



ECOLOGYSOLUTIONS

Part of the ES Group

PLOT 4200,
ARC OXFORD

Ecological Assessment

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1. INTRODUCTION

1.1. Background & Proposals

- 1.1.1. Ecology Solutions was commissioned in September 2023 by ARC to undertake an ecological assessment of Plot 4200, ARC Oxford (see Plan ECO1), hereafter, referred to as the site.
- 1.1.2. The site is to be subject to a planning application for the demolition of seven existing buildings, to be replaced by a single larger building, together with associated car parking and landscaping.

1.2. Site Characteristics

- 1.2.1. The site is located at the western edge of ARC Oxford. The site is bounded by residential buildings to the west, with other development plots and infrastructure within ARC Oxford located to the east, south and north.
- 1.2.2. The site comprises the existing seven office buildings and associated access and car parking. There are, additionally, areas of amenity planting, modified grassland, and a number of trees present.

1.3. Ecological Assessment

- 1.3.1. This document assesses the ecological interest of the site. The importance of the habitats within the site are evaluated with due consideration given to the guidance published by the Chartered Institute of Ecology and Environmental Management (CIEEM)¹.
- 1.3.2. Where necessary, mitigation measures are recommended so as to safeguard any significant existing ecological interest within the site and, where appropriate, potential enhancement measures are put forward and reference made to both priority species and priority habitats.

¹ CIEEM (2018). *Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine*. Version 1.1 – Updated September 2019. Chartered Institute of Ecology and Environmental Management, Winchester.

2. SURVEY METHODOLOGY

2.1. The methodology utilised for the survey work can be split into three areas, namely desk study, habitat survey and faunal survey. These are discussed in more detail below.

2.2. Desk Study

2.2.1. In order to compile background information on the site and the surrounding area, Ecology Solutions contacted Thames Valley Environmental Records Centre (TVERC), with records provided within a 2km radius of the site.

2.2.2. Further information on designated sites from a wider search area was obtained from the online Multi-Agency Geographic Information for the Countryside (MAGIC)² database, which uses information held by Natural England and other organisations. This information is reproduced at Appendix 1 and where appropriate on Plan ECO1.

2.3. Habitat Survey

2.3.1. A habitat survey was carried out by Ecology Solutions in June 2023, and again in October 2023, in order to ascertain the general ecological value of the land contained within the boundaries of the site, and to identify the main habitats and associated plant species.

2.3.2. The site was surveyed based around extended Phase 1 Survey methodology³, as recommended by Natural England, and UK Habitat Classification (UKHab) whereby the habitat types present are identified and mapped, together with an assessment of the species composition of each habitat together with the condition of the habitat. This technique provides an inventory of the basic habitat types present and allows identification of areas of greater potential which require further survey. Any such areas identified can then be examined in more detail.

2.3.3. Using the above method, the site was classified into areas of similar botanical community types, with a representative species list compiled for each habitat identified.

2.3.4. The species present were each assigned a score corresponding with its percentage cover within the said habitat. The abundance scores are based on the Braun-Blanquet Scale: D=Dominant 76-100%, A=Abundant 51-75%, F=Frequent 26-50%, O=Occasional 6-25% and R=Rare >1-5%.

2.3.5. All the species that occur in each habitat would not necessarily be detectable during survey work carried out at any given time of the year, since different species are apparent in different seasons. Nonetheless, the surveys were undertaken within the optimal period for Phase 1 surveys and botanical surveys and, given the habitats present, it is considered an accurate and robust assessment has been completed.

² <http://www.magic.gov.uk>

³ Joint Nature Conservation Committee (2010). *Handbook for Phase 1 Habitat Survey – a Technique for Environmental Audit*. England Field Unit, Nature Conservancy Council, reprinted JNCC, Peterborough.

2.4. Faunal Survey

2.4.1. Obvious faunal activity, such as birds or mammals observed visually or by call during the course of the surveys, was recorded. Specific attention was paid to any potential use of the site by protected species, priority species, or other notable species.

2.4.2. In addition to general observations of faunal activity, specific surveys have been completed in respect of bats and Badgers *Meles meles*.

Bats

2.4.3. The site was surveyed to assess its potential to support bats in October 2023.

2.4.4. All trees within the site were assessed for their potential to support roosting bats. Features typically favoured by bats or evidence of past use by bats were searched for, including:

- Obvious holes, e.g. rot holes and old Woodpecker holes;
- Dark staining on the tree, below the hole;
- Tiny scratch marks around a hole from bat claws;
- Cavities, splits and or loose bark from broken or fallen branches, lightning strikes etc.; and
- Very dense covering of mature Ivy over trunk.

2.4.5. The main requirements for a winter / hibernation roost site are that it maintains a stable (cool) temperature and humidity. Sites commonly utilised by bats as winter roosts include cavities / holes in trees, underground sites, and parts of buildings. Whilst different species may show a preference for one of these types of roost site, none are solely dependent on a single type.

2.4.6. In addition, all buildings within the site were assessed by Ecology Solutions for their potential to support roosting bats during the surveys undertaken in October and November 2023. Buildings were categorised as having high, medium, low or negligible suitability for roosting bats in accordance with the Bat Conservation Trust's *Bat Surveys for Professional Ecologists: Good Practice Guidelines*. An internal survey of the loft void of all buildings except building 4420 due to lack of access, was completed to review the general construction and suitability for roosting bats; with a search also completed for any potential sign of roosting.

2.4.7. The survey work carried out by Ecology Solutions was undertaken using (where necessary) a ladder, torch, endoscope, mirrors and binoculars.

2.4.8. The probability of a building being used by bats as a roost site increases if it:

- is largely undisturbed;
- dates from pre-20th Century;
- has a large roof void with unobstructed flying spaces;
- has access points for bats (though not too draughty);
- has wooden cladding or hanging tiles; and / or
- is in a rural setting and close to woodland or water.

- 2.4.9. Conversely, the probability decreases if a building is of a modern or pre-fabricated design / construction, is in an urban setting, has small or cluttered roof voids, has few gaps at the eaves or is a heavily disturbed premises.
- 2.4.10. The site was also appraised for its likely value to any locally present foraging and dispersing bats.
- 2.4.11. Field surveys have been and shall be undertaken with regard to best practice guidelines issued by Natural England (2004⁴), the Joint Nature Conservation Committee (2004⁵) and the Bat Conservation Trust (2016⁶).

Badgers

- 2.4.12. The site was surveyed for Badgers in October 2023. The survey comprised two main elements: firstly, searching thoroughly for evidence of Badger setts. For any setts encountered each sett entrance would be noted and plotted, even if the entrance appeared disused. The following information would be recorded:
- i) The number and location of well used or very active entrances; these are clear of any debris or vegetation and are obviously in regular use and may, or may not, have been excavated recently.
 - ii) The number and location of inactive entrances; these are not in regular use and have debris such as leaves and twigs in the entrance or have plants growing in or around the edge of the entrance.
 - iii) The number of disused entrances; these have not been in use for some time, are partly or completely blocked and cannot be used without considerable clearance. If the entrance has been disused for some time all that may be visible is a depression in the ground where the hole used to be together with the remains of the spoil heap.
- 2.4.13. Secondly, evidence of Badger activity such as well-worn paths, run-throughs, snagged hair, footprints, latrines and foraging signs was recorded so as to build up a picture of the use of the site by Badgers.

⁴ Mitchell-Jones, A. J. (2004). *Bat Mitigation Guidelines*. English Nature, Peterborough.

⁵ Mitchell-Jones, A.J. & McLeish, A.P. (Eds.) (2004). *Bat Workers' Manual*. 3rd edition. Joint Nature Conservation Committee, Peterborough.

⁶ Collins, J. (2016). *Bat Surveys for Professional Ecologists: Good Practice Guidelines*. 3rd Edition. The Bat Conservation Trust, London.

3. ECOLOGICAL FEATURES

3.1. A habitat survey was undertaken across the site by Ecology Solutions in June and October 2023.

3.2. The following main habitat / vegetation types were identified within the site during the survey undertaken:

- Amenity planting;
- Modified grassland;
- Hardstanding; and
- Buildings

3.3. The locations of these habitats are shown on Plan ECO2, and described individually below.

3.4. Amenity Planting

3.4.1. Area of amenity planting are present throughout the site; these areas are adjacent to buildings and at the site boundaries.

3.4.2. Species present include Rose *Rosa* sp., Box *Buxus sempervirens*, Firethorn *Pyracantha* sp., Cotoneaster sp., Euonymus sp., Dogwood *Cornus* sp., and Jerusalem Sage *Phlomis fruticosa* with the areas seen to be subject to regular management (see Photograph 1).

3.4.3. The amenity planting across the site also includes young to semi-mature amenity trees that are present within dedicated planting beds around the site (see Photograph 1). Species present include Cherry *Prunus* sp., Lime *Tilia* sp., Corsican Pine *Pinus nigra*, and Whitebeam *Sorbus aria*.

3.5. Modified Grassland

3.5.1. Modified grassland is present in the east of the site, largely as verges associated with John Smith Drive and well maintained (see Photograph 2).

3.5.2. Species present include Perennial Rye Grass *Lolium perenne* (A), False Oat-grass *Arrhenatherum elatius* (F), Cocks-foot *Dactylis glomerata* (O), Ground Ivy *Glechoma heder* (O), Yorkshire Fog *Holcus lanatus* (O), Fescue *Festuca* sp. (O), Daisy (R), Common Mouse-ear *Cerastium fontanum* (O), Common Bent *Agrostis capillaris* (O), Creeping Buttercup *Ranunculus repens* (O), Ribwort Plantain *Plantago lanceolata* (O), and White Clover *Trifolium repens* (F).

3.6. Hardstanding

3.6.1. Hardstanding surfaces are present in the form of roads, car parking and pavements in various states of repair; no colonising species were recorded (see Photograph 3).

3.7. Buildings

3.7.1. Seven separate buildings are present across the site. The buildings are of a very similar, and in most cases identical, design and structure. The buildings are two-story office buildings of a brick construction supporting

pitched concrete tile and ridge tile roofs. The buildings support plastic soffits and are all in a good state of repair (see Photographs 4 and 5). The loft void accessed and surveyed was relatively cluttered but was noted to be clean and did not consider any sign of wildlife, including roosting bats (see Photograph 6).

3.8. Background Records

- 3.8.1. The desk study returned 15 records of higher plant species that are listed as species of principal importance under Section 41 of the Natural Environment and Rural Communities Act (NERC) Act 2006, listed in Schedule 1 of the Wildlife and Countryside Act 1981 (as amended) or listed as European Protected Species by Annex IV of European Habitats Directive. These include Bluebell *Hyacinthoides non-scripta*, Greater Water-parsnip *Sium latifolium*, Flat Sedge *Blysmus compressus*, Cornflower *Centaurea cyanus*, Water Germander *Teucrium scordium*, White Helleborine *Cephalanthera damasonium*, Downy Woundwort *Stachys germanica* and Butcher's Broom *Ruscus aculeatus*.
- 3.8.2. The closest of these records is of White Helleborine and relates to a location approximately 0.4km northeast of the site.
- 3.8.3. Forty-seven species are listed as being rare in Oxfordshire (defined as any species found in 1-3 Oxfordshire tetrads). These include Broad-leaved Cottongrass *Eriophorum latifolium*, Dioecious Sedge *Carex dioica*, Few-flowered Spike-rush *Eleocharis quinqueflora*, Flixweed *Descurainia sophia*, White Ramping-fumitory *Fumaria capreolata*, Elecampane *Inula helenium*, Parsley Water-dropwort *Oenanthe lachenalii*, Common Butterwort *Pinguicula vulgaris*, Grass-of-Parnassus *Parnassia palustris*, Marsh Lousewort *Pedicularis palustris*, Flat Sedge, Frogbit *Hydrocharis morsus-ranae*, Downy Woundwort, Annual Beard-grass *Polypogon monspeliensis* and Greater Water-Parsnip.
- 3.8.4. The closest of these records is of Annual Beard-grass, relating to a location 0.6km northwest of the site and dating from 2020.
- 3.8.5. Fifty-five species are listed as scarce in Oxfordshire (any species found in 4-10 Oxfordshire tetrads). These species include Annual Pearlwort *Sagina apetala*, Alder Buckthorn *Frangula alnus*, Alexanders *Smyrniololus atrum*, Black Bog-rush *Schoenus nigricans*, Bog Pimpernel *Anagallis tenella*, Bog Bean *Menyanthes trifoliata*, Bottle Sedge *Carex rostrata*, Distant Sedge *Carex distans*, Great Wood-rush *Luzula sylvatica*, Greater Spearwort *Ranunculus lingua*, Ivy Broomrape *Orobanchae hederaceae*, Knotted Clover *Trifolium striatum*, Long-stalked Yellow-sedge *Carex viridula*, Narrow-leaved Meadow-grass *Poa angustifolia*, Purple Moor-grass *Molinia caerulea*, Tawny Sedge *Carex hostiana*, Corn Chamomile *Anthemis arvensis*, Flea Sedge *Carex pulicaris*, Marsh Helleborine *Epipactis palustris*, Marsh Pennywort *Hydrocotyle vulgaris*, and Common Cottongrass *Eriophorum angustifolium*.
- 3.8.6. The closest of these is the record for Narrow-leaved Meadow-grass, relating to a location approximately 0.5km south of the site, dated from 2013.
- 3.8.7. There are a further 79 records of species that are listed under the UK Red List of Conservation Concern species, and/or are listed as nationally

scarce or rare. These species include Common Rock-rose *Helianthemum nummularium*, Common Valerian *Valeriana officinalis*, Corn Mint *Mentha arvensis*, Devil's-bit Scabious *Succisa pratensis*, Field Scabious *Knautia arvensis*, Harebell *Campanula rotundiflora*, Marsh Arrowgrass *Triglochin palustre*, Marsh Valerian *Valeriana dioica*, Quaking-grass *Briza media*, Ragged-robin *Silene flos-cuculi*, Spiny Restharrow *Ononis spinosa*, Tormentil *Potentilla erecta*, Wild Strawberry *Fragaria vesca*, Wood-sorrel *Oxalis acetosella*, Common Cudweed *Filago vulgaris*, Lesser Spearwort *Ranunculus flammula*, White Helleborine, Corn Marigold *Glebionis segetum*, Strawberry Clover *Trifolium fragiferum*, Jacob's-ladder *Polemonium caeruleum*, Water Germander, Chives *Allium schoenoprasum*, Fritillary *Fritillaria meleagris*, Sharp Rush *Juncus acutus*, Stinking Hellebore *Helleborus foetidus*, Wall Whitlowgrass *Draba muralis*, Wavy St John's-wort *Hypericum undulatum*, Woad *Isatis tinctoria*, and Galingale *Cyperus longus*.

- 3.8.8. The closest of these records is of Common Cudweed, relating to a location just outside the boundary of the site, and dating from 2021. The next closest record is of Wall Whitlowgrass, relating to a location 0.5km southeast of the site, and dating from 2021.

Invasive Species

- 3.8.9. The desk study returned 53 records for invasive plant species, including Butterfly Bush *Buddleja davidii*, Himalayan Balsam *Impatiens glandulifera*, Canadian Waterweed *Elodea canadensis*, Italian Alder *Alnus cordata*, Least Duckweed *Lemna minuta*, New Zealand Pygmyweed *Crassula helmsii*, Orange Balsam *Impatiens capensis*, Russian-vine *Fallopia baldschuanica*, Three-cornered Garlic *Allium triquetrum*, Water Fern *Azolla filiculoides*, and Winter Heliotrope *Petasites fragrans*.
- 3.8.10. The closest records are of Canadian Waterweed and Water Fern, both relating to the same location, approximately 0.04km northeast of the site boundary, dated from 2021. The most recent record is of Butterfly Bush, relating to a location approximately 1.7km northwest of the site, dating from 2022.

4. WILDLIFE USE OF THE SITE

4.1. General observations were made during the surveys of any faunal use of the site, with specific attention paid to the potential presence of protected species. In addition, specific surveys have been completed in respect of bats and Badger.

4.2. Bats

4.2.1. None of the trees within the site are considered to have developed potential roosting features. The buildings within the site all have negligible suitability for bats.

4.2.2. The site is considered to support low suitability for foraging and dispersal opportunities for bats. The site is subject to artificial lighting which could further detract from the identified but limited foraging resources.

Background Records

4.2.3. The desk study returned 73 records of bat species within the data search area dating from the past ten years. Records of nine different bat species were returned including Common Pipistrelle *Pipistrellus pipistrellus*, Soprano Pipistrelle *Pipistrellus pygmaeus*, Brown Long-eared Bat *Plecotus auritus*, Leisler's Bat *Nyctalus leisleri*, Noctule *Nyctalus noctula*, and Myotis *Myotis* sp., as well as a few additional records of Pipistrelle *Pipistrellus* sp. and *Nyctalus* sp., and single records of Serotine *Eptesicus serotinus* and Nathusius' Pipistrelle *Pipistrellus nathusii*.

4.2.4. The closest bat records to the site include single records of *Pipistrellus* sp. and Common Pipistrelle, which both relate to a location approximately 0.7km north of the site and date from 2013 and 2020 respectively.

4.2.5. Nineteen records were returned for Common Pipistrelle. The closest record, as above, relates to a location approximately 0.7km north of the site, dating from 2020. Two further records for Common Pipistrelle date from 2020, relating to a different location 0.7km to the north of the site.

4.2.6. Fifteen records were returned for Soprano Pipistrelle. The closest record relates to a location approximately 0.8km north of the site and dates from 2016, whilst the most recent record dates from 2021 and relates to a location approximately 1.7km northwest of the site.

4.2.7. A single record of a Nathusius' Pipistrelle was returned, which relates to a location approximately 1.7km north of the site and dates from 2014.

4.2.8. Six records were returned for Brown Long-eared Bat. The closest and most recent record relates to a location approximately 1.4km west of the site and dates from 2020.

4.2.9. Fourteen records were returned for Noctule. The closest record relates to a location approximately 0.7km north of the site and dates from 2020, whilst the two most recent records relate to a location approximately 1.7km northwest of the site and date from 2021.

4.2.10. Two records were returned for Leisler's Bat. The closest record relates to a location approximately 1km northeast of the site and dates from 2013,

whilst the most recent record relates to a location approximately 1.6km northeast of the site and dates from 2016.

- 4.2.11. A single record of a Serotine was returned, which relates to a location approximately 1.6km east of the site and dates from 2016.
- 4.2.12. Three records were returned for *Myotis* sp., the closest of which relates to a location approximately 0.8km north of the site and dates from 2016. The two other records relate to the same location approximately 1.7km southwest of the site, and date from 2019.
- 4.2.13. In addition, a review of online resources showed one European Protected Species (EPS) Licence was granted to allow the damage / destruction of a bat roosting site within the data search area in the last ten years. This licence was granted in 2015 for a Common Pipistrelle roost at a site located approximately 1.7km northeast of the site.

4.3. **Badgers**

- 4.3.1. The site has low suitability for Badger due to the extent of hardstanding and limited grassland and shrub habitats for foraging. There are some but limited suitable foraging opportunities for Badger in the wider site of Oxford Business Park.
- 4.3.2. No field signs that could be directly attributed to Badger were recorded during the survey work. An excavated burrow found on site was attributed to human activity or to Fox *Vulpes vulpes* and, additionally, was disused. Mammal footprints found near to this feature were attributed to Fox or Domestic Cat *Felis catus*.

Background Records

- 4.3.3. Twenty records of Badgers were returned by the desk study from between 2013 and 2022. The closest record relates to a location approximately 0.8km north of the site of the site at its closest point, whilst the most recent record dates from 2022 and related to a location approximately 2km northwest of the site.

4.4. **Other Mammals**

- 4.4.1. The site provides some limited suitable opportunities for a number of small mammals of no conservation importance or concern as evidenced by mammal footprints attributed to Fox or to Domestic Cat; whilst also providing some suitability for Hedgehogs *Erinaceus europaeus* albeit with no evidence of this species recorded.

Background Records

- 4.4.2. Ninety-five records of Hedgehog were returned. The closest of these relates to a location approximately 0.1km south of the site and dating from 2014. The most recent record relates to a location approximately 1.1km west of the site and dates from 2022.
- 4.4.3. A single record of Eurasian Otter *Lutra lutra* was returned, which relates to a location approximately 1.1km northwest of the site and dates from 2022.

- 4.4.4. A single record of Water Vole *Arvicola amphibius* was returned, which relates to a location approximately 1.8km southeast of the site, dating from 2014.

4.5. Birds

- 4.5.1. Several casual observations of bird were recorded during the course of the habitat survey; these included Wood Pigeon *Columba palumbus*, Robin *Erithacus rubecula*, Grey Wagtail *Motacilla cinerea*, Magpie *Pica pica*, and Blackbird *Turdus merula*.
- 4.5.2. The habitats within the site provide some opportunities for foraging and nesting birds, with the trees and some shrubs providing most suitability.

Background Records

- 4.5.3. A total of 369 records were returned for 32 protected species of bird. The species included in the desk study below are covered by one or a number of the following protections:

- Wildlife and Countryside Act 1981 Schedule 1 Part 1 (WCA1i);
- Schedule 41 of the Natural Environment and Rural Communities (NERC) Act 2006;
- Bird Population Status Amber list; and
- Bird Population Red list.

- 4.5.4. The desk study returned a total of nine records of protected bird species listed under Part 1 of Schedule 1 of the Wildlife and Countryside Act 1981 (as amended). Four different protected bird species were recorded within the data search area, including Black Redstart *Phoenicurus ochruros*, Red Kite *Milvus milvus*, Redwing *Turdus iliacus* and Fieldfare *Turdus pilaris*.

- 4.5.5. The closest protected bird record is for the single Black Redstart record, relating to a location approximately 0.5km southwest of the site and dating from 2013. Four records, including the single record for Fieldfare, as well as Red Kite and Redwing, relate to a location approximately 2.5km northeast of the site and date from 2018. The most recent record is for Red Kite, relating to a location approximately 1.7km northwest of the site, dating from 2020.

- 4.5.6. In addition, the desk study returned a total of 268 records of birds listed as species of principal conservation concern on the Bird Population Status Red List. These included records of eleven bird species, including Common Redpoll *Acanthis flammea*, Fieldfare, Greenfinch *Carduelis chloris*, Herring Gull *Larus argentatus*, House Martin *Delichon urbicum*, House Sparrow *Passer domesticus*, Marsh Tit *Poecile palustris*, Mistle Thrush *Turdus viscivorus*, Skylark *Alauda arvensis*, Starling *Sturnus vulgaris*, and Swift *Apus apus*.

- 4.5.7. Of these notable bird records, the closest are of Swift, and the closest of these relates to a location approximately 0.1km south of the site and dates from 2022. The closest record other than those for Swift is of Greenfinch, relating to a location approximately 1.6km north of the site and dating from 2016. Single records of Common Redpoll and House Martin relating to the same location, approximately 1.7km northwest of the site, are dated

from 2020. A single record for Mistle Thrush relates to a location approximately 1.7km north of the site and dates to 2016. The closest records for Herring Gull, House Sparrow and Starling relate to the same location, approximately 1.3km southeast of the site and dated from 2017.

- 4.5.8. There are 95 records of birds listed as species on the Bird Population Status Amber List. These include Black Redstart, Black-headed Gull *Chroicocephalus ridibundus*, Bullfinch *Pyrrhula pyrrhula*, Dunnock *Prunella modularis*, Grey Wagtail, Kestrel *Falco tinnunculus*, Lesser Black-backed Gull *Larus fuscus*, Mallard *Anas platyrhynchos*, Common Moorhen *Gallinula chloropus*, Redstart *Phoenicurus phoenicurus*, Redwing, Rook *Corvus frugilegus*, Song Thrush *Turdus philomelos*, Sparrowhawk *Accipiter nisus*, Stock Dove *Columba oenas*, Tawny Owl *Strix aluco*, Whitethroat *Sylvia communis*, Wood Pigeon, and Wren *Troglodytes troglodytes*.
- 4.5.9. The closest of these records is of Black Redstart, relating to a location approximately 0.5km southwest of the site and dates from 2013, whilst the most recent record is of Sparrowhawk and relates to a location approximately 1.7km northwest of the site, dating from 2021.
- 4.5.10. The desk study also returned 53 records of birds listed as species of principal importance under Section 41 of the Natural Environment and Rural Communities Act (NERC) Act 2006. These species are also listed under the IUCN Red or Amber lists above, and include Bullfinch, Dunnock, Herring Gull, Marsh Tit, Skylark, Song Thrush and Starling.
- 4.5.11. Six records were returned for birds species that are listed in the European Birds Directive Annex I, these being five records of Red Kite, and one record of Little Egret *Egretta garzetta*. This record relates to a location approximately 1.8km north of the site, and dates from 2018.

4.6. Amphibians (Great Crested Newts)

- 4.6.1. The site is devoid of any potential breeding opportunities, with no waterbodies within the site or in immediately vicinity.
- 4.6.2. The site is considered to support negligible terrestrial habitat for amphibian species.

Background Records

- 4.6.3. The desk study returned two records for Great Crested Newt *Triturus cristatus*, the closest and most recent of which relates to a location approximately 0.8km south of the site, and dates from 2021.
- 4.6.4. In addition, the desk study returned further records of amphibians dating from within the past ten years, including fourteen records of Common Frog *Rana temporaria*. The closest of these records relate to a location approximately 0.6km west of the site are dated from 2014.
- 4.6.5. A review of online resources showed no EPS Licences were granted to allow the damage / destruction of a Great Crested Newt resting site within the data search area, in the past 10 years.

4.7. Reptiles

- 4.7.1. The site is considered to support negligible opportunities for breeding or foraging reptiles.

Background Records

- 4.7.2. The desk study returned 36 records of reptiles, including Slow Worm *Anguis fragilis*, Common Lizard *Zootoca vivipara* and Grass Snake *Natrix helvetica*.
- 4.7.3. The closest record of a Slow Worm relates to a location approximately 0.6km southwest of the site, and dates from 2019, whilst the 16 most recent records relate to the same location, approximately 1.7km northwest of the site, and are dated from 2021.
- 4.7.4. The closest record for Common Lizard relates to a location approximately 1.5km northeast of the site and is dated from 2017, whilst the most recent record relates to a location approximately 1.6km north of the site and is dated from 2021.
- 4.7.5. There are two records for Grass Snake, the closest relating to a location 1.7km west of the site and dating from 2020, whilst the most recent relates to a location 1.8km south of the site and dates from 2021.

4.8. Invertebrates

- 4.8.1. Given the habitats present, it is likely a limited assemblage of common invertebrate species would be present within the site.

Background Records

- 4.8.2. The desk study returned 75 records of nineteen invertebrate species listed as species of principal importance under Section 41 of the Natural Environment and Rural Communities Act (NERC) Act 2006, including Brown Hairstreak *Thecla betulae*, Cinnabar *Tyria jacobaeae*, Stag Beetle *Lucanus cervus*, and single records for White Admiral *Limenitis camilla*, and Grizzled Skipper *Pyrgus malvae*.
- 4.8.3. The closest record of these species is of a Brown Hairstreak and relates to a location approximately 0.6km northeast of the site and dates from 2020, whilst the most recent record is also of Brown Hairstreak, relating to a location approximately 1.5km northwest of the site and dates from 2023.
- 4.8.4. Seventy-six records were returned of species listed under Part 1 of Schedule 1 of the Wildlife and Countryside Act 1981 (as amended), including the Brown Hairstreak and Stag Beetle which are also listed under NERC Section 41, as well as Silver-spotted Skipper *Hesperia comma*, Black Hairstreak *Satyrion pruni*, and a single record of Chalk Hill Blue *Polyommatus coridon*.
- 4.8.5. The closest of these is a Silver-spotted Skipper record relating to a location 1.5km northeast of the site, dating from 2018, whilst the most recent record is of Chalk Hill Blue, relating to a location approximately 2.3km west of the site, and dates from 2020.

- 4.8.6. Eighty-nine records were returned of species that are listed as species of conservation concern on UK Red Lists. Of these, the Brown Hairstreak, Grizzled Skipper, White Admiral, Silver-spotted Skipper, Chalk Hill Blue, and Black Hairstreak are already included above, but other species in this category include Common Darter *Sympetum striolatum*, Large Black Slug *Arion ater*, as well as single records for the beetles *Eubria palustris* and *Hypopycna rufula*. The closest of these records is of Common Darter, relating to a location approximately 1.2km west of the site, and dating to 2020.
- 4.8.7. A further eight records are listed as Nationally Notable B species (defined as species found in between 31 and 100 hectads). These are Cramp-ball Fungus Weevil *Platyrhinus resinosus*, and single records of Large Yellow-face Bee *Hylaeus signatus*, Musk Beetle *Aromia moschata*, Adonis' Ladybird *Hippodamia variegata*, a true fly *Merzomyia westermanni* and the beetle *Stenus niveus*. The closest of these is *Stenus niveus*, the record related to a location approximately 1.3km north of the site and dated from 2016.

5. ECOLOGICAL EVALUATION

5.1. The Principles of Ecological Evaluation

- 5.1.1. The guidelines for ecological evaluation produced by CIEEM propose an approach that involves professional judgement, but makes use of available guidance and information, such as the distribution and status of the species or features within the locality of the project.
- 5.1.2. The methods and standards for site evaluation within the British Isles have remained those defined by Ratcliffe⁷. These are broadly used across the United Kingdom to rank sites so priorities for nature conservation can be attained. For example, current Sites of Special Scientific Interest (SSSI) designation maintains a system of data analysis that is roughly tested against Ratcliffe's criteria.
- 5.1.3. In general terms, these criteria are size, diversity, naturalness, rarity and fragility, while additional secondary criteria of typicalness, potential value, intrinsic appeal, recorded history and the position within the ecological / geographical units are also incorporated into the ranking procedure.
- 5.1.4. Any assessment should not judge sites in isolation from others, since several habitats may combine to make it worthy of importance to nature conservation.
- 5.1.5. Further, relying on the national criteria would undoubtedly distort the local variation in assessment and therefore additional factors need to be taken into account, e.g. a woodland type with a comparatively poor species diversity, common in the south of England, may be of importance at its northern limits, say in the border country.
- 5.1.6. In addition, habitats of local importance are often highlighted within a local Biodiversity Action Plan (BAP). The Oxford City Council BAP has been considered as part of this assessment and is referenced where relevant.
- 5.1.7. Levels of importance can be determined within a defined geographical context from the immediate site or locality through to the international level.
- 5.1.8. The legislative and planning policy context are also important considerations and have been given due regard throughout this assessment.

5.2. Habitat Evaluation

Designated Sites

- 5.2.1. **Statutory Sites.** There are no statutory designations of conservation value within or adjacent to the site. Lye Valley Site of Special Scientific Interest (SSSI) is located approximately 1.3km to the north of the site and represents the closest statutory designation to the site (see Plan ECO1). Brasenose Wood and Shotover Hill SSSI is approximately 1.4km to the northeast of the site. The closest Local Nature Reserve (LNR) is that of Lye Valley located approximately 1.8 km north of the site (see Plan ECO1).

⁷ Ratcliffe, D A (1977). *A Nature Conservation Review: The Selection of Sites of Biological National Importance to Nature Conservation in Britain*. Two Volumes. Cambridge University Press, Cambridge.

- 5.2.2. The site is considered to be sufficiently removed from the local designated site, such that the development proposals are unlikely to result in any significant effect on the features and species of interest. Nonetheless in accordance with best practice a comprehensive Construction Environmental Management Plan (CEMP) should be drafted and employed to negate any low risk from pollution during site preparation and construction works.
- 5.2.3. The site lies within the identified SSSI Impact Risk Zone (IRZ) of the above SSSI sites, indicating that the development has potential to impact upon an SSSI. Advice from Natural England has highlighted the risks from pipelines and underground and overhead cables as well as risks from increased road traffic. Additionally, large non-residential developments are at risk of impacting water supply mechanisms to SSSIs, hence, are indicated as a risk category. Developments that are of a scale and nature to meet these descriptions are advised to consult with the Local Planning Authority and Natural England for advice on how risks can be avoided or mitigated.
- 5.2.4. Natural England have advised that new development, specifically where resulting in the provision of overnight accommodation, should be assessed in terms of potential likely significant effects against the Conservation of Habitats and Species Regulations 2017 (as amended) with a likely requirement for mitigation to be provided.
- 5.2.5. The proposed development is for non-residential development and hence shall not support any overnight accommodation. Accordingly, it is not considered likely that the proposed development will result in any adverse effect on the conservation objectives of the nearby statutory sites when considered alone or in combination with other plans or protects. As such, the proposed development can be screened out under Regulation 63 as being unlikely to have an effect, with no requirement for specific mitigation measures and hence there is no requirement to proceed to the appropriate assessment stage.
- 5.2.6. **Non-statutory Sites.** A number of non-statutory designated sites are present in the vicinity of the site; the closest of which is Lye Valley and Cowley Marsh Local Wildlife Site (LWS) located approximately 1 km north of the site (see Plan ECO1). The Littlemore and Northfield Brooks Oxford City Wildlife Site is located approximately 1km south of the site.
- 5.2.7. It is considered that all non-statutory designated sites are sufficiently removed and buffered from the site as to be unaffected by the proposed development. Nonetheless, in accordance with best practice appropriate safeguards and measures should be adopted in the CEMP.

Habitats

- 5.2.8. The habitats within the site have a low distinctiveness and nature conservation interest. The modified grassland areas and amenity shrub planting have a low species diversity and include non-native ornamental species, however, they may offer some suitability for invertebrate species and foraging for bird and mammal species. The on-site trees are largely medium quality trees, with low suitability for birds and bats.

Modified grassland

The modified grassland areas are in the context of maintained verges and understorey cover and are of limited ecological value.

- 5.2.9. **Effects.** The modified grassland will be largely removed as part of the development.
- 5.2.10. **Mitigation.** The landscape scheme shall offset the losses through new areas of species-rich grassland and of benefit to pollinators. Furthermore, the provision of a biodiverse green roof will further elevate the floristic diversity across the site post-development.
- 5.2.11. **Residual Effects.** Effects are considered to be positive at the site level.

Amenity Planting

- 5.2.12. The amenity planting areas, at the edges of buildings and the northern, western and southern boundaries of the site, are considered to have low biodiversity value.
- 5.2.13. **Effects.** The amenity planting will be removed as part of the development.
- 5.2.14. **Mitigation.** The landscape scheme shall offset the loss through new diverse shrub planting at the northern, western and southern boundaries of the site. Furthermore, rain gardens and additional landscape features will increase the diversity and interest compared to the existing situation.
- 5.2.15. **Residual Effects.** Effects are considered to be positive at the site level.

Existing Trees

- 5.2.16. The existing trees are early mature and mature Category B and C trees, in good or fair condition.
- 5.2.17. **Effects.** The majority of the trees will be protected and retained as part of the development. These trees are those located at the boundaries to the site. The 18 trees located away from the site boundary will be lost during the development.
- 5.2.18. **Mitigation.** Retained trees as part of the scheme would be subject to protective measures in line with BS 5837:2012 to be detailed in the CEMP.
- 5.2.19. The retained trees will be subject to management to ensure their condition is maintained through the development. Additionally, 49 new trees will be planted as part of the proposed landscape scheme.
- 5.2.20. **Residual Effects.** Effects are considered to be positive at the site level.

5.3. Faunal Evaluation

Bats

- 5.3.1. **Legislation.** All bats are protected under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) and included on Schedule 2 of the

Conservation of Habitats and Species Regulations 2017 (“the Habitats Regulations”). These include provisions making it an offence to:

- Deliberately kill, injure or take (capture) bats;
- Deliberately disturb bats in such a way as to significantly affect:-
 - (i) be likely to impair their ability to survive, to breed or rear or nurture their young; or to hibernate or migrate; or
 - (ii) to affect significantly the local distribution or abundance of the species to which they belong;
- Damage or destroy any breeding or resting place used by bats;
- Intentionally or recklessly to obstruct access to any place used by bats for shelter or protection (even if bats are not in residence).

- 5.3.2. The words deliberately and intentionally include actions where a court can infer that the defendant knew that the action taken would almost inevitably result in an offence, even if that was not the primary purpose of the act.
- 5.3.3. The offence of damaging (making it worse for the bat) or destroying a breeding site or resting place is an absolute offence. Such actions do not have to be deliberate for an offence to be committed.
- 5.3.4. In accordance with the Habitats Regulations the licensing authority (Natural England) must apply the three derogation tests as part of the process of considering a licence application. These tests are that:
1. the activity to be licensed must be for imperative reasons of overriding public interest or for public health and safety;
 2. there must be no satisfactory alternative; and
 3. the favourable conservation status of the species concerned must be maintained.
- 5.3.5. Licences can usually only be granted if the development is in receipt of full planning permission.
- 5.3.6. **Site Usage.** The site is absent of any roosting opportunities for locally present bats. The site currently provides negligible opportunities for foraging and dispersal with artificial lighting prevalent across the site. Survey information and background records show negligible use of the site.
- 5.3.7. **Effects.** The proposed development shall potentially lead to indirect effects from lighting upon retained and created habitat of potential value to foraging and dispersing bats.
- 5.3.8. **Mitigation and Enhancements.** To elevate the on-site roosting opportunities for locally present bat populations, a series of bat boxes shall be positioned on retained trees or affixed to the new build. The proposed tree planting, and new amenity shrub, biodiverse roof and grassland planting, shall provide continued foraging opportunities for a number of bat species.
- 5.3.9. The lighting design shall be cognisant to reduce lighting to retained and created habitats of likely bat foraging and dispersal interest. Construction lighting should be restricted as part of a CEMP to ensure continued dark corridors are provided across the site.

- 5.3.10. **Residual Effects.** Positive residual effects on bats are anticipated, given the above mitigation and enhancement measures.

Badgers

- 5.3.11. **Legislation.** The Protection of Badgers Act 1992 consolidates the previous Badgers Acts of 1973 and 1991. The legislation aims to protect the species from persecution, rather than being a response to an unfavourable conservation status.
- 5.3.12. As well as protecting the animal itself, the 1992 Act also makes the intentional or reckless destruction, damage or obstruction of a Badger sett an offence. A sett is defined as “*any structure or place, which displays signs indicating current use, by a Badger*”. ‘Current use’ is defined by Natural England as any use within the preceding 12 months.
- 5.3.13. In addition, the intentional elimination of sufficient foraging area to support a known social group of Badgers may, in certain circumstances, be construed as an offence by constituting ‘cruel ill treatment’ of a Badger.
- 5.3.14. Local Authorities are therefore obliged to consult Natural England over any application that is likely to adversely affect Badgers.
- 5.3.15. Any work that disturbs Badgers is illegal without a licence granted by Natural England. Unlike the general conservation legislation, the Badgers Act 1992 makes specific provision for the granting of licences for development purposes, including for the destruction of setts.
- 5.3.16. Guidance produced by Natural England in 2002 developed guidelines on the types of activity that it considers should be licensed within certain distances of sett entrances. For example, using heavy machinery within 30 metres of any entrance to an active sett, and lighter machinery within 20 metres, or light work such as hand digging within 10 metres, all may require a license.
- 5.3.17. It should be noted that a licence cannot be issued until the site is in receipt of full and valid planning permission and that generally licences are not granted between December and June inclusive to avoid disruption to the Badger breeding cycle.
- 5.3.18. **Site Usage.** No evidence of Badger was recorded during the course of the site survey work. However, the wider site is considered to support suitable habitat for this species, as well as potential mammal burrows and, should there be a local social group, occasional use of the site and habitats therein could not be fully dismissed although considered unlikely against the paucity of the on-site habitats.
- 5.3.19. **Mitigation and Enhancements.** Given the suitability of the wider site and low potential for Badger to utilise the site, a number of precautionary measures should be put in place throughout the construction phase of the development. These will include:
- During the construction process all dug ground should be levelled and compacted wherever possible. This will prevent Badgers from attempting to excavate setts prior to completion of the works;

- Planks should be left in any uncovered trenches to allow any Badger that may stray onto the site an escape route;
- Materials should be stored in a storage container in order to avoid the chance of Badgers coming onto site and potentially injuring themselves;
- Fires and chemicals should not be used within 20 metres of the sett; and
- Any open pipework greater than 150mm outside diameter should be blanked off at the end of each working day.

5.3.20. Badgers are an especially mobile species that often extend existing setts and excavate new ones in areas of suitable habitat. New setts may be excavated within the construction zone during the period between the survey work undertaken and the drafting of this report and the commencement of site clearance and construction works. Were construction to proceed directly, involving the use of heavy machinery, newly excavated setts or entrances may be adversely affected, leading to the collapse of entrances and tunnels and possible Badger injury or mortality.

5.3.21. If any suspected Badger activity is observed during construction, the project's ecological consultancy should be contacted.

5.3.22. The proposed landscape scheme shall ensure that any local social group has sufficient suitable dispersal and foraging corridors to access habitat in the wider area / territory. The proposed landscaping, particularly in the north and east of the site, shall provide continued opportunities for dispersal and foraging.

5.3.23. **Residual Effects.** No significant residual effects on Badger are anticipated following the implementation of safeguards and mitigation.

Hedgehogs

5.3.24. **Legislation.** Hedgehog is a Species of Principal Importance for the Conservation of Biodiversity under Section 41 (England) of the Natural Environment and Rural Communities (NERC) Act 2006.

5.3.25. The NERC Act 2006 requires the Secretary of State to:

...take such steps as appear... to be reasonably practicable to further the conservation of the living organisms and types of habitat included in any published under this section, or...promote the taking by other of such steps.

5.3.26. **Site Usage.** No evidence of Hedgehogs was recorded during the survey work undertaken. The amenity planting and grassland present offer limited opportunities for foraging and dispersing Hedgehogs.

5.3.27. **Mitigation and Enhancements.** It is recommended that ground cover be cleared outside the winter hibernation period (October to April inclusively). The new amenity planting boundary features will provide continued opportunities for commuting and foraging Hedgehogs.

5.3.28. **Residual Effects.** No significant residual effects are considered likely.

Birds

- 5.3.29. **Legislation.** Section 1 of the Wildlife and Countryside Act 1981 (as amended) is concerned with the protection of wild birds, while Schedule 1 lists species that are protected by special penalties. All species of birds receive general protection while nesting.
- 5.3.30. **Site Usage.** The site supports some suitable nesting and foraging opportunities for birds, in particular the trees and, to a lesser extent, the amenity planting.
- 5.3.31. **Mitigation and Enhancements.** During the construction phase, it is recommended that any suitable bird nesting habitat be cleared outside the nesting season (typically March to August inclusive) to avoid a potential offence under the legislation. Where this cannot be achieved, a check survey for nesting birds should be undertaken by an ecologist immediately prior to removal, with any confirmed nests left in situ until the young have fledged.
- 5.3.32. The majority of trees shall be retained in situ as part of the proposed development and, hence, the current nesting opportunities within the site shall be retained.
- 5.3.33. New landscape planting shall include a number of fruit-bearing species to offer a foraging resource. New native tree and amenity shrub planting will increase opportunities for foraging and nesting birds.
- 5.3.34. A variety of bird boxes shall be provided to enhance current nesting opportunities. These shall include new opportunities for Swift *Apus apus* within integrated nesting opportunities provided.
- 5.3.35. **Residual Effects.** At the time of writing, no significant residual effects on birds are considered likely with gains considered likely.

Great Crested Newts

- 5.3.36. **Legislation.** Great Crested Newts are protected under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) and included on Schedule 2 of the Conservation of Habitats and Species Regulations 2017 ("the Habitats Regulations"). These include provisions making it an offence:
- Deliberately to kill, injure or take (capture) Great Crested Newts;
 - Deliberately to disturb Great Crested Newts in such a way as to:-
 - (i) be likely to impair their ability to survive, to breed or reproduce, or to rear or nurture their young, or to hibernate or migrate; or
 - (ii) affect significantly the local distribution or abundance of the species to which they belong;
 - To damage or destroy any breeding or resting place used by Great Crested Newts;
 - Intentionally or recklessly to obstruct access to any place used by Great Crested Newts for shelter or protection.

- 5.3.37. European Protected Species licences are available from Natural England in certain circumstances, and permit activities that would otherwise be considered an offence.
- 5.3.38. **Site Usage.** The site is not considered to support breeding opportunities for any locally present Great Crested Newt populations, noting the closest pond would appear to be an ornamental pond approximately 0.06km northeast of the site. This pond is separated from the site by considered dispersal barriers in the form of existing road infrastructure. Furthermore, the site supports negligible opportunities for amphibians during their terrestrial phase.
- 5.3.39. **Mitigation.** No mitigation required. As a very much precautionary approach an eDNA survey of the pond could be completed to ascertain the presence of any Great Crested Newts in the wider area. In the unlikely event any population is identified a simple check of any covered areas within the amenity planting could be undertaken under a non-licensed method statement.
- 5.3.40. **Residual Effects.** No residual effects are anticipated.

Reptiles

- 5.3.41. **Legislation.** Rare, endangered or declining species receive full protection under the Wildlife & Countryside Act 1981 (as amended) as well as protection under the Conservation of Habitats and Species Regulations 2017. Species that are fully protected are Smooth Snake *Coronella austriaca* and Sand Lizard *Lacerta agilis*. It is illegal to:
- Deliberately kill, injure or take (capture) these reptiles;
 - Deliberately disturb these reptiles in such a way as to be likely:–
 - (i) to impair their ability to survive, to breed or reproduce, or to rear or nurture their young, or to hibernate; or
 - (ii) to affect significantly their local distribution or abundance;
 - Damage or destroy any breeding or resting place used by these reptiles;
 - Intentionally or recklessly obstruct access to any place used by these reptiles for shelter or protection (even if the reptiles are not present at the time);
 - Sell, offer for sale, possess or transport for purposes of sale these reptiles (live or dead animal, part or derivative).
- 5.3.42. Owing to their abundance in Britain, Common Lizard, Slow Worm, Grass Snake and Adder *Vipera berus* are only 'partially protected' under the Wildlife & Countryside Act 1981 (as amended) and as such only receive protection from:
- Intentional killing and injuring; and
 - Being sold or other forms of trading.
- 5.3.43. The habitat of common reptiles is therefore not directly protected. However, because of their partial protection, disturbing or destroying their habitat while they are present may lead to an offence.
- 5.3.44. All reptile species are listed as a Species of Principal Importance under Section 41 of the Natural Environment and Rural Communities Act (NERC)

2006. The NERC Act places responsibility upon public bodies to have regard for the conservation of biodiversity in England.

5.3.45. **Site Usage.** The site is considered to support negligible breeding and foraging opportunities for reptile species.

5.3.46. **Mitigation.** No mitigation required.

5.3.47. **Residual Effects.** No significant residual effect on reptiles is expected.

Invertebrates

5.3.48. The habitats within the site are expected to support a low assemblage of invertebrates.

5.3.49. **Effects.** Loss of amenity planting and modified grassland will reduce nectar sources for pollinators and reduce the current available habitat.

5.3.50. **Mitigation.** The planting scheme includes flowering species including a biodiverse roof, which will provide nectar sources for pollinating invertebrates.

5.3.51. Furthermore, habitat opportunities, such as dead wood habitats and insect towers, can also be created near the boundaries of the site to further elevate the local interest and opportunities for entomology.

5.3.52. **Residual Effects.** No residual effects are anticipated.

6. PLANNING POLICY CONTEXT

6.1. Planning policy for development in Oxford is administrated at two principal levels, nationally through the National Planning Policy Framework (NPPF) and locally through the Oxford Local Plan.

6.2. Any proposed development will be judged in relation to the policies contained within the following documents.

6.3. National Policy

National Planning Policy Framework (September 2023)

6.3.1. National policy for biodiversity and geological conservation is provided by the National Planning Policy Framework (NPPF), revised most recently in September 2023. It is noted that the NPPF continues to refer to further guidance in respect of statutory obligations for biodiversity and geological conservation and their impact within the planning system provided by Circular 06/05 (DEFRA / ODPM, 2005) accompanying the now-defunct Planning Policy Statement 9 (PPS9).

6.3.2. The key element of the NPPF is that there should be “a presumption in favour of sustainable development” (paragraphs 10 to 11). It is important to note that this presumption “does not apply where the plan or project is likely to have a significant effect on a habitats site (either alone or in combination with other plans or projects), unless an appropriate assessment has concluded that the plan or project will not adversely affect the integrity of the habitats site” (paragraph 182). ‘Habitats site’ has the same meaning as the term ‘European site’ as used in the Habitats Regulations 2017.

6.3.3. Hence, the direction of Government policy is clear. That is, the presumption in favour of sustainable development is to apply in circumstances where there is potential for an effect on a European site, if it has been shown that there will be no adverse effect on that designated site as a result of the development in prospect.

6.3.4. The NPPF refers to minimisation of impacts to and net gains for biodiversity (paragraph 174). The NPPF also considers the strategic approach that Local Authorities should adopt with regard to the protection, maintenance and enhancement of green infrastructure, priority habitats and ecological networks, and the recovery of priority species.

6.3.5. Paragraphs 179 to 181 of the NPPF comprise a number of principles that Local Authorities should apply, including encouraging opportunities to incorporate biodiversity in and around developments; provision for refusal of planning applications if significant harm cannot be avoided, mitigated or compensated for; applying the protection given to European sites to potential Special Protected Areas (SPA), possible Special Areas of Conservation (SAC), listed or proposed Ramsar sites and sites identified (or required) as compensatory measures for adverse effects on European sites; and the provision for the refusal for developments resulting in the loss or deterioration of ‘irreplaceable’ habitats – unless there are ‘wholly exceptional reasons’ (for instance, infrastructure projects where the public benefit would clearly outweigh the loss or deterioration of habitat) and a suitable compensation strategy exists.

- 6.3.6. National policy therefore implicitly recognises the importance of biodiversity and that with sensitive planning and design, development and conservation of the natural heritage can co-exist and benefits can, in certain circumstances, be obtained.

6.4. Local Policy

- 6.4.1. The current and most relevant local policy in Oxford is currently made up of the Oxford Local Plan and supporting planning documents.

Oxford Local Plan 2016-2036 (Adopted June 2020)

- 6.4.2. The Oxford Local Plan was adopted during June 2020 and sets out policies and proposals for the future development and spatial requirements of Oxford for the period 2016 to 2036. Policies relevant to biodiversity and nature conservation at the site are set out below.

- 6.4.3. **Policy G1: Protection of Green and Blue Infrastructure network** refers to how developments will only be permitted if they maintain the protection of green and blue networks for their social, environmental functions.

- 6.4.4. **Policy G2: Protection of biodiversity and geo-diversity** is concerned with development that is to have an adverse impact on a site of biodiversity or geodiversity importance, particularly regarding sites that may have an impact on sites of national importance (SAC's SSSI's). Where development is permitted and likely to cause harm, proposals must include measures that minimise harm and provide mitigation and enhancements to the nature conservation value of the Site. This policy refers to achieving a 5% net gain from any development.

- 6.4.5. **Policy G7: Protection of existing Green Infrastructure features** states that new buildings will not be granted planning permission if they result in the loss of green infrastructure, which includes features such as hedgerows or trees/woodland. If the loss of such features is anticipated, suitable mitigation needs to be offered to offset the loss.

- 6.4.6. **Policy G8: New and enhanced Green and Blue Infrastructure Network features** directly relates to Policy G7. This policy encourages developments that incorporates hedgerows, trees, green linkage, SuDS. This policy also greatly supports proposals that include green/brown roofs and walls.

6.5. Discussion

- 6.5.1. The development proposals for the site would be judged against the policies summarised above. Recommendations have been made in respect of potentially present protected and priority species, with measures proposed to ensure presence and use is protected.

- 6.5.2. The proposed development will retain existing trees and include new planting of grassland and amenity shrubs. Furthermore, the proposals include a biodiverse roof and hence further the aims of the Local Plan. The landscape proposals shall increase the floristic diversity and local provenance of species within the site.

- 6.5.3. A variety of further measures such as bird and bat boxes, together with log piles, can be provided to offer opportunities for a variety of species and groups.
- 6.5.4. The retention and strengthening of boundary features shall ensure that the proposed development and site contribute to local green and blue infrastructure.
- 6.5.5. The use of Defra Biodiversity Metric 4.0 has shown the proposed development shall result in a net biodiversity gain. Opportunities for maximising the opportunities within the proposed development have been taken, with an increase in species diversity and interest. A separate Biodiversity Net Gain has been drafted and submitted with the application together with a DEFRA Metric 4.0.

7. SUMMARY AND CONCLUSIONS

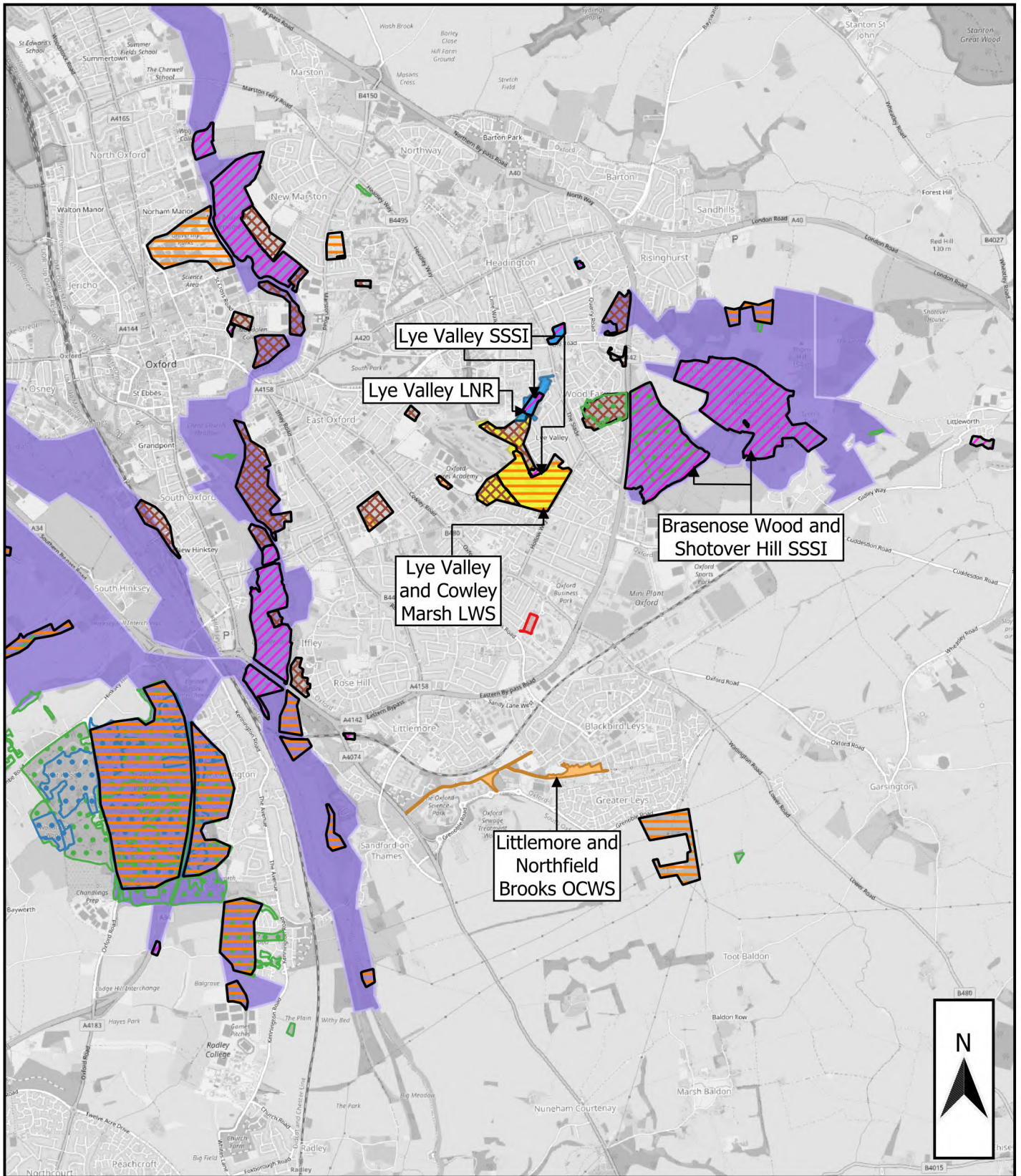
- 7.1. Ecology Solutions has prepared this ecological assessment in support of a planning application at Plot 4200, ARC Oxford which will involve the demolition of seven existing office buildings to be redeveloped into a single building with associated parking, access and landscaping.
- 7.2. The site was subject to an extended Phase 1 habitat survey in June 2023 and updated in October 2023; a desk-based study was also undertaken to inform this assessment. A number of surveys (bats, Badgers) were also completed in October 2023.
- 7.3. **Statutory Sites.** Lye Valley SSSI is located approximately 1.2km to the north of the site and represents the closest statutory designation to the site. Brasenose Wood and Shotover Hill SSSI is approximately 1.4km to the northeast of the site. Lye Valley LNR is located approximately 1.8 km north of the site.
- 7.4. Due to the nature and proximity of the proposed development, it is anticipated that there will be no adverse effects on the local statutory designated sites. Nonetheless, a CEMP is recommended to ensure all potential pathways for pollution are reduced to acceptable levels.
- 7.5. **Non-statutory Sites.** A number of non-statutory designated sites are present in the vicinity of the site; the closest of which is Lye Valley and Cowley Marsh LWS, located approximately 1 km north of the site.
- 7.6. It is anticipated that the proposed development will have no direct impacts on this or other locally present non-statutory designation features of these sites following the implementation of standard engineering and construction safeguards to be set out in a CEMP.
- 7.7. **Habitats.** The habitats within the site consist of common and widespread species. Habitats of reduced interest include modified grassland and amenity planting.
- 7.8. The proposed development shall require the removal of modified grassland, amenity planting, and some trees. The landscape strategy for the site shall be based around a diverse selection of native species.
- 7.9. The majority of existing trees within the site will be retained and protected as part of the landscaping scheme. Furthermore, new species-rich grassland shall be created together with a diverse range of amenity species and provision of a biodiverse roof.
- 7.10. **Bats.** The site is absent of any suitable roosting opportunities for locally present bat species. Only low numbers of common and widespread bat species have been recorded in the surrounding area of the site and it is anticipated that there will be minimal effects on this species group. A sensitive lighting scheme shall be employed to avoid light spillage on to areas of retained and created suitable foraging and commuting habitat. A number of bat boxes of differing types, such that they provide opportunities for a range of bat species, shall be provided around the site, particularly the northern and eastern margins. Overall, the development is not anticipated to have an adverse effect on local bat populations, and new planting will bolster the suitability of the boundary features for this group.

- 7.11. **Badgers.** No evidence of Badger was recorded during the course of the surveys completed to date, although the site is noted as providing some suitable dispersal opportunities for Badgers and as having some connectivity to suitable habitat in the wider area. The proposed layout and habitat provision across the site shall allow for continued dispersal and foraging opportunities, both within the site and connected to the wider countryside, and a precautionary approach will be taken when removing vegetation and suitable habitat.
- 7.12. **Other Mammals.** The site is likely to support a variety of common mammal species owing to the habitats present on site, and evidence of mammal footprints and possible burrowing. The potential presence of Hedgehog warrants a precautionary approach when removing ground vegetation that may present hibernation opportunities for this species. The scheme shall retain suitable habitats for Hedgehog and a range of other common small mammals.
- 7.13. **Birds.** The trees and amenity planting on site provide some suitability for nesting and foraging birds. During the site preparation phase, it is recommended that any suitable bird nesting habitat be cleared outside the nesting season (typically March to August inclusive) to avoid a potential offence under the legislation. Where this cannot be achieved a check survey for nesting birds should be undertaken by an ecologist, with any confirmed nests buffered and left in situ until the young have fledged.
- 7.14. The proposed development shall retain the majority of habitats of considered value for locally present bird species. A series of bird boxes, providing opportunities for a variety of bird species including Swift, shall be installed within suitable areas of the site.
- 7.15. **Amphibians.** The site is not considered to offer suitable opportunities for breeding amphibians, specifically Great Crested Newts. The habitats within the site are considered to provide negligible opportunities for amphibians during their terrestrial phase.
- 7.16. **Reptiles.** The site is considered to provide negligible habitat for reptile species.
- 7.17. **Invertebrates.** The site is considered likely to support a small range of invertebrate species. The habitat creation proposed, together with a future sensitive management regime, will provide continued and enhanced foraging and breeding opportunities for locally present invertebrate species. A total of five insect boxes suitable for bees, wasps and lacewing flies will be installed on existing trees in a sunny location that is protected from wind and rain.
- 7.18. In conclusion, the detailed survey work completed has identified limited habitats or features of ecological interest. Whilst the proposed development would result in impacts on some areas of limited interest in the context of the site, appropriate and proportionate measures are provided to ensure the necessary mitigation and enhancement is delivered. The proposed mitigation and enhancement strategies, including habitat provision of high nature conservation value, shall ensure the local wildlife can be maintained at a favourable conservation status. Furthermore, through the proposed measures biodiversity net gains shall be delivered.

PLANS

PLAN ECO1

Site Location and Ecological Designations



KEY:

- SITE BOUNDARY
- SITE OF SPECIAL SCIENTIFIC INTEREST (SSSI)
- LOCAL WILDLIFE SITES
- LOCAL NATURE RESERVE (LNR)
- ANCIENT AND SEMI-NATURAL WOODLAND
- ANCIENT REPLANTED WOODLAND
- SITE OF LOCAL INTEREST FOR NATURE CONSERVATION (SLINC)
- OXFORD CITY WILDLIFE SITE
- CONSERVATION TARGET AREAS
- OXFORDSHIRE LOCAL WILDLIFE SITE



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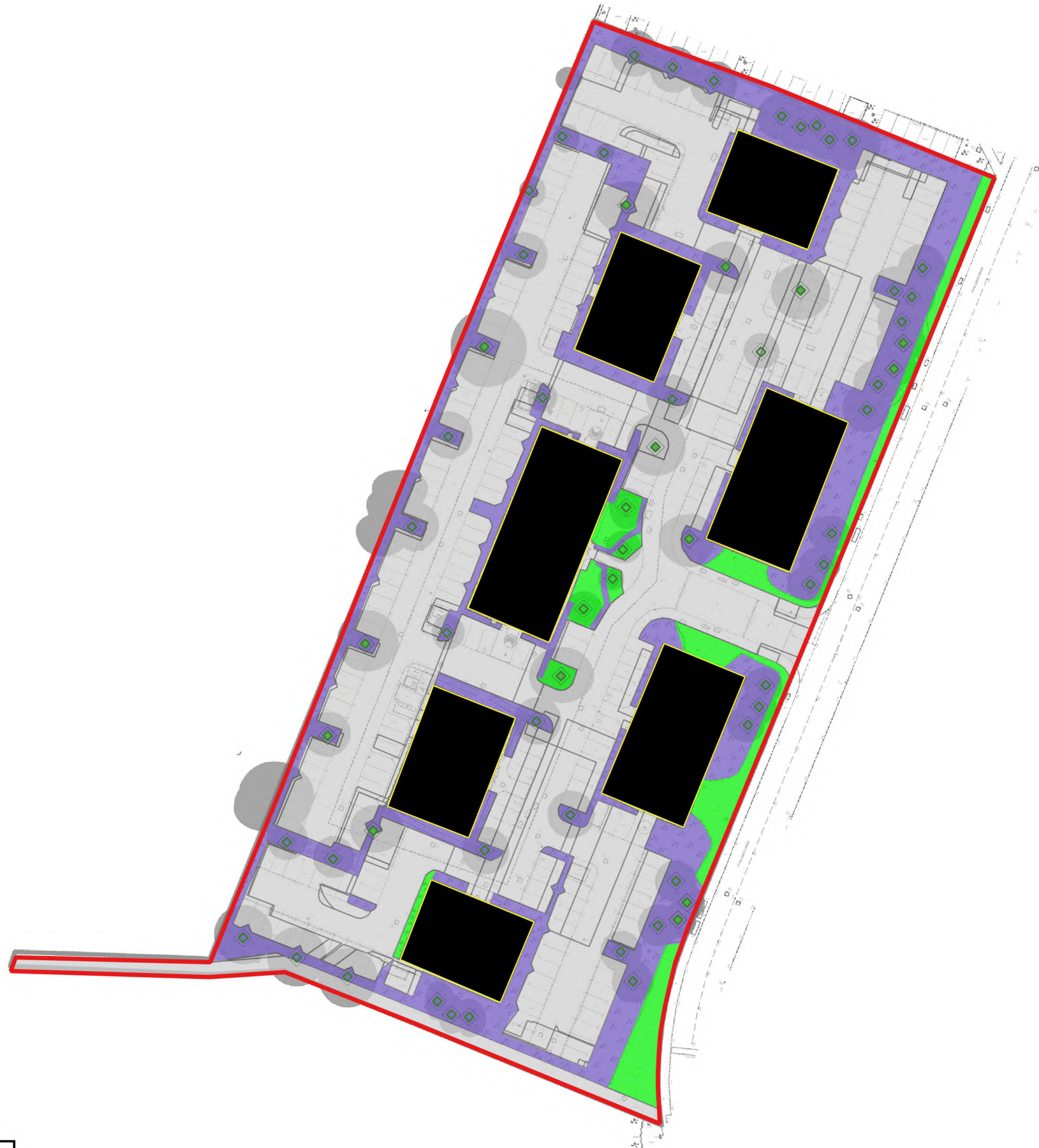
PLAN ECO1: SITE LOCATION AND
ECOLOGICAL DESIGNATIONS

Rev: B
Jan 2024



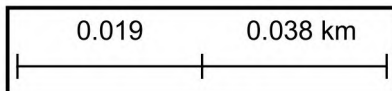
PLAN ECO2

Ecological Features



KEY:

-  SITE BOUNDARY
-  BUILDINGS
-  HARDSTANDING
-  AMENITY PLANTING
-  MODIFIED GRASSLAND
-  MEDIUM URBAN TREE
-  SMALL URBAN TREE



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PLAN ECO2: ECOLOGICAL
FEATURES

Rev: B
Jan 2024

PHOTOGRAPHS

PHOTOGRAPH 1: Amenity Planting and Existing Trees



PHOTOGRAPH 2: Modified Grassland



PHOTOGRAPH 3: Hardstanding



PHOTOGRAPH 4: Building



PHOTOGRAPH 5: Building



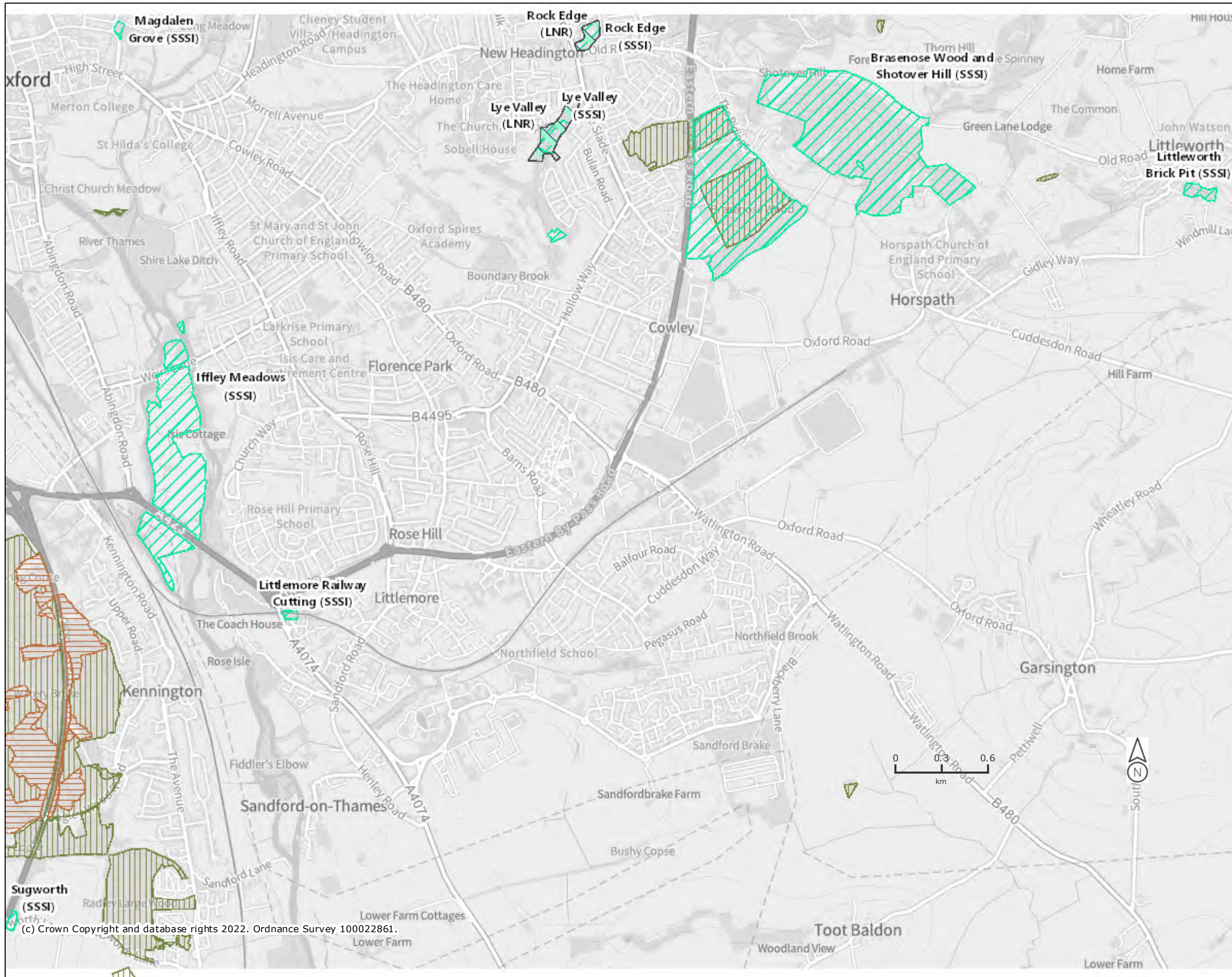
PHOTOGRAPH 6: Loft Void within Building



APPENDICES

APPENDIX 1

Information downloaded from Multi-Agency
Geographic Information for the Countryside (MAGIC)
website



Legend

- Local Nature Reserves (England)
- Ramsar Sites (England)
- Sites of Special Scientific Interest (England)
- Special Areas of Conservation (England)
- Special Protection Areas (England)

Ancient Woodland (England)

- Ancient and Semi-Natural Woodland
- Ancient Replanted Woodland

Projection = OSGB36
 xmin = 448900
 ymin = 200500
 xmax = 461500
 ymax = 206600



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