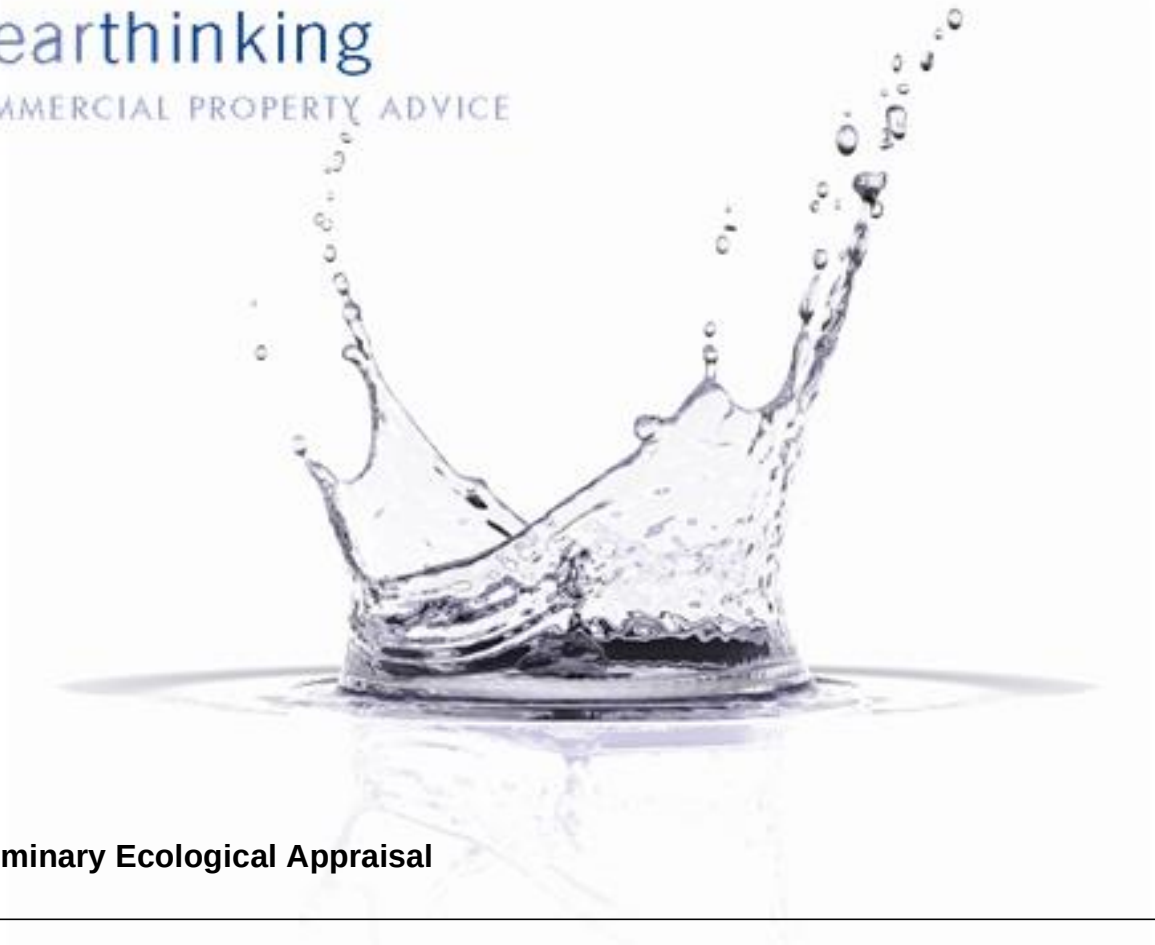


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COMMERCIAL PROPERTY ADVICE



Preliminary Ecological Appraisal

Land Adjacent to Ilkeston Road, Ilkeston

On Behalf Of: Wulff Asset Management

Prepared By:

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Date: May 2022

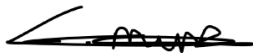
Preliminary Ecological Appraisal

Land Adjacent to Ilkeston Road, Ilkeston

Main Contributors

Liam Murtagh BSc

Issued By



Signature

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Date: 26.05.2022

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Date: 26.05.2022

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EXECUTIVE SUMMARY

Harris Lamb Property Consultancy (HLPC) was commissioned by Wulff Asset Management to undertake an ecological appraisal of land adjacent to Ilkeston Road, Ilkeston, Derbyshire. The report has been produced to support an outline planning application for a residential development of up to 196 dwellings with all matters reserved other than the means of access.

HLPC carried out an Extended Phase 1 Habitat Survey of the site in April 2022 undertaken by a suitably experienced ecologist. Desk-based consultation was undertaken with the local ecological records centre for records of protected species and habitats within 2km of the site.

The site habitats have the potential to support nesting birds, reptiles and foraging/commuting bats.

Mitigation and enhancement measures are proposed on site to minimise the impacts of the development on biodiversity.

1.0 INTRODUCTION

1.1 Background

- 1.1.1 Harris Lamb Property Consultancy (HLPC) was commissioned by Wulff Asset Management to undertake a Preliminary Ecological Appraisal (PEA) of land adjacent to Sowbrook Lane and Ilkeston Road, Ilkeston, Derbyshire (national grid reference SK 46426 39330), hereafter termed the 'site' (see Figure 1 below).

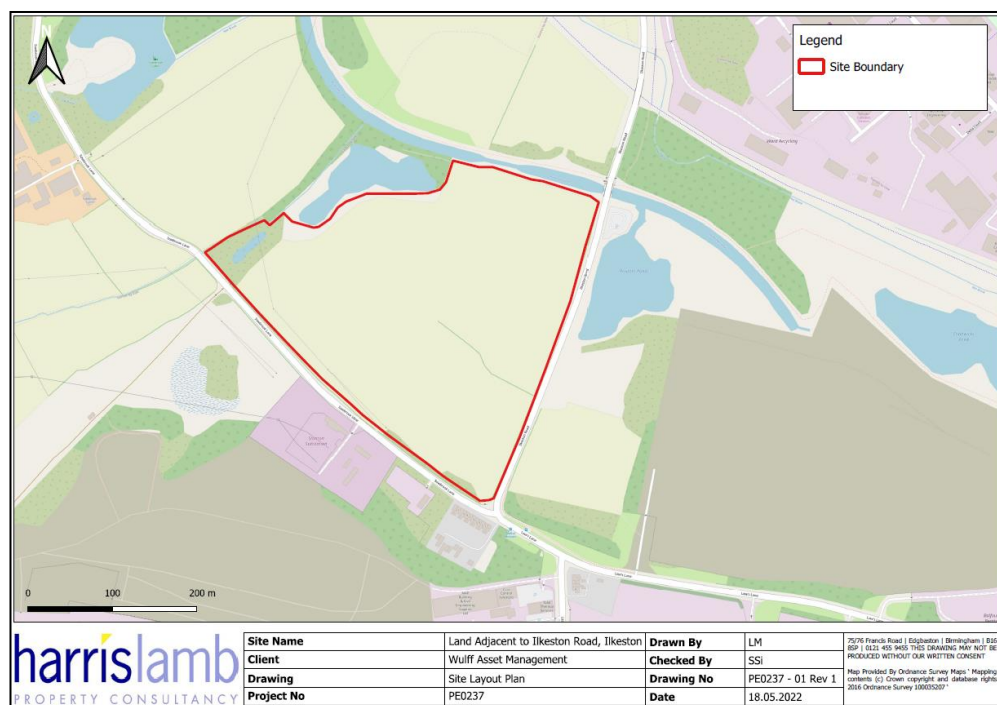


Figure 1: Site location. Not to scale.

1.2 Site location

- 1.2.1 The site is located on the southern side of Ilkeston, Derbyshire. Most of the site comprises modified grassland with areas of scrub, native hedgerows and the site contains a dry pond located to the south-west of the site. The site lies adjacent to Nutbrook Canal located beyond the northern boundary and fishing ponds to the north-west and beyond Ilkeston Road to the east. Sowbrook Lane is located beyond the southern boundary.

1.3 Proposed development

1.3.1 It is understood that outline planning permission is being sought for residential dwellings, with accompanying soft landscaping and access roads.

1.4 Purpose of the report

1.4.1 The purpose of this report is to:

- Identify key ecological constraints associated with the proposed development and input into the scheme design to minimise ecological impacts where possible.
- Set out mitigation measures required to ensure compliance with nature conservation legislation and address potentially significant ecological effects.
- Identify how mitigation measures could be secured.
- Provide an assessment of significance of residual effects.
- Identify appropriate enhancement measures.
- Identify appropriate post-construction monitoring if relevant.

2.0 PLANNING CONTEXT

2.1 National Planning Policy Framework (NPPF)

2.1.1 National Planning Policy Framework (NPPF)¹ is the top tier of planning policy. The Framework provides guidance to local authorities and other agencies on planning policy and the operation of the planning system. Section 15 relates to 'Conserving and enhancing the natural environment'.

2.1.2 Relevant policies for this planning application will include Paragraphs 174, 178 and 180 which deal with (amongst other things), biodiversity as outlined below:

2.1.3 "174 "Planning policies and decisions should contribute to and enhance the natural and local environment by:

a) protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan);

b) recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland;

c) maintaining the character of the undeveloped coast, while improving public access to it where appropriate;

d) minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures;

e) preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. Development should, wherever possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans; and

¹ National Planning Policy Framework (2021) July 2021 Ministry of Housing Communities and Local Government

f) remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate.

2.1.4 179. To protect and enhance biodiversity and geodiversity, plans should:

a) Identify, map and safeguard components of local wildlife-rich habitats and wider ecological networks, including the hierarchy of international, national and locally designated sites of importance for biodiversity⁵⁶; wildlife corridors and stepping stones that connect them; and areas identified by national and local partnerships for habitat management, enhancement, restoration or creation; and

b) promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species; and identify and pursue opportunities for securing measurable net gains for biodiversity.

2.1.5 180. When determining planning applications, local planning authorities should apply the following principles:

a) if significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;

b) development on land within or outside a Site of Special Scientific Interest, and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally be permitted. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact on the features of the site that make it of special scientific interest, and any broader impacts on the national network of Sites of Special Scientific Interest;

c) development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons⁵⁸ and a suitable compensation strategy exists; and

d) development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to incorporate

biodiversity improvements in and around developments should be encouraged, especially where this can secure measurable net gains for biodiversity.”

2.2 Relevant local planning policy

2.2.1 Identified relevant local planning policy is summarised in Table 1 below.

Table 1: Summary of relevant biodiversity local planning policy

Policy	Description
Erewash Core Strategy – Adopted March 2014 ²	
Policy 17: Biodiversity	1. The biodiversity of Erewash will be increased over the Core Strategy plan period by: a) protecting, restoring, expanding and enhancing existing areas of biodiversity interest, including areas and networks of habitats and species listed in the UK and Lowland Derbyshire Local Biodiversity Action Plans; b) ensuring that fragmentation of the Green Infrastructure network is avoided wherever appropriate and improvements to the network benefit biodiversity through the incorporation of existing habitats and the creation of new habitats; c) seeking to ensure new development provides new biodiversity features, and improves existing biodiversity features wherever appropriate; d) supporting the need for the appropriate management and maintenance of existing and created habitats through the use of planning conditions, planning obligations and management agreements; and e) ensuring that where harm to biodiversity is unavoidable, and it has been demonstrated that no alternative sites or scheme designs are suitable, development should as a minimum mitigate or compensate at a level equivalent to the biodiversity value of the habitat lost. 2. Designated national and local sites of biological or geological importance for nature conservation will be protected in line with the established hierarchy of designations and the designation of further protected sites will be pursued. 3. Development on or affecting other, non-designated sites or wildlife corridors with biodiversity value will only be permitted where it can be demonstrated that there is an overriding need for the development and that adequate mitigation measures are put in place.

² http://offlinehbppl.hbpl.co.uk/NewsAttachments/RLP/Erewash_Core_Strategy.pdf

2.3 Natural Environment and Rural Communities Act

- 2.3.1 In Section 41 (S41) of the Natural Environment and Rural Communities (NERC) Act, which came into force on 1st Oct 2006 requires the Secretary of State to publish “*a list of habitats and species which are of principal importance for the conservation of biodiversity in England*”. This list guides decision-makers such as councils and statutory undertakers, as to their duty under Section 40 of the NERC Act, to “*have regard to the conservation of biodiversity in England*” in day-to-day decisions.
- 2.3.2 There are currently 56 habitats of principal importance and 943 species of principal importance included on the S41 list. The habitats recorded were considered against the list of species likely in the site’s geographical area and supporting habitats.

3.0 METHODOLOGY

3.1 Study area

3.1.1 The study area is the application boundary shown on Figure 1. The study area was extended beyond the site where appropriate to undertake species-specific appraisals as detailed below.

3.2 Desk study

3.2.1 The desktop study was undertaken in May 2022 and included:

- Derbyshire Wildlife Trust (DWT),
- Multi Agency Geographic Information for the Countryside (MAGIC) website³,
- Ordnance Survey (OS)⁴, and
- Aerial imagery⁶.

3.2.2 The geographical extent of the search area for biodiversity information was related to the significance of sites and species and potential zones of influence which might arise from development within the site. For this site the following search areas were considered to be appropriate:

- 10km around the site boundary for sites of International Importance (e.g. Special Area of Conservation (SAC), Special Protection Area (SPA), Ramsar site));
- 2km around the site boundary for sites of National or Regional Importance (e.g. Sites of Special Scientific Interest (SSSI)), protected or otherwise notable species and non-statutory designated sites of County Importance (e.g. Local Wildlife Sites (LWS);
- 1km for ancient woodland, and
- 2km for biological records.

³ www.magic.gov.uk accessed May 2022

⁴ www.bing.co.uk accessed May 2022

3.3 Field survey

Flora

- 3.3.1 HLPC carried out an Extended Phase 1 Habitat Survey of the site in April 2022. The survey was carried out by an experienced and suitably qualified ecologist. The survey was undertaken in accordance with 'Extended Phase 1' methodology⁵.
- 3.3.2 Specific habitat features were mapped using Target Notes (TN) to record ecological features of particular note where necessary.

Fauna

- 3.3.3 The fauna included within this assessment is based on the habitats present, data from the desk-based searches, and the following legislation⁶:
- Wildlife and Countryside Act 1981 (as amended);
 - The Protection of Badgers Act 1992;
 - Environment Act 2021;
 - The Conservation of Habitats and Species Regulations 2017 (as amended),
 - The NERC Act 2006, and
 - The Countryside Rights of Way Act 2000.

Amphibians

- 3.3.4 Waterbodies within 250m of the site boundary, not separated by major barriers to amphibian dispersal were identified using online Ordnance Survey maps⁷ and aerial imagery.
- 3.3.5 Waterbodies on site or within 250m of the site boundary, not separated by major barriers to amphibian dispersal, were identified using online Ordnance Survey maps and aerial imagery⁸ and those accessible were assessed for their suitability to support great-crested newts *Triturus cristatus* using a

⁵ Joint Nature Conservation Committee (2010) Handbook for Phase 1 Habitat Survey. A Technique for Environmental Audit.

⁶ See www.legislation.gov.uk

⁷ <https://www.bing.com/maps> [accessed May 2022]

Habitat Suitability Index (HSI). The HSI is a numerical index, between 0 and 1. Values close to 0 indicate unsuitable habitat, 1 represents optimal habitat (Oldham *et al.*, 2000)⁹.

Reptiles

- 3.3.6 An assessment of the suitability of the habitats present to support common reptile species was undertaken. In accordance with current guidance, this assessment involved a review of habitats and habitat structure for suitable shelter for reptiles such as areas of scrub and woodpiles, grassland with well-developed and varied structure, areas suitable for basking, large tussocks etc.
- 3.3.7 A presence/absence reptile survey using 30 Artificial Cover Objects (ACO's) or refugia according to Froglife guidelines (1999) was undertaken in June 2021 by HLPC during suitable weather conditions. ACOs were distributed along a linear vegetation and dense scrub habitat within the site boundaries where reptiles may bask. The approximate location and distribution of the refugia is shown in Appendix 3.
- 3.3.8 ACOs were constructed of c. 0.5m² sheets using bitumen roofing felt as recommended by Froglife. In addition, natural refugia features already present, i.e., rubble/brick piles and wooden planks, were searched. For areas that were inaccessible the refugia were placed on immediately adjacent where safe to do so.
- 3.3.9 The ACOs were left to 'bed in' for approximately two weeks, after which time seven non-consecutive survey visits were carried out during ideal weather conditions between June and July. During each visit, the ACOs were checked visually from a distance to determine whether reptiles were basking on their surface. The artificial refugia were then carefully approached and lifted to check for reptiles sheltering beneath them.
- 3.3.10 Weather during the survey visits was conducive for surveying for reptiles, being dry and warm or mild. Froglife guidelines (1999) recommend ideal
-

temperatures for reptile survey between 9°C and 18°C. Details on the survey timings and weather conditions are given in Table 2.

Table 1: Reptile survey timings and weather conditions.

Date	Time (h)	Weather conditions	Air Temperature °C
08.06.2021	18:45	Dry and clear.	15
22.06.2021	17:41	Dry and clear	15
24.06.2021	18:06	Hazy cloud	17
26.06.2021	07:47	Dry with 60% cloud	14
28.06.2021	17:22	Hazy cloud	17
30.06.2021	18:05	Dry with 10% cloud.	15
01.07.2021	08:13	Dry with 60% cloud.	16

Birds

3.3.11 Bird species identified at the time of survey were noted and nesting birds recorded as seen. An assessment of habitats was undertaken to determine the likely value to breeding and foraging birds.

3.3.12 Three breeding bird surveys were undertaken by Falco Ecology Ltd with April 22, May22 and July21 visits covering the core months of the breeding bird period. The territory mapping methodology was based on a reduced survey effort of the Common Bird Census (CBC) as described in both Gilbert *et al.*, 1998¹⁰ and Bibby *et al.*, 2000¹¹. The surveys were carried out during the mid-June to early July 2021 period. Details on the survey timings and conditions are given in Table 3 & 4.

Table 2: Breeding bird survey timings.

Visit	Date	Time (h)
1	21.07.2021	06:00 – 07:35
2	29.04.2022	06:30 - 08:00
3	15.05.2022	05:15 – 07:45

Table 3: Breeding bird survey weather conditions.

Visit	Visibility	Wind speed	Rain	Cloud	Air Temperature °C
1	Good	1	Nil	4/8	17-20
2	Good	0-1	Nil	5/8	15-17
3	Good	1-2	Nil	8/8	12-14

¹⁰ Gilbert, G., Gibbons, D.W. & Evans, J. 1998. Bird Monitoring Methods. Royal Society for the Protection of Birds. Pelagic Publishing Limited: Exeter.

¹¹ Bibby, C.J., Burgess, N.D. & Hill, D.A. 2000. Bird Census Techniques. Second edition. London: Academic Press.

- 3.3.13 Birds heard and seen outside the site were recorded to an approximate distance of 100m. Accurate territory counts outside the site were not obtained; however, the data collected provides an indication of what key species are in the vicinity of the site. The direction of travel of the BBS route was reversed on each visit to prevent temporal bias. The survey route followed the site boundary and along hedgerows within the site.

Bats

- 3.3.14 The potential for the site and immediate surrounds to support foraging and commuting bats were assessed, with particular regard given to the presence of the canal and surrounding fishing ponds to the north and west, with scattered scrub and hedgerows on site providing good foraging habitat with connectivity to surrounding habitats.

Tree Assessments

- 3.3.15 The tree assessments were undertaken from ground level, with the aid of a torch and binoculars, where required. As it is not known which trees will be affected by the Proposed Development at the outline stage further surveys in respect of trees had not been undertaken at the time of writing this report.

Automated Static Bat Detector and Transect Surveys

- 3.3.16 The potential for the site and immediate surrounds to support foraging and commuting bats was also assessed across the whole site with particular regard given to the presence of habitat features such as, ponds and hedgerows providing good connectivity across the site and wider landscape.
- 3.3.17 Three seasonal transect survey were carried out during June 2021, August 2021 and May 2022. The transect routes are shown on Figure 3. The surveys targeted habitats and features suitable for foraging and commuting activity, including hedgerows dense and scattered scrub and also adjacent to waterbodies.
- 3.3.18 The surveyors were equipped with Echo Meter Touch Pro and Elekon Batlogger M bat detectors to listen and view the echolocations of bats during the surveys. The transect routes were walked at a steady pace, during which all visual and audible bat activity was recorded and if required, later analysed using BatSound, Bat Explorer and Kaleidoscope Pro software.

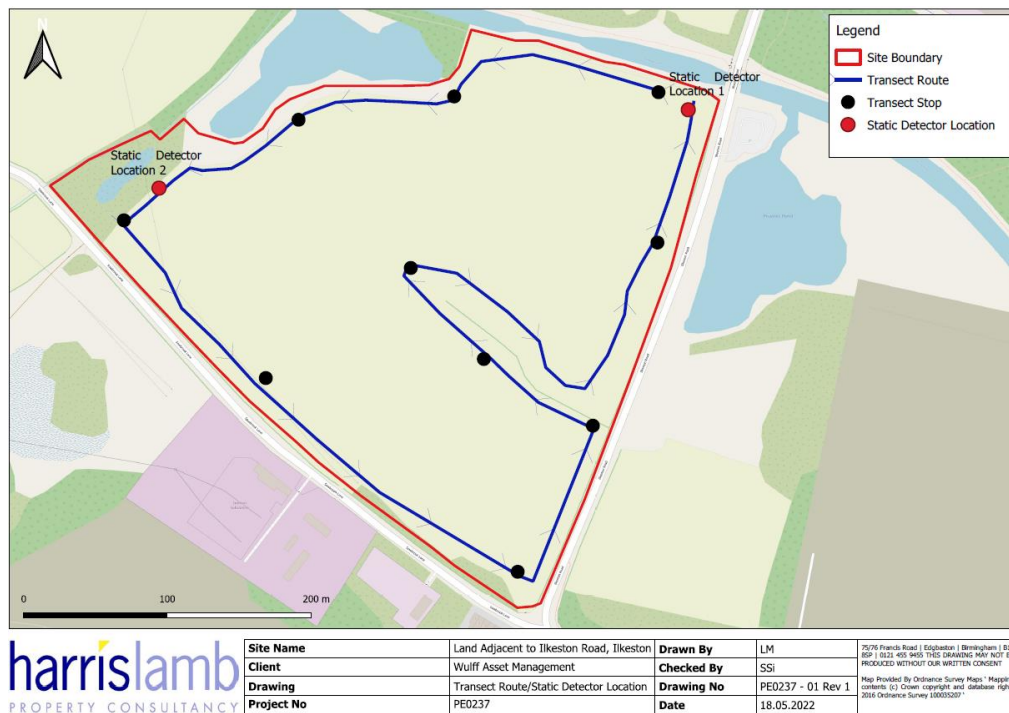


Figure 1: Map of transect routes and static detector location.

3.3.19 Weather conditions during the surveys were considered suitable for bat activity and are shown in Table 7 below. All timings were based on best practice guidelines by Collins, 2016¹².

Table 5: Transect survey timings and weather conditions.

Survey Month	June 21		August 21		May 22	
Date	08.06.2021		09.08.2021		11.05.2022	
Sunset Time (h)	21:20		20:35		20:58	
Survey Time (h)	Start	End	Start	End	Start	End
	21:20	22:55	20:35	22:10	20:50	22:30
Temperature (°C)	20	18	16	15	12	11
Cloud (Octas)	2	2	7	7	3	3
Wind (Beaufort)	1	1	1	1	1	1
Precipitation	None		None		None	
General	Clear and dry		Dry and overcast		Clear sky and dry	

¹² Bat Conservation Trust (BCT) 2016. Bat Surveys for Professional Ecologists, Good Practice Guidelines, 3rd Edition

3.3.20 In addition to the transect surveys. A single static detector was deployed on two occasions within the site, once within the north-eastern portion of the site and again within the western boundary of the site. Both locations were chosen based on habitat features most likely to be used by foraging and commuting bats (see Figure 3).

3.3.21 The static detector surveys were left out on site between 7 and 9 nights per month. The detectors were programmed to begin recording 30 minutes before sunset and cease recording 30 minutes after sunrise each night. Details on the survey timings and conditions are given in Table 6.

Table 6: Static detector survey timings and weather conditions.

Date Deployed	Date Collected	No. of Survey Nights	Nightly Temperature Range (°C)
27.08.2021	04.09.2021	7	27.08.21: 11-16°C 28.08.21: 13-20°C 29.08.21: 12-20°C 30.08.21: 13-17°C 31.08.21: 12-16°C 01.09.21: 13-17°C 02.09.21: 13-17°C 03.09.21: 12-15°C
11.05.2022	20.05.2022	9	11.05.22: 13-11°C 12.05.22: 8-7°C 13.05.22: 11-11°C 14.05.22: 12-9°C 15.05.22: 14-12°C 16.05.22: 12-12°C 17.05.22: 13-12°C 18.05.22: 15-10°C 19.05.22: 12-10°C 20.05.22: 14-12°C

Badgers

3.3.22 Where accessible up to 30m from the site boundary, areas of suitable habitat were surveyed for evidence of badger activity, such as mammal paths, setts, snuffle holes or latrines.

Riparian mammals

3.3.23 Nutbrook Canal is present beyond the northern boundary of the site. It was assessed for its suitability to support water vole *Arvicola amphibius*, otter *Lutra lutra* and white-clawed crayfish *Austropotamobius pallipes*.

Scoped out

- 3.3.24 Survey for hazel dormice *Muscardinus avellanarius* were scoped out due to lack of records for this species in this locality and poor habitat suitability.

Other notable species

- 3.3.25 Signs of other notable species were recorded as seen.

Legally controlled species

- 3.3.26 Evidence of species listed on Schedule 9 of the Wildlife and Countryside Act (1981) as amended were recorded as seen.

3.4 Assessment limitations

- 3.4.1 Any absence of desk study records cannot be relied upon to infer absence of a species/habitat as the absence of records may be a result of under-recording within the given search area.
- 3.4.2 Phase 1 Habitat survey aimed to characterise the habitat on site and is not intended to give a complete list of plant species present.
- 3.4.3 Ecological surveys are limited by factors that affect the presence of plants and animals, such as the time of year, weather, migration patterns and behaviour. The initial survey was undertaken in November, which is towards the end of growing season.
- 3.4.4 This report assumes that construction will commence within 1-2 years of the date of the assessment in accordance with the British Standard 42020:2013 unless otherwise stated.
- 3.4.5 During the surveys the site had been cleared of dense hawthorn scrub within the northern section of the site.

4.0 RESULTS

4.1 Ecological designations

Internationally designated sites for nature conservation

- 4.1.1 No internationally designated sites for nature conservation were identified within 10km of the site.

Nationally designated sites for nature conservation

- 4.1.2 Four nationally designated sites are located within 2 km of the site boundary, all four being Local Nature Reserves (LNR), the closest being Pioneer Meadows LNR located c. 0.53 km west of the site boundary. The reserve contributes to the Lowland Derbyshire Biodiversity Action Plan and habitats include neutral grassland, mixed broad-leaved woodland and plantations, ancient hedgerows and ponds with associated vegetation. The remaining sites are summarised in Table 7 below.

Table 7: Non-statutorily designated sites for nature conservation recorded within 2km of the site.

Site Name	Feature	Approx. location from site
Trowell Marsh LNR	No available description	1.43 km north-east
Stoney Clouds LNR	No available description	1.73 km south-east
Stanton Gate LNR	No available description	2 km south-east

Non-statutorily designated sites for nature conservation

- 4.1.3 Twenty-one non-statutorily designated sites for nature conservation (Local Wildlife Sites (LWS)) were identified within 2km of the site. Three non-statutorily designated sites border the site with Kirk Hallam Fishing Ponds Local Wildlife Site (LWS) is located directly adjacent to the north-western boundary of the site. Nutbrook Canal & Fields LWS is located adjacent to the northern boundary of the site. Ilkeston Road Pond and Nutbrook Canal

LWS is located immediately beyond Ilkeston Road beyond the eastern boundary, the remaining LWS are summarised in Appendix 2.

- 4.1.4 These sites are considered to be of importance to nature conservation up to a local level.

Ancient woodland

- 4.1.5 One ancient woodland was identified within 1 km of the site, Thacker Wood is located 0.9 km south-west of the site boundary.

Priority Woodland

- 4.1.6 One ancient woodland was identified within 1 km of the site, Thacker Wood is located 0.9 km south-west of the site boundary.

4.2 Habitats

- 4.2.1 All habitats recorded within the site are described below and are shown on Figure 2. Site photographs are provided in Appendix 1.



Site Name	Land Adjacent to Ilkeston Road, Ilkeston	Drawn By	LM	75/76 Francis Road Edgbaston Birmingham B16 8SP 0121 455 9455 THIS DRAWING MAY NOT BE PRODUCED WITHOUT OUR WRITTEN CONSENT
Client	Wulff Asset Management	Checked By	SSI	
Drawing	UK Habitat Classification Map	Drawing No	PE0237 - 01 Rev 1	Map Provided By Ordnance Survey Maps * Mapping contents (c) Crown copyright and database rights 2016 Ordnance Survey 100035207
Project No	PE0237	Date	18.05.2022	

Figure 2: Phase 1 habitat map (Not to scale)

Modified grassland

- 4.2.2 The majority of the site comprises modified semi-improved grassland which appears to be managed and last cut in Autumn 2021.
- 4.2.3 Species recorded include meadow foxtail *Alopecurus pratensis*, meadow vetchling *Lathyrus pratensis*, common hogweed *Heracleum sphondylium*, broadleaved dock *Rumex obtusifolius*, meadow buttercup *Ranunculus acris*, creeping thistle *Cirsium arvense*, nettle *Urtica dioica*, Yorkshire fog *Holcus lanatus*, dandelion *Taraxacum officinale*, creeping cinquefoil *Potentilla reptans*, great willowherb *Epilobium hirsutum*, tufted hairgrass *Deschampsia cespitosa*, ragwort *Jacobaea vulgaris*, red clover *Trifolium pratense*, field speedwell *Veronica persica*, creeping buttercup *Ranunculus repens*, occasional greater stitchwort *Stellaria holostea*, fescue *Festuca* spp., cow parsley *Anthriscus sylvestris* and rarely occurring white dead nettle *Lamium album* and red dead nettle *Lamium purpureum*.
- 4.2.4 The grassland habitat is considered to be of site level importance to nature conservation based on the common species assemblage recorded.

Scattered Scrub

- 4.2.5 A small plantation of scrub is located within the south-eastern corner of the site and also a small triangle located in the north-western aspect of the site, species recorded include hawthorn *Crataegus monogyna*, blackthorn *Prunus spinosa*, dogwood *Cornus sanguinea*, occasional goat willow *Salix caprea* and bramble *Rubus fruticosus* agg. and common stinging nettle with rarely occurring gorse *Ulex europaeus*.
- 4.2.6 This habitat is considered to be of site level importance to nature conservation based on the common species assemblage recorded and its limited extent.

Dense Scrub

- 4.2.7 A small section of dense young blackthorn scrub with occasional elder is located adjacent to the plantation scrub within the south-east of the site and the eastern hedgerow of the site bordering Ilkeston Road contains dense thickets of blackthorn which have pushed into the field in places widening the hedgerow to 10 m wide along the majority of its length.

- 4.2.8 A large area of dense scrub and young woodland is located adjacent to the pond to the west of the site. Species recorded include ash, hawthorn, goat willow, crack willow *Salix × fragilis*, blackthorn, oak *Quercus robur* with an understory of bramble, willowherb, nettle, field rose *Rosa arvensis* and rarely occurring gorse.
- 4.2.9 This habitat is considered to be of site level importance to nature conservation based on the common species assemblage recorded and limited extent.

Intact species-poor hedgerow

- 4.2.10 Three intact native hedgerows are located along the boundaries of the site with one extending into the centre of the site:
- H1 – Hedgerow 1 is located along the eastern boundary that extends into the middle of the site which is c. 4 to 6 m high and c. 10 to 15 m wide in parts. This hedgerow is unmanaged and dominated by hawthorn and blackthorn, it contained standard trees occasionally along its length with species of oak, ash *Fraxinus excelsior* and willow *Salix* spp. The hedgerow also contains pockets of dense bramble. Dense blackthorn thickets have formed along the hedgerow pushing into the field and the hedgerow/thickets are up to 10-15m wide along the majority of its length.
 - H2 – Hedgerow 2 is located along the south-eastern boundary of the site which is managed and c. 2 to 3 m high. This hedgerow is blackthorn dominated with small field margins containing species of cleavers *Galium aparine*, garlic mustard *Alliaria petiolata*, nettles and hogweed.
 - H3 – Hedgerow 3 is located along the southern boundary of the site, which is managed and c. 1.5 to 2 m high and 2 to 4m wide in sections. The hedge is split into three distinct sections. Species include blackthorn, bramble, and snowberry *Symphoricarpos albus*.
 - H4 – Hedgerow 4 is an unmanaged hawthorn hedge which is located along the northern boundary adjacent to the canal and is c. 6 m high and 4 to 6m wide.

- 4.2.11 Hedgerows H1, H2 and H4 are dominated by hawthorn and blackthorn with occasional native trees and provide valuable habitat. H3 is largely comprised of bramble and snowberry and is considered to be of poor quality. The native hedgerows do not contain the required number of species to be classified as important under the Hedgerow Regulations 1997 and do not support any qualifying features such as ditch banks, ditches or walls. Irrespective of the number of species contained within a hedgerow, native hedgerows are classified as a habitat of principal importance under the NERC Act.
- 4.2.12 Collectively the hedgerows are considered to be of value at the site to local level due to the habitat connectivity they provide.

Pond

- 4.2.13 A single defunct pond was located within the south-western aspect of the site which was dry at the time of the survey and dominated by bull rush *Typha latifolia* with 100% cover. The pond was also recorded as dry during the June 2021 reptile surveys and is unlikely to hold water for the majority of the year and is of negligible ecological value.

4.3 Species

Amphibians

- 4.3.1 Records of great crested newt and common amphibians within 2km of the site were provided by DWT the closest occurring approximately 225 m from the site to the south west recorded from within the former Stanton Ironworks site. No records were provided for the site itself, Nutbrook Canal or any of the associated fishing ponds located within proximity to the site.
- 4.3.2 Five ponds were identified within 250 m of the site with Nutbrook Canal also located immediately beyond the northern boundary. One pond (defunct) is located within the site to the west however, the pond was completely dry at the time of the April 2022 ecology survey and it was also recorded as dry during the June 2021 reptile surveys. The pond contains 100% dense cover of emergent vegetation and due to a lack of permanence, is not considered to be a viable breeding pond for great-crested newts (GCN). Three further ponds are associated with the Stanton Fishing Club including Sowbrook

Pond (also known as Roughs Pond) to the north of the site, a ponded section of the Nutbrook Canal to the north of the site and Privates Pond to the east of the site beyond Ilkeston Road. All of the ponds associated with the fishing club are heavily stocked with fish including carp, pike and chub which affects their suitability to support great crested newt with the two ponds achieving a HSI score of 0.48 which is classified as being of poor suitability, mostly influenced by their poor water quality (low invertebrate diversity due to fish predation) and supporting few submerged plants due to high turbidity which caused by fish, particularly larger species including carp.

- 4.3.3 The Nutbrook Canal section scored at the lower end of 'below average', suitability being limited by the same factors as seen within the two fishing ponds, but with potentially better water quality and macrophyte cover resulting in the slightly elevated score.

Table 8: Habitat Suitability Scores for Ponds Occurring within 250 m of the site

ARGUK GCN HSI Calculator									
	Pond Name Grid Ref	Example SK123456	Sowbrook Pond (aka Roughs Pond) SK 46339 39495	Privates Fishing Pond SK 46644 39371	Nutbrook Canal Fishing				
SI No	SI Description	SI Value	SI Value	SI Value	SI Value	SI Value	SI Value	SI Value	SI Value
1	Geographic location	1.00	1	1	1				
2	Pond area	0.50							
3	Pond permanence	0.90	0.9	0.9	0.9				
4	Water quality	1.00	0.33	0.33	0.67				
5	Shade	1.00	1	1	1				
6	Water fowl effect	1.00	0.67	0.67	0.67				
7	Fish presence	1.00	0.01	0.01	0.01				
8	Pond Density	0.65	1	1	1				
9	Terrestrial habitat	1.00	1	1	1				
10	Macrophyte cover	0.90	0.3	0.3	0.5				
HSI Score		0.88	0.48	0.48	0.54	0.00	0.00	0.00	0.00
Pond suitability (see below)		Excellent							
Categorisation of HSI Score by Lee Brady									
HSI Score		Pond Suitability							
< 0.50		Poor							
0.50 - 0.59		Below average							
0.60 - 0.69		Average							
0.70 - 0.79		Good							
> 0.80		Excellent							
Based on ARGUK advice note 5 - Great Crested Newt Habitat Suitability Index									

- 4.3.4 A further pond record was provided for the former Stanton Iron Works site located 250m to the south west of the site which has been recorded as supported GCN in the past with records provided for 2015. The pond is located within an extensive area of optimal habitat extending further to the west.

- 4.3.5 Based on the lack of identified great-crested newt breeding habitat on and around the site and due to the distance from the nearest recorded breeding pond, it is considered unlikely that GCN will be present on site. The

development site is located 250 m from the recorded pond on the former Iron Works and separated by Sowbrook Lane which is likely to represent a further barrier. The Iron Works pond is also located within an area of optimal habitat and the pond is within proximity to further GCN ponds located to the south east and has potential to be part of a larger metapopulation with interaction likely to occur between the recorded ponds.

Reptiles

- 4.3.6 Nine records of grass snake *Natrix natrix* and two records of barred grass snake *Natrix helvetica* were provided by the data search species within 2km of the site were provided by NBRC. The closest record within 10 years is located 0.96 km east of the site boundary, the data con produced historic records from 1995 within the site boundary.
- 4.3.7 The habitats on site were considered to have some suitability to support reptiles, with margins of dense scrub and woodland offering the greatest potential. During the presence/absence survey a single grass snake was recorded in the north-east portion of the site. Full detail of the reptile survey can be found in Appendix 3.
- 4.3.8 Based on survey data gathered a low population of grass snake could use the site likely to be using the canal habitats and the site is considered to be of site level importance to populations of grass snake.

Birds

- 4.3.9 Records of birds within 2km of the site were provided by NBRC, including red list species such as skylark *Alauda arvensis*, starling *Sturnus vulgaris* and lapwing *Vanellus vanellus*.
- 4.3.10 The habitats on site were considered suitable for nesting and foraging birds associated with the scattered trees, scattered and dense scrub and hedgerows.
- 4.3.11 A total of 36 species were recorded across the 2021 & 2022 BBS survey. Of these, 13 were species of conservation concern, including two red list species (Skylark and Mistle thrush) and 11 included on the amber list of conservation concern. Of the 13 species of conservation concern, 10 showed evidence of breeding or holding territory within the site itself and 3

including mallard, moorhen and sparrowhawk were likely to be holding territory in the surrounding area. Birds of conservation concern recorded on site are listed below in Table 9.

Table 9: Species of conservation concern breeding or holding territory within the site and wider survey area.

Species	BOCC Status	Notes
Skylark	Red List	Single birds seen over site on all survey visits, considered likely to support 1 -2 territories on site.
Mistle Thrush	Red List	Heard singing on and around the site and considered to be holding territory.
Stock Dove	Amber List	Seen on site in limited numbers, considered to be holding territory on or within proximity to the site.
Song Thrush	Amber List	Heard singing on and around the site and considered to be holding territory.
Whitethroat	Amber List	Seen on site in limited numbers, considered to be holding territory on or within proximity to the site.
Woodpigeon	Amber List	Seen on site in limited numbers, considered to be holding territory on or within proximity to the site.
Bullfinch	Amber List	One territory within woodland in the west of the site was the only one identified during the survey.
Dunnock	Amber List	Seen on site in limited numbers, considered to be holding territory on or within proximity to the site.
House sparrow	Amber List	Seen on site in limited numbers, considered to be holding territory on or within proximity to the site.
Wren	Amber List	Three pairs considered to be holding territory in scrub and hedgerow areas within the site.

4.3.12 A further 23 bird species (not of conservation concern) were recorded, many of which were considered likely to be holding territory within proximity to the site, but none were recorded in particularly notable numbers or densities. Territories are largely associated with boundary hedgerows and scrub to site boundaries with the exception of skylark.

4.3.13 Foraging and nesting birds including skylark are potential receptors to the proposed development of the site. Whilst the site habitats are shown to

support a number of bird species, the site habitats are limited in their extent and there is a significant amount of habitat to the south and west of the site which is of equal or greater quality. Based on the data gathered and the availability of suitable habitat outwith the site, site habitats are considered to be of importance to birds at Local level.

Bats

- 4.3.14 Records of bat species records within 2km of the site were provided by NBRC. Species records included common pipistrelle *Pipistrellus pipistrellus*, unidentified pipistrelle species bats *Pipistrellus* sp., brown long-eared bat *Plecotus auritus*, Daubenton's *Myotis daubentoni* and two noctule *Nyctalus noctula*. The data search provided two *Pipistrelle* sp sightings located beyond the eastern boundary associated with the fishing pond. These records are from 2010 and 1999. The remaining records are beyond 400 m of the site boundary. Numerous bat roost records were provided within the data search, all of which are associated with housing estates within Ilkeston beyond 1 km of the site boundary.

Foraging and commuting

- 4.3.15 The site boundaries support hedgerows that are generally intact and thick providing good foraging and commuting potential for bats throughout the site, with large fishing pond, woodland, scrub and the adjacent canal providing quality habitat within the wider area.
- 4.3.16 The transect surveys returned a small number of total passes across the survey months, with the most activity recorded in May 2022 with 9 passes and the least activity in June 2021 with 4 passes. The highest level of activity was recorded by common pipistrelle. At least 4 different species were recorded during the May 2022 transect surveys including *Myotis* bat species which were actively foraging over and around the Sowbrook fishing pond to the north west of the site. A summary of the transect survey results are given in Table 10.

Table 10: Summary of transect survey results.

Species	June 21	August 21	May 22	
Common pipistrelle	4	6	5	15
Soprano pipistrelle	-	2	1	3
Noctule	-	-	1	1
<i>Myotis</i> sp.	-	-	2	2
Total no. of passes	4	8	9	21

4.3.17 Most of the hedgerows on the site were used by bats but with limited numbers recorded during the transect surveys. Some areas of the site were more heavily utilised, particularly the areas adjacent to the open fishing pond to the west and the canal to the north.

4.3.18 The static detectors only count bat passes and do not differentiate between commuting and foraging behaviour. As a result, a single bat passing the detector on multiple occasions whilst foraging would result in a spike in the number of passes on a detector, which can account for higher counts on some static detectors. A summary of the static detector surveys are given in Table 11.

Table 11: Summary of static detector survey results.

Species	Location	No. of species	Total no. bat passes	Average passes per night
27.08.21 – 04.09.21 (8 nights)	1	4	219	55
11.05.22 – 20.05.22 (9 nights)	2	4	181	45
Total			400	

Species	Aug 21 total passes	May 22 total passes	Total
Common pipistrelle	99	147	246
Soprano pipistrelle	62	11	73
Noctule	7	2	9
<i>Myotis</i> sp.	51	21	72
Total no. of passes	219	181	400

4.3.19 The habitats on site are likely to contribute to a wider foraging resource used by bats within the local area and the canal corridor and associated fishing ponds are likely to be a key foraging resource for bats. The habitats on site are likely to be used by foraging bats and site boundaries have been shown to be used by both foraging and commuting bats, but at a relatively low level in terms of both the activity recorded and the species recorded on site. The site habitats are considered to be of importance to foraging bats at the site level.

Roosting - Trees

4.3.20 Three trees were considered to support features of potential interest to roosting bats were recorded on site. This included a pair of field maple trees growing together (TN1; Figure 2) in the centre of the northern field were identified to be of moderate Bat Root Potential (BRP), containing woodpecker holes and a large crack within a branch. A mature ash was also identified within the eastern hedgerow of the site (TN2; Figure 2) considered to provide moderate BRP. The ash tree contained woodpecker holes and also a broken/split limb. No specific bat activity surveys were undertaken to trees at the time of the assessment.

4.3.21 It is recommended that bat activity surveys are undertaken to the 3 trees recorded as having moderate BRP within the main bat activity and survey season (May – August) to determine the likely presence or absence of bats.

It is recommended that the trees are subject to 2 nocturnal surveys or tree climbing surveys in accordance with best practice guidelines.

Badger

- 4.3.22 Records of badger within 2km of the site were provided by NBRC.
- 4.3.23 No evidence was found on site to suggest it is being used by badger and the habitats are considered to provide minimal suitable habitat to badgers and only likely to be used as part of a much wider foraging resource. As badgers are known to be present within the wider area, there is a risk that badgers may use or commute across the site from time to time and foraging badgers are considered to be a potential receptor in relation to the development as a precautionary approach.

Riparian Mammals

- 4.3.24 Seventy-four records of water vole and one record otters within 2km of the site were returned by NBRC. Eleven of these records are within 10 years and the remaining are historic records, with a large amount associated with the canal beyond the northern boundary and the fishing pond immediately beyond the north-western boundary. Three records were provided to be associated with the fishing pond beyond the northern boundary. All three of these records date from 2004. One record of otter in 2018 was provided within the data search and located on Ilkeston Road immediately beyond the eastern boundary.
- 4.3.25 No sightings or evidence of water vole or otter were found during the survey visit which included a search along the canal and adjacent Sowbrook Pond (also known as Roughts Pond). The canal banks are constructed from stone in places but have developed a natural fringe of dense vegetation along its length and natural areas of banking are likely to be present with potential to be used by water vole and the fishing ponds within the wider area surrounding the site have good suitability to support this species. The habitats on site are unlikely to be used directly by water vole should they be present and the site is buffered from the canal by a 5-10 m strip of scrub and hedgerow which provides natural screening between the site and the canal.

- 4.3.26 Whilst no records were provided for otter along the canal, the canal has connectivity with Nut Brook and is considered to have potential to be used by otter. The band of scrub and hedgerow habitat between the canal and the site is generally thin and highly disturbed by anglers accessing fishing pegs placed at regular intervals along both the canal and Sowbrook Pond (also known as Roughts Pond) which are accessed via a footpath which runs along the edge of site. The habitat between the site and the canal are unlikely to support resting otters, or otter holts due to its limited extent and disturbed nature. Otter activity, should they be present within the wider area is likely to be limited to commuting and foraging activity along the canal corridor.

Invasive species

- 4.3.27 No species listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) were included within supplied records and none were recorded during the survey.

Other notable species

- 4.3.28 Hedgehogs have been recorded within 2km of the site. The hedgerows along the site boundaries and scrub area to the south-west are suitable for supporting this species and hedgehogs could be a potential receptor with respect to the proposed development.

5.0 ASSESSMENT OF EFFECTS AND MITIGATION MEASURES

5.1 The proposed development

5.1.1 Outline planning permission is being sought to provide a residential development with associated road infrastructure and areas of public open space.

5.1.2 The following assessment is based on proposed development as shown on Indicative Masterplan (RDC1146/002 dated February 2022).

5.2 Statutory and non-statutory designated sites for nature conservation

5.2.1 No internationally designated sites for nature conservation were identified within 10km of the site.

5.2.2 Four nationally designated sites were located within 2 km of the site boundary. All four being Local Nature Reserves (LNR), the closest being Pioneer Meadows LNR located c. 0.53 km west of the site boundary. The reserve contributes to the Lowland Derbyshire Biodiversity Action Plan and habitats include neutral grassland, mixed broad-leaved woodland and plantations, ancient hedgerows and ponds with associated vegetation.

5.2.3 Twenty-one non-statutorily designated sites for nature conservation (Local Wildlife Sites (LWS) were identified within 2km of the site.

5.2.4 Of the twenty-one LWS, three are located immediately adjacent to the site with Nutbrook Canal & Fields LWS to the north, Privates Pond and Nutbrook Canal ER188 to the east and Sowbrook Pond ER045 to the north. Part of the Sowbrook Pond designation falls within the north-western corner of the site and is listed for its standing open water habitats.

5.2.5 Whilst the site is located close to the adjacent wildlife sites, the development is not considered likely to directly impact upon the Nutbrook Canal and fields to the north, nor the Privates Pond LWS to the east which is separated from the site by Ilkeston Road.

5.2.6 The Sowbrook Pond LWS falls partially within the development site with the LWS redline including the north-western tip of the development site which contains young woodland and scrub habitat around a defunct pond. Without

mitigation, the development has potential to impact upon the Sowbrook Pond ER045 LWS site.

Potential Impacts

- 5.2.7 The development has potential to directly impact upon the Sowbrook Pond ER045 LWS site through direct land take of habitats and via indirect impacts caused by the construction phase of the development. The scheme has been designed to include an area of POS for recreational use by new residents to minimise indirect impacts on local wildlife sites.

Mitigation Measures

- 5.2.8 The development has been designed to retain the habitats within the LWS designated area to ensure there is no direct impacts upon the LWS. The woodland and scrub habitat along with the pond will be retained in this area and a strip of existing woodland and scrub habitat will also be maintained between the edge of the development and the entirety of the LWS to protect and screen the area.
- 5.2.9 As a precaution, works should proceed under a Construction Environmental Management Plan (CEMP) to minimise pollution/construction impact and secured via condition.

Significance

- 5.2.10 Assuming the above measures are secured through a planning condition it is anticipated that the proposed development would not result in an adverse impact to the Sowbrook Pond ER045 LWS or adjacent LWS sites.

Enhancement

- 5.2.11 The layout has been designed to provide ecological enhancement along the northern boundary of the site to compliment those within the LWS and to buffer the canal and LWS from the development. Areas of greenspace Public Open Space (POS) and attenuation basins have been included within this area to improve the overall biodiversity value of the site and these would include areas of wildflower meadow and grassland planting to increase the biodiversity value for a wide range of species.
- 5.2.12 No additional monitoring is considered to be required at this stage.

5.3 Habitats

Potential Impacts

- 5.3.1 The proposed development will require land-take of modified semi-improved grassland habitat, with minimal losses of scrub and hedgerow habitat and trees. The proposed development is at an outline stage and details of planting schedules cannot be confirmed at this stage. However the scheme has been designed to include meadow grassland planting particularly around attenuation ponds to provide valuable habitat for a wide range of species including invertebrates and grass snake and will improve the value of these areas for foraging birds, bats and hedgehog.
- 5.3.2 The site includes the retention of most hedgerows on site with a wider green corridor which will maintain commuting and foraging routes for wildlife.

Mitigation measures

- 5.3.3 Retained trees and hedgerows should be protected through the construction phase following advice set out within the British Standard Trees in Relation to Design, Demolition and Construction BS:5837:2012.
- 5.3.4 Standard best practice pollution prevention guidelines should be followed and set out within a CEMP secured via planning condition.
- 5.3.5 As the scheme is at an outline stage, at the reserved matters stage a detailed scheme and associated landscape design should be produced with an ecologist to demonstrate biodiversity improvement in accordance with planning policy including maintaining commuting and foraging routes for wildlife, appropriate grassland conservation seed mixes and management regimes, additional hedgerow planting where necessary to improve the species diversity/length of hedgerows, protected species enhancements (see below). This should be detailed within in Landscape and Ecological Management Plan (LEMP) and secured via a suitable planning obligation.

Significance

- 5.3.6 Assuming the above measures are secured through a planning condition it is anticipated that no adverse impacts to nature conservation outside a site level would occur.

Enhancement

- 5.3.7 Assuming the LEMP and any associated planning obligations are secured it is anticipated that the proposed development would deliver a biodiversity enhancement.

Monitoring

- 5.3.8 The success of the landscape scheme should be monitored through standard landscape management practices detailed within the Landscape and Ecological Management Plan (LEMP) or similar.

5.4 Species

Reptiles

- 5.4.1 Common reptiles are protected by Section 9(5) of the Wildlife and Countryside Act 1981 (as amended)¹³.

Potential impacts

- 5.4.2 The loss of grassland and scrub habitat could result in harm to common reptile species including grass snake which have been recorded on site.

Mitigation measures

- 5.4.3 A detailed Reptile Mitigation Strategy should be agreed with the LPA and implemented prior to development commencing and secured via planning condition. The RMS should detail how reptiles will be safeguarded and protected during the works, timing of works, enhancement measures (e.g. location of hibernacula). The method statement should outline the approach taken to safeguard reptiles during site clearance, and during the construction phase and should outline the roles and responsibilities of those involved.

Significance

- 5.4.4 Assuming the above measures are secured through a planning condition it is anticipated that the proposed development would not result in an adverse impact to reptiles, should they be present at the time of works.

Enhancement

¹³ See www.legislation.gov.uk for full details throughout this report

- 5.4.5 The site has been designed to provide commuting and habitat corridors around the site boundaries and further specific enhancements should be included within the development to improve the site for reptiles, particularly along the canal and the adjacent LWS. Enhancements should include the creation of basking banks and hibernacula within the north of the site to around attenuation and scrub habitat areas.

Monitoring

- 5.4.6 No additional monitoring is considered to be required at this stage.

Birds

- 5.4.7 All species of native British birds are protected only the Wildlife and Countryside Act 1981 (as amended) making it an offence to intentionally kill, injure or take any species of wild bird, and to take, damage or destroy their nests or eggs. Several species receive higher levels of protection from disturbance under the Schedule 1 of the Act. Several declining bird species are also Priority Species under the NERC Act 2006.

Potential impacts

- 5.4.8 The development will result in the loss of open grassland areas which have been shown to support both foraging and nesting birds, most notably skylark with 1 to 2 pairs considered likely to be breeding on site. The development will result in the loss of minor areas of scrub and hedgerow habitat, but the majority will be retained within the development and the impacts to hedgerow and woodland birds is considered to be minimal.

Mitigation measures

- 5.4.9 The areas of retained grassland are unlikely to be of sufficient size to provide skylark nesting habitat and mitigation for the loss of nesting habitats would need to be delivered off-site.
- 5.4.10 Retained hedgerows and wildlife corridors should be improved through additional species planting to benefit birds as set out above to increase the value of hedgerows on site and plant new native trees for the future benefit of nesting and foraging birds.

- 5.4.11 As a precautionary measure, any vegetation should be removed outside of the nesting bird season (nesting season runs March-August, inclusive) where practicable. Should the works be scheduled during the nesting bird season, it is advised that a pre-works inspection for nesting birds is undertaken by a suitably experienced ecologist immediately beforehand.
- 5.4.12 To prevent disturbance or harm to nesting birds, work should not be carried out within a minimum of 5m of any in-use nest, although this distance could be more depending on the sensitivity of the species.

Significance

- 5.4.13 Assuming the above measures are secured through a planning condition it is anticipated that the proposed development would not result in an adverse impact to breeding birds.

Enhancement

- 5.4.14 Installation of 12 nesting bird boxes located throughout the development on retained trees or buildings would provide nesting opportunities for local bird species and should be set out within the LEMP at the detailed design stage.
- 5.4.15 The final landscape design for the scheme should aim to use wildlife friendly planting throughout the scheme to help enhance the site for birds and should be detailed within the LEMP.

Monitoring

- 5.4.16 No additional monitoring is considered necessary outside the standard landscape planting maintenance requirements.

Bats

- 5.4.17 In Britain all bat species and their roosts are legally protected, by both the Wildlife and Countryside Act 1981 (as amended) and The Conservation of Habitats and Species Regulations 2017 (as amended). Several species are also Priority Species under the NERC Act 2006.

Potential impacts

- 5.4.18 The development will result in the loss of grassland habitat with smaller losses of scrub, hedgerow and trees which are likely to be used by foraging and commuting bats. In addition, artificial lighting could disrupt potential

commuting and foraging activities of bats, particularly around the site boundaries.

- 5.4.19 Should trees require felling to accommodate the final detailed design then there is potential to adversely affect roosting bats without mitigation.

Mitigation measures

- 5.4.20 Any temporary construction or permanent lighting should be kept to a minimum and be sensitive to local bat foraging and commuting activity and avoid light spill over new or retained planting.
- 5.4.21 To minimise disturbances to bats key foraging areas have been retained and incorporated into the layout which retains key foraging and commuting corridors along all boundaries. The detailed reserved matters layout should demonstrate how these corridors are retained with a detailed lighting strategy. At this stage a lighting strategy should be produced for the development to ensure that key commuting and foraging areas around the site are not affected by light spill from the development. The strategy should aim to retain dark corridors to site boundaries and minimise light spill onto potential foraging areas in and around the site. The lighting strategy should be secured via a planning condition.
- 5.4.22 Prior to works affecting any tree(s) within the site they should be re-appraised by a licensed bat ecologist and if required bat surveys undertaken to determine the likely presence or absence of bats either via nocturnal surveys or tree climbing surveys in accordance with best practice guidelines. Should a bat roost(s) be found no works should occur to trees or associated hedgerows on site until an appropriate licence from Natural England has been granted and all required mitigation put in place.

Significance

- 5.4.23 Assuming the above measures are secured through a planning condition it is anticipated that the proposed development would not result in a significant adverse impact to foraging, commuting, and roosting bats.

Enhancement

- 5.4.24 The installation of bat roost boxes within the development is recommended to provide suitable roosting areas for bats. Installation of 8 no. bat roost

boxes (Schwegler 2F bat boxes or similar) should be erected on retained trees, or built into the fabric of the buildings at key locations around the development. The boxes should be placed on south facing aspects at a minimum height of 4m and in locations free from artificial lighting or clutter beneath to ensure bats are not impeded when exiting from the boxes.

Monitoring

- 5.4.25 No additional monitoring is considered to be required at this stage.

Badgers

Potential impacts

- 5.4.26 Badgers are not considered to be present on site and no direct impacts to badger or their sett is anticipated. However, badgers are considered likely to be present within the area and may commute across the site from time to time and construction works have potential to impact upon badgers.

Mitigation measures

- 5.4.27 Prior to construction or enabling works commencing a pre-start badger survey should be undertaken by an experienced ecologist. Should badgers be found then no works should commence within a minimum 30m buffer from the identified badger sett until appropriate mitigation and if required Natural England licence has been obtained.
- 5.4.28 The Construction and Environmental Management Plan (CEMP) should identify an Ecological Clerk of Works and include the following information.
- 5.4.29 All excavations that have potential to flood should be completely covered overnight or securely fenced off to ground level to prevent incursion by badgers. Any uncovered shallow excavations should have a ramp installed at a no greater than a 45° angle, to allow badgers to escape.
- 5.4.30 Any open drainage or pipework >0.2 m diameter should be blocked at the end of each shift to prevent entry by badgers and all materials used on site should be securely stacked to avoid collapse should they be investigated by badger.

- 5.4.31 If site personnel have any concerns about badger during works or if additional mammal holes are discovered, then works should stop and a suitable qualified ecologist consulted for advice.

Significance

- 5.4.32 Assuming the above measures are secured through a planning condition it is anticipated that the proposed development would not result in an adverse impact to badgers, should they be present at the time of works.

Enhancement

- 5.4.33 None anticipated to be required at this stage.

Monitoring

- 5.4.34 No additional monitoring is considered to be required at this stage.

Other notable species

Potential impacts

- 5.4.35 The habitats on site could be used by hedgehogs. Hedgehogs are listed as a Priority Species under the NERC Act 2006.

Mitigation measures

- 5.4.36 The detailed reserved matters layout should include gaps to boundary features to ensure hedgehogs can freely pass between gardens across the site. Where no natural gaps exist such as when gardens are enclosed with close board fencing to ground level, a hedgehog hole should be cut into the baseboard or gravel board with the hole measuring no less than 140mm x 140mm.
- 5.4.37 As a precautionary measure the CEMP should include the following information.
- 5.4.38 Excavations should be completely covered overnight unless completely fenced off securely to ground level to prevent accidental entry by hedgehog. Any unfenced/uncovered shallow excavations should have scaffold boards or equivalent placed in them to one side to act as a ramp to allow any badgers or hedgehogs to exit, should they fall in.

- 5.4.39 Any open drainage or pipework >0.2 m diameter should be blocked at the end of each shift to prevent entry by small mammals.

Significance

- 5.4.40 Assuming the above measures are secured through a planning condition it is anticipated that the proposed development would not result in an adverse impact to hedgehog, should they be present.

- 5.4.41 Enhancement

- 5.4.42 Consideration should be given to installation of hedgehog boxes as an enhancement.

Monitoring

- 5.4.43 No monitoring is considered to be required.

6.0 CONCLUSIONS

- 6.1.1 Based on the data collected and information provided about the proposed development, it is anticipated that impacts to species and habitats identified within this report could be avoided, mitigated and enhanced with recommended measures secured through appropriately worded planning conditions.
- 6.1.2 On this basis there are no insurmountable constraints to development from an ecology or biodiversity perspective which have been identified to date and the proposals would accord with current relevant national and local planning policy.

7.0 APPENDICES

Appendix 1 – Site images



Plate 1: H1 located along the eastern boundary



Plate 2: H2 located along the eastern boundary



Plate 3: Modified grassland



Plate 3: Dry pond within the site boundary

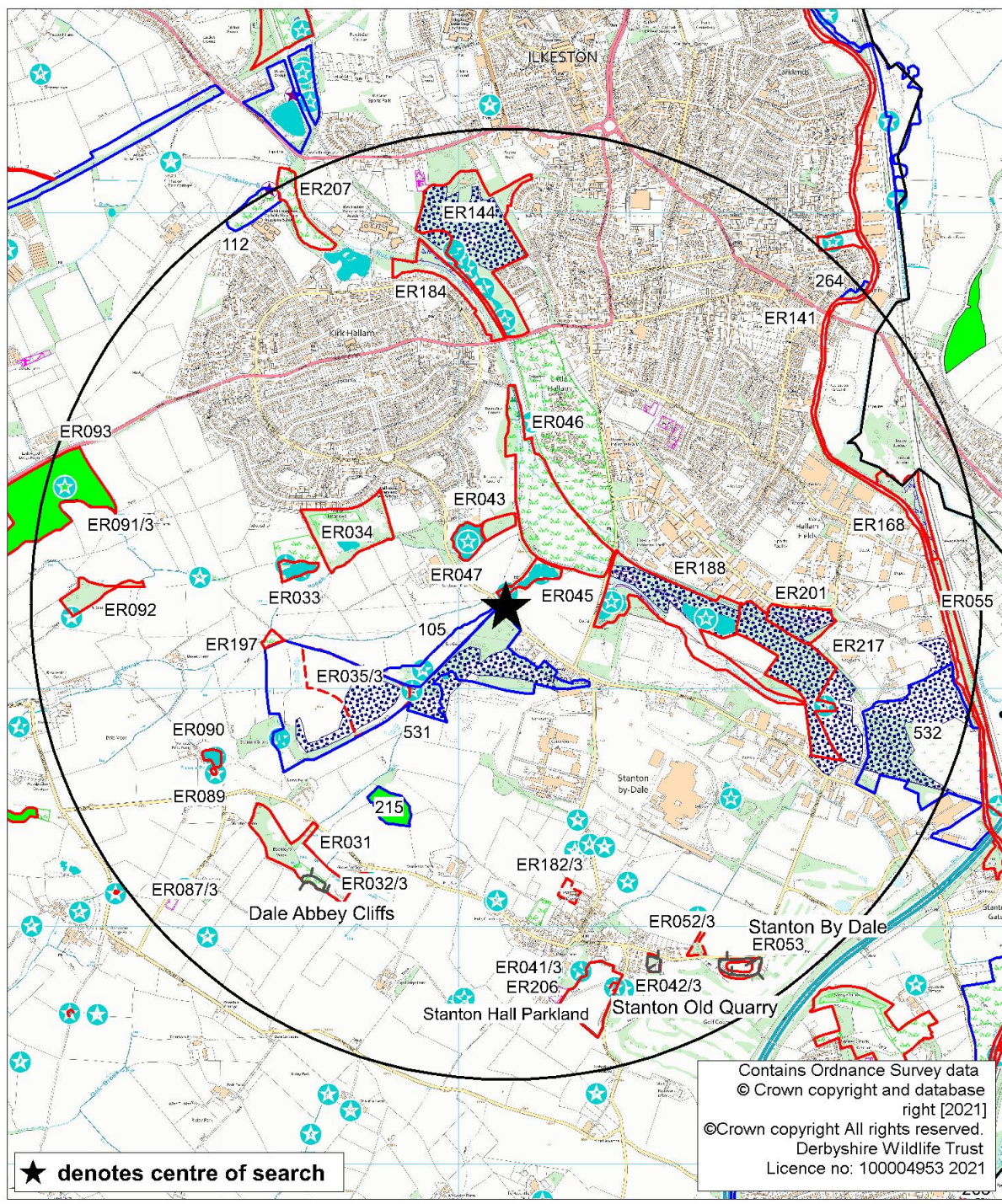


Plate 3: Fishing pond beyond the north-western boundary

Appendix 2 – Non-statutory designated sites

Site Name	Feature
ER031 - Baguley's Wood, Grassland and Carr	Secondary broad-leaved woodland
ER033 - Rifle Range Pond	Standing open water
ER043 - Kirk Hallam Wood	Secondary broad-leaved woodland
ER045 - Sowbrook Pond, New Stanton	Standing open water
ER046 - Nutbrook Canal & Fields	Standing open water
ER053 - Quarry Hill Quarry, Stanton	Secondary broad-leaved woodland
ER055 - West Hallam Towpath Scrub	Standing open water
ER089 - Lindridge House Pond, Dale Moor	Standing open water
ER090 - Furnace Pond ,Dale Moor	Standing open water
ER092 - Ladywood Disused Pit Woodland	Secondary broad-leaved woodland
ER093 - Lady Wood	Ancient semi-natural woodland - mixed deciduous

ER144 - Oakwell Brickworks & the Beauty Spot	Unimproved neutral grassland
ER184 - Nutbrook Canal, Brook and Wet Woodland	Secondary broad-leaved wet woodland
ER188 - Ilkeston Road Pond and Nutbrook Canal	Standing open water
ER197 - Bassett Farm Meadow	Semi-improved neutral grassland
ER201 - Quarry Hill Lagoons	Lowland swamp
ER206 - Stanton Hall Parkland	Wood-pasture and parks
ER207 - Kirk Hallam Meadows	Semi-improved neutral grassland
ER215 - Erewash Canal	Standing open water
ER217 - Stanton Ironworks	Ephemeral/grassland



Appendix 3: Reptile Survey Data

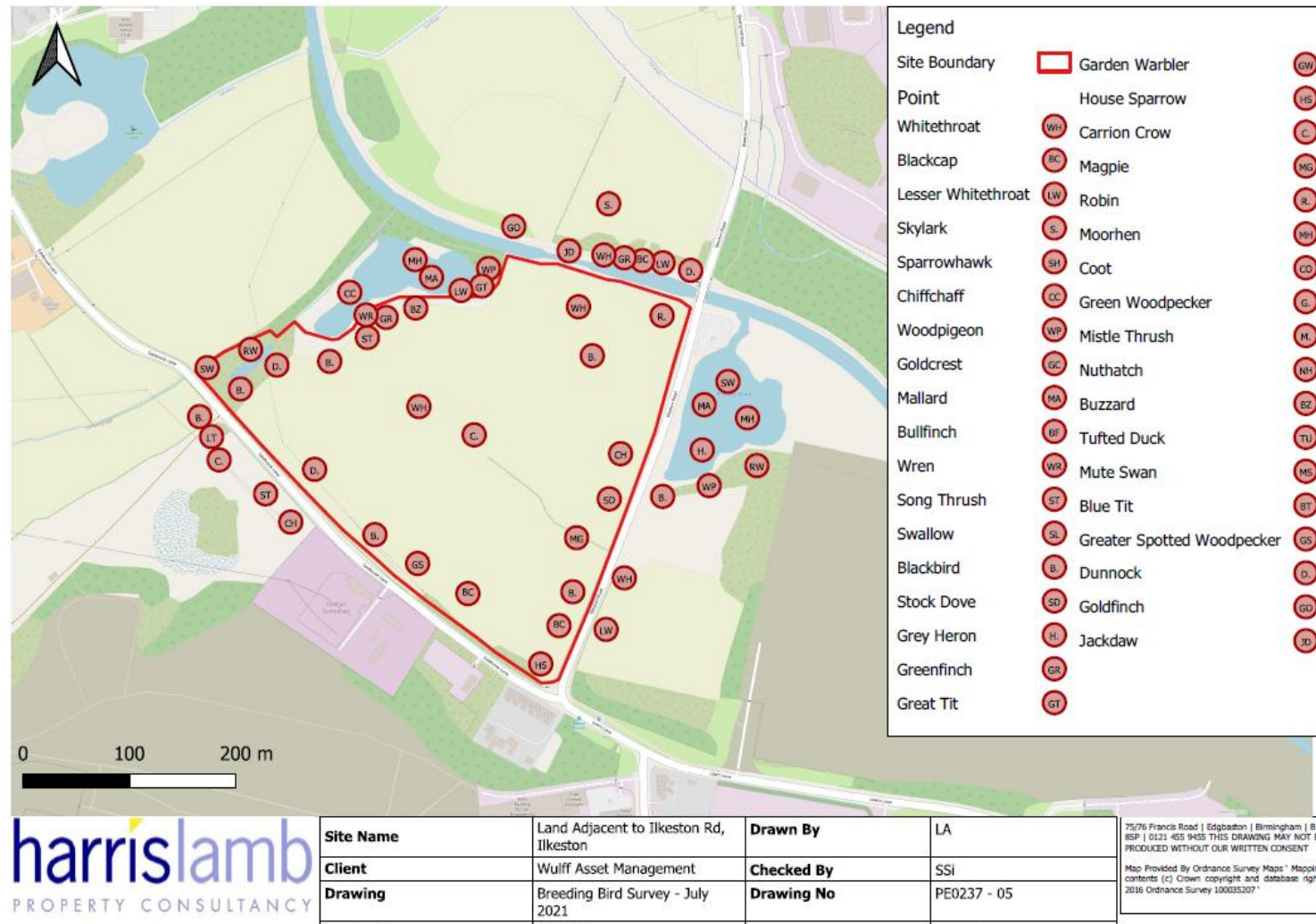
Reptile Survey - PE0237 - New Stanton							
Survey Number	1	2	3	4	5	6	7
Date	08/06/2021	22/06/2021	24/06/2021	26/06/2021	28/06/2021	30/06/2021	01/07/2021
Temperature (°C)	15°C	15°C	17°C	14°C	17°C	15°C	16°C
Weather conditions	Dry, clear	Dry, clear	Hazy cloud	Dry, 60% cloud	Hazy cloud	Dry, 10% cloud	Dry, 60% cloud
Time start	18:45	17:41	18:06	07:47	17:22	18:05	08:13
Time end	19:45	18:08	18:33	08:16	17:51	18:40	08:39
Surveyor initials	RH	LA	LA	LA	LA	LA	LA
Total no. reptiles recorded	0	0	0	0	0	1	0
Grass Snake	0	0	0	0	0	1	0
Common Lizard	0	0	0	0	0	0	0
Adder	0	0	0	0	0	0	0
Slow Worm	0	0	0	0	0	0	0
Smooth Snake	0	0	0	0	0	0	0
Sand Lizard	0	0	0	0	0	0	0
Amphibians/ Other	0	0	0	0	0	0	0



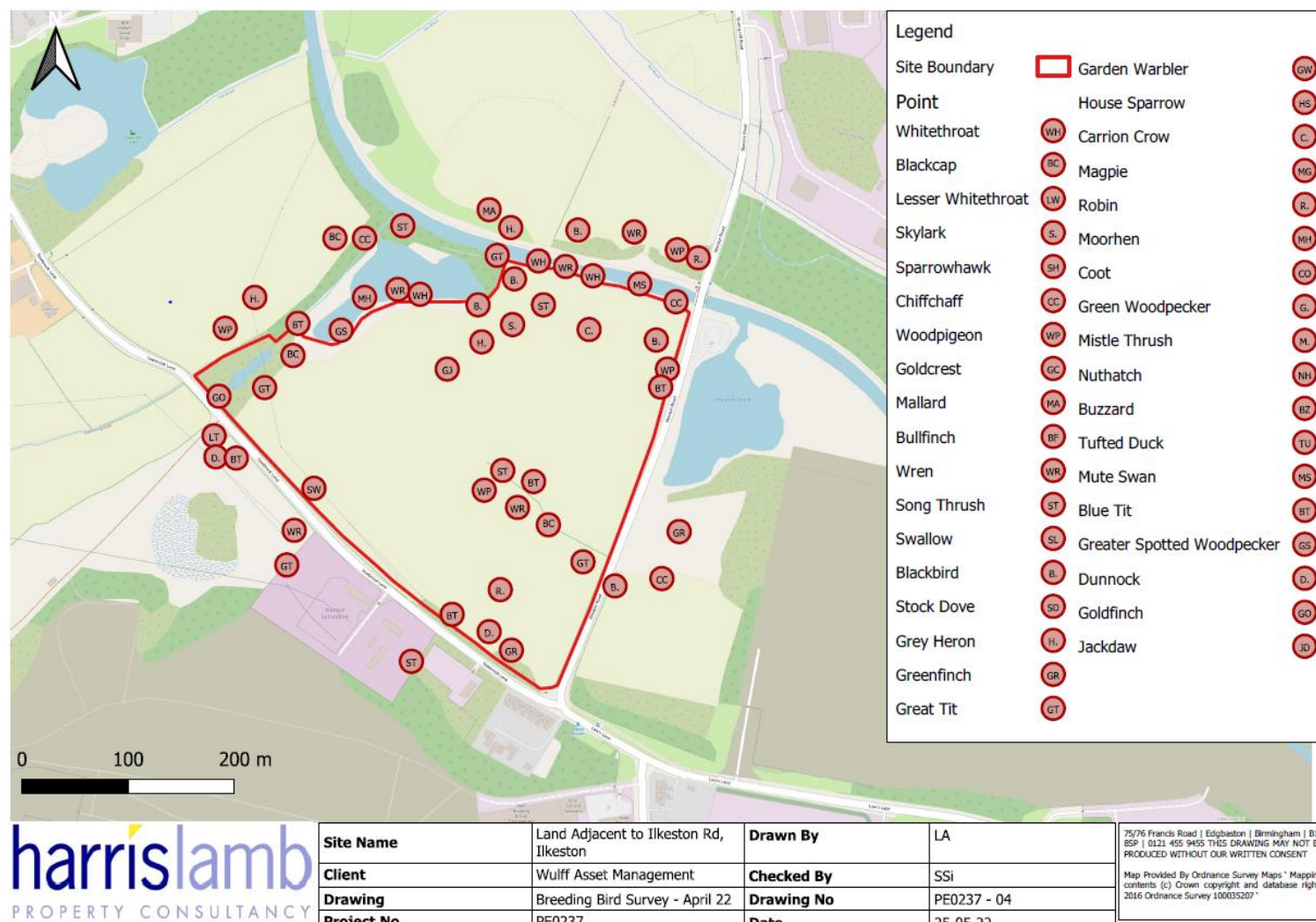
Site Name	Land Adjacent to Ilkeston Road, Ilkeston	Drawn By	LM	75/76 Francis Road Edgbaston Birmingham B15 8EP 0121 455 9455 THIS DRAWING MAY NOT BE PRODUCED WITHOUT OUR WRITTEN CONSENT
Client	Wulff Asset Management	Checked By	SSI	Map Provided By Ordnance Survey Maps * Mapping contracts (c) Crown copyright and database rights 2016 Ordnance Survey 100035207
Drawing	Reptile Refugia Locations	Drawing No	PE0237 - 01 Rev 1	
Project No	PE0237	Date	18.05.2022	

Appendix 4 – Breeding bird survey data

July 21 Breeding Bird Survey Results



April 2022 Breeding Bird Survey Results



May 2022 Breeding Bird Survey Results

