

# Swindon Reg 19 Local Plan

## Marlow Avenue Regeneration Area Habitat Survey

### Swindon Borough Council

#### **Draft report**

Prepared by LUC

July 2026

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# Chapter 1

## Introduction

**1.1** Swindon Borough Council is preparing a new Local Plan which will set out ‘a guide to growth and development to 2043, with a wider vision to 2055’. The emerging Local Plan will set out policies that align with its strategic vision for the Borough, targeting housing, employment, infrastructure, transport and the environment to support sustainable growth.

### Project Background

**1.2** In April 2026, LUC was appointed by Swindon Borough Council (hereafter referred to as the ‘Council’) to undertake an ecological appraisal to inform ecological considerations with regards to a proposed development at a site allocation, Marlowe Avenue Regeneration Area.

**1.3** This report has been produced in response to the Regulation 18 Local Plan consultation response from Natural England regarding site allocations proposed in the Plan. This consultation concluded in October 2025 that preferred site allocations that may harm biodiversity were identified which required further assessment through habitat surveys to inform the Local Plan Regulation 19 consultation scheduled for the end of 2026.

**1.4** The aim of this report is to identify the key ecological considerations, through assessment of ecological value in relation to proposed development at Marlowe Avenue Regeneration Area, hereafter referred to as ‘the Site’. The results of this survey should be used to inform the strategic masterplan for the Site with consideration for the opportunities to incorporate landscaping measures and requirement for green infrastructure, which enhance the ecological value of the Site and improve the resilience of the local ecological network.

### Site Context

**1.5** The Site is located in the northeast of Swindon, within the northeast of the urban neighbourhood of Walcot. The Site comprises a mix of land uses. The west of the Site comprises predominantly of industrial buildings, with small areas of amenity planting and individual trees. Two public parks are located within the Site, Tiny Forest in the south and Dorcan Way Play Park in the north. Within the Site, to the north of Tiny Park and Marlowe Avenue are residential dwellings and associated landscaping. The centre of the Site comprises open green space, including neutral and amenity

grassland, hedgerow and woodland, and the Nythe Community Allotments, which are accessible for plot holders only.

## Legislation and Policy Context

**1.6** Nature recovery and climate change resilience are inextricably linked. The Wildlife Sites network is integral to the delivery of nature recovery across the district, and indeed more widely across the county. This section sets out the key policy and strategic commitments to delivering nature recovery, either directly or as part of wider action to address climate change.

### National Policy

**1.7** In recognition of the biodiversity emergency, the 2021 Environment Act requires a national nature network delivered through a series of Local Nature Recovery Strategies (LNRS). Swindon is located within the Wiltshire and Swindon LNRS, which is led by Wiltshire Council, Swindon Borough Council, and the New Forest National Park Authority. The LNRS plays a role in informing Biodiversity Net Gain (BNG) by determining the 'strategic significance' multiplier within the BNG metric. Thus, providing incentive for developers to align with the LNRS in their locality when choosing the location of off-site BNG units [\[See reference 1\]](#)

**1.8** The Wildlife Site network, along with the national and international designated site network, form the core of the nature network which aims to 'reconnect habitats, support wildlife, and strengthen our resilience to climate change' for nature to recover and thrive. Thriving ecosystems optimise resilience to climate change whilst delivering ecosystem services such as air and water regulation, and to support people's health and wellbeing.

### Local Policy

**1.9** The Swindon Borough Council adopted local plan (adopted in March 2015) will be updated by the emerging Local Plan to 2043. The current adopted local plan contains a number of policies which set out safeguards for biodiversity and wildlife within the Borough, including:

- Policy EN1 – Green Infrastructure Network – This policy sets out that development must implement protection parameters for woodland, trees and hedgerows, and states that deterioration of irreplaceable habitat as a result of development must be avoided where possible.

- Policy EN2 – Community Forest – This policy states that development must contribute towards the objectives of the Great Western Community Forest by increasing tree cover, ensuring access to local woodlands and creating or enhancing habitats for biodiversity.
- Policy EN4 – Biodiversity and Geodiversity – This policy states that development must avoid negative impacts to biodiversity and geodiversity through sensitive development design, ensuring buffers and ecological connectivity to the wider environment are present.
- Policy SD1 – Sustainable Development Principles – This policy states that development must assess and address the impacts of climate change through mitigation and / or adaptation measures.

## Chapter 2

### Methodology

#### Desk Study

**2.1** To provide additional background to the report and to highlight likely features or species of interest, a study of available biological records was undertaken to identify sites designated for their nature conservation value, and existing records of protected or notable species of relevance to the Site. A search of the following resources was undertaken, within a 2km radius from the Site.

- Wiltshire and Swindon Biological Records Centre, with species records from the last 10 years;
- Multi-Agency Geographical Information for the Countryside (MAGIC);
- Ordnance Survey (OS) mapping; and
- Aerial photography.

**2.2** The desk study included review of the Wiltshire and Swindon LNRS Local Habitat Map [See reference 2] to understand the strategic ecological significance of the Site, in relation to the Areas of Particular Importance to Biodiversity (APIB), and Areas that Could Become of Particular Importance (ACB), and to understand the landscape scale opportunities.

#### Extended UKHab Habitat Survey

**2.3** An Extended Habitat Survey was undertaken within the Site boundary (**Appendix A**, Figure 1) in line with the UKHab methodology [See reference 3]. UKHab provides a rapid means of classifying habitat types and is compatible with use in the Biodiversity Net Gain Metric.

**2.4** The survey was 'extended' to consider the suitability of the Site to support notable or protected flora or fauna. Species considered included those identified during the desk study, or those considered appropriate by the surveyor during the survey. This included but was not limited to the following species: badger, bats, birds, great crested newt, reptiles and hedgehog.

**2.5** Based on an understanding of species ecology, consideration was given to the Site's potential to provide sheltering or foraging habitat and/or connectivity to allow

dispersal between populations. An invasive species search was also conducted during the Site visit. Further information is provided in the 'Results' section below.

**2.6** The survey was completed on 22<sup>nd</sup> and 25<sup>th</sup> June 2026 by Calista Collins, BSc (Hons), MRes. Weather conditions during the survey were hot and sunny.

## Preliminary Roost Assessment

**2.7** In addition to the Extended Phase 1 Habitat Survey, a Preliminary Roost Assessment of the building and a Ground Level Assessment of all trees was undertaken within the Site, which have potential to be affected by proposals to assess their bat roost suitability (BRS). The survey was carried out by Calista Collins, with due consideration for best practice guidelines as outlined by The Bat Conservation Trust [\[See reference 4\]](#).

**2.8** The PRA comprised a detailed search from ground level of any external features on the buildings with potential to support access points and roosting places suitable for bats, and noted evidence of bat activity, such as droppings, staining, feeding remains and presence of bats (live/dead specimens).

**2.9** Where bat features were recorded, they were classified in accordance with the categories described in **Table 2.1** below.

**2.10** Ground Level Tree Assessments (GLTA) were undertaken for all trees within each Site. This comprised of an external, ground-based inspection of trees, surveying for PRFs. Close focusing binoculars were used to look for features which may support bat roosts, and evidence of bat activity. These surveys were undertaken in line with best practice methods detailed by Bat Conservation Trust.

**2.11** All surveyed trees were classified into one of five categories, dependant on the features identified **Table 2.2**.

**2.12** In addition to this, the habitats within and surrounding the Site were assessed for their suitability to support foraging and commuting bats, and to identify potential commuting links to habitats of value to bats in the wider area.



**Table 2.1: Bat Roost Suitability Categories - Structures**

| Potential Suitability | Roosting Habitat in structures                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Potential flightpaths and Foraging Habitat Features                                                                                                                                                                                                                                                                                                                              | Survey Requirements                       |
|-----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|
| None                  | No habitat features on site likely to be use by any roosting bats at any time of the year (i.e. a complete absence of crevices/suitable shelter at all ground/underground levels).                                                                                                                                                                                                                                                                                                         | No habitat features on site likely to be used by any commuting or foraging bats at any time of the year (i.e. no habitats that provide continuous lines of shade/protection for flight-lines or generate/shelter insect populations available to foraging bats).                                                                                                                 | No further surveys required.              |
| Negligible            | No obvious habitat features on site likely to be used by roosting bats; however, a small element of uncertainty remains as bats can use small and apparently unsuitable features on occasion.                                                                                                                                                                                                                                                                                              | No obvious habitat features on site likely to be used as flightpaths or by foraging bats; however, a small element of uncertainty remains in order to account for non-standard bat behaviour.                                                                                                                                                                                    | No further surveys required.              |
| Low                   | A structure with one or more potential roost sites that could be used by individual bats opportunistically at any time of year. However, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats (i.e. unlikely to be suitable for maternity and not a classic cool/stable hibernation site but could be used by individual hibernating bats). | Habitat that could be used by small numbers of bats as flightpaths such as a gappy hedgerow or unvegetated stream, but isolated, i.e. not very well connected to the surrounding landscape by another habitat.<br><br>Suitable, but isolated habitat that could be used by small numbers of foraging bats such as a lone tree (not in a parkland situation) or a patch of scrub. | One dusk survey required for structures.  |
| Moderate              | A structure with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions and surrounding habitat but unlikely to support a high conservation status (with respect to roost type only, such as maternity and hibernation – the categorisation described in this table is made irrespective of species conservation status, which is established after presence is confirmed).                                                       | Continuous habitat connected to the wider landscape that could be used by bats for flightpaths such as lines of trees and scrub or linked back gardens.<br><br>Habitat that is connected to the wider landscape that could be used by bats for foraging such as trees, scrub, grassland or water.                                                                                | Two dusk surveys required for structures. |

| Potential Suitability | Roosting Habitat in structures                                                                                                                                                                                                                                                                                                                                                                     | Potential flightpaths and Foraging Habitat Features                                                                                                                                                                                                                                                                                                                                                                                                                                               | Survey Requirements                         |
|-----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------|
| High                  | A structure with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions and surrounding habitat. These structures have potential to support high conservation status roost, e.g. maternity or classic cool/stable hibernation site. | <p>Continuous, high-quality habitat that is well connected to the wider landscape that is likely to be used regularly for bats for flight paths such as river valley, streams, hedgerows, lines of trees and woodland edges.</p> <p>High-quality habitat that is well connected to the wider landscape that is likely to be used regularly by foraging bats such as broadleaved woodland, tree-lined watercourses and grazed parkland.</p> <p>Site is close to and connected to known roosts.</p> | Three dusk surveys required for structures. |

**Table 2.2: Bat Roost Suitability Categories - Trees**

| Suitability | Description                                                                                                                         |
|-------------|-------------------------------------------------------------------------------------------------------------------------------------|
| NONE        | Either no PRFs in the tree or highly unlikely to be any.                                                                            |
| FAR         | Further assessment required to establish if PRFs are present in the tree.                                                           |
| PRF – I     | PRF is only suitable for individual bats or very small numbers of bats either due to size or lack of suitable surrounding habitats. |
| PRF – M     | PRF is suitable for multiple bats and may therefore be a maternity colony.                                                          |

## Wildlife Site Assessment

**2.13** Marlow Avenue Regeneration Area was assessed for its suitability for designation as a Wildlife Site. The results of the survey and desktop study were assessed against the Wildlife Site Criteria specified in the Wiltshire and Swindon Wildlife Sites Handbook (2016), based on the 'principles of selection' including size/ extent, diversity, naturalness, rarity, fragility, and biogeographical association, and the 'Habitat and Species Criteria'.

## Limitations

**2.14** A large proportion of the west of the Site was not accessible due to private industrial land (See **Appendix A, Figure 2**). Areas to the southeast of the Site were also not accessible as they were private residential dwellings. A strip of woodland which formed a section of the eastern edge of the central area was surveyed from afar because access was not possible due to a thick strip of scrub. The access limitations in the west of the Site were not considered to constrain the assessment because a review of aerial imagery indicated that most of the inaccessible area comprised of developed land.

**2.15** The central area was fully accessible, aside from the small strip of woodland along the eastern edge. This area contained habitats of value to wildlife and biodiversity and was assessed against the Wildlife Site Criteria. This area was referred to as the 'area of interest' (see **Appendix A, Figure 3**).

## Chapter 3

### Desk Study

3.1 The findings of this desk study are presented in the tables below.

### Designated Sites

3.2 Table 3.1 summarises the statutory designated sites and non-statutory designated sites within 5km of the Site.

**Table 3.1: Statutory designated and non-designated sites within 5km of the Site**

| Site Name                         | Designation                                | Qualifying Features/Description                                                                                                                                                                                                                                            | Distance / Orientation (m) |
|-----------------------------------|--------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|
| Statutory sites                   |                                            |                                                                                                                                                                                                                                                                            |                            |
| Coate Water                       | Site of Special Scientific interest (SSSI) | Coate Water SSSI is a former canal reservoir and is designated for its diverse breeding and wintering bird populations and varied habitats. Habitats present include large open water bodies, wet and dry woodlands, and established hedgerows.                            | 2.1km southeast            |
| Old Town Railway Cutting, Swindon | SSSI                                       | The SSSI supports abundant nonmarine bivalves of the <i>Carbonicola lenisulcata</i> Biozone. It provides a valuable comparison with the coeval sequences found further to the west such as Goyt's Moss and Upholland, and Wildlife Site a more complete palaeogeographical | 2.2km southwest            |

| Site Name                       | Designation   | Qualifying Features/Description                                                                                                                                                                                                 | Distance / Orientation (m) |
|---------------------------------|---------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|
|                                 |               | reconstruction to be achieved for this early part of the Westphalian.                                                                                                                                                           |                            |
| Great Quarry Swindon            | SSSI          | The SSSI is designated for its richness of molluscan fauna and diverse suite of sediments.                                                                                                                                      | 2.3km southwest            |
| Okus Quarry                     | SSSI          | Okus Quarry is designated for its geological interest and contains rare Portlandian and Purbeck rock beds.                                                                                                                      | 2.7km southwest            |
| Burderop Wood                   | SSSI          | Burderop is an example of wet ash-maple and acid pedunculate oak-hazel-ash woodland, with a rich associated ground flora. Large numbers of mature oaks and extensive areas of permanently saturated ground add to the interest. | 3.4km south                |
| <b>Non-statutory sites</b>      |               |                                                                                                                                                                                                                                 |                            |
| River Cole                      | Wildlife Site | A river complex draining Swindon into the Thames.                                                                                                                                                                               | 0.02km north               |
| Great Copse                     | Wildlife Site | A small ancient broadleaved woodland isolated between commercial and residential areas on the southern edge of Swindon                                                                                                          | 2.3km south                |
| Kingshill Canal and Old Railway | Wildlife Site | Disused canal & railway (now a recreational path) on the south edge of Swindon. Well used green/recreational corridors.                                                                                                         | 2.8km southwest            |

| Site Name             | Designation   | Qualifying Features/Description                                                                                                                         | Distance / Orientation (m) |
|-----------------------|---------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|
| Stratton Wood         | Wildlife Site | Young mixed broadleaf plantation with extensive areas of meadow, rough grassland with scrub, clearings and rides located on the urban fringe of Swindon | 2.8km northwest            |
| Groundwell Scrub      | Wildlife Site | A small area of rough grassland and scrub between an industrial estate and a main road.                                                                 | 3.2km northwest            |
| Groundwell Farm Copse | Wildlife Site | A small fragment of broadleaved woodland surrounded by new housing developments and amenity grassland.                                                  | 3.6km northwest            |
| Groundwell Marsh      | Wildlife Site | A small area of scrubby wet woodland, reed bed and Horsetail swamp situated on a flush, within a larger area of amenity grassland.                      | 3.9km northwest            |

**3.3** The Site is well separated from the majority of the statutory and non-statutory designated Sites by existing infrastructure. However, the River Cole Wildlife Site is located approximately 27m to the north of the Site.

## Irreplaceable and Priority Habitats

**3.4 Table 3.2** summarises the irreplaceable and Priority Habitats present within 200m.

**Table 3.2: Irreplaceable and Priority Habitats present on site or within 200m**

| Habitat                                                 | Location   | Description                                                                                                                                                                                                      |
|---------------------------------------------------------|------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Coastal and floodplain grazing marsh (Priority Habitat) | 56m north  | A small area (0.6ha) of coastal floodplain and grazing marsh is located to the north of the Site, associated with the River Cole Wildlife Site. This habitat often has ditches rich in plants and invertebrates. |
| River (Priority Habitat)                                | 77km north | The River Cole is located in proximity to the north of the Site; this is the only section of the river that lies within 200m of the Site. The river is a tributary of the River Thames.                          |

**3.5** No irreplaceable habitats were recorded within or adjacent to the Site.

## Protected, notable and priority Species

**3.6** Table 3.3 summarises records of protected and notable species of relevance to the Site within 2km

**Table 3.3: Protected and notable species within 2km**

| Species                                                | Status                                                                            | Distance / Orientation |
|--------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------|
| Birds                                                  |                                                                                   |                        |
| Black-headed gull<br><i>Chroicocephalus ridibundus</i> | Birds of Conservation Concern Amber List (BAmb), GB Red List Vulnerable (RLGB.VU) | On site                |
| Kestrel <i>Falco tinnunculus</i>                       | BAmb, RLGB.VU                                                                     | On site                |
| Herring Gull <i>Larus argentatus</i>                   | Birds of Conservation Concern Red List (BRed) GB Red List Endangered (RLGB.EN)    | On site                |
| Swift <i>Apus apus</i>                                 | BRed, RLGB.EN                                                                     | 147m NE                |
| Sparrowhawk <i>Accipiter nisus</i>                     | BAmb                                                                              | 190m NW                |
| Lesser Black-backed Gull<br><i>Larus fuscus</i>        | BAmb                                                                              | 190m NW                |
| Starling <i>Sturnus vulgaris</i>                       | BRed, RLGB.VU                                                                     | 237m S                 |

| Species                                      | Status                                                     | Distance / Orientation |
|----------------------------------------------|------------------------------------------------------------|------------------------|
| Greenfinch <i>Chloris chloris</i>            | BRed, RLGB.EN                                              | 457m W                 |
| Woodpigeon <i>Columba palumbus</i>           | BAmb                                                       | 457m W                 |
| House Martin <i>Delichon urbicum</i>         | BRed, RLGB.VU                                              | 457m W                 |
| House Sparrow <i>Passer domesticus</i>       | BRed, NERC Section.41, UK Biodiversity Action Plan (UKBAP) | 457m W                 |
| Bullfinch <i>Pyrrhula pyrrhula</i>           | BAmb                                                       | 457m W                 |
| Dunnock <i>Prunella modularis</i>            | BAmb                                                       | 459m N                 |
| Peregrine <i>Falco peregrinus</i>            | Wildlife and Countryside Act Schedule 1 (WCA1i)            | 676m E                 |
| Nightingale <i>Luscinia megarhynchos</i>     | BRed, RLGB.VU                                              | 676m E                 |
| Red Kite <i>Milvus milvus</i>                | RLGLB.NT, WCA1i                                            | 676m E                 |
| Tawny Owl <i>Strix aluco</i>                 | BAmb,                                                      | 676m E                 |
| Ring Ouzel <i>Turdus torquatus</i>           | BRed, RLGB.VU, Sect.41, UKBAP                              | 676m E                 |
| Mallard Anas <i>platyrhynchos</i>            | BAmb                                                       | 759m N                 |
| Greylag Goose <i>Anser anser</i>             | BAmb, WCA1ii                                               | 759m N                 |
| Moorhen <i>Gallinula chloropus</i>           | BAmb, RLGB.VU                                              | 759m N                 |
| Willow Warbler <i>Phylloscopus trochilus</i> | BAmb                                                       | 777m W                 |
| Wren <i>Troglodytes troglodytes</i>          | BAmb                                                       | 777m W                 |
| Whitethroat <i>Curruca communis</i>          | BAmb                                                       | 1100m NW               |
| Grey Wagtail <i>Motacilla cinerea</i>        | BAmb,                                                      | 1100m NW               |
| Redwing <i>Turdus iliacus</i>                | BAmb, GB Red List Critically Endangered (RLGB.CR), WCA1i   | 1100m NW               |
| Song Thrush <i>Turdus philomelos</i>         | BAmb                                                       | 1100m NW               |
| Mistle Thrush <i>Turdus viscivorus</i>       | BRed, RLGB.VU                                              | 1100m NW               |
| Redstart <i>Phoenicurus phoenicurus</i>      | BAmb                                                       | 1154m NE               |
| Common Sandpiper <i>Actitis hypoleucos</i>   | BAmb, RLGB.VU                                              | 1177m S                |



| Species                                             | Status                                     | Distance / Orientation |
|-----------------------------------------------------|--------------------------------------------|------------------------|
| Stock Dove <i>Columba oenas</i>                     | BAmb                                       | 1177m S                |
| Gadwall <i>Mareca strepera</i>                      | BAmb                                       | 1177m S                |
| Spotted Flycatcher <i>Muscicapa striata</i>         | BRed, Sect.41, UKBAP                       | 1177m S                |
| Great Crested Grebe <i>Podiceps cristatus</i>       | RLGB.VU                                    | 1177m S                |
| Green Sandpiper <i>Tringa ochropus</i>              | BAmb, RLGB.EN, WCA1i                       | 1177m S                |
| Wheatear <i>Oenanthe oenanthe</i>                   | BAmb                                       | 1435m W                |
| Dipper <i>Cinclus cinclus</i>                       | BAmb,                                      | 1538m SE               |
| Kingfisher <i>Alcedo atthis</i>                     | WCA1i                                      | 1639m SW               |
| Crane <i>Grus grus</i>                              | BAmb, RLGB.VU                              | 1639m SW               |
| Black Redstart <i>Phoenicurus ochruros</i>          | BAmb, RLGB.EN, WCA1i                       | 1639m SW               |
| Shoveler <i>Spatula clypeata</i>                    | BAmb                                       | 1639m SW               |
| Lapwing <i>Vanellus vanellus</i>                    | BRed, RLGB.EN, RLGB.VU, Sect.41, UKBAP     | 1639m SW               |
| <b>Bats</b>                                         |                                            |                        |
| Common Pipistrelle <i>Pipistrellus pipistrellus</i> | HSD4, WCA5/9.4b, WCA5/9.4c                 | 676m E                 |
| Polecat <i>Mustela putorius</i>                     | HSD5, Sect.41, UKBAP                       | 914m SW                |
| Noctule <i>Nyctalus noctula</i>                     | HSD4, Sect.41, UKBAP, WCA5/9.4b, WCA5/9.4c | 1062m SE               |
| Soprano Pipistrelle <i>Pipistrellus pygmaeus</i>    | HSD4, Sect.41, UKBAP, WCA5/9.4b, WCA5/9.4c | 1062m SE               |
| Brown Long-eared Bat <i>Plecotus auritus</i>        | HSD4, Sect.41, UKBAP, WCA5/9.4b, WCA5/9.4c | 1154m NE               |
| <b>Other mammals</b>                                |                                            |                        |
| Hedgehog <i>Erinaceus europaeus</i>                 | RLGB.VU, Sect.41, UKBAP                    | 22m NW                 |
| Badger <i>Meles meles</i>                           | Protection of Badgers Act                  | 1435m W                |
| <b>Invertebrates</b>                                |                                            |                        |
| Wall <i>Lasiommata megera</i>                       | Sect.41, UKBAP                             | 777m W                 |
| 57 Species of moth                                  | Various                                    | Various up to 1km      |

| Species                                          | Status                                       | Distance / Orientation |
|--------------------------------------------------|----------------------------------------------|------------------------|
| Amphibians                                       |                                              |                        |
| Common Frog <i>Rana temporaria</i>               | Habitat and Species Directive Annex V (HSD5) | 128m NW                |
| Plants                                           |                                              |                        |
| Box <i>Buxus sempervirens</i>                    | Red List GB                                  | 954m SE                |
| Invasive species                                 |                                              |                        |
| Himalayan Balsam <i>Impatiens glandulifera</i>   | WCA Sch9                                     | 140m N                 |
| Wall Cotoneaster <i>Cotoneaster horizontalis</i> | WCA Sch9                                     | 189 SW                 |
| Japanese Rose <i>Rosa rugosa</i>                 | WCA Sch9                                     | 214m NW                |
| Grey Squirrel <i>Sciurus carolinensis</i>        | WCA Sch9                                     | 309m NE                |
| Muntjac <i>Muntiacus reevesi</i>                 | WCA Sch9                                     | 506m NW                |
| Canada Goose <i>Branta canadensis</i>            | WCA Sch9                                     | 759m N                 |
| Reeves's Pheasant <i>Syrmaticus reevesii</i>     | WCA Sch9                                     | 759m NE                |
| Black Swan <i>Cygnus atratus</i>                 | WCA Sch9                                     | 1.18km S               |
| Ring-necked Parakeet <i>Psittacula krameri</i>   | WCA Sch9                                     | 1.44km W               |

## Local Nature Recovery Network

### Swindon's Wildlife Site Network

**3.7** A single Wildlife Site was located within 1km of the Site, the River Cole, which is located 0.02km to the north of the Site. The River Cole is a tributary which also flows to the northwest and west of the Site. The river is 27km in length and flows from Lechlade to Swindon town centre.

**3.8** The River Cole Wildlife Site supports the priority habitats 'river' and 'coastal and floodplain grazing marsh'. The latter of which is located 0.03km to the north of the Site and meets the selection criteria for HR1 Rivers and HM3 Urban sites. The Site does not contain these priority habitats, nor is it hydrologically connected to the River

Cole. The centre of the Site contains habitats of elevated importance for biodiversity, hereafter referred to as 'the area of interest. Within the area of interest, there are areas of neutral grassland, which are likely to form a key part of the wider ecological network and may support protected and notable species which utilise the River Cole and its associated priority habitats, including birds such as kingfisher, invertebrates and small mammals. Small areas of neutral grassland are also located within the north of the Site in Dorcan Way Play Park.

**3.9** The River Cole is also tree lined and supports hedgerows along its banks, which connect with the treelines and hedgerows through the Site. This connectivity of linear habitats between the Site and the River Cole provides opportunities for foraging and commuting bats, alongside wildlife corridors for small mammals, such as hedgehog.

**3.10** Several areas of the Site lie within the Areas that Could Become of particular importance "ACB" layer, which identifies areas that could become of particular importance for biodiversity. These areas include Tiny Forest Park to the south of the Site, an area within a newly developed housing estate, the central area of interest, Swindon Rugby Football Club (RFC), and Dorcan Way Play Park

## Chapter 4

### Habitat Surveys

#### Habitats and Flora

**4.1** A variety of habitats were recorded throughout the Site (see **Appendix A, figure 1**). Built up areas, including industrial and residential areas, largely comprised hardstanding and amenity planting, while the area of interest included habitats such as neutral grassland, woodland and scrub. Hedgerows were located throughout the Site, alongside individual trees.

#### Site Habitat Distinctiveness

**4.2** Within the BNG metric, each habitat has a distinctiveness which represents its overall relative biodiversity value. Habitats of high distinctiveness included lowland mixed deciduous woodland, although areas of this habitat were small and often isolated, traditional orchards and hedgerows, which are also Priority Habitats. Medium distinctiveness habitats included other neutral grassland, mixed scrub, individual trees and ponds. The ponds were located within the allotment and were small and ornamental. Habitats of low distinctiveness included modified grassland, which was located throughout the Site, ruderal/ephemeral vegetation, bramble scrub, and introduced shrub. Removal of habitats of higher distinctiveness equate to larger losses in biodiversity units under BNG, and it is therefore harder to achieve a 10% net gain. The retention, enhancement and creation of higher distinctiveness habitats provide a greater contribution towards achieving a 10% biodiversity net gain.

#### Habitats

##### w1f – Lowland mixed deciduous woodland

**4.3** Small areas of woodland are located throughout the Site. One area of woodland formed a belt along eastern edge of the Site within the area of interest, while the other area of woodland was recorded in the northwestern corner of the Site.

**4.4** The woodland belt was surveyed from afar and appeared to be an outgrown treeline which has formed a wooded belt. The woodland comprised mature ash *Fraxinus excelsior* and pedunculate oak *Quercus robur* of approximately 20m tall. Blackthorn *prunus spinosa* bounded the woodland belt to the west. It was not

possible to record the ground flora layer due to the thick scrub which bounded the woodland; however, it is assumed blackthorn comprised a large proportion of the understorey layer.

**4.5** An additional small area of woodland was recorded in the northwestern corner of the Site. The woodland was small in extent and provided screening between Dorcan Way and Drakes Way and an industrial estate and a number of ornamental species were recorded within the understorey layer. The woodland was young and comprised abundant crack willow *Salix fragilis* and bramble, with frequent small-leaved lime *Tilia cordata*. Beech *Fagus sylvatica* and *Hypericum calycinum* occurred occasionally, while field maple *Acer campestre* and firethorn *Pyracantha* sp. were recorded rarely. The woodland lacked a ground flora layer and was relatively sparse.

**4.6** Both areas of woodland were small in extent and lacked connectivity to wider areas of woodland which are generally infrequent in the urban wider landscape. The woodland belt within the area of interest was connected to on-Site hedgerows. It is considered likely that the two strips of woodland would obtain a poor BNG condition.

## h2a - Native hedgerow

**4.7** Native hedgerows are located throughout the Site. There was a native hedgerow with trees which bound Nythe Community Allotments to the south. This hedgerow comprised dominant blackthorn, frequent hawthorn *Crataegus monogyna* and field maple, and occasional clematis *Clematis* sp. Dead ash trees were recorded within the hedgerow. It was not possible to record the ground flora due to a fence between the allotments and the hedgerow.

**4.8** A native hedgerow associated with a dry ditch was located in the centre of the Site and bisected two grassland fields. The hedgerow was outgrowing and unmanaged at the time of survey, approximately 4m x 5m. The hedgerow was dominated by blackthorn and hawthorn, with frequent dogwood *Cornus sanguinea*, bramble and elder *Sambuca nigra*. Crack willow was occasional. Plants indicative of aquatic habitat were present to the north of the ditch, including meadow sweet *Filipendula ulmaria* and yellow flag iris *Iris pseudacorus*. The hedgerow was in good condition, and it is considered likely that the hedgerow would obtain a good BNG condition.

**4.9** A native hedgerow in good condition separated the allotments from Greenbridge Road and was managed to maintain its box shape. The hedgerow was dominated by hawthorn, with frequent bramble, occasional horse chestnut *Aesculus hippocastanum* and ash and rare dog rose *Rosa canina*. The ground flora consisted

of garlic mustard *Alliaria petiolata*, bristly oxtongue *Helminthotheca echinoides*, prickly lettuce *Lactuca serriola*.

**4.10** A native hedgerow in good condition was present to the south of Swindon RFC sports pitch and was dominated by hawthorn, with frequent bramble and blackthorn. The ground flora comprised modified grassland that formed the sports pitch.

**4.11** Areas of new hedgerow planting were recorded across the Site. New hawthorn hedgerow planting was recorded to the west of the Rugby Football Club, which was supported by dead-hedging. Young and gappy hedgerows were recorded within the new housing estate to the north of Marlowe Avenue. These hedgerows comprised dogwood *Cornus sanguinea*, blackthorn, hornbeam *Carpinus betulus*, field maple and elder. These hedges were less than 1m in height and width.

**4.12** A slightly outgrowing but managed native hedgerow with trees of approximately 2m x 2.5m formed the western boundary of Dorcan Way Play Park. The hedgerow was dominated by hawthorn with abundant silver birch *Betula pendula*, blackthorn and grey willow trees. Frequent species were hazel *Corylus avellana* and hornbeam, field maple and bramble. The hedgerow was in good condition. A small hedgerow of approximately 1m x 1m was present at the western edge of the park and was dominated by blackthorn with frequent pedunculate oak and hawthorn. Rarely occurring were hawthorn, elder, hornbeam and poplar.

**4.13** An established hedgerow in good condition was located between an established housing estate and a new housing estate to the north of Marlowe Avenue. This hedgerow included mature ash trees and was dominated by hawthorn. Frequent were elder, dog rose and bramble. The ground flora comprised modified grassland.

**4.14** A number of native hedgerows were recorded within the west of the Site, associated with the industrial buildings and walkways. These hedgerows were largely native, with some ornamental species noted. Blackthorn was often dominant, with frequent bramble, dog rose and elder. Occasional species included thorny olive *Elaeagnus pungens*, firethorn *Pyracantha* sp. and nettle *Urtica dioica*. A non-native ornamental hedgerow was also present in this area.

### **UKHab secondary code 50 - Wet ditch**

**4.15** A ditch associated with the central hedgerow within the area of interest was dry at the time of survey. The ditch supported plants indicative of a wetter habitat, such as meadow sweet and reed canary grass, and thus is likely wet for periods. The extent of the ditch appears to be limited to the field within the centre of the Site. The

Site is not hydrologically connected to the River Cole due to Dorcan Way Road which forms the north-eastern boundary of the Site.

### 33 - Line of trees

**4.16** A line of semi mature silver maple trees was planted adjacent to the new hawthorn hedgerows to the west of Swindon RFC. A tree line of semi-mature small-leaved lime was present to the east of Dorcan Way Play Park along the northeastern Site boundary. Two young treelines were planted in the centre of the park and consisted of ash, cherry *Prunus avium* and field maple. A tree line comprises semi-mature to young trees formed the park's southwestern boundary and consisted of crack willow, field maple, horse chestnut and hawthorn.

**4.17** A tree line comprising mature London plane *Platanus x hispanica* trees and black poplar *Populus nigra* was located at the northeastern edge of Tiny Forest Park. The tree line had a sparse understorey of scattered bramble, cow parsley *Anthriscus sylvestris* and elder. A small tree line of mature London plane trees with a thin understorey of cotoneaster *Cotoneaster* sp., snowberry *Symphoricarpos* sp. and bramble was located along the eastern boundary. A young cherry tree line was recently planted within the new housing estate to the north of Marlow Avenue.

**4.18** Semi-mature to mature tree lines were recorded within the west of the Site, associated with industrial buildings and adjacent paved walkways. These tree lines included species such as sycamore *Acer pseudoplatanus* and Norway maple *Acer platanoides*.

### h3h - Mixed scrub

**4.19** Large areas of mixed scrub were recorded to the east and northeast of Nythe Community Allotments. These areas of scrub were well established and in good conditions, with glades present. The scrub parcels were not dominated by a single species, rather field maple, elder, hazel, pedunculate oak, and bird cherry *Prunus padus* and were abundantly present. Rowan *Sorbus aucuparia* was occasionally occurring. Evidence of hazel coppice was also present. Some trees were mature and 4-5m tall. The parcels of scrub were surrounded by neutral grassland.

**4.20** Two small areas of mature mixed scrub were located in the southeast of the Site and formed boundaries between a residential estate and a cul-de-sac. The scrub was dominated by blackthorn with abundant ash. Frequent species were bramble and elder. A species of conifer *Pinophytas* sp. was occasionally recorded. Smaller areas



of planted mixed scrub were also recorded within the new housing estate in the south of the Site, to the north of Marlowe Avenue.

### **h3a - Blackthorn scrub**

A strip of blackthorn scrub was present to the east of these scrub patches, which formed an ecotone between the neutral grassland and lowland mixed deciduous woodland which forms a section of the Site's eastern boundary. The blackthorn scrub had abundant bramble and occasional hawthorn.

### **h3f - Hawthorn scrub**

**4.21** A small area of young hawthorn scrub was located in an area of planting to the south of Dorcan Way Play Park within the north of the Site.

### **h3d - Bramble scrub**

**4.22** Small areas of bramble scrub were located throughout the Site. A number of small parcels were associated with the central grassland fields and areas where bramble was encroaching onto grassland fields from hedgerows, such as to the south of Swindon RFC. Small patches of bramble were also located to the west of the Site, adjacent to footpaths to the east of Drakes Way and along the eastern edge of Tiny Forest Park within the south of the Site.

### **c1e and UKHab secondary code 27 - Orchard**

**4.23** A belt of orchard was located between the two allotment parcels within the centre of the Site. The orchard comprised fruit trees plum *Prunus* sp., pear *Pyrus* sp. and apple *Malus* sp. varieties, alongside elder, rowan and hazel. The trees were young and had an approximate diameter at breast height (DBH) of 7cm-10cm. Tree guards were present indicating recent planting. The ground flora comprised grassland dominated by false oat grass *Arrhenatherum elatius*, abundant Yorkshire fog *Holcus lanata* and perennial ryegrass *Lolium perenne* and red fescue *Festuca rubra*, frequent cock's-foot *Dactylus glomerata*, bristly oxtongue *Helminthotheca echinoides*, common sorrel *Rumex acetosa*, occasional broad-leaved dock *Rumex obtusifolius*, selfheal *Prunella vulgaris*, meadow buttercup *Ranunculus acris*, creeping bent *Agrostis stolonifera*, nettle, hoary willowherb *Salix eleagnos* and bramble. Rare were poppy *Papaveraceae* sp., nightshade *Solanum dulcamara*, ribwort plantain *Plantago lanceolata*, common ragwort *Jacobaea vulgaris*, prickly lettuce, soft brome *Bromus hordeaceus* and rugosa rose *Rosa rugosa*.



**4.24** A small comprising young plum, pear and apple trees was located within Tiny Forest Park in the south of the Site. All trees were between 5-7cm diameter at breast height (DBH). The ground flora consisted of the modified grassland which dominated the park, details of which are below in paragraph 4.28.

### g3c – Other neutral grassland

**4.25** A large area of other neutral grassland was located within the centre of the Site and surrounded areas of established mixed scrub to the east and northeast of Nythe Community Allotments. The grassland was dominated by tufted hair grass *Deschampsia cespitosa* in the field to the east of the allotments; however, the sward became less dominated by tufted hair grass to the north and west of the grassland parcel and became more dominated by false oat grass. Abundant species included tormentil *Potentilla erecta*, creeping bent *Agrostis stolonifera*, creeping cinquefoil *Potentilla reptans*, cock's-foot, common bent *Agrostis capillaris* and false oat grass. Frequent species included bird's-foot trefoil *Lotus corniculatus*, meadow foxtail *Alopecurus pratensis*, hoary willowherb *Epilobium parviflorum* and red fescue. Occasional species included Yorkshire fog, meadow vetchling *Lathyrus pratensis*, wall barley *Hordeum murinum*, meadow buttercup *Ranunculus acris*, creeping buttercup *Ranunculus repens*, meadow sweet *Filipendula ulmaria*, cut leaf cranesbill *Geranium dissectum*, annual meadow grass *Poa annua* and cleavers. Rare species included groundsel *Senecio vulgaris*, lesser stitchwort *Stellaria graminea*, selfheal *Prunella vulgaris*, field horsetail *Equisetum arvense*, white clover *Trifolium repens* and reed canary grass *Phalaris arundinacea*. The grassland appeared unmanaged with a sward height of approximately 60cm. Trodden paths utilised by walkers and dog-walkers were approximately 5cm. Although overall the sward was relatively diverse, there were not 10 or more vascular plants per m<sup>2</sup> and therefore it is considered that the grassland would achieve a poor BNG condition.

**4.26** Five small areas of neutral grassland were found to the north of the Site, in Dorcan Way Play Park. These areas of grassland were not subject to an intensive mowing regime and had sward heights of 40cm – 50cm. Two thin strips in the centre of the park were abundant in wall barley, perennial ryegrass and meadow foxtail. Frequent species included creeping thistle *Cirsium arvense*, red fescue, lesser knapweed *Centaurea nigra* and red clover *Trifolium pratense*. Occasional species were smaller cat's-tail *Phleum bertolonii*, creeping bent, annual meadow grass, meadow buttercup and lady's bedstraw *Galium verum*. Rare species were oxeye daisy, soft brome *Bromus hordeaceus*, yarrow *Achillea millefolium*, cut leaf cranesbill and bird's-foot trefoil. As there were not 10 or more vascular plants per m<sup>2</sup> it is considered that these areas would achieve a poor BNG condition. Three areas of other neutral grassland were located to the south of Dorcan Way Play Park was

dominated by false oat grass and meadow foxtail and were abundant in creeping thistle. Frequent were cock's-foot, perennial ryegrass, creeping bent and lesser knapweed. Occasional were Yorkshire fog, annual meadow grass, groundsel and wall barley. Rare species were nettle and common mugwort *Artemisia vulgaris*. Scattered trees were present in these parcels, including young cherry trees, apple, field maple and hazel, the majority of which had a DBH of <7cm.

## **g4 – Modified grassland**

**4.27** Modified grassland was located throughout the Site. Amenity grassland areas were located adjacent to footpaths and amenity planting around housing estates. The parks within the Site predominantly comprised modified grassland. A large modified grassland field in the centre of the Site formed the Swindon RFC sports pitch which was dominated by perennial rye grass. Abundant was cock's-foot, frequent was common daisy, white clover, rescue, false oat grass (at the field margins), cleavers (at the field margins) and cow parsley (at the field margins). Occasional species included pineapple mayweed *Matricaria discoidea*, greater plantain *Plantago major* and wall barley (at the field margins), while rare species included bristly oxtongue, creeping thistle and smooth hawksbeard *Crepis capillaris* (at the field margins). The sward was not diverse and maintained at a height of approximately 10cm given its use. Some areas of grassland at the field margins were left unmown and reached a height of approximately 50cm. Due to the lack of species diversity, the sports pitch is in poor condition.

**4.28** Tiny Forest Park and Dorcan Way Play Park were both dominated by perennial rye grass, with abundant Yorkshire fog. Frequent species included common daisy, white clover and creeping bent. Occasional were annual meadow grass, red fescue, timothy and wall barley, while rare species included barren brome *Bromus sterilis*, soft brome meadow buttercup and sow thistle *Sonchus oleraceus*. The sward was subject to a regular mowing regime and a sward height of approximately 10cm was largely uniform across both parks. One area of grass within Tiny Forest Park was left unmown to benefit pollinators in the southwest of the park. The sward height in this area was approximately 40cm.

**4.29** The remaining areas of modified grassland were thin belts adjacent to pavements, and isolated patches surrounding amenity planting associated with industrial buildings and residential estates. These areas were species poor and largely dominated by perennial rye grass with abundant wall barley and white clover. Annual meadow grass, red fescue, creeping bent and soft brome were often frequently occurring, while dove's-foot cranesbill *Geranium molle*, meadow buttercup, bristly oxtongue, pineapple weed and smooth hawksbeard occurred occasionally or rarely in these areas.

### 847 - Introduced shrub and sustainable drainage system (UKHab secondary code 848)

Small areas of introduced shrub were recorded within the south of the Site, associated with amenity planting within the newly developed housing estate. A small area was associated with Dorcan's Way Play Park in the north of the Site. Species included cotoneaster, snowberry, blue eyed grass *Sisyrinchium* sp., meadow cranesbill *Geranium pratense*, guelder rose *Viburnum opulus* and Rugosa rose. Within the southern areas of introduced shrub, ruderal species such as bristly oxtongue, hoary willowherb, pineapple weed, creeping cinquefoil and creeping thistle were recorded. A small Sustainable Drainage System (SuDS) swale was located adjacent to introduced shrub in the south of the Site, associated with a new housing estate. This was dry at the time of survey and aforementioned introduced shrub species were present, thus the SuDS lacked a biodiverse floral assemblage.

### UKHab secondary code 616 – Allotment

**4.30** Nythe Community Allotments were recorded in the centre of the Site. The allotments were split into two parcels, bisected by a belt of orchard. The allotments were privately owned, and comprised a mix of ornamental species, vegetables, fruit and grasses. Abundantly occurring species such as apple, sweet pea *Lathyrus odoratus*, lavender *Lavandula* sp., poppies *Papaver* sp., buddleia *Buddleja davidii*, radish *Raphanus sativus*, fig *Ficus* sp., raspberries *Rubus idaeus*, sunflower *Helianthus annuus*, tomato *Solanum lycopersicum*, wall barley and bind weed *Convolvulus arvensis*. Small shed structures were found throughout the allotments. An apiary was noted in the southeast of the allotments (see **Appendix A, Figure 1** and **Appendix B**).

**4.31** A small pond was recorded within the southern allotment parcel. The pond was approximately 0.5m x 0.5m, lined and lacked any vegetation and was therefore in poor condition. An additional small pond was located within southeast of the allotments and was approximately 1m x 1.5m. Duckweed *Lemna minor* was recorded within the pond. This pond was also considered to be in poor BNG condition.

### UKHab secondary code 81 – Ruderal or ephemeral

**4.32** Small areas of ruderal/ephemeral vegetation were associated with the allotments, the new housing estate in the south of the Site and Tiny Forest Park also in the south of the Site. These areas were dominated by bristly oxtongue, false oat grass, creeping thistle, nettle and pineapple weed. False oat grass was abundant. Frequent were rosebay willowherb *Chamaenerion angustifolium*, cleavers, meadow

foxtail, creeping buttercup, cow parsley, curled dock and guelder rose. Occasional species included square-stalked willowherb *Epilobium tetragonum*, wall barley, cotoneaster, soft brome. Rare was broom *Cytisus scoparius*. These areas were small and isolated and considered to be in a poor BNG condition.

## Individual trees

**4.33** A number of individual trees are found throughout the whole Site. The majority of trees are located within the south of the Site, associated with Tiny Forst Park and around residential areas. A number of young planted trees were also recorded to the south of Dorcan Way Play Park in the north of the Site. Trees were also located within the west of the Site, on industrial land and adjacent to pavements. Few scattered trees were recorded in the centre of the Site, associated with the large parcel of other neutral grassland and mixed scrub. Young tree planting within the two parks included a number of fruit trees, such as pear, cherry, plum and apple.

**4.34** Large mature trees were recorded within Tiny Forest Park, including a number of large London plane trees. Semi-mature small leaved lime *Tilia cordata* trees were abundant to the north and south of Marlowe Avenue. Other species noted throughout the Site included copper beech *Fagus sylvatica*, field maple, white poplar *Populus alba*, weeping willow *Salix babylonica*, crack willow *Salix fragilis*, pedunculate oak, ash, rowan, sycamore, blackthorn, silver birch, whitebeam *Sorbus aria*, alder *Alnus glutinosa*, hornbeam, and grey willow.

## Invasive species

**4.35** During the habitat survey, cherry laurel *Prunus laurocerasus* and cotoneaster *Cotoneaster* sp. were recorded within the southeast of the Site within tree lines, the latter of which is listed on the Schedule 9 invasives list of the Wildlife and Countryside Act [See reference 5] (see **Appendix A, Figure 1** and **Appendix B**).

## Protected, notable and priority species

**4.36** The desk study and habitat survey identified the following protected or notable species/species groups as potentially present at the Site or immediate surroundings.

### Bats

**4.37** The biological records search from Wiltshire & Swindon Biological Records Centre identified the following species within 2km of the Site:

- Common pipistrelle *Pipistrellus pipistrellus*
- Noctule *Nyctalus noctula*
- Soprano pipistrelle *Pipistrellus pygmaeus*
- Brown long-eared bat *Plecotus auritus*

**4.38** The closest record was of a common pipistrelle, located 676m east of the Site. The Site offers foraging and commuting corridors via hedgerows and woodland. Few trees and buildings throughout the Site had bat roost suitability (BRS). The woodland parcels within the Site provide suitable roosting habitat for bat species, particularly the strip of woodland which forms the eastern edge of the central area of the Site, as this appeared to be unlit on its western edge. The hedgerows provide suitable habitat for foraging and commuting bats. The hedgerows were of a varied height and species composition which extends their suitability to a wide range of bat species.

**4.39** A number of trees and buildings were recorded to have BRS for roosting bats (see **Appendix A, Figure 4**):

- T1 – PRF-I: Crack willow with loose bark present on the trunk at the southeastern aspect of the tree.
- T2 – PRF-I: Semi-mature small-leaved lime with loose bark on the terminal of a broken limb at the southern aspect
- T3 – PRF-I: Semi-mature ash with two broken limbs which may lead to cavities on the southern aspect
- T4 – PRF-M: Mature black poplar with crack on the underside of a branch at the eastern aspect
- T5 – PRF-I: Semi-mature field ample with limb wound on the underside of a branch at the southern aspect
- T6 – PRF-M: Mature pedunculate oak with rot hole at the south-facing side of a limb at the western aspect

**4.40** Two small sheds located within the allotments had BRS. The shed to the east of the allotments (B1) had small gaps between the felt roof and wooden planks which formed the shed walls at the eastern aspect and is considered of low suitability to roosting bats. The small shed within the centre of the allotments (B2) had a gap between the corrugated roof and corrugated walls which was considered to be of low suitability for roosting bats; however, this shed is also considered to be suitable for hanging bats.

**4.41** The neutral grassland provided suitable foraging habitat for bats due to the extensive invertebrate assemblage likely to be supported by the grassland.

## Badgers

**4.42** The desk study identified the closest record of badger 1.4km west from the Site. No evidence of badger was recorded during the habitat survey. The Site contains small areas of woodland which provide suitable sett building habitat, in addition to the hedgerow network, due to the width and density of hedgerows. The central hedgerow which bisects two other neutral grassland fields connects to the eastern strip of woodland and therefore suitable foraging, commuting and sett building habitat is located centrally. The hedgerows located within the west of the Site are largely associated with busy roads and are subject to disturbance thus restricting their suitability for badgers.

## Birds

**4.43** The desk study identified records of the following species within the Site:

- Black-headed Gull *Chroicocephalus ridibundus*
- Kestrel *Falco tinnunculus*
- Herring Gull *Larus argentatus*

**4.44** Additionally, several species of interest were recorded within 2km of the Site, including:

- House sparrow *Passer domesticus*
- Red kite *Milvus milvus*
- Ring ouzel *Turdus torquatus*
- Redwing *Turdus iliacus*
- Spotted flycatcher *Muscicapa striata*

**4.45** The woodland, hedgerows, grassland, trees, and scrub present within the Site provide suitable habitat for common and widespread urban and garden birds. As the woodland parcels are small and isolated, there is limited opportunities for woodland bird species, albeit woodland birds may utilise the Site. During the habitat survey, a rookery was noted within the eastern woodland belt. Song thrush, robin, blackbird, goldfinch, wren, wood pig, blue tit, starling, and fieldfare were noted utilising the Site (see **Appendix A, Figure 1** and **Appendix B**).



**4.46** As a whole, the Site is likely to be valuable to breeding birds due to the variety of supporting habitats present especially to passerine birds and foraging habitats.

## Amphibians

**4.47** A record of common frog was returned from the desk study, located 128m to the northwest of the Site. No records of great crested newt (GCN) were returned from the last 10 years; however, a protected species licence for GCN was applied for in 2020, approximately 1.07km north of the Site, therefore it is assumed GCN are present in the wider landscape. The Site did not support extensive aquatic habitats to support amphibian species. Small ponds were recorded within the allotments, however these had little vegetation and were very small in size. No other ponds were recorded on Site and from a review of aerial imagery one waterbody is present within 500m of the Site; therefore, pond creation would significantly improve the suitability of the Site for amphibians. The area of interest provides suitable terrestrial habitat for great crested newt in the form of long sward grassland, scrub, woodland, and hedgerows.

## Reptiles

**4.48** No records of reptiles were returned from the 2km desk study from the last 10 years. The area of interest within the Site includes habitat of high suitability for reptiles, including long sward grassland, scrub, woodland, hedgerows and brash piles (see **Appendix A, Figure 1** and **Appendix B**). The ditch also provides suitable habitat for grass snake when the conditions are wetter and the ditch holds water.

## Dormouse

**4.49** No records of dormouse *Muscardinus avellanarius* were returned from the desk study. The closest protected species licence for hazel dormouse was located 16.3km southeast of the Site in 2015. The Site contains habitat of suitability for dormouse in the form of hedgerows, woodland and scrub, particularly within the area of interest. However, given the lack of connectivity of the Site to areas of woodland larger in size and the urban context of the Site, it is considered unlikely that the Site supports hazel dormouse.

## Hedgehog and other small mammals

**4.50** The data search returned a record of hedgehog 22m northwest from the Site, alongside polecat 913m from the Site boundary. The habitats on Site included grassland with a varied sward height as well as mixed scrub and tall ruderal vegetation, providing suitable commuting and foraging habitats for hedgehogs. It is considered unlikely that polecat utilise the Site, given its urban context and isolation from wooded areas. Evidence of rabbit (droppings) were noted within the central neutral grassland area.

## Otter and water vole

**4.51** No records of otter or water vole were returned from the desk study; however, it has been noted that otter sightings have occurred in the River Cole [\[See reference 6\]](#), located 0.02km to the north of the Site. Holt-building habitat was not present within the Site, and it considered unlikely that otters utilise the Site for breeding. However, the site, particularly the area of interest, contains habitat suitable for foraging and commuting badger, such as hedgerows, long grassland and woodland.

**4.52** Water vole has also been recorded within Swindon [\[See reference 7\]](#). The ditch within the area of interest is not considered suitable for water vole as it was dry at the time of survey and did not have abundant marginal vegetation.

## Invertebrates

**4.53** The data search returned records of a number of invertebrate species within the 2km search area, including wall moth which was located 777m west of the Site. A record of common darter was located within the Site. The central area of the Site provides suitable habitat for invertebrates due to the abundance of nectar and pollen sources in scrub, hedgerow, grassland and woodland habitats. Within this area, common darter, buff-tailed bumblebee, meadow brown *Maniola jurtina* and green grasshopper *Omocestus viridulus* were noted (see **Appendix A, Figure 1** and **Appendix B**). The northern areas of neutral grassland also provided suitable pollen and nectar sources for invertebrates and insect hotels were present in these areas. The allotments within the centre of the Site provide a variety of food sources for insects, due to the range of horticultural and crops present including fruit, vegetables and ornamental plant species. Areas of introduced shrub provide limited resources for invertebrates to the south of the Site.



## Assessment against Wiltshire and Swindon's Wildlife Site guidance

**4.54** The central area of the Site consisted of habitats of interest, including woodland, hedgerow, scrub, individual trees and neutral grassland. Together, these habitats form an established and structurally diverse habitat mosaic, which provides suitable habitat for a number of species; nesting passerine birds within scrub, ground nesting birds nesting in tussocky grassland, reptiles and small mammals using dense scrub and tussocky grass for shelter, ecotones between grass and scrub providing basking and foraging habitat for reptile, foraging and commuting bats utilising the hedgerows, are foraging and commuting larger mammals, such as badger and otter.. This area also provides a sizable area of accessible greenspace amongst a highly urbanised area.

**4.55** The neutral grassland within the area of interest is larger than 0.5ha and situated within the urban area of Walcot, Swindon. Under HM3 Urban sites, 20% of a habitat criteria threshold must be met in order for a site to be suitable for designation. Regarding the neutral grassland and HG3 Semi-natural sites with high species diversity, 20% of the threshold would require three species to occur occasionally through the sward. A total of four indicator species from List 5 are present, which is over 20% of the threshold relating to criterion HG3 that is required to meet the HM3 Urban sites criteria. Therefore, the area of neutral grassland within the centre of the Site meets the selection

**4.56** In isolation, the habitats within this area do not meet the selection criteria for individual habitats. The woodland does not meet the criteria thresholds for criteria HW1-HW4, the scrub does not meet the HW5 Scrub stands of biodiversity importance; the hedgerows do not meet the HW6 Ancient or species rich hedgerows or HW7 Hedgerows providing continuous cover and connection criteria; the neutral grassland does not contain enough frequently occurring indicator species to meet the HG2.2 Species rich neutral grassland habitat criterion, nor HG3 Semi natural grassland sites with high species diversity and HG4 Semi-natural grassland sites with moderate species diversity.

**4.57** With appropriate management, these habitats have potential to become more species rich and biodiverse over time. As the Site is surrounded by new residential and industrial development, any future increase in recreational pressure as a result of development should be absorbed by the provision of open space and green infrastructure in least sensitive habitats, which should ensure the protection of sensitive biodiverse features.

**4.58** The area of interest does not meet the HM1 Priority habitat mosaics as two priority habitats need to be present to meet this criterion, nor does the area of interest meet HM2 Other habitat mosaics due to the number of indicator species not meeting the threshold. Further details can be found in the Site proforma in **Appendix B**.

**4.59** The area of interest, alongside Swindon RFC, Tiny Forest Park and Dorcan Way Play Park lies within the ACB layer, with the relevant measure being to 'Create and Improve Habitats for Nature on Our Doorstep', thus enforcing the importance to protect and enhance the habitats within the grassland that meet the selection criteria for HM3. Management strategies outlined in the proforma can also be applied to areas within and outside of the area of interest in order to improve habitats for biodiversity and enjoyment of nature by residents. Please see appendix C for more details.

## Chapter 5

# Conclusions and Recommendations

## Conclusions

### Designated sites

**5.1** Statutory designations within 5km of the Site boundary included five Sites of Special Scientific Interest (SSSIs), and seven non-statutory Wildlife Sites.

**5.2** The closest SSSI is Coate Water, located 2.1km southeast of the Site. It is designated for its diverse wintering bird populations, and habitat mosaic, comprising large waterbodies, woodland and hedgerows. The Site does not contain waterbodies or reedbeds that would support the breeding and wintering bird assemblages within the SSSI. The bird species present are largely wetland bird species, such as the Eurasian spoonbill *Platalea leucorodia* and red-throated diver *Gavia stellata*, which are considered unlikely to rely upon habitats present within the Site; however, species such as purple heron *Ardea purpurea* may utilise the grassland within the area of interest for foraging habitat.

**5.3** Coate Water SSSI is separated from the Site by residential dwellings and main roads including the A4259 and larger areas of green space are located to the south of Coate Water SSSI, including Burderop Wood SSSI which is more likely to be utilised by foraging birds. The Site is considered of low value for the bird assemblage within the SSSI; however, it is not possible to rule out the use of the Site by designated bird species given its proximity to the SSSI. Therefore, further survey effort is recommended.

**5.4** Old Town Railway Cutting, Swindon SSSI and Great Quarry Swindon SSSIs are designated for their nonmarine bivalves and molluscan fauna respectively. Both SSSIs are also designated for their diverse sediments. It is considered unlikely that the Site supports suitable habitat for nonmarine bivalves and molluscan fauna and therefore there is not considered to be an impact pathway from future development proposals at the Site and the SSSIs.

**5.5** Okus Quarry SSSI is designated for its geological interest. As the Site does not support similar habitat of geological interest, it is considered that there will be no impact pathway to Orkus Quarry SSSI as a result of potential development at the Site.

**5.6** Burderop Wood SSSI is located 34km south of the Site. The SSSI is designated for wet woodlands and ash woodlands, neither of which are present on Site. Given the distance and lack of functional linkage between the SSSI and the Site, no potential impacts are predicted as a result of the proposed development.

**5.7** The River Cole Wildlife Site is located adjacent to the north of the Site at its closest point. There are no hydrologically connected waterbodies or watercourses within the Site, however, there is a wet ditch present within the area of interest. The ditch does not appear to be hydrologically connected to the River Cole. However, given the proximity of the Site to the Wildlife Site, it is possible the Wildlife Site may be indirectly affected through pollution and runoff as a result of the proposed development. Standard best practice measures would ensure that potential impacts are negated.

**5.8** The remaining Wildlife Sites: Great Copse, Kingshill Canal and Old Railway, Stratton Wood, Groundwell Scrub, Groundwell Farm Copse and Groundwell Marsh are all located over 2km from the Site and are well separated from the Site by areas of residential and industrial development and are considered unlikely to be affected by direct or indirect effects of proposed development at the Site.

## Mitigation

**5.9** Appropriate mitigation measures to avoid impacts on adjacent designations will include following best practice construction measures to avoid potential impacts such as contamination. This includes:

- Secure storage and safe disposal of any materials and substances to prevent accidental contamination.
- Prevention or reduction of dust through timing of works or damping down where required.
- Control of surface water runoff, including from damping down, to prevent contamination of nearby habitats and designated Sites.

**5.10** Trees that are to be retained within close proximity of the Site will require protection in line with BS 5837:2012: Trees in relation to design, demolition and construction, to ensure that they are not damaged as a result of any proposed works such as through root compaction.

## Habitats

**5.11** There were a range of habitats present on Site. The central area of interest comprised neutral grassland, mixed scrub, bramble scrub, lowland mixed deciduous woodland and hedgerows. Hedgerows were also located throughout the Site, alongside individual trees. Modified grassland and introduced shrub were associated with amenity areas, including Tiny Forest Park and Dorcan Way Play Park, these habitats were also located adjacent to pavements within the south and west of the Site.

**5.12** The habitats of higher ecological value included:

- Neutral grassland located in the centre and north of the Site;
- lowland mixed deciduous woodland, located in the centre and northwest of the Site;
- mixed scrub, located in the south and centre of the Site;
- hedgerows, located throughout the Site; and
- individual trees, located throughout the Site.

## Retention of habitats

**5.13** Any proposed development should seek to focus on areas of low to negligible ecological value, such as existing hardstanding or modified grasslands to avoid the loss of habitats of high ecological value, including woodland, trees, mixed scrub, neutral grassland and hedgerows. To avoid impacts on adjacent, retained habitats of high ecological value, the mitigation measures outlined in paragraph 5.5 and 5.6 will be required. Additional mitigation measures including woodland buffer zones and root protection zones for trees and hedges should also be implemented during the construction phase.

**5.14** Habitats of high and medium distinctiveness, namely woodland, hedgerows, neutral grassland, mixed scrub and individual trees throughout the Site, should be retained given their importance to the ecological network in a highly urbanised environment. Management strategies detailed in the proforma (**Appendix C**) should be implemented to improve the suitability of these habitats for protected species further. These include:

- Implementation of woodland buffer zones, and management techniques such as coppicing and invasive species control.

- Retention and extension of the hedgerow network throughout the Site. Implementation of buffer zones to protect the root protection zone (RPZ) of the trees and hedgerows.
- Tree planting, for woodland extension, woodland creation, hedgerow trees, standard trees and orchards.
- Creation of pond or wet ditches throughout the Site to contribute to a site-wide habitat mosaic.
- Relaxed mowing regimes of the neutral grassland to create a longer and more complex sward.

**5.15** Green spaces, such as Tiny Forest Park and Dorcan Way Play Park contain modified grassland habitat, which although is of low distinctiveness provides some opportunities for wildlife, such as invertebrates and foraging bird species. Management recommendations detailed in the proforma should be considered and implemented where possible to ensure the biodiversity potential of these areas is met. For example, a relaxed mowing regime of the grasslands would improve the suitability of these areas for foraging and sheltering reptiles and small mammals, foraging opportunities for bat species and increased pollen and nectar sources for invertebrates.

## Wildlife Site Assessment

**5.16** One area of the Site, located in the centre, is recommended to be progressed through the designation process based on its eligibility under the Wildlife Site criteria and its potential contribution to the Wildlife Site network (**Appendix A, Figure 1**). The area of interest consists of grassland which meets the selection criteria for HM3 Urban sites.

**5.17** The area of interest provides a large and accessible semi-natural greenspace within a heavily urbanised environment that is comprised of multiple habitats of biodiversity value.

**5.18** Any upcoming proposed development at the Site should, where possible, seek to retain and increase open space and green infrastructure which can help to protect these sensitive biodiverse features. Buffer zones are recommended to protect hedgerow and woodland habitats, including the protection of roots and avoidance of damage to the canopy layers. Management of the grassland habitat would contribute to a more species rich sward with tussocky areas, thus improving its suitability to ground nesting bird species, invertebrates, reptiles, foraging bats and commuting small mammals.

## Local Nature Recovery Network

**5.19** Should the habitats within the centre of the Site be subject to favourable management strategies, detailed in the proforma (see **Appendix B**), the area has the potential to become an Area of Particular Importance for Biodiversity (APIB), thus expanding the Wildlife Site and Local Nature Recovery Network within the Borough. The Site is well located to provide stepping stone habitat for wildlife within a highly urbanised area.

## Recommendations

### Phase 2 survey recommendations

**5.20** The Site has suitability for protected species, for example:

- There are a number of trees throughout the Site which have features suitable for roosting bat species, as do some small sheds within the allotments;
- long sward grassland provided suitable habitat for birds, reptiles, badger, great crested newt and invertebrates;
- Wooded habitat was present which provided suitable sett-building habitat for badger; and
- nesting birds were recorded during the habitat survey, namely rooks within the belt of woodland within the area of interest.

### Bats

**5.21** Legal protection afforded to bats and their roosts is summarised in **Appendix E**. In summary all bats and their roosts are subject to the highest level of protection afforded to species in the UK as European Protected Species (EPS).

### Habitat and mitigation

**5.22** The Site supports trees and buildings which provide roosting opportunities for bat species. Should these features be proposed for removal under the proposed schemes, trees categorised as potential roosting feature for individual bats (PRF-I) will require ecological supervision during soft felling of the tree/s. Should trees with potential roosting features for multiple bats (PRF-M) be removed, further survey effort in the form of emergence surveys will be required to identify whether bat roosts will

be affected, and if so, the type of roost and implications for mitigation and licensing. These surveys require three visits between May and September and include the use of night vision aids. Should a bat roost be identified, a protected species licence for bats will be required for any works that will cause damage or disturbance. Bat boxes should be implemented to replace any roosting features lost.

**5.23** Suitable foraging and commuting habitat for bats within the Site, namely hedgerows and neutral grassland, are also present. Proposals should seek to retain foraging and commuting habitat to bats. Should hedgerows be significantly impacted under the proposed scheme, activity surveys will be required. These surveys take place between April and September inclusive. The survey effort required would be informed by the scale and design of development proposals, but may likely require monthly deployment of static detectors, and three night-time bat walks. New hedgerow or tree line planting should take place to replace any foraging and commuting habitat lost.

## Nesting birds

**5.24** Birds and their nests are protected by the Wildlife and Countryside Act, 1981 (as amended) detailed in **Appendix E**.

## Habitat and mitigation

**5.25** The Site supports hedgerows and woodland which provide suitable bird nesting habitat, and long sward grassland within the centre of the Site which provides suitable habitat for ground nesting birds such as skylark and lapwing, local records for which were identified by the desk study.

**5.26** Where possible, proposals should seek to retain these habitats. Where impacts to bird nesting habitat cannot be avoided, breeding bird surveys may be required to inform impacts and identify opportunities to provide mitigation and enhancement. The requirement for, and design of, breeding bird surveys would be dependent on the potential scale of the impact but breeding bird surveys typically involve between 3 and 6 survey visits between March and June inclusive. T

**5.27** Should proposals result in the loss of nesting habitat, the following mitigation measures may be required:

- Clearance of suitable nesting habitat/nesting features to be undertaken between September-February (inclusive) to avoid the nesting season.



- If vegetation/feature clearance cannot be undertaken outside the nesting bird season, an inspection of the vegetation or feature for the presence of nesting birds would be undertaken by a suitably qualified ecologist no more than 24 hours prior to removal. This would then provide a 48hr period for the works to commence prior to another nesting bird check being required.
- If nesting birds are found to be present, works must cease within a suitable buffer zone until the young have fully fledged, and the nest is no longer active (to be confirmed by an ecologist). This would result in delays to the programme, the length of which would be determined by the species present.

## Badger

**5.28** Badger and their setts are protected under the Protection of Badgers Act 1992, summarised in **Appendix E**.

### Habitat and mitigation

**5.29** The Site provided hedgerows and woodlands suitable for sett building, foraging and commuting, alongside taller sward grasslands which represents suitable habitat for foraging. No setts were recorded during the survey; however, areas of woodland were not fully accessible to conduct a detailed badger survey, thus a badger survey is recommended within the Site and a suitable buffer distance of the Site (typically 30-50m). It is an offence to disturb, obstruct, damage or destroy a sett. If a sett is identified in future surveys, the proposals should seek to avoid impacts in the first instance. If impacts cannot be avoided, the requirement for mitigation, compensation and Natural England licensing would depend upon the nature of the impact.

**5.30** The following mitigation measures are recommended during the construction phase to prevent adverse impacts to badger:

- The storage of topsoil or other 'soft' building materials on site should be given careful consideration. Badgers will readily adopt such mounds as setts. To avoid the risk of badgers excavating setts, mounds should be kept to a minimum and any essential mounds covered or fenced to prevent access by badger.
- Excavations should be covered at the end of each working day, and any temporary exposed pipes should be capped to prevent badgers gaining access during the night. Any excavations or deep pits within the construction site that have to be left open overnight should be provided with a means of escape

should a badger enter. This could simply be in the form of a roughened plank of wood placed in the excavation as a ramp to the surface.

- The storage of any chemicals within the Site should be contained in such a way that they cannot be accessed or knocked over by any roaming badgers.

**5.31** The above measures also represent a sensible precautionary approach for other species, including hedgehogs.

## Reptiles

**5.32** Reptiles are protected under the Wildlife and Countryside Act 1981 (as amended), summarised in **Appendix D**.

### Habitat and mitigation

**5.33** Habitats within the Site area, namely the long sward grassland in the centre of the Site, scrub and hedgerows provide suitable foraging, commuting and basking habitat for reptiles. Therefore, there is potential for killing and injury to reptiles during construction.

**5.34** The following mitigation measures will be required during construction to avoid impacts in relation to the reptiles:

- Habitat manipulation – Suitable habitat, particularly longer grassy margins, should be subject to a two-stage vegetation clearance during the reptile active season (April to September inclusive). The vegetation should be cut to approximately 15cm which should encourage reptiles to leave the works area. A second cut to ground level can then be completed once a suitably qualified ecologist has checked the vegetation for reptiles. If a reptile is found, the ecologist will move the reptile out of the works area into suitable habitat, and the works will cease until the suitably qualified ecologist advises further.
- Destructive search - a search of habitat features suitable of reptiles under ecological supervision. Any reptiles located during this process would be relocated to areas of suitable habitat in the vicinity

## Great crested newt

**5.35** Legal protection afforded to GCN and their places of shelter is summarised in **Appendix D**. In summary, GCN are subject to the highest level of protection afforded to species in the UK as European Protected Species (EPS).

## Habitat and mitigation

**5.36** The long sward grassland, hedgerows and woodland provide suitable terrestrial habitat for sheltering and commuting GCN. The small waterbodies located within the allotments were not suitable aquatic GCN waterbodies due to their size and lack of vegetation. One pond is located within 500m of the Site, and it is recommended that all ponds within 500m are subject to an eDNA survey. Should the eDNA result be positive, the following mitigation measures should be implemented to avoid adverse impacts to GCN during the construction phase:

- Suitable habitat, particularly longer grassy margins, should be subject to a two-stage vegetation clearance during the active season (April to September inclusive).
- The vegetation should be cut to approximately 15cm which should encourage reptiles to leave the works area.
- A second cut to ground level can then be completed once a suitably qualified ecologist has checked the vegetation.
- Terrestrial habitats such as woodlands, hedgerows and scrub should also be subject to avoidance and mitigation measures to prevent harm to GCN during hibernation period (October to February, inclusive).
- If a GCN is found works will cease until the suitably qualified ecologist advises further.

## Invertebrates

**5.37** A number of protected and notable species of invertebrate were returned from the desk study, including the wall moth, knot grass moth and common dater. A number of invertebrates were recorded during the habitat survey within the neutral grassland of the area of interest, including common dater, buff-tailed bumblebee and green grasshopper.

## Habitat and mitigation

**5.38** Due to the presence of long sward neutral grassland, hedgerows, and scrub within the centre of the Site, a targeted invertebrate survey is recommended to understand the species assemblage within this area. These surveys should be carried out by a technical expert and may include sweep netting and transects.

## Wildlife Site Recommendations

**5.39** The area of other neutral grassland appeared to be unmanaged and did not have a high number of forb or grass species within the sward. The dominant grass species was false oat grass, which was consistently abundant throughout the sward, forb species, such as creeping cinquefoil were also abundantly present throughout the sward; however, the number of species within a quadrat did not exceed 10 throughout the parcel. Species indicative of an improved grassland, such as white clover and perennial rye grass were only present occasionally, thus indicating that the sward has not recently been modified / enriched. The moderate species richness is likely a result of a lack of management, which has resulted in the dominance by few species. Therefore, management of these areas should focus on techniques to improve the floristic assemblage, such as a relaxed mowing regime which includes a hay cut from late July to mid-August, followed by a cut towards the end of October. Additional over-sowing with appropriate species rich meadow seed mixes would also improve the species richness of the sward and therefore increase the invertebrate assemblage of the sward. As part of a relaxed mowing regime, alternate cutting should be implemented, with some areas of grassland left uncut to retain tussocky structure which provides benefits for small mammals, invertebrates and in turn predators, such as barn owl, and kestrels. The hedgerows within the area of interest were dense and comprised of native species. The hedgerows were unmanaged; therefore, it is recommended that hedgerows are trimmed within the winter months to maintain their structure and avoid growing into a tree line which may become gappier in nature in the future.

**5.40** The scrub within the centre of the Site should be managed to prevent succession into a woodland in order to maintain the habitat mosaic within the central area of the Site. Trimming of scrub should occur in the winter months, outside of the nesting bird season. Any brash that is created as a result of trimming, should be kept as deadwood to provide refugia for reptiles and invertebrates.

## Habitat management recommendations

**5.41** Areas of other neutral grassland located in the north of the Site were subject to a relaxed mowing regime and had a longer sward height than the modified grassland within the area. The small areas of neutral grassland were not considered species rich due to less than 10 species present within a quadrat. Therefore, it is recommended that these areas are over-seeded with a native species meadow mix in order to improve the species richness, thus improving its suitability for a wider range of invertebrates, such as the jersey tiger and buff ermine moth.

**5.42** Areas of scrub within the southeast of the Site should be managed to maintain their structure and prevent early successional secondary woodland. The scrub habitat provides important nesting habitat for species such as whitethroat and dunnock, which has been recorded in the locality.

**5.43** Areas of woodlands should be retained and managed in order to promote structural diversity and species richness, through measures such as coppicing and underplanting. The areas of woodland would likely score poor condition under BNG condition assessments due to the few native species present and lack of structure; therefore, implementing the management strategies detailed in the site proforma in **Appendix C** would improve the woodland condition across the Site.

**5.44** Hedgerows are located throughout the Site and are Priority Habitats and should therefore be retained as part of masterplanning. A number of hedgerows within the Site were unmanaged and outgrowing. It is recommended that hedgerows undergo management to retain their dense structure which will improve the suitability of the habitat for nesting bird species and improve the wildlife corridor system.

**5.45** Individual trees throughout the Site should be retained and root protection zones should be implemented to avoid adverse impacts to the root system during the construction and operational phases of development as a result of soil compaction.

## Habitat enhancements recommendations

**5.46** The Marlowe Avenue Regeneration Area lacks wetland habitat, such as ponds that can support amphibians, reptiles, invertebrates, birds and bats. The land within the area can be enhanced to fill this ecological niche through pond provision in green areas, such as Tiny Forest Park, Dorcan Way Play Park and within the central green area of interest. These ponds should be graded in order to facilitate access for wildlife and planted with wildlife friendly planting for food sources and water quality.

**5.47** Wildlife friendly planting should be incorporated within the wider area, particularly in amenity areas to provide stepping stones of green space for food sources and shelter for a variety of species. Areas of ornamental shrub should be planted with species attractive for invertebrate species and selected for climate resilience.

**5.48** The Site could be enhanced with a diverse mix of locally appropriate fruiting and orchard species of trees throughout to benefit biodiversity, alongside native tree species which are climate tolerant.

## Next steps

**5.49** Any future Masterplan for development of this preferred site allocation should take into account the survey findings with regards to the ecological value and suitability for designation of the central area of neutral grassland as a Wildlife Site. All habitats of high ecological value should be retained and protected. Masterplanning and development proposals should take account of the recommended further surveys and opportunities to avoid impacts through retention and protection of habitat, and sensitive design. Enhancement opportunities are present for habitats of importance, such as neutral grassland, scrub, woodland and hedgerows, to avoid or minimise the potential threat of habitat loss and fragmentation associated with development, and the threat of disturbance of species and degradation of habitats, which may result from local increase in residential housing and associated recreational pressures.

**5.50** As part of the development planning process, planning applications should be subject to an Ecological Impact Assessment (EclA). This should be conducted at an early stage to inform the Masterplan and subsequent detailed design stages. An initial Preliminary Ecological Assessment will ascertain which habitats, and protected species may be affected as part of forthcoming proposals and set out the primary design solutions, Phase 2 survey requirements and headline planning requirements (such as the preparation of a Habitat Management and Maintenance Plan (HMMP), Construction Environmental/Ecological Management Plan (CEMP)). It should include, but not be restricted to, the ecological receptors highlighted as part of this review.

**5.51** The Site has suitability for protected species. Subject to scheme design, ability to avoid and protected features, and potential impacts further phase 2 surveys may be required. These surveys include, but are not limited to:

- Emergence surveys for trees and buildings with potential roosting features for multiple bats/
- Detailed badger surveys throughout the Site, particularly in proximity to woodland, hedgerow and scrub habitats.
- Nesting birds were recorded during the habitat survey, namely rooks within the belt of woodland within the area of interest, therefore nesting bird surveys are required should vegetation clearance be unavoidable.

# Appendix A

## Figures

**A.1** Baseline UKHab Survey Map

**A.2** Access limitations Plan

**A.3** Habitats Meeting Wildlife Sites Criteria Map

**A.4** Preliminary Roost Assessment Results





## Legend

Site boundary

Target note

Individual tree

## UKHab (baseline) habitat linear

Ditches

Line of trees

Native hedgerow

Native hedgerow - associated with bank or ditch

Native hedgerow with trees

Non-native and ornamental hedgerow

Species-rich native hedgerow with trees

## UKHab (baseline) habitat area

Allotments

Blackthorn scrub

Bramble scrub

Developed land; sealed surface

Hawthorn scrub

Intensive orchards

Introduced shrub

Lowland mixed deciduous woodland

Mixed scrub

Modified grassland

Ornamental lake or pond

Other neutral grassland

Ruderal/Ephemeral

Sustainable drainage system (SuDS)

Traditional orchards

Vegetated garden







Legend

- Site boundary
- No access permitted
- Surveyed from afar







**Legend**

-  Site boundary
-  Habitats meets Local Wildlife Site criteria
-  Area of interest







## Legend

Site boundary

## Bat Roost Suitability (BRS) structure

Low

Negligible

## Bat Ground Level Tree Assessment (GLTA)

Potential Roosting Feature - PRF - multiple

Potential Roosting Feature - individual

None



## Appendix B

### Figure 1 Target Notes

**B.1** Target Note 1 – Apiary within allotments

**B.2** Target Note 2 – Blackbird, wren, wood pigeon and blue tit noted

**B.3** Target Note 3 – Log and brash piles for reptiles. Song thrush, robin, blackbird and goldfinches noted

**B.4** Target Note 4 – Rookery within belt of deciduous woodland

**B.5** Target Note 5 – Common darter, painted lady, green grasshopper, brown skipper and buff-tailed bumblebee noted

**B.6** Target Note 6 – Ditch dry at the time of survey

**B.7** Target Note 7 – Brash pile suitable for reptiles

**B.8** Target Note 8 - Starling foraging and blackbird singing

**B.9** Target Note 9 – Dunnock noted adjacent to scattered hawthorn

**B.10** Target Note 10 – Cherry laurel noted

**B.11** Target Note 11 – Cotoneaster noted

**B.12** Target Note 12 – Fieldfare noted

## **Appendix C**

### Assessment against Wiltshire and Swindon Wildlife Site Criteria – Site proforma

# Individual Record Report for Swindon LoWS Survey Proforma

**Submitted By: calista.collins@landuse.co.uk\_LUC**

**Submitted Time: 10 July 2026 11:59**

**Creation Time: July 10, 2026 12:01 PM**

## Site Information

LUC ID:

LUC\_7

Reg18 Reference ID:

18-024

Site Name:

Marlowe Avenue

Grid reference:

SU1739985276

Area (ha):

52.03

Ownership:

Swindon Borough Council and Private Ownership

Management provider:

Private landowner

Designated site within 50m of the Site boundary:

No

Total area of Designated sites overlapping Site Allocation (ha):

0

Regulation 18 Representation from Natural England:

“Natural England has no objection to the principle of development in the location. We note that there is a block of habitat located within the allocation and further information is required to ascertain the quality of this habitat and how it would be retained within the development. The strategic masterplan should include consideration of landscaping measures and requirement for green infrastructure.”

Located within an Area of Particular Importance for Biodiversity (APIBs):

No

Located within an Area that Could Become of Importance (ACB):

Yes - Create and Improve Habitats for Nature on Our Doorstep

Ancient woodland on Site:

No

Ancient woodland within 200m of Site:

No

Irreplaceable habitat - PHI on Site:

No

Irreplaceable habitat - PHI within 200m of Site:

PHI\_Irreplaceable\_200

Priority habitat on Site:

No

Priority habitat within 200m of Site:

Rivers, Coastal and floodplain grazing marsh, Deciduous woodland



Notable species within 30m of Site:

Long-eared Bat species, Hedgehog, Common Dart, Sparrowhawk, Common Toad, Grey Wagtail, Great Burnet, Black-headed Gull, Herring Gull, Kingfisher, Kestrel, Pipistrelle

Invasive species within 30m of Site:

No

Known projects/initiatives:

N/A

### Survey Data

Surveyor:

CC

Weather:

Sunny

Access:

Open access

Date:

22

Month:

6

### Summary of site:

The Site is located in the east of Swindon. An area within the centre of the Site was assessed against the Local Wildlife Site guidance, this area is hereafter referred to as 'the interest area', due to the habitats present within the interest area. The interest area comprised a community allotment to the south, a small belt of orchard which separated the two allotment parcels, neutral grassland which dominated the interest area, areas of dense scrub, a belt of woodland which formed the eastern boundary of the interest area and native hedgerows. These habitats

were unmanaged at the time of survey. Nythe Community Allotments was not publicly accessible. However, access was granted by Nythe Parish Council for the purpose of carrying out the survey. The remainder of the interest area was openly accessible to the public and appeared to be utilised by dog walkers due to the presence of desire lines.

The remainder of the Site comprised a mix of land uses and as such comprised a mixture of public and private land. Other publicly accessible areas within the wider Site included Tiny Forest Park, Dorcan Way Play Park, and green spaces surrounding Marlowe Avenue, Ringwood Close, Railton Way, Drakes Way, and Dorcan Way. Swindon Rugby and Football Club was also publicly accessible.

#### Description of on-site habitats:

A variety of habitats were recorded throughout the Site. The habitats of highest distinctiveness in regard to Biodiversity Net Gain and habitats of most value for retention included lowland mixed deciduous woodland, although areas of this habitat were small and often isolated, traditional orchards and hedgerows. The belt of orchard is not considered to meet the UKBAP Priority Habitat definition for Traditional Orchard and is therefore not considered a Priority Habitat; however, the lowland mixed deciduous woodland and hedgerows within the interest area are considered to be Priority Habitats. Medium distinctiveness habitats included other neutral grassland, mixed scrub, a large proportion of both was recorded in the centre of the Site, individual trees and ponds. The ponds were very small and in poor condition. Habitats of lowest distinctiveness, due to low species diversity and lack of structural complexity included modified grassland, which was located throughout the Site, ruderal/ephemeral vegetation, bramble scrub, and introduced shrub.

An area of ecological interest, which contained woodland, hedgerows, neutral grassland and scrub habitats with the potential to meet the Wildlife Site selection criteria was located within the centre of the Site, to the north-east of Nythe Community Allotments.

A belt of woodland was located at the eastern edge of the area of interest at the centre of the Site. This woodland was surveyed from afar and appeared to be an outgrown tree line. The woodland comprised mature ash and pedunculate oak approximately 20m tall. Blackthorn bound the woodland to the west and formed the woodland edge. It was not possible to record the ground flora layer due to the thick scrub which bounded the woodland. The woodland did not have a species rich canopy layer as only two species (pedunculate oak and ash) were noted.

Native hedgerows are located throughout the area of interest. Three hedgerows were present within the interest area, forming the western and northern area boundaries, with an additional

hedgerow located within the centre of the area that formed a field boundary. This central hedgerow was associated with a dry ditch was located in the centre of the Site and bisected two other neutral grassland fields. The hedgerow was in good condition, outgrowing and unmanaged at the time of survey and formed a broad dense hedgerow with structural integrity, approximately 4m x 5m. The hedgerow was dominated by blackthorn and hawthorn, with frequent dogwood, bramble and elder. Crack willow was occasional. Plants indicative of aquatic habitat were present to the north of the ditch, including meadow sweet and yellow flag iris.

Another native hedgerow in good condition separated the grassland and allotments from Greenbridge Road and appeared to be managed to maintain its height and structure. The hedgerow was dominated by hawthorn, with frequent bramble, occasional horse chestnut and ash and rare dog rose *Rosa canina*. The ground flora consisted of garlic mustard, bristly oxtongue, prickly lettuce. A native hedgerow in good condition was present to the south of Swindon RFC sports pitch and was dominated by hawthorn, with frequent bramble and blackthorn.

Large areas of mixed scrub were recorded to the east and northeast of Nythe Community Allotments. These areas of scrub were well established and in good condition, with glades present. The scrub parcels were not dominated by a single species, rather field maple, elder, hazel, pedunculate oak, and bird cherry were abundantly present. Rowan was occasionally occurring. Evidence of hazel coppice was also present. Trees were largely 2.5 to 3m in height. Some trees were mature and 4-5m tall. The parcels of scrub were surrounded by other neutral grassland.

A strip of blackthorn scrub was present along the woodland edge, which formed an ecotone between the other neutral grassland and lowland mixed deciduous woodland which forms a section of the Site's eastern barrier. The blackthorn scrub had abundant bramble and occasional hawthorn.

A belt of orchard was located between the two allotment parcels within the centre of the Site, which was managed by the council. The orchard comprised fruit trees such as plum, pear and apple varieties, alongside elder, rowan and hazel. The trees were young and approximately 7cm-10cm diameter at breast height. Tree guards were also present. The ground flora comprised grassland dominated by false oat grass, abundant Yorkshire fog and perennial ryegrass and red fescue, frequent cock's-foot, bristly oxtongue, common sorrel, occasional broad-leaved dock, selfheal, meadow buttercup, creeping bent, nettle, hoary willowherb and bramble. Rare were poppy sp, nightshade, ribwort plantain, common ragwort, prickly lettuce, soft brome and rugosa rose.

A large area of neutral grassland was located within the centre of the Site and surrounded areas of established mixed scrub to the east and northeast of Nythe Community Allotments. The

grassland was dominated by tufted hair grass in the field to the east of the allotments; however, the sward became less dominated by tufted hair grass to the north and west of the grassland parcel and became more dominated by false oat grass. Abundant species included tormentil, creeping bent, cock's-foot, meadow vetchling, common bent and false oat grass. Frequent species included bird's-foot trefoil, meadow foxtail, hoary willowherb and red fescue. Occasional species included Yorkshire fog, wall barley, meadow buttercup, creeping buttercup, meadow sweet, cut leaf cranesbill annual meadow grass and cleavers. Rare species included groundsel, lesser stitchwort, selfheal, field horsetail, white clover and reed canary grass. The grassland appeared unmanaged with a sward height of approximately 60cm. Trodden paths utilised by walkers and dog-walkers were approximately 5cm. Although overall the sward was relatively diverse, there were not 10 or more vascular plants per m<sup>2</sup>. Small brash piles were noted in the sward which provided suitable refugia for reptile species. A number of invertebrates were recorded during the habitat survey including common darter, grasshoppers, buff-tailed bumblebee, red-tailed bumblebee, small white, peacock butterfly and orange tips.

#### Management:

Satisfactory

#### Known/relevant existing site management plan:

N/A - Management of the parks was evident, and grassland swards in these areas were frequently mown for amenity purposes. The central area of council-owned grassland and scrub appeared to be unmanaged, with little evidence of management present at the time of survey. Allotment owners tended to their plots.

#### Opportunities on site:

Mowing regime, Wetland creation / enhancement, Scrub establishment / management, Deadwood habitat creation, Meadow creation, Wildlife friendly planting

Provide a summary of the opportunities for the site to deliver the measures set out within the LNRS ACB in the desk study, in addition to enhancement of the site to contribute towards the Wildlife Site criteria, and finally any general site enhancements which could be delivered to improve the overall ecological value

Management should be supported by monitoring, including the potential impacts of future increase in recreational activity due to development associated with the Local Plan and the potential impact this could have on habitats of high ecological value, such as the grasslands, scrub and woodland within the centre of the Site. Several areas of the Site are located within

the 'Create and Improve Habitats for Nature on Our Doorstep' measure within the ACB.

Woodland opportunities: retain and establish a buffer zone to protect from the construction and operational impacts of any future development. Management of woodland should optimise the structural layers and condition of the woodland may consider coppicing, underplanting, invasive and non-native species control. Management of the buffer zone should target clearly defined habitats whether these are to establish through planned intervention or natural colonization, namely scrub.

Hedgerow opportunities: retention and extension of the hedgerow network around the Site and through any future development should seek to optimise connectivity through the landscape. Provision of a buffer zone to protect the RPZ can both support natural colonisation of scrub and also contribute to widening the hedgerows. Provision of planted trees within the hedgerow would help to contribute to its structural diversity.

Dark corridors: the hedgerows and woodland should remain unlit to maximise their use for shelter, foraging and dispersal of wildlife including nocturnal and crepuscular species.

Wet ditch associated with central hedgerow: retain the wet ditch associated with the hedgerow which separates the two neutral grassland fields with ample buffer to protect the connecting freshwater habitat of the wider landscape e.g. River Cole. The buffer zone should follow the wet ditch along the entire hedgerow.

Tree planting: proposed planting may include, for example, woodland extension, woodland creation, hedgerow trees, standards and orchards. A diverse mix of locally appropriate fruiting and orchard species of benefit to biodiversity should be considered.

Wetland features: creation of new ponds and/or, where appropriate, wet ditches should be integrated to the site-wide habitat mosaic; particularly in juxtaposition with deadwood and brash piles to benefit reptiles, amphibians and invertebrates.

Neutral grassland opportunities: the neutral grassland within the centre of the Site support indicators of unimproved grassland. Where these can be retained from development and from high recreational use (which may cause damage to, and ultimately loss of, their ecological value), positive management to enhance their ecological value can benefit both habitat value (in terms of the BNG metric, for example) as well as promoting pollinator interest, foraging value.

Scrub opportunities: scrub management of the mixed scrub which forms a mosaic with the grassland should be implemented to prevent succession into secondary woodland and optimise



the habitat mosaic across the Site.

Retained grassland management should seek to optimise structural and species diversity, recognising that some areas within the development will be prioritised for biodiversity, some for play and recreation, etc. A relaxed mowing regime of the grassland would allow a longer and more complex sward to improve foraging, commuting and sheltering habitats for a range of species.

Additional comments:

N/A

Threats and disturbances:

Recreational pressure, Redevelopment, Lighting

Additional comments:

Given the site is a preferred site allocation, masterplanning should take into account the opportunities listed above to avoid or minimise the potential threat of habitat loss and fragmentation associated with development, and the threat of disturbance and degradation associated with its long-term occupation. Of particular importance is the opportunity to protect and enhance the central area of the Site, which supports a mosaic of habitats, namely neutral grassland, mixed scrub, hedgerows and woodland. Desire lines have been created through the neutral grassland fields, which are currently confined in extent and narrow reflecting the desired walking routes through the tall grassland. However, should the population in the local area increase or cause heightened recreational pressure on the habitats within the centre of the Site as a result of adjacent development, the quality of the grassland may deteriorate. Therefore, the habitats of high ecological value are at risk of increased footfall and subsequent erosion. Increases in lighting as a result of new development on habitats such as woodland and hedgerows may lead to adverse impacts on crepuscular and nocturnal species, such as bats, badger, and hedgehog through disturbing their usual patterns of movement and use of the Site.

Level of public recreational use:

High

Additional comments:

The Site as a whole supported various different uses. The parks and Nythe Community Allotment within the Site were subject to high recreational use during the survey and included benches for residents to use for relaxation. The neutral grassland and mixed scrub mosaic did not appear to have high levels of recreational use, and paths were well trodden but narrow. Small amounts of litter were noted within the neutral grassland sward along path edges.

Management recommendations:

Given the location of the site in proximity to residential areas and subsequent high footfall, there are signs that some habitats are being negatively impacted, for example, through littering and footpath soil erosion. Positive future management should look to reduce these impacts through footpath delineation and maintenance, provision of bins and improved signage of the importance of the habitats within, and adjacent to, the site.

The scrub within the centre of the Site should be managed to prevent succession into a woodland in order to maintain the habitat mosaic within the central area of the Site. Trimming of scrub should occur in the winter months, outside of the nesting bird season. Any brash that is created as a result of trimming should be kept as deadwood to provide refugia for reptiles and invertebrates. The other neutral grassland appeared to be unmanaged at the time of survey. It is recommended that this area should be subject to a relaxed mowing regime which includes a hay cut from late July to mid-August, followed by a cut towards the end of October. Green hay can also be transferred from an adjacent species rich site in order to further improve species richness. Areas of grassland should be left uncut to create tussocky areas which provide benefits for small mammal invertebrates and in turn predators. Pond creation within the northern other neutral grassland field would further improve the diversity of habitats within the habitat mosaic and provide aquatic habitat for amphibian and invertebrate species. Pond creation provides on-site connectivity to the pond network within the wider area. Wildlife friendly planting should be incorporated within the wider area, particularly in amenity areas to provide steppingstones of green space for food sources and shelter for a variety of species.

With regards to the overall ecological value, tick any of the following enhancement and management measures which are relevant:

Mowing regime, Meadow creation, Wetland creation / enhancement, Scrub establishment / management, Wildlife friendly planting, Deadwood habitat creation

Additional comments:

N/A

## Wildlife Site Criteria

### Principles of Selection

#### Size or Extent

The habitats of highest ecological interest are located in the centre of the Site and comprised neutral grassland, hedgerow associated with a ditch and mixed scrub. Overall, the size of this central area of the Site is 5.55ha. Of this area, approximately 3.20ha is neutral grassland and 0.60ha is mixed scrub, which are both over the 0.5ha threshold for size/extent criteria. There is 0.32ha of blackthorn scrub, and 0.38ha of lowland mixed deciduous woodland, which are both below the size/extent criteria of 0.5ha. Linear habitats included 0.56km of native hedgerow, 0.26km of which is associated with a ditch that was dry at the time of survey but had vegetation indicative of wet ground. All individual hedgerows were longer than 50m within the area of interest.

#### Diversity

The habitats within the area of interest do not have exceptional species diversity, in relation to the habitat criteria and indicator species set out within the guidance for each habitat type. However, within the area of interest, there was a diverse mix of medium to high distinctiveness habitats, including neutral grassland, mixed scrub, hedgerows and woodland respectively. Within the area of interest, the scrub and grassland mosaic provided structural diversity. Structural diversity is also present within the hedgerow network, particularly the central hedgerow which consisted of trees and a ditch.

Together, the habitats do not meet the selection criteria HM1 Priority habitat mosaics or HM2 Other habitat mosaics, as more than two Priority Habitats were not present to meet HM2, and the grassland did not support 15 indicator species for HM2.

#### Naturalness

Evidence of hazel coppicing was recorded in the parcels of mixed scrub within the area of interest, which is a traditional method of woodland management that mimics natural processes and encourages new growth and the creation of habitat niches to support a range of species. However, the remainder of the area of interest appeared to be unmanaged at the time of survey, and therefore, likely to be biodiverse. The grassland sward height was approximately 60cm and there was no evidence of mowing or grazing. However, low level disturbance of the flora and soils occur due to human presence and recreational activity which has resulted in the formation of desire lines which create mini ecotones amongst the tall grass. The woodland

appeared to be an established outgrowing treeline, and the hedgerow was outgrowing at the time of survey.

#### Rarity

The habitats within the interest area may support rare species, including a record of slow worm returned from the desktop study, located within 30m of the Site.

#### Fragility

The Site comprises habitats such as woodland and hedgerow which are well established and not considered to be fragile habitats due to their root systems and structural diversity. The woodland is small and isolated from larger pockets of woodland within the immediate locality and may be perceived as less significant and may be vulnerable to be lost as a result of development. The hedgerows are considered to be less fragile due to their moderate connectivity to the hedgerow network within the locality. The neutral grassland was well established and had a moderate species diversity which improves its resilience to short term environmental stressors such as drought. However, any changes in use, recreational pressure or management could affect the resilience of this habitat. The area of interest may be threatened due to upcoming development, as a result of growth set out in the Local Plan and any such development has potential to cause degradation of habitats in the absence of protective measures.

#### Biogeographical association

The area of interest includes hedgerow habitat, one of which is associated with a wet ditch, which provides a steppingstone of aquatic habitat between the area of interest and the wider landscape including River Colne. The hedgerows provide wooded corridors for a number of species, such as foraging and commuting bats, small mammals and reptiles, alongside suitable nesting habitat for birds. The connecting habitats are limited in their connectivity to the wider landscape; however, the area of interest is connected to wooded habitat within the wider landscape by hedgerows and individual trees.

#### Typicalness

The habitats onsite do not meet the typicalness criteria. The woodland within the area of interest is a small isolated belt, while the neutral grassland is not species rich or structurally diverse.

#### Recorded history, cultural associations and archaeology

No evidence of features that meet the criteria for historical or cultural associations and archaeology were recorded during the habitat survey or desktop study.

#### Landscape connectivity

The habitats on site provide connectivity to the wider area, albeit the presence of woodland and hedgerows and neutral grassland within the wider area are limited. The area of interest is publicly accessible through Swindon RFC, and on foot through the car park of Nythe Community Allotments.

#### Value for appreciation of nature and learning

The area of interest offers opportunities for appreciation of nature. There are paths throughout the grassland which are publicly accessible for walkers.

#### Ecosystem services

The Site provides several ecosystem services. The woodland, scrub and hedgerow habitats provide carbon sequestration, while the neutral grassland forb species provide nectar and pollen sources for pollinators.

#### LoWS Criteria

##### Habitat Selection Criteria

#### Woodland, Scrub and Hedgerows

##### Additional comments:

There is no ancient woodland on site. Woodland areas within the area of interest, and the remainder of the Site are not over 0.5ha and therefore do not meet the woodland selection criteria HW1-HW4. The area of mixed scrub within the area of interest amounts to 0.6ha; however, as five native woody species were present, it does not meet the HW5 Scrub stands of biodiversity importance selection criteria. The hedgerows within the area of interest were not ancient and were not species rich (<10 woody species present) and did not connect Wildlife



Sites / protected sites and therefore the hedgerows do not meet the HW6 Ancient or species rich hedgerows or HW7 Hedgerows providing continuous cover connection selection criteria.

## Grassland

### Additional comments:

The neutral grassland present in the area of interest had a reasonable species diversity; however, two indicator species from List 2 of the Wildlife Site selection criteria were not present at the required frequency to meet the criteria for HG2.2 species-rich neutral grassland habitat. Meadow sweet, meadow vetchling, black knapweed and rough hawkbit are species listed that were recorded occasionally. Therefore, the neutral grassland did not meet the selection criteria for HG2.2 species-rich neutral grassland habitat. Only five species were present in the grassland sward listed on List 5, and therefore the grassland sward does not meet the selection criteria for HG3 Semi-natural grassland sites with high species diversity (which requires 15 species from List 5), or HG4 Semi-natural grassland sites with moderate species diversity (which requires 9-14 species listed from List 5). Although the grassland parcel does not meet HG4, further information will be required on the value of the site for the local community in providing access to nature is needed to determine whether it could have potential for meeting HG4.5 Grassland community interest sites with either minor alterations in management or enhancement through additional species sowing. Implementing appropriate management techniques may improve the species diversity of the sward and in the future the grassland has the potential to be eligible to meet the selection criteria for HG1.2, HG2, HG3, and HG4 should the species richness of the grasslands improve to include the appropriate number of indicators listed on List 2 or List 5 under the Wildlife Site Criteria.

## Heathland

### Additional comments:

N/A

## Parkland, Wood-pasture and Veteran Trees

Additional comments:

N/A

## Orchards

Additional comments:

The trees within the orchard do not meet the UKBAP Priority Habitat definition as the trees were not mature and lacked succession. The area of orchard was approximately 0.1ha and therefore does not meet the 0.5ha threshold for consideration. The trees were young and failed the four required criteria for HO1 Traditional orchard sites. With the correct management, overtime the orchard may develop mature trees that are eligible to meet the HO1 selection criteria.

## Fens, Swamps, Marshes, Bogs, Mires and Other Wetlands

Additional comments:

N/A

## Standing Water

Additional comments:

N/A

## Standing Water

Additional comments:

N/A

## Arable Habitats

### Additional comments:

N/A

## Habitat Mosaics

### HM3 - Urban sites

### Additional comments:

The neutral grassland within the area of interest is larger than 0.5ha and situated to the north of Walcot, an urban area. A total of four indicator species from List 5 are present, which is over 20% of the threshold criteria needed for HG3 Semi-natural grassland sites with high species diversity. Thus, under the HM3 Urban sites criterion the neutral grassland meets the Urban sites criteria due to more than 20% (three species required) occasionally occurring in the sward. These species were meadow sweet, rough hawkbit, meadow vetchling and black knapweed. Therefore, the area of neutral grassland within the centre of the Site meets the selection criteria for HM3. The habitat mosaic of the area of interest does not meet the selection criteria HM2 Other habitat mosaics, or the subsidiary categories, as the grassland did not support 15 indicator species. As the scrub has established to the point it is almost early successional secondary woodland, this habitat type cannot be considered as part of the mosaic criteria, but the scrub patches could be suitable for consideration once they have reached maturity under the woodland criteria. The area of interest does not meet the selection criteria for HM1 Priority habitat mosaics, as only one priority habitat is present within the mosaic – lowland mixed deciduous woodland along the eastern boundary of the area of interest, which was young in nature and not structurally diverse.

## Other Habitats

### Additional comments:

N/A

## Species Selection Criteria

Is the site used regularly or continuously by a rare species?

N/A

Is the species or assemblage demonstrably dependent on the site for an essential part of its lifecycle, such as breeding or hibernation?

N/A

Is the population(s) using the site significant for species' survival in a local context? Is the population large enough to be sustainable, or be part of a metapopulation which is sustainable?

N/A

Is the site large enough, and does it have adequate resources to sustain the population(s)? Considering the nature and extent of supporting habitats required for mobile species such as bats and birds.

N/A

## Wildlife Site Survey Recommendations

### Designated Wildlife Site

#### Wildlife Site Survey Recommendation:

#### Potential for Wildlife Site designation

#### Rationale:

The area of neutral grassland within the centre of the Site is large in extent, located in a highly urbanised area, and meets 20% threshold of the selection criteria for HG3 (with four out of 9 species recorded occasionally that are listed in List 5 of the guidance), and therefore this area meets the selection criteria for HM3 – Urban sites. The neutral grassland contained a good number of forb species, and an array of invertebrates and bird species were recorded during the habitat survey. The grassland provides suitable habitat for foraging and commuting reptiles and mammals, foraging opportunities for bats and bird species, and nectar and pollen resources for invertebrates.

The area of interest also contains Priority Habitats native hedgerow and lowland mixed deciduous woodland which should be retained and buffered as part of the masterplanning process.

There is potential for habitats within the area of interest and adjacent to the area of interest to be eligible to meet their habitat-specific criteria in future through appropriate management and, in the case of the orchard, as the trees mature. The scrub habitat within this area is also of value to wildlife and could be suitable for consideration as part of a habitat mosaic with the neutral grassland once they reach maturity as woodland.

#### Site photo

*Image*



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Image



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Image



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Image



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*Image*



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Image



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Image



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Image



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# Appendix D

## Site Photos

Table D.1: Marlowe Avenue Regeneration Area Site Photos

| Description                                                          | Photograph                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|----------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Belt of lowland mixed deciduous woodland within the area of interest |  The 'Photograph' column contains two separate images stacked vertically. Both images show a lush green field of tall grass in the foreground, with a dense line of trees and shrubs in the background under a clear blue sky. The top image shows a slightly different angle or lighting than the bottom image, but both depict the same general landscape. |

| Description                                          | Photograph                                                                                                                                                                                                                                                  |
|------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>Neutral grassland within the area of interest</p> | <div data-bbox="432 277 1077 1133"></div> <div data-bbox="432 1133 1077 2007"></div> |



| Description                              | Photograph                                                                           |
|------------------------------------------|--------------------------------------------------------------------------------------|
|                                          |   |
| <p>Scrub within the area of interest</p> |  |



| Description                                 | Photograph                                                                           |
|---------------------------------------------|--------------------------------------------------------------------------------------|
| Native hedgerow within the area of interest |   |
| Dry ditch within the area of interest       |  |



| Description | Photograph                                                                           |
|-------------|--------------------------------------------------------------------------------------|
| T4 – PRF-M  |   |
| T6 – PRF-M  |  |



| Description                       | Photograph                                                                                                                                                                                                                                                                                                                                                                                                                               |
|-----------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>Nythe Community Allotments</p> |  <p>The top photograph shows a lush garden plot with a large, mature tree in the center. The ground is covered with various green plants, and a wooden trellis structure is visible. The bottom photograph shows a garden plot with raised beds, a black water tank, and a blue shed in the background. The sky is clear and blue in both photos.</p> |



| Description                | Photograph                                                                          |
|----------------------------|-------------------------------------------------------------------------------------|
| Orchard between allotments |  |



| Description                               | Photograph                                                                          |
|-------------------------------------------|-------------------------------------------------------------------------------------|
| Swindon RFC sports field                  |  |
| Neutral grassland in Dorcan Way Play Park |                                                                                     |



| Description | Photograph                                                                                                                                                                                                                                                                                                                                               |
|-------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|             |  <p>The top photograph shows a grassy field with tall grass and trees in the background under a cloudy sky. The bottom photograph shows a grassy field with tall grass and trees in the background under a clear blue sky, with houses visible in the background.</p> |



| Description                                                    | Photograph                                                                          |
|----------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Species rich hedgerow to the northwest of Dorcan Way Play Park |   |
| Tiny Forest Park                                               |  |

| Description | Photograph                                                                                                                                                                                                                                                                                                                                                                                      |
|-------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|             |  <p>The 'Photograph' column contains two images. The top image shows a grassy field with a wooden fence and residential buildings in the background under a clear blue sky. The bottom image shows a similar view of a grassy field with residential buildings in the background under a clear blue sky.</p> |



| Description                                                                                       | Photograph                                                                                                                                                                                                                                                  |
|---------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p data-bbox="204 286 370 573">New residential estate planting to the north of Marlowe Avenue</p> | <div data-bbox="432 277 1051 1099"></div> <div data-bbox="432 1099 1051 1917"></div> |



| Description                               | Photograph                                                                          |
|-------------------------------------------|-------------------------------------------------------------------------------------|
| Mixed scrub in the southeast of the Site  |   |
| Modified grassland adjacent to Dorcan Way |  |



| Description                                  | Photograph                                                                           |
|----------------------------------------------|--------------------------------------------------------------------------------------|
|                                              |   |
| <p>Woodland in the northwest of the Site</p> |  |

## Appendix E

### Legislation & Policy

**E.1** The Conservation of Habitats and Species Regulations 2017 transpose the requirements of the European Habitats Directive (Council Directive 92/43/EEC) and Birds Directive (Council Directive 2009/147/EC on the conservation of wild birds, replacing Directive 79/409/EEC) into UK law, enabling the designation of protected sites and species at a European level.

**E.2** The Wildlife and Countryside Act 1981 (as amended) forms the key piece of UK legislation relating to the protection of habitats and species.

**E.3** The Countryside Rights of Way Act 2000 provides additional support to the Wildlife and Countryside Act 1981; for example, increasing the level of protection for certain species of reptiles.

**E.4** The Wild Mammals (Protection) Act 1996 sets out the welfare framework in respect to wild mammals, prohibiting a range of activities that may cause unnecessary suffering.

**E.5** Species and Habitats of Principal Importance for Conservation in England and Wales and priority habitats and species listed in the Wandsworth Local Plan (see below) are species which are targeted for conservation. The government has a duty to ensure that involved parties take reasonable practice steps to further the conservation of such species under Section 41 of the Natural Environment and Rural Communities Act 2006. In addition, the Act places a biodiversity duty on public authorities who ‘must, in exercising their functions, have regard, so far as is consistent with the proper exercise of those functions, to the purpose of conserving biodiversity’ (Section 40 [1]). Criteria for selection of national priority habitats and species in the UK include international threat and marked national decline.

**E.6** The National Planning Policy Framework (December 2023) states (Section 15) that the planning system should Identify, map and safeguard components of local wildlife-rich habitats and wider ecological networks, including the hierarchy of international, national and locally designated sites of importance for biodiversity; wildlife corridors and stepping stones that connect them; and areas identified by national and local partnerships for habitat management, enhancement, restoration or creation; and promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species; and identify and pursue opportunities for securing measurable net gains for biodiversity.



**E.7** It also states when determining planning applications, local planning authorities should apply the following principles:

- a) if significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;
- b) development on land within or outside a Site of Special Scientific Interest, and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally be permitted. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact on the features of the site that make it of special scientific interest, and any broader impacts on the national network of Sites of Special Scientific Interest;
- c) development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons and a suitable compensation strategy exists; and
- d) development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to improve biodiversity in and around developments should be integrated as part of their design, especially where this can secure measurable net gains for biodiversity or enhance public access to nature where this is appropriate.

## Bats

**E.8** All British species of bat are listed on the Wildlife and Countryside Act 1981 (as amended) Schedule 5. It is an offence to deliberately kill, damage, take (Section 9(1)) a bat; to intentionally or recklessly disturb a bat whilst it occupies a place of shelter or protection (Section 9(4)(b)); or to deliberately or recklessly damage, destroy or obstruct access to a bat roost (Section 9(4)(c)). Given the strict nature of these offences, there is an obligation on the developer and owner of a site to consider the presence of bats.

**E.9** All British bats are listed on the Conservation of Habitats and Species Regulations 2017, Schedule 2. Regulation 43 strengthens the protection of bats under the 1981 Act against deliberate capture, injuring or killing (Regulation 43(1))

(a)), deliberate disturbance (Regulation 43 (1) (b)) and damage or destruction of a resting place (Regulation 43(1) (d)).

**E.10** A bat roost is defined as any structure or place which is used for shelter or protection, irrespective of whether bats are resident. Buildings and trees may be used by bats for a number of different purposes throughout the year including resting, sleeping, breeding, raising young and hibernating. Use depends on bat age, sex, condition and species as well as the external factors of season and weather conditions. A roost used during one season is therefore protected throughout the year and any proposed works that may result in disturbance to bats, and loss, obstruction of or damage to a roost are licensable.

## Application for a Natural England EPS Licence

**E.11** Development works that may cause killing or injury of bats or that would result in the damage, loss or disturbance of a bat roost would require a Natural England (NE) Bat Mitigation Licence. For a Mitigation licence to be granted three tests must be met. Evidence is needed to determine these three tests:

**E.12** Whether there is a need for the development which justifies the impact on the European Protected Species (EPS);

**E.13** Whether there is an alternative which would avoid the impact and need for an EPS licence; and

**E.14** Whether mitigation proposed is sufficient to maintain the conservation status of the EPS in question.

**E.15** A Mitigation Licence application will generally only be considered by NE on receipt of planning consent, and once any pre-commencement conditions of relevance to ecology have been discharged.

## Licensing Routes

**E.16** There are two licensing routes now available for bats, outlined below:

### Full NE England EPS Mitigation Licence

**E.17** The application comprises three components including:

1. An application form (broad details of the applicant, site and proposals);

2. A detailed Method Statement providing the survey methods and findings, impact assessment and mitigation measures (including detailed maps and schedule of works); and
3. A Reasoned Statement outlining the “need” for the development and consideration of alternatives.

**E.18** NE aim to determine the application within six weeks (although this can take longer).

### **NE Low Impact Class Licence (LICL)**

**E.19** This new route provides an alternative, quicker route (with a much-reduced application form, and a target of 10 days to determine an application). LICL is only available to Registered Consultants identified by NE if the following condition is met:

Sites which support up to three low status roosts (day roosts, night roosts, feeding roosts and transitional roosts) of a maximum of three common species. The common species which can be covered by this licence include common pipistrelle, soprano pipistrelle, brown long eared, whiskered, Brandts, Daubenton’s and Natterer’s bat.

**E.20** This licence cannot be used in relation to trees.

**E.21** All licensed works require evidence that there is a need for the development and that appropriate mitigation, including seasonal constraints and provision of alternative habitat and/or roosting structures is considered.

**E.22** Before Natural England can confirm The Site is registered and licensable works can commence, an assessment of the three tests must be undertaken by the Registered Consultant.

**E.23** Although this does not need to be submitted to NE, NE may subsequently undertake a review of the project and request to see all evidence as collected by the Consultant. This can only be undertaken following a survey and impact assessment which must be carried out in accordance with licence conditions and BCT survey guidelines.

## **Birds**

**E.24** Birds and their nests are protected by the Wildlife and Countryside Act 1981 (as amended). This Act gives protection to all species of bird with regard to killing and injury, and to their nests and eggs with regard to taking, damaging and destruction.

Certain species listed on Schedule 1 of the Act, are afforded additional protection against protection.

## Great Crested Newts

**E.25** GCN and their places of shelter are subject to the same level of protection as bats as a European Protected Species (see above).

## Reptiles

**E.26** All UK reptiles and amphibians are legally protected from intentional and reckless killing and injury under the Wildlife and Countryside Act 1981 (as amended).

## Badger

**E.27** Badger is subject to legal protection under the Protection of Badgers Act (1992). Works which may result in damage to a badger sett, or potential disturbance to badger using setts, must be undertaken under a Natural England licence.



## References

- 1 Available at: Gov.UK -  
<https://defraenvironment.blog.gov.uk/2023/11/07/incorporating-local-nature-recovery-strategies-when-planning-for-biodiversity-net-gain/>
- 2 Accessible here:  
[https://experience.arcgis.com/experience/2b3a19902e3e4b81bac90326a2a2dec5/page/View-only-map?draft=true&views=View-4#data\\_s=id%3AdataSource\\_12-19209d14036-layer-6-0%3A2864801%2Cid%3AdataSource\\_12-1983c8d7fdc-layer-31-19841238feb-layer-31-0-1%3A1%2Cid%3AdataSource\\_18-1997bece863-layer-41-0%3A3572827%2Cid%3AdataSource\\_18-1997105fe34-layer-101-19865de85c6-layer-29-19865ddcd42-layer-28%3A876](https://experience.arcgis.com/experience/2b3a19902e3e4b81bac90326a2a2dec5/page/View-only-map?draft=true&views=View-4#data_s=id%3AdataSource_12-19209d14036-layer-6-0%3A2864801%2Cid%3AdataSource_12-1983c8d7fdc-layer-31-19841238feb-layer-31-0-1%3A1%2Cid%3AdataSource_18-1997bece863-layer-41-0%3A3572827%2Cid%3AdataSource_18-1997105fe34-layer-101-19865de85c6-layer-29-19865ddcd42-layer-28%3A876)
- 3 UK Habitats Ltd (2023). UK Habitat Classification Documents V2.01. Available at <https://www.ukhab.org/ukhab-documentation/>
- 4 Collins, J. (ed) (2023) Bat Surveys for Professional Ecologists: Good Practice Guidelines (4<sup>th</sup> edn). The Bat Conservation Trust, London
- 5 Wildlife and countryside Act 1981 – Schedule 9 species, accessed here:  
<https://www.legislation.gov.uk/ukpga/1981/69/schedule/9>
- 6 <https://www.nationaltrust.org.uk/visit/oxfordshire-buckinghamshire-berkshire/buscot-and-coleshill-estates/nature-recovery>
- 7 <https://www.wildlifetrusts.org/national-water-vole-database-project>

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