West Burton C Power Station Environmental Impact Assessment Scoping Report

Project Number: 60527350

April 2017

Quality information

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Revision History

Revision	Revision date	Details	Authorised by	Position
1.0	25/04/17	Final	R. Lowe	Director

Glossary

Abbreviation	Description
ADMS	Atmospheric Dispersion Modelling System
APFP	Applications: Prescribed Forms and Procedures
AQMA	Air Quality Management Area
AQS	Air Quality Strategy
BDC	Bassetlaw District Council
BS	British Standard
CAA	Civil Aviation Authority
CCR	Carbon Capture Readiness
CCS	Carbon Capture and Storage
CCGT	Combined Cycle Gas Turbine
CDM	Construction (Design and Management) Regulations 2015
CEMP	Construction Environmental Management Plan
CHP	Combined Heat and Power
CMS	Construction Method Statement
COPA	Control of Pollution Act 1974
CRTN	Calculation of Road Traffic Noise
DCLG	Department of Communities and Local Government
DCO	Development Consent Order
DECC	Department of Energy and Climate Change
DMRB	Design Manual for Roads and Bridges
DMV	Deserted Medieval Village
DTM	Digital Terrain Model
EH	English Heritage
EIA	Environmental Impact Assessment
EMR	Emergency Market Reform
ES	Environmental Statement
FGD	Flue gas desulphurisation
HA	Highways Agency
HCA	Homes and Communities Agency
HE	Historic England
HER	Historic Environment Record
HGV	Heavy Goods Vehicle
HHRA	Human Health Risk Assessment
IAQM	Institute of Air Quality Management
IED	Industrial Emissions Directive
IEEM	Institute of Ecology and Environmental Management
IEMA	Institute of Environmental Management and Assessment
LCA	Landscape Character Assessment
LWS	Local Wildlife Site
MW	Megawatts
NAQS	National Air Quality Strategy

NCA	National Landscape Character Area
NPPF	National Planning Policy Framework
NPS	National Policy Statement
NSIP	Nationally Significant Infrastructure Project
NTS	Non-Technical Summary
OCGT	Open Cycle Gas Turbine
PEI	Preliminary Environmental Information
PINS	Planning Inspectorate
RCA	Regional Character Area
RSPB	Royal Society for the Protection of Birds
SAC	Special Area of Conservation
SNCI	Site of Nature Conservation Importance
SPA	Special Protection Area
SPZ	Source Protection Zone
SSSI	Site of Special Scientific Interest
TA	Transport Assessment
WFD	Water Framework Directive
WHO	World Health Organisation
WLDC	West Lindsey District Council
ZTV	Zone of Theoretical Visibility

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1. Introduction

1.1 Background

1.1.1 AECOM Infrastructure and Environment Ltd ('AECOM') has been commissioned by EDF Energy (West Burton Power) Limited (hereafter referred to as 'the Applicant' or 'EDF Energy', as appropriate) to prepare this Environmental Impact Assessment (EIA) Scoping Report to inform the scope and content of an EIA for a proposed gas-fired generating station near Gainsborough, Nottinghamshire (hereafter referred to as the 'Proposed Development') (see **Figure 1**). An EIA is being prepared to support an application for development consent for the Proposed Development, to be submitted to the Planning Inspectorate (PINS) for determination in accordance with The Planning Act 2008.

1.1.2 The Proposed Development would provide a gross electrical output of up to 299 megawatts (MW) of electrical generation capacity for export onto the UK national transmission system. It would be constructed within the boundary of the existing West Burton Power Station site (and associated land within the ownership of the Applicant).

1.1.3 Peaking plants are used to rapidly supply electricity to the network when required by the National Grid. These plants are most likely to run during periods of low electricity supply or high demand, or when required to provide technical services to support the National Grid. This is expected to be weighted towards the winter period, for a few hours at a time. However, as the operation of the plant is driven by the dynamics of the energy market, the plant could run for longer periods, at any time of day, up to the maximum allowed under its Environmental Permit, which is currently anticipated to be 1,500 hours per year.

1.1.4 The application for development consent will be accompanied by an Environmental Statement (ES), which will be prepared in accordance with the Infrastructure Planning (Environmental Impact Assessment) Regulations 2009 (as amended) ('EIA Regulations'). The application will be submitted in accordance with Regulation 5 (2)(a) of the Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 ('APFP Regulations').

1.1.5 This Scoping Report considers the environmental context of the Proposed Development Site and the potential environmental impacts of the Proposed Development. Where impacts are considered to have the potential to cause significant environmental effects, these are identified and the proposed approach to be used to characterise the impacts and understand the significance of their effects is outlined. This Scoping Report also outlines issues perceived to be not significant which it is proposed do not require formal assessment as part of the EIA.

1.2 Consenting Regime

1.2.1 The Proposed Development falls within the definition of a 'nationally significant infrastructure project' (NSIP) under Section 14(1)(a) and 15(2) of the Planning Act 2008 as a 'generating station exceeding 50 MW'. It is also a 'Schedule 2' development under Part 3(a) of The Infrastructure Planning (Environmental Impact Assessment) Regulations 2009 (as amended) ('EIA Regulations') as it constitutes '*Industrial installations for the production of electricity, steam and hot water'*. Whilst EIA is not compulsory for Schedule 2 developments, given the character and scale of the Proposed Development, it is considered that there is potential for the Proposed Development to have significant effects on the environment.

1.2.2 As a NSIP project, the Applicant is required to secure a Development Consent Order (DCO) to construct and operate the power station, under Section 31 of the Planning Act 2008. The

application for development consent will be prepared in accordance with Section 37 of this Act and secondary legislation including the EIA Regulations and the APFP Regulations (detailed above). The application for development consent will be submitted to PINS who will examine the application and make a recommendation to the Secretary of State. In turn, the Secretary of State will determine whether or not a DCO should be granted for the Proposed Development.

1.2.3 **Figures 2 and 3** illustrate the Indicative DCO Site boundary, which comprises the proposed generating station and associated infrastructure including gas and electricity connections. A description of the indicative Site and Proposed Development is provided in **Sections 2** and **3** of this Scoping Report.

1.2.4 As the Applicant proposes to provide an Environmental Statement (ES) with the application for development consent, this Scoping Report constitutes the Applicant's notification under Regulation 6(1) of the EIA Regulations 2009 that it proposes to provide an Environmental Statement in respect of the Proposed Development.

1.3 Objectives of Scoping

1.3.1 Having determined that an EIA will be prepared for the Proposed Development, scoping forms the next key stage of the EIA process. It provides a framework for identifying likely significant environmental impacts arising from the development and distinguishing the priority issues to be addressed at the assessment stage. By doing so, the scoping phase assists in focusing attention on key environmental impacts for inclusion within the assessment. A Scoping Report also identifies those matters which do not need to be assessed in detail. In addition, scoping provides key stakeholders with an early opportunity to comment on the proposed structure, methodology and content of the EIA.

1.3.2 This Scoping Report has been prepared as part of a request to PINS for a formal Scoping Opinion on the information to be provided in the ES, pursuant to Regulation 8 of the EIA Regulations.

1.3.3 **Table 1.1** presents a list of information that should be included in a Scoping Report, as prescribed by EIA Regulation 8 and as highlighted in PINS Advice Note 7 'Environmental Impact Assessment: Screening, Scoping and Preliminary Environmental Information' (Ref 1-1), and the location in this Scoping Report where the information is presented.

Table 1.1: Information provided in the Scoping Report (based on Advice Note 7)

Description of Information Required	Section in Scoping Report where the Information is Presented
A plan showing: • the site boundary and associated development; • permanent land take required for the NSIP; • temporary land take required for construction, including construction compounds; • existing infrastructure which would be retained or upgraded for use as part of the NSIP; • existing infrastructure which would be removed; and • features including planning constraints and designated areas on and around the site, such as	**Figures 1** to **7**

Description of Information Required	Section in Scoping Report where the Information is Presented
national parks or historic landscapes.	
A description of: • the NSIP Site; • the NSIP development; and • its possible effects on the environment	**Section 2** (Description of the Existing Environment) **Section 3** (Project Description) **Section 5** (Potentially Significant Environmental Issues)
Key topics covered as part of the developer's scoping exercise	**Section 5** (Potentially Significant Environmental Issues)
An outline of the structure of the proposed ES	**Section 7** (EIA Scope and Process)
Where consequential or cumulative development has been identified, how the developer intends to assess these impacts in the ES	**Section 7** (EIA Scope and Process)
Results of desktop and baseline studies where available	**Section 5** (Baseline Conditions for each environmental topic)
Guidance and best practice to be relied upon, and whether this has been agreed with the relevant bodies	**Section 5** (Scope of the Assessment for each environmental topic)
Methods used or proposed to be used to predict impacts and the significance criteria framework used	**Section 5** (Scope of Assessment for each environmental topic) and **Section 7** (EIA Scope and Process)
Any mitigation proposed and predicted residual impacts	**Section 5** (Scope of the Assessment for each environmental topic)
An indication of any European designated nature conservation sites that are likely to be significantly affected by the Proposed Development and the nature of the likely significant impacts on these sites	N/A
Where a developer seeks to scope out matters, a full justification for scoping out such matters	**Section 6** (Non-Significant Issues)

2. Description of the Existing Environment

2.1 The Existing West Burton Power Station Site

2.1.1 The West Burton Power Station site is located approximately 3.5km to the south-west of the town of Gainsborough and 1km to the north-east of Sturton-le-Steeple (see **Figure 1**). Access to the site by road is via the Gainsborough Road, which links to the A620 and A631. The nearest settlement is the village of Bole located approximately 1km to the north-west of the West Burton Power Station site.

2.1.2 The West Burton Power Station site is located in Nottinghamshire, close to the border with Lincolnshire (defined by the River Trent which forms part of the eastern boundary of the West Burton Power Station site), and falls within the administrative area of Bassetlaw District Council (BDC), close to the border with West Lindsey District Council (WLDC) (defined by the River Trent to the east).

2.1.3 The site currently encompasses two power stations owned and operated by the Applicant. West Burton A Power Station (WBA) is a coal-fired power station, which was commissioned in 1968. It comprises four coal-fired units with two chimney stacks (each circa 200m high) and eight natural draught cooling towers (each circa 110m high). It supplies up to 2,000MW to the National Grid, providing electricity for around two million homes. Flue gas desulphurisation (FGD) equipment was installed between 2000 and 2003 and separate over-fire air burners were installed in 2007, in order to meet Emission Limit Values specified in the EU Large Combustion Plant Directive (2001/80/EC) (Ref 2-1).

2.1.4 Coal for the power station is currently delivered from a variety of UK and international sources by rail. The West Burton Power Station site includes extensive areas for the storage of coal and its conveyance to the boilers, and also for storage and handling of other materials. Bole Ings Ash Disposal Site to the north of the West Burton Power Station site takes ash from WBA.

2.1.5 Adjacent to the east of WBA is West Burton B Power Station (WBB), a combined cycle gas turbine (CCGT) power station, which was commissioned in 2013. It comprises three units with a combined output of 1,332MW. This power station is also owned and operated by the Applicant. Together WBA and WBB provide approximately 270 jobs to employees of the Applicant and also support a number of contractor jobs on a full time and part time basis.

2.2 The Proposed Development Site

2.2.1 The Proposed Development site ('the Site') is located within the wider West Burton Power Station site, to the north of WBB (see **Figures 2 and 3**). It comprises the Proposed Development footprint, land for the electric and gas connections and construction laydown areas.

2.2.2 At this stage, the Site encompasses an area of approximately 21.5ha. However, this is to allow for several potential gas and grid connection options that are still under technical evaluation. The proposed generating station is to be located immediately north of WBB and occupies an area of approximately 3.4ha (see **Figure 4**). This land was formerly used for the deposit of pulverised fuel ash from WBA and more recently as a construction laydown area for WBB. It is currently unused and occupied by grassland and young planted scrub.

2.2.3 The Proposed Development would share WBB's natural gas supply pipeline to fuel the generating station; a new gas connection pipeline would link the Proposed Development with the existing WBB Gas Reception Facility that receives natural gas into the Site. A new

electrical connection would be required to the existing 400kV switchyard within the WBB station.

2.2.4 Access to the Site would be via the main entrance to the West Burton Power Station site, off the Gainsborough Road to the south-west. Gainsborough Road links to the A620 and then the A631 near Beckingham to the north. Bus stops for routes 595 and 95A (Retford – Gainsborough) are located adjacent to the Gainsborough Road junction with Station Road to the south of the West Burton Power Station site.

2.3 The Surrounding Area

2.3.1 The Site is located within a relatively flat, agricultural landscape. The nearest villages are Bole (approximately 1km to the north-west), Lea (approximately 2.5km to the east), Knaith (approximately 2.8km to the south-east), Sturton-le-Steeple (approximately 1km to the south-west) and South Wheatley (approximately 3.5km to the west). The larger town of Gainsborough is approximately 3.5km to the north-east.

2.3.2 The Lincoln to Sheffield Railway Line runs north-east/south-west along the western boundary of the West Burton Power Station site and this line also provides the route for the delivery of coal to WBA.

2.3.3 The West Burton Power Station sits on the western bank of the River Trent, which flows from Staffordshire and through the Midlands to join the River Ouse to form the Humber Estuary.

2.3.4 A number of environmental receptors have been identified within the vicinity of the Site as shown on **Figures 5 and 6**. Each of these are detailed in the relevant environmental discipline, recognising that this may not be an exhaustive list at this stage. All distances are given as the shortest distance between the receptor and the closest point of the Site boundary.

Ecology and Nature Conservation

2.3.5 There are no international statutory nature conservation designations (including Special Areas of Conservation (SAC), Special Protection Areas (SPA), or Ramsar sites) within 15km of the Site.

2.3.6 Lea Marsh Site of Special Scientific Interest (SSSI) lies approximately 1km to the north-east of the Site. There are no other national nature conservation designations within 5km of the Site.

2.3.7 Eleven Local Wildlife Sites (LWS) are located within 2km of the Site, as follows:

- West Burton Power Station LWS, located within the Site;
- West Burton Reedbed LWS, approximately 50m to the south-east;
- Burton Round Ditch LWS, approximately 100m to the south;
- Bole Ings LWS approximately, 400m to the north;
- Bole Ings Drains LWS, approximately 400m to the north;
- Mother Drain, Upper Ings LWS, approximately 1.1km to the east;
- West Burton Meadow LWS, approximately 1.2km to the south-west;
- Bole Ings Flood Pasture LWS, approximately 1.4km to the north-east;
- Saundby Ponds LWS, approximately 1.6km to the north;

- Saundby Marsh Drains LWS, approximately 1.7km to the north; and
- Lea Meadow LWS, approximately 1.8km to the north-east.

Cultural Heritage

2.3.8 There are no statutorily designated world heritage sites, non-statutory battlefield sites or registered parks and gardens within 5km of the Site. West Burton scheduled deserted medieval village (Scheduled Monument 1017741) is located approximately 90m to the south of the Site, within land owned by the Applicant.

2.3.9 The Site is not located within a conservation area but there are three conservation areas within 5km, namely:

- Saundby Conservation Area, located approximately 2km to the north-west;
- Wheatley Conservation Area, located approximately 3.5km to the west; and
- Gainsborough Conservation Area, located approximately 4.2km to the north-east.

2.3.10 There are clusters of listed buildings in the nearby villages of Bole, Saundby, North Wheatley, Sturton-le-Steeple, Littleborough, Knaith and Lea.

Traffic and Transport

2.3.11 The key receptors in respect of transport are the small number of residential frontages along the A620 to the north of the West Burton Power Station site.

Air Quality

2.3.12 BDC and WLDC have not declared any Air Quality Management Areas. There are some localised areas of identified elevated NO_2 concentrations, however these occur at roadside locations within Worksop and along the A1(M) corridor. The key air quality receptors include the residential areas of Bole approximately 1km to the north-west of the Site, North and South Wheatley approximately 3.5km to the west, Sturton-le-Steeple approximately 1km to the south-west, and Gainsborough approximately 3.5km to the north-east. EDF Energy operates an automatic background air quality monitor (measuring nitrogen dioxide and sulphur dioxide) located downwind of the prevailing wind from West Burton Power Station site in Gainsborough. The results indicate ambient background pollutant concentrations well below the National Air Quality Strategy (NAQS) objectives. EDF Energy has also undertaken dispersion modelling of 2015 emissions from WBA and WBB for comparison with ambient monitoring data. The results indicate that process contributions from WBA and WBB are well within NAQS objectives.

Noise and Vibration

2.3.13 Annual noise surveys are also undertaken by EDF Energy within the boundary of the West Burton Power Station site and at nearby human receptor locations. The nearest noise survey locations at identified noise sensitive receptors (located to the north, west and south of the West Burton Power Station site) are at Bole village approximately 1km to the north-west of the Site, Mill House Farm approximately 1.1km to the west, Cross Keepers Cottage approximately 80m to the south-west and at a property to the north of Sturton-le-Steeple approximately 1km to the south-west.

Hydrology/Flood Risk, Geology and Hydrogeology

2.3.14 Made ground deposits are anticipated to be present across much of the Site as this location is indicated to lie within the footprint of an Environment Agency recorded historic landfill. It is believed that this is associated with the historic disposal of PFA generated in WBA.

2.3.15 The superficial deposits within the Site are classified as Secondary A Aquifers by the Environment Agency. The underlying bedrock is Mercia Mudstone deposits (Secondary B Aquifer). A review of a groundwater monitoring programme undertaken by EDF Energy indicates that groundwater levels vary from 12m Above Ordnance Datum (AOD) to a more typical 2–6m AOD across the majority of the West Burton Power Station site.

2.3.16 The River Trent is located immediately to the east of the West Burton Power Station site and is tidal in this location. Wheatley Beck and Railway Dyke are located to the west.

2.3.17 There are tidal flood defences in place adjacent to the West Burton Power Station site, comprising raised earth embankments along the west bank of the River Trent. However, the Site is not located in an area shown on Environment Agency's flood maps to benefit from flood defences.

2.3.18 The Environment Agency's flood maps identifies that the Proposed Development lies almost entirely within Flood Zone 1. There are small areas of the Site along the eastern boundary that lie within Flood Zone 2, and the two outfall route options to the River Trent lie within Flood Zone 3 (as shown on **Figure 7**).

Landscape

2.3.19 The Site does not lie within or adjacent to any national or regional designations for landscape protection (e.g. Areas of Outstanding Natural Beauty (AONB) or Green Belt land). The Site lies within National Landscape Character Area 48 - Trent and Belvoir Vales, which is characterised by undulating, strongly rural and predominantly arable farmland centred on the River Trent.

2.3.20 A number of Public Rights of Way (PRoW) exist within the surrounding area, linking nucleated settlements and farmsteads, as illustrated on **Figure 6**. No PRoW cross the Proposed Development Site.

3. Project Description

3.1 The Proposed Development

3.1.1 The Proposed Development comprises the construction and operation of a gas-fired power station with a gross electrical output of up to 299MW.

3.1.2 The choice of plant and technology are still being considered, and are still the focus of ongoing technical studies. Further studies would ensure that the most suitable plant is selected for the Site taking into consideration local constraints and the intended operational regime of the plant. It is, however, known at this stage that the Proposed Development would either comprise Open Cycle Gas Turbine (OCGT) plant or a number of gas engines. A decision on when this selection would be made (i.e. pre- or post-a DCO being secured) is under consideration. A description of how each of these technologies operates and the key difference between them are provided below.

3.1.3 Although the choice of plant may vary, the scope and methodology of the EIA, as set out in **Sections 5-7** of this Report would not differ significantly between different plant and technology choices. There would be some key differences between the plant configurations for each technology type (e.g. stack heights) and where these would impact on the assessment methodology, these have been explained.

3.1.4 In addition, irrespective of technology choice, both options are able to fit within the Site boundary as shown on **Figures 2 and 3**. Both the potential technology options would be assessed on the basis of the 'maximum adverse' scenarios for potential environmental impacts in order to present the worst case assessment for consideration.

3.1.1 The infrastructure proposed to be installed at the Site, some of which may be shared with WBB, would likely include:

- One or more OCGT units with a stack, or co-located stacks and a transformer(s), or a number of gas engines with associated stacks and a transformer(s);
- associated switch gear and ancillary equipment;
- gas receiving area, gas treatment control facilities, gas reception building and gas pipeline to the WBB Gas Reception Facility;
- electrical connection with a potential upgrade of switchgear or other existing equipment;
- water supply and pipelines;
- liquid fuel tank for start-up of the plant;
- workshop and stores;
- electrical, control, administration and welfare buildings;
- above ground raw water and fire water storage tanks;
- storm water attenuation system or similar;
- internal access roads and car parking;
- landscaping and fencing;
- construction laydown areas and potentially a rail offloading area from the existing rail loop 'merry-go-round' that is present on the West Burton Power Station site;
- auxiliary cooling equipment/ system and cooling water supply; and
- other minor infrastructure and auxiliaries/services.

3.1.2 Laydown areas for the storage of plant and equipment and siting of construction contractors' compounds during construction have been incorporated within the Site boundary.

3.1.3 All of the above elements would be located within the Site as shown on **Figures 2 and 3**.

3.1.4 Two technology options are currently under consideration for the Proposed Development and these are discussed in turn below.

Open Cycle Gas-Turbine Power Plant

3.1.5 In an Open Cycle Gas Turbine (OCGT), natural gas fuel is mixed and combusted with air from the compressor section of the gas turbine (GT) and the hot gases are expanded through the power turbine section of the GT which drives a generator to produce electricity for export to the National Grid electricity transmission system.

3.1.6 Gas turbines are widely used in the power industry as a result of multiple advantages when compared to other power plants, such as their flexibility of operation, ease of use, relatively low weight, compactness, and multiple fuel capability. Two types of OCGT are under consideration for the Proposed Development – industrial gas turbines and aero derivative gas turbines.

3.1.7 OCGTs are ideally suited to peaking plant operation as they can be started and shutdown quickly and operate flexibly across a range of loads. An OCGT power plant of this scale could comprise a single large industrial gas turbine or multiple gas turbines, either industrial or aero derivative, with their own stacks

3.1.8 If a single large OCGT was selected for the Proposed Development, it would typically have dimensions of 60m in length x 30m in width (excluding gas turbine auxiliaries and associated plant and equipment) with a typical stack height in the range of 35-45m.

3.1.9 If multiple aero-derivative gas turbines were selected for the Proposed Development each unit would have typical dimensions of 35m in length x 10m in width, with a typical stack height of in the range of 25-35m. The development would typically be expected to comprise up to 6 units.

Gas Engines

3.1.10 In a gas engine natural gas is burnt in the cylinders of a multi-cylinder gas engines, utilising the air that is usually first pressurised by the turbo charger(s) and then compressed by the pistons. The force developed turns a crank shaft which then turns an alternator which generates the electricity for export to the National Grid electricity transmission system.

3.1.11 Gas engines have been widely used for power generation particularly for peaking and back-up generation because of their ability to start up and shut down quickly and operate flexibly across a range of loads. Gas Engines are available in a range of sizes and for this project engines in a range of sizes will be considered, typically from 1.5 MW up to 10MW.

3.1.12 Depending on the output of the gas engine selected, the Proposed Development may therefore comprise over a 100 separate units, each with an individual stack.

3.1.13 A single 4.0-5.0MW gas engine would have typical dimensions of18m in length x 6m in width (excluding the engine auxiliaries), with a stack height typically less than 15m.

Black Start Capability

3.1.14 The Proposed Development may also provide a 'black start' capability. This could provide the capability to start the selected technology without any assistance from the national grid system in the event of a total or partial shutdown of the national grid system (so called 'black-start' capability). Thereby the Proposed Development could then be used to help restart the national transmission system, whereas power stations without black start capability need to draw power from the transmission system to start operation.

3.1.15 The inclusion of black start capability and the provision of emergency back-up supplies might require the use and storage of diesel or distillate fuel in above ground tank(s) within the Site, although natural gas would continue to be the fuel used during normal plant operation. The diesel would only be used to support black start operations or to provide emergency supplies if connection to the grid system was lost.

Electricity Switchyard Station and Grid Connection

3.1.16 The Proposed Development would connect to the existing 400kV switchyard within the WBB power station.

3.1.17 The connection between the Proposed Development and 400kV switchyard would comprise either overhead or below ground cables, or a combination of both. The route of the electrical connection would broadly follow the road which borders the eastern boundary of WBB, as shown on **Figures 2** and **3**.

Gas Connection

3.1.18 The new gas connection pipeline would link into WBB's gas supply infrastructure. The new gas connection route would be relatively short as the WBB gas reception facility is sited in the north-east corner of the WBB site and is immediately south of the Proposed Development Site. A tee connection would be made within the WBB gas reception facility and a section of pipe would extend north into the Proposed Development site, where a separate gas reception facility would meter the gas and reduce the pressure to that required for the selected technology.

3.2 Construction

3.2.1 It is currently anticipated that construction of the Proposed Development would commence around Q2 2020 and could be undertaken in up to three phases over a period of up to six years, subject to a DCO being granted.

3.2.2 Construction of the Proposed Development is anticipated to create approximately 150 temporary construction jobs at peak. Details of the likely traffic movements during construction will be considered within the EIA.

3.2.3 Anticipated normal construction working hours would be Monday – Friday 07:00 to 19:00 and Saturday 08:00 to 18:00, should on-site construction works need to be conducted outside of these normal construction working hours they would comply with any restrictions agreed with the planning authorities through the DCO process, and in particular regarding control of noise and traffic.

3.2.4 The ES will include details of the proposed construction activities and their anticipated duration, along with an indicative programme of each phase of the works.

3.2.5 The ES will also be supported by a framework Construction Environmental Management Plan (CEMP), which will describe the specific mitigation measures to be followed by the appointed construction contractor to reduce potential nuisance impacts from:

- use of land within the Site for temporary laydown areas, contractor facilities and offices, etc.;
- construction traffic (including parking and access requirements);
- earthworks;
- noise and vibration;
- dust generation; and
- waste generation.

3.2.6 The framework CEMP will identify all the procedures to be adhered to throughout construction; this framework will then be adopted by the appointed contractor in the drafting of their more detailed CEMP prior to commencement of construction.

3.2.7 Contracts with companies involved in the construction works will incorporate environmental control, health and safety regulations and current guidance, with the intention that construction activities are sustainable. All contractors involved with the construction stages would be required to meet agreed best practice and all relevant environmental legislation including: Control of Pollution Act 1974 (COPA) (Ref 3-1), Environment Act 1995 (Ref 3-2) and Hazardous Waste (England and Wales) Regulations 2005 (Ref 3-3).

3.2.8 All construction works would adhere to the Construction (Design and Management) Regulations 2015 (CDM).

3.3 Operation

3.3.1 The Proposed Development would be on standby and needs to be available at all times. It is most likely to run during periods of low electricity supply or high demand on the transmission network, or when required to provide technical services to support the National Grid. This is expected to be weighted towards the winter period, for a few hours at a time. However, as the operation of the plant is driven by the dynamics of the energy market, the plant could run for longer periods, at any time of day, up to the maximum allowed under its Environmental Permit, which is currently anticipated to be up to 1,500 hours/year.

3.3.2 Operation of the Proposed Development is anticipated to create up to 15 permanent operational roles. Depending on the degree of integration with the existing West Burton Power Stations, these may be new jobs or roles undertaken by personnel from WBA and/or WBB stations, thereby contributing to continuity of employment at the West Burton Power Station site.

3.4 Decommissioning

The peaking plant is capable of a life expectancy of up to 40 years or more, depending on running hours. Eventually decommissioning would involve the removal of the plant. The gas and electricity connections would be disconnected and made safe. If gas engines are selected as the preferred technology, the plant is modular, transportable and small scale. Similarly, an OCGT, although larger than gas engine units, could either be removed as a unit for reuse elsewhere (depending on its condition) or alternatively dismantled on site and removed. Therefore, decommissioning is not anticipated to present any significant environmental impacts beyond those assessed for the construction phase of the Project.

4. Planning Policy and Need

4.1 Introduction

4.1.1 This section details the main planning policy documents taken into account in terms of defining the scope of the EIA.

4.2 National Policy Context

4.2.1 The UK electricity generation mix is going through a time of reform. With a number of the UK's coal power stations set to close in the next ten years, the country is facing a large shortfall in its electricity generating capacity.

4.2.2 The current reforms of the electricity market are intended to help tackle the 'energy trilemma': how to decarbonise electricity supply while ensuring security of supply and keeping prices affordable for consumers. The Capacity Market is one of the central pillars of the UK's electricity market reform proposals and is aimed primarily at ensuring security of our electricity supply.

4.2.3 The principles behind the Capacity Market were first published in the Energy White Paper *Planning our Electric Future: a White Paper for Secure, Affordable and Low-Carbon Electricity* in July 2011 and legislated through the Energy Act 2013. Further details have been given between June and December 2013 through a series of detailed design proposals, consultations and the Electricity Market Reform (EMR) Delivery Plan, which was published by the Department of Energy & Climate Change (DECC) in December 2013 (Ref 4-1).

4.2.4 DECC guidance on the Capacity Market states:

"[The] *Capacity Market will ensure security of electricity supply by providing a payment for reliable sources of capacity, alongside their electricity revenues, to ensure they deliver energy when needed. This will encourage the investment we need to replace older power stations and provide backup for more intermittent and inflexible low carbon sources".*

4.2.5 It is anticipated that the Applicant will seek to qualify for Capacity Payments through the annual Capacity Market Auction, to provide power at times of stress, when generation does not meet demand. The Proposed Development responds directly to the Government's recognised need for flexible electricity generation capacity to secure reliable energy supplies and support the transition to a low carbon economy.

4.2.6 As the Proposed Development is a NSIP, the principles outlined in the National Policy Statements are relevant to the Proposed Development and are outlined below.

4.3 Overarching National Policy Statement for Energy (EN-1)

4.3.1 The Overarching National Policy Statement for Energy (EN-1) (NPS EN-1) (Ref 4-2) sets out national policy for energy infrastructure developments that meet the Planning Act 2008 definition of NSIPs. Applications for NSIP developments are determined by the Secretary of State in accordance with the Planning Act 2008. The Proposed Development meets this definition (due to its size and scale). In addition, paragraph 3 of the National Planning Policy Framework (NPPF) (see Section 4.4) states:

"National policy statements form part of the overall framework of national planning policy, and are a material consideration in decisions on planning applications".

4.3.2 Paragraph 3.3.11, 3.6.1 and 3.6.3 of NPS EN-1 recognise that flexible electricity generation facilities powered by fossil fuel are required to provide back-up for intermittent renewable energy and therefore is necessary to support the decarbonisation of electricity generation. Paragraph 3.3.11 states:

"…the more renewable generating capacity we have the more generation capacity we will require overall, to provide back-up at times when the availability of intermittent renewable sources is low. If fossil fuel plant remains the most cost-effective means of providing such back-up, particularly at short notice, it is possible that even when the UK's electricity supply is almost entirely decarbonised we may still need fossil fuel power stations for short periods when renewable output is too low to meet demand, for example when there is little wind".

4.3.3 Paragraph 3.6.1 of NPS EN-1 states:

"Fossil fuel power stations play a vital role in providing reliable electricity supplies: they can be operated flexibly in response to changes in supply and demand, and provide diversity in our energy mix. They will continue to play an important role in our energy mix as the UK makes the transition to a low carbon economy, and Government policy is that they must be constructed, and operate, in line with increasingly demanding climate change goals".

4.3.4 Paragraph 3.3.12 of NPS EN-1 also states:

"… increasing reliance on renewables will mean that we need more total electricity capacity than we have now, with a larger proportion being built only or mainly to perform back-up functions".

4.4 National Planning Policy Framework and Planning Practice Guidance

4.4.1 The National Planning Policy Framework (NPPF) (Ref 4-3) was adopted in March 2012 and replaced the majority of Planning Policy Statements and Planning Policy Guidance Notes. The policies contained within the NPPF are expanded upon and supported by the 'Planning Practice Guidance', which was published in March 2014.

4.4.2 The NPPF details out the Government's planning policies for England and how these are to be applied. It is a material consideration in planning decisions. The NPPF will be reviewed and appropriate policies identified which may have a bearing on the decision making process.

4.5 Local Planning Policy

4.5.1 The Site lies entirely within the administrative areas of BDC and Nottinghamshire County Council. The Local Development Plan comprises the Bassetlaw District Core Strategy and Development Management Policies (adopted December 2011) (Ref 4-4). Further details of the local policy context will be provided in the ES and Planning Statement accompanying the planning application.

4.6 The Need for the Proposed Development

4.6.1 The Energy White Paper 'Meeting the Energy Challenge' published in 2007 by the Department for Trade and Industry, which formed the basis of the Energy Act 2008, sets out the Government's plans for tackling climate change by reducing carbon emissions whilst ensuring the availability of secure, clean, affordable energy (Ref 4-5).

4.6.2 The White Paper and the Overarching NPS for Energy (EN-1) both emphasise the importance of a diverse mix of energy generating technologies, including renewables, nuclear and fossil fuels, to avoid over-dependence on a single fuel type and thereby ensure security of supply.

4.6.3 In the transition to the low carbon economy, the large scale deployment of renewable technologies and construction of new nuclear power plant will change the way the current mix of energy will occur. This is compounded with the Government's commitment to close all coal-fired power stations by 2025 which would remove plant currently providing a balancing service to the national grid when the need should arise. As a result there is need for power plant that can operate flexibly, as the Applicant is proposing that the West Burton C power station could do. This need is underpinned by a combination of Government policy drivers and the Industrial Emissions Directive (IED) resulting in the closure of fossil generation plant and is reflected in future generation projections.

4.6.4 Energy Market Reform (EMR) is intended to deliver low carbon energy and reliable supplies that the UK needs, while minimising costs to consumers. EMR introduces a mechanism to provide incentives for the investment required in low carbon generation infrastructure, the Capacity Market. The Capacity Market provides a regular retainer payment to reliable forms of capacity (both demand and supply side) in return for such capacity being available when needed.

4.6.5 The reformed electricity market is intended to transform the UK electricity sector to one in which low-carbon generation can generate in an affordable way while maintaining the security of supply while ensuring a cleaner, more sustainable energy mix. However, in the run up to 2050, gas generation is still required to meet electricity demand. It is preferable over coal generation as generating electricity from gas is more efficient and of lower carbon intensity, resulting in significantly lower CO_2 emissions per generated megawatt from gas-fired power stations compared to coal-fired power stations.

4.6.6 Other peaking technologies, such as pumped storage schemes or batteries, exist and are an increasingly important part of the energy mix. However, flexible gas-fired plant currently offers a proven lower cost alternative.

4.6.7 For these reasons, the Applicant considers that there is a clear and compelling need for the development of a new flexible gas-fired electricity generating station and has selected the site at West Burton on which to do so for technical, environmental and commercial reasons. The Applicant therefore proposes to seek consent for the construction and operation of a gas-fired power station of up to 299MW capacity at the West Burton Power Station site.

5. Potentially Significant Environmental Issues

5.1 Introduction

5.1.1 The following sections identify the potential environmental impacts associated with the Proposed Development proposed for inclusion within the EIA. The methodology and assessment criteria that are proposed to be used to assess the potential significance of the identified impacts are also outlined alongside potential mitigation measures for implementation following assessment.

5.2 Air Quality

Baseline Conditions

5.2.1 The key air quality receptors include the residential areas of Bole approximately 1km to the north-west of the Site, North and South Wheatley approximately 3.5km to the west, Sturton-le-Steeple approximately 1km to the south-west, and Gainsborough approximately 3.5km to the north-east. Lea Marsh SSSI, located approximately 1km north-east of the Site, has been identified as an ecological receptor.

5.2.2 The Applicant operates an automatic background air quality monitor (measuring nitrogen dioxide (NO_2) & sulphur dioxide (SO_2)) located downwind in Gainsborough which shows ambient background concentrations being well below the National Air Quality Strategy (NAQS) objectives.

5.2.3 There are no designated Air Quality Management Areas (AQMAs) within BDC or WLDC's boundaries.

Scope of the Assessment

5.2.4 The following potential impacts may be associated with the Proposed Development:

- emission of pollutants to air from the stacks during operation;
- emission of pollutants to air from vehicle exhausts associated with construction, operation and decommissioning; and
- construction dust and mobile plant exhaust emissions generated during construction and decommissioning.

5.2.5 The Proposed Development, when operational, would emit known pollutants to air, via a stack(s). These would include the combustion products nitrogen oxides (NO_x) and carbon monoxide (CO), for which Air Quality Objectives (AQS) have been set as part of the National Air Quality Strategy, as well as CO_2 and potentially additional trace pollutants. Sulphur dioxide (SO_2) emissions and particulate emissions are expected to be minimal when the plant is running on natural gas, and firing on distillate is only expected to occur for at most a few hours per year.

5.2.6 The plant would be designed to comply with the requirements of the Industrial Emissions Directive (IED) (Ref 2-1) and in accordance with Environment Agency guidance (Ref 5-1). The Directive specifies Emission Limit Values for pollutant releases to air from this type of plant that would need to be met. Performance against these emission limit values would be regulated by the Environment Agency through an Environmental Permit.

5.2.7 An air impact assessment will be undertaken for the main point source emissions, utilising air dispersion modelling to assess the impact to air quality potentially brought about through the generation and dispersion of emissions from the operation of the Proposed Development. The study will be desk-based and will assess the predicted concentrations of those combustion pollutants that will be emitted from the plant and that are specifically detailed in the IED, which are potentially hazardous to human health and designated habitats sites. The modelling will predict concentrations at identified receptors (such as residential properties, schools, nature sites) within the local area.

5.2.8 The modelling will be based on Emission Limit Values set by the IED and at full operating load, thereby presenting a worst-case scenario in the ES. Should it be deemed appropriate to model lower loads, justification for this will be provided and the load clearly stated in the assessment. Modelling will be undertaken in accordance with Environment Agency guidance (Ref 5-1).

5.2.9 The atmospheric dispersion modelling study of operational emissions will be undertaken using the Atmospheric Dispersion Modelling System (ADMS) model, currently version 5.1. ADMS is widely used by industry and the regulatory authorities.

5.2.10 The dispersion modelling study will be used to determine the most appropriate height for the emission stacks and configuration (single or combined stacks) based on the resultant maximum short term and long term ground level concentrations predicted.

5.2.11 Potential impacts on ecological receptors will be assessed, including nationally and non-statutory habitat sites within 2km of the Proposed Development, in accordance with EA guidance (Ref 5-1) and with reference to the critical load data provided in the Air Pollution Information System (APIS).

5.2.12 An air quality screening assessment will be undertaken on the potential effects of road traffic on the local road network associated with the construction of the Proposed Development, in accordance with the methods outlined in the guidance for local authorities (Ref 5-2). The Highways Agency's (HA) Design Manual for Roads and Bridges (DMRB) (Ref 5-3) screening model will be used. Based on expected traffic volumes, it is not considered that detailed ADMS-Roads dispersion modelling would be required.

5.2.13 In addition, potential impacts and nuisance from site clearance, construction dust and mobile plant exhaust emissions generated during the construction phase of the plant will be considered using a screening assessment (Ref 5-4) and supplemented by case studies where appropriate. Similar effects during the decommissioning stage will also be considered. Where necessary, mitigation measures will be recommended for the control of dust and site plant emissions during site preparation and construction works to minimise the potential effects.

5.2.14 The AQS objectives set within the National Air Quality Strategy are intended to protect the most sensitive parts of the population. Therefore it is considered that compliance with such objectives means that a separate Human Health Risk Assessment (HHRA) for this type of development is not required.

5.2.15 Given the subjectivity that can occur when attempting to assign a level of significance to a given air quality impact, AECOM has produced a set of quantitative significance criteria for air quality matters. These are based on regulatory and expert guidance (Ref 5-1, Ref 5-3 and Ref 5-4) and will be used to determine the significance of the predicted effects of the Proposed Development.

5.3 Traffic and Transport

Baseline Conditions

5.3.1 The West Burton Power Station site is accessed at its south-western corner via Gainsborough Road (a 'C' class road), which joins the A620 at Bole Corner and in turn the A631 to the north-west of the Site.

5.3.2 The closest train station is at Gainsborough, located approximately 9km to the north-east. Access to the Site by bus is via Station Road, through the village of Sturton-le-Steeple, a 700m walk from the West Burton Power Station site entrance.

5.3.3 Pedestrian and cycle routes to the Site are generally good. A footpath exists along Gainsborough Road leading up to the site entrance from Sturton-le-Steeple.

Scope of the Assessment

5.3.4 The following potential impacts may be associated with the Proposed Development:

- generation of traffic during construction (and decommissioning) affecting the local and strategic road network; and
- generation of traffic during operation affecting the local and strategic road network.

5.3.5 A preliminary assessment has been undertaken to establish the level of traffic that is likely to be associated with the Proposed Development. The principal vehicle movements are anticipated to be associated with the construction phase of the Proposed Development, although the volume of construction vehicles associated with the delivery of plant and the labour force has not been determined at this stage.

5.3.6 During the operational phase of the development, it is anticipated that there would be up to approximately 15 operational roles. Depending on the degree of integration with the existing West Burton Power Stations, these might be new jobs or roles undertaken by personnel from WBA/ WBB. Staff would travel to and from work in a variety of directions. Fuel would predominantly be delivered by pipeline and other operational and maintenance consumables are likely to be minimal. Therefore, it is considered that the effects of operational traffic would be negligible and a detailed assessment of the operational phase of the development is not proposed for the ES.

5.3.7 To fully address the impacts of the construction phase on the transport network, at this stage it is proposed that a Transport Assessment (TA) will be produced, although the requirement for a TA will be confirmed following determination of the number of construction movements, in liaison with Nottinghamshire County Council. The scope for the TA will follow the guidelines set out in the Department of Communities and Local Governments 'Planning Practice Guidance' document (March 2014) (Ref 5-5). Nottinghamshire County Council and Highways England will be consulted so that their specific requirements can be accommodated within the TA scope.

5.3.8 The traffic and transport chapter in the ES will summarise the salient points from the TA. It will also relate the magnitude and significance of potential impacts to criteria contained in the 'Guidelines for the Environmental Assessment of Road Traffic' document, produced by the Institute of Environmental Management & Assessment (Ref 5-6).

5.3.9 The scope of the TA would cover the following key areas:

- a review of national, regional and local transport policy;
- a description of baseline and future baseline conditions, including link and junction flows (described further below), a review of highway safety issues including examination of personal injury accident data and consideration of accessibility by all main transport modes;
- calculation of construction traffic flows over the period of construction;
- distribution and assignment of construction traffic flows to the road network, including the identification of routes for abnormal loads such as the delivery of generators and transformers;
- local network impact analysis – the size of the study area will be confirmed with Nottinghamshire County Council and Highways England, and key junctions may be identified by these stakeholders that require detailed capacity analysis;
- consideration of the local public rights of way for leisure and commuting uses, and whether their use would be affected by the Proposed Development;
- cumulative impact assessment; and
- the formulation of mitigation measures, if required, such as a Construction Worker Travel Plan to promote sustainable journeys during the construction phase of the development and where possible reduce single occupant car journeys, and a Construction Traffic Management Plan to seek to control the routing and impact that HGVs will have on the local road network during construction.

5.3.10 An initial review of the road network in the vicinity of the site suggests junction counts will be required at the following junctions:

- A631/ A620 Roundabout Junction;
- A620/ Sturton Road Roundabout Junction; and
- Gainsborough Road/ Power Station Site Access.

5.3.11 In addition, it is anticipated that links counts will be required on the A631, A620 and Gainsborough Road. The exact locations of the link counts will be determined in liaison with the local authorities.

5.3.12 It is likely that additional traffic surveys may need to be undertaken to supplement the count locations identified above, though this will be determined in liaison with Nottinghamshire County Council and Highways England. The data will be used to quantify baseline vehicular demand along key routes to and from the Site. The data will also form the basis of calculations to quantify the impact of construction traffic on the surrounding road network.

5.3.13 A summary of any residual and cumulative impacts will be provided should the proposed mitigation not fully address the impact of the Proposed Development on the transport network.

5.4 Noise and Vibration

Baseline Conditions

5.4.1 The Proposed Development would be located within the existing industrial setting of WBA and WBB Power Station.

5.4.2 Annual noise surveys are undertaken by EDF Energy within the boundary of the West Burton Power Station site and at several of the nearest human noise sensitive receptor locations. The nearest noise survey locations at identified noise sensitive receptors, all located to the north, west and south of the Site, are at Bole Village, Mill House Farm, Cross Keepers Cottage and at a property to the north of Sturton-le-Steeple. At each of the four locations, rotational 15 minute measurements have been undertaken annually during day, evening and night time periods; the latest surveys being undertaken between Tuesday 4th and Wednesday 5th October 2016.

5.4.3 No monitoring locations are included in the annual surveys to the east of the Site, but the area is open agricultural/wetland, with no identified receptors in close proximity.

Scope of the Assessment

5.4.4 The following potential impacts may be associated with the Proposed Development:

- construction and decommissioning noise and vibration impacts (including construction and decommissioning traffic on public roads);
- operational noise impacts from the new plant; and
- operational noise impacts from road traffic on public roads.

5.4.5 Based on the distance between the Site and the nearest residential receptors, significant vibration impacts associated with on-site activities are considered unlikely, although they will still be considered as part of the EIA, particularly during construction if, for example, piling is used.

5.4.6 The proposed scope of the noise and vibration assessment comprises:

- identification of nearest noise sensitive receptors;
- liaison with Local Authorities' Environmental Health Officer(s) to agree scope and methodology of noise assessment, including whether any supplementary baseline monitoring is required for the proposed Development beyond that already gathered for WBA;
- establishment of baseline noise levels in the locality (as agreed necessary);
- qualitative assessment of construction/decommissioning noise and vibration impacts based on available information on the likely works;
- quantitative assessment of operational noise associated with the proposed plant; and
- quantitative assessment of road traffic noise level changes on affected roads during both operation and construction/decommissioning based upon the standard methodology outlined in the 'Calculation of Road Traffic Noise'.

5.4.7 The noise and vibration assessment will be carried out in accordance with the following guidance:

- Overarching National Policy Statement for Energy (EN-1), July 2011 (NPS EN-1) (Ref 4-2);
- National Policy Statement for Fossil Fuel Electricity Generating Infrastructure (EN-2), July 2011 (NPS EN-2) (Ref 5-7);
- National Policy Statement for Gas Supply Infrastructure and Gas and Oil Pipelines (EN-4), July 2011 (NPS EN-4) (Ref 5-8);
- The NPPF, 2012 (Ref 4-3);

- Noise Policy Statement for England, 2010 (Ref 5-9); and
- Planning Practice Guidance for Noise, 2014 (Ref 5-10).

5.4.8 Additionally, reference will be made, but not be limited, to the following:

- British Standard (BS) 5228-1 2009+A1:2014 'Code of practice for noise and vibration control on construction and open sites. Part 1: Noise' (Ref 5-11);
- BS 5228-2 2009+A1:2014 'Code of practice for noise and vibration control on construction and open sites. Part 2: Vibration' (Ref 5-12);
- International Organisation for Standardisation (ISO) 9613-2: 1996 'Attenuation of sound during propagation outdoors. Part 2: General method of calculation' (Ref 5-13);
- BS 4142: 2014 'Methods for rating and assessing industrial and commercial sound (Ref 5-14)';
- BS 8233:2014 'Guidance on sound insulation and noise reduction for buildings' (Ref 5-15);
- World Health Organisation (WHO) (1999), 'Guidelines for Community Noise' (Ref 5-16);
- World Health Organisation (WHO) (2009), 'Night Noise Guidelines for Europe' (Ref 5-17);
- BS 7385: 1993 'Evaluation and measurement for vibration in buildings' (Ref 5-18);
- BS 6472: 2008 'Guide to evaluation of human exposure to vibration in buildings' (Ref 5-19);
- Control of Pollution Act 1974 (Ref 3-1);
- Calculation of Road Traffic Noise (CRTN) (DoT, 1988) (Ref 5-20); and
- Design Manual for Road and Bridges (DMRB) Volume 11 Section 3 Part 7 HD213/11 (Revision 1)' Traffic Noise and Vibration' (Highways Agency, 2011) (Ref 5-3).

5.4.9 Baseline noise monitoring requirements will be agreed in advance with the Environmental Health Officer at BDC. Any monitoring required will conform to BS 7445: 2003 'Description and Measurement of Environmental Noise' (Ref 5-21), and monitoring will be undertaken in close proximity to local sensitive receptors including weekend and weekday times, ideally (subject to adequate security) over a minimum five day unmanned monitoring period.

5.4.10 Qualitative assessment of construction noise and vibration impacts is proposed given that a construction contractor is unlikely to be appointed at the time of preparing the EIA, and therefore the detailed site specific information on the construction works required to complete a quantitative assessment will not be available. The focus of the assessment will therefore be on recommendations for appropriate mitigation. Additionally, noise increases at sensitive receptors due to any construction traffic on public roads will be calculated according to the methods given in CRTN.

5.4.11 The operational noise impact of the Proposed Development will be predicted using computer noise modelling software (SoundPLAN or Cadna-A), based on information regarding plant layout, the operating conditions and the levels of noise generated by plant items and vehicles. The noise modelling software enables a detailed consideration of the proposed equipment and buildings, and also takes into account existing surrounding buildings and ground features. The software implements the methodology in ISO 9613-2 for the calculation of noise levels from industrial sources.

5.4.12 The significance of the noise impact of the Proposed Development during operation will be assessed using the method given in BS 4142 (Ref 5-14) and will make reference to

guidance provided by the World Health Organisation (WHO) guidance (Ref 5-17) and contained in BS 8233 (Ref 5-15). BS 4142 provides a method for rating the acceptability of noise from industrial sources affecting noise-sensitive receptors and the WHO/BS 8233 guidance provides information regarding assessment of sleep disturbance. Further details of the approach will be discussed and agreed as required with the Environmental Health Officer at BDC.

5.4.13 The construction, operation and decommissioning of the Proposed Development may have a potentially significant impact on traffic flows on local roads around the Site. The change in road traffic noise levels, at a selection of relevant receptors, will be predicted using the standard methodology outlined in the CRTN. The predictions will be based on baseline and with-development traffic data provided as part of the proposed traffic and transport assessment (see **Section 5.3**).

5.4.14 The significance of changes in road traffic noise levels will be assessed based on a range of relevant guidance including the DMRB.

5.5 Ecology and Nature Conservation

Baseline Conditions

5.5.1 There are no international nature conservation designations within 15km of the Site.

5.5.2 Lea Marsh SSSI is located 1km to the north-east of the Site, beyond the River Trent. There are no other national nature conservation designations within 5km of the Site.

5.5.3 Eleven non-statutory LWS are located within 2km of the Site, one of which exists within the Site boundary (West Burton Power Station LWS).

5.5.4 An Extended Phase 1 Habitat Survey was completed in February 2017. Habitats within and adjacent to the Site include semi-improved neutral grassland, scattered and dense scrub, plantation and semi-natural broad-leaved woodland, ponds, reedbeds and the River Trent, as well as hardstanding areas, operational buildings and plant associated with the WBB.

5.5.5 A badger survey was completed in March 2017. This confirmed badger activity within the Site boundary, including the presence of outlier setts. Further setts were identified outside the Site boundary within close proximity.

5.5.6 Previous ecological surveys undertaken within the wider West Burton Power Station site have reported the presence of several other protected species, including great crested newt (GCN), grass snake, water vole, otter and a range of breeding bird species. The most recent surveys for these species were completed in 2014.

Scope of the Assessment

5.5.7 The following potential impacts may be associated with the Proposed Development:

- permanent loss of habitats within the Site during construction;
- temporary impacts on habitats within the Site during construction;
- disturbance of ecological features (including noise, dust and light impacts) in the vicinity of the Site during construction, operation and decommissioning;
- temporary and permanent impacts on aquatic habitats and water quality in the River Trent due to construction of new outfall points; and
- air quality impacts on ecological features in the vicinity of the Site during operation.

5.5.8 Potential impacts on ecological features will be assessed in accordance with best practice guidance issued by the Chartered Institute for Ecology and Environmental Management (Ref 5-22). Any likely significant adverse effects will be mitigated or compensated for and a number of ecological enhancements will also be recommended where appropriate, in accordance with relevant NPS. Following the implementation of mitigation and compensation, any residual effects on ecological features will be identified.

5.5.9 The scope of ecological surveys (with timescales) proposed to be undertaken to inform an adequate assessment of the likely effects of the Proposed Development on ecological features to inform the DCO is provided in **Table 5.1**. All ecological surveys will be completed in 2017.

5.5.10 Surveys for the following species or species groups have been scoped out:

- Wintering birds – the habitats to be affected by the Proposed Development are unlikely to support important numbers of wintering or passage birds.
- Terrestrial invertebrates – the habitats to be impacted by the Proposed Development are not notable or particularly diverse and are therefore unlikely to support an important assemblage of terrestrial invertebrate species.
- Plants – the Proposed Development will not impact on any notable or particularly diverse habitats, so no further botanical survey is required.

5.5.11 The results of the surveys, the desk study and consultation responses will be used to undertake an ecological impact assessment. Once the ecological baseline for the Site has been fully described, any ecological features that are likely to be significantly impacted by the Proposed Development will be identified and appropriate and proportionate mitigation will be described where necessary. Mitigation and enhancement proposals will consider wider strategic aims and options for mitigation of development from BDC and WLDC's planning policy.

5.5.12 As outlined in the Air Quality section (**Section 5.2**), it is expected that the Proposed Development would emit a range of pollutants into the air, including NO_x and some trace species. There are no international designations (SACs, SPAs or Ramsar sites) within 15km of the Proposed Development and therefore it is very unlikely for there to be significant effects on such sites as a result of changes in air quality. The potential impact of air quality changes on Lea Marsh SSSI will be considered in the assessment.

Habitats Regulations Assessment

5.5.13 There are no SACs, SPAs or Ramsar sites (collectively known as Natura 2000 sites) within 15km of the Site. The nearest Natura 2000 site is Hatfield Moor SAC, located 19.5km to the north-west.

5.5.14 Due to the distance from the Proposed Development to the nearest Natura 2000 sites and given the nature of potential impacts due to the Proposed Development, there is considered to be no potential for likely significant effects on Natura 2000 sites. Habitats Regulations Assessment is therefore not considered to be required.

Table 5.1: Scope of Ecological Studies and Surveys for EIA

Study / Survey	Scope / Methodology	Timing	Further Comments
Desk Study – protected species and designations	Protected / notable species and non-statutory nature conservation designations within 2km. National nature conservation designations within 5km. International nature conservation designations within 15km	February 2017	Completed
Desk Study – fish	Historical fish data for the River Trent in the vicinity of the Proposed Development	April – May 2017	
Extended Phase 1 Habitat survey	All habitats within a 50 m radius of the Site	February – April 2017	Completed
Badger survey	All suitable habitats within 100 m of the Site	March 2017	Completed
Great Crested Newt Habitat Suitability Index (HSI)	Assessment of the suitability of all ponds within 500m of the Site	February 2017	Completed
Great Crested Newt survey	Survey of all ponds suitable for GCN within 500m of the Site to determine presence or likely absence and, where necessary, an estimate of population size	April – May 2017	
Preliminary Bat Roost Assessment	Assessment of the potential suitability for roosting bats of all buildings, structures and trees to be impacted	February - April 2017	Completed
Bat Roost surveys	Dusk emergence and dawn re-entry surveys of trees with suitable features to determine whether they support roosting bats	June – August 2017	
Bat Activity surveys	1 walked transect per month covering suitable habitat for foraging and commuting within the Site 5 nights of monitoring per month using 2 automated bat detectors	May – September 2017	
Reptile survey	7 survey visits using artificial refugia and visual searches of suitable habitat	April - September 2017	
Breeding Bird survey	5 survey visits to determine breeding bird assemblage and presence of notable and Schedule 1 bird species	April – June 2017	
Otter survey	All suitable riparian and terrestrial habitat within 50 m of the Site	April - May 2017	
Water Vole survey	Survey of suitable habitat to be affected (e.g ponds, reedbeds, river)	May – September 2017	
River Corridor Survey	River corridor and macrophyte survey of the River Trent upstream and downstream of the proposed outfall points	July to October 2017	
Aquatic Macro-invertebrates	Macro-invertebrate survey of the River Trent upstream and downstream of the proposed outfall points	September – October 2017	
Fish survey (if required)	Fish habitat appraisal within the section of the River Trent to be impacted. Fish survey to determine species assemblage within the affected reach if no baseline data is available.	June to October 2017	

5.6 Landscape and Visual Amenity

Baseline Conditions

5.6.1 The site lies within National Landscape Character Area (NCA) 48: Trent and Belvoir Vales (Ref 5-23), which is characterised by undulating, strongly rural and predominantly arable farmland centred on the River Trent.

5.6.2 At a regional level the Site lies within the Trent Washlands Regional Character Area (RCA) as defined by the Bassetlaw Landscape Character Assessment (LCA). The power stations of West Burton and Cottam and the associated power lines are considered by the LCA to be the most dominant and visually intrusive landscape features within this area. The site also lies within the Mid Nottinghamshire Farmlands RCA which is considered to be an undulating landscape of predominantly rural, agricultural character.

5.6.3 The West Burton Power Station site is visible within the majority of the wider study area, where open views allow. Generally field boundary vegetation does little to reduce the visibility of the power station structures due to their scale.

5.6.4 Sensitive visual receptors including residents, road users and users of Public Rights of Way (PRoW) are located around the Site (see description in **Section 2**).

5.6.5 There are a number of (PRoW) within 500m of the Site, the closest of which are a public footpath to the east of the Site, which passes along the eastern bank of the River Trent. This connects with a second PRoW which branches off the River Trent, immediately north of the sewage works and leads in a north-westerly direction, passing around Bole Ings.

Scope of the Assessment

5.6.6 The following potential impacts may be associated with the Proposed Development:

- temporary changes to landscape character and views from sensitive receptors in the vicinity of the Site during construction and decommissioning; and
- permanent changes to landscape character and views from sensitive receptors in the vicinity of the Site during operation.

5.6.7 The proposed method of landscape and visual impact assessment has been devised to address the specific impacts likely to result from a development of its scale and nature. The methodology draws upon the following established best practice guidance:

- Guidelines for Landscape and Visual Impact Assessment, Third Edition. (Ref 5-24), referred to as GLVIA3 in this assessment;
- An Approach to Landscape Character Assessment (Ref 5-25); and
- Landscape Institute Advice Note 01/11: Photography and photomontage in landscape and visual impact assessment (Ref 5-26).

5.6.8 The EIA process requires that a clear distinction is drawn between landscape and visual impacts, as follows:

- landscape impacts relate to the degree of change to physical characteristics or components of the landscape, which together form the character of that landscape (e.g. landform, vegetation and buildings); and

- visual impacts relate to the degree of change to an individual receptor's view of that landscape (e.g. local residents, users of public footpaths or motorists passing through the area).

5.6.9 The assessment of impacts on built heritage, including impacts on the setting of listed buildings and structures, will be addressed by the cultural heritage assessment (see **Section 5.9**).

5.6.10 A detailed study of the existing landscape components, character and views of the Site and an agreed study area will be carried out in consideration of the following:

- site context;
- topography;
- vegetation including green infrastructure;
- roads, public rights of way and access;
- settlement and land-use;
- landscape character; and
- representative views.

5.6.11 This will be supported by photographs as appropriate. The planning context with respect to landscape character and visual amenity will also be assessed, taking into account relevant European, national, regional and local planning policies. The baseline study will form the basis of the assessment of the predicted impacts of the Proposed Development.

5.6.12 Representative views will be identified through the Zone of Theoretical Visibility (ZTV) assessment that will be undertaken on the main building envelope and the potential stack(s). The ZTV will be generated using a bare ground Digital Terrain Model (DTM) and be reviewed in the field against the following criteria in order to determine the selection of representative views which form the basis of the visual assessment:

- receptor function/ activity;
- distance from the Site;
- topography and elevation;
- degree and period of exposure;
- designation of the viewing place; and
- distribution of receptors.

5.6.13 From the initial site visit and planning policy context review, and based on a maximum stack height of up to 30-45m, a 5km radius study area is proposed for the landscape and visual impact assessment of the Proposed Development. It is not considered that any significant landscape or visual impacts would occur beyond 2km based on the context of the Proposed Development.

5.6.14 Up to 10 accurate Visual Representations of the Proposed Development for agreed representative views (visual receptors) will be produced in line with the guidance within the Landscape Institute Advice Note 01/11: Photography and photomontage in landscape and visual impact assessment (Ref 5-24). The location of representative views and photomontages will be agreed in consultation with BDC, WLDC and Nottinghamshire County Council as appropriate.

5.6.15 Where the assessment indicates the need for mitigation as a result of significant effects on landscape character or visual amenity, these will be outlined within the ES. A detailed landscaping strategy including green infrastructure will be prepared in liaison with BDC and WLDC as a requirement of a DCO.

5.7 Ground Conditions and Hydrogeology

Baseline Conditions

5.7.1 Made ground deposits are anticipated to be present across much of the Proposed Development site as this is indicated to lie within the footprint of the Environment Agency recorded historic landfill. It is believed that this is associated with the historic disposal of PFA generated at the WBA site.

5.7.2 The superficial deposits within the Site are classified as Secondary A Aquifers by the Environment Agency. The underlying bedrock is Mercia Mudstone deposits (Secondary B Aquifer). A review of the groundwater monitoring programme undertaken by EDF Energy indicates that groundwater levels vary from 12m Above Ordnance Datum (AOD) to a more typical 2 – 6m AOD across the majority of the West Burton Power Station Site.

5.7.3 Based on the possible presence of a Secondary A aquifer within the underlying superficial deposits, which could be in hydraulic connectivity with the River Trent, the sensitivity of the hydrogeology is considered to be moderate.

5.7.4 The Site is not located within a groundwater Source Protection Zone (SPZ) and there are no identified groundwater abstractions within 1km of the Site.

Scope of the Assessment

5.7.5 The following potential impacts may be associated with the Proposed Development:

- disturbance of contaminated soils and contamination perched groundwater and creation of new pathways to sensitive receptors, including construction workers and controlled waters, during construction;
- pollution of soils, and controlled waters within or near the Site during construction and decommissioning, for example due to the spillage of polluting materials (if an appropriate Construction Environmental Management Plan is not adhered to); and
- pollution of soils and controlled waters within or near the Site during operation, for example due to the spillage of polluting materials (if materials are not appropriately stored at the Proposed Development in accordance with an appropriate Operational Environmental Management Plan and/or an appropriate drainage system is not implemented and maintained).

5.7.6 A desk-based assessment (Phase 1) will be completed to identify potential contaminative uses of the Site. This desk-based assessment will identify the potential for land contamination and potential pathways to sensitive receptors. The desk-based assessment will consider the potential for contaminants associated with current and historic land use in and around the Site to be present within the footprint of the Proposed Development.

5.7.7 The results of the desk-based assessment and conceptual site model will be used to assess data gaps and uncertainties and, if required an initial scope for additional site investigation. It is anticipated that the requirements for intrusive investigation will be discussed and agreed in advance with the Environment Agency and BDC.

5.7.8 An assessment of potential impacts on existing ground conditions and sterilisation of potential mineral deposits will be undertaken as part of the EIA, including the potential for the Proposed Development to result in land contamination, as defined in the Environment Act 1995 Part 2A (Ref 5-27). Consideration will also be given to potential impacts associated with the construction and operation of the Proposed Development and how these will be prevented or minimised.

5.7.9 Based on the assessment of the baseline and the identification of any potential impacts, the ES will make recommendations for mitigation measures. These may include the recommendation for further intrusive investigation to address residual data gaps or better delineate identified contamination hotspots or plumes, quantitative risk assessment, remediation and validation. It will also make recommendations for possible mitigation measures to be employed by contractors, should any previously unidentified contamination be encountered during the construction phase.

5.8 Flood Risk, Hydrogeology and Water Resources

Baseline Conditions

5.8.1 The River Trent flows to the east of the Proposed Development, and is tidally influenced in this location. The Proposed Development includes two potential surface water outfall route options to the River Trent, and as such, the bank of the River Trent is included in the Site boundary. There are tidal flood defences in place adjacent to the West Burton Power Station site comprising raised earth embankments along the west bank of the River Trent; however, the Site is not located in an area shown to benefit from flood defences.

5.8.2 Wheatley Beck is located to the north-west of the Site, flowing south-west to north-east adjacent to the coal stockpile area. Railway Dyke Drain flows south-west to north-east parallel to the western boundary of the Power Station Site and the Catchwater Drain runs south-west to north-east to east of the site.

5.8.3 There is a small land drain to the north of the railway loop within the coal stockpile area which flows intermittently and a drainage channel located around the periphery of the railway loop, which drains water from the railway loop and coal stockpile area. This drainage channel discharges to the Wheatley Beck, to the north-west of the railway loop via oil interceptors.

5.8.4 The River Trent is designated under the Freshwater Fish Directive, the Nitrates Directive and the Urban Wastewater Treatment Directive. The River Trent also has ecological classification under the Water Framework Directive (WFD) and therefore is considered to be of high importance with regards to biodiversity.

5.8.5 Both Wheatley Beck and Catchwater Drain have ecological classification under the WFD. They are, therefore, are considered to be water resources of high importance with regards to biodiversity.

5.8.6 West Burton Sewage Treatment Works (STW) is located to the east and is owned and operated by Severn Trent Water who holds the appropriate consent to discharge to the River Trent. The STW takes foul water from the West Burton Power Station site.

5.8.7 Surface water from the existing West Burton Power Station site flows towards the south-east and is discharged to the River Trent.

5.8.8 The majority of the Proposed Development would lie within Flood Zone 1, meaning that there is low probability of the site flooding from fluvial and/or tidal sources. However, there are small areas of the Site along the eastern boundary that lie within Flood Zone 2, and the

two outfall route options to the River Trent lie within Flood Zone 3, meaning that there is a moderate and high probability of fluvial and/or tidal flooding.

Scope of the Assessment

5.8.9 The following potential impacts may be associated with the Proposed Development:

- change to the impermeable area within the Site and associated changes to surface water flows during operation;
- pollution of surface watercourses within or near the Site during construction and decommissioning, due to spillages or polluted surface water runoff entering the watercourse (if an appropriate Environmental Management Plan is not adhered to); and
- pollution of surface watercourses within or near the Site during operation, due to spillages or polluted surface water runoff entering the watercourse (if materials are not appropriately stored at the Proposed Development in accordance with the Environmental Permit or an appropriate Operational Environmental Management System and/ or an appropriate drainage system is not implemented and maintained).

5.8.10 Potential impacts on groundwater are considered in the Ground Conditions and Hydrogeology section (**Section 5.7**).

5.8.11 A Flood Risk Assessment (FRA) is required in accordance with the NPPF (Ref 4-3) and NPS EN-1 (Ref 4-4) due to the size (over 1ha) and location of the Proposed Development (partly in Flood Zones 2 and 3). The FRA will consider flood risk from all sources to the Proposed Development as well as the potential for the Proposed Development to increase flood risk off site. This will inform the design of the Proposed Development (including finished ground and floor levels) as well as the EIA.

5.8.12 The EIA will also consider the potential for impacts on surface watercourses and waterbodies, including potential impacts on the River Trent. Depending on the works undertaken for surface water management at the Site, and the potential need for an outfall to the river Trent, a Water Framework Directive assessment may be undertaken to support the EIA. In addition, as the river Trent is tidal at this location, works in the river may require a Marine Licence to be obtained from the Marine Management Organisation. This will be evaluated as the design of the surface water management system is progressed.

5.9 Cultural Heritage

Baseline Conditions

5.9.1 There are no statutorily designated world heritage sites, or non-statutory battlefield sites or registered parks and gardens within 5km of West Burton Power Station.

5.9.2 Archaeological remains within 2km of West Burton Power Station are sparse and include remains associated with the West Burton scheduled Deserted Medieval Village (DMV) (SM 1017741) on the south site of West Burton Power Station Site, a fish pond associated with the listed manor and church at Bole and isolated find spots. A Roman Road may run through North Wheatley to the west of West Burton Power Station heading south-east towards the River Trent.

5.9.3 There are notable clusters of listed buildings in the nearby villages of Bole and Saundby, North Wheatley, Sturton-le-Steeple, Littleborough, Knaith and Lea. The nearest are in Bole where the Grade II listed Church of St Martin and the Grade II Bole Manor House and attached outbuilding are located.

5.9.4 The village of Saundby is a designated conservation area which is approximately 2.1km from the Site.

Scope of the Assessment

5.9.5 The following potential impacts may be associated with the Proposed Development:

- physical impacts and/or impacts on the setting of non-designated heritage assets, including historic landscape character areas, within the Site during construction; and
- impacts on the setting of designated and non-designated heritage assets, including historic landscape character areas, in the vicinity of the Site during construction and operation.

5.9.6 A desk-based archaeological assessment will determine, as far as is reasonably possible, from existing records (including the Nottinghamshire Historic Environment Record (HER), Historic England Archive and the National Heritage List) and visits to relevant archives and local studies libraries, the nature of the archaeological resource within a study area of 1km for non-designated assets. A larger study area of 5km, or larger if agreed to be appropriate, will be used to identify designated heritage assets.

5.9.7 The results will be used to identify any impacts that the Proposed Development may have on the receptors. An inventory of all heritage assets will be cross-referenced to drawings (base maps) and the report narrative. This baseline collation of data will be supported by site visits to identify any unknown archaeological assets, the potential for survival of archaeology and to establish the setting of identified archaeological assets.

5.9.8 Due to the scale of the Proposed Development there is the potential for the setting of these heritage assets to be impacted; therefore potential setting impacts upon designated and non-designated assets will be assessed. The Zone of Theoretical Visibility (ZTV) (to be undertaken as part of the landscape and visual impact assessment as discussed in the Landscape and Visual Amenity section (**Section 5.6**)) will be used as a tool of assessment to identify areas of visibility. However as the setting of a heritage asset is not a solely visual concept, other aspects such as aural intrusion and historical associations must also be taken into account. The assessment will follow current professional good practice and guidance including that produced by the Chartered Institute for Archaeologists (CIfA) and Historic England (HE) (formerly English Heritage (EH)):

- Chartered Institute for Archaeologists (CIfA): Standard and Guidance for historic environment desk-based assessment (Ref 5-28);
- CIfA: Code of Conduct (Ref 5-29);
- Historic England:: Conservation Principles: Policies and Guidance for the Sustainable Management of the Historic Environment (Ref 5-30);
- Historic England: Seeing History in the view (Ref 5-31);
- Historic England: Historic Environment Good Practice Advice in Planning Note 2: Managing Significance in Decision-Taking in the Historic Environment (Ref 5-32);
- Historic England: Historic Environment Good Practice Advice in Planning Note 3: The Setting of Heritage Assets (Ref 5-33); and
- Historic England: Historic England Advice Note 4: Tall Buildings (Ref 5-34).

5.9.9 It is possible that sufficient heritage information is presently available to provide an adequate baseline assessment for the EIA. However, should this prove not to be the case following the initial assessment, the need for further archaeological evaluation such as geophysical

survey will be discussed and agreed with the Local Authority. If intrusive works are required to inform the EIA, an archaeologist will be present to undertake a watching brief during those works.

5.9.10 The purpose of the EIA will be to assess the potential impacts of the Proposed Development upon the significance of the heritage resource and to understand the level of harm to that resource. The aim will then be to propose appropriate mitigation to resolve the harm caused, where possible.

5.9.11 Once all of the potential heritage receptors have been identified, they will be assigned a 'value'. This is not solely a reflection of their designated or non-designated status but is determined through a number of factors including their values which can be expressed as artistic, archaeological, architectural or historic. The impact of the Proposed Development upon the significance of the heritage assets will then be quantified and expressed within the EIA. This will produce an initial significance of effect of the Proposed Development upon the heritage resource, taking into account any design or embedded mitigation.

5.9.12 Following the impact assessment process, any potential mitigation strategies required will be considered and recommendations made. The significance of residual effects remaining after mitigation will be assessed according to accepted criteria for assessing heritage assets.

5.10 Socio-Economics

Baseline Conditions

5.10.1 The Proposed Development falls in the Sturton Ward within the district of Bassetlaw.

5.10.2 The study area is within a rural environment, which is characteristic of much of Bassetlaw, where two fifths (42.2%) of the population live in rural areas, compared to a quarter (26.7%) in the East Midlands and less than a fifth (17.6%) in England (Ref 5-35). In the immediate vicinity of the Proposed Development, all 2,300 people living in the Sturton Ward are in a rural area (Ref 5-32).

Scope of Assessment

5.10.3 The Proposed Development is likely to have a beneficial effect on employment during the construction phase. There will also be limited employment opportunities associated with the operation of the Proposed Development (associated with operating and maintenance works).

5.10.4 A policy review will be undertaken including relevant local, sub-regional (LEP) and national policies around economic development and planning in a socio-economic context to understand the fit of the development proposals with existing policy and identify, where available, relevant service provision standards. This will provide an interpretation of where the Proposed Development would meet local policy requirements

5.10.5 In order to provide an accurate assessment of the potential impacts of the Proposed Development, a detailed baseline of the social and economic profile of the local area, including local urban centres, compared to the regional and national context, will be established based on the relevant impact and benchmark areas identified.

5.10.6 The baseline will be developed using appropriate data sources including ONS 2011 Census, ONS Annual Population Survey, ONS Mid-year Population Estimates, ONS Labour Market Statistics, Business Register and Employment Survey data, Annual Survey of Hours and Earnings, and current provision and position in relation to the relevant impact areas (e.g.

employment, demography, provision of education, health, community services and open space).

5.10.7 During the collection of baseline data, consultation with local and sub-regional stakeholders may be required to gain the most up to date and accurate information.

5.10.8 The impact assessment will identify the additional demand created in the economy and for social infrastructure resulting from the Proposed Development both during the construction and operational phases, including any mitigation measures required as a result of residual impacts. Information on construction phase expenditure and duration and construction and operation phase workforce will be used to inform the assessment.

5.10.9 The impact assessment will consider both construction and operational phases and provide an assessment of both gross and net additional impacts resulting from the Proposed Development. The assessment will draw on the latest guidance on employment densities, additionality and impact assessment to include HCA, Treasury Green Book and BIS published guides. Where possible the impacts of the socio-economic assessment will be appraised against relevant national standards and guidance. Where no standards exist, professional experience and judgement will be applied and justified.

5.11 Sustainability and Climate Change

Baseline Conditions

5.11.1 National, regional and local policy guidance promotes sustainability principles, particularly with regard to the reuse of land and buildings, air quality and land contamination issues, energy conservation, materials and water usage.

Scope of the Assessment

5.11.2 The ES will incorporate an assessment of the design against established sustainability criteria to take into account the following:

- land, materials and natural resource use;
- energy consumption and energy efficiency;
- waste minimisation and implementation of the waste hierarchy, including a waste management plan covering the construction phase of the Proposed Development; and
- materials specification and usage in relation to CO_2 emissions and ozone depletion.

5.11.3 The carbon emissions/carbon footprint from the operational power plant will be assessed in a standalone Climate Change Impact Report, considering proposed plant efficiency and performance against UK data including the average carbon emissions associated with the current electricity fuel mix in the UK.

5.12 Cumulative Effects

5.12.1 An assessment of potentially significant cumulative effects with other proposed developments in the vicinity of the Proposed Development will be undertaken for each of the technical topics, and reported in the ES.

5.12.2 Based on an initial search of the planning register, **Figure 8** presents other known planned developments in the vicinity of the Proposed Development (for which a planning application has been submitted, or which has been specifically requested for consideration by a key stakeholder). These are as follows:

- **Ash processing plant (16/1441/CDM):** an application to was submitted in September 2016 and is currently being determined, located adjacent to the Proposed Development Site;
- **49MW Battery Storage Facility (16/00954/FUL):** the application was approved in September 2016 and is located adjacent to the Proposed Development, within the bounds of WBB;
- **A quarry access road (16/00354/CDM):** a variation to a former planning application was approved in March 2016, located at the southern perimeter of the West Burton Power Station Site.

5.12.3 Information on other developments that have the potential for cumulative effects with the Proposed Development will be identified in consultation with the relevant local planning authorities.

5.13 Combined Head and Power (CHP) Assessment

5.13.1 Although not formally part of the EIA, it is a requirement of the NPS that applicants for all new power stations explore and develop feasible CHP opportunities. This is in order to maximise the use of waste heat and in turn the thermal efficiency of the proposed combustion plant.

5.13.2 A CHP investigation will be undertaken and a statement included as part of the application for development consent, in accordance with the EA CHP Ready Guidance for Combustion and Energy from Waste Power Plant (Ref 5-36).

5.13.3 The CHP feasibility review will consider the heat availability from the Proposed Development, recognising that the plant is only expected to run for up to 1,500 hours per year, which may affect the economic viability of it supporting any CHP provision.

6. Non-Significant EIA Issues

6.1 Introduction

6.1.1 The aim of the Scoping stage is to focus the EIA on those environmental aspects that may be significantly affected by the Proposed Development. In so doing, the significance of impacts associated with each environmental aspect becomes more clearly defined, resulting in certain aspects being considered 'non-significant'. The following section provides a summary of those issues considered during the preparation of this Scoping Report, which are not considered likely to lead to significant environmental effects. It is proposed that these would therefore not be considered in the ES.

6.2 Waste Management

6.2.1 Waste arisings from the existing WBA and WBB Power Stations are managed in accordance with the Environmental Management System Procedure for the Management of Controlled Waste (Hazardous & Non-Hazardous).

6.2.2 Due to the size of the Proposed Development, waste arisings are anticipated to be very minor in nature from the operational power plant and would be managed by adopting the procedures already in place for the WBA and WBB Power Stations. Construction wastes are not expected to be significant and will be managed through a Site Waste Management Plan. Any spoil arising from site clearance and preparation works is envisaged to be retained on site for beneficial use. Therefore, significant effects from waste are not anticipated.

6.3 Electronic Interference

6.3.1 The proposed maximum building heights and expected temporary construction cranes would be no higher than the existing cooling towers and stacks associated with the WBA Power Station and the stacks of WBA Power Station. Therefore an assessment of the Proposed Development's effect on electronic interference is not considered to be required.

6.3.2 Further to this, analogue television and radio signals have ceased to be transmitted and have been replaced by digital signals. As such, the Proposed Development's potential to interfere with television, radio (both analogue and digital) and mobile phone reception is considered negligible. It is proposed that Electronic Interference is scoped out of the EIA.

6.4 Aviation

6.4.1 The Civil Aviation Association (CAA) has a general interest in charting all known structures of 91.4m (300 feet) or more above ground level. The stack of WBA Power Station is 198m in height, and the cooling towers are 112m in height. The stack has lighting at the top for aviation purposes.

6.4.2 Given the Site's distance from the nearest airfield (Sturgate Airfield), approximately 7km to the east, and as none of the proposed buildings or structures would be 91.4m or more above ground level, an assessment of the potential impacts of the Proposed Development on aviation is not required. It is proposed that Aviation is scoped out of the EIA.

6.4.3 The CAA will however be consulted on the Proposed Development to review any requirements for aviation lighting on the stack(s) and enable the Proposed Development to be charted in future if required.

6.5 Accidental Events/Health & Safety

6.5.1 The description of the Proposed Development in the ES will provide information to allow the key environmental issues identified to be adequately assessed. Accidental events such as the potential for fuel spillages, fires and abnormal air emissions, and how the risk of these events would be minimised, will be detailed in the relevant chapter of the ES.

6.5.2 Accidental events will be covered by a brief risk assessment in the ES, which will include reference to the Applicant's overarching principles of emergency management. The majority of emergency response plans and contingency measures will be dealt with in the Environmental Permit, which is regulated by the Environment Agency.

7. Environmental Impact Assessment Scope and Process

7.1 Proposed Scope of the EIA

7.1.1 Based on an evaluation of the baseline environmental information that exists for the Site and surrounding area and the potential environmental effects of the Proposed Development, it is proposed that the EIA will include the following technical disciplines:

- Planning Policy Context;
- Air Quality;
- Traffic and Transport;
- Noise and Vibration;
- Ecology and Nature Conservation;
- Landscape and Visual Amenity;
- Ground Contamination and Hydrogeology;
- Flood Risk, Hydrology and Water Resources;
- Cultural Heritage;
- Socio-Economics; and
- Sustainability and Climate Change.

7.1.2 As outlined in Section 6, a number of assessments are not considered relevant to the EIA for this Proposed Development as no significant environmental effects are anticipated to occur. The term 'significant' is an important distinction because a development may cause minor impacts to occur which do not have significant environmental effects. As such, the following topics are proposed to be scoped out of the EIA:

- Waste management;
- Electronic interference;
- Aviation; and
- Accidental events.

7.2 EIA Methodology and Reporting

7.2.1 The ES will set out the process followed during the preparation of the EIA including the methods used for the collection of data and for the identification and assessment of impacts. Any assumptions made will be clearly identified.

7.2.2 The EIA process is designed to be capable of, and sensitive to, changes that occur as a result of changes to the plant design, including any mitigation measures that are incorporated during the EIA. This will be particularly important for the Proposed Development as the design and layout is still being refined, and minor changes are likely to be made following submission of this EIA Scoping Report.

7.2.3 The EIA is based on a number of related activities, as follows:

- establishing existing baseline conditions;
- consultation with statutory and non-statutory consultees throughout the development consent process;
- consideration of relevant local, regional and national planning policies, guidelines and legislation relevant to EIA;
- consideration of technical standards for the development of significance criteria;
- review of secondary information, previous environmental studies and publicly-available information and databases;
- physical surveys and monitoring;
- desk-top studies;
- computer modelling;
- reference to current legislation and guidance; and
- expert opinion.

7.2.4 Impacts will be considered on the basis of their magnitude, duration and reversibility. Cumulative and combined effects will also be considered where appropriate. Significance will be evaluated on the basis of the scale of the impact and the importance or sensitivity of the receptors, in accordance with standard assessment methodologies (major, moderate, minor and not significant).

7.2.5 Where likely significant environmental effects are identified in the assessment process, measures to mitigate these effects will be put forward in the form of recommendations to be undertaken as part of the project development.

7.3 Proposed Structure of the Environmental Statement

7.3.1 The ES will comprise the following set of documents:

- Non-Technical Summary (NTS): This document will provide a summary of the key issues and findings of the EIA in non-technical language.
- Volume I: Environmental Statement: This will contain the full text of the EIA with the proposed chapter headings as follows:
  - Chapter 1: Introduction;
  - Chapter 2: Assessment Methodology;
  - Chapter 3: Description of the Site;
  - Chapter 4: The Proposed Development;
  - Chapter 5: Planning Policy Context;
  - Chapter 6: Air Quality;
  - Chapter 7: Traffic and Transport;
  - Chapter 8: Noise and Vibration
  - Chapter 8: Ecology and Nature Conservation;
  - Chapter 9: Landscape and Visual Amenity;
  - Chapter 10: Ground Conditions and Hydrogeology;

- Chapter 11: Flood Risk, Hydrogeology and Water Resources;
- Chapter 12: Cultural Heritage
- Chapter 13: Socio-Economics
- Chapter 14: Sustainability and Climate Change
- Chapter 15: Cumulative and Combined Effects; and
- Chapter 16: Summary of Significant Residual Effects and Mitigation.

- Volume II: Figures: This will provide supporting figures of the environmental studies conducted during the EIA.
- Volume III: Technical Appendices: These will provide supplementary details of the environmental studies conducted during the EIA including relevant data tables, figures and photographs. A table outlining the proposed mitigation measures and how they are to be secured will also be provided.

Structure of Technical Chapters

7.3.2 Chapters 6-13 will be structured based on the following sub-headings:

Introduction

7.3.3 The Introduction will describe the format of the assessment presented within the chapter.

Legislation and Planning Policy Context

7.3.4 The Legislation and Planning Policy Context section will provide an overview of the relevant legislation, planning policy and technical guidance relevant to the assessment.

Assessment Methodology and Significance Criteria

7.3.5 The assessment method will incorporate feedback from consultation that has been undertaken throughout all stages of the project. The ES will highlight key issues that have arisen from the scoping exercise that have been specifically addressed within the EIA.

7.3.6 The methods used in undertaking the technical study will be outlined with references to published standards (e.g. British Standards, Building Research Establishment), guidelines (e.g. Design Manual for Roads and Bridges and Institute of Environmental Management & Assessment guidelines) and relevant significance criteria.

7.3.7 The significance of effects before and after mitigation will be evaluated with reference to definitive standards, accepted criteria and legislation where available. Where it is not possible to quantify impacts, qualitative assessments will be carried out, based on available knowledge and professional judgment. Where uncertainty exists, this will be noted in the relevant technical assessment chapter.

7.3.8 Specific criteria for each technical assessment will be developed, giving due regard to the following:

- extent and magnitude of the impact;
- impact duration (whether short, medium or long term);
- impact nature (whether direct or indirect, reversible or irreversible);
- whether the impact occurs in isolation, is cumulative or interactive;
- performance against environmental quality standards where relevant;

- sensitivity of the receptor; and
- compatibility with environmental policies and standards.

7.3.9 For issues where definitive quality standards do not exist, significance will be based on the:

- local, district, regional or national scale or value of the resource affected;
- number of receptors affected;
- sensitivity of these receptors; and
- duration of the impact.

7.3.10 In order to provide a consistent approach to expressing the outcomes of the various studies undertaken as part of the EIA, and thereby enable comparison between effects upon different environmental components, the following terminology will be used throughout the ES to define effects:

- adverse – detrimental or negative effect to an environmental resource or receptor; or
- beneficial – advantageous or positive effect to an environmental resource or receptor; and
- negligible – imperceptible effect to an environmental resource or receptor; or
- minor – slight, very short or highly localised effect of no significant consequence; or
- moderate – more than a slight, very short or localised effect (by extent, duration or magnitude) which may be considered significant; or
- major – considerable effect (by extent, duration or magnitude) of more than local significance or in breach of recognised acceptability, legislation, policy or standards.

7.3.11 As indicated above, for the purpose of this EIA moderate and major effects will be deemed 'significant'. Where possible mitigation measures will be identified to reduce the residual effects to 'not significant'.

7.3.12 Each of the technical chapters will provide the criteria, including sources and justifications, for quantifying the different levels of residual effect. Where possible, this has been based upon quantitative and accepted criteria (for example, the National Air Quality Strategy objectives or noise assessment guidelines), together with the use of value judgement and expert interpretation to establish to the scale of an effect.

Baseline Conditions

7.3.13 In order to assess the potential impacts and effects of the Proposed Development, it is necessary to determine the environmental conditions that currently exist on site and in the surrounding area, for comparison. These are known as the 'existing baseline conditions'. Baseline conditions are determined using the results of site surveys and investigations or desk based data searches, or a combination of these, as appropriate.

7.3.14 In order to compare future operations against the baseline that is likely to occur at the time of full operation, for most technical disciplines it will be necessary to establish future baseline conditions taking account of any planned or likely changes.

Development Design and Impact Avoidance

7.3.15 Measures that have been integrated into the Proposed Development in order to avoid or reduce adverse environmental effects will be described. Such measures may include refinement of the design and layout of the Proposed Development to avoid impacts on

sensitive receptors, implementation of Construction and Operational Environmental Management Plans, and adherence of relevant legislation, guidance and best practice. The assessment of impacts and effects in the next section takes account of these measures already being in place.

Likely Impacts and Effects

7.3.16 This section will identify the likely impacts resulting from the Proposed Development. The magnitude of impacts are defined with reference to the relevant baseline conditions (existing or future, as appropriate), and effects are determined in accordance with the identified methodology.

Mitigation and Enhancement Measures

7.3.17 The Mitigation and Enhancement Measures section will describe the measures that will be implemented by the Applicant to reduce any significant adverse effects identified by the assessment and enhance beneficial effects during construction and operation of the Proposed Development.

Residual Effects and Conclusions

7.3.18 Effects of the Proposed Development remaining following the implementation of available mitigation measures are known as 'residual effects'. These will be discussed for each of the potential effects, and their significance level identified.

Cumulative and Combined Effects

7.3.19 In accordance with the EIA Regulations, consideration will also be given to the potential for cumulative impacts to arise. Other developments to be considered in the cumulative impact assessment will be agreed with the LPA.

7.3.20 Cumulative impacts are those that accrue over time and space from a number of development activities. The impact of the Proposed Development will be considered in conjunction with the potential impacts from other projects or activities which are both reasonably foreseeable in terms of delivery (e.g. have planning consent) and are located within a realistic geographical scope where environmental impacts could act together to create a more significant overall effect.

7.3.21 Combined effects will also be assessed. The combination of predicted environmental impacts resulting from a single development on any one receptor that may collectively cause a greater effect (such as the combined effects of noise and air quality/ dust impacts during construction on local residents), are referred to as combined effects.

7.4 Scoping and Consultation

7.4.1 The process of consultation is critical to the development of a comprehensive and balanced ES. The views of statutory and non-statutory consultees serve to focus the environmental studies and to identify specific issues that require further investigation. Consultation is an ongoing process, which enables mitigation measures to be incorporated into the project design thereby limiting adverse effects and enhancing environmental benefits.

7.4.2 Bassetlaw District Council and Nottinghamshire County Council has been contacted prior to the submission of this Scoping Report.

7.4.3 Following the publication of this EIA Scoping Report, informal consultation on the Proposed Development will be undertaken in spring/summer 2017, using a range of methods, which

includes a project website will be maintained throughout the project to provide up-to-date information.

7.4.4 As required by Section 47 of the Planning Act 2008 (as amended) the Applicant is preparing a Statement of Community Consultation (SoCC) for publication in spring/summer 2017. The SoCC will outline how the Applicant intends to formally consult with the local community about the Proposed Development. The Applicant is required to first consult the relevant local authorities on the draft SoCC, who have a period of at least 28 days following receipt of the draft SoCC to do so, prior to its publication for inspection by the public.

7.4.5 Preliminary Environmental Information (PEI) will be provided for statutory consultation, which will take place around Q3 2017. The formal consultation will use a range of methods including a public exhibition, newsletter drop and ongoing use of the project website.

7.4.6 All responses received during consultation will be carefully considered and taken into account in the development of the project, in accordance with Section 49 of the Planning Act 2008. Details of any responses received during consultation and the account taken of those responses will be included in a Consultation Report, as required by Section 37 of the Planning Act 2008. This Consultation Report will be submitted as part of the application for development consent and will be available for public review at that point.

7.4.7 The Consultation Report will demonstrate how the Applicant has complied with the consultation requirements of the Planning Act 2008. It will be considered by PINS, both when determining whether to accept the application and in examining the application.

8. Summary

8.1.1 This EIA Scoping Report has identified the potential for significant effects to arise from the construction and operation of the Proposed Development. The following technical specialist assessments are proposed:

- Air Quality;
- Traffic and Transport;
- Noise and Vibration;
- Ecology and Nature Conservation;
- Landscape and Visual Amenity;
- Ground Contamination and Hydrogeology;
- Flood Risk, Hydrology and Water Resources;
- Cultural Heritage;
- Socio-Economics; and
- Sustainability and Climate Change.

8.1.2 The detailed assessments for each of these topics will be undertaken in accordance with standard guidance and best practice and reported in the ES. Where significant effects are identified, mitigation measures will be described where possible to reduce the residual effects.

8.1.3 This EIA Scoping Report is submitted to PINS with a formal request for a Scoping Opinion in accordance with Regulation 8 of the Infrastructure Planning (Environmental Impact Assessment) Regulations 2009 as amended (Ref 8-1).

9. References

Ref 1-1 PINS (2015) Advice Note 7 *Environmental Impact Assessment Screening, Scoping and Preliminary Information*

Ref 2-1 European Commission (2001) Directive 2001/80/EC of the European Parliament and the Council of 23 October 2001 on the limitation of emissions of certain pollutants into the air from large combustion plants. *Official Journal of the European Communities, L309/1.*

Ref 3-1 HM Government (1974) Control of Pollution Act

Ref 3-2 HM Government (1995) Environment Act

Ref 3-3 HM Government (2005) Hazardous Waste (England and Wales) Regulations

Ref 4-1 Department of Energy & Climate Change (DECC) (2013*) Electricity Market Reform (EMR) Delivery Plan*

Ref 4-2 Department of Energy and Climate Change (DECC) (2011) *Overarching National Policy Statement for Energy (EN-1)*. London: The Stationery Office

Ref 4-3 Department for Communities and Local Government (DCLG) (2012*) The National Planning Policy Framework.* DCGL

Ref 4-4 Bassetlaw District Council (2011) BDC Core Strategy and Development Policies

Ref 4-5 Department of Trade and Industry (2007) *Meeting the Energy Challenge: a White Paper on energy.* DECC

Ref 5-1 Environment Agency (2016) *Air Emissions Risk Assessment for your Environmental Permit*. Available from: https://www.gov.uk/guidance/air-emissions-risk-assessment-for-your-environmental-permit [Accessed 16/01/17].

Ref 5-2 Department for Environment Food and Rural Affairs (Defra) (2016) *Local Air Quality Management: Technical Guidance (TG16)*. Available from https://laqm.defra.gov.uk/technical-guidance/ [Accessed 20/03/16]

Ref 5-3 Highways Agency (2007) *Design Manual for Roads and Bridges, Vol 11, S3, Part 1, HA 207/07* [Online] Available from: http://www.standardsforhighways.co.uk/dmrb/vol11/section3/ha20707.pdf [Accessed 16/01/17].

Ref 5-4 Institute of Air Quality Management (IAQM) (2016) *Guidance on the Assessment of Mineral Dust Impacts for Planning.* Institute of Air Quality Management and Assessment

Ref 5-5 Department for Communities and Local Government (2014) *Travel Plans, Transport Assessments and Statements, Planning Practice Guidance.*

Ref 5-6 Institute of Environmental Assessment (1993) *Guidelines for the Environmental Assessment of Road Traffic.*

Ref 5-7 National Policy Statement for Fossil Fuel Electricity Generating Infrastructure (EN-2), July 2011 (NPS EN-2

Ref 5-8 National Policy Statement for Gas Supply Infrastructure and Gas and Oil Pipelines (EN-4), July 2011 (NPS EN-4)

Ref 5-9 Noise Policy Statement for England, 2010

Ref 5-10 Planning Practice Guidance for Noise, 2014

Ref 5-11 British Standard (BS) 5228-1 2009+A1:2014 *Code of Practice for Noise and Vibration Control on Construction and Open Sites. Part 1: Noise*

Ref 5-12 British Standard (BS) 5228-2 2009+A1:2014 *Code of Practice for Noise and Vibration Control on Construction and Open Sites. Part 2: Vibration*

Ref 5-13 International Organisation for Standardisation (ISO) 9613-2: 1996 *Attenuation of sound during propagation outdoors. Part 2: General method of calculation*

Ref 5-14 British Standard (BS) 4142: 2014 *Methods for rating and assessing industrial and commercial sound.*

Ref 5-15 British Standard (BS) 8233:2014 *Guidance on Sound Insulation and Noise Reduction for Buildings*

Ref 5-16 World Health Organisation (WHO) (1999) *Guidelines for Community Noise'*

Ref 5-17 World Health Organisation (WHO) (2009) *Night Noise Guidelines for Europe*

Ref 5-18 British Standard (BS) 7385: 1993 *Evaluation and measurement for vibration in buildings'*

Ref 5-19 British Standard (BS) 6472: 2008 *Guide to evaluation of human exposure to vibration in buildings*

Ref 5-20 Department of Transport (1988) *Calculation of Road Traffic Noise (CRTN)*

Ref 5-21 British Standard (BS) 7445 2003 *Description and Measurement of Environmental Noise*

Ref 5-22 CIEEM (2016) *Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater and Coastal, second Edition.* Chartered Institute of Ecology and Environmental Management, Winchester.

Ref 5-23 Natural England (2013) *National Character Area profile 48: Trent and Belvoir Vales*

Ref 5-24 Landcape Institute and Institute of Environmental Management and Assessment (2013) *Guidelines for Landscape and Visual Impact Assessment, Third Edition*

Ref 5-25 Natural England (2014) *Approach to Landscape Character Assessment.* Available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/396192/landscape-character-assessment.pdf [Accessed 20/03/2017]

Ref 5-26 Landscape Institute (2011) Landscape Institute Advice Note 01/11: Photography and photomontage in landscape and visual impact assessment

Ref 5-27 HM Government (1995) Environment Act 1995 Part 2A

Ref 5-28 Chartered Institute for Archaeologists (CI*f*A) (2014) *Standard and Guidance for historic environment desk-based assessment*

Ref 5-29 Chartered Institute for Archaeologists (CI*f*A) (2014) *Code of Conduct*

Ref 5-30 Historic England (2008) *Conservation Principles: Policies and Guidance for the Sustainable Management of the Historic Environment*

Ref 5-31 Historic England (2011) *Seeing History in the view*

Ref 5-32 Historic England (2015) *Historic Environment Good Practice Advice in Planning Note 2: Managing Significance in Decision-Taking in the Historic Environment*

Ref 5-33 Historic England (2015) *Historic Environment Good Practice Advice in Planning Note 3: The Setting of Heritage Assets*

Ref 5-34 Historic England (2015) *Historic England Advice Note 4: Tall Buildings*

Ref 5-32 Office for National Statistics (2011) Census data. Available at https://www.ons.gov.uk/census/2011census/2011censusdata [Accessed 03/04/2016]

Ref 5-35 Environment Agency (2013) *CHP Ready Guidance for Combustion and Energy from Waste Power Plant*

Ref 8-1 HM Government (2009) Infrastructure Planning (Environmental Impact Assessment) Regulations 2009

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Wider West Burton Power Station

Purpose of Issue
FINAL

Client
EIA SCOPING REPORT

Project Title
WEST BURTON C

Drawing Title
FIGURE 1

SITE LOCATION

Drawn	Checked	Approved	Date
GB	EB	RL	25/04/2017

AECOM Internal Project No.
60527350

Scale @ A3
1:25,000

AECOM
Scott House
Alencon Link, Basingstoke
Hampshire, RG21 7PP
Telephone (01256) 310200
Fax (01256) 310201
www.aecom.com

Drawing Number
60527350/DCO/FIGURE 1

Rev

File Name:K:\Newproje\60527350 - West Burton C Gas Fired Power Station\06. GIS\02_Maps\West Burton C DCO 300MW\Figure 1.mxd

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LEGEND

Indicative DCO Site Boundary

Purpose of Issue
FINAL

Client
EIA SCOPING REPORT

Project Title
WEST BURTON C

Drawing Title
FIGURE 2
INDICATIVE DCO
SITE BOUNDARY

Drawn	Checked	Approved	Date
GB	EB	RL	07/04/2017

AECOM Internal Project No.	Scale @ A3
60527350	1:4,000

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Drawing Number
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N

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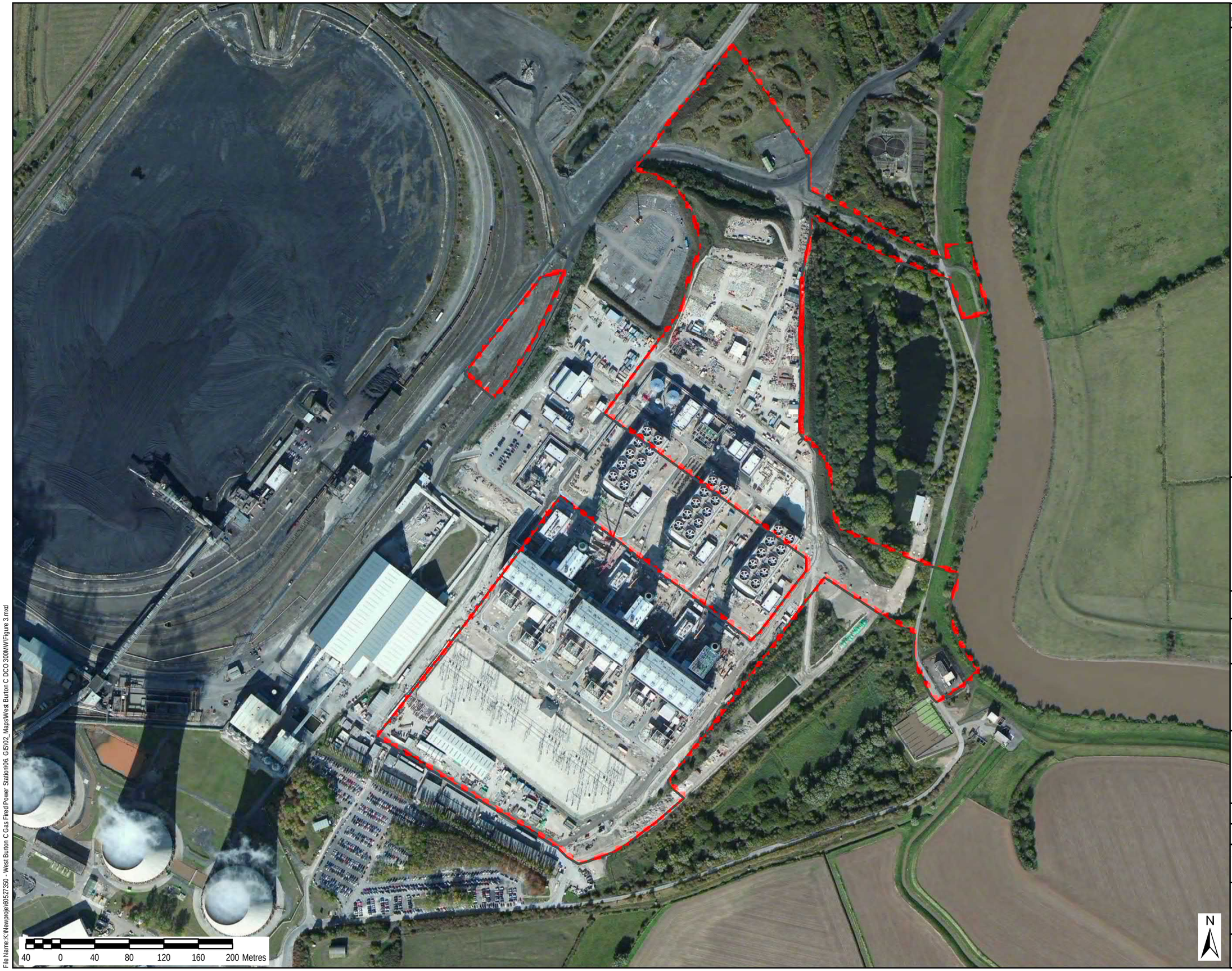

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LEGEND

Indicative DCO Site Boundary

Purpose of Issue

FINAL

Client

EIA SCOPING REPORT

Project Title

WEST BURTON C

Drawing Title

FIGURE 3
AERIAL PHOTOGRAPH OF INDICATIVE DCO SITE

Drawn	Checked	Approved	Date
GB	EB	RL	27/02/2017

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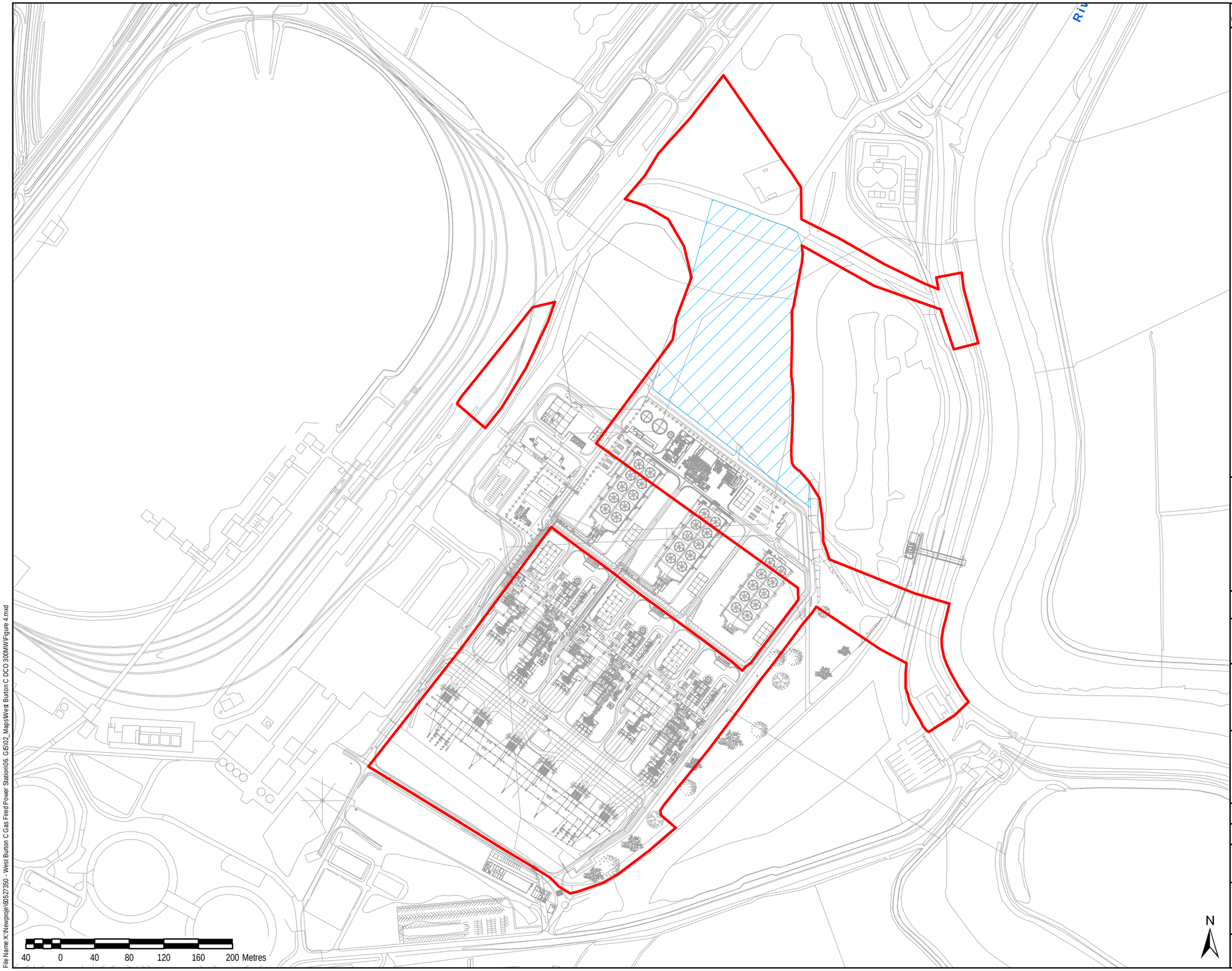

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LEGEND

- Indicative DCO Site Boundary
- Indicative Development Footprint

Purpose of Issue: FINAL

Client: EIA SCOPING REPORT

Project Title: WEST BURTON C

Drawing Title: FIGURE 4 INDICATIVE DEVELOPMENT FOOTPRINT

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LEGEND

- Indicative DCO Site Boundary
- 10km Buffer
- Local Nature Reserve (LNR)
- Ancient Woodland
- Site of Special Scientific Interest (SSSI)
- Scheduled Monument

Listed Building

- Grade I Listed Building
- Grade II* Listed Building
- Grade II Listed Building

Purpose of Issue
FINAL

Client
EIA SCOPING REPORT

Project Title
WEST BURTON C

Drawing Title
FIGURE 5
ENVIRONMENTAL RECEPTORS WITHIN 10KM OF THE SITE

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Rev

870 0 870 1,740 2,610 3,480 4,350 Metres

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LEGEND

- Indicative DCO Site Boundary
- 2km Buffer
- 5km Buffer
- Watercourse
- Large Bodies of Water
- Local Nature Reserve (LNR)
- Ancient Woodland
- Local Wildlife Sites (LWS)*
- Site of Special Scientific Interest (SSSI)
- Conservation Area
- Scheduled Monument

Listed Building

- Grade I Listed Building
- Grade II* Listed Building
- Grade II Listed Building

* boundaries indicative only

Purpose of Issue: FINAL

Client: EIA SCOPING REPORT

Project Title: WEST BURTON C

Drawing Title: FIGURE 6 ENVIRONMENTAL RECEPTORS WITHIN 5KM OF THE SITE

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Rev:

410 0 410 820 1,230 1,640 2,050 Metres

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LEGEND

- Indicative DCO Site Boundary
- Defences
- Flood Zone 3
- Flood Zone 2

Purpose of Issue: FINAL

Client: EIA SCOPING REPORT

Project Title: WEST BURTON C

Drawing Title: FIGURE 7

FLOOD ZONES

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Drawing Number: 60527350/DCO/FIGURE 7

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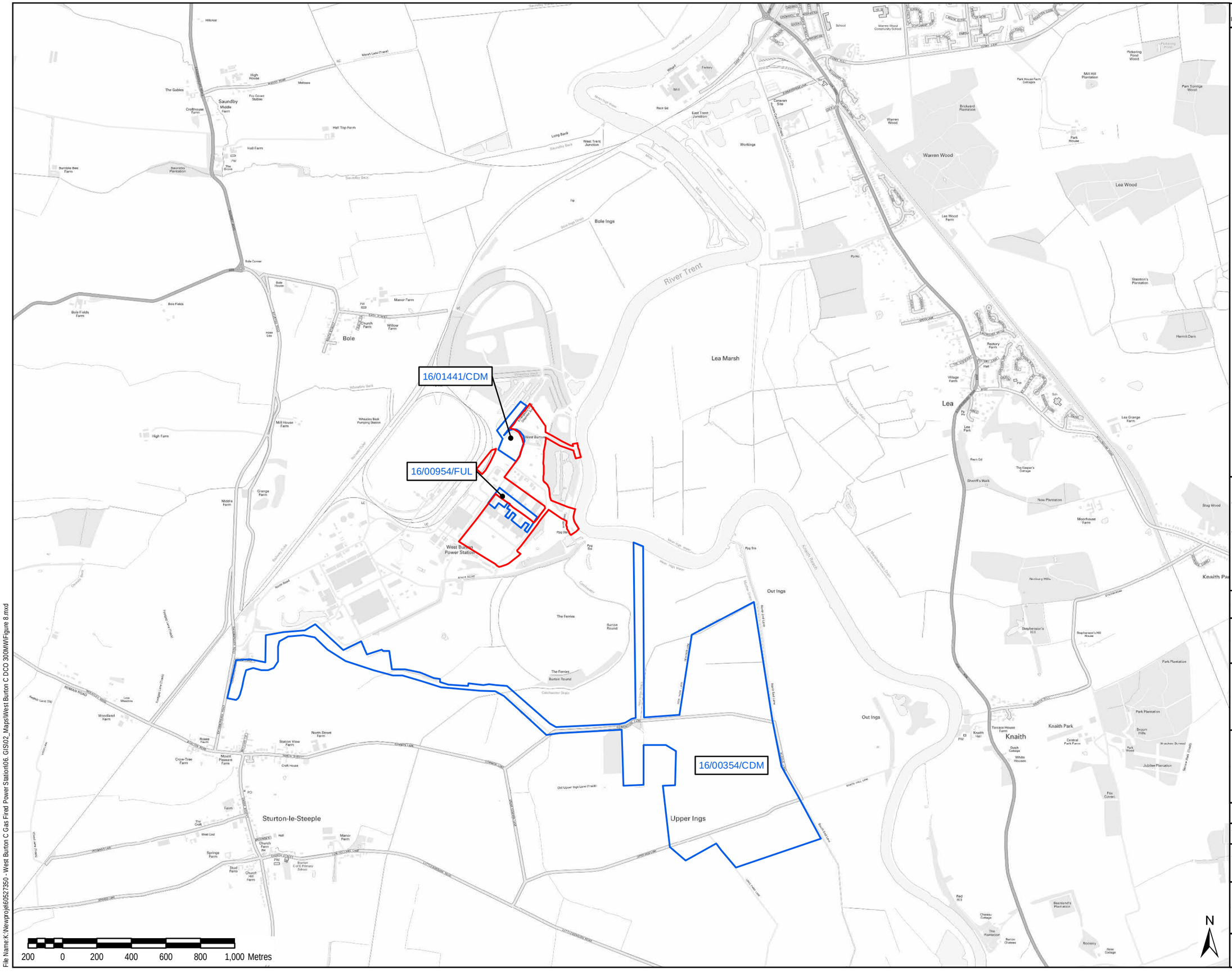

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Indicative DCO Site Boundary

Other Developments

Purpose of Issue: FINAL

Client: EIA SCOPING REPORT

Project Title: WEST BURTON C

Drawing Title: FIGURE 8
OTHER PROPOSED DEVELOPMENTS TO BE CONSIDERED IN THE CUMULATIVE IMPACT ASSESSMENT

Drawn	Checked	Approved	Date
GB	EB	RL	25/04/2017

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Drawing Number: 60527350/DCO/FIGURE 8

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