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West Burton C (Gas Fired Generating Station)

The West Burton C (Generating Station) Order

Land to the north of the West Burton B Power Station, Nottinghamshire

Framework Construction Environmental Management Plan (CEMP)

Applicant: EDF Energy (Thermal Generation) Limited
Date: April 2019

DOCUMENT HISTORY

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GLOSSARY OF ABBREVIATIONS AND DEFINITIONS

ABBREVIATION	DESCRIPTION
AIL	Abnormal Indivisible Load – a load that cannot be broken down into smaller loads for transport without undue expense or risk of damage. It may also be a load that exceeds certain parameters for weight, length and width.
Applicant	EDF energy (Thermal Generation) Limited
BAT	Best Available Techniques – available techniques which are the best for preventing or minimising emissions and impacts on the environment. BAT is required for operations involving the installation of a facility that carries out industrial processes. Techniques can include both the technology used and the way an installation is designed, built, maintained, operated and decommissioned.
BDC	Bassetlaw District Council – the local planning authority with jurisdiction over the area within which the West Burton Power Station site and Proposed Development Site (the Site) are situated.
BPEO	Best Practicable Environmental Option - the BPEO procedure establishes, for a given set of objectives, the option that provides the most benefits, as a whole, at acceptable cost, in both the short-term and the long-term.
BPM	Best Practicable Means – Actions undertaken and mitigation measures implemented to ensure that noise levels are minimised to be as low as practicable.
British Standard	Standard produced by the British Standards Institution based upon the principles of standardisation recognised inter alia in European Policy.

CCGT	Combined Cycle Gas Turbine – a CCGT is a combustion plant where a gas turbine is used to generate electricity and the waste heat from the flue-gas of the gas turbine is converted to useful energy in a heat recovery steam generator (HRSG), where it is used to generate steam. The steam then expands in a steam turbine to produce additional electricity.
CCS	The Considerate Constructors Scheme – a non-profit making, independent organisation founded in 1997 by the construction industry to improve its image. The scheme promotes good construction site practice and provides codes of considerate practice which commit the users of registered sites to be considerate and good neighbours, respectful; environmentally conscious, responsible and accountable.
CD&E	Construction, Demolition and Excavation Waste.
CEMP	Construction Environmental Management Plan – a plan to outline how a construction project will avoid, minimise or mitigate effects on the environment and surrounding area.
CIRIA	Construction Industry Research and Information Association – a member-based research and information organisation dedicated to improvement in all aspects of the construction industry.
COSHH	Control of Substances Hazardous to Health – a United Kingdom Statutory Instrument stating general requirements on employers to protect employees and other persons from the hazards of substances used at work by risk assessment.
CTMP	Construction Traffic Management Plan – a plan outlining measures to organise and control vehicular movement on a construction site so that vehicles and pedestrians using site routes can move around safely.
CWTP	Construction Workers Travel Plan – a plan managing and promoting how construction workers travel to a particular area or organisation. It aims at promoting greener, cleaner travel choices and reducing reliance on the private car.
DCLG	Department of Communities and Local Government (now the Ministry of Housing, Communities and Local Government) – the UK department for communities and local government in England.
DCO	Development Consent Order - made by the relevant Secretary of State pursuant to The Planning Act 2008 to authorise a Nationally Significant Infrastructure Project. A DCO can incorporate or remove the need for a range of consents which would otherwise be required for a development. A DCO can also include rights of compulsory acquisition.

DEFRA	Department for Environment, Food and Rural Affairs – the UK government department responsible for environmental protection, food production and standards, agriculture, fisheries and rural communities in the United Kingdom. The department's priorities are to grow the rural economy, improve the environment and safeguard animal and plant health.
EIA	Environmental Impact Assessment – a term used for the statutory process that assesses environmental consequences (positive or negative) of a project prior to the decision to move forward with the proposed development. The EIA process concludes whether likely significant effects on the environment are expected.
ELVs	Emission Limit Values – emission limit values based on the Best Available Techniques.
ES	Environmental Statement – a report in which the process and results of an Environment Impact Assessment are documented.
FBA	Furnace Bottom Ash – the 'coarse' ash fraction produced by coal-fired power stations when pulverised fuel is burned at high temperatures and pressures.
FGD	Flue Gas Desulphurisation – a set of technologies used to remove sulphur dioxide from exhaust flue gases of fossil-fuel power plants.
HEMP	Handover Environmental Management Plan
HGV	Heavy Goods Vehicle – vehicles with a gross weight in excess of 3.5 tonnes.
HRSG	Heat Recovery Steam Generator – an energy recovery heat exchanger that recovers heat from a hot gas stream. It produces steam that can be used in a process (cogeneration) or used to drive a steam turbine (combined cycle).
IDBs	Internal Drainage Boards – a type of operating authority with permissive powers to undertake work to secure clean water drainage and water level management within drainage districts.
ISMP	Invasive Species Management Plan
LCC	Lincolnshire County Council – the adjoining county council to Nottinghamshire County Council within which the West Burton Power Station Site and Proposed Development Site (the Site) is situated.
LWS	Local Wildlife Site – an area important for the conservation of wildlife, these are non-statutory sites of nature conservation value that have been designated 'locally'. These sites are referred to differently between counties with common terms including site of importance for nature conservation, county wildlife site, site of biological importance, site of local importance and sites of metropolitan importance.

MMP	Materials Management Plan - A mechanism by which those who are developing a site can comply with Environment Agency regulations for excavated ground materials.
NCC	Nottinghamshire County Council – the county council with jurisdiction over the area within which the West Burton Power Station Site and Proposed Development Site (the Site) are situated.
NPPF	The National Planning Policy Framework – Policy Framework which first came into effect in March 2012 (with some transitional arrangements) replacing the majority of national planning policy other than NPSs. A revision of the NPPF was published in July 2018 by the Ministry of Housing, Communities and Local Government and updated again in February 2019. The NPPF is part of the Government's reform of the planning system intended to make it less complex, to protect the environment and to promote sustainable growth. It does not contain any specific policies on Nationally Significant Infrastructure Projects but its policies may be taken into account in decisions on DCOs if the Secretary of State considers them to be 'relevant'.
NPPW	National Planning Policy For Waste
NSIP	Nationally Significant Infrastructure Projects – defined by the Planning Act 2008 and covers projects relating to energy (including generating stations, electric lines and pipelines); transport (including trunk roads and motorways, airports, harbour facilities, railways and rail freight interchanges); water (dams and reservoirs, and the transfer of water resources); waste water treatment plants and hazardous waste facilities. These projects are only defined as nationally significant if they satisfy a statutory threshold in terms of their scale or effect.
OCGT	Open Cycle Gas Turbine – a combustion turbine plant fired by gas or liquid fuel to turn a generator rotor that produces electricity.
PFA	Pulverised Fuel Ash – a by-product of pulverised fuel fired power stations.
PPE	Personal Protective Equipment.
PWMS	Precautionary Working Method Statement.
SEA/SA	Strategic Environmental Assessment/Sustainability Appraisal - SA is designed to ensure compliance with SEA and as such includes for requirements on environmental decision making such as an opportunity for the public to express their opinion on draft plans (community involvement), take into account significant environmental effects including those on human health, material assets and climatic factors and a full assessment of alternative options and reasons why alternatives have been assessed and why others have not.

SWMP	Site Waste Management Plan – a plan setting out how resources will be managed and waste controlled at all stages during a construction project.
WBA	West Burton A – the existing coal-fired power station within the West Burton Power Station Site, owned and operated by the Applicant.
WBB	West Burton B – the existing gas-fired power station, using Combined Cycle Gas Turbine (CCGT) technology, owned and operated by the Applicant.
WLDC	West Lindsey District Council – the adjoining local planning authority to Bassetlaw District Council in which the West Burton Power Station Site and Proposed Development Site (the Site) are situated.

Executive Summary

This document has been prepared on behalf of EDF Energy (Thermal Generation) Limited (the Applicant) to provide a framework for a Construction Environmental Management Plan (CEMP) which will be produced by the contractor appointed by the Applicant to undertake the construction of the Proposed Development. By drawing upon the measures set out in the following sections, the final CEMP would help to manage environmental issues appropriately during construction.

Section 1 provides an overview of the Proposed Development, the Applicant and a description of the Site.

Section 2 details the indicative construction programme, including construction facilities, delivery routes for construction materials, construction lighting and recycling and disposal measures for construction waste.

Section 3 gives an indication of the additional information which should be included under each sub-section within the final CEMP. This includes a table summarising the potential impacts for each environmental topic (Air Quality, Traffic and Transport, Noise and Vibration, Ecology, Landscape and Visual Amenity, Ground Conditions and Hydrogeology, Flood Risk, Hydrology and Water Resources, Cultural Heritage and Sustainability, Waste and Climate Change) reported in the Environmental Statement (ES) (**Application Document 5.2**). Mitigation and enhancement measures described in the ES to address construction impacts are also presented. Monitoring requirements for mitigation measures are described where these have been recommended in the Environmental Statement (ES) and the responsibilities for implementation are to be confirmed in the final CEMP. Submission and approval of the final plan is proposed to be secured by a Requirement of the draft DCO (**Application Document Ref. 2.1**) prior to commencement of the works..

Appendix A presents a Framework Site Waste Management Plan (SWMP). This outlines the waste management strategy for the construction phase by considering likely waste arisings from construction activities and provides recommended management measures, taking into account the principles of the waste hierarchy. A final SWMP would be developed by the appointed construction contractor.

Tables

1. Introduction

1.1 Overview

1.1.1 This Framework Construction Environmental Management Plan (CEMP) has been prepared on behalf of EDF Energy (Thermal Energy) Limited (hereafter referred to as the Applicant). It forms part of the application (the Application) for development consent that has been submitted to the Secretary of State, pursuant to the Planning Act 2008 (2008 Act) (Ref 1).

1.1.2 The Applicant is seeking development consent for the construction, operation (including maintenance) and decommissioning of a new gas-fired electricity generating station of up to 299 megawatts (MW) of gross electrical output including electrical, gas and utility connections, a construction laydown area and other associated works (the Proposed Development) on land to the north of the existing West Burton B (WBB) Power Station, in Nottinghamshire. The Proposed Development is described in **Chapter 4**: The Proposed Development of the Environmental Statement (ES) (ES Volume I), (**Application Document Ref. 5.2**).

1.1.3 The Proposed Development falls within the definition of a *'Nationally Significant Infrastructure Project'* (NSIP) under Section 14(1)(a) and Sections 15(1) and (2) of the 2008 Act, as it is an onshore generating station in England that would have a generating capacity greater than 50MW electrical output (50MWe). As such, a DCO is required to authorise the Proposed Development in accordance with Section 31 of the 2008 Act.

1.1.4 The DCO, if made by the Secretary of State, would be known as the 'West Burton C (Gas Fired Generating Station) Order' (the 'Order').

1.2 The Applicant

1.2.1 The Applicant is EDF Energy (Thermal Generation) Limited which owns and operates the two existing power stations at the West Burton Power Station Site, West Burton A (WBA) and WBB, as well as the nearby Cottam Power Station.

1.2.2 EDF Energy (Thermal Generation) Limited is part of EDF Energy which is the UK's largest producer of low-carbon electricity, the biggest supplier of electricity by volume in Great Britain and the largest supplier to British businesses.

1.3 The Site

1.3.1 The Site comprises land within the boundary of the existing West Burton Power Station site near Gainsborough, Nottinghamshire. The land is within the ownership of the Applicant. The Site is centred on national grid reference 480275, 386241 (the middle of the Proposed Power Plant Site, defined in **Chapter 3**: Description of the Site and its Surroundings (ES Volume I), **Application Document Ref. 5.2**).

1.3.2 The West Burton Power Station site is located approximately 3.5km to the south-west of Gainsborough and 1km to the north-east of Sturton-le-Steeple and lies close to the junction of the A631/A620, being accessed by a C-class road (the C2), which joins the A620 at Bole Corner. The nearest settlement is the village of Bole located approximately 1km to the north-west of the Proposed Power Plant Site.

1.3.3 The entire Site lies within the administrative boundary of Bassetlaw District Council (BDC), close to the border with West Lindsey District Council (WLDC) (defined by the River Trent to the east).

1.3.4 The West Burton Power Station site covers in excess of 200 hectares (ha). WBA is a coal fired power station, which was commissioned in 1968. It comprises four coal fired units with two chimney stacks (each 198m high) and eight natural draught cooling towers (each 112m high), with cooling water sourced from the River Trent. It supplies up to 2,000MW of electricity to the National Grid.

1.3.5 Adjacent to the east of WBA Power Station is the WBB Power Station, a combined cycle gas turbine (CCGT) power station, which was commissioned in 2013. It comprises three units, each having a gas turbine, a heat recovery steam generator (HRSG) and an associated steam turbine, with a combined output capacity of 1,332MW. The WBB Power Station connects to the National Grid Transmission System approximately 0.7km to the south of the WBB Power Station site via the existing WBA Power Station 400kV substation, located within the confines of the overall West Burton Power Station site. The WBB Power Station is also served by an underground gas pipeline connection entering the WBB Power Station site at its north-eastern boundary.

1.4 The Proposed Development

1.4.1 The Proposed Development would comprise a gas fired generating station with gross electrical output capacity of up to 299MW with associated buildings, structures and plant defined in the draft DCO as Work No. 1 and shown on the Works Plans (**Application Document Ref. 3.2**) as **Work No. 1: Sheet 1 of 10** including:

- up to five open cycle gas turbine (OCGT) units and associated generators, potentially housed within building(s), with stack(s), transformer(s), air inlet filter(s), and exhaust gas diffuser(s);
- associated switchgear and ancillary equipment; and
- auxiliary closed loop cooling equipment/systems.

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

1.4.3 Peaking plants, such as that proposed, are used to rapidly supply electricity to the network when required by the National Grid. These plants can be fired up at short notice to help cope with periods of high demand or low electricity supply nationally (for example when the wind is not blowing to enable sufficient output to be achieved from of wind farms in the UK), or when required to provide ancillary services to support the National Grid. This is expected to be weighted towards the winter period, usually 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 anticipated to be 1,500 hours per year on a rolling five year average.

1.4.4 The Proposed Development is described in further detail in the Environmental Statement (ES) (ES Volume I) (**Application Document Ref. 5.2**, Chapter 4: The Proposed Development).

1.4.5 The Site encompasses an area of approximately 32.8ha of which approximately 16.3ha comprises the built development and construction laydown area, with further approximately 16.5ha of land proposed for ecology and landscaping works. However, the Site area allows for several potential gas and grid connection options that are still under technical evaluation. The proposed generating station itself would occupy an area of approximately 3.4ha. The component parts of the Site are shown on **Figure 1**.

1.4.6 The Proposed Power Plant Site was formerly used to deposit PFA from WBA Power Station and more recently as a construction laydown area for WBB Power Station. The area currently comprises areas of recently seeded and planted grassland, scrub and immature trees, created following the construction of WBB Power Station. The Proposed Power Plant Site is bounded:

- to the north by an access road serving Bole Ings Ash Disposal Site and beyond this, by the proposed construction laydown area;
- to the north-east by the proposed northern drainage connection corridor into the existing West Burton Power Station drainage systems;
- to the east by an area of woodland and ponds, which forms part of the West Burton Power Station Local Wildlife Site (LWS 5/2217), comprising an area of mature gravel pits of biodiversity interest, located within the West Burton Power Station boundary;
- to the south by WBB Power Station; and
- to the west by an area used for the storage of furnace bottom ash (FBA) and ash processing (authorised by Nottinghamshire County Council (NCC) application reference 1/16/01441/CDM).

1.4.7 Vegetation within the footprint of the Proposed Power Plant Site would be removed prior to construction. An alternative landscaping and biodiversity

management and enhancement area would be created on suitable land within the Site boundary shown on **Figure 2**.

1.5 The Purpose of this Document

1.5.1 This Framework CEMP sets out a series of proposed measures that would be applied by the contractor to provide effective planning, management and control during construction to control potential impacts upon people, businesses and the natural and historic environment.

1.5.2 This Framework CEMP has been produced in conjunction with the ES (**Application Document Ref. 5.2**) with the aim of ensuring that design and impact avoidance measures reported in the ES are implemented and are effective, together with any additional mitigation measures proposed to reduce significant adverse effects. Site-specific controls, which will be included within the final CEMP, would be developed taking the measures set out in this Framework CEMP into account. The final CEMP will be developed in accordance with the principles set out in this Framework.

1.5.3 It is expected that the contractor will comply, as a minimum, with applicable environmental legislation at the time of construction, together with any additional environmental controls imposed by the DCO. The final CEMP will, therefore, be designed with the objective of compliance with relevant environmental legislation and the mitigation measures set out within the ES and this Framework. Any additional construction licences, permits or approvals that are required would be listed in the final CEMP, including any environmental information submitted in respect of them.

1.5.4 Further guidance on specific areas, such as soil handling and dust management, are considered from industry best practice guidance documents, as set out in each discipline section of this Framework CEMP. The references to guidance documents are not intended to be exhaustive.

1.5.5 The final CEMP will broadly reflect the structure of this Framework CEMP. **Section 2** provides an indication of the construction arrangements that have been assessed in the ES. **Section 3** presents additional information that might be included under each sub-section within the final CEMP, which includes:

- environmental impacts (assessed through the EIA);
- impact avoidance or reduction of measures to be applied, where the ES has assumed they would be applied during the detailed design or construction phase;
- any other additional mitigation measures;
- additional surveys or monitoring considered necessary pre-construction or during construction in order to confirm the status of receptors, and the effectiveness of impact avoidance/mitigation measures;

- corrective action procedure to be applied, where necessary; and
- links to other complementary plans and procedures.

1.5.6 In summary, the final CEMP would identify how commitments made during the EIA (and reported in the ES) will be translated into actions on-site.

1.5.7 The contractor will be responsible for working in accordance with the environmental controls documented in the final CEMP, which will allocate responsibilities for environmental performance. The overall responsibility for implementation of the final CEMP will lie with the Applicant.

2. Construction Phase Arrangements

2.1 Indicative Programme

2.1.1 Construction of the Proposed Development could (subject to the necessary consents being granted and an investment decision being made) potentially start as early as Quarter 3 (Q3) 2020. Construction activities are expected to be completed within four years and are more likely to be completed within three years. **Table 1** shows an indicative three year construction programme.

Table 1: Indicative three year construction programme

	Year 1				Year 2				Year 3			
	1	2	3	4	1	2	3	4	1	2	3	4
Site Preparation												
Main civil works												
Plant installation												
Gas and electrical connections												
Commissioning												

2.2 Working Hours

2.2.1 Core construction working hours would be Monday to Friday 07:00 to 19:00 (except bank holidays) and Saturday 08:00 to 18:00. However, it is likely that some construction activities may need to be undertaken outside these core working hours. This is partly because certain construction activities cannot be stopped, such as concrete pouring, if this is required, but also to manage the construction programme. Where on-site works are to be conducted outside the core hours, they would comply with any restrictions agreed with the local planning authorities, in particular regarding control of noise and traffic in accordance with the relevant requirements proposed to be secured by the draft DCO (**Application Document Ref. 2.1**).

2.2.2 A start-up period from 06:30 to 07:00 and shut-down period from 19:00 to 19:30 Monday to Friday, and a start-up period from 07:30 to 08:00 and shut-down period from 18:00 to 18:30 on a Saturday would also be maintained. This period would allow construction workers to arrive and prepare for work, but would not include deliveries or operation of plant or machinery likely to cause a disturbance to local residents or businesses.

2.2.3 A small number of abnormal indivisible loads (AILs) may also be generated, which need to be treated as a special case for delivery (including delivery outside of core working hours). This would be subject to the approval of the relevant authorities, and is proposed to be secured by a Requirement of the draft DCO (**Application Document Ref. 2.1**).

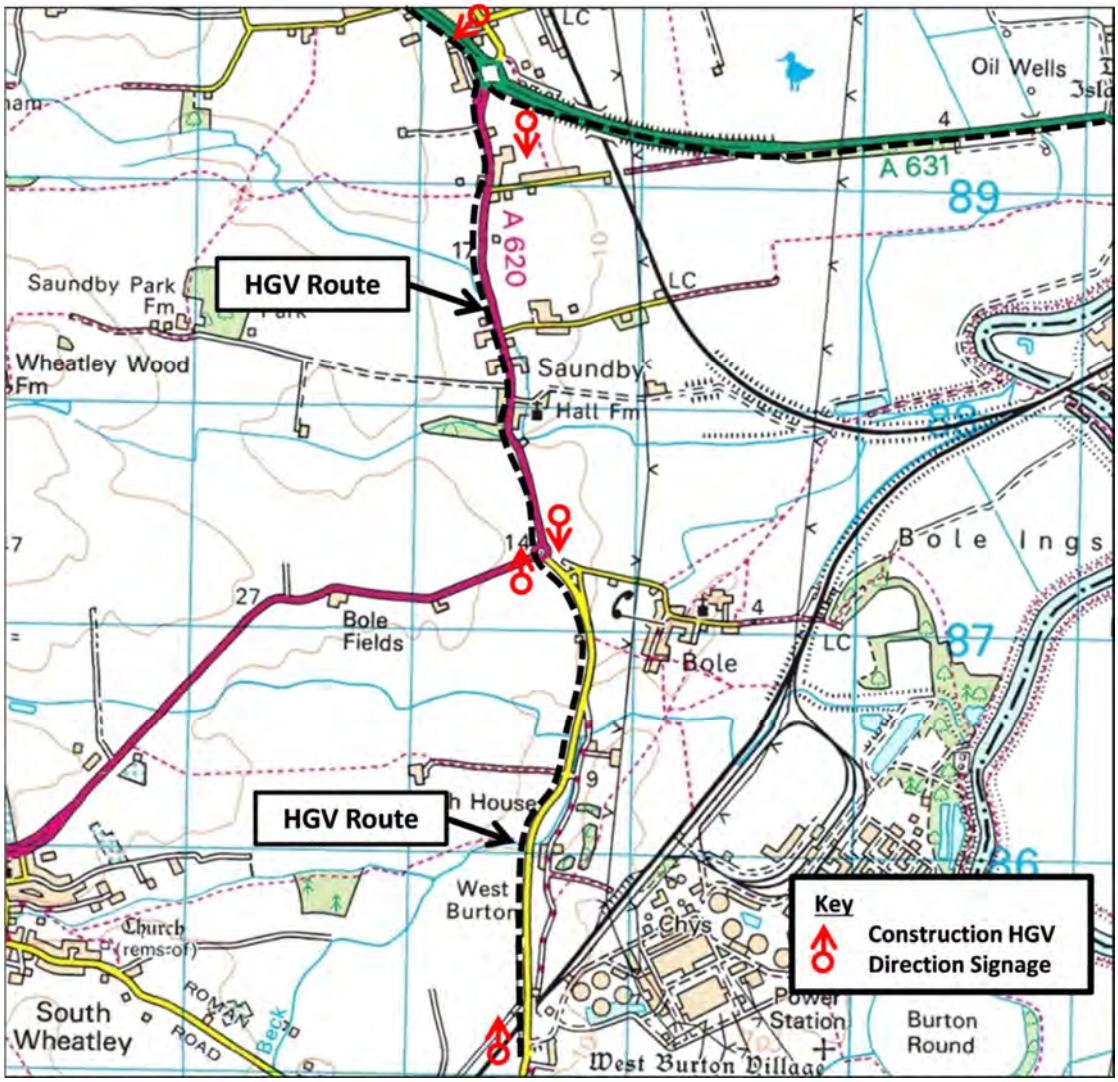
2.3 Traffic Management

2.3.1 During construction, the appointed contractor will ensure that the impacts from construction traffic on the local community (including local residents and businesses and users of the surrounding transport network) are minimised, where reasonably practicable, by implementing the measures set out in the Framework Construction Traffic Management Plan (CTMP) and the Framework Construction Workers' Travel Plan (CWTP) (**Application Document Ref. 7.6** and **Application Document Ref. 7.7**) respectively; final plans are proposed to be secured by a Requirement of the draft DCO (**Application Document Ref. 2.1**).

2.3.2 The Framework CTMP (**Application Document Ref 7.6**) provides details of the designated routes for HGV movements. It has been assumed that HGVs delivering construction materials would access the West Burton Power Station site from the existing site entrance located off the C2 Gainsborough Road, with all HGVs arriving and departing to/from the north via the A620 and onwards to the A631. This is due to a bridge height restriction in place at two locations along the A620 towards Retford with height limits of 3.8m and 4.5m respectively.

2.3.3 The HGV routing plan (see **Plate 1**) will be distributed to all drivers during their induction. It will be a condition of contract between the Applicant and the contractor to ensure that all construction HGV deliveries to the Site are instructed to use the designated route to access and egress the construction site. Sanctions will be applied to deal with non-compliance with the aim of avoiding repeat events.

Plate 1. HGV designated route plan during construction



2.4 Parking Provisions and Off-site Facilities

2.4.1 The location and size of parking provision on-site, access/egress, routes/gates, loading and unloading areas for plant and materials, storage areas, wheel washing facilities and construction traffic management measures will be detailed in the final CEMP, which would also include a description of construction laydown areas and contractor accommodation areas.

2.5 Wheel Wash Facilities

2.5.1 In the interests of highway safety, wheel cleaning facilities will be installed on-site from the start of construction. All HGVs would be required to wheel wash when exiting the Site. The need for this measure would be periodically reviewed throughout the construction phase.

2.6 Site Lighting

2.6.1 Construction temporary site lighting will be required in areas where natural lighting is unable to reach (sheltered/confined areas) and prior to permanent lighting being installed. Lighting may also be required around the site for night time construction and during core working hours within winter months. Artificial lighting would be provided to maintain sufficient security and health and safety for the Site, whilst adopting the mitigation principles outlined in the Lighting Strategy (**Application Document Ref 7.4**) to avoid excessive glare and minimise spill of light to nearby receptors (including ecology and residents) outside of the Site as far as reasonably practicable.

2.6.2 Details of all external lighting, for both construction and operation are proposed to be secured by a Requirement of the draft DCO (**Application Document Ref. 2.1**).

2.7 Recycling and Disposing of Waste

2.7.1 To control the waste generated during the site preparation and construction phase, the contractor will segregate the main waste streams on-site, prior to them being beneficially re-used (on or off-site), or removed from site as waste for recycling, energy recovery or disposal.

2.7.2 A Site Waste Management Plan (SWMP) will be developed, which will specify the waste streams to be estimated and monitored and will set goals with regards to the waste produced. A Framework SWMP is included in **Appendix A** of this Plan. The SWMP will be finalised by the contractor, with specific measures to be implemented prior to the start of construction. This is proposed to be secured by a Requirement of the draft DCO (**Application Document Ref. 2.1**).

2.7.3 All waste to be removed from the Site will be undertaken by fully licensed waste carriers and taken to licensed waste facilities.

2.8 Best Practice Measures

2.8.1 The selected contractor would be encouraged to be a member of the 'Considerate Constructors Scheme' which is an initiative open to all contractors undertaking building work.

2.8.2 Construction industry guidance (e.g. from the Construction Industry Research and Information Association (CIRIA)) will be adopted as far as reasonably practicable to assist in reducing the potential for pollution and nuisance. This will be achieved by employing best practice measures.

3. Impact Avoidance and Mitigation Measures Implementation Plan

3.1 Overview

3.1.1 This section sets out the embedded impact avoidance and additional mitigation, enhancement and management measures to be included as a minimum in the final CEMP. It also illustrates where additional surveys will be required, either pre-construction or during construction. It describes how the monitoring strategy would be implemented in order to assess the effectiveness of mitigation measures, monitor the impact of construction works and take other actions necessary to enable compliance.

3.1.2 In the final CEMP, this section will identify the responsible party for each mitigation, enhancement measure or monitoring requirement. As a contractor has not yet been appointed, responsibilities cannot be assigned at this stage.

Table 2: Air Quality

Potential Impact	Mitigation/Enhancement Measure	Monitoring/Additional Survey Requirements	Responsibility
Increased nitrogen dioxide (NO_2) and particulate matter (PM_{10}) from on-site and off-site construction vehicle/plant emissions. Increased particulates and deposited dust from Site activities, materials transportation, storage and handling, including use of haul roads.	Appropriate standard and best practice control measures will be included in the final CEMP, which may include: **Construction Plant, Vehicles and Equipment** • vehicles and plant will be switched off and secured when not in use and construction vehicles will conform to current EU emissions standards; • static construction plant will be located away from Site boundaries that are close to sensitive receptors, where reasonable and practicable; • cutting and grinding operations, if required, will be conducted using equipment and techniques that reduce emissions and incorporate appropriate dust suppression measures; • damping down of dust-generating equipment and vehicles within the Site and the provision of dust suppression in all areas of the Site that are likely to generate dust; • measures will be taken to keep roads and accesses clean; and • vehicle, plant and equipment maintenance records will be kept on-site and reviewed regularly. **Transportation, Storage and Handling of Materials** Best practice will be employed, as appropriate, including:	Measures in the final CEMP will include the implementation of: • inspection procedures at Site boundaries to periodically visually assess any dust and air pollution which may be generated; • inspection of maintenance schedules for construction vehicles, plant and machinery; and • inspection and recording procedures relating to the level of traffic movements, use and condition of haul routes.	To be confirmed in final CEMP.

Potential Impact	Mitigation/Enhancement Measure	Monitoring/Additional Survey Requirements	Responsibility
	• covering materials, deliveries or loads entering and leaving the construction site for the purposes of preventing materials and dust spillage in transit; • vehicles transporting materials within or outside the construction site will not be overloaded; • stockpiles and mounds will be kept away from sensitive receptors, watercourses and surface drains where reasonably practicable, and sited to take into account the predominant wind direction relative to sensitive receptors; • materials stockpiles likely to generate dust will be enclosed or securely sheeted, damped down or stabilised as appropriate; and • mixing of grout or cement-based materials will be undertaken using appropriate techniques/mitigation suitable for the prevention of dust emissions. **Haul routes** • haul routes will be surfaced and maintained so as to control dust emissions, as far as reasonably practicable. The frequency of cleaning will be suitable for the purposes of suppressing dust emissions from the site boundaries; • regular inspection of haul routes and prompt repair (if required) will be undertaken; and • enforcement of speed limits on haul roads for safety reasons and for the purposes of suppressing dust		

Potential Impact	Mitigation/Enhancement Measure	Monitoring/Additional Survey Requirements	Responsibility
	emissions will be implemented.		

Table 3: Traffic and Transport

Potential Impact	Mitigation/Enhancement Measure	Monitoring/Additional Survey Requirements	Responsibility
Severance and intimidation associated with increased construction traffic and abnormal indivisible loads (AIL). Increased traffic flows, including HGVs, on the roads leading to the Site (the adjacent C2 Gainsborough Road and the A620 to the north).	**Construction Traffic Management Plan (HGVs and AILs)** • HGV arrivals, including deliveries, will be managed as far as reasonably practicable such that they are spread evenly over the day between the hours of 07:00 and 19:00 Monday to Friday (except bank holidays) and 08:00 to 18:00 on Saturday (if required) to avoid on-site congestion. On average these deliveries are anticipated to equate to 10 HGV trips per hour (five in and five out); • all HGVs would be required to arrive and depart the Site to/from the north via the A620 and onwards to the A631. This is due to a bridge height restriction in place at two locations along the A620 towards Retford with height limits of 3.8m and 4.5m respectively; • the HGV routing plan would be distributed to all drivers during their induction; • it will be a condition of contract between the Applicant and the contractor to ensure that all HGV deliveries to the Site are instructed to use the designated route to access and egress the Site. Sanctions will be put in place to deal with non-compliance with the aim of ensuring no repeat events; • the contractor will erect signage at the main junctions to ensure that all HGV traffic relating to the Proposed Development travel in the appropriate directions. The contractor will also be required to maintain all the HGV	The appointed contractor will undertake such monitoring as is necessary to assess the effectiveness of the measures included in the CTMP and final CWTP. This will include the maintenance of gatehouse of records of construction HGVs entering and leaving the Site, which will be available to NCC on request. Further details to be confirmed in final CEMP.	Travel Plan Co-ordinator to oversee management, monitoring and implementation of the individual measures within the CTMP and CWMP. Other responsibilities to be confirmed in final CEMP.

Potential Impact	Mitigation/Enhancement Measure	Monitoring/Additional Survey Requirements	Responsibility
	route signage; • in the interests of highway safety, wheel cleaning facilities will be installed on-site from the start of the construction phase. All HGVs leaving the Site will be required to wheel wash when exiting the Site. The need for this measure would be periodically reviewed throughout the construction phase; • it will be a condition of contract between the Applicant and the contractor to ensure that an anti-social behaviour policy is adhered to by both HGV drivers and construction workers. This policy will be reinforced during the induction and will include HGV drivers being made aware not to park on the public highway, with sanctions put in place to deal with non-compliance; • a 24 hour contact name and number will be displayed on a notice board at the Site entrance, on the Applicant's website and on the Sturton Ward website (where they elect to do so) for members of the public to contact should they have any issues regarding construction traffic; • details of the routing strategy and procedures for the notification and conveyance of AILs, including agreed routes, the number of abnormal loads to be delivered by road and measures to mitigate traffic impact will be set out in the Construction Traffic and Routing Management Plan; • signage is already in place at the West Burton Power		

Potential Impact	Mitigation/Enhancement Measure	Monitoring/Additional Survey Requirements	Responsibility
	Station site entrance directing HGVs north towards the A620. In addition, a HGV and AIL routing plan would be provided in the Construction Traffic and Routing Management Plan, which HGV drivers would be required to adhere to, this is proposed to be secured by a Requirement of the draft DCO (**Application Document Ref. 2.1**); • residents would be updated on progress during construction via a regular update bulletin posted on the Applicant's website and the Sturton Ward website (where they would elect to do so). This would include information on the timing and routing of AIL deliveries; • NCC and Highways England's normal loads officer would be consulted at the earliest opportunity on the programme and plan for the delivery of the AILs; and • it will be a condition of contract between the Applicant and the appointed contractor to ensure that anti-social behaviour policy is adhered to, by both HGV drivers and construction workers. This policy will be reinforced during staff inductions and will include HGV drivers being made aware not to park on the public highway, with sanctions put in place to deal with non-compliance with the aim of ensuring no repeat. A Framework CTMP is provided in support of the application (**Application Document Ref 7.6**).		

Potential Impact	Mitigation/Enhancement Measure	Monitoring/Additional Survey Requirements	Responsibility
	Construction Worker Travel Plan (CWTP) The contractor will prepare and implement a Travel Plan – Construction Staff to reduce the volume of construction staff and employee trips to the Site, to include the following measures: • sections of the car park would gradually be opened up, as construction develops, with a defined number of construction worker car parking spaces to be provided during construction (as specified in the Construction Workers' Travel Plan), to help ensure that the number of vehicles is controlled, and that sustainable transport options are promoted throughout the course of construction; • car parking at the Site would be monitored by the Travel Plan Co-ordinator; • the contractor will be encouraged to provide minibuses for transporting workers from the key points of construction worker origin to the Site; • the contractor will be encouraged to set up and manage a car share scheme for workers; • the contractor will encourage the use of common hotels and B&Bs by workers that are not from the local area, as this will encourage the use of shared transport modes; • secure parking for bicycles will be provided and staff that cycle to work will have access to showers, changing		

Potential Impact	Mitigation/Enhancement Measure	Monitoring/Additional Survey Requirements	Responsibility
	facilities and lockers to store clothing, cycle helmets etc.; • details of the sustainable transport options available for accessing the Site will be provided in an information pack and sent to construction workers prior to them starting work; with the contractor being responsible for ensuring all construction workers receive the information pack prior to starting work on-site; • all construction workers will receive an introductory meeting when they commence work, which will include the provision of the following information: – designated access and exit routes to the Site; – details of sustainable transport measures available; and – parking arrangements. • the contractor will allocate the responsibilities of a Travel Plan Co-ordinator to one of the site personnel to manage and deliver the Travel Plan. The Co-ordinator's details would be supplied to NCC and Highways England; • in emergencies, the Travel Plan Co-ordinator would provide a guaranteed lift home for car sharers, which would be extended in emergency situations to other staff that travel to the Site; • the Travel Plan Co-ordinator would be responsible for monitoring the Travel Plan, to ensure an efficient and		

Potential Impact	Mitigation/Enhancement Measure	Monitoring/Additional Survey Requirements	Responsibility
	effective execution of the measures, and to refine the measures, where necessary, to cope with the changes in demand during construction; • the Travel Plan Co-ordinator would hold regular review meetings to ensure any issues are dealt with effectively; • the Travel Plan Co-ordinator would monitor parking utilisation at the Site, reviewing the split of vehicles between cars, vans and minibuses and assessing effectiveness of the Travel Plan against targets set. Additional measures to ensure that the Travel Plan meets its overall objectives would be considered where necessary (e.g. implementing a lift share policy or putting on additional minibuses to pick up from key worker locations); and • the Travel Plan Co-ordinator would collate and where necessary, respond to feedback from employees, NCC and local residents regarding any issues. Refer to **Application Document Ref. 7.7** for a copy of the Framework CWTP.		

Table 4: Noise and Vibration

Potential Impact	Mitigation/Enhancement Measure	Monitoring/Additional Survey Requirements	Responsibility
Vibration due to construction activities causing annoyance at Noise Sensitive Receptors (NSR) and damage to building structures. Construction noise at nearby NSR.	The following Best Practicable Means (BPM) will be applied, as far as reasonably practicable, during construction works to minimise noise (including vibration) at neighbouring residential properties and other sensitive receptors arising from construction activities: • ensuring that all appropriate processes, procedures and measures are in place to minimise noise before works begin and throughout the construction programme; • all contractors to be made familiar with current legislation and the guidance in BS 5228 (Parts 1 and 2) (Ref 2 and Ref 3) which should form a prerequisite of their appointment; • ensuring that, where reasonably practicable, noise and vibration is controlled at source (e.g. the selection of inherently quiet plant and low vibration equipment), review of the construction programme and methodology to consider quieter methods, consideration of the location of equipment on-site and control of working hours (see **Section 2.2**); • use of modern plant, complying with applicable UK noise emission requirements; • hydraulic techniques for breaking to be used in preference to percussive techniques, where reasonably practicable;	A scheme to monitor and control construction noise during construction would be implemented; stipulating agreed monitoring locations, noise monitoring methods and frequency, maximum permitted daytime noise levels and the noise control measures to be employed. This is proposed to be secured by a Requirement of the draft DCO (**Application Document Ref. 2.1**). Any construction works required to be undertaken outside of core working hours, including night-time, would be subject to measures being put in place so as not to exceed the SOAEL or relevant noise limit to be agreed with BDC. This may include monitoring to demonstrate that agreed noise limits are not exceeded. The final CEMP would also set	To be confirmed in final CEMP.

Potential Impact	Mitigation/Enhancement Measure	Monitoring/Additional Survey Requirements	Responsibility
	• if piling is required, use of lower noise piling (such as rotary bored or hydraulic jacking) rather than the driven piling techniques where reasonably practicable; • off-site pre-fabrication where reasonably practicable; • use of screening locally around significant noise producing plant and activities; • all construction plant and equipment to be properly maintained, silenced where appropriate, operated to prevent excessive noise and switched off when not in use; • loading and unloading of vehicles, dismantling of site equipment (such as scaffolding) or moving equipment or materials around the Site to be conducted in such a manner as to minimise noise generation, as far as reasonably practicable; • all vehicles used on-Site shall incorporate broadband reversing warning devices as opposed to the typical tonal reversing alarms to minimise noise disturbance where reasonably practicable; • appropriate routing of construction traffic on public roads and along access tracks (see **Plate 1**); • provision of information to BDC and local residents to advise of potential noisy works that are due to take place; • monitoring of noise complaints and reporting to the Applicant for immediate investigation and action; and	out a scheme for the provision of information to BDC and local residents to advise of potential noisy works that are due to take place and for monitoring of noise complaints, and reporting to the Applicant for immediate investigation and action. Details to be confirmed in final CEMP.	

Potential Impact	Mitigation/Enhancement Measure	Monitoring/Additional Survey Requirements	Responsibility
	• a detailed noise assessment will be carried out once the contractor is appointed and further details of construction methods are known, in order to identify specific mitigation measures (including construction traffic).		

Table 5: Ecology

Potential Impact	Mitigation/Enhancement Measure	Monitoring/Additional Survey Requirements	Responsibility
Potential for obtrusive glare and light spill to impact on ecology. Potential for spillages to enter watercourses and impact ecology. Clearance or damage of habitat to facilitate construction – resulting in temporary or permanent reduction in habitat extent and potential direct and indirect effects on associated species. Dust deposition on sensitive ecological receptors. Loss of an area of grassland within the Site which would be	**Application Document Ref 7.5**: Landscape and Biodiversity Management and Enhancement Plan sets out the measures proposed to mitigate the potential impacts and effects of the Proposed Development on biodiversity (and landscape) features, and to enhance the biodiversity, landscape and green infrastructure value of the Site. A final Plan, which takes into account and is prepared in accordance with the principles of the Landscape and Biodiversity Management and Enhancement Plan, will be submitted to and approved by the relevant planning authority. This is proposed to be secured by a Requirement of the draft DCO (**Application Document Ref. 2.1**). Measures proposed in the Landscape and Biodiversity Management and Enhancement Plan (**Application Document Ref. 7.5**) include: • biodiversity and habitat protection, management and impact avoidance requirements including updated surveys, protected species licences, clerk of works, tree works, precautionary working methods and animal welfare requirements; • those measures proposed to enhance existing scrub, reedbed, grassland and hibernacula and habitat piles and tree planting;	A pre-construction Site walkover will be undertaken in advance of mobilisation/any potential advance works to re-confirm the ecological baseline conditions and to identify any new ecological risks. Updated species surveys, including bats, great crested newt, breeding birds, otter, water vole and badger, would be completed as appropriate to re-confirm the status of protected species identified, to inform mitigation requirements and support protected species licence applications, where required. This is proposed to be secured by a Requirement of the draft DCO (**Application Document Ref. 2.1**). Such surveys would be undertaken sufficiently far in advance of construction works to account for seasonality	Section 6 of the Landscape and Biodiversity Management and Enhancement Plan (**Application Document Ref 7.5**) sets out roles and responsibilities for implementation, but these would be confirmed in final CEMP.

Potential Impact	Mitigation/Enhancement Measure	Monitoring/Additional Survey Requirements	Responsibility
utilised as the construction laydown area, alongside removal of vegetation present within the Site.	• roles and responsibilities; and • an implementation timetable for maintenance and management, including measures to protect, manage and enhance habitats. The final CEMP will be required to take into account measures contained within that Plan, including: • the Proposed Development would avoid, as far as reasonably practicable, areas of high quality habitat, such as mature trees and woodland/wetland habitats associated with Local Wildlife Sites (LWS) to the east and south of the Site; and • retained trees adjacent to construction working areas would be protected by clearly defined root protection zones to prevent damage/compaction of roots by plant and other machinery. **Protected Species Licences** • a European Protected Species Mitigation (EPSM) licence for great crested newt would be required as the Proposed Development would result in the temporary and permanent loss of suitable habitat in the vicinity of breeding ponds, and construction works have the potential for direct impacts (killing/injury). Measures would be taken as a condition of the licence to avoid the killing/injury of great crested newts prior to, and during construction, including the erection of appropriate temporary exclusion fencing	constraints and to allow time for the implementation of any necessary mitigation, prior to construction. Additional surveys may be required during the advance works, site clearance and construction phase as advised as necessary by the Applicant's ecologist, based on the findings of the updated walkover and protected species surveys, or otherwise as identified as appropriate by the Applicant or their appointed contractor.	

Potential Impact	Mitigation/Enhancement Measure	Monitoring/Additional Survey Requirements	Responsibility
	around suitable habitats and recovering newts within these areas using pitfall trapping; • existing artificial hibernacula within the Proposed Power Plant Site would be carefully dismantled by hand, under the supervision of a licensed Ecological Clerk of Works. Destructive searches of other natural refugia within the Site would be completed in the same way; • newts recovered during the process of trapping and destructive searches would be placed in suitable terrestrial habitat, adjacent to the Site within the West Burton Power Station site, but away from construction areas. Temporary exclusion fencing would be left in place for the duration of the construction to prevent newts dispersing into the construction areas; • habitat restoration and enhancement would be required under the licence to compensate for the loss of habitat and maintain the favourable conservation status of the local population of great crested newt in the vicinity of the Site. The proposals for habitat restoration and enhancement are included within **Section 5** of the Landscape and Biodiversity Management and Enhancement Plan (**Application Document Ref 7.5**); and • a badger development licence would also be required to permit works with the potential to affect (through destruction or disturbance) badger setts. The exact requirements for mitigation would be determined during		

Potential Impact	Mitigation/Enhancement Measure	Monitoring/Additional Survey Requirements	Responsibility
	pre-construction update surveys (see monitoring/additional survey requirements). **Ecological Clerk of Works** • Requirements for a licensed ecological Clerk of Works (CoW) would be advised by the ecologist based on relevant environmental commitments, the findings of the updated surveys, protected species licencing requirements and with reference to the relevant project programmes; • immediately prior to site clearance and the start of construction in each relevant part of the Site, further site walkover surveys would be undertaken by an ecologist to confirm whether the risks remain as previously assessed and/or to confirm the correct implementation of impact avoidance measures (e.g. protected species stand-offs). The scope of the required walkovers would be defined on a case by case basis, in consultation with the project team and BDC or other relevant statutory consultees as necessary, based on the specific risks; and • relevant site staff would receive toolbox talks on the ecological risks present, legal requirements and working arrangements necessary to comply with legislation. Toolbox talks would be repeated as necessary over the duration of the relevant works. **Precautionary Working Methods** The following precautionary working methods would be		

Potential Impact	Mitigation/Enhancement Measure	Monitoring/Additional Survey Requirements	Responsibility
	employed to minimise potential adverse effects on protected/notable species prior to, and during, construction: • precautionary working method statements would be produced to specify working requirements and other impact avoidance measures and would be controlled and implemented through the final CEMP; • where reasonably practicable, vegetation clearance works would be undertaken outside the bird breeding season, which is generally between March and August inclusive. Where this is not reasonably practicable, an ecologist would inspect all areas of vegetation prior to clearance, and clearance would only be undertaken subject to the instruction and requirements of the ecologist to protect any birds and their nests; • cleared ground would be maintained in a disturbed state in the run-up to construction commencing to minimise the risk of ground nesting birds attempting to nest on cleared ground; • if the proposed southern drainage connection corridor is chosen, construction works that would be cause disturbance to Cetti's warbler or other protected birds within the nearby West Burton Reedbed LWS and other adjacent habitats would be timed to be outside the bird breeding season (March to August inclusive); • measures required to prevent the killing/injury of great		

Potential Impact	Mitigation/Enhancement Measure	Monitoring/Additional Survey Requirements	Responsibility
	crested newt prior to and during construction (outlined above under Protected Species Licencing) would also serve to prevent direct impacts on grass snakes present within the same areas. Refugia would be placed within fenced areas in order to attract grass snakes and permit their recovery and translocation into suitable adjacent habitat, prior to the start of construction works; • reasonable avoidance measures would be used during clearance of any habitat suitable for grass snake located outside of areas fenced off under great crested newt licencing, to minimise the risk of direct impacts including phased clearance of vegetation to gradually reduce suitability for grass snake, thereby encouraging animals to move away from affected areas into adjacent suitable habitat; and • precautionary measures would be implemented to prevent trapping wildlife in construction excavations in order to ensure compliance with animal welfare legislation. All excavations deeper than 1m would be covered or fenced overnight, or where this is not practicable, a means of escape would be fitted (e.g. battened soil slope or scaffold plank) to provide an escape route should any animals stray into the construction site and fall into an excavation. **Lighting** • controls on lighting/illumination to minimise visual intrusion and potential adverse effects on sensitive ecology will be		

Potential Impact	Mitigation/Enhancement Measure	Monitoring/Additional Survey Requirements	Responsibility
	considered as far as reasonably practicable as part of the development of a lighting scheme; and • construction temporary site lighting will be designed as far as reasonably practicable so as to minimise artificial light spill from the Site (see **Section 2.6**). **Habitat Restoration** • habitats to be temporarily lost or damaged during construction would be fully reinstated where reasonably practicable on a like-for-like basis at the same location on completion of construction works, where practical. Some habitats would be restored and managed with the aim of increasing their biodiversity value in the long-term as set out within **Section 5** of the Landscape and Biodiversity Management and Enhancement Plan **(Application Document Ref 7.5**).		

Table 6: Landscape and Visual Amenity

Potential Impact	Mitigation/Enhancement Measure	Monitoring/Additional Survey Requirements	Responsibility
Loss of existing landscape features and visibility of new landscape features. Increased visibility of construction activities. Loss of an area of grassland within the Site which would be utilised as the construction laydown area, alongside removal of trees and vegetation present within the Site.	The Landscape and Biodiversity Management and Enhancement Plan (**Application Document Ref 7.5**) sets out the measures proposed to mitigate the potential impacts and effects on landscape (and biodiversity) features, and to enhance the landscape, green infrastructure and biodiversity value of the Site. A final Plan, which takes into account and is prepared in accordance with the principles of the Landscape and Biodiversity Management and Enhancement Plan, will be submitted to and approved by the relevant planning authority. This is proposed to be secured by a Requirement of the draft DCO (**Application Document Ref. 2.1**). Measures proposed include: • measures to protect, manage and enhance existing trees and vegetation that is to be retained and to minimise the effects of temporary construction lighting; • landscape and biodiversity management and enhancement measures including replacement tree planting; • roles and responsibilities; and • an implementation timetable for maintenance and management proposals, including an annual landscaping maintenance plan.	An arboricultural survey in line with BS5837:2012 (Ref 4) would be undertaken concurrently with detailed design of the Proposed Development, to identify where trees are likely to be affected by the construction works and to inform the development of the detailed design. Such pre-construction surveys would be undertaken in accordance with the Landscape and Biodiversity Management and Enhancement Plan (**Application Document Ref. 7.5**). Additional surveys may be required during the advance works, site clearance and construction phase as advised as necessary by the Applicant's arboricultural specialist, based on the findings of the tree survey, or otherwise as identified as appropriate by the	Section 6 of **Application Document Ref 7.5**: Landscape and Biodiversity Management and Enhancement Plan sets out roles and responsibilities for implementation. To be confirmed in final CEMP.

Potential Impact	Mitigation/Enhancement Measure	Monitoring/Additional Survey Requirements	Responsibility
	The final CEMP will be required to take into account measures contained within that Plan, as summarised below. **Tree Works** • the findings of the pre-construction tree survey (see Monitoring/Additional Survey Requirements) and Arboricultural Report, accompanied by an Arboricultural Method Statements, where construction works are likely to affect trees, will be taken into account by the appointed contractor; • where works in close proximity to retained trees cannot be practicably avoided, these works would be undertaken in accordance with current best practice, defined in British Standard (BS) 5837: 2012 Trees in relation to design, demolition and construction – Recommendations (Ref 4) and National Joint Utilities Group (NJUG) Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees (Ref 5); and • all necessary protective fencing would be installed prior to the commencement of any site clearance or construction works. **Lighting** • construction temporary site lighting required to enable safe working during construction in hours of darkness would be designed as far as reasonably practical so as not to cause a nuisance outside of the Site. Standard best practice	Applicant or their appointed main contractor.	

Potential Impact	Mitigation/Enhancement Measure	Monitoring/Additional Survey Requirements	Responsibility
	measures including those set out in **Section 2.6** would be employed to minimise light spill, including glare during construction. Submission and approval of an external lighting scheme is proposed to be secured by a Requirement of the draft DCO (**Application Document Ref. 2.1**) prior to commencement of the development. **Screening** • existing vegetation along the boundary of the Site will be retained and managed to ensure its continued presence and to aid the screening of low level views into the Site.		

Table 7: Ground Conditions and Hydrogeology

Potential Impact	Mitigation/Enhancement Measure	Monitoring/Additional Survey Requirements	Responsibility
Potential for risks to human health associated with waste generation, land contamination, airborne contamination and groundwater contamination. Potential risk of explosion if explosive gases were to accumulate in excavations. The discovery of ground contamination during groundworks. Re-profiling of the Site including the possible introduction of new fill materials and the removal of unsuitable or	A preliminary ground investigation was undertaken in December 2017, including soil and groundwater sampling. The results of the preliminary ground investigation, presented in **Appendix 11B** (ES Volume II) would be reviewed by the appointed contractor, including any additional investigation or mitigation measures beyond the impact avoidance measures stated here, that are developed and after consultation with the Environment Agency, agreed with BDC, prior to commencement of the development, as required and secured by a Requirement of the draft DCO. Impact avoidance measures proposed include: • all workers would be required to wear Personal Protective Equipment (PPE) such as dust masks as applicable; • pollution control measures would include the following, as well as those in **Table 8**: – containment measures would be implemented, including drip trays, bunding or double-skinned tanks of fuels and oils; all chemicals would be stored in accordance with their COSHH guidelines, whilst spill kits would be provided in areas of fuel/oil storage; – all plant and machinery would be kept away from surface water bodies wherever possible, checked regularly and, where necessary, the use of drip trays would be employed. Refuelling and delivery	To be confirmed in final CEMP.	To be confirmed in final CEMP.

Potential Impact	Mitigation/Enhancement Measure	Monitoring/Additional Survey Requirements	Responsibility
excessive materials.	areas would be located away from surface water drains; – an emergency spillage action plan will be produced, which staff would have read and understood, and provisions made to contain any leak/spill; – should any potentially contaminated ground, including isolated 'hotspots' of contamination and/or potential deposits of asbestos containing materials (ACM), be encountered, the contractor would be required to investigate the areas and assess the need for containment or disposal of the material. The contractor would also be required to assess whether any additional health and safety measures are required; – to further minimise the risks of contaminants being transferred and contaminating other soils or water, construction workers would be briefed as to the possibility of the presence of such materials; – in the event that contamination is identified, appropriate remediation measures would be taken to protect construction workers, future site users, water resources, structures and services; – the contractor would be required to place arisings and temporary stockpiles away from watercourses and drainage systems, whilst surface water would be directed away from stockpiles to prevent erosion;		

Potential Impact	Mitigation/Enhancement Measure	Monitoring/Additional Survey Requirements	Responsibility
	– the risk to surface water and groundwater from run-off from any contaminated stockpiles during construction works would be reduced by implementing suitable measures to minimise rainwater infiltration and/or capture runoff and leachates, through use of bunding and/or temporary drainage systems. These mitigation measures would be designed in line with current good practice, follow appropriate guidelines and all relevant licences/permits; – the contractor would ensure that all material is suitable for its proposed use and would not result in an increase in contamination-related risks on identified receptors, including any landscaped areas and underlying groundwater. This may include a Materials Management Plan (MMP) developed as part of the application of the CL:AIRE Definition of Waste Code of Practice (Ref 6) to allow beneficial re-use of materials and a SWMP to manage waste to be removed and disposed of; – any waters removed from excavations by dewatering would be discharged appropriately, subject to the relevant permits being obtained from the Environment Agency; – the contractor would implement a dust suppression/management system in order to control the potential risk from airborne contamination migrating off-site to adjacent sites, specifically the		

Potential Impact	Mitigation/Enhancement Measure	Monitoring/Additional Survey Requirements	Responsibility
	adjacent agricultural land, surrounding receptors and the River Trent; and – if piling is required, piling design and construction works would be completed following the preparation of a piling risk assessment, completed in accordance with the Environment Agency's 'Piling and Penetrative Ground Improvement Methods on Land Affected by Contamination: Guidance on Pollution Prevention' (Ref 8). A piling and penetrative foundation design method statement would be submitted to and after consultation with the Environment Agency, agreed with BDC prior to relevant works commencing. This is proposed to be secured by a Requirement of the draft DCO (**Application Document Ref. 2.1**).		

Table 8: Flood Risk, Hydrology and Water Resources

Potential Impact	Mitigation/Enhancement Measure	Monitoring/Additional Survey Requirements	Responsibility
Leakage or accidental spillage of construction materials and potential pollutants used on-site, migrating to nearby surface watercourse of infiltrating to groundwater. Flood Risk.	**General** The contractor will comply with: • Guidance for Pollution Prevention (GPP) 2 Above ground oil storage tanks (Ref 8); • GPP 4 Treatment and disposal of wastewater where there is no connection to the public foul sewer Ref (9); • GPP 5 Works and maintenance in or near water (Ref 10); • GPP 8 Safe storage and disposal of used oils (Ref 11); and • GPP 21 Pollution incident response planning (Ref 12). • the requirements of the Trent Valley IDB byelaws (Ref 13), particularly where works take place in the vicinity of any watercourse under control of the IDB (Wheatley Beck, Catchwater Drain and un-named tributary and Railway Dyke Drain), – Byelaw 3: Control of introduction of water and increase in flow or volume of water; – Byelaw 4: Control of sluices etc.; – Byelaw 6: Diversion or stopping up of watercourses; – Byelaw 10: No obstructions within 9m of the edge of the watercourse; – Byelaw 17: Fences, excavations, pipes etc.; and	To be confirmed in final CEMP.	To be confirmed in final CEMP.

Potential Impact	Mitigation/Enhancement Measure	Monitoring/Additional Survey Requirements	Responsibility
	– Byelaw 18: Interference with Sluices. Local watercourses are shown on **Figure 3**. **Staff Awareness and Training** • the contractor will ensure that construction staff are fully aware of the potential impact to water resources associated with the construction works and procedures to be followed in the event of an accidental pollution event occurring. This would be included in the site induction and training, with an emphasis on procedures and guidance to reduce the risk of water pollution. **Pollution Plans** • plans to deal with accidental pollution would be included within the detailed CEMP prior to commencement of construction; and • any necessary equipment (e.g. spillage kits) would be held on Site and all site personnel would be trained in their use. The Environment Agency would be informed immediately in the unlikely event of a suspected pollution incident. **Storage of Materials** The final CEMP will incorporate measures set out in the Environment Agency GPP and relevant Construction Industry Research and Information Association (CIRIA) Guidance. In addition to those measures set out above in this table, examples of such measures include:		

Potential Impact	Mitigation/Enhancement Measure	Monitoring/Additional Survey Requirements	Responsibility
	• placing arisings and temporary stockpiles outside of the Flood Zone 3 flood extent where reasonably practicable and away from drainage systems; • containment measures would be implemented, including drip trays, bunding or double-skinned tanks of fuels and oils; • all chemicals would be stored in accordance with their Control of Substances Hazardous to Health (COSHH) guidelines (Ref 14), whilst spill kits will be provided in areas of fuel/oil/minor chemicals storage; • an Emergency Spillage Plan would be produced, which site staff will have read and confirmed that they understand, via the site induction; • the mixing and handling of materials would be undertaken in designated areas and away from surface water drains; • plant and machinery would be kept away from surface waterbodies wherever possible and would have drip trays installed beneath oil tanks/engines/gearboxes and hydraulics, which would be checked and emptied regularly. Refuelling and delivery areas would be located away from surface water drains; and • exposed ground and stockpiles would be protected as appropriate and practicable to prevent windblown migration of potential contaminants. Water suppression would be used if there is a risk of fugitive dust emissions.		

Potential Impact	Mitigation/Enhancement Measure	Monitoring/Additional Survey Requirements	Responsibility
	Discharge/Disposal of Site Runoff • plans for the discharge and/or disposal of potentially contaminated water would be agreed in advance with the Environment Agency, and other relevant stakeholders, where appropriate, and permits obtained as required; • foul water from any site compound (including temporary toilets) would be either tankered away to an appropriate disposal facility by a licensed waste disposal contractor, or treated on-site in a septic tank; • if any suspected contaminated material is discovered during the works, the contractor would be required to investigate the areas and assess the need for containment or disposal of the material. If material is considered to be contaminated, it would be disposed of to an appropriately licensed facility; • any waters removed from excavations by dewatering would be discharged appropriately, subject to the relevant licenses being obtained; • foundations and services would be designed and constructed to prevent the creation of pathways for the migration of contaminants and would be constructed of materials that are suitable for the ground conditions and designed use. For example, water supply pipes would be designed in accordance with current good practice and applicable guidance to ensure pipes are protected from		

Potential Impact	Mitigation/Enhancement Measure	Monitoring/Additional Survey Requirements	Responsibility
	potential impacts associated with contamination; • no discharges from any self-contained wheel wash and localised wheel wash would be permitted to discharge directly into any surface water system. **Temporary Drainage** Measures that would be considered for implementation for temporary drainage through the construction design and/or final CEMP include: • installation of measures such as: swale(s), silt fences and appropriately sized settlement tank(s)/pond(s) to reduce sediment load; • cut-off ditches or geotextile silt-fences, installed around excavations, exposed ground and stockpiles to prevent uncontrolled release of sediments; • site access points would be regularly cleaned to prevent build-up of dust and mud; and • all potentially contaminated waters (for example washdown areas, stockpiles and other areas of risk for water contamination) to have separate drainage and where contamination is present to be tankered away from the Site. In addition, if monitoring demonstrates unsatisfactory levels of solids or other pollutants, measures would be implemented (e.g. changes to site drainage and settlement facilities and/or use of flocculants) to control suspended solids or other		

Potential Impact	Mitigation/Enhancement Measure	Monitoring/Additional Survey Requirements	Responsibility
	contaminated discharge to watercourses. **Flood Risk** • construction works undertaken adjacent to watercourses would comply with relevant guidance during construction, including the Environment Agency GPP and the requirements of the Trent Valley IDB byelaws, particularly Byelaws 3, 6, 10 and 17; • construction works within the drainage connection corridors, specifically in areas located within Flood Zone 3, would not be undertaken when an Environment Agency Flood Warning is in place for the River Trent adjacent to the Site; • at least one designated Flood Warden would be appointed who is familiar with the risks and remains vigilant to news reports, Environment Agency flood warnings and water levels in the River Trent; • the final CEMP would incorporate measures aimed at preventing an increase in flood risk during the construction works. Examples of measures when developing in Flood Zone 2 and 3 areas include: – topsoil and other construction materials would be stored as far as reasonably practicable, outside of the 1 in 100 year floodplain extent (Flood Zone 3); – the Applicant would seek to store materials outside of Flood Zone 2 as design of the Proposed Development		

Potential Impact	Mitigation/Enhancement Measure	Monitoring/Additional Survey Requirements	Responsibility
	progresses; – connectivity would be maintained between the floodplain and the River Trent, with no changes in ground levels within the floodplain as far as practicable; – the construction laydown area site office and supervisor would be notified of any potential flood occurring by use of the Floodline Warnings Direct service; – the contractor would be required to produce a Flood Risk Management Action Plan/Method Statement which would provide details of the response to an impending flood and include: ▪ a 24 hour availability and ability to mobilise staff in the event of a flood warning; ▪ the removal of all plant, machinery and material capable of being mobilised in a flood for the duration of any holiday close down period; ▪ details of the evacuation and site closedown procedures; and ▪ arrangements for removing any potentially hazardous material and anything capable of becoming entrained in floodwaters, from the temporary works areas. • potentially hazardous materials would be stored in locations outside of flood risk areas, or on raised areas;		

Potential Impact	Mitigation/Enhancement Measure	Monitoring/Additional Survey Requirements	Responsibility
	• a site specific Emergency Response plan would be produced detailing emergency evacuations procedures in the event of a flood or breach of the defences; and • provision would be made for the safe access and egress from all working areas of the Site in case of flooding.		

Table 9: Cultural Heritage

Potential Impact	Mitigation/Enhancement Measure	Monitoring/Additional Survey Requirements	Responsibility
Potential for impact upon potential archaeological deposits. Temporary impacts on the setting of below ground scheduled monuments (West Burton Deserted Medieval Village and Segelocum Roman town) and other built heritage assets during construction associated with increased visual and noise intrusion.	**General** • a programme of archaeological monitoring and associated palaeo-environmental sampling would accompany pre-construction site investigation works. This would allow a more detailed model of the deposits below the PFA to be developed and palaeo-environmental information gathered; • the archaeological strategy would include provision for dating of deposits and geoarchaeological assessment to provide information on the timeframe of the deposit sequence and the environments in which it was laid down; • the number and spacing of investigation locations would be agreed with Historic England Regional Science Advisor and the Senior Archaeologist for NCC. This would enable an assessment of the archaeological potential and value of deposits below the PFA to be made; • the proposed strategy would include the Site and the chosen drainage connection corridor, with targeted intrusive works where these are needed to provide detail to the deposit model along the drainage connection corridor route, if chosen. The results of this archaeological sampling regime would inform any requirements for archaeological monitoring or excavation during construction;	The Outline Written Scheme of Investigation (WSI) provided as **Application Document Ref 7.9** will be agreed with Historic England and NCC. Once agreed, this document would establish the objectives for the historic environment works and set out the mechanisms for the appointed archaeological contractor to design the investigation, undertake evaluation, analysis, reporting and deposit the archive prior to construction.	To be confirmed in final CEMP.

Potential Impact	Mitigation/Enhancement Measure	Monitoring/Additional Survey Requirements	Responsibility
	• archaeological investigations would take an iterative approach to the evaluation of archaeological potential and establishing the requirements for archaeological mitigation work. An Outline Written Scheme of Investigation describing the approach and methods to be used is provided in **Application Document Ref. 7.9**; and • evaluation during detailed design would allow for preservation in-situ of archaeological remains where reasonably practicable. Where not reasonably practicable, it would enable the implementation of strategy for archaeological recording to preserve the remains impacted by record.		

Table 10: Sustainability, Waste and Climate Change

Potential Impact	Mitigation/Enhancement Measure	Monitoring/Additional Survey Requirements	Responsibility
Waste Potential to impact on sensitive receptors (humans, wildlife and controlled waters) if not stored and managed appropriately.	The contractor would consider the objectives of sustainable resource and waste management and seek to use material resources efficiently, reduce waste at source, reduce waste that requires final disposal to landfill and apply the principles of the waste hierarchy. This would include, where reasonably practicable, working towards a cut and fill balance for excavations; segregation of construction materials on-site for appropriate re-use, recycling and recovery, with landfill as a last resort. This would be achieved by a combination of measures, including: • the contractor would prepare and implement a Site Waste Management Plan (SWMP) in accordance with the framework set out in **Appendix A** of this Framework CEMP; • as part of the SWMP, the contractor would segregate construction waste to be re-used and recycled where reasonably practicable; and • earthworks would be balanced so that quantities of 'cut' material match quantities of 'fill' material as far as reasonably practicable, to minimise quantities of surplus excavation waste from the site. To minimise impacts of waste on the surrounding environment, the following measures would be implemented: • off-site pre-fabrication, where reasonably practical,	The types, quantities and final destination of waste generated during the construction phase would be identified, measured and recorded through the SWMP. A register of all waste loads leaving the Site would be maintained to provide a suitable audit trail for compliance purposes and to facilitate monitoring and reporting of waste types, quantities and management methods.	To be confirmed in final CEMP.

Potential Impact	Mitigation/Enhancement Measure	Monitoring/Additional Survey Requirements	Responsibility
	including the use of pre-fabricated structural elements, cladding units, mechanical and electrical risers and packaged plant rooms; • burning of waste or unwanted materials would not be permitted on-site; • all hazardous materials including chemicals, cleaning agents and solvent containing products to be properly sealed in sealed containers at the end of each day prior to storage in appropriately protected and bunded storage areas; and • materials requiring removal from the Site would be transported using licensed carriers and records kept, detailing the types and quantities of waste moved and the destinations of this waste, in accordance with the relevant regulations.		

3.2 Complementary Plans and Procedures

3.2.1 In addition to the final CEMP, including a (final) SWMP, a suite of complementary environmental plans and procedures for the construction phase will be developed, secured by Requirements of the draft DCO where applicable, including:

- Construction Traffic and Routing Management Plan and Construction Workers' Travel Plan;
- a scheme for the control of construction noise;
- a final Landscaping and Biodiversity Management and Enhancement Plan;
- an external lighting scheme;
- a scheme to deal with the contamination of land, including groundwater;
- a written scheme of archaeological investigation; and
- a piling and penetrative foundation design method statement.

3.2.2 These plans and procedures will build on the principles and procedures set out in this Framework CEMP, the ES (Volume I) and other relevant approved application documents would be cross referenced in the final CEMP.

3.3 Implementation and Operation

3.3.1 The final CEMP will set out all roles, responsibilities and actions required in respect of implementation of the measures described in this Framework CEMP, including:

- an organogram showing team roles, names and responsibilities;
- training requirements for relevant personnel on environmental topics;
- information on site briefings and toolbox talks that will be used to equip relevant staff with the necessary level of knowledge to follow environmental control procedures;
- measures to advise employees of changing circumstances as work progresses;
- communication methods (e.g. updates via Sturton Ward website);
- document control; and
- environmental emergency procedures.

3.4 Checking and Corrective Action

Monitoring

3.4.1 To meet the requirement of the CEMP, environmental monitoring of impacts will be undertaken throughout the construction phase. In addition to any monitoring

specified in other licences and consents (e.g. under Protected Species Licensing), the requirements of the CEMP specified in **Tables 2-10** will be closely monitored.

3.4.2 As part of the monitoring process, the appointed contractor would allocate a designated Environmental Site Officer(s), who would be present on-site throughout the construction, including when new activities are commencing. The Environmental Site Officer would observe site activities and report any deviations from the final CEMP in a log book, along with the action taken and general conditions at the time. The Applicant would be informed of any deviations from the final CEMP as soon as possible following identification of such issues. The Environmental Site Officer would also assist the Applicant with day-to-day contact with BDC, and other regulatory agencies such as the Environment Agency.

3.4.3 During construction, the Environmental Site Officer would conduct regular walkover surveys to ensure all requirements of the final CEMP are being met. Action from these surveys would be documented on an Environmental Action Schedule, discussed with the Site Foreman for programming requirements and issued weekly for actioning.

3.4.4 The Environmental Manager/Project Manager would arrange regular formal inspections to ensure the requirements of the CEMP are being met. After completion of the works, the Environmental Site Officer would conduct a final review.

Records

3.4.5 The Environmental Manager/Project Manager would retain records of environmental monitoring and implementation of the final CEMP. This would allow provision of evidence that the final CEMP is being implemented effectively, including:

- an Environmental Action Schedule;
- records of licences and approvals;
- results of inspections by Environmental Manager/Project Manager;
- other environmental surveys and investigations; and
- environmental equipment test records.

3.4.6 The final CEMP would be a live document and as such updated regularly, with a full review on at least a quarterly basis throughout construction.

3.4.7 A report would be produced and submitted to BDC at the end of each key activity shown in the final construction programme, and following completion of commissioning. It would summarise the monitoring process, any observed deviations from the final CEMP and the corrective actions taken.

3.5 Management Review

3.5.1 The CEMP would be signed off on completion of the construction works and would form the basis of the Handover Environmental Management Plan (HEMP).

4. References

Ref 1 HM Government (2008) *The Planning Act 2008.*

Ref 2 British Standards Institute (2014a) *BS 5228-1:2009+A1:2014 – Code of practice for noise and vibration control on construction and open sites. Part 1: Noise.*

Ref 3 British Standards Institute (2014b) *BS 5228-2:2009+A1:2014 – 'Code of practice for Noise and Vibration control on construction and open sites. Part 2: Vibration'.*

Ref 4 British Standard (BS) 5837: 2012 *Trees in relation to design, demolition and construction.*

Ref 5 National Joint Utilities Group (NJUG) *Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees.*

Ref 6 Contaminated Land: Applications in Real Environments (2011*) The Definition of Waste: Development Industry Code of Practice, Version 2.*

Ref 7 Environment Agency (2001) *Piling and Penetrative Ground Improvement Methods on Land Affected by Contamination: Guidance on Pollution Prevention.*

Ref 8 Environment Agency (2018) *Guidance for Pollution Prevention 2: Above ground oil storage tanks.*

Ref 9 Environment Agency (2017) *Guidance for Pollution Prevention 4: Treatment and disposal of wastewater where there is no connection to the public foul sewer.*

Ref 10 Environment Agency (2018) *Guidance for Pollution Prevention 5: Works and maintenance in or near water.*

Ref 11 Environment Agency (2017) *Guidance for Pollution Prevention 8: Safe storage and disposal of used oils.*

Ref 12 Environment Agency (2017) *Guidance for Pollution Prevention 21: Pollution incident response planning.*

Ref 13 Trent Valley Internal Drainage Board (2012) *Planning and Byelaw Policy*.

Ref 14 Health and Safety Executive (2002) Control of Substances Hazardous to Health.

Appendix A – Framework Site Waste Management Plan (SWMP)

Introduction

A.1.1 This Framework Site Waste Management Plan (SWMP) provides an outline waste management strategy for the construction phase, considering likely waste arising from construction based activities such as earthworks, and addresses how these would be managed through application of the principles of the waste hierarchy as identified within the Waste Framework Directive (Ref 1A) (refer to Section 15.1.9 of **Chapter 15:** Sustainability, Waste and Climate Change for further details (ES Volume I) (**Application Document Ref. 5.2**)). **Figure A.1** shows the Waste Hierarchy.

Figure A.1: The Waste Hierarchy

A.1.2 This Framework SWMP does not replace the requirement for the completion of a construction stage SWMP. The Framework SWMP presents the approach that would be adopted as a minimum throughout construction and forms a framework for the approach of the construction stage SWMP.

Waste Management Legislation and Policy Context

Legislative Background

A.1.3 Relevant waste legislation would be complied with during construction. Waste legislation (principally originating from European Directives) includes (but is not limited to) those listed below (refer to Sections 15.1.9 to 15.1.14 of **Chapter 15:** Sustainability, Waste and Climate Change (ES Volume I) (**Application Document Ref. 5.2**) for further details):

- Control of Pollution (Amendment) Act 1989 (Ref 2A);
- Environmental Protection Act 1990 (Ref 3A);
- Environmental Protection (Duty of Care) Regulations 1991 (Ref 4A);
- Controlled Waste Regulations 1992 (Ref 5A);
- Environment Act 1995 (Ref 6A);
- The Hazardous Waste (England and Wales) Regulations 2005 (Ref 7A);
- The Environmental Permitting (England and Wales) Regulations 2016 (Ref 8A);
- Site Waste Management Regulations 2008; (Ref 9A)
- The Environmental Damage (Prevention and Remediation) Regulations 2009 (Ref 10A); and
- The Waste (England and Wales) Regulations 2011 (as amended) (Ref 11A).

A.1.4 Note that the Waste (England and Wales) Regulations 2011 (as amended) transpose the EU Waste Framework Directive (Directive 2008/98/EC) (Ref 12A) into UK law and sets the legal basis for the 'Duty of Care' for the management of waste in England and Wales.

A.1.5 (Note that this list includes base legislative references only – a number of regulations have also been amended).

National Planning Policy

A.1.6 In England, waste management strategies and principles are set out in a number of documents:

- Waste Strategy 2000 (subsequently built upon by the Waste Strategy for England (Ref 13A) introduced new underlying principles of sustainable waste management, some key aspects of which are outlined in **Table A.1**.
- National Planning Policy Framework (NPPF) 2019 (Ref 14A) sets out the Government's objectives in order to help achieve sustainable development. The framework does not include specific waste policies. Rather, these have been published as part of the National Waste Management Plan for England (Ref 15A).
- The National Waste Management Plan revoked Planning Policy Statement (PPS) 10 (PPS10) (Ref 16A) which set out the requirement for applicants to describe arrangements that are proposed for managing any waste produced and prepare a SWMP. However, preparation of an SWMP remains good practice in order to ensure that wastes are dealt with in terms of the waste hierarchy.
- The National Planning Policy for Waste (NPPW) (Ref 17A) provides guidance of relevance to the Proposed Development in outlining that it is the responsibility of the local planning authority to ensure that non-waste related

development does not impact on existing waste management facilities and does not prejudice implementation of the waste hierarchy or the efficient operation of such facilities. Similarly, there is a requirement that new, non-waste development makes sufficient provision for waste management and promotes good design to secure the integration of waste management facilities with the rest of the development. NPPW requires the handling of waste arising from the construction such that a development maximises reuse/recovery opportunities, and minimises off-site disposal.

A.1.7 Taking this into account, the arrangements described and defined within the SWMP should include information on the proposed waste recovery and disposal system for all waste generated by the Proposed Development, and an assessment of the impact of the waste arising from the Proposed Development on the capacity of waste management facilities to deal with other waste arising in the area.

A.1.8 The appointed contractor should seek to minimise the volume of waste produced and the volume of waste sent for disposal.

A.1.9 The appointed contractor should propose an effective system for managing hazardous and non-hazardous waste arising during construction.

A.1.10 The appointed contractor should demonstrate:

- any such waste would be properly managed, both on-site and off-site;
- the waste can be dealt with appropriately by the waste infrastructure which is, or is likely to be, available. Such waste arisings should not have an adverse effect on the capacity of existing waste management facilities to deal with other waste arisings in the area; and
- adequate steps have been taken to minimise the volume of waste arisings, and of the volume of waste arisings sent to disposal, except where that is the best overall environmental outcome.

Table A.1: Principles of Waste Management – Definitions

Principal	Description
Waste Hierarchy	A theoretical framework used as a guide to the waste management options that should be considered when assessing BAT.
Waste as a Resource	Certain wastes can be directly used or separated/processed for use as a replacement for raw materials, saving resources and potentially reducing energy use or other impacts associated with virgin resource extraction and transport. Where materials have been identified for beneficial use (i.e. not as 'waste') within the site or at another site, they must be managed using the CL:AIRE Definition of

Principal	Description
	Waste Code of Practice (DoW CoP), which requires the development of a Materials Management Plan (MMP) that defines how the materials are to be managed following satisfactorily being pre-assessed.
Proximity Principle	Waste should generally be managed as close as possible to its place of production, to minimise environmental impact that arises through transportation.
Best Practicable Environmental Option (BPEO) (Superseded by Strategic Environmental Assessment (SEA) /Sustainability Appraisal (SA)	Defined by the Royal Commission on Environmental Pollution (1988) as 'the outcome of a systematic and consultative decision making procedure which emphasises the protection and conservation of the environment across land, air and water'. The BPEO procedure establishes, for a given set of objectives, the option that provides the most benefits, as a whole, at acceptable cost, in both the short-term and the long-term. SA is designed to ensure compliance with SEA and as such includes for requirements on environmental decision making such as an opportunity for the public to express their opinion on draft plans (community involvement), take into account significant environmental effects including those on human health, material assets and climatic factors and a full assessment of alternative options and reasons why alternatives have been assessed and why others have not.

A.1.11 Further details of waste planning policy are provided in **Section 15.1** of **Chapter 15**: Sustainability, Waste and Climate Change (ES Volume I) (**Application Document Ref. 5.2**).

Policy Relating to Specific Waste Types

A.1.12 In regards to Construction, Demolition and Excavation (CD&E) Waste, the EU Waste Framework Directive (Ref 1A) has set a recovery target of 70% of construction and demolition waste by 2020.

A.1.13 Further details of the Waste Framework Directive are provided in **Section 15.1** of **Chapter 15**: Sustainability, Waste and Climate Change (ES Volume I) (**Application Document Ref. 5.2**).

Local Planning Policy

A.1.14 Nottinghamshire County Council (NCC) is the waste disposal authority for the Site. The Site is in close proximity to existing Ash Processing Facilities which form part

of the wider West Burton Power Station site. It is noted in the response to the Scoping Opinion that NCC cite their Waste Core Strategy (Ref 18A) and in particular, note that they are supportive of proposals to temporarily stockpile ash within, or on land adjacent to power stations, where this would help to maximise recycling or re-use over a foreseeable period.

A.1.15 It is noted that NCC has confirmed that they would be keen to see best practice in relation to waste management and in accordance with Policy WCS2 of the Core Strategy, the Proposed Development should be:

"designed, constructed, and implemented to minimise the creation of waste, maximise the use of recycled materials and assist the collection, separation, sorting, recycling and recovery of waste arising from the development."

A.1.16 Further details of the Waste Core Strategy are provided in **Section 15.1** of **Chapter 15**: Sustainability, Waste and Climate Change (ES Volume I) (**Application Document Ref. 5.2**).

Approach to Waste Management

A.1.17 The Applicant is committed to delivering a development that is sustainable in regards to matters relating to waste management and would comply with the relevant statutory requirements (as detailed above), which are underpinned at a national level by the NPPW. This requirement would be passed onto the contractor.

A.1.18 Waste elimination would start as early as possible and the contractor and their design team would work in conjunction with the Applicant to design and plan waste minimisation.

A.1.19 In addition, an effective construction phase SWMP would be prepared which would identify, formalise and communicate waste management good site practice and responsibilities during the construction.

A.1.20 The proposed construction phase SWMP would identify the types and quantities of waste anticipated to be generated, along with the definition of suitable disposal routes. The plan would also include details as to how material reuse and recycling options would be maximised. The plan would be maintained as a live document, to be updated and monitored by the contractor, in order to demonstrate compliance with the Waste Duty of Care and other relevant regulations.

Waste Types and Actions

A.1.21 It is not expected that there would be any significant volumes of PFA or waste spoil required to be removed from the Site to facilitate construction. Therefore, the primary construction wastes would relate to packaging waste associated with materials used during construction.

A.1.22 Although, at this stage it is not possible to confirm the anticipated type and estimated volumes of waste to be produced from construction; **Table A2** provides a summary of potential wastes, with more detailed information provided within **Chapter 15:** Sustainability, Waste and Climate Change (**Section 15.7**) (ES Volume I) (**Application Document Ref. 5.2**).

Waste Minimisation Actions and Mitigation

A.1.23 Waste minimisation actions relating to Site generated construction waste would include consideration of:

- agreements with material suppliers to reduce the amount of packaging or to participate in a packaging take-back scheme;
- implementation of a 'just-in-time' material delivery system, as far as reasonably practical, to avoid materials being stockpiled, which increases the risk of their damage and disposal as waste;
- attention to material quantity requirements to avoid over-ordering and generation of waste materials;
- re-use of materials wherever feasible;
- segregation of waste at source where practical; and
- re-use and recycling of materials off-site where re-use on-site is not practical (e.g. through use of an off-site waste segregation facility and re-sale for direct re-use or re-processing).

Additional Actions for Dealing with Waste

A.1.24 In addition to the waste management measures as detailed in the 'Approach to Waste Management' section above, there are actions that would be introduced as part of the construction SWMP which would contribute to the general reduction of waste generation during construction, including:

- appointment of an environment manager who would hold overall responsibility for waste management, coordinate all waste and environmental issues on-site, monitor waste data and identify training needs. Sites with such personnel tend to perform better in managing waste;
- accurate record keeping of waste types, volumes and disposal routes and destinations;
- staff awareness training to ensure all personnel know the correct procedures on-site for waste segregation, disposal and actively promote recycling on-site through clear signage;
- setting of targets/Key Performance Indicators (KPIs) for waste recycling and reduction, including the Applicant's sustainable development policy target of zero waste to landfill for construction wastes; and

- establishing a good management structure, which would allow prompt decision making relating to improvements in waste management and recycling initiatives.

Indicative Roles and Responsibilities

A.1.25 Personnel at all levels have a role in managing materials and waste correctly, however typical roles and responsibilities that may be defined as part of both the construction and operational phase SWMPs (not an exhaustive list) are summarised as follows:

Environmental Manager

- responsible for the overall management, co-ordination and dissemination of the project waste management requirements through the final CEMP;
- supported by the Site Waste Management Representative, has responsibility for legal compliance, preparation of plans, reviewing waste data, investigating incidents, near misses and non-conformances and organising site and waste audits; and
- development of training presentations and task briefings/toolbox talks for construction staff and maintaining training records and certificates of competence.

Site Manager

- responsible for ensuring a system is implemented that identifies and manages the waste being produced;
- implements a waste plan as a 'live' document, identifying an appropriate strategy and KPIs; and
- co-ordinates waste management on-site.

Site Waste Management Representative

- co-ordinates the identification of materials for re-use or recycling and identifies opportunities for waste reduction;
- staff training;
- ensures that all waste storage containers are accurately labelled to show all site workers where to deposit specific materials; and
- liaises with the management team to ensure the appropriate management of incoming materials, the establishment of waste management contracts, and the provision of receptacles.

Site Personnel (as relevant)

- reduction of materials ordered to reduce the amount of waste produced;
- correct handling and storage of materials to prevent damage and wastage;

- co-ordinating the reuse or recycling of materials for alternative usage where possible;
- correct handling of waste materials by containment, separation and storage;
- labelling of waste storage containers to show where to deposit specific materials;
- checking that containers are stored safely and securely; and
- monitoring the disposal of waste to appropriate sites, with correct documentation completed.

A.1.26 The SWMP would define and assign the responsibilities of personnel at the Site.

Audit Monitoring and Review

A.1.27 To be most effective, it is important that the SWMP is a live document which, like the final CEMP, is regularly reviewed and updated. Waste would be monitored routinely. Monitoring of waste and implementation of waste management plans would assist in achieving waste minimisation obligations, as detailed within the SWMP as well as helping to identify opportunities for improvements and potential cost reductions.

A.1.28 The following is not an exhaustive list and represents typical activities undertaken at each stage.

Waste Monitoring (undertaken quarterly as a minimum)

- update the SWMP at regular intervals to illustrate changes to the Proposed Development, as required by the current SWMP Regulations, such as waste types, volumes, sub-contractors and changes in personnel and to drive continual improvement in promoting management of wastes as high up the waste hierarchy as possible;
- monitor compliance with relevant legislation and regulations and check that the waste management strategy is being implemented appropriately, monitored through regular site inspections;
- completion of monthly logs detailing the volume of material brought onto Site and the volume of waste generated, including the type and route of disposal/recovery; and
- collation of monthly data detailing all waste movements into a quarterly report to be submitted to the site manager for use during the annual waste audit and waste review.

Waste Audit (undertaken annually as a minimum)

- Collate/review baseline information. This would include, for example reviews of:

- operations/staffing levels, composition, waste monitoring reports and quantity of waste generated;
- current waste management procedures;
- existing activities including, for example, key roles and responsibilities; and
- an estimation of waste volumes including a comparison from previous and projected years (where appropriate);

- The results of the waste audit would be used to inform the waste review.

Waste Review (undertaken annually as a minimum)

- A waste review would be undertaken following the completion of a waste audit and the completion of regular waste monitoring. The review would provide an opportunity to consider the suitability of the management strategies that are in place in relation to relevant regulations and best practice procedures, and identify areas for improvement, lessons to be learnt and improved cost saving and sustainability; and
- the review would consider monthly, quarterly and annual reports, compare waste related data that has been collected and include guidance and proposals to drive continual improvement.

A.1.29 The monitoring procedures detailed above would be undertaken as a minimum and defined within the SWMP.

Conclusion and Summary

A.1.30 This Framework SWMP presents the approach that would be implemented during the construction phase.

A.1.31 This Plan illustrates and seeks to guide the appointed contractor and Applicant to:

- recognise that the SWMP would underpin the approach to waste management for the Proposed Development;
- define indicative roles and responsibilities within the organisations to ensure those responsible for waste management are aware of the remit;
- demonstrate that key waste legislation would be met and local and regional drivers would be fulfilled, including reviewing procedures should waste legislation and guidance be amended or updated in future;
- demonstrate that the construction phase would minimise waste as far as reasonably practicable in accordance with best practice via the implementation of a construction phase SWMP;
- develop a proactive and coordinated approach to sustainable waste management, reuse and recycling that would be encouraged and implemented at the Site through a number of recycling initiatives to divert as much recyclable waste as possible from landfill; and

- record and audit waste movement during construction.

A.1.32 Where individual waste types have not been identified within this Framework SWMP, these would be assessed at the appropriate stage.

A.1.33 **Table A.2** provides a summary of the potential wastes that are likely to be generated and proposed management processes to reduce adverse impacts.

Table A.2: Waste Estimations

Waste Type	Main Management Process
Soil arisings	Reuse on-site where appropriate, remediate where necessary.
Concrete, masonry and aggregates	Crush and reuse investigate potential for off-site use
Metals	Recycle via appropriate waste carrier
Paper and cardboard	Segregate and recycle via appropriate waste carrier
Sanitary waste	Remove by specialist waste contractor
Plastics and glass	Recycle via appropriate waste carrier

References

Ref 1A European Commission (2008) Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste and repealing certain Directives (the Waste Framework Directive).

Ref 2A HM Government (1989) *Control of Pollution (Amendment Act.*

Ref 3A HM Government (1990) *Environmental Protection Act.*

Ref 4A HM Government (1991) *The Environmental Protection (Duty of Care) Regulations.*

Ref 5A HM Government (1992) *Controlled Waste Regulations.*

Ref 6A HM Government (1995) *Environment Act.*

Ref 7A HM Government (2005) The Hazardous Waste (England and Wales) Regulations.

Ref 8A HM Government (2016) *The Environmental Permitting (England and Wales) Regulations.*

Ref 9A HM Government (2008) *Site Waste Management Regulations.*

Ref 10A HM Government (2009) *The Environmental Damage (Prevention and Remediation) (England) Regulations.*

Ref 11A HM Government (2011) *The Waste (England and Wales Regulations*.

Ref 12A European Commission (2008) *Directive 2008/98/EC on waste (Waste Framework Directive).*

Ref 13A Department for Environment, Food and Rural Affairs (2007) *Waste Strategy for England.*

Ref 14A Department for Communities and Local Government (2019) *National Planning Policy Framework.*

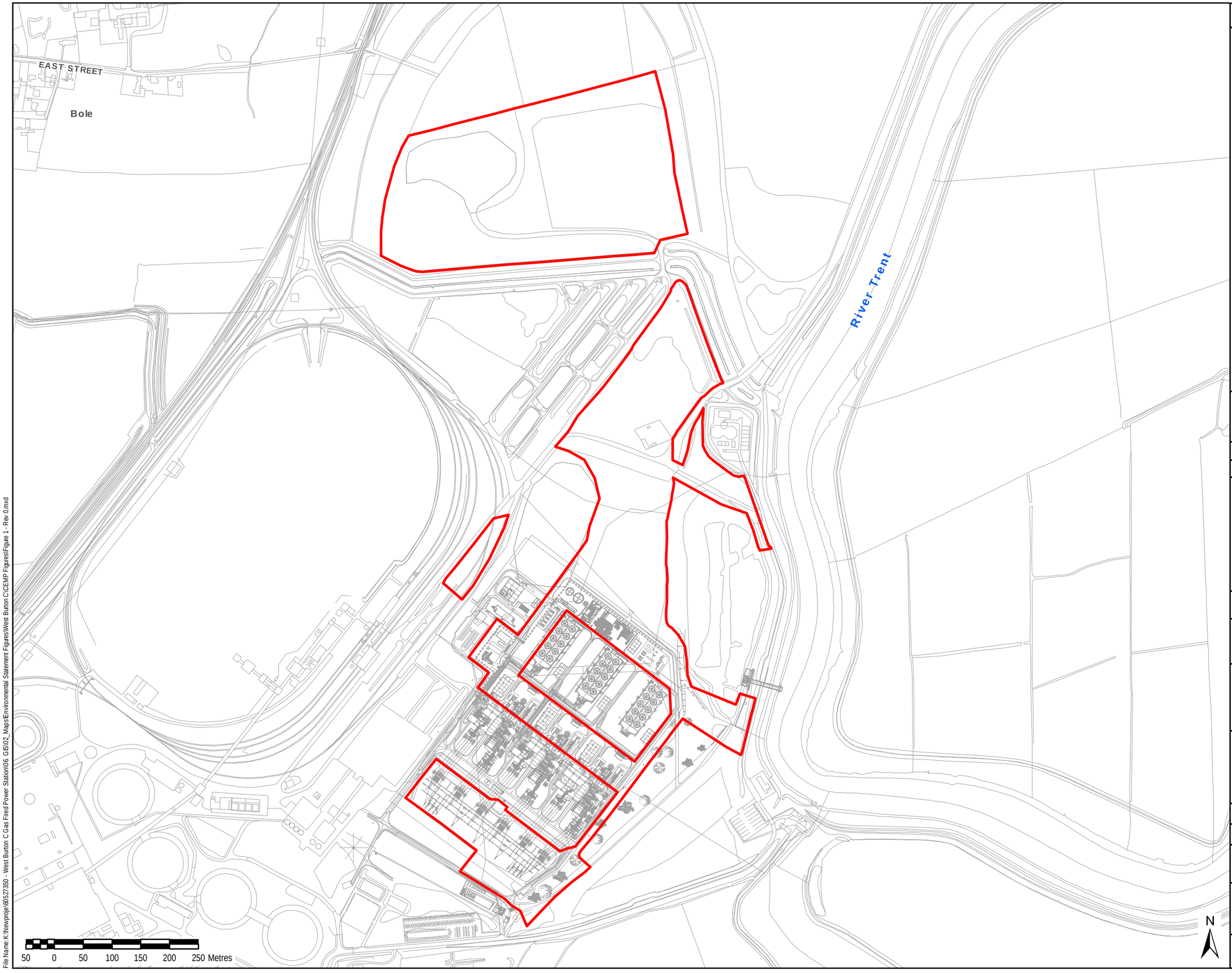
Ref 15A Department for Environment, Food and Rural Affairs (2013) *National Waste Management Plan for England.*

Ref 16A Department for Communities and Local Government (2010) *Planning for sustainable waste management: Planning Policy Statement 10.*

Ref 17A Department for Communities and Local Government (2014) *National Planning Policy for Waste.*

Ref 18A Nottinghamshire County Council and Nottingham City Council (2013) *Nottinghamshire and Nottingham Replacement Waste Local Plan (Waste Core Strategy)*.

Figures



LEGEND

The Order Limits

First Issue	GB	SE	05.01.18	0
Revision Details	By	Check	Check Date	Suffix

Purpose of Issue
DCO APPLICATION

Client
EDF ENERGY
(THERMAL GENERATION) LIMITED

Project Title
WEST BURTON C (GAS FIRED GENERATING STATION)

Drawing Title
FIGURE 1
THE ORDER LIMITS

Drawn	Checked	Approved	Date
GB	SE	RL	05.01.18

AECOM Internal Project No.	Scale @ A3
60527350	1:6,000

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Drawing Number	Rev
60527350/WBC/CEMP/FIGURE 1	0

File Name: K:\Newproje\60527350 - West Burton C Gas Fired Power Station\06. GIS\02_Maps\Environmental Statement Figures\West Burton C\CEMP Figures\Figure 1 - Rev 0.mxd

5.Botanical enhancement and management of existing seeded grassland areas

3. Management of existing scrub and grassland habitats to enhance their biodiversity value. To include scrub thinning, diversification and creation of habitat piles / hibernacula.

4.Management of existing scrub habitats to enhance their biodiversity value, including scrub thinning and diversification, and tree planting, plus creation of habitat piles / hibernacula.

1.Management of existing scrub and reedbed habitats to enhance their biodiversity value. To include scrub thinning and diversification, rotational reedbed management and creation of habitat piles / hibernacula.

2.Construction Laydown Area - re-instatement following construction with mosaics of species-rich grassland and scrub of higher ecological value than existing, plus creation of habitat piles / hibernacula.

60 0 60 120 180 240 300 Metres

N

LEGEND

- The Order Limits
- Area 1. Management of existing scrub and reedbed habitats.
- Area 2. Construction Laydown Area – habitat re-instatement
- Area 3. Management of existing scrub and grassland habitats
- Area 4. Management of existing scrub habitats and tree planting
- Area 5. Grassland enhancement

Minor Edit	GB / SE	30.01.19	1
First Issue	GB / SE	05.01.18	0
Revision Details	By / Check	Check Date	Suffix

Purpose of Issue
DCO APPLICATION

Client
EDF ENERGY
(THERMAL GENERATION) LIMITED

Project Title
WEST BURTON C (GAS FIRED GENERATING STATION)

Drawing Title
FIGURE 2
LANDSCAPING AND BIODIVERSITY MANAGEMENT AND ENHANCEMENT AREAS

Drawn	Checked	Approved	Date
GB	SE	RL	05.01.18

AECOM Internal Project No.	Scale @ A3
60527350	1:6,000

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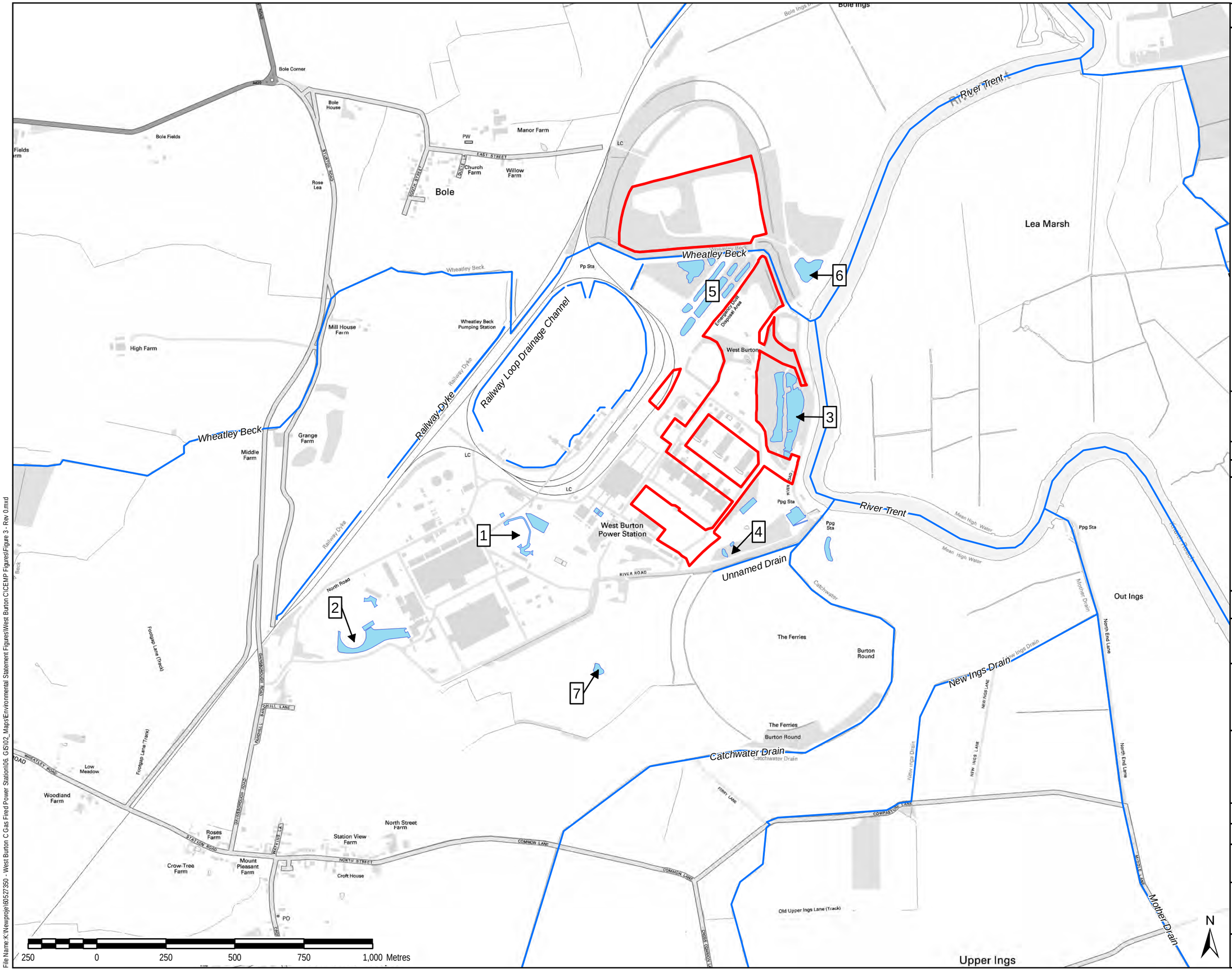
Drawing Number
60527350/WBC/CEMP/FIGURE 2

Rev
0

File Name:K:\Newprojje\60527350 - West Burton C Gas Fired Power Station\06. GIS\02_Mapsl\Environmental Statement Figures\West Burton C\Landscape and Biodiversity Strategy\Figure 2 - Rev 1.mxd



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LEGEND

The Order

Surface Water

First Issue	GB	SE	05.01.18	0
Revision Details	By	Check	Check Date	Suffix

Purpose of Issue
DCO APPLICATION

Client
EDF ENERGY
(THERMAL GENERATION) LIMITED

Project Title
WEST BURTON C (GAS FIRED GENERATING STATION)

Drawing Title
FIGURE 3
LOCAL WATERCOURSES

Drawn	Checked	Approved	Date
GB	SE	RL	05.01.18

AECOM Internal Project No.	Scale @ A3
60527350	1:12,500

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Drawing Number	Rev
60527350/WBC/CEMP/FIGURE 3	0