PRELIMINARY ECOLOGICAL APPRAISAL

11 FACTORY ROAD, SANDYCROFT, DEESIDE

INDUSTRIAL ESTATE

20 February 2025

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This report has been prepared by Sambrook Associates Ltd on behalf of Cassidy and Ashton in connection with the re-development of 11 Factory Road, Sandycroft, Deeside Industrial Estate and takes into account their particular instructions and requirements. It is not intended for, and should not be relied on, by any third party and no responsibility is undertaken to any third party.

Contents

1 INTRODUCTION

1.1 Background Information

1.1.1 Sambrook Associates Ltd was instructed by Cassidy and Ashton to undertake a Preliminary Ecological Appraisal (PEA) in relation to the proposed re-development at 11 Factory Road, Sandycroft, Deeside Industrial Estate, including demolition of the existing buildings and construction of a new warehouse and associated parking, infrastructure and landscaping.

1.1.2 As part of the Appraisal, a walk-over of the Site, external inspections of the existing buildings and a desktop study were undertaken in 2025. This report provides the results of these, as well as an appraisal of the potential effects the proposed development may have on biodiversity, and recommendations for further survey, mitigation and enhancement, where required.

1.1.3 The aim of the preliminary appraisal is to provide sufficient ecological information for pre-app consultation and, once the scheme is finalised, the PEA will be updated to provide sufficient information for the local planning authority (LPA) to determine the associated planning application. The objectives of the study were to:

- Provide baseline information on the current ecological features both on-site and in the immediate surrounding area (up to 30m where accessible);
- Identify the presence or potential presence of any protected species or habitats and provide an appraisal of any potential effects that the proposed development may have on these;
- Identify the proximity of any sites designated for nature conservation interest and provide an appraisal of any potential effects that the proposed development may have on these; and
- Provide recommendations for further pre-construction survey work and / or mitigation measures if required and present opportunities for habitat enhancement.

1.1.4 In consideration of the nature of the proposed work which includes demolition of a building and construction of a new building and associated road infrastructure, but in consideration of the site location being sub-optimal since it is in the middle of an industrial estate, all relevant key protected and notable sites, habitats and species have been considered in the scoping of this appraisal. It is considered the likelihood of protected species being present is, in the main, low but bats and birds are a key consideration.

1.2 Site Description

1.2.1 The Site is located within the well-established Deeside Industrial Estate. The site is a now derelict former light industrial unit with large expanses of hard-standing and soft ground. The site is surrounded by other industrial units.

1.2.2 The proposed development is hereby referred to as the Site and comprises the land within the red-line boundary. The walk-over survey covered an area greater than this (where access permitted) for mobile species such as great crested newts, badgers, water vole and otter and to look at how nearby habitats may influence the use of the building by bats.

2 LEGISLATION AND PLANNING POLICY

2.1.1 Many sites, animals and plants are protected by European and/or UK legislation either because of their decline across Europe and the UK or due to the persecution they have placed upon them by negligent or illegal acts such as baiting or trade. Legislation is also in place to prevent the spread of introduced or non-native invasive species and harmful weeds. When undertaking an appraisal of a proposed development, such legislation is taken into account as follows.

- **European:** Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora (the 'Habitats Directive'); and Directive 2009/147/EC of the European Parliament and of the Council on the conservation of wild birds (codified version of Directive 79/409/EEC as amended) (the 'Birds Directive').
- **UK (England & Wales):** The Environment (Wales) Act 2016, The Environment Act 2021, The Conservation of Habitats and Species Regulations 2017, as amended (the 'Habitat Regulations') which transposes the Habitats Directive in UK law. Since 1st January 2021, the UK is no longer a member of Europe but since the Habitats Directives are embedded into UK statute, The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 was published and still applies in England and Wales; The Wildlife and Countryside Act 1981 (as amended); the Countryside and Rights of Way Act (CRoW) 2000; the Protection of Badgers Act 1992; the Natural Environment and Rural Communities Act (NERC) (2006) and the Environmental Protection Act (EPA) 1990.

2.1.2 Species such as birds, bats, great crested newts *Triturus cristatus*, otter *Lutra lutra*, water vole *Arvicola amphibious*, reptiles and badgers *Meles meles* are all protected to varying degrees under this legislation.

2.1.3 Under the NERC Act, local authorities (and other public bodies) have a duty to conserve biodiversity. The Act confers responsibility on the local authority to take the protection of priority habitats and species (as listed in Section 41) into consideration when making a planning decision. Habitats listed in this section include eutrophic standing waters, rivers, lowland meadows and lowland mixed deciduous woodland. Species listed in this section include great crested newt *Triturus cristatus*, sky lark *Alauda arvensis*, hedgehog *Erinaceus europaeus*, otter *Lutra lutra*, soprano pipistrelle *Pipistrellus pygmaeus* and red squirrel *Sciurus vulgaris.* Full habitats and species' lists can be found at the Natural History Museum website, nhm.ac.uk or jncc.defra.gov.uk.

2.1.4 The Environment (Wales) Act 2016 introduced an enhanced biodiversity and resilience of ecosystems duty (Section 6 Duty). This duty applies to public authorities in the exercise of their functions in relation to Wales and will help maximise contributions to achieving the well-being goals. The Nature Recovery Action Plan supports this legislative requirement to reverse the decline in biodiversity, address the underlying causes of biodiversity loss by putting nature at the heart of decision-making and increasing the resilience of ecosystems by taking specific action focused around the 6 objectives for habitats and species.

2.1.5 In addition to legislation, there are also national and local planning policies pertaining to the protection of biodiversity. Planning Policy Wales (PPW) Edition 12 (February 2024) requires the planning system to have a key role in helping to reverse the decline in biodiversity and increasing

the resilience of ecosystems, at various scales, by ensuring appropriate mechanisms are in place to both protect against loss and to secure enhancement. Development plan strategies, policies and development proposals must consider the need to:

- support the conservation of biodiversity, in particular the conservation of wildlife and habitats;
- ensure action in Wales contributes to meeting international responsibilities and obligations for biodiversity and habitats;
- ensure statutorily and non-statutorily designated sites are properly protected and managed;
- safeguard protected and priority species and existing biodiversity assets from impacts which directly affect their nature conservation interests and compromise the resilience of ecological networks and the components which underpin them, such as water and soil, including peat;
- secure enhancement of and improvements to ecosystem resilience by improving diversity, condition, extent and connectivity of ecological networks;
- provide measurable biodiversity net benefit which is secured through the production and implementation of a Green Infrastructure Statement which comprises a commitment to biodiversity gain through the creation and long term management of valuable habitats.

2.1.6 To accompany the PPW, Technical Advice Note 5 (TAN5) demonstrates how local authorities, developers and stakeholders can deliver sustainable development that does not result in losses to biodiversity and takes the opportunity to protect and enhance it. Flintshire council also have their own guidance and local policy to promote ecological resilience in their decision making.

2.1.7 The RSPB's Birds of Conservation Concern 5 (2021) is also taken into consideration when undertaking this appraisal.

2.1.8 Because of the type of development proposed, it is usual that bats are the most likely animals affected and so the legislative and licensing obligations pertaining to bats are described in more detail below.

2.1.9 All bat species are protected in the UK under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). The species is also protected under Annex II of the Council Directive 92/43/EEC 1992 on the Conservation of Natural Habitats and of Wild Fauna and Flora (the EC Habitats Directive). This has been transposed into UK law by the Conservation of Habitats and Species Regulations 2017 (as amended) in England and Wales. Bats are referred to as European Protected Species (EPS).

2.1.10 It is an offence to deliberately capture, injure or kill a bat; intentionally or recklessly disturb in a way that would affect their local distribution or abundance, or affect their ability to survive, or breed. It is also an offence to damage or destroy a bat roost and to possess, advertise, control, transport, sell, exchange or offer for sale/exchange any live or dead bat or any part of a bat.

2.1.11 If you wish to undertake works that would affect an EPS then you will need a licence. Natural England (NE) and Natural Resources Wales (NRW), in exercise of the powers conferred under regulation 53(1) and 56(3) (a) of the Conservation of Habitats and Species Regulations 2017, may issue licences for the following purposes:

- Preserving public health or public safety or other imperative reasons of overriding public interest including those of a social or economic nature and beneficial consequences of primary importance for the environment;
- Preventing the spread of disease;
- Preventing serious damage to livestock, foodstuffs for livestock, crops, vegetables, fruit, growing timber or any other form of property or to fisheries; to allow people to carry out activities which would otherwise be illegal;

2.1.12 Before issuing a licence under the Habitats Regulations, the licensing authority must be satisfied that "there is no satisfactory alternative" to the work as proposed and, that the proposed actions "will not be detrimental to the maintenance of the population of the species at a favourable conservation status (FCS)".

2.1.13 To ensure these requirements are met, the licensing authority must have enough information to complete an assessment of the application. This includes sufficient survey data so that the roost and how it is used by bats is understood and impacts upon the roost are appropriately assessed so that mitigation and/or compensation can be designed into the proposed development that will ensure the bat population can be incorporated and maintained in the long term.

3 METHODOLOGY

3.1 Introduction

3.1.1 To inform this Ecological Appraisal, a site walk-over survey was conducted on 29 January 2025 which comprised recording of habitats within the Site and an external inspection of building for bats (i.e. a bat scoping survey) and birds. The survey also included potential for protected and notable species, and invasive species such as Japanese knotweed *Fallopia japonica* and Himalayan balsam *Impatiens glandulifera*. In addition to this, a desk-top study was also undertaken

3.2 Desk-top Study

3.2.1 The desktop study involved publicly available data searches for statutory and non-statutory sites, legally protected species and other features of interest within a 500m radius of the site. The boundary of the site with a central point of Ordnance Survey Grid Reference SJ 3267 9673 was used for the data search.

3.2.2 The following sources were searched for information about the Site:

- Defra's 'MAGIC' website;
- Google Earth;
- Bing Maps; and
- Flintshire Council website.

3.3 Walk-over Survey

3.3.1 The purpose of the survey was to determine:

- the habitats present;
- any potential constraints to development;
- legally protected species potentially present;
- the presence of invasive plant and animals; and
- any requirement for additional ecological surveys.

3.3.2 Sambrook Associates Ltd. carried out walk-over survey of the Site on 29 January 2025. The weather was cold with an average temperature of 8°C.

3.3.3 The walk-over survey was carried out by Rebecca Sambrook MCIEEM. The surveyor is a Full Member of the Chartered Institute of Ecology and Environmental Management (CIEEM) and adheres to that organisation's Code of Professional Conduct. Rebecca has gained over 24 years as a professional ecologist, conducting surveys and authoring reports including PEAs, Ecological Impact Assessment chapters, Habitat Regulations Assessments, Biodiversity Management Plans and other specialist technical reports, including mitigation design and licence applications.

3.3.4 The survey was not a detailed Phase 1 Habitat survey but a general recording of habitats which enabled key constraints to be identified to inform design. The Site and immediately adjacent areas (up to 30m) were searched for evidence of protected species that may occur in this area

such as bats, birds, great crested newts *Triturus cristatus*, badgers *Meles meles*, otters *Lutra lutra*, and water vole *Arvicola amphibious* and any invasive plants or animals.

3.3.5 Photographs are included within this report. Plant names follow the third edition of the New Flora of the British Isles (Stace, 2010). The common name of the plant is stated first and is followed by the Latin name, on the first occasion that it is used. Only the common name is used subsequently.

3.4 Bat Scoping Survey

3.4.1 The survey followed the methodology set out in the Bat Conservation Trust's *Bat Surveys for Professional Ecologists: Good Practice Guidelines* (Collins, 2023). The survey was carried out by Rebecca Sambrook on 29 January 2025.

3.4.2 The building was inspected externally only. The survey started with an examination of the external parts of the building to locate potential roosting features such as lifted/missing roof material, gaps around soffits, barge boards and similar. Evidence such as staining, droppings, urine splashes and individuals were also searched for.

3.4.3 There were a few potential roosting features identified externally and given the sub-optimal location of the building, it was considered that a single bat activity survey should be conducted during the core bat activity season of 2025.

3.4.4 A ground level tree assessment was made of the two birch *Betula sp.* trees within the site.

3.5 Limitations

3.5.1 No significant limitations were encountered during the survey. It was noted that some clearance of the site had been undertaken recently to tidy up the site and provide access for numerous surveys. However, it was still possible to assess the site's value and Google Streetview was used to assist in the formulation of this appraisal.

4 RESULTS

4.1 Introduction

4.1.1 This section provides a commentary on the data collected during the desk-top study and survey undertaken in 2025.

4.2 Desk-top Study

4.2.1 Two statutory designated sites are present within 500m, these are, the River Dee and Bala Lake / Afon Dyfrdwy a Llyn Tegid (Wales) Special Areas of Conservation and the Afon Dyfrdwy (River Dee) Site of Special Scientific Interest both of which are 275m north of the proposed site.

4.2.2 There do not appear to be any non-statutory sites within the zone of influence of the proposed site.

4.2.3 A review of MAGIC, Google Earth and Bing Maps did not identify ponds within 250m of the Site.

4.2.4 The Flintshire Council planning portal did not reveal any pertinent information and there do not appear to be any current adjacent developments that would likely cause any in-combination effects with the proposed Site.

4.3 Walk-over Survey

4.3.1 The Site comprises a single storey derelict industrial unit, a small steel portal building, hardstanding and soft ground. There was some evidence of previous clearance of trees with approximately 10 stumps left in-situ with a likely DBH of between c.15-25cm. There are patches of grass on soft ground and sparse tall ruderals and grass covering hardstanding. Along the eastern side of the building there is a single elder *Sambucus nigra* shrub, hawthorn *Crataegus monogyna,* rose *Rosa sp.,* and. a small tree (unidentified). Buddleja is present sporadically around the site. There are a number of rubble piles and rubble is mixed in with the soft earth. The rubble arises from some previously demolished buildings that were present on the site a number of years ago.

4.3.2 There are occasional patches of bramble *Rubus fruticosis* along the palisade fencing of the northern site boundary. The eastern and western boundaries comprise palisade fencing and are mainly clear of vegetation with the exception of two birch trees in the southeastern corner of the site. There is also an alder *Alnus glutinosa* just beyond the site boundary at this location. The southern boundary comprises the frontage of the building and palisade fencing which is flanked by bramble scrub and a rose.

4.3.3 The site supports terrestrial habitats suitable for **great crested newts and other amphibians** but the likelihood of them being present on site is low given the lack of suitable waterbodies nearby.

4.3.4 The location of the site being an industrial site is sub-optimal for **badgers** and there was no evidence of badgers including setts or foraging signs and it is highly unlikely they traverse the site. Similarly, hedgehog and other mammals are unlikely to be present within the site or local area.

4.3.5 The site boundaries offer limited habitat to **reptiles**.

4.3.6 The site does not support suitable habitat for **otter** or **water vole** and these are not considered further.

4.3.7 There was no evidence of non-native invasive or harmful weeds such as Japanese knotweed or Himalayan balsam identified during the survey.

4.3.8 Ground level photographs of the site are provided below.

Plate 4.1: Photographs of the Site

Looking west	Eastern side of building
	
Looking north from building	Western boundary access point
	
Looking north	Looking south towards building

	
Trees south eastern corner	Trees south eastern corner
	
Eastern side of building	Eastern side of building
	
Towards middle of site	Towards middle of site

	
Towards middle of site	Eastern boundary access point
	
Harsdtanding within site	Vegetation next to eastern side of building
	
Birch in south eastern corner	Birch in south eastern corner

4.4 Bat Scoping Survey

4.4.1 As noted above, the main building was assessed for its potential to support bats and considered to be Low suitability i.e. each potential roosting feature could support one or two bats of low conservation concern. An assessment of trees was also made, and these were found to be of Negligible suitability. There was a single detached steel portal building with corrugated metal sheet cladding; this was classified as a suitability of 'None'.

Table 4.2: Description and Photographs of the Building

Description	
Single storey brick building with either corrugated metal or asbestos/cement roofing sheets throughout. Roof in reasonable condition, no gaps. Potential roosting features: a small gap along the metal barge boards on northern gables which may allow access to bats to sit on top of wall plate. Some of these are blocked but there are a couple open. In consideration of the limited potential roosting features present, the building is of Low suitability for bats. Otherwise potential roosting features are limited and downgraded further by the sub-optimal location of the building.	
Northern gable	Northern gable
	

Northern gable	Northern gable
	
Northern gable	Eastern side
	
Steel portal shed	Steel portal Shed
	

4.4.2 The two retained birch trees do not support any potential roosting features. The ivy cover on one of the trees is superficial and does not offer shelter to roosting bats.

4.4.3 The Site and surrounding habitats provide poor foraging and commuting habitat for bat species and the site is poorly connected to surrounding areas and the wider landscape.

4.5 Appraisal of Potential Effects

4.5.1 The proposed scheme will include:

- Demolition of existing structures
- Construction of a new building and associated infrastructure
- New car parking
- Landscaping

4.5.2 Due to the distance between the Site and statutory and non-statutory designated sites, effects are not anticipated on statutory and non-statutory designated sites.

4.5.3 **Habitats:** the tree group 1-3 (see AIA Report) and bramble scrub will be retained and protected during the course of the works. T4 will be removed to facilitate the development. Previous vegetation clearance will be compensated in a site wide habitat compensation strategy which will comprise the planting of trees, bramble scrub, hedgerows and grassland, as described in the Green Infrastructure Statement below.

4.5.4 As a minimum, good site management should be implemented based upon the Considerate Constructors Scheme, Code of Considerate Practice. Key principals of good management to protect habitats include:

- Being organised, clean and tidy; always net skips to prevent materials and rubbish from blowing around the site and onto adjacent habitats.
- Identifying, managing and promoting environmental issues.
- Seeking sustainable solutions, and minimising waste, carbon footprint and resources.
- Minimising the impact of vibration, and air, light and noise pollution.
- Protecting the ecology, the landscape, wildlife, vegetation and water courses.

4.5.5 **Bats:** Works on buildings often gives rise to numerous effects on bats in the absence of mitigation. Direct impacts can include disturbance, loss or modification of roosts due to building work including demolition, removal of roofs, re-pointing of brickwork, installation of insulating materials and non-breathable membranes, closing up of access points, increased people presence and installation of lighting. A single **bat survey is recommended** to be undertaken in the core bat survey season in 2025 to allow a full appraisal of the site in relation to bats.

4.5.6 **Great crested newts, badgers, small mammals and reptiles** are highly unlikely to be present on site. Nevertheless, as a highly precautionary approach, during the demolition and construction phase, a series of **Reasonable Avoidance Measures** will be employed to prevent harm to these species as follows:

- Any minor excavations will be backfilled overnight, capped at the ends (in the case of ducts) or if left open overnight, the surfaces are to be smoothed and a means of escape (a ramp) provided.
- Any materials requiring storage should be stored on pallets raised off the ground, or otherwise compacted/modified to prevent plant growth and cracks that could be exploited by GCN.
- All on-site debris and stored materials should be dismantled and removed carefully as amphibians may be present, if a suspected great crested newt is found, a photograph is to be taken and sent to the retained ecologist for advice.
- Any waste materials arising from the development should be removed from site as soon as possible and should not be stored on site to prevent animals from using the materials for shelter.
- If amphibians, reptiles or any other animal is discovered at any point, works must stop immediately, and the ecologist is to be contacted for further advice.

4.5.7 The habitat creation strategy will benefit these species, if they are present in the wider area.

4.5.8 No active **bird** nests were identified in the building or surrounding vegetation, but it is possible they may do at some point between the survey and start of proposed works. It is advised that the disturbance and/or destruction of breeding birds and their nests is illegal under the Wildlife and Countryside Act 1981 (as amended). If any nests are built between the survey and the outset of demolition, and the nest is likely to undergo any disturbance, an ecologist should be contacted for advice. If nests are identified, the nests must remain intact and undisturbed until young have fledged. Any vegetation required to be removed, must be done outside of the nesting bird season which includes the months of March to August inclusive, unless the vegetation is first checked by an experienced ecologist and no nests are found.

4.5.9 **Enhancement:** The proposed scheme includes the installation of bat and bird boxes which will provide a net gain in roosting and nesting opportunities. The following boxes are proposed:

- 3no. wooden bird nest boxes or similar (suitable for passerines) are to be installed on the rear of the building or on a pole or fenceline to the rear of the building, at least two metres off the ground to reduce risk of predators and human interference and out of artificial light.
- 3no. Beaumaris Woodstone bat box or similar to be installed on a suitable building, pole or fenceline to the rear boundary, at least 3 metres off the ground and out of direct sunlight and artificial light.

5 GREEN INFRASTRUCTURE STATEMENT

5.1 Assessed Losses

5.1.1 The previous partial vegetation clearance and proposed further clearance within the site has/will result in the loss of approximately:

- 11no. trees;
- Scrub;
- Patches of grassland, tall ruderals and occasional native shrubbery such as hawthorn and elder.

5.2 Proposed Biodiversity Net Benefit

5.2.1 The proposed development includes a soft landscaping scheme which will be created with a biodiversity focus. The proposed landscaping is presented on the Site_Plan_Proposed drawing (C&A, P04)). The following will be undertaken:

- Creation of approx. 1,312m² of neutral grassland by sowing a wildflower seed mix such as Emorsgate EM2 Standard General Purpose Meadow Mixture or similar.
- Planting of 33no. trees comprising:
    - 10no. wild cherry *Prunus avium*;
    - 10no. silver birch;
    - 3no. oak Quercus robur; and
    - 7no. hazel *Corylus avellana;*
    - 3no. alder *Alnus glutinosa.*
- Creation of c.109.4m species rich hedgerow (with trees) along the western boundary comprising:
    - 30% hawthorn *Crataegus monogyna*;
    - 30% blackthorn *Prunus spinosa*;
    - 10% holly *Ilex aquifolium*;
    - 10% field maple *Acer campestre*;
    - 10% hazel *Corylus avellana;*
    - 5% spindle *Euonymus europaeus*; and
    - 5% elder Sambucus nigra
- Retention of current bramble and encouragement of this to grow to achieve c.170.5m² of bramble scrub along the northern boundary.

5.2.2 The above habitats will be created and managed as per the specification below.

Habitat Creation Specification & Management Plan	
Notes	This GIS is provided in good faith. Above ground and buried services have not been surveyed in the production of this GIS. It is advisable that the site owner undertakes the necessary services/utilities surveys to ensure this planting scheme does not conflict with unknown infrastructure currently and in the future – it is advisable to consider a 5-metre clearance of any buried or above ground services to allow for future growth. Sambrook Associates Ltd accepts no liability in the implementation of this biodiversity statement – the burden of responsibility to ensure this statement is devoid of risk lies with the site owner. Any designs, specifications, advice, suggestions, or comments written or verbal relating to work of any kind are provided for consideration only and under no circumstances are to be interpreted as provision of design, management or supervision under the Construction (Design and Management) Regulations 2015. All operatives will be appropriately trained, certified and qualified to undertake the tasks required. All work is to be carried out in accordance with the relevant British Standards, Codes of Practice and Legislation.

Proposed Habitats:	• Neutral grassland: wildflower seed mix such as Emorsgate EM2 Standard General Purpose Meadow Mixture or similar (depending on availability).
	• Trees: 10no. wild cherry, 10no. silver birch, 3no. oak and 7no. hazel. Girth/Dia: 12-14cm, Height: 350-425cm, Root Zone: RB.
	• Species rich hedgerow comprising:
	  ○ 30% hawthorn *Crataegus monogyna* (transplant, age 1+1, height 80-100cm, bare root)
	  ○ 30% blackthorn *Prunus spinosa (*transplant, age 1+2, height 80-100cm, bare root)
	  ○ 10% holly *Ilex aquifolium* (branched, 3 breaks, age 3L, height 40-60cm, container)
	  ○ 10% field maple *Acer campestre* (transplant, age 1+1, height 40-60cm, bare root)
	  ○ 10% hazel *Corylus avellana* (transplant, age 1+1, height 40-60cm, bare root)
	  ○ 10% spindle *Euonymus europaeus* (transplant, age 1+1, height 40-60cm, bare root)
	• Bramble scrub which is present along the northern boundary and will naturally colonise along this boundary with some targeted management.

Ground Preparation	Remove any existing hardstanding and create a planting bed to a depth of 1m and fill with subsoil (700mm) and topsoil (300mm). This will be a sufficient depth the support trees and also be suitable for the creation of the grassland and hedgerow. Where necessary, existing weeds will be treated with a herbicide and a suitable period allowed to elapse, as recommended by the manufacturer, for the herbicide to take effect before planting commences. Topsoil to be the top layer which should be raked to produce a fine tilth.

Sowing/Planting	Hedgerow to be planted first, followed by trees, and then the grassland can be sown. **Hedgerow:** Bare root plants shall be planted while dormant (i.e. November to April) and not when frosty or waterlogged. Plant at 5 plants per linear metre in a double staggered row. Species should be mixed randomly. Bare roots plants shall be notch planted (using T, L or straight notches) using suitable spades. The notches must be vertical and deep enough for the roots to hang freely with the transplant being plants so that the root collar is exactly level with the ground surface. The notch must then be closed and the soil well firmed round the roost in line with the guidelines set out in BS4428. All planting stock to be protected from rabbit damage using approved proprietary 600mm clear plastic spiral guards, supported with 0.9m 12/14lb canes as advised by the manufacturer. All plants to be watered in well after planting. Composted bark mulch shall be spread to a depth of 75mm and total width of 1m after watering. **Trees:** Tree pits of at least 75cm diameter greater than the roost system and no deeper than the container shall be excavated and the sides well scarified to prevent smearing. The root system of the tree should be wetted prior to planting. The tree should be planted at the correct depth taking into account the position of the root flare and the finished level - the rootball or root stem transition should be level with the existing host soil or surface. The base of the rootball should typically sit on subsoil, for larger rootballs the subsoil will sit around the lower portion of the rootball. Tree pits should be backfilled with 1 part excavated topsoil and 2 parts tree planting compost. At each stage the fill should be firmed in to eliminate all air pockets under and around the root system, but with care being taken not to excessively compact the soil. The final layer should not be consolidated. Apply a general-purpose slow release fertiliser (at the rate of 75gm/m2) and Tree Planting and Mulching Compost at the rate of (20litres/m2) are to be incorporated into the top 150mm of topsoil during final cultivations. All trees are to be double staked with 75mm dia stakes with rubbers and spacers. Stakes should be driven at least 300mm into the ground before planting the tree, taking care to avoid underground services and cables etc. and should typically be one third the height of the tree stem above ground. Staked trees shall be secured to stakes with suitable proprietary rubber tree ties and spacers. Immediately after planting, but before applying the bark mulch, all trees should be saturated. **Grassland:** Seed to be sown in the autumn (September to October) or spring (March-April) providing there is sufficient warmth and moisture. The seed must be surface sown and is to be applied by machine or preferably broadcast by hand. Press the seeds into the ground and if necessary, cover with a layer of topsoil, not exceeding 1cm in

	depth. During the establishment phase, in very dry conditions, the seed beds may need irrigation. Sowing rate to be confirmed pending seed mix selection.
Year 1 Management	**Hedgerow:** In the first spring, the shrubs should be cut to approx. 45–60cm above the ground to encourage them to 'bush out', encouraging lateral growth and creating a thick hedge. All dead, dying or diseased hedge plants will be replaced with plants of similar size and species. If the failure of the plant is due to disease and the disease is considered likely to re-occur then an alternative species may be used as replacement if agreed with the LPA. Weed growth will be controlled in the planting area by careful application of an approved herbicide by a qualified landscape contractor. **Trees:** Top up mulch to ensure a 50mm layer around tree bases is maintained. Replace any dead, dying, damaged stock with same species of similar size. Adjust ties and stake as and when required; the need for this must be checked annually. **Grassland:** Most of the sown meadow species are perennial and are slow to establish. Soon after sowing there will be a flush of annual weeds which can look unsightly, but they will offer shelter to the sown seedlings, are great for insects, and they will die before the year is out. Cut the annual weeds in August, then remove and compost. This will reveal the young meadow, which can then be kept short by mowing through to the end of March of the following year. Dig out any residual perennial weeds such as docks.
Year 2-30 Management	**Hedgerow:** The hedgerow is to be allowed to grow up to 1.75m and maintained at that height. The width of the hedgerow should be allowed to maintain a bushy structure. Trim different parts of the hedgerow on a 2-3 year rotation, only cutting one side of the hedgerow each time. Top up mulch to ensure a 50mm layer around plant bases is maintained up to Year 5. Replace any dead, dying, damaged stock with same species of similar size. Adjust protective sheaths and stake as and when required; the need for this must be checked annually. These can usually be removed from Year 5. **Trees:** Top up mulch to ensure a 50mm layer around tree bases is maintained up to Year 5. Replace any dead, dying, damaged stock with same species of similar size. Adjust ties and stake as and when required; the need for this must be checked annually. These can usually be removed from Year 5. From Year 3, check for the need to prune to encourage a good shape. **Grassland:** In the second and subsequent years, grassland will be managed by traditional meadow management based around a main summer cut in combination with autumn and possibly spring mowing.

	The meadow grassland is not to be cut from late April through to late August to give the sown species an opportunity to flower. After flowering in August mow to a height of c 50mm. Leave the arisings to dry and shed seed for 3 days then remove from site, or compost. Mow the re-growth through to late autumn/winter to c 50mm and again in spring, if needed. **Bramble:** Bramble should be managed conservatively so that it retains a dense bushy structure but doesn't impede movement between the boundary and the building and still allows some light to penetrate through to the grassland adjacent.

6 CONCLUSION & RECOMMENDATIONS

5.1.1 The site has been the subject of an Ecological Appraisal in 2025 which concludes that the Site was of some ecological value.

5.1.2 As such, the following recommendations are made in respect of habitats:

- **Recommendation:** the Tree Group 1-3 are retained and protected with Heras fencing throughout the proposed works.
- **Recommendation:** good site management should be implemented based upon the Considerate Constructors Scheme, Code of Considerate Practice

5.1.3 The following recommendations are made in respect of bats.

- **Recommendation:** a single bat survey of the main building is to be undertaken between May-August 2025.
- **Recommendation:** bat boxes are to be installed as per Section 4.

5.1.4 The following recommendations are made in respect of great crested newts, other amphibians, reptiles and mammals.

- **Recommendation:** the RAMs detailed in Section 4 is implemented.

5.1.5 The following recommendations are made in respect of birds.

- **Recommendation:** to prevent impacts on nesting birds, demolition and vegetation removal shall occur outside of the nesting bird season i.e. not during the months of March through to August inclusive. If demolition and/or vegetation removal is required during this time, the building/vegetation shall first be checked by a competent Ecologist and only if no nests are found can demolition occur/vegetation be removed. If nests are found, they will remain in-situ and undisturbed until the young have fledged.
- **Recommendation:** woodcrete/wooden bird nest boxes (suitable for passerines) are to be installed as per Section 4.

5.1.6 To further enhance the natural landscape and improve biodiversity of the Site, the following recommendation is made.

- **Recommendation:** the landscaping scheme/Green Infrastructure Statement is implemented and must only include the planting of native species, preferably of local provenance, and species that provide a good nectar source for invertebrates.

5.1.7 Taking into consideration these recommendations, long term negative effects on biodiversity are not anticipated and the proposed development actually gives rise to biodiversity enhancement opportunities within the Site, improving biodiversity at a local level which will be managed in the long term to provide future biodiversity resilience.

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