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Ecological Impact Appraisal

Client

Highwood Ventures 7 Limited

Project

Land East of Chickenhall Lane, Eastleigh

Date

June 2025

CONTENTS

1.0	NON-TECHNICAL SUMMARY	2
2.0	INTRODUCTION	3
3.0	LEGISLATION	4
4.0	METHODOLOGY	5
5.0	RESULTS	9
6.0	IMPACT ASSESSMENT	21
7.0	CONCLUSIONS	28

TABLES

Table 1: Internationally Designated Sites of Nature Conservation Importance

Table 2: Non-Statutory Sites

Table 3: Hedgerow evaluation

Table 4: Headline BNG Results

Table 5: Protected and notable species suitability and results

Table 6: Important Ecological Features On-Site

Table 7: Assessment of Effects on Important Ecological Features

FIGURES

Figure 1a: Statutory and non-statutory Designated Sites Plan (2km)

Figure 1b: Statutory Designated Sites Plan (10km)

Figure 2: Protected Species Consultation Plan

Figure 3: Biodiversity Net Gain – Baseline Habitats Plan

Figure 4: Biodiversity Net Gain – Proposed Habitats Plan

Figure 5: Biodiversity Net Gain – Retention Plan

Figure 6: Biodiversity Net Gain – Baseline Condition and Distinctiveness Plan

Figure 7: Biodiversity Net Gain – Proposed Condition and Distinctiveness Plan

Figure 8: Reptile Survey Plan

Figure 9: Static Detector Location Plan

Figure 10: Riparian mammal survey area

APPENDICES

Appendix A: Legislation and Policy

Appendix B: Botanical Species List

Appendix C: Detailed Faunal Survey Methodology

Appendix D: Bat Static Results

Appendix E: Biodiversity Net Gain Report

Appendix F: Reptile Survey Results

Appendix G: Site photos

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1.0 NON-TECHNICAL SUMMARY

Report Scope and Methodology

- FPCR were commissioned by Highwood Ventures 7 Limited to undertake an Ecological Impact Assessment associated with the site at Land East of Chickenhall Lane, Eastleigh.
- Full planning application for a proposed 70-bed care home (Use Class C2), associated parking, landscaping, access, drainage, and other associated works following demolition of existing structures.
- Following an initial site visit and preliminary protected species survey in 2024, subsequent ecological surveys were undertaken to inform this assessment, including UK Habs habitat survey, desktop study, and protected species surveys (bats, breeding birds, reptiles, riparian mammals).

Ecological Baseline

- The Barton River off-shoot of the River Itchen SAC is adjacent to the site. The site is within scoping distance of the Solent and New Forest Statutory Protected Sites Network.
- The site is comprised of modified grassland, other neutral grassland managed by regular cutting bounded by hedgerows, introduced shrubs and trees.
- Surveys for bats were completed during 2024. Low levels of activity were recorded with common and widespread species accounting for most of the activity recorded.
- A bird scoping survey recorded an assemblage of common species. Nesting habitat is present across the site.
- Great crested newts are present within 300, however the site is isolated by significant barriers to dispersal including the Barton River.
- A low population of common lizard and grass snake was identified along the eastern site boundary.
- Badgers and dormice were scoped out of assessment following desktop search and site surveys.

Residual Effects

- The proposals would result in likely significant effects on the River Itchen SAC and SSSI from proposed drainage features works within the protected site boundary and increased nitrates/phosphates from wastewater. Following mitigation measures proposed through an Ecological Construction and Environmental Management Plan and policy secured payment local nutrient mitigation schemes, all residual effects on statutory protected sites are not significant.
- Intrinsic mitigation measures for protected species on site, and off-site habitat provisions for Biodiversity Net Gain will ensure that all residual effects on Important Ecological Features present on site are not significant.

2.0 INTRODUCTION

- 2.1 This report has been prepared by FPCR Environment and Design Ltd., on behalf of Highwood Ventures 7 Limited. The initial Phase 1 Habitat Survey and Preliminary Protected Species Survey was undertaken in April 2024 at Land East of Chickenhall Road, Eastleigh (central OS grid reference: SU 46160 19138) hereafter referred to as the 'site'.
- 2.2 The initial survey informed the need for further specific species surveys, including badgers, bats, breeding birds, dormice, great crested newt, reptile and riparian mammal surveys. Habitat condition assessment to inform biodiversity net gain calculation was undertaken at a later date during the core survey period for botany.

Site Context

- 2.3 The site spans an area of 0.6ha and forms part of a larger field area to the south. The site is currently largely utilised for materials storage by the landowner but a small section is managed as a hay meadow in line with the larger field area to the south. The site sits in a green corridor for the River Itchen between the large town of Eastleigh and smaller settlement of Bishopstoke.

Proposals

- 2.4 Full planning application for a proposed 70-bed care home (Use Class C2), associated parking, landscaping, access, drainage, and other associated works following demolition of existing structures.

3.0 LEGISLATION

3.1 Details on relevant national and local policy and legislation for ecology in relation to the development site are provided in Appendix A. The policies and legislation most relevant are:

- The Conservation of Habitats and Species Regulations 2019 (EU Exit) (CHSR) (as amended) in relation to the European Protected Species (EPS) great crested newt *Triturus cristatus* (GCN), bats (all species) and hazel dormouse *Muscardinus avellanarius*; and European protected sites i.e. Special Areas of Conservation (SAC), Special Protection Areas (SPAs) and internationally protected "Ramsar Sites". Annex II bat species of particular relevance in relation to SACs designated for bats.
- The Wildlife and Countryside Act 1981 (WCA) (as amended) in relation to all wild birds (including Schedule 1 species), other animals (notably Schedule 5 species), flora (those listed in Schedules 8 and 9) and Sites of Special Scientific Interest (SSSI);
- The Environment Act 2021;
- Protection of Badgers Act (PBA) 1992;
- Natural Environmental and Rural Communities (NERC) Act 2006 in relation to various priority species and habitats;
- Hedgerow Regulations 1997 made under Section 97 of the Environment Act 1995;
- National Planning Policy Framework (NPPF) 2023;
- Local Planning Policy contained within the Eastleigh Borough Local Plan;
- Local Nature Reserves (LNR) as designated most recently by the NERC Act 2006;
- Non-statutory protected local sites including County Wildlife Sites (CWS), Sites of Importance for Nature Conservation (SINC), Local Wildlife Sites (LWS) and Ancient Woodland Inventory (AWI) sites;
- Local Biodiversity Action Plans (LBAP); and
- Birds of Conservation Concern (BoCC).

4.0 METHODOLOGY

Desk Study

- 4.1 In order to compile existing baseline information, relevant ecological information was requested from both statutory and non-statutory nature conservation organisations including:
- Multi Agency Geographic Information for the Countryside (MAGIC)¹; and
 - Hampshire Biological Records Centre (HBIC)
- 4.2 Further inspection of colour 1:25,000 OS base maps (www.ordnancesurvey.co.uk) and aerial photographs from Google Earth (www.maps.google.co.uk) was also undertaken in order to provide additional context and identify any features of potential importance for nature conservation in the wider countryside.
- 4.3 The search area for biodiversity information was related to the significance of sites and species and potential zones of influence, as follows:
- European Protected Sites - 10km search around the site for sites of International Importance (e.g. SACs, SPAs and Ramsar sites).
 - Nationally Protected Sites - 2km search around the site for sites of National Importance (e.g. SSSIs). Sites of importance outside of the 2km range may also be highlighted if a potential impact is perceived.
 - Local Protected Sites - 1km search around the site for locally protected sites (e.g. LNRs).
 - Non-statutory Designated Sites - 1km search around the site.
 - Legally Protected and Notable Species - 1km search around the Survey Area.
- 4.4 When handling data species data:
- All results were filtered to include records from the previous ten years only (since 2014).
 - Results are plotted to identify any records falling within the site boundary.
 - The remainder of results are filtered, separating (from those listed in d.) all WCA Schedule 5 species, all likely breeding or over wintering WCA Schedule 1 birds, any EPS species and any Nationally Rare and scarce plants.

Field Survey

Habitats/flora

Phase 1

- 4.5 An initial walkover was conducted on 22nd April 2024 by Adam Day, who is experienced in botanical surveys, having achieved a level 4 on the Botanical Society of Britain and Ireland's (BSBI) Field Identification Skills Competency (FISC), equivalent to tutor level identification skills.

¹ [Online]. <http://magic.defra.gov.uk/>

- 4.6 The survey was conducted using the methodology outlined in the Handbook for Phase 1 Habitat Survey (JNCC 2010)². This involved a systematic walkover of the site to classify the habitat types present (using the standardised Phase 1 Habitat classification system) and mapping these onto an OS base map. Each habitat was described based on the botanical merits and target notes used to record features of habitats of particular interest, as well as any sightings, evidence of, or potential for protected or notable species.
- 4.7 Where feasible, target notes and species lists were compiled for individual areas and assessments of abundance were made using the DAFOR scale. Vascular plant nomenclature follows Stace (2010)³. Whilst the species lists collected should not be regarded as exhaustive, sufficient information was gained during the survey to enable classification and assessment of broad habitat types and identify features of interest.

Biodiversity Net Gain

- 4.8 The habitat condition surveys were also undertaken by Adam Day on the 17th July 2024. All habitats/habitat compartments on site have been assessed using the technical guidance document provided by Natural England for use with the statutory metric. The guidance provides a list of criteria for a range of broad habitat types which are used to determine whether habitat fall into a 'poor', 'moderate' or 'good' condition score. For grassland, species numbers were assessed using 5x1m quadrats per parcel.
- 4.9 A botanical species list (Appendix B) was compiled during the survey, and a Baseline Habitat plan of all major habitat types produced (Figure 3).

River Corridor Assessment

- 4.10 The River Condition Assessment (RCA) was completed by Tiana Thomas MSc BSc, an Ecologist who is experienced in riparian surveys and accredited in conducting MoRPh4 field surveys, River Type desk studies, recording data using the RCA information system and interpreting RCA indicators and scores for baseline and post-intervention River Metric.
- 4.11 The field survey was undertaken on 4th July 2024 using the MoRPh methodology, during low flow conditions and with suitable weather conditions, being dry but cloudy throughout the survey. The desktop survey was undertaken on the 1st of July 2024. Full RCA results can be found in the RCA technical note appended to Appendix E- BNG report of this EclA.

Hedgerows

- 4.12 Hedgerows were surveyed using the UK Habs 2.0 condition assessment criteria based on woody species present, consistency of structure and height and width. Ground flora is also assessed.
- 4.13 The hedgerows were also assessed against the Wildlife and Landscape criteria contained within Statutory Instrument No: 1160 – The Hedgerow Regulations 1997 to determine whether they qualified as 'Important' hedgerows under the Regulations.

2 JNCC, (2010). Handbook for Phase 1 habitat survey – a technique for environmental audit, ISBN 0861396367.

3 Stace, C.A. (2010). New Flora of the British Isles. (3rd Ed.). Cambridge: Cambridge University Press

4 Gurnell, A et al (2020). A GUIDE TO ASSESSING RIVER CONDITION [online] Available at: <https://modularriversurvey.org/wp-content/uploads/A-GUIDE-TO-ASSESSING-RIVER-CONDITION-Jly2020.pdf>.

Faunal Surveys

- 4.14 Following the initial assessment of the site for protected / notable species potential, further surveys were completed during 2024. Detailed methods are detailed in Appendix B and within relevant species-specific appendices (see contents page).

Survey Conditions and Personnel

- 4.15 All ecology surveys were undertaken during favourable weather conditions by experienced Ecologists and licensed Ecologists where appropriate. Full details of survey conditions are contained within the appended reports. Details of personnel and relevant qualifications are outlined in the relevant appendices.

Impact Assessment

- 4.16 The assessment of significant ecological effects was undertaken in accordance with CIEEM EcIA guidelines⁵. In summary, the process involves:
- Establish Baseline – this is based on desk study and field surveys and describes the existing and potential Important Ecological Features (IEFs) within the zones of influence specified.
 - Determine the Scale of Importance of Ecological Features - importance is determined using geographical frames of reference: Local, Country, Regional, National and International. This assessment is based on a variety of factors, including statutory protection, statutory designation, conservation status, abundance and rarity.
 - Assess Significant Ecological Effects – this is based on the importance of the ecological feature, magnitude of the effect and sensitive of the features considered. This is description-based rather than applying a matrix and considers construction and operation effects only where relevant. The assessment assumes the proposed layout, intrinsic mitigation and routine ecological mitigation normally conditioned have been actioned and these are outlined clearly.
 - Mitigation – This will be based on the mitigation hierarchy – avoidance, mitigation, compensation and enhancement. Any further mitigation measures required will be outlined to ensure residual effects are lowered to a level considered acceptable. Enhancements will seek biodiversity net gain in line with the NPPF. Monitoring will be considered where applicable.
- 4.17 Future Baseline and Residual Effects – final conclusionary statements for the short, medium and long term.

Limitations

- 4.18 This assessment aims to provide baseline ecological data for the site and as such presents an overview of the habitats and features present. Due to the transient and complex nature of ecosystems, no investigation can provide a complete representation or prediction of the natural environment present, however every effort has been made to ensure an accurate description of the site is presented following best practice guidance, experience and

⁵ CIEEM (2018) Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine (version 1.1). Chartered Institute of Ecology and Environmental Management, Winchester.

professional judgement. All survey information is within the guidelines for validity of the age of ecological survey data.

- 4.19 Data provided by third party sources collated during the desktop study, is generally made up from a wide range of sources including (but not limited to) those submitted by ecological consultancies, wildlife conservation organisations and volunteers. As such, this data is typically focused on areas of known nature conservation and is reliant upon formal surveys having been undertaken within an area or the presence of an expert within the locality (particularly for invertebrate records) and as such this data can never be fully relied upon as a complete ecological dataset for any given area. Rather, this data is used as a guide to likely presence of notable ecological features and can never be relied upon for likely absence.
- 4.20 The associated site plans have been reproduced from detailed field notes and informed by aerial imagery, OS mapping and site maps provided by the client. The accuracy of this figure is therefore ultimately guided by the accuracy of these sources and can only be relied upon to a certain degree of resolution.
- 4.21 Hedgerows surveyed against the Hedgerow Regulations 1997 could not be assessed under the Archaeology and History criteria, as this is outside the scope of ecology surveys. Therefore, some hedgerows on site may be important under these criteria and this should be addressed by the appropriate consultees.
- 4.22 Due to the relatively small size of the site and its urban and well lit location, it was assessed that walked transect surveys would not provide significant additional context to the static surveys. The western boundary and central site areas have high baseline light levels from adjacent street and building lighting. The results of the static surveys demonstrate this, showing that the eastern boundary has higher levels of bat activity. The lack of transect data in this assessment is not considered to be a limitation.

5.0 RESULTS

Desk Study

Designated Sites

Internationally Designated Sites of Nature Conservation Importance

5.1 Five statutory designated sites are located within 10km of the site boundary (Figure 1a and 1b):

Table 1: Internationally Designated Sites of Nature Conservation Importance

Designated Site Name	Site Reference	Proximity to Site (approx.)	Summary Description of Ecological Receptor
River Itchen SSSI, SAC	UK0012599	9m East	This river with marshes, and humid grassland habitats is inhabited by Annex II species, particularly two that are a primary reason for the selection of this site: Southern damselfly <i>Coenagrion mercuriale</i> and European bullhead <i>Cottus gobio</i> .
Solent & Southampton Water RAMSAR, SPA	UK11063, UK9011061	6.3km South	The site is comprised of estuaries and adjacent coastal habitats including intertidal flats, saline lagoons, shingle beaches, reefs, saltmarsh, and reedbeds, damp woodland, and grazing marsh. It supports internationally important numbers of wintering waterfowl including <i>Charadrius hiaticula</i> , <i>Anas crecca</i> and <i>Branta bernicla bernicla</i> , important breeding gull and tern populations, and an impressive assemblage of rare invertebrates and plants.
Emer Bog SAC	UK0030147	6.4km West	This site is mainly composed of broad-leaved woodland, scrub, heath and bogs. The site is of relevance as it contains transition mires and quaking bog habitats which are designated as Annex I habitats.
Solent Maritime SAC	UK0030059, UK9020330	8.3km Southeast	Major estuarine system with four coastal plain estuaries and four bar-built estuaries. The site and its inlets are unique in Britain and Europe due to their hydrographic regime of four tides each day and for the complexity of the marine and estuarine habitats present within the area. Unusual features include the presence of very rare sponges and a sandy reef of polychaete <i>Sabellaria spinulosa</i> on the steep eastern side of the entrance to Chichester Harbour.
Solent and Dorset Coast SAC	UK9020330	6.3km South	Habitats include brackish floodplain grazing marsh ditches, saline lagoons, intertidal saltmarsh, and mudflats. These habitats support internationally important numbers of wintering waterfowl and a rich variety of wetland plants and invertebrates.

Non-Statutory Sites

- 5.2 There are 22 SINCS, mainly composed of recreational woodland, parks, and meadows within 2km of the site. Additionally, there are 4 Ancient-Semi Natural Woodland (ANSW), including one within 1 km of the site. These are listed in table 2 below and shown on figure 1a.

Table 2: Non-Statutory Sites

Site Name	Site Ref.	Proximity to site (approximate m)	Description
Stoke Park Wood, ASNW	N/A	1 km East	A mix of ancient woodland and newly planted trees.
Breach Copse, ANSW	N/A	1 km North	A mix of ancient woodland and newly planted trees. Close to River Itchen, it provides refugee from urban spaces.
Lord's Wood, ASNW	N/A	2 km Northeast	A mix of ancient woodland and newly planted trees.
Breach sling copse, ANSW	N/A	1.5km North	A mix of ancient woodland and newly planted trees. Close to River Itchen, it provides refugee from urban spaces.
Monks Book, Fleming Park	N/A	1.9km West	Park situated nearby to Patio Veranda, as well as near the community centre Pavilion on the Park.
Lakeside Country Park	N/A	1.8km West	The site is a country park just south of the town of Eastleigh in Hampshire. The park is on the site of old gravel workings, with lakes formed from gravel pits.
Boyatt Wood, Woodside Avenue Extension	N/A	1.6km Northwest	Wooded area to the south of Boyatt Lane which connects the area to the village of Otterbourne.
Allbrook Hill Copse	N/A	1.6km North	
Ham Farm Meadow	N/A	1.3km North	Meadow located between River Itchen and Itchen navigation as well as near the grassland Allbrook Knoll Play Area.
Swamp West of Recreation Grounds	N/A	0.002km North	Swamp connected to River Itchen.
Meadow between Railway & River Itchen (Winchester)	N/A	1.5km North	Meadow habitats between Railway & River Itchen.
Breach Farm Meadows	N/A	1.4km North	Meadow habitats between Railway & River Itchen. Connected to other meadow habitats they form a corridor for species.
Allington Manor Farm Water Meadows	N/A	1.7km South	Farm colliding with and Meadow habitats.

Site Name	Site Ref.	Proximity to site (approximate m)	Description
Ashtrim Nurseries	N/A	0.15km Southeast	Land between Barton River and a branch of River Itchen that provides nursery habitats.
Breach & Gully Copses	N/A	0.5km North	Small secondary woodland greenspace overlooking the river within the Greenhithe conservation area
Marshy Grassland, Bishopstoke	N/A	0.5km Southeast	Marshes that lie beside River Itchen.
Meadow North of Railway	N/A	1.5km South	Meadow greenspace habitats.
Stanford Meadow	N/A	1km Southeast	Meadow greenspace habitats
Breach Sling Copse & Stoke Common Copse	N/A	1.4km Northeast	Woodland area within a larger forest or landscape where trees and underbrush grow closely together. Copses can provide important habitats for wildlife, offering shelter and cover for various animals.
Hog Wood & Gravel Pits	N/A	1.6km South	Woodland habitats.
Judges Gully Meadow	N/A	1 km East	Meadow habitats creating a corridor connected to the near Ancient Woodland Stoke Parkwood can protect wildlife from surrounding land uses.
Judges Gully Copse	N/A	1 km East	Meadow habitats creating a corridor connected to the near Ancient Woodland Stoke Parkwood can protect wildlife from surrounding land uses.
West Horton Farm Woods	N/A	1.4km Southeast	Farmland colliding with woodland habitats.
Brick Kiln Copse, Bishopstoke	N/A	1.3 km Southeast	small, wooded area within a larger forest or landscape where trees and underbrush grow closely together. Copses can provide important habitats for wildlife, offering shelter and cover for various animals.
Poplar Plantation (Stoke Park Woods)	N/A	1 km East	A mix of ancient woodland and newly planted trees.

Protected and Notable Species

- 5.3 Protected and notable species records from the last 10 years within 1km of the site are shown in Figure 2. All records of relevance to this assessment are discussed in the relevant species assessments.

Habitats

- 5.4 The locations of the habitats described below are illustrated in Figure 3: Baseline Habitats Plan and Figure 6: Baseline Habitat Condition and Distinctiveness. A botanical species list is provided in Appendix C. Off-site habitats within the ownership boundary are also included as the overall BNG assessment relies on these. Degradation of site habitats as described in the BNG PPG has not been undertaken prior to the site assessment taking place. This is based on analysis of historic arial imagery and discussions with the landowner. Two large poplar trees were felled in summer 2024 by the landowner. This is in line with his regular felling of poplar at the site for firewood. Both trees are included within this BNG assessment including on plans, in the metric and descriptions below.

Bare ground (on-site)

- 5.5 Patches of bare ground are present at the site entrance and sporadically in the northern field area. These are where the temporary unsealed entrance to the site is located and where the landowner has stored materials historically. This habitat is low distinctiveness and in poor condition. This habitat will be lost to the proposals.

Developed Land, sealed-surface (on-site)

- 5.6 Two buildings are present on site, a former changing rooms and an open-sided storage building. These buildings do not have a condition assessment applied. All buildings will be removed to facilitate the development.

Introduced shrub (on and off-site)

- 5.7 The planted tree belt along the eastern boundary includes few native and ornamental trees but is dominated by non-native cherry laurel *Prunus laurocerasus*. This has historically been planted to form a dense shelter belt line along the eastern boundary and now dominates this feature. This habitat does not have a condition assessment applied. Post-development, all cherry laurel will be removed to facilitate new mixed scrub planting.

Urban trees (on and off-site)

- 5.8 There are seven trees within the site boundary. These include the two large grey/black poplar hybrid trees *Populus x canadensis* that have now been felled and groups of smaller trees including a single hawthorn *Crataegus monogyna* and small groups of sycamore *Acer pseudoplatanus*. Small groups of trees are also present in shelter belt area that runs along the sites eastern boundary. These include self-seeded poplar and planted hawthorn, sycamore and field maple *Acer campestre*. Some individual trees and sections of tree groups will be lost.

Ruderal/ephemeral (on site)

- 5.9 Ruderal/ephemeral habitat is present around the site buildings and along the hedgerow. Common nettle *Urtica dioica* and spear thistle *Cirsium vulgare* are dominant, with occasional Hogweed *Heracleum sphondylium* and hedge bindweed *Calystegia sepium*. The distribution and extent of the habitat is consistent with the edges of the field being regularly disturbed and high in nutrients. These edges are flailed annually in autumn according to the landowner in line with hedgerow management. This habitat is low distinctiveness and in poor condition. Areas of this habitat surrounding the buildings will be lost to the proposals.

Modified Grassland (on and off-site)

- 5.10 All remaining areas of the site are managed as a modified grassland. This includes the northern field area and all managed tracks and paths between neutral grassland habitats as described in paragraphs 5.11-5.14. The northern areas of grassland have re-established naturally from bare ground where materials including timber were previously stored. These are managed with regular mowing. This has created a short and sparse sward that mimics field gateways or disturbed pathways and is dominated by annual meadow grass *Poa annua*, with occasional coltsfoot *Tussilago farfara*, scarlet pimpernel *Anagallis arvensis*, and rare scentless mayweed *Tripleurospermum inodorum*.
- 5.11 The maintained track ways are more consistent grassland type swards, but also limited in diversity. These areas are dominated by annual meadowgrass and perennial ryegrass *Lolium perenne* with occasional creeping buttercup *Ranunculus repens* and rare hogweed.
- 5.12 Immediately adjacent to the River Barton corridor is a managed strip of modified grassland that sits between the northern field area and then between the field and introduced shrub and trees corridor that runs along the eastern boundary of the site. This strip of grassland is intensively managed by regular mowing and is generally very sparse with a high percentage of bare ground showing through. Annual meadow grass is frequent, as are broad leaved plantain *Plantago major*, creeping buttercup and dandelion. Nettle and common reed *Phragmites australis* dominate the riverside edge and just nettle which forms the introduced shrub understorey.
- 5.13 All modified grassland areas are low distinctiveness and in poor condition. All modified grassland will be lost to the proposals, however, areas of good condition modified grassland are proposed within site green infrastructure areas.

Arrhenatherum Neutral Grassland

- 5.14 Other neutral grassland is recorded in the southern section of the site where it forms part of the wider management of this field. It is managed as two separate areas, with a constantly mown access track down the sides and middle. Because the southern area of this field and the western boundary is mapped as priority habitat Coastal Floodplain Grazing Marsh (see plate 1 below), which is a priority habitat, the whole field was condition assessed to ensure this habitat was not lost to the proposals if within the site boundary.

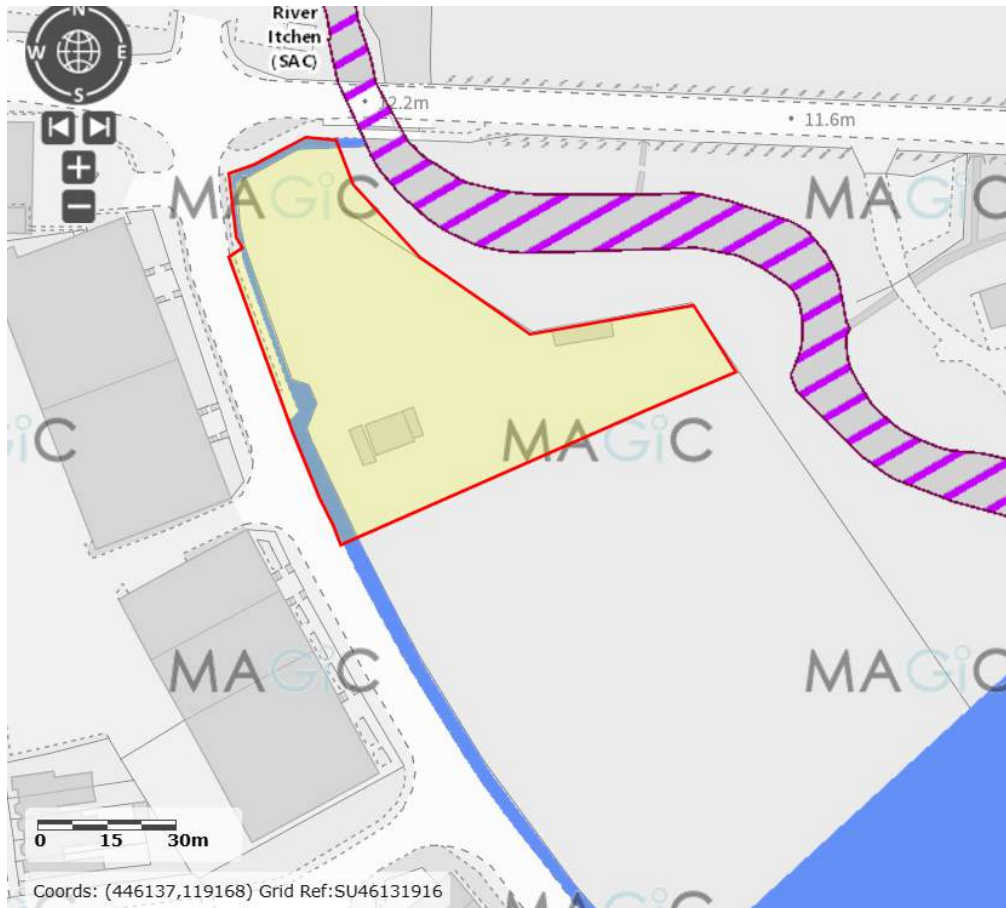


Plate 1- CFGM (blue polygon)⁶ habitat along the western boundary and southern portion of the UK Habs survey area. Please note that site boundary (red line) is demonstrative only.

- 5.15 The most abundant grass species within the site impact area were dominant false oat-grass *Arrhenatherum elatius* and frequent cock's-foot *Dactylis glomerata*. Creeping bent *Agrostis stolonifera* is occasional. Herb diversity in this area is low. Hogweed, common nettle and creeping thistle are locally frequent to occasional. Creeping cinquefoil *Potentilla reptans*, red clover *Trifolium pratense* and meadow vetchling *Lathyrus pratensis* are rare. This community is representative of a typical dry *Arrhenatherum* neutral grassland that is regularly managed through mechanical cutting.
- 5.16 The sward is consistent over much of the wider field extent, which ties to the topography of the field and its influence on the water table and seasonal inundation. The southeastern corner of the field is distinctively different, and an NVC community more typical of CFGM is present including frequent tufted hair grass *Deschampsia cespitosa*, fleabane *Pulicaria dysenterica* and occasional hard rush *Juncus inflexus*, water mint *Mentha aquatica* and rare marsh woundwort *Stachys palustris* and wild angelica *Angelica sylvestris*.
- 5.17 The overall extent of CFGM type habitat is limited to this southeastern corner only and is clearly linked to the seasonal wetness of the area. It is not clear why the western field boundary is also included within the CFGM layer on MAGIC. It may be that historically a ditch was present along

⁶ MAGIC mapping service (DEFRA, 2024) <https://magic.defra.gov.uk/MagicMap.aspx> first accessed 19.11.24

the boundary, but this has not been present for a considerable time judging by the lack of any topographical feature and how dry the habitat is along the hedgerow boundary now.

- 5.18 Within the site boundary and over the majority of the wider field, the grassland is g3c5 sub-category ONG. Given the mean species count of 6 per quadrat, the lack of variation in the sward height and presence of undesirable species, the grassland was assessed to be in poor condition. This is a medium distinctiveness habitat.
- 5.19 Small areas of ONG are lost to the proposals. To compensate, retained areas of ONG within the ownership boundary will be enhanced to ONG in good condition.

Watercourse (off-site)

- 5.20 The watercourse is characteristic of a chalk stream, with *Apium nodiflorum* - fools' watercress and *Ranunculus aquatilis* – water crowfoot present mid channel, flowing over a gravel, pebble bed some areas shallower than others. Throughout the most part the bank face is gentle and steep on the left bank and steep on the right and there is a strong marginal fringe. A full description and condition assessment is contained within the BNG appendix E.

Hedgerows

- 5.21 A hedgerow runs along the western and northern boundaries of the site. The vegetation type is distinct along three separate lengths and therefore these are split into three hedgerows for assessment purposes. The hedgerows are managed through mechanical cutting annually. H1 is particularly intensively cut, likely for its position along the highway. H3 is not as intensively managed, but it has become tall, leggy and gappy over time.

Table 3: Hedgerow evaluation

Hedge ref.	Species composition	Ave. no. species per 30m section	Associated features	HPI	Biodiversity Metric Condition	Important under wildlife & landscape criteria of Hedgerow REGS
H1	Ac, Cm, Cs, Fe, Sn	3	No feature, below 1.5m height/width height/width, intact with <10% gaps	N	Poor	Yes, reptiles likely present
H2	Non-native Ornamental Hedge (cherry laurel)					
H3	Cm, Ca, Ap, Ac, Cs, Sn, Ps, Rc, Rf, Vo	10	Bank, above 1.5m height/width, >10% gaps in canopy	Y	Poor	Yes 10 woody species

Key to hedgerow species: Ac *Acer campestre* Field maple, Ap *Acer pseudoplatanus* sycamore, Ca *Corylus avellana* Hazel, Cm *Crataegus monogyna*, Hawthorn, Cs *Cornus sanguinea* Dogwood, Ps *Prunus spinosa* Blackthorn, Pa *Prunus avium* Wild cherry, Rc *Rosa canina* dog rose, Rf *Rubus fruticosus* agg. Bramble aggregate, Sn *Sambucus nigra* Elder, Vo *viburnum opulus* Guelder Rose

Biodiversity Net Gain

- 5.22 The site is subject to the requirement to deliver a net gain. No degradation activities have taken place other than the felling of two large polar trees in summer 2024. The site has been determined to be of high strategic significance following the desk study. It is important to note that whilst the watercourse BNG scoring has resulted in an uplift in units, this does not contribute to the final site BNG score. Habitats within statutory designated sites boundaries cannot be utilised for net gain purposes. Appendix E provides a detailed report of how BNG is assessed for the proposals.

- 5.23 Table 4 below summarises the unit changes between the baseline and proposed site design value. The watercourse value is included to demonstrate that proposed mitigation measures to buffer the river have an enhancement effect.

Table 4: Headline BNG Results

On-Site Habitats	Pre-intervention Units	2.68
	Post-Intervention Units	1.70
	Net change	-0.98(-36.64%)
On-Site Hedgerows	Pre-intervention Units	0.23
	Post-Intervention Units	0.52
	Net change	+0.29 (123.78%)
Off-Site Habitats	Pre-intervention Units	3.38
	Post-Intervention Units	5.21
	Net change	+1.83(+54.02%)
Off-Site Watercourse	Pre-intervention Units	1.60
	Post-Intervention Units	1.86
	Net change	+0.27 (+16.62%)
Combined Net Unit Change	Habitats	0.84 (+31.41%)
	Hedgerows	0.29(+123.78%)
	Watercourse	0.27

Protected and Notable Species

- 5.24 Following a review of the desktop data and the preliminary ecological assessment of the site in April 2024, the site was considered to have the potential to support the following species/groups:
- Bats
 - Breeding birds
 - Great-created newt (GCN) *Triturus cristatus*
 - Hazel dormice
 - Reptiles
 - Riparian mammals
 - Western European hedgehog *Erinaceus europaeus*
- 5.25 Species were either ruled out of further assessment, or further faunal surveys were subsequently undertaken in 2024. Full details of the further surveys methodologies or results are provided in the appended reports, and species/group assessments summarised in Table 5.

Table 5: Protected and notable species suitability and results

Species/Group	Site suitability and survey results	Conclusion
Bats	Desktop: At least 7 species within 2km including barbastelle and greater horseshoe. Habitat: The hedgerows and trees provide suitable foraging and commuting habitats. Survey results (Appendix D: Bat Survey Results) shows a low use of the site by bats with the majority of the bat activity consisting of common and soprano pipistrelles. Levels of activity from other bat species were very low. A single barbastelle pass was recorded in August. 8 confirmed species were recorded in total. Static detectors were placed in fixed locations, one along the western hedgerow boundary and another on the eastern tree line. The eastern boundary accounted for higher levels of activity than the western boundary as expected.	Site used by a small number of common and widespread species of bat.
	Buildings: Two buildings are present on site, an old changing facility for the historic sports pitches that were present and a livestock shelter. The changing room facility is a pre-fabricated type building made from converted shipping containers. It has no features suitable to support bats. The livestock shelter is an open-sided timber framed structure with a corrugated tin roof. No suitable bat roost features are present. Both buildings have negligible bat roosting potential. Trees: No trees with bat roost potential were identified within the site boundaries.	No potential for bat roosts on site.
Badgers	The hedges and grassland have the potential to provide foraging habitat for badgers. No signs of badger were noted during surveys. Badgers are likely to be present locally given the habitat corridor along the River Itchen valley.	No setts present on site.

Birds	The desktop study returned results of a variety of bird species within 1km. Mature hedges and trees have the potential to provide cover for nesting birds. A scoping survey recorded a low diversity breeding bird assemblage predominantly composed of commonly occurring and widespread species, typical of urban-edge habitat, two of which (robin <i>Erithacus rubecula</i> and blackbird <i>Turdus merula</i>) were confirmed breeders.	Site habitats provide breeding sites for a variety of passerine species. Confirmed breeding of two species.
Dormice	The hedgerows are suitable for dormice; however, there were no local records of dormouse occurrence within the 2km search radius. The site is poorly connected to known local populations. Presence/absence surveys were not undertaken as dormice were ruled out at the desktop assessment stage.	Likely absent from site.
GCN	Breeding: No breeding habitat is present on site. A large pond is present approximately 210m southeast of the site boundary. There are records of GCN breeding in the ditch network approximately 300m east of the site on the other side of the Barton River and another River Itchen channel. District Level Licence mapping shows the site to fall within the amber consultation zone for these ditches. Terrestrial: The site habitats, including grassland and scrub are suitable for GCN. The Barton River to the east of the site, as well as another main River Itchen Channel and urban Eastleigh on all other sides completely isolate the site from known nearby populations. Rivers, continuous urban areas and major roads are known to provide barriers to dispersal to GCN. They are normally unable to cross these when dispersing from breeding sites into terrestrial habitats. It is unlikely GCN can disperse from known nearby breeding ditches onto the Chickenhall Lane site. GCN are scoped out of further assessment.	Suitable habitat within amber consultation zone. Site isolated from known populations by major barriers to dispersal. Presence ruled out.
Reptiles	The habitats within central site areas of the site are managed too intensively for reptiles, however periphery habitats including grassland, scrub, hedgerows and the Barton River banks form a network of good, structurally diverse habitat for reptiles. Presence/absence surveys for reptiles, conducted during 2024 by FPCR identified a low population of common lizard <i>Zootoca vivipara</i> (peak count 1) and grass snake <i>Naatrix helvetica</i> (Peak count 2 grass snake, 1 common lizard) on-site. (Appendix F: Reptile Survey Results). These were restricted to the River Barton corridor and associated unmanaged margin. This connects well to other marginal habitats on site. (Figure 8: Reptile Survey Plan).	Common lizard and grass snake present in low numbers on site.
Riparian mammals	There are records of otter <i>Lutra lutra</i> and water vole <i>Arvicola amphibius</i> within 1km of the site and the adjacent Barton River is connected to the wider River Itchen habitat network. No evidence of otters or water voles was recorded in the proposed swale area that enters the Barton River or along the	Otter and water vole not present in impact area at time of survey.

	300m surveyed stretch of the Barton River that runs north to south to the east of the site.	
Hedgehog	Records within 1km. Habitats on site are suitable for foraging hedgehogs and connected to further areas of suitable habitat in the local area. No incidental evidence was found on-site during surveys.	Assumed presence on site.

Summary of Important Ecological Features

- 5.26 The suite of surveys has demonstrated that the site supports a range of important ecological features. These are summarised in Table 6 and assigned a geographic context based on survey results and relevant legislation and policy.
- 5.27 Species likely to be absent from site have been scoped out.

Table 6: Important Ecological Features On-Site

Important Ecological Feature	Relevant Legislation/ Policy	Geographic Scale	Rationale
Designated Sites (SAC, SPA, Ramsar, SSSI, SINC)	Habitats Directive, NPPF	International (SAC, SPA, Ramsar) National (SSSI) County (SINC)	The River Barton channel, designated within the River Itchen SAC and SSSI is approximately 8m east of the site boundary. Site surface water drainage will enter the protected site from a headwall within the site boundary, where water will flow out into a natural swale that enters the river. A likely significant effect on the protected site should be assumed in the absence of mitigation. The site is outside of the 5.6km scoping area for the Solent protected sites network but falls inside the scoping distance for the New Forest Protected sites network. The proposals are for a care home that will not result in any additional recreational pressure on these sites and therefore potential impacts are scoped out at this stage. 26 non-statutory sites were located within 1km.
Hedgerows	NERC S41	Local	H1 and H2 Identified as habitats of principal importance as they comprised >80% native woody species.

Important Ecological Feature	Relevant Legislation/ Policy	Geographic Scale	Rationale
Bats	CHSR, WCA Sched 5	Local	The hedgerows and trees bordering along the eastern boundary provided the most suitable foraging and commuting habitats for bats. Baseline light levels are high due to the adjacent road and industrial park being very well lit. The Barton River corridor provides a commuting route for bats. Common and widespread species were recorded on site in relatively low numbers during the automated and manual activity surveys conducted from April to September 2024, with common and soprano pipistrelle being the most frequently recorded. A total of 8 species/species groups were identified on site during the automated detector surveys.
Birds	WCA	Local	On-site habitats were suitable for a range of species typical of edge-of-settlement type sites. Two confirmed breeding species. No evidence of breeding schedule 1 riparian species including Cetti's warbler or kingfisher was recorded.
Reptiles	WCA Sched 5, NERC S41	Local	Low population of common lizard and grass snake recorded along eastern boundary.
Riparian mammals	WCA Sched 5, NERC S41	Local	Otter and water vole may colonise bankside habitats at any time.
Hedgehog	NERC S41	Local	Assumed to be present in suitable habitats.

6.0 IMPACT ASSESSMENT

Development Proposals and Intrinsic Mitigation

6.1 The proposed outline scheme includes the following intrinsic ecological avoidance, mitigation and enhancement measures:

- Surface water treatment is engineered into the site design to ensure water draining from the proposed site carpark and building roofs is clean upon entry into the River Barton. A soft engineered swale is proposed between the drain headwall and River Barton to ensure habitat is maintained along the bank edge.
- The River Barton is enhanced by reducing encroachment of the current bank edge that is intensively managed. Willow/alder scrub planting is proposed to further enhance this buffer zone between the River and site.
- The areas of main ecological importance, the hedges and mature trees, will be largely retained and, where appropriate, enhanced through removal of invasive cherry laurel and planting of new trees and scrub.
- Areas of retained other neutral grassland will have additional forb species sown into the sward. These will be placed into a favourable management regime to maintain the condition and value to protected species including reptiles and bats.
- Bat corridors are retained along boundary features with no built environment encroaching into these other than where access is proposed on the western site boundary. These are placed in sensitive lighting schemes to maintain bat use.

Core Documents

6.2 A LEMP is to be submitted at the application stage to secure the long-term management of all retained and enhanced and newly created habitats. A CEMP that includes some ecological mitigation has also been submitted. Other core documents that will secure the mitigation and enhancement measures described in this report can be secured through appropriately worded pre-commencement planning conditions attached to planning statement if the proposals are approved.

a) Specific Ecological Construction and Environmental Management Plan (ECEMP): This pre-commencement document contains the necessary Method Statements to ensure protected habitats species are not unlawfully harmed during ground clearance, earthworks and during construction. The document will include a detailed strategy for protecting the River Barton (River Itchen SAC, SSSI) corridor from proposed works not limited to but including;

- Pollution event safe working and protection methods
- Works exclusion zone
- Materials and aggregate storage methods
- Pre-planting of corridor to ensure enhancement habitat in place

An Ecological Constraints and Mitigation Plan drawing that clearly shows the location of constraints and details mitigation required will also be included.

- b) Biodiversity Net Gain Plan/Habitat Management and Monitoring Plan (HMMP): To be secured as a pre-commencement condition as per BNG PPG. This document specifies the creation, 30 year management and monitoring of all on-site and off-site habitats that contribute to the site achieving 10% BNG.

Assessment of Likely Significant Effects on Important Ecological Features

- 6.3 The status of the important ecological features (IEFs) identified on site have been reviewed against the proposals and intrinsic mitigation to determine whether there are any impact pathways to IEFs and whether any of these will lead to a likely significant effect in Table 7. The requirement for additional mitigation measures above the intrinsic mitigation has been considered for each of the IEFs where they can reduce the scale of negative effects or encourage a positive effect.

Table 7: Assessment of Effects on Important Ecological Features

IEF: Designated Sites	
Assessment of Impacts	<u>Direct impact</u> A surface water drainage outfall is proposed to enter the Barton River, which forms part of the River Itchen SAC/SSSI. A natural swale will form the outfall into the river itself, with an exit headwall approximately 8m from the river edge within the site boundary. Water will drain from the site car park and building roofs into a series of treatment features prior to exiting into the river. Work to create the swale will include works within the protected sites boundary. The discharge of water into the river will be continuous over the life of the development. This has the potential to impact the qualifying features of the River Itchen SAC/SSSI although not direct loss of qualifying habitat would take place. Surface water drainage has been designed at the site based on high groundwater levels that do not allow for natural surface drainage. Utilising the surface drainage hierarchy, the next accepted method is discharge to nearby watercourse. Given the proposed series of drainage and storage/treatment features slow drainage rates significantly, discharge into the Barton River is not expected to be any faster than current site drainage rates. The care home site is within 10m of the SAC boundary.
	<u>Water Quality</u> The River Itchen SAC/SSSI is adjacent to the site and all wastewater from the proposals will be treated at Chickenhall WWTW prior to entering the SAC/SSSI. The development will result in increased nitrate and phosphate input via wastewater discharge, which will negatively impact water quality, in the absence of mitigation.
	<u>Care home</u>

	The 70 bed care home metric utilises an occupancy rate of 0.93. This is based on all rooms being single occupancy and the nationally agreed total occupancy rate for care facilities which are typically never fully occupied. The total annual phosphorous load to mitigate is 2.15 kg TP/yr and the total annual nitrate load to mitigate is 88.27 kg TP/yr <u>Recreational Pressure</u> The proposed 70 bed care home has been scoped out of any recreational impacts as the residents will not leave the facility for recreation at the protected sites. The development is not expected to impact any of the remaining statutory designated sites, given the low impact nature of the site use and intervening distances between them and the application site.
Predicted Effect	Moderate at International and National scale
Mitigation	<u>Construction works within SAC boundary</u> The proposed drainage swale is within the SAC/SSSI boundary. This feature will provide improved bankside habitat over the existing modified grassland which is mown right to the bank top regularly throughout the summer months. The proposed headwall is approximately 8m away. An ECEMP will be submitted to specify safe working methods that prevent impacts on the river. Given the small scale and low impact nature of the works to create the natural swale feature, with safe working methods utilised there is unlikely to be a significant effect on the qualifying features of the SAC. <u>Overall site impacts</u> The proposals are within 10m of the SAC boundary through the installation of a headwall for drainage and green infrastructure proposed for the care home. Care home residents will not have access to the river and encroachment is completely removed through the provision of new scrub planting in a buffer zone 8-15m wide along the entire length of the Barton River within the ownership boundary. The proposals are therefore unlikely to directly impact the Barton River and no likely significant effect is predicted with mitigation in place. <u>Water Quality</u> The development will offset the additional phosphate input to wastewater discharge via purchase of locally available credits, which will allow the development to achieve nutrient neutrality in relation to potential water pollution impacts to the River Itchen.
Compensation	None (no qualifying habitat lost)
Enhancement	A willow/alder scrub buffer will be planted along the Barton River edge where habitat is currently managed as modified grassland. This reduces encroachment and creates additional habitat for protected species including water vole and otter. This planting has been assessed through the BNG metric and increases the condition of the watercourse feature overall.
Residual Effects	Not significant at International, National, or Local Scale

IEF: Hedgerows	
Assessment of Impacts	Proposals include the retention or enhancement of 110m of hedgerows. Some minor losses are required for access facilitation No likely significant effect is anticipated as a result of the small losses to H1 and H3, as enhancement will increase the condition of hedgerow habitat on site. It is recognised that there will be a short-term loss in the overall presence of mature hedgerows while enhancement planting and management takes place.
Predicted Effect	Neutral
Mitigation	In order to maintain the integrity of the retained hedgerows and avoid their degradation through individual residential management (i.e. removal of sections, excessive cutting by homeowners), hedgerows will not be incorporated into the care home gardens and instead are managed as part of the site-wide green infrastructure.
Compensation	N/A
Enhancement	Hedgerows H1 and H3 will be enhanced by allowing them to naturally grow to over 1.5m in both width and height and through planting up of gaps and the placement into a long term management strategy.
Residual Effects	Not significant at Site Scale
IEF: Bats	
Assessment of Impacts	Overall levels of bat activity recorded were low, with the eastern River Corridor identified as the feature of most value to bats adjacent to the site. Other areas were not assessed as being important due to the existing high light levels and sub-optimal habitats. A single barbastelle bat was recorded during the August static deployment. Barbastelle are afforded additional protection under Annex II of the Habitats Regulations in relation to SAC sites designated for the species. None of these sites are within scope of the proposals. This species utilises features such as the river corridor for commuting whilst foraging. A single registration is not significant given the suitable commuting habitat present and it is unlikely the site is regularly utilised by this species. Post-development, the eastern boundary feature will be maintained as a corridor for bats with a sensitive lighting scheme implemented. Retained and enhanced areas of grassland and scrub will remain a foraging resource for bats. No bat roosts were recorded on site.
Predicted Effect	Minor at a local scale
Mitigation	Sensitive lighting corridors along eastern site boundary to maintain function of site boundary features for bats. Buffer planting along the river corridor will also prevent light spill onto the river feature, including existing sources outside of the site boundary.
Compensation	None
Enhancement	Retained grassland and scrub areas will be managed to maintain a foraging resource for bats at the site.

	Site boundary hedgerows will be enhanced through additional planting to increase diversity and structure. These will be maintained to allow mature trees to establish where not currently present to further enhance their value to bats. A total of seven bat boxes will be integrated into the care home structure on the northern, eastern and southern aspects.
Residual Effects	Not significant at Local Scale Not significant at Regional Scale (Annex II species)
IEF: Reptiles	
Assessment of Impacts	Low population of common lizard and grass snake found on site along eastern boundary and River Barton (Figure 8) in site periphery habitats. Regular management of the field is likely to prevent reptiles colonising central areas over time. Suitable reptile habitat will be lost. Construction activities could negatively impact reptiles within habitats on site.
Predicted Effect	Negligible
Mitigation	During construction precautionary methods will be followed as set out in a suitable method statement within the ECEMP. This will be through standard passive displacement measures that will include: • Two-stage vegetation removal under ECOW April to October when temperatures above 10°C • Area walked and searched prior to cutting. • Directional cutting towards retained habitat.
Compensation	To compensate for the small losses to grassland areas and hedgerows, additional planting and enhancement is proposed in existing reptile habitat areas.
Enhancement	Off site grassland and scrub is created with some retained areas enhanced. Management plan will be beneficial for reptiles. Two hibernacula features will be created in proposed ONG enhancement areas to the south of the site.
Residual Effects	Not significant at Local Scale
IEF: Riparian mammals	
Assessment of Impacts	No evidence of water vole or otters was recorded in likely impacts areas along the River Barton.
Predicted Effect	Negligible
Mitigation	The construction area for the swale will be managed and reinspected prior to works commencing to ensure water vole have not colonised this area or 5m either side. An update survey for otter rest sites will also be undertaken. Prior to works taking place alongside the river, vegetation will be strimmed under supervision to deter water voles creating burrows in this zone. It will then be fingertip searched under ECOW. If water vole or otter rest places are recorded, work would not commence until a licence had been sought from Natural England.
Compensation	None
Enhancement	The proposed reduction in encroachment of the River Barton through willow and alder scrub planting that also includes clear areas for riparian vegetation will

	benefit water voles and otters. The currently intensively managed banks are likely to discourage both species.
Residual Effects	Not significant at a Local Scale
IEF: Birds	
Assessment of Impacts	The majority of nesting habitat shown to support the breeding bird assemblage on site will be retained, although some small sections of hedgerow and some trees and introduced shrubs will be lost to facilitate access and the care home curtilage. Construction activities during breeding bird season could negatively impact nesting birds within habitats on site.
Predicted Effect	Negligible
Mitigation	Vegetation removal will be avoided during breeding bird season (March to September inclusive) or will be carried out immediately following a nesting bird check by a suitably qualified ecologist. Retained hedgerows and other woody habitats should be protected with Heras fencing, or similar, during the construction phase, to protect them from accidental damage or disturbance from construction operations.
Compensation	Small losses of hedgerows and trees is compensated for through enhancement hedgerow planting and new tree and scrub planting.
Enhancement	Nest boxes will be integrated into proposed buildings on site. Six swift bricks will be integrated into the care home building. These should be installed in groups of 3 for this colony nesting species. The inclusion of green infrastructure planting and the maturation of gardens will lead to additional opportunities for a range of species found on site. A hedgerow management scheme, which will include a detailed management plan, and enhancements, to create thick structures, will be implemented. This will be achieved through hedge laying or rotational cutting on a three-year cycle, ensuring that entire habitats are not cut at the same time. Suitable management of existing and proposed scrub habitats will provide further nesting and foraging opportunities for birds.
Residual Effects	Not significant at a Local Scale
IEF: Hedgehog	
Assessment of Impacts	Hedgehogs have been recorded locally and are likely to be present on site intermittently. Construction activities could harm hedgehogs. The proposals may isolate individuals from their full current range.
Predicted Effect	Negligible
Mitigation	Hedgehog safe working methods to be proposed in ECMP and include safe storage of materials and provision of escape from excavations. Hedgehog passes to be installed in all proposed fences and walls. Shallow areas must be implemented on edges of all rain gardens and drains must be grated.
Compensation	N/A

Enhancement	Proposed enhancement planting across the site will benefit hedgehogs by increasing the extent of foraging and rest habitat overall.
Residual Effects	Not significant at Local Scale

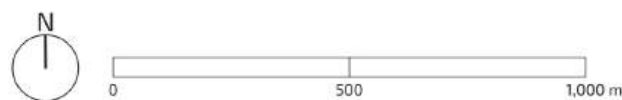
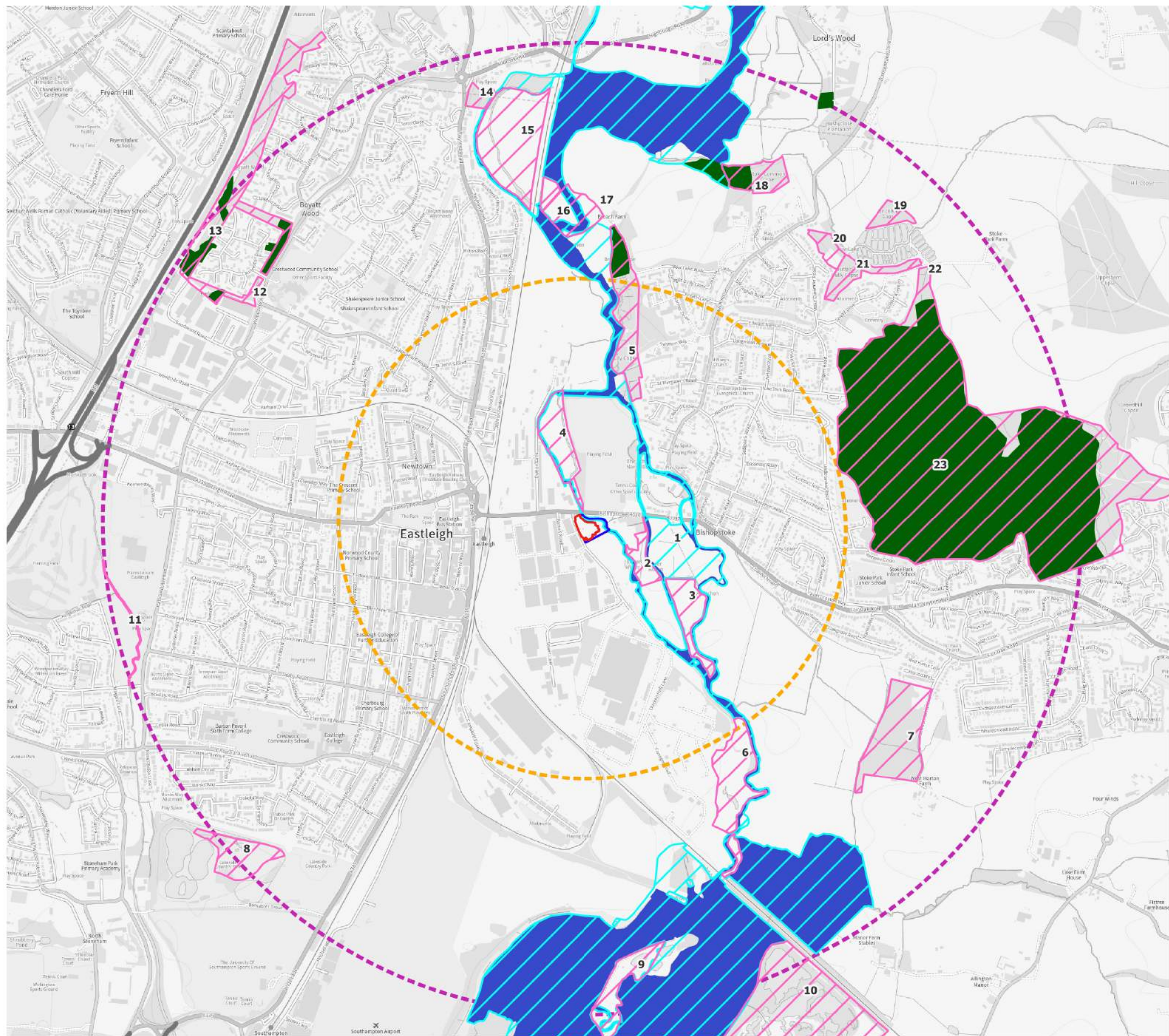
7.0 CONCLUSIONS

- 7.1 The ecology surveys identified important ecological features on site and within its zone of influence. The impacts on these were assessed against the proposals for a 70 bed care home development and associated infrastructure.
- 7.2 In the absence of mitigation, likely significant effects would be generated on the River Itchen SAC/SSSI from construction works within the protected sites boundary, surface water drainage entering the site and increased nutrients arising from the proposals entering the same SAC/SSSI.
- 7.3 On site storage and treatment will ensure that water enters the protected site at a permitted rate and will meet water discharge standards. A detailed ECEMP to be conditioned for the proposed swale works ensures that the designated features of the protected site are maintained during the construction phase. The scheme will secure phosphate and nitrate credits from a local mitigation scheme to remove any likely significant effects on the River Itchen SAC.
- 7.4 No priority or irreplaceable habitats are present and the loss of the medium distinctiveness habitats is offset on and off site through the creation of new habitat to reduce encroachment along the River Barton, enhancement of retained ONG through seeding and beneficial management and removal of invasive cherry laurel with new tree and scrub planting.
- 7.5 Mitigation for minimising impacts on bats, birds, reptiles and other protected species is integrated into the site design and precautionary works methods proposed during the construction phase. Enhancements for bats and birds are integrated into the proposed buildings.
- 7.6 The assessment has demonstrated that following mitigation measures, all residual effects on IEF's are not significant.

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- Red Line Boundary
- Off-site Land
- 1km Buffer
- 2km Buffer
- Site of Special Scientific Interest (SSSI)
- Sites of Importance for Nature Conservation (SINCs)
- Ancient Woodland
- Special Areas of Conservation (SAC)

Name	Label	Designation
River Itchen	1	SSSI, SAC
Astrim Nurseries	2	SINC
Marshy Grassland, Bishopstoke	3	SINC
Swamp West of Recreation Grounds	4	SINC
Breach & Gully Copses	5	SINC
Stanford Meadow	6	SINC
West Horton Farm Woods	7	SINC
Lakeside Country Park	8	SINC
Allington Manor Farm Water Meadows	9	SINC
Hog Wood & Gravel Pits	10	SINC
Monks Brook, Fleming Park	11	SINC
Boyatt Wood - Woodside Avenue Extension	12	SINC; Ancient Woodland
Boyatt Wood, Eastleigh	13	SINC; Ancient Woodland
Allbrook Hill Copse	14	SINC
Ham Farm Meadow	15	SINC
Meadow between Railway & River Itchen	16	SINC
Breach Farm Meadows	17	SINC
Breach Sling Copse & Stoke Common Copse	18	SINC; Ancient Woodland
Brick Kiln Copse, Bishopstoke	19	SINC
Judges Gully Meadow	20	SINC
Judges Gully Copse	21	SINC
Poplar Plantation (Stoke Park Wood)	22	SINC
Stoke Park Wood	23	SINC; Ancient Woodland

date 02/12/24 drwn/chkd
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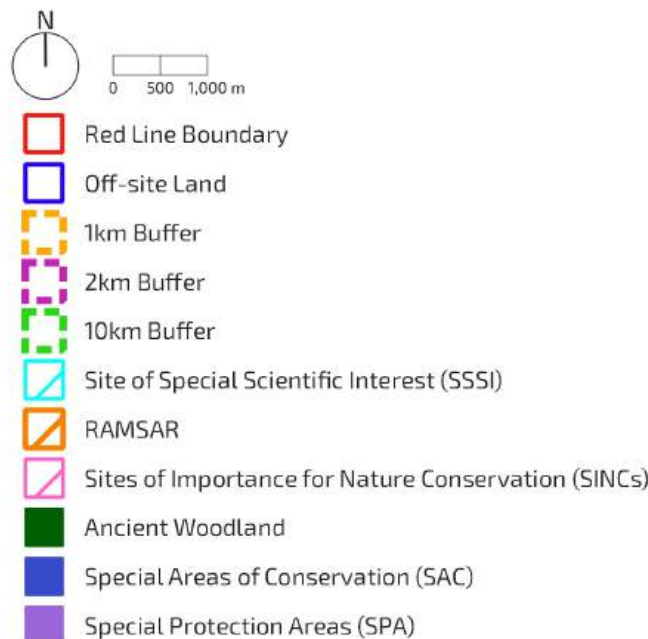
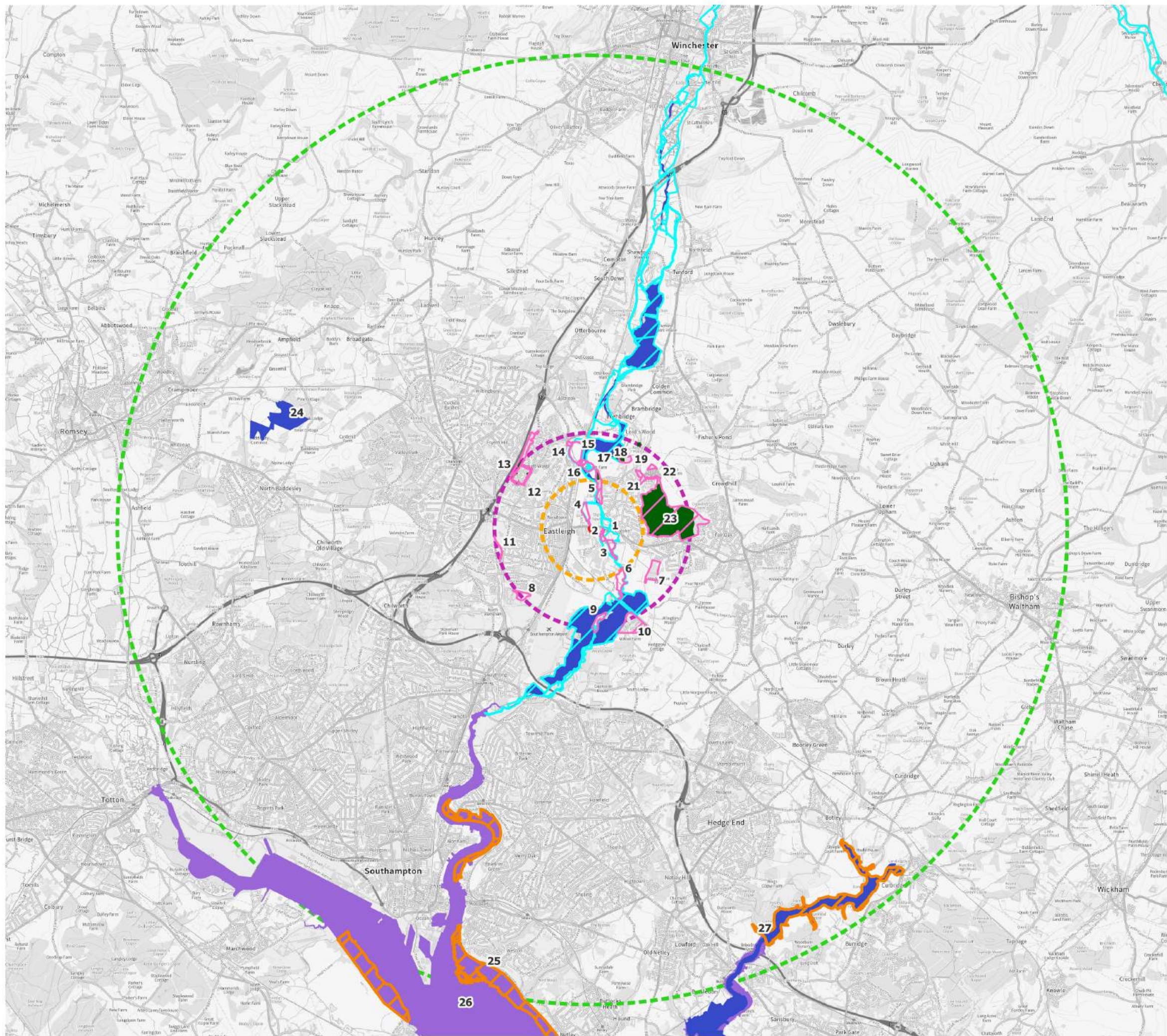
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project

Chickenhall Lane, Eastleigh

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DESIGNATED SITES
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FIGURE 1a

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& design



Name	Label	Designation
River Itchen	1	SSSI, SAC
Ashtrim Nurseries	2	SINC
Marshy Grassland, Bishopstoke	3	SINC
Swamp West of Recreation Grounds	4	SINC
Breach & Gully Copses	5	SINC
Stanford Meadow	6	SINC
West Horton Farm Woods	7	SINC
Lakeside Country Park	8	SINC
Allington Manor Farm Water Meadows	9	SINC
Hog Wood & Gravel Pits	10	SINC
Monks Brook, Fleming Park	11	SINC
Boyatt Wood - Woodside Avenue Extension	12	SINC; Ancient Woodland
Boyatt Wood, Eastleigh	13	SINC; Ancient Woodland
Allbrook Hill Copse	14	SINC
Ham Farm Meadow	15	SINC
Meadow between Railway & River Itchen	16	SINC
Breach Farm Meadows	17	SINC
Breach Sling Copse & Stoke Common Copse	18	SINC; Ancient Woodland
Brick Kiln Copse, Bishopstoke	19	SINC
Judges Gully Meadow	20	SINC
Judges Gully Copse	21	SINC
Poplar Plantation (Stoke Park Wood)	22	SINC
Stoke Park Wood	23	SINC; Ancient Woodland
Emer Bog	24	SAC
Solent & Southampton Water	25	RAMSAR
Solent & Dorset Coast	26	SPA
Solent Maritime	27	SAC

date 02/12/24
drawn/chkd DS / TT

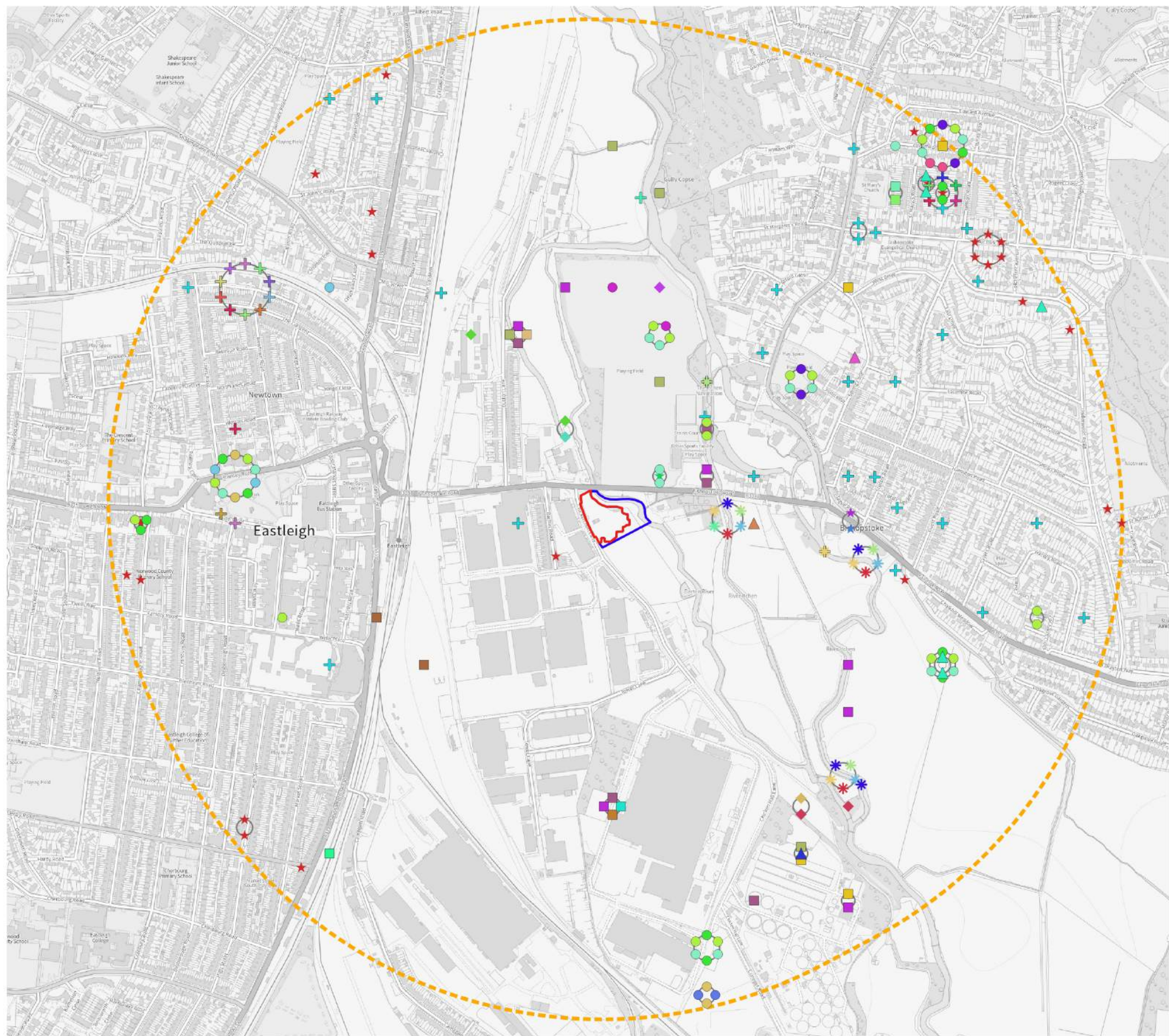
client
Highwood
project

Chickenhall Lane, Eastleigh

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FIGURE 1a

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date: 06/12/24
client: Highwood
project: Chickenhall Lane, Eastleigh

title: CONSULTATION PLAN - SPECIES RESULTS
scale: 1:8,000 @ A3
number: FIGURE 2
rev: -

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Red Line Boundary

Off-site Land

Baseline Habitats

Developed land; sealed surface

Introduced shrub

Modified grassland

Other neutral grassland

Watercourse footprint

Ruderal/Ephemeral

Bare ground

Baseline Hedgerow

Non-native and ornamental hedgerow

Native hedgerow

Baseline Watercourse

Priority habitat

Baseline Individual Trees

Existing large urban tree

Existing medium urban tree

Existing small urban tree

date

17/06/25

drwn/chkd

TT/APD

client

Highwood

project

Chickenhall Lane,
Eastleigh

title

BASELINE HABITAT PLAN

scale

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FIGURE 1

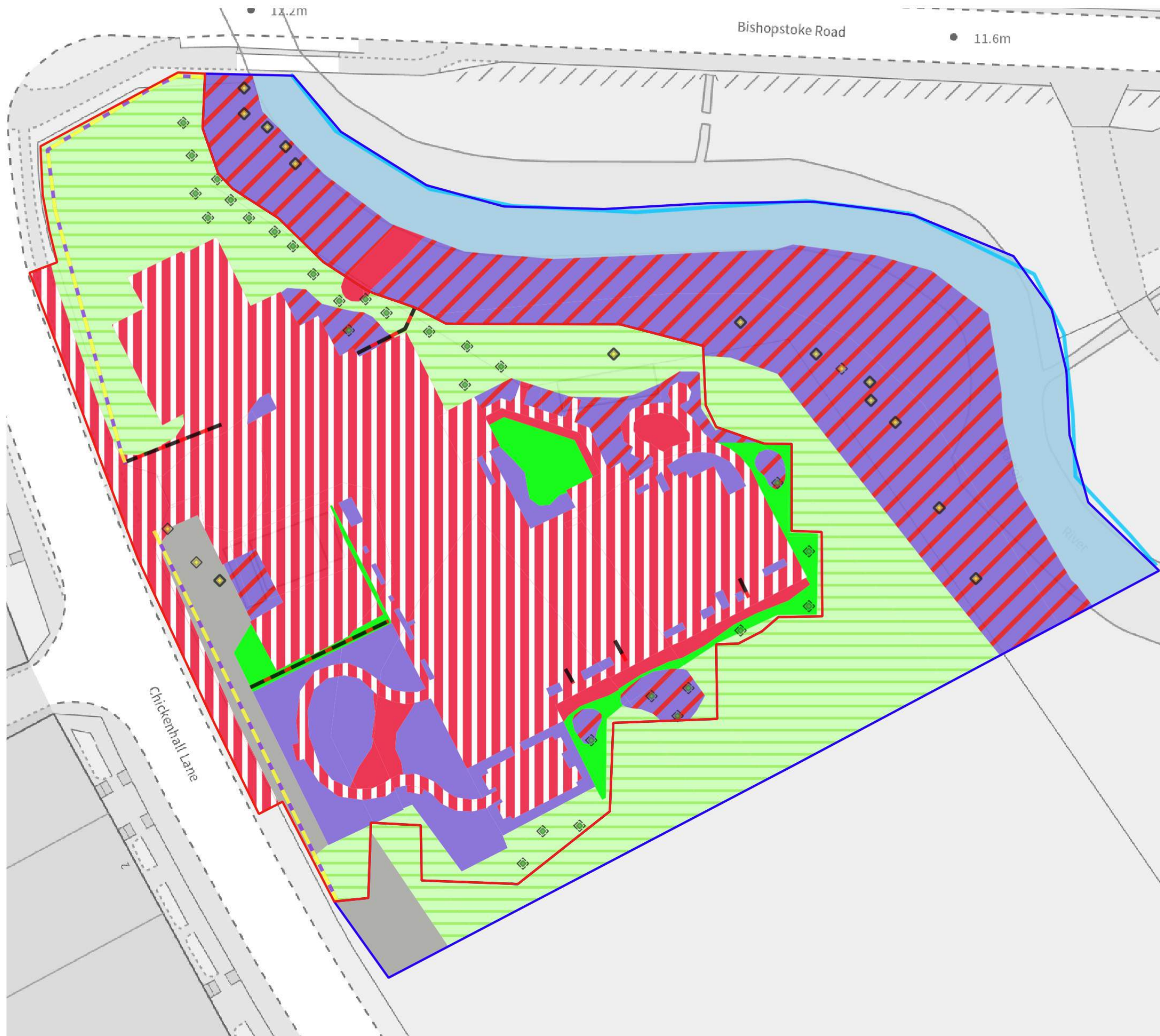
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N

0

10

20 m

Red Line Boundary

Off-site Land

Proposed Habitats

Bioswale

Developed land; sealed surface

Introduced shrub

Mixed scrub

Modified grassland

Other neutral grassland

Rain garden

Watercourse footprint

Ruderal/Ephemeral

Willow scrub

Proposed Hedgerows

Non-native and ornamental hedgerow

Native hedgerow

Proposed Watercourse

Priority habitat

Proposed Individual Trees

Proposed Small Urban Tree

Retained Large Urban Tree

Retained Medium Urban Tree

Retained Small Urban Tree

date

19/06/25

drwn/chkd

TT/APD

client

Highwood

project

Chickenhall Lane,
Eastleigh

title

PROPOSED HABITAT PLAN

scale

1:500 @ A3

number

FIGURE 2

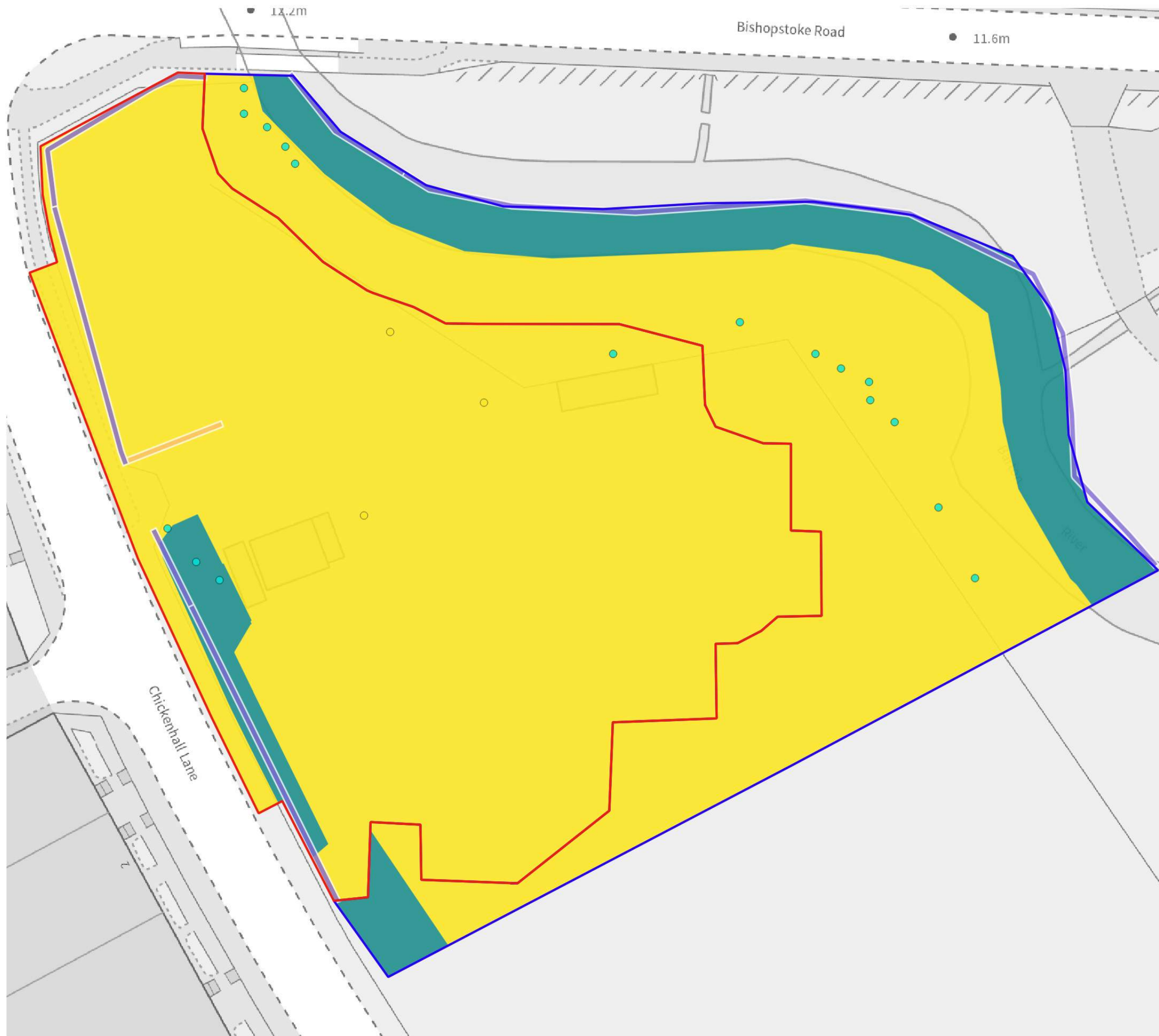
rev

-

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N

0

10

20 m

Red Line Boundary

Off-site Land

Habitats

Retained

Lost

Hedgerows

Enhanced

Lost

Watercourses

Enhanced

Individual Trees

Retained

Lost

date

17/06/25

drwn/chkd

TT/APD

client

Highwood

project

Chickenhall Lane,
Eastleigh

title

HABITAT RETENTION PLAN

scale

1:500 @ A3

number

FIGURE 3

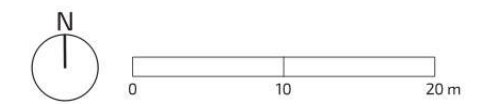
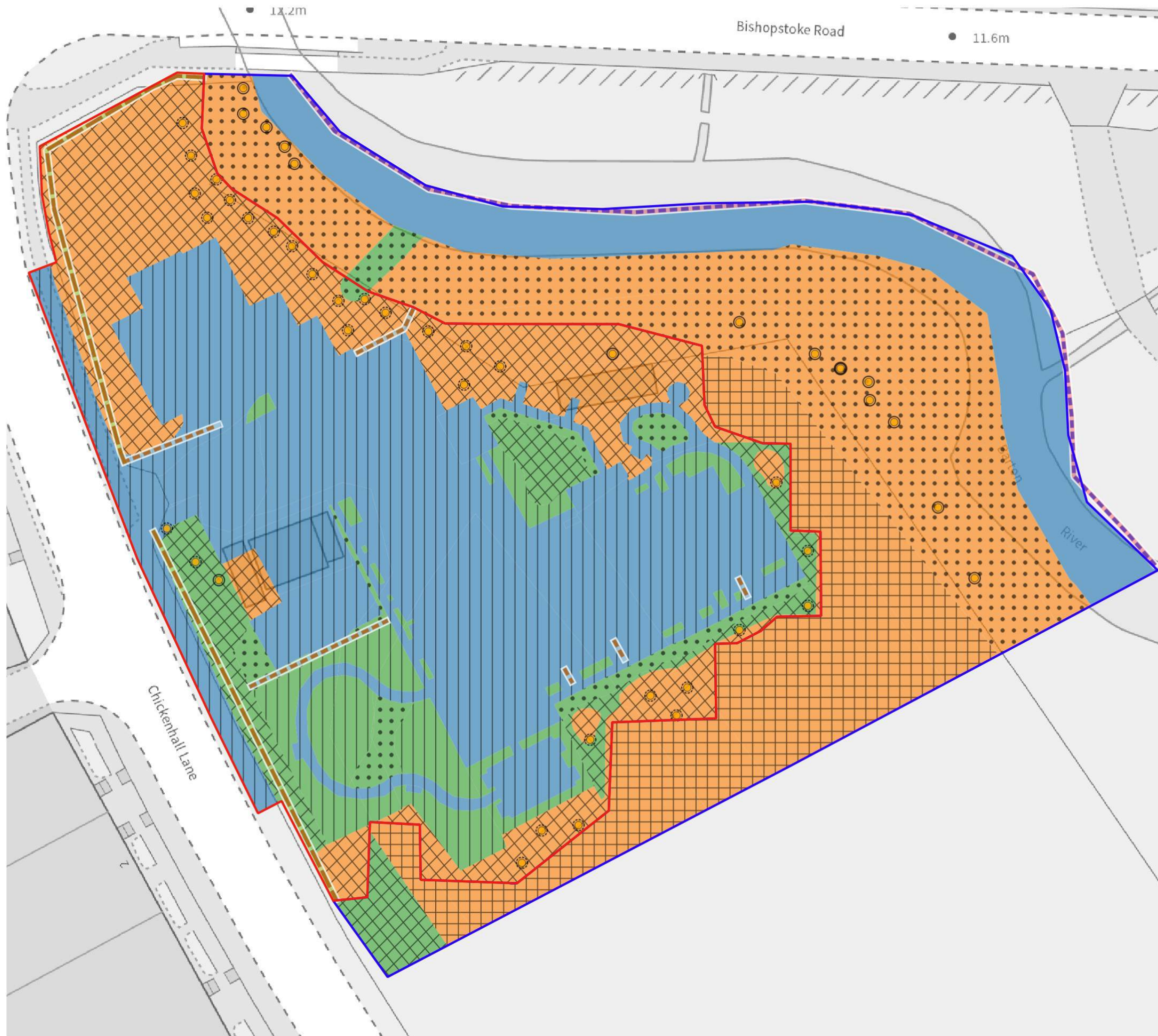
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- Red Line Boundary
- Off-site Land
- Proposed Habitat Condition
 - Good
 - Moderate
 - Poor
 - Condition Assessment N/A
- Proposed Habitat Distinctiveness
 - Medium
 - Low
 - V.Low
- Proposed Hedgerow Condition
 - Moderate
 - Poor
- Proposed Hedgerow Distinctiveness
 - Low
 - V.Low
- Proposed Watercourse Condition
 - Fairly Poor
- Proposed Watercourse Distinctiveness
 - V.High
- Proposed Individual Tree Condition
 - Poor
 - Moderate
 - Good
- Proposed Individual Tree Distinctiveness
 - Medium

date 17/06/25 drwn/chkd TT/APD

client Highwood
project Chickenhall Lane, Eastleigh

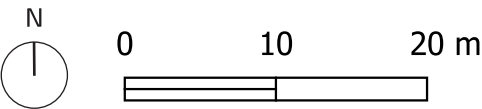
title PROPOSED HABITAT CONDITION AND DISTINCTIVENESS PLAN scale 1:500 @ A3

number FIGURE 5 rev -



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- Site Boundary
- Survey Area

- Reptiles
- Common Lizard
 - Grass Snake

date	drwn/chkd
05/12/24	DAH/ APD

client
Highwood
project
Chickenhall Lane, Eastleigh

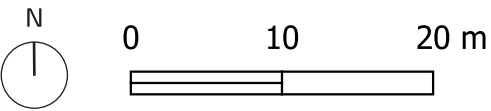
title	scale
Reptile Location Plan	1:500 @ A3

number	rev
FIGURE 08	-



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- Red Line Boundary
-  Site Boundary
 -  Survey Area
 -  Static Detector Locations

date	drwn/chkd
05/12/24	DAHM/ APD

client
Highwood
project
Chickenhall Lane, Eastleigh

title	scale
Static location Plan	1:500 @ A3

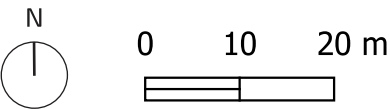
number	rev
FIGURE 09	-

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-  Site Boundary
-  Survey Area

date	drwn/chkd
05/12/24	IRM / APD

client
Highwood
project
Chickenhall Lane, Eastleigh

title	scale
Riparian Mammal Survey Area	1:800 @ A3

number	rev
FIGURE 10	-

APPENDIX A: ENGLISH NATURE CONSERVATION LEGISLATION

The Environment Act 2021

In England, biodiversity net gain is now required under statutory frameworks introduced by Schedule 7A of the Town and Country Planning Act 1990 (inserted by the Environment Act 2021). Under this framework, every grant of planning permission will be deemed to have been granted subject to a general biodiversity gain condition. This will require an objective for developments to deliver at least a 10% increase in biodiversity value relative to the pre-development biodiversity value of all onsite habitats.

This is a pre-commencement condition requiring the provision of a Biodiversity Gain Plan to be submitted and approved before works can be commenced, but after planning permission has been granted.

In principle, the grant of planning permission is not within the scope of BNG, however it is important to consider as part of the consenting body's decision-making process how a scheme will be able to demonstrate BNG after permission is granted. Therefore, this biodiversity net gain report presents the results of a Biodiversity Net Gain assessment that has been completed in order to demonstrate how the proposals will be compliant with the requirements of the Environment Act. Bat roost present in tree avenue – cursory mention of observation during activity surveys. No location given in previous work, although mitigation suggested in ES.

Biodiversity Net Gain Hierarchy

The statutory framework allows for the 10% biodiversity gain to be delivered through onsite biodiversity gains, registered offsite biodiversity gains or statutory biodiversity credits. However, as set out in Articles 37A and 37D of the Town and Country Planning (Development Management Procedure) (England) Order 2015, development must consider the biodiversity net gain hierarchy when designing scheme proposals.

Proposals must demonstrate how the biodiversity hierarchy has been applied to or provide the reasons for any deviation. This biodiversity net gain hierarchy is distinct from the mitigation hierarchy set out in paragraph 186(a) of the National Planning Policy Framework (2023).

Exemptions

There are a number of circumstances where a Site will be exempt from biodiversity net gain including:

- Development impacting habitat of an area below a 'de minimis' threshold of 25m², or 5m for linear habitats.
- Householder applications (as defined within article 2(1) of the Town and Country Planning (Development Management Procedure) (England) Order 2015).
- Self-build and custom-build applications (no more than 9 dwellings, site no larger than 0.5 ha and consists exclusively of self-build/ custom dwellings).
- Biodiversity gain sites (where habitats are being enhanced for wildlife only).
- Previously developed land with a baseline score of zero (exempted via the metric).

The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019

The Regulations ensure that the habitat and species protection and standards derived from EU law as per "The Habitat Regulations" Amendment will continue to apply after Brexit.

The Conservation of Habitats and Species Regulations ("The Habitats Regulations") (Amendment) 2017

European Protected Sites

The Habitats Regulations ratifies into UK law the "Habitats Directive" (92/43/EEC) and the "Birds Directive" (79/409/EEC). It places a duty on the Secretary of State to propose a list of sites which are important for species listed in Annex I and II of the Habitats Directive respectively to the European Commission. Once the Commission and EU Member States have agreed that the sites submitted are worthy of designation, they are identified as Sites of Community Importance (SCIs). The EU Member States must then designate these sites as Special Areas of Conservation (SACs) within six years.

The Regulations require the compilation and maintenance of a register of European sites to include SACs as well as Special Protection Areas (SPAs) designated for birds and sites designated as internationally important wetlands under the Ramsar Convention known as "Ramsar Sites". These three designations form a collective Europe wide network of internationally protected sites known as Natura 2000. All European sites are also designated under UK law as Sites of Special Scientific Interest (SSSIs; please see below).

Habitats Regulation Assessment

There is a requirement under EU law that Member States' take measures to reach and maintain European Protected Sites' at Favourable Conservation Status (FCS). An Appropriate Assessment is required for plans or projects that may potentially damage a European Protected Site. This is based on an assessment against a given European Protected Site's Conservation Objectives. The process is commonly known as a Habitats Regulations Assessment (HRA).

The HRA must be conducted by, or on behalf of, the Competent Authority. The HRA process assesses plans or projects alone or in combination. It involves a four stage approach as follows:

- Stage One: Screening - also known as the Test of Likely Significant Effect (TOLSE). If the Competent Authority cannot screen out a likely significant effect, an Appropriate Assessment is required.
- Stage Two: Appropriate Assessment - the Competent Authority will only agree to plans or projects that will not affect the integrity of a European site also known as the "Integrity Test".
- Stage Three: Alternative Solutions - assesses any alternative solutions of a potentially damaging plan or project that failed the Integrity Test, and if it is determined there are no alternative solutions, the project cannot be agreed to and it will either need to be changed or refused.
- Stage Four: The final stage may allow a plan or project to proceed if after failing stage three if it is for Imperative Reasons of Overriding Public Interest, and only if suitable compensatory measures are secured.

Any plan or project that may have a potentially damaging effect on a transient species or the habitat on which it relies (for example bats or birds), that is both a Qualifying Features of a European Protected Site and considered functionally linked with a European Protected Site, are required under law to be considered as part of any HRA process.

Habitats Regulation Assessment

The Habitats Regulations includes a list of animals and plant species taken from the Annex IV of the Habitats Directive that have a natural range which includes any area in Great Britain. These are collectively known as European Protected Species (EPS). The regulations make it an offence to deliberately capture, kill, disturb, take or destroy eggs of, or damage or destroy a breeding or resting place of animals listed in Schedule 2 of the Regulations, and to pick, collect, cut, uproot or destroy wild plants listed in Schedule 5 of the Regulations. All listed EPS are shown in Table 1 below. The Regulations also protect these species alive or dead and parts thereof from various forms of possession and trade.

Table1: The Habitats Regulations Schedule 2 and Schedule 5 Species.

Schedule 2 European Protected Animal Species		Schedule 5 – European Protected Plant Species	
Common name	Scientific name	Common name	Scientific name
Horseshoe bats – all species	<i>Rhinolophidae</i>	Shore dock	<i>Rumex rupestris</i>
Bats – all species	<i>Vespertilionidae</i>	Killarney fern	<i>Trichomanes speciosum</i>
Large blue butterfly	<i>Maculinea arion</i>	Early gentian	<i>Gentianella anglica</i>
Wild cat	<i>Felis silvestris</i>	Lady's slipper	<i>Cypripedium calceolus</i>
Dolphins, porpoises & whales – all species	<i>Cetacea</i>	Creeping marshwort	<i>Apium repens</i>
Hazel dormouse	<i>Muscardinus avellanarius</i>	Slender naiad	<i>Najas flexilis</i>
Pool frog	<i>Rana lessonae</i>	Fen orchid	<i>Liparis loeselii</i>
Sand lizard	<i>Lacerta agilis</i>	Floating-leaved water plantain	<i>Luronium natans</i>
Fisher's estuarine moth	<i>Gortyna borelli lunata</i>	Yellow marsh saxifrage	<i>Saxifraga hirculus</i>
Great crested newt	<i>Triturus cristatus</i>		
Otter	<i>Lutra lutra</i>		
Lesser whirlpool ram's-horn snail	<i>Anisus vorticulus</i>		
Smooth snake	<i>Coronella austriaca</i>		
Sturgeon	<i>Acipenser sturio</i>		
Natterjack toad	<i>Bufo calamita</i>		
Marine turtles	<i>Caretta caretta</i> <i>Chelonia mydas</i> <i>Lepidochelys kempii</i> <i>Eretmochelys imbricata</i> <i>Dermochelys coriacea</i>		

These actions may be made lawful in certain circumstances through the granting of licences by the appropriate authority (Natural England). Licences must only be granted after the appropriate authority is satisfied that no satisfactory alternatives are available. In most circumstances, licences are only applied for and granted following full planning permission.

In determining whether or not to grant a licence Natural England must apply the requirements of The Conservation of Habitats and Species Regulations 2012 (amendment) and, in particular, the three derogation tests:

- Test 1: A licence can be granted for the purposes of "preserving public health or public safety or other imperative reasons of overriding public interest including those of a social or economic nature and beneficial consequences of primary importance for the environment".
- Test 2: The appropriate authority shall not grant a licence unless they are satisfied "that there is no satisfactory alternative".

- Test 3: The appropriate authority shall not grant a licence unless they are satisfied "that the action authorised will not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status in their natural range.

The Wildlife and Countryside Act 1981 (as amended)

The Wildlife and Countryside Act 1981 (WCA) (as amended) is the principal legislation providing protection for wildlife in the UK. It prescribes legislation for wild birds, other animals, wild plants and non-native species. In addition, it provides for the designation of Sites of Special Scientific Interest (SSSI) in England.

Wild birds

The WCA as amended by Schedule 12 of the Countryside and Rights of Way Act 2000 makes it an offence (with exception to species listed in Schedule 2) to intentionally or recklessly:

- kill, injure, or take any wild bird;
- take, damage or destroy the nest of any wild bird while that nest is in use or being built (also [take, damage or destroy the nest of a wild bird included in Schedule ZA1] under the Natural Environment and Rural Communities Act 2006); or
- take or destroy an egg of any wild bird.

For birds listed on Schedule 1 of the WCA, protection extends to offences relating to the intentional or reckless disturbance of these birds while at their nests or their dependent young.

Other animals

The WCA (as amended) makes it an offence to (subject to exceptions) intentionally or recklessly kill, injure or take wild animals listed on Schedule 5 of the Act. For some species, the protection extends to interference with places used for shelter or protection, or disturbing animals occupying or obstructing access to such places. These species are regarded as "fully protected" and as well as the EPS species listed above include the mammal species water vole *Arvicola amphibius*, pine marten *Martes martes* and red squirrel *Sciurus vulgaris* as well as selected others from a range of species groups including, fish, butterflies, hemipteran bugs, beetles, crickets, dragonflies, moths, spiders, crustaceans, sea-slugs, molluscs, Annelid worms and sea anemones (and allies).

There are seven species on Schedule 5 of the Act that not fully protected but are still protected against killing and injuring these include the common reptile species slow worm *Anguis fragilis*, viviparous lizard *Zootoca vivipara*, grass snake *Natrix helvetica* and adder *Vipera berus*.

The Act prohibits certain methods of killing, injuring, or taking wild animals, and numerous species are protected against sale only as well as other variations for example Atlantic stream (white-clawed) crayfish *Austropotamobius pallipes* are protected against taking and sale.

Vascular plants, bryophytes, lichens and fungi

With regards to native flora the Act makes it an offence to (subject to exceptions) intentionally or recklessly pick, uproot or destroy any wild plant listed in Schedule 8. Similarly, the Act

prevents the sale, offer or expose for sale, or possess (for the purposes of trade), any live or dead wild plant included in Schedule 8, or any part of, or anything derived from, such a plant.

Non-native species

The Act contains measures for preventing the establishment of non-native species which may be detrimental to native wildlife, prohibiting the release of animals and planting of plants listed in Schedule 9 in England and Wales.

Sites of Special Scientific Interest

The Act provides for the notification and confirmation of Sites of Special Scientific Interest (SSSIs). These sites can be identified for their flora, fauna, geological or physiological interest. In England, the power to confirm an SSSI lies with Natural England.

Laws protecting areas designated as SSSIs are described in Sections 28 to 33 of Part 2 of the Wildlife and Countryside Act 1981 (as amended). SSSIs are the principle statutory designation of sites in the UK and offences are enforced through Natural England. Offences include the following:

SSSI owners and occupiers

- carrying out, causing or allowing operations likely to damage an SSSI without Natural England consent.
- failing to keep to a management notice.
- failing to let us know about a change in ownership or occupation of land in an SSSI.

Public bodies

- carrying out or authorising operations likely to damage an SSSI without meeting the requirements to notify Natural England.
- failing to minimise any damage to an SSSI and if there is any damage, failing to restore it to its former state so far as is reasonably practical and possible.

Any person

- intentionally or recklessly damaging, destroying or disturbing any of the habitats or features of an SSSI.
- intentionally or recklessly damaging, destroying, obscuring or taking down a site notice put up on land within an SSSI.
- preventing a Natural England officer lawfully accessing an SSSI.

Protection of Badgers Act 1992

Badgers and their setts are protected under the Protection of Badgers Act 1992. This act is based on the need to protect badgers from persecution by baiting and deliberate harm or injury.

The act makes it an offence to:

- intentionally capture, kill or injure a badger;

- damage, destroy or block access to their setts;
- disturb badgers in setts;
- treat a badger cruelly;
- deliberately send or intentionally allow a dog into a sett; and
- bait or dig for badgers.
- A sett is defined as:

"Any structure or place that displays signs indicating current use by a badger".

Natural Environmental and Rural Communities (NERC) Act 2006

Section 40 of the NERC Act 2006 imposes a duty on every public authority to conserve biodiversity in exercising its functions, have regard, so far as is consistent with the proper exercise of those functions, to the purpose of conserving biodiversity. Conserving biodiversity includes, in relation to a living organism or type of habitat, restoring or enhancing a population or habitat.

Section 41 (S41) of the NERC Act 2006 requires the Secretary of State to publish a list of habitats and species that are of principal importance for the conservation of biodiversity in England. The list (including 56 habitats and 943 species) has been drawn up in consultation with Natural England and draws upon the UK BAP List of Priority Species and Habitats. The S41 list is used to guide decision-makers such as public bodies, including local and regional authorities, in implementing their duty under section 40 of the Natural Environment and Rural Communities Act 2006.

National Planning Policy Framework (NPPF) (2023)

The National Planning Policy Framework (NPPF) sets out the Government's planning policy for England. As such, the NPPF must be a material consideration for local authorities when considering planning decisions. The following points highlight those policies/statements which particularly relate to ecology/biodiversity and the planning system.

Policy 15 – Conserving and enhancing the natural environment

180. Planning policies and decisions should contribute to and enhance the natural and local environment by:

- (a) protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan);
- (b) recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland;
- (c) maintaining the character of the undeveloped coast, while improving public access to it where appropriate;

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

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

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

181. Plans should: distinguish between the hierarchy of international, national and locally designated sites; allocate land with the least environmental or amenity value, where consistent with other policies in this Framework; take a strategic approach to maintaining and enhancing networks of habitats and green infrastructure; and plan for the enhancement of natural capital at a catchment or landscape scale across local authority boundaries.

182. Great weight should be given to conserving and enhancing landscape and scenic beauty in National Parks, the Broads and Areas of Outstanding Natural Beauty, which have the highest status of protection in relation to these issues. The conservation and enhancement of wildlife and cultural heritage are also important considerations in these areas, and should be given great weight in National Parks. Where significant development of agricultural land is demonstrated to be necessary, areas of poorer quality land should be preferred to those of a higher quality. The scale and extent of development within these designated areas should be limited. Planning permission should be refused for major development other than in exceptional circumstances, and where it can be demonstrated that the development is in the public interest. Consideration of such applications should include an assessment of:

(a) the need for the development, including in terms of any national considerations, and the impact of permitting it, or refusing it, upon the local economy;

(b) the cost of, and scope for, developing outside the designated area, or meeting the need for it in some other way; and

(c) any detrimental effect on the environment, the landscape and recreational opportunities, and the extent to which that could be moderated.

184. Within areas designated as Heritage Coast (and that do not already fall within one of the designated areas mentioned in paragraph 182), planning policies and decisions should be consistent with the special character of the area and the importance of its conservation. Major development within a Heritage Coast is unlikely to be appropriate, unless it is compatible with its special character.

185. To protect and enhance areas of biodiversity and geodiversity, plans should:

(a) Identify, map and safeguard components of 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.

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

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

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

(c) development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional 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 incorporate biodiversity improvements in and around developments should be encouraged, especially where this can secure measurable net gains for biodiversity.

187. The following should be given the same protection as habitats sites:

(a) potential Special Protection Areas and possible Special Areas of Conservation;

(b) listed or proposed Ramsar sites; and

(c) sites identified, or required, as compensatory measures for adverse effects on habitats sites, potential Special Protection Areas, possible Special Area of Conservation, and listed or proposed Ramsar sites.

188. The presumption in favour of sustainable development does not apply where the plan or project is likely to have a significant effect on a habitats site (either alone or in combination with other plans or projects) unless an appropriate assessment has concluded that the plan or project will not adversely affect the integrity of the habitats site.

Local Nature Reserves

Local Nature Reserve (LNR) is a statutory designation made under Section 21 of the National Parks and Access to the Countryside Act 1949, and amended by Schedule 11 of the Natural Environment and Rural Communities Act 2006, by principal local authorities.

Local authorities have the powers to acquire, declare and manage LNRs. Parish and town councils can declare LNRs providing power is given by the district or county council. LNRs may or may not have other statutory designations such as SSSI status. LNRs must be controlled by the local authority through ownership, lease or agreement with the owner. The main aim must

be to care for the natural features which make the site special. LNRs are of local, but not necessarily national, importance.

LNRs are usually owned by local authorities, with management often passed onto other organisations such as County Wildlife Trusts etc. They often have good public access and facilities. There is no legal necessity to manage an LNR to any set standard but management agreements and plans often exist. Protection of LNRs is usually provided through local planning policy and through local bylaws.

Non-Statutory Protected Local Sites

Non-statutory Designated Sites are sites designated by local authorities which fall outside the statutory criteria for designation. They are policy protected and included in the National Planning Policy Framework (NPPF) as "Local Sites". Local Planning Authorities should set criteria based policies against which proposals for developments on or affecting protected wildlife sites should be judged. Non-statutory sites are given various names including County Wildlife Sites (CWS), Sites of Importance for Nature Conservation (SINC) and Local Wildlife Sites (LWS). To this end Ancient Woodland Inventory (AWI) sites are also considered non-statutory sites.

Hedgerows

Hedgerows are designated as Habitats of Principal Importance under the NERC Act 2006. The National Planning Policy Framework (NPPF) emphasises the preservation, restoration and re-creation of priority habitats and ecological networks. Hedgerows are important components of ecological networks linking other important habitats and designated sites.

Hedgerows also receive statutory protection under the Hedgerow Regulations 1997 made under Section 97 of the Environment Act 1995, which came into force in 1997. The regulations introduced new arrangements for local planning authorities in England and Wales to protect important hedgerows in the countryside, by controlling their removal through a system of notification. Important hedgerows are defined by complex assessment criteria, which draw on biodiversity features, historical context and the landscape value of the hedgerow.

Local Biodiversity Action Plan (LBAP)

Local Biodiversity Action Plans (LBAP) identify habitat and species conservation priorities at a local level (typically at the County level) and are usually drawn up by a consortium of local Government organisations and conservation charities.

Birds of Conservation Concern (BoCC)

The Birds of Conservation Concern (BoCC) is jointly prepared by the British Trust for Ornithology (BTO), Joint Nature Conservation Committee (JNCC) and The Royal Society for the Protection of Birds (RSPB).

The report classifies birds according to the extent that they are known to be declining. The classifications are split into groups, Red, Amber and Green, with species classified as Red being those with the greatest declines. The criteria for classifications are presented in *Table 2*.

Table 2: BoCC species classification criteria

Red list criteria	Amber list criteria	Green list criteria
Global Conservation Status - Species listed by BirdLife International as being Globally Threatened using IUCN criteria.	European Conservation status - Categorised as a Species of European Conservation Concern.	All regularly occurring species that do not qualify under any of the red or amber criteria are green listed.
Historical Decline - A severe decline in the UK between 1800 and 1995, without substantial recent recovery.	Historical Decline – Recovery - Red listed for Historical Decline in a previous review but with substantial recent recovery (more than doubled in the last 25 years).	Includes those species listed as recovering from Historical Decline in the last review that have continued to recover and do not qualify under any of the other criteria.
Breeding Population Decline - Severe decline in the UK breeding population size, of more than 50%, over 25 years or the entire period used for assessments since the first BoCC review, starting in 1969 ("longer-term").	Breeding Population Decline - As for red list criteria and, but with moderate decline (by more than 25% but less than 50%).	
Non-breeding Population Decline - Severe decline in the UK non-breeding population size, of more than 50%, over 25 years or the longer-term.	Non-breeding Population Decline - As for red list criteria and, but with moderate decline (by more than 25% but less than 50%).	
Breeding Range Decline - Severe decline in the UK range, of more than 50%, as measured by number of 10 km squares occupied by breeding birds, over 25 years or the longer-term.	Breeding Range Decline - As for red list criteria and, but with moderate decline (by more than 25% but less than 50%).	
	Rarity - UK breeding population of less than 300 pairs, or non-breeding population of less than 900 individuals.	
	Localisation - At least 50% of the UK breeding or non-breeding population found in 10 or fewer sites.	
	International Importance - At least 20% of the European breeding or non-breeding population found in the UK.	
Fisher's estuarine moth	Gortyna borelli lunata	Yellow marsh saxifrage
Great crested newt	Triturus cristatus	
Otter	Lutra lutra	
Lesser whirlpool ram's-horn snail	Anisus vorticulus	
Smooth snake	Coronella austriaca	
Sturgeon	Acipenser sturio	
Natterjack toad	Bufo calamita	
Marine turtles	Caretta caretta Chelonia mydas Lepidochelys kempii Eretmochelys imbricata Dermochelys coriacea	

APPENDIX B: BOTANICAL SPECIES LIST**CH1 – Other Neutral Grassland – g3c5**

Note: Species **in bold** are recorded off-site as part of wider survey area assessment

Common Name	Latin Name	DAFOR
Agrimony	<i>Agrimonia eupatoria</i>	R
Clustered dock	<i>Rumex conglomeratus</i>	O
Cock's-foot	<i>Dactylis glomerata</i>	F
Common comfrey	<i>Symphytum officinale</i>	R
Common fleabane	<i>Pulicaria dysenterica</i>	R
Common hogweed	<i>Heracleum sphondylium</i>	F
Common Nettle	<i>Urtica dioica</i>	F
Common ragwort	<i>Jacobaea vulgaris</i>	O
Creeping bent	<i>Agrostis stolonifera</i>	O
Creeping Buttercup	<i>Ranunculus repens</i>	F
Creeping cinquefoil	<i>Potentilla reptans</i>	O
Creeping Thistle	<i>Cirsium arvense</i>	F
Cut-leaved crane's-bill	<i>Geranium dissectum</i>	R
Equisetum sp.	<i>Equisetum sp.</i>	R
False oat-grass	<i>Arrhenatherum elatius</i>	D
Field bindweed	<i>Convolvulus arvensis</i>	O
Hairy-sedge	<i>Carex hirta</i>	R
Hard rush	<i>Juncus inflexus</i>	R
Hedge Bindweed	<i>Calystegia sepium</i>	O
Hemlock water-dropwort	<i>Oenanthe crocata</i>	R
Marsh woundwort	<i>Stachys palustris</i>	R
Meadow vetchling	<i>Lathyrus pratensis</i>	O
Perennial rye-grass	<i>Lolium perenne</i>	R
Prickly sow-thistle	<i>Sonchus asper</i>	R
Red clover	<i>Trifolium pratense</i>	O
Reed canary-grass	<i>Phalaris arundinacea</i>	R
Rosebay willowherb	<i>Chamaenerion angustifolium</i>	O
Silverweed	<i>Potentilla anserina</i>	O
Spear Thistle	<i>Cirsium vulgare</i>	D
Timothy	<i>Phleum pratense</i>	R
Tufted hair-grass	<i>Deschampsia caespitosa</i>	R
Water mint	<i>Mentha aquatica</i>	O
Wild angelica	<i>Angelica sylvestris</i>	R
Yorkshire-fog	<i>Holcus lanatus</i>	O

CH2 – Modified grassland – g4

Common Name	Latin Name	DAFOR
Annual meadow-grass	<i>Poa annua</i>	R
Cock's-foot	<i>Dactylis glomerata</i>	O
Germander speedwell	<i>Veronica chamaedrys</i>	F
Greater burdock	<i>Arctium lappa</i>	R
Scarlet pimpernel	<i>Anagallis arvensis</i>	R
Scentless mayweed	<i>Tripleurospermum inodorum</i>	F

H1-Native hedgerow – h2a

Common Name	Latin Name
Blackthorn	<i>Prunus spinosa</i>
Bramble	<i>Rubus fruticosus agg.</i>
Dog rose	<i>Rosa canina</i>
Dogwood	<i>Cornus sanguinea</i>
Elder	<i>Sambucus nigra</i>
Field maple	<i>Acer campestre</i>
Guelder-rose	<i>Viburnum opulus</i>
Hawthorn	<i>Crataegus monogyna</i>
Hazel	<i>Corylus avellana</i>
Sycamore	<i>Acer pseudoplatanus</i>

APPENDIX C: DETAILED FAUNAL SURVEY METHODOLOGY

Badgers

- C.1 As part of the extended phase 1 habitat survey, suitable habitats within the Site, and immediately adjacent to the Site boundary, were searched for evidence indicative of badger activity. A standard methodology was used, as outlined by Harris, Creswell, and Jefferies (1991)¹. This involved a thorough search for evidence that may indicate the presence of badgers, including:
- setts, including earth mounds, evidence of bedding and runs between setts
 - latrines, often located close to setts, at territory boundaries or adjacent to favoured feeding areas
 - prints and paths or track ways
 - hairs caught on rough wood or fencing; and
 - other evidence including snuffle holes, feeding, and playing areas and scratching posts.
- C.2 The identification of snuffle holes, scratching posts or feeding signs on their own is not necessarily conclusive evidence of the presence of badgers. Several such signs may need to be seen in conjunction with one another before they can be said to be conclusive of badger activity.
- C.3 Where setts are found, their status and level of activity is noted. Sett status is broadly categorised as follows:
- *Main sett* – usually continuously used with many signs of activity around, numerous holes and conspicuous spoil mounds.
 - *Annexe sett* – usually located close to a main sett and connected to it by well used paths. Annexes may not be continuously occupied.
 - *Subsidiary sett* – lesser used setts comprising a few holes and without associated well-used paths. Subsidiary setts are not continuously occupied.
 - *Outlier sett* – one or two holes without obvious paths. These are used sporadically.
- C.4 Level of activity is described as:
- *Well used* – clear of debris, trampled soil mounds and obviously active, with signs of activity such as presence of prints, dislodged guard hairs around the entrances.
 - *Partially used* – some associated debris or plants at the entrance. Could be used with minimal excavation and usually with signs of activity within the vicinity, for example, badger pathways.
 - *Disused* – partially or completely blocked entrances.

Bats

Ground-Based Tree Surveys

¹ Harris, S., Cresswell, P. and Jefferies, D., (1991). (Report) Surveying Badgers. The Mammal. Society, Bristol.

- C.5 During the extended phase 1 habitat, trees that were considered likely to be directly affected by the proposals were assessed for the presence of Potential Roosting Features (PRF) for bats such as the following (Based on P16, British Standard 8596:2015 Surveying for bats in trees and woodland, October 2015):
- Natural holes (e.g., knot holes) arising from naturally shed branches or branches previously pruned back to a branch collar.
 - Man-made holes (e.g., cavities that have developed from flush cuts or cavities created by branches tearing out from parent stems).
 - Woodpecker holes.
 - Cracks/splits in stems or branches (horizontal and vertical).
 - Partially detached, loose bark plates.
 - Cankers (caused by localised bark death) in which cavities have developed.
 - Other hollows or cavities, including butt rots.
 - Compression of forks with occluded bark, forming potential cavities.
 - Crossing stems or branches with suitable roosting space between.
 - Ivy stems with diameters in excess of 50mm with suitable roosting space behind (or where roosting space can be seen where a mat of thinner stems has left a gap between the mat and the trunk).
 - Bat or bird boxes.
 - Other suitable places of rest or shelter.
- C.6 Certain factors such as orientation of the feature, its height from the ground, the direct surroundings, and its location in respect to other features may enhance or reduce the potential value.
- C.7 Trees were classified into general bat roost potential groups based upon the presence of these features. Table B.1 (below) broadly classifies the potential categories as accurately as possible as well as discussing the relevance of the features. This table is based upon Table 4.1 and Chapter 6 in Bat Surveys for Professional Ecologists: Good Practice Guidelines (J., Collins (Bat Conservation Trust), 2016).
- C.8 Although the British Standard 8596:2015 document groups trees with moderate and high potential, these have been separated below (as per Table 4.1 in The Bat Conservation Trust Guidelines) to allow more specific survey criteria to be applied.

Table C.1: Classification and Survey Requirements for Bats in Trees

Classification of Tree	Description of Category and Associated Features (based on Potential Roosting Features listed above)	Likely Further Survey work / Actions
Confirmed Roost	Evidence of roosting bats in the form of live / dead bats, droppings, urine staining, mammalian fur oil staining, etc.	A Natural England derogation licence application will be required if the tree or roost site is affected by the development or proposed arboricultural works. This will require a combination of aerial assessment by roped access bat workers (where possible, health and safety constraints allowing) and nocturnal survey during appropriate periods (e.g., nocturnal survey - May to August) to inform on the licence. Works to tree undertaken under supervision in accordance with the approved good practice method statement provided within the licence. However, where confirmed roost site(s) are not affected by works, work under a precautionary good practice method statement may be possible.
High Potential	A tree with one or more Potential Roosting Features that are obviously suitable for larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter protection, conditions (height above ground level, light levels, etc) and surrounding habitat. Examples include (but are not limited to); woodpecker holes, larger cavities, hollow trunks, hazard beams, etc.	Aerial assessment by roped access bat workers (if appropriate) and / or nocturnal survey during appropriate period (May to August). Following additional assessments, tree may be upgraded or downgraded based on findings. If roost sites are confirmed and the tree or roost is to be affected by proposals a licence from Natural England will be required. After completion of survey work (and the presence of a bat roost is discounted), a precautionary working method statement may still be appropriate.
Moderate Potential	A tree with Potential Roosting Features which could support one or more potential roost sites due to their size, shelter protection, conditions (height above ground level, light levels, etc) and surrounding habitat but unlikely to support a roost of high conservation status (i.e. larger roost, irrespective of wider conservation status). Examples include (but are not limited to); woodpecker holes, rot cavities, branch socket cavities, etc.	A combination of aerial assessment by roped access bat workers and / or nocturnal survey during appropriate period (May to August). Following additional assessments, tree may be upgraded or downgraded based on findings. After completion of survey work (and the presence of a bat roost is discounted), a precautionary working method statement may still be appropriate. If a roost site/s is confirmed a licence from Natural England will be required.
Low Potential	A tree of sufficient size and age to contain Potential Roosting Features but with none seen from ground or features seen only very limited potential. Examples include (but are not limited to); loose/lifted bark, shallow splits exposed to elements or upward facing holes.	No further survey required but a precautionary working method statement may be appropriate.
Negligible/No potential	Negligible/no habitat features likely to be used by roosting bats	None.

*The Conservation of Habitats & Species Regulations 2010 (as amended) affords protection to "breeding sites" and "resting places" of bats. The EU Commission's Guidance document on the strict protection of animal species of Community interest under the Habitats Directive 92/43/EEC, February 2007 states that these are places "where there is a reasonably high probability that the species concerned will return".

Static Monitoring

- C.9 Static (passive) monitoring was undertaken using an automated logging system (Wildlife Acoustics Inc. Song Meter® SM4BAT FS bat detectors with SMM-U2 microphones). During the survey period two static recording devices were positioned within the Site to record bat registrations for at least five consecutive nights per month.
- C.10 The number of static detectors to be used and location of deployment was determined so that a representative sample of all habitats within the Site could be monitored. The locations were subjectively predetermined using professional judgment to be positioned at least 15m away from any known or likely roosts and also in consideration of likely impacts. In order to provide rigorous analysis, static detectors were placed in the same location during each survey and these are shown on *Figure 01*.
- C.11 The devices were deployed for 5 consecutive nights during suitable weather conditions that were typical for the season/ month of deployment and were programmed to activate 30 minutes before sunset and record continuously until 30 minutes following sunrise.
- C.12 Static detectors were deployed during the following periods;
- 22nd to 27th April 2024;
 - 21st to 26th May 2024;
 - 27th June to 1st July 2024;
 - 19th to 24th July 2024;
 - 21st to 26th August 2024;
 - 19th-24th September 2024
- C.13 The data was analysed as soon as possible after retrieval of the static units using the SonoBat software package to assess the amount of bat activity on site by recording the number of bat registrations. Measurements including peak frequency, inter-pulse interval, call duration and end frequency were taken to aid in species identification. This analysis was completed by a suitably experienced ecologist (analysts are audited internally for quality control purposes and to maintain consistent results).

Building Assessments

Internal / External Surveys

- C.14 All buildings on-site were surveyed for their potential to provide roosting opportunities for bats on 22nd April 2024 by licensed bat worker Adam (2015-14892-CLS-CLS).
- C.15 Internal assessments consisted of a systematic search of potential features inside the buildings, including all surfaces, window ledges, floors etc., using high powered torches and endoscopes (where possible and required). During these surveys evidence of bat roosts was sought. This included the presence of live or dead bats, or associated evidence which included droppings, urine staining, feeding remains, and potential roosting/access points.
- C.16 External building assessments were undertaken from ground level with the aid of a torch and binoculars (where appropriate). Surveys were undertaken by suitably experienced ecologists from FPCR. During these surveys PRF for bats including (but not limited to) the following were sought:

- Broken and missing roof tiles, verge tiles, ridge tiles and crevices between hanging tiles
- Access points behind soffits, fascia boards and barge boards
- Gaps beneath lifted roofing felt and lead flashing
- Openings in to roof voids, such as through eaves and gable end
- Loose mortar between bricks, tiles, or cracks in rendering
- Crevices between windows and lintel
- Chimney stacks, cracks in mortar or lead flashing
- Spaces between downpipes or guttering
- Timber cladding that may be warped, lifted, or have knot holes present; and/or
- Roof joists, and gaps between support beams.

C.17 The buildings were then classified as offering negligible, low, moderate, or high potential dependent on the number and type of features and / or evidence observed, which is based on *Table B.2* overleaf.

Table B.2: Building bat roost habitat classifications

Roost Suitability	Description of Roosting Habitats
Negligible	Negligible habitat features on site likely to be used by roosting bats.
Low	A structure with one or more potential roost sites that could be used by individual bats opportunistically. However, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats (i.e., unlikely to be suitable for maternity or hibernation).
Moderate	A structure with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions, and surrounding habitat but unlikely to support a roost of high conservation status (with respect to roost type only the assessments in this table are made irrespective of species conservation status, which is established after presence is confirmed).
High	A structure with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions and surrounding

C.18 The evidence from the roost inspection was used to determine any potential further survey work that may be required and to classify the type of roost, if any, that the building supports. These are:

- *Maternity roost* - where young are born and raised until they're independent, this has the highest conservation status,
- *Hibernation roost* - where bats are found during winter,
- *Mating roost* - where males and females gather during the autumn,

- *Feeding roost* - where bats rest at night between feeding sessions,
- *Transitional or swarming site* - where bats may be present in spring or autumn; and
- *Summer roost* - used by males and non-breeding females.

Bat Survey Limitations

- C.19 The site is small and is adjacent to a well-lit industrial area. Due to this, nighttime bat walkovers were not conducted. Static (passive) monitoring was used to survey the river corridor and other habitat suitable for bats.
- C.20 Due to the overlapping properties of bat echolocation calls from *Myotis* and *Nyctalus* species, it is not always possible to identify a series of echolocation calls from bats included in these genera to species level. In the majority of cases, identification to genus level was possible, which is considered a suitable taxonomic level to allow potential affects to be assessed and appropriate mitigation designed.
- C.21 The lower amplitude calls made by brown long-eared bat *Plecotus auritus* and barbastelle *Barbastella barbastellus* are more difficult to detect and may not be picked up by the directional microphones. Therefore, these species may have been under-recorded during these surveys.
- C.22 The static detector units do not discern between individual bats, or a single bat passing the microphone several times, and therefore the data recorded can only provide an indication of bat activity as bat registrations per unit time.

Scoping Breeding Bird Survey (BBS)

- C.23 A single scoping surveys was undertaken on the 2nd of May 2024, between the hours of 05.00 and 11.00, during the main part of the bird breeding season (Apr-Jun) to assess the presence of notable and protected breeding bird species on-site.
- C.24 A route was mapped out prior to the surveys being undertaken, paying particular attention to any habitats of value to birds, including linear features, such as hedgerows and tree lines, and natural features, such as scrub and waterbodies.
- C.25 Bird surveys were not undertaken in unfavourable conditions, such as heavy rain or strong wind, which may negatively affect the results. The weather conditions during which surveys were undertaken are detailed in *Table C.2* below.
- C.26 Bird species were recorded in a list, but not mapped unless they are significant records such as schedule 1 species.

Table C.2: Weather Conditions and Survey Dates for Breeding Bird Surveys (BBS) undertaken 2024

Date	Wind (Beaufort)	Rain	Cloud cover (%)	Visibility
02.05.2024	1-2	None	100	Good

Reptiles

- C.27 Habitats within the site were assessed for their potential to support a reptile population, such as tussock-forming grassland habitats with a variety of sward heights, which provide the varied structure required by reptiles throughout their life cycle.

- C.28 Strategic reptile presence/ likely absence surveys were undertaken in 2024, based on the methodology detailed in the Herpetofauna Workers Manual² and the Froglife Advice Sheet 10 - Reptile Survey³. Methods involved a search for basking reptiles on/under naturally occurring and strategically positioned artificial refugia. These were placed in locations that offered the most suitable habitat for common reptiles, i.e., structurally diverse 'edge' habitats with areas of bare ground/short vegetation.
- C.29 A total of **50** artificial refugia (0.5m² sections of roofing felt) were placed within the site in habitats considered most suitable for reptiles in April 2024 and were subsequently checked during summer and autumn 2024. Suitable habitats mainly consisted of south-facing field margins, hedgerows, woodland edges, and areas of surrounding scrub. This is in accordance with Froglife Advice Sheet 10, which recommends that refugia should be placed at a density of at least 10 per ha of suitable habitat.
- C.30 The refugia were left to 'bed in' for approximately 2 weeks, followed by seven separate surveys. Each survey visit was undertaken in accordance with guidelines as follows:
- At temperatures of between 9°C - 20°C
 - On sunny / cloudy days with little or no wind
 - Before 1100 hours and after 1600 hours
 - Approaching refugia from downwind, avoiding casting a shadow, and with care to not disturb basking animals when checking; and
 - That lifting and replacing tins is undertaken with particular care during hot weather to avoid potential harm to any animals taking refuge underneath.
- C.31 Seven surveys were completed during 2024, the dates and weather conditions for which are detailed in *Table B.6* below:

Table C.3. Dates and Surveys conditions for Reptile Surveys

Survey Occasion	Date	AM or PM survey	Weather conditions
1	02.05.2024	AM	90-100% cloud cover, 17°C, 1-2 BF, drizzle, overcast
2	23.05.2024	PM	20-30% cloud cover, 17°C, 3-4 BF, clear, partial cloud
3	07.06.2024	AM	30-40% cloud cover, 16°C, 1-2 BF, bright, sunny
4	21.06.2024	AM	90-100% cloud cover, 15°C, 1-2 BF, bright
5	12.09.2024	PM	80-90% cloud cover, 13°C, 1-2 BF, bright, sunny
6	19.09.2024	AM	20-30% cloud cover, 14°C, 0-1BF, partially cloudy, humid.
7	04.10.2024	PM	40-50% cloud cover, 14°C, 1-2 BF, clear, sunny

² Gent, T & Gibson, S (2003) *Herpetofauna Worker's Manual*. JNCC, Peterborough.

³ Froglife (1999) *Reptile Survey; an introduction to planning, conducting and interpreting surveys for snake and lizard conservation*. Froglife Advice Sheet 10. Froglife, Halesworth.

- C.32 Reptile populations will be assessed in accordance with population level criteria, as stated in the Key Reptile Site Register⁴. This system classifies populations of individual reptile species into three population categories that facilitate an assessment of the importance of the population (Table B.7). These categories are based on the total number of adult animals observed during individual survey occasions.

Table C.4. Key Reptile Site Survey Assessment Categories (Froglife 1999)

Species	Low Population (No. of individuals)	Good Population (No. of individuals)	Exceptional Population (No. of individuals)
Adder	<5	5 - 10	>10
Common lizard	<5	5 - 20	>20
Grass snake	<5	5 - 10	>10
Slow worm	<5	5 - 20	>20

Riparian Mammals

- C.33 Riparian mammal surveys were undertaken by walking along all accessible banks and from a kayak placed in the river channel. The kayak allows full access to banks and ensures evidence not visible from the bank is missed.

Otter

- C.34 Otter surveys were undertaken during summer (26th July) and autumn (6th September) 2024. The survey methodology employed followed that detailed within the New Rivers and Wildlife Handbook⁵. Due to the unlikely event of actual observation, the survey concentrated on locating field signs indicating otter *Lutra lutra* presence or use of the site, and surrounding watercourses. Such field signs include:

- **Spraints** – characteristic faecal deposits that are sweet-smelling, black, and tar-like (where fresh/relatively recent i.e., within a few weeks), or grey and crumbly (when old); and usually containing fish scales, bones, and occasionally invertebrate exoskeletons and bird feathers; and
- **Footprints** – In good substrate typically asymmetrical and showing five toes arched around a large pad, and depending on substrate, may also show webbing, and claw marks. Poorer, generally coarser substrates do not often enable the identification of otter footprints.

- C.35 Additional signs of otter presence may occur, although without additional evidence are usually not conclusive proof of current otter presence:

- Feeding remains – Remains of prey items, such as fish bones,
- Slides/haul-outs – Routes into and out of the water, which are usually associated with terrestrial routes, such as short cuts around meanders, or along traditionally used otter paths/routes,

⁴ Froglife (1999) *Reptile Survey; an introduction to planning, conducting and interpreting surveys for snake and lizard conservation*. Froglife Advice Sheet 10. Froglife, Halesworth.

⁵ Ward D., Holmes N., Jose P. (eds). (1994). *The New Rivers and Wildlife Handbook* RSPB: Sandy

- Couches/hovers – above ground resting places. Usually associated with cover, such as dense scrub, rushes, or reed, flood debris, or fallen trees. Many couches are rarely used, whilst other more so; and
- Holts – below ground resting site usually associated with spraint marking. Sometimes used with greater frequency than couches and can be important for breeding (natal holts) where other signs are usually absent.

Water Vole

C.36 Water vole surveys were undertaken during summer (27th July) and autumn (7th September) 2023. These followed the standard methodology of Strachn *et al.* as described in the Water Vole Handbook (Third Edition, 2011). This involved identification of water vole *Arvicola amphibius* activity within the survey areas, using field evidence such as:

- Faeces - these are 8 - 12mm long and 4 - 5 mm wide, cylindrical, with blunt ends. The colour is variable, though often green, and they are generally odourless or have a faint musky smell.
- Latrines - most droppings are deposited at latrine sites, used to mark range boundaries, favoured spots close to nests, and where they leave and enter water. Latrines often consist of a flattened mass of old droppings topped with fresh ones.
- Feeding stations - water voles often bring pieces of cut vegetation to favoured feeding stations close to the water's edge and leave remains in neat piles. The cut vegetation is typically 100mm long and is cut at a perfect 45° angle.
- Burrows - many burrows can be found in riverbanks, but those constructed by water voles are typically rounded in shape, reflecting the rounded body shape of water vole, with a diameter of 6 - 8cm. The holes are often near the water level, but may be partially or fully submerged, further up the bank, or dug vertically into the bank top. Around these holes, well-grazed 'lawns' can often be found, where the water voles have chewed the surrounding vegetation short⁶.
- Footprints – identifiable prints in soft margins of the watercourse
- Runways – low tunnels that are pushed through the vegetation often leading to burrows or feeding stations.

C.37 Several field signs, including burrows, feeding evidence, footprints, and runways can easily be confused with those of other small mammals, particularly rats *Rattus norvegicus*, which may produce burrows of a similar size and shape, and have similarly shaped feet. These types of evidence (or their absence) are therefore best interpreted alongside other signs of water vole presence.

⁶ Dean M. (2021) *Water Vole Field Signs and Habitat Assessment: A Practical Guide to Water Vole Survey*. Pelagic Publishing, Exeter

APPENDIX D: BAT SURVEY RESULTS

Static Monitoring

- D1.1 During the automated detector surveys to date, a total of 19577 registrations were recorded by 12 automated detectors. Common pipistrelle (C. pip) was the most frequently recorded species (approximately 67.26% of total data), with further species recorded in lower numbers:
- Soprano pipistrelle – 32.02%
 - Myotis sp. – 0.25%
 - Noctule – 0.18%
 - Nathusius' pipistrelle (N. pip) – 0.13%
 - Plecotus species (Plec) – 0.11%
 - Nyctalus species – 0.015%
 - Nyctalus/Eptesicus sp. (Nyc/Ept) – 0.015%
 - Serotine (Sero) – 0.01%
 - Barbastelle – 0.05%
- D1.2 The river corridor and hedgerow delineating the eastern site boundary provide the most suitable foraging and commuting habitat for bats as the highest levels of activity were recorded in association with these features. Overall, the species assemblage was dominated by common and soprano pipistrelle, being these the species with registrations in all automatic detectors. Other common and widespread species were recorded in low numbers (see Table D.1 for a summary of the results).
- D1.3 The automated detectors identified the presence of one Annex II species: barbastelle. One registration of barbastelle was recorded on Unit 27 during the August automated survey. This static detector was located in the eastern hedgerow on site (see Table D.2 for detailed results).

Table D.1: Static Detector Results Summary

Dates	Unit Reference	Total Registrations	Species & Registration Count	Activity summary
22 nd – 27 th April 2024	11	61	C pip – 54 S pip – 5 N pip – 2	A total of 3 species/species groups were recorded across the two detectors across the five nights. Common pipistrelle was the most frequently recorded species in the two statics and ranged from 54 registrations on unit 11, to 995 registrations on Unit 12 and constituted 88.97% of all registrations. Soprano and Nathusius' pipistrelle were recorded in low numbers in unit 11. Activity was higher in unit 12, with 1118 recordings in total. Soprano pipistrelle was the second most frequent species, with 123 recordings.
	12	1118	C pip – 995 S pip – 123	
21 st – 26 th May 2024	30	2127	C pip – 1591 S pip – 533 Myo – 2 Noc – 1	Four species were recorded in May, with common pipistrelle being the most frequent one in both static units. Activity level was higher in unit 30, which was located along the river corridor and associated hedgerow that bound the site on the east. Other common species, such as Myotis sp and Noctule were registered in low numbers.
	31	310	C pip – 285 S pip – 21 Noc – 4	
27 th June – 1 st July 2024	15	4256	C pip – 3177 S pip – 1076 Myo – 3	Seven species were recorded in June. Similarly to the previous months, common pipistrelle was the most registered species in both units. Activity level was higher in unit 15, located along the river corridor and associated hedgerow that bound the site on the east. Other common species, such as Myotis sp, serotine, Plecotus sp, Nathusius' pipistrelle and noctule were registered in low numbers.
	20	730	C pip – 640 S pip – 84 Ser – 2 Plec – 2 N pip – 1 Noc – 1	
19 th – 24 th July 2024	33	5243	C pip – 2787 S pip – 2414 Myo – 21 Plec – 15 Noc – 4 Nyc – 1 Nyc/Ept – 1	Seven species were recorded in July. Similarly to the other months, common pipistrelle was the most registered species in both units. Activity level was higher in unit 33, located along the river corridor and

Dates	Unit Reference	Total Registrations	Species & Registration Count	Activity summary
	34	952	C pip – 721 S pip – 213 Noc – 13 Nyc/Ept – 2 Myo – 2 Nyc – 1	associated hedgerow that bound the site on the east. Other common species were registered in low numbers.
21 st – 26 th August 2024	27	1638	C pip – 1087 S pip – 545 Myo – 3 N pip – 1 Plec – 1 Barb – 1	Common pipistrelle was the most frequently recorded species in both statics and ranged from 252 registrations on unit 28, to 1087 registrations on Unit 27. One Annex II species was recorded during the August automated survey: barbastelle.
	28	345	C pip – 252 S pip – 87 Myo – 5 N pip – 1	There was only one recording of a barbastelle in Unit 27, located in the eastern hedgerow on site. Other common species were registered in low numbers.
19 th – 24 th September 2024	05	264	C pip – 123 S pip – 118 N pip – 11 Noc -8 Plec - 3 Nyc – 1	Common pipistrelle was the most frequently recorded species in both statics and ranged from 123 registrations on unit 05, to 1456 registrations on Unit 06.
	06	2533	C pip – 1456 S pip – 1050 Myo - 14 N pip – 9 Noc -4	Similarly to previous months, the activity levels were higher in the static that was located in the eastern hedgerow. Other common species, such as Nathusius' pipistrelle, noctule, Plecotus sp, Nyctalus sp. and Myotis sp. were registered in low numbers.

Table D.2: Static Detector Results Data

Sheet ref.	Common Pipistrelle			Soprano Pipistrelle			Myotis Species		
	Period Total	Peak Count	Av. Per Hour	Period Total	Peak Count	Av. Per Hour	Period Total	Peak Count	Av. Per Hour
Apr1	54	28		5	3		0	0	
Apr2	995	576		123	53		0	0	
May1	1591	453		533	174		2	1	
May2	285	113		21	12		0	0	
Jun1	3177	996		1076	709		3	2	
Jun2	640	234		84	39		0	0	
Jul1	2787	828		2414	727		21	11	
Jul2	721	213		213	62		2	1	
Aug1	1087	302		545	196		3	2	
Aug2	252	101		87	47		5	2	
Sep1	123	35		118	34		0	0	
Sep2	1456	653		1050	475		14	10	
	13168	996		6269	727		50	11	

Sheet ref.	Noctule			Nathusius' pipistrelle			Long Eared Species		
	Period Total	Peak Count	Av. Per Hour	Period Total	Peak Count	Av. Per Hour	Period Total	Peak Count	Av. Per Hour
Apr1	0	0		2	1		0	0	
Apr2	0	0		0	0		0	0	
May1	1	1		0	0		0	0	
May2	4	2		0	0		0	0	
Jun1	0	0		0	0		0	0	
Jun2	1	1		1	1		2	2	
Jul1	4	1		0	0		15	4	
Jul2	13	5		0	0		0	0	
Aug1	0	0		1	1		1	1	
Aug2	0	0		1	1		0	0	
Sep1	8	5		11	4		3	3	
Sep2	4	3		9	4		0	0	
	35	5		25	4		21	4	

Sheet ref.	Nyctalus Species			Nyctalus / Eptesicus			Serotine		
	Period Total	Peak Count	Av. Per Hour	Period Total	Peak Count	Av. Per Hour	Period Total	Peak Count	Av. Per Hour
Apr1	0	0		0	0		0	0	
Apr2	0	0		0	0		0	0	
May1	0	0		0	0		0	0	
May2	0	0		0	0		0	0	
Jun1	0	0		0	0		0	0	
Jun2	0	0		0	0		2	2	
Jul1	1	1		1	1		0	0	
Jul2	1	1		2	1		0	0	
Aug1	0	0		0	0		0	0	
Aug2	0	0		0	0		0	0	
Sep1	1	1		0	0		0	0	
Sep2	0	0		0	0		0	0	
	3	1		3	1		2	2	

Sheet ref.	Barbastelle		
	Period Total	Peak Count	Av. Per Hour
Apr1	0	0	
Apr2	0	0	
May1	0	0	
May2	0	0	
Jun1	0	0	
Jun2	0	0	
Jul1	0	0	
Jul2	0	0	
Aug1	1	1	
Aug2	0	0	
Sep1	0	0	
Sep2	0	0	
	1	1	

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APPENDIX E: BIODIVERSITY NET GAIN REPORT

Client

Highwood Ventures 7 Limited

Project

Land East of Chickenhall Lane, Eastleigh

Date

June 2025

CONTENTS

1.0 AIMS AND OBJECTIVES 1

2.0 METHOD 1

3.0 STRATEGIC SIGNIFICANCE 2

4.0 PRE-INTERVENTION (FIGURE 1 AND FIGURE 2) 2

5.0 POST-INTERVENTION (FIGURE 4 AND FIGURE 5) 3

6.0 OFF-SITE HABITAT PROVISION 4

7.0 CONCLUSION 6

TABLES

Table 1: Summary Biodiversity Net Gain Results

FIGURES

- Figure 3: Baseline habitats
- Figure 4: Baseline Habitat Condition and Distinctiveness
- Figure 5: Habitat Retention
- Figure 6: Proposed habitats
- Figure 7: Proposed Habitat Condition and Distinctiveness

APPENDICES

- Appendix A: Watercourse Results
- Appendix B: Statutory Metric

Rev	Issue Status	Prepared/Date	Approved/Date
-	Issue	TLT/ 29.11.24	APD/05.12.24
A	Issue		AU / 20.06.25

1.0 AIMS AND OBJECTIVES

- 1.1 This Biodiversity Net Gain Report is based on the Chartered Institute of Ecology and Environmental Management (CIEEM) guidance. The scope and objectives of this report are to:
- Present the results of the baseline UKHab Survey and habitat condition assessment following the Defra Statutory Biodiversity Metric Technical Guidance.
 - Provide an overview of the recommended proposed habitat enhancements including likely constraints and recommendations for further assessment.
 - Assess the feasibility of the proposals to achieve an increase in biodiversity value.
 - Present the results of the Defra Statutory Biodiversity Metric assessment completed for the proposals
- 1.2 For this assessment, the habitats included within the metric include the 0.62 ha of Site, plus 0.45ha of off-Site habitat (excluding trees).
- 1.3 The redline boundary was determined using the 3765-HIA-01-XX-M2-A-0001-Proposed Site Plan-S2-P16 and the blueline boundary was determined using the 3765-HIA-01-XX-DR-A-0101-Site Location Plan-D0-P3.

2.0 METHOD

- 2.1 Biodiversity net gain was measured using the Biodiversity Net Gain Statutory Metric (hereafter referred to as 'the metric'). To calculate biodiversity change using the metric the following are required:
- Habitat type and area pre- and post-intervention
 - Habitat condition pre-intervention
 - Estimated habitat condition post-intervention
 - Hedgerow type and area pre- and post-intervention
 - Hedgerow condition pre-intervention
 - Estimated hedgerow condition post-intervention
 - Watercourse type and length pre- and post-intervention
 - Watercourse condition pre-intervention
 - Estimated watercourse condition post-intervention
- 2.2 These are then entered into the metric which uses predetermined values for habitat distinctiveness alongside values generated for condition, strategic significance, and ecological connectivity to create a numerical output. In the case of habitat creation or enhancement these values are multiplied by a temporal factor and a difficulty of creation value to account for risks related to creating habitats, hedgerows and watercourses.
- 2.3 The field survey for habitats and hedgerows were conducted on 24th of July by a FISC level 4 Ecologist. Habitats on Site were classified according to the UK Habitats classification system. Habitat condition was determined through the use of the criteria set out in the guidance documents accompanying the metric.

- 2.4 Habitat locations were recorded during the field survey then combined with aerial imagery and mapping to determine the precise extent of the habitat in QGIS.
- 2.5 The field survey for the watercourse was undertaken on 4th of July 2024 by a MoRPh trained experienced Ecologist using the MoRPh methodology, during low flow and with suitable weather conditions, being dry but cloudy throughout the survey. The desktop survey was undertaken on the 1st of July 2024.
- 2.6 Barton River runs along the Eastern aspect of the blue line boundary, the redline boundary begins at 8m at the north of the Site and then quickly extends beyond 10m. Barton River has river width of >5m but <10m with a survey length of approximately 0.150m within the Site boundary. This resulted in one sub-reach being surveyed, with 5 x 20m modules (MoRPh5). The survey was undertaken from the right bank, working downstream. The detailed results of the RCA can be found in Appendix A.

3.0 STRATEGIC SIGNIFICANCE

- 3.1 The strategic significance of the individual habitats was determined by using data sent from Hampshire Biodiversity Information Centre within their Ecological network map, the site is highlighted as a network opportunity therefore is considered to have high strategic significance. The watercourse falls within the Itchen Operational Catchment and is part of the River Itchen SSSI; SAC and designated as a sub-type 1 chalk river¹². Therefore, has been entered into the metric as a priority river with high strategic significance.

4.0 PRE-INTERVENTION (FIGURE 1 AND FIGURE 2)

Baseline habitats

- 4.1 The Site baseline delivers a total of 2.68 habitat units.
- 4.2 The Site is predominantly covered in modified grassland with a patch of bare ground at the entrance. There are two strips of Other Neutral Grassland on the lower half of the Site surrounded by Modified Grassland. To the west of the Site from the access gates downwards running adjacent to the hedgerow is a margin of Ruderal vegetation. There are two onsite buildings. Along the eastern side of the redline boundary there is a large a strip of introduced scrub mostly comprised of cherry laurel with two large poplar and a mix of native trees of varying sizes emerging through the understory. In total there are 7 individual trees within the red-line boundary four are within the introduced scrub and three are located by the entrance boarding an external hedgerow on the western perimeter.
- 4.3 The area of Other Neutral Grassland delivers the highest number of units at 0.78 habitat units covering 0.1705ha, this was found to be in poor condition and is a medium distinctiveness habitat.

¹ <https://sac.jncc.gov.uk/site/UK0012599>

² <https://environment.data.gov.uk/catchment-planning/WaterBody/GB107042022580>

- 4.4 Modified grassland covered a total 0.2933ha, the low distinctiveness habitat was found to be in poor condition delivering 0.67 habitat units.
- 4.5 The two large poplar trees were found to be in moderate condition, they have been entered into the metric as urban trees, a medium distinctiveness habitat, delivering a total of 0.67 habitat units.
- 4.6 One medium tree was found to be in good condition, this as been recorded in the metric as an urban tree and is a medium distinctiveness habitat delivering 0.22 habitat units.
- 4.7 A total of 0.076ha of Ruderal/Ephemeral vegetation, a low distinctiveness habitat was found to be in poor condition this delivers 0.17 habitat units.
- 4.8 Four small urban trees located on the western site boundary were found to be in poor condition. This medium distinctiveness habitat delivers a total of 0.07habitat units.
- 4.9 The area of introduced shrub covers a total of 0.0199ha, this is considered as a low distinctiveness habitat that does not require a condition assessment. This habitat delivers a total of 0.05 habitat units.
- 4.10 The 0.0133ha of bare ground delivers a total of 0.03 habitat units, this is considered to be low distinctiveness habitat.
- 4.11 Lastly there is a total 0.0448ha of developed land sealed surface, this delivers 0.00 habitat units and is considered to be very low distinctiveness 'habitat'.

Hedgerows pre-intervention

- 4.12 A total of three hedges covering 0.12km are present around the north and western edge of the Site.
- 4.13 Of this 0.11km is considered to be native hedgerow in poor condition, which delivers 0.22 hedgerow units and is low distinctiveness hedgerow. H1 and H3 are present in the north and west of the Site.
- 4.14 H2 a Non-native and ornamental hedgerow is 0.013km and delivers 0.01 hedgerow units. This hedgerow type is given an automatic condition score of poor.

5.0 POST-INTERVENTION (FIGURE 4 AND FIGURE 5)

Habitat post-intervention

- 5.1 The habitats post intervention have been mapped using the most up-to-date Landscape General Arrangements Plan DD679L01F and the updated proposed Site plan 3765-HIA-01-XX-M2-A-0102. The proposal for the Site consists of a large care home, with associated built-up areas for access, cycling, parking and green infrastructure including open space, rain gardens, bioswale and trees. Proposed habitats post-intervention could deliver an extra -0.98 habitat units, leading to a biodiversity net loss of -36.64%.
- 5.2 Access points, roads, foot ways and cycle ways have been classified as developed land, sealed surface in the metric. Developed land, sealed surface is a habitat of very low distinctiveness that does not contribute to any habitat units as they are of no ecological value for biodiversity.

- 5.3 The green infrastructure surrounding the residential area has been classified as Other Neutral Grassland, mixed scrub and small urban trees. The habitats directly adjacent to and within the residential curtilage include modified grassland, introduced scrub and rain gardens.
- 5.4 Other neutral grassland has been targeted to meet poor condition covering a total of 0.1402ha delivering 0.60 habitat units.
- 5.5 Mixed scrub will be created in poor condition covering a total of 0.0289 ha, this is a medium distinctiveness habitat delivering 0.13 units.
- 5.6 0.0584 ha of introduced shrub will be created, a low distinctiveness habitat delivering 0.13 habitat units. There is no condition assessment required for this habitat type, therefore has no condition assigned.
- 5.7 Rain gardens will be created in moderate condition covering a total of 0.0159ha, a low distinctiveness habitat delivering 0.07 habitat units.
- 5.8 0.267 ha of modified grassland will be created in poor condition delivering 0.06 habitat units.
- 5.9 There are seven individual trees at baseline four of which will be retained.
- 5.10 The two large urban poplar trees in moderate condition have been removed/lost. The two trees that have been removed are equivalent to 0.67 habitat units. Meaning this loss will result in - 0.67 habitat units. In addition to the existing loss, one buddleia tree will be lost to the development equivalent to a loss of -0.02 habitat units.
- 5.11 One medium tree in good condition and five small trees in poor condition will be retained.
- 5.12 29 small urban trees will be planted in poor condition covering a total of 0.118ha delivering 0.38 habitat units

Hedgerows post-intervention

- 5.13 H1 will and H3 will remain as a native hedgerow but the condition will be enhanced from poor to moderate. This will deliver 0.48 hedgerow units.
- 5.14 H2 will be lost leading to a loss of 0.01 hedgerow units.
- 5.15 In addition to this 0.04km of non-native ornamental hedgerow will be created this is a very low distinctiveness habitat type and will provide 0.04 hedgerow units.
- 5.16 Total net unit increase for the hedgerow proposals reach 0.29 and a percentage increase of 123.78%.

6.0 OFF-SITE HABITAT PROVISION

- 6.1 The Site was unable to meet a 10% net gain for area habitats within the red-line boundary therefore Off-Site habitat provision is required. The blue line represents the Off-Site habitat provision which lies directly adjacent to the red-line boundary.

Baseline off-Site habitats

- 6.2 The Off-Site habitat at baseline delivers 3.38 habitat units.
- 6.3 The area within the blue-line boundary consists largely of the watercourse footprint of Barton River followed by modified grassland on the bank top, with a set of medium trees along the northern boundary upstream. Towards the western boundary of the blue-line where it abuts

the redline there is a strip of introduced scrub, this is acting as an understory to a variety of native urban trees which continues on into the red-line boundary, these have been recorded in their respective areas.

- 6.4 There is a total of 0.1774ha of modified grassland, a low distinctiveness habitat in poor condition this delivers 0.41 habitat units.
- 6.5 Other Neutral Grassland was found to be in poor condition covering 0.0765ha, this is a medium distinctiveness habitat delivering 0.35 habitat units.
- 6.6 Introduced shrub covers 0.0772ha, this habitat type has no condition assessment and is a low distinctiveness habitat delivering 0.18 habitat units.
- 6.7 Ruderal vegetation covers 0.012ha this habitat was found in poor condition and is a low distinctiveness habitat delivering 0.03 habitat units.
- 6.8 The 0.1049ha of the watercourse footprint for the Barton River is set to be retained, watercourse enhancement is provided separately below.
- 6.9 At baseline within the introduced scrub there are two large trees, three medium and five small urban trees in good condition delivering a total of 1.97 habitat units.
- 6.10 In addition to this there are three medium urban trees in moderate condition delivering 0.45 habitat units.

Baseline Watercourse – Off-site

- 6.11 Barton River has been entered into the Statutory Metric as 'Priority river ' (type F) with approximately 150m length within the site.
- 6.12 20m has been entered into the metric as Priority river in Fairly Poor condition with major watercourse encroachment and major riparian encroachment on both banks delivering 0.10 watercourse units.
- 6.13 The remaining 129 has been entered into the metric as Priority river in Fairly Poor condition with no watercourse encroachment but Major encroachment on one bank and minor on the other, delivering a total of 1.50 watercourse units.

Proposed Off-Site habitats

- 6.14 The off-Site habitat provision within the blueline boundary will be used to compensate any losses that occur within the redline boundary (On-Site).
- 6.15 The proposed off-Site habitats could deliver an extra 1.83 habitat units, leading to a biodiversity net gain of 54.02%.
- 6.16 Other Neutral Grassland will be lost and re-created in good condition covering 0.1331ha, this medium distinctiveness habitat provides 1.29 units.
- 6.17 Modified grassland will be lost and willow scrub will be created in moderate condition 0.1171ha medium distinctiveness moderate condition 0.51 units
- 6.18 Modified grassland will be lost and a bioswale will be created in modified condition covering 0.0037ha, this is a low distinctiveness habitat delivering 0.01 units (this is a continuation from the bioswale that is present on-Site, within the redline boundary).

- 6.19 Introduced scrub will be lost from the baseline and mixed scrub will be created covering a total of 0.0772ha this is a medium distinctiveness habitat with a target of moderate condition delivering 0.59 habitat units.
- 6.20 All trees within the blueline boundary trees at baseline will be retained. In addition to this to compensate for the loss of the two large trees in moderate condition within the redline boundary and one small tree in poor condition that will be lost to the development. 28 small trees in poor condition are required to be planted Off-Site to achieve a net-gain, this is the equivalent to 0.37 habitat units.

Proposed Off-site Watercourse

- 6.21 Barton River has been entered into the Statutory Metric as 'Priority river ' with approximately 150m length within the site. The condition has remained the same as it was in baseline however, the level of encroachment has been removed for the right bank.
- 6.22 The first 20m upstream has been entered into the metric as priority river in fairly poor condition with major watercourse encroachment due to the large bridge/road crossing and major encroachment on the left bank, however there will be no riparian encroachment on the right bank top. This should deliver 0.12 watercourse units.
- 6.23 The remaining 129m will keep the minor encroachment due to the main road which falls within 8-10m of the bank top, however will have no riparian encroachment on the right bank face and no watercourse encroachment. This should deliver 1.74 watercourse units.
- 6.24 The proposed enhancements to the watercourse could deliver an extra 0.27 watercourse units leading to a net gain of (+16.62%).

7.0 CONCLUSION

- 7.1 For this assessment, the habitats included within the metric include the 0.62 ha of Site within the redline boundary and 0.45ha of off-site habitat. On-site alone is achieving a net loss of -0.98(-36.64%), highlighting the requirement for Off-site habitat provision to achieve a net gain.
- 7.2 Combined the proposed habitats can deliver a net gain of 0.84 (+31.41%). On-site alone delivers a net gain for hedgerows of 0.29 (+123.78%) and the watercourse Off-site only +0.27 (+16.62%).

Table 1: Summary of Biodiversity Net Gain Results

On-Site Habitats	Pre-intervention Units	2.68
	Post-Intervention Units	1.70
	Net change	-0.98(-36.64%)
On-Site Hedgerows	Pre-intervention Units	0.23
	Post-Intervention Units	0.52
	Net change	+0.29 (123.78%)
Off-Site Habitats	Pre-intervention Units	3.38
	Post-Intervention Units	5.21
	Net change	+1.83(+54.02%)
Off-Site Watercourse	Pre-intervention Units	1.60
	Post-Intervention Units	1.86
	Net change	+0.27 (+16.62%)
Combined Net Unit Change	Habitats	0.84 (+31.41%)
	Hedgerows	0.29(+123.78%)
	Watercourse	0.00



N

0

10

20 m

Red Line Boundary

Off-site Land

Baseline Habitats

Developed land; sealed surface

Introduced shrub

Modified grassland

Other neutral grassland

Watercourse footprint

Ruderal/Ephemeral

Bare ground

Baseline Hedgerow

Non-native and ornamental hedgerow

Native hedgerow

Baseline Watercourse

Priority habitat

Baseline Individual Trees

Existing large urban tree

Existing medium urban tree

Existing small urban tree

date

17/06/25

client

Highwood

project

Chickenhall Lane,
Eastleigh

title

BASELINE HABITAT PLAN

number

FIGURE 1

scale

1:500 @ A3

rev

-

drwn/chkd

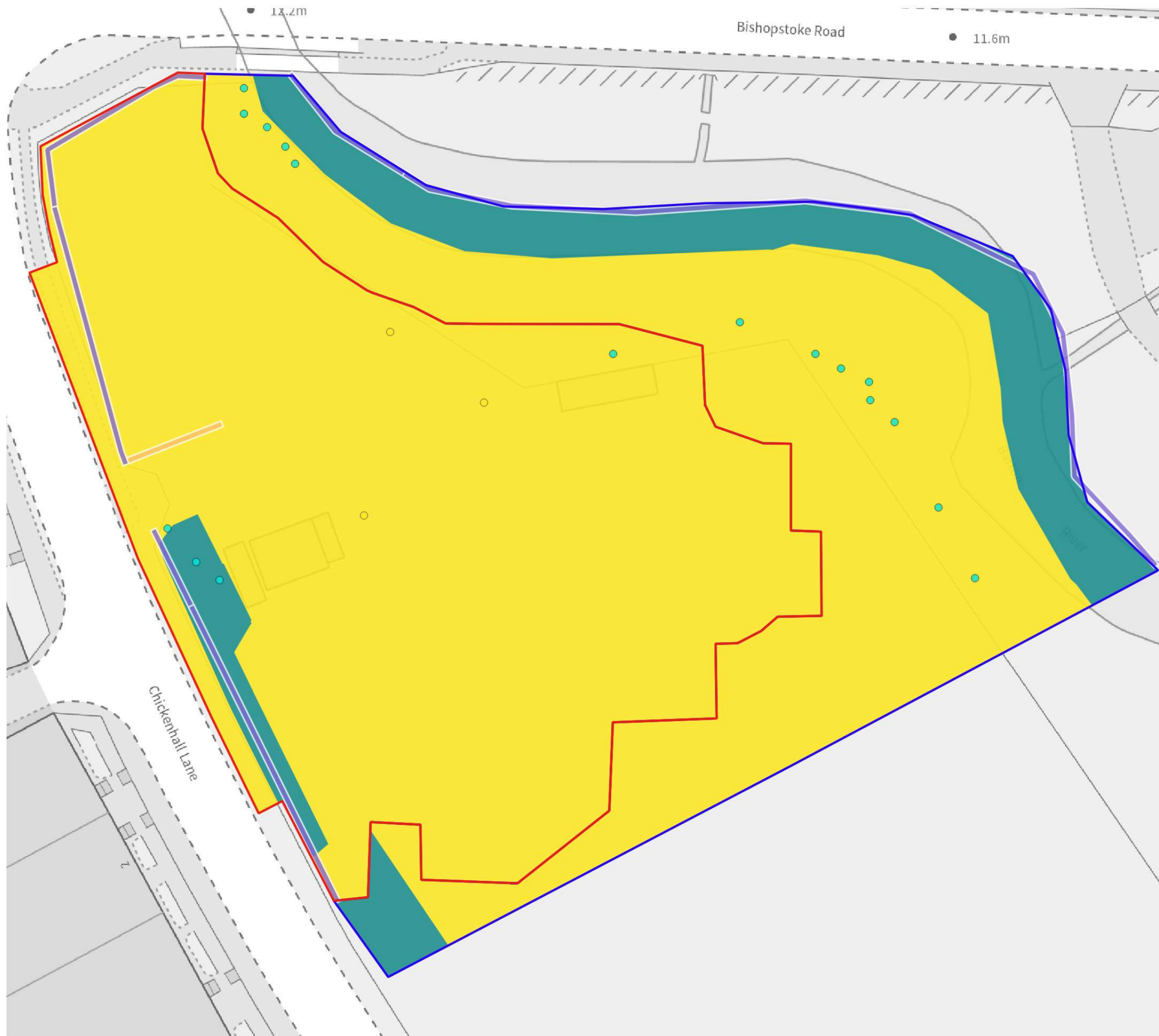
TT/APD

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N

0

10

20 m

Red Line Boundary

Off-site Land

Habitats

Retained

Lost

Hedgerows

Enhanced

Lost

Watercourses

Enhanced

Individual Trees

Retained

Lost

date

17/06/25

drwn/chkd

TT/APD

client

Highwood

project

Chickenhall Lane,
Eastleigh

title

HABITAT RETENTION PLAN

scale

1:500 @ A3

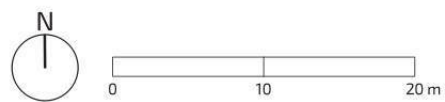
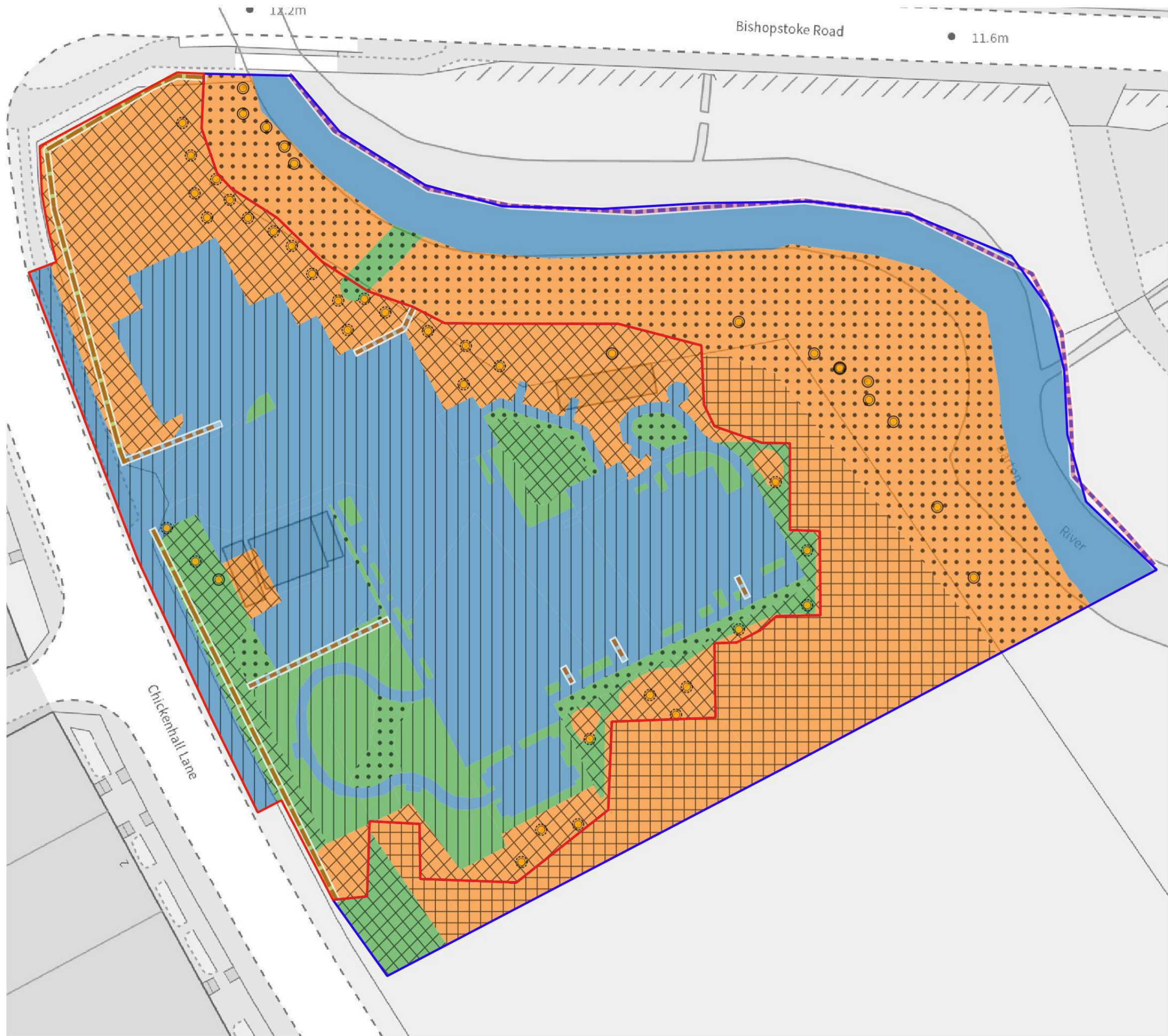
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FIGURE 3

rev

-

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- Red Line Boundary
- Off-site Land
- Proposed Habitat Condition
 - Good
 - Moderate
 - Poor
 - Condition Assessment N/A
- Proposed Habitat Distinctiveness
 - Medium
 - Low
 - V.Low
- Proposed Hedgerow Condition
 - Moderate
 - Poor
- Proposed Hedgerow Distinctiveness
 - Low
 - V.Low
- Proposed Watercourse Condition
 - Fairly Poor
- Proposed Watercourse Distinctiveness
 - V.High
- Proposed Individual Tree Condition
 - Poor
 - Moderate
 - Good
- Proposed Individual Tree Distinctiveness
 - Medium

date
17/06/25

drwn/chkd
TT/APD

client
Highwood

project
**Chickenhall Lane,
Eastleigh**

title
**PROPOSED HABITAT CONDITION
AND DISTINCTIVENESS PLAN**

scale
1:500 @ A3

number
rev

FIGURE 5

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TECHNICAL NOTE: River Condition Assessment (RCA) for Biodiversity Net Gain.

Land East of Chickenhall Lane, Eastleigh

December 2024

General

- 1.1 This technical note report has been produced as an Appendix to the Biodiversity Net Gain Report for Chickenhall Lane, Eastleigh; it should be read in conjunction with this report.

Methodology

- 1.2 The River Condition Assessment (RCA) was completed by Tiana Thomas MSc BSc, an Ecologist who is experienced in riparian surveys and accredited in conducting MoRPh1 field surveys, River Type desk studies, recording data using the RCA information system and interpreting RCA indicators and scores for baseline and post-intervention River Metric.
- 1.3 The field survey was undertaken on 4th July 2024 using the MoRPh methodology, during low flow conditions and with suitable weather conditions, being dry but cloudy throughout the survey. The desktop survey was undertaken on the 1st of July 2024.
- 1.4 There is one watercourse present within the land ownership. Barton River runs along the Eastern aspect of the blue line boundary. The strategic significance for Barton River is considered to be high as the watercourse falls within the Itchen Operational Catchment and is part of the River Itchen SSSI; SAC and is listed as a Sub-type 1 Chalk Stream and has therefore being entered into the metric as a 'priority river'.
- 1.5 Barton River has river width of 5m for most of its length with a survey length of approximately 150m within the Site boundary. This resulted in one sub-reach being surveyed, with 5 x 20m modules (MoRPh5)¹. The survey was undertaken from the right bank, working downstream.

¹ Gurnell, A et al (2020). A GUIDE TO ASSESSING RIVER CONDITION [online] Available at: <https://modularriversurvey.org/wp-content/uploads/A-GUIDE-TO-ASSESSING-RIVER-CONDITION-Jly2020.pdf>.

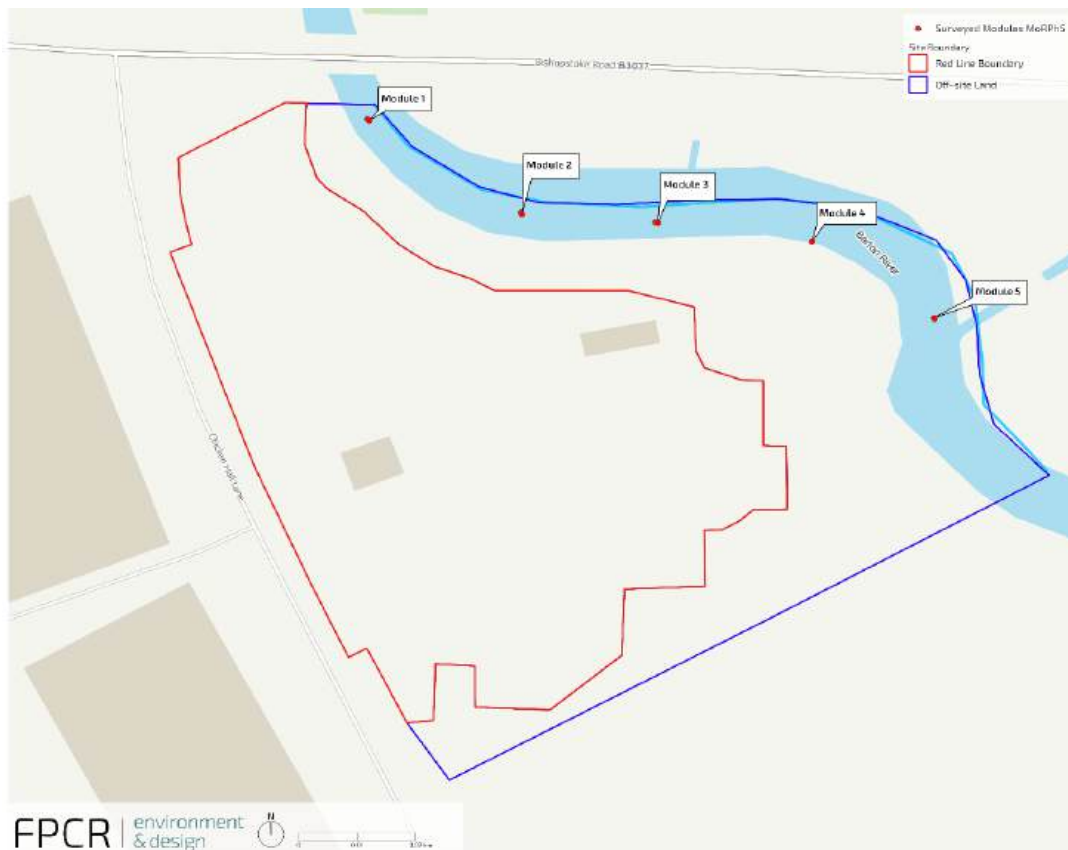


Figure 1 MoRPh5 Survey Module Locations

Results

- 1.6 Below provides the conditions class / scores for each survey section. The version of the Biodiversity Net Gain (BNG) metric used for this scheme is currently the statutory metric which requires the condition score to be adjusted based on the river shape index. Condition scores are shown in Table 1.
- 1.7 The river shape index of the surveyed sub-reach is at a level where the watercourse is considered likely to be over deep and disconnected from its floodplain.

Table 1 Final Condition class / scores for Barton River and adjusted river score.

Barton River	Preliminary Condition Score	Condition Class / Score	River Shape Index	Condition Class / Score following River Shape Index Review ²
Sub-reach 1	0.15	Moderate	2.68	Fairly Poor

- 1.8 Barton River been entered into the statutory metric as "Priority River" due to its statutory designation, the total 150m of the watercourse than runs within the site boundary is in Fairly Poor condition.
- 1.9 Barton River is straight-sinuuous with the average bed material of gravel pebble and the largest being cobble, it is therefore river type F with a sinuosity index of 1.083, indicating the watercourse is mostly straight with few meanders.
- 1.10 The watercourse is characteristic of a chalk stream, with *Apium nodiflorum* - fools' watercress and *Ranunculus aquatilis* – water crowfoot present mid channel, flowing over a gravel, pebble

² <https://modularriversurvey.org/river-shape/> [accessed 14.08.2024]

bed some areas shallower than others. Throughout the most part the bank face is gentle and steep on the left bank and steep on the right and there is a strong marginal fringe.

- 1.11 In the upstream section of the site Module 1 the water is shallow and clear as it runs over submerged cobbles passing through the bridge/road over a carpet of fool's water cress. Trees and branches have fallen into this fast-flowing stretch of water where there is a diverse range in flow. The bank face is covered in trees and scrub on both sides of the bank with areas of bare ground and short creeping herbs and ivy on the right. On the left is a bed of tall herbs and a marginal fringe comprised mostly of *Oenanthe crocata* - hemlock water dropwort,
- 1.12 As the watercourse moves downstream the left bank face remains the same with a scrubby structure as it inclines back towards the bank top, the right bank top covered in modified grassland and its bank face is comprised mostly of brambles. As the watercourse travels further downstream into module 3 onwards the bank face is only covered in herbaceous vegetation and the left is now a wooded area.
- 1.13 The watercourse becomes a lot deeper from module 2 onwards, with water crowfoot and fools water cress forming in channel vegetation and large wood has fallen into the watercourse with branches and vegetation dangling in the stream. The marginal fringe now consists of some emergent reeds as well as water dropwort growing in an amphibious manner. The water depth in the final sub-reach is well over 1m with sediment disposition being visible as the watercourse appears to have less diversity in flow, the gravel and cobble bed is now smothered in sediment, reeds grow tall on the right bank with areas of bare ground and a steep/vertical bank face showing signs of erosion from the meander. Table 2 below summarises the positive and negative scores which determine the condition score for the surveyed sub-reach in Barton River.

Table 2 Positive and Negative Scores- Barton River

Condition Assessment Criteria		RCA Index Values	
RCA Index ID	RCA Index Name Green = Positive and Red = Negative scoring indices	Baseline Score	Proposed Scores
Bank Top			
B1	Bank top vegetation structure	2	4
B2	Bank top tree feature richness	0	1
B3	Bank top water-related features	0	3
B4	Bank top NNIPS cover	0	0
B5	Bank top managed ground cover	-1	-1
Bank face			
C1	Bank face riparian vegetation structure	4	4
C2	Bank face tree feature richness	2	2
C3	Bank face natural bank profile extent	2	2
C4	Bank face natural bank profile richness	3	3
C5	Bank face natural bank material	1	1
C6	Bank face bare sediment extent	0	0
C7	Bank face artificial bank profile extent	0	0
C8	Bank face reinforcement extent	-1	-1
C9	Bank face reinforcement material	-2	-2
C10	Bank face NNIPS* cover	0	0
Channel Margin			
D1	Channel margin aquatic vegetation extent	3	3
D2	Channel margin aquatic morphotype richness	4	4
D3	Channel margin physical feature extent	1	1
D4	Channel margin physical feature	1	1

D5	Channel Margin artificial features	0	0
Channel Bed			
E1	Channel aquatic Morphotype richness	3	3
E2	Channel bed tree features richness	3	3
E3	Channel bed hydraulic features richness	3	3
E4	Channel bed natural features richness	0	0
E5	Channel bed natural features richness	0	0
E6	Channel bed material richness	3	3
E7	Channel bed siltation	-2	-2
E8	Channel bed reinforcement extent	0	0
E9	Channel bed reinforcement severity	0	0
E10	Channel bed artificial features severity	-3	-3
E11	Channel bed NNIPS extent	0	0
E12	Channel bed filamentous algae extent	0	0
Is the Watercourse Over Deep?		Yes	Yes
Final Condition Score (including overdeepness assessment)		Fairly Poor	Fairly Poor

Summary of results

Positive Indicators

- 1.14 Overall, the watercourse scored well in bank face vegetation structure and natural bank profile richness, channel margin aquatic vegetation extent and morphotype richness. The channel bed indices scored best in morphotype richness, tree feature richness, hydraulic features richness and material richness.

Negative indicators

- 1.15 The surveyed sub-reached scored worst in its negative indices for managed ground cover due to the road, additionally scoring badly for bank face reinforcement due to the bridge in module 1, channel bed artificial features due to a large trash being present in the watercourse and the bridge shadow. Additionally having low scores for bank top tree feature richness and water related features.

Encroachment

- 1.16 The first module (20m) of the watercourse is roughly 8-10m from the red-line boundary. The riparian encroachment here is major on both sides due to the watercourse being in close proximity to the road on the left bank top with the bridge crossing over Barton River itself, the land on-site to the west is managed modified grassland which is regularly mown.
- 1.17 As the watercourse moves downstream the road extends between 8-10m from the west bank top and the redline boundary lays well outside of 10m on the east, however for the whole length on the west side, the modified grassland remains mown. Therefore, the encroachment banding has been divided. For the first 20m there is major riparian encroachment on both sides, and major watercourse encroachment due to the artificial structures in channel as a result of the bridge. The following 129 metres have minor riparian encroachment on the east side where the road fades out into the distance at around 8-9m, and on the west-side there is major encroachment due to management activities. There is no watercourse encroachment for the remaining 129m within the Site ownership.

Enhancements

- 1.18 Targeted Indices

- B1 Bank top vegetation structure
- B2 Bank top tree feature richness
- B3 Bank top water-related features

- 1.19 B1: To add diversity in vegetation structure modified grassland present along the right back top will be replaced with willow/alder carr scrub. In addition to this there will be 28 small standard wetland trees planted. The willow/alder scrub will have a verge and understory vegetation to create diversity in structure. In addition to this there will be rides and glades with a herbaceous layer of vegetation running in between, therefore improving the bank-top vegetation structure, shading areas allowing moss and lichens to grow. Management of the scrub will ensure that diversity is maintained.
- 1.20 B2: Woody debris from any woodland management activities will be left to decompose naturally on the bank tops leaving log piles where possible and organic matter such as leaf litter to rot providing habitat for a plethora of wildlife.
- 1.21 B3: To boost the score for this index a bioswale will be planted with a variation of aquatic and amphibious plants with both short and tall non-woody wetland plants.

Removal of Encroachment

- 1.22 To achieve a net gain encroachment within the riparian zone for the right bank has been removed. To replace the areas of modified grassland and introduced scrub there will be willow scrub, mixed scrub and a bioswale planted with a variation of aquatic and amphibious plants with both short and tall non-woody wetland plants. Encroachment for the first 20m (Module 1) will remain as Major both in watercourse and on the left bank top due to the road outside of the site boundary. For the remaining 129m the watercourse will have minor riparian encroachment on the left bank top as mentioned previously the road will remain but there will be no in watercourse encroachment and no riparian encroachment on the right bank top.

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APPENDIX F: REPTILE SURVEY REPORT

Client

Highwood Ventures 7 Limited

Project

Land East of Chickenhall Lane, Eastleigh

Date

December 2024

CONTENTS

1.0 INTRODUCTION 1

2.0 LEGISLATION AND POLICY 2

3.0 METHODOLOGY 3

4.0 RESULTS 6

5.0 DISCUSSION AND RECOMMENDATIONS 7

TABLES

- Table 1: Reptile Survey Weather Conditions
- Table 2: Key Reptile Site Survey Assessment Categories (HGBI 1998)
- Table 3: 2024 Reptile Survey Results

FIGURES

- Figure 1: Reptile Survey Plan

Rev	Issue Status	Prepared/Date	Approved/Date
-	Draft	PJP / 03.12.2024	APD / 03.12.24

1.0 INTRODUCTION

- 1.1 The following Reptile Survey Report has been prepared by FPCR Environment and Design Ltd. on behalf of Highwood Ventures 7 Limited for the site on Land East of Chickenhall Lane, Eastleigh, Southampton, Hampshire (Central OS Grid Ref: SU 46160 19138) herein referred to as 'the Site'.
- 1.2 A suite of ecological surveys have been undertaken on the application site and this report should be read in conjunction with the Ecological Impact Assessment (EcIA, FPCR 2024).

Site Location and Context

- 1.3 The site spans an area of 0.6ha and forms part of a larger field area to the south. The site is currently largely utilised for materials storage by the landowner but a small section is managed as a hay meadow in line with the larger field area to the south. The site sits in a green corridor for the River Itchen between the large town of Eastleigh and smaller settlement of Bishopstoke.

Site Proposals

- 1.4 Full planning application for a proposed 70-bed care home (Use Class C2), associated parking, landscaping, access, drainage, and other associated works following demolition of existing structures.

2.0 LEGISLATION AND POLICY

Reptile Legislation

- 2.1 All widespread reptile species, including slow-worm *Anguis fragilis*, adder *Vipera berus*, common lizard *Zootoca vivipara* and grass snake *Natrix helvetica* are partially protected under Sections 9(1) and 9(5) of Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). This legislation protects these animals from:
- intentional killing and injury;
 - selling, offering for sale, possessing, or transporting for the purpose of sale or publishing advertisements to buy or sell a protected species.
- 2.2 The impact that this legislation has on the Planning system is outlined in ODPM 06/2005 Government Circular: Biodiversity and Geological Conservation – Statutory Obligations and their Impact within the Planning System, this states:
- 2.3 'The presence of a protected species is a material consideration when a planning authority is considering a development proposal that, if carried out, would be likely to result in harm to the species or its habitat. Local authorities should consult English Nature [now Natural England] before granting planning permission. They should consider attaching appropriate planning conditions or entering into planning obligations under which the developer would take steps to secure the long-term protection of the species. They should also advise developers that they must comply with any statutory species' protection provisions affecting the site concerned.'
- 2.4 This partial protection does not directly protect the habitat of these reptile species. Where these animals are present on land that is to be affected by development, the implications of legislation are that providing that killing can reasonably be avoided then an operation is legal. Guidance provided by Natural England¹ and the Amphibian and Reptile Groups of the UK² recommends that this should be achieved by ensuring that:
- the animals are protected from injury or killing;
 - mitigation is provided to maintain the conservation status of the species; and
 - population monitoring is carried out subsequent to operations.

¹ Reptiles: guidelines for developers, English Nature (2004).

<http://publications.naturalengland.org.uk/publication/76006?category=31018>

² Maintaining best practise in reptile mitigation/translocation programmes: Herpetofauna Groups of Britain and Ireland.

http://www.arguk.org/index.php?option=com_docman&task=cat_view&gid=13&Itemid=17

3.0 METHODOLOGY

Desk Study

- 3.1 In order to compile existing baseline information, relevant ecological information was requested from both statutory and non-statutory nature conservation organisations including:
- Hampshire Biological Information Centre (HBIC);
 - Multi Agency Geographic Information for the Countryside (MAGIC) website (www.magic.defra.gov.uk); and
- 3.2 Further inspection of colour 1:25,000 OS base maps (www.ordnancesurvey.co.uk) and aerial photographs from Google Earth (www.maps.google.co.uk) was also undertaken in order to provide additional context and identify any features of potential importance for nature conservation in the wider countryside.
- 3.3 The search area for biodiversity information was related to the significance of sites and species and potential zones of influence, as follows:
- 10km around the application area for sites of International Importance (e.g. Special Areas of Conservation (SACs), Special Protection Areas (SPAs), Ramsar sites).
 - 2km around the application area for sites of National or Regional Importance (e.g. Sites of Special Scientific Interest (SSSIs) and species records (e.g. protected, Local Biodiversity Action Plan (LBAP) or notable species).
 - 1km around the application site for sites of County Importance (e.g. Biological Heritage Sites Local Wildlife Sites(LWS)).
- 3.4 When handling data, species data were filtered to include records from the previous ten years only.

Reptile Survey

- 3.10 The survey methodology was based on that detailed in the *Herpetofauna Workers Manual*³ and the *Froglife Advice Sheet 10 - Reptile Survey*⁴. Methods involved a search for basking reptiles on/under naturally occurring and strategically positioned artificial refugia. The artificial refugia used were 0.5m² sections of bitumen roofing felt with a black upper side. These were placed in areas of suitable habitat on 22nd April 2024 and allowed to 'bed down' prior to the first survey visit.
- 3.11 In line with guidance, refugia were installed at a minimum density of five refugia per hectare of suitable habitat (a greater density than this was used to further increase the likelihood of detection).

³ Herpetofauna Workers Manual, Gent and Gibson (1999). JNCC

⁴ Froglife Advice Sheet 10: An introduction to planning, conducting and interpreting surveys for snake and lizard conservation [Froglife Advice Sheet 9 \(wildcare.co.uk\)](http://www.wildcare.co.uk)

3.12 Survey visits were undertaken under suitable weather conditions i.e. air temperature between 10-18°C, no strong wind or heavy rain. The surveys also followed the guidelines recommendations by approaching refugia from downwind and avoiding casting a shadow and with care so as to not to harm or disturb basking animals when checking.

3.13 Four reptile presence/absence surveys have been undertaken in line with current survey methodology. Figure 1 Reptile Survey Plan provides the locations of the refugia.

Timings/Conditions

3.14 The following are the weather conditions and timings for reptile surveys on site, provided in *Table 1* below. Surveys were conducted before 10:30am (AM survey) or after 16:30pm (PM survey); however, when there were high temperatures in the survey period the start/finish times were moved to ensure the ambient air temperature during the survey never exceeded 20°C.

Table 1: Reptile Survey Weather Conditions

Survey Occasion	Date	AM or PM survey	Weather conditions
1	02.05.2024	AM	90-100% cloud cover, 17°C, 1-2 BF, drizzle, overcast
2	23.05.2024	PM	20-30% cloud cover, 17°C, 3-4 BF, clear, partial cloud
3	07.06.2024	AM	30-40% cloud cover, 16°C, 1-2 BF, bright, sunny
4	21.06.2024	AM	90-100% cloud cover, 15°C, 1-2 BF, bright
5	12.09.2024	PM	80-90% cloud cover, 13°C, 1-2 BF, bright, sunny
6	19.09.2024	AM	20-30% cloud cover, 14°C, 0-1BF, partially cloudy, humid.
7	04.10.2024	PM	40-50% cloud cover, 14°C, 1-2 BF, clear, sunny

Population Assessment

3.15 Reptile populations are assessed in accordance with population level criteria as stated in the Key Reptile Site Register. This system classifies populations of individual reptile species into three population categories assessing the importance of the population (*Table 2*). These categories are based on the total number of adult animals observed during individual survey occasions.

Table 2: Key Reptile Site Survey Assessment Categories (HGBI 1998)

Species	Low Population (No. of individuals)	Good Population	Species
Adder	<5	5 - 10	>10
Common lizard	<5	5 - 20	>20
Grass snake	<5	5 - 10	>10
Slow worm	<5	5 - 20	>20

Limitations/notes

3.16 There were no limitations to the surveys.

4.0 RESULTS

Desk Study

- 4.1 There were no sites designated for reptiles within the Desktop Study Area.

Reptile Records

- 4.2 HBIC returned one reptile record from the last 10 years within 1km; one record of slow worm located to the north-west of the Site.

Habitats

- 4.3 Habitats on site comprise the northern extent of a modified grassland field, with patches of ruderal vegetation, introduced shrub (shelter belt), and standard trees. Habitats suitable for reptiles were limited to ruderal vegetation, hedgerow bases, and marginal habitat along the river edge. The northern edge of the site is demarcated by the River Itchen, which passes along the northern boundary. Native species hedgerows bound the site along its western and northwestern sides. Both the hedgerows and the river corridor provide connectivity to habitats across the Site and in the immediate locality.

Reptile Survey

- 4.4 Three juvenile grass snakes were found during the surveys, all of them were found in the grassland margin adjacent to the riverbank, along in the northern edge of the site. One adult common lizard was also identified, also from along marginal vegetation along the river. *Table 3* below presents the findings of the reptile surveys with locations of refugia, and reptile sightings shown on *Figure 1*.

Table 3: 2024 Reptile Survey Results

Date	Reptile Species	
	Common lizard	Grass snake
02.05.2024	0	2 x juvenile
23.05.2024	1 x adult	1 x juvenile
07.06.2024	0	0
21.06.2024	0	0
12.09.2024	0	0
19.09.2024	0	0
04.10.2024	0	0

5.0 DISCUSSION AND RECOMMENDATIONS

- 5.1 The grassland habitats along the hedgerow to the west of the site, and the riparian margins along the north of the site, provided good foraging habitats for reptiles, albeit limited in extent, along with patchy areas of shrub and ruderal vegetation. The bulk of the field is cultivated and managed as modified grassland and was considered to be of low suitability for reptiles. Pre-existing areas of hardstanding and the disused changing room buildings were of little to no value to reptiles.
- 5.2 The number of grass snakes and common lizards observed has been assessed in accordance with population level criteria, as stated in the Key Reptile Site Register. A peak count of one adult common lizard, and two juvenile grass snakes, were recorded; these are classed as a 'Low' population, falling within the lower band (<5 individuals). Given the presence of juvenile grass snakes, it is likely a low population is breeding on, or nearby, the site.
- 5.3 Despite the 'Low' population of reptiles observed during the survey, and the location of observations, there is potential for an adverse impact on reptile populations caused by:
- loss of habitat through vegetation clearance; and
 - incidental harm during the works to carry out the proposed development.
- 5.4 Mitigation measures are recommended which aim to ensure that reptiles are not killed or injured during works and that their local conservation status is maintained. This includes passively moving reptiles into retained habitat by removing vegetation in stages during the active period (March – September inclusive) to allow reptiles to disperse of their own accord. A passive displacement method statement would be outlined within a CEMP, that would be secured through an appropriately worded condition to ensure reptiles are not harmed or killed during any vegetation clearance works. Once cleared, the site will be maintained to ensure reptile habitat does not re-establish and to discourage reptiles from recolonising.
- 5.5 Marginal habitat along the river edge will be retained within a buffer zone, and will be protected with a reptile exclusion fence to prevent reptiles which have been displaced and/or moved during vegetation clearance, from recolonising the working areas.
- 5.6 The loss of grassland habitat will inevitably reduce the availability of foraging habitat present for reptile species. To mitigate for this, the proposals include extensive habitat creation and enhancement measures within the river buffer zone, including species-rich wildflower grasslands and mixed native/ornamental scrub habitat. Creation of two reptile hibernacula will be incorporated into the river buffer zone to enhance the habitat for reptiles. The resulting mosaic of habitats will provide optimal breeding, foraging and shelter habitat for the existing low populations of reptiles.
- 5.7 Existing hedgerows along the western boundary will be buffered with wildflower grassland, maintaining their function as corridors for reptiles to move across the Site.
- 5.8 It is therefore considered that the proposals will result in positive effects on the local reptiles population, providing extensive areas of optimal habitat for the low slow worm population recorded and provided optimal habitat for other reptile species to colonise the Site.

Enhancement

- 5.9 There are several enhancements designed into the scheme that will benefit reptiles post-development. These include:
- Wildflower grassland creation at the site boundaries,
 - The boundaries will be enhanced with tree and shrub planting, creating a mosaic of structures and improving connectivity around the site,
 - Two hibernacula created within the GI will provide additional sheltering opportunities for reptile (and amphibian) species.
- 5.10 It is recommended that two hibernacula are provided, both within the GI that forms the river buffer along the north of the site, near to the location of the reptile (common lizard and grass snake) sightings. These should have a rubble/brick base, overlaid with mounded earth that will be allowed to colonise naturally with vegetation.

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APPENDIX G: SITE PHOTOGRAPHS



Photo 1 – View east across other neutral grassland



Photo 2 – View of H1



Photo 3 – Other neutral grassland/modified grassland field compartment



Photo 4 – Building B1



Photo 5 – View of River Barton



Photo 6 – View of modified grassland along river Barton edge



Photo 7- Modified grassland in northern field parcel



Photo 8- Cherry laurel and tree shelter belt