee member.
Major Accidents and Natural Disasters	Laura Dugdale MIEMA, CEnv, Tech IOSH, MSc, BSc	15 years' experience in environmental consultancy, providing EHS support to clients and preparing IPPC / EPR permit applications and COMAH Safety Reports.

Location in EIA Regulations 2017	Requirement	ES Reference
		Experience of hazards/aspects identification and assessment, qualitative and quantitative risk assessments and identification of major accident scenarios for emergency planning purposes.

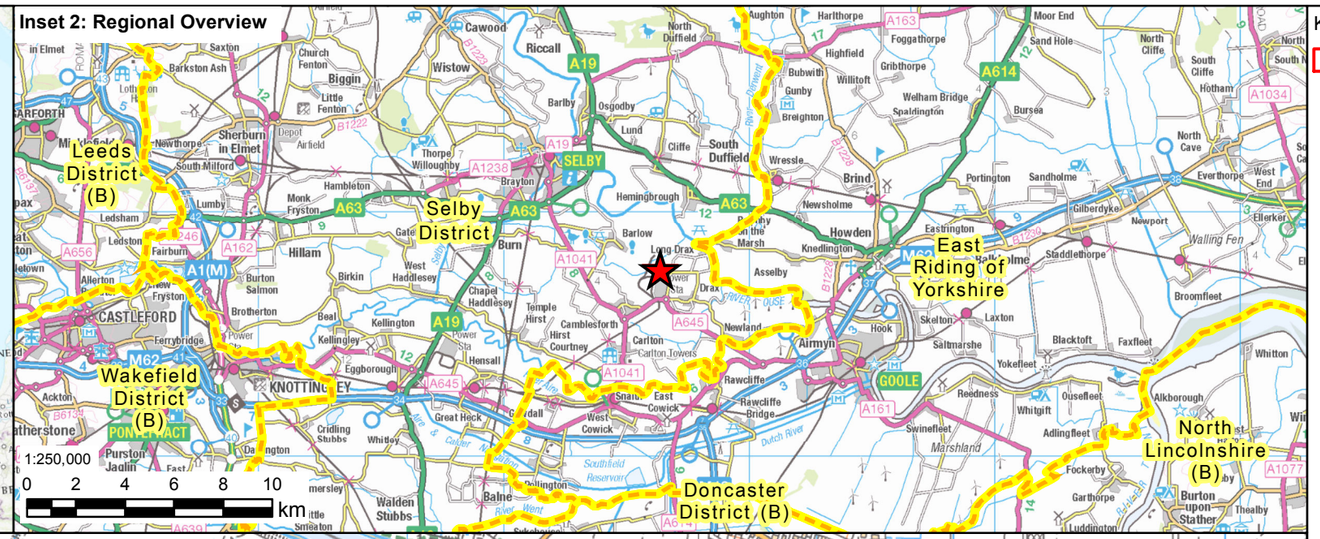
User Name: UKRJM017 | Date Saved: 18/05/2018 09:14:09

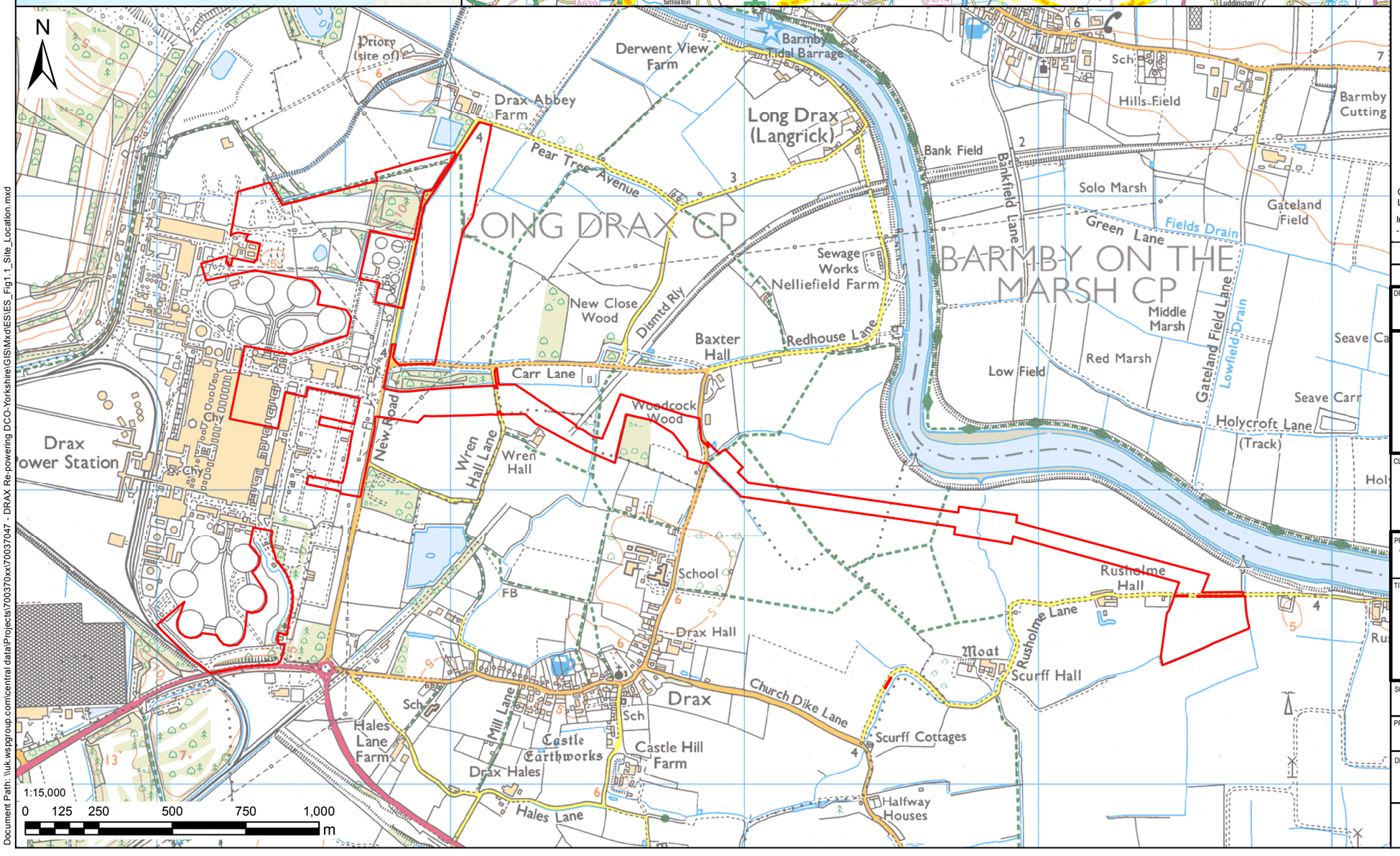
Document Path: \\uk.wspgroup.com\central data\Projects\700370xx\70037047 - DRAX Re-powering DCO-Yorkshire\GIS\MxdIES\ES_Fig1.1_Site_Location.mxd

Inset 1: UK Overview



Inset 2: Regional Overview





Key

Site Boundary

Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 - Regulation 5(2)(a)

REV	DATE	BY	DESCRIPTION	CHK	APP
A	23/04/2018	RMcC	FIRST ISSUE	CS	CT

DRAWING STATUS: FINAL

Three White Rose Office Park, Millshaw Park Lane, Leeds, LS11 0DL, UK
Tel: +44 113 395 6200 Fax: +44 113 395 6201
wsp.com

CLIENT: drax

PROJECT: The Drax Power (Generating Stations) Order

TITLE: Figure 1.1 Site Location

SCALE @ A3:	CHECKED:	APPROVED:
See map @ A3	CS	CT

PROJECT No:	DESIGNED:	DRAWN:	DATE:
70037047	RMcC	RMcC	23/04/2018

DRAWING No: 70037047-1.1 REV: A

Key

Site Boundary

Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 - Regulation 5(2)(a)

REV	DATE	BY	DESCRIPTION	CHK	APP
A	23/04/2018	RMcC	FIRST ISSUE	CS	CT

DRAWING STATUS: FINAL

wsp
Three White Rose Office Park, Millshaw Park Lane, Leeds, LS11 0DL, UK
Tel: +44 113 395 6200 Fax: +44 113 395 6201
wsp.com

CLIENT: drax

PROJECT: The Drax Power (Generating Stations) Order

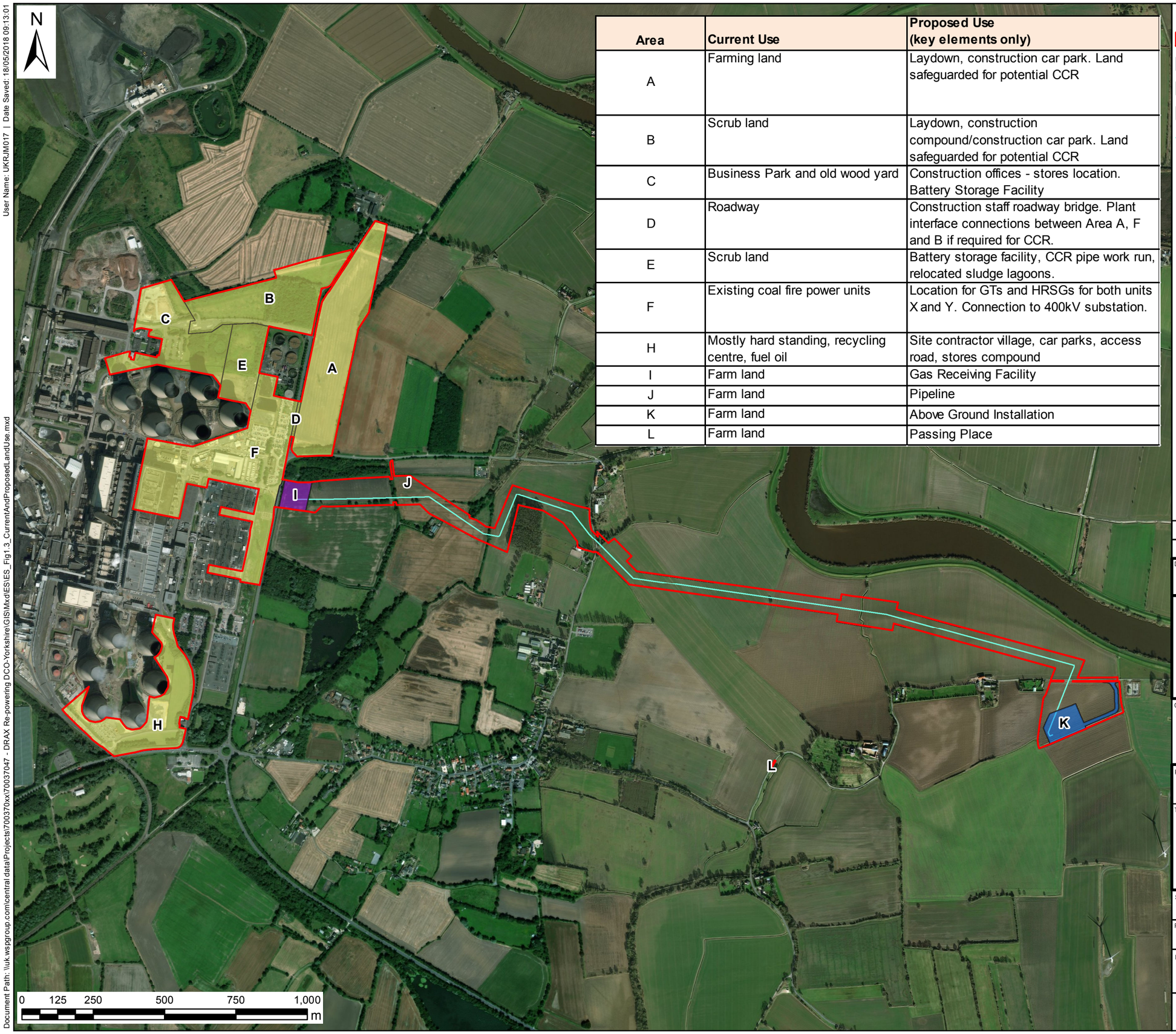
TITLE:

Figure 1.2
Aerial View of the Site

SCALE @ A3:	CHECKED:	APPROVED:
15,000 @ A3	CS	CT

PROJECT No:	DESIGNED:	DRAWN:	DATE:
70037047	RMcC	RMcC	23/04/2018

DRAWING No: 70037047-1.2 REV: A



Area	Current Use	Proposed Use (key elements only)
A	Farming land	Laydown, construction car park. Land safeguarded for potential CCR
B	Scrub land	Laydown, construction compound/construction car park. Land safeguarded for potential CCR
C	Business Park and old wood yard	Construction offices - stores location. Battery Storage Facility
D	Roadway	Construction staff roadway bridge. Plant interface connections between Area A, F and B if required for CCR.
E	Scrub land	Battery storage facility, CCR pipe work run, relocated sludge lagoons.
F	Existing coal fire power units	Location for GTs and HRSGs for both units X and Y. Connection to 400kV substation.
H	Mostly hard standing, recycling centre, fuel oil	Site contractor village, car parks, access road, stores compound
I	Farm land	Gas Receiving Facility
J	Farm land	Pipeline
K	Farm land	Above Ground Installation
L	Farm land	Passing Place

Key

- Site Boundary
- Development Parcels
- Gas Receiving Facility
- Above Ground Installation
- Gas Pipeline

Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 - Regulation 5(2)(a)

REV	DATE	BY	DESCRIPTION	CHK	APP
A	23/04/2018	RMcC	FIRST DRAFT	CS	CT

DRAWING STATUS: FINAL

wsp
Three White Rose Office Park, Millshaw Park Lane, Leeds, LS11 0DL, UK
Tel: +44 113 395 6200 Fax: +44 113 395 6201
wsp.com

CLIENT: drax

PROJECT: The Drax Power (Generating Stations) Order

TITLE:

Figure 1.3
Current and Proposed Land Use

SCALE @ A3:	CHECKED:		APPROVED:
13,000 @ A3	CS		CT
PROJECT No:	DESIGNED:	DRAWN:	DATE:
70037047	WSP	RMcC	23/04/2018

DRAWING No: 70037047-1.3 REV: A

User Name: UKRJM017 | Date Saved: 18/05/2018 09:13:01
Document Path: \\uk.wspgroup.com\central data\Projects\70037047xx\70037047 - DRAX Re-powering DCO-Yorkshire\GIS\MxdES\ES_Fig1.3_CurrentAndProposedLandUse.mxd