

**LOVERS WALK, THE AVENUE, SOUTHAMPTON
COMMON, SOUTHAMPTON, HAMPSHIRE**

ECOLOGICAL IMPACT ASSESSMENT

Final Document (Revision 2)

October 2023

Preliminary Ecological Appraisals • Protected Species Surveys and Licensing • NVC • EclA • HRA • Management Plans
Habitats • Badger • Bats • Hazel Dormouse • Birds • Reptiles • Amphibians • Invertebrates • Riparian and Aquatic Species


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**LOVERS WALK, THE AVENUE, SOUTHAMPTON COMMON,
SOUTHAMPTON, HAMPSHIRE**

ECOLOGICAL IMPACT ASSESSMENT

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EXECUTIVE SUMMARY

Ecological Survey and Assessment Ltd (ECOSA) have been appointed by Southampton City Council to undertake an Ecological Impact Assessment to support a section 38 application for the redevelopment of Lovers Walk, Southampton. The site is located in Southampton, Hampshire and comprises an existing cycle and pedestrian path along the eastern edge of Southampton Common. The proposals entail the widening of the path known as 'Lovers Walk'. The main findings of the Ecological Impact Assessment are:

- The site forms part of the wider Southampton Common Site of Importance for Nature Conservation (SINC). Southampton Common Site of Special Scientific Interest is located approximately 35 metres west and designated for supporting an important population of great crested newt and notable habitats.
- The site comprises broad-leaved semi-natural woodland, scattered trees, scattered scrub, amenity grassland, running water, hardstanding and bare ground. The non-native invasive species Japanese knotweed is present. Three low status day roosts of common pipistrelle are present within close proximity of Lovers Walk. Additionally, many trees are recorded as supporting bat roost features. The site supports foraging and commuting bats and firecrest territories. The site also has the suitability to support badger, breeding birds, widespread species of reptiles, great crested newt, invertebrates, European hedgehog and common toad.
- The proposals have potential to result in adverse impacts on protected species through direct killing and injury, loss of suitable habitat and disturbance. Appropriate mitigation and compensation measures have been devised in order to avoid adverse impacts on protected and notable species. The works will take place in the period between September and October or March and April, inclusive. If this timing is not possible due to the time consent is obtained, then the recommendations within the separate Ecological Method Statement will be followed.
- There will be a small loss (0.35%) of Southampton Common SINC as a result of the proposals which will be compensated through positive ecological management in a nearby parcel of land within Southampton Common. The details of this work and the associated Biodiversity Offsetting calculations are provided in a separate report. Furthermore, a small area of Southampton Common which is currently hardstanding will be returned to the common as a result of the proposals. Additionally, a small area of grassland, measuring approximately 157 square metres, will be created at Lovers Walk.

- Given the impacts identified, and the mitigation, compensation and enhancement measures proposed it is considered that the proposals accord with all relevant local and national planning policy.

- If the application boundary changes or the proposals for the site alter, a re-assessment of the scheme in relation to ecology may be required. Given the mobility of animals and the potential for colonisation of the site over time, updating survey work may be required, particularly if development does not commence within 18 months of the date of the most recent relevant survey.

1.0 INTRODUCTION

1.1 Background

Ecological Survey & Assessment Limited (ECOSA) have been appointed by Southampton City Council to undertake an Ecological Impact Assessment to support a section 38 application¹ for the redevelopment of Lovers Walk, The Avenue, Southampton Common, Southampton, Hampshire (hereafter referred to as the site).

The initial extended Phase 1 ecological survey was undertaken by ECOSA in April 2012 (ECOSA, 2012a). The site was assessed as having potential to support roosting, foraging and commuting bats, badger, breeding birds, reptiles, great crested newt and terrestrial invertebrates.

Further to the results of the Phase 1 survey, targeted bat surveys (ECOSA, 2012b) were subsequently undertaken during 2012. The bat surveys confirmed the presence of a small number of common pipistrelle roosts within the vicinity of the works. Bat activity surveys recorded small numbers of at least five common and widespread bat species.

An updating ecological assessment was undertaken by ECOSA between April 2016 and June 2016 (ECOSA, 2021). The scope of the updating report was to include an updating Phase 1 ecological assessment, updating ground level tree assessments, bat transect and static detector surveys and firecrest surveys.

A planning application was submitted to Southampton City Council in February 2020 for the widening of the path known as 'Lovers Walk' that runs north to south on the eastern side of Southampton Common between Burgess Road and Westwood Road, supported by the ECOSA documents (Southampton City Council planning reference 20/00255/FUL). Full planning permission for the works was granted on 22nd February 2022 subject to a number of conditions.

Condition 9 of the approved consent states:

“Prior to development commencing including site clearance; and notwithstanding the specific location of the mitigation measures which must first be agreed in writing by the Local Planning Authority, the developer shall

¹ Under section 38 of the Commons Act 2006 (“the 2006 Act”), the Secretary of State’s consent is required to carry out any restricted works on land registered as common land under the Commons Registration Act 1965. Restricted works are works which have the effect of preventing or impeding access to or over any land to which this section applies, in particular, the erection of fencing, the construction of buildings and other structures and the digging of ditches and trenches and the building of embankments, as well as the resurfacing of land, which consists of the laying of concrete, tarmacadam, coated roadstone or similar material.

implement the programme of habitat and species mitigation, compensation and enhancement measures as set out in:

- 1. Lovers Walk, The Avenue, Southampton Common, Southampton. Ecological Method Statement, ECOSA Ltd Final Document 16th August 2018; and*
- 2. Lovers Walk Cyclepath Upgrade, Southampton Common, Southampton. Ecological Compensation and Management Plan, Final Document (Revision 3) May 2021.*

The agreed programme of habitat and species mitigation, compensation and enhancement measures shall accordingly be continued for a minimum period of 10 years.

Reason: To safeguard protected species under the Wildlife and Countryside Act 1981 (as amended) in the interests of preserving and enhancing biodiversity.”

Condition 9 of the approved consent states:

“No clearance of vegetation likely to support nesting birds shall take place between 1 March and 31 August unless a method statement has been first submitted to and agreed in writing by the Local Planning Authority and works implemented in accordance with the agreed details.

Reason: For the safeguarding of species protected by The Wildlife & Countryside Act 1981 (as amended) and the conservation of biodiversity.”

Due to the length of time that has passed since the previous assessment, an updating Ecological Impact Assessment is required to support the section 38 application. An updating Preliminary Ecological Appraisal was undertaken by ECOSA on 6th October 2022. This report summarises the findings of the surveys undertaken in 2012 and 2016 and presents the findings of the updating Preliminary Ecological Appraisal undertaken in 2022.

1.2 The Site

The site is located in Southampton, Hampshire, centred on National Grid Reference (SU42191515 (northern part of the site) and (SU42021470 southern part of the site) **Map 1**). The Phase 1 habitat map (**Map 2**) depicts the boundary of the site.

The site itself comprises an existing cycle and pedestrian path along the eastern edge of Southampton Common. Two distinct sections are subject to proposed works, much

of which is bordered by broadleaved woodland. The wider landscape is dominated by Southampton Common to the west and dense residential housing to the east.

1.3 Aims and Scope of Report

The information within this report is based on a field survey and desktop study carried out during October and November 2022 and relevant species-specific surveys carried out between April and September 2012 and April and June 2016. The report describes the habitats and species (hereafter referred to as ecological features) within the site's Zone of Influence (Paragraph 3.2), and provides a detailed assessment of potential ecological effects of the proposed development of the site. It identifies the need for any measures to avoid, mitigate or compensate for significant adverse effects² on ecological features and outlines enhancements to the site's ecology to be implemented as part of the development. The objectives of the assessment are:

- To provide baseline information on ecological features within the site's Zone of Influence;
- To assess, characterise and quantify the effects on ecological features, including cumulative effects, and identify effects in the absence of any mitigation;
- To set out measures to avoid, mitigate and compensate for significant ecological effects in accordance with the 'mitigation hierarchy'³; and
- To outline opportunities for enhancement in order to achieve a net gain for biodiversity.

1.4 Site Proposals

The proposals comprise the widening of the path known as 'Lovers Walk' that runs north to south on the eastern side of Southampton Common between Burgess Road and Westwood Road. Full planning permission for the works was granted on 22nd February 2022 subject to a number of conditions. (Southampton City Council planning reference 20/00255/FUL).

This report will be submitted as part of the application for a section 38 agreement for the widening of Lovers Walk. The Ecological Impact Assessment is based on the proposals plan produced by Balfour Beatty, dated June 2015 (Drawing No. 15/AL/M/010/001 Revision F sheets 1 to 2) (**Appendix 1**). The proposals have not changed since the previous ecological assessment was carried out.

² For the purposes of this assessment a 'significant' adverse effect is one which will have an adverse effect on the ecological feature at the site level or higher.

³ In accordance with CIEEM Ecological Impact Assessment guidance (CIEEM, 2018) a sequential process is adopted to address impacts on features of ecological interest, with 'Avoidance' prioritised at the top of the hierarchy and Compensation/Enhancement' at the bottom. This is often referred to as the 'mitigation hierarchy'.

The section 38 agreement is being sought during 2023 with construction proposed to commence soon after permission has been granted.

2.0 PLANNING POLICY CONTEXT

2.1 Introduction

This section summarises the planning policy in relation to ecology and biodiversity within the Southampton City Council administrative area. This information is then used to assess the compliance of the scheme in relation to relevant planning policy and where necessary used to inform the necessary mitigation, compensation and enhancement measures (see Section 5.0).

2.2 Planning Policy

2.2.1 National Policy

The National Planning Policy Framework (NPPF) sets out the government's requirements for the planning system in England. The original document was published in 2012 with the most recent revised NPPF published in July 2021. A number of sections of the NPPF are relevant when taking into account development proposals and the environment. As set out within Paragraph 11 of the NPPF "*Plans and decisions should apply a presumption in favour of sustainable development*". However, Paragraph 182 goes on to state that "*The presumption in favour of sustainable development does not apply where the plan or project is likely to have a significant effect on a habitats site (either alone or in combination with other plans or projects), unless an appropriate assessment has concluded that the plan or project will not adversely affect the integrity of the habitats site.*".

The NPPF sets out that development proposals should not only minimise the impacts on biodiversity but also to provide enhancement. Paragraph 174 states that the planning system should contribute to and enhance the natural environment by "*...minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures...*".

A number of principles are set out in Paragraph 180, including that where harm cannot be adequately avoided then it should be mitigated for, or as a last resort, compensated for. Where impacts occur on nationally designated sites, the benefits must clearly outweigh any adverse impact and incorporating biodiversity in and around developments should be encouraged. Specific reference is also made to the protection of irreplaceable habitats⁴, including ancient woodland⁵. Where loss to irreplaceable

⁴ The NPPF defines irreplaceable habitats as "*Habitats which would be technically very difficult (or take a very significant time) to restore, recreate or replace once destroyed, taking into account their age, uniqueness, species diversity or rarity. They include ancient woodland, ancient and veteran trees, blanket bog, limestone pavement, sand dunes, salt marsh and lowland fen.*"

⁵ Natural England defines ancient woodland as "An area that has been wooded continuously since at least 1600 AD. It includes ancient semi-natural woodland and plantations on ancient woodland sites (PAWS)."

habitats occurs planning permission would normally be refused unless there are wholly exceptional reasons and an adequate compensation strategy is in place. Paragraph 180 also states “*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.*”. Paragraph 181 also sets out that potential SPAs, SACs and listed or proposed Ramsar sites or sites acting as compensation for SPAs, SACs and Ramsar sites, should receive the same protection as habitat sites.

In addition to the NPPF, Circular 06/05 provides guidance on the application of the law relating to planning and nature conservation as it applies in England. Paragraph 98 states “*the presence of a protected species is a material consideration when a planning authority is considering a development proposal that, if carried out, would be likely to result in harm to the species or its habitat*”. Paragraph 99 states “*it is essential that the presence or otherwise of a protected species, and the extent that they may be affected by the Proposed Project Development, is established before planning permission is granted*”.

2.2.2 Local Policy

Local planning policy within Southampton City Council is provided by the Core Strategy (adopted 2010) and the saved policies from the Local Plan Review (amended 2010). A single overarching policy makes specific reference to ecology and biodiversity within the Core Strategy:

- **Policy CS22:** Protecting biodiversity and protecting habitats. This policy specifically refers to the protection of biodiversity and makes specific reference to the protection of land both within the city but also at a regional level. Specific reference is also made to:
 - Protection of designated sites at international, national and local level;
 - Appropriate consideration to internationally and nationally protected species and habitats;
 - Safeguard of the existing “green grid” providing wildlife corridors throughout the city;
 - Retention, protection and enhancement of features of biological interest and suitable management of these features; and
 - Seeking net gains in biodiversity from development proposals.

A number of saved policies within the Local Plan Review (amended 2010) are relevant to development and biodiversity with a total of six making specific reference to ecology and biodiversity:

- **Policy SDP12:** Landscape and Biodiversity. This policy makes reference to the importance of ensuring that proposed landscaping retain/enhances existing wildlife habitat features and contributes to the objectives of the local biodiversity action plan.
- **Policies NE1 to NE4:** International Sites, National Sites, Sites of Local Nature Conservation Importance, Protected Species. These policies have been part replaced by the Core Strategy CS22 and refer to the protection of designated sites and legally protected species. Specific reference is also made for the need for the development at the site to outweigh the potential ecological impacts in relation to protected species.
- **Policy NE5:** Intertidal Mudflat Habitats. This policy prevents development on any areas which would result in the reclamation or disturbance to mudflat habitat along the River Itchen, River Test or Southampton Water and Weston Shore outside of the SPA. Development would only be permitted in the event that there are no adverse impacts on nature conservation interests and no net loss of international mudflat habitat.

3.0 METHODS

3.1 Introduction

This section details the methods used during the field survey and desktop study carried out as part of the Ecological Impact Assessment. Any significant limitations to the assessment are also considered.

3.2 Zone of Influence

To define the total extent of the study area for this assessment (Zone of Influence⁶), the proposed scheme was reviewed to establish the spatial scale at which ecological features could be affected. The appropriate survey radii for the various elements of the assessment (i.e. desktop study and field survey) have been defined in the relevant sections below. These distances are determined based on the professional judgement of the ecologist leading the appraisal, taking into account the characteristics of the site subject to appraisal, its surroundings and the nature and scope of the proposals.

3.3 Scoping

Protected species considered within this appraisal are those species/species groups considered likely to be encountered given the geographical location and context of the site. These are discussed within the results section (Section 4.0) of the current report. Where such a species is unlikely to be present on site a justification for likely absence is provided. Species considered likely absent from the site are not then considered in the assessment of ecological effects and mitigation measures section (Section 5.0) of this report.

3.4 Desk Study

3.4.1 Biological Records Centre

Hampshire Biodiversity Information Centre (HBIC) was consulted on 3rd October 2022 for the following data:

- Records of non-statutory designated sites (Sites of Importance for Nature Conservation (SINCs) within one kilometre of the site boundary. See **Appendix 2** for details;
- Records of legally protected and notable species (flora and fauna) within one kilometre of the site boundary, including priority species and Species of Principal Importance (**Appendix 3**); and

⁶ The Zone of Influence (Zoi), as defined by CIEEM, is the area over which ecological features may be subject to significant effects as a result of the proposed project and associated activities.

- Records of bats within two kilometres of the site boundary. Bat species are highly mobile and therefore the search radius is increased for this species group.

3.4.2 Multi-Agency Geographic Information for the Countryside

The Multi-Agency Geographic Information for the Countryside (MAGIC) (DEFRA, 2022) database was reviewed on 29th November 2022 to establish the location of statutory designated sites located within the vicinity of the site. This included a search for all internationally and nationally designated sites such as Special Protection Areas (SPAs), Special Areas of Conservation (SACs), Wetlands of International Importance (Ramsar sites), Sites of Special Scientific Interest (SSSIs), National Nature Reserves (NNRs) and Local Nature Reserves (LNRs) within one kilometre of the site. Where appropriate, the desk study search area has been extended to take account of any appropriate statutory designated sites which need consideration in terms of potential in-direct effects and which support particularly mobile species⁷. The Impact Risk Zones (IRZ) were also obtained from MAGIC, which are used to help guide and assess planning applications for likely effects on SSSIs.

Sites within two kilometres of the site boundary where European Protected Species Mitigation (EPSM) licences have been granted were reviewed. This information allows a greater understanding of the potential for European Protected Species to be present in the local area.

3.4.3 Other Sources of Information

Online mapping resources, at an appropriate scale, were used to identify the presence of habitats such as woodland blocks, ponds, watercourses and hedgerows, in the vicinity of the site. These habitats may offer resources and connectivity between the site and suitable habitat in the local area, which may be exploited by local species populations.

The presence of ponds or other waterbodies within a 500 metre radius of the site in particular are noted in relation to great crested newt. The 500 metre radius is a standardised search radius to assist in the assessment of the suitability of a site and its surrounding habitat to support this species, based on current Natural England guidance (English Nature, 2001).

ECOSA have previously prepared an Ecological Impact Assessment (ECOSA, 2021) of the site in 2016. The results of this assessment has been referred to, where relevant.

⁷ Search areas for bat records are based upon information contained within Collins, J. (Ed.) (2016) *Bat Surveys for Professional Ecologists: Good Practice Guidelines* (Third Edition). The Bat Conservation Trust, London. Relevant distances for consideration of impacts on SPAs, SACs, Ramsar sites have been based on current published guidance available through web-based sources.

3.5 Field Survey

The field survey broadly followed standard Phase 1 habitat survey methodology (JNCC, 2010) and included a search for evidence of, and an assessment of the site's suitability to support, protected and notable species as recommended by CIEEM (CIEEM, 2017). The field survey covered all accessible areas of the site, including boundary features. Habitats described in Section 4.0, have been mapped (**Map 2**) and photographs provided, where relevant. For ease of reference, Target Notes (TN) depict locations of particular ecological interest or features which are too small to map.

3.5.1 Phase 1 Habitat Survey

An assessment was made of all areas of vegetation within the site based on the standardised Phase 1 habitat survey methodology (JNCC, 2010). This involved identification of broad vegetation types, which were then classified against Phase 1 habitat types, where appropriate. A list of characteristic plant species for each vegetation type was compiled and any invasive species⁸ encountered as an incidental result of the survey recorded.

3.5.2 Protected and Notable Species Appraisal

A preliminary appraisal of the site's suitability to support legally protected and notable species was carried out. The following species/species groups were considered during the appraisal.

Bats

The survey conformed to current Bat Conservation Trust guidelines (Collins, 2016). An assessment was made of the suitability of trees on the site and immediately on the site boundary to support roosting bats based on the presence of Potential Roosting Features such as holes, cracks, splits, loose bark and ivy cladding

An assessment was made of the suitability of the site and the surrounding landscape to support foraging and/or commuting bat species. The assessment of the suitability of the site to support roosting, foraging and commuting bats is based on a four-point scale as detailed in **Appendix 4**.

Otter

The otter appraisal was based on an assessment of the suitability of the habitat present within the site to support otter by reference to habitat type (such as rivers, streams, ditches, wetlands, reed beds, lakes, ponds and reservoirs), proximity of the site to freshwater and potential important feeding resources (such as fisheries), presence of habitat features which could provide opportunities for resting places and/or holts (such

⁸ Plant species included on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended). The survey was not specifically aimed at assessing the presence of these species and further specialist advice may need to be sought.

as tunnels, hollows at the base of trees and presence of dense, undisturbed habitat). During the survey attention was paid to the presence of evidence such as spraints, feeding remains, footprints and slides.

Badger

The survey involved an assessment of the suitability of the site to support badger. Evidence of the species was recorded as an incidental result of the Phase 1 habitat survey and included locating badger setts, paths, and signs of territorial activity such as latrine sites.

Hazel Dormouse

The appraisal for the suitability of the site to support hazel dormouse was based on an assessment of habitat features that may indicate that the species is present. This includes the presence of key food sources such as hazel and bramble, or plants used as nesting material such as honeysuckle and clematis. Additionally, the species requires a continuum of food supply so that habitat structure, diversity and connectivity to adjacent areas of woodland/scrub are important features in determining the suitability of the site for hazel dormouse.

Water Vole

The water vole appraisal was based on an assessment of the suitability of the habitat present within the site to support water vole by reference to habitat type (such as rivers, streams, ditches, wetlands, reed beds, lakes, ponds and reservoirs), bank structure and the bank side vegetation. Water voles generally require sloping banks in which to burrow and well-developed bank side vegetation to provide shelter and food. During the survey attention was paid to the presence of burrows, latrines, feeding remains, trails and footprints.

Birds

The appraisal of breeding birds on the site was based on the suitability of habitat present to support nesting bird communities, the presence of bird species that may potentially nest within the available habitat and evidence of nesting such as old or currently active nests.

The assessment of wintering birds was based on an assessment of the suitability of the habitat on site to support important wintering bird species and populations. Particular attention was paid to the suitability for the site to support wintering farmland bird species, waders and wildfowl.

Reptiles

The reptile appraisal was based on an assessment of the suitability of the habitat present within the site to support a population of reptiles. Reptiles particularly favour

scrub and rough grassland interfaces and the presence of these is a good indication that reptiles may be present on-site. In addition, reptiles may utilise features such as bare ground for basking, tussocky grassland for shelter and compost heaps and rubble piles for breeding and/or hibernating.

Great Crested Newt

The appraisal of the site to support great crested newt included establishing the presence of suitable aquatic habitats such as ponds, lakes or other waterbodies within or adjacent to the site and the presence of suitable terrestrial habitat. Waterbodies that are densely shaded, highly eutrophic or that contain fish are likely to be less suitable for this species. The suitability of on-site ponds and terrestrial habitat is considered in relation to the presence of ponds within the wider area, as identified within the desktop study (Paragraph 3.4.3), and their suitability to be used as a network.

Invertebrates

An assessment was made of the suitability of the site to support diverse communities of invertebrates. The assessment was based on the presence of habitat features which may support important invertebrate communities. These features include, for example, an abundance of dead wood, the presence of diverse plant communities, varied woodland structure, sunny woodland edges with a diverse flora, waterbodies and water courses and areas of free draining soil exposures. During the field survey there was no attempt made to identify species present as this is a more specialist area of ecological assessment reserved for targeted surveys.

Other Relevant Species

An assessment was made of site suitability for other notable species such as more rarely encountered protected species, Species of Principal Importance for the Conservation of diversity in England notified under Section 41 of the NERC Act 2006 and as listed in the England Biodiversity List, and Local Biodiversity Action Plan (LBAP) species⁹, specific to the study region.

Invasive Species

During the field survey any incidental records of invasive species listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) were recorded. However, it should be considered that the survey was not specifically aimed at assessing the presence of these species and further specialist advice may need to be sought.

⁹ LBAPs identify local priorities for biodiversity conservation by translating national targets for species into effective action at the local level and identifying targets for species important to the local area.

3.6 Field Survey Details

The field survey was carried out by Lucy Bartlett, Senior Ecologist of ECOSA on 6th October 2022. The weather conditions were sunny with approximately 0-10% cloud cover, an ambient temperature of 15°C and a gentle breeze.

During the survey, the surveyor was equipped with 10x40 binoculars, a high powered torch and a digital camera.

3.7 Field Survey Limitations

Ecological surveys are limited by factors which affect the presence of plants and animals such as the time of year, migration patterns and behaviour. The field survey has therefore not produced a complete list of plants and animals and in the absence of evidence of any particular species should not be taken as conclusive proof that the species is absent or that it will not occur in the future.

Online mapping resources provide an indication of habitat features present in the wider area, but do not provide a detailed assessment of habitat types.

Not all potential bat roosting features are accessible to the surveyor, e.g. holes or cracks in trees, and therefore assessments are based upon the potential for these features to provide suitable roosting opportunities.

The survey was undertaken at a time of year when many species of plant and animal are either dormant, not visible above ground or simply not present in the UK (such as migratory birds). Therefore, the survey was based upon an assessment of the habitat present on site and the suitability of this habitat to support protected species.

4.0 BASELINE ECOLOGICAL CONDITIONS

4.1 Introduction

This section details the results of the field survey and desktop study undertaken as part of the Ecological Impact Assessment for the site. It assesses the baseline ecological conditions of the site at the time the desktop study was completed and based on the ecological features recorded during the field survey carried out on 6th October 2022 and the previous protected species surveys undertaken in 2012 and 2016.

4.2 Statutory and Non-statutory Designated Sites

Details of designated sites are provided in the paragraphs below.

4.2.1 Statutory Designated Sites

There is a single statutory designated site of nature conservation interest situated within one kilometre of the site boundary. This is:

- Southampton Common (SSSI) – Located approximately 35 metres west at its nearest point and designated for supporting an important population of great crested newt *Triturus cristatus* and notable habitats;

Further details of the statutory designations listed above are provided in **Appendix 5**.

4.2.2 Non-Statutory Designated Sites

There are 11 non-statutory designated sites of nature conservation interest situated within one kilometre of the site boundary. These are:

- Southampton Common (SINC) – Located on-site and designated for supporting:
 - Other woodland where there is a significant element of ancient semi-natural woodland surviving or supporting some characteristics of ancient woodland;
 - Semi-improved grasslands which retain a significant element of unimproved grassland;
 - Grasslands which have become impoverished through inappropriate management, but which retain sufficient elements of relic unimproved grassland to enable recovery;
 - A Hampshire notable species stag beetle *Lucanus cervus*; and
 - Sites of nature conservation interest which occur in areas otherwise deficient in such interest, and/or are known to be of particularly high value to local communities.

- The Old Cemetery (SINC) – Located approximately 365 metres west of the site and designated for supporting Semi-improved grasslands which retain a significant element of unimproved grassland and the Hampshire notable species green-winged orchid *Anacamptis morio*;
- Broadlands Valley Greenway (SINC) – Located approximately 510 metres east and designated for supporting wet woodland and sites of nature conservation interest which occur in areas otherwise deficient in such interest, and/or are known to be of particularly high value to local communities;
- Bassett Wood Greenway (SINC) – Located approximately 515 metres north-east and designated for supporting ancient semi-natural woodland, wet woodland, Semi-improved grasslands which retain a significant element of unimproved grassland and sites of nature conservation interest which occur in areas otherwise deficient in such interest, and/or are known to be of particularly high value to local communities;
- Land Off Church Lane (SINC) – Located approximately 545 metres south-east and designated for supporting wet woodland and sites of nature conservation interest which occur in areas otherwise deficient in such interest, and/or are known to be of particularly high value to local communities; and
- Rollesbrook Valley Greenway (SINC) – Located approximately 750 metres north-west and designated for supporting wet woodland and sites of nature conservation interest which occur in areas otherwise deficient in such interest, and/or are known to be of particularly high value to local communities.

Further information on sites designated for nature conservation are provided in **Appendix 5**.

4.3 Habitats

4.3.1 Desktop Study Results

Consultation with MAGIC identified the majority of the site as the Habitat of Principal Importance (**Appendix 3**) lowland mixed deciduous woodland.

Consultation with HBIC produced records of broadleaved, mixed and yew woodland as well as neutral grassland within the site. Other notable habitats from within one kilometre of the site include ponds, fen, marsh and swamp, coniferous woodland and improved grassland.

4.3.2 Field Survey Results

Habitats within the site are shown on the Phase 1 Habitat Map (**Map 2**), Target Notes and photographs have been provided as appropriate, Target Notes are cross referenced to **Map 2**. Habitats are described in general terms using standard Phase 1 habitat survey terminology. The main habitats recorded on site during the Phase 1 habitat survey were as follows:

Broad-leaved Semi-natural Woodland

Broad-leaved semi-natural woodland is the most abundant habitat type within the site and bounds the on-site path for much of their length. The woodland mainly comprises pedunculate oak *Quercus robur* with an occasionally dense understorey of holly *Ilex aquilinum* (**Figure 1** and **Figure 2**). The ground flora is mainly composed of dense ivy *Hedera helix* or bramble *Rubus fruticosus* aggregate, although some areas are more open. Herbaceous species recorded included lords and ladies *Arum maculatum*, wood avens *Geum urticum*, wood melick *Melica uniflora* and a single specimen of butcher's broom *Ruscus aculeatus*.

Other woody species recorded occasionally in the canopy and shrub layer included silver birch *Betula pendula*, goat willow *Salix caprea*, hawthorn *Crataegus monogyna*, hazel, beech *Fagus sylvatica*, horse chestnut *Aesculus hippocastanum*, sycamore *Acer pseudoplatanus*, ash *Fraxinus excelsior*, cherry laurel *Prunus laurocerasus* and rowan *Sorbus aucuparia*. Scot's pine *Pinus sylvestris*, yew *Taxus baccata*, wild cherry *Prunus avium* and wych elm *Ulmus glabra* are rare on site.

A large stand of Japanese knotweed *Fallopia japonica* was recorded adjacent to the watercourse within the woodland (TN1 on **Map 2**). The stand has been subject to glyphosate treatment works, but has not been successful in controlling the species.

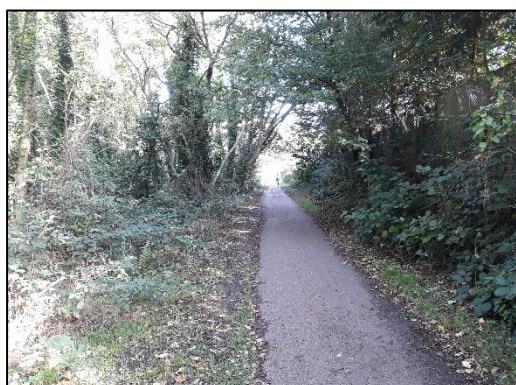


Figure 1: Southern end of site showing Lovers Walk and bounding broad-leaved semi-natural woodland

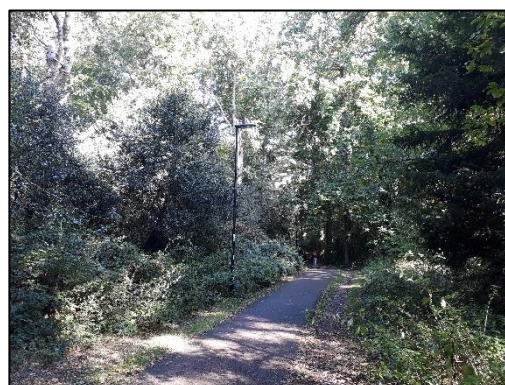


Figure 2: Northern end of site showing Lovers Walk and bounding broad-leaved semi-natural woodland

Scattered Trees

Scattered trees are mainly present in the southern section of the site and comprise mature pedunculate oak and a small section of Scot's pine.

Scattered Scrub

A small section of scattered scrub is present in the southern compartment. This habitat is dominated by bramble.

Amenity Grassland

Amenity grassland is the second most abundant habitat within the site. Much of the grassland is regularly managed and had been mown recently at the time of the survey (**Figure 3**). Much of the path is bounded by a thin strip of amenity grassland (**Figure 4**). The amenity grassland on site mainly comprised coarse grasses such as cock's foot *Dactylis glomerata*, perennial rye grass *Lolium perenne* and Yorkshire fog *Holcus lanatus*. Other species in the verges included greater plantain *Plantago major*, creeping buttercup *Ranunculus repens* and rough meadow grass *Poa trivialis*.



Figure 3: Lover's Walk and adjacent area of mown amenity grassland in the northern part of the site

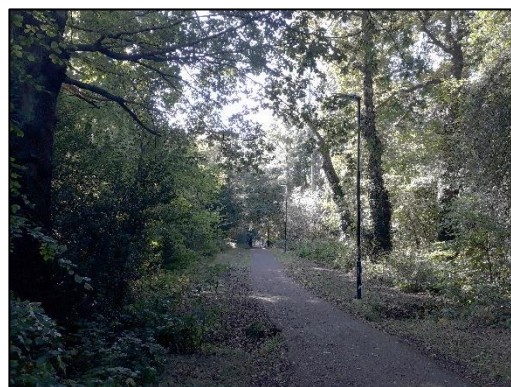


Figure 4: Amenity grassland bounding Lover's Walk in the northern part of the site

Running Water

There are a number of culverts in the northern section of the site, at the time of the survey there was no water present within these features. In addition, no specific aquatic vegetation was present. A small stream is present at the far northern end of the site (**Figure 5**). This feature is extremely shaded and the only aquatic species present was pendulous sedge *Carex pendula*. The bankside has been significantly affected by the brown rat *Rattus norvegicus* burrows present in the area.



Figure 5: Stream at the far northern end of the site

Hardstanding

The existing paths within the site are composed of tarmacadam.

Other Habitats

Much of Lover's Walk has a strip of bare ground either side of it associated with the public use of these areas (**Figure 6** and **Figure 7**).



Figure 6: Bare ground either side of path

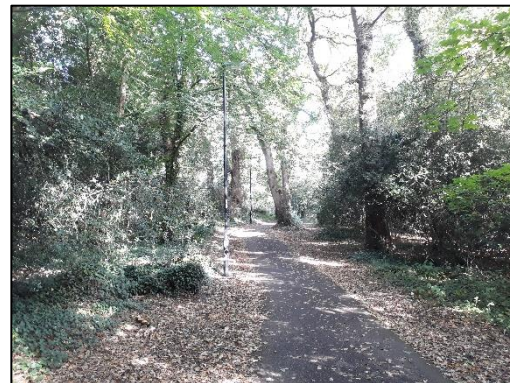


Figure 7: Bare ground associated with path

Summary

The habitats within the site mainly comprises high value broad-leaved semi-natural woodland. However much of the habitat in close proximity to the path comprises low value habitats such as bare ground and amenity grassland.

4.4 Notable and Legally Protected Species

4.4.1 Bats

Desktop Study Results

Consultation with HBIC returned a large number of records of bats within two kilometres of the site boundary. Recent (within the last ten years) records include Brandt's bat

Myotis brandtii, brown long-eared bat *Plecotus auritus*, common pipistrelle *Pipistrellus pipistrellus*, Daubenton's bat *Myotis daubentonii*, Leisler's bat *Nyctalus leisleri*, *Myotis* bat species¹⁰, Nathusius' pipistrelle *Pipistrellus nathusii*, noctule *Nyctalus noctula*, Natterer's, serotine *Eptesicus serotinus*, soprano pipistrelle *Pipistrellus pygmaeus*, barbastelle *Barbastella barbastellus* and whiskered bat *Myotis mystacinus*.

Consultation with MAGIC returned 10 granted EPSM licences in respect of bats within two kilometres of the site boundary. The nearest of these is located approximately 25 metres east of the site and was granted in 2014 for the destruction of a resting place of common pipistrelle.

Dusk emergence surveys were undertaken on ten trees in 2012, which revealed a small number of low status day roosts of common pipistrelle within close proximity to Lovers Walk. Roost locations are provided in **Map 3**.

A ground level tree assessment was undertaken in April 2016 on trees within five metres of Lovers Walk (ECOSA, 2021). A total of 35 trees were recorded as having moderate or high suitability for roosting bats.


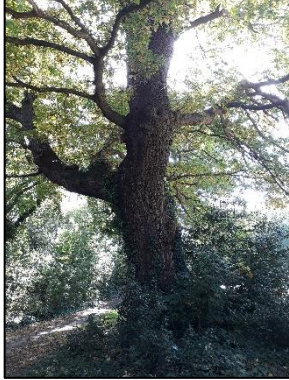
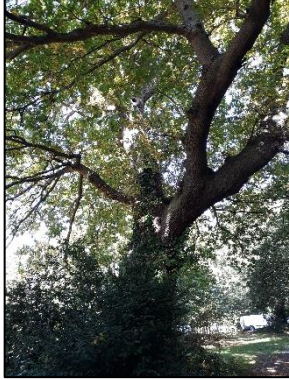
Transect surveys were undertaken at the site on two dates in August 2012 (ECOSA, 2012b). Transect surveys were also undertaken at the site between April and June 2016 (ECOSA, 2021). The transect surveys recorded a total of four bat species: common pipistrelle, soprano pipistrelle, noctule and serotine. The results indicated that the site supports a moderate level of foraging and commuting bat activity, this is not considered to be atypical given the habitats present. The species diversity recorded was largely attributable to common and widespread species specifically common pipistrelle with single registrations of soprano pipistrelle, noctule and serotine.

Automated detector surveys were undertaken at the site between April and June 2016 (ECOSA, 2021). The automated bat detector survey results recorded a total of 1,526 bat registration of at least six species: common pipistrelle, soprano pipistrelle, noctule, serotine, long-eared bat species and *Myotis* bat species. Common pipistrelle represented 90.23% of recorded activity and noctule 4% of registrations. The remaining three species / species groups represented under 5% of the registrations. A high percentage of the total bat registrations were recorded during May, indeed 56% of registrations were of common pipistrelle from a single static detector situated in the north of the site. This area was lit by streetlights.

¹⁰ There are seven species of *Myotis* bats in Britain. *Myotis* bats are very difficult to identify specifically, this can generally only be done by examination of physical features and Phylogenetic Analysis Identification of bat droppings. Many of these bats are common and will utilise buildings for roosting often occupying small and inaccessible voids. For the purpose of this report all *Myotis* bat species shall be referred to as *Myotis* bats unless a specific identification has been possible.

Tree Assessment

Given the large number of trees present within the site, it was not possible to fully inspect each tree for bat roosting suitability during the field survey undertaken and survey effort focused on those that had previously recorded bat roosts.

Tree Number	Figure	Description	Bat Roost Potential
Tree 1	 <p data-bbox="427 875 847 927">Figure 8: Cavity in callus roll on eastern aspect</p>	Pedunculate oak with cavity in callus roll on eastern aspect	Confirmed low status day roost of common pipistrelle with a peak count of three individuals
Tree 2	 <p data-bbox="427 1335 847 1386">Figure 9: Rot hole on northern aspect at approximately four metres height</p>  <p data-bbox="427 1787 847 1839">Figure 10: Rot hole on southern aspect at approximately seven metres height</p>	Pedunculate oak with rot hole on northern aspect at approximately four metres height and rot hole on southern aspect at approximately seven metres height.	Confirmed low status day roost of common pipistrelle with a peak count of three individuals

Tree 3	There are no photographs of Tree 3 from previous ecological reports.	There is no description of Tree 3 from previous ecological reports. From looking on satellite imagery, the tree appears to be a lime tree <i>Tilia</i> species.	Confirmed low status day roost of common pipistrelle with a peak count of two individuals
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Additionally, there are a large number of mature trees within the site, mainly consisting of pedunculate oak with fewer beech and ash. These trees are likely to provide features suitable for supporting roosting bats.

Foraging and Commuting Habitat

The habitat on site provides excellent foraging habitat in the form of broad-leaved semi-natural woodland with associated edge habitat. However small sections of Lovers Walk are lit and there is likely to be a degree of disturbance and light spill from properties and Southampton university adjacent to the site. Overall, the site is assessed as having high suitability to support foraging and commuting bats.

4.4.2 Otter

Desktop Study Results

Consultation with HBIC produced no records of otter *Lutra lutra* within the desktop study area, however, this does not confirm the absence of the species in the local area.

Consultation with MAGIC produced no granted EPSM licences in relation to otter within a two kilometre radius of the site.

Field Survey Results

No evidence of otter such as otter spraints, feeding remains, tracks, couches or holts was recorded during the survey. There are a number of culverts in the northern section of the site, at the time of the survey there was no water present within these features. In addition, no specific aquatic vegetation was present. A small stream is present at the far northern end of the site (**Figure 5**). This feature is shaded and the only aquatic species present was pendulous sedge *Carex pendula*. The bankside has been significantly affected by the brown rat *Rattus norvegicus* burrows present in the area. The habitat on site is unsuitable for otter and therefore the species is not considered further in this report.

4.4.3 Badger

Desktop Study Results

Consultation with HBIC returned a single record of badger *Meles meles* from within one kilometre of the site. The record is located east of the site and is from 2008.

No evidence of badger was recorded within the site during the surveys undertaken in 2012 and 2016.

Field Survey Results

No evidence of badger was recorded within the site during the survey undertaken. The site offers suitable habitat for both foraging and resident badger in the form of the broad-leaved semi-natural woodland. The woodland and open grassland provides suitable foraging habitat for this species. It is possible that badgers are present elsewhere on Southampton Common and the survey area.

4.4.4 Hazel Dormouse

Desktop Study Results

Consultation with MAGIC returned two records of granted EPSM licences in respect of hazel dormouse *Muscardinus avellanarius* located approximately one kilometre north-east and north-west of the site. The licence to the north-east was granted in 2018 for the damage and destruction of a breeding site and resting place while the licence to the north-west was granted in 2019 for the same reasons.

Consultation with HBIC produced no records of hazel dormouse within the desktop study area, however, this does not confirm the absence of the species in the local area.

Field Survey Results

The woodland habitat within the survey area contains mainly a dense understorey of holly with a few hazel specimens scattered across the site. The on-site woodland is suitable for the species, but does not provide optimum habitat. Southampton Common is also isolated from connecting habitat by the large swathes of residential areas surrounding it, making it unlikely that hazel dormouse would be able to colonise the area, should they be present. The habitat on site is unsuitable for hazel dormouse and therefore the species is not considered further in this report.

4.4.5 Water Vole

Desktop Study Results

Consultation with HBIC produced no records of water vole *Arvicola amphibius* within the desktop study area, however, this does not confirm the absence of the species in the local area.

Field Survey Results

No evidence of water vole such as footprints, feeding remains, latrines or burrows was recorded during the survey. A small stream is present at the far northern end of the site (**Figure 5**). This feature is shaded and the only species present was pendulous sedge *Carex pendula*. No suitable spring and summer food resources such as grassland species were recorded along the bank. The bankside has been significantly affected by the brown rat burrows present in the area. The river is also culverted in two sections within the northern part of the site. The habitat on site is unsuitable for water vole and therefore the species is not considered further in this report.

4.4.6 Birds

Desktop Study Results

Southampton Common is well watched by local birders and therefore a good number of bird records were returned with the data search. Notable or protected species included with the data search which may breed on site include lesser redpoll *Acanthis cabaret*, lesser spotted woodpecker *Dendrocopos minor*, spotted flycatcher *Muscicapa striata*, marsh tit *Poecile palustris*, firecrest *Regulus ignicapilla*, siskin *Spinus spinus*, starling *Sturnus vulgaris* and song thrush *Turdus philomelos*.

During the Phase 1 Habitat Survey undertaken in 2012 (ECOSA, 2012a), a range of common breeding bird species were recorded. These consisted of blackbird *Turdus merula*, song thrush, mistle thrush *Turdus viscivorus*, robin *Erithacus rubecula*, blue tit *Cyanistes cyanus*, great tit *Parus major*, woodpigeon *Columba palumbus*, chaffinch *Fringilla coelebs*, great spotted woodpecker *Dendrocopos major*, magpie *Pica pica*, jay *Garrulus glandarius* and carrion crow *Corvus corone*. Additionally, the amber listed species of conservation concern¹¹ bullfinch *Pyrrhula pyrrhula*, black-headed gull *Chroicocephalus ridibundus* and mallard *Anas platyrhynchos* were recorded within the site.

Firecrest surveys in the form of transects were undertaken at the site between mid-May and June 2016 (ECOSA, 2021). The firecrest surveys recorded four confirmed territories from the site. Territory locations are provided in **Map 4**. All birds were recorded from areas of mature pedunculate oak with a dense understorey of holly. Two of the territories (central and far north) were recorded on all four surveys the other two territories were recorded on less visits. All territories were on the western side of Lover's Walk possible as a result of the more continuous habitat present to the west. Singing males were recorded from locations around 3-10 metres from the path, and were

¹¹ Eaton M.A. *et al.*, (2009) Birds of Conservation Concern 3: The Population Status of Birds in the United Kingdom, Channel Islands and the Isle of Man. *British Birds* 102, 296–341

associated with small clearings in the canopy. It was concluded that firecrest is breeding within close proximity to Lover's Walk.

During the firecrest surveys, number of other bird species were recorded including; wren *Troglodytes troglodytes*, jay, blackcap *Sylvia atricapilla*, woodpigeon, long-tailed tit *Aegithalos caudatus*, magpie, blackbird, robin, nuthatch *Sitta europaea*, great spotted woodpecker, green woodpecker *Picus viridis*, chiffchaff *Phylloscopus collybita*, great tit, blue tit, goldcrest *Regulus regulus*, carrion crow, goldfinch *Carduelis carduelis* and coal tit *Periparus ater*. The amber listed species of conservation concern stock dove *Columba oenas*, song thrush, dunnock *Prunella vulgaris* were heard singing, and, therefore it is possible that all three species breed on-site.

Field Survey Results

During the field survey the common and widespread blue tit, goldcrest, blackbird, robin, long-tailed tit and green woodpecker were recorded on site.

The site provides suitable nesting habitat for breeding birds in the form of the broad-leaved semi-natural woodland, scattered trees and scattered scrub. A variety of suitable habitats for supporting a variety of bird species are also present in the vicinity of the site in the form of the wider Southampton Common and residential gardens.

Because of the scale and types of habitats present on the site, it is unlikely that the site supports notable populations or assemblages of wintering birds. Therefore, wintering birds are not considered further in this report.

4.4.7 Reptiles

Desktop Study Results

No granted EPSM licences in respect of smooth snake *Coronella austriaca* or sand lizard *Lacerta agilis* were identified within a two kilometre radius of the site. The habitat is unsuitable for these species and the nearest locations suitable are in the New Forest and Dorset heaths.

Consultation with HBIC returned four records of slow-worm *Anguis fragilis* within one kilometre of the site. The nearest record is from 2007 of a single slow-worm located approximately 700 metres east of the site.

Field Survey Results

The habitats present are generally of low value for this species group, as they lack areas of tussocky grassland or open areas for basking. Furthermore, the habitats either side of Lover's Walk are subject to a high level of disturbance associated with public use. There are areas of habitats suitable for reptiles within other areas of Southampton

Common and therefore it is possible that reptiles utilise habitats in close proximity to the path on occasion.

4.4.8 Great Crested Newt

Desktop Study Results

Southampton Common SSSI is located approximately 35 metres west at its nearest point and designated for supporting an important population of great crested newt.

Consultation with HBIC returned a number of records of great crested newt within one kilometre of the site. Records were returned associated with Southampton Common Boating Lake approximately 220 metres west of the path within Southampton Common SSSI. Additional records were returned in the Southampton University Valley Gardens Pond approximately 310 metres east of the path.

Consultation with MAGIC returned records of two granted EPSM licences in respect of great crested newt within two kilometres of the site. The nearest of these are located approximately 160 metres east of the site and was granted in 2010 for the destruction of a resting place of great crested newt. An additional licence was granted in 2009 for land approximately 530 metres east of the site for the destruction of a resting place of the species.

Consultation with MAGIC also returned four records of great crested newt class licence returns recording great crested newt as present within 500 metres of the site. The records are located approximately 250 metres east of the site in 2015.

Consultation with online OS mapping returned the presence of 10 waterbodies within 500 metres of the site.

Field Survey Results

There are no waterbodies on site and therefore the site is unsuitable for breeding great crested newt. The site offers suitable habitat for the species in its terrestrial stage in the form of broad-leaved semi-natural woodland, scattered scrub and amenity grassland. Given the network of ponds in the surrounds, the records of the species in the local area and the fact that great crested newt is the primary designation criteria for Southampton Common SSSI, it is likely that the on-site habitat provides part of the wider terrestrial habitat for the species.

4.4.9 Invertebrates

Desktop Study Results

A large number of moth records were returned with the data search, most of the records are likely to relate to light trapping records from the local area. Many of the species are

associated with broad-leaved semi-natural woodland and are therefore likely to occur within the site. In addition, a large number of recent records (within the last ten years) of the Species of Principal Importance (**Appendix 3**) stag beetle *Lucanus cervus* were included with the data search.

Field Survey Results

The site offers suitable habitat for supporting invertebrates in the form of broad-leaved semi-natural woodland, scattered trees, scattered scrub, amenity grassland and running water. The understorey of the broad-leaved semi-natural woodland contains log piles and decaying wood which may support a community of saproxylic species. Saproxylic species include a high number of rare and scarce coleoptera and hymenoptera in particular and could include Species of Principal Importance stag beetle (Kirby, P., 2001).

4.4.10 Other Relevant Species

Desktop Study Results

A large number of recent records (within the last ten years) of the Species of Principal Importance European hedgehog *Erinaceus europaeus* were included with the data search.

Field Survey Results

No evidence of any other relevant species was recorded within the site during the survey undertaken. The site offers suitable habitat for common toad *Bufo bufo* in its terrestrial stage and European hedgehog in the form of broad-leaved semi-natural woodland and scattered scrub. The network of ponds in the surrounds offers suitable breeding habitat for common toad and it is therefore possible that the species disperses to the site.

4.5 Summary of Key Ecological Features

The following features are those with greatest ecological value that lie within the site's Zone of Influence:

- The site forms part of the wider Southampton Common SINC;
- Southampton Common SSSI located approximately 35 metres west of the site;
- Presence of the habitat of Principal Importance lowland mixed deciduous woodland;
- Confirmed bat roosts within trees;
- Suitability for tree roosting bats and foraging and commuting bats;

- Suitability for badger;
- Supporting breeding firecrest;
- Suitability for common species of breeding birds;
- Suitability for widespread reptiles;
- Suitability for great crested newt;
- Suitability for notable invertebrates; and
- Suitability for European hedgehog.

5.0 ASSESSMENT OF ECOLOGICAL EFFECTS AND MITIGATION/COMPENSATION/ ENHANCEMENT MEASURES

5.1 Introduction

This section assesses the ecological effects of the proposed development scheme on the identified ecological features as identified in Section 4.0. Methods for addressing potential impacts and effects on ecological features have been approached in accordance with the mitigation hierarchy¹² with avoidance of impacts prioritised where possible. Where significant adverse effects cannot be avoided other forms of mitigation are prioritised over compensation. Enhancement measures have been detailed, where relevant, in order to not only minimise the impacts on biodiversity but also to provide enhancement in accordance with Paragraph 174 of the NPPF (Paragraph 2.2.1). It is anticipated that mitigation, compensation and enhancement measures will be secured through the planning process.

5.2 Scheme Design

The proposed development entails the widening of the path known as 'Lovers Walk' that runs north to south on the eastern side of Southampton Common between Burgess Road and Westwood Road. No lighting is proposed.

The potential ecological impacts and effects of these proposals, in the absence of mitigation, are described for each ecological feature below. For each ecological feature, measures to mitigate and/or compensate for significant effects are described.

5.3 Designated Sites

5.3.1 Potential Impacts and Effects

The site is situated within Southampton Common SINC. The nearest statutory designated site is Southampton Common SSSI located 35 metres west of the site at its nearest point, designated for supporting an important population of great crested newt and notable habitats.

The development will result in the direct net loss of approximately 1,265 square metres of Southampton Common SINC, excluding the loss of hardstanding. This represents 0.35% of the total SINC area and consists of widespread habitats which do not form part of the designation (bare ground, amenity grassland and scattered scrub). Overall, the impact of the direct loss of SINC will be minimal given the small area involved and poor quality of the habitats present.

¹² In accordance with CIEEM Ecological Impact Assessment guidance (CIEEM, 2018) a sequential process is adopted to address impacts on features of ecological interest, with 'Avoidance' prioritised at the top of the hierarchy and Compensation/Enhancement' at the bottom. This is often referred to as the 'mitigation hierarchy'.

The proposals have the potential to result in indirect impacts to Southampton Common SINC as a result of construction activities through noise, disturbance and pollution events.

The site is separated from Southampton Common SSSI by the A33 and given the minor nature of the development proposals no direct effects on Southampton Common SSSI are anticipated. There may be temporary impacts on great crested newt, which is a qualifying feature of Southampton Common SSSI, with further details discussed in Paragraph 5.9.

5.3.2 Mitigation and Compensation Measures

To compensate for the loss of Southampton Common SINC, the following green land parcels will be afforded protection as if it were common land:

- Land at Rosemary Cross (Hill Lane / Burgess Road) (825 square metres); and
- Land South of Northlands Road (258 square metres).

In addition, the following land parcels, which are already common land, will be converted from existing hardstanding to grassland:

- Former Toilets Footpath (52 square metres) - There is a section of footpath at the access from Hill Lane / Burgess Road junction which connected to former toilets. The toilets have long been removed and footpath no longer required. This is to be broken out and returned to grass;
- Former Changing Rooms (200 square metres) - The foundations of a former changing rooms remains on Southampton Common. This is to be broken out and returned to grass; and
- Old Cricket Strips x 2 (111 square metres) - There are two tarmac strips on Southampton Common to be used for playing cricket. These are now in poor condition and will be broken out and returned to grass.

These areas will be sown with an appropriate seed mixture. The above three areas are located within Southampton Common SSSI and therefore Natural England's consent is required to determine an appropriate acid grassland seed mix. A consultation will be submitted to Natural England at the time as the Section 38 application by Southampton City Council.

A Construction Environment Management Plan (CEMP) will be prepared and implemented as part of the construction phase of the scheme to ensure no indirect impacts on Southampton Common SINC. This will include guidance on reducing the

risk of pollution incidents during construction in accordance with current best practice guidelines including the provision of spill kits and the appropriate storage of materials and machinery on hardstanding.

5.3.3 Enhancement

No enhancement measures in relation to designated sites are considered necessary.

5.4 Habitats

5.4.1 Potential Impacts and Effects

There will be a net loss of low value habitats (approximately 29 square metres of scattered scrub, 423 square metres of amenity grassland and 970 square metres of bare ground) as a result of the proposals associated with the edge of the existing path. The habitats to be lost are of negligible importance.

The broad-leaved semi-natural woodland, scattered trees, running water will be retained as part of the proposals. Retained habitats may be damaged through accidental impacts with heavy machinery or storage of materials during construction.

There is also potential for pollution of nearby watercourses and groundwater associated with run-off during construction.

The non-native invasive Japanese knotweed within the site has the potential to significantly degrade any existing ecological value at the site. Japanese knotweed is listed on Schedule 9 of the Wildlife and Countryside Act which makes it illegal to plant or otherwise cause the species to grow in the wild. Refer to **Appendix 3** for details.

5.4.2 Mitigation and Compensation Measures

The loss of habitats will be partly off-set through the creation of approximately 157 square metres of amenity grassland. There are not ecologically focussed management requirements for these areas, however where possible the arisings should be removed when cutting.

The majority of habitat loss will be off-set through positive management of other areas of the common. Further details of these proposals are provided in a separate Ecological Compensation and Management Plan (ECOSA, 2023a). The Biodiversity Net Gain (BNG) calculations have identified a 10% net gain as part of the (ECOSA, 2023b).

Trees to be retained within the site will be protected during the construction period with Root Protection Zones (British Standards, 2012).

If possible, the area where the Japanese knotweed is present will be avoided. An exclusion area will be set up in consultation with a specialist contractor.

Recommendations have already been made in order to safeguard Southampton Common SINC, which will mitigate potential effects on the habitats as discussed in Paragraph 5.3.2.

5.4.3 Enhancement

Ongoing monitoring and management will be required to ensure that control of Japanese knotweed is successful.

5.5 Bats

5.5.1 Potential Impacts and Effects

No additional external lighting is being introduced to the site. The proposals will not result in any long-term loss of bat roosts or significant foraging and commuting habitat for bats.

There will be no direct impacts on trees with bat roosting features. There is potential for temporary disturbance to bat roosts in the vicinity of the path during construction, whilst this is not likely to be significant in respect of low status roosts it may have more serious negative impacts should any maternity roosts be present in the vicinity of works.

In England, bats and their habitat are fully protected under the Wildlife and Countryside Act 1981 through inclusion in Schedule 5. In addition, all bat species are protected under the Conservation of Habitats and Species Regulations 2017. Refer to **Appendix 3** for details.

5.5.2 Mitigation and Compensation Measures

In consultation with the Local Authority ecologist it has been agreed that the works will take place in the period between September and October or March and April, inclusive when potential impacts on maternity roosts will be avoided, with preference for the Autumn to avoid the breeding bird season. During this period bats will be neither breeding nor hibernating and are therefore less susceptible to disturbance.

If this timing is not possible due to the time consent is obtained, then the recommendations within the separate Ecological Method Statement will be followed (ECOSA, 2023c).

5.5.3 Enhancement

No enhancement measures in relation to bats are considered necessary.

5.6 Badger

5.6.1 *Potential Impacts and Effects*

Whilst no badger setts have been identified at the site, suitable sett building habitat is present within the site. As badger is a highly mobile species, there is the potential that badger could colonise the site prior to any future construction.

The proposals also have the potential to result in long-term loss of habitat suitable for foraging badger. However, given that the site forms a small area of potential foraging habitat for badger in the context of the wider area this is not considered significant.

Badger are protected from killing and injury, and their setts protected from damage and interference, under the Protection of Badgers Act 1992. Refer to **Appendix 3** for details.

5.6.2 *Mitigation and Compensation Measures*

No more than three months prior to the commencement of the development, a walkover of the site will be undertaken to determine whether there has been any material change in the status of badger. Further recommendations will be made if they are located within the site during this survey. Should any setts be identified then, depending on the location, a Natural England licence may be required in order to close the sett(s). Any sett closure works are restricted to the period July to November.

5.6.3 *Enhancement*

No enhancement in respect of badger is considered necessary.

5.7 Birds

5.7.1 *Potential Impacts and Effects*

Removal of any woody vegetation has the potential to result in direct harm to nesting birds, including firecrest, if undertaken during the nesting bird season (March to August, inclusive) and result in the long-term loss to nesting habitat overall.

Construction activities also have the potential to result in disturbance to breeding birds if works are undertaken during the nesting bird season.

All birds, their nests, eggs and young are legally protected, with certain exceptions, under the Wildlife and Countryside Act 1981 (as amended). Refer to **Appendix 3** for details.

5.7.2 *Mitigation and Compensation Measures*

Construction works and any clearance of woody vegetation will ideally be undertaken outside of the breeding bird season which extends from March to August, inclusive. If this timing is not possible due to the time consent is obtained, then the

recommendations within the separate Ecological Method Statement will be followed (ECOSA, 2023c).

Two Vivara Pro Seville 32mm WoodStone Nest Boxes, two Vivara Pro Seville 28mm WoodStone Nest Boxes and two Vivara Pro Barcelona WoodStone Open Nest Boxes, or similar alternatives, will be erected on retained mature trees to provide nesting opportunities at the site.

5.7.3 Enhancement

No enhancement in respect of breeding birds is considered necessary.

5.8 Reptiles

5.8.1 Potential Impacts and Effects

Removal of grassland has the potential to result in direct impacts on reptile populations as a result of site clearance and the long-term loss of reptile habitat. Although the likelihood of impacts are minimal due to the high level of disturbance along the route.

Widespread reptile species (slow-worm *Anguis fragilis*, common lizard *Zootoca vivipara*, grass snake *Natrix helvetica* and adder *Vipera berus*) are protected under the Wildlife and Countryside Act 1981 against harm. Refer to **Appendix 3** for details.

5.8.2 Mitigation and Compensation Measures

Discussions with the Local Authority ecologist have agreed a precautionary approach. This has involved the preparation of an Ecological Method Statement (ECOSA, 2023c). The method statement details the requirement for an ecologist to be present on site during the initial preparatory works associated with clearance of semi-natural vegetation and any soil scraping required. In the unlikely event that reptiles are found, works will cease and the individual(s) moved to the nearest suitable habitat not affected by works.

Ground clearance works will ideally be undertaken between September and October, inclusive to avoid the breeding bird season and the bat maternity season. This timing also ensures the works are undertaken within the reptile active season which runs from March to October, inclusive. If this timing is not possible due to the time consent is obtained, then the recommendations within the separate Ecological Method Statement will be followed (ECOSA, 2023c).

5.8.3 Enhancement

No enhancement in respect of reptiles is considered necessary.

5.9 Great Crested Newt

5.9.1 Potential Impacts and Effects

Great crested newt may be disturbed or harmed during clearance works associated with construction activities. However, given the limited working zone and restricted timespan of the works these impacts are considered unlikely.

In England, great crested newt and their habitat are fully protected under the Wildlife and Countryside Act 1981 through inclusion in Schedule 5. In addition, this species is protected under the Conservation of Habitats and Species Regulations 2017. Refer to **Appendix 3** for details.

5.9.2 Mitigation and Compensation Measures

Discussions with the Local Authority ecologist have agreed a precautionary approach. This has involved the preparation of an Ecological Method Statement (ECOSA, 2023c). The method statement details the requirement for an ecologist to be present on site during the initial preparatory works associated with clearance of semi-natural vegetation and any soil scraping required. In the unlikely event that a great crested newt is found works will cease and a European Protected Species Mitigation licence obtained.

Ground clearance works will be undertaken between September and October, inclusive to avoid the breeding bird season and the bat maternity season. This timing also ensures the works are undertaken within the great crested newt active season which runs from March to October, inclusive. If this timing is not possible due to the time consent is obtained, then the recommendations within the separate Ecological Method Statement will be followed (ECOSA, 2023c).

Three log piles will be installed along the route of the path to provide hibernacula for reptile and other wildlife. Refer to the EMS for more details (ECOSA, 2023c).

5.9.3 Enhancement

No enhancement in respect of great crested newt is considered necessary.

5.10 Invertebrates

5.10.1 Potential Impacts and Effects

The proposals will result in the overall loss in suitable habitat for terrestrial invertebrates through the loss of a small area of amenity grassland and scattered scrub. While there will be a loss in habitat suitable for invertebrates this is considered to be insignificant since the habitat is limited in extent and quality.

The proposals will not result in the loss of suitable habitat for saproxylic species.

5.10.2 Mitigation and Compensation Measures

As no potential impacts are anticipated, no mitigation and compensation measures are considered necessary.

In the unlikely event that fallen deadwood needs to be moved this should be done carefully. The deadwood should be retained on site.

5.10.3 Enhancement

No enhancement in respect of invertebrate is considered necessary.

5.11 Other Relevant Species

5.11.1 Potential Impacts and Effects

The proposals will result in the overall loss in suitable habitat for European hedgehog and common toad through the loss of a small area of amenity grassland and scattered scrub within the site. However, it is not considered that any local population(s) would rely on the site given the extent of suitable habitat in the wider area. The loss of habitat for European hedgehog and common toad is therefore considered to be of negligible significance. Vegetation clearance has the potential to result in killing and injury of European hedgehog and common toad.

5.11.2 Mitigation and Compensation Measures

The site clearance methods set out in Paragraphs 5.7.2, 5.8.2 and 5.9.2 and will need to be undertaken by/under the supervision of a suitably qualified ecologist. Therefore, as part of this operation any European hedgehog or common toad encountered will be safely relocated to the nearest suitable habitat not affected by works.

5.11.3 Enhancement

No enhancement is considered necessary in respect of European hedgehog and common toad.

5.12 Residual and Cumulative Effects

Given the mitigation and compensation measures outlined above, no significant residual effects are anticipated on any of the species considered. Therefore, there will be no cumulative effects on local populations as a result of the development.

6.0 CONCLUSIONS

6.1 Conclusion

The majority of the site forms Southampton Common SINC. There will be a small loss (0.35%) of Southampton Common SINC as a result of the proposals which will be compensated through positive ecological management in a single nearby parcel of land within Southampton Common. The details of this work and the associated Biodiversity Offsetting calculations are provided in a separate report. Furthermore, a small area of Southampton Common which is currently hardstanding will be returned to the common as a result of the proposals. Recommendations have been made for the treatment of this area. Additionally, a small area of grassland, measuring approximately 157 square metres, will be created at Lovers Walk.

The site supports a small number of common pipistrelle roosts within close proximity to Lovers Walk, foraging and commuting bats and firecrest territories. The site also has the suitability to support badger, breeding birds, widespread species of reptiles, great crested newt, invertebrates, European hedgehog and common toad.

Adverse impacts on roosting bats, firecrest, widespread species of reptiles and great crested newt have been identified and appropriate mitigation measures proposed. These impacts will be avoided through timing the works during September and October and a precautionary method of works. A badger walkover survey will also be undertaken no more than six months prior to construction. Post-development, no residual or cumulative impacts are anticipated.

6.2 Updating Site Survey

If the application boundary changes or the proposals for the site alter, a re-assessment of the scheme in relation to ecology may be required. Given the mobility of animals and the potential for colonisation of the site over time, updating survey work may be required, particularly if development does not commence within 18 months of the date of the most recent relevant survey.

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Map 1 Site Location Plan

LOVERS WALK, SOUTHAMPTON COMMON, THE AVENUE, SOUTHAMPTON, HAMPSHIRE

ECOLOGICAL IMPACT ASSESSMENT

Map 1 - Site Location Plan

Client:	Southampton City Council
Date:	March 2023
Status:	Final

KEY

 Site Boundary



Scale at A4: 1:15,000



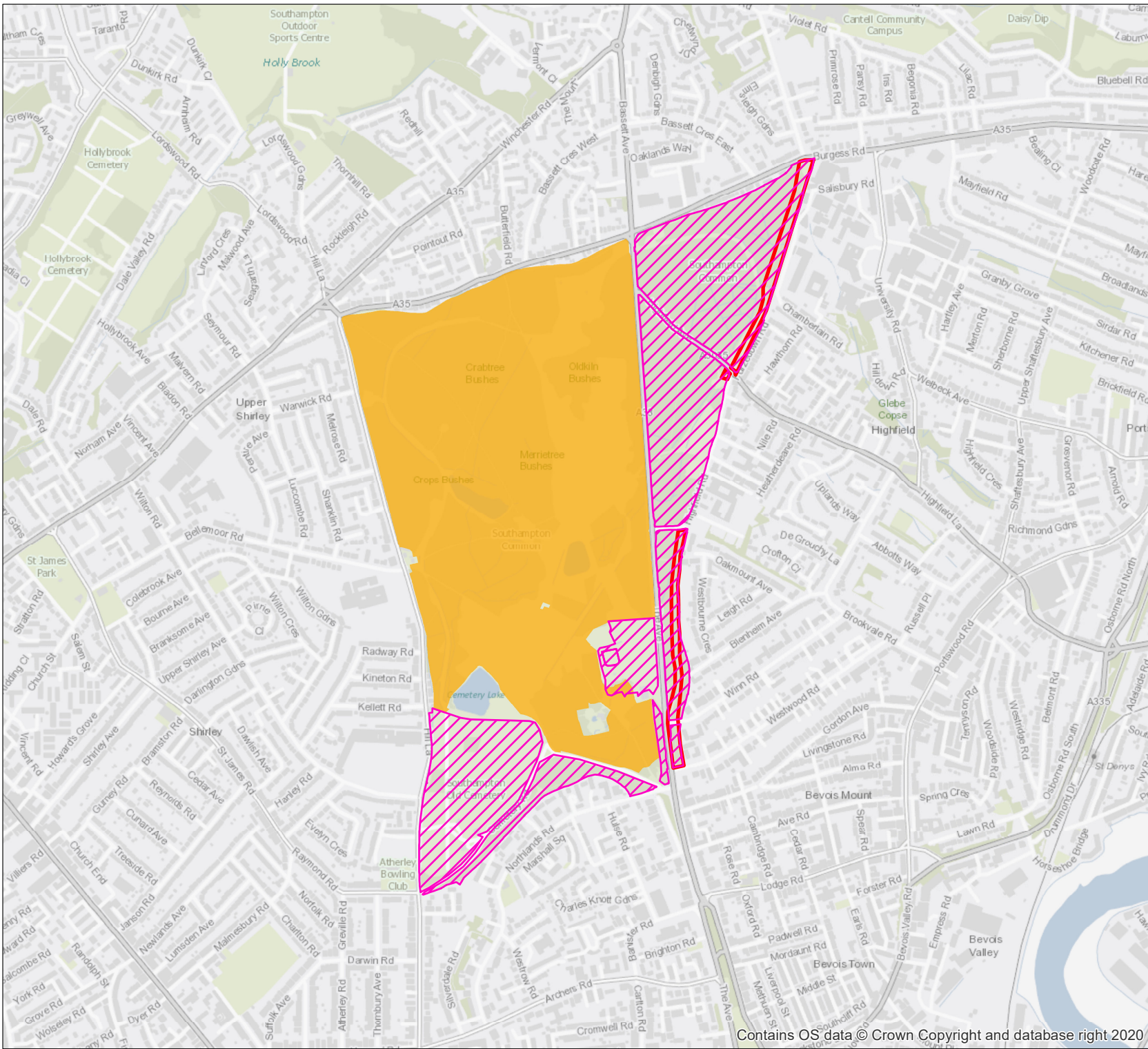
Prepared by: EV	Date: 090323
Last amended by: N/A	Date: N/A



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Map 2 Phase 1 Habitat Map

**LOVERS WALK (OFFSET LAND),
SOUTHAMPTON COMMON, THE AVENUE,
SOUTHAMPTON, HAMPSHIRE**

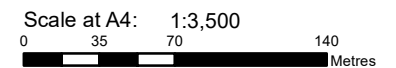
ECOLOGICAL IMPACT ASSESSMENT

Map 2a - Phase 1 Habitats - North

Client:	Southampton City Council
Date:	September 2023
Status:	Final

KEY

- Site Location
- Broadleaved Woodland
- A A Amenity Grassland
- Bare Ground
- Hardstanding
- Scattered Trees
- TN1 Target Note



Prepared by: EV	Date: 211022
Last amended by: OW	Date: 250923



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





**LOVERS WALK (OFFSET LAND),
SOUTHAMPTON COMMON, THE AVENUE,
SOUTHAMPTON, HAMPSHIRE**

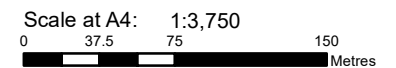
ECOLOGICAL IMPACT ASSESSMENT

Map 2b - Phase 1 Habitats - South

Client:	Southampton City Council
Date:	September 2023
Status:	Final

KEY

-  Site Location
-  Broadleaved Woodland
-  Scattered Scrub
-  Scattered Scrub
-  Amenity Grassland
-  Bare Ground
-  Hardstanding
-  Scattered Trees



Prepared by: EV	Date: 211022
Last amended by: OW	Date: 250923



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Map 3 Previously Recorded Bat Roosts

**LOVERS WALK, THE AVENUE,
SOUTHAMPTON COMMON,
SOUTHAMPTON, HAMPSHIRE**

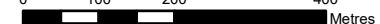
ECOLOGICAL IMPACT ASSESSMENT

Map 3 - Previously Recorded Bat Roosts

Client:	Southampton City Council
Date:	May 2023
Status:	Final

KEY

- Site Location
- Bat Roost

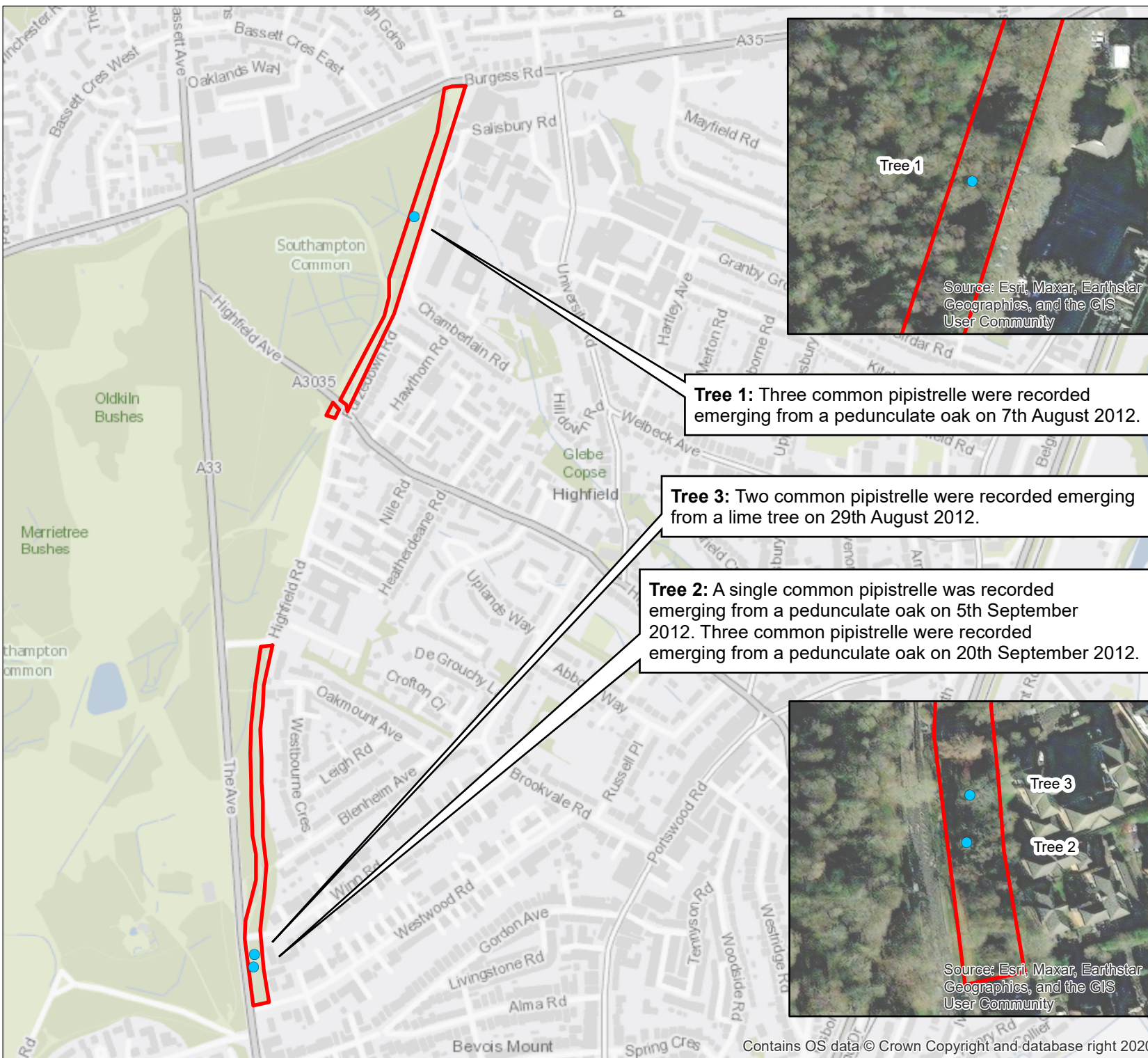
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Prepared by: EV	Date: 141222
Last amended by: EV	Date: 020523



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Map 4 Previously Recorded Locations of Firecrest Territories




**LOVERS WALK, SOUTHAMPTON
COMMON, THE AVENUE, SOUTHAMPTON,
HAMPSHIRE**

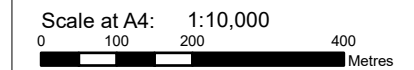
ECOLOGICAL IMPACT ASSESSMENT

**Map 4 - Previously Recorded Locations of
Firecrest Territories**

Client:	Southampton City Council
Date:	December 2022
Status:	Final

KEY

	Site Location
	Transect Route
	Firecrest Territories



Prepared by: EV	Date: 141222
Last amended by:	Date:



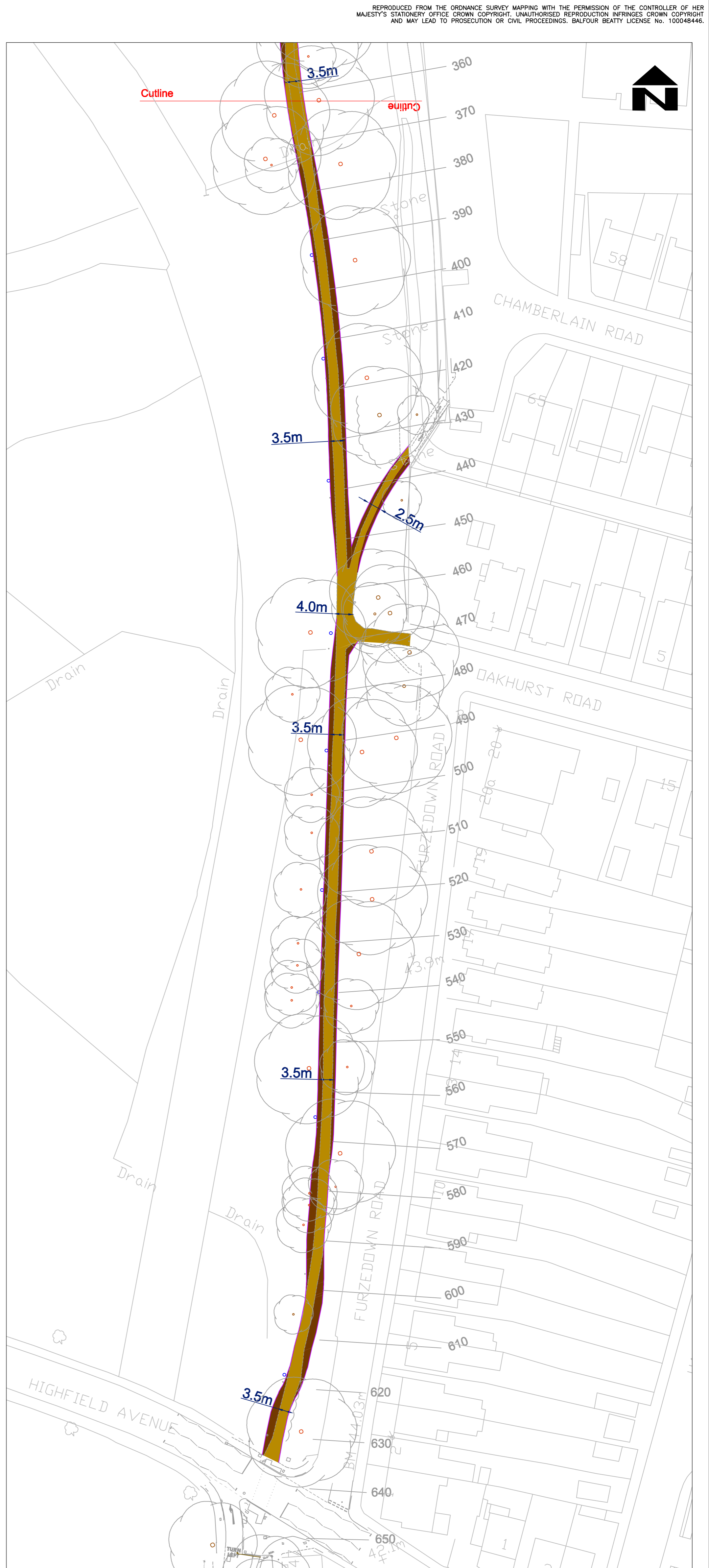
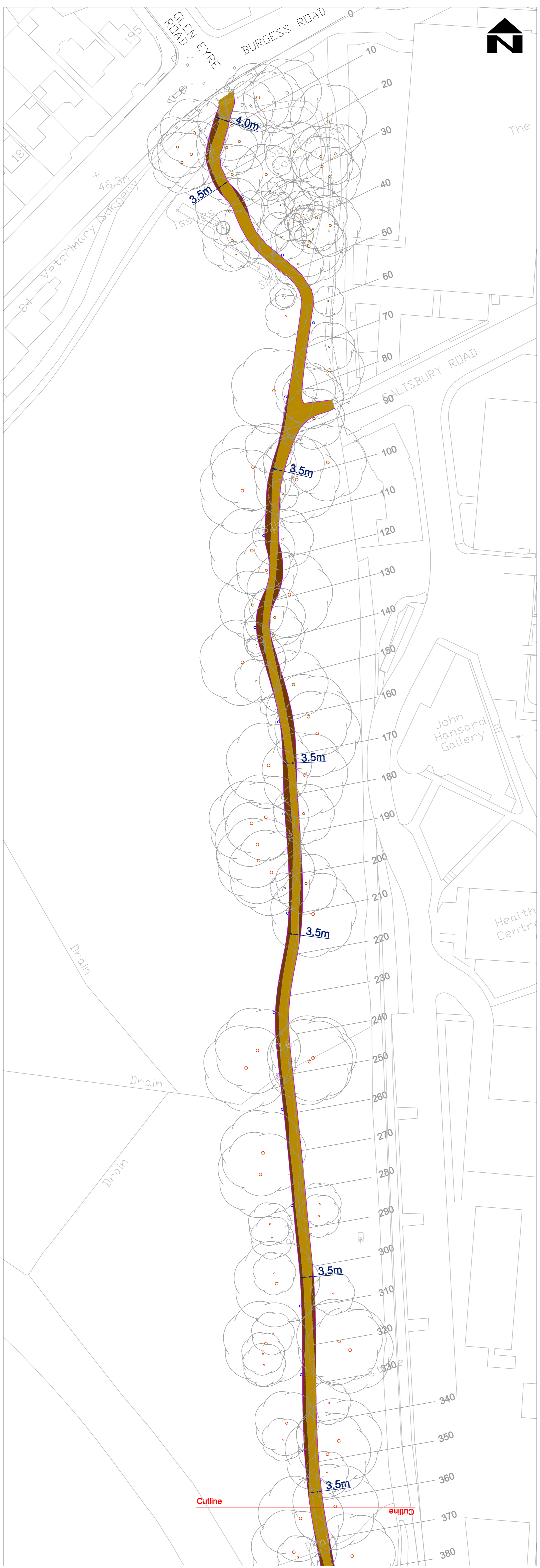
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Appendix 1 Site Proposals Plan



Key:

- Existing path
- Proposed path (with aluminum edging and 'no dig' construction)
- Existing lighting
- Area of existing footway to be resurfaced
- Area of Common land to be transferred to public highway - footway/cycleway (total: 1422m²)
- Area of existing highway to be transferred to green Common land (total: 157m²)
- Location of tree trunk
- Dimension of proposed path

Notes:

- Design based upon:
 - 3.5m wide path between Burgess Road to Highfield Road
 - 2.5m between the Highfield Road and Blenheim Avenue.
 - 3.0m between Blenheim Avenue and Westwood Road
- Area to be transferred from the Common to achieve this is approximately 1265m².
- Design shown is based on the layout as per 29th March 2021. Any changes to the layout completed after this date is not reflected in the drawings (see section 5 of the Lover's Walk - Additional Information document).
- For the proposed traffic calming features, please refer to supplementary planning documentation.

REV	DATE	DRWN	CHKD	APPD	AMENDMENT
F	31/03/21	TH	TH	BO	Adjustment to key
E	26/01/21	TH	TH	BO	Adjustment in cobble specification.
D	29/10/20	TH	BO	DP	Change in edging spec and addition of cobble areas
C	14/08/17	TH	SPW	SLT	Revision to areas following planning application
B	27/03/17	TH	DH	RH	Removal of Highfield Road Extents
A	13/11/15	AMS	TH	ARW	Highfield Road bus stop

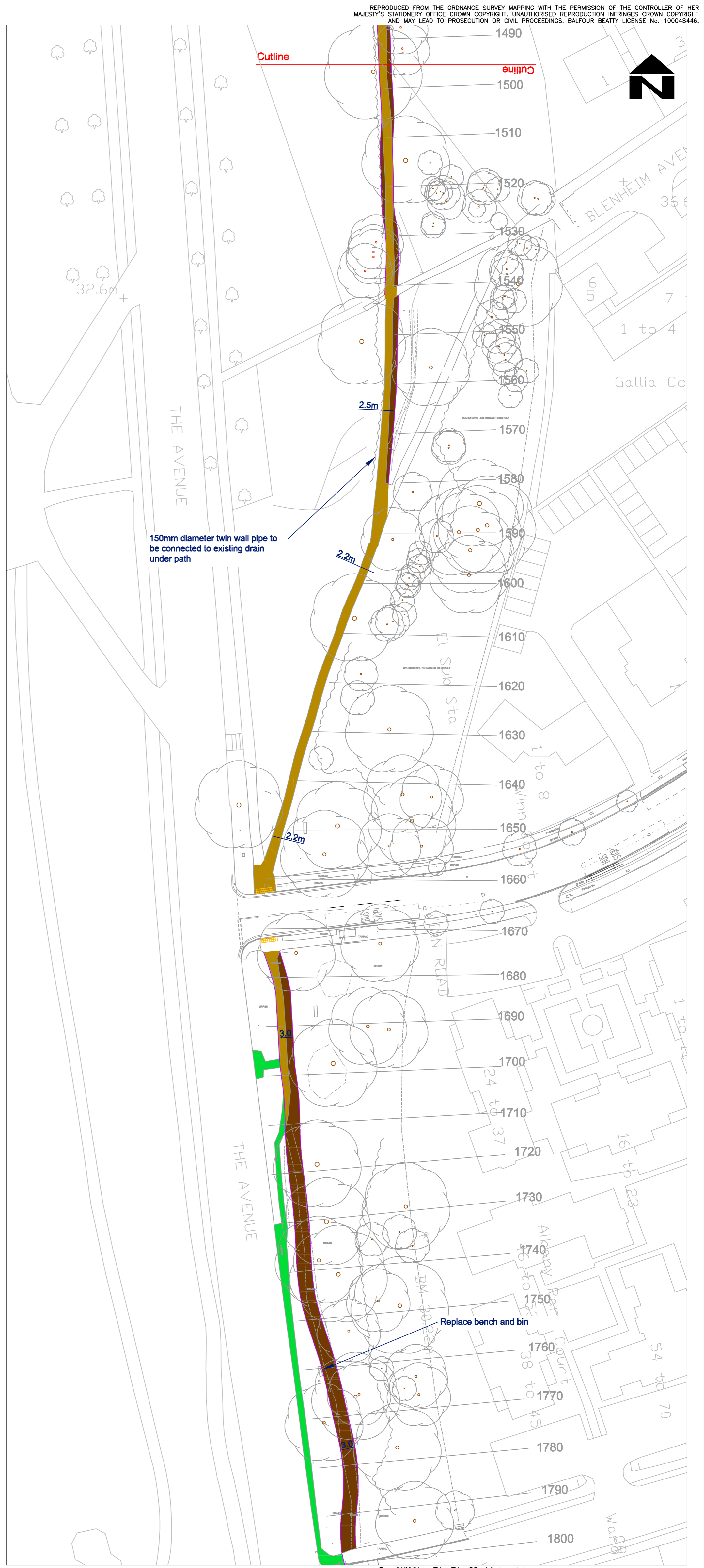
DRAWING STATUS: **FOR INFORMATION**

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Working in partnership with **Design Group**
 Southampton City Council
 Civic Centre
 SOUTHAMPTON SO14 7LY

DRAWING TITLE: **Northern Cycle Corridor
 Lover's Walk
 Preliminary Design
 (Burgess Road to Highfield Avenue)**

DESIGNED	DRAW	CHECKED	APPROVED	DATE	SCALE
TH	TH	HCH	KJ	09/06/15	A1 1:500
DRAWING NUMBER				SHEET	REVISION
15/AL/M/010/001				1 of 2	F



Key:

- Existing path
- Proposed path (with aluminum edging and 'no dig' construction)
- Existing lighting
- Area of existing footway to be resurfaced
- Area of Common land to be transferred to public highway - footway/cycleway (total: 1422m²)
- Area of existing highway to be transferred to green Common land (total: 157m²)
- Location of tree trunk
- Dimension of proposed path

Notes:

- Design based upon:
 - 3.5m wide path between Burgess Road to Highfield Road
 - 2.5m between the Highfield Road and Blenheim Avenue.
 - 3.0m between Blenheim Avenue and Westwood Road
- Area to be transferred from the Common to achieve this is approximately 1265m².
- Design shown is based on the layout as per 29th March 2021. Any changes to the layout completed after this date is not reflected in the drawings (see section 5 of the Lover's Walk - Additional Information document).
- For the proposed traffic calming features, please refer to supplementary planning documentation.

F	31/03/21	TH	TH	BO	Adjustment to key
E	26/01/21	TH	TH	BO	Adjustment in cobble specification.
D	29/10/20	TH	BO	DP	Change in edging spec and addition of cobble areas
C	14/08/17	TH	SPW	SLT	Revision to areas following planning application
B	27/03/17	TH	DH	RH	Removal of Highfield Road Extents
A	13/11/15	AMS	TH	ARW	Highfield Road bus stop

REV	DATE	DRWN	CHKD	APPD	AMENDMENT

DRAWING STATUS: **FOR INFORMATION**

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Working in partnership with **Design Group**
 Southampton City Council
 Civic Centre
 SOUTHAMPTON SO14 7LY

DRAWING TITLE: **Northern Cycle Corridor Lover's Walk Preliminary Design (Highfield Road to Westwood Road)**

DESIGNED	DRAWN	CHECKED	APPROVED	DATE	SCALE
TH	TH	HCH	KJ	09/06/15	A1 1:500
DRAWING NUMBER: 15/AL/M/010/001				SHEET: 2 of 2	REVISION: F

Appendix 2 Sites Designated for Nature Conservation

Statutory Sites

Internationally Designated Sites - Ramsar Sites, Special Areas of Conservation and Special Protection Areas

Special Protection Areas (SPAs) and Special Areas of Conservation (SACs) form a network of protected sites across the European Union and United Kingdom. In the United Kingdom the primary legislative protection is afforded to these sites under the Conservation of Habitats and Species Regulations 2017 (as amended).

Ramsar sites are designated as wetlands of international importance which are afforded similar legislative protection to SPAs and SACs.

SACs are sites which support internationally important habitats or internationally important assemblages or populations of species. SPAs are designated for supporting internationally important populations of birds. SACs, SPAs and Ramsar sites are generally also designated as Sites of Special Scientific Interest.

Under Regulation 63 of the Conservation of Habitats and Species Regulations 2017 (as amended) there is a legal requirement that competent authorities, such as local planning authorities, need to consider whether plans or projects are likely to have a significant adverse effect on SPAs, SACs or Ramsar sites, either alone, or in combination with other plans or projects. In the event that a likely significant effect cannot be ruled out, on the basis of objective information, then the competent authority must undertake an “Appropriate Assessment” to fully assess the plan or project against the site’s conservation objectives. Unless certain defined derogation tests can be met, the competent authority may not authorise nor undertake any plan or project which adversely affects the integrity of a SPA, SAC or Ramsar site.

Nationally Designated Sites – Sites of Special Scientific Interest and National Nature Reserves

Sites of Special Scientific Interest (SSSI) receive legal protection under the Wildlife and Countryside Act 1981 (as amended). Such sites are designated to protect specific areas of biological or geological interest of national importance. Such sites also generally receive strict protection through the planning system.

National Nature Reserves (NNR) are also usually designated as SSSIs and are specifically managed for their wildlife value. They receive legal protection through the National Parks and Access to the Countryside Act 1949 and the Wildlife and Countryside Act 1981 (as amended). As with SSSIs, these sites generally receive strict protection through the planning system.

Locally Designated Sites – Local Nature Reserves

Local Nature Reserves (LNR) are designated by local authorities under the National Park and Access to the Countryside Act 1949. These are generally designated not only for their local wildlife value but also for education, scientific and recreational purposes. These sites generally receive protection from development through the planning system.

Non-Statutory Sites

Locally Designated Sites

In addition to statutory designations, local authorities often designate sites of nature conservation importance at the local level. Such designations are named differently by each local authority and may be referred to as Sites of Importance for Nature Conservation (SINC) amongst others. The exact level of protection afforded to these sites varies and is normally defined through local planning policy.

Appendix 3 Relevant Legislation

Bats

All UK bat species are listed in Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) and Schedule 2 of the Conservation of Habitats and Species Regulations 2017. They are afforded full protection under Section 9(4) of the Act and Regulation 43 of the Regulations. These make it an offence to:

- Deliberately capture, injure or kill any such animal;
- Deliberately disturb any such animal, including in particular any disturbance which is likely:
 - To impair its ability to survive, breed, or rear or nurture their young;
 - To impair its ability to hibernate or migrate;
 - To affect significantly the local distribution or abundance of that species;
- Damage or destroy a breeding site or resting place of any such animal;
- Intentionally or recklessly disturb any of these animals while it is occupying a structure or place that it uses for shelter or protection; or
- Intentionally or recklessly obstruct access to any place that any of these animals uses for shelter or protection.

In addition, five British bat species are listed on Annex II of the Habitats Directive. These are:

- Greater horseshoe bat *Rhinolophus ferrumequinum*;
- Lesser horseshoe bat *Rhinolophus hipposideros*;
- Bechstein's bat *Myotis bechsteinii*;
- Barbastelle *Barbastella barbastellus*; and
- Greater mouse-eared bat *Myotis myotis*.

In certain circumstances where these species are found the Directive requires the designation of Special Areas of Conservation (SACs) by EC member states to ensure that their populations are maintained at a favourable conservation status. Outside SACs, the level of legal protection that these species receive is the same as for other bat species.

Great Crested Newt

This species is listed in Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) and Schedule 2 of the Conservation of Habitats and Species Regulations 2017. They are afforded full protection under Section 9(4) of the Act and Regulation 43 of the Regulations. These make it an offence to:

- Deliberately capture, injure or kill any such animal;
- Deliberately disturb any such animal, including in particular any disturbance which is likely, to impair its ability to survive, breed, or rear or nurture their young, to impair its ability to hibernate or migrate;
- To affect significantly the local distribution or abundance of that species;
- Damage or destroy a breeding site or resting place of any such animal;
- Intentionally or recklessly disturb any of these animals while it is occupying a structure or place that it uses for shelter or protection; or
- Intentionally or recklessly obstruct access to any place that any one of these species uses for shelter or protection.

Badger

The Protection of Badgers Act 1992 consolidates previous legislation (including the Badgers Acts 1973 and 1991 Badgers (Further Protection) Act 1991). It makes it an offence to:

- Kill, injure or take a badger;
- Attempt to kill, injure or take a badger; or
- To damage or interfere with a sett.

The 1992 Act defines a badger sett as 'any structure or place which displays signs indicating current use by a badger'.

Breeding Birds

With certain exceptions, all wild birds, their nests and eggs are protected by Section 1 of the Wildlife and Countryside Act 1981 (as amended). Therefore, it is an offence, to:

- Intentionally kill, injure or take any wild bird;
- Intentionally take, damage or destroy the nest of any wild bird while it is in use or being built; or
- Intentionally take or destroy the egg of any wild bird.

These offences do not apply to hunting of birds listed in Schedule 2 subject to various controls. Bird species listed on Schedule 1 of the Act receive further protection, thus for these species it is also an offence to:

- Intentionally or recklessly disturb any bird while it is nest building, or is at a nest containing eggs or young; or
- Intentionally or recklessly disturb the dependent young of any such bird.

Reptiles

The four widespread species of reptile that are native to Britain, namely common or viviparous lizard *Zootoca vivipara*, slow-worm *Anguis fragilis*, adder *Vipera berus* and grass snake *Natrix helvetica*, are listed in Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) and are afforded limited protection under Section 9 of this Act. This makes it an offence to:

- Intentionally kill or injure any of these species.

The remaining native species of British reptile (sand lizard *Lacerta agilis* and smooth snake *Coronella austriaca*) receive a higher level of protection via inclusion under Schedule 2 of the Conservation of Habitats and Species Regulations 2017. They are afforded full protection under Section 9(4) of the Act and Regulation 43 of the Regulations (in England and Wales only) and the Wildlife and Countryside Act 1981 (as amended). The distribution of these species are restricted to only a few sites in England.

Species and Habitats of Principal Importance in England

The Natural Environment and Rural Communities (NERC) Act came into force on 1st October 2006. Section 41 (S41) of the Act requires the Secretary of State to publish a list of habitats and species which are of principal importance for the conservation of biodiversity in England. The England Biodiversity List is used to guide decision-makers such as public bodies, including local and regional authorities, in implementing their duty under section 40 of the NERC Act 2006, to have regard to the conservation of biodiversity in England, when carrying out their normal functions. There are currently 943 species of principal importance and 41 habitats of principal importance included on the England Biodiversity List.

Schedule 9 Invasive Species

Japanese knotweed is listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended). This makes it illegal to plant or otherwise cause the species to grow in the wild. It is also classed as a 'controlled waste' under the Environmental Protection Act 1990 (EPA). As such it must be disposed of safely at a licensed landfill site according to the EPA (Duty of Care) Regulations 1991.

Appendix 4 Appraisal Criteria for Bats

The criteria used to assess the suitability of roosting and foraging/commuting habitat for bats is based on industry guidelines and outlined in **Table 1**¹³.

Table 1: Criteria used to Assess Suitability of Roosting and Foraging/Commuting Habitat for Bats

Suitability	Description of roosting habitats	Commuting and foraging habitats
High	A structure or tree 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.	<p>Continuous, high-quality habitat that is well connected to the wider landscape that is likely to be used regularly by commuting bats such as river valleys, streams, hedgerows, lines of trees and woodland edge.</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>
Moderate	A structure of tree 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 roost of high conservation status.	<p>Continuous habitat connected to the wider landscape that could be used by bats for commuting such as lines of trees and scrub or linked back gardens.</p> <p>Habitat that is connected to the wider landscape that could be used by bats for foraging such as trees, scrub, grassland or water.</p>
Low	<p>A structure with one or more potential roost sites that could be used by individual bats opportunistically/structure that does 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 or hibernation).</p> <p>A tree of sufficient size and age to contain potential roost features but with none seen from the ground or features seen with only very limited roosting potential.</p>	<p>Habitat that could be used by small numbers of commuting bats such as a gappy hedgerows or un-vegetated stream, but isolated (i.e. not very well connected to the surrounding landscape by other habitat).</p> <p>Suitable, but isolated, habitat that could be used by small numbers of foraging bats such as a lone tree or a patch or scrub.</p>
Negligible	Negligible habitat features on site likely to be used by roosting bats.	Negligible habitat features on site likely to be used by commuting or foraging bats.

¹³ Table adapted from (Collins, 2016)

Appendix 5 Statutory Designated Sites within the Desktop Study Area

Details of statutory designated sites within the desktop study area, as listed in Paragraph 4.2.1, are provided in **Table 2**.

Table 2: Statutory Designated Sites Located Within the Desktop Study Area

Site Name	Southampton Common
Site Designation	SSSI
Approximate Relative Location	35 metres west at its nearest point
Reasons for Designation:	
The site is designated for an important population of newts, comprising all three British species. There is also extensive stands of broadleaved woodland and herb rich grassland. The assemblage of meadow habitats, especially those at the wetter end of the spectrum, are among the best examples of species-rich mown pasture in the Hampshire Basin.	