

East Lancashire Paper Mill Island, Radcliffe, M26 2GU

ECOLOGICAL SURVEY AND ASSESSMENT

December 2021

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Document Control

Survey Type:	Surveyors	Survey Date(s)
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SUMMARY

Introduction and Scope

- i. This ecological survey and assessment presents the ecological, biodiversity and nature conservation status of East Lancashire Paper Mill Island, Radcliffe, M26 2GU. The assessment was requested in connection with proposals to develop the site to housing.
- ii. This report presents the results of a desktop study and extended Phase 1 Habitat Survey carried out in November 2021. The scope of survey undertaken is appropriate to identify potential ecological constraints, the remit of mitigation required and opportunities for biodiversity associated with the development proposals.
- iii. The site comprises an area of scrub, an area of amenity grassland with scattered trees and two areas of hard standing.

Results of Survey and Assessment

- iv. The proposals will have no adverse effect on statutory or non-statutory designated sites for nature conservation.
- v. None of the habitats within the site are of significant interest in terms of their plant species composition. None of the habitats present are representative of semi-natural habitat or are Priority Habitat. The site contains only common and widespread plant species. No invasive species listed on Schedule 9 of the *Wildlife and Countryside Act 1981* (as amended) were detected at the site.
- vi. Invasive species listed on Schedule 9 of the *Wildlife and Countryside Act 1981* (as amended) namely Japanese Knotweed and Wall Cotoneaster were detected. It is an offence to cause the spread of these species in the wild. Guidance on the control and management of these species is described in the report (**Section 5.3**).
- vii. The presence of roosting bats at the site is reasonably discounted in accordance with previous ecology surveys carried out at the site. Precautionary actions relating to the protection of roosting bats, and recommendations to enhance the site for roosting bats are presented at **Section 5.4**.
- viii. The scrub and scattered trees provide suitable habitat for use by nesting birds, and foraging and sheltering hedgehog. Recommendations for the protection of nesting birds and the provision of opportunities for nesting birds as part of the development are described at **Section 5.5**; guidance for the protection of other wildlife, such as hedgehog (a Priority Species) is presented at **Section 5.6**.
- ix. The presence of other protected species at the site is reasonably discounted.

Recommendations

- x. The recommendations in **Section 5.0** outline all the mandatory measures and additional actions to be applied to ensure compliance with wildlife legislation, the National Planning Policy Framework (NPPF) and best practice.
- xi. The proposals will secure an opportunity to implement beneficial measures such as habitat creation that will safeguard habitats for wildlife such as birds and bats, with the aim of providing a net gain in biodiversity in accordance with the principles of the NPPF.

Conclusion

- xii. It is concluded that the proposals are feasible and acceptable in accordance with ecological considerations and relevant planning policy. Development at the site will provide an opportunity to secure ecological enhancement for wildlife associated with residential development.

1.0 INTRODUCTION

1.1 Background and Rationale

- 1.1.1 ERAP (Consultant Ecologists) Ltd was commissioned by Great Places Housing Group to carry out an ecological assessment of the East Lancashire Paper Mill Island, Radcliffe, M26 2GU (hereafter referred to as the 'site'). The Ordnance Survey (OS) grid reference at the centre of the site is SD 7902 0740. An aerial image of the site and its surrounding habitats is appended at **Figure 1** (source image: ESRI World Imagery).
- 1.1.2 The assessment was requested in connection with a planning application to develop the site to housing.
- 1.1.3 The results of a preliminary roost assessment of the buildings and trees at the site undertaken in April 2021 are presented at *East Lancashire Paper Mill Island Site, Radcliffe, Bat Survey Report* (The Environment Partnership, 2021), hereafter referred to as the 'preliminary roost assessment'.
- 1.1.4 In accordance with the preliminary roost assessment, two trees (Tree 1 and Tree 4) were identified as having moderate suitability for use by roosting bats. The results of bat activity surveys undertaken at Trees 1 and 4 are presented at *2021-283 Trees at East Lancashire Paper Mill Island, Radcliffe, M26 2GU, Bat Activity Surveys* (ERAP (Consultant Ecologists) Ltd, 2021), hereafter referred to as the 'bat survey report'.

1.2 Scope of Works

- 1.2.1 The scope of ecological works undertaken in November 2021 comprised:
 - a. A desktop study and data search for known ecological information at the site and the local area;
 - b. An Extended Phase 1 Habitat Survey and assessment;
 - c. Assessment of the ecological value of the habitats within the site with the use of the National Vegetation Classification (NVC) and the Ratcliffe criteria, as presented in *A Nature Conservation Review* (Ratcliffe, 1977);
 - d. Survey and assessment of all habitats for relevant statutorily protected species¹ and other wildlife including badger (*Meles meles*), bird species and reptiles;
 - e. The identification of any potential ecological constraints on the proposals and the specification of the scope of mitigation and ecological enhancement required in accordance with wildlife legislation, planning policy guidance and other relevant guidance; and
 - f. The identification of any further surveys or precautionary actions that may be required prior to the commencement of any construction activities.

2.0 METHOD OF SURVEY

2.1 Desktop Study and Data Search

- 2.1.1 The following sources of information and ecological records were consulted:

¹ In accordance with *Government Circular: Biodiversity and Geological Conservation – Statutory Obligations and Their Impact on the Planning System* (Ministry of Housing, Communities & Local Government, 2005) developers should not be required to undertake surveys for protected species unless there is reasonable likelihood of the species being present and affected by the development. For example, there are no water bodies or water courses within or adjacent to the site; there has therefore been no requirement to consider water vole (*Arvicola amphibius*) or otter (*Lutra lutra*) as part of this assessment. Additionally, no ponds lie within a 500 metre radius to the site, therefore further consideration for great crested newt (*Triturus cristatus*) is not required.

- a. MAGiC: A web-based interactive map which brings together geographic information on key environmental schemes and designations, including details of statutory nature conservation sites;
- b. Greater Manchester Local Record Centre;
- c. The Greater Manchester Biodiversity Action Plan (BAP);
- d. The preliminary roost assessment report (The Environment Partnership, 2021); and
- e. The bat survey report (ERAP (Consultant Ecologists) Ltd, 2021).

2.2 Vegetation and Habitats

- 2.2.1 An Extended Phase 1 Habitat Survey of the site was carried out by Amy Sharples B.Sc. (Hons) M.Sc. ACIEEM on 25th November 2021. The weather was dry with clear skies, calm (Beaufort scale 0) and 5°C.
- 2.2.2 A habitat and vegetation map was produced for the site and the immediate surrounding area at a scale of 1:1000 (refer to **Figure 2**). The mapping is based on the Joint Nature Conservation Committee Phase 1 Habitat Survey methodology (JNCC, 2010) with minor adjustments to illustrate and examine the habitats with greater precision.
- 2.2.3 The plant species within the site boundary were determined with estimates of the distribution, ground cover, abundance and constancy of individual species. The estimation of abundance was based on the DAFOR system, where D = Dominant, A = Abundant, F = Frequent, O = Occasional and R = Rare, this being a widely used and accepted system employed by ecological surveyors. The terms L = Locally and V = Very were additionally used to describe the plant species distributions with greater precision.
- 2.2.4 Stands of vegetation and habitats were described and evaluated using the National Vegetation Classification (NVC). The NVC provides a systematic and comprehensive analysis of British vegetation and is a reliable framework for nature conservation and land-use planning.
- 2.2.5 Habitats within the site were assessed in accordance with the UK Habitats Classification / UKHab (Butcher, et al., 2020). The UKHab has been designed to function at two scales: fine scale (25m² or 5 metres length) and large scale (400m² or 20 metres length). It has been considered for the purposes of this survey that the fine scale of 25m² or 5 metres length is appropriate.
- 2.2.6 Searches were made for uncommon, rare and statutorily protected plant species, those species listed as protected in the *Wildlife and Countryside Act 1981* (as amended) and species which are indicators of important and uncommon plant communities. Plant nomenclature follows *New Flora of the British Isles 3rd Edition* (Stace, 2010).
- 2.2.7 Searches were carried out for the presence of invasive species, including those listed on Schedule 9 of the *Wildlife and Countryside Act 1981* (as amended), including Japanese Knotweed (*Fallopia japonica*), Indian Balsam (*Impatiens glandulifera*) and Giant Hogweed (*Heracleum mantegazzianum*).

2.3 Animal Life

Badger

- 2.3.1 The survey area for badger covered the site (as annotated on **Figures 1 and 2**) and extended to accessible land within a radius of 50 metres from the site boundary. Private gardens / land were excluded from the survey.
- 2.3.2 The survey was conducted in accordance with guidance presented within *Badgers and Development* (Natural England, 2007) and *Badgers: surveys and mitigation for development projects* (Natural England, 2015).
- 2.3.3 The following signs of badger activity were searched for:

- a. Setts entrances, e.g. entrances that are normally 25 to 35cm in diameter and shaped like a 'D' on its side;
- b. Large spoil heaps outside sett entrances;
- c. Bedding outside sett entrances;
- d. Badger footprints;
- e. Badger paths;
- f. Latrines;
- g. Badger hairs on fences or bushes;
- h. Scratching posts; and
- i. Signs of digging for food.

2.3.4 Habitats within and surrounding the site were assessed in terms of their suitability for use by foraging and sheltering badger in accordance with their known habitat preferences as detailed in current guidance and *Badger* (Roper, 2010).

Bat Species

Daylight Survey

2.3.5 A licensed daylight bat survey of Building 1 and all trees at the site was undertaken in April 2021, details are presented in the preliminary roost assessment report (The Environment Partnership, 2021).

Other Buildings at the Site

2.3.6 The surveys were carried out in accordance with standard methodology including the *Bat Mitigation Guidelines* (Mitchell-Jones, 2004), the *Bat Workers' Manual 3rd Edition* (Mitchell-Jones & Mcleish, 2004) and *Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd edn)* (Collins, J. (ed), 2016).

2.3.7 An inspection of the external surfaces, walls and roofs of the buildings was carried out to find potential bat roosting habitat or accesses into internal areas where roosts may be present. Searches for evidence of bat presence in the form of droppings, urine stains, feeding signs, grease marks and other evidence were also carried out.

2.3.8 The suitability of each building has been assessed in accordance with Table 4.1 of *Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd edn)*, (Collins, J. (ed), 2016), taking into account any presence of gaps suitable for access by bats, features suitable for use by roosting bats within the building (including crevice dwelling species and species which can roost in the open in roof voids), and the suitability of the surrounding habitats for use by foraging and commuting bats.

Habitat Assessment for Commuting / Foraging Bats

2.3.9 Habitats within and adjacent to the site were assessed for their value and suitability for commuting and foraging bats in accordance with Table 4.1 of *Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd edn)*, (Collins, J. (ed), 2016). Reference has been made to the categories and descriptions / examples, presented at **Table 2.1**, below.

Table 2.1: Consideration of Suitability of Foraging and Commuting Habitat for Bats

Suitability	Commuting Habitat	Foraging Habitat
Negligible	Negligible habitat features on site likely to be used by commuting bats.	Negligible habitat features on site likely to be used by foraging bats.
Low	Habitat that could be used by small numbers of commuting bats such as a gappy hedgerow or unvegetated stream, but isolated i.e. not very well connected to the surrounding landscape by other habitat.	Suitable, but isolated habitat that could be used by small numbers of foraging bats such as a lone tree or patch of scrub.
Moderate	Continuous habitat connected to the wider landscape that could be used by bats for commuting such as lines of trees and scrub or linked back gardens.	Habitat that is linked to the wider landscape that could be used by bats for foraging such as trees, scrub, grassland or water.
High	Continuous, high-quality habitat that is well connected to the wider landscape and is likely to be used regularly by commuting bats such as river valleys, streams, hedgerows, lines of trees and woodland edge. Habitats close to and connected to known roosts.	High-quality habitat that is well-connected to the wider landscape and is likely to be used regularly by foraging bats such as broadleaved woodland, tree-lined watercourses and grazed parkland. Habitats close to and connected to known roosts.

Presence / Absence Surveys: Dusk Emergence Surveys

- 2.3.10 Two dusk emergence surveys were undertaken at Trees 1 and 4 in September 2021. Details of the methodology are presented in the bat survey report (ERAP (Consultant Ecologists) Ltd, 2021).

Bird Species

- 2.3.11 Bird species observed and heard during the survey were recorded.
- 2.3.12 Habitats throughout the site and in the immediate surrounding area were assessed for their value to roosting, feeding and nesting birds, as indicated by the amount of shelter, feeding value, woody vegetation structure and species diversity of tree and shrub species in the site.

Reptile Species

- 2.3.13 The site and its surroundings were assessed in terms of their suitability for use by reptile species using the important characteristics for reptiles outlined in the draft document '*Reptile Mitigation Guidelines*' (Natural England, 2011), and the *Reptile Habitat Management Handbook* (Edgar, et al., 2010). These habitat characteristics are outlined in **Table 2.2**, below.

Table 2.2: Important Habitat Characteristics for Reptiles

1. Location (in relation to species range)	7. Connectivity to nearby good quality habitat
2. Vegetation Structure	8. Prey abundance
3. Insolation	9. Refuge opportunity
4. Aspect	10. Hibernation habitat potential
5. Topography	11. Disturbance regime
6. Surface geology	12. Egg-laying site potential

Other Wildlife

- 2.3.14 Evidence of other wildlife (including Priority Species) observed whilst on site (but for which specific surveys were not made) was recorded and has been included in this report where it is considered of relevance.

2.4 Survey and Reporting Limitations

- 2.4.1 The survey was conducted in late autumn, when many plant species are in a state of senescence (i.e. dying back). The surveyor is experienced in surveying plant species from their vegetative characteristics, and it has been possible to reliably identify the habitats and principal plant species present.
- 2.4.2 No significant survey limitations were experienced.
- 2.4.3 All measurements within this report are approximate only, and have been estimated whilst on site or calculated using mapping software (QGIS) or internet-based mapping services such as MAGiC and Google Earth.

2.5 Evaluation Methods

- 2.5.1 The habitats, vegetation and animal life were evaluated with reference to standard nature conservation criteria as described in *A Nature Conservation Review* (Ratcliffe, 1977) and *Guidelines for the Selection of Biological SSSIs* (Bainbridge, et al., 2013). These are size (extent), diversity, naturalness, rarity, fragility, typicality, recorded history, position in an ecological or geographical unit, potential value and intrinsic appeal.
- 2.5.2 Habitats have been assessed to determine whether they meet those described in *UK Biodiversity Action Plan: Priority Habitat Descriptions* (Maddock, A (ed), 2008); these lists are used to help draw up the statutory lists of Priority Habitats, as required under Section 41 of the *Natural Environment and Rural Communities (NERC) Act 2006*. Where suitable, the ecological value of the habitats present has been assessed using the terms outlined in *Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine* (CIEEM, 2018).
- 2.5.3 Government advice on wildlife, as set out in the *National Planning Policy Framework* (Ministry of Housing, Communities and Local Government, 2021) and associated government circulars has been taken into consideration. Legislation relating to protected species, such as those listed under Schedules 1, 5, 6 and 8 of the *Wildlife and Countryside Act 1981* (as amended) and *The Conservation of Habitats and Species Regulations 2017*, is referenced where applicable, and any impacts to protected species are evaluated in accordance with current guidance.
- 2.5.4 The presence of any Priority Species, as listed under Section 41 of the *Natural Environment and Rural Communities (NERC) Act 2006* is noted, and habitats are assessed in terms of their suitability and value for these species. The presence of habitats and/or species listed by the Greater Manchester Biodiversity Action Plans has been taken into account in the evaluation of the site.

3.0 SURVEY RESULTS

3.1 Desktop Study and Data Search

Designated Sites for Nature Conservation

Statutory Designated Sites for Nature Conservation and SSSI Impact Risk Zones

- 3.1.1 The site has no statutory designation and no statutory designated sites for nature conservation lie within a 1 kilometre radius of the site.
- 3.1.2 The site lies within a Site of Special Scientific Interest (SSSI) Impact Risk Zone for Ashclough SSSI and Nob End SSSI. The SSSI Impact Risk Zone requires the Local Planning Authority to consult with Natural England on likely risks from the following development categories (Ordnance Survey, 2021):

Infrastructure: Airports, helipads and other aviation proposals.

Minerals, oils and gas: Planning applications for quarries including new proposals, review of minerals permissions, extensions, variation to conditions etc. and oil and gas exploration / extraction.

Air pollution: Livestock and poultry units with floorspace greater than 500m², slurry lagoons and digestive stores greater than 750m² and manure stores greater than 3500 tonnes.

Combustion: General combustion processes greater than 50 megawatt energy input including energy from waste incineration, other incineration, landfill gas generation plant, pyrolysis / gasification, anaerobic digestion, sewage treatment works and other incineration / combustion.

- 3.1.3 The proposals do not meet any of the above development categories which may otherwise trigger the need for the LPA to consult Natural England on likely risks as a result of the proposed development.

Non-statutory Designated Sites for Nature Conservation

- 3.1.4 No non-statutory designated sites lie within or adjacent to the site.
- 3.1.5 Four Sites of Biological Importance (SBI), non-statutory designated sites for nature conservation in Greater Manchester, are located within 1 kilometre to the site and are summarised in the table below.

Table 3.1: Non-statutory Designated Sites within 1 kilometre

Sites of Biological Importance (SBIs)	Distance and Direction from Site (OS central grid reference)	Reason for Designation
Wetland near Radcliffe	0.4 kilometres to the north-west (SD 78744 07815)	Ponds and small lodges
Sailor's Brow and Springwater Park	0.41 kilometres to the south-east (SD 79799 06777)	Ponds and small lodges, habitat mosaic and aquatic invertebrates
Manchester, Bolton and Bury Canal (East)	0.47 kilometres to the west (SD 77954 07518)	Ponds and canal habitats
Swan Lodge	0.86 kilometres to the north-east (SD 79680 08517)	Open water, running water and aquatic invertebrates

- 3.1.6 The presence of the SBIs in the wider area is considered further at **Section 4.2**.

Priority Habitats Inventory and Soilscape Information

- 3.1.7 The Priority Habitats Inventory² was checked via MAGiC map, no Priority Habitats are noted for the site or immediate surrounds on MAGiC.
- 3.1.8 In accordance with *Soilscape (England)* as presented on MAGiC Map (National Soil Resources Institute, 2005), the site supports '*slowly permeable seasonally wet acid loamy and clayey soils*', and the characteristic semi-natural habitats associated with the soils comprise '*seasonally wet pastures and woodlands mainly, but not exclusively, on the upland fringe*'.

Protected and Notable Species

- 3.1.9 GMLRC hold no records of protected and notable species for the site. Records for noctule bat (*Nyctalus noctula*), pipistrelle species (*Pipistrellus* sp.) and Daubenton's bat (*Myotis daubentonii*) are present 30 metres to the east of the site. Refer to **Table 3.2** for information on species designations.

² A spatial dataset that describes the geographic extent and location of Natural Environment and Rural Communities Act (2006) Section 41 habitats of principal importance.

3.1.10 Records of protected and notable species for a 1 kilometre radius of the site are summarised at **Table 3.2** below.

Table 3.2: Records of Protected Species Within a 1 Kilometre Radius of the Site

Taxon Group	Species Name and Designations ¹ and Notes
Amphibians	Great crested newt (<i>Triturus cristatus</i>): EPS, WCAs5, PS & GMBAP. 1 record, dated 2021, 680m from the site.
	Common toad (<i>Bufo bufo</i>): PS. 3 records, dated between 2017 and 2018, the closest of which is 260m from the site.
Birds	WCAs1 species Hobby (<i>Falco subbuteo</i>), kingfisher (<i>Alcedo atthis</i>), little ringed plover (<i>Charadrius dubius</i>) and peregrine (<i>Falco peregrinus</i>)
	PS & GMBAP species Willow tit (<i>Parus montanus</i>).
	PS only species Bullfinch (<i>Pyrrhula pyrrhula</i>), cuckoo (<i>Cuculus canorus</i>), curlew (<i>Numenius arquata</i>), dunnoek (<i>Prunella modularis</i>), grasshopper warbler (<i>Locustella naevia</i>), herring gull (<i>Larus argentatus</i>), house sparrow (<i>Passer domesticus</i>), lapwing (<i>Vanellus vanellus</i>), lesser redpoll (<i>Carduelis cabaret</i>), linnet (<i>Linaria cannabina</i>), reed bunting (<i>Emberiza schoeniclus</i>), skylark (<i>Alauda arvensis</i>), song thrush (<i>Turdus philomelos</i>), spotted flycatcher (<i>Muscicapa striata</i>), starling (<i>Sturnus vulgaris</i>) and yellow wagtail (<i>Motacilla flava</i>).
	Insects (moths) PS Buff ermine (<i>Spilosoma luteum</i>), cinnabar (<i>Tyria jacobaeae</i>), dot moth (<i>Melanchra persicariae</i>), knot grass (<i>Acronicta rumicis</i>) and white ermine (<i>Spilosoma lubricipeda</i>).
Terrestrial Mammals	Brandt's bat (<i>Myotis brandtii</i>): EPS, WCAs5 & GMBAP. 1 record, dated 2018, 750m from the site.
	European otter (<i>Lutra lutra</i>): EPS, PS & WCAs5. 1 record, dated 2020, 800m from the site.
	Common pipistrelle (<i>Pipistrellus pipistrellus</i>): EPS, WCAs5 & GMBAP. 37 records, dated between 1996 and 2019, the closest of which is 120m from the site.
	Daubenton's bat (<i>Myotis daubentonii</i>): EPS, WCAs5 & GMBAP. 6 records, dated between 2003 and 2006, the closest of which is 30m from the site.
	Myotis sp. (<i>Myotis</i> sp.): EPS, WCAs5 & GMBAP. 1 record, dated 2015, 630m from the site.
	Pipistrelle sp. (<i>Pipistrellus</i> sp.): EPS, WCAs5 & GMBAP. 10 records, dated between 1996 and 2014, the closest of which is 30m from the site.
	Noctule bat (<i>Nyctalus noctula</i>): EPS, WCAs5, PS & GMBAP. 5 records, dated between 1999 and 2006, the closest of which is 30m from the site.
	Soprano pipistrelle (<i>Pipistrellus pygmaeus</i>): EPS, WCAs5, PS & GMBAP. 1 record, dated 2016, 660m from the site.
¹Key to Designation Codes: EPS = European Protected Species under the <i>Conservation of Habitats and Species Regulations 2017</i> . WCAs1 = Species receives full protection under Schedule 1 of the <i>Wildlife and Countryside Act 1981</i> (as amended). WCAs5 = Species receives full protection under Schedule 5 of the <i>Wildlife and Countryside Act 1981</i> (as amended). PS = Priority Species listed under Section 41 of the NERC Act 2006 GMBAP = Species listed on the Greater Manchester Biodiversity Action Plan	

3.1.11 The presence of these protected and notable species within the wider area has been taken into account throughout this report.

Preliminary Roost Assessment

3.1.12 A preliminary roost assessment was undertaken at the site in April 2021.

3.1.13 Trees 1 and 4 were assessed to be of moderate suitability for use by roosting bats. The preliminary roost assessment states:

Tree 1:

Potential roost feature (PRF) 1: Small cavity with approximately 5 cm wide entrance hole on eastern aspect at 2m height. Hole extends a short way down branch. Potential for use by individual bats.

PRF2: Upward facing branch cavity with approximately 5cm wide entrance hole on western aspect at 2.5 m height. The cavity may extend down the branch but is likely to allow rainwater to enter. Potential for use by individual bats.

PRF3: Trunk cavity at approximately 3m height on northern aspect. May open into larger cavity within trunk but needs further inspection. Potential to support individual or small number of bats.

Moderate (precautionary classification based on PRF3; all other PRFs considered Low).

Tree 4:

Semi-mature willow tree with curved trunk. PRF: Multiple small cavities present on all aspects of the tree. Some cavities are superficial but higher features could not be checked from ground-level. Potential to support individual or small number of bats.'

3.1.14 Building 1 was assessed to be of negligible suitability for use by roosting bats.

Bat Activity Surveys

3.1.15 Bat activity surveys were undertaken at Trees 1 and 4 in September 2021.

3.1.16 All features suitable for use by roosting bats were inspected by a licensed bat surveyor prior to the commencement of the bat emergence surveys. No bats or evidence of roosting bats was detected.

3.1.17 No bat emergence or re-entry was detected during the surveys. The presence of roosting bats at the trees is reasonably discounted.

3.1.18 Common pipistrelle (*Pipistrellus pipistrellus*) were observed at the site during the bat activity surveys. Anabat recording detectors recorded common pipistrelle and *Myotis* species calls.

3.2 Vegetation and Habitats

General Description

3.2.1 The approximately 0.7 hectare site is located in an urban location and comprises two areas of hard standing with colonising vegetation, an area of scrub and an area of amenity grassland with scattered trees.

3.2.2 The site boundaries are defined by fences and walls, with areas of the site boundaries not defined by a physical feature. The site boundaries lie adjacent to existing residential streets with housing. A disused building lies adjacent to the southern section of the eastern site boundary. The eastern section of the northern site boundary lies adjacent to the A6053 and the western section lies adjacent to Howard Street. The eastern site boundary lies adjacent to Cock Clod Street. The western and southern site boundaries lie adjacent to Rectory Lane.

3.2.3 A Phase 1 Habitat Survey map is appended at **Figure 2**, and can be referred to for all habitat descriptions. Photographs are appended at **Table 8.4**.

Hard Standing with Colonising Vegetation and Boundary Scrub

3.2.4 The southern area of the site supports hard standing with boundary scrub (**Photos 1 to 3**). An area of hard standing with colonising vegetation also separates the area of scrub in the north-east corner of the site and the amenity grassland (**Photo 4**).

3.2.5 The boundary scrub is characterised by locally abundant Ivy (*Hedera helix*), Cherry species (*Prunus* sp.), Creeping Buttercup (*Ranunculus repens*), Goat Willow (*Salix caprea*) and Grey Willow (*Salix cinerea*). The colonising vegetation is characterised by locally abundant moss species and Annual Meadow-grass (*Poa annua*). A plant species list is appended at **Table 8.1**.

- 3.2.6 The boundary scrub and colonising vegetation are not characteristic of an NVC community. The hard standing is described by the UKHab as u1b6 – other developed land and the boundary scrub is described as h3h – mixed scrub.

Scrub

- 3.2.7 An area of unmanaged scrub lies in the north-east corner of the site (**Photos 5 and 6**).
- 3.2.8 The vegetation is characterised by occasional Sycamore (*Acer pseudoplatanus*), Silver Birch (*Betula pendula*), Dogwood (*Cornus sanguinea*), Ash (*Fraxinus excelsior*), Goat Willow and Grey Willow with frequent Dandelion (*Taraxacum officinale* agg.), occasional Perennial Rye-grass (*Lolium perenne*) and Bramble (*Rubus fruticosus* agg.) and locally abundant Butterfly-bush (*Buddleja davidii*), Cock's-foot (*Dactylis glomerata*), Yorkshire-fog (*Holcus lanatus*), Field-rose (*Rosa arvensis*) and Common Nettle (*Urtica dioica*). A plant species list is appended at **Table 8.2**.
- 3.2.9 The scrub is not characteristic of an NVC community, and is described by the UKHab as h3h – mixed scrub.

Amenity Grassland with Scattered Trees

- 3.2.10 The western area of the site supports amenity grassland with scattered trees (**Photos 7 to 9**).
- 3.2.11 The vegetation is characterised by abundant and constant Perennial Rye-grass, abundant Cock's-foot and Yorkshire-fog, frequent Annual Meadow-grass, Smooth Meadow-grass (*Poa pratensis*) and Rough Meadow-grass (*Poa trivialis*) and occasional Daisy (*Bellis perennis*) and Creeping Buttercup with locally abundant Sycamore, Dogwood, Cherry species, Firethorn (*Pyracantha coccinea*), Goat Willow and Grey Willow and locally frequent Ash, Holly and Garden Privet (*Ligustrum ovalifolium*). A plant species list is appended at **Table 8.3**.
- 3.2.12 The amenity grassland is characteristic of an MG7 Perennial Rye-grass ley grassland community of the NVC (Rodwell, 1992), and is described by the UKHab as g4 – modified grassland with the following secondary code: 11 scattered trees.

Invasive Plant Species

- 3.2.13 An area in the north-west corner of the amenity grassland was demarcated and signposted as being treatment for Japanese Knotweed at the time of the survey (**Photo 10**). In addition, stands of Wall Cotoneaster (*Cotoneaster horizontalis*) were detected at the eastern boundary of the amenity grassland.
- 3.2.14 These species are listed on Schedule 9 of the *Wildlife and Countryside Act 1981* (as amended); it is an offence to spread or cause their spread in the wild. This is considered further at **Section 4.3** below.

3.3 Animal Life

Badger

- 3.3.1 No badger or signs of badger were detected within the site. No evidence of badger such as setts / holes, prints, hairs, dung pits or snuffle holes were detected at the site or in the immediate surrounding area. Due to the absence of any field signs of badger, the presence of badger at the site is reasonably discounted. No further survey for badger is required.

Bat Species

Daylight Survey: Buildings

- 3.3.2 Building 1 (**Photo 11**) is assessed as negligible suitability for use by roosting bats at the preliminary bat assessment (The Environment Partnership, 2021). No further survey is required at Building 1.

- 3.3.3 Two metal cabins (**Photos 12 and 13**) are present at the hard standing in the southern area of the site. Both metal cabin structures do not have any features suitable for use by roosting bats. Both metal cabins are assessed to be of negligible suitability for use by roosting bats. No further survey is required.

Habitat Assessment for Commuting and Foraging Bats

- 3.3.4 The scrub, amenity grassland and scattered trees within the site are unlikely to provide an abundance or diversity of invertebrate prey, and the habitats within the site are therefore considered to be of low suitability for use by foraging bats.

Bird Species

- 3.3.5 No bird species were detected in the site during the survey on 25th November 2021.
- 3.3.6 The scrub and scattered trees within the site are suitable for use by nesting passerine (i.e. perching) species. This is considered further at **Section 4.4**.

Reptiles

- 3.3.7 The regularly disturbed and managed habitats within the site provide poor quality habitat for sheltering, basking and hibernating reptiles. The site supports an even topography and the homogenous vegetation supports little variation in its physiognomy. The species-poor habitats within the site are reasonably unlikely to support a large populations or a variety of invertebrate prey.
- 3.3.8 The site is not adjacent or linked to any areas of favourable habitat for reptile species. The presence of reptiles within the site is reasonably discounted.

Other Wildlife

- 3.3.9 The scrub at the site is suitable for use by foraging and sheltering hedgehog (*Erinaceus europaeus*), a Priority Species. Measures to protect individual animals, including hedgehog, are presented at **Section 5.6**.

4.0 EVALUATION AND ASSESSMENT

4.1 Introduction and Description of Proposals

- 4.1.1 It is proposed to develop the site to housing with associated roads, hard standing and landscaping, refer to *Radcliffe ELPM Island Site, Indicative Site Plan Proposal, Dwg. No. 12216-AEW-XX-XX-DR-A-502 Rev. P08* (Aew Architects, 2021).
- 4.1.2 **Section 4.2** provides an assessment of any impacts of the proposed development on the designated sites for nature conservation present in the wider area. The ecological value of habitats within the site is evaluated at **Section 4.3**, and protected and notable species are considered at **Section 4.4**.

4.2 Designated Sites for Nature Conservation

- 4.2.1 The site does not support any habitats or species which contribute to, or complement the identified designated sites (statutory and non-statutory) in the wider area. The site is not directly or hydrologically linked to any of the designated sites.
- 4.2.2 No potential pathways for direct or indirect adverse impacts or likely significant effects on the integrity and conservation objectives of the statutory and non-statutory designated sites in the wider area as a result of the development proposals are identified.

4.3 Vegetation and Habitats

- 4.3.1 Only common and widespread plant species were found. None of the habitats present are representative of semi-natural habitat. The NVC communities present are typical of the geographical area and conditions present.
- 4.3.2 In terms of each habitat's importance in a geographical context³, the scrub and scattered trees are considered to be of 'local' importance as they support habitats of value to nesting and foraging birds. The amenity grassland is of 'site' value only, and the hard standing is of negligible importance.
- 4.3.3 The presence of Japanese Knotweed and Wall Cotoneaster, both invasive species listed under Schedule 9 of the *Wildlife and Countryside Act 1981* (as amended), has been detected within the site. The Japanese Knotweed at the site is currently under treatment (at the time of writing the details of the treatment were not available) and it is considered that the proposals present an opportunity to continue the eradication of Japanese Knotweed at the site and the removal of the Wall Cotoneaster as part of the proposed development. Recommendations for the eradication of these species prior to the commencement of development activities are presented at **Section 5.3**.

4.4 Protected Species and Other Wildlife

- 4.4.1 Habitats within and adjacent to the site are suitable for foraging and commuting bats. Precautionary actions for the protection of roosting bats at the site and recommendations relating to the retention of features suitable for use by foraging and commuting bats, and features to enhance habitats for roosting bats at the site are presented at **Section 5.4**.
- 4.4.2 The scrub and scattered trees provide favourable foraging and nesting habitat for the species of birds detected within the site and the wider area via the records search (including house sparrow, a Priority Species). Consideration of birds (including protection of breeding birds and recommended enhancements for Priority Species) are presented at **Section 0** of this report.

5.0 RECOMMENDATIONS AND ECOLOGICAL ENHANCEMENT

5.1 Introduction

- 5.1.1 These recommendations aim to ensure that the development is implemented in accordance with relevant wildlife legislation, Natural England guidance, the principles of the National Planning Policy Framework (NPPF), local planning policy and best practice.
- 5.1.2 The recommendations address the potential impacts identified in **Section 4.0** and are appropriate and proportionate.
- 5.1.3 In accordance with Chapter 15, paragraph 180(d) of the NPPF:
'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'.
- 5.1.4 Where possible, opportunities to enhance the ecological interest and habitat connectivity and seek biodiversity gain through appropriate landscape planting and habitat creation have been identified.

³ Using the terms presented at Section 4.7 of *Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine* (CIEEM, 2018), i.e. International and European, National, Regional, Local Authority-wide area, River Basin District, Estuarine system / Coastal cell or Local. The term 'site' value is additionally used to highlight ecological features considered to be of importance in the context of the wider site habitats, but which are of negligible value in the context of the local area.

- 5.1.5 All recommendations are appropriate to the geographical area, the habitats in the wider area, the wildlife present in the local area (and likely to use the site post-construction) and take into consideration the end use of the site as a residential development.

5.2 Protection of Existing Vegetation and Recommendations in Relation to Site Layout

Protection of Trees

- 5.2.1 It is recommended that the site layout is designed to retain the scattered trees where feasible. During the construction phase, temporary protective demarcation fencing will be used to protect any trees or shrubs to be retained. The fencing must extend outside the canopy of the retained trees and must remain in position until all areas have been developed to ensure protection is provided throughout the construction phase.
- 5.2.2 The fencing will be in accordance with BS5837:2012 *Trees in Relation to Design, Demolition and Construction: Recommendations* (BSI, 2012).

5.3 Invasive Plant Species

- 5.3.1 It is an offence under the *Wildlife and Countryside Act 1981* (as amended) to cause the spread of Japanese Knotweed and Wall Cotoneaster in the wild. At the time of writing the details of the ongoing treatment of Japanese Knotweed at the site are not known. It is recommended that a specialist contractor is employed / continued to be employed for the eradication of the Japanese Knotweed at the site, and that this is completed under a suitable Invasive Species Management Plan.
- 5.3.2 It is recommended that the Wall Cotoneaster shrubs are grubbed out by the roots during site clearance and disposed of either by burying on site or removal to a suitable tip.

5.4 Bats

- 5.4.1 The following recommendations are made in the preliminary roost assessment:

'A bat box scheme is recommended to maintain opportunities for roosting bats within the site.

Planting of linear features within the completed development is also recommended to mitigate for the loss of any foraging and commuting habitat.

New lighting should be designed in line with the Institution of Lighting Professionals Guidance Note 08/18 Bats and Artificial Lighting in the UK. A Sensitive Lighting Strategy should also be produced to avoid impacts of lighting on nocturnal species, primarily bats.

- 5.4.2 The following recommendations are designed to complement the recommendations presented above.
- 5.4.3 These recommendations aim to ensure that the proposals are implemented in accordance with relevant wildlife legislation, Natural England guidance, the principles of the National Planning Policy Framework (NPPF), local planning policy and best practice. The recommendations are appropriate and proportionate to the proposals.

Survey Validity

- 5.4.4 The results of the bat activity survey will remain valid until the start of the 2022 bat activity survey season (May to mid-September inclusive). If no tree removal works have commenced at the site before May 2022 an updated bat survey and assessment will be required.
- 5.4.5 Due to the accessible nature of the identified features it is recommended that, in this instance, a licenced daylight bat survey utilising an endoscope is appropriate to update the 2021 survey findings.

Lighting

- 5.4.6 Paragraph 185(c) in Chapter 15 (conserving and enhancing the natural environment) of the NPPF states that development should:

'limit the impact of light pollution from artificial light on local amenity, intrinsically dark landscapes and nature conservation.'

- 5.4.7 Any lighting scheme to be implemented at the site must involve the use of appropriate products and screening, where necessary, to ensure no excessive artificial lighting shines over any landscape planting proposed by the development, as lighting overspill may deter use by wildlife such as foraging bats.

- 5.4.8 The lighting scheme will be designed with reference to current guidance, namely:

- a. Guidance Note 08/18. *Bats and Artificial Lighting in the UK*. Bats and Built Environment series. (Bat Conservation Trust and Institution of Lighting Professionals, 2018); and
- b. Bats and lighting: Overview of current evidence and mitigation guidance (Stone, 2014).

Reasonable Avoidance Measures to be Observed During Tree Felling

- 5.4.9 It is recommended that the following measures are adopted during the works proposed to Trees 1 (**Photo 14**) and 4 (**Photo 15**). In accordance with *Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd edn)* (Collins, J. (ed), 2016) it is essential that the following actions are applied during the felling of these trees:

- a. The optimal time for tree removal is between September and late February inclusive;
- b. The trees will be carefully section-felled. The sectioning must avoid cutting through or close to any cavities (this is likely to involve climbing the tree);
- c. Cut sections will be lowered to the ground with the use of ropes;
- d. Once on the ground the cavity / feature will be inspected by the licensed bat surveyor and guidance issued; and
- e. All felled sections will be left to lie on the ground for 24 hours before removing ivy and snedding (removing side branches).

- 5.4.10 If at any time during the works a bat is discovered or suspected all contractors must withdraw from the area and ERAP Ltd (01772 750502) or Natural England must be contacted for further guidance.

Enhancing Habitats for Roosting Bats

- 5.4.11 It is recommended that the development incorporates the installation of four bat access panels at the new buildings.

- 5.4.12 The bat access panels should be sited at least four metres above ground level, ideally facing or close to areas of landscape planting or existing linear features. The access panels should not be positioned over windows or doorways where bat droppings may become a nuisance. Once the development layout has been finalised, an ecologist should advise on appropriate positions for the bat access panels. Suitable bat access panels are available from NHBS Ecology (www.nhbs.com) or Wild Care (www.wildcare.co.uk) and are presented at **Insert 1**.



Insert 1: Examples of integrated bat access panels and an externally mounted box⁴

5.5 Birds

Protection

- 5.5.1 All wild birds are protected under the *Wildlife and Countryside Act 1981* (as amended) while they are breeding. It is advised that any works such as vegetation clearance that will affect habitats suitable for use by nesting birds are scheduled to commence outside the bird nesting season. Commencement of works in the nesting season must be informed by a pre-works nesting bird survey, carried out by a suitably experienced ecologist. The bird breeding season typically extends between March to August inclusive (Natural England, 2015).
- 5.5.2 If breeding birds are detected the ecologist will issue guidance in relation to the protection of the nesting birds in conjunction with the scheduled works. This may involve cordoning off an area of the site until the young birds have fledged.

Enhancing Habitats for Nesting Birds

- 5.5.3 The installation of two house sparrow terrace nest boxes is recommended at the proposed new housing. The boxes will not be positioned over windows or doorways where droppings may become a nuisance. RSPB advice states that boxes should ideally be sited facing north to east, to avoid exposure to direct sunlight, which may cause overheating of chicks in the nest. Once the development layout has been finalised, an ecologist should advise on appropriate positions for the house sparrow terrace nest boxes. Suitable house sparrow terrace nest boxes are available from NHBS Ecology (www.nhbs.com) or Wild Care (www.wildcare.co.uk) and are presented at **Insert 2**.



Insert 2: Schwegler 1SP House Sparrow Nesting Terrace

⁴ Left to right: IBstock Enclosed Bat Box 'c' (left); Habitat Bat Access Panels (centre left and centre right) and Greenwood's Ecohabitat's two crevice bat box (right). Products with a brick face are illustrated, however the Habitat bat access panels can be supplied unfaced to enable the addition of matching material.

5.6 Landscape Planting and Protection of Other Wildlife

- 5.6.1 It is recommended that the landscape planting within the residential site is composed from native species and species known to be of value for the attraction of wildlife.
- 5.6.2 It is recommended that trees which support blossom and fruit which will attract insects are incorporated into the landscape planting. Suitable species are presented at **Table 5.1**, below.

Table 5.1: Suitable Native Species for Tree and Shrub Planting

Scientific Name	Common Name	Scientific Name	Common Name
<i>Acer campestre</i>	Field Maple	<i>Prunus spinosa</i>	Blackthorn
<i>Corylus avellana</i>	Hazel	<i>Rosa arvensis</i>	Field Rose
<i>Crataegus monogyna</i>	Hawthorn	<i>Rosa canina</i>	Dog-rose
<i>Ilex aquifolium</i>	Holly	<i>Sambucus nigra</i>	Elder
<i>Malus sylvestris</i>	Crab Apple	<i>Sorbus aucuparia</i>	Rowan
<i>Prunus avium</i>	Wild Cherry	<i>Ulmus glabra</i>	Wych Elm
<i>Prunus padus</i>	Bird Cherry	<i>Viburnum opulus</i>	Gelder Rose

- 5.6.3 The understorey and ground cover planting design should be prepared to optimise the attraction of invertebrates such as feeding bumblebees and butterflies. Where possible the use of native species should be maximised but where necessary non-native species known to be attractive to invertebrates should be used.
- 5.6.4 Planting schemes that include flowering species such as *Viburnum*, *Ceanothus*, *Hebe*, *Lavandula*, *Lonicera*, *Potentilla*, *Rosmarinus* and *Vinca* can maximise opportunities for feeding invertebrates and for the attraction of foraging bats and birds.
- 5.6.5 For further plants suitable for the attraction of pollinators please refer to the *Perfect for Pollinators Plant List* (Royal Horticultural Society, 2012). It is recommended that the selection of plant species at the site ensures that a variety of flowering species are available throughout the year.

Protection of Other Wildlife

- 5.6.6 During the site clearance and site preparation works, if any animals (such as hedgehog) are detected on site, they must be carefully picked up, where possible, placed in a clean bucket and moved to an area of suitable habitat beyond the working area.

6.0 CONCLUSION

- 6.1 This ecological assessment has demonstrated that a residential development at the site is feasible and acceptable in accordance with ecological considerations and the National Planning Policy Framework.
- 6.2 It is possible to implement reasonable actions for the protection and long-term conservation of fauna such as nesting birds and commuting / foraging bats associated with the site.
- 6.3 Development at the site will provide an opportunity to secure ecological enhancement for fauna typically associated with residential areas such as breeding birds and roosting bats.

7.0 REFERENCES

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8.0 APPENDIX: TABLES AND FIGURES

8.1 Tables

Table 8.1: Plant Species List for Boundary Scrub and Colonising Vegetation at the Hard Standing

Scientific Name	Common Name	DAFOR ¹	Cover
	Moss species	LA	<1%
<i>Buddleja davidii</i>	Butterfly-bush	VLF	<1%
<i>Cerastium fontanum</i>	Common Mouse-ear	VLF	<1%
<i>Cirsium vulgare</i>	Spear Thistle	R	<1%
<i>Epilobium hirsutum</i>	Great Willowherb	VLA	<1%
<i>Geranium robertianum</i>	Herb-Robert	VLA	<1%
<i>Hedera helix</i>	Ivy	LA	<1%
<i>Ligustrum ovalifolium</i>	Garden Privet	VLA	<1%
<i>Poa annua</i>	Annual Meadow-grass	LA	<1%
<i>Prunus</i> sp.	Cherry species	LA	<1%
<i>Ranunculus repens</i>	Creeping Buttercup	LA	<1%
<i>Sagina procumbens</i>	Procumbent Pearlwort	VLA	<1%
<i>Salix caprea</i>	Goat Willow	LA	<1%
<i>Salix cinerea</i>	Grey Willow	LA	<1%
<i>Stellaria media</i>	Common Chickweed	VLF	<1%
<i>Taraxacum officinale</i> agg.	Dandelion	VLF	<1%
<i>Urtica dioica</i>	Common Nettle	LF	<1%

¹**Key to DAFOR:** D=Dominant, A=Abundant, F=Frequent, O=Occasional, R=Rare, V=Very, L=Local and *denotes a constant species

Table 8.2: Plant Species List for the Area of Scrub

Scientific Name	Common Name	DAFOR ¹	Cover
	Moss species	LA	<1%
<i>Acer pseudoplatanus</i>	Sycamore	O	10%
<i>Betula pendula</i>	Silver Birch	O	10%
<i>Buddleja davidii</i>	Butterfly-bush	LA	5%
<i>Cerastium fontanum</i>	Common Mouse-ear	LF	<1%
<i>Chamerion angustifolium</i>	Rosebay Willowherb	LA	1%
<i>Cirsium arvense</i>	Creeping Thistle	LF	<1%
<i>Cornus sanguinea</i>	Dogwood	O	5%
<i>Dactylis glomerata</i>	Cock's-foot	LA	5%
<i>Epilobium hirsutum</i>	Great Willowherb	LA	1%
<i>Equisetum arvense</i>	Field Horsetail	VLA	<1%
<i>Fraxinus excelsior</i>	Ash	O	10%
<i>Galium aparine</i>	Cleavers	LA	<1%
<i>Geranium robertianum</i>	Herb-Robert	VLF	<1%
<i>Holcus lanatus</i>	Yorkshire-fog	LA	5%
<i>Lolium perenne</i>	Perennial Rye-grass	O	5%
<i>Plantago lanceolata</i>	Ribwort Plantain	VLF	<1%
<i>Poa annua</i>	Annual Meadow-grass	LA	1%
<i>Ranunculus repens</i>	Creeping Buttercup	VLA	<1%
<i>Rosa arvensis</i>	Field-rose	LA	5%
<i>Rubus fruticosus</i> agg.	Bramble	O	5%
<i>Rumex obtusifolius</i>	Broad-leaved Dock	VLA	<1%
<i>Salix caprea</i>	Goat Willow	O	10%
<i>Salix cinerea</i>	Grey Willow	O	10%
<i>Senecio jacobaea</i>	Common Ragwort	LA	2%
<i>Sonchus oleraceus</i>	Smooth Sow-thistle	VLA	<1%
<i>Stellaria media</i>	Common Chickweed	LF	<1%
<i>Taraxacum officinale</i> agg.	Dandelion	F	5%
<i>Urtica dioica</i>	Common Nettle	LA	5%
<i>Vicia sepium</i>	Bush Vetch	VLA	<1%

¹**Key to DAFOR:** D=Dominant, A=Abundant, F=Frequent, O=Occasional, R=Rare, V=Very, L=Local and *denotes a constant species

Table 8.3: Plant Species List for the Amenity Grassland with Scattered Trees

Scientific Name	Common Name	DAFOR ¹	Cover
<i>Acer pseudoplatanus</i>	Sycamore	LA	2%
<i>Bellis perennis</i>	Daisy	O	5%
<i>Berberis darwinii</i>	Darwin's Barberry	VLA	<1%
<i>Calystegia sepium</i>	Hedge Bindweed	VLA	<1%
<i>Cornus sanguinea</i>	Dogwood	LA	<1%
<i>Cotoneaster horizontalis</i>	Wall Cotoneaster	VLA	<1%
<i>Dactylis glomerata</i>	Cock's-foot	A	10%
<i>Dryopteris filix-mas</i>	Male-fern	VLF	<1%
<i>Euonymus japonicus</i>	Evergreen Spindle	VLA	<1%
<i>Euphorbia peplus</i>	Petty Spurge	VLA	<1%
<i>Festuca rubra</i>	Red Fescue	LA	<1%
<i>Fraxinus excelsior</i>	Ash	LF	<1%
<i>Galium aparine</i>	Cleavers	LA	<1%
<i>Geranium robertianum</i>	Herb-Robert	LF	<1%
<i>Hedera helix</i>	Ivy	LA	<1%
<i>Holcus lanatus</i>	Yorkshire-fog	A	10%
<i>Ilex aquifolium</i>	Holly	LF	<1%
<i>Ligustrum ovalifolium</i>	Garden Privet	LF	<1%
<i>Lolium perenne</i>	Perennial Rye-grass	A*	45%
<i>Poa annua</i>	Annual Meadow-grass	F	5%
<i>Poa pratensis</i>	Smooth Meadow-grass	F	5%
<i>Poa trivialis</i>	Rough Meadow-grass	F	5%
<i>Prunus</i> sp.	Cherry species	LA	2%
<i>Pyracantha coccinea</i>	Firethorn	LA	2%
<i>Ranunculus repens</i>	Creeping Buttercup	O	5%
<i>Rumex obtusifolius</i>	Broad-leaved Dock	LF	<1%
<i>Salix caprea</i>	Goat Willow	LA	2%
<i>Salix cinerea</i>	Grey Willow	LA	2%
<i>Taraxacum officinale</i> agg.	Dandelion	LA	<1%
<i>Urtica dioica</i>	Common Nettle	LF	<1%
<i>X Cuprocyparis leylandii</i>	Leyland Cypress	VLA	<1%

¹**Key to DAFOR:** D=Dominant, A=Abundant, F=Frequent, O=Occasional, R=Rare, V=Very, L=Local and *denotes a constant species

8.2 Photographs

Table 8.4: Photographs



Photo 1: Hard standing at southern area of site, with boundary scrub



Photo 2: Hard standing at southern area of site, with boundary scrub

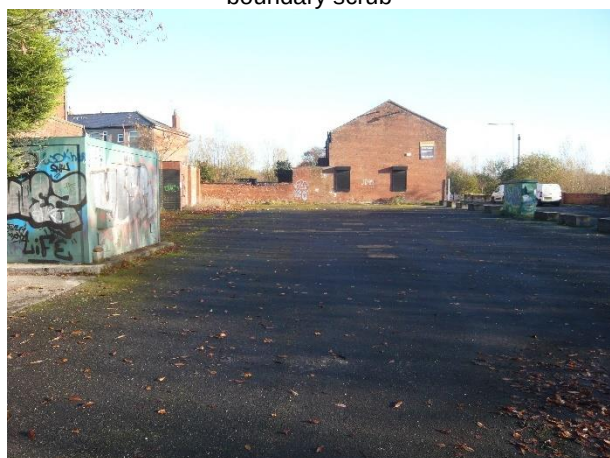


Photo 3: Hard standing at southern area of site



Photo 4: Hard standing between the area of scrub and amenity grassland, with colonising vegetation



Photo 5: Area of scrub at north-east corner of site



Photo 6: Area of scrub at north-east corner of site, adjacent to the area of hard standing



Photo 7: Area of amenity grassland with scattered trees



Photo 8: Area of amenity grassland with scattered trees



Photo 9: Area of amenity grassland with scattered trees



Photo 10: Area fenced off for Japanese Knotweed treatment in north-west corner of the amenity grassland



Photo 11: Building 1



Photo 12: Metal cabin



Photo 13: Metal cabin



Photo 14: Tree 1

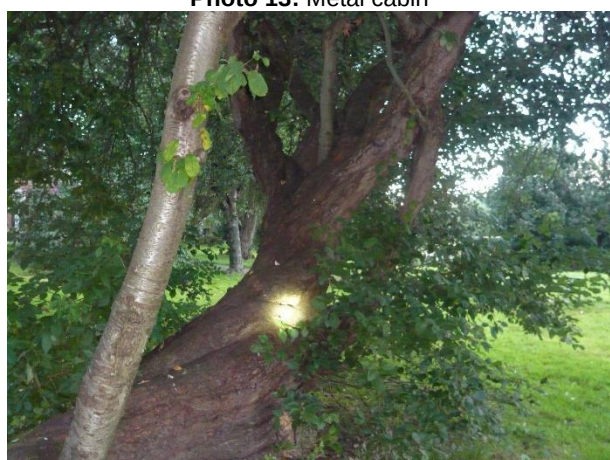


Photo 15: Tree 4

8.3 Figures

Figure 1: Aerial Image of the Site and its Surrounding Habitats



Figure 2: Phase 1 Habitat and Vegetation Map

