

# **Ecological Impact Assessment**

London Oxford Airport - Gateway Site
Presented
Oxford Aviation Services Limited

**Issued: February 2023** 

Delta-Simons Project No: 22-2011.01/88056.545691

Protecting people and planet

### **Report Details**

Client	Oxford Aviation Services Limited	
Report Title	cological Impact Assessment	
Site Address	Gateway Site, Land West of The Junction with The Boulevard, Oxford Airport, Langford Lane, Kidlington, OX5 1NZ	
Project No.	22-2011.01/88056.545691	
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### **Quality Assurance**

lssue No.	Status	lssue Date	Comments	Author	Technical Review	Authorised
3	Final	9 <sup>th</sup> February				
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### **Non-Technical Summary**

Delta-Simons Ltd was instructed by Oxford Aviation Services Limited (the 'Client') to undertake an Ecological Impact Assessment (EcIA) of an area of land west of The Junction with The Boulevard, Oxford Airport, off Langford Lane, to the north of Kidlington in Oxfordshire (hereafter referred to as the 'Site') to inform a planning application for redevelopment of the Site to include the demolition of existing buildings and development of new accommodation across five buildings for employment uses (Class E(g)(ii) and (iii)) plus ancillary amenity building, outdoor amenity space, car parking, cycle parking, landscaping and associated works (the 'Proposed Development').

This EcIA addresses the potential effects of the Proposed Development on ecology and nature conservation. The Report describes the methods used to assess the effects; the baseline conditions currently existing at the Site and within the immediate surrounding area; the mitigation measures required to prevent, reduce or offset any significant adverse effects and the likely residual effects after these measures have been adopted, as well as any proposed enhancement measures. A summary of residual effects is provided overleaf.

An ecological desk study undertaken in September 2022 identified one internationally designated statutory site within 6 km of the Site, and two nationally designated statutory site. Five non-statutory designated sites were identified within 2 km of the Site. Due to the development's type, small scale and distance from all of these designated sites, no adverse impacts on designated sites are anticipated

The habitat on Site were surveyed and assessed for their suitability to support protected/otherwise notable species by Delta-Simons on 22<sup>nd</sup> September 2022 and a further Bat Roost Potential (BRP) survey undertaken on the 13<sup>th</sup> December 2022. The Site covers an area of 3.11 ha and comprised seven commercial and office buildings with their associated hardstanding and soft landscaping, and an area of bare ground where a building previously stood. The western boundary of the Site comprises security fencing, whilst the northern and eastern boundaries are access roads with trees on either side. The southern boundary is a managed hedgerow. The Site is surrounded by commercial and industrial buildings with associated hard and soft landscaping to the north and south beyond Langford Road, and east, beyond.

The habitats present on Site are widespread on both a local and national scale, with none of the habitats being considered rare. However, the species-rich hedgerow on Site qualifies as a Habitat of Principal Importance for nature conservation and provide a potential wildlife corridor. The trees at the Site, despite being managed to mitigate the risk of bird strike associated with the airport, also offer more valuable habitat and connectivity across the Site. The boundary hedgerow and many of the trees at the Site are to be retained following the development, and proposed landscaping will ai to promote biodiversity whilst being appropriate to the use and location of the Site.

Building 2 was assessed as having low Bat Roost Potential (BRP), and several trees were also found to contain features suitable to support roosting bats, although no evidence of bat activity has been recorded to indicate the presence of a roost site. The buildings, trees and hedgerow also provide suitable habitat for nesting birds, although management is undertaken to the trees due to the proximity of London Oxford Airport. Appropriate mitigation is required during Site clearance in relation to the potential for roosting bats and nesting birds, and a sensitive lighting plan is required to avoid increased light levels post-development.

Biodiversity Net Gain calculations for the Site indicate that a gain in biodiversity of 19.67 % can be achieved for area units and a gain of 244.41% for linear units. An appropriate landscape management and monitoring plan will be followed to promote the long-term biodiversity value of the retained and proposed habitats.

Whilst there is likely to be a temporal delay in achieving the biodiversity objectives for the Site (i.e. whilst new habitats become established), it is anticipated that in the long term there will be no significant residual effects on habitats or protected species resulting from the Proposed Development





### **Summary of Residual Effects**

Important Ecological Feature	Geographic Value	Characterisation of Unmitigated Impact	Significance Before Mitigation	Avoidance, Mitigation and Compensation	Residual Effect Significance
Habitats	Local	Habitat loss Damage to roots/health Inappropriate management	Minor adverse Non- significant	Adherence to BS5837:2012 Proposed soft landscaping Application of a Landscape and Ecology Management Plan (LEMP)	Negligible Neutral
Birds	Local	Habitat loss Nest destruction/ disturbance Noise and vibration Inappropriate management	Minor adverse Non- significant	Sensitive timing of works and/or watching brief with regards to the removal of, and works within close proximity to, suitable nesting habitat LEMP	Negligible Neutral
Bats	Local	Increased lighting on Site Loss of foraging, roosting, commuting habitat Loss of roost potential Kill/injure any bats present during demolition/tree felling	Minor adverse Non- significant	Appropriate lighting plan Precautionary approach to demolition/tree felling Landscaping to increase foraging opportunities LEMP	Negligible Neutral





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### 1.0 Introduction

### 1.1 Purpose and Scope of the Survey

Delta-Simons Ltd was instructed by Oxford Aviation Services Limited (the 'Client') to undertake an Ecological Impact Assessment (EcIA) of an area of land west of The Junction with The Boulevard, Oxford Airport, off Langford Lane, to the north of Kidlington in Oxfordshire (hereafter referred to as the 'Site') to inform a planning application for a new commercial development at the Site.

The purpose of this report is to:

- Establish baseline ecological conditions at the Site.
- Provide details of ecological mitigation measures incorporated through design evolution as an intrinsic part of the project design.
- Detail any ecological mitigation measures to be implemented during Site clearance, construction and operation.
- Identify any residual ecological effects after avoidance and mitigation measures have been considered.
- Identify any compensation measures required to offset residual effects.
- Provide recommendations for how mitigation and compensation may be secured and monitored.
- Set out details of ecological enhancement measures to be included within the Proposed Development.
- Provide sufficient information to determine whether the project accords with relevant nature conservation policies and legislation and, where appropriate, to allow conditions or obligations to be proposed by the relevant authority.

The Site location and the red line boundary are shown in Figure 1.

#### **1.2** Site Description

The Site is centred at Ordnance Survey (OS) grid reference SP 47566 1494, to the to the north of Kidlington in Oxfordshire. The Site covers an area of 3.11 hectares (ha) and comprised seven commercial and office buildings with their associated hardstanding and soft landscaping, and an area of bare ground where a building previously stood. The western boundary of the Site comprises security fencing, whilst the northern and eastern boundaries are access roads with trees on either side. The southern boundary is a managed hedgerow. The Site did not support standing water at the time of the survey.

The Site is surrounded by commercial and industrial buildings with associated hard and soft landscaping to the north and south, beyond Langford Road, and east, beyond The Boulevard, beyond which are areas of arable and woodland. To the west is London Oxford Airport, which comprises hardstanding and amenity grassland.

The habitats present on Site are shown in Figure 2.

#### 1.3 **Proposed Development**

It is understood from the drawing provided by Spratley and Partners (21.926.PL.005) (Drawing 1) that the proposals are for the redevelopment of the site to include the demolition of existing buildings and development of new accommodation across five buildings for employment uses (Class E(g)(ii) and (iii)) plus ancillary amenity building, outdoor amenity space, car parking, cycle parking, landscaping and associated works. The majority of habitats will be cleared from the Site to facilitate the proposals, however, trees and hedgerow along the Site boundary, along with a number of trees at the Site entrance, are expected to be retained.





The construction phase will comprise:

- Clearance of habitats on Site, including building demolition; and
- Retention and protection of trees and species rich hedgerow habitats on/off-Site.

The operational phase will comprise:

- Use of buildings for commercial purpose;
- Management of proposed landscape habitats in accordance with a Landscape and Ecological Management Plan (LEMP).





### 2.0 Legislation & Policy Summary

Planning guidelines, international commitments, legislation and planning policies relevant to the protection, conservation and enhancement of nature conservation interests are detailed below.

### 2.1 National Policy and Guidance

Specific habitats and species of relevance to the Site receive legal protection in the United Kingdom under various pieces of legislation, including:

- National Planning Policy Framework (NPPF, revised 2021);
- The Conservation of Habitats and Species Regulations 2017 (as amended);
- The Wildlife and Countryside Act (WCA) 1981 (as amended);
- The Countryside and Rights of Way (CRoW) Act 2000;
- The Natural Environment and Rural Communities Act (NERC) 2006;
- The Hedgerow Regulations 1997; and
- The Protection of Badgers Act 1992.

Where relevant, this assessment takes account of the legislative and policy protection afforded to specific habitats and species. Delta-Simons do not purport to provide specialist legal advice and where necessary the reader should also consult the original legislation, references to which are included in Appendix A.

#### 2.2 Local Policy and Guidance

Local planning policies relating to ecology are generally based on national planning policy, the conservation of species protected under the above legislation and the protection of designated sites. However, relevant local policy and guidance documents are outlined below.

The Adopted Cherwell Local Plan 2011-2031 contains strategic planning policies for development and the use of land. The Plan was formally adopted by the Council on 20 July 2015.

The principal planning policies relating to nature conservation are as follows:

Policy ESD 10: Protection and Enhancement of Biodiversity and the Natural Environment

'Protection and enhancement of biodiversity and the natural environment will be achieved by the following':

- In considering proposals for development, a net gain in biodiversity will be sought by protecting, managing, enhancing and extending existing resources, and by creating new resources;
- The protection of trees will be encouraged, with an aim to increase the number of trees in the district;
- The reuse of soils will be sought;
- If significant harm resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or as a last resort, compensated for, then development will not be permitted;
- Development which would result in damage to or loss of a site of international value will be subject to the Habitats Regulations Assessment process and will not be permitted unless it can be demonstrated that there will be no likely significant effects on the international site or that effects can be mitigated;
- Development which would result in damage to or loss of a site of biodiversity or geological value of national importance will not be permitted unless the benefits of the development clearly outweigh the





harm it would cause to the site and the wider national network of SSSIs, and the loss can be mitigated to achieve a net gain in biodiversity/geodiversity;

- Development which would result in damage to or loss of a site of biodiversity or geological value of
  regional or local importance including habitats of species of principal importance for biodiversity will not
  be permitted unless the benefits of the development clearly outweigh the harm it would cause to the site,
  and the loss can be mitigated to achieve a net gain in biodiversity/geodiversity;
- Development proposals will be expected to incorporate features to encourage biodiversity, and retain and where possible enhance existing features of nature conservation value within the site. Existing ecological networks should be identified and maintained to avoid habitat fragmentation, and ecological corridors should form an essential component of green infrastructure provision in association with new development to ensure habitat connectivity;
- Relevant habitat and species surveys and associated reports will be required to accompany planning applications which may affect a site, habitat or species of known or potential ecological value;
- Air quality assessments will also be required for development proposals that would be likely to have a significantly adverse impact on biodiversity by generating an increase in air pollution;
- Planning conditions/obligations will be used to secure net gains in biodiversity by helping to deliver Biodiversity Action Plan targets and/or meeting the aims of Conservation Target Areas. Developments for which these are the principal aims will be viewed favourably; and
- A monitoring and management plan will be required for biodiversity features on site to ensure their longterm suitable management.

#### Policy ESD 11: Conservation Target Areas

'Where development is proposed within or adjacent to a Conservation Target Area biodiversity survey and a report will be required to identify constraints and opportunities for biodiversity enhancement. Development which would prevent the aims of a Conservation Target Area being achieved will not be permitted. Where there is potential for development, the design and layout of the development, planning conditions or obligations will be used to secure biodiversity enhancement to help achieve the aims of the Conservation Target Area.'





### 3.0 Methodology

The baseline for the EcIA has been established through a combination of desk study and field surveys.

#### 3.1 Scope of the Assessment and Zone of Influence

The features considered for this assessment were designated sites, Habitats and Species of Principal Importance for conservation, and species protected by wildlife legislation.

Given the size and location of the Site, the zone of influence was taken to be the Site boundary and its immediate environs only. The exception for this was for designated sites and great crested newt, details of the zone of influence for these features is provided in Section 3.2, below.

#### 3.2 Desk Study

#### 3.2.1 Data Search

In September 2022, available records of protected and notable species were collated from the local record centre, Thames Valley Environmental Records Centre (TVERC).

A search for internationally, nationally and locally designated statutory sites for nature conservation was undertaken using the Multi-Agency Geographic Information for the Countryside (MAGIC) website. The search radius was 6 km from the Site centre for internationally important designated sites and 2 km from the Site centre for nationally and locally designated statutory sites. A search for non-statutory ancient woodland was undertaken within 2 km of the Site centre, and an assessment was made regarding the location of Habitats of Principal Importance (HPIs) on or near the Site using MAGIC.

In addition, free and publicly accessible Ordnance Survey maps and aerial photographs were searched for waterbodies on, or within, 500 m of the Site boundary. This information has been used to assess the Site for its potential to support great crested newts, the results of which are found in Section 4.3.

#### 3.3 Preliminary Ecological Appraisal Survey

The habitats on Site, were surveyed on 22<sup>nd</sup> September 2022 by a Delta-Simons ecologist and further Bat Roost Potential (BRP) inspections were undertaken on the 13<sup>th</sup> December 2022. Since access was not permitted to the surrounding land, it was visually assessed from the Site boundary.

The following was undertaken during the survey:

- Habitats were classified and mapped using the standard JNCC Phase 1 habitat classification and methodology (JNCC, 2010). Dominant plant species were recorded in each different habitat. The plant species nomenclature followed that of Stace (2010);
- Habitats on-Site were surveyed for the presence of, or field signs to indicate the presence of protected or notable birds, amphibians, reptiles, mammals and widespread invasive plants. This included an external visual assessment of any trees/buildings on the Site for potential bat roost features and any evidence of bat activity, and an assessment of the Site's suitability to support commuting and foraging bats (Appendix B), in line with Collins (2016); and
- If Habitats of Principal Importance (HPIs) under the NERC Act 2006 were found to be present these were
  recorded. Further, an assessment of any hedgerows at the Site, which will be adversely affected by the
  proposed development, was undertaken using the hedgerow criteria outlined in the Hedgerow
  Regulations 1997. The purpose of the assessment was to ascertain whether the hedgerows are classified
  as 'nationally important' and, therefore, protected under the Hedgerow Regulations 1997. The
  assessment involves a scoring system which relies on particular features, number of woody and floral
  species present within the hedgerow habitat, and the age of the hedgerow.





#### 3.4 Survey Limitations

There were no limitations to the survey in terms of timing and weather conditions.

An internal assessment was not undertaken on the majority of the buildings for BRP, apart from Buildings 2 and 7, however, given their structure and location, this was not considered necessary, and a robust assessment was achieved.

It should be noted that the location of any protected or notable species was not provided as part of the data search, however, given the limited opportunities on-Site for the majority of protected species this was not considered to represent a constraint.

The baseline conditions described in this report were accurate at the time at which the survey was undertaken. Should at least two years pass by, and/or conditions on Site/Site usage change prior to the commencement of works, an update survey should be undertaken.

#### 3.5 Ecological Impact Assessment Methodology

An ecological impact assessment has been carried out following the principles set out within the Guidelines for Ecological Impact Assessment (EcIA) in the UK and Ireland; Terrestrial, Freshwater, Coastal and Marine updated by the Chartered Institute of Ecology and Environmental Management (CIEEM) in 2019, the full details of which are provided in Appendix C.





### 4.0 Baseline Conditions

The following section describes the baseline ecological conditions at the Site, outlining the results of the desk study and field survey findings. Current management is anticipated to remain unchanged up until development and, therefore, baseline conditions at the time of writing this Report are anticipated to reflect those at the commencement of the Proposed Development. The conservation importance of the features identified have been evaluated using the geographical scale outlined in the previous section.

The pertinent information from the data search is set out in section 5.1 below for designated sites, whilst data search records for the species are discussed in the relevant species sections. Full results of the data searches are available to the Client on request.

#### 4.1 Desk Study

#### 4.1.1 Designated Sites

The results of the MAGIC data search and the (TVERC) desk search indicate:

- One internationally designated statutory site within 6 km of the Site boundary, a Special Area of Conservation (SAC);
- Two nationally designated statutory sites within 2 km of the Site centre, both of which are Sites of Special Scientific Interest (SSSI); and
- Five non statutory designated sites within 2 km of the Site centre, including a Cherwell District Wildlife Site (DWS), a proposed Cherwell DWS, and three Local Wildlife Sites (LWS).

Tables 1, 2 and 3 below set out the statutory and non-statutory designated sites identified and considered relevant to the Site.

Site Name	Designation	Distance and Direction from Site Boundary	Designation Criteria Summary
Oxford Meadows	SAC	4.16 km south	An area of nationally rare grassland habitats, qualifying due to the presence of lowland hay meadows characterised by species-rich swards containing frequent red fescue <i>Festuca rubra</i> , crested dog's-tail <i>Cynosurus cristatus</i> , meadow foxtail <i>Alopecurus pratensis</i> , great burnet <i>Sanguisorba officinalis</i> , meadowsweet <i>Filipendula ulmaria</i> and meadow buttercup <i>Ranunculus acris</i> , and <i>fritillary Fritillaria meleagris</i> .
			This area also qualifies due to being one of only two sites in the UK to support Creeping marshwort <i>Apium repens</i> , a specialist of floodplain meadows.

#### Table 1 - International Statutory Designated Sites within 6 km of the Site Boundary





Site Name	Designation	Distance and Direction from Site Boundary	Designation Criteria Summary
Rushy Meadows	SSSI	520 m south	An area of unimproved grassland meadows dominated by hard rush Juncus inflexus. The meadow develops into dense scrub in some areas featuring wayfaring tree Viburnum lantana, guelder rose V. opulus, hazel Corylus avellana, crack willow Salix fragilis and sallow S. cinerea. Two watercourses are present within this site, a broad, shallow, eutrophic ditch running north- south through the site and a balancing reservoir within the site both of which support distinctive aquatic vegetation. The site also supports notable bird species, in particular snipe Gallinago gallinago, grasshopper warbler Locustella naevia and over-wintering water-rail Rallus aquaticus.
Shipton-on- Cherwell & Whitehill Farm Quarries	SSSI	1.86 km north	Geological SSSI featuring small freshwater pools and scattered scrub

#### Table 2 - National Statutory Designated Sites within 2 km of the Site Centre

#### Table 3 - Non-Statutory Designated Sites within 2 km of the Site Centre

Site Name	Designation	Distance and Direction from Site Boundary	Designation Criteria Summary
Langford Meadows	LWS	320 m east	Area of fallowed arable land, now developed into unimproved grassland, dense scrub, and fen featuring a high diversity of wildflowers.
Thrupp Community Woodland	DWS	1.06 m east	Plantation deciduous woodland area including a section of the river Churwell and a small area of wet meadow.
Kidlington Copse (Parkhill Copse)	Proposed DWS	1.49 km south- east	Small woodland associated with a public green space in Park Hill.
Bladon Heath	LWS	1.56 km south- west	Mixed area of ancient and plantation woodland with some areas of heathland and coniferous plantation woodland.
Begbroke Wood	LWS	1.64 km south- west	Mixed ancient and plantation woodland close to the village of Begbroke.

#### 4.1.2 SSSI Impact Risk Zones

The Site lies within the SSSI Impact Risk Zone (IRZ) for Rushy Meadows SSSI which requires the Local Planning Authority (LPA) to consult with Natural England on certain development proposals, including the following which may be relevant to the Site:





- Any discharge of water or liquid waste of more than 20m³/day to ground (i.e. to seep away) or to surface water, such as a beck or stream; and
- Large infrastructure such as warehousing/industry where net additional gross internal floorspace is > 1,000m<sup>2</sup> or any development needing its own water supply.

#### 4.2 Habitats

Figure 2 shows the extent of habitat types identified during the survey. Descriptions of the habitat types and dominant plant species found at the Site are provided below. Habitat descriptions are by broad habitat type, as listed in the Phase 1 Habitat Survey Manual (JNCC, 2010). Target Notes (TNs) are listed under Appendix D whilst photographs of the Site survey are located in Appendix E.

Habitats recorded on Site are:

#### Amenity Grassland

Amenity grassland surrounded the buildings and bare ground (Photograph 1) and was present around much of the Site boundary, as well as at the Site entrance. Dominant species were perennial ryegrass *Lolium perenne*, yarrow *Achillea millefolium*, clover *Trifolium sp*, ribwort plantain *Plantago lanceolata*, and creeping thistle *Cirsium arvense*.

#### <u>Buildings</u>

There was a total of seven buildings present on-Site, labelled B1 - B7 on Figure 2. Descriptions of each of these buildings are provided in Table 4, below:

Building Reference	Description
B1	This large building was in use as a gym and was constructed of a mixture of brick (up to approximately 2.5 m) and prefabricated metal sheeting. The front of the building was brick, with rows of windows on either side of the glass door entrance. The rear of the building was taller, with metal sheet walls above the brick. Dense ivy <i>Hedera helix</i> was growing up an unused doorway on the northern aspect. The whole building had a flat, metal sheet roof. Security lighting was present in regular intervals around the majority of the building.
B2	An L shaped, single-storey, rendered building with a pitched, suspected asbestos sheet roof. This building appeared derelict. It was in poor condition due to a temporary boarded-up door, cracks and peeling paintwork, dense moss growing on the roof and electrical cables hanging off the walls. It supported a roof void. Limited security lighting was noted next to the doors.
B3	An L-shaped prefabricated portacabin raised off the ground by 0.5 m, with a flat roof. This building appeared relatively new, and was in good condition and well-sealed, with windows making the interior light throughout. It was in use as offices and classrooms for a flying school.
B4	A large airport hangar, constructed from prefabricated metal with a pitched metal sheet roof. There was no roof void present, and the interior was light throughout due to industrial skylights and large sliding doors on the northern and southern aspects. This building was in use by the airport to store planes.

#### Table 4 - On-Site Building Descriptions





В5	A large airport hangar, constructed from prefabricated metal with a pitched metal sheet roof. There was no roof void present, and the interior was light due to industrial skylights and large sliding doors on the northern and southern aspects. This building was in use at the time of the survey.
B6	An old prefabricated portacabin with a flat felt roof that was raised off the ground by 0.5 m. There were several windows on all aspects, making the interior light. This building was used for storage and was in poor condition due to mouldy and rotting woodwork.
Β7	A single storey, breeze block-built building with a pitched metal sheet roof, but no roof void. One half was not in use and was in poor condition due to visible damp and mould within. There was a large window on the northern aspect which made this side's interior light. The other side had been recently refurbished as a toilet and shower room. An old birds' nest was noted inside.

In addition to the above, there was a collection of temporary portacabins in the south-eastern extent of the Site (Target Note 1 on Figure 2), which were the offices for the Civils Contracting compound. A wooden shed (Target Note 2 on Figure 2) was present in between B1 and B3. The shed was in poor condition, with the roof bowing in the middle and ivy growing out of the door and large window. It was being used for storage at the time of the survey.

#### <u>Hardstanding</u>

Hardstanding comprised access roads, car parking areas and pavements (Photograph 2).

#### <u>Bare Ground</u>

An area of bare ground was present in the eastern half of the Site, where a building was previously situated (Photograph 3). Ruderals were beginning to colonise the area with common nettle *Urtica dioica*, creeping thistle, and dock *Rumex obtusifolius* recorded.

#### Intact Species Rich Hedgerow

An intact species-rich hedgerow formed most of the southern Site boundary (Photograph 4), following Langford Lane. It comprised hazel *Corylus avellana*, hawthorn *Crataegus monogyna*, field maple *Acer campestre*, English elm *Ulmus procera*, and Norway maple *Acer platanoides*.

This hedgerow qualifies as a Habitat of Principal Importance for nature conservation, however, despite the hedgerow being more than 30 years old, it is not considered to meet any of the criteria to qualify as Important against the Hedgerow Regulations.

#### Intact Species Poor Hedgerow

An intact species-poor hedgerow was along the edge of an area of amenity grassland in the northern extent of the Site comprising Leyland cypress *Cupressus* × *leylandii* (Photograph 5). This hedgerow does not meet the criteria of Important against the Hedgerow Regulations.

#### <u>Tree Line</u>

A row of small-leaved lime *Tilia cordata* was present along a small section of the eastern Site boundary, north of the current Site entrance (Photograph 6).

#### Scattered Broadleaved Trees

Scattered broadleaved trees, ranging in age and stature from young to mature, were present throughout the Site, most of which had been pollarded (Photograph 7). As a result of previous pollarding, cavities and





decay were noted on a number of trees. Species recorded included sycamore *Acer pseudoplatanus*, Norway maple, cherry plum *Prunus cerasifera*, cherry *Prunus* sp., small-leaved lime, and horse chestnut *Aesculus hippocastanum*.

#### Scattered Scrub

Several stands of butterfly bush *Buddleja davidii* were present on-Site, mostly in the western areas, associated with buildings, hard standing and amenity grassland.

#### 4.3 Species

#### Amphibians

No ponds were identified on-Site or within 500 m of the Site that had connectivity to it, such that there were no breeding opportunities for amphibians. Given the isolated location of the Site, coupled with the lack of suitable habitat on-Site and within the immediate surrounding area, amphibians are not considered to be a constraint at the Site and are, therefore, not considered further within this Report.

#### Reptiles

The data search contained a single record of grass snake *Natrix natrix* from 2017, within 2 km of the Site centre from the last ten years.

No evidence of reptiles was recorded on-Site during the survey. Whilst the bare ground and hedgerows offer suitable basking and sheltering opportunities, the Site lacked the mosaic of habitats that these species require, was heavily disturbed and isolated from ideal habitats for these species.

Due to the lack of records and suitable habitat on-Site, reptiles are not considered to be a constraint at this Site and are not considered further within this Report.

#### Birds

The data search contained 25 records of bird species listed on the BoCC red/amber list recorded within 2 km of the Site centre from the last ten years. Of these, the most likely to use the Site are dunnock *Prunella modularis*, house sparrow *Passer domesticus*, mistle thrush *Turdus viscivorus*, song thrush *Turdus philomelos*, starling *Sturnus vulgaris*, stock dove *Columba oenas*, swift *Apus apus*, and wren *Troglodytes troglodytes* 

The data search also contained records of three species listed on Schedule 1 of the WCA 1981 within 2 km of the Site centre: barn owl *Tyto alba*, hobby *Falco subuteo* and red kite *Milvus milvus*. None of these are anticipated to utilise the habitats on-Site on a regular basis due to a lack of nesting and foraging opportunities, and the regular disturbance.

Habitats featured on-Site suitable for nesting birds included scattered trees that had not been heavily pollarded, hedgerows, and B7, where an old nest was noted internally. During the updated BRP inspections a great tit *Parus major* was present in the roof space of B2, indicating access is available and small passerines may utilise the roof structure for nesting.

No birds were recorded on-Site at time of survey, however, it should be noted that this is not representative of the bird species which may be present at the Site.

Birds are considered to be of Local value.

#### Bats

The data search contained records of 11 bat species within 2 km of the Site centre from the last ten years. The species listed are brown long-eared bat *Plecotus auratus*, common pipistrelle *Pipistrellus pipistrellus*, Daubenton's bat *Myotis daubentonii*, lesser noctule *Nyctalus leisleri*, Nathusius's pipistrelle *Pipistrellus nathusii*, noctule *Nyctalus noctule*, serotine bat *Eptesicus serotinus*, soprano pipistrelle *Pipistrellus* 





Page 12

*pygmaeus*, and western barbastelle *Barbastella barbastellus*. The most recent of these records was from 2021. Suitable roosting features are presented in Table 5, below.

Reference	Potential Roost Features	Suitability	Photograph Reference
B1	Gaps were present within the decaying wooden sofit boards, between the metal roof and the brick walls on the southern side which could offer opportunities for bats to roost. However, there were no obvious points for bats to land when returning to a possible roost site and, furthermore, given that the building is well lit on all aspects it was not considered suitable to support roosting bats.	Negligible	Photographs 8 and 9
B2	Fascia boards were lifted on the eastern aspect of the building, providing gaps suitable for roosting bats. Furthermore, there were gaps between the corrugated roofing sheets and the top of the building walls, which may have led to a possible cavity for roosting bats, there was no lighting around it and there were scattered trees to provide a commuting corridor.	Low	Photographs 10-12
	Further inspection of the building in December 2022 identified that the building supports an enclosed roof space which was visually inspected from the various loft hatches, or through lifted ceiling tiles. Insulation on the base of the roof void was inspected and no evidence of bat activity was recorded. The roof is internally boarded with wooden panels, several of which had warped or were damaged, exposing the external corrugated asbestos sheeting. A great tit and dead squirrel were present in the roof void at the time of the survey, indicating access is available, however, gaps at the eaves (associated with the corrugated roof material) were mostly heavily cobwebbed and/or contained debris, indicating no recent bat activity. This was also the case along the lifted fascia at the eastern gable end. No bat droppings were recorded on the exterior of the building.		

#### Table 5 - Roost Potential of on-Site Buildings

#### <u>Trees</u>

Four trees were identified as having BRP:

Details of the trees and associated Potential Roost Features (PRF) are provided in Table 6, locations are shown on Figure 3.





Tree Reference and OS Grid Reference	Tree Description	PRF	Evidence of Bats	BRP Assessment
T1 (SP 47524 14932)	Semi-mature Prunus spp	Branch cavity approximately 2ft from the ground. The cavity was approximately 60 cm in height. The feature was inspected using an endoscope and no evidence of bats were noted (Photograph 13)	No	Low
T2 (SP 47643 14927)	Semi-mature sycamore	Rot hole was noted approximately 4ft from the ground. The cavity was approximately 10 cm in height. The feature was inspected using an endoscope and no evidence of bat activity was found (Photograph 14)	No	Low
T3 (SP 47653 14927)	Semi-mature sycamore	A branch cavity was noted approximately 9ft from the ground. This feature was too high to inspect thoroughly at the time of the survey.	No	Low
T4 (SP 47554 14927)	Semi-mature sycamore	Two separate branch cavities were noted. Both features were inspected with an endoscope. The first cavity was approximately 120 cm in height however the internal inspection showed a lot of loose decay. The second cavity had a cavity approximately 30 cm in height (Photograph 15)	No	Low

#### Table 6 - Bat Roost Potential Assessment - Trees

Preliminary Commuting and Foraging Habitat Assessment

Overall, the Site offers low foraging and commuting opportunities due to limited vegetation and the fact that it is likely subject to high levels of lighting both on-Site and from the adjacent roads and surrounding developments. The hedgerows and trees along the south and eastern boundaries provide a commuting corridor to the wider area.

Bats are considered to be of Local value

#### **Other Protected or Otherwise Notable Species**

The data search contained 180 records of west European hedgehog *Erinaceus europaeus* within 2 km of the Site centre from the last ten years, the most recent of which was from 2021. Whilst the Site offered limited





foraging opportunities, given its location, it is considered fragmented from suitable habitat such that this species is not considered further in this Report.

#### **Invasive Species**

The data search contained one record of American mink *Neovison vison* within 2 km of the Site centre from the last ten years. The Site does not offer suitable habitat for this species.

No widespread invasive non-native plant species were included within the data search or were recorded on-Site at the time of the survey.

#### 4.4 Summary of Important Ecological Features and Geographic Value

The species scoped out as important ecological features above due to their likely absence from Site cannot experience effects from the Proposed Development and are not therefore considered below.

The 'important ecological features' identified above with the potential to experience effects as a result of the Proposed Development are listed in Table 7 below, along with their geographic importance. These features will be the subject of the ecological impact assessment in section 5.0.

Important Ecological Feature	Geographic Value
Designated Sites	International, National, Local
Habitats	Local
Bats	Local
Birds	Local

#### Table 7 - Identified Important Ecological Features





### 5.0 Assessment of Effects

The evaluation in this section is based on the baseline information presented above, review of design proposals, consultation with the design team, knowledge of likely construction practices to be employed, and reasonable assumptions regarding operation.

For purposes of the assessment, it is assumed there has been no change in the condition of the Site since the Site surveys (unless otherwise stated).

#### 5.1 Important Ecological Features for Which No Effect is Anticipated

There was one international statutory designated site located within 6 km of the Site boundary, Oxford Meadows SAC is located approximately 4.16 km south of the Site. Given its distance from the Site, and the habitats it supports, there are not anticipated to be any adverse impacts as a result of the redevelopment proposals.

Two statutory designated sites are located within 2 km of the Site, the closest being Rushy Meadows SSSI, located 520 m south of the Site. Whilst the Site falls within the IRZ for this site and, therefore, the LPA may need to consult with Natural England regarding potential impacts as a result of the redevelopment proposals, there is significant development in between the two areas and no common habitat to support the species for which the SSSI is designated. No adverse impacts are therefore anticipated.

Five non-statutory designated sites are located within 2 km of the Site centre, the closest of these was Rushy Meadows LWS located 320 m east of the Site. Given their distance from the Site, and fragmentation from it by a combination of development and arable, there are not anticipated to be any impacts on non-statutory designated sites as a result of the redevelopment proposals.

#### 5.2 Important Ecological Features and Potential Effects

#### 5.2.1 Habitats

#### Potential Impacts and Effects During Construction and Operation

#### During Construction

The habitats present on Site are widespread on both a local and national scale, with none of the habitats being considered rare. However, the species-rich hedgerow on Site qualifies as a Habitat of Principal Importance for nature conservation and provide a potential wildlife corridor. The trees at the Site, despite being managed to mitigate the risk of bird strike associated with the airport, also offer more valuable habitat and connectivity across the Site.

The Development Proposals will result in the loss of most of the on-Site habitat during Site clearance, however, the species-rich hedgerow and many of the trees at the boundary and bordering the existing access road are to be retained. Any works (including vehicular movement and equipment/material storage) within close proximity to any trees and hedgerow retained/adjacent to the Site, have the potential to cause damage to the structure, roots and health.

This is considered to have a minor adverse impact that is not significant

#### During Operation

If habitats retained and planted are not managed appropriately during operation, then there is the potential for additional biodiversity loss from the Site. This is considered to have a minor adverse impact that is not significant

This is considered to have a minor adverse impact that is not significant.





#### Avoidance and Mitigation

#### During Construction

Trees retained on, and adjacent to, the Site will receive appropriate protection during the construction phase of works through the use of tree root protection zones and barriers in accordance with BS5837: 2012 - Trees in relation to design, demolition and construction, where appropriate. In addition, best practice measures will be followed with regards to dust.

It is understood from the proposals put forward as part of the planning application process that the proposed landscaping seeks to provide an environment which maximises biodiversity opportunities whilst being appropriate to the use and location of the Site, in particular its proximity to London Oxford Airport.

#### **During Operation**

An appropriate landscape management and monitoring plan will be followed to promote the long-term biodiversity value of the retained and proposed habitats.

#### **Assessment of Residual Effects**

Following the application of the above mitigation measures, the potential residual effects are considered to be negligible and of neutral significance, and with appropriate landscape planting has the potential to be minor beneficial.

#### 5.2.2 Birds

#### Potential Impacts and Effects During Construction and Operation

#### During Construction

The construction phase will result in the loss of trees within the centre of the Site, as well as demolition of buildings. There is, therefore, potential for direct adverse effects on nesting birds that are permanent in nature as a result of such clearance.

In addition, construction works being carried out within proximity to nesting birds may affect them indirectly, depending on the works being carried out, and the species of bird affected. Noise and vibration disturbance effects may result in birds being repeatedly flushed off nests, causing disruption to feeding activity, or even abandonment of nests. This is considered to be a temporary impact.

Further to the potential direct effects on birds whilst they are actively nesting, the removal of suitable vegetation will result in the direct loss of available bird nesting habitat, as well as a loss of foraging opportunities.

Due to the location of the Site within proximity to London Oxford Airport, active control measures, such as pollarding of the trees, are employed to manage the risk of bird strikes, and therefore the presence of bird numbers overall is discouraged.

The impacts during construction are therefore considered to be minor adverse and not significant.

#### During Operation

During operation, if habitats retained and/or planted during construction are not managed appropriately, then there is the potential for additional impacts on nesting birds. However, this has to be considered in relation to the required control measures associated with the function of the airport.

This is considered to have a minor adverse impact that is not significant.





#### Avoidance and Mitigation

#### During Construction

Where practicable, vegetation clearance and building demolition at the Site will be undertaken outside of the main nesting bird season (i.e., clearance carried out between September and February inclusive). Conflict with the development can be avoided by managing the land to discourage nesting birds up to the works commencing.

If these works cannot be restricted to within this period, an Ecological Watching Brief will be maintained during the main bird breeding season to ensure that no nesting birds are adversely affected. This will entail checking all suitable habitat for nesting birds due to be removed, and a suitable buffer beyond that area, by a suitably experienced ecologist prior to the commencement of works. If, during the Ecological Watching Brief, birds are found to be within the area due to be cleared or the buffer zone, measures to prevent any disturbance to breeding birds, including the cessation of tree and vegetation clearance, demolition, or construction works in areas close to breeding sites until the birds have completed breeding, will be put in place until the chicks have fledged.

#### During Operation

A landscape management and monitoring plan will be in place in order to ensure retained and planted habitats are managed appropriately to maximise biodiversity opportunities and prevent disturbance of nesting birds whilst being sensitive to the proximity of the airport.

#### **Assessment of Residual Effects**

Following the application of the above mitigation measures, the potential residual effects are considered to be negligible and of neutral significance.

#### 5.2.3 Bats

#### Potential Impacts and Effects During Construction and Operation

#### During Construction

Despite no evidence of bat activity recorded, there remains a very low risk of individual bats utilising B2 on occasion. The construction phase is, therefore, considered to result in the direct permanent loss of roosting opportunities, and the potential to result in the killing or injury of any bats if present during demolition.

In addition, loss of a small number of trees assessed as offering low BRP may result in similar impacts in relation to loss of suitable features and direct harm to any bats present.

The boundary hedgerow and majority of the trees around the edge of the Site are to be retained and protected during construction which will continue to provide suitable foraging and commuting habitat across the Site and into the wider landscape for bats.

The construction phase of works has the potential to result in temporary disturbance to bats through increased lighting, noise and vibration, both on foraging and commuting corridors. However, it is anticipated that during the main active bat season (April-October, inclusive), construction works will generally cease, or be winding down before dusk when bats emerge and will not begin before dawn when bats return to roosts. Therefore, generally additional artificial lighting will not be required, and there are not anticipated to be any negative effects upon bat foraging and commuting behaviour from noise across the Site since construction works will not coincide with the timing of bat activity.

In certain circumstances, for example, in late autumn or early spring when daylight hours are limited but weather conditions may be suitable for bats to be active, there may be a brief overlap between bat activity and on-Site construction works. During this period, lighting may be required to enable the construction works to progress, and this along with any associated noise, may temporarily alter bats foraging and





commuting activity across an area of the Site. However, the combined effects of lighting and noise from construction works during these occasional circumstances would only be a temporary deterrent to foraging and commuting bats in a concentrated area, and not across the wider Site and this is not anticipated to have any adverse impact upon bats.

This is considered to have a minor adverse impact that is not significant.

#### During Operation

Lighting at the Site during the operational phase has the potential to adversely affect bat activity within retained and adjacent off-Site habitats. Considering the particularly low level of bat activity recorded during the surveys of the Site, and the species recorded, the potential impacts of the operational phase of the development on bats is, therefore, considered to have a minor adverse effect that is non-significant.

This is considered to have a minor adverse impact that is not significant.

#### **Avoidance and Mitigation**

#### During Construction

A precautionary approach must be employed in relation to the demolition of B2, assessed as offering low BRP:

- As a precaution, demolition of the building will be undertaken during the active bat season (April-October, inclusive) to ensure that no hibernating bats are disturbed;
- A 'tool-box talk' will be given to all contractors working on the Site before works commence. This will outline the law with regards to bats. They will also be briefed on the correct procedure to follow if bats are discovered on the Site;
- A dawn return bat survey will be undertaken of the building on the morning the works are due to commence, by a licenced bat ecologist and suitably experienced assistants to cover all aspects of the buildings;
- If no bats are found to be roosting within the building, then works to demolish the building will commence immediately;
- Careful dismantling and removal of suitable roosting features (roof tiles, ridge tiles, wooden boarding) will be undertaken under the supervision of the licenced bat worker;
- Once each building has been deemed by the licenced ecologist to be unsuitable for roosting bats, works to demolish will proceed; and
- In the event that a bat(s) is discovered, all works will stop immediately, and the licenced bat worker will be contacted to determine the most appropriate way forward. It may be necessary to stop works until a licence has been sought from Natural England.

A precautionary approach will also be undertaken in relation to felling of any trees identified as having potential to support roosting bats, to include an aerial inspection of suitable features by a licenced bat ecologist, or pre-dawn survey where works are undertaken during the active season. In the event that a bat(s) is discovered, all works will stop immediately, and the licenced bat worker will be contacted to determine the most appropriate way forward. It may be necessary to stop works until a licence has been sought from Natural England.

#### During Operation

In order to prevent any impacts to more light tolerant species of bat, the lighting strategy will be designed in consultation with an ecologist and should avoid increasing existing light levels. The detailed lighting plan on-Site should be functional and directional and in line with current guidance (BCT and ILP, 2018). Habitat





retained, enhanced or planted for foraging and/or commuting bats will need to be considered within a suitable lighting plan in order to be used by bats. Where designing with bats in mind:

- Light emitting diodes (LED) should be used, as these typically feature no UV component and as a result are less attractive to invertebrates and less disturbing to bats;
- Only luminaires with 0 % upward light ratio should be used and fitted on the horizontal to avoid excessive up-lighting, back lighting and light spill onto boundary hedgerows and trees;
- A warm white spectrum (ideally under 2700 Kelvin) should be used in order to reduce blue light component, therefore reducing the number of invertebrates attracted to the lights;
- The use of specialist bollard or low-level downward directional luminaires to retain darkness above can be considered, although this has certain drawbacks and should only be used as directed by a lighting professional;
- Column heights should be carefully considered to minimise light spill;
- Any external security lighting should be set on motion-sensors and short (e.g., 1 minute) timers, where possible;
- Luminaires should feature peak wavelengths higher than 550nm to avoid the component of light most disturbing to bats;
- As a last resort, accessories such as baffles, hoods or louvres can be used to reduce light spill and direct it only to where it is needed.

#### **Assessment of Residual Effects**

Subsequent to the application of avoidance and mitigation, the residual effects are considered to be neutral and not significant.

#### 5.3 Cumulative Effects

Given the size, nature and location of the Proposed Development and the non-significant residual effects from the Proposed Development, no other schemes have been identified for which the Site may contribute to an in-combination cumulative effect on ecologically important features within the ZOI of the Site.

#### 5.4 Enhancement

The revised National Planning Policy Framework (NPPF), sets out, amongst other points, how "Planning policies and decisions should contribute to and enhance the natural and local environment by:

'Minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressure'.

Soft landscaping as part of the proposed development will increase the biodiversity value of the Site. Biodiversity Net Gain calculations for the Site indicate that a gain in biodiversity of 19.67 % can be achieved for area units and a gain of 244.41% for linear units. An appropriate landscape management and monitoring plan will be followed to promote the long-term biodiversity value of the retained and proposed habitats.





### 6.0 Conclusions

The habitats present on Site are widespread on both a local and national scale, with none of the habitats being considered rare. However, the species-rich hedgerow on Site qualifies as a Habitat of Principal Importance for nature conservation and provide a potential wildlife corridor. The trees at the Site, despite being managed to mitigate the risk of bird strike associated with the airport, also offer more valuable habitat and connectivity across the Site. The species-rich hedgerow is to be retained and protected during construction, and many of the boundary trees and those along the existing access road are also to be retained and protected.

The aim of the landscaping scheme is to maximise biodiversity opportunities whilst being appropriate to the use and location of the Site, in particular its proximity to London Oxford Airport. As, such it will be possible to achieve a gain in biodiversity of 19.67% for area units and a gain of 244.41% for linear units.

Appropriate mitigation is required during Site clearance in relation to the potential for roosting bats and nesting birds, and a sensitive lighting plan is required to avoid increased light levels post-development.

An appropriate landscape management and monitoring plan will be followed to promote the long-term biodiversity value of the retained and proposed habitats.

Whilst there is likely to be a temporal delay in achieving the biodiversity objectives for the Site (i.e., whilst new habitats become established), it is anticipated that in the long term there will be no significant residual effects on habitats or protected species resulting from the Proposed Development.





### 7.0 Disclaimer

The recommendations contained in this report represent Delta-Simons' professional opinions, based upon the information referred to in Section 1.0 of this report, exercising the duty of care required of an experienced Ecology Consultant. Delta-Simons does not warrant or guarantee that the Site is free of bats or other protected species.

The behaviour of animals can be unpredictable and may not conform to characteristics recorded in current scientific literature. This report, therefore, cannot predict with absolute certainty that animal species will or will not occur in apparently suitable locations or habitats or that they will not occur in locations or habitats that appear unsuitable.

No part of the survey included an assessment of the materials and conditions of any buildings. No part of the survey included an asbestos assessment, nor did it represent an appraisal of other deleterious materials or hazardous substances.

This report was prepared by Delta-Simons for the sole and exclusive use of the Client and for the specific purpose for which Delta-Simons was instructed as defined in Section 1.0 of this report. Nothing contained in this report shall be construed to give any rights or benefits to anyone other than the Client and Delta-Simons, and all duties and responsibilities undertaken are for the sole and exclusive benefit of the Client and not for the benefit of any other party. In particular, Delta-Simons does not intend, without its written consent, for this report to be disseminated to anyone other than the Client or to be used or relied upon by anyone other than the Client. Use of the report by any other person is unauthorised and such use is at the sole risk of the user. Anyone using or relying upon this report, other than the Client, agrees by virtue of its use to indemnify and hold harmless Delta-Simons from and against all claims, losses and damages (of whatsoever nature and howsoever or whensoever arising), arising out of or resulting from the performance of the work by the Consultant.

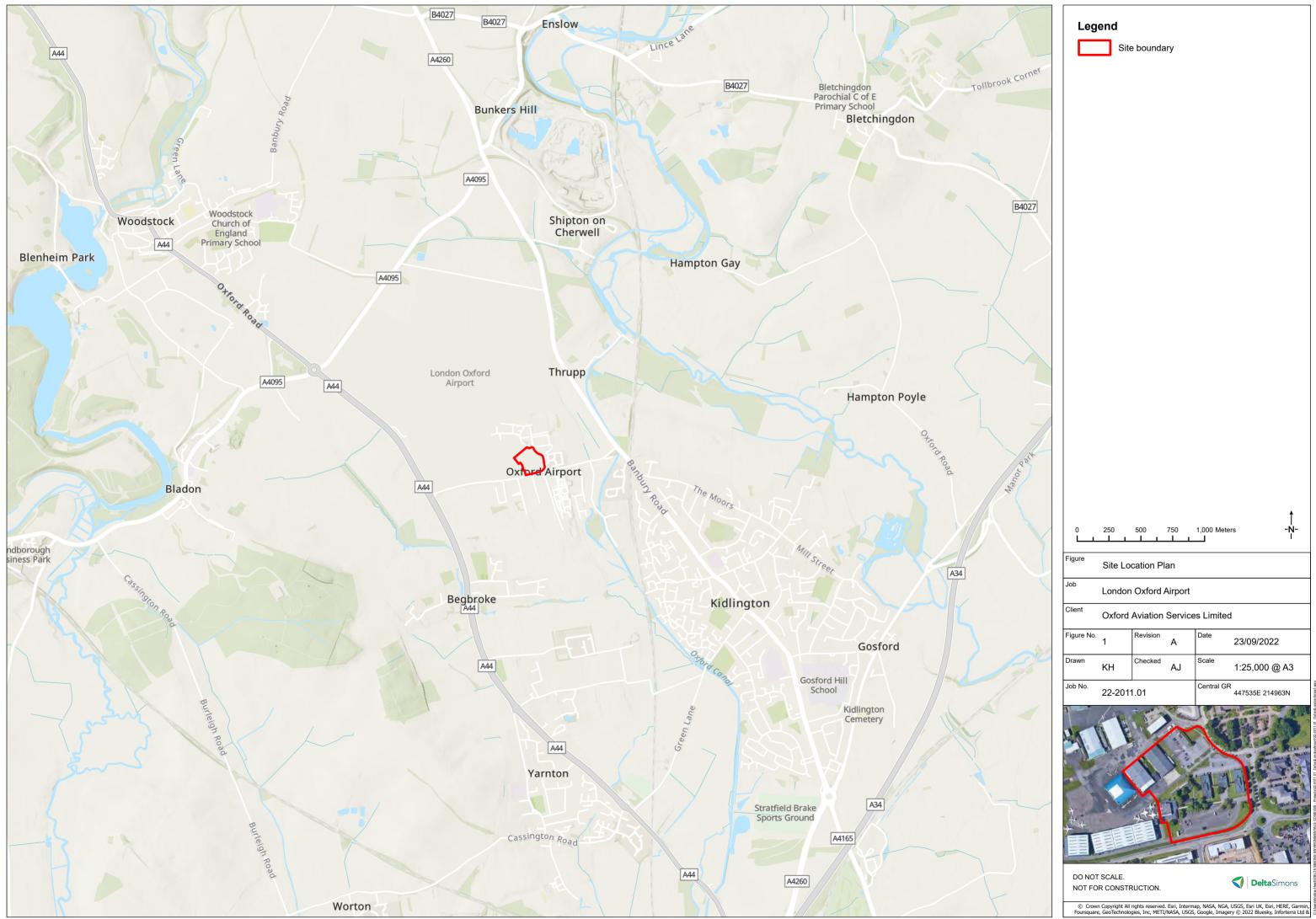




### Figure 1 - Site Location Plan



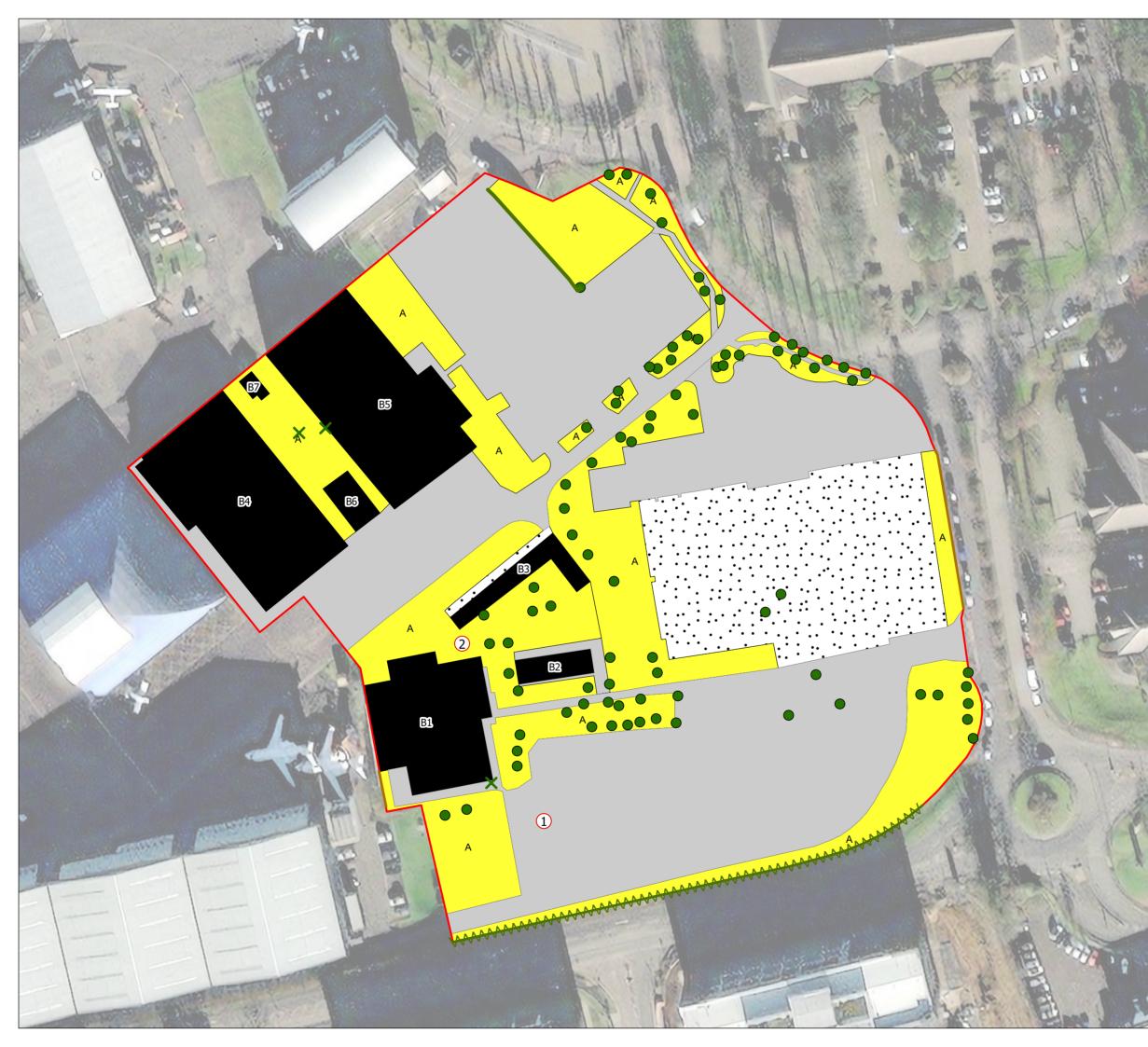


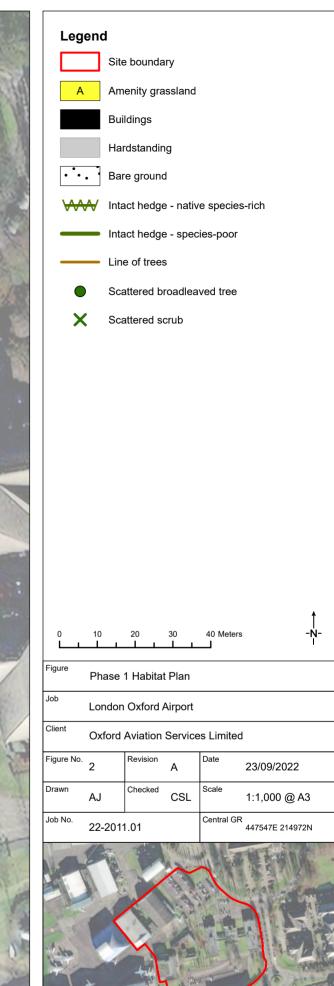


## Figure 2 - Phase 1 Habitat Plan









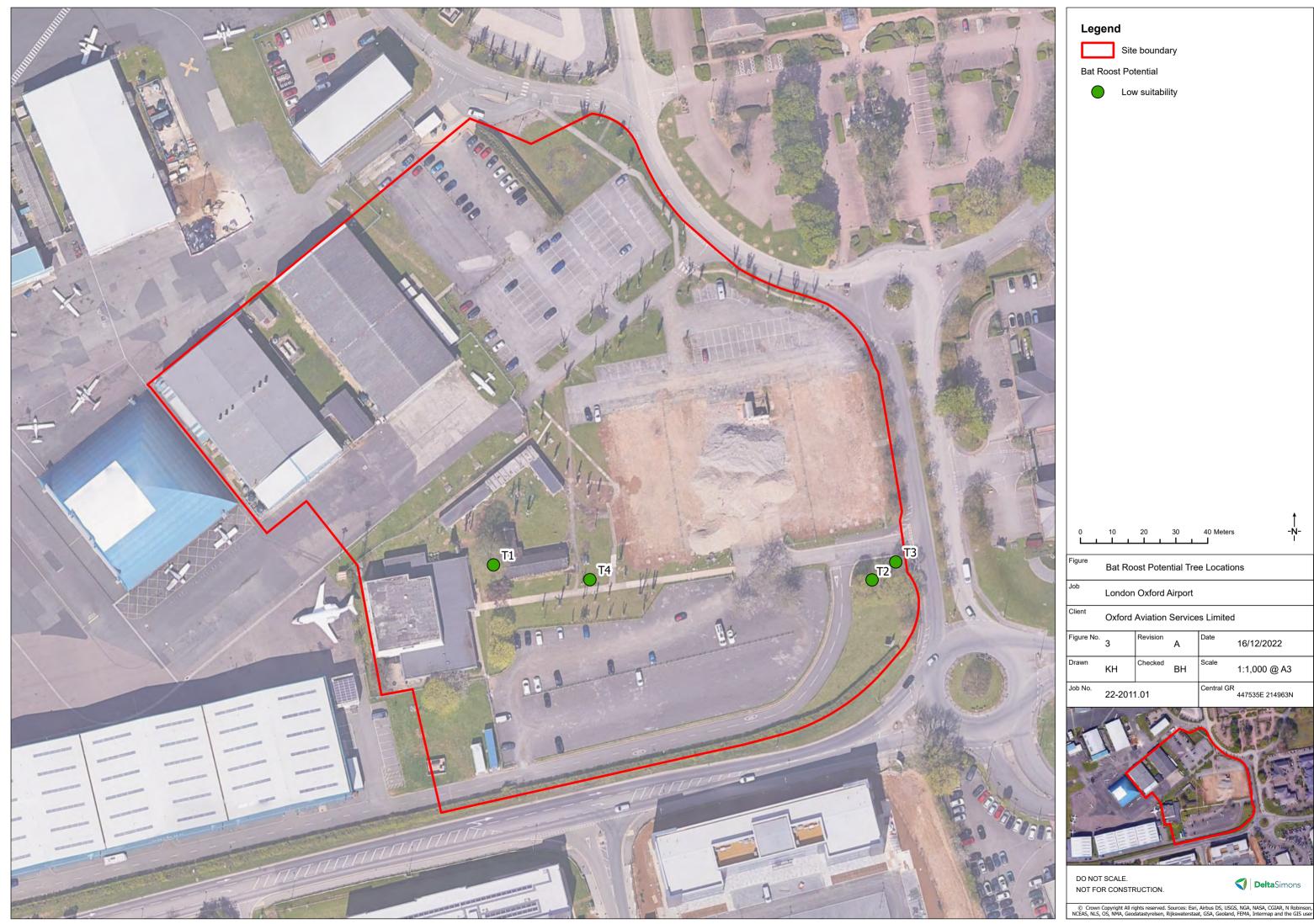
DO NOT SCALE. NOT FOR CONSTRUCTION.



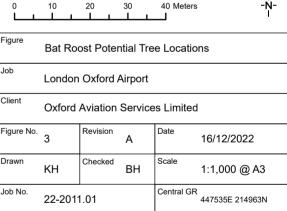
### Figure 3 - Bat Roost Potential Tree Locations







Legend	
	Site bound
Bat Roost Potential	
	Low suitab



## Drawing 1 - Proposed Development Plan







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**Appendix A - References** 





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Appendix B - Assessment of Structures, Trees and Habitats for Bats





# Assessment of Structures, Trees and Habitats for Bats

Cuitak liter	Description		
Suitability	Roosting	Commuting and Foraging	
Negligible	An inspected structure or tree which is considered to have no features of importance for roosting bats. No further constraints apply to the method or timing of proposed works.	Negligible habitat features on-Site to support commuting or foraging bats.	
Low	A structure with at least one or more features suitable to support opportunistic individual bats. However, inadequate space, shelter, protection and conditions, and the low suitability of surrounding habitats means that it is unlikely to be used as a maternity or hibernation roost site. A tree of adequate age and stature to support potential roosting features, however, either no features, or only features of limited potential recorded from the ground.	Habitat with potential to support low numbers of commuting bats due to its quality and connectivity. For example, a gappy hedgerow or unvegetated stream that is isolated from the surrounding landscape. Alternatively, suitable but isolated habitats suitable to support low numbers of foraging bats such as a lone tree or a patch of scrub.	
Moderate	A structure or tree with one or more potential roost sites that are of adequate size, shelter and protection, with suitable conditions and surrounding habitat to support a bat roost not of high conservation status (with respect to roost type not individual species conservation status).	Linear habitat continuity connecting to the wider landscape offering potential to support commuting bats, such as rows of trees and scrub or linked back gardens. Habitat such as trees, scrub, grassland or a waterbody with connectivity to the wider landscape offering foraging opportunities for bats.	
High	A structure or tree with one or more potential roost sites that are suitable for use by large numbers of bats on a regular basis and for long periods of time due to their size, shelter, protection, conditions and the surrounding habitat.	Continuous high-quality habitat with strong connectivity to the wider landscape that is likely to be used by commuting bats on a regular basis, such as flowing waterbodies, hedgerows, rows of trees and woodland edges. High quality habitat with strong connectivity to the wider landscape that is likely to be regularly used by foraging bats, such as broadleaved woodland, tree-lined watercourses and grazed parkland. Site is close to, and connected to, known roost sites.	

Guidance on Assessing the Potential Suitability of Development Sites to Support Bats (adapted from Collins, J. (ed)).





**Appendix C - Ecological Impact Assessment Methodology** 





# **Ecological Impact Assessment Methodology**

The methodology for the EcIA follows the principles set out within the Guidelines for Ecological Impact Assessment (EcIA) in the UK and Ireland; Terrestrial, Freshwater, Coastal and Marine updated by the Chartered Institute of Ecology and Environmental Management (CIEEM) in 2019 and comprises a staged approach to assessing the potential impacts resulting from the proposed development on the ecological features within the ZOI.

The EcIA has involved the following stages:

- Determination of baseline conditions;
- Identification of important ecological features;
- Identification of potential impacts and effects;
- Identifying likely significant effects;
- Designing appropriate avoidance and/or mitigation for impacts and effects;
- Assessment of residual effect significance;
- Assessment of cumulative impacts and effects; and
- Identification of compensation and enhancement measures.

#### **Baseline Conditions**

Baseline conditions have been established following the methodology outlined in the above sections.

#### **Important Ecological Features**

Important ecological features have been identified based on existing statutory, policy and conservation objectives. In accordance with the CIEEM Guidelines the value or potential value of an ecological resource has been determined within a defined geographical context in line with the table below.

#### **Potential Impacts and Effects**

The potential impacts on any important ecological features are identified during construction and operation, and prior to any mitigation, based on available baseline data, an assessment of design proposals and construction methods, and available information on the existing conservation status of the features in question.

Impacts are then characterised in terms of the following attributes:

- Positive or negative i.e., a change that improves or reduces the quality of the environment;
- Magnitude i.e., the size of an impact in quantitative terms where possible;
- Extent i.e., the area over which an impact occurs;
- Duration i.e., the time for which an impact is expected to last;
- Reversibility i.e., is the impact permanent or temporary; and
- Timing and frequency e.g., related to breeding seasons.

The likely effects of potential impacts on important ecological features largely depend upon their sensitivity, whilst the level of certainty that an impact will occur as predicted is based on professional judgment. Only the impacts likely to result in significant effects have been described in detail within the report. Impacts that are either unlikely to occur, or if they did occur are unlikely to be significant have been scoped out and justification for scoping out provided.





Geographic Scale		
International		
	A species presents in internationally important numbers (>1% of international population).	
	Notable species which is part of the cited interest of an SPA or SAC and which regularly occurs in internationally or nationally important numbers.	
National	Habitats meeting the criteria for a Site of Special Scientific Interest, Marine Conservation Zone (MCZ), or National Nature Reserve (NNR).	
	A species present in nationally important numbers (>1% of UK population).	
	A species which is part of the cited interest of a SSSI and which regularly occurs in internationally or nationally important numbers.	
	Rare breeding species (e.g. birds with <300 UK breeding pairs).	
Regional	A local site with important regional habitats or significant populations of Species of Principal Importance (SPIs) under the NERC act.	
	Species present in regionally important numbers (>1% of regional population).	
	Species listed as priority species, which are not covered above, and which regularly occur in regionally important numbers.	
	Sustainable populations of a species that is rare or scarce within a region.	
	Species on the Birds of Conservation Concern (BoCC) Red or Amber List and which regularly occur in regionally important numbers.	
County	A local site with a habitat that is characteristic of the county or rare on a county scale, or with significant populations of locally important species.	
	Species present in county important numbers (>1% of county population).	
	Species listed as priority species, which are not covered above, and which regularly occur in county important numbers.	
	Sustainable population of a species that is rare or scarce within a county.	
	A site designated for its county important assemblage of species.	
	Species on the BoCC Red or Amber List and which regularly occur in county important numbers.	
Local	A site which has wildlife corridors likely to be essential to allow viable movement of species or improve the biodiversity of the area.	
	Species listed as priority species, which are not covered above, and are rare in the locality.	
	Species present in numbers just under county importance (<1% of county population).	
	Sustainable population of a species that is rare or scarce within the locality.	
	A site whose designation is just under for inclusion for its county important assemblage of a particular species on site.	
	Other species on the BoCC Red or Amber List and which are considered to regularly occur in locally important numbers.	





### Likely Significant Effects

In accordance with the CIEEM guidelines, an ecologically significant effect is 'an effect that either supports or undermines the biodiversity conservation objectives for 'important ecological features' or for biodiversity in general'.

Using an approach to valuing impacts that involves professional judgement and reference to available conservation objectives, neutral and minor effects are considered to be not significant, while moderate and major effects are assessed to be significant. The table below provides a comparison of the terms used.

Effect Significance	Type of Effect	Equivalent CIEEM Assessment
Significant	Major beneficial	Significant positive impact on biodiversity conservation objectives at given geographical context
	Moderate beneficial	Positive impact on biodiversity conservation objectives at given geographical context
Non-significant	Minor beneficial	Limited positive impact on biodiversity conservation objectives at given geographical context
Neutral	Negligible	No significant impact on biodiversity conservation objectives at given geographical context
Non-significant	Minor adverse	Limited adverse impact on biodiversity conservation objectives at given geographical context
Significant	Moderate adverse	Adverse impact on biodiversity conservation objectives at given geographical context
	Major adverse	Significant adverse impact on biodiversity conservation objectives at given geographical context

The evaluation of significant effects has been based on the best available scientific evidence. Where sufficient evidence is not available, the precautionary principle has been applied. Therefore, where it is not possible to robustly justify a conclusion of no significant effect, a significant effect has been assumed. Any uncertainty has been acknowledged within the report.

#### Avoidance and/or Mitigation

Negative impacts have been avoided and/or mitigated where possible, in line with the mitigation hierarchy as presented within the CIEEM Guidelines.

#### **Assessment of Residual Effect Significance**

Once the impacts of the proposed development have been assessed, and all attempts to avoid and mitigate ecological impacts have been finalised, an assessment of the residual impacts is undertaken to determine the significance of their effects upon ecological features.

#### **Cumulative Impact Assessment**

The following types of future development within the same zone of influence have been considered as part of the cumulative impact assessment in relation to each important ecological feature:

• Proposals for which consent has been applied which are awaiting determination and are visible on the local planning portal;





- Projects which have been granted planning consent, but which have not yet been started or which have been started but are not yet completed (i.e. under construction); and
- Proposals which have been refused permission but which are subject to appeal and the appeal is undetermined.

#### **Compensation and Enhancement**

Compensation measures were taken to offset residual effects resulting in the loss of, or permanent damage to ecological features despite mitigation, where required. Compensation has only been considered as a last resort, in line with the mitigation hierarchy.

Enhancement measures have been agreed over and above any mitigation or compensation measures, in order to provide a biodiversity net gain.





**Appendix D - Target Notes** 





# **Target Notes**

## Target Note 1

A temporary Site compound for Civils Contracting Ltd

### Target Note 2

A small, wooden shed in the centre of the Site.



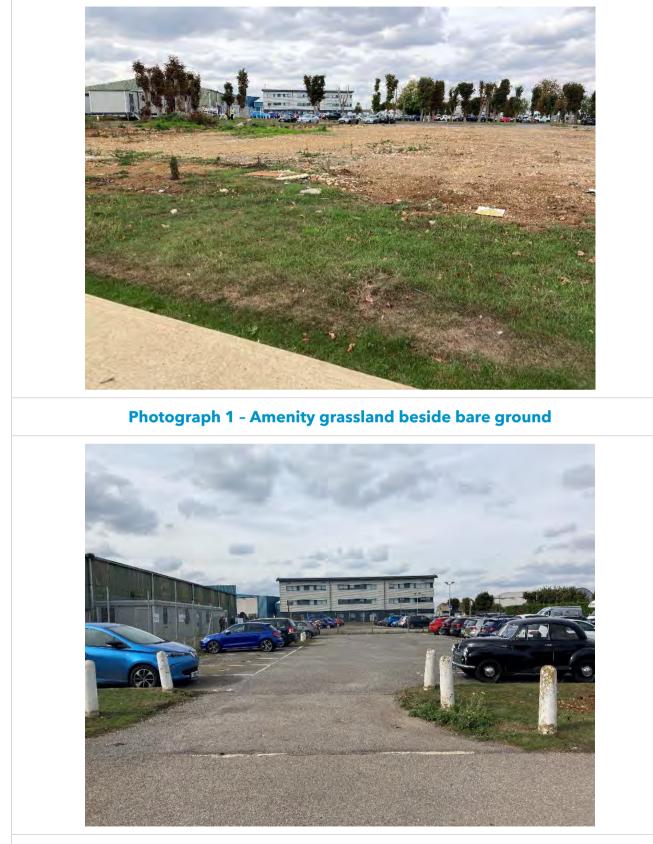


# **Appendix E - Site Photographs**





# Site Photographs



Photograph 2 - Hardstanding







Photograph 4 - Intact species-rich hedgerow







Photograph 6 - Tree line



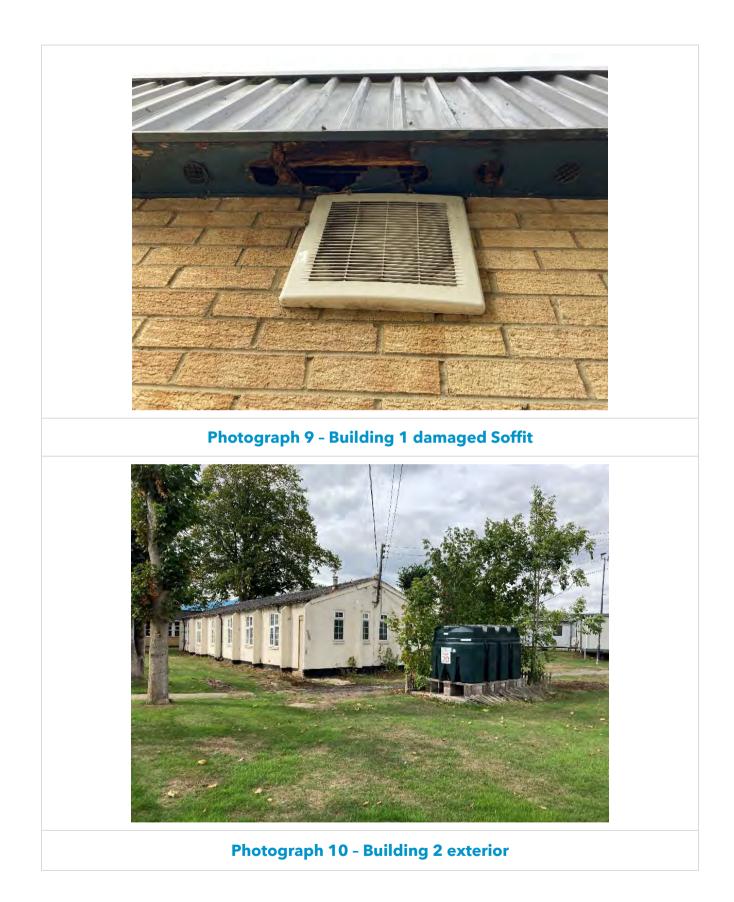




Photograph 8 - Building 1 exterior

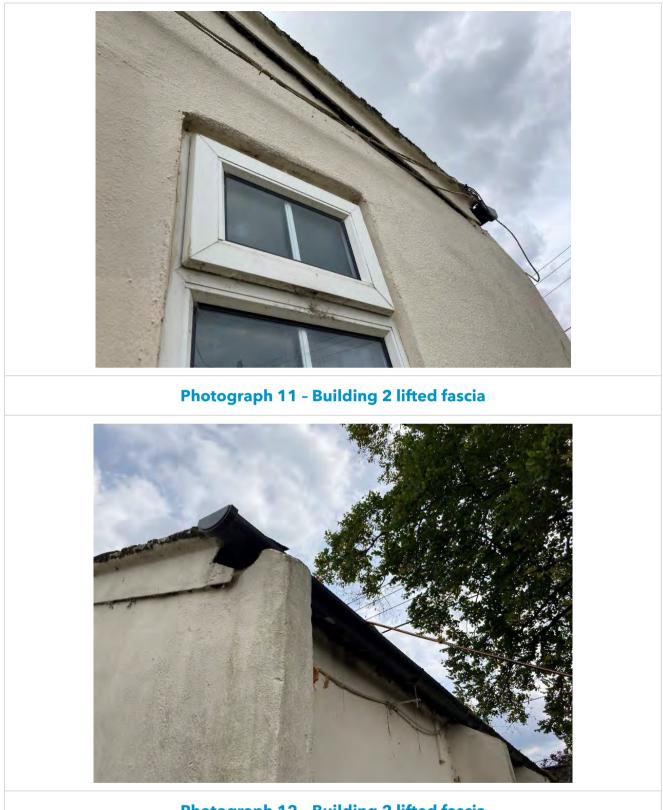












Photograph 12 - Building 2 lifted fascia















