

# West Burton C (Gas Fired Generating Station)

Appendix 9C: Preliminary Ecological Appraisal

EDF Energy (Thermal Generation) Limited

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# 1. Introduction

## 1.1 Overview and Purpose

- 1.1.1 This report describes the approach and findings of the Preliminary Ecological Appraisal (PEA) undertaken in support of the Ecological Impact Assessment (EclA) for the Proposed Development (in **Chapter 9: Ecology (ES Volume I)**).
- 1.1.2 The terms of reference used in this report to describe the different elements of the Proposed Development are consistent with those defined within the main chapters of the Environmental Statement (ES). However, for the purposes of this report, ‘the Site’ refers to all parts of the Proposed Development included in the Order Limits, as described within **Chapter 3: Description of the Site (ES Volume I)** and illustrated on **Figure 1.1 (ES Volume III)**.
- 1.1.3 The purpose of the PEA has been to define the baseline ecological conditions associated with the Site and determine the need for further survey work to inform the EclA. The approach applied when undertaking this PEA accords with current best practice guidelines for PEA published by the Chartered Institute of Ecology and Environmental Management (CIEEM) (Ref 9C-1). The PEA addresses relevant wildlife legislation and planning policy as summarised in **Section 2** of this report.
- 1.1.4 In order to deliver the PEA, a desk study and an extended Phase 1 Habitat survey were undertaken by an appropriately experienced ecologist, to identify ecological features within the Site and the wider potential zone of influence of the Proposed Development. The potential zone of influence relevant to different ecological features is considered within **Section 3** of this report when defining desk study and field survey areas.
- 1.1.5 The objectives of the PEA were to:
- identify statutory and non-statutory nature conservation designations within the potential zone of influence of the Proposed Development;
  - identify and categorise all habitats present within the Site and any areas immediately outside of the Site where there may be potential for direct or indirect effects;
  - carry out an appraisal of the potential of the habitats recorded to support protected or notable species of fauna and flora;
  - identify requirements for follow-up habitat and species surveys to fully define the ecological baseline;
  - provide an evaluation of the relative nature conservation value of identified habitats and designated sites to inform the EclA, where possible; and

- provide figures showing the locations of the identified ecological features.

## 2. Wildlife Legislation and Planning Policy

### 2.1 Wildlife Legislation

2.1.1 The following wildlife legislation is potentially relevant to the Proposed Development:

- Wildlife and Countryside Act (WCA) 1981 (as amended) (Ref 9C-2);
- Countryside and Rights of Way (CRoW) Act 2000 (Ref 9C-3);
- Natural Environment and Rural Communities (NERC) Act 2006 (Ref 9C-4);
- The Conservation of Habitats and Species Regulations 2017 (as amended) (Ref 9C-5);
- Protection of Badgers Act 1992 (Ref 9C-6); and
- The Hedgerow Regulations 1997 (Ref 9C-7).

2.1.2 The above legislation has been considered when planning and undertaking this PEA using the methods described in **Section 3**, when identifying potential constraints and making recommendations for further survey, as discussed in **Section 5**. Compliance with legislation may require the attainment of relevant protected species licences prior to the implementation of the Proposed Development.

2.1.3 Further information on the requirements of the above legislation is provided as **Appendix 9A** (ES Volume II).

### 2.2 Planning Policy

#### National Policy Statements

2.2.1 The overarching National Policy Statement (NPS) for Energy (EN-1) (Ref 9C-8) and EN-2 sets out national policy for energy infrastructure. Paragraph 3 of the NPS states:

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

2.2.2 The relevant policy for nature conservation is Part 5.3 (Biodiversity and geological conservation) and states that where the development is subject to Environmental Impact Assessment (EIA) the applicant should ensure that the ES clearly sets out any effects on internationally, nationally and locally designated sites of ecological or geological conservation importance, on protected species and on habitats and other species identified as being of principal importance for the conservation of biodiversity. The policy also requires that the applicant shows how the project has taken advantage of

opportunities to conserve and enhance biodiversity and geological conservation interests.

### National Planning Policy Framework

2.2.3 The National Planning Policy Framework (NPPF) came into effect on July 2018 to replace those produced in March 2012 and was subsequently updated in February 2019 (Ref 9C-9), this details the Government’s planning policies for England and how these are expected to be applied. The NPPF states the commitment of the UK Government to minimising impacts on biodiversity and providing net gains in biodiversity where possible, contributing to the Government’s commitment to halt the overall decline in biodiversity. It specifies the obligations that the Local Authorities and the UK Government have regarding statutory designated sites and protected species under UK and international legislation and how this is to be delivered in the planning system. Protected or notable habitats and species can be a material consideration in planning decisions and may therefore make some sites unsuitable for particular types of development. If development is permitted, mitigation measures may be required to avoid or minimise impacts on certain habitats and species, or where impacts are unavoidable, compensation may be required. Further information on the relevant parts of the NPPF is provided within **Appendix 9A** (ES Volume II).

### Local Development Plan Policy

2.2.4 Relevant local planning policies adopted by Bassetlaw District Council (BDC) are detailed in the following documents:

- Bassetlaw Core Strategy and Development Management Policies Development Plan Document (DPD) – adopted December 2011 (Ref 9C-10);
- Draft Bassetlaw Local Plan (2019) (Ref 9C-11); and
- The Sturton Ward Neighbourhood Plan 2015-2030 (2015) (Ref 9C-12).

2.2.5 **Table 1** provides a summary of current policies relevant to ecology and nature conservation. The source document should be referred to for the precise wording of each specific policy. This planning policy has been considered when assessing potential ecological constraints and requirements for further survey, as described in **Section 5**.

**Table 1: Summary of local development plan policy**

Document	Planning Policy	Purpose
<b>Bassetlaw Core Strategy and Development</b>	DM9: Green Infrastructure; Biodiversity	To ensure that development proposals support the Council’s strategic approach to the delivery, protection

Document	Planning Policy	Purpose
<p><b>Management Policies DPD (Ref 9C-10)</b></p>	<p>and Geodiversity; Landscape; Open Space and Sports Facilities</p>	<p>and enhancement of multi-functional Green Infrastructure.</p> <p>To safeguard habitats and species populations by requiring that development proposals do not adversely affect or result in the loss of ecological features of importance, including protected trees and hedgerows, ancient woodlands, statutory and non-statutory nature conservation designations and protected/notable habitats and species.</p>
<p><b>Draft Bassetlaw Local Plan (Ref 9C-11).</b></p>	<p>Strategic Objective 5</p>	<p>BDC is currently in the early stages of preparing a new Local Plan for the District and began consulting on a Draft Bassetlaw Local Plan in January 2019. Strategic objective 5 (Conserve the District’s distinctive historic built and natural environments) states:</p> <p>“The variety of distinctive historic and natural environments throughout Bassetlaw will be conserved and, where possible, enhanced for the enjoyment of future generations of residents and visitors alike. This will include making the most efficient use of land wherever appropriate.”</p>
<p><b>The Sturton Ward Neighbourhood Plan 2015-2030 (Ref 9C-12)</b></p>	<p>Policy 2: Conservation and Enhancement of Existing Natural Features</p>	<p>“Development will be permitted where it fulfils all the relevant criteria listed:</p> <ul style="list-style-type: none"> <li>- protects and enhances designated wildlife sites and landscape distinctiveness; as identified in Appendix G5; and-</li> <li>retains features of high conservation or landscape value including mature trees, hedgerows, species-rich grasslands, ponds and wetlands, and woodlands; and</li> <li>- introduces or safeguards boundary treatments that are sympathetic to maintaining and enhancing</li> </ul>

Document	Planning Policy	Purpose
		<p>biodiversity on new development or as part of alterations to existing development. Incorporating native species of tree and shrub and provision of bat boxes will be particularly encouraged.”</p> <p>The policy also states that “development on sites either adjoining existing settlements or in the open countryside must assess the impact of the proposals upon the local biodiversity and if there is a significant loss of trees and shrubs as part of the development then new provision will be expected elsewhere.”</p>

## 2.3 Other Relevant Guidance

### Local Biodiversity Action Plan for Nottinghamshire

2.3.1 The Local Biodiversity Action Plan (LBAP) for Nottinghamshire (Ref 9C-13) is a nature conservation strategy identifying threats to habitats and species within the county and setting out the actions necessary to conserve them. The LBAP is a useful tool for determining threatened or uncommon habitats and species within the county. The LBAP confers no particular legislative or policy protection to the habitats and species identified, but they are listed as priorities for conservation at the county level.

2.3.2 The presence of, or potential for, LBAP habitats and species at the Site is considered within **Section 4** of this report. All priority habitats and species in the LBAP are listed in **Table A1** in **Annex A**, together with a summary of their relevance to the Proposed Development.

### National Character Areas

2.3.3 National Character Areas (NCA) were developed by Natural England to provide a description of the landscape area and other details such as the topography, geology and soils, field patterns and boundary features, agricultural uses, semi-natural habitats and species closely associated with the area. The NCAs describe areas that share similar landscape characteristics, and which follow natural landscape boundaries rather than administrative boundaries. They provide a framework for decision-making in the natural environment, particularly with regards to the planning of conservation initiatives at a landscape scale by analysing an area’s broad

characteristics and ecosystem services. The NCAs do not confer any legal or planning policy habitat protection.

2.3.4 The Site is located entirely within the Trent and Belvoir Vales NCA (NCA Profile 48), which is characterised by undulating, strongly rural and predominantly arable farmland, centred on the River Trent, with relatively little woodland cover (Ref 9C-14). The NCA profile for the Trent and Belvoir Vales identifies a number of Statements of Environmental Opportunity (SEO); those relevant to ecology and nature conservation are summarised below:

- SEO 1 – maximise the use of sustainable agricultural practices that protect and enhance ecological networks;
- SEO 2 – enhance the woodland and hedgerow network through the planting of small woodlands, tree belts, hedgerow trees and new hedgerows to benefit habitat connectivity and a range of ecosystem services; and
- SEO 3 – enhance the rivers and their flood plains for their ecological importance and their contribution to biodiversity.

### 3. Methods

#### 3.1 Desk Study

- 3.1.1 A desk study was carried out to identify nature conservation designations and protected and notable habitats and species potentially relevant to the Proposed Development.
- 3.1.2 A stratified approach was taken when defining the desk study area, based on the likely zone of influence of the Proposed Development on different ecological features, and an understanding of the maximum distances typically considered by statutory consultees. The desk study areas applied and the data sources used are detailed in **Table 2**.

**Table 2: Desk study areas and data sources**

<b>Ecological Feature</b>	<b>Desk Study Area</b>	<b>Data Source</b>
<b>International nature conservation designations Special Areas of Conservation (SAC), Special Protection Areas (SPA) and Ramsar sites</b>	10km	Multi-Agency Geographic Information for the Countryside (MAGIC) website ( <a href="http://www.magic.defra.gov.uk">www.magic.defra.gov.uk</a> ) (accessed February 2017 and January 2019)
<b>National nature conservation designations Sites of Special Scientific Interest (SSSI)</b>	2km	MAGIC website (accessed February 2017 and January 2019)
<b>Local non-statutory nature conservation designations Local Wildlife Sites (LWS)</b>	2km	Nottinghamshire Biological and Geological Record Centre (accessed February 2017)) Lincolnshire Environmental Records Centre (accessed February 2017) Nottingham City Council Insight Mapping website ( <a href="https://maps.nottinghamcity.gov.uk/insi">https://maps.nottinghamcity.gov.uk/insi</a> )

Ecological Feature	Desk Study Area	Data Source
		ghtmapping/#) (accessed February 2017 and January 2019)
<b>Protected and notable habitats and species<sup>1</sup></b>	2km	Nottinghamshire Biological and Geological Record Centre Lincolnshire Environmental Records Centre (accessed February 2017)
<b>Ponds<sup>2</sup></b>	500m	Ordnance Survey (OS) 1:25,000 mapping Aerial photography (Google Earth) MAGIC website (accessed February 2017)

3.1.3 In addition to the above sources of information, a review was undertaken of the results of a suite of previous ecological surveys and monitoring completed within the wider power station site in support of planning requirements for West Burton B (WBB) Power Station and Bole Ings Ash Disposal Site. A summary of previous ecological work reviewed is provided in **Table 3**.

**Table 3: Summary of previous ecological survey work at West Burton Power Station**

Survey Type	Scope of Survey	Date	Reference
<b>Great crested newt</b>	Population size class assessment of ponds within 500m of Bole Ings Ash Disposal Site	Spring 2014	Ref 9C-15
	Population monitoring surveys as part of Natural England European	2008-2014	Ref 9C-16

<sup>1</sup> Protected and notable habitats and species include those listed under Schedules 1, 5 and 8 of the Wildlife and Countryside Act 1981 (as amended); Schedules 2 and 4 of The Conservation of Habitats and Species and Planning (Various Amendments) (England and Wales) Regulations 2018; and species and habitats of principal importance for nature conservation in England listed under Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006. Records of non-native controlled weed species were also collated where available; such species are listed under Schedule 9 of the Wildlife and Countryside Act 1981 (as amended).

<sup>2</sup> To determine the potential for the presence of great crested newt (*Triturus cristatus*) within the Site and adjacent areas.

Survey Type	Scope of Survey	Date	Reference
	Protected Species mitigation licence for WBB Power Station		
<b>Badger</b>	Badger survey encompassing all landholdings of the Applicant at West Burton Power Station	Summer 2014	Ref 9C-17
<b>Reptiles</b>	Post-construction habitat suitability appraisal of WBB Power Station	Summer 2014	Ref 9C-16
<b>Breeding birds</b>	Breeding bird survey of Bole Ings Ash Disposal Site	Spring/ summer 2014	Ref 9C-18
<b>Water vole</b>	Water vole survey of all suitable water bodies within landholdings of the Applicant at West Burton Power Station	Summer 2014	Ref 9C-19
<b>Phase 1 Habitat</b>	Phase 1 habitat mapping of broad habitat types encompassing all landholdings of the Applicant at West Burton Power Station	Summer 2013	Ref 9C-20

## 3.2 Field Survey

### Phase 1 Habitat Survey

3.2.1 A Phase 1 Habitat survey was undertaken by an appropriately experienced AECOM ecologist in accordance with the standard survey method (Ref 9C-21). Phase 1 Habitat survey is a standard method of environmental audit. It involves categorising different habitat types and habitat features within a defined field survey area. The information gained from the survey can be used to determine the likely ecological value of a site, and to direct any more specific survey work which may need to be carried out prior to the submission of a planning application.

3.2.2 The survey was undertaken on 20 February 2017, and subsequently updated on 21 April 2017 to take account of proposed design changes.

Further validation of the results of the habitat appraisal was completed as necessary in spring and summer 2017, during the course of site visits for protected species surveys, for example to update the appraisal of areas of grassland at the Site at a more optimal time of year. A further survey was undertaken on 23 January 2019 to ground-truth the habitats present to account for the time lapse between the previous survey work and the submission of the Application.

- 3.2.3 The field survey area applied during the surveys is shown on **Figure 9C.1**.
- 3.2.4 All habitat types present within the field survey area were recorded and mapped. Typical and notable plant species were recorded for different habitat types and reflect the conditions at the time of survey. This was not intended to be a detailed inventory of the plant species present, as this is not required for the purposes of Phase 1 Habitat survey.

### Appraisal of Potential Suitability of Habitats to Support Protected and Notable Species

- 3.2.5 The Phase 1 Habitat survey was 'extended' to include an appraisal of the potential suitability of the habitats present to support protected and notable species of plants or animals (as defined in footnote 1). Field signs, habitat features with potential to support protected or notable species and any sightings or auditory evidence were recorded when encountered, but no detailed surveys were carried out for any particular species as part of the Phase 1 Habitat surveys.
- 3.2.6 Detailed species surveys were carried out in 2017, in addition badger surveys were repeated in 2019 (see **Table 8** for further details of the surveys undertaken).
- 3.2.7 A note was made of visible instances of invasive non-native plant species listed under Schedule 9 of the WCA 1981 (as amended) (Ref 9C-2), such as Japanese knotweed (*Fallopia japonica*). The locations of plants or stands of any such invasive non-native plant species found were recorded.

## 3.3 Evaluation of Ecological Features

- 3.3.1 The value of habitats and designated sites identified within this PEA has been defined with reference to the following geographic scale. It is not possible in the context of this report to place similar values on species, and instead this is provided in the standalone survey reports for relevant protected species. Further information on the approach to the evaluation of ecological features is provided in **Appendix 9B: Ecological Impact Assessment Methodology** (ES Volume II).
- international (generally this is within a European context, reflecting the general availability of good data to allow cross-comparison);

- national (Great Britain, but considering the potential for certain ecological features to be more notable (of higher value) in an England context relative to Great Britain as a whole);
- regional (East Midlands);
- county (Nottinghamshire);
- district (Bassetlaw);
- local (ecological features that do not meet criteria for valuation at a District or higher level, but that have sufficient value to merit retention or mitigation); and
- negligible (common and widespread ecological features of such low priority that they do not require retention or mitigation at the relevant location to otherwise maintain a favourable nature conservation status).

3.3.2 Evaluation of ecological features identified has been undertaken to inform the EclA presented in **Chapter 9: Ecology of ES Volume I**. This has been included within this PEA to enable scoping out of features of Negligible ecological value from the EclA at an early stage, and to streamline the ES chapter.

## 3.4 Limitations

3.4.1 The aim of the desk study was to help characterise the baseline context of the Proposed Development and provide valuable background information that would not be captured by a single site survey alone. Information obtained during the course of a desk study is dependent upon people and organisations having made and submitted records for the area of interest. As such, a lack of records for a particular habitat or species does not necessarily mean that the habitats or species do not occur in the desk study area. Likewise, the presence of records for particular habitats and species does not automatically mean that these still occur within the area of interest or are relevant in the context of the Proposed Development.

3.4.2 The identification of typical and notable plant species was potentially constrained by the time of year that the initial Phase 1 Habitat surveys were completed. However, this limitation was removed by keeping the initial survey findings under review. The habitat data was updated as necessary in spring and summer 2017, when undertaking other surveys that were timed during a more optimal time of year for identification of plants and assessment of relative habitat value.

3.4.3 A further survey was conducted in January 2019 to ground-truth broad habitat types present within the field survey area during which habitats within the ecological mitigation and enhancement areas in the north of the Site were mapped. January is generally a sub-optimal time of year to undertake detailed botanical surveys, but as commented on in paragraph 3.2.4,

detailed species lists were not required and the broad habitat categories could be ascertained.

## 4. Results

### 4.1 Nature Conservation Designations

#### Statutory Designations

- 4.1.1 There are no international statutory nature conservation designations within the desk study area, as defined in **Section 3.1**. The nearest international designation is Hatfield Moor Special Area of Conservation (SAC), located approximately 19.5km to the north-west of the Site.
- 4.1.2 One national statutory nature conservation designation is located within the desk study area, as detailed in **Table 4**. The location of the designation in relation to the Site is shown on **Figure 9C.1**.

**Table 4: Statutory nature conservation designations within 2km of the Site**

Designation	Ecological value	Reason(s) for Designation	Relationship to the Site
<b>Lea Marsh SSSI</b>	National	<p>Lea Marsh is an important area of unimproved floodplain meadow and wet pasture adjacent to the River Trent.</p> <p>Populations of two nationally scarce plants (narrow-leaved water-dropwort (<i>Oenanthe silaifolia</i>) and (mousetail <i>Myosurus minimus</i>)) with a restricted distribution in the East Midlands are particularly notable, whilst breeding waders provide additional interest.</p>	<p>The SSSI is located approximately 1km to the north-east of the Site and lies approximately 1.5km downstream of the Site along the River Trent.</p> <p>Habitats associated with the SSSI are susceptible to nitrogen and acid deposition, and are potentially within the zone of influence of air emissions from the Proposed Development.</p>

## Non-statutory Designations

- 4.1.3 Ten non-statutory nature conservation designations (Local Wildlife Sites (LWS)) are present within the desk study area, as detailed in **Table 5**. The designations are listed in descending order, with those closest to the Site listed first. The locations of LWS in relation to the Site are shown on **Figure 9C.1**.

**Table 5: Non-statutory nature conservation designations within 2km of the Site**

Designation Name / Ref No.	Ecological value	Reason(s) for Designation	Relationship to the Site
<b>Bole Ings LWS (2/657)</b>	County	An old Trent oxbow with a good diversity of semi-natural habitat types including mosaics of grassland and scrub.	Part of the Site lies within the boundary of the LWS.
<b>West Burton Power Station LWS (5/2217)</b>	County	An area of mature flooded gravel pits within the power station of biodiversity interest for water beetles, water bugs, reptiles and amphibians	Part of the Site lies within the boundary of the LWS.
<b>West Burton Reedbed LWS (5/2159)</b>	County	An extensive reedbed and associated carr woodland of botanical interest.	Located approximately 10m of the Site to the south-east, with connecting scrub habitat.
<b>Burton Round Ditch LWS (5/2261)</b>	County	A drain of interest for water beetles.	Located approximately 70m to the south and upstream of the Site along the River Trent.
<b>Bole Ings Drains LWS (2/491)</b>	County	Drains of botanical interest.	Located within 400m of the Site, with semi-natural habitats including

<b>Designation Name / Ref No.</b>	<b>Ecological value</b>	<b>Reason(s) for Designation</b>	<b>Relationship to the Site</b>
			mosaics of grassland and scrub. There are no drains or other watercourses connecting the Site with the LWS drains.
<b>Saundby Ponds LWS (5/2222)</b>	County	Fishing ponds notable for water beetles.	Located approximately 1km to the north, with no habitat connectivity.
<b>Bole Ings Flood Pasture LWS (2/492)</b>	County	An inundated pasture adjacent to the River Trent.	Located approximately 1km to the north-east of the Site and downstream along the River Trent.
<b>Mother Drain, Upper Ings LWS (5/2238)</b>	County	A drain of interest for water beetles.	Located approximately 1.1km to the east and upstream of the Site.
<b>West Burton Meadow LWS (1/122)</b>	County	An unimproved ridge and furrow grassland with an excellent species content.	Located approximately 1.2km to the south-west. The LWS is separated from the Site by the buildings and infrastructure of West Burton A (WBA) and WBB Power Stations.
<b>Lea Meadow LWS (471)</b>	County	No information provided.	Located approximately 1.6km to the north-east and downstream along the River Trent.

## 4.2 Habitats

### Overview

- 4.2.1 The Proposed Power Plant Site would be located on the former construction laydown area for WBB Power Station, which now largely comprises seeded

grassland and young planted scrub and trees. Several artificial amphibian hibernacula (large piles of logs, soil and turf) are also present in this area, as these habitats were established for the benefit of great crested newts (and other wildlife) as part of compensation for the loss of habitat associated with the construction of WBB Power Station.

- 4.2.2 Habitats present within and adjacent to the electricity connection route and construction laydown area include blocks of semi-mature plantation broad-leaved woodland, dense and scattered scrub and seeded semi-improved neutral grassland.
- 4.2.3 The proposed northern and southern drainage connection corridor options and the potential oil water separator to the south-east corner of the WBB site pass through West Burton Power Station LWS. The main habitat along these corridors is dense and scattered scrub, but small areas of wet woodland, pockets of reedbed swamp, and a section of drainage ditch may also be affected.
- 4.2.4 The Site also includes hardstanding areas, operational buildings and plant associated with WBB Power Station and other power station infrastructure. This built infrastructure is not considered further in this section, where the remit is restricted to the description and assessment of the ecological interest of semi-natural habitats only.

### Phase 1 Habitat Types

- 4.2.5 The habitats recorded within the field survey area are described below and illustrated on **Figure 9C.2**. Representative photographs are provided in **Annex B**.

#### *Semi-natural Broad-leaved Woodland*

- 4.2.6 Secondary wet woodland dominated by willow (*Salix* spp.) and hawthorn (*Crataegus monogyna*) is present in association with several flooded former gravel pits and low lying, seasonally-wet areas to the east of the Site within West Burton Power Station LWS.
- 4.2.7 Similar wet woodland habitat is also found in association with reedbeds and low-lying seasonally wet areas to the south-east of the Site within West Burton Reedbed LWS.
- 4.2.8 These woodlands outside the Site are of County value as they are important components of these LWS and wet woodland is a priority habitat within the LBAP.
- 4.2.9 There is a block of semi-natural broadleaved woodland along the northern boundary of the field survey area along a dry ditch with a canopy of ash (*Fraxinus excelsior*), birch (*Betula* sp.) and alder (*Alnus glutinosa*) and

understorey of mainly bramble (*Rubus fruticosus* agg.) and hawthorn. Parts of this woodland along the northern boundary are also likely to be of County value as a component of Bole Ings LWS.

### **Plantation Broad-leaved Woodland**

- 4.2.10 Areas of recently planted trees and scrub (<5 years old) are present within the Proposed Power Plant Site. Species include hawthorn, blackthorn (*Prunus spinosa*), hazel (*Corylus avellana*), rose (*Rosa* sp.), elder (*Sambucus nigra*), willow and alder. Other areas of recently planted trees and scrub of similar species composition are present in landscaped areas adjacent to the electricity connection route. Rank seeded semi-improved neutral grassland, as described below, is present beneath the young trees and scrub. Similar newly planted trees and scrub are present in areas on top of the two PFA mounds to the north of the field survey area.
- 4.2.11 These areas of young plantation are readily replaceable, and because of their relative immaturity they are considered to be of negligible value.
- 4.2.12 More established blocks of semi-mature plantation broad-leaved woodland (typical diameter at breast height (DBH) of around 0.2m) are present on an area in the north of the Proposed Power Plant Site, as well as immediately adjacent to the eastern boundary of WBB Power Station. Canopy species include poplar (*Populus* sp.), alder, sycamore (*Acer pseudoplatanus*), ash, horse chestnut (*Aesculus hippocastanum*), birch and cherry (*Prunus* sp.). Areas of plantation are typically around 0.5ha in size and dominated by one or two of the above species. Understorey planting includes hawthorn, blackthorn, rose and various exotics, such as snowberry (*Symphoricarpos* sp.). Ground flora in these blocks is generally sparse, with locally frequent nettle (*Urtica dioica*) and bramble.
- 4.2.13 Plantation broad-leaved woodland of this type does not fall within the remit of priority woodland habitat in the LBAP. The blocks of semi-mature plantation associated with the Site are considered to be of negligible value given their limited extent, even age-structure and limited canopy diversity, a large proportion of which comprises non-native species. These plantation habitats are of relatively low ecological interest and could be replaced to a comparable or higher value over the medium term.

### **Scattered Trees**

- 4.2.14 A line of planted semi-mature to mature broad-leaved trees (typical DBH 0.2 – 0.3m), including alder, cherry, poplar and sycamore, is present at the top of a bank leading down to the flooded gravel pits immediately to the east of the Proposed Power Plant Site. This line of trees is within the boundary of West Burton Power Station LWS. While contributing to the diversity of habitats within, and the integrity of, the LWS they do not contribute

significantly to supporting the interest features of the LWS. As such they are considered to be of Local value.

- 4.2.15 A line of semi-mature Lombardy poplar (*Populus nigra* 'Italica') trees is present within a landscaped area to the south of WBB Power Station. These are of negligible nature conservation value. Such trees are fast growing and relatively short-lived, and are unlikely to provide habitat of any substantive functional value for wildlife.

### Scrub

- 4.2.16 Dense stands of planted scrub are present in several landscaped areas within and adjacent to the Site. Component species mainly comprise hawthorn, blackthorn, willow and rose. Comparable habitats of planted origin are common and widespread, and easily replaced. This scrub is of negligible nature conservation value.
- 4.2.17 Dense scrub of hawthorn and blackthorn is present within West Burton Power Station LWS to the east of the Site, including on a bank leading down from the Proposed Power Plant Site to the flooded gravel pits, as well as around the sewage treatment works to the north. There is a further area of dense hawthorn and willow scrub to the north of the construction laydown area (location of laydown area is shown on **Figure 3.3** in ES Volume III), as well as dense areas to the south and in between the landscaped PFA mounds in the northern area of the site (north of the lagoons). While contributing to the diversity of habitats within, and the integrity of, the LWS they do not contribute significantly to supporting the interest features of the LWS. As such they are considered to be of Local value. Such habitats could also be replaced over the medium term with similar plantings of comparable or higher ecological potential.

### Semi-improved Neutral Grassland

- 4.2.18 The Proposed Development would be located on the former construction laydown for WBB Power Station which was seeded with a wildflower grassland mix following construction. Species include abundant Yorkshire-fog (*Holcus lanatus*), frequent rough meadow-grass (*Poa trivialis*), occasional meadow fescue (*Festuca pratensis*), frequent timothy-grass (*Phleum pratense*), occasional cock's-foot (*Dactylis glomerata*) and occasional perennial rye-grass (*Lolium perenne*). Herb species include abundant common bird's-foot trefoil (*Lotus corniculatus*) and ribwort plantain (*Plantago lanceolata*), with frequent common knapweed (*Centaurea nigra* agg.), oxeye daisy (*Leucanthemum vulgare*), red clover (*Trifolium pratense*) and tufted vetch (*Vicia cracca*). The relative abundance of the aforementioned herbs increases at the margins of this area, perhaps reflecting a variation in the seed mix that was originally sown. In these marginal areas, abundant common knapweed, oxeye daisy, bird's-foot trefoil and ribwort plantain are particularly apparent, with some meadow vetchling

(*Lathyrus pratensis*). Tall ruderal vegetation and scrub are also developing in places, including spear thistle (*Cirsium vulgare*), common nettle, teasel (*Dipsacus fullonum*), rose, bramble and broad-leaved dock (*Rumex obtusifolius*).

- 4.2.19 Other areas of seeded semi-improved neutral grassland of similar composition are present within landscaped areas of the Site. Grassland beneath young planted scrub and trees is generally rank and unmanaged, whereas the grassland sward in more open areas and within road verges is shorter and appears to be more regularly cut.
- 4.2.20 In the ecological mitigation and enhancement area in the north of the field survey area, two PFA mounds are revegetated with grassland which appears to be managed more regularly. The species composition could not be fully ascertained due to the survey being carried out in winter however it is considered to be semi-improved neutral grassland of similar composition to that on the Proposed Development site.
- 4.2.21 Seeded grassland of this type may fall within the remit of the Lowland Neutral Grassland priority habitat within the LBAP. However, the grassland associated with the Site is readily replaceable and is considered to be of Local value.
- 4.2.22 Species poor semi-improved grassland with a reduced diversity of grasses and herbs is present along the top of the banks of the River Trent. This is regularly managed and is of negligible value, and can be readily reinstated or replaced to a comparable composition and structure.

### **Tall ruderal**

- 4.2.23 Small bands of tall ruderal vegetation have grown on the slopes of the PFA mounds in the ecological mitigation and enhancement area in the north of the field survey area, as well as growing in patches within the semi-improved neutral grassland to the south-west of this area at the base of the mound. Species include hogweed (*Heracleum sphondylium*), teasel (*Dipsacus fullonum*), thistle (*Cirsium sp.*) and willowherb (*Epilobium sp.*). This is of negligible value, and can be readily reinstated or replaced to a comparable composition and structure.

### **Swamp**

- 4.2.24 Small pockets of reedbed (a type of swamp vegetation for the purposes of Phase 1 Habitat survey) dominated by common reed (*Phragmites australis*) have developed in low lying areas within and adjacent to the northern drainage connection corridor, within the boundary of West Burton Power Station LWS. More extensive areas of reedbed are present within West Burton Reedbed LWS to the south-east of the Site. These reedbeds

contribute to the designated ecological interest of these LWS, and are therefore of County value.

- 4.2.25 Reedbeds dominated by common reed are also found in association with ash lagoons to the north-west of the Site. Reedbeds are a priority habitat within the LBAP and those associated with the ash lagoons are considered to be of Local value.

### **Standing Water**

- 4.2.26 A wet ditch is present at the base of the bank leading down to the flooded gravel pits to the east of the Site. The wetted channel is approximately 1-2m wide and 0.5m deep, with generally shallow earth banks. There is no discernible flow, but the ditch outfalls into the River Trent to the south via a culvert beneath site access roads. The ditch is heavily shaded by dense scrub and willow carr along the majority of its length, resulting in a general absence of in-channel, marginal or bankside vegetation. Water levels in the ditch change markedly throughout the year and it dries up in the summer months. In the January 2019 walkover survey, the channel was reduced to occasional wet areas.
- 4.2.27 Several large, longitudinal flooded former gravel pits are present to the east of the Site within West Burton Power Station LWS. These have steep to vertical banks and deep, clear water (over 1m deep at the margins). Vegetation within the parts of the ponds within the field survey area was limited to patches of duckweed (*Lemna* sp.) on the water surface and narrow fringes of common reed. The banks and margins of the ponds are mostly shaded by willow trees. The waterbodies have been stocked with a range of coarse fish.
- 4.2.28 Several areas of standing open water are present within the reedbeds and wet woodland within West Burton Reedbed LWS to the south-east of the Site. Shaded pools within the wet woodland support few aquatic plants, though patches of water forget-me-not (*Myosotis scorpioides*) are present. The ground here was wet in the January 2019 walkover survey, but no standing water was present.
- 4.2.29 These areas of standing water are all associated with LWSs within and adjacent to the Site and contribute to supporting the interest features of these designations. Standing water associated with the Site is therefore of County value.

### **Running Water**

- 4.2.30 The River Trent is located to the east of the Site and is part of the tidal reach of the river. The channel is approximately 50m wide, the water is turbid with suspended sediment, and there are exposed mud banks along the margins. Scattered willow and elder scrub is present along the top of the western

bank of the river, but the bank faces are generally bare as a result of tidal scour. No macrophytes were noted within the channel at the time of survey and would not be expected along a tidal section of river.

- 4.2.31 Rivers and streams are a priority habitat within the LBAP, but the section of river adjacent to the Site is typical of wider river habitat and therefore is of Local nature conservation value.

### Bare Ground

- 4.2.32 Areas of bare ground within the field survey area comprise PFA storage mounds and PFA surfaced access roads in the north of the Site. No vegetation is growing in association with this substrate.
- 4.2.33 Extensive areas of surfaced hard standing are present within WBB Power Station, as well as along access roads.
- 4.2.34 All areas of bare ground are of negligible value.

### Summary of Evaluation

- 4.2.35 All of the semi-natural habitats present within the field survey area (outside of LWS boundaries) have been assessed as being of Local nature conservation value or lower. **Table 6** provides a summary of the habitats considered of Local importance on their own merits, and the table shows whether these meet criteria for recognition as NERC Act S41 (Ref 9C-22), Nottinghamshire LWS quality (Ref 9C-23) and Nottinghamshire BAP (Ref 9C-13) habitats. Habitats that are of Local value solely because of their coincidence with LWS designations, and which would not otherwise be considered of Local or higher value on their own merits, are omitted from the table.

**Table 6: Summary of evaluation of habitats associated with the Site**

Habitat	NERC Act?	LWS Quality?	Nottinghamshire BAP?	Supporting Comments
<b>Semi-improved neutral grassland</b>	x	x	✓	Seeded grassland is present within landscaped areas of the Site.
<b>Reedbeds</b>	✓	✓	✓	Reedbeds associated with ash lagoons to the north-west of the Site.
<b>River Trent</b>	x	x	✓	Located nearby to the east of the Site.

Habitat	NERC Act?	LWS Quality?	Nottingham shire BAP?	Supporting Comments
Key to symbols: ✓ = yes, x = no				

### 4.3 Protected and Notable Species

4.3.1 **Table 7** identifies those protected and notable species that are of potential relevance to the Proposed Development. Potentially relevant species have been identified through a combination of desk study and field survey. The table summarises the conservation status of each species and provides comment on the likelihood of presence.

4.3.2 Species present on-site are those for which recent direct observation or field signs confirmed presence. Species that are possibly present are those for which there is potentially suitable habitat based on the results of the Phase 1 Habitat survey, or this combined with desk study records. Species unlikely to be present are only mentioned where it is considered necessary (covering certain high risk protected species only) to clarify the reasons for scoping them out, otherwise if a species is not included it should be assumed that there is no potential for presence. Brief comments are provided to support the determinations made in **Table 7** in the text below.

4.3.3 Where species are identified in **Table 7** as likely or possible, they are likely to represent legal constraints or may be material to determination of a planning application. Further surveys may be required to determine presence or likely absence. Requirements for further survey are identified in **Section 5** of this report.

**Table 7: Protected and notable species relevant or potentially relevant to the Proposed Development**

Species	Legally Protected Species?	Species of Principal	Other Notable Species?	Present on-site?	Present / Potentially Present in Wider Zone of Influence?
<b>Great crested newt</b>	✓	✓	x	✓	✓
	<p>Populations of great crested newt (GCN) are known to be present within wetland habitats around the wider power station site (Ref 9C-15; Ref 9C-16). Surveys completed prior to the construction of WBB Power Station in 2006 found small to medium size populations within ponds to the north of the Site, reedbeds to the south-east and an artificial pond to the south.</p> <p>The flooded gravel pits to the east of the Site are not considered to be suitable for great crested newt due to their large size, lack of macrophyte cover and presence of fish which are very effective predators of newt eggs and larvae.</p> <p>Several amphibian hibernacula have been constructed within the area of seeded grassland and recently planted trees and scrub to the north of WBB Power Station (Target Note 2, <b>Figure 9C.2</b>). These were created to enhance the habitat for GCN as part of compensation for the loss of habitat associated with the construction of WBB Power Station.</p> <p>GCN surveys conducted at the site in 2017 found GCN to be present in all six of the waterbodies surveyed. See <b>Appendix 9E</b> for full results and further details.</p>				
<b>Bats</b>	✓	✓	✓	✓ Foraging only	✓

Species	Legally Protected Species? Species of Principal Other Notable Species? Present on-site?	Present / Potentially Present in Wider Zone of Influence?
	<p>Common pipistrelle (<i>Pipistrellus pipistrellus</i>), soprano pipistrelle (<i>Pipistrellus pygmaeus</i>) and bats in the <i>Myotis</i> genus were recorded foraging in association with woodland and waterbodies at West Burton power station during surveys in 2008. In addition to these species, noctule bats (<i>Nyctalus noctula</i>) have also been recorded within the desk study area.</p> <p>Habitats within and adjacent to the Site are of moderate suitability for foraging and commuting bats, in accordance with criteria set out in best practice guidance (Ref 9C-24).</p> <p>No potential bat roosting habitat was identified within the Site boundary. Buildings within WBB Power Station and other operational buildings associated with the Site are modern and/or industrial in nature and do not provide suitable roosting opportunities for bats. Trees within the Site are not mature enough to have developed features of value to roosting bats, such as cavities and rot holes.</p> <p>Several standing dead trees are present close to the northern boundary of the Site (Target Note 1, <b>Figure 9C.2</b>). These have multiple features of potential value to roosting bats, including woodpecker holes, cracks and flaking bark. See <b>Appendix 9G</b> for further details of bat survey results from 2017.</p>	

Species	Legally Protected Species?	Species of Principal	Other Notable Species?	Present on-site?	Present / Potentially Present in Wider Zone of Influence?
<b>Badger</b> <i>(Meles meles)</i>	✓	x	x	Assessed through standalone survey and reported separately	
	Previous ecological surveys have identified potential for badger to be present (Ref 9C-17). A badger survey was completed in 2017 and 2019 to investigate this further, so no further assessment is required in the PEA. See <b>Appendix 9D</b> (Confidential Appendix) for results and further details.				
<b>Otter</b> <i>(Lutra lutra)</i>	✓	✓	✓	x	✓
	Otter activity was recently recorded (2016) to the south of the Site. The River Trent adjacent to the Site is likely to form part of an otter territory. The flooded gravel pits to the east of the Site may attract foraging otters, though there are no known records of their use by otter. Scrub habitat along the banks of the river and wet woodland habitat nearby to the west, may provide refuge sites for otter. See <b>Appendix 9I</b> for results of surveys from 2017 and further details.				

Species	Legally Protected Species?	Species of Principal	Other Notable Species?	Present on-site?	Present / Potentially Present in Wider Zone of Influence?
<b>Water vole (<i>Arvicola amphibius</i>)</b>	✓	✓	✓	?	✓
	<p>Water vole populations have been recorded within wetland habitats across the desk study area, including within drains and ponds in Bole Ings to the north of the Site.</p> <p>Habitats within the Site are however sub-optimal for water vole. The single wet ditch present is heavily shaded and lacks suitable marginal and bankside vegetation to provide food and cover for water voles. It also mostly dries out in the summer and is isolated from the drains within Bole Ings to the north.</p> <p>The River Trent adjacent to the Site is also sub-optimal for this species due to its large size and absence of marginal and bankside vegetation.</p> <p>See <b>Appendix 9I</b> for results of surveys from 2017 and further details.</p>				
<b>Fish</b>	✓	✓	✓	✓	✓
	<p>The River Trent will support a number of fish species, some of which may be protected or notable. The flooded gravel pits have been stocked with a range of coarse fish.</p>				
<b>Reptiles</b>	✓	✓	x	✓	✓
	<p>Grass snake (<i>Natrix natrix</i>) has been recorded within the wetland habitats to the east of the Site. No other reptile species have been identified at the Site in the past.</p> <p>The mosaic of grassland, scrub and woodland habitats present within and adjacent to the Site, as well as features such as the artificial hibernacula and grassy mounds, provide potentially suitable habitat for reptiles such as grass snake and common lizard (<i>Zootoca vivipara</i>).</p>				



Species	Legally Protected Species?	Species of Principal	Other Notable Species?	Present on-site?	Present / Potentially Present in Wider Zone of Influence?
	See <b>Appendix 9F</b> for full details of reptile survey results from 2017.				
<b>Birds</b>	✓	✓	✓	✓	✓

Species	Legally Protected Species?	Species of Principal	Other Notable Species?	Present on-site?	Present / Potentially Present in Wider Zone of Influence?

Breeding birds

Habitats within the Site, including rank grassland, scrub and woodland, provide nesting opportunities for a range of bird species.

A breeding bird survey completed within Bole Ings to the north of the Site in 2014 recorded a total of 46 bird species, including 24 species of conservation concern (Ref 9C-18). Eight Species of principal importance (cuckoo, dunnock, grey partridge, linnet, reed bunting, skylark, songthrush, yellowhammer) and one LBAP species (little egret) were identified. One specially Schedule 1\* species (greenshank) was recorded, but was not considered likely to be breeding so the legislation does not apply.

Habitats within and adjacent to the Site have the potential to support the following bird species specially protected under Schedule 1:

- Little ringed plover - areas of bare ground in the north of the Site have the potential to be used for breeding. A pair was seen displaying but not breeding at the site in 2008.
- Barn owl - rank grassland habitats within the Site may attract foraging barn owl, though no suitable breeding habitat is present.
- Kingfisher – the banks of the River Trent adjacent to the Site are unlikely to be used for breeding as there is no suitable cliff habitat, but the opposite bank has some potential. The species has been recorded in Bole Ings (2008).

See **Appendix 9H** for results and full details of breeding bird surveys carried out in 2017.

Wintering birds

The main habitats associated with the Site (plantation woodland, scrub and seeded grassland) are unlikely to attract important assemblages of wintering and passage birds.

	x	✓	x	?	✓
<b>Aquatic invertebrates</b>	<p>The flooded gravel pits within West Burton Power Station LWS to the east of the Site are known to support a range of notable water beetles.</p> <p>The wet ditch located adjacent to the flooded gravel pits may also support notable water beetles or other notable aquatic invertebrates.</p> <p>The River Trent will support a range of aquatic invertebrate species.</p>				
<b>Brown hare (<i>Lepus europaeus</i>)</b>	x	✓	x	?	✓
	<p>There are records of hare within the desk study area and hares were recorded in association with areas of bare ground, grassland and scrub in the north of the Site during the survey. The range of habitats within and adjacent to the Site provide good breeding and foraging opportunities for this species, as part of the wider habitat resource available to the species.</p>				
<b>Terrestrial invertebrates</b>	✓	✓	✓	x	x
	<p>The main habitats within the Site (plantation woodland, scrub and seeded grassland) would not be expected to support a particularly diverse assemblage of terrestrial invertebrate species.</p> <p>The habitats are unlikely to be of importance for the two terrestrial invertebrate species in the LBAP (also species of principal importance) - dingy skipper butterfly (<i>Erynnis tages</i>) and grizzled skipper butterfly (<i>Pyrgus malvae</i>). Whilst the main larval food plants of these species are present within the Site, other habitat requirements are not present, such as sparse swards with bare patches of earth, and sheltered conditions (grassland habitats within the Site are exposed). The grasslands are predominantly of recent sown origin.</p>				

<b>White-clawed crayfish</b> <i>(Austropotamobius pallipes)</i>	✓	✓	✓	x	x
There are no records of white-clawed crayfish in the desk study area. The silty substrate within the River Trent, and the tidal influence result in conditions that are unsuitable for this species.					
<b>Water fern</b>	x	x	✓	✓	✓
Water fern was noted within an area of open water within the reedbeds to the south-east of the Site, outside the field survey area (Target Note 3, <b>Figure 9C.2</b> ). No other invasive, non-native plant species were recorded during the survey.					

**Key to symbols:** ✓ = yes, x = no, ? = possibly, see Supporting Comments for further rationale.

Species present on-site are those for which recent direct observation or field signs confirmed presence. Species which are possibly present are those for which there is potentially suitable habitat based on the results of the Phase 1 Habitat survey, or this combined with desk study records.

Legally protected species are those listed under Schedules 1, 5 and 8 of the Wildlife and Countryside Act 1981 (as amended); and, Schedules 2 and 4 of The Conservation of Habitat and Species and Planning (Various Amendments) (England and Wales) Regulations 2018.

Species of Principal Importance as those listed under Section 41 of the NERC Act. Planning Authorities have a legal duty under Section 40 of the same Act to consider such species when determining planning applications.

Other notable species include native species of conservation concern listed in the LBAP (except species that are also of principal importance), those that are Nationally Rare, Scarce or Red Data List, and non-native controlled weed species listed under Schedule 9 of the Wildlife and Countryside Act 1981 (as amended).

\* Bird species listed on Schedule 1 Part 1 of the WCA 1981 are afforded additional protection from disturbance during breeding.

## 5. Identification of Potential Ecological Constraints and Recommendations

### 5.1 Constraints and Requirements for Further Survey: Designations

#### *Statutory Nature Conservation Designations*

- 5.1.1 There are no international nature conservation designations within the likely zone of influence of the Proposed Development. The nearest international designation is Hatfield Moor Special Area of Conservation (SAC), located approximately 19.5km to the north-west of the Site.
- 5.1.2 Lea Marsh SSSI is located downstream of the Site. Water quality impacts are very unlikely as no outfall to the River Trent is proposed. Potential air quality impacts on this site will require assessment in the ES.

#### *Non-statutory Nature Conservation Designations*

- 5.1.3 West Burton Power Station LWS is partially located within and directly adjacent to the Proposed Development. No permanent land take within the LWS would result from the Proposed Development. However, there would be temporary impacts on habitats within the LWS boundary during construction of the northern or southern drainage connection corridor. The drainage connection corridors are located along existing access tracks, or at the edge of the LWS, and the main habitat along the routes is scrub, though small areas of wet woodland and reedbed swamp, and a section of wet ditch, may also be affected. The main habitat features for which the LWS is designated, the flooded gravel pits, would not be directly affected. In order to minimise the potential impact on interest features of the LWS, it is recommended that works associated with the construction of the chosen drainage connection corridor are undertaken avoiding, as far as practicable, valuable habitats such as wet woodland and reedbed swamp, which are illustrated on **Figure 9C.2**.
- 5.1.4 Bole Ings LWS is also partially located within and directly adjacent to the Site in the ecological mitigation and enhancement area. There would be no permanent land take or temporary disturbance on the LWS as a result of the Proposed Development.
- 5.1.5 West Burton Reedbed LWS is located in close proximity to the Site boundary. No direct impacts on the botanical interest features of this designation are anticipated, but there is a possibility of indirect impacts during construction, for example from dust generation and pollution of wetland habitats.
- 5.1.6 Air quality impacts on non-statutory designated sites will require assessment, to comply with requirements specified by relevant consultees.

5.1.7 Significant adverse effects on the LWSs within the zone of influence of the Proposed Development are likely to be avoidable with the implementation of impact avoidance and mitigation measures. In view of this, no further surveys of LWS habitats or species are considered necessary in order to make a robust assessment of impacts within the EclA.

## 5.2 Constraints and Requirements for Further Survey: Habitats

5.2.1 The main habitats to be impacted by the Proposed Development, outside of LWS boundaries, are areas of recently planted trees and scrub, seeded grassland and semi-mature plantations dominated by non-native trees. These habitats are not particularly diverse or notable and do not represent a constraint to the Proposed Development. However, alternate habitat provision or enhancement would still be desirable to compensate for the loss of these habitats.

5.2.2 Lowland neutral grassland is a Nottinghamshire LBAP priority habitat, though this generally relates to unimproved grassland habitats within the county. Whilst the seeded grassland areas within the Site make a contribution to the wider grassland resource, they are of lower biodiversity value than unimproved grassland habitat and are easily replaceable using similar seed mixes. Therefore, impacts resulting from the Proposed Development are unlikely to conflict with LBAP targets.

5.2.3 Recently seeded grassland and planted trees and scrub to the north of WBB Power Station would be permanently lost as a result of the Proposed Development. These habitats, as well as several artificial amphibian hibernacula, were created as part of compensation for the loss of terrestrial habitat for great crested newt associated with the construction of WBB Power Station. Therefore, it would be necessary to provide suitable replacement habitat elsewhere on the Site in order to maintain appropriate habitat provision for this and other species. Replacement habitat would also need to be provided in order to meet national planning policy objectives for no net loss, and where possible net gain, of biodiversity.

5.2.4 The information collected during the Phase 1 Habitat survey was sufficient to fully characterise the terrestrial habitats present and no further targeted terrestrial habitat surveys are considered necessary to inform the EclA.

5.2.5 In view of the time that lapsed between the main survey visits in 2017 and the submission of the application in early 2019, an ecological walkover was undertaken in January 2019 to ground-truth the habitats within the field survey area and map habitats within the ecological mitigation and enhancement area in the northern area of the site. One additional habitat category of Negligible value (tall ruderal) was identified and a line of planted young trees was mapped, but no further changes to habitat categories were identified.

## 5.3 Constraints and Requirements for Further Survey: Species

### *Protected and Notable Species Scoped In*

- 5.3.1 A number of protected or notable species have been identified as present or potentially present within the Site and may be relevant to the Proposed Development. **Table 8** outlines the scope of targeted species surveys that were recommended to inform the ecological baseline for the purposes of EclA; these surveys were subsequently completed during the recommended survey periods in 2017 and a further badger survey was completed in 2019. Targeted surveys are not considered to be required for all species potentially present within the zone of influence of the Proposed Development; the rationale for scoping out further surveys is provided below the table.

**Table 8: Scope of further species surveys undertaken to inform EclA**

Species	Survey Type	Timing of Completed Surveys	Scope /Methodology
<b>Great crested newt</b>	Population size class assessment	April to June 2017	<p>Survey of all ponds suitable for GCN within 500m of the Proposed Development to determine population size class in order to support a European Protected Species Mitigation (EPSM) licence application to Natural England. Four surveys were completed to each suitable pond between April and June, with at least two surveys between mid-April and mid-May.</p> <p>Although it was known that some of the ponds on the Site support GCN based on previous surveys, it was necessary to update the surveys because the data was three years old and would be considered out-of-date for planning purposes.</p> <p>See <b>Appendix 9E</b> for further details.</p>
<b>Bats</b>	Bat roost surveys	July to August 2017	<p>Dusk emergence and dawn re-entry surveys of standing dead trees with potential roosting features to determine whether they support roosting bats.</p> <p>See <b>Appendix 9G</b> for further details.</p>
	Bat activity surveys	May to September 2017	<p>Habitats to be affected by the Proposed Development have moderate suitability for foraging/commuting bats. In accordance with best practice guidance (Ref 9C-24), the following surveys were completed to characterise the use of habitats by bats:</p> <ul style="list-style-type: none"> <li>• one walked transect per month; and</li> <li>• minimum of five days of automated bat monitoring per month using two automated detectors (SM2s).</li> </ul>

Species	Survey Type	Timing of Completed Surveys	Scope /Methodology
			See <b>Appendix 9G</b> for further details.
<b>Badger</b>	Badger survey	March 2017 and January 2019	Survey of all suitable habitat within the field survey area that was not thoroughly inspected as part of the Phase 1 Habitat survey (e.g. extensive areas of woodland and scrub) to determine the use of the Site by badger. See <b>Appendix 9D</b> (Confidential Appendix) for further details
<b>Reptiles</b>	Reptile survey	April to July 2017	Seven survey visits using artificial refugia and visual searches of suitable habitat. See <b>Appendix 9F</b> for further details.
<b>Breeding birds</b>	Breeding bird survey	April to July 2017	Five survey visits to determine breeding bird assemblage and presence of notable and Schedule 1 bird species. See <b>Appendix 9H</b> for further details.
<b>Otter</b>	Otter survey	April 2017	Survey of the River Trent and other suitable wetland and terrestrial habitat for signs of presence. See <b>Appendix 9I</b> for further details.
<b>Water vole</b>	Water vole survey	April and August 2017	Survey of the River Trent and the wet ditch within 50m of the Site for signs of presence. See <b>Appendix 9I</b> for further details.

## Protected and Notable Species Scoped Out

- 5.3.2 The rationale for scoping out further surveys for species potentially relevant to the Proposed Development is provided below.

### *Wintering/Passage Birds*

- 5.3.3 The main habitats that would be affected by the Proposed Development, including recently seeded grassland, scrub and plantation woodland, are unlikely to attract important assemblages of wintering and passage birds and therefore further survey is not considered necessary.

### *Brown Hare*

- 5.3.4 This species has been confirmed within the Site, but no further targeted surveys are considered necessary to inform an assessment of impacts.

### *Terrestrial Invertebrates*

- 5.3.5 The main habitats to be affected by the Proposed Development are unlikely to be of value to rare or notable terrestrial invertebrate species, including the dingy skipper and grizzled skipper butterflies within the LBAP. Therefore, no further targeted surveys are considered necessary.

### *Aquatic Invertebrates*

- 5.3.6 No impacts are likely that would compromise the nature conservation status of aquatic invertebrates in the LWS as the flooded gravel pits would not be directly impacted.

### *Fish*

- 5.3.7 There would be no impact on fish in the River Trent as no outfall to the river is proposed.

### *White-clawed Crayfish*

- 5.3.8 There is no suitable habitat for this species within the Site and further survey is not deemed to be necessary.

### *Water Fern*

- 5.3.9 Water fern is present within reedbeds to the south-east of the Site, but it is unlikely to be affected and no further surveys or control measures are considered necessary in relation to the Proposed Development.

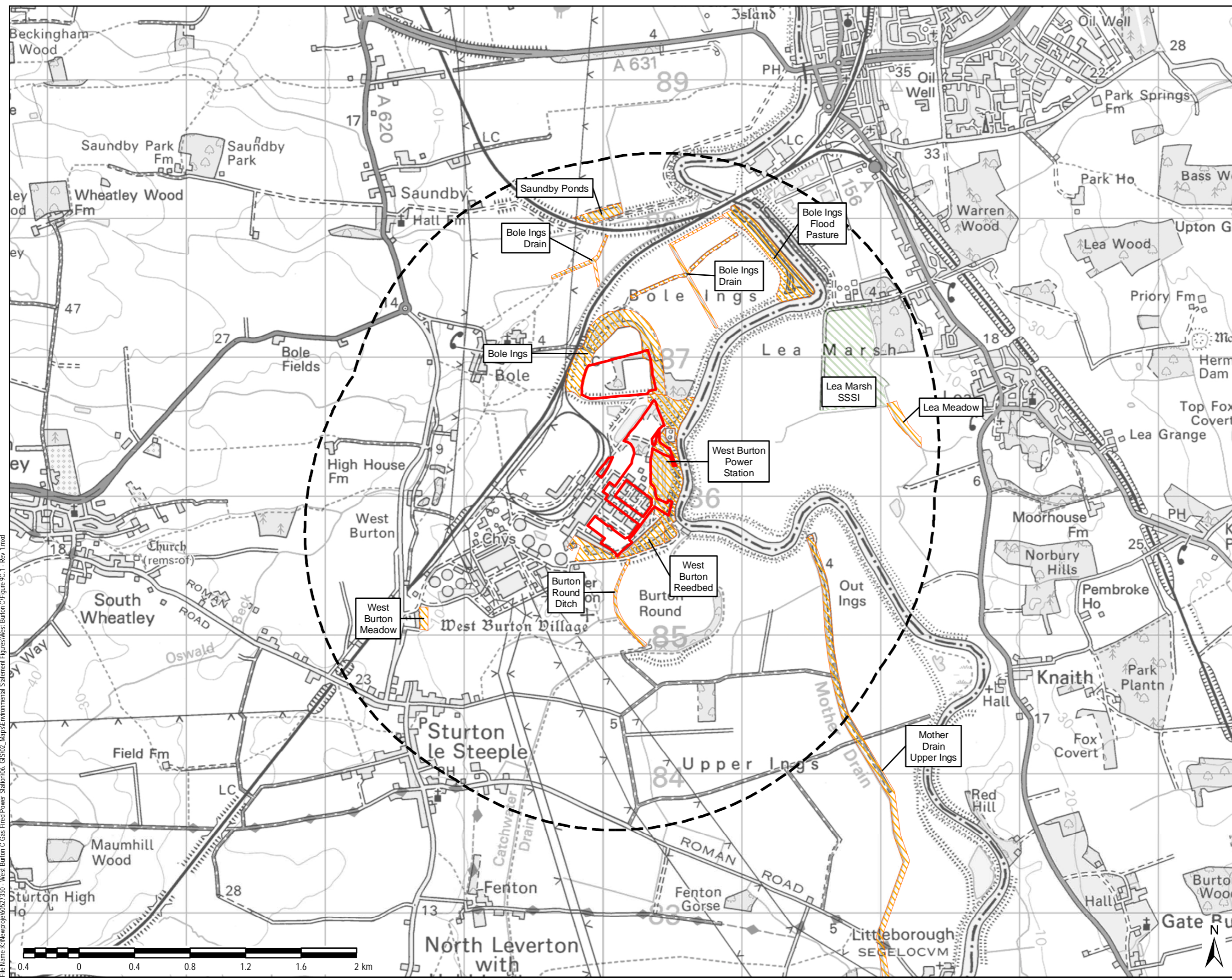
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## Figures

## Figure 9C.1: Nature Conservation Designations



**LEGEND**

- The Order Limits
- Study Area (2km)
- Site of Special Scientific Interest (SSSI)
- Local Wildlife Sites \*

\* boundaries indicative only.

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First Issue	GB	SE	05.01.18	0
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Purpose of Issue  
**ENVIRONMENTAL STATEMENT**

Client  
**EDF ENERGY  
 (THERMAL GENERATION) LIMITED**

Project Title  
**WEST BURTON C (GAS FIRED  
 GENERATING STATION)**

Drawing Title  
**FIGURE 9C.1  
 LOCATION OF  
 NATURE CONSERVATION  
 DESIGNATIONS WITHIN 2KM  
 OF THE ORDER LIMITS**

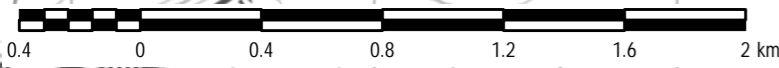
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GB	SE	SE	05.01.18
AECOM Internal Project No. 60527350		Scale @ A3 1:25,000	

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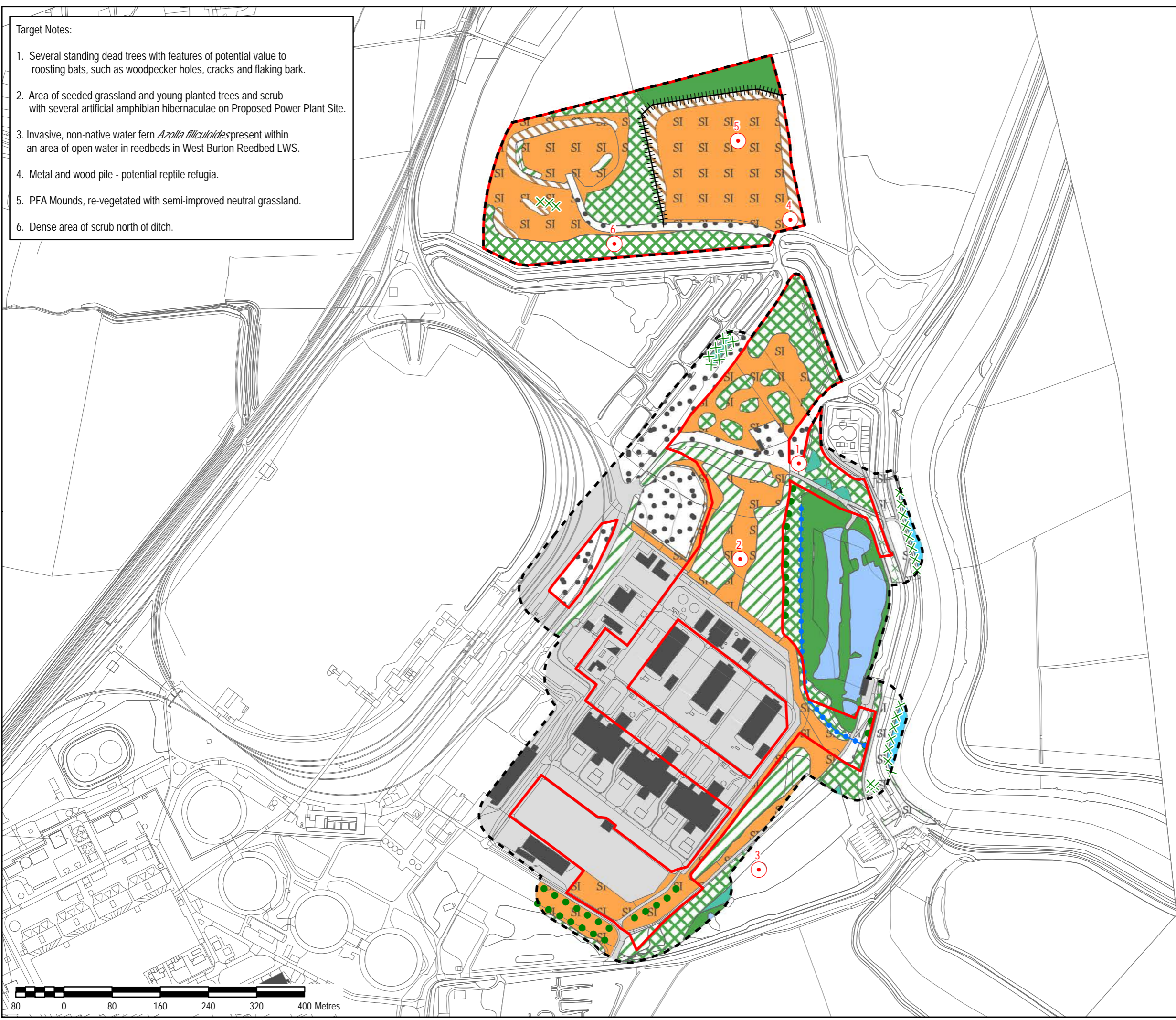
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## Figure 9C.2: Phase 1 Habitat Plan

- Target Notes:
1. Several standing dead trees with features of potential value to roosting bats, such as woodpecker holes, cracks and flaking bark.
  2. Area of seeded grassland and young planted trees and scrub with several artificial amphibian hibernaculae on Proposed Power Plant Site.
  3. Invasive, non-native water fern *Azolla filiculoides* present within an area of open water in reedbeds in West Burton Reedbed LWS.
  4. Metal and wood pile - potential reptile refugia.
  5. PFA Mounds, re-vegetated with semi-improved neutral grassland.
  6. Dense area of scrub north of ditch.



LEGEND

- Field Survey
- The Order Limits
- Scrub - scattered
- Target note
- Wet ditch
- Broadleaved parkland/scattered trees
- Fence
- Scrub - scattered
- Bare ground
- Broadleaved woodland - plantation
- Broadleaved woodland - semi-natural
- Buildings
- Hardstanding
- Neutral grassland - semi-improved
- Other tall herb and fern - ruderal
- Poor semi-improved grassland
- Running water
- Scrub - dense/continuous
- Scrub - scattered
- Standing water
- Swamp

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Project Title  
**WEST BURTON C (GAS FIRED  
 GENERATING STATION)**

Drawing Title  
**FIGURE 9C.2  
 PHASE 1 HABITAT  
 PLAN AND TARGET NOTES**

Drawn SM	Checked SB	Approved SW	Date 05.01.18
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## Annex A: Nottinghamshire LBAP Habitats and Species

The potential relevance of all LBAP priority habitats and species to the Proposed Development is summarised in **Table A1**.

**Table A1: Determination of relevant Nottinghamshire LBAP habitats and species**

Habitat or Species Action Plan	Relevant /Potentially Relevant to Proposed Development?	Comments
<b>Habitat Action Plans</b>		
Canals	×	Not present.
Ditches	✓	A drainage ditch is present within the footprint of the southern drainage connection corridor.
Eutrophic and Mesotrophic Standing Water	✓	Flooded gravel pits are present within West Burton Power Station LWS adjacent to the Site.
Farmland: Arable farmland, arable field margins and improved grassland	×	Not present.
Fens, marshes and swamps	×	Not present as narrowly defined for the purposes of the LBAP, but see reedbed (below) which is a related habitat.
Hedgerows	×	Not present.
Lowland calcareous grassland	×	Not present.
Lowland dry acid grassland	×	Not present.
Lowland heathland	×	Not present.
Lowland neutral grassland	✓	Areas of seeded semi-improved neutral grassland are present in landscaped areas around the Site.

Habitat or Species Action Plan	Relevant /Potentially Relevant to Proposed Development?	Comments
Lowland wet grassland	x	Not present.
Mixed ash-dominated woodland	x	Not present.
Oak-birch woodland	x	Not present.
Parkland and wood pasture	x	Not present.
Planted coniferous woodland	x	Not present.
Reedbed	✓	A small area of reedbed (definable as swamp for the purposes of Phase 1 Habitat survey) is present along the northern drainage connection corridor. More extensive reedbeds are present adjacent to the Site in association with the ash lagoons to the north-west and within West Burton Reedbed LWS to the south-east.
Rivers and streams	✓	The River Trent is present to the east of the Site.
Urban and post-industrial habitats	x	Not present.
Wet broad-leaved woodland	✓	Secondary wet woodland is present in association with flooded former gravel pits in West Burton Power Station LWS adjacent to the Site.
<b>Species Action Plans</b>		
Atlantic salmon	x	Not relevant as the River Trent would not be impacted.

Habitat or Species Action Plan	Relevant /Potentially Relevant to Proposed Development?	Comments
Barn owl	x	Not identified during breeding bird surveys at the Site. No habitat suitable for nesting was found.
Bats	✓	Foraging bats recorded in association with habitats within and adjacent to the Site.
Black Poplar	x	Not present.
Deptford Pink	x	Not present.
Dingy Skipper	x	Habitats within the Site are not suitable for this species.
Grizzled Skipper	x	Habitats within the Site are not suitable for this species.
Harvest mouse	x	Habitats within the Site are sub-optimal and of very limited extent such that presence is unlikely.
Nightjar	x	Habitats within the Site are not suitable for this species.
Nottingham autumn crocus and Nottingham spring crocus	x	There is no reasonable likelihood of the habitats present supporting this species given their composition and origins.
Otter	✓	There are desk study records in the local area and terrestrial habitats to be affected adjacent to the River Trent could be used by the species.
Water vole	x	Habitats within the Site are sub-optimal for this species and no evidence of presence has been found.
White-clawed crayfish	x	No suitable habitat present in the field survey area for this species.

## Annex B: Photographs

**Photograph 1: Recently seeded grassland and planted scrub and trees to the north of WBB Power Station**



**Photograph 2: Typical semi-mature plantation broad-leaved woodland around the Site**



**Photograph 3: Habitats along the route of the northern drainage connection corridor**



**Photograph 4: Artificial hibernacula within landscaped area to the north of WBB Power Station (Target Note 2)**



**Photograph 5: Habitats to the east of the Site within West Burton Power Station LWS**



**Photograph 6: Wet ditch within West Burton Power Station LWS**



**Photograph 7: Flooded gravel pits to the east of the Site**



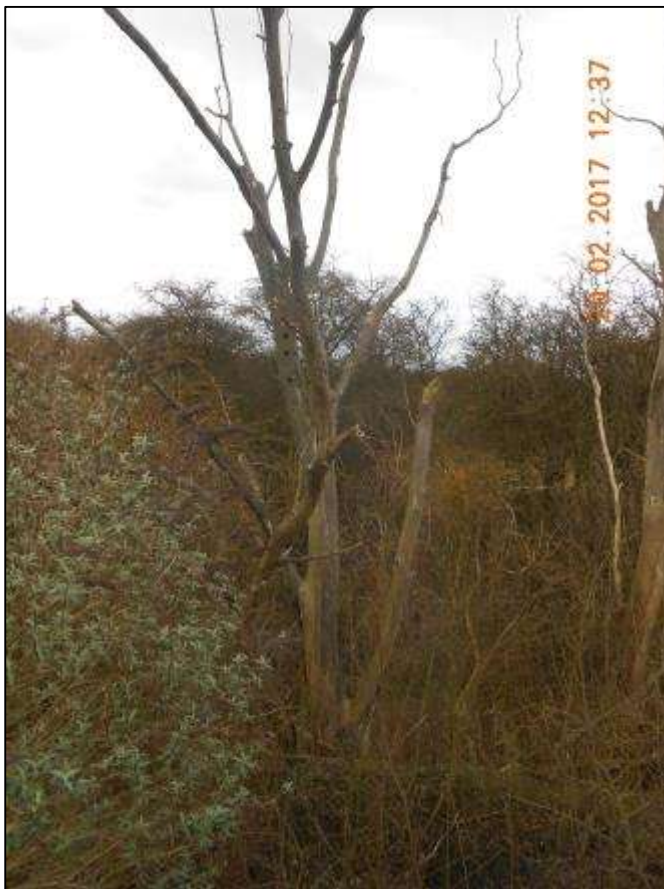
**Photograph 8: Habitats to the east of the Site along the River Trent**



**Photograph 9: River Trent adjacent to the Site**



**Photograph 10: Standing dead trees with potential bat roosting features (Target Note 1)**



**Photograph 11: Track and dense scrub to the south of Bole Round PFA mounds (Ecological Mitigation and Enhancement area) (2019)**



**Photograph 12: Grassland on top of eastern PFA mound in Ecological Mitigation and Enhancement area to the north of the site, with planted trees.**



**Photograph 13: Scrub/grassland/tall ruderal mosaic to the south-west of the Ecological Mitigation and Enhancement area to the north of the site.**



**Photograph 14: Access track and adjacent scrub/planted trees to the south-east of West Burton B site.**

