

Land to North of Little Green
Lane, Croxley Green,
Rickmansworth, Hertfordshire

Ecological Impact Assessment and
Biodiversity Impact Assessment



Client:
Richborough

Report Reference:
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EXECUTIVE SUMMARY

i This Ecological Impact Assessment (EcIA) and Biodiversity Impact Assessment has been prepared by RammSanderson Ecology Ltd on behalf of Richborough ('the Applicant') in support of the submission of an outline planning application for residential housing at land to the north of Little Green Lane, Croxley Green, Rickmansworth, Hertfordshire ('the Site').

ii The Site is located to the north of Croxley Green and is surrounded by Ancient Woodland to the north, east and west. The Site itself is approximately 40ha in size and dominated by cropland. A small stand of Ancient Woodland is present within the eastern area of the Site and is surrounded by cropland. A hedgerow runs through the centre of the Site and hedgerows are also present along the perimeter of the Site adjacent to highway boundaries. Mature broadleaf trees are present adjacent to and within the vicinity of the central hedgerow and on-Site Ancient Woodland.

Ecological Feature	Potential to be affected by the Scheme	Proposed Mitigation	Significant Residual Impacts & Compensation?
Designated Sites – Ancient Woodland, LWS and SSSI	Ancient Woodland and LWS parcel present within Site boundary. Ancient Woodland, LWS and SSSI parcels offsite but adjacent to Site boundary. No loss of woodland areas proposed. Potential for negative impacts to Ancient Woodlands and ecological receptors during construction – i.e. direct impact strikes, ground level changes, pollution incidents. Potential for negative impacts to Ancient Woodlands arising from urban edge effects and recreational pressure during operation – i.e. damage and disturbance from anthropological ingress, artificial light spill causing displacement to nocturnal species.	30m built development buffers and barrier shrub planting built-in to Scheme around all Ancient Woodland boundaries (on and off site). Ancient Woodland on Site to be incorporated into areas of open green space. Construction Ecological Management Plan (CEMP), Arboricultural Method Statement (AMS) and Tree Protection Plan (TPP) secured through condition – will define mitigation measures to minimise construction impacts to Ancient Woodlands. Ancient Woodland Recreational Management Plan, Detailed Soft Landscaping Scheme, Habitat Management and Monitoring Plan and Artificial Lighting Strategy secured through condition – will define mitigation measures to control urban edge effect impacts to Ancient Woodlands during operation.	No
Habitats (non-woodland)	Scheme located largely within dominant areas of arable cropland. Extensive areas of open green space and habitat creation proposed within the Scheme comprising wildflower meadow, native tree and scrub planting and SuDS features. Native hedgerows present through centre of Site and along highway boundaries largely retained, some sectional removal required for vehicle and pedestrian access. Broadleaf trees present in association with central hedgerow and woodland edges to be retained within Scheme	To control construction impacts to retained habitats, mitigation measures defined through CEMP, AMS and TPP secured through condition. To control operational impacts to retained habitats, mitigation measures defined through Woodland Recreational Management Plan, Detailed Soft Landscaping Scheme, Habitat Management and Monitoring Plan and Artificial Lighting Strategy secured through condition.	Positive residual effect due to extensive habitat creation.

Ecological Feature	Potential to be affected by the Scheme	Proposed Mitigation	Significant Residual Impacts & Compensation?
	and incorporated into areas of open green space. Potential for impacts to retained habitats during construction and operation, as described for woodlands (above).		
Badgers	Two outlier badger setts identified within the Site, both permanently removed to facilitate construction. Impact is not considered significant as outlier setts are infrequently used for habitation by badgers. Potential for status of badger setts to change prior to Scheme construction.	Pre-commencement badger surveys to be undertaken prior to the start of construction. Derogation licence to be approved by Natural England to close active setts prior to construction. Best practice measures to be undertaken to protect badgers during construction. All measures to be captured within a CEMP secured by condition.	No
Bats	Trees with Potential Roosting Features (PRFs) present within the Site but will be retained and incorporated into areas of open green space. Potential for negative construction impacts to trees (i.e. direct impacts strikes, disturbance) and negative urban edges effects (i.e. disturbance, vandalism) during operation. Artificial lighting spill during operation has the potential to displace and disturb foraging and commuting bats along woodland edges and hedgerows as well as PRF trees.	To control construction impacts to PRF trees during construction, mitigation measures defined through CEMP, AMS and TPP secured through condition. To control artificial lighting impacts to foraging/commuting habitats and PRF trees, Artificial Lighting Strategy secured through condition.	Positive residual effect due to extensive habitat creation.
Birds (non Schedule 1)	Potential for impacts to nesting birds where Site vegetation removed during breeding season, to facilitate Scheme construction.	Avoid Site clearances during breeding season where possible. If not, nesting bird surveys prior to clearances to be undertaken. Measures to be captured within a CEMP secured by condition.	Positive residual effect due to extensive habitat creation for most bird species. Significant negative residual effect due to loss of skylark nesting territories which cannot be replaced within the Scheme. Off-site compensation proposed.
Birds (Schedule 1)	Nesting red kite present within on-Site woodland - spring/early summer 2024. Potential for disturbance and displacement impacts to red kites if	Pre-commencement surveys to be undertaken prior to construction for nesting red kite with construction buffer zones implemented should red kite be nesting. Number and frequency of surveys to be dictated by start of construction,	No

Ecological Feature	Potential to be affected by the Scheme	Proposed Mitigation	Significant Residual Impacts & Compensation?
	nesting during construction and operation of Scheme.	build programme and remain dynamic as surveys completed in response to individual circumstances. Red kite is a green listed species and of least conservation concern, common and widespread in Hertfordshire. Potential displacement of nesting red kites during operation considered to not be significant.	
Great crested newts	Scoped out of assessment due to presence of only one pond within 500m of Site (450m west of Site), limited historical records and sub-optimal terrestrial habitats within Site.	None.	No
Reptiles	If present with locality, reptiles likely to be restricted to boundary habitats within Site. Potential for impacts to individual reptiles of present within Site during vegetation clearances particularly along boundary habitats.	Precautionary Working Measures such as habitat manipulation and ecologist watching briefs during Site clearances. Measures to be captured within a CEMP secured by condition.	Positive residual effect due to extensive habitat creation (if reptiles populations present in locality).
Otters, Water voles and white clawed-crabs	No suitable habitats present on-Site or in the zone of influence.	None.	No
Other Notable Species	Potential for hedgehogs, brown hares and harvest mice to be present within Site habitats during Site clearances and construction.	Standard precautionary measures to be undertaken during construction, such as a systematic two-stage vegetation cut allowing animals to disperse naturally. Measures to be captured within a CEMP secured by condition.	Positive residual effect due to extensive habitat creation.

iii Hazel dormice were scoped out of the EcIA through advice from the Local Planning Authority.

iv Extensive areas of open green space and habitat creation are proposed within Scheme comprising wildflower meadows, native tree and scrub planting and SuDS features.

v The Scheme would result in a Biodiversity Net Gain of 34.41% Habitat Units and 42.54% Hedgerow Units. The potential to maximise net gain within the redline boundary of the Scheme has been explored based on the Scheme's design parameters and targeting realistic and deliverable habitats as part of the Scheme's soft landscaping. The mandatory requirement for 10% BNG has been achieved and surpassed for the Scheme and the Trading Rules have been met. A Biodiversity Gain Plan and Habitat Management and Monitoring Plan must be secured by condition.

vi The following enhancement measures are proposed to comply with national and local planning policy, current legislation and good practice, the detail of which is expected to be secured through planning condition:

The installation of a variety of bat, bird and insect boxes on retained site trees.

The creation of hedgehog highways within private gardens, to allow passage for these mammals and create foraging opportunities within the residential area.

The installation of swift, house sparrow, starling and house martin boxes and bat bricks on appropriate aspects of dwellings within the residential area.

Information packs to be provided to residents and the school outlining the ecological importance of Ancient Woodlands within and surrounding the Site.

CONTENTS

EXECUTIVE SUMMARY	3
1 INTRODUCTION	9
2 METHODOLOGY	11
3 BASELINE CONDITIONS AND NATURE CONSERVATION IMPORTANCE	16
4 IMPACT ASSESSMENT, AGREED MITIGATION MEASURES AND SIGNIFICANCE OF RESIDUAL EFFECTS	32
5 OUTLINE BIODIVERSITY IMPACT ASSESSMENT	44
6 CONCLUSION	45
7 FIGURES	46
8 REFERENCES	74

FIGURES

FIGURE 1: SITE LOCATION AND CONTEXT PLAN	47
FIGURE 2: UK HABITATS PLAN	49
FIGURE 3: WATERBODY PLAN	51
FIGURE 4: STATUTORY DESIGNATED SITES PLAN	53
FIGURE 5: ANCIENT WOODLAND PLAN	55
FIGURES 6: WALKED BAT TRANSECT SURVEYS – MAY 2024 (6A), JULY 2024 (6B) AND SEPTEMBER 2024 (6C)	57
FIGURE 7: BADGER ACTIVITY PLAN	61
FIGURES 8: BREEDING BIRD PLANS (8A-D)	63
FIGURES 9: BIA BASELINE VISUALISATIONS	68
FIGURES 10: BIA PROPOSED VISUALISATIONS	71

APPENDICES

APPENDIX 1: RELEVANT LEGISLATION AND PLANNING POLICY	75
APPENDIX 2: METHODOLOGY	84
APPENDIX 3: NON-STATUTORY DESIGNATED SITES SUMMARY	90
APPENDIX 4: HERTFORDSHIRE ECOLOGY CONSULTATION – HAZEL DORMICE	94
APPENDIX 5: BIA HEADLINE RESULTS	96
APPENDIX 6: STATIC BAT DETECTORS – RAW DATA	98

TABLES

TABLE 1. BACKGROUND RECORDS AND FIELD SURVEYS STUDY AREAS	12
TABLE 2. FIELD SURVEYS UNDERTAKEN TO INFORM THE ECIA.....	13
TABLE 3: STATUTORY DESIGNATED SITES WITHIN THE STUDY AREA.....	16
TABLE 4: NON-STATUTORY DESIGNATED SITES WITH THE STUDY AREA.....	17
TABLE 5: HOPI, ANCIENT WOODLAND AND PROTECTED AND NOTABLE FLORA WITHIN THE STUDY AREA.....	18
TABLE 6: HABITATS WITHIN THE SITE.....	20
TABLE 7: GROUND LEVEL TREE ASSESSMENT RESULTS (ROOSTING BATS)	24
TABLE 8: STATIC BAT DETECTOR ER0042 – BAT PASSES WITH % TOTALS PER SPECIES PER MONTH.....	26
TABLE 9: STATIC BAT DETECTOR ER0045 – BAT PASSES WITH % TOTALS PER SPECIES PER MONTH.....	26
TABLE 10: SUMMARY OF BREEDING BIRD SURVEYS.....	28
TABLE 11: SUMMARY OF NATURE CONSERVATION IMPORTANCE.....	31

1 INTRODUCTION

1.1 Terms of Reference

- i This Ecological Impact Assessment (EcIA) and Biodiversity Impact Assessment has been prepared by RammSanderson Ecology Ltd on behalf of Richborough ('the Applicant') in support of the submission of an outline planning application for residential housing at land north of Little Green Lane, Croxley Green, Rickmansworth, Hertfordshire ('the Site').
- ii The purpose of this EcIA is to demonstrate how the Scheme accords with relevant national and local planning policy and legislation. Further details on relevant planning policy and legislation are provided in Appendix 1.
- iii This EcIA details the methodology followed to undertake the assessment, describes the ecological baseline relevant to the Scheme and evaluates the nature conservation importance of ecological features present within the Study Area. The EcIA characterises the impacts (both positive and negative) of the Scheme on Important Ecological Features (IEF)¹, and where necessary, sets out appropriate and proportionate avoidance, mitigation and compensation measures that will be delivered within the Scheme. The significance of any residual effects (both positive and negative) of the Scheme on the IEFs has been assessed, and opportunities for enhancement are identified with the overall aim of achieving biodiversity net gain through the mitigation hierarchy.
- iv This EcIA forms part of the supporting technical documentation for the planning application submitted for the Scheme and has been undertaken with reference to current good practice² and is consistent with the requirements of British Standard 42020:2013 *Biodiversity. Code of Practice for Planning and Development*.

1.2 The Scheme

- i The Scheme comprises an outline application for up to 600 residential dwellings (Use Class C3(a)), a 5-bedroom property for children's social care and supported living (Use Class C3(b)). Two vehicular access points from Little Green Lane and further pedestrian / cycleway accesses. A one form entry primary school (Use Class F1(a)) (plus expansion land for a two-form entry primary school). A mixed-use local centre including provision for NHS health and social care services (Use Class E(e)), community building (Use Class F2), retail and café provision (Use Class E(a-c)), car parking and associated infrastructure. A country park, areas for play and recreation, allotments, community orchard and landscaping with associated infrastructure including sustainable urban drainage systems. All matters are reserved except for vehicular access.

1.3 The Site

- i The Site is located to the north of Croxley Green and is surrounded by Ancient Woodland to the north, east and west. The Site itself is approximately 40ha in size and dominated by cropland. A small stand of Ancient Woodland is present within the eastern area of the Site and is surrounded by cropland. An internal hedgerow runs through the centre of the Site and hedgerows are also present along the perimeter of the Site adjacent to highway boundaries. Mature broadleaf trees are present adjacent to and within the vicinity of the central hedgerow and on-Site Ancient Woodland.

¹ Important Ecological Features are habitats, species, ecosystems and their functions and processes that are of conservation importance and could potentially be affected by the Scheme. Various characteristics contribute to a feature's importance including its rarity, diversity, size, population trend, distinctiveness, naturalness, fragility, typicalness, recorded history, potential value and intrinsic appeal.

² CIEEM (2018). Guidelines for Ecological Impact Assessment in the UK and Ireland. Terrestrial, Freshwater, Coastal and Marine. Chartered Institute of Ecology and Environmental Management, Winchester.

- ii Croxley Green is located directly to the south of the Site beyond Little Green Lane which straddles the southern Site boundary. Rousebarn Lane is located along the eastern boundary of the Site, beyond which is a belt of woodland, a golf course, Cassiobury Park and the urban edge of Watford, approximately 1km from the Site boundary. A large area of Ancient Woodland is dominant to the north of the Site comprising Whippendell Woods Site of Special Scientific Interest (SSSI). Directly to the west of the Site is Dell Wood, a further area of Ancient Woodland, beyond which is pastureland and the village of Loudwater. The M25 motorway is located approximately 1.6km to the north/northwest of the Site.
- iii A Site Location and Context Plan is provided in Figure 1.

2 METHODOLOGY

2.1 Scope of the EcIA

i This EcIA has been undertaken as follows:

- Define the Study Area for the assessment, which considers the Zone of Influence³ (Zol) of the Scheme ;
- Undertake desk and field-based assessments for designated sites, habitats and species to determine the ecological baseline for the Scheme within the Study Area ;
- Determine the nature conservation importance of each ecological feature recorded during the desk and field-based assessments to determine which of those features are IEFs in the context of the EcIA;
- Assess the potential impacts on IEFs because of the Scheme ;
- Design suitable avoidance and mitigation measures to address potential impacts ;
- Determine the significance of any residual effects and design suitable compensation measures to address significant residual effects; and
- Identify opportunities for biodiversity enhancements including delivery of Biodiversity Net Gain through the mitigation hierarchy.

2.2 Important Ecological Features

i This EcIA has focused on the potential impacts to ecological features (habitats, species, ecosystems and their functions/processes) that are considered important and potentially affected by the Scheme. This EcIA has not carried out detailed assessments of features that are sufficiently widespread, unthreatened and resilient to impacts and which will remain viable and sustainable should the Scheme proceed as detailed in Section 1.

ii For this EcIA, the following are considered IEFs requiring detailed assessment:

- Statutory designated sites.
- Non-statutory designated sites.
- Habitats and species of principal importance (HoPI / SoPI) for the conservation of biodiversity in England⁴.
- Irreplaceable habitats including ancient woodland and veteran trees.
- Individual habitat types or mosaics that may not qualify as HoPI but form an important part of ecosystems and their function.
- Legally protected species⁵.
- Local Biodiversity Action Plan (LBAP) priority species and habitats⁶.
- Species of conservation concern, Red Data Book (RDB) species – UK⁷.
- Birds of Conservation Concern – UK⁸.

³ The Zone of Influence is the area over which ecological features may be affected by biophysical changes because of the Scheme and associated activities.

⁴ Listed under S41 of the Natural Environment and Rural Communities Act 2006.

<http://publications.naturalengland.org.uk/publication/4958719460769792>.

⁵ Legally protected species are those listed on the Wildlife and Countryside Act 1981, The Conservation of Habitats and Species Regulations 2018, Protection of Badgers 1992.

⁶ Hertfordshire Biodiversity Action Plan.

⁷ Species Status Assessment project published by Joint Nature Conservation Committee (JNCC) in 1999.

<http://jncc.defra.gov.uk/default.aspx?page=3352>.

⁸ Eaton MA, Aebischer NJ, Brown AF, Hearn RD, Lock L, Musgrove AJ, Noble DG, Stroud DA and Gregory RD (2023). Birds of Conservation Concern 5: the population status of birds in the United Kingdom, Channel Islands and Isle of Man.

iii The EcIA has also considered legally controlled plant species listed as invasive on Schedule 9 of the Wildlife and Countryside Act 1981 in Britain (e.g., Japanese knotweed, Himalayan balsam, giant hogweed).

2.3 Study Area

i Desk and field-based studies have been undertaken to establish the biodiversity baseline that may be impacted by the Scheme. The scale of the Study Areas varies dependent upon the ecology of the feature being assessed and its vulnerability to change resulting from construction and operation of the Scheme. Ecological features outside of the Study Area are unlikely to be affected by the Scheme and are not considered in this EcIA.

ii Table 1 summarises the Study Area for the Scheme.

Table 1. Background Records and Field Surveys Study Areas

Ecological Feature	Background Records Study Area ⁹	Field Survey Study Area ¹⁰
Designated sites and habitats	2km	Within and as applicable, adjacent to the Site
Great crested newts	2km	500m
Badgers	2km	30m
Other protected and notable species	2km	Within and as applicable , adjacent to the Site

2.4 Desk Study

2.4.1 Background Records

i A desk study has been undertaken to obtain background records relevant to the Scheme and the EcIA, including records of statutory and non-statutory designated sites and protected and notable species within the Study Areas detailed above in Table 1. The data obtained provides contextual information for the scope of field surveys, to aid the evaluation of field survey results, and to provide supplementary information where complete field survey coverage has not been possible.

ii Data has been obtained from the following organisations in August 2024:

DEFRA Multi-Agency Geographic Information for the Countryside (MAGIC) website.

Hertfordshire Environmental Records Centre (HERC).

iii A proportion of data received from HERC provided only 2-4 Ordnance Survey Grid Reference numbers with a geographical location confidence of 0-1km, 0-2km, 0-5km and 0-10km from the Site. This data was not used for species with limited territory ranges such as amphibians, reptiles and small mammals, as well as plants, due to a lack of spatial accuracy in the context of the Site.

2.4.2 Planning Policy

iv To demonstrate how the Scheme accords with relevant national and local planning policy, the following have been reviewed as part of this assessment:

⁹ Distance measured from the Site Boundary.
¹⁰ Distance measured from the Site Boundary.

The National Planning Policy Framework 2023.

Three Rivers District Council Core Strategy 2011: Policy CP9: Green Infrastructure (Appendix 1).

Three Rivers District Council Development Management Policies 2013: Policy DM6: Biodiversity, Trees, Woodland and Landscaping (Appendix 1).

2.5 Consultation Responses

2.5.1 Hazel Dormice

i Hertfordshire Ecology were contacted in June 2024 to determine whether hazel dormice populations are present within the locality of the Site and/or Hertfordshire which would trigger a requirement for presence/absence surveys within the Site.

ii Hertfordshire Ecology confirmed that hazel dormice are likely to be absent from Hertfordshire and therefore presence/absence surveys would not be required to inform a planning application for the Scheme. The email response is provided in Appendix 4.

2.6 Field Surveys

i Field surveys have been designed to collect information on the habitats and species present that may be affected by the Scheme. The geographical areas across which field surveys have been undertaken are the areas over which ecological features are likely to be subject to impacts from the construction or operation of the Scheme if they are present and accounting for the Scheme design detailed in Section 1.

ii Table 2 summarises the field surveys that have been undertaken to inform the EcIA.

iii Detailed methodologies for collection of field survey data, and any specific limitations and deviations encountered during these surveys, are presented in Appendix 2.

Table 2. Field Surveys undertaken to inform the EcIA

Ecological Feature	Survey Type	Date(s) of Survey(s)
Habitats	UK Habitats Survey	23/05/2024
Protected Species	Preliminary Protected Species Assessment	23/05/2024
Badgers	Presence likely absence	23/05/2024
Birds	Breeding birds	09/05/2024 24/05/2024 11/06/2024 11/07/2024
Bats	Ground Level Tree Assessment	23/05/2024
Bats	Walked Transect Surveys x3	23/05/2024 10/07/2024 09/09/2024
Bats	Static Bat Detector Surveys x5	May-September 2024

iv Reptile surveys were not undertaken within the Site as it is dominated by cropland, a sub-optimal habitat for this species. Boundary woodland, trees and hedgerows would also be retained. It was determined that residual impacts to potential reptile species during construction could be mitigated through the Precautionary Working Measures (PWMs).

v Aerial inspections of potential bat roosting trees were not undertaken as all Site trees would be retained and PWS can be adopted during construction. An Artificial Lighting Strategy can be implemented to mitigate light spill against potential bat roosting trees.

vi Great crested newts were scoped out for further survey due to the presence of only one pond within 500m of the Site (0.45km west), a lack of historic records in the locality and the sub-optimal terrestrial habitats which dominate the Site.

2.7 Assessment Criteria

i This EcIA broadly follows CIEEMs Guidelines for Ecological Impact Assessment in the United Kingdom with the following clarifications specific to the Scheme.

2.7.2 Nature Conservation Evaluation

ii Several criteria have become accepted as a means of assessing the nature conservation importance of a defined area of land which are set out in *A Nature Conservation Review*¹¹ and include diversity, rarity and naturalness.

iii For this EcIA, the nature conservation importance or potential value of an ecological feature is determined within the following geographic context:

International (Europe): such as Special Areas of Conservation (SAC) or Special Protection Areas (SPA);

National (England): such as Sites of Special Scientific Interest (SSSI);

Regional (*): such as populations of species which enrich biodiversity on a regional scale and whose loss would significantly affect the species national distribution;

County (Hertfordshire): such as Local Nature Reserves (LNR) or populations of species which qualify for Local Wildlife Site (LWS) designation;

Local (Parish): undesignated ecological features such as old hedges, woodlands, ponds;

Site: the feature has some ecological importance, but is not of a scale warranting consideration outside of the boundaries of the Site itself; and

Negligible: the feature either has little or no importance for biodiversity, or is considered sufficiently widespread, unthreatened, and resilient to impacts and will remain viable and sustainable.

*A geographical area for Regional importance has not been defined. A feature is of Regional importance when it is of greater geographical importance than within the County of Hertfordshire but does not reach the threshold to be of National importance.

iv Ecological features of Local or higher nature conservation importance are considered IEFs requiring detailed assessment. In addition, for the EcIA to demonstrate how the Scheme will comply with statutory requirements and policy objectives for biodiversity, some ecological features are considered IEFs even if they are not of Local or higher nature conservation importance. These are features that are protected by national legislation and include:

Badgers, legally protected through the Protection of Badgers Act, 1992;

Great crested newts and bats, legally protected through the Habitats Regulations 2017;

All nesting birds, legally protected through the Wildlife and Countryside Act, 1981; and

Non-native invasive plant species, listed on Schedule 9 of the Wildlife and Countryside Act, 1981.

v A detailed account of statutory legislation and policy in respect of biodiversity is provided in Appendix 1.

¹¹ Ratcliffe, D. (1977). *A Nature Conservation Review*.

2.7.3 Temporal Scope

- vi Potential impacts on IEFs have been assessed in the context of how the predicted baseline conditions might change between the surveys and the start of construction.
- vii Long-term trend information was used to make judgements about the significance of an impact or effect on the conservation objectives or condition of a designated site, or the conservation status of a habitat or species (for example a species with a long term, national population decline may be more susceptible to impacts attributable to the Scheme). Where this information was available it is referenced in Section 4.
- viii A high-level construction programme for the Scheme is outlined in Section 1. Once construction is complete, this EcIA has assumed that the operational phase of the Scheme will last for the foreseeable future.

2.7.4 Approach to Mitigation

- ix Where impacts on IEFs are predicted, the approach to mitigation engages the following hierarchy:
 - (1) Avoid features where possible;
 - (2) Minimise impact by design, method of working or other measures, for example by enhancing existing features; and
 - (3) Compensate for significant residual impacts (e.g., by providing suitable habitats elsewhere).
- x The highest level of the hierarchy has been applied where possible. Only where this cannot reasonably be adopted have lower levels been considered. The rationale for the proposed level of mitigation has been detailed in Section 4, including sufficient detail to show that these measures are feasible and will be delivered within the Scheme.
- xi NPPF (2024) states that “*development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to improve biodiversity in and around developments should be integrated as part of their design, especially where this can secure measurable net gains for biodiversity or enhance public access to nature where this is appropriate*”.
- xii Throughout this EcIA, the potential to secure biodiversity enhancement, and therefore overall net gain, has been considered through the mitigation hierarchy.

2.8 Limitations to the Assessment

- i The ecological surveys undertaken to support this EcIA have not produced a complete list of plants and animals and the absence of evidence of any particular species should not be taken as conclusive proof that the species is not present or that it will not be present in the future. However, the results of these surveys have been reviewed and are considered to be sufficient to undertake this EcIA in accordance with current industry best practice.

3 BASELINE CONDITIONS AND NATURE CONSERVATION IMPORTANCE

i The following sections provide a summary of the baseline conditions relevant to the Scheme and assessment of nature conservation importance of ecological features. The baseline is based on the results of the desk and field-based studies undertaken within the Study Area to inform this EcIA.

ii Regarding biological records, 'recent' records are considered to be those no older than 10 years from the date of the desk study. Records outside of this period are historical and have only been reported where more recent records do not exist. Exceptions to this are detailed in the appropriate sections below.

iii Ecological features which are present or considered likely to be present within the Study Area have been assigned a geographical scale of nature conservation importance in line with the criteria detailed in Section 2.

iv Where it has not been possible to achieve 100% survey coverage for a habitat or species, the baseline conditions have been based on a reasonable precautionary approach, supported by the results of the desk study.

3.2 Consultation Responses

3.3 Designated Sites

3.3.1 Statutory Designated Sites

i The Site does not fall within the boundary of a statutory designated site.

ii A total of five statutory designated sites were recorded within the Study Area, the details of which are summarised in Table 3 below. A plan of statutory designated sites is provided in Figure 4.

iii Of specific note is the presence of Whippendell Wood SSSI, located north of the Site beyond Rousebarn Lane. The citation for the SSSI describes the woodland as:

'This is an ancient woodland site in the clay-with-flints region which retains large areas of semi-natural vegetation. A complex of woodland habitats are present on the pebble clays and sandy soils with Oak/Hazel/Ash and Oak/Hornbeam being the major stand types. Both these woodland types have been much reduced in extent nationally and the former is also scarce in Hertfordshire. This is a large woodland in a predominantly urban and agricultural setting'.

iv The Site is located within the Impact Risk Zones of Whippendell Wood SSSI and Croxley Moor Common SSSI.

Table 3: Statutory Designated Sites within the Study Area

Site Name	Designation	Location ¹²	Brief Description
Whippendell Wood	SSSI ¹³	Adjacent to Site boundary, N	A small but quite varied block of ancient woodland, predominantly oak/hazel with a canopy that is noted as developing and closing since last assessed in 2010.
Cassiobury Park	LNR ¹⁴	0.4km E	Large Park with a variety of habitats including River Gade, the Grand Union Canal, streams, ditches, ponds, watercress beds, wet grassland and wet woodland. The site is rich in invertebrates.
Croxley Common Moor	SSSI	1.9km S	Open moorland and ancient woodland with hazel coppice.
Croxley Common Moor	LNR	1.9km S	Open moorland and ancient woodland with hazel coppice.

¹² From the Site boundary

¹³ Site of Special Scientific Interest

¹⁴ Local Nature Reserve

Site Name	Designation	Location ¹²	Brief Description
Westwood Quarry	SSSI	2km NW	Geological site of interest.

v LNRs are considered to be of nature conservation importance at the County scale and SSSIs at the National scale.

3.3.2 Non-Statutory Designated Sites

vi Thirty-five non-statutory designated sites were recorded within the Study Area, all LWS. Table 4 below provides a summary of LWS within 0.5km of the Site. All other LWS within the Study Area are summarised in Appendix 3.

vii Of note is the presence of 'Wood E of Dell Wood/Green Lane Wood' within the eastern area of the Site, which is a stand of Ancient Woodland. Other areas of Ancient Woodland are located offsite but adjacent to Site boundaries:

Merlin's Wood and Newland's Spring Wood LWS adjacent to the northwestern Site boundary;

Dell Wood complex LWS adjacent to the western Site boundary; and for completeness

Whippendell Wood SSSI (a statutory designated Site), adjacent to the northern Site boundary, beyond Rousebarn Lane.

viii A plan of Ancient Woodlands within the Study Area is provided in Figure 5.

ix Jacotts Hill/West Herts Golf Course LWS is located adjacent to the eastern Site boundary beyond Rousebarn Lane but is not an Ancient Woodland site.

Table 4: Non-Statutory Designated Sites with the Study Area

Site Name	Designation	Location ¹⁵	Brief Description
Wood E. Of Dell Wood/Green Lane Wood	LWS ¹⁶	Within Site boundary	Ancient semi-natural broadleaved woodland, mainly of oak (both Pedunculate Oak and Sessile Oak) with some Ash, Silver Birch, Field Maple and Hazel coppice.
Jacotts Hill/West Herts Golf Course	LWS	Adjacent to site boundary, E	Golf course supporting a mosaic of habitats comprising roughs of acid, neutral and calcareous grassland, amenity grassland, broadleaved semi-natural and mixed plantations, and scrub.
Merlin's Wood and Newland's Spring	LWS	Adjacent to site boundary, NW	Part ancient semi-natural (Merlin's Wood) and part mostly old secondary woodland (Newland's Spring).
Dell Wood, Round Newland's & Long Newland's Springs	LWS	Adjacent to site boundary, W	A complex of ancient semi-natural woodlands.
Waterdell Spring	LWS	0.2km W	Ancient semi-natural woodland mostly of Pedunculate Oak and Silver Birch with some Beech and Ash plus Hazel coppice.
Croxley Green Grassland	LWS	0.5km SW	Old heathy/acid grassland dissected by several roads with several scarce and locally uncommon species including abundant Harebell, Heath-grass and the rare Petty Whin.

¹⁵ From the Site boundary

¹⁶ Local Wildlife Site

3.4 Habitats

3.4.1 Desk Study

i Table 5 summarises relevant records of HoPI¹⁷, ancient woodlands and protected and/or notable¹⁸ flora¹⁹ (including veteran trees²⁰) within the Study Area.

ii As previously described, a plan of Ancient Woodlands within the Study Area is provided in Figure 5.

Table 5: HoPI, Ancient Woodland and Protected and Notable Flora within the Study Area

Habita/Flora Feature	Reason for Conservation Interest	Nearest Location Parcel ²¹
ANCIENT WOODLAND		
Wood E. Of Dell Wood/Green Lane Wood	Ancient Woodland	Onsite
Dell Wood	Ancient Woodland	Adjacent to Site boundary NW & W, 0.9km NW
Whippendell Wood	Ancient Woodland	Adjacent to Site boundary N
Unnamed Ancient Woodland	Ancient Woodland	0.2km W
Unnamed Ancient Woodland	Ancient Woodland	0.7km N
Unnamed Ancient Woodland	Ancient Woodland	0.8km N
Copthorne Wood	Ancient Woodland	0.9km SW
Unnamed Ancient Woodland	Ancient Woodland	1.2km NW
Heath Wood	Ancient Woodland	1.5km N
Croxleyhall Wood	Ancient Woodland	1.6km SW
Welling Wood	Ancient Woodland	1.6km NW 1.7km NW
Unnamed Ancient Woodland	Ancient Woodland	1.9km N

¹⁷ Priority habitats are taken as principal habitats for the conservation of biodiversity listed under Section 41 of the Natural Environment and Rural Communities Act 2006.

¹⁸ Protected and/or notable flora are taken as principal flora for the conservation of biodiversity listed under Section 41 of the Natural Environment and Rural Communities Act 2006; any flora listed in an IUCN Red Data Book; and any other flora listed under the County Rare and Scarce Plants in Hertfordshire list.

¹⁹ For this assessment 'flora' includes: vascular and non-vascular plants, fungi and lichens.

²⁰ For this assessment the definition of a veteran tree is taken from Annex 2 of the National Planning Policy Framework (glossary): "A tree which, because of its great age, size or condition is of exceptional value for wildlife, in the landscape, or culturally."

²¹ Where features are situated outside of the Site boundary, the distance and direction is given at the closest point of the designated site from the Site.

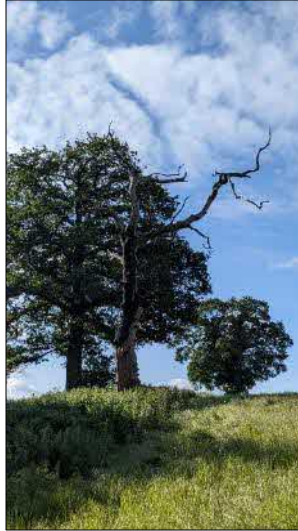
Habita/Flora Feature	Reason for Conservation Interest	Nearest Location Parcel ²¹
Beechen Bottom	Ancient Woodland	2km N
OTHER PRIORITY HABITATS		
Semi-Improved Grassland	Priority Habitat	0.6km SW 1km SW
Lowland Heathland	Priority Habitat	1.4km S
Lowland Fens	Priority Habitat	1.6km SW 1.8km S
Chalk Rivers	Priority Habitat	0.7km E 0.7km E 1.7km SW
Traditional Orchards	Priority Habitat	0.8km W (x3) 1km SW 1.3km NW 1.7km NW 1.9km NW 1.3km E (x2)
Woodpasture and Parkland BAP	Priority Habitat	Adjacent to Site boundary NE
Open Mosaic Habitat	Priority Habitat	1.2km N 1.8km N

3.4.2 UK Habitats Survey

iii Table 6 summarises the results of the habitat survey and botanical surveys within the Site. A UK Habitats Plan is provided in Figure 2.

Table 6: Habitats within the Site

Habitat	Description	Photograph(s)	Nature Conservation Importance
Cereal Crops	The dominant habitat within the Site was cereal crops. During the Site walkovers, the land was identified as being sown with wheat, left as stubble (as ph adjacent) and freshly ploughed.		Site
Lowland Mixed Deciduous Wood	To the east of the Site was a stand of mature Ancient Woodland comprising semi-mature to mature trees and an understory of shrubs. The woodland is a non-statutory designated site – hereafter referred to as 'Green Lane Wood LWS'. Dominant tree species within the woodland included pedunculate oak, ash, sycamore and bird cherry. Shrub layer species included hazel coppice, hawthorn holly, English elm, elder and blackthorn.		National

Habitat	Description	Photograph(s)	Nature Conservation Importance
Rural Trees	Eight individual rural trees were recorded within the Site, comprising a mix of semi-mature to mature pedunculate oak. Only one tree (T4) was recorded as a dead standing specimen. The trees were mostly present in association with boundary habitats such as woodlands and hedgerows, although one field tree was also recorded (T9). The submitted Arboricultural Report identifies that individual trees present within the Site were not considered to be ancient or veteran specimens.		Site
Native Hedgerow with Trees	Three native hedgerows were recorded within the Site (HE1, HE2 & HE3). Hedgerow HE1 ran through the centre of the Site and was managed to a height of approximately 1.5m and width of 2m. Whilst mostly structurally intact, the hedgerow was not functionally linked to wider habitats around the Site boundary, with gaps exceeding 20m. Blackthorn formed the dominant species with abundant field maple and hawthorn. Occasional species included elder, dog-rose, hazel and pedunculate oak. There was one pedunculate oak standard tree (T7) within the hedgerow.		Local

Habitat	Description	Photograph(s)	Nature Conservation Importance
Native hedgerow	Hedgerow HE2 was a continuous managed hedgerow approximately 1.5m tall and wide, present along Rousebarn Lane. Blackthorn formed the dominant species with abundant field maple and occasional hazel, pedunculate oak and dog-rose. The hedgerow formed good habitat connections to an area of lowland mixed deciduous woodland and a small area of willow scrub, as well as being functionally linked to hedgerow HE3. Hedgerow HE3 was an extensive hedgerow forming the Site's south and eastern boundaries along Little Green Lane. The southern boundary hedgerow component was managed to a regular height and width (1.5m x 2m) and was entirely structurally intact. The eastern boundary hedgerow component was unmanaged with a variable mix of young and mature shrubs. Abundant shrub species included hawthorn, English elm, with occasional blackthorn, hazel and holly. The three hedgerows within the Site were not considered to be 'important' under the wildlife and landscape criteria (Schedule 1) of the Hedgerow Regulations 1997, due to insufficient woody species per 30m. Consideration of heritage criteria under the Hedgerow Regulations does not fall within the ecological discipline and has not therefore been considered.		Local

3.5 Great Crested Newts (GCN)

3.5.1 Desk Study

- i Six recent records for GCN were returned for the Study Area, the nearest record was located 0.73km from the Site. MAGIC returned no Class Survey Licence Returns within the Study Area. MAGIC returned eDNA results for one pond located 1.6km north-west of the Site, which was negative, indicating GCN were absent (GCN Pond Surveys 2017-2019).
- ii There are no ponds within the Site.
- iii One pond was identified within the Study Area, located 0.45km west of the Site. A Waterbody Plan is provided in Figure 3.

3.5.2 Field Assessment

- iv The site walkover identified that the Site is dominated by cropland and therefore provides sub-optimal habitat for GCN. It was further identified that hedgerow, woodland and scrub habitats within and bounding the Site would provide suitable terrestrial habitat for GCN, if a meta-population was present within the locality.
- v Given a lack of ponds within the local landscape significantly limiting the presence of a functional meta-population of GCN, as well as the lack of GCN records and the sub-optimal terrestrial habitats present on Site, GCN are considered highly likely to be absent from the Site and local landscape.
- vi GCN have not been assigned a geographical scale of nature conservation importance and this species is not considered further in this assessment.

3.6 Common Species of Reptiles

- i 'Common species of reptile' refers to common lizard, slow worm, adder and grass snake. The Site is located outside of the known range of smooth snake and sand lizard therefore these species are not considered in this EcIA.

3.6.1 Desk Study

- ii One record for grass snake from 2009 appeared to have been returned for within the Site itself, however, the specific record location was Little Green Junior School which is located offsite to the south of the Site boundary. A small number of other records for grass snake were returned 0.75km+ from the Site, but all pre-dated 2000. Three recent records for slow worm were returned 1km+ from the Site. No recent records for common lizard or adder were returned.

3.6.2 Field Assessment

- iii The Site is dominated by cropland and therefore provides sub-optimal habitat for reptiles.
- iv The site walkover identified that hedgerow, woodland and scrub habitats within and bounding the Site would provide suitable shelter, hibernacula, foraging and dispersal habitats for reptiles, should populations be present within the locality.
- v Any reptile populations present are predicted to be small in number (as stated in Section 2 surveys were considered disproportionate), therefore reptiles are of nature conservation importance at the Site level.

3.7 Bats

3.7.1 Desk Study

- i Forty-two recent records of bats were returned within the Study Area, the nearest of which was a noctule bat 0.25km from the Site. Most records returned were for common pipistrelle and soprano pipistrelle bats, with occasional records of noctule, brown long-eared, Daubenton's, serotine and Leisler's bats.
- ii MAGIC returned eight records of granted European Protected Species Licences (EPSL) for bats within the Study Area. The nearest record was located 0.1km south of the Site and comprised the destruction of a breeding site for brown long-eared, common pipistrelle and soprano pipistrelle bats from 2013-2015. The second nearest record was located 0.71km south of the Site and comprised the destruction of a resting place for common pipistrelle and soprano pipistrelle bats from 2018-2019. All other records were located 0.8km+ from the Site.

3.7.2 Field Surveys

Buildings

iii There were no buildings or built structures within the Site.

Ground Level Tree Assessment

iv The site walkover identified that the scattered broadleaf trees present within the Site (T1-T8 Figure 2), outside of woodlands, provided suitable Potential Roosting Features PRFs) for bats. The PRF's on individual trees are listed in Table 7 below:

Table 7: Ground Level Tree Assessment Results (Roosting Bats)

Tree Reference	Tree Species	PRF Description	Roost Classification ²²
T1	Oak	Branch cavity 6m S	PRF-I
		Branch cavity 7m E	PRF-I
T2	Oak	Woodpecker hole 8m E	PRF-M
		Woodpecker hole 6m NW	PRF-M
T3	Oak	Two adjacent woodpecker holes 7m NE	PRF-M
T4	Dead	Multiple trunk cavities 2m-6m SW	PRF-M
T5	Oak	Trunk cavity 3m W	PRF-M
T6	Oak	Trunk cavity 6m NW	PRF-M
T7	Oak	Ivy cover and branch/trunk cavities	PRF-M
T8	Oak	Ivy cover	PRF-I

v There is the potential for woodland trees bounding the Site to also support PRFs.

Walked Bat Transect Surveys

vi Three bat transect surveys were undertaken across the Site in accordance with current best practice (Collins, 2023 - see Appendix 2) – x1 in May (spring), x1 in July (summer) and x1 in September (autumn) 2024. Bat transect plans are provided in Figures 6a-6c which also detail the walked transect route undertaken. Survey summaries of the walked transects are provided below. All transects were undertaken in appropriate weather conditions for bat surveys (above 10°C, no/light wind, no rain).

vii Bat Transect 23rd May 2024 – Bat species recorded during the transect were common pipistrelle, soprano pipistrelle and noctule. Recorded and observed bat activity was low, limited to occasional encounters along woodland edges.

viii Bat Transect 10th July 2024 - Bat species recorded during the transect were common pipistrelle only, limited to two encounters along woodland edges.

²² See Appendix 2 for roost classification

ix Bat Transect 9th September 2024 - Bat species recorded during the transect were common pipistrelle and soprano pipistrelle, limited to two encounters along woodland edges. The soprano pipistrelle bat was observed to fly from the offsite woodland to the east of the Site, towards Green Lane Wood LWS within the Site.

Static Bat Detector Surveys

x Static bat detectors were set out in two locations within Green Lane Wood LWS (see Plate 1 below):

Static ER0042 - located to the north-eastern edge of Green Lane Wood LWS.

Static ER0045 - located to the north-western edge of Green Lane Wood LWS.

Plate 1: Static Bat Detector Deployment Locations ER0042 & ER0045



xi Both static bat detectors were deployed on five separate occasions from May through to September during the time periods set out below. Raw data from the static bat detectors is provided in Appendix 6. In most cases static bat detectors recorded six consecutive nights of activity, only the September statics recorded less than the five nights required by best practice (September: n=4 nights) – this is not considered a constraint to the survey effort.

Deployment 1 - 24-29.05.24

Deployment 2 - 19-24.06.24

Deployment 3 - 11-16.07.24

Deployment 4 - 05-10.08.24

Deployment 5 - 26-30.09.24

xii The results from both static bat detectors are set out in Tables 8 and 9.

xiii The static detectors recorded a total of nine bat species within the Site – common pipistrelle, soprano pipistrelle, Nathusius pipistrelle, noctule, Leisler's, serotine, Natterer's, brown long-eared and barbastelle.

xiv For each recording month, the highest numbers of passes recorded were generally for common pipistrelle (35%-88% of total passes), noctule (5%-62% of total passes) and soprano pipistrelle (7%-24% of total passes). The three species were consistently detected during most recording nights/ months on both static detectors.

xv For each recording month, recorded passes were notably lower for Nathusis pipistrelle, Leisler's, serotine, Natterer's, brown long-eared and barbastelle, less than 5% of total passes for any one species. These species were also infrequently detected during recording nights/months on both static detectors.

xvi It is likely that activity from brown-long eared bats was under recorded during static surveys, as this species typically produces low-amplitude quiet calls and generally uses eyes and ears to forage through gleaning.

xvii The static data appears to indicate comparably higher levels of foraging within the Site by common pipistrelle and soprano pipistrelle, which is consistent with the walked transect surveys undertaken and the presence of suitable woodland edge habitat within and surrounding the Site. Comparably higher levels of activity from noctule bats were also recorded; this could indicate foraging over cropland but may also be indicative of noctule bats commuting high over the Site between offsite foraging areas. This is a typical trait of this species and is again consistent with the walked transects undertaken.

xviii The comparably lower levels of bat activity from Nathusis pipistrelle, Leisler's, serotine, Natterer's, brown long-eared and barbastelle are indicative of occasional dispersal and foraging within the Site, which is considered consistent with the Site's geographical location and the immediate and local landscape which supports a habitat pattern of well-connected woodland, hedgerows and tree lines.

Table 8: Static Bat Detector ER0042 – Bat Passes with % Totals per Species per Month

BAT SPECIES	MAY Total Passes (%)	JUNE Total Passes (%)	JULY Total Passes (%)	AUGUST Total Passes (%)	SEPTEMBER Total Passes (%)
Common pipistrelle	246 (62%)	407 (82%)	793 (78%)	572 (72%)	266 (68%)
Soprano pipistrelle	67 (17%)	32 (7%)	170 (17%)	138 (17%)	95 (24%)
Nathusis pipistrelle	0	0	0	0	3 (1%)
Noctule	67 (17%)	43 (9%)	41 (4%)	40 (5%)	0
Leisler's	14 (4%)	5 (1%)	3 (<1%)	3 (<1%)	0
Serotine	2 (1%)	0	3 (<1%)	0	3 (1%)
Natterer's	1 (<1%)	0	0	1 (<1%)	1 (<1%)
Brown long-eared	0	3 (1%)	5 (<1%)	18 (3%)	2 (1%)
Barbastelle	0	2 (<1%)	0	23 (3%)	19 (5%)

Table 9: Static Bat Detector ER0045 – Bat Passes with % Totals per Species per Month

BAT SPECIES	MAY Total Passes (%)	JUNE Total Passes (%)	JULY Total Passes (%)	AUGUST Total Passes (%)	SEPTEMBER Total Passes (%)
Common pipistrelle	677 (88%)	35 (28%)	72 (35%)	100 (37%)	166 (81%)
Soprano pipistrelle	52 (7%)	11 (9%)	18 (9%)	43 (13%)	34 (17%)
Nathusis pipistrelle	0	0	0	0	0
Noctule	37 (5%)	78 (62%)	107 (53%)	126 (47%)	0
Leisler's	0	1 (1%)	0	0	0
Serotine	0	0	7 (3%)	0	0

BAT SPECIES	MAY Total Passes (%)	JUNE Total Passes (%)	JULY Total Passes (%)	AUGUST Total Passes (%)	SEPTEMBER Total Passes (%)
Natterer's	0	1 (1%)	0	2 (1%)	2 (1%)
Brown long-eared	0	0	0	4 (2%)	3 (2%)
Barbastelle	0	0	0	0	0

Summary and Assessment of Nature Conservation Importance

xix To assess the importance of bat assemblages within the Site as a whole, the standard approach within Table 3.3 (Central England/Midlands) of the Bat Mitigation Guidelines was used (Reason & Wray, 2023). This method combines scores of bat species rarity to compare against a maximum theoretical score and identify a specific geographical level of nature conservation importance.

xx As previously detailed, bat transect and static surveys identified the presence of nine bat species within the Site. Utilizing Table 3.3 (Central England/Midlands) of the Bat Mitigation Guidelines, the total recorded bat assemblage within the Site scores 20 points and would in this context, be of nature conservation importance at the National level.

xxi However, for each recording month, recorded passes were notably lower for Nathusius pipistrelle, Leisler's, serotine, Natterer's, brown long-eared and barbastelle bats, less than 5% of total passes for any one species. These species were also infrequently detected during recording nights/months on both static detectors and were not recorded during walked transect surveys. Therefore, the current baseline data suggests limited and transient use of Site habitats by these species.

xxii Most of the bat activity recorded during walked transect and static surveys within the Site were for common pipistrelle, soprano pipistrelle and noctule bats. Utilizing Table 3.3 (Central England/Midlands) of the Bat Mitigation Guidelines, this bat assemblage scores 4 points and would in this context, be of nature conservation importance at the Site level.

xxiii Utilizing professional judgement, the bat assemblage within the Site, which based on the current baseline comprises a predominance of activity from widespread bat species and transient use by rarer or restricted distribution bat species, would be of nature conservation importance at the Local level.

3.8 Birds

3.8.1 Desk Study

i Recent records for sixty-eight bird species were returned within the Study Area, with over 1500 individual records returned. No recent records were obviously returned for the Site itself. The closest recent records were for goldfinch, great spotted woodpecker and ring-necked parakeet, located 0.1km from the Site. Recent records up to 0.5km from the Site included lesser redpoll, kingfisher, Egyptian goose, treecreeper, stock dove, grey wagtail, spotted flycatcher, marsh tit, goldcrest, woodcock, redwing, mistle thrush, black-headed gull, firecrest and song thrush. Recent notable²³ records within the wider Study Area relevant to the habitat pattern within and adjacent to the Site included red kite, skylark, lesser spotted woodpecker, hobby, peregrine falcon, bullfinch, tawny owl and kestrel.

²³ Notable bird species are taken as those listed: on Annex I of the EC Birds Directive (2009/147/EC); on Schedule 1 of the Wildlife and Countryside Act 1981 (as amended); as Species of Principal Importance (SPI) for the Conservation of Biodiversity in England listed in Section 41 of the Natural Environment and Rural Communities Act 2006; as Red or Amber in the Birds of Conservation Concern (BoCC) 4 (Eaton MA, Aebischer NJ, Brown AF, Hearn RD, Lock L, Musgrove AJ, Noble DG, Stroud DA and Gregory RD (2021). Birds of Conservation Concern 5: the population status of birds in the United Kingdom, Channel Islands and Isle of Man.

3.8.2 Field Assessment

ii Table 10 provides a summary of the notable bird species recorded within the Site during the breeding bird surveys, along with their likely breeding status. Results of the bird surveys are summarised in Figures 8a-d. Survey methodology is provided in Appendix 2.

iii A total of twenty-two bird species were recorded within the Site.

iv Of these species, four are red listed: common swift, greenfinch, mistle thrush and skylark. Common swift was identified foraging over cropland during one survey occasion only and was determined to be non-breeding (there is no suitable habitat for breeding within the Site). Mistle thrush and greenfinch were predicted as possibly breeding within the Site along boundary habitats, with one possible breeding territory recorded each. Skylark were predicted as probably and possibly breeding across the cropland, with five probable breeding territories and one possible breeding territory recorded.

v Five amber listed bird species were recorded within the Site: kestrel, song thrush, whitethroat, woodpigeon and wren. Kestrel was recorded as not breeding but observed during one survey occasion foraging over the cropland. For the other amber listed species, a total of ten possible breeding territories were recorded and two probable breeding territories (wren and song thrush).

vi The remaining thirteen bird species recorded were all green listed, apart from rose-ringed parakeet which is a non-native and invasive species. Green listed bird species included green and great spotted woodpecker, blackcap, chaffinch, goldcrest, jackdaw, magpie and robin. Of the green listed bird species, twenty-four possible breeding territories and one probable breeding territory (red kite) were recorded within the Site.

vii Two Schedule 1 (Wildlife and Countryside Act 1981, as amended) were recorded within the Site. A pair of red kites were recorded as probably breeding within Green Lane Wood LWS. Red kite is a green listed species, reflecting its population expansion in range and numbers over the past 30 years since its original inclusion on the Schedule 1 list). A Cetti's warbler was also recorded within Green Lane Wood LWS but determined to be non-breeding and passing through, as this species is associated with breeding in tall vegetation and scrubby habitats in proximity to water. Cetti's warbler is a green listed species.

viii The bird species recorded within the Site are considered typical of the prevailing habitat pattern comprised of cropland bounded by woodlands and hedgerows. Current field evidence identifies that the Site is of nature conservation importance for birds at the Site level.

Table 10 : Summary of Breeding Bird Surveys

Bird Species	Legal/ Conservation Status	Breeding Status and Code ²⁴	Confirmed Number of Breeding Pairs/ Territories within the Site ²⁵	Primary Breeding Habitat ²⁶
Blackcap	Green listed	Possibly breeding (H)	4	Woodland edge
Blue tit	Green listed	Possibly breeding (H)	5	Woodland edge and hedgerow
Chaffinch	Green listed	Possibly breeding (H)	1	Woodland edge

²⁴ See Appendix 2, methodology, for classification of breeding activity.

²⁵ This is the minimum number of breeding pairs/territories recorded during the breeding bird surveys. Where '0' is stated, this denotes that a species was recorded; however, there were insufficient registrations to enable the number of breeding pairs/territories to be assigned.

²⁶ Broad habitats have been used for simplicity and have been taken from British Trust for Ornithology online resources (BirdFacts and BirdTrends 2017) (<https://www.bto.org/>)

Bird Species	Legal/ Conservation Status	Breeding Status and Code ²⁴	Confirmed Number of Breeding Pairs/ Territories within the Site ²⁵	Primary Breeding Habitat ²⁶
Cetti's warbler	Green listed, Sch 1 W&C Act	Non-breeding	0	Recorded in unsuitable breeding habitat – woodland
Chiffchaff	Green listed	Possibly breeding (H)	1	Scattered trees
Common swift	Red listed	Non-breeding (F)	0	Foraging over cropland.
Goldcrest	Green listed	Possibly breeding (H)	3	Woodland edge
Greenfinch	Red listed	Possibly breeding (H)	1	Hedgerow/tree lines
Great spotted woodpecker	Green listed	Possibly breeding (H)	1	Woodland
Green woodpecker	Green listed	Possibly breeding (H)	1	Woodland
Jackdaw	Green listed	Possibly breeding (H)	1	Woodland
Kestrel	Amber listed	Non-breeding (F)	0	Foraging over cropland
Magpie	Green listed	Non-breeding (F)	0	Flying over site
Mistle thrush	Red listed	Possibly breeding (H)	1	Woodland
Red kite	Green listed, Sch 1 W&C Act	Probably breeding (T)	1	Woodland
Robin	Green listed	Possibly breeding (H)	5	Woodland edge
Rose-ringed parakeet	n/a – non-native	Probably breeding (H)	1	Woodland edge
		Possibly breeding (T)	1	Woodland edge
Skylark	Red listed	Probably breeding (T)	5	Cropland
		Possibly breeding (S)	1	Copland
Song thrush	Amber listed	Probably breeding (T)	1	Woodland
		Possibly breeding (H)	3	Woodland edge
Whitethroat	Amber listed	Possibly breeding (H)	3	Woodland edge and hedgerow
Woodpigeon	Amber listed	Possibly breeding (H)	3	Woodland

Bird Species	Legal/ Conservation Status	Breeding Status and Code ²⁴	Confirmed Number of Breeding Pairs/ Territories within the Site ²⁵	Primary Breeding Habitat ²⁶
Wren	Amber listed	Probably breeding (T)	1	Woodland
		Possibly breeding (H)	1	Woodland edge

3.9 Badgers

3.9.1 Desk Study

i Fifteen records of badgers were returned within the Study Area, the nearest of which was located 0.45km from the Site.

3.9.2 Field Survey

ii A plan of badger activity is provided in Figure 7. Two single-hole outlier setts were identified within the Site and are described below.

Sett S1

iii An active, single-hole outlier sett was identified along the south-western Site corner under a hedgerow. Outside the sett entrance was a compacted mound of spoil. Badger footprints were identified leading into the sett. There was evidence of badger foraging around the sett. A badger latrine and well-marked trail with badger footprints was identified to the east, along the southern Site boundary hedgerow.

Sett S2

i An active, single-hole outlier sett was identified under the hedgerow which runs through the centre of the Site. The sett was located at the southern end of the hedgerow. Freshly excavated spoil was identified outside the sett entrance in a small mound of unconsolidated spoil. Badger foraging (snuffle holes) was also identified along the central hedgerow to the north.

Additional Badger Evidence

ii A live badger was observed during a bat survey moving between Green Lane Wood LWS towards Little Green Lane along the southern Site boundary.

Summary of Nature Conservation Value.

iii Outlier setts, two of which have been identified within the Site, are temporary places of shelter and protection used by badger clans typically on the periphery of their territory and are thus not core components utilised for permanent habitation. Current field evidence has identified that badgers are dispersing along boundary habitats such as hedgerows and woodlands, which are also used for occasional foraging.

iv Current field evidence identifies that the Site is of nature conservation importance for badgers at the Site level.

3.10 Other Notable Species

3.10.1 Desk Study

i Twenty recent records for hedgehog were returned within the Study Area, the nearest of which was located 0.28km from the Site. Two recent records for common toad were returned within the Study Area, the nearest of which was located 0.38km from the Site. Three recent records of stag beetle were returned within the Study Area, the nearest of which was located 0.62km from the Site.

ii No recent records were returned for other notable species such as harvest mice, brown hare or polecat.

3.10.2 Field Assessment

- iii There are no aquatic habitats within the Site or zone of influence such as watercourses therefore the Site is determined to be unsuitable for otters, water voles and white-clawed crayfish.
- iv The hedgerow, woodland and scrub habitats within and bounding the Site provide opportunities for foraging, dispersing and refuge-seeking hedgehogs and common toads.
- v The woodlands within and surrounding the Site may have the potential to support stag beetles should suitable deadwood habitats be present. The dominant cropland habitats within the Site are unsuitable for stag beetles.
- vi The cropland within the Site may provide suitable habitat for brown hares and harvest mice. No evidence of brown hares was identified within the Site during any surveys – brown hares are typically a conspicuous species.
- vii The habitat pattern within the Site is predicted to be of nature conservation importance to other notable species at the Site level.

3.11 Future Baseline

- i The agricultural management of the Site is unlikely to change between the time the surveys were undertaken and development of the Scheme. Therefore, the baseline described above is not expected to change prior to development of the Scheme.

3.12 Summary of Nature Conservation Importance

- i Table 11 summarises the IEFs that have been recorded in the Study Area and their nature conservation importance.

Table 11: Summary of Nature Conservation Importance

Ecological Feature	Geographical Scale of Nature Conservation Importance
Designated Sites (onsite and offsite adjacent to the Site)	County to National
Site Habitats – non-LWS	Site to Local
Reptiles	Site
Bats	Local
Birds	Site
Badgers	Site
Other Notable Species	Site

4 IMPACT ASSESSMENT, AGREED MITIGATION MEASURES AND SIGNIFICANCE OF RESIDUAL EFFECTS

i This Section characterises the impacts of the Scheme on IEFs during the construction and operation phases, sets out avoidance and mitigation measures, and assesses the significance of the residual effects (both positive and negative) of the Scheme on these features. Where significant residual effects will occur, appropriate compensation measures are identified to offset those effects.

ii The Scheme assessed in this section is derived from the submitted Illustrative Masterplan and Illustrative Landscape Strategy.

iii Mitigation and compensation measures identified in Section 4.1 onwards will be incorporated into the detailed design parameters for the Scheme and implemented as part of the overall development of the Site pursuant to a Reserved Matters application.

4.2 Green Lane Wood LWS and Ancient Woodland

4.2.1 Policy Background

i Green Lane Wood LWS is an area of Ancient Woodland and a non-statutory Local Wildlife Site, located within the Site to the east (Figure 5). Ancient Woodland is offered protection under the NPPF, which states:

'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 reasons and a suitable compensation strategy exists'

ii Similarly, Three Rivers District Council DMP policy DM6: Biodiversity, Trees, Woodland and Landscaping states:

'Planning permission will be refused for any development resulting in the loss or deterioration to protected woodland (including ancient woodland), protected trees (including aged or veteran trees) and hedgerows, unless conditions can be imposed to secure their protection'

iii In the context of Designated Sites (i.e. LWS, SSSIs), DM6 policy states:

'Development that would affect a Site of Special Scientific Interest, Local Nature Reserve, Local Wildlife Site or protected species under UK or European law, or identified as being in need of conservation by the UK Biodiversity Action Plan or the Hertfordshire Biodiversity Action Plan, will not be permitted where there is an adverse impact on the ecological, geological or biodiversity interests of the site, unless it can be demonstrated that:

The need for the development would outweigh the need to safeguard the biodiversity of the site, and where alternative wildlife habitat provision can be made in order to maintain local biodiversity; and

Adverse effects can be satisfactorily minimised through mitigation and compensation measures to maintain the level of biodiversity in the area'

4.2.2 Built-In Mitigation

iv The Scheme will incorporate Green Lane Wood LWS into areas of open space with no direct loss of woodland area. In accordance with Natural England and Forestry Commission standing advice, a 0-15m development buffer will be incorporated around Green Lane Wood LWS. There will be a further 15m buffer from the main areas of built development (i.e. housing, school and local centre) providing in total a 30m development buffer. Surfaced and unsurfaced paths are likely to be created in some areas of the 15-30m buffer, as well as the outer edges of SuDs features.

v The Scheme will incorporate a substantial belt of barrier planting around the perimeter of Green Lane Wood LWS within the 0-15m buffer, comprising thorny shrubs to mitigate the potential for anthropological ingress.

4.2.3 Construction Impacts and Mitigation

vi There is the potential for negative, indirect and temporary impacts to Green Lane Wood LWS during construction, arising from operations such as ground level changes, the movement of construction plant, the creation of dust, the storage of construction materials and chemical spillages.

vii To prevent negative impacts to Green Lane Wood LWS during construction, mitigation measures would include (but not be limited to):

Requirements for 'toolbox talks' and dissemination of mitigation measures to site managers and construction workers;

Incorporation of a minimum 15m Heras fenced Biodiversity Protection Zone around Green Lane Wood LWS throughout construction, further informed by the Arboriculturist's report and Ecologist's advice for general woodland protection as necessary;

Control of construction artificial lighting to prevent disturbance and displacement of nocturnal ecological receptors (such as bats);

Appropriate control of construction waste, noise and airborne particulates; and

Appropriate storage and use of construction materials, fuels and machinery.

viii The detail of construction mitigation measures for Green Lane Wood LWS are expected to be captured in a Construction Ecological Management Plan (CEMP), Arboricultural Method Statement (AMS) and Tree Protection Plan (TPP) for the Scheme, secured through condition pursuant to a reserved Matters Application.

4.2.4 Operation Impacts and Mitigation

ix There is the potential for 'urban edge effects' to Green Lane Wood LWS arising from the Scheme during operation, such as anthropological ingress causing disturbance and damage to woodland habitats and the ecological receptors present therein. Impacts have the potential to be negative and permanent for the long-term operation of the Scheme.

x Built-in mitigation measures for Green Lane Wood LWS, as previously described, includes a 30m development buffer and barrier planting. To further mitigate urban edge effects to Green Lane Wood LWS, the following measures would be developed and incorporated into the detailed design stage of the Scheme:

Specifications for the installation of post and wire barrier fencing around the woodland perimeter and a reinforced barriered access gate to allow for woodland management;

A detailed planting specification for barrier shrub planting around the perimeter of Green Lane Wood LWS, detailing species mixes and planting zones;

As part of the detailed landscaping design, a strategic and holistic strategy to channel recreational and urban edge effect pressures away from the woodland, such as through defined walkways, waymarking and strategic tree and shrub planting; and

The installation of interpretation boards at strategic locations, educating residents and visitors of the nature conservation value of Ancient Woodland, sensitivity to urban edge effects and the need for long term protection.

xi The detail of operation mitigation measures for Green Lane Wood LWS are expected to be captured in a Woodland Recreational Management Plan or similar, as well as a detailed Soft Landscaping Strategy, secured through condition pursuant to a reserved Matters Application.

xii In addition, a Habitat Management and Monitoring Plan (HMMP) will be essential for the Scheme to meet mandatory Biodiversity Net Gain requirements (Section 5). With specific reference to the potential for urban edge effects to Green Lane Wood LWS, the HMMP would include (but not be limited to):

Monitoring measures which specifically require potential damage or disturbance to woodland habitats to be assessed, quantified and recorded;

Trigger levels above which remedial works to woodland habitats must be actioned; and

A range of management prescriptions appropriate to remediate damage or disturbance to woodland habitats, as well as improving the overall ecological condition of the woodland over the long-term where proportionate and appropriate opportunities are actively identified.

xiii Uncontrolled artificial lighting built into the Scheme would have the potential to cause negative displacement impacts to nocturnal ecological receptors utilising Green Lane Wood LWS and furthermore degrade the overall ecological functioning of the woodland.

xiv The artificial lighting strategy for the Scheme would therefore follow the recommendations set out within the following best practice document: Institution of Lighting Professionals and Bat Conservation Trust (2018) - Bats and Artificial Lighting in the UK – Bats and the Built Environment Series Guidance Note 08/18. Measures to reduce the impact of artificial lighting on Green Lane Wood LWS would include:

Avoid lighting wherever possible;

Install lamps and the lowest permissible density;

Lamps positioned to direct light to avoid upward spill onto any green corridors that could be used by commuting bats/nocturnal species or features with bat roost potential;

LED lighting – with no/low UV component is recommended;

Lights with a warm colour temperature – 3000K or 2700K have significantly less impact on bats/nocturnal species;

Light sources that peak higher than 550nm also reduce impacts to bats/nocturnal species; and

The use of timers and dimmers to avoid lighting areas of the Site all night is recommended.

xv It is expected that an Artificial Lighting Strategy to mitigate impacts to Green Lane Wood LWS and nocturnal ecological receptors would be secured by condition pursuant to a Reserved Matters application.

4.2.5 Residual Effects and Compensation Measures

xvi Whilst it would not be possible to fully mitigate for all potential negative urban edge impacts to Green Lane Wood LWS, the construction and operational mitigation measures set out are considered sufficient to maintain the level of biodiversity within the woodland, as required by Three Rivers District Council DM6 Policy.

xvii In summary, no significant negative residual impacts are expected to occur to Green Lane Wood LWS and no compensation is proposed.

4.3 Whippendell Wood SSSI and Ancient Woodland

4.3.1 Policy Background

i Whippendell Wood is a SSSI and extensive area of Ancient Woodland located just offsite to the north, beyond Rousebarn Lane (Figure 5). SSSI's are protected under the Wildlife and Countryside Act 1981 (as amended) – see Appendix 2. The National and Local policy background for Ancient Woodland and Designated Sites has previously been described and is also relevant to Whippendell Wood SSSI. In addition, Three Rivers District Council Policy DM6 also identifies that 'Whippendell Woods and surrounds' are key areas for protection under the Hertfordshire Biodiversity Action Plan.

4.3.2 Construction Impacts and Mitigation

ii Whippendell Wood SSSI is located offsite beyond Rousebarn Lane which is in turn bounded by a hedgerow along the highway boundary. The woodland would be located 800m+ from the Scheme development parcels. Therefore, the potential for negative construction impacts to Whippendell Wood SSSI are unlikely to be as acute or wide ranging as those which may affect Green Lane Wood LWS. However, there may still be the potential for negative impacts to Whippendell Wood SSSI such as those arising from dust creation.

iii The proposed CEMP, AMS and TPP for the Scheme would therefore identify potential construction impacts to Whippendell Wood SSSI and provide appropriate mitigation measures as previously described for Green Lane Wood LWS.

4.3.3 Operation Impacts and Mitigation

iv Whippendale Wood SSSI would be separated from Scheme development parcels by an extensive area of open space identified in the submitted Illustrative Masterplan and Illustrative Landscape Strategy, as a Country Park. Given this separation distance, it is considered that potential urban edge effects arising from the Scheme are unlikely to be as acute or wide ranging as those which may affect Green Lane Wood LWS. The minimum statutory 15m buffer for Whippendale Wood SSSI is built-in to the Scheme, although this buffer is significantly larger. Within the northern area of the Country Park closest to Whippendale Wood SSSI, proposed footpaths would be mown through the surrounding grassland and would not have an artificial surface.

v Mitigation built-in to the Scheme proposes tree and shrub planting along the Site boundary to Rousebarn Lane, which would mitigate anthropological ingress into Whippendale Wood SSSI and channel recreational pressure to the existing Public Right of Way (PRoW) which crosses the proposed Country Park and Rousebarn Lane to the east.

vi There may still be the potential for distant and infrequent recreational and urban edge effect negative impacts to Whippendale Wood SSSI arising from the Scheme, given the PRoW and highway link (Rousebarn Lane) to the woodland. The proposed Woodland Recreational Management Plan and Soft Landscaping Strategy for the Scheme would therefore incorporate measures to mitigate such impacts to Whippendale Wood SSSI, such as appropriate waymarking to channel recreational activities within the Site boundary and potentially post and wire fencing along Rousebarn Lane to provide a strengthened deterrent against direct anthropological ingress.

vii Given the separation distance between Whippendale Wood SSSI and the Scheme development parcels of the Scheme, no negative impacts from artificial lighting are expected.

4.3.4 Residual Effects and Compensation Measures

viii Mitigation measures prescribed are considered sufficient to maintain the level of biodiversity within Whippendale Wood SSSI, as required by Three Rivers District Council DM6 Policy.

ix Therefore, no significant residual effects are expected to occur to Whippendale Wood SSSI and no compensation is proposed.

4.4 Merlin/Newland's Spring/Dell Wood LWSs and Ancient Woodlands

4.4.1 Policy Background

i Merlin's Wood and Newland's Spring Wood LWS are located adjacent to the northwestern Site boundary. Dell Wood LWS is located adjacent to the western Site boundary. These woodlands are also designated as Ancient Woodlands (Figure 5). The National and Local policy background for Ancient Woodland and Designated Sites has previously been described and is also relevant to the above woodland units.

4.4.2 Construction Impacts and Mitigation

ii Merlin's Wood/ Newland's Spring Wood LWS would be located approximately 300m north of the Scheme development parcels, although Dell Wood LWS would be proximal to the Scheme development parcels to the north and west with a minimum 30m development buffer built in.

iii There is the potential for negative construction impacts to Dell Wood LWS on a similar magnitude to Green Lane Wood LWS. Negative construction impacts to Merlin's Wood/Newland's Spring Wood LWS are unlikely to be as acute or wide ranging, given the separation distance.

iv The proposed CEMP, AMS and TPP for the Scheme would therefore identify potential construction impacts to Merlin's Wood/Newland's Spring Wood LWS and Dell Wood LWS and describe appropriate mitigation measures as previously described for Green Lane Wood LWS.

4.4.3 Operational Impacts and Mitigation

v Built-in mitigation for Dell Wood LWS comprises a statutory 15m development buffer together with a further 15m buffer from the main areas of built development (i.e. housing, school and local centre) providing in total a 30m development buffer. Surfaced and unsurfaced paths as well as allotments are likely to be created in some areas of the 15-30m buffer. There would be an extensive buffer from Merlin's Wood/Newland's Spring Wood LWS due to the creation of the Country Park, proximal proposed footpaths would be mown through the surrounding grassland and would not have an artificial surface. Barrier planting is also proposed along the entire length of Merlin's Wood/Newland's Spring Wood LWS and Dell Wood LWS woodland edges facing the Scheme, as shown on the submitted Illustrative Masterplan and Illustrative Landscape Strategy, to mitigate anthropological ingress.

vi There is the potential for negative urban edge effects and artificial light impacts to Dell Wood LWS on a similar magnitude to Green Lane Wood LWS, as there is a PRoW link. Negative urban edge effect and artificial light impacts to Merlin's Wood/Newland's Spring Wood LWS, where there is also a PRoW link, are unlikely to be as acute or wide ranging, given the separation distance.

vii The proposed Woodland Recreational Management Plan and Soft Landscaping Strategy for the Scheme would therefore propose appropriate measures to mitigate negative urban edge effect and artificial light impacts on Merlin's Wood/Newland's Spring Wood LWS and Dell Wood LWS, as set out for Green Lane Wood LWS.

4.4.4 Residual Effects and Compensation Measures

viii Mitigation measures prescribed are considered sufficient to maintain the level of biodiversity within Merlin's Wood/Newland's Spring Wood LWS and Dell Wood LWS, as required by Three Rivers District Council DM6 Policy.

ix Therefore, no significant residual effects are expected to occur to Merlin's Wood/Newland's Spring Wood LWS and Dell Wood LWS and no compensation is proposed.

4.5 Other Designated Sites

4.5.1 Policy Background

i Jacotts Hill/West Herts Golf Course LWS is located adjacent to the eastern Site boundary beyond Rousebarn Lane but is not an Ancient Woodland site.

ii The Site is located within the Impact Risk Zone of Croxley Moor Common SSSI, an area of open heathland and woodland, located 1.9km to the south beyond the urban area of Croxley Green.

iii Policies relating to SSSIs and LWSs has been described in previous sections.

4.5.2 Construction Impacts and Mitigation

i Jacotts Hill/West Herts Golf Course LWS is located offsite beyond Rousebarn Lane which is in turn bounded by a hedgerow along the highway boundary. The woodland is located 230m+ from the Scheme development parcels. Therefore, the potential for negative construction impacts to Jacotts Hill/West Herts Golf Course LWS are unlikely to be as acute or wide ranging as those which may affect Green Lane Wood LWS. However, there may still be the potential for negative residual impacts to Jacotts Hill/West Herts Golf Course LWS such as those arising from dust creation.

ii The proposed CEMP, AMS and TPP for the Scheme would therefore identify potential construction impacts to Jacotts Hill/West Herts Golf Course LWS and provide appropriate mitigation measures as previously described for Green Lane Wood LWS.

iii Given the separation distance between the Site and Croxley Moor Common SSSI (1.9km), no negative construction impacts are expected to occur to the SSSI.

4.5.3 Operation Impacts and Mitigation

iv Jacotts Hill/West Herts Golf Course LWS is privately owned and therefore public access would be restricted to large areas of the LWS. Measures as previously described to mitigate recreational and urban edge effect negative impacts to Ancient Woodlands and Designated Sites within and surrounding the Site would also be appropriate for Jacotts Hill/West Herts Golf Course LWS.

- v The extensive areas of open green space proposed within the Scheme will mitigate recreational pressures to Croxley Moor Common SSSI, located 1.9km south of the Site.

4.5.4 Residual Effects and Compensation Measures

- vi Mitigation measures prescribed are considered sufficient to maintain the level of biodiversity within Jacotts Hill/West Herts Golf Course LWS and Croxley Moor Common SSSI, as required by Three Rivers District Council DM6 Policy.
- vii Therefore, no significant residual effects are expected to occur to Jacotts Hill/West Herts Golf Course LWS and Croxley Moor Common SSSI and no compensation is proposed.

4.6 Site Habitats

4.6.1 Scheme Design

- i The Scheme comprises an outline application for up to 600 residential dwellings (Use Class C3(a)), a 5-bedroom property for children's social care and supported living (Use Class C3(b)). Two vehicular access points from Little Green Lane and further pedestrian / cycleway accesses. A one form entry primary school (Use Class F1(a)) (plus expansion land for a two-form entry primary school). A mixed-use local centre including a medical centre (Use Class E(e)), community building (Use Class F2), retail and café provision (Use Class E(a-c)), car parking and associated infrastructure. A country park, areas for play and recreation, allotments, community orchard and landscaping with associated infrastructure including sustainable urban drainage systems.
- ii The Scheme development parcels, soft and hard landscaping and SuDs features would predominantly be located on existing cropland. Green Lane Wood LWS located to the east of the Site, would as previously described, be incorporated into the open green space of the Scheme with no net loss of woodland area. The scattered broadleaf trees and scrub patches present in association with woodland edges and hedgerow (T1-T9 Figure 2) would be retained and incorporated into the open green space of the Scheme. Sectional removals of the central hedgerow within the Site (HE1 Figure 2) will be required to facilitate internal road construction, however the hedgerow will largely be retained. Sectional removal of the hedgerow along the southern Site boundary (HE3 Figure 2) will be required to facilitate vehicular access of Little Green Lane, however the hedgerow will largely be retained. Sectional removal of the short section of hedgerow to the south-east of the Site (HE2 Figure 2) would be required for footpath construction, however the hedgerow would largely be retained.
- iii The submitted Illustrative Masterplan and Illustrative Landscape Strategy proposes the following broad soft landscaping typologies:

Shrub and tree planting around Ancient Woodlands within and surrounding the Scheme to mitigate anthropological ingress and extend and strengthen these habitat features.

An extensive area of open green space to the north of the Site, the Country Park, comprising tall wildflower meadows with scattered native tree and shrub planting, as well as mown grass edges to allow for informal recreational access.

To the east and north of Green Lane Wood LWS, a sequence of SuDs features and associated terrestrial margins, comprising wildflower meadows, wetland bankside vegetation and scattered native tree and shrub planting.

A community orchard and allotments to the south of Green Lane Wood LWS.

Between the two development parcels, a linear area of more formalised planting comprising amenity grassland, meadow and tree and shrub planting.

- iv A high-level Biodiversity Impact Assessment (BIA) has been undertaken to determine the biodiversity performance of the Scheme at this current outline design stage. The BIA is presented in Section 5.

4.6.2 Construction Impacts and Mitigation

- v Measures to protect woodland habitats within and adjacent to the Site have been outlined in previous sections.

vi There is the potential for negative, indirect and temporary impacts to retained Site habitats during construction, arising from operations such as ground level changes, the movement of construction plant, the creation of dust, the storage of construction materials and chemical spillages. Retained habitats are broadleaf trees and associated areas of scrub (T1-T9 Figure 2) and associated hedgerows (HE1-HE3 Figure 2).

vii To prevent negative impacts to retained habitats during construction, mitigation measures would include (but not be limited to):

Requirements for 'toolbox talks' and dissemination of mitigation measures to site managers and construction workers;

Incorporation of Heras fenced Biodiversity Protection Zones along and around retained habitats, informed by the Arboriculturist's report and Ecologist's advice for general tree and hedgerow protection;

Control of construction artificial lighting to prevent disturbance and displacement of nocturnal species;

Appropriate control of construction waste, noise and airborne particulates;

Appropriate storage and use of construction materials, fuels and machinery.

viii The detail of mitigation measures for retained habitats are expected to be captured in the CEMP, AMS and TPP for the Scheme, secured through condition pursuant to a reserved Matters Application.

4.6.3 Operation Impacts and Mitigation

ix There is the potential for negative impacts to retained habitats, particularly broadleaf trees but also hedgerows, as a result of urban edge effects arising from the Scheme causing damage to these features, such as from vandalism. The submitted Illustrative Masterplan and Illustrative Landscape Strategy proposes additional barrier planting below and surrounding retained broadleaf trees, which would assist in mitigating negative urban edge effect impacts.

x To further mitigate these impacts, the following measures would be developed and incorporated into the detailed design stage of the Scheme:

Specifications for the installation of post and wire barrier fencing around retained trees;

A detailed planting specification for barrier shrub planting within and around retained trees, detailing species mixes and planting zones; and

The creation and maintenance of long grass margins along either side of retained hedgerows.

4.6.4 Residual Effects and Compensation Measures

xi No significant negative residual effects are expected to occur to retained Site habitats and no compensation is proposed.

xii The extensive areas of open green space and habitat creation proposed within the Scheme is considered to provide a significant positive residual effect at the Site level.

4.7 Reptiles

4.7.1 Construction Impacts and Mitigation

i The Scheme will predominantly impact cropland which is unsuitable for reptile species. Suitable habitats such as woodlands within and surrounding the Scheme would be retained and protected during construction as previously described. Site hedgerows may be utilised as dispersal corridors for low numbers of reptiles and will be impacted by sectional permanent hedgerow removal.

ii Given the limited impact to potentially suitable reptile habitats, the following Precautionary Work Measures would be undertaken to protect potential reptiles from killing and injuring during construction:

Requirements for 'toolbox talks' and dissemination of mitigation measures to site managers and construction workers;

The installation and retention of Heras fenced Biodiversity Protection Zones along retained boundary habitats;

Habitat manipulation of impacted hedgerows to disperse potential reptiles prior to full site clearances, such as a two-stage cut of vegetation;

Ecologist oversight and direction of habitat manipulation works and finger-tip search of manipulated land if appropriate; and

Installation of ramps within open trenches to allow reptiles to escape.

iii The detail of mitigation measures for reptiles are expected to be captured in a CEMP for the Scheme, secured through planning condition pursuant to a reserved Matters Application.

4.7.2 Operation Impacts and Mitigation

iv The Scheme proposes to convert the dominant cropland within the Site to a habitat pattern post-development comprising extensive areas of tall wildflower meadows, SuDS features and native tree and shrub planting, which would provide enhanced opportunities for potential reptile populations to colonise, breed, shelter and forage (should populations be present within the locality and are able to colonise the Site).

4.7.3 Residual Effects and Compensation Measures

v No significant negative residual effects are expected to occur to reptiles and no compensation is proposed.

vi The extensive areas of open green space and habitat creation proposed within the Scheme is considered to provide a significant positive effect at the Site level for reptiles, should populations be present within the locality and are able to colonise the Site.

4.8 Bats

4.8.1 Construction Impacts and Mitigation

i The broadleaf trees to be retained within the Scheme (T1-T9 Figure 2) were identified as supporting Potential Roosting Features (PRFs). In order to mitigate negative construction impacts to these trees, such as the potential for direct impacts strikes and disturbance, trees would be incorporated into Heras fenced Biodiversity Protection Zones informed by the Arboriculturist's report and Ecologist's advice.

ii Artificial lighting utilised during construction would have the potential to cause displacement impacts to foraging and commuting bats, where directed towards woodlands, hedgerows and scrub, as well as broadleaf trees with PRFs. Night working and artificial lighting during construction would in the first instance be avoided wherever possible. Where artificial lighting is required, lighting would strictly be focussed on the works area only and away from woodland, hedgerows, scrub and broadleaf trees. If necessary, luminaires would be utilised to assist in the directional focus of artificial light.

iii The detail of mitigation measures for bats are expected to be captured in a CEMP for the Scheme, secured through condition pursuant to a Reserved Matters application.

4.8.2 Operation Impacts and Mitigation

iv Artificial lighting built into the Scheme would have the potential to cause displacement impacts to foraging and commuting bats, where directed towards woodlands, hedgerows and scrub, as well as broadleaf trees with PRFs.

v The artificial lighting strategy for the Scheme would therefore follow the recommendations set out within the following best practice document: Institution of Lighting Professionals and Bat Conservation Trust (2018) - Bats and Artificial Lighting in the UK – Bats and the Built Environment Series Guidance Note 08/18. Measures to reduce the impact of artificial lighting on woodlands, hedgerows, scrub and broadleaf trees would include:

Avoid lighting wherever possible;

Install lamps and the lowest permissible density;

Lamps positioned to direct light to avoid upward spill onto any green corridors that could be used by commuting bats or features with bat roost potential;

LED lighting – with no/low UV component is recommended;

Lights with a warm colour temperature – 3000K or 2700K have significantly less impact on bats;

Light sources that peak higher than 550nm also reduce impacts to bats; and

The use of timers and dimmers to avoid lighting areas of the site all night is recommended.

vi It is expected that an Artificial Lighting Strategy to mitigate impacts to roosting and foraging bats would be secured by condition pursuant to a Reserved Matters application.

vii The Scheme proposes to convert the dominant cropland within the Site to a habitat pattern post-development comprising extensive areas of tall wildflower meadows, SuDS features and native tree and shrub planting, which would provide enhanced foraging opportunities for the local bat population.

4.8.3 Residual Effects and Compensation Measures

viii No significant negative residual effects are expected to occur to bats and no compensation is proposed.

ix The extensive areas of open green space and habitat creation proposed within the Scheme is considered to provide a significant positive effect at the Site level for the local bat population.

4.9 Birds – non-Schedule 1 Species

4.9.1 Construction Impacts and Mitigation

i Clearance of vegetation within the Site during the nesting bird season (taken to be March to August inclusive, though with some seasonal and species variations) would risk damaging or destroying active birds' nests. To mitigate this potential negative impact, clearance of vegetation would be undertaken outside of the nesting bird season. If this isn't possible, nesting bird surveys of vegetation to be cleared would be undertaken within 24 hrs of works taking place. If active birds' nests are discovered, they would be left in place with a buffer surrounding until such time as the young had fledged or the nest was no longer active.

ii The identification and retention of Heras fenced Biodiversity Protection Zones during construction, as previously specified, would protect retained woodland, hedgerow, shrub and broadleaf tree habitats where birds also have the potential to nest during construction.

iii The detail of mitigation measures for birds are expected to be captured in a CEMP for the Scheme, secured through planning condition pursuant to a Reserved Matters application.

4.9.2 Operation Impacts and Mitigation

Ground Nesting Birds (Skylark)

iv Five probable and one possible breeding territories of skylark were identified within the Site, spread across the whole Site area. Skylarks are a ground nesting species and are red listed, and therefore of most conservation concern. The Scheme proposes to permanently remove the existing cropland nesting habitat within the Site. Whilst extensive areas of open wildflower meadow are proposed to be created within the Scheme, the total area of new habitat to be created is approximately 50% less than the existing cropland habitats and would not therefore support six breeding territories of skylark. Anthropological disturbance during operation of the Scheme would, furthermore, be a significant limiting factor to skylarks successfully ground nesting within the open areas of wildflower meadow.

v In consideration of this assessment, it would not be possible to compensate for the loss of skylark breeding territories within the Site, therefore, a significant negative impact is expected to occur to skylarks at the Site level.

Non-Ground Nesting Birds

vi The Scheme proposes to convert the dominant cropland within the Site to a habitat pattern post-development comprising extensive areas of tall wildflower meadows, SuDS features and native tree and shrub planting, which would provide enhanced foraging and nesting opportunities for the non-ground nesting local bird population.

4.9.3 Residual Effects and Compensation Measures

Ground Nesting Birds (Skylark)

vii A significant residual effect is expected to occur to skylarks because of the Scheme therefore compensation should be undertaken. It would not be possible to fully compensate for the loss of skylark breeding territories within the Scheme boundary.

viii An offsite solution to compensate for the loss of skylark territories should therefore be discussed with the LPA in the first instance and if necessary, secured by condition pursuant to a Reserved Matters application. An offsite solution undertaken in other parts of the country such as Essex, is the creation and management of AB4 skylark plots within cropland near to the development site, through a legal agreement with the landowner. The skylark plots comprise undrilled patches within wheat crops which provide foraging (and potentially nesting) opportunities for the skylark population. Typically, a ratio of 2:1 plots are provided, therefore the loss of six breeding territories for skylark would require 12 skylark plots to be created.

Non-Ground Nesting Birds

ix The extensive areas of open green space and habitat creation proposed within the Scheme is considered to provide a significant positive effect at the Site level for the non-ground nesting local bird population.

4.10 Birds—Schedule 1 Species (Red Kite)

4.10.1 Baseline Summary

i A pair of red kites were considered probably breeding within Green Lane Wood LWS. Red kites are listed under Schedule 1 of the Wildlife and Countryside Act 1981 (as amended), which provides protection whilst nesting. Red kites are also green listed, meaning they are of least conservation concern.

ii A literature review on disturbance distances in selected bird species by Ruddock & Whitfield (2007) states in respect of red kites, given the habit of some red kites to nest close to areas of human activity any recommended 'disturbance-free' buffers must be enacted with pragmatism towards individual circumstances surrounding particular nest sites: apparently at least some pairs are routinely exposed to human activity without any obvious adverse effect. Other pairs which may not be routinely exposed to such activity may not be so tolerant, however.

4.10.2 Construction Impacts and Mitigation

iii There is the potential for negative disturbance impacts to nesting red kites during construction, should this species again nest within Green Lane Wood LWS or within other boundary woodlands in proximity to construction activities. However, the potential for disturbance to red kites and its relative magnitude would be significantly influenced by several variables, such as the specific location of the nest site relative to construction activities, the nature of those construction activities and the tolerance of the individual red kites to disturbance impacts.

iv It is therefore recommended as a precautionary measure, that nesting bird surveys are undertaken across the Site to determine potential presence of nesting red kite. The number and frequency of surveys would be dictated by the start of construction, the build programme and further remain dynamic as surveys are completed in response to individual circumstances.

v Red kites typically nest between March to August, with seasonal variation.

vi Where red kites are identified as nesting together with the potential to be disturbed by construction activities, an Ecological Clerk of Works and/or ornithologist would determine an appropriate buffer zone guided by the nesting location, the nature and temporal scope of the construction activities and any observations made of the red kites likely tolerance to disturbance during nesting surveys. The buffer zone would not be breached until the Ecological Clerk of Works and/or ornithologist has confirmed that chicks have fledged.

vii The detail of mitigation measures for nesting red kites are expected to be captured in a CEMP for the Scheme, secured through planning condition, when more detail would be known of likely construction start dates and the build programme.

4.10.3 Operation Impacts and Mitigation

viii The operational phase of the Scheme may have the potential to displace a nesting pair of red kite from Green Lane Wood LWS due to anthropological disturbance, however, the potential for disturbance to red kites and its relative

magnitude would be significantly influenced by several variables, such as the fidelity of red kites to that nesting location and the tolerance of the individual red kites to disturbance impacts. Red kites are also a green listed species and of least conservation concern and common and widespread within Hertfordshire.

ix Potential displacement of nesting red kite within Green Lane Wood LWS due to anthropological disturbance is not therefore considered to be significant.

4.10.4 Residual Effects and Compensation Measures

x No significant residual effects are expected to occur to red kites and no compensation is proposed.

4.11 Badgers

4.11.1 Construction Impacts and Mitigation

i The current baseline has identified that two outlier setts are present within the Site and that badgers are likely to utilise boundary habitats such as hedgerows and woodland for commuting and occasional foraging.

ii Due to the location of outlier setts S1 and S2 (Figure 7) between or adjacent to the main development parcels of the Scheme, the setts would need to be permanently removed. Given that outlier setts are temporary places of shelter and protection used by badger clans and thus not core components utilised for permanent habitation, the permanent loss of these setts is not considered significant. Natural England do not require replacement of outlier setts when permanently closed through derogation licence.

iii Prior to construction, there is the potential for existing badger setts to become disused and/or new setts to be created. Pre-commencement badger surveys would therefore be undertaken prior to the start of construction to identify whether the status of the Site in respect to badger setts has changed. If the existing badger setts are still active and/or new setts are identified, appropriate avoidance and/or mitigation measures would be implemented, including the application for and approval of a derogation licence from Natural England for sett closure.

iv The following Precautionary Work Measures would be undertaken to prevent harm to badgers and disturbance impacts during construction:

Incorporation of Heras fenced Biodiversity Protection Zones along and around retained habitats where badger setts have the potential to be present, informed by the Arboriculturist's report and Ecologist's advice for general tree and hedgerow protection.

Ramps would be created (mammal ladders) by edge-profiling excavations or by using planks to allow mammal escape.

Open pipework greater than 200mm external diameters would be capped off at the end of each working day.

Artificial lighting used during construction would be directed away from boundary habitats and focussed on internal work areas only.

Chemicals would be stored in secure compounds.

Spillages would immediately be treated with spill kits.

v The detail of mitigation measures for badgers are expected to be captured in a CEMP for the Scheme, secured through planning condition pursuant to a Reserved Matters application.

4.11.2 Operation Impacts and Mitigation

vi The Scheme proposes to convert the dominant cropland within the Site to a habitat pattern post-development comprising extensive areas of tall wildflower meadows, SuDS features and native tree and shrub planting, which would provide enhanced foraging and sett building opportunities for the local badger population.

vii The Scheme has the potential to displace current badger commuting routes through the Site, particularly along the central and southern hedgerows. However, badgers can become readily accustomed to urban habitats and tolerant of anthropological disturbance. It is noted that the current sett locations and commuting routes, particularly associated with sett S1, are directly adjacent to an extensive area of existing residential development comprising the northern urban

edge of Croxley Green. Potential urban edge effects to badger commuting routes as a result of the Scheme are therefore considered to not be significant.

4.11.3 Residual Effects and Compensation Measures

viii No significant residual effects are expected to occur to badgers and no compensation is proposed.

4.12 Other Notable Species

4.12.1 Construction Impacts and Mitigation

i Site habitats impacted during construction may have the potential to support common toads, hedgehogs, brown hares and harvest mice.

ii Potential construction impacts to common toads would be mitigated for as part of the Precautionary Works Measures provided for reptiles.

iii To reduce the potential for negative impacts to hedgehogs, harvest mice and brown hares during Site clearances, appropriate mitigation measures such as a two-stage cut of vegetation would be implemented, allowing animals to naturally disperse prior to full site clearances. Where such animals are found during works, they would be left to disperse of their own accord.

iv The detail of mitigation measures for the other identified notable species are expected to be captured in a CEMP for the Scheme, secured through condition pursuant to a Reserved Matters application.

4.12.2 Operation Impacts and Mitigation

v The Scheme proposes to convert the dominant cropland within the Site to a habitat pattern post-development comprising extensive areas of tall wildflower meadows, SuDS features and native tree and shrub planting, which would provide enhanced foraging, breeding and shelter opportunities common toads, hedgehogs, harvest mice and brown hares.

4.12.3 Residual Effects and Compensation Measures

vi No significant residual effects are expected to occur to other notable species and no compensation is proposed.

4.13 Proposed Enhancement Measures

i The following enhancement measures are proposed to comply with national and local planning policy, current legislation and good practice, the detail of which is expected to be secured through planning condition, pursuant to a Reserved Matters application.

The installation of a variety of bat, bird and insect boxes on retained site trees.

The creation of hedgehog highways within private gardens, to allow passage for these mammals and create foraging opportunities within the residential area.

The installation of swift, house sparrow, starling and house martin boxes and bat bricks on appropriate aspects of dwellings within the residential area.

Information packs to be provided to residents and the school outlining the ecological importance of Ancient Woodlands within and surrounding the Site.

5 OUTLINE BIODIVERSITY IMPACT ASSESSMENT

5.1 Overview

- i An Outline Biodiversity Impact Assessment (BIA), based on the submitted Illustrative Masterplan and Illustrative Landscape Strategy, has been undertaken. This involves making a comparison between the biodiversity value of habitats present within the Site prior to development (the 'baseline') and the predicted biodiversity value of habitats following the completion of the Scheme ('post development'). The comparison is undertaken in terms of 'biodiversity units', with a 'biodiversity metric' providing the mechanism to allow biodiversity values to be calculated and compared.
- ii The BIA Methodology is provided in Appendix 2 which utilised the DEFRA Statutory Metric.
- iii The Metric spreadsheet has been submitted separately to this EcIA report. An extract of the Metric Headline Results is provided in Appendix 5. Baseline and Post-Development Visualization Plans are provided in Figures 9 & 10.
- iv The Metric considered the Area Habitat and Hedgerow modules only. There are no Watercourses within the Site.

5.2 BIA Results

5.2.1 Baseline

- i The baseline biodiversity value of the Site is as follows:

82.25 Habitats Units.

10.26 Hedgerow Units.

5.2.2 Post-Development

- ii Post development, the Scheme would result in the following:

A net gain of 28.30 Habitat Units. This equates to a 34.41% biodiversity net gain.

A net gain of 4.36 Hedgerow Units. This equates to a 42.54% biodiversity net gain.

- iii The net gain in Habitat Units is a result of the extensive area of open green space proposed within the Scheme, converted from low distinctiveness cropland to a habitat pattern of medium distinctiveness neutral grassland, SuDS features and native tree and shrub planting.
- iv The net gain in Hedgerow Units is because of low impacts to existing Site hedgerows and new native hedgerows planted across the Scheme.
- v The mandatory requirement for 10% BNG has been achieved and significantly surpassed for the Scheme and the Trading Rules have been met.

5.2.3 Recommendations

- vi Compliance with BNG requirements as enacted through the Environment Act 2021 should be determined through the standard pre-commencement biodiversity gain planning condition (the 'biodiversity gain condition'). This would require prior to the start of construction:

The submission of a Biodiversity Gain Plan to the LPA;

A planning mechanism to secure the on-site BNG for the minimum 30-year period required by the Environment Act 2021; and

The submission of a Habitat Management and Monitoring Plan to the LPA, to secure the management of on-site habitats for the minimum 30-year period, including all habitats to be retained (but not enhanced within the BIA), such as Green Lane Wood LWS.

6 CONCLUSION

i This EcIA is based on a desk study and ecological surveys undertaken between May to September 2024. The scope of the surveys was based on the Zol of the Scheme and included habitat surveys and condition assessments, as well as bat, breeding bird and badger surveys. The ecological features present within the Survey Area are shown in Figures 2 to 8. Once all relevant available baseline information was obtained, the significance of effects (both positive and negative) on IEFs was assessed.

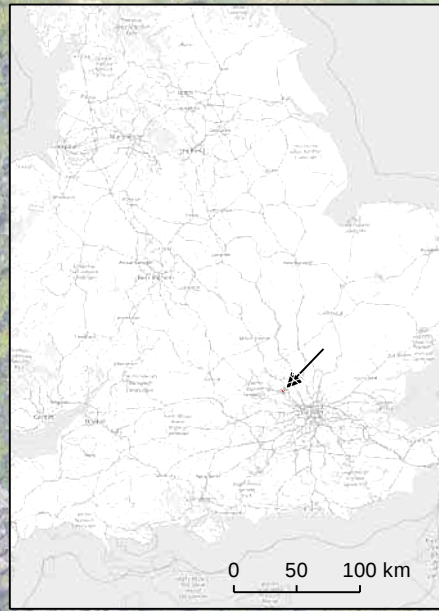
ii Avoidance, mitigation, and compensation measures identified in this EcIA will be incorporated into the detailed design proposals for the Scheme and implemented as part of the overall development of the Scheme. The Scheme has maximised opportunities to incorporate and enhance biodiversity within the proposals wherever possible.

iii The Scheme would result in a biodiversity net gain of 34.41% Habitat Units and 42.54% Hedgerow Units. The potential to maximise net gain within the redline boundary of the Scheme has been explored, at this outline stage, based on the Scheme's design parameters and targeting realistic and deliverable habitats as part of the Scheme's soft landscaping. The mandatory requirement for 10% BNG has been achieved and surpassed for the Scheme and the Trading Rules have been met. A

iv Taking avoidance, mitigation and compensation measures into account, the Scheme conforms in respect of biodiversity to The Environment Act 2021 requirement for mandatory biodiversity net gain, the National Planning Policy Framework 2024 Section 15 (Conserving and enhancing the natural environment), Three Rivers District Council Core Strategy 2011: Policy CP9: Green Infrastructure and Three Rivers District Council Development Management Policies 2013: Policy DM6: Biodiversity, Trees, Woodland and Landscaping.

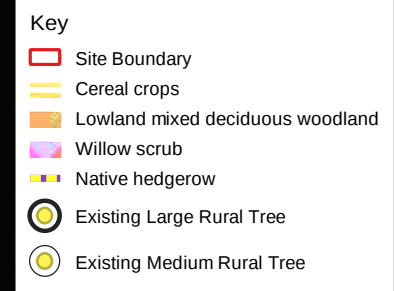
7 FIGURES

Figure 1: Site Location and Context Plan



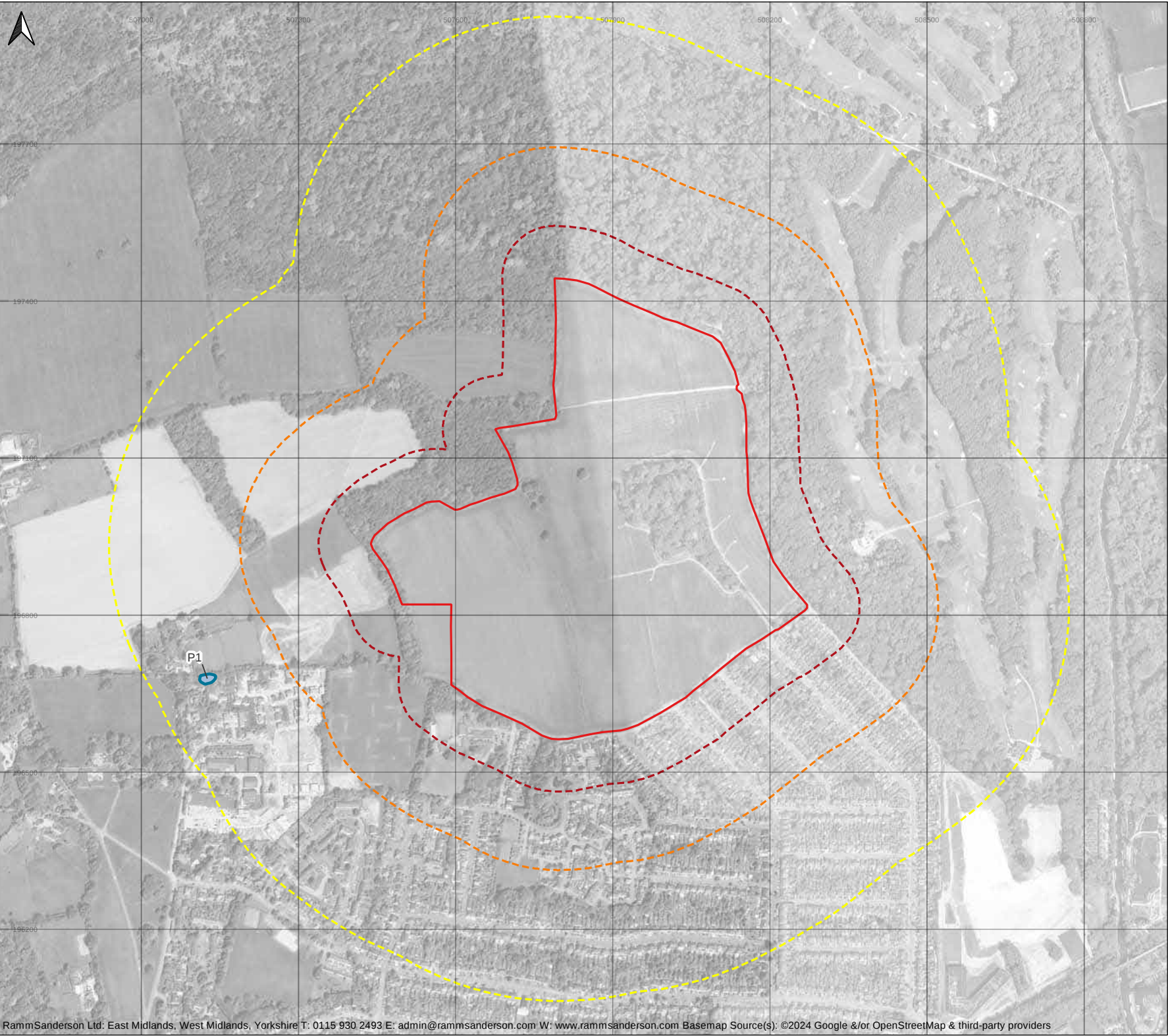
RammSanderson		
Title: Site Context Plan		
Project: Land off Little Green Lane, Croxley Green		
Client: Richborough Estates Ltd		
Date: 01/08/2024	Fig:	Author: AJ
A4 Scale: 1:4500	ID: RSE_8239_STC_0824_V1R1	

Figure 2: UK Habitats Plan



 RammSanderson		
Title: UKHabs Habitats Plan		
Project: Land off Little Green Lane, Croxley Green		
Client: Richborough Estates Limited		 RammSanderson
Date: 04/10/2024	Fig:	Author: AJ
A4 Scale: 1:4500	ID: RSE_8239_UKH_1024_V1R1	

Figure 3: Waterbody Plan



Key

- Site Boundary
- 100m Buffer
- 250m Buffer
- 500m Buffer
- Pond Location

Pond	Area (m2)
P1	438.44



Title: Waterbody Plan

Project: Land off Little Green Lane, Croxley Green

Client: Richborough Estates Ltd

Date: 07/10/2024

Fig:

Author: AJ

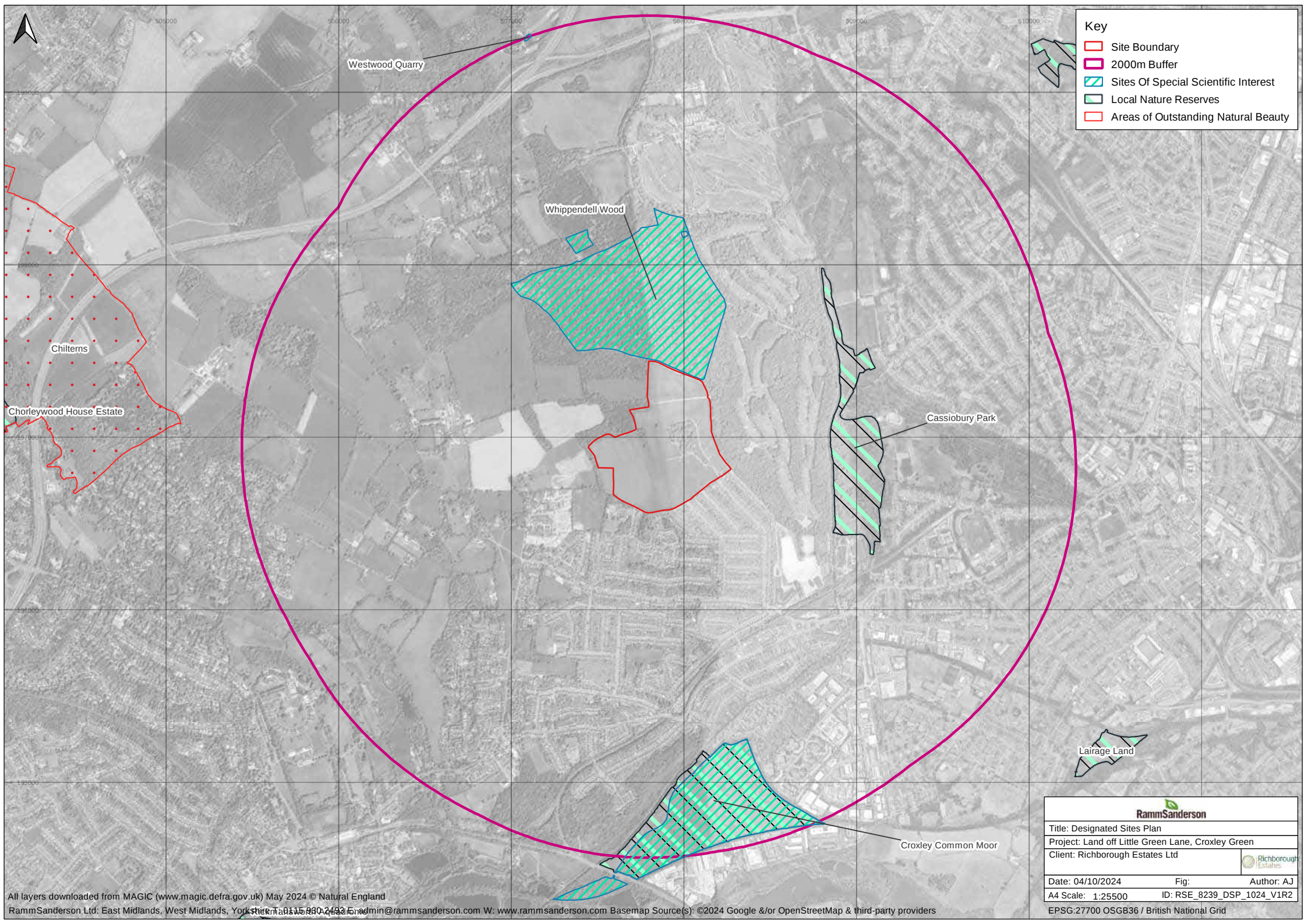
A4 Scale: 1:9500

ID: RSE_8239_WBY_1024_V1R2

Richborough Estates

EPSSG:27700 OSGB36 / British National Grid

Figure 4: Statutory Designated Sites Plan



Key

Site Boundary

2000m Buffer

Sites Of Special Scientific Interest

Local Nature Reserves

Areas of Outstanding Natural Beauty

RammSanderson

Title: Designated Sites Plan

Project: Land off Little Green Lane, Croxley Green

Client: Richborough Estates Ltd

Date: 04/10/2024

Fig:

Author: AJ

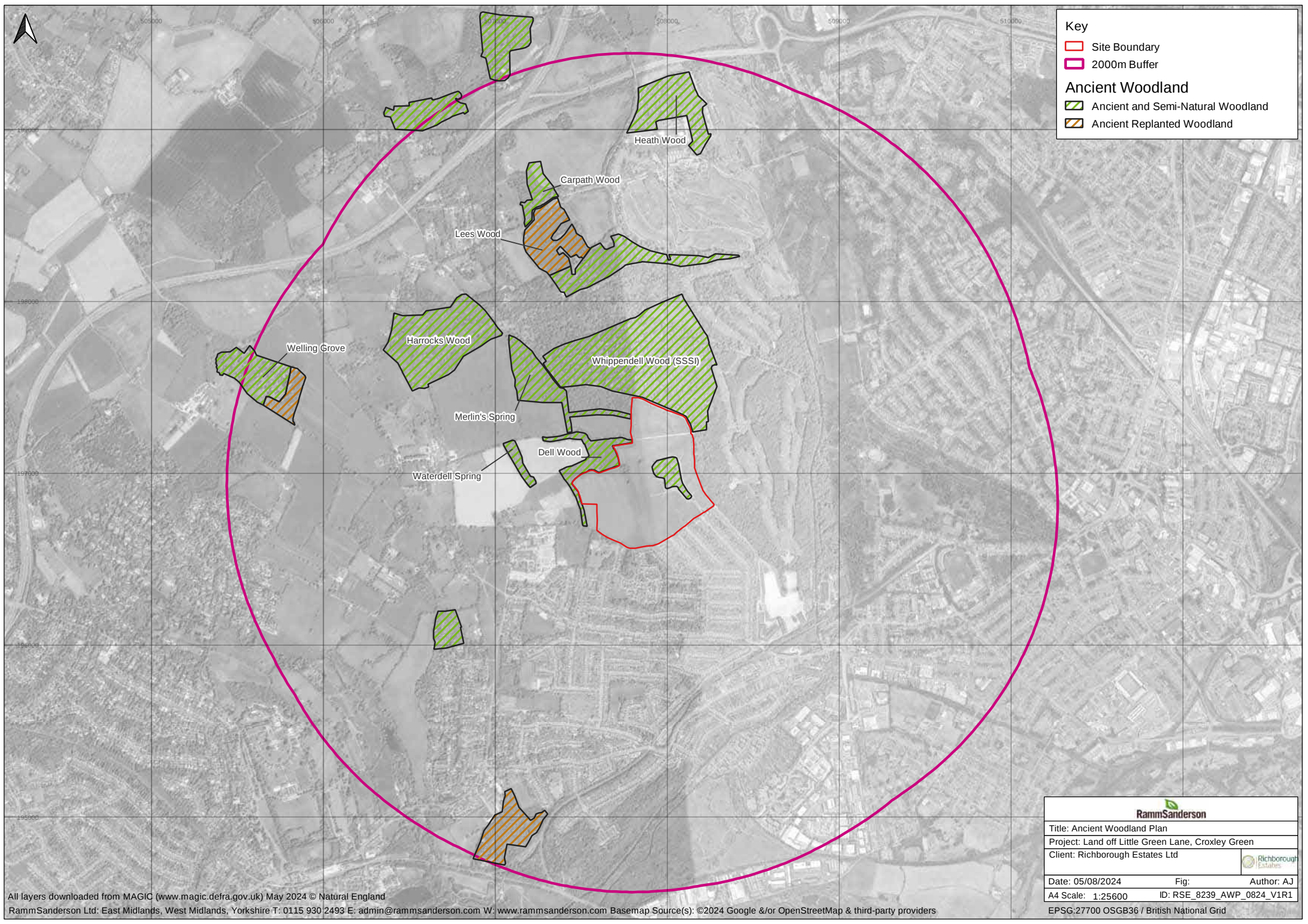
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ID: RSE_8239_DSP_1024_V1R2

EPSG:27700 OSGB36 / British National Grid

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Figure 5: Ancient Woodland Plan



Key

Site Boundary

2000m Buffer

Ancient Woodland

Ancient and Semi-Natural Woodland

Ancient Replanted Woodland

RammSanderson

Title: Ancient Woodland Plan

Project: Land off Little Green Lane, Croxley Green

Client: Richborough Estates Ltd

Date: 05/08/2024

Fig:

Author: AJ

A4 Scale: 1:25600

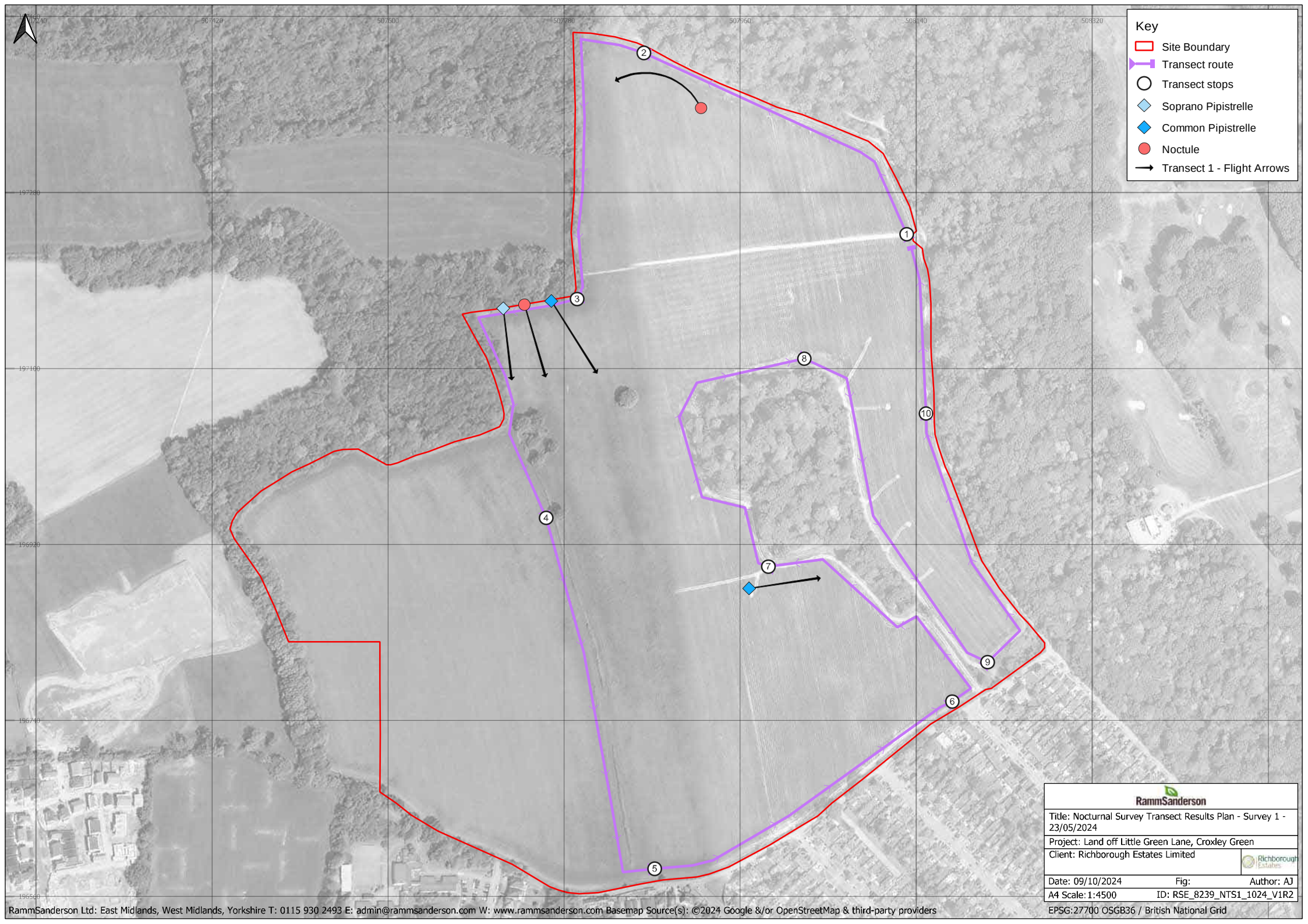
ID: RSE_8239_AWP_0824_V1R1

Richborough Estates Ltd

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EPSG:27700 OSGB36 / British National Grid

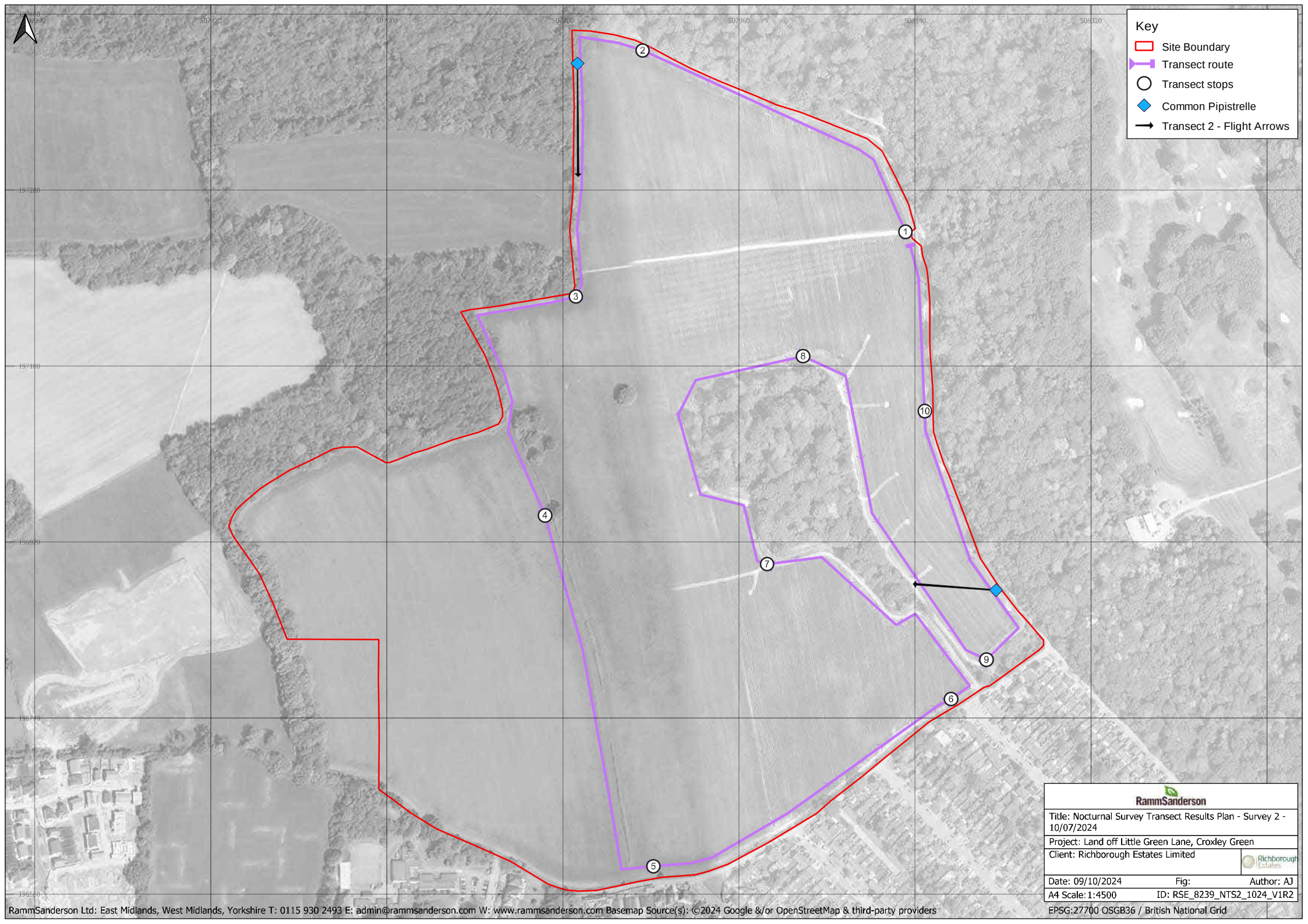
Figures 6: Walked Bat Transect Surveys – May 2024 (6a), July 2024 (6b) and September 2024 (6c)



Key

- Site Boundary
- Transect route
- Transect stops
- Soprano Pipistrelle
- Common Pipistrelle
- Noctule
- Transect 1 - Flight Arrows

Title: Nocturnal Survey Transect Results Plan - Survey 1 - 23/05/2024		
Project: Land off Little Green Lane, Croxley Green		
Client: Richborough Estates Limited		
Date: 09/10/2024	Fig:	Author: AJ
A4 Scale: 1:4500	ID: RSE_8239_NTS1_1024_V1R2	
EPSG:27700 OSGB36 / British National Grid		



Key

Site Boundary

Transect route

Transect stops

Common Pipistrelle

Transect 2 - Flight Arrows

Title: Nocturnal Survey Transect Results Plan - Survey 2 - 10/07/2024

Project: Land off Little Green Lane, Croxley Green

Client: Richborough Estates Limited

Richborough Estates

Date: 09/10/2024

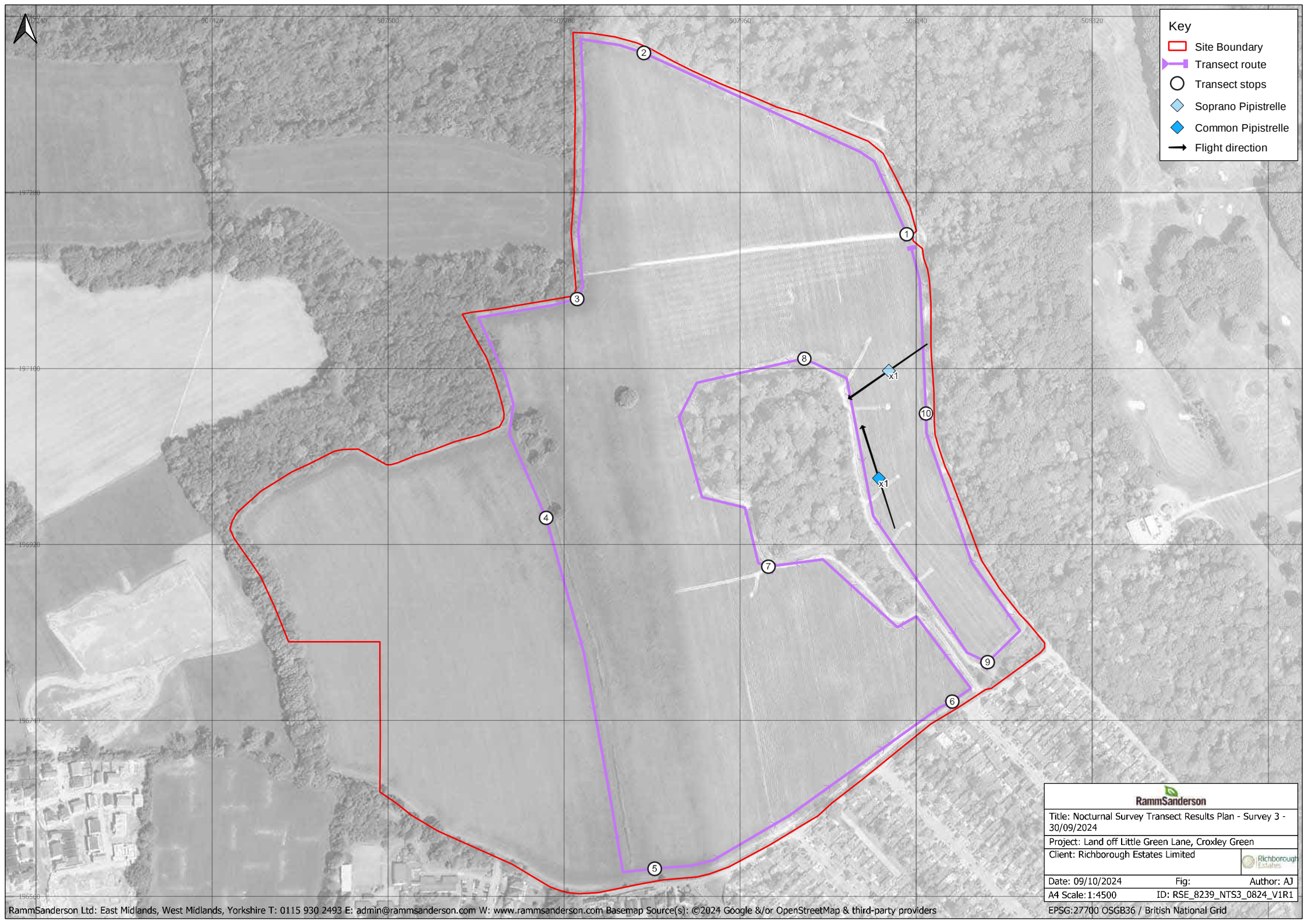
Fig:

Author: AJ

A4 Scale: 1:4500

ID: RSE_8239_NTS2_1024_V1R2

EPSG:27700 OSGB36 / British National Grid



Key

- Site Boundary
- Transect route
- Transect stops
- Soprano Pipistrelle
- Common Pipistrelle
- Flight direction



Title: Nocturnal Survey Transect Results Plan - Survey 3 - 30/09/2024		
Project: Land off Little Green Lane, Croxley Green		
Client: Richborough Estates Limited		
Date: 09/10/2024	Fig:	Author: AJ
A4 Scale: 1:4500	ID: RSE_8239_NTS3_0824_V1R1	
EPSG:27700 OSGB36 / British National Grid		

Figure 7: Badger Activity Plan



507300 507400 507500 507600 507700 507800 507900 508000 508100 508200 508300 508400

197400

197300

197200

197100

197000

196900

196800

196700

196600

Key

Site Boundary

Badger Setts

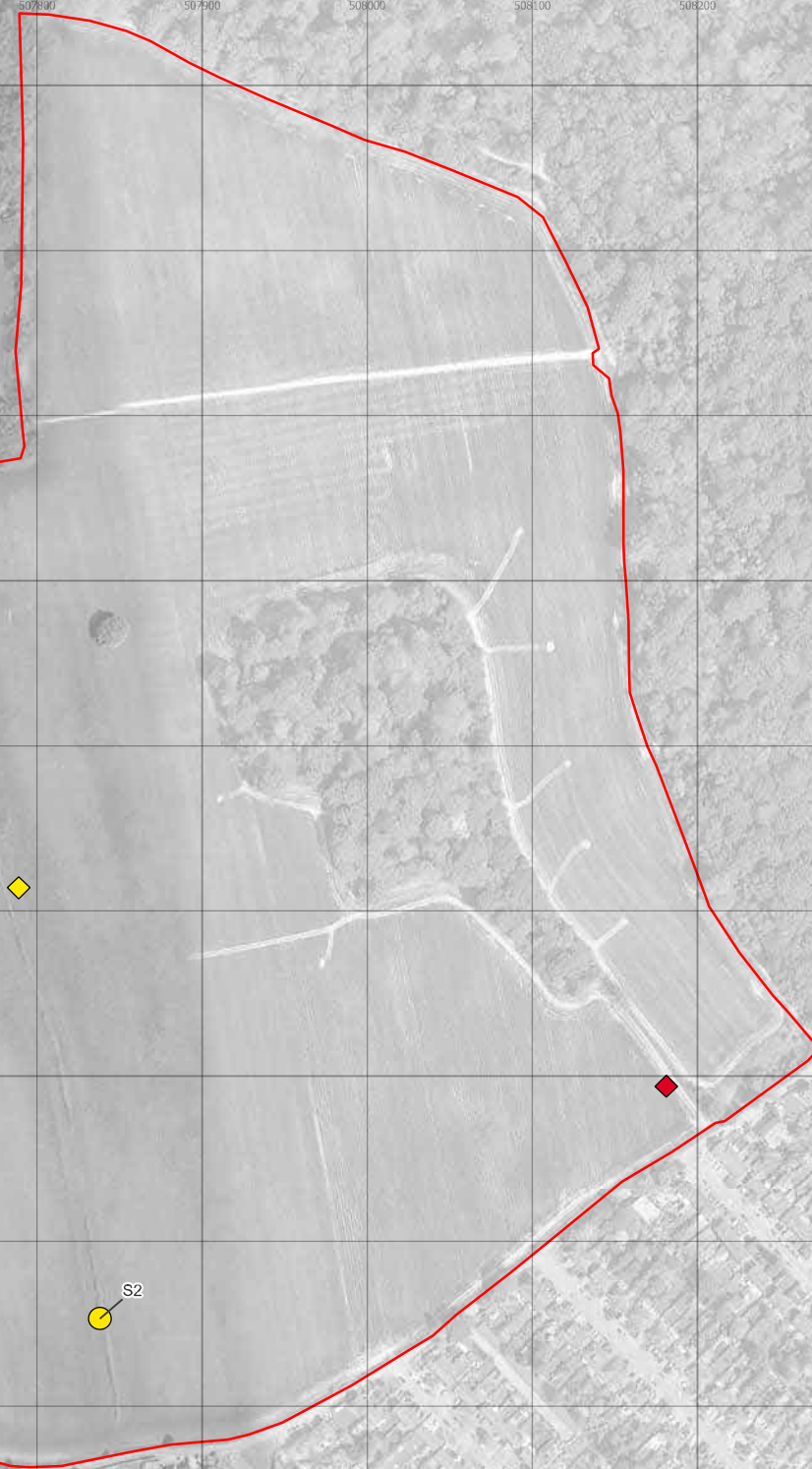
Active Outlier

Badger Signs

Badger Foraging Sign

Live Badger Sighting

Latrine



RammSanderson

Title: Badger Results Plan

Project: Land off Little Green Lane, Croxley Green

Client: Richborough Estates Ltd

Date: 09/10/2024

Fig:

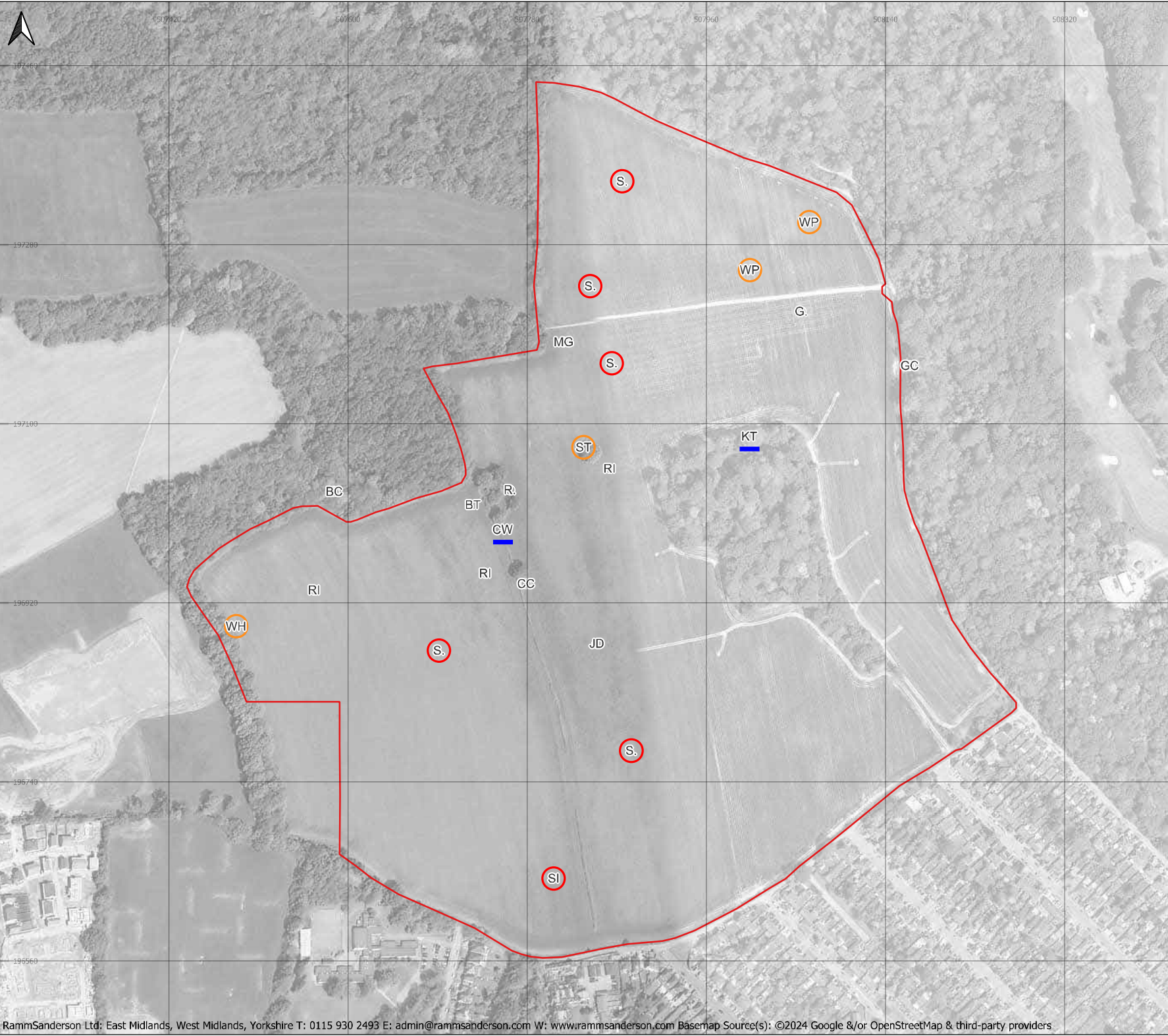
Author: AJ

A4 Scale: 1:4500

ID: RSE_8239_BADG_1024_V1R1

EPSG:27700 OSGB36 / British National Grid

Figures 8: Breeding Bird Plans (8a-d)



Key

Site Boundary

WCA Schedule 1 Species

sp_abbrev	species
BC	Blackcap
BT	Blue Tit
CC	Common Chiffchaff
CW	Cetti's Warbler
G.	Green Woodpecker
GC	Goldcrest
JD	Eurasian Jackdaw
KT	Red Kite
MG	Magpie
R.	European Robin
RI	Rose-ringed Parakeet
S.	Skylark
SI	Common Swift
ST	Song Thrush
WH	Common Whitethroat
WP	Common Woodpigeon

Precipitation:	0%
Cloud:	20%
Temperature:	18° C
Wind:	1 as per Beaufort scale
Visibility:	>2km

Title: Breeding Bird Survey Plan - Survey 2 - 24/05/2024

Project: Land off Little Green Lane, Croxley Green

Client: Richborough Estates Limited

Date: 04/09/2024

Fig:

Author: EN

A4 Scale:1:5000

ID: RSE_8239_BBS2_0924_V1R2

EPSG:27700 OSGB36 / British National Grid



Key

-  Site Boundary
 WCA Schedule 1 Species
 BoCC5 Red List Species
 BoCC5 Amber List Species

sp_abbrev	species
B.	Common Blackbird
BC	Blackcap
C.	Carriion Crow
KT	Red Kite
M.	Mistle Thrush
MG	Magpie
R.	European Robin
RI	Rose-ringed Parakeet
S.	Skylark
WP	Common Woodpigeon
WR	Wren
WW	Willow Warbler

Precipitation:	0%
Cloud:	100%
Temperature:	20° C
Wind:	0 as per Beaufort scale
Visibility:	>2km



Title: Breeding Bird Survey Plan - Survey 3 - 11/06/2024

Project: Land off Little Green Lane, Croxley Green

Client: Richborough Estates Limited



Date: 04/09/2024	Fig:	Author: EN
------------------	------	------------

A4 Scale: 1:5000 ID: RSE_8239_BBS3_0924_V1R2

EPSG:27700 OSGB36 / British National Grid

Figures 9: BIA Baseline Visualisations



Key

Site Boundary

Cereal crops

Lowland mixed deciduous woodland

Willow scrub

Native hedgerow

Existing Large Rural Tree

Existing Medium Rural Tree



RammSanderson

Title: BIA Baseline Habitat Plan

Project: Land off Little Green Lane, Croxley Green

Client: Richborough Estates Limited

Date: 04/12/2024

Fig:

Author: LE

A4 Scale: 1:4500

ID: RSE_8239_BIAB_1224_V1R4

Richborough Estates



Key

Site Boundary

Baseline Individual tree Condition

Good

Baseline Hedgerow Condition

Good

Moderate

Baseline Habitat Condition

Good

Moderate

Condition Assessment N/A



**RammSanderson**

Title: BIA Baseline Conditions Plan

Project: Land off Little Green Lane, Croxley Green

Client: Richborough Estates Limited

**Richborough Estates**

Date: 04/12/2024

Fig:

Author: LE

A4 Scale: 1:4500

ID: RSE_8239_BIAB_1224_V1R4

Figures 10 : BIA Proposed Visualisations



Key

Site Boundary

Allotments

Bioswale

Developed land; sealed surface

Introduced shrub

Lowland mixed deciduous woodland

Mixed scrub

Modified grassland

Other neutral grassland

Willow scrub

Native hedgerow

Lost

Proposed Small Urban Tree

Retained Large Rural Tree

Retained Medium Rural Tree



Key

Site Boundary

Proposed Individual tree Condition

Poor

Moderate

Good

Baseline Hedgerow Condition

Good

Moderate

Proposed Hedgerow Condition

Good

Moderate

Poor

N/A

Proposed Habitats Condition

Good

Moderate

Poor

N/A - Other

Condition Assessment N/A



Key

Site Boundary

Individual tree Retention

Created

Retained

Hedgerow Retention

Created

Retained

Lost

Habitats Retention

Retained

Lost



RammSanderson

Title: BIA Retention Plan

Project: Land off Little Green Lane, Croxley Green

Client: Richborough Estates Limited

Date: 04/12/2024

Fig:

Author: LE

A4 Scale: 1:4500

ID: RSE_8239_BIAB_1224_V1R4

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APPENDIX 1: Relevant Legislation and Planning Policy

The UK is no longer a member of the European Union (EU). EU legislation as it applied to the UK on 31 December 2020 is now a part of UK domestic legislation. EU legislation which applied directly or indirectly to the UK before 11.00 p.m. on 31 December 2020 has been retained in UK law as a form of domestic legislation known as 'retained EU legislation'.

The Secretary of State for the Environment, Food and Rural Affairs and Welsh Ministers have made changes to parts of the Conservation of Habitats and Species Regulations 2017 (referred to as the 2017 Regulations) so that they operate effectively. Most of these changes involve transferring functions from the European Commission to the appropriate authorities in England. All other processes or terms in the 2017 Regulations remain unchanged and existing guidance is still relevant and are now referred to as The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 (the 2019 Regulations).

Designated Sites

Sites of Special Scientific Interest

Under the Wildlife and Countryside Act 1981 (as amended), it is an offence to carry out or permit to be carried out any operations likely to damage the Site of Special Scientific Interest (SSSI). These operations are listed in the SSSI notification.

Owners, occupiers, public bodies and statutory undertakers must give notice and obtain the appropriate consent under S.28 of the Wildlife and Countryside Act 1981 (as amended), before undertaking operations likely to damage a SSSI.

Local Nature Reserve

A Local Nature Reserve (LNR) is a statutory designation made under the National Parks and Access to the Countryside Act, 1949, by principal local authorities (district, borough or unitary councils).

The local authority must control the LNR land - either through ownership, a lease or an agreement with the owner. LNRs are given protection through policies in local development plans.

Locally Designated Sites

Local Wildlife Sites are sites with 'substantive nature conservation value'. They are defined areas, identified and selected for their nature conservation value, based on important, distinctive and threatened habitats and species within a region.

They are usually selected by the relevant Wildlife Trust, along with representatives of the local authority and other local wildlife conservation groups.

The LWS selection panel, select all sites that meet the assigned criteria, unlike SSSIs, which for some habitats are a representative sample of sites that meet the national standard. Consequently, many sites of SSSI quality are not designated and instead are selected as LWSs. Consequently, LWSs can be amongst the best sites for biodiversity.

Protected Species

Bats / Hazel Dormouse / Otter / Great Crested Newt

These species, known as European Protected Species, are protected under Regulation 43 of the 2017 Regulations as amended by the 2019 Regulations. This makes it an offence to deliberately capture, injure or kill an animal; deliberately disturb an animal; or damage or destroy a breeding site or resting place used by an animal.

Deliberate capture or killing is taken to include "accepting the possibility" of such capture or killing. Deliberate disturbance of animals includes in particular any disturbance which is likely a) to impair their ability (i) to survive, to breed or reproduce, or to rear or nurture their young, or (ii) in the case of animals of hibernating or migratory species, to hibernate or migrate; or b) to affect significantly the local distribution or abundance of the species to which they belong.

Where development works are at risk of causing one or more of the offences listed above, a mitigation licence from Natural England can be obtained to facilitate the works that would otherwise be illegal.

These species are also protected under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). This makes it an offence to intentionally or recklessly obstruct access to any structure or place used for shelter or protection or disturb an animal in such a place.

Lower levels of disturbance not covered by the Conservation of Habitats and Species Regulations 2017 remain an offence under the Wildlife and Countryside Act 1981 although a defence is available where such actions are the incidental result of a lawful activity that could not reasonably be avoided.

Water Vole

Water voles are protected under the Wildlife and Countryside Act 1981 (as amended). There are no licensing purposes that explicitly cover development or other construction activities which could have an impact on water voles.

When development work is proposed in or near an area which is either known to or likely to contain water voles, then the developer will need to implement suitable mitigation to prevent impacts to water voles. The preferred mitigation option is to leave water voles in situ, with the development works adopting avoidance measures through redesign of the proposals.

Where impacts cannot be avoided, operations aimed at displacing water voles from a development site are now no longer covered by the “incidental result of an otherwise lawful action” defence in the Wildlife and Countryside Act 1981 (as amended). Displacement of water voles now needs to be undertaken under a licence.

In England, small scale (limited to continuous lengths of bank not exceeding 50 m) displacement of water voles can be carried out at certain times of the year (February to April) for the purposes of conservation under a Class Licence by a registered person. For larger scale displacements or displacements outside of this period, displacement can be undertaken under a site-specific conservation licence.

Where it is considered that the best outcome for water voles is capture and translocation to a different location then this action is considered by Natural England to be outside the scope of the defence as the intentional capture of water voles is unlikely to be considered ‘incidental’. In these circumstances there may be genuine grounds for issuing a conservation licence for the purpose of translocating the water vole population to suitable alternative habitat.

Nesting Birds

All wild birds are protected under the Wildlife and Countryside Act 1981 (as amended), with some species afforded greater protection under Schedule 1 of the Wildlife and Countryside Act 1981 (as amended). In addition to the protection from killing or taking that all birds receive, Schedule 1 birds and their young must not be disturbed at the nest.

There are no licensing purposes that explicitly cover development activities affecting wild birds.

White-clawed Crayfish

White-clawed crayfish are protected under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). It is illegal to take or to sell white-clawed crayfish.

White-clawed crayfish is a species under major threat of global extinction and is referred to in various biodiversity related policy²⁷. Several organisations involved in works on rivers or other water bodies have general legal obligations²⁸ to take the presence of white-clawed crayfish into account when issuing permissions to undertake works.

Common Species of Reptile (common lizard, slow worm, grass snake and adder)

Common species of reptile are protected against intentional killing and injury under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). There is no requirement for a licence where development works affect common species of reptiles. Instead, Natural England (English Nature, 2004) advise that where reptiles are present, they should be protected from any harm that might arise during the development works through appropriate mitigation.

Badger

Badgers and their setts are protected under the Protection of Badgers Act 1992 (as amended). This makes it an offence to wilfully kill, injure or take a badger; or intentionally or recklessly damage, destroy or obstruct access to a badger sett or disturb a badger in its sett.

It is not illegal to carry out disturbance activities near setts that are not occupied, i.e. those that do not show signs of current use.

Where required, licences for development activities involving disturbance or sett interference or closure are issued by Natural England. Licences for activities involving watercourse maintenance, drainage works or flood defences are issued under a separate process.

When assessing the requirement for a licence in respect of development, Natural England (Natural England, 2009) state that badgers are relatively tolerant of moderate levels of noise and activity around their setts, and that a low or moderate level of apparent disturbing activity at or near to badger setts does not necessarily disturb the badgers occupying those setts.

Licences are normally not granted from December to June inclusive (the badger breeding season) because dependent cubs may be present within setts.

Species and Habitats of Principal Importance for the Conservation of Biodiversity

Section 40 of the Natural Environment & Rural Communities Act (NERC) 2006 sets out the duty for public authorities to conserve biodiversity in England.

Habitats and species of principal importance for the conservation of biodiversity are identified by the Secretary of State for England, in consultation with Natural England, are referred to in Section 41 of the NERC Act for England. The list, known as the 'England Biodiversity List', of habitats and species can be found on the Natural England web site.

The 'England Biodiversity List' is used as a guide for decision makers such as public bodies, including local and regional authorities, in implementing their duty under Section 40 of the NERC Act 2006 to have regard to the conservation of biodiversity in England when carrying out their normal functions. The habitats and species on the List, are material considerations of planning, where present on an application site.

²⁷ White-clawed crayfish is listed under the following: as a "priority" species of conservation importance under Section 41 of the Natural Environment and Rural Communities Act (2000).

²⁸ Under the Water Resources Act 1991 and the Land Drainage Act 1991 there is a requirement to consider the presence of notable species such as white-clawed crayfish when the Environment Agency, Internal Drainage Board or other statutory agency is considering granting consent for proposed operations to a water course.

Hedgerows

Under The Hedgerow Regulations, 1997, it is against the law to remove or destroy certain hedgerows without permission from the local planning authority. In general, permission will be required before removing hedges that are at least 20 metres in length, over 30 years old and contain certain species of plant. The local planning authority will assess the importance of the hedgerow using criteria set out in the regulations.

Non-native Invasive Plant Species

Under the Wildlife and Countryside Act, 1981 (as amended), it is an offence to plant or otherwise cause these species to grow in the wild.

Any contaminated soil or plant material is classified as controlled waste and should be disposed of in a suitably licensed landfill site, accompanied by appropriate Waste Transfer documentation, and must comply with section 34 of the Environmental Protection Act 1990.

Planning Policy

National Planning Policy Framework, 2024

The National Planning Policy Framework (NPPF) (Ministry of Housing, Communities and Local Government, 2024) sets out the Governments planning policies for England and how these are expected to be applied by Local Authorities within their Local Development Frameworks (LDF).

Regarding the NPPF, the most pertinent paragraphs, relating to the Scheme are:

8. “Achieving sustainable development means that the planning system has three overarching objectives, which are interdependent and need to be pursued in mutually supportive ways (so that opportunities can be taken to secure net gains across each of the different objectives):

c) an Environmental objective - To protect and enhance our natural, built and historic environment, including making effective use of land, improving biodiversity, using natural resources prudently, minimising waste and pollution, and mitigating and adapting to climate change, including moving to a low carbon economy”

151. “Once Green Belts have been defined, local planning authorities should plan positively to enhance their beneficial use, such as looking for opportunities to provide access; to provide opportunities for outdoor sport and recreation; to retain and enhance landscapes, visual amenity and biodiversity; or to improve damaged and derelict land. Where Green Belt land is released for development through plan preparation or review, the ‘Golden Rules’ in paragraph 156 below should apply.”

156. “Where major development involving the provision of housing is proposed on land released from the Green Belt through plan preparation or review, or on sites in the Green Belt subject to a planning application, the following contributions (‘Golden Rules’) should be made:

c) the provision of new, or improvements to existing, green spaces that are accessible to the public. New residents should be able to access good quality green spaces within a short walk of their home, whether through onsite provision or through access to offsite spaces.”

162. Plans should take a proactive approach to mitigating and adapting to climate change, taking into account the long-term implications for flood risk, coastal change, water supply, biodiversity and landscapes, and the risk of overheating and drought from

rising temperatures. Policies should support appropriate measures to ensure the future health and resilience of communities and infrastructure to climate change impacts, such as providing space for physical protection measures, or making provision for the possible future relocation of vulnerable development and infrastructure.”

182. “Applications which could affect drainage on or around the site should incorporate sustainable drainage systems to control flow rates and reduce volumes of runoff, and which are proportionate to the nature and scale of the proposal. These should provide multifunctional benefits wherever possible, through facilitating improvements in water quality and biodiversity, as well as benefits for amenity. Sustainable drainage systems provided as part of proposals for major development should:

- a) take account of advice from the Lead Local Flood Authority;*
- b) have appropriate proposed minimum operational standards; and*
- c) have maintenance arrangements in place to ensure an acceptable standard of operation for the lifetime of the development.”*

187. “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;*
- 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 and incorporating features which support priority or threatened species such as swifts, bats and hedgehogs;”*

192. “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 biodiversity; 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.”*

193. “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;*

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 reasons, and a suitable compensation strategy exists; and

d) development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to improve biodiversity in and around developments should be integrated as part of their design, especially where this can secure measurable net gains for biodiversity or enhance public access to nature where this is appropriate'.

Three Rivers District Council Local Plan 2011

The Site lies within the jurisdiction of Three Rivers District Council. The following Policy CP9 Green Infrastructure is relevant to biodiversity.

The Council will seek a net gain in the quality and quantity of Green Infrastructure, through the protection and enhancement of assets and provision of new green spaces. Priorities for Green Infrastructure focus on conserving and enhancing the following key assets and the linkages between them which are illustrated in Appendix 5:

a) the corridors of the Rivers Chess, Colne and Gade and the Grand Union Canal

b) the Chilterns Area of Outstanding Natural Beauty

c) the Colne Valley Park

d) the District's Sites of Special Scientific Interest, Local Nature Reserves, wildlife sites, key biodiversity habitats, species and areas identified in the Hertfordshire Biodiversity Action Plan and heritage assets and landscape character within areas of Green Infrastructure.

It is also important to improve connectivity between key assets through the establishment of linked and coherent networks and corridors of green spaces and sustainable transport links. More detailed ongoing work will inform future priorities for Green Infrastructure in Three Rivers and will be included within the Green Infrastructure and Landscape Supplementary Planning Document.

The Council will require new development to contribute to the delivery of new Green Infrastructure and the management of a linked network of new and enhanced open spaces and corridors. Development will not compromise the integrity of the Green Infrastructure network, by causing fragmentation, damage to, or isolation of Green Infrastructure assets including natural habitats and species. Where development is likely to have significant harmful effects on the natural environment, as a result of the development itself, or the cumulative impact of developments, developers must demonstrate that all possible alternatives that would result in less harm have been considered. Where development is permitted, appropriate mitigation of the impacts and compensation where relevant will be required to deliver a net gain in biodiversity, habitat creation, landscape character and local distinctiveness. Enhancements should be undertaken either on the site, or in its vicinity, but where it is demonstrated that this is not possible, offsetting in alternative strategic locations within the biodiversity or green infrastructure network, to deliver biodiversity or other objectives may be considered. Where appropriate, developers should demonstrate compliance with this policy through an ecological statement or by relevant information in the West Midlands Sustainability Checklist.

Three Rivers District Council Development Management Policies 2013

The Site lies within the jurisdiction of Three Rivers District Council. The following DM6: Biodiversity, Trees, Woodland and Landscaping is relevant to biodiversity.

Development should result in no net loss of biodiversity value across the district as a whole. The weight given to the protection of sites will be commensurate with their position in the hierarchy:

- *International*
- *National*
- *Regional*
- *Local*

a) Development that would affect a Site of Special Scientific Interest, Local Nature Reserve, Local Wildlife Site or protected species under UK or European law, or identified as being in need of conservation by the UK Biodiversity Action Plan or the Hertfordshire Biodiversity Action Plan, will not be permitted where there is an adverse impact on the ecological, geological or biodiversity interests of the site, unless it can be demonstrated that:

i) The need for the development would outweigh the need to safeguard the biodiversity of the site, and where alternative wildlife habitat provision can be made in order to maintain local biodiversity; and

ii) Adverse effects can be satisfactorily minimised through mitigation and compensation measures to maintain the level of biodiversity in the area.

b) The following areas have been highlighted as key areas for biodiversity within the Hertfordshire Biodiversity Action Plan:

- *Mid Colne Valley*
- *Whippendell Woods and surrounds*
- *River Chess Valley.*

c) In the first instance development should seek to avoid impacts on designated sites and important habitats/species through sensitive design and consideration of alternatives. Proposals should seek to incorporate measures for biodiversity enhancement and Green Infrastructure delivery wherever possible.

d) Development must conserve, enhance and, where appropriate, restore biodiversity through:

i) Protecting habitats and species identified for retention

ii) Providing compensation for the loss of any habitats

iii) Providing for the management of habitats and species

iv) Maintaining the integrity of important networks of natural habitats, and

v) Enhancing existing habitats and networks of habitats and providing roosting, nesting and feeding opportunities for rare and protected species.

e) Linked habitats are important in allowing species to adapt and respond to circumstances. Development must not result in fragmentation or isolation of wildlife habitats and should seek opportunities for habitat connectivity with the wider landscape.

f) Trees, Woodlands and Landscaping

i) Proposals for new development should be submitted with landscaping proposals which seek to retain trees and other important landscape and nature conservation features. Landscaping proposals should also include new trees and other planting to enhance the landscape of the site and its surroundings as appropriate.

ii) Development proposals on sites which contain existing trees and hedgerows will be expected to retain as many trees and hedgerows as possible, particularly those of local amenity or nature conservation value or hedgerows considered to meet the criteria of the Hedgerow Regulations 1997.

iii) Development proposals should demonstrate that existing trees, hedgerows and woodlands will be safeguarded and managed during and after development in accordance with the relevant British Standards.

iv) Development should be designed in such a way as to allow trees and hedgerows to grow to maturity without causing undue problems of visibility, shading or damage. 26 Development likely to result in future requests for significant topping, lopping or felling will be refused.

v) Planning permission will be refused for any development resulting in the loss or deterioration to protected woodland (including ancient woodland), protected trees (including aged or veteran trees) and hedgerows, unless conditions can be imposed to secure their protection.

vi) Where the felling of a tree or removal of a hedgerow is permitted, a replacement tree or hedge of an appropriate species, size and in a suitable location will be required, taking account of issues such as landscape and biodiversity.

vii) Areas forming part of development proposals which are to be transferred to the local authority for maintenance should be designed for ease of access and low-cost maintenance overheads and management regimes.

g) Watercourses Any development adjacent to, over or in a watercourse needs to take into account consideration of the Water Framework Directive requirements and opportunities outlined in the Thames River Basin Management Plan. All developments should seek to improve the biodiversity of the site and contribute towards the riparian corridor's ability to be used by migrating species.

APPENDIX 2: Methodology

Desk Study

Background Records Search

The preliminary ecological assessment includes a desk study to obtain background records relevant to a Site and the Scheme. The data obtained provides contextual information for the scope of field surveys, to aid the evaluation of field survey results, and to provide supplementary information where complete field survey coverage is not possible.

The Study Area is dependent upon the nature, timing and scale of the Scheme, as well as the location of the Site and the surrounding landscape. These variables all contribute to what is referred to as the Zone of Influence (Zoi) of the Scheme, which is the area over which ecological features may be affected by biophysical changes because of the works and associated activities.

Warwickshire Biological Records Centre was contacted to obtain the following ecological data:

Records of non-statutory designated sites within 2km of the Site boundary;
Records of legally protected and notable species (fauna and flora) within 2km of the Site boundary, including Species of Principal Importance for the Conservation of Biodiversity listed under Section 41 of the Natural Environment & Rural Communities Act 2006 in the England Biodiversity List²⁹.

The Multi-Agency Geographic Information for the Countryside (MAGIC) (www.magic.gov.uk) website was reviewed for the following information:

Designated sites of nature conservation importance (statutory sites only) within 2km of the Site. This was extended to 2km for internationally designated sites: Special Protection Areas (SPAs), Wetlands of International Importance (Ramsar sites) and Special Areas of Conservation (SACs); and, Notable habitats within 2km of the Site, these being areas of ancient woodland and 'Habitats of Principal Importance for the Conservation of Biodiversity' included in the England Biodiversity List.

Great Crested Newt Pond Search

Ordnance Survey maps and the Where's the Path website (<https://wtp2.appspot.com/wheresthepath.htm>) have been used to identify the presence of water bodies within 500 m of the Site boundary, in order to help establish if the land within and immediately surrounding the Site could be used by great crested newts. This species can use suitable terrestrial habitat up to 500 m from a breeding pond (English Nature, 2001), though there is a notable decrease in great crested newt abundance beyond 250 m from a breeding pond (Natural England, 2004).

UK Habitats Surveys

The preliminary ecological assessment includes a walkover survey of the Survey Area (all land within the Site), broadly following the Phase 1 habitat survey methodology as set out in Joint Nature Conservation Committee guidance (Joint Nature Conservation Committee, 2010). This survey method records information on habitat types and is 'extended' to record any evidence of and potential for protected or notable species to be present. Plant names recorded during the survey follow (Stace, 2019).

During the walkover survey, the following protected or notable species are considered:

²⁹ Section 40 of the Natural Environment & Rural Communities Act 2006 requires that very public authority must, in exercising its functions, have regard, so far as is consistent with the proper exercise of those functions, to the purpose of conserving biodiversity. The Secretary of State has drawn up, in accordance with Section 41 of the Act and in consultation with Natural England, a list of habitats and species of principal importance for the conservation of biodiversity in England that is known as the England Biodiversity List

Badger: the survey involves searching for signs of badger activity including setts, tracks, snuffle holes and latrines, following the methodology detailed in (Scottish Natural Heritage, 2018) and (Harris, 1989).

Bats: the survey involves searching for potential roosting sites for bats within trees and structures (such as buildings, bridges or underground features such as mines) and categorising the potential of those trees or structures to support roosting bats (negligible to high, or confirmed roost), in accordance with Bat Conservation Trust (BCT) (Collins, J. (Eds.), 2016) guidance.

Otter: the survey involves assessing the potential of watercourses and water bodies, and adjacent terrestrial habitat within the Survey Area to support otter, following RSPB (Ward, 1994) and (Chanin, 2003) guidance;

Water vole: the survey involves assessing the potential of watercourses and water bodies within the Survey Area to support water vole, following The Mammal Society (Dean, 2016) guidance;

Birds: the survey involves assessing the potential of habitats within the Survey Area to support breeding, wintering or migrating birds, either individually notable species or assemblages of both common and rarer species;

Great crested newt: the survey involves assessing the potential of habitats within the Survey Area to support great crested newt, following English Nature (English Nature, 2001) and Froglife (Froglife, 2001) guidance;

Reptiles: the survey involves assessing the potential of habitats within the Survey Area to support reptiles (typically adder, grass snake, common lizard and slow worm only, though in some locations and habitat types (most notably heathland) may also include smooth snake and sand lizard), following Froglife (Froglife, 1999) and JNCC (Joint Nature Conservation Committee, 2003) guidance;

Protected or Notable species of plants: the survey involves recording protected or notable plant species;

Other notable species: the survey involves assessing the potential of habitat within the Survey Area to support other Notable Species, such as hedgehog, brown hare, polecat or common toad;

Non-native invasive plant species: the survey involves recording evidence of the presence of invasive plants listed on (Wildlife and Countryside Act, 1981 (as amended)) and subject to strict legal control.

Badger Surveys

The badger survey involves a daytime assessment of the site and surrounding 30m (where accessible) for visible signs such as setts, latrines, prints & tracks, hairs and scratch marks. The survey followed nationally recognised methods, as set out by Harris et al (1990).

Bat Surveys – Ground Level Tree Assessment (GLTA)

The GLTA survey followed the industry standard methodology published in the Bat Conservation Trust Bat Surveys for Professional Ecologists Good Practice Guidelines (BCT 2023) and included an assessment individual tree for their suitability to support roosting bats, utilising the assessment criteria provided in the table below.

Roost Potential	Description	Surveys Required (Trees)
Confirmed roost	Evidence of roosting bats found during initial daytime inspection or known bat roost present.	3 – including 1 dawn as a minimum or all dusk surveys supplemented by night vision aids (May to September). Or: conduct Advanced Licence Bat Survey Techniques (ALBST) for larger schemes and / large numbers of trees and PRF-Ms.
PRF-M	PRF is suitable for multiple bats and therefore may be used by a maternity colony.	Winter: 2 surveys / Assume presence and mitigate – December to February.

Roost Potential	Description	Surveys Required (Trees)	
PRF-I	PRF is only suitable for individual bats or very small numbers of bats due to either size or lack of suitable surrounding habitat.	Compensate for all PRF-Is prior to impacts. Precautionary Mitigation of Works for works. In some instances, may require further survey depending on context.	
Negligible	No obvious features likely to be used by roosting bats; however, a small element of uncertainty remains as bats can use small and apparently unsuitable features on occasion. Risk considered insignificant.	None	None

Bat Surveys – Walked Transect

Transect surveys were undertaken following the industry standard methodology published in the Bat Conservation Trust Bat Surveys for Professional Ecologists Good Practice Guidelines (BCT 2023).

Surveyors walked a pre-designed transect route, making 2-5-minute recording stops at predetermined intervals throughout the route to record bat activity. The starting point of the transect for each survey was altered to ensure coverage of different parts of the transect at different times of the night and included a 30-minute recording stop at the start of the transect route. Bat activity was also recorded between recording stops throughout the transect route.

Each transect survey covered the period of peak bat activity, which is considered to be from sunset until around 2 hours after sunset (dusk transect). For all surveys, surveyors used an EM Touch bat detector and iPad, which logged GPS locations and recorded the calls of all bats encountered. This equipment allowed surveyors to listen to, identify and record calls during the survey. Notes were made by the surveyor during the survey on the time of bat observations, species heard and, where possible, direction of flight and behavioural notes regarding their activity (e.g. feeding, commuting, passing, social calling).

A qualitative assessment was made of bat activity highlighting areas where bats were seen to:

Forage - Either occasionally or regularly: Occasional meaning one or two foraging episodes across the transect period, regular meaning foraging behaviour noted on three or more occasions during the transect survey.

Commute - Commuting activity would be characterised by a number of bats entering the site and flying purposefully in a direct line: e.g. following a hedge or flying across open areas.

Interact - These behaviours could include regular chasing, 'lekking' or bats recorded making regular social calls.

Breeding Bird Surveys

The BBS was based on the Common Bird Census (CBC) methodology (Bibby et al. 2000). This methodology seeks to estimate and map the quantity and distribution of breeding bird territories encountered within the Site and 50 metres outside of the Site boundary.

A series of four visits were undertaken, starting 30 minutes before sunrise, between May to June. A transect of the Site was walked ensuring all land within the Site was surveyed within 50m, with the direction being alternated between visits. Surveys were only conducted during suitable weather conditions.

Birds observed during the survey, either visually or audibly, were recorded using the standardised British Trust for Ornithology (BTO) codes, including behavioural notes that may indicate breeding e.g. singing, courtship displays, nest building etc.

Field survey maps were transferred to a GIS mapped system. These maps were then used to identify territory boundaries within the Site, by analysing the pattern of activity between each visit. Birds were also categorized using the BTO bird atlas as:

Breeding Status Codes

Non-breeding	
F	Flying over
M	Species observed but suspected to be still on Migration
U	Species observed but suspected to be sUmmering non-breeder
Possible breeder	
H	Species observed in breeding season in suitable nesting Habitat
S	Singing male present (or breeding calls heard) in breeding season in suitable breeding habitat
Probable breeding	
P	Pair observed in suitable nesting habitat in breeding season
T	Permanent Territory presumed through registration of territorial behaviour (song etc) on at least two different days a week or more part at the same place or many individuals on one day
D	Courtship and Display (judged to be in or near potential breeding habitat; be cautious with wildfowl)
N	Visiting probable Nest site
A	Agitated behaviour or anxiety calls from adults, suggesting probable presence of nest or young nearby
I	Brood patch on adult examined in the hand, suggesting Incubation
B	Nest Building or excavating nest-hole
Confirmed breeding	
DD	Distraction-Display or injury feigning
UN	Used Nest or eggshells found (occupied or laid within period of survey)
FL	Recently FLedged young (nidicolous species) or downy young (nidifugous species). Careful consideration should be given to the likely provenance of any fledged juvenile capable of significant geographical movement. Evidence of dependency on adults (e.g. feeding) is helpful. Be cautious, even if the record comes from suitable habitat.
ON	Adults entering or leaving nest-site in circumstances indicating Occupied Nest (including high nests or nest holes, the contents of which can not be seen) or adults seen incubating
FF	Adult carrying Faecal sac or Food for young
NE	Nest containing Eggs
NY	Nest with Young seen or heard

Biodiversity Impact Assessment

The biodiversity net gains assessment involves making a comparison between the biodiversity value of habitats present within the Site prior to a development (i.e. the 'baseline') and the predicted biodiversity value of habitats following the completion of the Scheme (i.e. 'post development'). The comparison is undertaken in terms of 'biodiversity units', with a 'biodiversity metric' providing the mechanism to allow biodiversity values to be calculated and compared.

The metric assesses and generates separate outputs for area-based habitats and linear based habitats (with rivers reported separately to other habitats like hedgerows). A development cannot claim to achieve net gain until biodiversity net gains are predicted across all area-based, linear based and river based habitats.

The calculation for area-based and linear (non-river) habitats calculates biodiversity units as follows:

Before Works = Distinctiveness Score x Condition Assessment x Area/Length x connectivity x strategic significance

After Works = ((Distinctiveness Score x Condition Score x Area/ Length x connectivity x strategic significance) / Time to Target Condition) / Difficulty of Creation/Restoration

The five factors are determined as set out below:

Distinctiveness Score – High, Medium or Low, based on UK habitat classifications.

Condition Score – Good, Fairly good, Moderate, Fairly poor or Poor, based on habitat condition assessment.

Area/ Length – hectares (ha)/ length (km) of habitat type.

Connectivity – High, Medium and Low.

Strategic significance – High (Within area formally identified in local strategy), Medium (Location ecologically desirable but not in local strategy) and Low (Area/compensation not in local strategy/ no local strategy).

Time until target condition – time period (in years) until the target condition will be achieved.

Difficulty of creation/restoration – a score applied to account for risk associated with creating/restoring different types of habitat.

Limitations

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

An ecological survey represents a 'snapshot' in time of the ecological condition of a Site. The ecological character of a Site can change substantially throughout both the course of a year, and from year to year impacting on the extent and quality of habitats potential to support protected species.

APPENDIX 3: Non-Statutory Designated Sites Summary

Site Name					Designation	Location ³⁰	Brief Description
Wood E. Of Dell Wood					LWS	Within Site boundary	Ancient semi-natural broadleaved woodland, mainly of oak (both Pedunculate Oak and Sessile Oak with some Ash, Silver Birch, Field Maple and Hazel coppice).
Jacotts Course	Hill/West	Herts	Golf		LWS	Adjacent to site boundary, E	Golf course supporting a mosaic of habitats comprising roughs of acid, neutral and calcareous grassland, amenity grassland, broadleaved semi-natural and mixed plantations, and scrub.
Merlin's Wood and Newland's Spring					LWS	Adjacent to site boundary, NW	Part ancient semi-natural (Merlin's Wood) and part mostly old secondary woodland (Newland's Spring).
Dell Wood, Round Newland's & Long Newland's Springs					LWS	Adjacent to site boundary, W	A complex of ancient semi-natural woodlands.
Waterdell Spring					LWS	0.2km W	Ancient semi-natural woodland mostly of Pedunculate Oak and Silver Birch with some Beech and Ash plus Hazel coppice.
Croxy Green Grassland					LWS	0.5km SW	Old heathy/acid grassland dissected by several roads with several scarce and locally uncommon species including abundant Harebell, Heath-grass and the rare Petty Whin.
Lees Wood					LWS	0.7km N	This site has been left as a result of removing SSSIs from Wildlife Sites.
Cassiobury Park Nature Reserve					LWS	0.6km E	Old spring fed watercress beds and watercourses with associated wet habitat along the River Gade/Grand Union Canal corridor
Harrocks Wood					LWS	0.8km NW	Ancient semi-natural broadleaved woodland supporting two stand types - Beech with Hazel coppice and Silver Birch with Hazel and a few Pedunculate Oak.
Blackets Nursery Meadow					LWS	0.8km N	Unimproved, species-rich grassland with some scattered scrub.
Little Gillions Grassland					LWS	0.8km SW	This grassland on the eastern side of Copthorne Wood is a semi-improved neutral grassland with 11 neutral indicator species.
Blackets Wood					LWS	0.9km N	Ancient semi-natural broadleaf woodland of Ash, Hornbeam including some old coppice, Sycamore and Pedunculate Oak.
Stones Orchard					LWS	0.9km SW	Old orchard with unimproved neutral to acidic grassland supporting some herb-rich sward.
Gade Avenue					LWS	0.9km SE	Buildings and environs important for protected species. Wildlife Site criteria: Species.
Copthorne Wood					LWS	1km SW	Ancient semi-natural mature Beech woodland with Pedunculate Oak and an understorey dominated by Holly with some coppiced Hazel and young saplings.

Site Name	Designation	Location ³⁰	Brief Description
Ascot Road Scrub	LWS	1.1km SE	Long established secondary wet Alder and Willow woodland and scrub in the Gade Valley on former alluvial grassland.
Birch Spring	LWS	1.2km N	Part ancient semi-natural woodland of Pedunculate Oak with Silver Birch and Hazel coppice.
Cartpath Wood	LWS	1.2km N	Ancient semi-natural broadleaved woodland comprising mainly mature Pedunculate Oak with Ash and Silver Birch.
Long Valley Wood	LWS	1.3km S	Ancient semi-natural broadleaved woodland remnant composed predominantly of Pedunculate Oak and Hazel coppice with locally frequent Wild Cherry plus Ash and Field Maple.
Rough Wood	LWS	1.3km NE	Ancient semi-natural acid Pedunculate Oak, Beech, Hazel, Hornbeam woodland part of which has been planted with Ash and European Larch.
Air Raid Shelter, The Grove	LWS	1.3km N	Building and environs important for protected species. Wildlife Site criteria: Species.
Wood S. of Loudwater Lane	LWS	1.3km SE	Thin belt of ancient semi-natural broadleaf woodland, dominated by Ash with Wild Cherry and Pedunculate Oak and a scrubby subcanopy of Elder, Hazel and Hawthorn.
Scrub N.W. of Croxley Common Moor	LWS	1.4km S	A thin strip of unimproved mainly acidic grassland and tall swamp vegetation between the River Gade and the Grand Union Canal.
Heath Wood	LWS	1.5km N	Ancient semi-natural open mixed broadleaved woodland with some old 18th Century plantation.
Welling Grove	LWS	1.6km NW	Ancient semi-natural woodland of Beech, Pedunculate Oak and Ash with Hazel coppice and Holly below.
Rickmansworth Park Watercress Beds	LWS	1.6km NE	Neglected grazing marsh and watercress beds adjacent to the River Chess now comprising tall herbs, swamp, wet grassland, scrub and areas of open water.
Field by The Lodge, Redhall Lane	LWS	1.6km NW	Secondary neutral to slightly acid grassland supporting a herb-rich flora.
Croxley Hall Wood	LWS	1.6km S	Ancient semi-natural acid broadleaf woodland dissected by railway lines, with old excavations in the eastern area.
Hempstead Road Wood	LWS	1.7km NE	Ancient woodland site with old secondary, possibly semi-natural, canopy of Ash, Hornbeam and Pedunculate Oak.
Round Spring (Loudwater)	LWS	1.9km W	Ancient semi-natural broadleaf woodland of Pedunculate Oak, Ash, Beech and Wild Cherry over a subcanopy of Hazel and Hornbeam coppices plus Elder and Hawthorn.
Templepan Wood	LWS	1.9km NW	Ancient semi-natural broadleaved woodland in the south with conifer plantation in the north.
Sawpit Spring	LWS	1.9km NW	Small area of old/ancient semi-natural broadleaved woodland dominated by Ash and Beech.
Lavrock Lane Parkland	LWS	1.9km SW	Site important for protected species.

Site Name		Designation		Location ³⁰	Brief Description
Juniper Hill Wood		LWS		2km N	Ancient semi-natural woodland of predominantly Pedunculate Oak, Ash and Beech with an understorey of Haze coppice, plus some Ash, Field Map and Holly.
Lower Plantation (Loudwater)	Area	LWS		2km E	Site important for protected species.

APPENDIX 4: Hertfordshire Ecology Consultation – Hazel Dormice

From: Chloe Weingarten <[REDACTED]>
Sent: Monday, June 17, 2024 3:33 PM
To: Matt Oakley <[REDACTED]>
Subject: Little Green Lane, Croxley Green

CAUTION: This email originated from outside the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Hi Matt,

Thank you for your inquiry below:

Hi all. I am working on the proposed Little Green Lane, Croxley Green development in support of Richborough. RammSanderson are supporting with the ecology and biodiversity assessments, and I have a query relating to the scope of the works that are required to support the development that I was hoping you might be able to answer. The site is bordered by ancient deciduous woodland, and a small copse of such woodland is present within the site. These habitats have been surveyed and they are optimal habitat for hazel dormouse. They are also connected to additional woodlands in the wider landscape. However, there is conflicting evidence available online as to whether hazel dormouse are extinct in the Rickmansworth and wider Hertfordshire area. Records of the species exist from the 90's and early 2000's, but more recent assessments seem to suggest the species is no longer present. <https://mammal-atlas.hnhs.org/2015/CDO.shtml> Would ThreeRivers expect hazel dormouse surveys to be undertaken to support this development, or can we rely on the recent studies highlighting likely absence to scope this species out of the required works? Thanks Matt

As you mentioned, hazel dormice have not been present in Hertfordshire for a while. Because of this, we would not expect the development to be supported by a hazel dormouse survey, therefore this species will not be a constraint.

Hope that helps.



Chloe Weingarten

Assistant Ecology Advisor | Hertfordshire Ecology

LEADS* Hertfordshire County Council

Address: Farnham House Six Hills Way, Stevenage SG1 2FQ

T: 01992 556917 (**Internal:** 556889) **E:** [REDACTED]

To contact the Ecology team, please direct enquiries to: ecology@hertfordshire.gov.uk or phone 01992 555220

**Hertfordshire LEADS provides Landscape, Ecology, Archaeology,
Design and Sustainability support to Local Planning Authorities in Hertfordshire*



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We act
Sustainably

We champion
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APPENDIX 5: BIA Headline Results

FINAL RESULTS		
Total net unit change (Including all on-site & off-site habitat retention, creation & enhancement)	Habitat units	28.30
	Hedgerow units	4.36
	Watercourse units	0.00
Total net % change (Including all on-site & off-site habitat retention, creation & enhancement)	Habitat units	34.41%
	Hedgerow units	42.54%
	Watercourse units	0.00%
Trading rules satisfied?	Yes ✓	

Unit Type	Target	Baseline Units	Units Required	Unit Deficit
Habitat units	10.00%	82.25	90.47	0.00
Hedgerow units	10.00%	10.26	11.28	0.00
Watercourse units	10.00%	0.00	0.00	0.00

No additional area habitat units required to meet target ✓
No additional hedgerow units required to meet target ✓
No additional watercourse units required to meet target ✓

APPENDIX 6: Static Bat Detectors – Raw Data

Session 1 - 24-29.05.24

ER0042	ENGLISH NAME							
SURVEY DATE	Common Pipistrelle	Noctule	Soprano Pipistrelle	Leisler's Bat	Serotine	Natterer's bat	Grand Total	
24/05/2024	28		6	5		1	40	
25/05/2024	48		10	13	11	2	84	
26/05/2024	54		10	11	1		76	
27/05/2024	28		9	4	1		42	
28/05/2024	23		21	5	1		50	
29/05/2024	65		11	29			105	
Grand Total	246		67	67	14	2	1	397
Percentage	62.00%		17.00%	17%	4%	1%	0%	

ER0045	ENGLISH NAME					
SURVEY DATE	Common Pipistrelle	Soprano Pipistrelle	Noctule	Grand Total		
24/05/2024	474		22	8	504	
25/05/2024	134		15	4	153	
26/05/2024				1	1	
27/05/2024	4		1	3	8	
28/05/2024				8	8	
29/05/2024	65		14	13	92	
Grand Total	677		52	37	766	
Percentage	88.00%		7.00%	5%		

Session 2 - 19-24.06.24

ER0042	ENGLISH NAME							
SURVEY DATE	Common Pipistrelle	Noctule	Soprano Pipistrelle	Leisler's Bat	Brown Long-eared Bat	Barbastelle	Grand Total	
19/06/2024	173		8	3	3		187	
20/06/2024	76		1	9	1	1	89	
21/06/2024	21			2			23	
22/06/2024	107		15	10	1	1	134	
23/06/2024	15		12	5		1	33	
24/06/2024	15		7	3		1	26	
Grand Total	407		43	32	5	3	2	492
Percentage	82.00%		9.00%	7%	1%	1%	0%	

ER0045	ENGLISH NAME						
SURVEY DATE	Noctule	Common Pipistrelle	Soprano Pipistrelle	Leisler's Bat	Natterer's Bat	Grand Total	
19/06/2024	7	2		2	1	12	
20/06/2024	4	9			1	14	
21/06/2024	4	6		5		15	
22/06/2024	30	2		1		33	
23/06/2024	16	2		1		19	
24/06/2024	17	14		2		33	
Grand Total	78	35		11	1	1	126
Percentage	62.00%	28.00%		9%	1%	1%	

Session 3 - 11-16.07.24

ER0042	ENGLISH NAME							
SURVEY DATE	Common Pipistrelle	Soprano Pipistrelle	Noctule	Brown Long-eared Bat	Serotine	Leisler's Bat	Grand Total	
11/07/2024	295	37		5		1	338	
12/07/2024	259	100		6	3		368	
13/07/2024	48	12		8			68	
14/07/2024	29	13		8		1	51	
15/07/2024	21	1		11	2	1	36	
16/07/2024	141	7		3		3	154	
Grand Total	793	170		41	5	3	3	1015
Percentage	78.00%	17.00%		4%	1%	0%	0%	

ER0045	ENGLISH NAME					
SURVEY DATE	Noctule	Common Pipistrelle	Soprano Pipistrelle	Serotine	Grand Total	
11/07/2024	10		11		21	
12/07/2024	5		13	5	23	
13/07/2024	25		19	7	51	
14/07/2024	34		8	2	44	
15/07/2024	7		5		12	
16/07/2024	26		16	4	7	53
Grand Total	107		72	18	7	204
Percentage	53.00%		35.00%	9%	3%	

Session 4 - 05-10.8.24

ER0042	ENGLISH NAME							
SURVEY DATE	Common Pipistrelle	Soprano Pipistrelle	Noctule	Barbastelle	Brown Long-eared Bat	Leisler's Bat	Natterer's Bat	Grand Total
05/08/2024	68	26	8		2		1	105
06/08/2024	57	21		1	2			81
07/08/2024	43	16	4		4			67
08/08/2024	7	1					1	9
09/08/2024	117	25	2	1	4		1	150
10/08/2024	280	49	26	21	6		1	383
Grand Total	572	138	40	23	18		3	795
Percentage	72.00%	17.00%	5%	3%	3%		0%	

Session 5 - 26-30.09.24

ER0042	ENGLISH NAME							
SURVEY DATE	Common Pipistrelle	Soprano Pipistrelle	Barbastelle	Serotine	Nathusius' Pipistrelle	Brown Long-eared Bat	Natterer's Bat	Grand Total
26/09/2024	5	3			1			9
27/09/2024	13	2	3				1	20
28/09/2024	7	1	10				1	19
29/09/2024	241	89	6	2	3			341
Grand Total	266	95	19	3	3		2	389
Percentage	68.00%	24.00%	5%	1%	1%		1%	

ER0045	ENGLISH NAME							
SURVEY DATE	Noctule	Common Pipistrelle	Soprano Pipistrelle	Brown Long-eared Bat	Natterer's Bat			Grand Total
05/08/2024	40	33	9	1				83
06/08/2024	8	2	2				1	13
07/08/2024	5	14	6				1	26
08/08/2024	9	17	3					29
09/08/2024	7	14	8	1				30
10/08/2024	57	20	6	2				85
Grand Total	126	100	34	4			2	266
Percentage	47.00%	37.00%	13%	2%			1%	

ER0045	ENGLISH NAME							
SURVEY DATE	Brown Long-eared Bat	Common Pipistrelle	Natterer's Bat	Soprano Pipistrelle				Grand Total
26/09/2024	1	8		1			8	18
27/09/2024	1			1				2
28/09/2024	1							1
29/09/2024		158					26	184
Grand Total	3	166		2			34	205
Percentage	2.00%	81.00%		1%			17%	

