



# Preliminary Ecological Appraisal Report

Marl Road, Knowsley

Prepared on behalf of  
Forsa Energy Gas Holdings Ltd.

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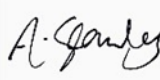
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## QUALITY MANAGEMENT

| Quality Management Approved prior to Issue |                                                               |              |                                                                                    |
|--------------------------------------------|---------------------------------------------------------------|--------------|------------------------------------------------------------------------------------|
| Report Ref:                                | SE0950-01_E0a_PEA_AS Marl Road, Knowsley                      |              |                                                                                    |
| Site Address:                              | Marl Road, Knowsley                                           |              |                                                                                    |
| Doc Title:                                 | Marl Road, Knowsley – Preliminary Ecological Appraisal Report |              |                                                                                    |
| Issue Date:                                | 24 <sup>th</sup> August 2021                                  | Revision No: | b                                                                                  |
| Prepared by:                               | Bethany Pythian BSc (Hons),<br>Ecologist                      | Signature:   |  |
| Approved by:                               | Amy Stanley BSc (Hons), PG Dip,<br>ACIEEM, Senior Ecologist   | Signature:   |  |

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This report is based on survey data gathered in July 2021 at this site at Marl Road, Knowsley.

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## 1.0 SUMMARY

### 1.1 Recommendations:

|    |                                                                                                                                                                                                                                                                                                                                              |
|----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| R1 | Dense scrub, mature tree woodland and flowering plant habitats provide biodiversity on-site. These habitats should be retained where possible or similar habitat created (on-site or off-site) to compensate for the loss of this and to achieve a net gain in biodiversity.                                                                 |
| R2 | The site has low value for bats and birds. Appropriate mitigation should be incorporated in the landscape design including bird and bat boxes. The proposed landscape would benefit bats and birds where there is enhancement by native planting of shrubs and highly scented herbs which will attract invertebrates and encourage foraging. |
| R3 | Consideration should be given to the potential impacts of lighting on bat foraging during development works, particularly where there is woodland.                                                                                                                                                                                           |
| R4 | All vegetation clearance and building demolition should be timetabled out with the core British bird breeding season (i.e March-August inclusive). Where this is not possible, all vegetation to be cleared must be checked for active nests by a suitably experienced ecologist before undertaking the works.                               |

### 1.2 For further information on this survey report, please contact:

Dr David Hackett  
Biora Ltd  
[d.hackett@bioragroup.com](mailto:d.hackett@bioragroup.com)

## 2.0 INTRODUCTION

### 2.1 Background and Scope of Survey

2.1.1 Biora was commissioned in June 2021, by Forsa Energy Gas Holdings Ltd. to undertake a Preliminary Ecological Appraisal (PEA) survey of land at Marl Road, Knowsley. Survey was commissioned to update the PEA that was undertaken by The Environment Partnership (TEP) in 2018 and to identify any ecological constraints at this site to accompany a planning application.

### 2.2 Proposed Development Works and Expected Zone of Influence

2.2.1 Planning application is for the development and operation of a 20MW gas powered standby electricity generation plant, associated infrastructure and access road. As this is a small-scale brownfield site, the zone of influence is likely to be very limited.

### 2.3 Aims of the Survey

2.3.1 Preliminary Ecological Appraisal survey and report at this site aimed to:

- Determine the potential of the site to support protected habitats or species;
- Assess the current ecological value of the site;
- Assess the likely impacts of development on protected habitats and species; and
- Advise on the requirement for further survey, mitigation, compensation, or licensing should the proposed re-development be considered likely to result in adverse impacts on biodiversity or fail compliance with current ecological legislation and/or planning policies.

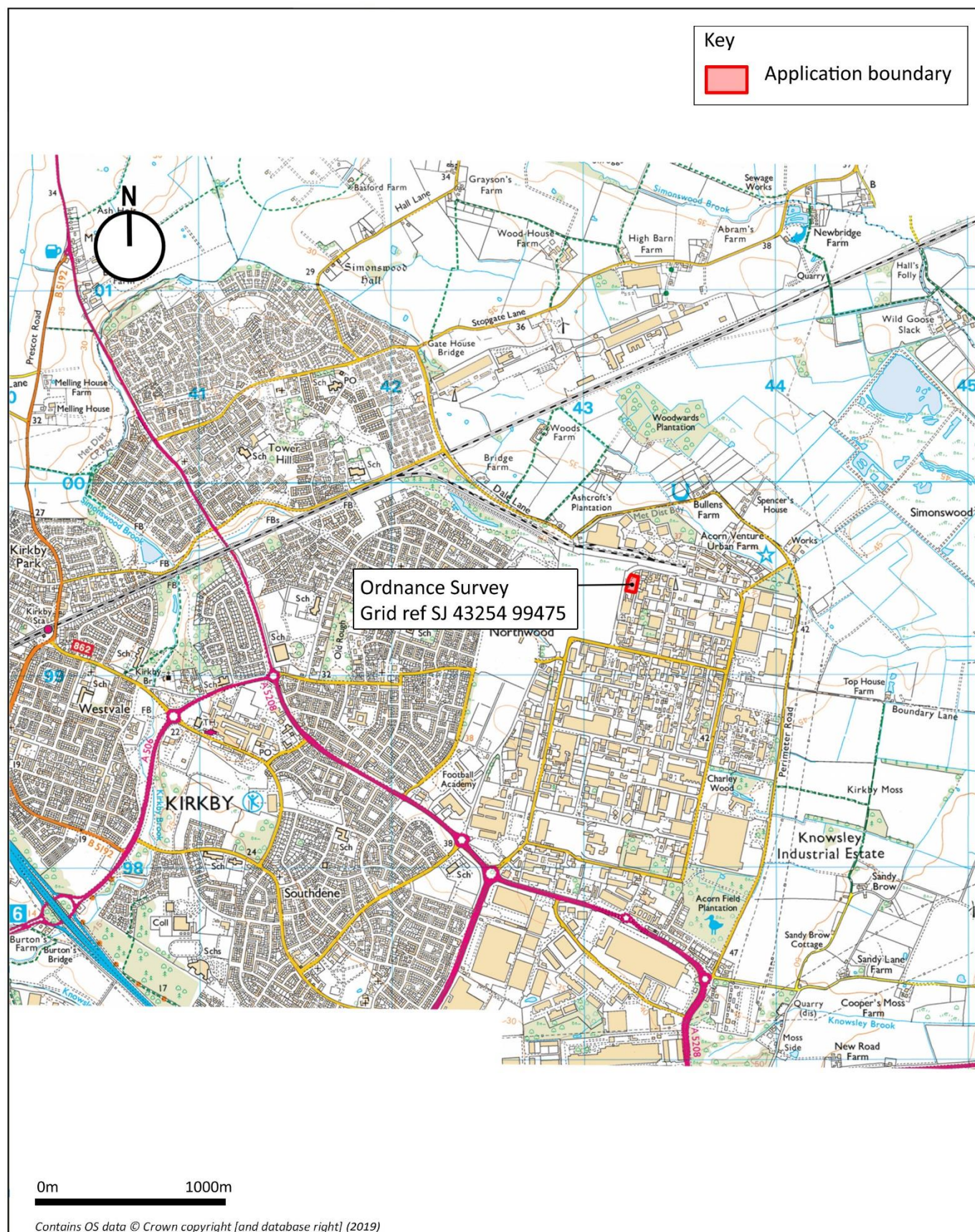
### 2.4 Site Description and Context

2.4.1 Measuring approximately 0.5 ha and situated in Knowsley, the application site, hereby referred to as 'the site', comprises of a brownfield site with areas of bare ground, scrub and mature trees. The site is bound by Marl Road to the west, industrial units to the north and south, and an access road to the east. The site is located within an industrial setting.

2.4.2 The site is centred on OS grid reference [SJ 43254 99483](#).

2.4.3 The location of the site within the wider landscape is presented in [Plan 1](#); the application boundary is presented as a red line at [Plan 2](#).

## Plan 1: Site Location (not to scale)



Client: FORSA ENERGY GAS HOLDINGS LTD

Author: GS

Date: 27.07.2021

Project: MARL ROAD, KNOWSLEY

Scale: 1:25000 @A4

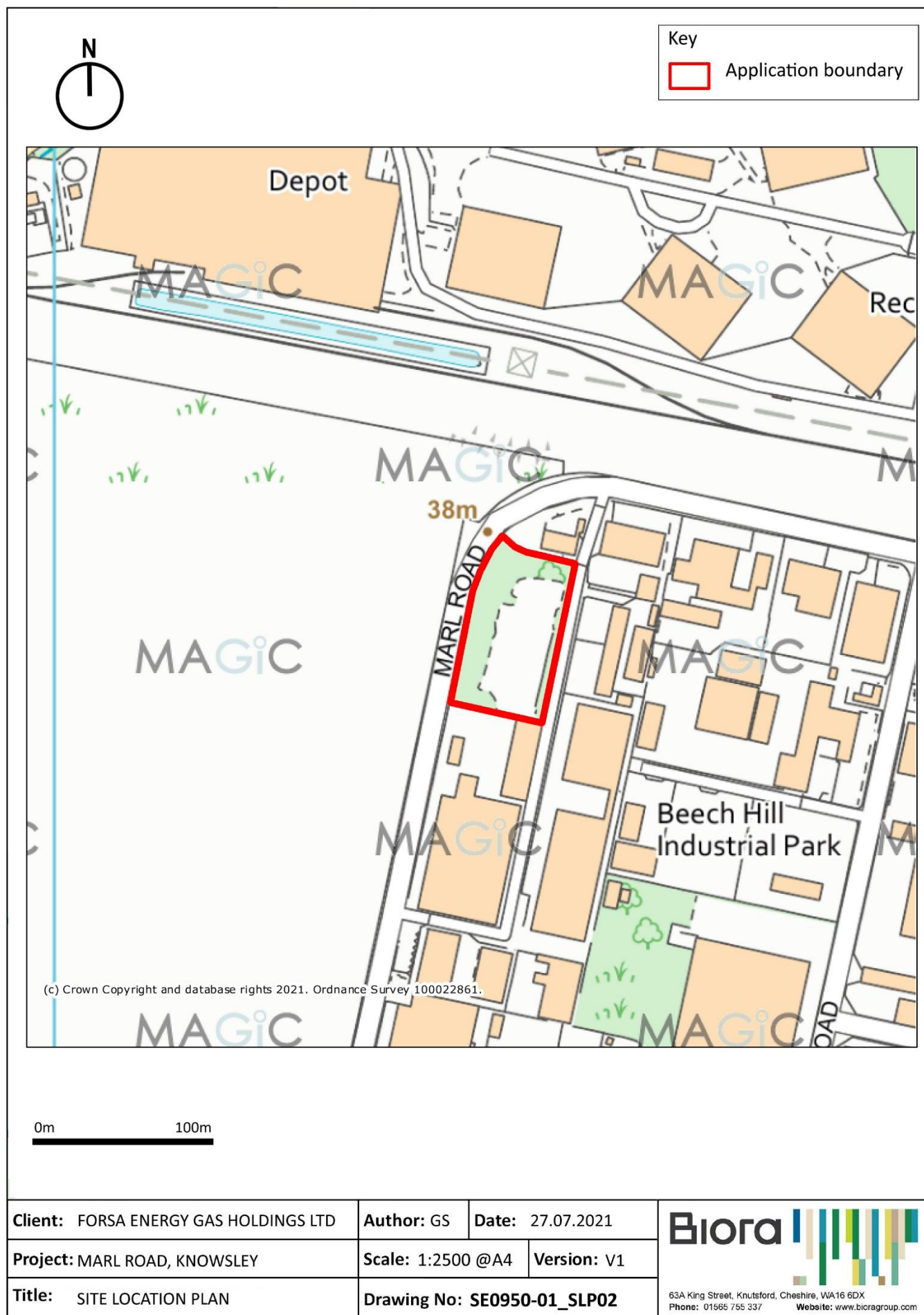
Version: V1

Title: SITE LOCATION PLAN (wider context)

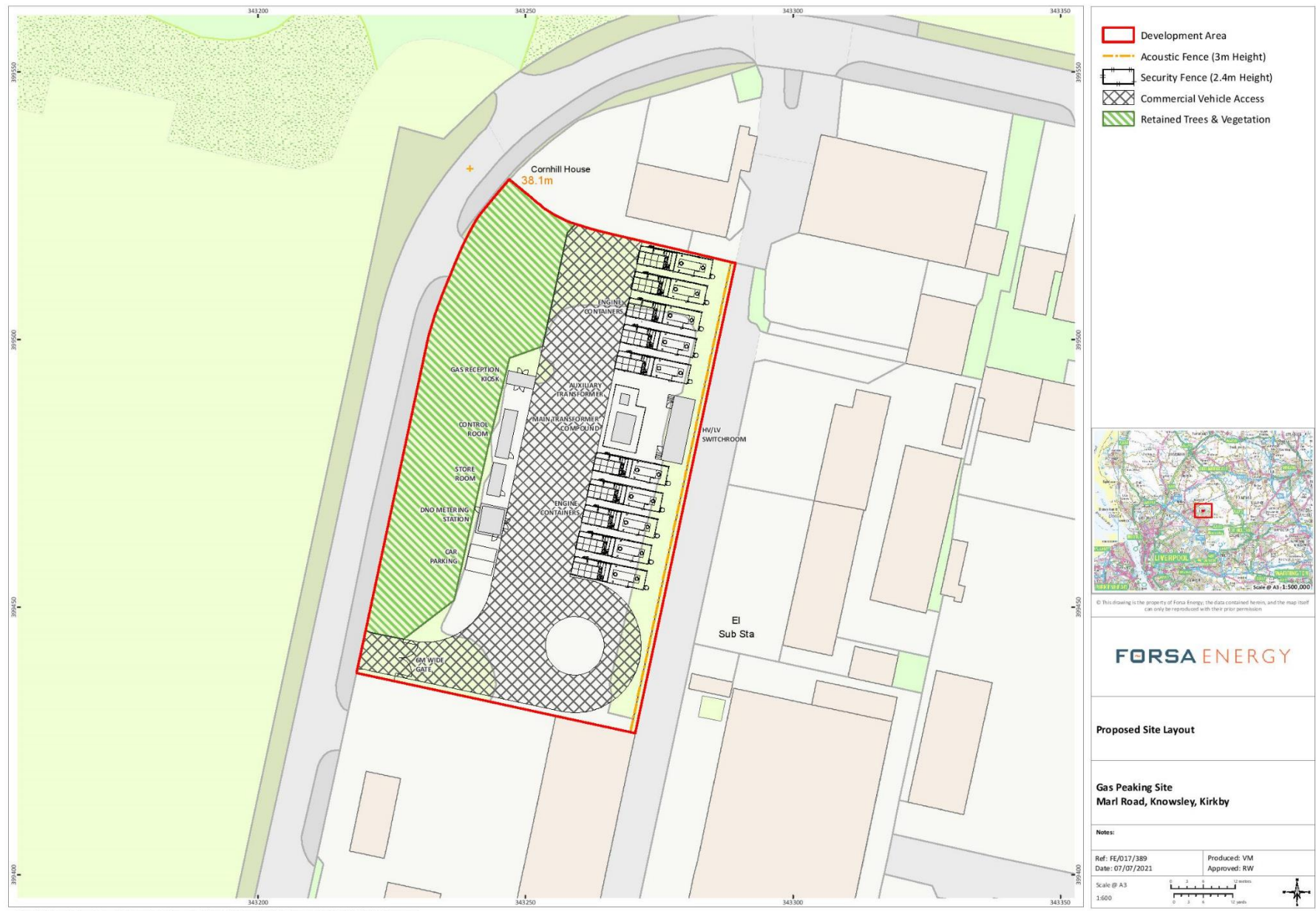
Drawing No: SE0950-01\_SLP01



63A King Street, Knutsford, Cheshire, WA16 6DX  
Phone: 01565 755 337 Website: www.bioragroup.com

*Plan 2: Site Red Line Boundary (not to scale)*

Plan 3: Site Development Plan (from client)



## 3.0 SURVEY AND EVALUATION METHODOLOGIES

### 3.1 Pre-survey data search

- 3.1.1 Data study was carried out in June 2021 accordance with the British Standard for Biodiversity<sup>1</sup> to identify any nearby sites of nature conservation designation and protected or notable<sup>2</sup> species from within a defined search area from the central point of the site. Data sources used to inform the desk study are presented in **Table 1** below.

**Table 1: Desk Study Data Sources and Search Radii**

| Information records                                                                                        | Search Radius | Data Source                            |
|------------------------------------------------------------------------------------------------------------|---------------|----------------------------------------|
| Statutory sites of national and international value                                                        | 2km           | MAGIC/Merseyside BioBank               |
| Statutory designated sites of national and county value                                                    | 2km           | Merseyside BioBank                     |
| Non-statutory sites                                                                                        | 2km           | Merseyside BioBank                     |
| Protected/ priority species                                                                                | 2km           | Merseyside BioBank                     |
| Potential great crested newt <i>Triturus cristatus</i> breeding sites, i.e. standing or slow-flowing water | 500m          | OS base maps/ satellite imagery/ MAGIC |

### 3.2 Field survey

- 3.2.1 PEA was conducted on 30<sup>th</sup> June 2021 by Bethany Phythian (Ecologist) and Max Starr (Ecological assistant). The survey followed standard methodology published in the UK Habitat Classification User Manual<sup>3</sup> and CIEEM's Guidelines for Preliminary Ecological Appraisal<sup>4</sup>, and involved a walkover of all accessible land within and adjacent to the site. Habitat compartments were mapped and the potential of each to support protected and notable species assessed.
- 3.2.2 This basic survey methodology was extended to provide further details in relation to notable or protected species present within the survey area, or in relation to habitats present that have the potential to support them. The potential of terrestrial, aquatic, and manmade habitats to support protected or notable species was assessed and any field evidence that confirmed or suggested their presence recorded. Field survey followed standard recognised methodologies outlined in current best practice guidance, details of which are given in the Appendices.
- 3.2.4 Details of field survey date(s), time, personnel, weather conditions and equipment used are presented in **Table 2** below.

**Table 2: Survey Dates, Surveyors, Weather Conditions**

| Date & Time of Survey                 | Personnel                      | Weather Conditions                                                                                    | Survey Equipment                                |
|---------------------------------------|--------------------------------|-------------------------------------------------------------------------------------------------------|-------------------------------------------------|
| Date: 30/06/2021<br>Start time: 11.00 | Bethany Phythian,<br>Max Starr | Air temperature: 20°C, Wind speed: 6 km/h, Wind direction: N, Cloud cover: 0% cloud, Precipitation: 0 | Binoculars<br>Digital camera<br>Garmin GPS unit |

### 3.3 Survey personnel

- 3.3.1 **Bethany Phythian BSc GradCIEEM** is an Ecologist at Biora and is experienced in conducting habitat and protected species surveys. She has over four years' experience of surveying for Preliminary Ecological Appraisal, bats, great crested newts, breeding birds and reptiles, and over a years' experience of project management and co-ordinating ecological surveys. Beth also has experience of putting together Natural England GCN district level and bat licences. She is a member of South Lancashire Bat Group.
- 3.3.2 **Max Starr BSc MSc GradiEMA** is an ecological assistant and has a Masters' Degree in Environmental Science and Management. He has over two years' experience in environmental surveying, including bat survey.

<sup>1</sup> BS:42020 (2013) Biodiversity. Code of practice for planning and development.

<sup>2</sup> Subject of a Species Action Plan under UK or Local Biodiversity Action Plan, or a species listed in Section 41 of the NERC Act (2006) as one of "principal importance for the conservation of biodiversity".

<sup>3</sup> Butcher, B., Carey, P., Edmonds, R., Norton, L. and Treweek, J. (2020). The UK Habitat Classification User Manual Version 1.1 at <http://www.ukhab.org/>

<sup>4</sup> Guidelines for Preliminary Ecological Appraisal (2017) <https://cieem.net/resource/guidance-on-preliminary-ecological-appraisal-gpea/>

### 3.4 Survey limitations

- 3.4.1 Survey was carried out during optimal season. All areas were able to be accessed by surveyors with the exception of the dense scrub/woodland area which was covered in dense bramble.

### 3.5 Evaluation Methods

- 3.5.1 Evaluation of the suitability of habitats to support protected or notable species was based on professional judgement and standard recognised methodologies outlined in current best practice guidance (see [APPENDIX 2](#)). Each species/species group is ultimately assigned a 'value score' based on the applications sites' habitats and their likelihood to provide suitable value to said species, when also considering the site's location at the landscape scale. These value scores range from **NEGLIGIBLE** to **HIGH**. Any species assigned low value and above are subjected to further assessment. When assigning a value score, this is also referred to at a specific scale, which gives a further indication of the sites potential importance for the given species group, based on the CIEEM EcIA guidelines<sup>5</sup>.

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<sup>5</sup> The Chartered Institute of Ecology and Environmental Management (CIEEM) Ecological Impact Assessment (EcIA) guidelines (2018)  
<https://cieem.net/wp-content/uploads/2019/02/Combined-EcIA-guidelines-2018-compressed.pdf>

## 4.0 SURVEY RESULTS AND EVALUATION

### 4.1 Desk study

#### 4.1.1 Designated sites

4.1.1.1 Statutorily and non-statutory designated areas are detailed in [Table 3](#) below.

**Table 3: Statutory and non-statutory designated sites**

| Site Name             | Designation                    | Location |
|-----------------------|--------------------------------|----------|
| Acornfield Plantation | Local Nature Reserve (LNR)     | SJ436978 |
| Hall's Folly          | Biological Heritage Site (BHS) | SD445010 |
| Moss Plantation       | BHS                            | SJ452989 |
| Woodwards Plantation  | BHS                            | SD434003 |
| Simonswood Moss       | BHS                            | SD446003 |

#### 4.1.2 Protected and notable species

4.1.2.1 The ecological data interrogation returned records of several protected species. Records from the last decade are detailed in [Table 4](#) below. This table does not include the extensive list of birds found in the local area; this list can be made available on request.

**Table 4: Results of Ecological Data Request for Protected Species**

| Common Name        | Scientific Name             | Group     | Records    | Distance (closest) |
|--------------------|-----------------------------|-----------|------------|--------------------|
| Great Crested Newt | <i>Triturus cristatus</i>   | Amphibian | 6x records | <0.82km SE         |
| Skylark            | <i>Alauda arvensis</i>      | Bird      | 2x records | <1.60km NE         |
| Yellowhammer       | <i>Emberiza citrinella</i>  | Bird      | 2x records | <1.60km NE         |
| Reed Bunting       | <i>Emberiza schoeniclus</i> | Bird      | 2x records | <1.60km NE         |
| Curlew             | <i>Numenius arquata</i>     | Bird      | 1x records | <1.60km NE         |
| Grey Partridge     | <i>Perdix perdix</i>        | Bird      | 1x records | <1.60km NE         |
| Lapwing            | <i>Vanellus vanellus</i>    | Bird      | 2x records | <1.60km NE         |

#### 4.1.3 Standing water inside 500 m search area

4.1.3.1 There are two waterbodies within the 500m area. These are shown at [Figure 1](#) at the end of this report.

#### 4.1.4 Relevant historical ecological surveys in local area

4.1.4.1 This site has previously been granted planning permission (ref: 15/00595/FUL). Planning portal search found a nearby application (ref: 20/00124/FUL Erection of Warehouse/Distribution Centre) at Former Sonae Site Moss Lane / Marl Road Kirkby Knowsley L33 7XQ, which is approximately 20m west of the site. The update ecological report associated with 20/00124/FUL from January 2020 found no local protected species constraints from GCN, water voles and badgers.

## 4.2 Field survey: Phase 1 Habitat Survey

### 4.2.1 Site Context and Connectivity

4.2.1.1 The site is located within an industrial estate, and is surrounded by industrial facilities on all sides. An area of woodland to the north western wider area connects to the railway line, forming a commuting route to the wider landscape.

### 4.2.2 Habitat Compartments

4.2.2.1 Details of the broad habitats recorded within the survey area, including any recognised conservation value at the local or national scale are provided in [Table 5](#). All habitats present on-site were recorded on a UKHab map, presented at the [FIGURES](#) section at the end of this report. Photographs of habitats described are provided in [APPENDIX 4](#).

**Table 5: Habitat compartments**

| Habitat Codes                 | Description                                                                                                                                                                                                                                                                                                                | Area               |
|-------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|
| Other neutral grassland – g3c | This habitat comprised predominantly nettle <i>Urtica dioica</i> , pineapple weed <i>Matricaria discoidea</i> , poppy <i>Papaver</i> sp., dock <i>Rumex obtusifolius</i> , bramble <i>Rubus fruticosus</i> , red valerian <i>Centranthus ruber</i> , hedge bindweed <i>Calystegia sepium</i> , Herb Robert <i>Geranium</i> | 576 m <sup>2</sup> |

|                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                     |
|-----------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|
|                                               | <p><i>robertianum</i>, ribwort plantain <i>Plantago lanceolata</i>, common fumitory <i>Fumaria officinalis</i>, Vetch sp., foxglove <i>Digitalis purpurea</i>, horsetail <i>Equisetum arvense</i>, forget-me-not <i>Myosotis sylvatica</i>, creeping cinquefoil <i>Potentilla reptans.</i>, Yorkshire fog <i>Holcus lanatus</i>, Fescue sp., Perennial rye-grass <i>Lolium perenne</i>, common thistle <i>Cirsium vulgare</i>.</p> <p>Towards the central area of the site, this habitat had a higher percentage of grasses Yorkshire fog, fescues, perennial ryegrass, with dominant common thistle, broadleaved dock, rosebay willowherb <i>Chamaenerion angustifolium</i>. Scattered buddleia <i>Buddleja davidii</i>, soft rush <i>Juncus effusus</i>, self-heal <i>Prunella vulgaris</i>, black medic <i>Medicago lupulina</i> were present within the habitat.</p> <p>This area was flower forage abundant with tall herb present. Himalayan Balsam present along northern boundary of site.</p> |                     |
| Other woodland-broadleaved – w1g              | <p>Mature trees of species: Wild cherry <i>Prunus avium</i>, oak <i>Quercus</i> sp., hawthorn <i>Crataegus monogyna</i>, alder <i>Alnus glutinosa</i>, willow <i>Salix</i> sp., sycamore <i>Acer pseudoplatanus</i>, rowan <i>Sorbus aucuparia</i>, Hazel <i>Corylus avellana</i>, dogwood <i>Cornus sanguinea</i>, birch <i>Betula</i>. Understorey predominantly thick bramble scrub and umbellifer sp .</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 1454 m <sup>2</sup> |
| Artificial unvegetated unsealed surface – u1c | Brownfield site, recently cleared, with some hardstanding areas.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 2795 m <sup>2</sup> |

### 4.3 Field Survey: Species and Species Groups

#### 4.3.1 Plants

4.3.1.1 Himalayan balsam was noted along the northern boundary of the site. This is an invasive, non-native species and listed under Schedule 9 of the Wildlife and Countryside Act (WCA) 1981, it is also an offence to plant or otherwise cause to grow these species in the wild.

4.3.1.2 No other flora recorded during survey, with the exception of the mature trees, was of conservation concern or listed under any Schedule of the WCA 1981 for their value.

#### 4.3.2 Great Crested Newt

4.3.2.1 Desk study identified two waterbodies within 500m of the site; WB01 (1x 75m N), and WB02 (1x 400m NW). Waterbody WB02 is cut off from the site by roads and buildings, which form a significant barrier, and so can be dismissed from further assessment. Waterbody WB01 is part of the recycling facility to the north, and is isolated from any other waterbodies. Marl Road and a railway track for the recycling facility forms minor barriers from the site. This waterbody was assessed in the Ecological Update Assessment report by Ecology Solutions, (dated January 2020, ref: 6641M.EcoAss.vf\_Update 5.2.20) for the nearby planning application 20/00124/FUL - Erection of Warehouse/Distribution Centre. The report found this waterbody to have been fairly recently created and to have no value for GCN due to its isolated nature.

4.3.2.2 The site itself has limited value for GCN, due to it being predominantly bare ground. There are limited patches of suitable habitat on site, however these are not connected to any wider habitat, and isolated by Marl Road.

4.3.2.3 There are desktop records for GCN which are from 800m to the SE. There are no connecting habitats to the site from the locations of these records. It is considered unlikely that GCN would utilise this site.

#### 4.3.3 Bats

4.3.3.1 There were no buildings on-site, but many mature trees which may be suitable for bat roosting, situated within the woodland area. Scattered trees along the north, east and southwestern boundaries (which were not part of the group of woodland trees) were assessed as having negligible value for roosting bats.

4.3.3.2 The habitats within the application boundary such as mature trees/woodland and value for foraging and commuting bats, however this habitat was relatively isolated within the wider area of predominantly industrial, only linking up to the small area of woodland to the northeast of the site.

#### 4.3.4 Otter

4.3.4.1 Field Survey identified no evidence of Otter using any part of the site, and no suitable habitat present to support this species.

#### 4.3.5 Water Vole

4.3.5.1 Field survey identified no evidence of water vole activity and no habitat with the potential to support this species within the site or immediately adjacent to the site.

#### 4.3.6 Badger

- 4.3.6.1 Field survey identified no evidence of Badgers (tracks, latrines, hairs, prints etc) on-site, and low-quality foraging habitat, with a limited variety of fruit bearing trees within the site which would provide a food source for badgers.
- 4.2.6.2 There are substantial metal fences surrounding the perimeter of the site. Badgers may still use the site to commute if they can find access around the fences, however it is unlikely due to the limited value of the site.

#### 4.3.7 Reptiles

- 4.3.7.1 The scrub/trees and any piles of dead wood in the woodland could be used as a refuge for some reptiles. The site holds some habitats which have value to reptiles, such as the woodland and scrub. However, in context these features are not in abundance and are not particularly species rich, and do not contribute towards a heterogenous landscape mosaic suitable for reptiles, particularly with the large expanse of hardstanding and buildings in the wider context of the site.

#### 4.3.8 Breeding birds

- 4.3.8.1 The woodland and scrub within the application boundaries represent habitat for nesting birds. There were no signs of other ground nesting birds within the site.
- 4.3.8.2 The wider surrounding landscape presents moderate-quality nesting habitat for birds, from the area of woodland present adjacent to Marl Road, at the north east, to the number of local wildlife sites within 2km of the site.

#### 4.3.9 Other notable species recorded by survey

- 4.3.9.1 No other notable species were recorded by survey.

*Table 6: Value summary table of protected/notable species*

| Species        | Local | County-wide | Regional | National | International |
|----------------|-------|-------------|----------|----------|---------------|
| Breeding Birds | Low   |             |          |          |               |
| Badger         |       |             |          |          |               |
| Bats           | Low   |             |          |          |               |
| Reptiles       |       |             |          |          |               |
| GCN            |       |             |          |          |               |
| Otter          |       |             |          |          |               |
| Water Vole     |       |             |          |          |               |

**KEY:** Blue fill represents scale at which value/potential value of species is relevant. Unshaded boxes represent negligible value impacts.

## 5.0 CONCLUSION AND RECOMMENDATIONS

### 5.1 Designated and Non-designated Sites

- 5.1.1 There are five local wildlife sites/biological heritage sites within 2km; however, none of these are in close proximity to the site and, therefore, unlikely to be affected by any development works at this site.

### 5.2 Habitats

- 5.2.1 Dense scrub, flowering plants and woodland habitats provide biodiversity and habitat on-site where there is very little. This habitat should be retained where possible. If this is not possible then similar habitat will need to be created on-site or off-site to compensate for the loss of this.

### 5.3 Protected Species

- 5.3.1 Bat species in the local area may use the site for foraging and commuting opportunities available. The site was assessed as having low suitability for bats, due to the relatively small area of partly isolated habitat present on-site; woodland, scrub and flowering plants. This habitat should be retained and enhanced where possible, to encourage bats in the local area. The proposed landscape would benefit bats where there is enhancement by native planting of shrubs and highly-scented herbs which will attract invertebrates.
- 5.3.2 The details of any proposed lighting throughout the site should be given careful consideration to avoid negative impacts on any foraging and commuting bats and to encourage future use.
- 5.3.3 The site presents low quality habitat for nesting birds, from the woodland containing mature trees and dense scrub. This habitat should be retained and enhanced, where possible, with native thorny and/or berry producing shrub species to provide varied layers for nesting and foraging birds.
- 5.3.4 If any habitat is removed during the core British bird breeding season of March to August inclusive, such activities have a high chance of destroying active nests, which would constitute an offence under the Wildlife & Countryside Act. Any vegetation clearance should be timed out with the core bird breeding season period (March – August inclusive) to avoid breaching legislation. Where such works cannot realistically be carried out during this period, any vegetation and all building structures to be affected must be checked by a suitably experienced ecologist for the presence of birds' nests immediately before the habitat is removed.

### 5.5 Recommendations

|    |                                                                                                                                                                                                                                                                                                                                              |
|----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| R1 | Dense scrub, mature tree woodland and flowering plant habitats provide biodiversity on-site. These habitats should be retained where possible or similar habitat created (on-site or off-site) to compensate for the loss of this and to achieve a net gain in biodiversity.                                                                 |
| R2 | The site has low value for bats and birds. Appropriate mitigation should be incorporated in the landscape design including bird and bat boxes. The proposed landscape would benefit bats and birds where there is enhancement by native planting of shrubs and highly scented herbs which will attract invertebrates and encourage foraging. |
| R3 | Consideration should be given to the potential impacts of lighting on bat foraging during development works, particularly where there is woodland.                                                                                                                                                                                           |
| R4 | All vegetation clearance and building demolition should be timetabled out with the core British bird breeding season (i.e March-August inclusive). Where this is not possible, all vegetation to be cleared must be checked for active nests by a suitably experienced ecologist before undertaking the works.                               |

## FIGURES

FIGURE 1: Waterbodies within 500m buffer

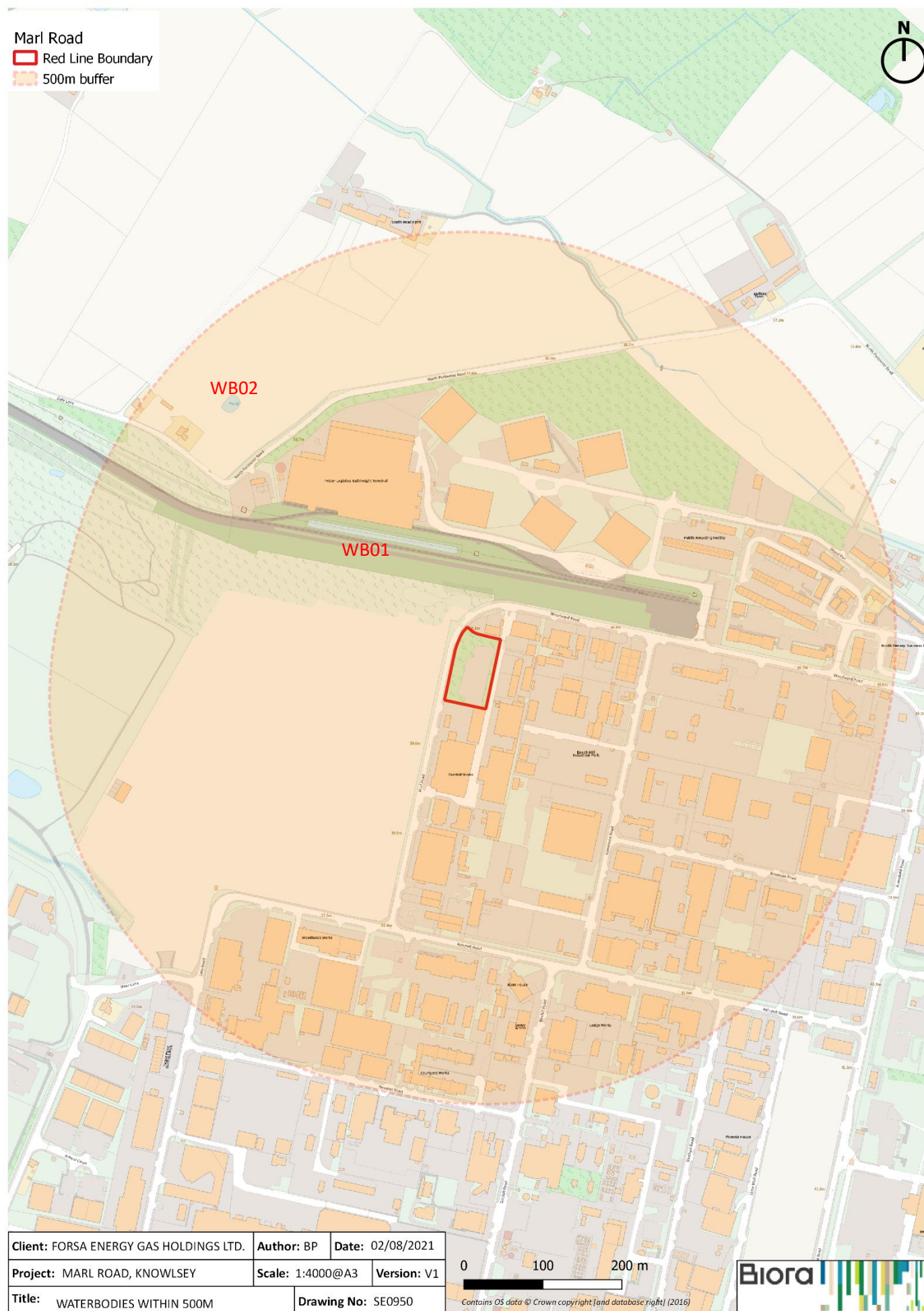


FIGURE 2: UK habitat compartments



## APPENDICES

## APPENDIX 1: UK Legal Protection and Planning Guidance

### A1 National Planning Policy Framework (NPPF)

The NPPF came into force in March 2012. It sets out the Government's planning policies for England and how these are expected to be applied. It gives guidance to local planning authorities on the content of their local plans but is also a material consideration in determining planning applications. **The NPPF states that the planning system should provide a net gain for biodiversity wherever possible.** The NPPF replaces much of the previous planning policy guidance, including PPS9: Biodiversity and Geological Conservation. However, the Government Circular 06/05: Biodiversity and Geological Conservation – Statutory Obligations and Their Impact within the Planning System (which accompanied PPS9) remains valid.

### A2 Biodiversity Action Plans

**UK Biodiversity Action Plans:** The **UK Biodiversity Action Plan (UKBAP)**<sup>6</sup> was established in response to the **Convention on Biological Diversity 1992**, signed by 150 members at the Rio Earth Summit, which aimed to promote sustainable development amongst all signatories. Specific action plans have been prepared for highly protected species. As well as a national Biodiversity Action Plan, local Biodiversity Action Plans identify species of note at local level throughout the UK.

### A3 Priority Habitats and Species

Under the terms of the Natural Environment and Rural Communities Act 2006<sup>7</sup>, all public bodies are required to have regard to the conservation of biodiversity when carrying out their activities. This means that efforts must be made to consider priority and protected species and habitats in particular. There would be a presumption in the land-use planning process against any development that would result in loss to an area of priority habitat or harm to the population of any priority species.

### A4 Vegetation

The Wildlife and Countryside Act 1981 (as amended)<sup>8</sup> lists plants which are statutorily protected. In relation to development these plants are rare and are not often encountered. The bluebell is scheduled, with commercial bulb-picking from the wild being prohibited. There is also a category of plants which it is an offence to introduce to the wild. This category includes Japanese knotweed, which is often found on brownfield sites. Care is needed to avoid spreading the species around the site during earthworks, and to ensure that any removal of infested soils off-site is to a licensed tip. Giant hogweed and Himalayan balsam are also listed in this category of invasive alien plant species. In addition, the Ragwort Control Act came into force on 20 February 2004 and enables the Secretary of State to make a Code of practice to prevent the spread of common ragwort.

### A5 Hedgerows

As a priority habitat for conservation concern, hedgerows also receive further protection under the Hedgerow Regulations 1997. Under the Hedgerows Regulations 1997 it is against the law to remove or destroy certain hedgerows without permission from the local planning authority. Local planning authority permission is normally required before removing hedges that are at least 20 metres (66 feet) in length, more than 30 years old and contain certain plant species. The authority will assess the importance of the hedgerow using criteria set out in the regulations. The local planning authority is also the enforcement body for offences created by the Regulations. If a hedgerow is removed without permission, there may be an unlimited fine and the hedgerow may have to be replaced.

### A6 Great crested newt

A European Protected Species (EPS) and fully protected under the Conservation of Habitats and Species Regulations 2010<sup>9</sup> and the Wildlife and Countryside Act 1981 (as amended). Under the legislation it is an offence to:

- *Intentionally or deliberately capture, kill or injure great crested newts (GCNs).*
- *Intentionally or recklessly disturb them in a place used for shelter or protection.*
- *Damage or destroy a breeding site or resting place.*
- *Intentionally or recklessly damage, destroy or obstruct access to a place used for shelter or protection.*
- *Possess a great crested newt, or any part of it, unless acquired legally.*
- *Sell, barter, exchange or transport or offer for sale great crested newts or parts of them.*

Where Great crested newts (GCNs) are present at a proposed development site it is usually possible to continue with the project, re-locating the animals in advance of development, but only upon receipt of a site-specific licence from Natural England. Licence options for GCN can be through a 'traditional' EPS licence, or a newer District Level Licence (DLL) which is currently in the process of being rolled out throughout the UK. DLL is a simpler process but can be more costly in many

<sup>6</sup>UK BAP [www.ukbap.org.uk](http://www.ukbap.org.uk)

<sup>7</sup> HMSO (2006) Natural Environment and Rural Communities Act. London.

<sup>8</sup> HMSO (1981) Wildlife and Countryside Act (as amended). London.

<sup>9</sup> HMSO (2010) The Conservation and Habitats Regulations 2010, as amended. London.

circumstances. **The traditional EPS licence application process can be complex and can only be conducted by a suitably qualified GCN-specialist ecologist.** Each EPS licence application must be supported by:

- Full optimal-season great crested newt survey results and analysis;
- A suitable mitigation strategy that ensures that the favourable conservation status of the GCN population will be maintained (this usually involves the provision by the developer of additional land with ponds as compensation for loss of habitat and breeding sites). This mitigation strategy should usually be agreed by the ecologist through liaison with Natural England; and
- A method statement explaining how GCNs will be accommodated legally if found during the development process.

## A7 Bats

All species of bats are European Protected Species and their breeding and nesting sites (roosts) are given a high degree of legal protection under the terms of the Wildlife and Countryside Act 1981 (as amended) and the Conservation of Habitats and Species Regulations 2010. In addition, all bats are the subject of a UK-wide Biodiversity Action Plan (BAP). This combined legislation offers bats, their roost sites and resting places strict protection from intentional or reckless disturbance (see wording of GCN legislation above). It should be noted that, under the legislation, a bat roost is defined as any structure or place which is used by bats to shelter, breed or perch whilst feeding. As bats tend to reuse the same roosts, the roost is legally protected, whether the bats are present at the time or not<sup>10</sup>.

**Where bats are present at a proposed development site it is usually possible to continue with the proposed project, but only upon receipt of a site-specific licence from Natural England. The licence application process can be complex and can only be conducted by a suitably qualified bat-specialist ecologist.** Each licence application must be supported by:

- Full optimal-season bat survey results and analysis;
- A suitable mitigation strategy that ensures that the favourable conservation status of the bat population will be maintained (this usually involves the provision by the developer of replacement permanent bat roosts, additional bat boxes and both bat-friendly planting and lighting within the development site). This mitigation<sup>11</sup> strategy should usually be agreed by the ecologist through liaison with Natural England; and
- A method statement explaining how bats will be accommodated legally if found during the development process.

## A8 Otter

Otters are a European Protected Species (EPS) and fully protected under the Conservation of Habitats and Species Regulations 2010 and the Wildlife and Countryside Act 1981 (as amended). Otters and their resting places are fully protected, it is an offence to deliberately, capture, injure or kill them or to damage, destroy or obstruct their breeding or resting places. It is also an offence to disturb otters in their breeding or resting places.

**Where otters are present at a proposed development site it is usually possible to continue with the proposed project, but only upon receipt of a site-specific licence from Natural England. The licence application process can be complex and can only be conducted by a suitably qualified otter-specialist ecologist.** Each licence application must be supported by:

- Full optimal-season otter survey results and analysis;
- A suitable mitigation strategy that ensures that the favourable conservation status of the otter population will be maintained (this usually involves the provision by the developer of replacement waterbodies and holts within the development site). This mitigation strategy should usually be agreed by the ecologist through liaison with Natural England; and
- A method statement explaining how otters will be accommodated legally if found during the development process.

## A9 Badger

All badgers are protected from harm under the Protection of Badgers Act (1992). Under this act it is an offence:

- To kill, injure or take a badger, or to attempt to do so;
- To use badger tongs in the course of killing or taking, or attempting to kill or take, any badger;
- To kill or take a badger with a firearm which does not fall within the specifications laid down in the Act;
- To dig for a badger;
- To cruelly ill-treat a badger;
- To possess or control a live badger;
- To sell or offer for sale a live badger;
- To mark, or attach any ring, tag or marking device to a badger;
- To possess or control any dead badger, any part of one, or anything derived from one;
- To interfere with a badger sett by (a) damaging a sett or any part of one; (b) destroying a sett; (c) obstructing access to or any entrance of a sett; (d) causing a dog to enter a sett; or (e) disturbing a badger when it is occupying a sett.

<sup>10</sup> WATERS, D. & WARREN, R. (2003) Bats. The Mammal Society, London

<sup>11</sup> MITCHELL-JONES, A.J. (2004) Bat Mitigation Guidelines. English Nature

Where badgers are present at a proposed development site, it is usually possible to continue with the proposed project, but only upon receipt of a site-specific licence from Natural England. A licence is always required to shut down a badger sett or for works within 30m of a badger sett. The licence application process can be complex and can only be conducted by a suitably qualified badger-specialist ecologist. Each licence application must be supported by:

- Full optimal-season badger survey results and analysis;
- A suitable mitigation strategy that ensures that the favourable conservation status of the badger population will be maintained (this usually involves the provision by the developer of replacement artificial setts, planting of suitable fruit-bearing shrubs, erection of badger gates and underpasses within the development site). This mitigation strategy should usually be agreed by the ecologist through liaison with Natural England; and
- A method statement explaining how badgers will be accommodated legally if found during the development process.

#### A10 Water vole

From 6th April 2008, water voles and their resting places gained full protection under the Wildlife and Countryside Act (1981). It is an offence to deliberately, capture, injure or kill them or to damage, destroy or obstruct their breeding or resting places. It continues to be an offence to disturb them in their breeding or resting places.

Where water voles are present at a proposed development site it is usually possible to continue with the project, re-locating the animals in advance of development, but only upon receipt of a site-specific licence from Natural England. The licence application process can be complex and can only be conducted by a suitably qualified water vole-specialist ecologist. Each licence application must be supported by:

- Full optimal-season water vole survey results and analysis;
- A suitable mitigation strategy that ensures that the favourable conservation status of the water vole population will be maintained (this usually involves the provision by the developer of additional land with ponds as compensation for loss of habitat and breeding sites). This mitigation strategy should usually be agreed by the ecologist through liaison with Natural England; and
- A method statement explaining how water voles will be accommodated legally if found during the development process.

#### A11 Reptiles

The four widespread species of reptile in the UK (ie common lizard, slow-worm, grass snake and adder) are all protected under the terms of the Wildlife and Countryside Act 1981 (as amended), however they are not fully protected under European law. This level of protection prohibits the intentional killing and injuring and trade of these reptiles. Where a survey identifies potential habitat for reptiles at a development site, a reptile survey may be needed prior to submission of a planning application and mitigation may be required by Natural England for any loss of reptile habitat as a result of a site's re-development.

#### A12 Breeding birds

All wild birds, their nests and their eggs are protected by the Wildlife & Countryside Act 1981 (as amended). It is an offence (with certain exceptions), to intentionally or recklessly kill, injure or take any wild bird (this includes chicks); to take, damage or destroy any wild bird's nest while it is use or being built; and to take or destroy the egg of any wild bird. The definition of a wild bird is 'any bird of a kind which is resident in or a visitor to Great Britain in a wild state'.

Species named in Schedule 1 of the Act are given special protection and it is an offence to disturb these species at the nest or while they are caring for dependant young. Note that if any of the above resulted from a person being reckless, even if they had no intention of committing the offence, their action would still be considered an offence. A person is not guilty of an offence if it can be shown that the act was 'the incidental result of a lawful operation and could not have been reasonably avoided'; only a court can decide what is 'reasonable' in any set of circumstances. The RSPB and the UK's leading bird conservation organisations work together to regularly review the status of birds within the UK. A total of 246 species are assessed against a set of objective criteria to place each on one of three lists - green, amber and red – indicating an increasing level of conservation concern. These lists provide a tool for guiding conservation actions for birds in the UK and for setting priorities for action on individual species. The last review of these lists was completed in May 2009.

For certain species, eg Feral Pigeon, general licences are available for an authorised person to lawfully carry out the actions outlined above providing that it is in the overriding interest of public health or air safety and that all other attempts to prevent the problem caused by the species have failed.

The Barn Owl has seen significant declines in recent history primarily due to habitat loss and the destruction, removal or renovation of traditional nesting sites. It is currently included in the amber-list of species of medium conservation concern, having been classified as a Species of European Conservation Concern (SPEC). In Great Britain it is listed on Schedule 1 of the Wildlife & Countryside Act (1981) as amended.

## APPENDIX 2: Protected Species Survey Methodologies

- Great Crested Newt:** Survey followed best-practice methodologies set out by Froglife<sup>12</sup> and Natural England<sup>13</sup>. An assessment was made of terrestrial habitat within and immediately adjacent to the application site to provide shelter, dispersal, and foraging opportunities for GCN and other amphibians. During terrestrial habitat assessment, any suitable refugia that could be lifted were also examined for amphibians<sup>14</sup>.
- Waterbodies located within or near (accessible) to the survey boundary were assessed for their suitability to support GCN, using selected indices of the Habitat Suitability Index (HSI)<sup>15</sup>. HSI is a numerical index, between 0 and 1. 0 indicates unsuitable habitat, 1 represents optimal habitat. The HSI for the great crested newt incorporates ten suitability indices, all of which are factors thought to affect great crested newts. HSI is not a substitute for GCN presence/absence survey but can assist in determining the requirement for further survey effort.
- Bats:** The potential for buildings and trees to support roosting bats, and the potential value of the site for foraging and commuting, was categorised as **NEGLIGIBLE**, **LOW**, **MODERATE**, or **HIGH** based on the presence of suitable habitat features, as outlined in BCT guidelines<sup>16,17</sup>.
- Otter:** The suitability of land within the survey area to support Otter *Lutra lutra* was based on the presence of habitat features along or around any watercourses or waterbodies that could provide a place of shelter for this species. Factors that could affect the potential foraging value of these water features to otter, e.g. water quality and the likely presence of fish, and the connectivity of watercourses to the wider environment were also used to determine the potential for otter using land within the survey area.<sup>18</sup>
- Water Vole:** Assessment of the suitability of watercourses and waterbodies within the survey area to support water vole *Arvicola amphibius* was based on guidance presented in third edition of *The Water Vole Conservation Handbook*<sup>19</sup>. Assessment of habitat suitability was guided by the presence of habitat conditions considered to influence the presence of water vole, i.e. water depth and flow, bankside cover, suitable food plants, bank gradient and suitable burrowing substrate, the presence of predators and/or competitors, e.g. brown rat, and the connectivity of the site to the wider environment.<sup>20</sup>
- Badger:** If badger *Meles meles* is or has been present within a survey area then signs of activity, e.g. setts, paths, latrines, foraging, etc., are usually evident. In addition to these field signs, an assessment of the suitability of the habitats within the survey area to support badger was made based on topography, substrate, land use and the quality of available foraging habitat.
- Reptiles:** The presence of habitat features as those favoured by reptiles<sup>21,22</sup>, i.e. dry, species-rich undisturbed open ground with a mix of sparse and dense vegetation, sunny banks, gullies and hollows and south-facing banks with mammal burrows suitable for hibernation, was used to assess the suitability of land within the survey area to support this species group. The habitat conditions of the surrounding landscape, including the presence of both potential habitat corridors that might provide connectivity with the site and potential barriers to dispersal, e.g. busy roads, were also considered in the overall assessment.<sup>23,24</sup>
- Breeding Birds:** The habitats within the survey area were assessed for their potential to support breeding birds based on surveyor experience and species breeding habitat requirements described in *A Field Guide to Monitoring Nests*<sup>25</sup>.

<sup>12</sup> LANGTON, T.E.S. et al. (2001) Great Crested Newt Conservation Handbook. Froglife, Halesworth.

<sup>13</sup> NATURAL ENGLAND Standing Advice Species Sheet: Great crested newts

<sup>14</sup> BEEBEE, T.J.C., & GRIFFITHS, R.A. (2000). Amphibians and Reptiles. Collins, London. New Naturalist Series.

<sup>15</sup> OLDHAM, R.S. et al (2000) Evaluating the suitability of habitat for the great crested newt (*Triturus cristatus*). Herpetological Journal Vol.10.

<sup>16</sup> HUNDT, L. (2016) Bat Surveys: Good Practice Guidelines (3rd Edition). Bat Conservation Trust

<sup>17</sup> NATURAL ENGLAND Standing Advice Species Sheet: Bats

<sup>18</sup> NATURAL ENGLAND Standing Advice Species Sheet: Otters

<sup>19</sup> STRACHAN, R., MOORHOUSE, T. & GELLING, M. (2011) Water Vole Conservation Handbook (3rd Edition). WildCRu: Oxford

<sup>20</sup> NATURAL ENGLAND Standing Advice Species Sheet: Water vole

<sup>21</sup> GENT, T. & GIBSON, S. (Eds) (1998) The Herpetofauna Workers' Manual. JNCC, Peterborough.

<sup>22</sup> GIBB, R. & FOSTER, J. (2000) The Herpetofauna Workers Guide 2000. Froglife, Halesworth.

<sup>23</sup> NATURAL ENGLAND Standing Advice Species Sheet: Reptiles

<sup>24</sup> FROGLIFE (1999). Reptile survey: an introduction to planning, conducting and interpreting surveys for snake and lizard conservation. Froglife Advice Sheet 10. Froglife, Halesworth.

<sup>25</sup> FERGUSON-LEES, J., CASTELL, R. & LEECH, D. (2011), A Field Guide to Monitoring Nests. British Trust for Ornithology

## APPENDIX 3: BCT Guidelines for Assessing Bat Roosting Potential

| POTENTIAL         | ROOSTING HABITATS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | COMMUTING AND FORAGING HABITATS                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|-------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>NEGLIGIBLE</b> | Negligible habitat features on site likely to be used by roosting bats.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Negligible habitat features on site likely to be used by foraging and commuting bats.                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>LOW</b>        | <p>A structure with one or more potential roost sites that could be used by individual bats opportunistically. These potential roost sites do not, however, provide enough space, shelter, protection, appropriate conditions<sup>1</sup> and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats (i.e. unlikely to be suitable for maternity or hibernation).</p> <p>A tree of sufficient size and age to contain potential roost features but with none seen from the ground or features with only very limited roosting potential.</p> | <p>Habitat that could be used by small numbers of commuting bats such as gappy hedgerow or unvegetated stream, but is isolated, i.e. not very well connected to the surrounding landscape by other habitats.</p> <p>Suitable, but isolated habitat that could be used by small numbers of foraging bats such as a lone tree (not in a parkland situation) or a patch of scrub.</p>                                                                                                        |
| <b>MODERATE</b>   | A structure or tree with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions and surrounding habitat but unlikely to support a roost of high conservation status (with respect to roost type only – the assessments in this table are made irrespective of species conservation status, which is established after presence is confirmed).                                                                                                                                                                           | <p>Continuous habitat connected to the wider landscape that could be used by bats for commuting such as lines of trees and scrub or linked back gardens.</p> <p>Habitat that is connected to the wider landscape that could be used by bats for foraging such as trees, scrub, grassland or water.</p>                                                                                                                                                                                    |
| <b>HIGH</b>       | A structure or tree with one or more potential roost sites that are obviously suitable for use by large numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions and surrounding habitat.                                                                                                                                                                                                                                                                                                           | <p>Continuous, high-quality habitat that is well connected to the wider landscape that is likely to be used regularly by commuting bats such as river valleys, streams, hedgerows, lines of trees and woodland edge.</p> <p>High-quality habitat that is well connected to the wider landscape that is likely to be used regularly by foraging bats such as broadleaved woodland, tree-lined watercourses and grazed parkland.</p> <p>Site is close to and connected to known roosts.</p> |

## APPENDIX 4: Photographs

P1: Entire site (looking towards SW)



P2: Scrubby trees (negligible BRP) to the SE of the site



### P3: Flowering plants with foraging insects



### P4: Woodland edge



P5: Himalayan Balsam present along northern boundary



P6: Woodland present on-site

