

Protected Species Report

Fallows Way

Allied Properties Ltd

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Executive Summary

Hilson Moran were commissioned by Allied Properties Ltd to undertake an Ecological Appraisal of land off Fallows Way, Whiston Lane Ends, Huyton, Knowsley. This comprised a desk study, Phase 1 Habitat Survey, eDNA survey, botanical survey, invertebrate survey, reptile survey and transect surveys of the site to support species of conservation concern or other species which could present a constraint to the development of the site.

The proposals include the removal of vegetation on site to facilitate the construction of five buildings with associated hardstanding and landscaping.

The site is approximately 1.48ha in size and comprises a line of trees, ditch, introduced shrub, lowland mixed deciduous woodland, modified grassland, other neutral grassland and other woodland 'broadleaved'. Japanese knotweed (*Reynoutria japonica*), synonym *Fallopia japonica* was identified on site, in addition to cotoneaster and laurel species which are also listed on Schedule 9 Non-Native Invasive species. Consultation with invasive weed specialists would be required.

Dune helleborine (*Epipactis dunensis*) plants were found within w1g Other broadleaved woodland, a count of 34 plants, in an area otherwise dominated by *Populus x jackii* over an area of approximately 40m x 10m around the central grid reference SJ 46218 90154. Dune helleborine are a nationally scarce endemic, Local Biodiversity Action Plan (LBAP) species for North Merseyside, the 5th inland record for the South Lancashire Vice County, and an internationally important species. Detailed discussions with a specialist botanist would be required for the protection of the species.

The site falls within the Site of Special Scientific Interest (SSSI) Impact Risk Zones in regard to drainage matters, therefore drainage consultants input will be required.

The proposed development has the potential to support a number of protected and notable species including:

- Due to the close proximity of the adjacent Country Park, a Construction and Environmental Management Plan (CEMP) should be conditioned and produced. The CEMP will detail protection measures, and pre/during clearance ecology checks for protected species or additional Invasive species.
- eDNA surveys for Great Crested Newt (GCN) (*Triturus cristatus*) was undertaken and concluded with a negative result. However, during the reptile surveys, numerous smooth newts (*Lissotriton vulgaris*), frogs (*Rana temporaria*) and toads (*Bufo bufo*) were identified on site.
- Reptile surveys – during seven visits from June to September 2023, no reptiles were identified during the survey effort. White eggs were found on site, which could indicate the presence of grass snakes (*Natrix natrix*). A precautionary method of works is required to ensure no fauna is harmed during the proposed works.

At present, the proposals result in -14.05 net loss with 100% loss of biodiversity based on the proposed plans.

The potential value at the site for invertebrates is along the boundaries where there is increased structural complexity owing to the scrub-fringe interface with ruderals and the field layer. The value though is still low to moderate, and only for common and typical species of woodland edge and scrub fringes. It is considered unlikely that any species of conservation significance would be recorded from this feature or the wider site.

1. Introduction

1.1. Background

Hilson Moran has been commissioned by Allied Properties Ltd to complete an ecological appraisal of the Land at Fallows Way, Whiston Lane Ends, Huyton, Knowsley, Liverpool City (Grid Reference SJ 46205 90217). The location is identified in Figure 1-1.



Figure 1-1 Land at Fallows Way Site Location (contains Ordnance Survey data © Crown copyright and database right 2022)

The proposal is for the development of four commercial buildings with the associated infrastructure and soft landscaping.

1.2. Purpose

To undertake an assessment of the potential ecological impact of the proposals, a desk study, Phase 1 Habitat survey and suite of protected species surveys have been conducted.

1.3. Scope

- Undertake an updated desk-based review of designated sites and records of protected species and other species that could present a constraint;
- Map and assess the habitats present on site;
- Assess the site for potential to support protected species or other species that could present a constraint, and make appropriate recommendations for further survey work, if necessary;
- Provide outline options for mitigation measures as appropriate; and

- Make recommendations for appropriate biodiversity enhancements in line with national and local planning policy.

1.4. Structure

Following this introductory section, a brief overview of the relevant legislation and planning policy framework is given in Section 2. Section 3 summarises the methodology applied in the surveys and Section 4 details the baseline in biodiversity terms based on the findings of the desk-study and field surveys. Section 5 presents a discussion of the potential implications from the development upon biodiversity features present and recommendations for mitigation.

Appendices and references can be found at the end of the document, with document control information included at the front.

1.5. Declaration of Conformity

The surveys and assessments have been overseen, led and verified by full members of CIEEM who are bound by its code of professional conduct. All surveys and assessments have been undertaken with reference to the recommendations given in British Standard BS 42020, and as stated within specialist guidance, as appropriate, and are referenced separately. On site surveys have been undertaken by:

Joe McLaughlin BSc (Hons) MCIEEM has extensive experience in surveys and site assessment for habitats and protected species and is appropriately qualified for this type of survey. Joe is also registered to use personal class licences (level 2) to survey for bats and great crested newts.

Josh Styles BSc, MS, MCIEEM has extensive experience in botany with FISC Level 6. Andy Jukes specialist Invertebrate surveyor with over 20 years' experience. Ceridwyn Adkins BSc (Hons) who has been an ecologist for 14 years, and who also holds Natural England Licences for bats and GCN (Level 2).

Due to the sensitive nature of the licence numbers, these can be supplied separately and should not be available in the public domain.

I confirm that the field survey and reporting has been completed in accordance with best practice principles outlined by CIEEM and is an accurate and realistic assessment of site conditions and potential enhancement works. The report complies with the CIEEM Code of Conduct, British Standard 42020 and BREEAM criteria.

1.6. Disclaimer

This report has been prepared on behalf of and for the exclusive use of Allies Properties Ltd for whom the services were undertaken and is subject to and issued in connection with the provisions of the agreement set out by Hilson Moran Partnership Ltd. Hilson Moran Partnership Ltd accepts no liability or responsibility whatsoever for or in respect of any use of or reliance upon this report by any third party. Furthermore, this report is subject to the following limitations:

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2. Legislative and Policy Context

This report has been prepared with due regard and consideration to applicable legislation and national and local planning policy. Detailed information regarding these documents is provided in Appendix A.

2.1. Legislation

Legislative protection is afforded to a range of sites, habitats and species through a number of national statutes. The principal means by which features of biodiversity interest are protected are:

- The Environment Act 2021¹;
- The Conservation of Habitats and Species Regulations 2017 (as amended)²;
- The Wildlife and Countryside Act 1981 (as amended)³;
- The Countryside and Rights of Way (CROW) Act 2000⁴; and,
- The Natural Environment and Rural Communities (NERC) Act 2006⁵.

The various national legislative statutes, including those identified above, provide protection to a range of ecologically significant sites and species. The legislative protection for the different sites and different species varies according to their sensitivity, rarity and the scale at which they are intrinsically valuable. Those of relevance to this assessment including: Local Nature Reserve (LNR), breeding birds, bats and plant species. Full details of the legislative protection for these sites and species are listed in Appendix A.

Additional sites of ecological importance can be identified by the local authority, such as Sites of Borough Importance for Nature Conservation, however these are not statutorily protected.

The Environment Act 2021 makes provision for targets, plans and policies for improving the natural environment. Section 98 in Part 6 of the Act makes provision for biodiversity gain to be a condition of planning permission, with Schedule 14 identifying the objective being at least 10 % when comparing the post-development site to the pre-development site. However, as planning permission was granted for the development prior to the being passed into statute, and completion of the transitional period of 2 years, it is not considered relevant for this appraisal.

2.2. Planning Policy

2.2.1. National

The National Planning Policy Framework (NPPF)⁶ sets out policies which will apply to the preparation of local plans, and to development management decisions. The framework sets out the Government's economic, environmental and social planning policies for England. Taken together, these policies articulate the Government's vision of sustainable development, which should be interpreted and applied locally to meet local aspirations.

The NPPF is supported by planning practice guidance⁷, which provides further information on key issues in the implementation of policies identified in the NPPF. Further information on the NPPF and supporting planning practice guidance are given in Appendix A.

2.2.2. Local

Local planning policy for the development site is provided by the Local Plan for Knowsley⁸, which was adopted in January 2016. The Local Plan Core Strategy sets out the vision, objectives and policies which will guide development within Knowsley up to the year 2028. The vision for Knowsley is that *“by 2028, Knowsley Borough will be known for its successful suburban townships that provide a sense of place and community, having sustainable, diverse, more prosperous and healthy populations”* and that *“Knowsley’s areas of environmental importance, including sites of biodiversity and geological value, together with buildings, structures and areas of historic and cultural importance will be protected, managed and enhanced, to ensure a positive contribution to Knowsley’s environmental quality and distinctiveness”*.

Strategic objectives have been set to identify the priorities in more detail with Strategic Objective 8 on Green Infrastructure and Rural Areas of most relevance to development of the site: *“to support and strengthen the role of Knowsley’s Green Infrastructure (in rural and urban areas), promote biodiversity [...]”*. The site is identified in the Local Plan for redevelopment for industrial and commercial development (Policy CS4: Economy and Employment). In addition to this, the following policies are of relevance to the assessment:

- Policy CS2: Development Principles;
- Policy CS8: Green Infrastructure;
- Policy CS19: Design Quality and Accessibility in New Development
- Policy CS21: Greenspaces and Trees

2.3. Biodiversity Action Plans

2.3.1. National

The UK BAP has been replaced by the Post-2010 Biodiversity Framework⁹, which addresses the changes in the strategic thinking of the Convention on Biological Diversity’s Strategic Plan for Biodiversity 2011 – 2020. The new Framework includes new priorities for UK-level work for the convention on Biological Diversity and provides a broad structure to enable action across the UK.

Whilst the BAP has been replaced, the UK priority habitat and species continue to be regarded as conservation priorities in the UK Post-2010 Biodiversity Framework¹⁰.

The UK BAP identifies 65 habitats and 1,150 species that are considered to be of conservation concern.

2.3.2. Local

The North Merseyside Biodiversity Action Plan¹¹, hosted by Mersey BioBank, aims to help local people become more aware of the area’s natural environment and the issues facing it. The Plan is not a single published document, instead a number of individual Habitat and Species Action Plans and a Business Plan. At present, there are a total of 44 habitat and species action plans, with the following considered to be of potential relevance to the assessment:

Habitats	Species
Mixed broadleaf woodland	Song thrush
Urban grasslands	Urban birds
Ponds	Bats
	Common lizard
	Great crested newt

3. Methodology

3.1. British Standard 42020: Biodiversity- Code of Practice for Planning and Development

These surveys and reporting has been completed in line with, and with reference to, British Standard (BS) 42020: Biodiversity- Code of Practice For Planning and Development¹². BS 42020 was developed to bridge the gap between specific best practice guidelines and professional Codes of Conduct and build upon relevant legislation and policy relating to biodiversity.

BS 42020 provides a framework for the assessment of biodiversity and recommendations for the content and detail of reporting on biodiversity features with the aim of improving standards within the profession. This ecological appraisal, including reporting, has been produced in consideration of and compliance with BS 42020.

3.2. Desk Study

The ecological records obtained as part of this assessment within a 2 km radius of the site were analysed, using online records. The analysis of data requests was limited to records for protected species recorded within the last ten years and sites of nature conservation interest within 2 km of the site. This included a review of existing statutory sites of nature conservation interest, such as Sites of Special Scientific Interest (SSSIs), Special Protection Areas (SPAs), Special Area of Conservation (SACs) and National Nature Reserves (NNRs). A 1:25,000 OS map was used to identify nearby features such as ponds or green corridors that could provide habitat or connectivity to other areas. Natural England's bat and GCN class licence return data.

3.3. UKHab Survey

The site was surveyed to determine the presence of any Section 41 (S. 41) habitats such as native species-rich hedgerows, woodland, ponds etc.

A UKHab survey was undertaken by Joshua Styles MSc AMRSB MCIEEM FISC Level 6 on 10th July 2023 during light rain with 100% cloud coverage, where temperatures reached 19 degrees Celsius. The survey was undertaken via a site walkover where all primary habitat types were recorded to Level 4 or above wherever possible. In addition, relevant secondary codes to accompany discrete primary habitat types were also identified.

Once primary habitat types were identified, they were each condition assessed using the Biodiversity Metric 4.0 condition sheets using appropriate, corresponding condition criteria for each habitat where applicable. Habitats not subjected to condition assessment included felled woodland where condition must be assumed to be good, and areas of u1c Developed land; sealed surface where condition assessment is not applicable.

3.4. Protected Species Assessments

A protected species scoping survey was carried out in conjunction with the Phase 1 Habitat survey. The site was assessed for its suitability to support protected species, in particular bats, birds, GCN, otters, reptiles, badgers, and other species of conservation importance that could pose a planning constraint.

3.4.1. Daytime Bat Assessment

The trees present on the site which may be affected by the proposed works were visually inspected and potentially suitable entry / exit points for bats such as holes and crevices were noted together with any evidence of bat presence such as droppings or feeding remains. Following standard best practice methodology¹³, each tree, which is to be affected by works, was classified either as confirmed roost, high, medium, low or negligible potential, which informs the need for any further survey effort of any nocturnal surveys required.

3.4.2. Transect Survey

The Site was assessed as having low potential for foraging and commuting bats following the BCT Guidelines¹³; therefore, bat activity surveys including transect surveys were undertaken between April, May and June 2023. During each survey, a bat activity transect was walked within the Site in order to assess levels of bat activity across a temporal and spatial survey period. The transect was walked at a steady pace, stopping at predetermined intervals (point counts) for five minutes at a time. These locations were distributed across the Site to cover all habitats present. Species identification was made based on the characteristics of the call including peak frequency, minimum and maximum frequency, call duration and inter-pulse intervals. Where possible, flight characteristics and foraging behaviour of individual bats were also used to aid in species identification, allowing some *Myotis spp.* individuals to be classified to species level during manual transects. All bat passes were recorded, and all bats were identified to species level, where possible on site. Echolocation calls were subsequently analysed using software (Kaleidoscope/ BatExplorer) for confirmation of species. Where possible, additional notes on size, flight height, types of flight (such as commuting, foraging) and direction of flight were also recorded.

3.4.3. Assessing Value of Commuting Routes and Foraging Areas for Bats

An assessment of the value of the Site in terms of commuting and foraging routes for bats has been undertaken in line with appropriate guidance¹⁴. The guidance provides a scoring system and assesses each bat species at the Site in terms of rarity against various factors including the presence/potential presence of bat roosts, habitat types at the Site, in order to determine the value of the Site at a geographical scale. Each bat species is assessed in terms of rarity and given a corresponding score.

3.4.4. Reptile Surveys

The field survey methodology has been devised in accordance with the requirements of all relevant legislation and good practice guidance, including the Reptile Management Handbook¹⁵, the Herpetofauna Workers' Manual¹⁶ and Advice Sheet 10¹⁷. The number of artificial refugia used for surveying is reliant upon many factors, such as the likelihood of disturbance and the size of the area. In general, the more artificial refugia used, the greater the chance of recording reptiles (and the larger number of reptiles seen) present. For general survey purposes, 5-10 refugia (consisting of 0.5m x 0.5m roofing felt tiles) per hectare is considered appropriate¹⁷. A total of 28 artificial refugia, at a minimum density of 5 tiles per ha. In addition to the artificial refugia, natural refugia (logs and stones) and semi-natural refugia (such as anthropogenic material that have been in place for a significant time to allow complete homogeneity with their surroundings) were identified as potentially suitable for use by reptiles. Refugia tiles were left to settle for a minimum period of 14 days before being checked for the first time. Refugia were visited seven times during the survey period during suitable weather conditions as defined by relevant guidance. Surveys were carried out during optimum temperature and weather conditions (intermittent sunshine, temperatures between 9°C and 18°C with low winds). The ideal time to carry out surveys is between the hours of 9am and 11am and 4pm and 7pm when reptiles have not reached their optimum temperature and so are more easily observed. Sunshine immediately after rain is also suitable at any time of the day so long as the temperature is greater than 9°C.

3.4.5. Reptile Population Assessment

A categorical population assessment was carried out with the largest count within the first seven visits indicating the category (low, good or exceptional) of the recorded reptile species. This survey methodology is recognised as best practice by Froglife¹⁷ and the Herpetofauna Workers Manual¹⁶. As described above, following guidelines set out by Froglife¹⁷ it is possible to assess the population size using the maximum number of adult animals seen per survey visit. This method is based on refugees being placed at a density of up to 5/ha.

Table 3-1 Population density in reptiles

Species	Low Population	Good Population	Exceptional Population
Grass Snake (<i>Natrix natrix</i>)	<5	5-10	>10
Common lizard (<i>Zootoca vivipara</i>)	<5	5-20	>20
Slow-worm (<i>Anguis fragilis</i>)	<5	5-20	>20

3.4.6. Invertebrate Surveys

An initial scoping visit to the Site was carried out in April 2023 to assess the quality of habitats present with regards to invertebrates. This scoping visit was then used to inform the sampling strategy used. The assessment appraised the key habitats and/or features

of the Site through the recording of invertebrates. The data are used to assess the value to invertebrates of those habitats or features in order to evaluate the site for its importance as an invertebrate resource. From the collection of data and subsequent assessment and valuation, suitable recommendations could then be put forward in the event that some or all of those features or key habitats may be impacted by a proposed development. The methods used for the assessment are those recommended in the Natural England guidance document Surveying Terrestrial and Freshwater Invertebrates for Conservation Evaluation¹⁸. In some instances, a bespoke method has been created for the site assessment but still retains the overall approach to assessing features and habitats for conservation assessment. The bespoke methods relate to the extent of the free-ranging sampling. This prioritised features that showed obvious interest, such as the tufa seepages and short sward and scrub fringe features.

3.4.7. eDNA

An eDNA survey of the ponds was undertaken to determine presence / likely absence of GCN. eDNA surveys are a highly accurate means of detecting GCN in water bodies by taking samples from the water column and extracting the DNA in a laboratory under controlled conditions. This gives a highly confident assessment as to whether newts have been present within the pond. eDNA surveys were undertaken in accordance with DEFRA Guidance¹⁹, with sampling kits and lab analysis provided by ADAS.

3.4.8. Impact Assessment

The ecological impact assessment is based on the standard best practice methodology provided by the Guidelines for Ecological impact Assessment²⁰. The assessment identifies important sites, habitats, species and other ecological features that are of conservation value based on factors such as legal protection, statutory or local site designations such as Sites of Special Scientific Interest (SSSI) or Local Wildlife Sites (LWS) or inclusion on Red Data Book Lists or Local Biodiversity Action Plans. The importance of an ecological feature is considered within a defined geographical context. The following frame of reference is used, or adapted to suit local circumstances:

- International and European
- National (England)
- Regional (North-West)
- County (Liverpool City)
- District (Knowsley)
- Local (Huyton)
- Below Local Level: Site Level Only.

Consideration of impacts at all scales is important, and essential if objectives for no net loss of biodiversity and maintenance of healthy ecosystems are to be achieved. In identifying impacts, the review considers the Client's Site proposals and any subsequent recommendations made are proportionate / appropriate to the site and have considered the Mitigation Hierarchy as identified below:

- **Avoid:** Provide advice on how the development may proceed by avoiding impacts to any species or sites by either consideration of site design or identification of an alternative option.
- **Mitigate:** Where avoidance cannot be implemented mitigation proposals are put forward to minimise impacts to species or sites as a result of the proposals. Mitigation put forward is proportionate to the site.
- **Compensate:** Where avoidance cannot be achieved any mitigation strategy will consider the requirements for site compensatory measures.
- **Enhance:** The assessment refers to planning policy guidance (e.g. NPPF) to relate the ecological value of the site and identify appropriate and proportionate ecological enhancement in line with both national and local policy

Effects are considered significant at the range of scales from international to local. A significant effect is an effect that is sufficiently important to require assessment and reporting so that the ecological consequences of the project are understood. In broad terms, significant effects encompass impacts on structure and function of defined sites, habitats or ecosystems and the conservation status of habitats and species (including extent, abundance and distribution).

3.5. Limitation

The methods employed for the completion of the ecological assessment are not considered to give rise to any significant limitations, following best practice guidance and utilising up-to-date information.

All surveys were undertaken in suitable weather conditions.

The absence of any particular species within the survey area should not be taken as conclusive evidence that the species is not present or that it will not be present in the future. The results of these bird surveys give an indication of the use of the survey area by breeding bird species at the time of survey.

3.5.1. Desk Study

A biological records data search has not been undertaken. However, given the location of the site, the nature of the habitats present and the assessed suitability of the site for protected or notable species, it is not anticipated that the purchase of biological records data will add any significant weight or alter the conclusions and recommendations outlined in this report.

3.5.2. Phase 1 Survey

Ecological surveys are limited by factors that affect the presence of plants and animals such as time of year, weather, migration patterns and behaviour. The survey was undertaken in December, outside the optimal survey season. As detailed further in the report, further surveys are recommended, this would then negate the current limitations.

Dense vegetation was present along the peripheries of the site and surrounding the ditch. Dense leaf litter and bramble restricted ground flora identification along with evidence of rabbit grazing on site. Urban debris was present throughout the site.

The report is not designed, nor is it required to present a complete inventory of flora and fauna or NVC surveys. The survey team comprised suitably qualified ecologists with good plant identification skills, these ecologists were not skilled in bryophyte or fungal identification; therefore, these elements were not included within the Phase 1 Habitat Survey.

The species lists are not intended to be exhaustive but rather provide a representative list of the botanical composition of the grassland. Nevertheless, the survey covered the entire site in detail. The survey was undertaken towards the end of the optimal period of grassland botanical survey work, and as such species which appear early in the season may not have been visible.

3.5.3. Bat Surveys

Due to the site being cleared prior to the surveys, it was deemed unsafe to enter the site during the April survey therefore, the route included the peripheries of the site, where access allowed.

Due to the open nature of the site, it is considered unsafe to undertake static monitoring surveys.

Fallows Way itself currently has lighting in place along the road and warehouses.

The bat surveys were completed with the assistance of bat detectors. Surveys using bat detectors have an advantage over other methodologies (such as radio tracking or trapping) in that they are 'non-intrusive' and will therefore not have an adverse effect on the conservation status or welfare of bats. However, all survey techniques for bats are subject to bias and bat detector surveys may under-record species with weak echolocation calls, such as brown long-eared bats. Bats from the *Myotis* genus can be difficult to identify to species from call structure alone²¹.

3.5.4. Reptile Surveys

Surveys were due to start in April, due to the site clearance, reptile surveys were undertaken in September, when vegetation had an opportunity to re-colonise.

Vegetation re-colonised and became dense in areas with numerous saplings. During heavy winds in September numerous saplings fell and created an access issue to parts of the site and blocked some of the reptile refugia.

Additional surveys were undertaken which have not been included in the survey dates and weather above as the weather temperatures exceeded the optimal temperatures for reptiles.

Reptile surveys were conducted in June, July, August and September. Given the numerous records reported within the study area and suitable habitat on site, it is considered that the timeframe has not been a limiting factor to the survey effort.

3.5.5. Invertebrate Surveys

Prior to the surveys starting in April, a route through the site was excavated as part of the ground investigation works which cleared the majority of the grassland, scrub and sapling

habitat within the centre of the site, therefore, removing suitable habitat for invertebrate species. It is planned that additional surveys will be undertaken this season to negate these limitations.

4. Baseline

4.1. Desk Study

4.1.1. Statutory and Non-Statutory Designated Sites

No Designated sites were identified within the search radius.

The Site falls within the SSSI Impact Risk Zones: “Any discharge of water or liquid waste of more than 20m³/day to ground (i.e. to seep away) or to surface water, such as a beck or stream”. Input from the drainage consultant will be required to ascertain if the above is relevant to the proposed development.

Stadt Moers Park Country Park is on the northern boundary of the proposed development and covers more than 90 ha of land between Whiston and Huyton, including meadow, woodland and pond habitats, set amongst a network of footpaths. The development of the Park has been an ambitious project in the heart of Knowsley to transform formerly derelict land into the largest area of public open space in the Borough.

At present, the entire site is classed as ‘Priority Habitat Inventory - Deciduous Woodland’ on the DEFRA website.

4.1.2. Protected and Ecologically Significant Species

One protected species licence was returned within the study area:

- EPSM2013-5867 for destruction of a resting place for C-PIP;S-PIP;BLE;NATT in 2013-2014. Located 1.2km south of the site boundary.

4.2. Field Survey

4.2.1. Habitats

The following sections describe the habitats that were identified in the field survey area according to the UKHab classification definitions and following CIEEM best practice guidance. The habitat descriptions should be read in conjunction with the UKHab classification survey map (Figure 4-1) identifying the area-based and linear point habitats/features, with secondary codes identified in Table 4-1 below. Site photographs are included in Appendix B.



Figure 4-1 UK Habitat Classification Map

Table 4-1 UK Habitat Classification Secondary Codes Identified on Site

Code	Description	Code	Description
10	Scattered Shrub	53	Felled
11	Scattered Trees	73	Bare ground
14	Scattered Rushes	77	Neglected
17	Ruderal/Ephemeral	132	Nutrient-poor substrate
37	Semi-natural Woodland	1160	Introduced Shrub
38	Secondary Woodland		

w- Woodland and Forest

w1d- Wet Woodland

This area of woodland is dominated by alder (*Alnus glutinosa*), with grey willow (*Salix cinerea*) forming an occasional to rare component of the canopy vegetation. Understorey vegetation is dominated principally by bramble (*Rubus fruticosus agg.*) with occasional hard rush (*Juncus inflexus*), common nettle (*Urtica dioica*), aster (*Aster sp.*), silverweed (*Argentina anserina*), Yorkshire-fog (*Holcus lanatus*) and great willowherb (*Epilobium hirsutum*). While this woodland is relatively recent in origin, both alder and common nettle are constant to frequent components of the stand which is most closely affiliated with a W6 *Alnus glutinosa* – *Urtica dioica* wet woodland. While some species present are atypical for W6 woodland such as hard rush, silverweed and aster sp., these are likely a vestige of transition into woodland from the previous habitat type which is likely to have been a mix of MG10 mesotrophic grassland and scrub. The woodland was assessed to be in poor condition.

w1f- Lowland broadleaved mixed deciduous woodland 1

A small area of semi-natural W10 *Quercus robur* – *Pteridium aquilinum* – *Rubus fruticosus* woodland exists to the far west of the site and is characterised by a mixed canopy of native broadleaved trees, dominated by the native hybrid oak *Quercus x rosacea* and pedunculate oak (*Quercus robur*). Other trees which form an occasional to rare component of the canopy includes ash (*Fraxinus excelsior*), downy birch (*Betula pubescens*), goat willow (*Salix caprea*) and field maple (*Acer campestre*). The scrub layer is dominated by shrubs characteristic of W10 woodland, namely elder (*Sambucus nigra*) and hazel (*Corylus avellana*), while the ground layer is characteristically species-poor and dominated by bramble. Other forbs which occur occasionally include: herb-Robert (*Geranium robertianum*), broad buckler-fern (*Dryopteris dilatata*), male fern (*D. filix-mas*), broadleaved willowherb (*Epilobium montanum*), wild raspberry (*Rubus idaeus*), wood avens (*Geum urbanum*) and cleavers (*Galium aparine*). The moss *Mnium hornum* occurs locally within the woodland which is likely to be diagnostic of very low nutrient, unmodified soils (Ellenberg N=4). While soils are likely to be unmodified or very low in available nutrients, no indicators of continuity such as English bluebell (*Hyacinthoides non-scripta*) or other ancient woodland indicators were observed across any area of the woodland. The woodland was assessed to be in good condition.

w1f- Lowland broadleaved mixed deciduous woodland 2 (recently felled)

An area of felled woodland occupies a large portion of the site to the north and east. This area was occupied by woodland which appears semi-natural on aerial imagery prior to 2019 and also is also listed as priority Lowland Mixed Deciduous Woodland. In addition to desktop evidence, many taxa exist within this area which strongly suggest reversion to this or a related habitat type. This includes a newly developing canopy of alder, grey willow, osier (*S. viminalis*), silver birch (*Betula pendula*) and oak (*Quercus spp.*). Understorey vegetation is principally dominated by brambles, including brambles in the series *Vestitii* which are most often associated with closed canopy woodlands. Lower quantities of buddleja (*Buddleja davidii*), dog rose (*Rosa canina agg.*) creeping thistle (*Cirsium arvense*) and coltsfoot (*Tussilago farfara*) also exist as locally frequent

components of the vegetation. A ditch which is infilled with vegetation exists to the north and is characterised by bulrush (*Typha latifolia*), hard rush, great willowherb, common nettle and bramble. Given the vegetation filling this ditch is not dissimilar to the surrounding character of the vegetation, this depression is for the purposes of this survey characterised as a continuation of surrounding felled woodland. The woodland was assessed to be in good condition.

w1g- Other woodland- broad leaved (partly felled)

A small portion of this woodland (0.01ha) has been recently cleared which is understood to have been to facilitate ground investigation works. This small area of cleared woodland was assessed to be of good condition, with the rest of the woodland being deemed to be of poor quality. Where areas of this woodland have not been cleared, it is primarily characterised by the overwhelming dominance of balm-of-Gilead (*Populus x jackii*) which forms the canopy. Other species such as grey willow, sycamore (*Acer pseudoplatanus*) and osier form rare components of the canopy vegetation. Ground flora within the woodland itself is sparse and principally comprises creeping thistle, wood avens, creeping bent (*Agrostis stolonifera*), glaucous sedge (*Carex flacca*) and the moss *Brachythecium rutabulum* are frequent to occasional components of the vegetation. Of particular note as a rare component of woodland vegetation was the presence of dune helleborine orchid (*Epipactis dunensis*), a **globally rare species endemic to the British Isles** (see Incidental Observations section below).

w1g6- Line of trees

A line of trees exists across a small portion of the south-western site boundary. Trees purely include even-aged Sycamore, while landscaped areas exist immediately beneath trees with a range of cultivated roses including Dutch rose (*Rosa 'Hollandica'*), in addition to snowberry (*Symphoricarpos albus*), shrubby cinquefoil (*Dasiphora fruticosa*), cherry laurel (*Prunus laurocerasus*), dogwood (*Cornus sanguinea*) and osier.

g- Grassland

g1c- Other neutral grassland

Areas with other neutral grassland includes a substantial area of MG10b *Holcus lanatus* – *Juncus effusus* grassland (*Juncus inflexus* sub-community) which is a widespread community on soils which are base-rich. The vegetation is characterised by the constancy of Yorkshire-fog, alongside hard rush and soft rush (*Juncus effusus*), while other forbs which formed a frequent component of the vegetation also included oxeye daisy (*Leucanthemum vulgare*), creeping thistle, creeping buttercup (*Ranunculus repens*), curled dock (*Rumex crispus*), ribwort plantain (*Plantago lanceolata*), hedge woundwort (*Stachys sylvatica*), common vetch (*Vicia sativa*) and tufted vetch (*Vicia cracca*). The sward itself appeared unmanaged, tall and rank, and is being invaded by woody shrubs and trees including bramble, alder, white willow (*Salix alba*), broom (*Cytisus scoparius*) and buddleja which are scattered throughout the sward.

Five quadrats placed amongst representative areas of vegetation counted the number of vascular plants (excluding indicators of sub-optimal condition – see Biodiversity Metric

4.0 condition sheet) within one metre squares. This found that average species richness, excluding indicators of sub-optimal condition, came to 12.8.

Table 4-2 Quadrant species richness within other neutral grassland

Q1	Q2	Q3	Q4	Q5	Average species richness per samples
12	13	14	13	12	12.8

u- Built-up Areas and Gardens

u1b- Developed Land; sealed surfaces

A small, tarmacked access junction onto the site from the public road.

4.2.2. Species

Flora

The entire site is noted as 'Priority Habitat Inventory - Deciduous Woodland' on the Defra MAGIC website. However, only two sections of the site, far east and west, were considered as woodland. These woodlands are considered to be linked to the adjacent Country Park/woodland. Due to the time of the year, it was unclear on the presence of ground flora to establish the woodland habitat.

The modified grassland (wet grassland) to east of the site (c.0.32ha) was noted to have characteristics such as rush (*Juncaceae sp.*), knapweed (*Centaurea nigra*), oxeye daisy (*Leucanthemum vulgare*), which could offer potential priority habitat status.

Ash (*Fraxinus excelsior*), willow (*Salix sp.*), sycamore (*Acer pseudoplatanus*), oak *Quercus robur*, hazel (*Corylus avellana*), alder (*Alnus glutinosa*) and dominant Balm of Gilead (*Populus x jackii*) were present.

Dune helleborine *Epipactis dunensis* is endemic to Britain, Nationally Scarce and a Red Data Book species.

Japanese knotweed recorded at SJ 46319 90172. Only one patch was noted.

Although snowberry (*Symphoricarpos albus*) and cherry laurel (*Prunus laurocerasus*) were noted on site, these species are not present on Schedule 9 list.

Birds

Although no nesting birds were directly observed during the habitat survey, the site contains suitable habitat within the trees and disused nests noted throughout the site. Nesting birds were therefore deemed to be confirmed present within the site.

Bats

The site was considered to offer low potential for foraging and commuting bats, due to the size of the site and lack of lighting currently present. Roosting bats were therefore deemed to be potentially present within the site and further surveys were conducted.

Reptiles

Reptiles were assessed to be potentially present within the site and further surveys were conducted.

Invertebrates

With a variety of micro-climates, dead wood, ditch and potential priority habitat, the site is considered suitable to support rare or notable species, so invertebrates are therefore deemed to be potentially present within the site. Further invertebrate surveys were conducted on the site.

Other Notable Species

Although ditches are not 'normally' considered to be suitable for GCN due to running water, the ditch on Site, however, was stagnant with no flow present nor obvious connection due to the presence of dense scrub. eDNA concluded negative results for GCN. The lake to the north is unsuitable to support the species. Therefore, GCN are considered absent from the site and not discussed further within this report.

No badger setts or evidence of pathways were noted on site, therefore badgers are considered absent from the site and not discussed further in this report.

The ditch on site was considered unsuitable for water vole and otters due to the lack of connection to the main body of water (River), the stagnant water present and lack of bankside for holts and burrows. Therefore, riparian species are considered absent from the site and not discussed further in this report.

The habitats on Site and in the wider landscape were suitable for hedgehogs which is UK BAP Priority Biodiversity Species. Evidence of rabbits was noted on site. The ditch on site could be suitable for common amphibians. As the suitable habitats are in low abundance and of poor quality, these species do not pose a constraint to the development proposals, providing reasonable measures are undertaken.

4.3. Bat Transect Survey

4.3.1. Summary of Results

Six bat species were recorded during the transect surveys at the site including:

- Common pipistrelle
- Soprano pipistrelle
- Noctule
- Daubenton's bat
- Brown long-eared bat
- *Myotis sp.*

The highest level of activity was noted on the northern and western boundaries of the site. The majority of the activity was common pipistrelle (42%), Noctule were the second highest (26%) with four bats noted at any one time foraging across the site, Daubenton's

bats (13%) and soprano pipistrelle (11%) were primarily noted / associated with the adjacent water body and brown long-eared bats (7%) noted on the western boundary and *Myotis sp.* (1%).

An activity map was produced for each month demonstrating the site usage by foraging and commuting bats. This has been combined to produce an overall activity map (Figure 4-2) and all activity heat maps can be seen in Appendix D.

4.3.2. Analysis

The survey results were analysed to inform an assessment of the value of the habitat at the Site for foraging bats (Wray *et al*, 2010).

- Common Pipistrelle - (2)+ individual bats (5) + Roost Potential (4) + Foraging habitat (3) = 14
- Soprano Pipistrelle - (2)+ individual bats (5) + Roost Potential (4) + Foraging habitat (3) = 14
- Noctule - (5)+ individual bats (5) + Roost Potential (4) + Foraging habitat (3) =17
- Daubentons - (5)+ individual bats (5) + Roost Potential (4) + Foraging habitat (3) =17
- Brown Long-eared - (5)+ individual bats (5) + Roost Potential (4) + Foraging habitat (3) =17
- Myotis - (5)+ individual bats (5) + Roost Potential (4) + Foraging habitat (3) =17

The Site has been assessed as being of District, Local or Parish level value for foraging and commuting bats.

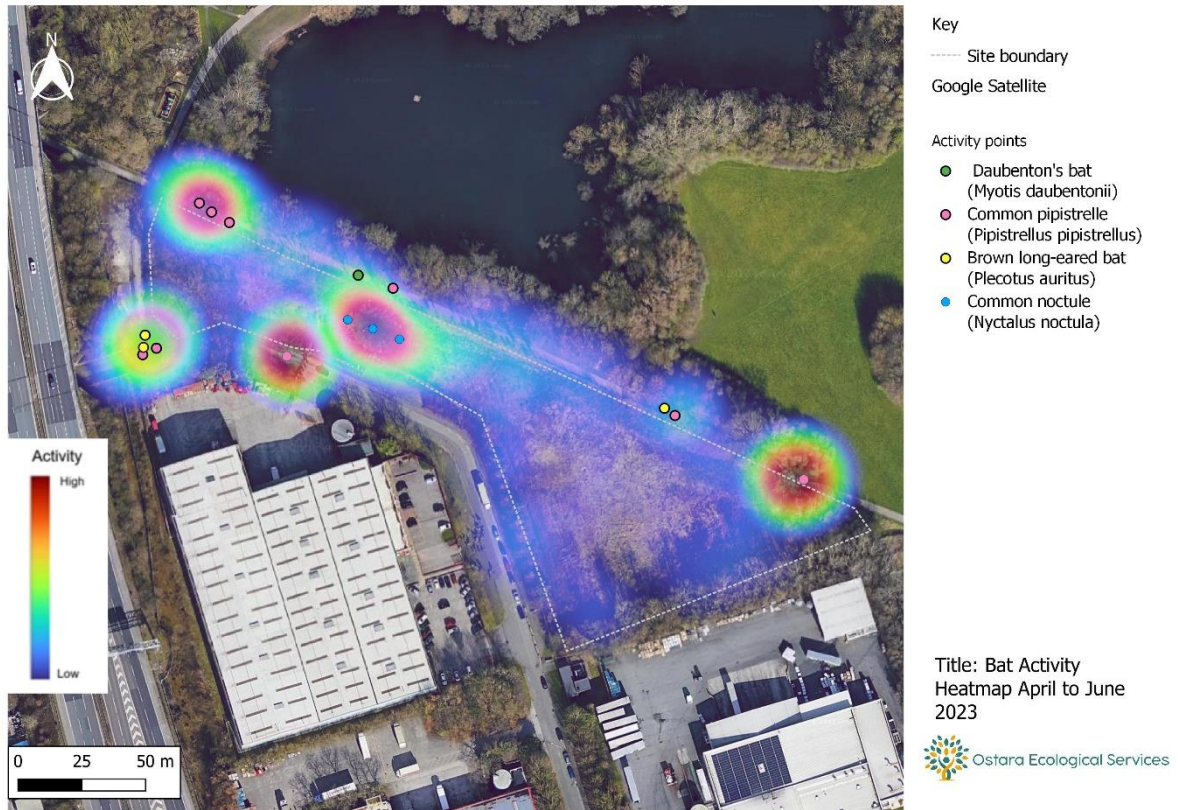


Figure 4-2 Bat Activity Heat Map April to June

4.4. Reptiles Surveys

4.4.1. Results



Figure 4-3 Reptile Mat Locations and Survey Finding Results

No reptiles were identified during the survey effort. However, white eggs were identified on the ground indicating grass snakes. Smooth newts (*Lissotriton vulgaris*), common toad and common frog were recorded primarily associated with waterbody on site. At any one time, seven smooth newts, 14 frogs and five toads were recorded. Locations of these sightings can be seen in Figure 4-3.

4.5. Invertebrate Survey

4.5.1. Habitats and Features

The interior to the site, where vegetated, is dominated by moderately coarse vegetation with some areas of raised botanical diversity. The range of broadleaved plants includes ox-eye daisy (*Leucanthemum vulgare*), creeping buttercup (*Ranunculus repens*), dove's-foot crane's-bill (*Geranium mole*), common sorrel (*Rumex acetosa*), and plantains (*Plantago spp.*). Hedge woundwort (*Stachys sylvatica*) and bramble (*Rubus fruticosus agg.*) are also present. Grasses are largely coarse in character including cock's-foot (*Dactylis glomerata*). Swards are therefore dense and do not possess fine-leaved or sparsely vegetated mosaics.

Scrub and Trees

The boundaries to the site are dominated by trees and scrub species. The trees are predominantly young and mature specimens. No veteran trees or those with significant rot or decay are noted. The boundaries present a range of tree and scrub species including oaks (*Quercus spp.*), which dominate the north-eastern fringe (Photograph 1), hawthorn (*Crataegus monogyna*), blackthorn (*Prunus spinosa*), willows (*Salix spp.*), and poplar *Populus spp.* Ornamental species are also present. The scrub is not managed and consequently has structural variation and spring blossom. The scrub forms an interface with ruderal zones and other field layer plant communities.

Bare Ground

The site has had recent ground clearance (see Photograph 2), exposing large areas of bare earth in the centre of the site. As it is recent, there is no regeneration or succession taking place. There are no other bare or patchy bare ground areas on the site.

Grassland

At the time of scoping, the sward includes common plants that cover a range of flower types including Asteraceae (flat flowers), Fabaceae, and Lamiaceae (deep flowers). Their relative abundance, however, is limited, and the range of floral diversity is also limited. The result of limited flowering potential from both flower abundance and also diversity is that it limits the number of nectar and pollen-feeding invertebrates that might utilize the site. There does not appear to be common bird's-foot trefoil in any abundance and not over short turf or bare ground. As such, the dingy skipper butterfly, an NERC Act Section 41 Species of Principal Importance, is unlikely to be present on the site. There are no other intrinsic species considered to be potentially present on the site. Therefore, and at the time of writing (April, 2023), there are no further considerations for this resource.

Should the resource change, such as the bare areas becoming more of a patchwork of open short swards that include plants like common bird's-foot trefoil, then its potential will increase.

Scrub and Trees Resource Potential

The boundaries are dominated by trees and scrub species. Some of these are ornamental and/or non-natives. The trees are all young or mature and therefore lack wood decay and other senescent features that would elevate their potential to invertebrates. The scrub is unmanaged and as a result produces a good interface with the field layer. This increases the opportunities to invertebrates, and therefore it is likely that there is a moderately diverse assemblage of species utilising this feature. However, given the comparatively small area this occupies along with a lack of other associated features that assist to elevate the scrub fringe status such as it being backed by mature woodland with deadwood and over-mature trees, the resource is likely to be populated by common and potentially some local species to the local area. Species of conservation significance are unlikely to be recorded.

It is considered that this resource is therefore not of conservation importance and is of low to moderate value to the invertebrate assemblages associated with scrub fringes and woodland edge.

Bare Ground Resource Potential

Although the site includes bare ground, this is recent and as a result of habitat clearance. It is not known what may have been here prior to the clearance, but the recently cleared ground is devoid of invertebrate value. This may change over time, however, as plants re-colonize.

4.6. Conclusion

The site was dominated by dense vegetation, with bare areas within the southern areas of the site and the boundaries of the site were dominated by young tree and scrub species. The site provided good habitat for both flora and fauna:

- Habitat- Although the site is classified as priority habitat according to magic maps, the site consisted of two small areas of woodland in the east and the west, with the majority of the site being grassland habitat. Dune helleborine was found in the southeast of the site, which is a nationally scarce endemic species.
- Reptile- assumed grass snake eggs were found to be present on site, however this constituted a low population of grass snake, as well as smooth newts, toads, and frogs.
- Invertebrates- the site was deemed suitable for invertebrates owing to the trees on site lacking in wood decay, but these species were likely to be common species and unlikely to be of any conservation significance.
- Bats- bats were shown to be using the site to forage, with six species, primarily in the north and northwest of the site. The site therefore has been deemed as being of value at the District, Local or Parish level for commuting and foraging.

5. Ecological Impacts and Mitigation

The proposal is for the development of four commercial buildings with the associated infrastructure and soft landscaping.

The recommendations have been made in consideration of Clause 10 of BS 42020, on the implementation of development: biodiversity on construction sites.

5.1. Potentially Damaging Activities

The largest impacts of the proposed development are associated with the habitat loss from the site and the subsequent impact on the floral and faunal species present. The proposed development will require the clearance of majority of the site prior to the construction phase, followed by the construction phase and the installation and erection of the proposed designs. These activities have potential implications to nesting birds, both ground and tree nesting birds.

Changes in Habitat Extent

The following identifies the habitat enhancements that have been incorporated into the building design and species enhancements that are recommended to be accommodated within the building design and landscaping areas.

Landscaping Areas

The development proposals include several areas of green landscaping. The north-western corner of the site is being retained as it currently stands, with the addition of translocated orchids from the south-west of the site. The treeline to the west has been retained, with borders a public footpath to the west of the site, which is being retained

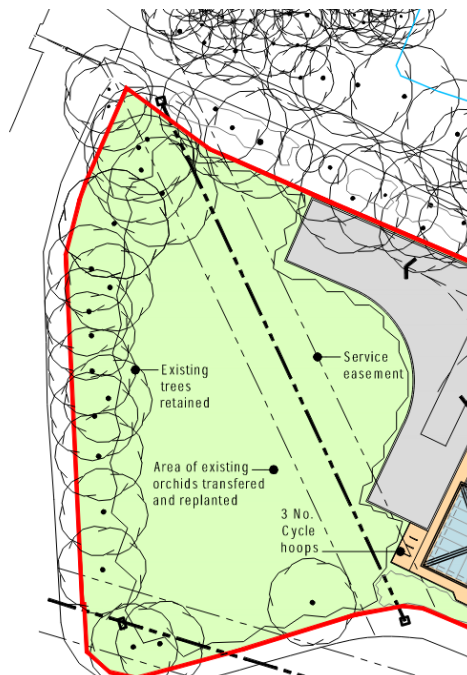


Figure 5-1 North-western landscaping

5.2. Protection of Biodiversity

Input from the drainage consultant will be required to ascertain if the site meets the criteria for the IRZ.

It is considered that direct adverse impacts may occur during the construction phase given the site's close proximity to Stadt Moers Park Country Park and on-site ditch. This designated site may also be impacted by the creation of dust typical of construction activity. Excessive dust may impinge photosynthesis of vegetation and affect soil and waterbody quality. Appropriate mitigation and management measures should be implemented during the construction phase to limit the risk of excessive dust generation and migration.

To mitigate against the potential adverse effects of pollution from construction (noise, dust) and light pollution, construction works will follow relevant industry standard best practice guidance set out within a Construction Environment Management Plan (CEMP). Measures will include provisions such as operating working hours and sensitive lighting specification to mitigate potential light pollution, use of swales to capture and filter run-off and standard dust prevention measures.

5.2.1. Habitats of Ecological Value

Areas of existing W10 *Quercus* – *Pteridium* – *Rubus* woodland (w1f) to the west correspond to the priority habitat 'Lowland Mixed Deciduous Woodland', while areas of W6 *Alnus* – *Urtica* woodland (w1d) to the east correspond to the priority habitat type 'Wet Woodland'. The extent of Lowland Mixed Deciduous Woodland is likely to have been significantly greater previously prior to on-site clearance post-2018.

A total of 34 plants of dune helleborine were observed amongst w1g Other woodland; broadleaved dominated by balm-of-Gilead. This record represents the fifth inland population in South Lancashire Vice County. The species is endemic to the British Isles and is generally restricted to coastal sand dunes with very few inland records across its range, being nationally scarce. In addition to its global rarity, the species is also listed as a Local Biodiversity Action Plan priority species.

One important aspect about the ecology of helleborine orchids in the broadleaved helleborine orchid (*E. helleborine*) group to note, including *E. dunensis*, is that they all have a strong interdependence upon ectomycorrhizal fungi in association with trees and other woody vegetation. This interdependence in the *E. helleborine* group is so strong that aberrations of species in the group which do not produce chlorophyll are often able to persist as complete mycoheterotrophs. There is no evidence that translocation of dune helleborine orchids has been successful, however there is an ongoing translocation scheme at Edge Hill University which is pending results, however it is hoped that the study will provide useful updates to methodology that will improve the success of Dune helleborine translocation in the future

Suggested recommendations:

- Enhance ONG from poor to good condition through cut and collect;

- Enhance wet woodland through INNS removal and allowing vegetation to develop over time. Wet woodland could further be enhanced over time through targeted thinning; and
- Avoid impacts to internationally important dune helleborine population through retention of other broadleaved woodland occupied by this species. Dune helleborine is often found in association with *Betula* species and so it may be beneficial to thin balm-of-Gilead and plant gaps with native downy and silver birch. Where retention of some or all of the on Site population is not possible, discussions with a specialist botanist on a well-planned translocation with monitoring and additional compensation for the loss of Dune helleborine will be explored, drawing in the practical experience gained at Edge Hill University.

5.2.2. Biodiversity Net Gain

The no net loss calculation for replaceable habitats is at this stage based on precautionary assumptions. It currently assumes that all habitats within the land identified as required temporarily for the construction of the Scheme will be removed. Due to the application of risk multipliers in the calculation this means that for each area of habitat lost it will normally require a larger habitat area in order to create a similar number of area-based biodiversity units to those associated with the habitats lost.

The proposed development will result in an overall loss of 14.05 habitat units -100%.

This metric operates by calculating the number of biodiversity units associated with a particular habitat type (both pre-and post-development) – the ‘unit’ value associated with each habitat type is calculated based on the following parameters:

A development achieves BNG when the total biodiversity units present post-development is higher than that of the biodiversity units present on-site prior to development.

Biodiversity offsetting is used to achieve BNG.

Biodiversity offsetting involves the provision of compensatory habitat for residual habitat losses and/or indirect effects arising from development that persists despite the implementation of appropriate avoidance and mitigation measures. A calculation is produced to assess the effects of a scheme on the habitats present versus the proposed compensatory habitat creation and enhancement measures. In order to determine whether offsetting is required, the biodiversity impact assessment metric is used to calculate the biodiversity value of a site before and after development in terms of ‘biodiversity units’ to give an overall biodiversity net gain or loss. Deliverable biodiversity net gain will be mandated in the upcoming Environment Bill, which will likely detail a requirement of 10% net gain.

As such, the masterplan for the site should implement the ecological constraints on site and to ensure retention of features identified within this report. However, it is considered that even if plans are to change, any proposals for the site will result in a net loss. In order for any proposed development to achieve biodiversity gains, mitigation in the form of off-site mitigation is likely to be required.

5.2.3. Species

The following best practice measures and mitigation options have been identified to minimise or negate the potential adverse effects on biodiversity and have considered the potential for changes in circumstances as a result of species establishing themselves between the survey and commencement of construction activities.

It is recommended that the Biodiversity Champion ensures routine inspections of the site are carried out to check for signs of the following species. An experienced ecological consultant should be available to provide advice and guidance to the Biodiversity Champion where necessary.

Invasive Species

Two invasive species were located in low abundance during the site survey. These include:

- Japanese knotweed (*Reynoutria japonica*): A small stand of Japanese knotweed (approx. 2m x 2m) exists at OS grid reference SJ 46259 90210; and
- Himalayan cotoneaster (*Cotoneaster simonsii*): A singular plant exists at OS grid reference SJ 46316 90164.

A specialist contractor would be required to undertake the eradication of species on site.

Breeding Birds

The trees, scrub, ditch, and woodland within the site provide suitable habitat for nesting birds. Disused nests were present throughout the site. Numerous birds were noted throughout the site.

All nesting birds are protected under the WCA 1981. Therefore, if any nesting bird habitat is to be lost (*i.e.* woodland, trees, hedgerows and/or arable land if Skylark presence is confirmed), these areas should be cleared outside of the nesting bird season (March to August inclusive) where possible. If works on these habitats are required during the nesting bird season, then a nesting bird check / habitat inspection is required to ensure that there is no nest disturbance within the site by a Suitably Qualified Ecologist (SQE) within 24 hours prior to clearance to confirm the absence of active nests. Any active nests located during inspections will be protected with a suitable buffer of retained vegetation around the nest (of appropriate size to the species) and monitored until the nest is no longer active/all chicks have fledged, when the ecologist will provide sign off for clearance to be undertaken.

Bats

Daytime Roost Assessment

Due to the age and structure of the mature trees to the west of the site, these have been assessed as having “Moderate” potential to support roosting bats as no notable features from the ground were identified. Bat roosts can be difficult to locate, especially as signs of their presence or roost access points may be hidden or obscured (Mitchell-Jones, 2004). In addition, bats are known to commonly switch roost locations in response to a

range of factors such as climate which change over time. However, if removal of these trees are required, detailed tree climbing surveys and / or nocturnal surveys would be required to ascertain if there are bat roosts on site.

The site itself provided suitable foraging and commuting resources for bats. The proposals will result in the loss of majority on-site vegetation, as well as the inclusion of lighting.

The loss of foraging habitat is likely to require a level of mitigation in the form of maintaining some areas of woodland alongside boundary habitats and within low light corridors during the construction and operation stages. There is considerable opportunity to enhance the habitats along the ditch for foraging bats through appropriate woodland creation.

Bat Transect Survey

The Site has connectivity to wider greenspace including Country Park to the north. Although the Site is on the edge of a large conurbation and within close proximity to built-up areas, the connectivity to local green spaces via woodland corridors, underpasses and parks is considered to be good. The Site is assessed as being of moderate suitability for bats in accordance with the good practice guidelines (Collins, 2016).

At least six species were recorded within the survey area. The following species were recorded during the bat activity surveys; common pipistrelle, soprano pipistrelle, brown long-eared, noctule, Daubenton's and other *Myotis* species. Bat activity was recorded along nearly all boundaries included in the transect surveys. Activity was also concentrated around the field margins, over/around trees and along the ditch. This behaviour is to be expected as these habitats support the highest insect densities, thus providing optimal foraging habitat (Walsh & Harris, 1996a; Walsh & Harris, 1996b).

Deterioration and fragmentation of foraging habitats by urbanisation and development are thought to be the chief causes of the decline in bat populations over the past 100 years or so (Garland 2007). Linear features such as the trees and woodland currently present on site are not legally protected. However, they are important foraging and commuting habitat for at least six species recorded onsite.

Overall, the Site has been assessed as being of District, Local or Parish level value for bats, in line with guidance.

Lighting related to any proposed development has the potential to disturb the usage of commuting routes by bats. Bat foraging areas have the potential to be impacted by the proposed works. Development has the potential to directly remove foraging areas through construction, isolation of foraging areas (through the severance of commuting routes), degradation of the value of foraging areas through habitat conversion, lighting or disturbance.

Detailed bat mitigation for the proposed development will need to be formalised within the associated Bat Mitigation Strategy and likely Ecological Impact Assessment.

In summary, the following outlines the mitigation to ensure that the conservation status of bats in and around the site is maintained, as a minimum:

- Retention of key areas for bats, buffered with a suitably sized and designed buffer;
- Creation of dark corridors within the development, that are designed to ensure that bats can continue to use the area for commuting and foraging. These should be designed to limit light spill into these areas and maximise continuity of these dark areas.
- A lighting design across the entire site which limits light spill onto retained habitats and specifies that all artificial lighting must be directional and low light spill.
- Retention and enhancement of connectivity and foraging areas, especially the core important foraging areas identified within the heat maps below.
- Specification for creation of bat roosting features including bat barns and installation of tree roost boxes and roost boxes within newly created structures. These features should be positioned in locations adjacent to the retained / enhanced dark corridors.
- Retention of the ditch on site and water features to create valuable feeding habitats for bats.
- Prescriptions for the provision of bat boxes within retained / created habitats.

Within the activity transect surveys, no Annex II species (as listed on the Habitats Directive (HMSO 2019)) were recorded within the site or its environs. The surveys conducted are considered sufficient for the stage of planning for which they were conducted *i.e.* master planning, however additional surveys for EclA may be required.

Great Crested Newts

The stagnant ditch on site, was considered to offer albeit low potential for GCN. environmental DNA (eDNA) water samples were undertaken on 17th April 2023 to determine presence/absence following published guidance (Biggs et al., 2014). eDNA results concluded negative presence for GCN. Therefore, this species is not considered further in this report.

Reptiles

A number of habitats within the Site have the potential to support common reptile species. Potential grass snake eggs were identified on site, however, they were degraded and identification was not possible.

Other amphibians – common frog, common toad, smooth newt and palmate newt, are not offered the same legal protection but it is good practice to try to avoid harm to these species. Common toad is listed on Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006 as a special of principle importance for the purpose of conserving biodiversity and thus must be regarded by the planning authority in exercising any of its functions.

Based on the findings from the reptile survey, it was concluded that the site is being used by a range of common amphibians and potentially reptiles. Due to the static ditch on site provides suitable aquatic terrestrial habitat as well as the site itself providing suitable foraging, commuting and hibernation potential.

At present, the proposals could cause impacts to the species themselves as well as removing their habitat. To ensure the protection of bats, birds and priority habitats the retention of these features would in turn protect common amphibians and reptiles. Therefore, a detailed Precautionary Method of Works / Statement would be required to safeguard the species.

Invertebrates

Much of the site is devoid of significant value to invertebrates other than those considered generalists, ubiquitous, and lacking a nationally significant conservation status. The potential value at the site is along the boundaries where there is increased structural complexity owing to the scrub-fringe interface with ruderals and the field layer. The value though is still low to moderate, and only for common and typical species of woodland edge and scrub fringes. It is considered unlikely that any species of conservation significance would be recorded from this feature or the wider site.

If the recently cleared land re-colonised with desirable plants such as common bird's-foot trefoil (*Lotus corniculatus*), then there is some potential for another dingy skipper butterfly, a NERC Act Section 41 species associated with open mosaics on previously developed land. The area of the site though is small, and any colonisation of the species may only be transitory.

It is suggested that no further surveys are required for this site unless, re-colonization includes prostrate-growing bird's-foot trefoils (*Lotus spp.*) and in significant quantities to support a colony of the dingy skipper butterfly.

Dune Helleborine

Within an area in the southwest of the site, 34 individual plants of Dune helleborine were identified. These are an endemic and nationally scarce floral species. The location of these plants impedes on the initial proposals for the site, with the area being removed to allow for car parking spaces and the access road. As a result of discussions with the local Council's ecologist, Lucy Bennison (further details included within Appendix G), the designs have been altered, reducing the car parking spaces to maximise the retained area of the dune helleborine. However, not all the orchids can be retained if the development is to go ahead as planned, so areas for translocation have been identified across the site, which will follow the same methodology as set out by ERAP at Edge Hill University²².

The allocated translocated area in the northwest of the site corresponds with an area being retained for the treeline, meaning that soil conditions, including soil pH, should be appropriate for the Dune helleborine. The species is known to be reliant on its symbiotic relation with mycorrhizal fungi within the soil, and when found inland it is often found within the immediate proximity to tree root systems.

Although risk to the plants will not be completely avoided (as is preferred following the mitigation hierarchy), the retention of the majority of the orchids in the southeast of the Site, and the proposed translocation of disturbed orchids to a nearby similar on-Site location, demonstrates a commitment by the developer to maintain and conserve a viable population of the species on Site as part of the proposed scheme.



Figure 5-4 Translocation areas for Dune helleborine within site boundary

Other Notable Species

Given the suitability of scattered scrub, ditch and overgrown vegetation on Site, it is considered that hedgehogs are likely to be utilising the Site for foraging. Whilst this species is not legally protected, they are a material consideration during planning and efforts should be made to minimise the risk of injury or effects on the local population status.

In order to minimise the risk of harm to other animals passing through the Site it is recommended that preventative measures are in place during construction. These precautions are:

- Mammal ladders (such as a plank) or earth ramps to be placed in any open excavations at the end of each day;
- Cap off any open pipes at the end of each day;
- Cover any open holes, or install mammal ladders or earth ramps in any open excavations at the end of each day to prevent animals from becoming trapped;
- Keep all fuel and other harmful substances in a locked area;
- Ensure any spillages are treated with spill kits; and
- Night work should be avoided where possible, and any flood lighting should face away from the Site boundaries.

5.3. Conclusion

The site is planned to be largely cleared, resulting in a loss of 14.05 habitat units. This has the potential to further impact floral and faunal species that are present within the site. There are areas of semi-natural habitats planned within the proposed development along the site boundary and withing the north and south of the site.

Appendix A Legislative and Planning Context

A.1 Legislative Framework

A.1.1 Environment Act 2021

The Environment Act 2021 makes provision for targets, plans and policies for improving the natural environment. Part 6 of the Act deals with nature and biodiversity, principally setting out the requirement for biodiversity net gain in planning but also including requirements relating to local nature recovery strategies and conservation.

Section 98 of the Act makes provision for biodiversity gain to be a condition of planning permission, with Schedule 14 identifying the objective being at least 10 % when comparing the post-development site to the pre-development site. Schedule 14 also identifies the methodology by which this is established and the process by which offsite biodiversity gains can be delivered.

The Act incorporates a transition period for biodiversity net gain of 2 years between its Royal Assent and enforcement of the requirement, bringing the mandatory net gain requirement in place in late 2023.

A.1.2 Conservation of Habitats and Species Regulations 2017 (as amended)

The Conservation of Habitats and Species Regulations 2017 (as amended), which consolidate the Conservation of Habitats and Species Regulations 2010 and subsequent amending instruments, is the main legislation governing the protection of biodiversity and is derived from European Council Directive 92/43/EEC (otherwise known as the Habitats Directive). These Regulations provide protection for sites, habitats and species that are of conservation importance at the European or international level. The Regulations provide the framework for the designation and protection of 'European sites', including Special Protection Areas (SPAs) and Special Areas of Conservation (SACs). The Regulations also provide legislative protection to species, identified as 'European Protected Species' (EPS) within Schedule 2 of the Regulations.

The Conservation of Habitats and Species Regulations 2017 are amended by The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019, which ensures the continuity of the legislation following the departure of the UK from the European Union.

A.1.3 Wildlife and Countryside Act 1981 (as amended)

The Wildlife and Countryside Act 1981 (as amended) comprises the principal means of protecting wildlife in the UK, including the identification and protection of Sites of Special Scientific Interest (SSSIs), and provides the mechanism by which a number of international directives are implemented in the UK.

A.1.4 Countryside and Rights of Way (CROW) Act 2000

The Countryside and Rights of Way (CROW) Act 2000 strengthens the Wildlife and Countryside Act 1981 (as amended) in relation to the protection of SSSIs and threatened species.

A.1.5 Natural Environment and Rural Communities (NERC) Act 2000

The Natural Environment and Rural Communities (NERC) Act 2006 places an obligation on public bodies and statutory undertakers to ensure due regard to the conservation of biodiversity.

A.2 Statutory Protected Sites and Species

A.2.1 Sites

Statutory protection for sites of ecological importance or value has derived from various international conventions, European Directives and national legislation. The designations for protected sites in the UK include:

- Special Area of Conservation (SAC) – designated under the European Council Directive on the Conservation of Natural Habitats and of Wild Flora and Fauna, targeting particulate habitats (listed on Annex I) and/or species (listed on Annex II) identified as being of European Importance;
- Special Protection Area (SPA) – designated under the European Council Directive on the Conservation of Wild Birds for the protection of wild birds and their habitats (including particularly rare and vulnerable species listed in Annex I of the Directive, and migratory species);
- Ramsar – listed under the Convention on Wetlands of International Importance for the protection of internationally important wetland habitat, especially as waterfowl habitat. Although not directly legislated, through the NPPF the government expects them to be given the same level of protection as SACs and SPAs;
- Site of Special Scientific Interest (SSSI – notified under the Wildlife and Countryside Act 1981 (as amended) or the National Parks and Access to the Countryside Act 1914, as being of special nature conservation interest for its plant or animal communities, habitats, geological or landform features;
- National Nature Reserve (NNR) – designated under the Wildlife and Countryside Act 1981 (as amended) as a nationally important nature reserve on account of its habitat, flora or fauna interest;
- Local Nature Reserve (LNR) – established by Local Authorities under s21 of the National Parks and Access to the Countryside Act 1914 as a locally important nature reserve on account of its habitat, flora or fauna interest.

A.2.2 Species

The following summarises the legislative protection afforded to species identified as potentially present within the field survey area.

Flora

All wild plants are protected under Schedule 13 of the Wildlife and Countryside Act 1981 (as amended), which makes it an offence to uproot a plant, defined as to *‘dig up or otherwise remove the plant from the land on which it is growing’*, without permission from the land owner or occupier. A number of higher and lower plants receive additional protection under Schedule 8 of the Act, which makes it an offence to intentionally pick, uproot, destroy or trade in these plants.

Schedule 9 of the Act identifies invasive plant species and makes it an offence to plant these species or otherwise cause them to grow in the wild. The protection has been strengthened through the inclusion of a new schedule, as a result of Section 23 of the Infrastructure Act 2015, which enables environmental authorities to require works to be undertaken to remove or prevent their establishment. Any material containing Japanese knotweed (*Fallopia japonica*) or giant hogweed

(*Heracleum mantegazzianum*) is identified as ‘controlled waste’ under the Environmental Protection Act 1990 and must be disposed of appropriately.

Birds

All wild birds in England and Wales are protected under Part 1 of the Wildlife and Countryside Act 1981 (as amended), which makes it an offence to intentionally kill, injure or take any wild bird, or take, damage or destroy the nest (whilst being built or in use) or its eggs. Additional protection is afforded to species listed in Schedule 1 of the Act from disturbance whilst it is building a nest, or at a nest containing eggs or young, or disturb the dependent young of such a bird.

Furthermore, provisions under Section 10, Part 1, of the Conservation of Habitats and Species Regulations 2017 require local planning authorities to have regard to ‘*the preservation, maintenance and re-establishment of a sufficient diversity and area of habitat for wild birds in the UK*’ in the exercising of their functions. As a result, it is important to consider any habitat loss as a result of development and opportunities for the provision of habitats.

European Protected Species

All European Protected Species (EPS) in England and Wales are fully protected through inclusion within the Conservation of Habitats and Species Regulations 2017 (as amended). Under this legislation it is an offence to deliberately capture, injure or kill individuals of any native EPS. It is also a strict liability offence to damage or destroy sites or places which EPS use as a breeding site or resting place. EPS are also protected under the Regulations from deliberate disturbance which is likely to:

- a) impair its ability:
 - i. to survive, breed or reproduce, or to rear or nurture their young; or,
 - ii. in the case of animals of a hibernating or migratory species to hibernate or migrate; or,
- b) to affect significantly the local distribution or abundance of the species to which they belong.

It may be possible to apply for a licence from Natural England to allow activities that would otherwise be an offence under these Regulations. However, it is an offence to breach a condition imposed by any such licence.

All EPS are also partially protected in England and Wales through their inclusion in Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). Under this legislation, it is an offence to intentionally or recklessly disturb a bat whilst it is using a place of rest or shelter.

EPS potentially present within the masterplan site and immediately surrounding areas include all species of bats.

A.3 Planning Policy

A.3.1 National Planning Policy

National planning policy guidance in relation to ecology and nature conservation is provided through the National Planning Policy Framework (NPPF), with planning practice guidance provided by the Ministry of Housing, Communities and Local Government. The conservation and enhancement of the natural environment is a key strategic policy in the NPPF, and Chapter 15 of the NPPF sets out the

Government's planning policies on this. Paragraph 174 states that *'planning policies and decisions should contribute to and enhance the natural and local environment by:*

- *protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils;*
- *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;*
- *minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures'.*

The NPPF also states in Paragraph 175 that *'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'.*

Paragraph 180 of the NPPF identifies a number of principles that should be applied by local planning authorities in the determination of planning applications, which include:

- *'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;*
- *development on land within or outside a SSSI, 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 SSSIs;*
- *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,*
- *development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to improve biodiversity in and around developments should be integrated as part of their design, especially where this can secure measurable net gains for biodiversity or enhance public access to nature where this is appropriate'.*

Planning practice guidance provided by the Ministry of Housing, Communities and Local Government includes further guidance on biodiversity, ecosystems and green infrastructure within the planning process. Paragraph 018 (Reference ID 8-018-20190721) identifies that information on biodiversity impacts and opportunities should inform all stages of development, with planning applications requiring an ecological survey where the type and location of development are such that the impact on biodiversity may be significant and existing information is lacking or inadequate. The guidance also identified that detailed species surveys should only be required by local planning authorities where clearly justified, for example if there is a reasonable likelihood of a protected species being present and affected by the development.

A.4 Biodiversity Action Plans

A.4.1 UK Biodiversity Action Plan

The UK BAP has been replaced by the Post-2010 Biodiversity Framework, which addresses the changes in the strategic thinking of the Convention on Biological Diversity's Strategic Plan for Biodiversity 2011-2020. The new Framework includes new priorities for UK-level work for the Convention on Biological Diversity and provides a broad structure to enable action across the UK. Whilst the UK BAP has been replaced, the UK BAP priority habitats and species continue to be regarded as conservation priorities in the UK Post-2010 Biodiversity Framework.

The UK BAP identifies 65 habitats and 1,150 species that are considered to be of conservation concern.

Although a number of the species present within the study area are included in the UK BAP, only common pipistrelle and song thrush have been included in a Species Action Plan.

Common Pipistrelle

Although it remains the most abundant and widespread bat species in the UK, the pipistrelle is thought to have undergone a significant decline in numbers. Estimates from the National Bat Colony Survey suggest a population decline of approximately 70% between 1978 and 1993. Factors identified as causing loss or decline of the species population include:

- A reduction in insect prey abundance, due to high intensity farming practice and inappropriate riparian management;
- Loss of insect-rich feeding habitats and flyways, due to loss of wetlands, hedgerows and other suitable prey habitats;
- Loss of winter roosting sites in buildings and old trees;
- Disturbance and destruction of roosts, including the loss of maternity roosts due to the use of toxic timber treatment chemicals.

The Species Action Plan identifies the objectives and targets as the maintenance of existing populations and range of pipistrelle, and restoration of populations to pre-1970 numbers.

Song Thrush

Although a common and widespread species, song thrush are declining throughout the UK as a result of changes in food supply and availability of nest sites as a result of changes in farming practice, predation by corvids and foxes and competition with blackbirds. The aims of the Species Action Plan are to halt the decline in numbers by 2000, maintain the range and population levels of the species and, where possible, restore them to that of the 1970 estimate, and identify and implement priority research in order to formulate future conservation action.

Appendix B Site Photographs



Photograph 1: Young trees on the north-eastern edge of the Site.



Photograph 2: Temporary ground clearance near centre of the Site



Photograph 3: Introduced shrubs



Photograph 4: Bare ground and self-set populous sp. trees



Photograph 5: Ground vegetation in centre of site



Photograph 6: Ground vegetation in centre of site



Photograph 5: Dense scrub



Photograph 8: Woodland and earth mound

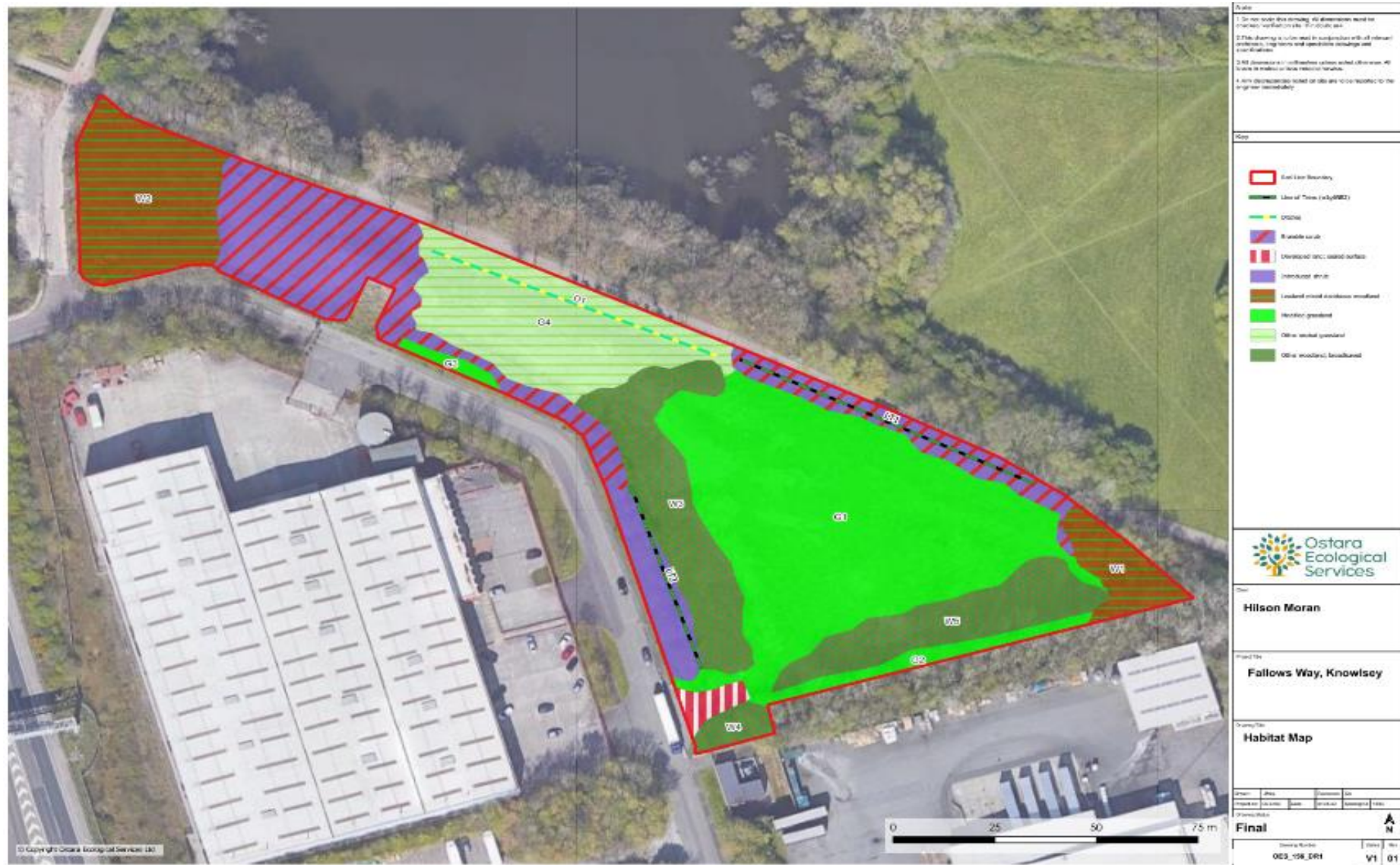


Photograph 9: Woodland Ground Flora



Photograph 10: Public right of way on western boundary.

Appendix C Pre-Planning Habitat Map



Appendix D Bat Activity Heat Maps



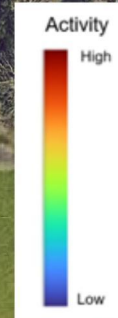
Key

- Transect line
- Site boundary

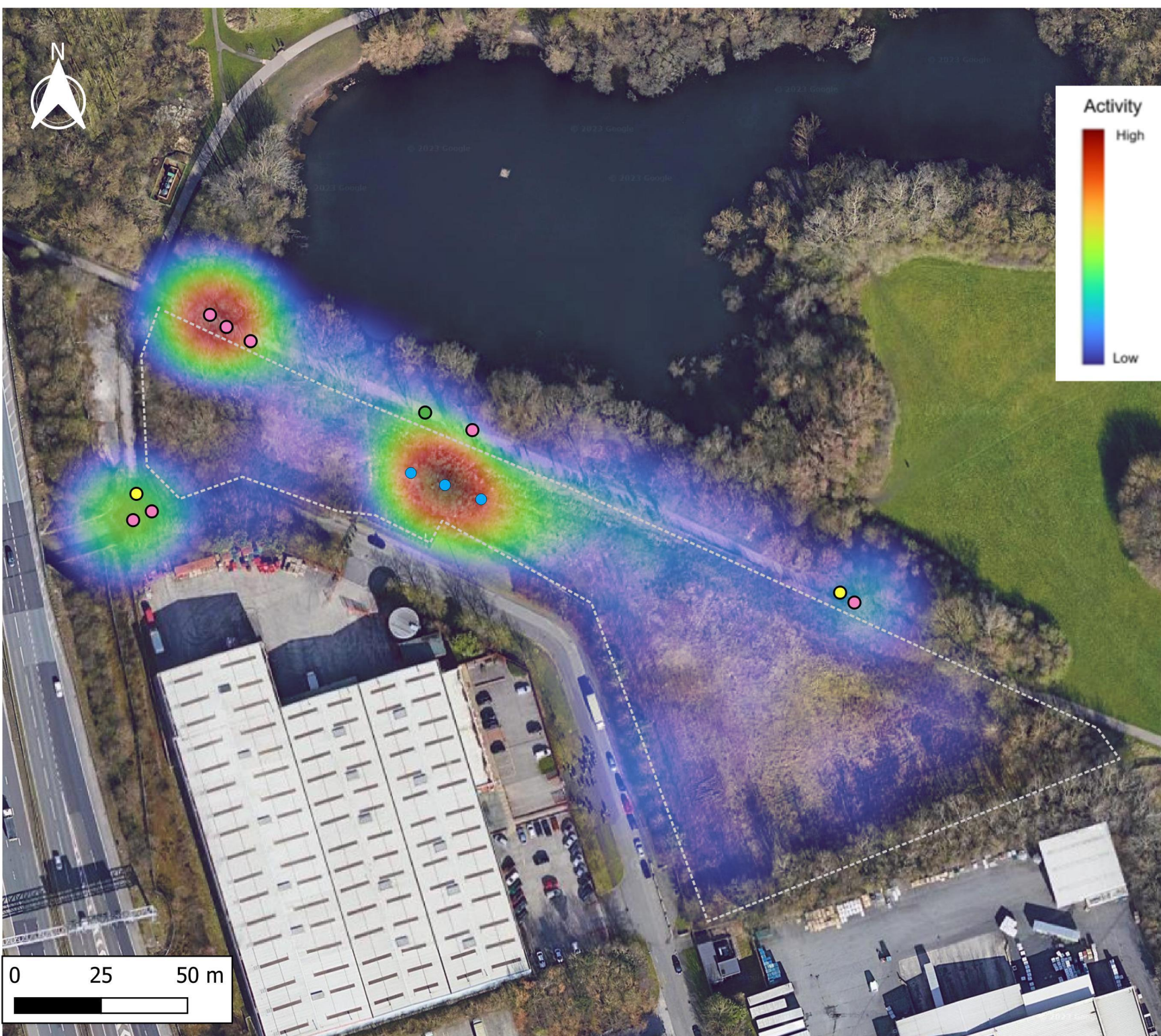
Google Satellite

Activity points

- Brown long-eared bat (*Plecotus auritus*)
- Common pipistrelle (*Pipistrellus pipistrellus*)

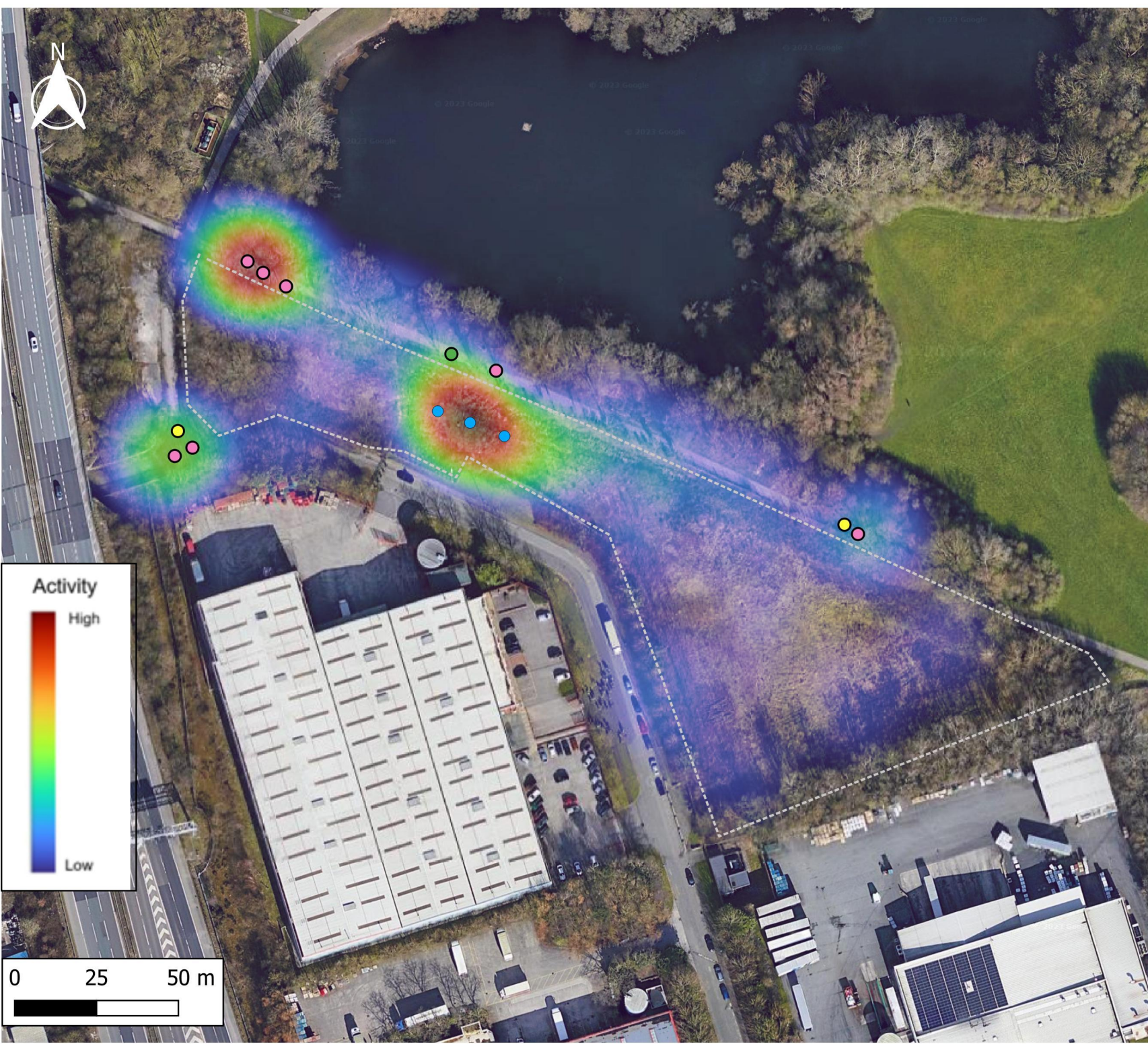


Title: April bat activity survey heatmap



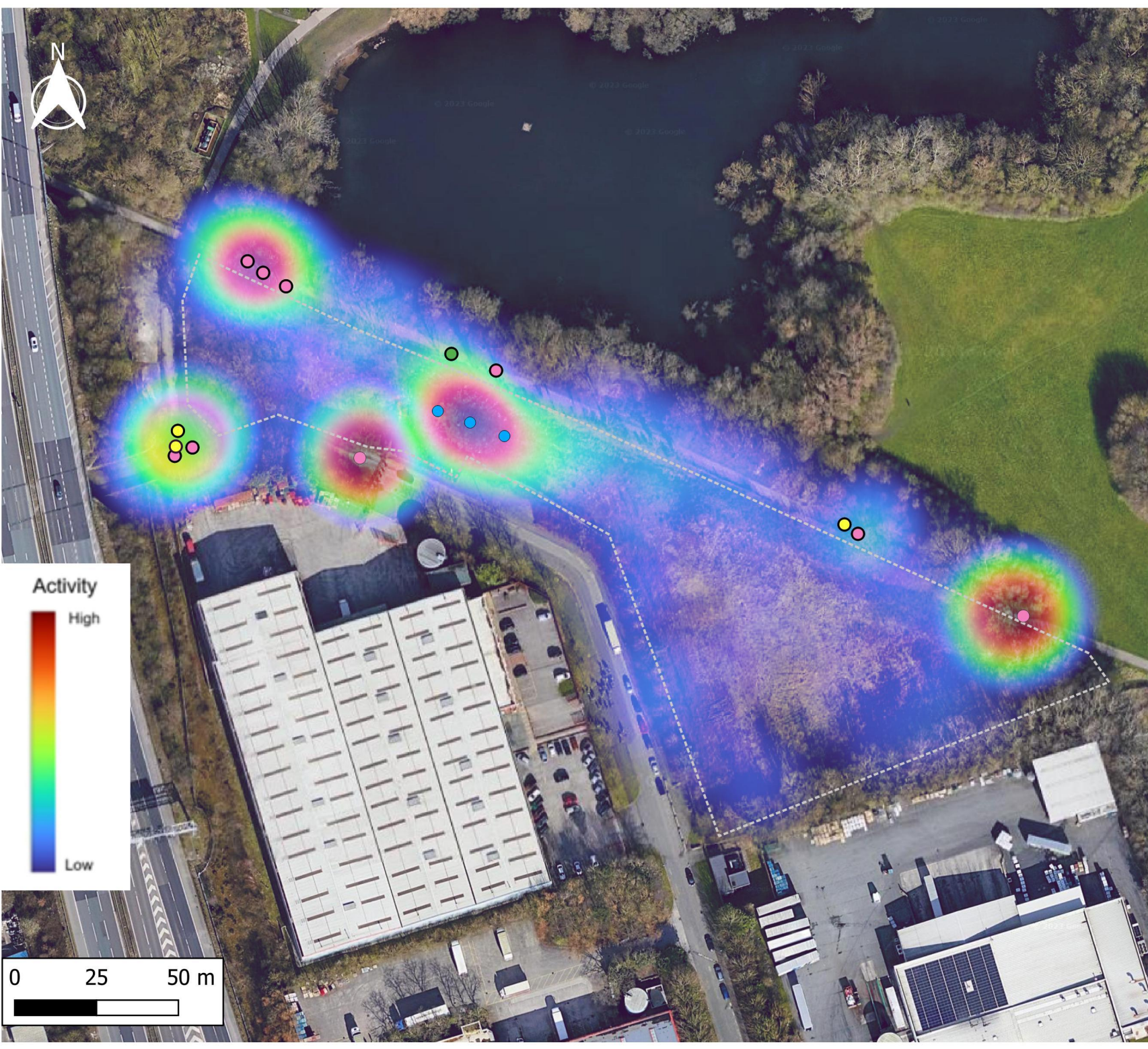
- Key
- Site boundary
- Google Satellite
- Activity points
- Daubenton's bat (*Myotis daubentonii*)
 - Common pipistrelle (*Pipistrellus pipistrellus*)
 - Brown long-eared bat (*Plecotus auritus*)
 - Common noctule (*Nyctalus noctula*)

Title: May bat activity survey heatmap



- Key
- Site boundary
- Google Satellite
- Activity points
- Daubenton's bat (*Myotis daubentonii*)
 - Common pipistrelle (*Pipistrellus pipistrellus*)
 - Brown long-eared bat (*Plecotus auritus*)
 - Common noctule (*Nyctalus noctula*)

Title: June Bat Activity Survey Heatmap



Key

--- Site boundary

Google Satellite

Activity points

- Daubenton's bat (*Myotis daubentonii*)
- Common pipistrelle (*Pipistrellus pipistrellus*)
- Brown long-eared bat (*Plecotus auritus*)
- Common noctule (*Nyctalus noctula*)

Title: Bat Activity
Heatmap April to June
2023

Appendix E Landscape Proposals



Notes | Sketch schemes may be based on plan information of unknown origin and is subject to verification and survey. Contractors must verify all dimensions on site before commencing any work or shop drawings. This drawing is not to be scaled. Use figured dimensions only. Ensure digital versions are plotted at 'Actual Size'. Building areas are liable to adjustment over the course of the design process due to ongoing construction detailing developments. Subject to statutory approvals and survey. The bar above is to check that the drawing has been printed to scale.

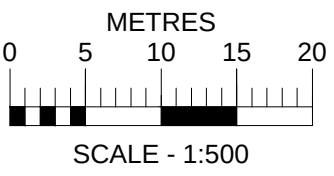
SITE AREA	3.67 Acres
Block B	04- 81.5m ² (880 sq ft) 05- 140m ² (1,500 sq ft) 06- 140m ² (1,500 sq ft)
Total -	361.5m ² (3,880 sq ft)
Block C	07- 140m ² (1,500 sq ft) 08- 140m ² (1,500 sq ft) 09- 140m ² (1,500 sq ft) 10- 140m ² (1,500 sq ft) 11- 140m ² (1,500 sq ft)
Total -	700m ² (7,500 sq ft)
Block D	12- 232m ² (2,500 sq ft)
Block E	13- 3,075m ² (33,070 sq ft) Plus 185m ² (1,991 sq ft) FF Offices
TOTAL	4,553.5m ² (49,019 sq ft)
PARKING	
Blocks B-D	30 car spaces
Blocks E	36 car spaces
TOTAL	66 car spaces
Total motorcycle parking spaces =	6 (min 1 per 1,000m ²)
Total cycle spaces =	17 (min 1 per 450m ²)

C	15.11.2023	Block A removed. Orchids retained and relocated. Parking numbers and schedule updated.	WC	ML
A	08.11.2021	Scale bar added	ML	ML
Rev	Date	Description	Drawn	Checked

Project	Fallows Way, Prescott	PO	ML
Drawing	Proposed Site Layout		
Client	Allied Properties		
BIM Suitability Description	SUITABLE FOR INFORMATION	BIM Suitability Code	S2
Status	Planning	2 Riverside Way Whitehall Waterfront LEEDS LS1 4EH t 0113 819 8041	320 City Road Angel LONDON EC1V 2NZ t 0203 883 8602
Date	20/08/2021		
Drawn	ML		
Checked	GE		
Scale (A2)	1:500		
Project	0924 - EA - A - PL03 - C	Discipline	



New footpaths from Fallows Way added to blocks A & E; New buffer zone indicated around mine cap; Size of unit 4 reduced to avoid mine cap; Blocks B & C repositioned to not overhang footpaths offered for adoption; Layout of main site access amended; Cab & trailer spaces to Unit E increased to 16.5m long; Turning circles amended to 26m diam; Unit E repositioned 1m further into the site; sprinkler tank to Unit E repositioned; additional landscaping added between Unit E & Fallows Way; car parking layouts amended to include additional disabled spaces, EV charging points & motorcycle spaces; total no. of car spaces increased; cycle shelter & hoops indicated.



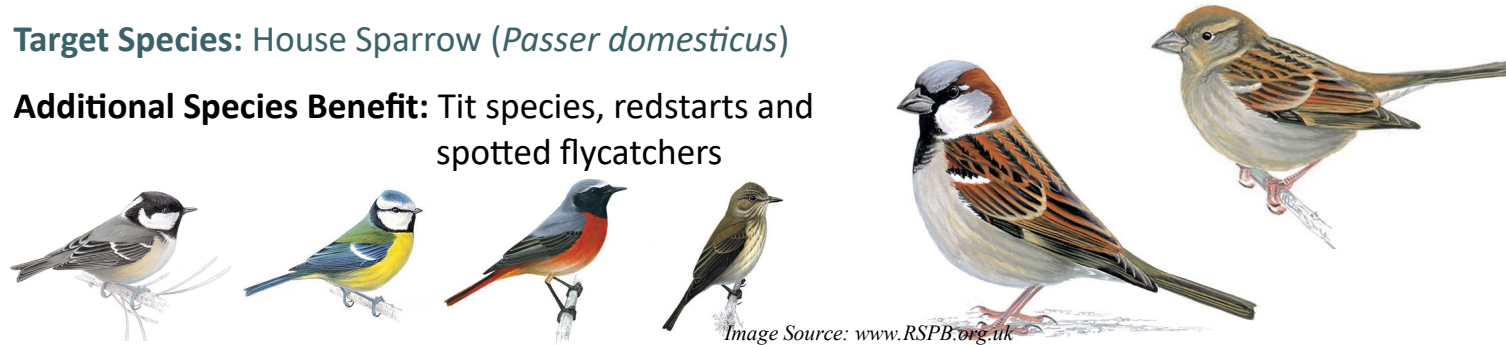
Appendix F Nest Box Placement Guidance

ARTIFICIAL HABITAT BOXES—INSTALLATION REQUIREMENTS

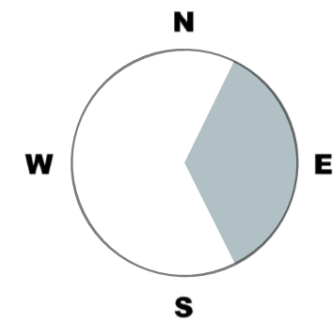
1SP Schwegler Sparrow Terrace

Target Species: House Sparrow (*Passer domesticus*)

Additional Species Benefit: Tit species, redstarts and spotted flycatchers



Aspect
(Orientation of opening)



Requirements:

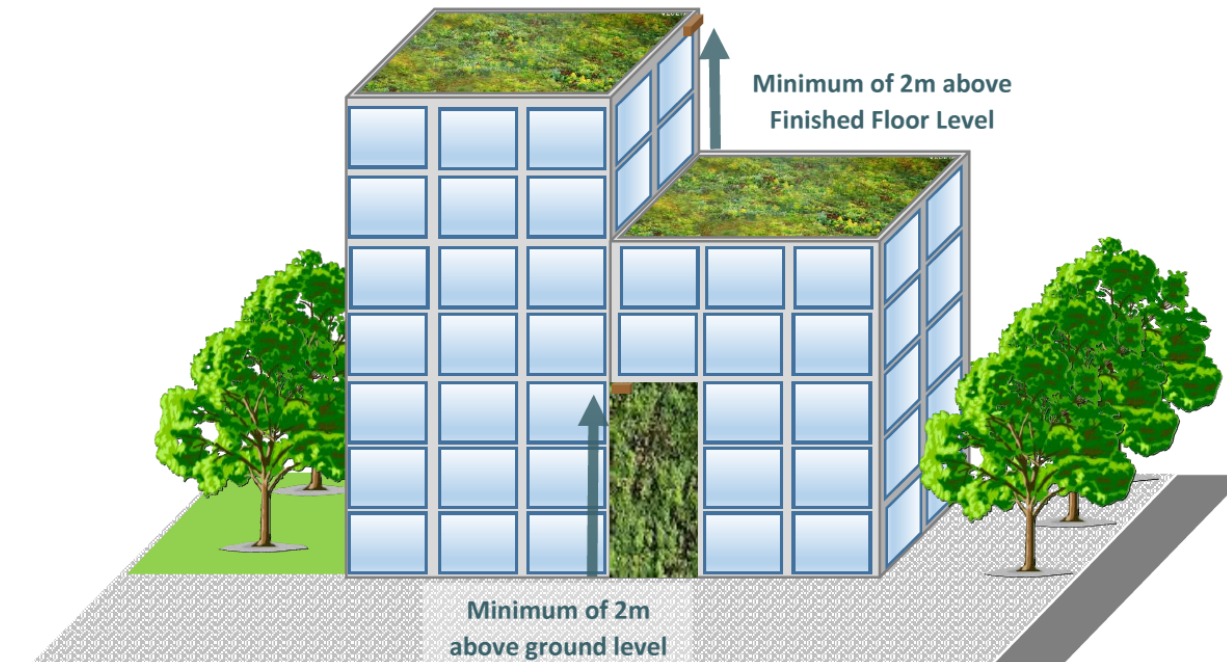
- The box must be placed in a location which has **clear and unobstructed** flight access to the opening.
- Locate out of direct sunlight.
- Wall mounted or in-set into façade.

Specification:

- Height: 245 mm
- Width: 430 mm
- Depth: 200 mm
- Weight: 15 kg



Image Source: www.nhbs.com



1B Schwegler Nest Box

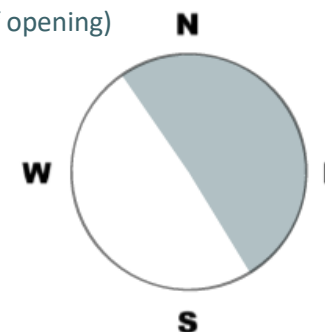
Target Species: Tit Species, Redstart, Flycatcher, Sparrow



Image Source: www.RSPB.org.uk

Aspect

(Orientation of opening)



Requirements:

- The box must be placed in a location which has **clear and unobstructed** flight access to the opening.
- Can be affixed to trees or buildings.
- Aluminium nails or hanging hook should be used when affixing to a tree.
- 26mm and 32mm entrance hole openings.

Specification:

- Height: 230 mm
- Diameter: 160 mm
- Weight: 3.6 kg



Image Source: www.nhbs.com



ARTIFICIAL HABITAT BOXES—INSTALLATION REQUIREMENTS

Vivaro Pro Woodstone Barcelona Open Nest Box

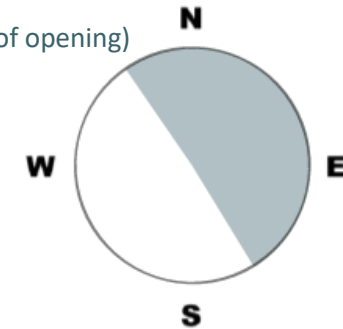
Target Species: Pied wagtails, spotted fly-catcher, song thrush



Image Source: www.RSPB.org.uk

Aspect

(Orientation of opening)



Requirements:

- The box must be placed in a location which has **clear and unobstructed** flight access to the opening.
- Installation heights:
 - Pied wagtail: >5m on tree or building;
 - Spotted flycatcher: 2-4m on a tree;
 - Robin and Wren: buried in thick vegetation.

Specification:

- Height: 270 mm
- Width: 190 mm
- Depth: 230 mm
- Weight: 5.2 kg



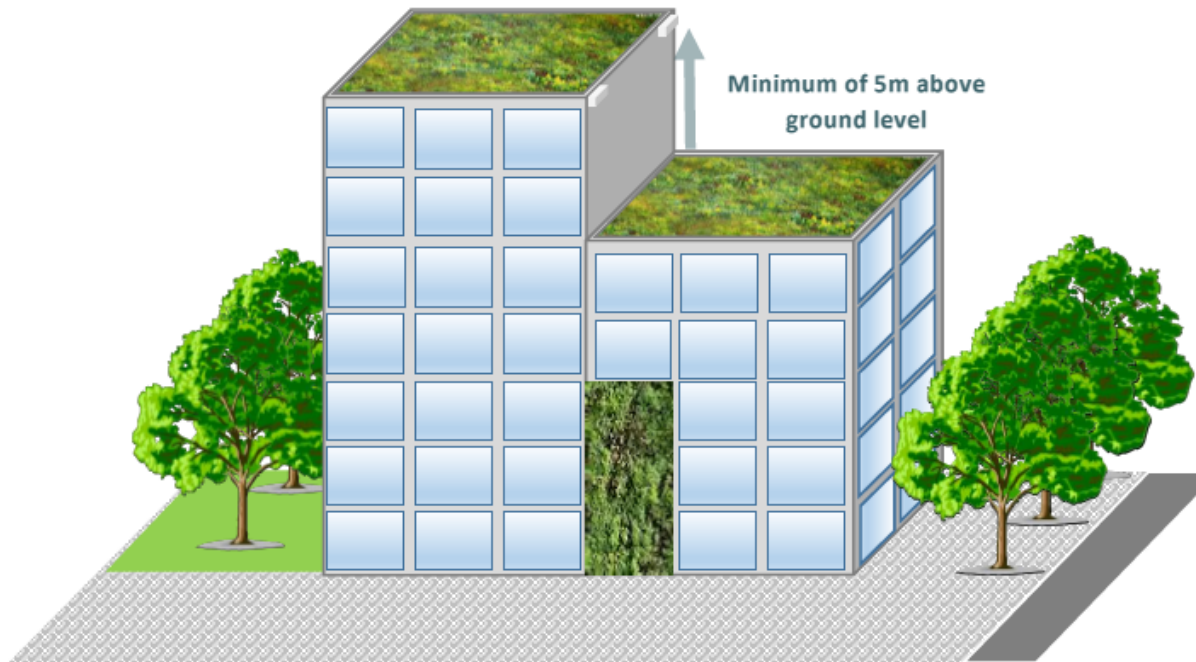
Image Source: www.nhbs.com

No. 17 Schwegler Swift Nest Box

Target Species: Swift (*Apus apus*)

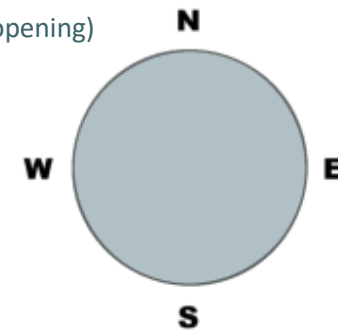


Image Source: www.RSPB.org.uk



Aspect

(Orientation of opening)



Any, but locate out of direct sunlight and away from windows.

Requirements:

- The box must be placed in a location which has **clear and unobstructed** flight access to the opening.
- Single and triple cavity options.

Specification:

- Height: 150 mm
- Width: 340 - 980 mm
- Depth: 150 mm
- Weight: 7.1 kg

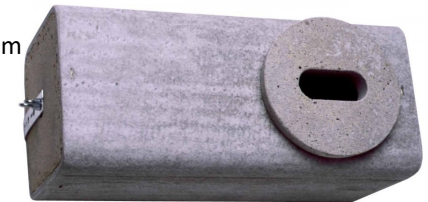


Image Source: www.nhbs.com

Appendix G Communications with County Ecologist

From: Bennison, Lucy
Sent: 08 November 2023 13:41
To: Tanishia Gearing
Cc: Paul Bond
Subject: RE: External Mail: RE: Protected Species within Development Site

Categories: Filed by Newforma

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender. **Report if suspicious.**

Hi Tanisha,

I am free all day tomorrow if you want to send a meeting invite over at a time that suits you.

Many thanks,

Lucy

Lucy Bennison
Ecological Consultant
Environmental Sustainability Service

Knowsley Council, Environmental Sustainability Service, Knowsley,



CAUTION: This email originated from an external source. If you suspect a potential phishing email, report it via the IT Self Service Portal which can be found within the Quick Links section on Bertha

Hi Lucy,

We had a meeting with the design team and the client and have an updated draft plan regarding the Dune helleborine. Would you have time for a call to discuss? I can be free any time this week.

Thanks,

Tanishia

Tanishia Gearing | MRes, BSc, QCIEEM
Consultant

S +4420 7940 8888
hilsonmoran.com



Subject: Re: Protected Species within Development Site

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender. **Report if suspicious.**

Hi Tanisha,

Following on from our conversation on Tuesday MEAS have advised that they have come across one recent application at Edge Hill university which advises to translocate Dune helleborine.

The PEA details information on protection of the plant during demolition phases of development and plans to translocate prior to the development of the new building. The development is different to the proposal on fallows way as we would be unable to translocate the plants within the site or nearby and the chances of the plants being monitored and protected in the same way Edge Hill are proposing is unlikely. Therefore, I think protecting the plant would still be my preference to guarantee its survival.

The planning application number is 2022/0416/PND on the West Lancashire planning portal, I have attached the PEA for information.

Hope this helps.

Many thanks,

Lucy

Lucy Bennison

Subject: RE: External Mail: Re: Protected Species within Development Site

Hi Lucy,

Yes, that works for me. I'll send an invite out.

Thanks

Tanishia

Tanishia Gearing | MRes, BSc, QCIEEM
Consultant

S +4420 7940 8888
hilsonmoran.com



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Morning Tanishia,

Thank you for getting in touch. Are you free on Tuesday morning around 10am to discuss?

Many thanks,

Lucy

Lucy Bennison
Ecological Consultant
Environmental Sustainability Service

Knowsley Council, Environmental Sustainability Service, Knowsley,



Subject: RE: External Mail: Re: Protected Species within Development Site

Hi Caroline,

That's fine. Thank you for passing on the details for Lucy.

When would be a good time for a chat [@Bennison, Lucy](#)? I am mostly available next week so I can work around your schedule.

Thanks

Tanishia

Tanishia Gearing | MRes, BSc, QCIEEM
Consultant

S +4420 7940 8888
hilsonmoran.com



Subject: RE: External Mail: Re: Protected Species within Development Site

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender. **Report if suspicious.**

Hello Tanishia,

Apologies I have been out of the office, however I have asked the Council's Ecologist, Lucy Bennison, to contact you to discuss your query and how we can support.

Best Regards

Caroline Holmes (She/Her)
Head of Environmental Sustainability and Communities
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References

- ¹ The Environment Act 2021. Her Majesty's Stationary Office (HMSO).
- ² The Conservation of Habitats and Species Regulations 2017. Her Majesty's Stationary Office (HMSO).
- ³ The Wildlife and Countryside Act 1981 (as amended). Her Majesty's Stationary Office (HMSO).
- ⁴ The Countryside and Rights of Way (CROW) Act 2000. Her Majesty's Stationary Office (HMSO).
- ⁵ The Natural Environment and Rural Communities (NERC) Act 2006. Her Majesty's Stationary Office (HMSO).
- ⁶ Ministry of Housing, Communities and Local Government (2021) National Planning Policy Framework.
- ⁷ Ministry of Housing, Communities and Local Government (2019) Planning practice guidance – Natural Environment; Biodiversity, geodiversity and ecosystems; and, Green Infrastructure. Accessed through www.gov.uk.
- ⁸ Knowsley Council (2016) Knowsley Local Plan Core Strategy. January 2016.
- ⁹ Joint Nature Conservation Committee and Defra (on behalf of the Four Countries' Biodiversity Group) (2012) UK Post-2010 Biodiversity Framework. July 2012. Available from <http://jncc.defra.gov.uk/page-6189>.
- ¹⁰ Natural England (2014) Habitats and Species of Principal Importance in England. Accessed through www.naturalengland.org.uk.
- ¹¹ Merseyside Biodiversity Group (2005) North Merseyside Biodiversity Action Plan. Accessed through www.merseysidebiodiversity.org.uk on 11/10/2023.
- ¹² British Standards Institute (2013) British Standard 42020: Biodiversity – Code of Practice for Planning and Development. British Standards Institute.
- ¹³ Collins, J. (ed.) (2016) Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd edn).
- ¹⁴ Wray, S., Wells, D., Long, E. and Mitchell-Jones, T., 2010. Valuing Bats in Ecological Impact Assessment. In Practice, 70, pp.23-25.
- ¹⁵ Edgar, P., Foster, J. and Baker, J. (2010). Reptile Habitat Management Handbook. Amphibian and Reptile Conservation, Bournemouth.
- ¹⁶ Gent, A. H., Gibson, S. D., (2003) Herpetofauna Workers Manual, Joint Nature Conservation Committee. Peterborough.
- ¹⁷ Froglife (1999) Froglife Advice Sheet 10: reptile survey. Froglife, Halesworth. Gent T and Gibson S (2003) Herpetofauna Workers Manual. JNCC, Peterborough.
- ¹⁸ Drake CM, Lott DA, Alexander KNA & Webb J (2007). Surveying terrestrial and freshwater invertebrates for conservation evaluation. Natural England Research Report NERR005. Natural England, Peterborough.
- ¹⁹ Biggs, J., Ewald, N., Valentina, A., Garbورياud, C., Griffiths, R. A., Foster, J., Wilkinson, J., Arnett, J., Williams, P., & Dunn, F. (2014). Analytical and methodological development for improved surveillance of the Great Crested Newt Defra Project WC1067 Appendix 5. Oxford: Freshwater Habitats Trust

²⁰ Chartered Institute of Ecology and Environmental Management, 2018. Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine. Version 1.1. Winchester: CIEEM.

²¹ Russ, J. (2012) British Bat Calls: A Guide to Species Identification. Pelagic Publishing, Exeter.

²² Victoria Burrows, (2022) Preliminary Ecological Appraisal (including a Licensed Daylight Bat Survey and Assessment, ERAP Consultant Ecologists.



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