

United Environmental Services Ltd

1 Booths Park,
Chelford Road,
Knutsford,
Cheshire
WA16 8QZ

www.ues.org.uk

enquiries@ues.org.uk

01565 757788



PRELIMINARY ECOLOGICAL APPRAISAL

At

Glen Dimplex Factory

Stone Lane

Whiston

Knowsley

L35 2XW

NGR: SJ 47998 91567

Prepared for:	Ben Edmundson, Taylor Wimpey North West
Written by:	Ysobella Cox, UES Ecologist
Approved by:	Toby Hart, UES Managing Director

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EXECUTIVE SUMMARY

United Environmental Services Ltd (UES) was commissioned by Taylor Wimpey North West to carry out a baseline ecological survey of Glen Dimplex Factory, Whiston. A desk study and preliminary ecological appraisal (PEA) survey were undertaken on 13th August 2025, including searches using the Multi Agency Geographic Information Centre (MAGIC) and Merseyside Biobank.

The PEA provides an assessment of potential ecological impacts associated with the development of the land parcel. The proposed development is for a housing scheme and will include the construction of numerous residential dwellings with associated access roads, footpaths and landscaping.

The proposed development site has an area of approximately 5.77ha and mainly comprises urban habitats with industrial buildings that were associated with the functioning of the disused factory. Small areas of woodland and other neutral grassland are also present within the northern and southeastern sections of the site, with standing water to the south of the central building.

The results of the survey combined with the results of the desk study have highlighted the requirement for further work in relation to the following habitats and species:

- **Amphibians** – reasonable avoidance measures (RAMs) are to be implemented during the construction phase of the development.
- **Bats** – Building 1 was assessed as having low potential to support roosting bats. Due to the large size of the building, two bat back tracking surveys are considered to be more appropriate than individual bat presence / absence surveys. These surveys should be undertaken during the bat survey season (May to September inclusive), with at least one of the surveys undertaken during the peak season of May to August inclusive. Surveyors should be positioned sufficiently to cover the proposed development site footprint.

Buildings 2 and 3 were assessed as having low potential to support roosting bats and as such, a single further bat presence / absence survey is required during the peak bat survey season of May to August inclusive.

Building 7 was assessed as having moderate potential to support roosting bats and as such, two further bat presence / absence surveys should be undertaken from May to September inclusive, with at least one of the surveys undertaken during the peak bat survey season of May to August inclusive.

Buildings 4, 5 and 6 were assessed as having negligible potential to support roosting bats and as such, no further surveys or mitigation measures are required for these buildings, with regards to bats.

Any external lighting installed as part of the development should be designed to be wildlife friendly and avoid overspill onto the woodland and treelines along the site boundaries.

- **Breeding birds** – the roofs of the buildings are likely used by nesting herring gulls *Larus argentatus* and lesser black-backed gulls *Larus fuscus*, whilst the woodland and scrub may provide suitable nesting opportunities for birds. As such, site clearance, building demolition, tree felling, arboricultural works and vegetation removal (including enabling works) are to take place outside of the breeding bird season and should not be undertaken from March to August inclusive. If this is not possible and works need to take place between this period, a targeted breeding bird nest scoping survey should be conducted by a suitably qualified ecologist immediately prior to the works, or an ecological clerk of works appointed to oversee the works.

Feral pigeons were identified within the buildings onsite and feral pigeons are known to breed all year round. Given the number of pigeons present and the potential for birds to be nesting at the time of the proposed works, it may be necessary to engage the services of a pest control contractor who may be able to remove the feral pigeons under general licence, provided that all the necessary criteria have been met.

- **Hedgehogs** – RAMs are to be implemented during the construction phase of the development.
- **Reptiles** – RAMs are to be implemented during the construction phase of the development.
- **Woodland** – to be retained where possible or replaced two-fold in terms of area in an appropriate location. Generic issues relating to root protection areas (RPAs).

Mitigation measures, as detailed in section 4, should be adhered to, which may in some cases negate the need for further survey work.

The development also presents an opportunity to improve the habitats on site for wildlife, such as bats and birds. The inclusion of nest boxes and bat boxes will provide suitable nesting and roosting features in the long term.

This report should be read with appendices 1 to 9, which include results of the desk study, GIS UKHab mapping, photographs of site and relevant statutory guidance.

1 INTRODUCTION

1.1 Author, surveyors, qualifications and scope of study area

This report is written by Ysobella Cox BSc MBiol, UES Ecologist. Ysobella holds a level 3 Botanical Society for Britain and Ireland (BSBI) field identification skills certificate (FISC), which certifies her as competent to undertake UKHab surveys.

Surveyors present included:

- Mark Halliwell MBiol, UES Senior Ecologist. Mark holds a level 4 Botanical Society for Britain and Ireland (BSBI) field identification skills certificate (FISC), which certifies him as competent to undertake phase 1 habitat surveys, UKHab and national vegetation classification (NVC) surveys. Mark is licensed by Natural England to disturb, take and handle all species of bats under licence number 2023-11661-CL18-BAT (level 2).
- Bethany Dineley BSc, UES Graduate Ecologist

The report provides an assessment of the potential ecological impacts associated with the proposed development at Glen Dimplex Factory, Whiston.

The zone of influence considered within the scope of the survey includes all land within the red line boundary. Where relevant, other ecological resources, receptors and important habitats which are spatially separate from the site are considered.

1.2 Survey objectives

UES was commissioned in July 2025 to conduct a PEA of the proposed development site. This was completed in order to:

- Establish baseline conditions and determine the importance of ecological features present or potentially present within the survey area
- Identify key ecological constraints to the project
- Make recommendations for design options to avoid significant effects on important ecological resources at an early stage of development planning
- Identify potential requirement for further surveys for nationally or internationally protected species which may be present on site
- Identify potential requirement for mitigation or compensation, including measures that may be required based on further surveys

1.3 Proposed development

The proposed development is for a housing scheme and will include the construction of numerous residential dwellings with associated access roads, footpaths and landscaping.



1.4 Structure of the report

This report is a baseline appraisal that forms the basis for further ecological surveys and environmental impact assessments (EIA) if required. In the majority of cases the preliminary ecological assessment will not provide all the ecological data required by the Local Planning Authority to determine an application, especially in the event that protected habitat or species issues are present or likely.

This report should be read with appendices 1 to 9, which include results of the desk study, GIS UKHab mapping, photographs of site and relevant statutory guidance.

2 METHODOLOGY

This PEA comprises a desk study and a field survey. The desk study is conducted in order to collate ecological information on species and / or habitats of interest that may be present. The field survey is conducted in order to assess the habitats and their importance, both on site and in the context of their wider surroundings.

2.1 Desk study

The following resources were used to inform the desk study:

- National – Using the UK government’s MAGIC website, statutorily protected sites were scoped to a distance of 10km from the application site.
- Local – A search for protected species or otherwise notable species and local designated sites was undertaken within a 2km radius of the proposed development site by Merseyside Biobank.

2.2 Field survey

An ecological walkover survey was carried out on 13th August 2025 by Mark Halliwell and Bethany Dineley. The purpose of the survey was to identify, record and map dominant habitat types within the development area and highlight any further species surveys that may be required based on the quality of those habitats. When conducting the surveys particular focus was concentrated on the following species and habitat features:

- | | |
|------------------|-------------------------|
| • Amphibians | • Water vole |
| • Reptiles | • White-clawed crayfish |
| • Badger | • Birds |
| • Bats | • Trees |
| • Hazel dormouse | • Hedgerows |
| • Hedgehog | • Plant communities |
| • Otter | • Invasive species |

The habitats were assessed by using the UKHab survey technique, which is a system for environmental audit widely used within the environmental consultancy field. The survey was undertaken in accordance with the methodology in the UK Habitat Classification Version 2.0 (UKHab Ltd, 2023) as recommended by Natural England, and in the “Guidelines for Preliminary Ecological Appraisal” (CIEEM, 2017).

The survey area encompasses all of the land within the development footprint and the land to a distance of 30m outside it where accessible. In line with recognised guidelines, ponds were also scoped to a distance of 500m (250m radius from the survey area).

The UKHab survey methodology was extended to record any signs of habitats suitable to support protected / invasive species and any incidental observations of other noteworthy species.



2.3 Survey limitations

No limitations were encountered during the preliminary ecological appraisal.

3 RESULTS

3.1 Desk study

A desk study was conducted for the proposed development site and surrounding area. Statutorily protected sites were scoped to a distance of 10km. Further results of the desk study can be found at Appendix 1 – Desk study.

3.1.1 Protected sites

There are no statutorily protected sites within 2km of the proposed development site and the site lies within a SSSI Impact Risk Zone (IRZ) within which Natural England do not request that they are consulted on this type of development.

There are fourteen non-statutorily protected sites within 2km of the proposed development site:

- Parrens Covert, LWS¹ – located approximately 706m to the south of the proposed development site.
- Blundell Hill Golf Course, LWS – located approximately 813m to the southeast of the proposed development site.
- Woodland, Sandfield Park, SBI² – located approximately 957m to the southwest of the proposed development site.
- Lickers Lane Wood, SBI – located approximately 1.12km to the southwest of the proposed development site.
- Stadt Moers Q4, Whiston, SBI – located approximately 1.28km to the southwest of the proposed development site.
- The Rough Woodland, LWS – located approximately 1.46km to the southeast of the proposed development site.
- Former Rainhill Hospital Site, LWS – located approximately 1.5km to the northeast of the proposed development site.
- Stadt Moers Q2 and Visitor Centre, Whiston, SBI – located approximately 1.66km to the west of the proposed development site.
- Knowsley Park, LWS – located approximately 1.73km to the northwest of the proposed development site.
- Prescot Reservoirs No. 3 & 4, LWS – located approximately 1.74km to the northwest of the proposed development site.
- Huyton and Prescot Golf Club, SBI – located approximately 1.79km to the west of the proposed development site.

¹ LWS – Local Wildlife Site

² SBI – Site of Biological Importance



- Big Water and Big Water Wood, Halshead, SBI – located approximately 1.8km to the southwest of the proposed development site.
- Copse South of A58, Prescott, SBI – located approximately 1.81km to the northwest of the proposed development site.
- Carr Lane Lake, Prescott, SBI – located approximately 1.83km to the west of the proposed development site.

There are twenty statutorily protected sites (designated for ecological reasons) within 2 –10km of site:

- | | |
|---|----------------------------------|
| • Acornfield Plantation, LNR ³ | • Mill Brow, LNR |
| • Allerton (Eric Hardy), LNR | • Millwood & Alder Wood, LNR |
| • Childwall Woods & Fields, LNR | • Parr Hall Millenium Green, LNR |
| • Clinton Wood, LNR | • Pickerings Pasture, LNR |
| • Clinkham Wood, LNR | • Runcorn Hill, LNR |
| • Colliers Moss Common, LNR | • Stanley Bank Meadow, SSSI |
| • Croxteth, LNR | • Stanley Bank, LNR |
| • Hale Road Woodland, LNR | • Thatto Heath Meadows, LNR |
| • Mersey Estuary, SSSI ⁴ , SPA ⁵ and Ramsar | • Wigg Island, LNR |

3.1.2 Protected species

The following records of protected or otherwise notable species were highlighted by the environmental records search:

- Amphibians: no records of GCN were returned from within 2km of the proposed development site. Other amphibian records returned are of common toad *Bufo bufo*, common frog *Rana temporaria*, palmate newt *Lissotriton helveticus*, and smooth newt *Lissotriton vulgaris*.
- Badgers: three records of badger *Meles meles* were returned by the record search, all of which are located beyond 1km of the proposed development site.
- Bats: records of brown long-eared bat *Plecotus auritus*, common pipistrelle *Pipistrellus pipistrellus*, soprano pipistrelle *Pipistrellus pygmaeus*, a *Pipistrellus sp.*, Daubenton's bat *Myotis daubentonii*, Leisler's bat *Nyctalus leisleri*, a *Myotis sp.* bat, noctule *Nyctalus noctula*, Brandt's bat *Myotis brandtii*, and whiskered *Myotis mystacinus* / brandt's bat were returned from within 2km of the proposed development site. The closest record is located approximately 236m to the east of the site in 2008 and details a single common pipistrelle foraging.

Records of a common pipistrelle maternity roost were also returned from within 2km of the site, which are located approximately 1.66km from the site in 1989.

³ LNR – Local Nature Reserve

⁴ SSSI – Site of Special Scientific Importance

⁵ SPA – Special Protection Area

- Birds: various species, including several NERC Section 41, Wildlife and Countryside Act 1981 Schedule 1, and the most recent Birds of Conservation Concern “red and amber” list species.
- Hazel dormouse: no records of hazel dormouse *Muscardinus avellanarius* were returned from within 2km of the proposed development site.
- Hedgehog: numerous records of hedgehog *Erinaceus europaeus* were returned from within 2km of the proposed development site, the closest of which is approximately 241m to the east of the site in 2008.
- Otter: no records of otter *Lutra lutra* were returned from within 2km of the proposed development site.
- Reptiles: no records of common reptile species were returned from within 2km of the proposed development site, within the last 25 years. However, a single record of grass snake *Natrix natrix* was returned from Stadt Moers Park in 1998.
- Water vole: six records of water vole *Arvicola amphibius* were returned from within 2km of the proposed development site, the closest of which is approximately 988m to the northeast of the site in 2000.
- White clawed-crayfish: no records of white-clawed crayfish *Austropotamobius pallipes* were returned from within 2km of the proposed development site.

3.2 Baseline conditions – Habitats

The results of the PEA are also shown on the accompanying map at Appendix 2 – UKHab plan. Habitats are colour-coded in accordance with the UKHab standard. A full botanical species list for each habitat is provided at Appendix 5.

The local area predominantly consists of residential dwellings. The following principle habitat types were characterised on site:

- g3c Other neutral grassland
- r1g Other standing water
- u1b5 Buildings
- u1b6 Other developed land
- u1e Built linear features
- w1g Other broadleaved woodland

3.2.1 g3c Other neutral grassland

Secondary codes: 521

Grassland 1

There is an area of other neutral grassland situated along the northern and southern boundaries of the proposed development site (see Appendix 4 – Photographs, Photograph 1). It is a rough, unmanaged grassland dominated by grasses such as false oatgrass *Arrhenatherum elatius*, and creeping bent *Agrostis stolonifera*. Additional grass species

including cock's foot grass *Dactylis glomerata*, red fescue *Festuca rubra*, annual meadow grass *Poa annua*, rough meadow grass *Poa trivialis*, sweet vernal grass *Anthoxanthum odoratum*, and Yorkshire fog *Holcus lanatus*, are also present.

Forb species are sporadic and scattered throughout the sward, generally comprising a mixture of species that have been found growing in the nearby area. This grassland is of a lower quality than the grassland to the east (Grassland 2), which features more frequent forbs and those indicative of higher quality grassland. By contrast, this grassland has a higher coverage of grasses.

Additional species present within the grassland include selfheal *Prunella vulgaris*, creeping thistle *Cirsium arvense*, American willowherb *Epilobium ciliatum*, dandelion *Taraxacum officinale* agg., ribwort plantain *Plantago lanceolata*, sheep's sorrel *Rumex acetosella*, common ragwort *Senecio jacobaea*, common cat's-ear *Hypochaeris radicata*, perennial sowthistle *Sonchus arvensis*, creeping buttercup *Ranunculus repens*, great willowherb *Epilobium hirsutum*, wood avens *Geum urbanum*, herb Robert *Geranium robertianum*, broadleaved dock *Rumex obtusifolius*, bramble *Rubus fruticosus* agg., common fleabane *Pulicaria dysenterica*, petty spurge *Euphorbia peplus*, rosebay willowherb *Chamaenerion angustifolium*, dove's-foot cranesbill *Geranium molle*, broadleaved helleborine *Epipactis palustris*, stinging nettle *Urtica dioica*, common hogweed *Heracleum sphondylium*, common sorrel *Rumex acetosa*, common knapweed *Centaurea nigra*, wood dock *Rumex sanguineus*, creeping cinquefoil *Potentilla reptans*, meadow buttercup *Ranunculus acris*, and common daisy *Bellis perennis*.

A small number of tree saplings are also present including hazel *Corylus avellana*, goat willow *Salix caprea*, and pedunculate oak *Quercus robur*.

Grassland 2

An area of other neutral grassland located within the northeastern section of the site (Photograph 2). This area is considered to be distinct from Grassland 1 as it has a higher coverage of nutrient grassland indicator species such as meadow buttercup, red clover *Trifolium pratense*, tufted vetch *Vicia cracca*, common vetch *Vicia sativa*, and ox-eye daisy *Leucanthemum vulgare*.

The grassland is still relatively species-poor; however, it features a different subset of species to Grassland 1 and as such, has been mapped separately.

Additional species present within the grassland include creeping bent, Yorkshire fog, cock's foot grass, red fescue, false oatgrass, dandelion, ribwort plantain, yarrow *Achillea millefolium*, creeping cinquefoil, common fleabane, selfheal, dove's-foot cranesbill, Canadian fleabane, field wood-rush *Luzula campestris*, black medick *Medicago lupulina*, common ragwort, creeping thistle, hoary ragwort *Jacobaea erucifolia*, common field speedwell *Veronica persica*, perennial ryegrass *Lolium perenne*, common knapweed, common cat's-ear, great willowherb, smooth sowthistle *Sonchus oleraceus*, prickly sowthistle *Sonchus asper*, glaucous sedge *Carex flacca*, common bird's-foot trefoil *Lotus corniculatus*, sweet vernal grass, rough meadow grass, pendulous sedge *Carex pendula*, autumn hawkbit *Leontodon autumnalis*, lady's bedstraw *Galium verum*, perforate St. John's wort *Hypericum perforatum*, bush vetch *Vicia sepium*, common couch *Elymus repens*, alder sapling *Alnus glutinosa*, fox and cubs *Pilosella aurantiaca*, and narrow-leaved ragwort *Senecio inaequidens*.



3.2.2 r1g Other standing water

Secondary codes: N/A

An industrial lagoon is present to the south of the main, central building (Photograph 3). It is a linear feature which has formed within a concrete structure in the ground, with small redbrick walls separating the feature into different segments that are connected by metal pipes.

3.2.3 u1b5 Buildings

Secondary codes: 817

There are numerous industrial buildings located within the proposed development site, which were previously associated with the functioning of the factory. This includes factory buildings, a security office, substation and offices.

Building 1 is the main factory building located within the centre of the development site (Photographs 4 to 6). It is a complex series of industrial units with a combination of pitched and flat roofs constructed from corrugated asbestos, sheet metal or bitumen felt. The eaves of the building consist of wooden or asbestos fascia boards, whilst the external walls are constructed from a combination of materials including redbrick, breezeblock and metal cladding.

Building 2 is a disused office building with a flat roof covered in metal sheeting (Photograph 7). The lower half of the external walls are constructed from redbrick, whilst the upper half of the walls primarily comprise PVC windows with metal cladding directly above.

Building 3 is a disused industrial building with a multi-pitched roof constructed from corrugated asbestos. The external walls are a combination of redbrick walls with corrugated asbestos cladding (Photographs 8 and 9).

Building 4 is a single-storey security office. It has a flat roof which is covered in a bitumen felt, and the roof extends beyond the eaves of the building to form an overhang (Photograph 10). The external walls are constructed of redbrick.

Building 5 is a single-storey substation (Photograph 11). It has a flat roof which is covered in a bitumen felt and the external walls are constructed of redbrick with stone lintels present above the doorways.

Building 6 is a single-storey substation. It has a flat roof which is covered in a bitumen felt, and the external walls are constructed of redbrick.

Building 7 is a disused social club with a multi-pitched roof constructed from interlocking concrete roof and ridge tiles (Photograph 12). The eaves of the building consist of wooden boxed soffits and barge boards, whilst the external walls are constructed of redbrick.

3.2.4 u1b6 Other developed land

Secondary codes: 10 and 81

The majority of the proposed development site comprises urban habitats including a hardstanding access road, car park, footpaths and work yard previously associated with the

functioning of the factory (Photographs 13 and 14). As the factory is disused, a large amount of storage and discarded waste is present within these areas.

Small areas of the hardstanding habitats have been encroached by ephemeral vegetation and scattered scrub. Species present include butterfly bush *Buddleja sp.*, broadleaved dock, great willowherb, Canadian fleabane, black medick, red valerian *Centranthus ruber*, American willowherb, ivy, dandelion, annual meadow grass, knotgrass *Polygonum aviculare agg.*, greater plantain *Plantago major*, water bent *Agrostis hygrometrica*, nipplewort, herb Robert, a *Rosa sp.*, grey willow *Salix cinerea*, common fleabane, white clover *Trifolium repens*, procumbent pearlwort *Sagina procumbens*, common orache *Atriplex hortensis*, groundsel, common bird's-foot trefoil, lesser sea spurrey *Spergularia marina*, white poplar sapling *Populus alba*, bramble, hawthorn, Michaelmas daisy *Aster amellus*, wall rue *Asplenium rutamuraria*, Yorkshire fog, maiden's hair spleenwort *Asplenium trichomanes*, annual wall rocket *Diplotaxis muralis*, common couch, scarlet pimpernel *Lysimachia arvensis*, yarrow, common vetch, smooth sowthistle, ash, perennial ryegrass, sycamore, common ragwort, hart's tongue fern *Asplenium scolopendrium*, marsh yellowcress *Rorippa palustris*, common chickweed *Stellaria media*, spear thistle *Cirsium vulgare*, goat willow, silver birch sapling *Betula pendula*, stinging nettle, creeping thistle, garden strawberry *Fragaria x ananassa*, prickly lettuce *Lactuca serriola*, bittersweet *Solanum dulcamara*, field horsetail, colt's-foot *Tussilago farfara*, pineapple weed *Matricaria discoidea*, common mouse-ear, wood avens, mugwort *Artemisia vulgaris*, Leyland's cypress *Cupressus x leylandii*, sweet briar *Rosa rubiginosa*, osier willow *Salix viminalis*, field maple *Acer campestre*, a *Tilia sp.*, perennial sowthistle, lady fern, dogwood *Cornus sanguinea*, and cherry laurel *Prunus laurocerasus*.

3.2.5 u1e Built linear features

Secondary codes: N/A

The boundaries of the proposed development site are demarcated by a combination of metal palisade fencing, concrete and redbrick walls (Photographs 13 and 14).

3.2.6 w1g Other broadleaved woodland

Secondary codes: 30 and 202

A small section of early successional woodland is present along the northern boundary of the proposed development site (Photographs 15 and 16). The woodland contains over 25% coverage of mature trees with a dense stand of scrub beneath.

The canopy comprises Lombardy poplar *Populus nigra italica*, ash and alder *Alnus glutinosa*, with an understorey of dogwood, holly *Ilex aquifolium*, hazel, hawthorn, wild cherry *Prunus avium*, rowan *Sorbus aucuparia*, cherry laurel, pedunculate oak, goat willow, alder and Wilsons honeysuckle *Lonicera nitida*.

The ground flora layer is near absent, with only bramble, wood avens, ivy, stinging nettle, honeysuckle *Lonicera periclymenum* and young shrubs / trees of more mature species present.

3.3 Baseline conditions – Protected species or resources

As part of the PEA, specific observations of wildlife were also recorded. Wildlife observations focused on protected species, invasive species or species of conservation concern. Habitats with potential to support protected species were noted with a view to follow up surveys if required.

3.3.1 Amphibians

No records of GCN were returned from within 2km of the site, the closest record returned is located approximately 2.3km to the west of the site and refers to a potentially suitable breeding pond within Stadt Moers Park.

There are no mapped ponds either onsite or within 500m of the proposed development site. An industrial lagoon is present to the south of Building 1; however, this has formed within a concrete structure in the ground, with small redbrick walls separating the feature into different segments that are connected by metal pipes.

The terrestrial habitats onsite including the woodland and other neutral grassland may provide commuting and foraging opportunities for amphibians. However, the majority of the proposed development site comprises urban habitats including hardstanding access roads, work yard, car parking and industrial buildings that would have previously seen high levels of disturbance.

Given that the majority of the proposed development site comprises low-quality habitats, the absence of ponds within 500m of the site and that no records of GCN were returned from within 2km of the site, it is considered unlikely that GCN will be present onsite.

3.3.2 Reptiles

There are no records of common reptile species within 2km of the proposed development site, from the last 25 years. However, a single record of grass snake was returned from Stadt Moers Park in 1998.

The margins of the woodland and other neutral grassland, where the sward has grown slightly longer, could be used by commuting and foraging common reptile species. However, the majority of the proposed development site comprises urban habitats including hardstanding access roads, work yard, car parking and industrial buildings that would have previously seen high levels of disturbance.

3.3.3 Badger

Three records of badger were returned by the record search, all of which are located beyond 1km of the proposed development site.

The woodland and grassland may provide foraging and commuting opportunities for badger. However, no evidence of badger activity including setts, hairs, latrines or footprints were identified onsite during the walkover survey. In addition, the majority of the proposed development site comprises urban habitats. As such, it is considered unlikely that badgers will be present onsite.

3.3.4 Bats

There are seven buildings onsite which were subject to a detailed bat scoping survey (see report reference UES05069/03 for full details; see Appendix 6 – Building plan).

Building 1 is the main factory building located within the centre of the development site (Photographs 4 to 6). It is a complex series of industrial units with a combination of pitched and flat roofs constructed from corrugated asbestos, sheet metal or bitumen felt. The eaves of the building consist of wooden or asbestos fascia boards, and gaps were identified beneath the eaves which may provide a potential roosting features (PRF) for bats.

The external walls are constructed from a combination of materials including redbrick, breezeblock and metal cladding. Cavities were identified within the brickwork, and where the cladding connects to the external wall, which may also provide a PRF for bats. The western-most section of the building is an openly accessible loading area covered with a corrugated roof.

Building 2 is a disused office building with a flat roof covered in metal sheeting (Photograph 7). The lower half of the external walls are constructed from redbrick, whilst the upper half of the walls primarily comprise PVC windows with metal cladding directly above. Gaps were identified where the eaves of the building connect to the cladding, which may provide a PRF for bats, and cavities were also identified within the brickwork.

Building 3 is a disused industrial building with a multi-pitched roof constructed from corrugated asbestos (Photographs 8 and 9). The external walls are a combination of redbrick with corrugated asbestos cladding. PRFs were identified during the bat scoping survey but were limited to gaps between the cladding and external walls, and cavities within the brickwork.

Building 4 is a single-storey security office. It has a flat roof which is covered in a bitumen felt, and the roof extends beyond the eaves of the building to form an overhang (Photograph 10). The external walls are constructed of redbrick. No suitable PRFs were identified during the bat scoping survey.

Building 5 is a single-storey substation. It has a flat roof which is covered in a bitumen felt, and the external walls are constructed of redbrick with stone lintels present above the doorways (Photograph 11). No suitable PRFs were identified during the bat scoping survey.

Building 6 is a single-storey substation. It has a flat roof which is covered in a bitumen felt, and the external walls are constructed of redbrick. No suitable PRFs were identified during the bat scoping survey.

Building 7 is a disused social club with a multi-pitched roof constructed from interlocking concrete roof and ridge tiles (Photograph 12). PRFs were found to be associated with the roof of the building due to the presence of raised or missing roof tiles, and gaps within the mortar of the verge pointing. The eaves of the building consist of wooden boxed soffits and barge boards, which are damaged in places with gaps identified between the soffits and the gable end walls. The external walls are constructed of redbrick, and a hole was identified within the brickwork on the eastern aspect of the building.

No trees within the proposed development site contain suitable PRFs for bats, including the overhanging trees that may be subject to pruning works. The woodland and grassland may provide commuting and foraging opportunities for bats.



3.3.5 Hazel dormouse

No records of hazel dormice were returned from within 2km of the proposed development site.

The habitats onsite are relatively unsuitable for dormice. There are no hedgerows onsite, and the woodland lacks large quantities of key species such as hazel and honeysuckle. In addition, dormice have a limited distribution nationally. Therefore, hazel dormice are not considered to be present onsite.

3.3.6 Hedgehog

Numerous records of hedgehog were returned from within 2km of the proposed development site.

Although the majority of the proposed development site comprises urban habitats associated with the disused factory, the areas of woodland and grassland may provide suitable foraging and commuting opportunities for hedgehogs.

3.3.7 Otter, water vole and white-clawed crayfish

No records of otter or white-clawed crayfish were returned from within 2km of the proposed development site. Although there are records of water vole within 2km of site, there are no watercourses within or directly adjacent to the development site. Therefore, otter, water vole and white-clawed crayfish are not considered to be present onsite.

3.3.8 Birds

Although a targeted bird survey was not conducted during the site visit, the following bird species were recorded whilst on site: feral pigeon *Columba livia*, herring gull *Larus argentatus*, lesser black-backed gull *Larus fuscus*, pied wagtail *Motacilla alba*, robin *Erithacus rubecula*, wood pigeon *Columba palumbus*, collared dove *Streptopelia decaocto*, magpie *Pica pica*, gold finch *Carduelis carduelis*, blue tit *Cyanistes caeruleus*, linnet *Linaria cannabina*, wren *Troglodytes troglodytes*, and grey wagtail *Motacilla cinerea*.

Of the species mentioned above, herring gull and linnet are included on both Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006 and the most recent Birds of Conservation Concern (BOCC) "red list". The lesser black-backed gull, wood pigeon, wren and grey wagtail are included on the BOCC "amber list".

The areas of woodland, scattered scrub and buildings provide suitable nesting opportunities for breeding birds in the summer (Photograph 17). Feral pigeons were identified breeding across the entirety of the site (Photograph 18), whilst herring gulls and lesser black-backed gulls are likely nesting on the roof of the buildings.

3.3.9 Trees

Trees on site may be protected by a Tree Preservation Order (TPO), for which a check has not been undertaken.

3.3.10 Hedgerows

There are no hedgerows within the proposed development site.



3.3.11 Plant communities

No plant communities or individual species were recorded on site which are afforded statutory protection in their own right.

3.3.12 Invasive species

No invasive species were identified onsite during the walkover survey.

4 EVALUATION AND RECOMMENDATIONS

This section provides a brief assessment of the likely impacts associated with the proposed development on the receptors identified during the walkover survey and desk study. It also includes any mitigation and compensation measures which may be required for the proposed development to proceed.

4.1 Habitats

4.1.1 Designated sites

The sites identified during the desk study were cross-referenced with the survey area relevant to this report. The closest statutorily protected site is Thatto Heath Meadows LNR which is located approximately 3.24km to the northeast of the site, whilst the closest non-statutorily designated site is Parrens Covert LWS which is located approximately 706m to the south of the proposed development site.

Given the distances from site and the scale of development, it is considered unlikely that the proposed development will have any direct or indirect impact on these sites.

4.1.2 Woodland

There is an area of semi-natural, broadleaved woodland located along the northern boundary of the proposed development site.

Construction impacts

The woodland could be permanently damaged, altered and / or disturbed by the construction activities.

Mitigation

The woodland should be adequately protected during the construction activities on site. It should be fenced off to protect the root systems of the trees within, and no contractors should access the woodland unless authorised to do so or for reasons related to working within the woodland (e.g. protecting it from construction activities). No materials should be stored in the woodland and no temporary or permanent external lighting should be directed onto the woodland.

Compensation

If the woodland is to be removed, it should be replaced two-fold in terms of area in an appropriate location. A detailed woodland management plan should be prepared for the newly created woodland and agreed with the local planning authority.

Operational impacts

Significant issues could include general degradation to the woodland by way of litter or access pressures from residents.



Mitigation

Bins and other waste disposal / recycling facilities should be available in the immediate surrounding area. Alternatively, the woodland can be fenced off to prevent access.

4.2 Species

4.2.1 Amphibians and reptiles

The woodland and grassland habitats onsite may provide foraging and commuting opportunities for both amphibians and reptiles. However, the majority of the proposed development site comprises urban habitats associated with the functioning of the disused factory, and there are no ponds located within 500m of the site.

Construction impacts

Potential impacts include direct harm, injury and / or death to individuals.

Mitigation

The following RAMs should be implemented on site during the construction phase of the development:

- The grassland is to be mown / cleared to have a sward length below 10cm. The sward length is to be reduced gradually in order to give any amphibians or reptiles present time to move off site of their own accord. The mown / cleared area will then be maintained with a short sward until the works on site have been completed.
- Any potential hibernacula will be removed from the working area by a suitably experienced ecologist, and placed in a suitable area close to site. Hibernacula could include piles of rubble, bricks, loose soil, debris, brash piles etc.
- No excavations are to be left open overnight. If this is not feasible a plank should be left within the excavation at a 45-degree angle to allow amphibians and other wildlife to escape. Any open excavations should be checked for amphibians in the morning prior to start of works on site.
- Materials will be stored on pallets off the ground in order to reduce the risk of amphibians and reptiles sheltering underneath them.
- The woodland and trees along the site boundaries should remain, where feasible, to continue to provide shelter and connectivity across site for amphibians and other fauna.
- UES will remain on-call throughout the development and if any newts or reptiles are encountered, work on site is to stop immediately and ecological advice is to be sought.

Operational impacts

No operational impacts are envisaged.

4.2.2 Bats

There are seven buildings within the proposed development site which were subject to a detailed bat scoping survey to determine their suitability to support roosting bats.

No trees within the development site contain suitable PRFs for bats, but the areas of woodland and grassland may provide foraging and commuting opportunities.

Construction impacts

If bats are roosting within the buildings during site clearance and demolition, they are at risk of direct harm and disturbance and the roosts will be lost permanently. Inappropriate landscaping could also result in the severing of commuting corridors used by bats as well as the loss of foraging habitats.

Mitigation

Building 1 was assessed as having low potential to support roosting bats. Due to the large size of the building, two bat back tracking surveys are considered to be more appropriate than individual bat presence / absence surveys. These surveys should be undertaken during the bat survey season (May to September inclusive), with at least one of the surveys undertaken during the peak season of May to August inclusive. Surveyors should be positioned sufficiently to cover the proposed development site footprint.

Buildings 2 and 3 were assessed as having low potential to support roosting bats and as such, a single further bat presence / absence survey is required during the peak bat survey season of May to August inclusive.

Building 7 was assessed as having moderate potential to support roosting bats and as such, two further bat presence / absence surveys should be undertaken from May to September inclusive, with at least one of the surveys undertaken during the peak bat survey season of May to August inclusive.

Buildings 4, 5 and 6 were assessed as having negligible potential to support roosting bats and as such, no further surveys or mitigation measures are required for these buildings, with regards to bats.

The survey results will need to be submitted as part of the planning application, and will inform further mitigation or compensation measures, if required. It should be noted that these further measures may include an application for a European Protected Species (EPS) mitigation licence or bat mitigation class licence (BMCL) from Natural England.

Any external lighting installed as part of the development should be designed to be wildlife friendly and avoid overspill onto the woodland and treelines along the site boundaries (see Appendix 7 – External lighting guidance).

Enhancements

The provision of bat boxes as part of the development proposals would increase the roosting opportunities for bats on site but would also increase the ecological value of the site. At the time of writing this report no detailed plans are available, but bat boxes that could be used on site include:

- Schwegler 1FF box (affixed to trees or buildings)
- Schwegler 2F box (affixed to trees or buildings)
- Schwegler 1FW hibernation box (affixed to trees)
- Schwegler 2FR bat tube (installed in connected pairs or threes into the external walls of buildings)

Bat boxes affixed to trees should be fitted at a height of between 5 and 6m metres on a southerly aspect.

The bat boxes affixed to, or installed into the external walls of buildings should be installed just below the eaves / roof height. No detailed lighting proposals are as yet available to UES, however care must be taken when installing any new lighting to ensure that light spillage onto the bat boxes is minimised. This may require the use of cowlings or relocation of the bat box or lighting.

It should be noted that once bat inhabits a bat box, they may only be disturbed by a licensed bat worker.

Operational impacts

To be assessed following the further surveys.

4.2.3 Birds

There are a number of habitats onsite, such as the woodland, scattered scrub and buildings which could support breeding birds.

Construction impacts

Building demolition, tree felling, arboricultural works and vegetation removal could result in the direct loss of nests, any individuals within the nests and of available nesting territories if conducted during the breeding season.

Mitigation

The roofs of the buildings onsite are likely used by nesting herring gulls and lesser black-backed gulls, whilst the woodland and scrub may provide suitable nesting opportunities for birds. As such, site clearance, building demolition, tree felling, arboricultural works and vegetation removal (including enabling works) are to take place outside of the breeding bird season and should not be undertaken from March to August inclusive. If this is not possible and works need to take place between this period, a targeted breeding bird nest scoping survey should be conducted by a suitably qualified ecologist immediately prior to the works, or an ecological clerk of works appointed to oversee the works.

Feral pigeons were identified using the buildings onsite and feral pigeons are known to breed all year round. Given the number of pigeons present and the potential for birds to be nesting at the time of the proposed works, it may be necessary to engage the services of a pest control contractor who may be able to remove the feral pigeons under general licence, provided that all the necessary criteria have been met.

Compensation and enhancement

If extensive areas of vegetation are to be removed, consideration should be given to providing replacement habitat for foraging and nesting birds by incorporating tree, shrub or scrub planting as part of the landscaping proposals.

Landscaping can also be used to promote biodiversity through the appropriate design of habitats and creating habitat mosaics, which promote natural linkages and hence the dispersal of target species. Principles and landscaping ideas beneficial to wildlife and relevant to this site include:

- Planting and management of hedgerows
- Planting of berry and nut bearing shrub species to encourage winter birds
- Planting and management of shrubs which develop a mosaic of structures to support breeding birds
- Use of nectar bearing flowers to encourage invertebrates (such as bees, flies, beetles and butterflies)

Species are to be native, of local provenance or to have a proven benefit to biodiversity. Further information can be found at Appendix 8 – Landscape design for birds.

Compensation for the loss of nesting habitat and the enhancing of the nesting habitat on site can also be provided through the provision of bird nest boxes. At the time of writing this report no detailed plans are available, but bird boxes that could be used on site include:

- Schwegler 1B nest box (affixed to trees)
- Schwegler 1SP sparrow terrace (affixed to building below the eaves)
- Schwegler 2H robin nest box (affixed to trees)
- Schwegler 3S starling nest box (affixed to trees or buildings)
- Schwegler 1MR Avianex box (affixed to trees or buildings)
- Manthorpe swift nest brick (incorporated into the external walls of buildings)

The bird boxes should be sited at a minimum height of three metres. Unless there are trees which shade the box during the day, the boxes should be oriented between north and east, thus avoiding strong sunlight and the wettest winds.

Operational impacts

Inappropriate management of the habitats on site could degrade them and render them unsuitable for wildlife.

Mitigation

It is important to implement good horticultural practice in any landscaping scheme, including the use of peat-free composts, mulches and soil conditioners. The use of pesticides (herbicides, insecticides, fungicides and slug pellets) should be discouraged to prevent fatal effects on the food chain. Any pesticides used should be non-residual.

Excessive removal or pruning of trees and hedgerows should be avoided to maximise the growth and plant matter available to wildlife. Pruning should be left until late winter to leave seeds and berries for wintering wildlife and to ensure no impact on breeding and nesting birds.



4.2.4 Hedgehogs

No evidence of hedgehog activity was observed on site during the walkover survey. However, numerous records of hedgehogs were returned from the local area, and the areas of woodland and grassland provide suitable foraging and commuting opportunities for hedgehogs.

Construction impacts

Vegetation clearance works and construction activities without mitigation could result in direct harm, injury and / or death to individuals.

Mitigation

The following RAMs should be implemented on site during the construction phase of the development:

- No trenches or excavations will be left open overnight. They will be backfilled or covered with board, or alternatively fitted with a means of escape for any hedgehogs (or other animal) which may become trapped within, such as a plank or slope leading out of the bottom of the excavation at an angle of 45°. All excavations left open overnight will be checked for trapped wildlife in the morning.
- Any potential refugia on site or created as part of the works should be removed by hand or checked for sheltering hedgehogs prior to their removal by mechanical means or burning. Potential refugia can include piles of leaf litter, log piles and brash piles.
- Any pipes will be stored with caps on to prevent entry by hedgehogs and other animals, and materials such as barbed wire will be stored so that animals cannot become entangled in them.
- Any chemicals or harmful materials will be stored so that they cannot be accessed by hedgehogs or other animals.
- Excavations will be checked immediately before they are backfilled to ensure that no animals have become trapped.

Operational impacts

To allow continued use of the site by hedgehog and to ensure commuting routes aren't blocked, any fences installed on site should be designed to allow passage of hedgehogs. This can either be through the choice of material e.g. choosing a fence style that naturally contains holes at the base or through the inclusion of hedgehog highways. Hedgehog highways are small 13cm x 13cm holes at the base of fences.



5 CONCLUSION

The proposed development site has an area of approximately 5.77ha and mainly comprises urban habitats with industrial buildings that were associated with the functioning of the disused factory. Small areas of woodland and other neutral grassland are also present within the northern and southeastern sections of the site, with standing water to the south of the central building.

The preliminary ecological appraisal has highlighted potential issues with the following ecological receptors on or adjacent to site: amphibians, bats, birds, hedgehogs, reptiles and woodland. Provided these issues are addressed in accordance with the recommendations detailed in this report, the development may proceed without adversely impacting the aforementioned ecological receptors.

The development also presents an opportunity to enhance the habitats available to wildlife on site. The provisioning of bat and bird nest boxes on site will provide improved roosting and nesting opportunities into the long-term future of the site.



6 REFERENCES

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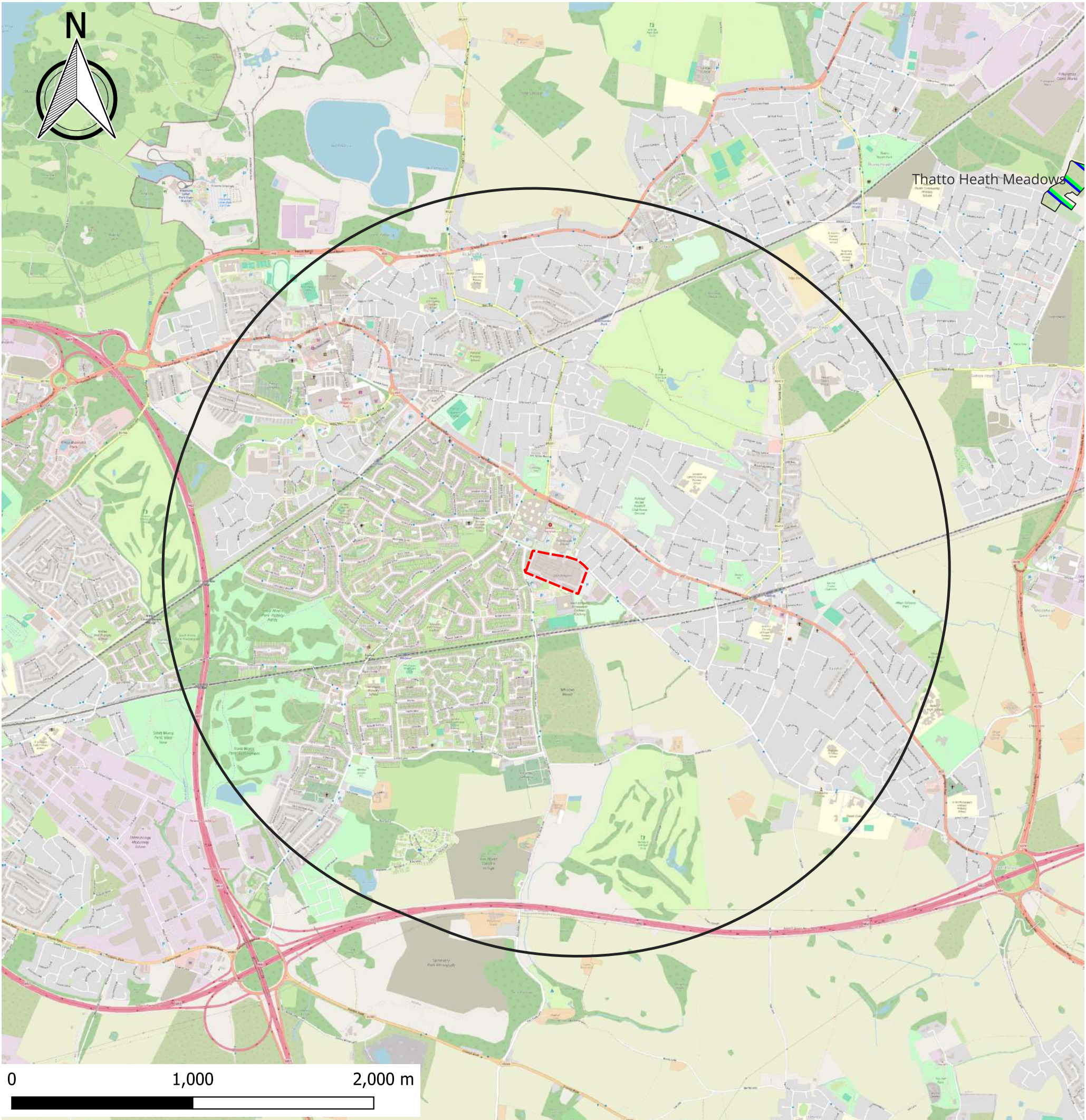
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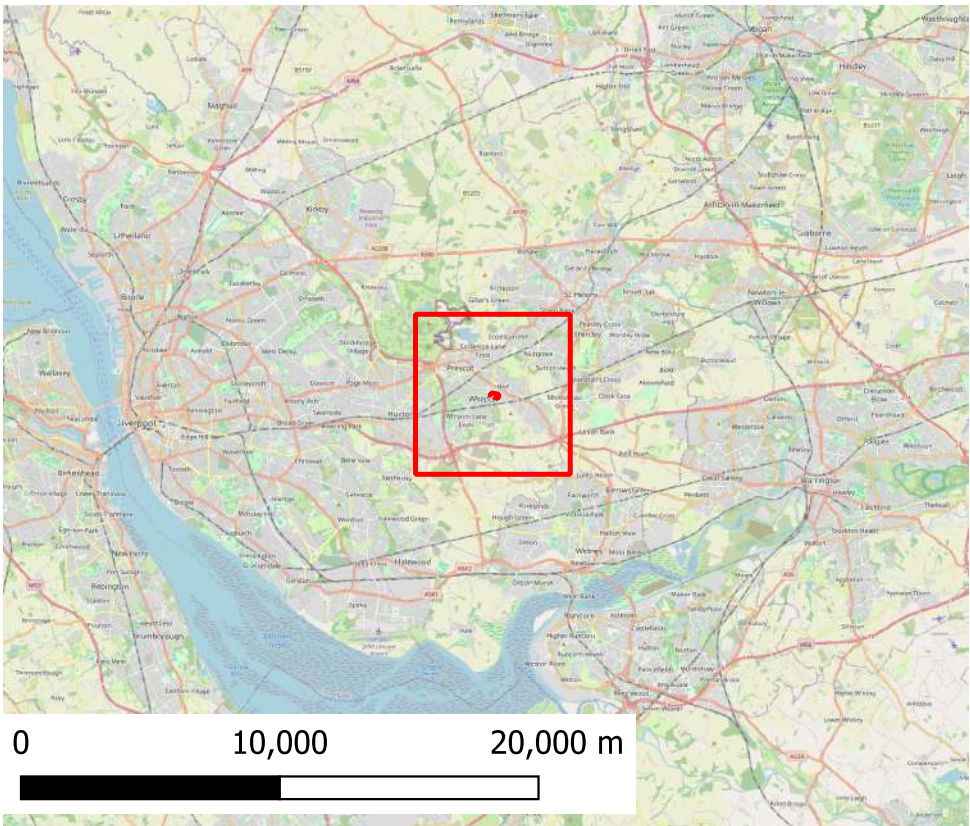
APPENDICES

Appendix 1 – Desk study



Statutorily Designated Sites

Site: Glen Dimplex Factory, Whiston
NGR: SJ 47998 91567
Author: Ysobella Cox
Date: 19.09.2025



Key

- Local Nature Reserve
- National Nature Reserve
- Ramsar Site
- Site of Special Scientific Interest
- Special Area of Conservation
- Special Protection Area
- Survey Boundary
- 2km Buffer

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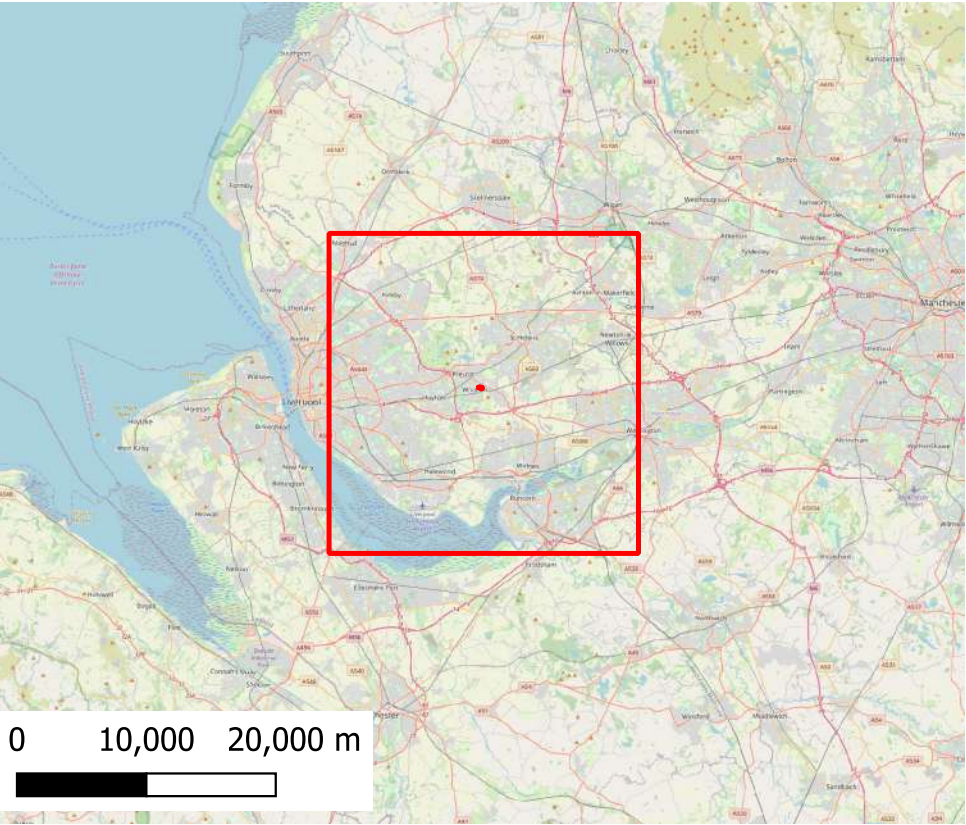
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Statutorily Designated Sites

Site: Glen Dimplex Factory, Whiston
NGR: SJ 47998 91567
Author: Ysobella Cox
Date: 19.09.2025



Key

- Local Nature Reserve
- National Nature Reserve
- Ramsar Site
- Site of Special Scientific Interest
- Special Area of Conservation
- Special Protection Area
- Survey Boundary
- 10km Buffer

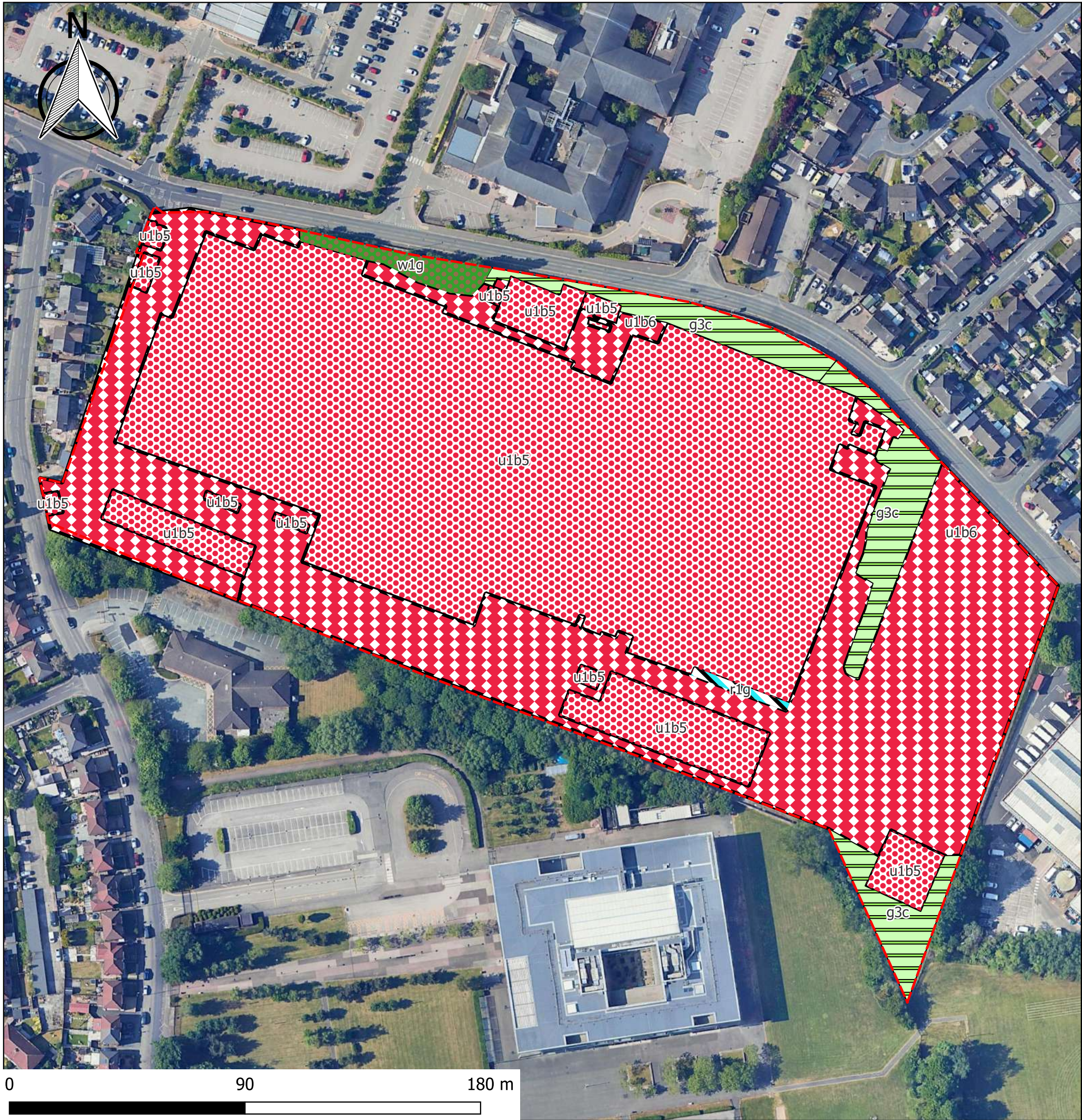
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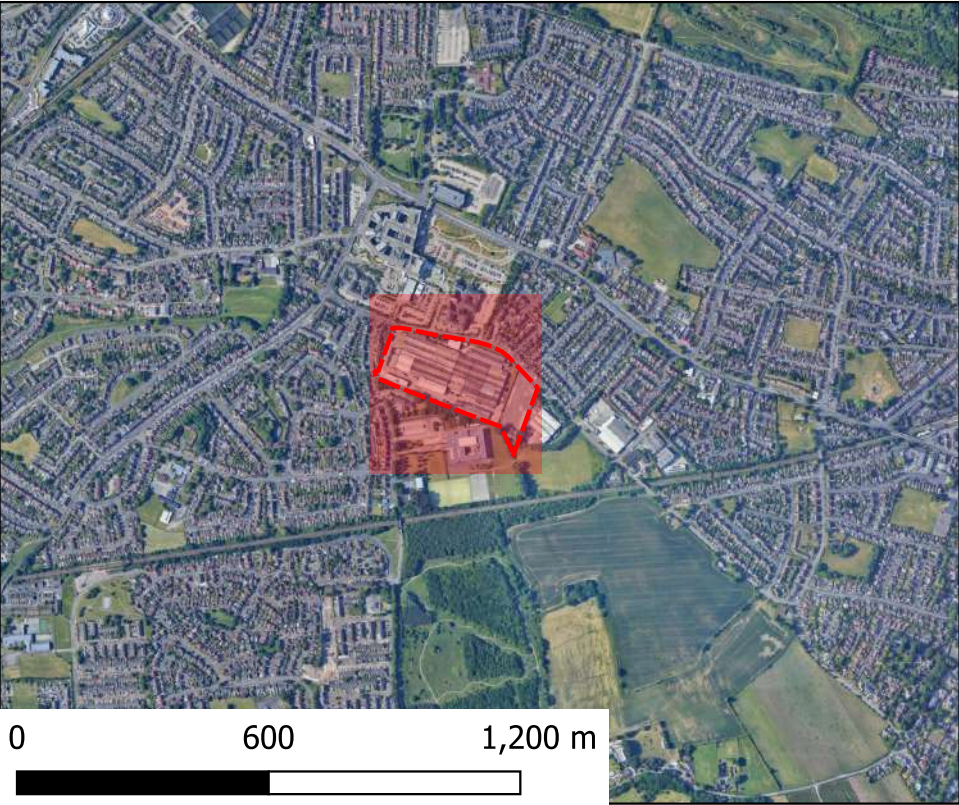


Appendix 2 – UKHab plan



UK Habitat Classification Plan

Site: Glen Dimplex,
Knowsley
NGR: SJ 47998 91567
Author: Bethany Dineley
Date: 16/09/2025



Key

- g3c - other neutral grassland
- w1g - other broadleaved woodland
- u1b5 - buildings
- u1b6 - other developed land
- r1g - other standing water
- Survey boundary

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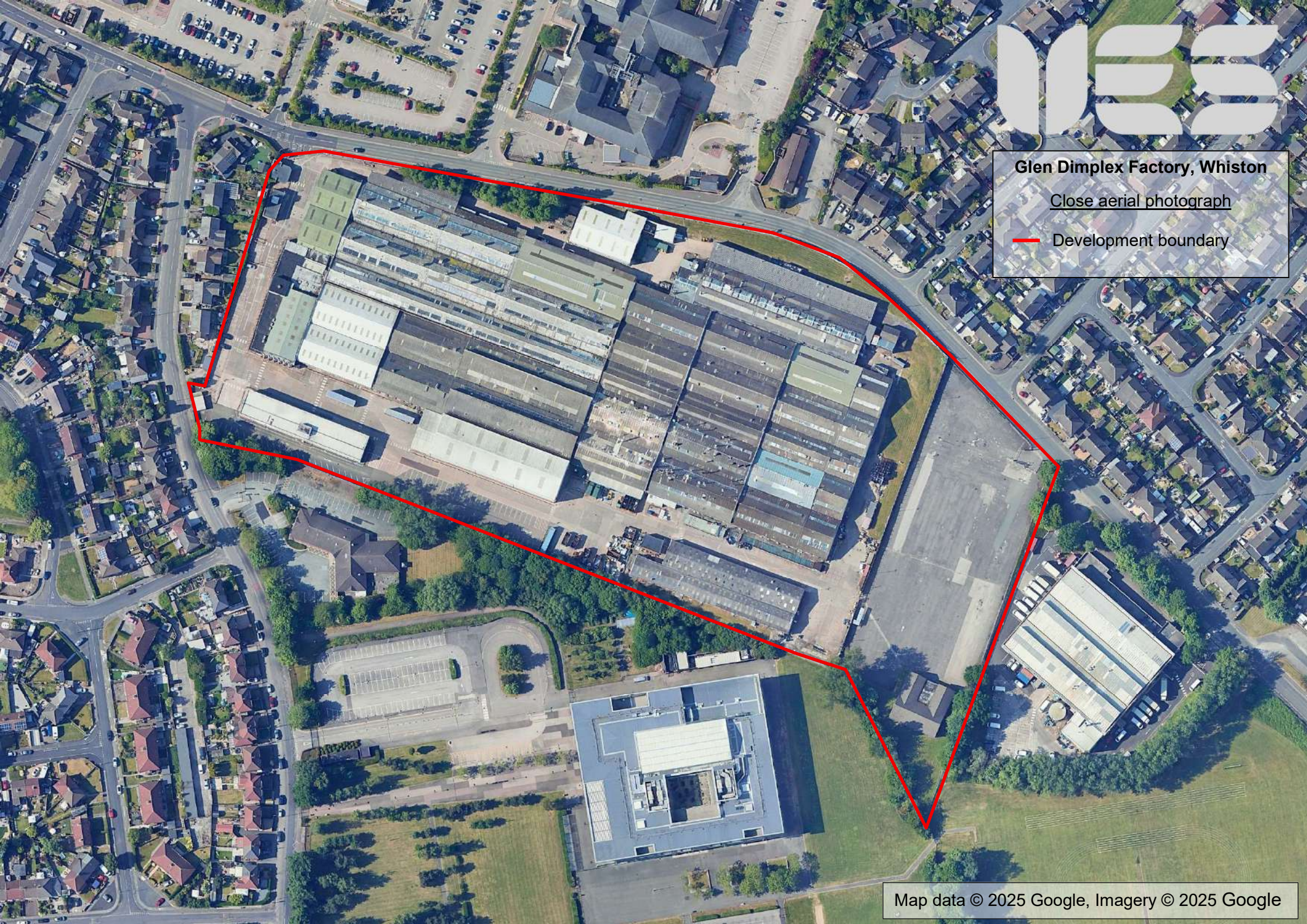
Appendix 3 – Aerial photographs



Glen Dimplex Factory, Whiston

Close aerial photograph

— Development boundary





Glen Dimplex Factory, Whiston

Wide aerial photograph



Site location



Appendix 4 – Photographs



Photograph 1. Grassland 1 located along the northern boundary of the proposed development site.



Photograph 2. Grassland 2 located to the east of Building 1.



Photograph 3. An industrial lagoon located to the south of Building 1.



Photograph 4. The southern aspect of Building 1.



Photograph 5. The western aspect of Building 1.



Photograph 6. The eastern aspect of Building 1.



Photograph 7. The northern aspect of Building 2.



Photograph 8. The western aspect of Building 3.



Photograph 9. The southern aspect of Building 3.



Photograph 10. The eastern and southern aspects of Building 4.



Photograph 11. The northern and eastern aspects of Building 5.



Photograph 12. The northern and western aspects of Building 7.



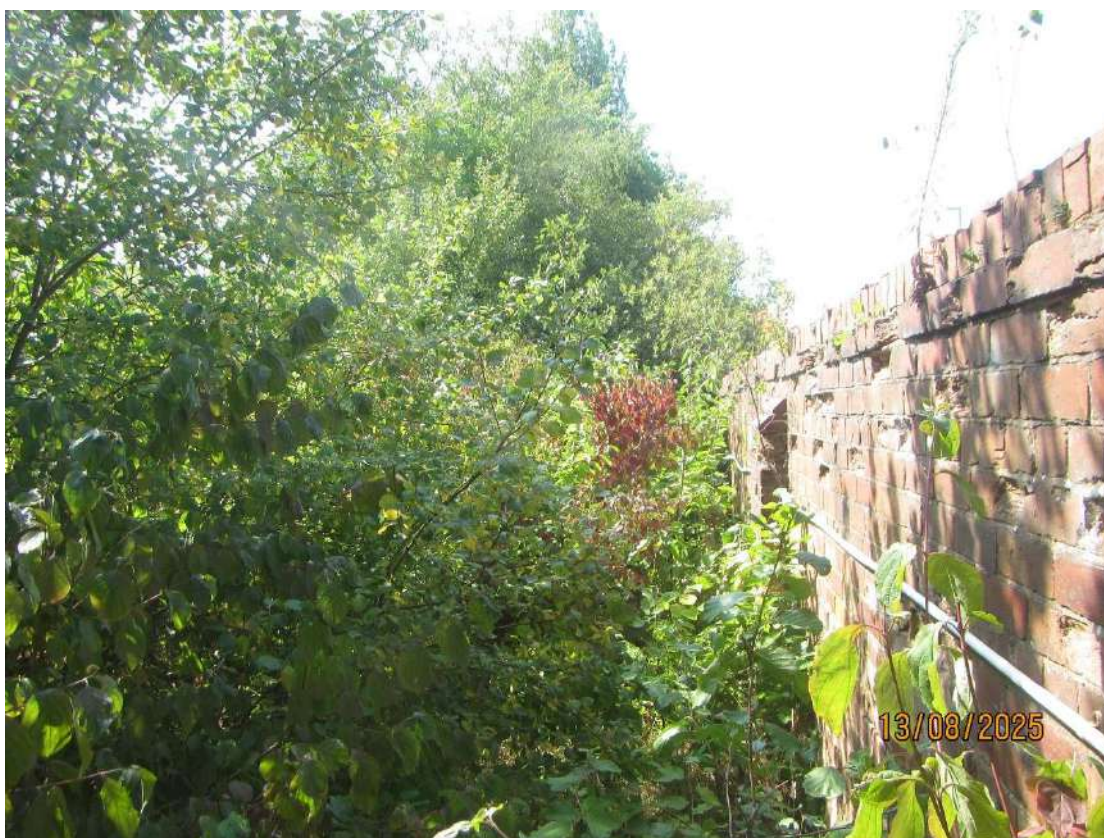
Photograph 13. Example of hardstanding habitats onsite and metal palisade fencing demarcating the site boundary.



Photograph 14. Example of hardstanding habitats onsite and redbrick walls demarcating the site boundary.



Photograph 15. The understorey of the broadleaved woodland onsite.



Photograph 16. Looking west across the broadleaved woodland.



Photograph 17. Example of an old bird nest identified within a tree onsite.



Photograph 18. Feral pigeon identified within Building 1.



Appendix 5 – Botanical species list

Scientific name	Common name
<i>Acer campestre</i>	Field Maple
<i>Acer pseudoplatanus</i>	Sycamore
<i>Achillea millefolium</i>	Yarrow
<i>Agrostis stolonifera</i>	Creeping Bent
<i>Alnus glutinosa</i>	Alder
<i>Anthoxanthum odoratum</i>	Sweet Vernal-grass
<i>Arrhenatherum elatius</i>	False Oat-grass
<i>Artemisia vulgaris</i>	Mugwort
<i>Asplenium ruta-muraria</i>	Wall Rue
<i>Asplenium scolopendrium</i>	Hart's Tongue Fern
<i>Asplenium trichomanes</i>	Maidenhair Spleenwort
<i>Aster amellus</i>	Michaelmas Daisy
<i>Athyrium filix-femina</i>	Lady Fern
<i>Atriplex hortensis</i>	Common Orache
<i>Bellis perennis</i>	Common Daisy
<i>Betula pendula</i>	Silver Birch
<i>Bromus hordeaceus</i>	Soft Brome
<i>Buddleja</i> sp.	Butterfly bush
<i>Carex flacca</i>	Glaucous Sedge
<i>Carex pendula</i>	Pendulous Sedge
<i>Centaurea nigra</i>	Common Knapweed
<i>Centranthus ruber</i>	Red Valerian
<i>Cerastium fontanum</i>	Common Mouse-ear
<i>Chamerion angustifolium</i>	Rosebay Willowherb
<i>Cirsium arvense</i>	Creeping Thistle
<i>Cirsium vulgare</i>	Spear Thistle
<i>Conyza canadensis</i>	Canadian Fleabane
<i>Cornus sanguinea</i>	Dogwood
<i>Corylus avellana</i>	Hazel
<i>Crataegus monogyna</i>	Hawthorn
<i>Cupressus x leylandii</i>	Leyland Cypress
<i>Dactylis glomerata</i>	Cock's Foot Grass
<i>Diplotaxis muralis</i>	Annual Wall Rocket
<i>Elytrigia repens</i>	Common Couch Grass
<i>Epilobium ciliatum</i>	American willowherb
<i>Epilobium hirsutum</i>	Great Willowherb
<i>Epipactis palustris</i>	Broadleaved Helleborine
<i>Equisetum arvense</i>	Field Horsetail
<i>Erodium cicutarium</i>	Common Stork's-bill
<i>Euphorbia peplus</i>	Petty Spurge
<i>Festuca rubra</i>	Red Fescue
<i>Fragaria x ananassa</i>	Garden Strawberry
<i>Fraxinus excelsior</i>	Ash
<i>Galium verum</i>	Lady's Bedstraw
<i>Geranium molle</i>	Dove's-foot Cranesbill
<i>Geranium robertianum</i>	Herb Robert
<i>Geum urbanum</i>	Wood Avens
<i>Hedera helix</i>	Ivy
<i>Heracleum sphondylium</i>	Common Hogweed
<i>Holcus lanatus</i>	Yorkshire Fog
<i>Hypericum perforatum</i>	Perforate St John's-wort
<i>Hypochaeris radicata</i>	Common Cat's-ear
<i>Ilex aquifolium</i>	Holly
<i>Jacobaea erucifolia</i>	Hoary Ragwort
<i>Lactuca serriola</i>	Prickly Lettuce
<i>Lapsana communis</i>	Nipplewort
<i>Leucanthemum vulgare</i>	Oxeye Daisy
<i>Lolium perenne</i>	Perennial Rye-grass
<i>Lonicera nitida</i>	Wilson's Honeysuckle
<i>Lonicera periclymenum</i>	Honeysuckle
<i>Lotus corniculatus</i>	Common Bird's-foot Trefoil
<i>Luzula campestris</i>	Field Wood-rush
<i>Lysimachia arvensis</i>	Scarlet Pimpernel
<i>Matricaria discoidea</i>	Pineapple Weed

Scientific name	Common name
<i>Medicago lupulina</i>	Black Medick
<i>Pilosella aurantiaca</i>	Fox and Cubs
<i>Plantago lanceolata</i>	Ribwort Plantain
<i>Plantago major</i>	Greater Plantain
<i>Poa annua</i>	Annual Meadow-grass
<i>Poa trivialis</i>	Rough Meadow-grass
<i>Polygonum aviculare</i> agg.	Knotgrass
<i>Polypogon viridis</i>	Water Bent
<i>Populus nigra italica</i>	Lombardy Poplar
<i>Populus</i> sp.	Poplar Species
<i>Populus x canadensis</i>	Canadian Poplar
<i>Potentilla reptans</i>	Creeping Cinquefoil
<i>Prunella vulgaris</i>	Selfheal
<i>Prunus avium</i>	Wild Cherry
<i>Prunus laurocerasus</i>	Cherry Laurel
<i>Pulicaria dysenterica</i>	Common Fleabane
<i>Quercus robur</i>	Pedunculate Oak
<i>Ranunculus acris</i>	Meadow Buttercup
<i>Ranunculus repens</i>	Creeping Buttercup
<i>Rorippa palustris</i>	Marsh Yellow Cress
<i>Rosa rubiginosa</i>	Sweet Briar
<i>Rosa</i> sp.	Rose species
<i>Rubus fruticosus</i> agg.	Bramble
<i>Rumex acetosa</i>	Common Sorrell
<i>Rumex acetosella</i>	Sheep's Sorrel
<i>Rumex obtusifolius</i>	Broadleaved Dock
<i>Rumex sanguineus</i>	Wood Dock
<i>Sagina procumbens</i>	Procumbent Pearlwort
<i>Salix caprea</i>	Goat Willow
<i>Salix cinerea</i>	Grey Willow
<i>Salix viminalis</i>	Osier Willow
<i>Sambucus nigra</i>	Elder
<i>Scorzoneroideis autumnalis</i>	Autumn Hawkbit
<i>Senecio inaequidens</i>	Narrow Leaved Ragwort
<i>Senecio jacobaea</i>	Common Ragwort
<i>Senecio vulgaris</i>	Groundsel
<i>Solanum dulcamara</i>	Bittersweet
<i>Sonchus arvensis</i>	Perennial Sowthistle
<i>Sonchus asper</i>	Prickly Sowthistle
<i>Sonchus oleraceus</i>	Smooth Sowthistle
<i>Sorbus aucuparia</i>	Rowan
<i>Spergularia marina</i>	Lesser Sea Spurrey
<i>Stellaria media</i>	Common Chickweed
<i>Taraxacum officinale</i> agg.	Dandelion
<i>Tilia</i> sp.	Lime
<i>Trifolium pratense</i>	Red Clover
<i>Trifolium repens</i>	White Clover
<i>Tussilago farfara</i>	Colt's-foot
<i>Urtica dioica</i>	Common Nettle
<i>Veronica persica</i>	Common Field Speedwell
<i>Vicia sativa</i>	Common Vetch
<i>Vicia sepium</i>	Bush Vetch



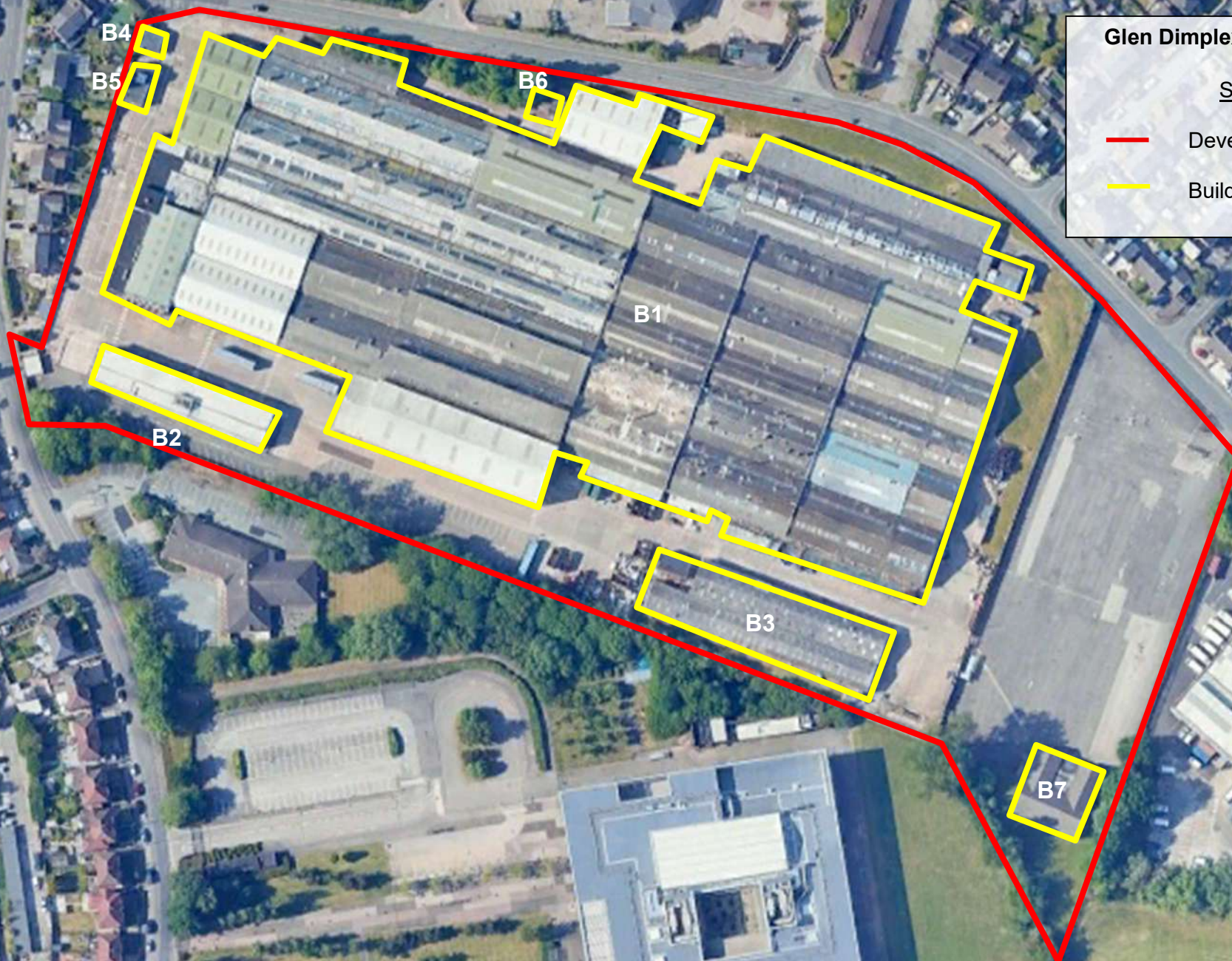
Appendix 6 – Building plan



Glen Dimplex Factory, Whiston

Site plan:

- Development boundary
- Building





Appendix 7 – External lighting guidance

Lighting scheme in relation to bats

The two most important features of street and security lighting with respect to bats are:

1. The UV component. Low or zero UV installations are preferred to reduce attraction of insects to lighting and therefore to reduce the attraction of foraging bats to these areas.
2. Restriction of the area illuminated. Lighting must be shielded to maintain dark areas, particularly above lighting installations, and in many cases, land adjacent to the areas illuminated. The aim is to maintain dark commuting corridors for foraging and commuting bats. Bats avoid well lit areas, and these create barriers for flying bats between roosting and feeding areas.

UV characteristics:

Low

- Low pressure Sodium Lamps (SOX) emit a minimal UV component.
- High pressure Sodium Lamps (SON) emit a small UV component.
- White SON, though low in UV, emit more than regular SON.

High

- Metal Halide lamps emit more UV than SON lamps, but less than Mercury lamps
- Mercury lamps (MBF) emit a high UV component.
- Tungsten Halogen, if unfiltered, emit a high UV component
- Compact Fluorescent (CFL), if unfiltered, emit a high UV component.
- Variable
- Light Emitting Diodes (LEDs) have a range of UV outputs. Variants are available with low or minimal UV output.
- Glass glazing and UV filtering lenses are recommended to reduce UV output.

Street lighting

- Low-pressure sodium or high-pressure sodium must be used instead of mercury or metal halide lamps. LEDs must be specified as low UV. Tungsten halogen and CFL sources must have appropriate UV filtering to reduce UV to low levels.
- Lighting must be directed to where it is needed and light spillage avoided. Hoods must be used on each lamp to direct light and contain spillage. Light leakage into hedgerows and trees must be avoided.
- If possible, the times during which the lighting is on overnight must be limited to provide some dark periods. If the light is fitted with a timer this must be adjusted to reduce the amount of 'lit time' and provide dark periods.

Security and domestic external lighting

The above recommendations concerning UV output and direction apply. In addition:

- Lighting should illuminate only ground floor areas. Light should not leak upwards to illuminate first floor and higher levels.
- Lamps of greater than 2000 lumens (150 W) must not be used.
- Movement or similar sensors must be used. They must be carefully installed and aimed, to reduce the amount of time a light is on each night.
- Light must illuminate only the immediate area required, by using as sharp a downward angle as possible. Light must not be directed at or close to bat roost access points or flight paths from the roost. A shield or hood can be used to control or restrict the area to be lit.
- Wide angle illumination must be avoided as this will be more disturbing to foraging and commuting bats as well as people and other wildlife.
- Lighting must not illuminate any bat bricks and boxes placed on buildings, trees or other nearby locations.



Appendix 8 – Landscape design for birds

SPECIES	F	SIZE				LOCATION			SOIL MOISTURE	BENEFITS TO WILDLIFE
		T	S	M	L	H	W	Su/Sh		
TREES										
Alder*	D				Y			Su	M	Seed food for birds
Beech*	D			Y	Y	Y		Su	D	Seed food for birds
Birch*	D		Y	Y	Y			Su	D	Seed food for birds
Bird cherry *	D			Y	Y			Su	D	Food for birds, flowers attract insects
Crab apple*	D		Y	Y	Y			Su	D	Food for birds, flowers attract insects
English oak*	D				Y			Su	D	Food for birds, insects and mammals, nesting sites
European larch*	D				Y			Su	M	Seed food for birds
Holly*	E		Y	Y	Y	Y		Su	D	Fruits eaten by birds, food plant of holly blue butterfly
Juniper*	E							Su	D	Shelter and nest sites, fruits eaten by thrushes
Lime*	D				Y	Y		Su	D	Seed food for birds
Rowan*	D			Y	Y			Su	D	Fruits eaten by birds
Scot's pine*	E				Y			Su	D	Seed food for birds
Swedish whitebeam	D		Y	Y	Y			Su	D	Food for birds, flowers attract insects
Wild cherry*	D			Y	Y			Su	D	Food for birds, flowers attract insects
Yew*	E		Y	Y	Y	Y		Su	D	Food for birds, nesting sites
SHRUBS										
Barberry	B	Y	Y	Y	Y	Y		Su	D	Good shelter and nest cover for birds, berries may provide food
Blackthorn*	D			Y	Y	Y		Su	M	Attracts insects, food for birds, nesting sites
Buckthorn*	D			Y	Y	Y		Su/Sh	D	Food plant of brimstone butterfly, fruits eaten by birds
Butterfly bush	E	Y	Y	Y	Y	Y		Su	D	Attracts insects
Californian lilac	E			Y	Y	Y	Y	Su	D	Flowers attractive to various insects
Dogwood*	D			Y	Y	Y		Su	D	Food for birds, winter stem colour
Elder*	D		Y	Y	Y	Y		Su	D	Food for birds
Escallonia	E			Y	Y	Y		Su	M	Flowers attractive to various insects, tolerant of salt - good in coastal areas
Field maple*	D		Y	Y	Y	Y		Su	D	Good source of insect food for birds
Firethorn	E	Y	Y	Y	Y	Y	Y	Su	D	Berries popular with many bird species
Flowering current	D		Y	Y	Y			Su	D	Early flowers attractive to insects
Forsythia	D		Y	Y	Y	Y	Y	Su	D	Early flowers attractive to insects
Garria	E	Y	Y	Y	Y		Y	Su	D	Winter catkins, early cover for nesting birds
Goat willow*	D	Y	Y	Y	Y			Su	D	Catkins attractive to bees, good source of insect food for birds
Gorse*	E			Y	Y	Y		Su	D	Early flowers attractive to insects, good protection for birds
Rhytismatales	E			Y	Y	Y		Su	D	Good cover, tolerant of salt - good in coastal areas
Guelder-rose*	D			Y	Y	Y		Su	D	Food for birds & insects
Hawthorn*	D		Y	Y	Y	Y		Su	D	Flowers attractive to insects, fruits eaten by birds, good shelter and nesting site
Hazel*	D	Y		Y	Y	Y		Su	D	Food for birds, insects and mammals, nesting sites
Laurel-leaved viburnum	E		Y	Y	Y			Su	D	Early flowers good for insects, good cover for birds

Lavender	E	Y	Y	Y	Y	Su	D	Flowers attract many insects, seeds popular with finches		
Lilac	D	Y	Y	Y		Su	D	Flowers attractive to insects		
Oregon grape	E		Y	Y	Y	Su/Sh	M	Early flowers good for insects		
Pheasant berry	E		Y	Y		Su	D	Berries popular with many bird species		
Privet*	E		Y	Y	Y	Y	Su	D	Flowers attract butterflies, produces berries	
Rose	D	Y	Y	Y	Y	Y	Y	Su	D	Fruits of some varieties attractive to birds
Rosemary	E	Y	Y	Y	Y	Y		Su	D	Flower attract many insects
Shad bush	D		Y	Y				Su	M	Flowers attract insects, early forming berries good for thrushes
Snowberry	D			Y	Y	Y		Su/Sh	D	Flowers attractive to bees, fruits attractive to birds, dense stems provide cover
Spindle*	D		Y	Y	Y			Su	D	Berries eaten by birds, but poisonous to mammals
Tamarix	D			Y	Y	Y		Su	D	Flowers attractive to various insects, tolerant of salt - good in coastal areas
CLIMBERS & RAMBLERS										
Bramble*	D		Y	Y	Y	Y	Y	Su/Sh	D	Food for birds, insects and mammals, nesting sites
Clematis	D	Y	Y	Y	Y			Su	D	Nesting sites
Honeysuckle*	D	Y	Y	Y	Y	Y	Y	Su/Sh	D	Attractive to insects, good nesting site, food for birds
Ivy*	E	Y	Y	Y	Y	Y	Y	Su/Sh	D	Attractive to insects, good nesting site, food for birds
Rose	D	Y	Y	Y	Y	Y	Y	Su	D	Fruits of some varieties attractive to birds
Winter jasmin	E	Y	Y	Y	Y	Y	Y	Su	D	Early flowers attractive to insects
Wisteria	D	Y	Y	Y	Y		Y	Su	D	Attractive to insects, good nesting site

KEY			
*	Native (NB: some varieties are cultivars or non-native)	Location	H = may be used as a hedge plant
F	D = Deciduous		W = may be used as a wall shrub
Foliage type	E = Evergreen		Su = Sunny borders
	B = Both		Sh = Shade tolerant
Size	T = Terraces & balconies		Su/Sh = Grows in partial shade
Suitable for garden sizes	S = Small garden (<= 6m x 4m)	Soil mositure	D = Well drained
	M = Medium gardens (<= 12m x 6m)		M = Moist
	L = Large gardens (> 12m x 6m)		W = Wet soil



Appendix 9 – Planning and statutory context

Ecological assessments

Ecological assessments play an important part within the planning context; they include an initial assessment which highlights any specific interests of a site. From the initial site assessment, the surveyor assesses the suitability of habitats within the site to support protected species and makes recommendations for further survey works if required. The following paragraphs provide a brief interpretation of legislative protection in relation to the following species and habitats:

Amphibians

Great crested newts

Other amphibians

Reptiles

Badgers

Hazel dormouse

Bats

Birds

Trees

Hedgerows

Invasive plant species

Otters

Water voles

White-clawed crayfish

Planning policy

Amphibians

Great crested newts

Great crested newts (GCN) *Triturus cristatus* and their habitat (aquatic and terrestrial) are afforded full protection by the Wildlife and Countryside Act 1981 (as amended) and the Conservation of Habitats and Species Amendment (EU exit) Regulations 2019. If both national and international legislation are taken together, it is an offence to:

- Deliberately, intentionally or recklessly kill, injure or capture GCN
- Deliberately, intentionally or recklessly disturb GCN in such a way to be likely to significantly affect:
 - their ability to survive, breed, reproduce, rear or nurture their young
 - their ability to hibernate or migrate
 - their local distribution or abundance
- Deliberately, intentionally or recklessly take or destroy the eggs of GCN
- Damage or destroy breeding sites or resting places of GCN
- Intentionally or recklessly disturb sheltering GCN, or obstruct access to their resting place
- Keep, transport, sell or exchange, or offer for sale or exchange any live or dead GCN, any part of GCN or anything derived from GCN

Penalties for offences include fines of up to £5000, plus up to six months imprisonment, for each offence committed.

GCN are also protected by the Protection of Animals Act 1911, which prohibits cruelty and mistreatment. Releasing a GCN in such a way as to cause undue suffering may be an offence under the Abandonment of Animals Act 1960.

In addition to the above, there are various statutory provisions relating to the transport of animals, designed to ensure their welfare. GCN are also listed under Section 41 of the NERC Act (see bats section for further details).

It is important to identify the presence of GCN individuals and also to identify suitable habitat on sites so that legal obligations regarding this species can be observed. If a survey identifies the presence of GCN on the site, an assessment of the population size class is required. This can then inform a mitigation scheme, which would need to be developed in liaison with the local Natural England team, and which minimises direct threats to newts and compensates for any loss of habitat. A licence issued by Natural England is required for the legal implementation of a mitigation scheme.

A Natural England mitigation licence application requires a Mitigation Method Statement and a Reasoned Statement of Application. The Mitigation Method Statement contains details of the proposed mitigation

works. The Reasoned Statement needs to provide a rational and reasoned justification as to why the proposed development meets the requirements of the Conservation (National Habitats & c.) regulations 1994, namely Regulations 44(2)(e), (f) or (g), and 44(3)(a).

Other amphibians

More common British amphibians, such as common frog *Rana temporaria*, common toad *Bufo bufo*, smooth newt *Triturus vulgaris* and palmate newt *Triturus helveticus* are protected only by Section 9(5) of the Wildlife and Countryside Act 1981 (as amended). This section prohibits sale, barter, exchange, transporting for sale and advertising to sell or to buy.

The above named species are also listed as UK Species of Conservation Concern. Due to general declines in most British amphibian species in recent years, many local authorities require amphibian surveys as a planning condition, or as part of environmental information submitted as part of a planning application, even where the presence of GCN is ruled out.

Natterjack toad *Bufo calamita* and pool frog *Pelophylax lessonae* are also offered the same level of protection as GCN, through the Wildlife and Countryside Act 1981 (as amended) and the Conservation of Habitats and Species Regulations 2017.

Natterjack toad, common toad and pool frog are also listed under Section 41 of the NERC Act (see bats section for further details).

Water bodies that support all five (more common) species of British amphibians in high numbers, may be afforded protection in local plans, as Sites of Importance for Nature Conservation (SINC), or a similar equivalent, for sites of local importance. A site may require statutory protection as a Site of Special Scientific Interest (SSSI).

Reptiles

Common lizard *Zootoca vivipara*, slow-worm *Anguis fragilis*, grass snake *Natrix natrix* and adder *Vipera berus* are protected under the Wildlife and Countryside Act 1981 (as amended). They are listed as a Schedule 5 species therefore part of Section 9(1) and section 9(5) apply. The Countryside and Rights of Way Act 2000 also strengthens their protection. It is offence to:

- Intentionally or recklessly kill or injure any of the species listed above
- Sell, offer, advertise or transport for sale a live or dead animal of the species listed above

If a proposed development is likely to have an impact on these reptiles the local statutory nature conservation organisation must be consulted.

Sand lizard *Lacerta agilis* and smooth snake *Coronella austriaca* receive full protection under the Wildlife and Countryside Act 1981 (as amended) and Conservation of Habitats and Species Regulations 2017. Read together, it is an offence to:

- Deliberately, intentionally or recklessly kill, injure or capture any sand lizards or smooth snakes
- Deliberately, intentionally or recklessly disturb sand lizards or smooth snakes in such a way to be likely to significantly affect:
 - their ability to survive, breed, reproduce, rear or nurture their young
 - their ability to hibernate or migrate
 - their local distribution or abundance
- Deliberately, intentionally or recklessly take or destroy the eggs of such an animal
- Damage or destroy breeding sites or resting places of such animals
- Intentionally or recklessly disturb sheltering sand lizards or smooth snakes, or obstruct access to their resting place
- Keep, transport, sell or exchange, or offer for sale or exchange any live or dead sand lizards or smooth snakes, any part of such an animal or anything derived from such an animal

Penalties for offences include fines of up to £5000, plus up to six months imprisonment, for each offence committed.

All reptile species are also listed under Section 41 of the NERC Act (see bats section for further details).

Badgers

European badgers *Meles meles* and their habitat are protected under The Protection of Badgers Act 1992 and are also included on Schedule 6 of the Wildlife and Countryside Act 1981, and Appendix III of the Bern Convention. The legislation affords badgers protection against deliberate harm or injury making it an offence to:

- Wilfully kill, injure, take, possess or cruelly ill-treat a badger (or attempt to do so)
- To interfere with a sett by damaging or destroying it
- To obstruct access to, or entrance of, a badger sett
- To disturb a badger whilst it is occupying a sett

Penalties for offences include fines of up to £5000, plus up to six months imprisonment, for each offence committed.

Works that disturb badgers whilst they are occupying a sett are illegal without a licence. Disturbance can occur even without direct interference or damage to the sett in question. In general, the following activities are likely to require a licence:

- Use of heavy machinery or significant earth moving within 30m of a sett
- Use of lighter machinery (usually any wheeled vehicles) within 20m of a sett
- Any digging, chain saw use or scrub clearance within 10m of a sett

Hazel dormouse

Hazel dormice *Muscardinus avellanarius* are offered full protection through the Wildlife and Countryside Act 1981 (as amended) and the Conservation of Habitats and Species Regulations 2017. If both national and international legislation are taken together, it is an offence to:

- Deliberately, intentionally or recklessly kill, injure or capture dormice
- Deliberately, intentionally or recklessly disturb dormice in such a way to be likely to significantly affect:
 - their ability to survive, breed, reproduce, rear or nurture their young
 - their ability to hibernate or migrate
 - their local distribution or abundance
- Damage or destroy breeding sites or resting places of dormice
- Intentionally or recklessly disturb sheltering dormice, or obstruct access to their resting place
- Keep, transport, sell or exchange, or offer for sale or exchange any live or dead dormouse, any part of a dormouse or anything derived from a dormouse

Penalties for offences include fines of up to £5000, plus up to six months imprisonment, for each offence committed.

Dormice are also listed under Section 41 of the NERC Act (see bats section for further details).

Bats

In the United Kingdom, all species of bat and their roosts are afforded full protection under the Wildlife and Countryside Act 1981 (as amended) and the Conservation of Habitats and Species Regulations 2017 (known as the "Habitats Regulations"). The Wildlife and Countryside Act is the domestic implementation of

the Convention on the Conservation of European Wildlife and Natural Habitats (the Bern Convention) and was amended by the Countryside and Rights of Way Act 2000. This makes it an offence to:

- Deliberately, intentionally or recklessly kill, injure or capture a bat
- Deliberately, intentionally or recklessly disturb a bat while it is occupying a structure or place that it uses for shelter or protection
- Deliberately, intentionally or recklessly damage, destroy or obstruct access to any place that a bat uses for shelter or protection (even if the bat is not present at the time)
- Keep, transport, sell or exchange, or offer for sale or exchange any live or dead bat, any part of a bat or anything derived from a bat

Under UK law, a bat roost is *any structure or place which any wild [bat] ... uses for shelter or protection*. As bats often reuse the same roosts, legal opinion is that a roost is protected whether or not the bats are present at the time of the activity taking place.

Penalties for offences include fines of up to £5000, plus up to six months imprisonment, for each offence committed.

If an activity is likely to result in any of the above offences, a licence can be applied for to derogate from the protection afforded. These licences must provide appropriate mitigation and are issued by Natural England.

A Natural England mitigation licence application requires a Mitigation Method Statement and, in many cases, a Reasoned Statement of Application. The Mitigation Method Statement contains details of the proposed mitigation works. The Reasoned Statement needs to provide a rational and reasoned justification as to why the proposed development meets the requirements of the Conservation (National Habitats & c.) regulations 1994, namely Regulations 44(2)(e), (f) or (g), and 44(3)(a).

The Natural Environment and Rural Communities (NERC) Act 2006 lists the following bat species as species of principle importance under Section 41:

- Barbastelle *Barbastella barbastellus*
- Bechstein's bat *Myotis bechsteinii*
- Noctule *Nyctalus noctula*
- Soprano Pipistrelle *Pipistrellus pygmaeus*
- Brown Long-eared bat *Plecotus auritus*
- Greater Horseshoe *Rhinolophus ferrumequinum*
- Lesser Horseshoe *Rhinolophus hipposideros*

Section 40 requires every public body in the exercising of its functions 'have regard, so far as is consistent with the proper exercise of those functions, to the purpose of conserving biodiversity' (all biodiversity and not just section 41 species and habitats); therefore making these bats a material consideration in the planning process and requiring a detailed ecological bat survey before planning permission can be granted.

Birds

All wild birds, their nests and young are protected throughout England and Wales by the Wildlife & Countryside Act 1981 (as amended). It is illegal to kill, injure or take any wild bird, or damage or destroy the nest or eggs of breeding birds. The legislation applies to all bird species, common and rare.

In addition to the protection afforded to all wild birds, more vulnerable species listed on Schedule 1 of the Act receive enhanced protection when breeding. Schedule 1 species, including their dependent young, are protected from intentional or reckless disturbance whilst at or near the nest, in addition to the protection afforded the more common species.

The NERC Act offers further protection to the nests of some species that regularly re-use their nests, even when the nests are not in use.

The leading governmental and non-governmental conservation organisations in the UK have reviewed the population status' of 244 UK bird species. "Birds of Conservation Concern 4: the Red List for Birds" is the

most recent publication summarising their findings. Three lists, Red, Amber and Green, have been produced based on the most up-to-date evidence available and criteria include conservation status at global and European levels and, within the UK: historical decline, trends in population and range, rarity, localised distribution and international importance. These lists are a valuable resource when considering conservation priorities.

Trees

Trees may be protected on an individual or group level through a Tree Preservation Order (TPO). In order to carry out works to trees with a TPO, prior written consent must be obtained from the Local Planning Authority. Trees may also be protected through a condition of planning consent or designated conservation areas.

Hedgerows

The Hedgerow Regulations are made under Section 97 of the Environment Act 1995 and came into operation on 1st of June 1997. They aim to protect important hedgerows in the countryside by controlling their removal through a system of notification to the Local Planning Authority.

A hedgerow can only be considered for classification as “important” if it, or the hedgerow of which the section belongs to is over 20m in length (or which meets a hedgerow at either end) and has existed for 30 years or more.

Invasive plant species

A number of invasive, non-native plant species are listed under Schedule 9 (Part II) of the Wildlife and Countryside Act 1981 (as amended). The most commonly encountered listed species in ecological surveys are Japanese knotweed *Fallopia japonica*, Montbretia *Crocasmia x crocosmiiflora* and variegated yellow archangel *Lamiastrum galeobdolon subsp. argentatum*. Section 14(2) of this Act makes it an offence to *plant or otherwise cause to grow in the wild* any plant listed on Schedule 9 (Part II). These provisions are necessary to prevent the establishment of non-native species which may be detrimental to our native wildlife.

A number of invasive, non-native plants species are listed under Schedule 2 (Part II) of the Invasive Alien Species (Enforcement and Permitting) Order 2019. The most commonly encountered listed species in ecological surveys are Himalayan balsam *Impatiens glandulifera* and giant hogweed *Heracleum mantegazzianum*. Section 3 of this Act make it an offence to *plant or otherwise causes to grow in the wild* any plant which is listed on Schedule 2 (Part II). These provisions are necessary to prevent the establishment of non-native species which may be detrimental to our native wildlife.

Soil or plant material contaminated with non-native and invasive plants can cause ecological damage and may be classified as controlled waste. It is an offence to keep, treat or dispose of waste that could harm the environment or human health. If there is any doubt, contact the local authority or Environment Agency.

Otters

European otter *Lutra lutra* are offered full protection through the Wildlife and Countryside Act 1981 (as amended) and the Conservation of Habitats and Species Regulations 2017. If both national and international legislation are taken together, it is an offence to:

- Deliberately, intentionally or recklessly kill, injure or capture otters
- Deliberately, intentionally or recklessly disturb otters in such a way to be likely to significantly affect:
 - their ability to survive, breed, reproduce, rear or nurture their young
 - their ability to migrate
 - their local distribution or abundance
- Damage or destroy breeding sites or resting places of otters

- Intentionally or recklessly disturb sheltering otters, or obstruct access to their resting place
- Keep, transport, sell or exchange, or offer for sale or exchange any live or dead otter, any part of an otter or anything derived from otter

Penalties for offences include fines of up to £5000, plus up to six months imprisonment, for each offence committed.

Otters are also listed under Section 41 of the NERC Act (see bats section for further details).

Water voles

Water voles *Arvicola amphibius* are protected by the provisions of Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). This makes it an offence to:

- Intentionally kill, injure or take water vole
- Possess or control live or dead water vole or any part of a water vole
- Intentionally or recklessly damage destroy or obstruct access to any structure or place which a water vole uses for shelter or protection, or disturb water vole using such a place
- Sell, offer, advertise or transport live or dead water voles for sale

Licences are available from Natural England to allow activities that would otherwise be an offence, including:

- Scientific or educational purposes
- For the purposes of ringing or marking
- Conserving wild animals or introducing them into particular areas
- Preserving public health or public safety
- Preventing the spread of disease
- Preventing serious damage to any form of property or to fisheries

Penalties for offences include fines of up to £5000, plus up to six months imprisonment, for each offence committed.

Water voles are also listed under Section 41 of the NERC Act (see bats section for further details).

White-clawed crayfish

White-clawed crayfish *Austropotomobius pallipes* are protected under the Wildlife and Countryside Act 1981 (as amended). They are listed as a Schedule 5 species therefore part of Section 9(1) and section 9(5) apply. The Countryside and Rights of Way Act 2000 also strengthens their protection. It is offence to:

- Intentionally or recklessly kill or injure white-clawed crayfish
- Sell, offer, advertise or transport for sale a live or dead white-clawed crayfish

If a proposed development is likely to have an impact on white-clawed crayfish then the local statutory nature conservation organisation must be consulted.

Penalties for offences include fines of up to £5000, plus up to six months imprisonment, for each offence committed.

Their inclusion on the EC Habitats Directive allows areas to be designated as Special Areas of Conservation (SAC) for the presence of white-clawed crayfish. Such a designation brings legal protection under the Conservation of Habitats Regulations 2017, this includes how the site is managed and what development can occur on and in proximity to these sites.

White-clawed crayfish are also listed under Section 41 of the NERC Act (see bats section for further details).

Planning policy

The National Planning Policy Framework 2024 (NPPF) provides guidance on the interpretation of the law in relation to the natural environment and development.

National Planning Guidance is issued in the form of the National Planning Policy Framework 2024 (NPPF). The most relevant section is 15: Conserving and enhancing the natural environment.

Key relevant principles stated in 15: Conserving and enhancing the natural environment are;

- 187.** Planning policies and decisions should contribute to and enhance the natural and local environment by:
- a) protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan);
 - b) recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland;
 - c) maintaining the character of the undeveloped coast, while improving public access to it where appropriate;
 - d) minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures and incorporating features which support priority or threatened species such as swifts, bats, and hedgehogs;
 - e) preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. Development should, wherever possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans; and
 - f) remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate.
- 192.** To protect and enhance biodiversity and geodiversity, plans should:
- a) Identify, map and safeguard components of local wildlife-rich habitats and wider ecological networks, including the hierarchy of international, national and locally designated sites of importance for biodiversity⁶⁸; wildlife corridors and stepping stones that connect them; and areas identified by national and local partnerships for habitat management, enhancement, restoration or creation⁶⁹; and
 - b) promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species; and identify and pursue opportunities for securing measurable net gains for biodiversity
- 193.** When determining planning applications, local planning authorities should apply the following principles:
- a) if significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;
 - b) development on land within or outside a Site of Special Scientific Interest, and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally be permitted. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact on the features of the site that make it of special scientific interest, and any broader impacts on the national network of Sites of Special Scientific Interest;

- c) development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons⁷⁰ and a suitable compensation strategy exists; and
- d) development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to improve biodiversity in and around developments should be integrated as part of their design, especially where this can secure measurable net gains for biodiversity or enhance public access to nature where this is appropriate.