



LAND AT KINGS COPSE AVENUE HEDGE END

ECOLOGICAL IMPACT ASSESSMENT (EcIA)



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QUALITY ASSURANCE

This report has been prepared in accordance with the Chartered Institute of Ecology and Environmental Management (CIEEM) Guidelines for Ecological Report Writing (2nd Edition, December 2017).

The facts stated in this report are true to the best of our knowledge and belief, and any opinions expressed are held genuinely and in accordance with the accepted standards of the profession. ACD Environmental Ltd is a CIEEM Registered Practice.

Client:	Eastleigh Borough Council
Site/job:	Land at Kings Copse Avenue, Hedge End
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1 EXECUTIVE SUMMARY

Purpose of report	To assess the ecological impacts of a proposed development on the Land at Kings Copse Avenue, Hedge End, SO30 0PP, hereafter referred to as 'the Application Site', clearly identifying any 'significant effects' on important ecological features (including designated sites or protected species) and detailing any mitigation and/or compensation measures required, and how these could be secured. The report also confirms how the proposed development could achieve Biodiversity Net Gain.
Description of proposed development	Planning permission is being sought for the creation of up to 200 new residential units with associated parking and landscaping. The residential units will be comprised of a mixture of 2 and 2.5 storey houses and apartment blocks with mixed tenure. A 3m wide tarmac path is being created along the footpath to the north of the Application Site. Offsite works to an electrical pylon will be completed south of the Application Site. The proposed development would result in the loss of other neutral grassland, a small section of willow scrub, and some small sections of tree line.
Brief description of the Site	The Application Site comprises 6.96ha of greenfield land, consisting largely of other neutral grassland, other lowland acid grassland, lowland meadow, purple moor grass and rush pasture, and lowland mixed deciduous woodland. Other habitats within the Application Site include a stream (tributary to Pudbrook Lake Stream), scattered trees, lines of trees, willow and mixed scrub, and bracken. There is an additional footpath to the north of the site, left of Ferndale Road, spanning approximately 190m.
Designated nature conservation sites	Manor Farm LNR and Tanhouse Meadows SINC are located within the Application Site boundary. The Application Site also lies within the risk zone of Upper Hamble Estuary and Woods SSSI, and sits within the Solent Nutrient Impact area and within 5.6km of the Solent SPAs, which qualifies it within the Solent Recreation Mitigation Strategy. In addition, five sites associated with the Solent Waders and Brent Goose Strategy are present within 2km of the Application Site. The nearest site is located 0.4km to the east of the Application Site.
Key habitats	The most valuable habitats present within the Application Site comprise the other lowland acid grassland, lowland meadow, purple moor grass and rush pasture, other neutral grassland, lowland mixed deciduous woodland, species rich hedgerows with trees and lines of trees.
Key species	The Application Site supports reptiles and foraging/commuting bats, and also has the potential to support invertebrates, roosting bats, nesting birds, hedgehogs and commuting/foraging badgers. Previous ecological surveys suspected the presence of Jersey cudweed on site, protected under Schedule 8 of the Wildlife and Countryside Act 1981, however, DNA analysis concluded that only marsh cudweed was present, which is not protected.
Key impacts	The development would result in the loss of other neutral grassland, a small section of willow scrub, and some small sections of tree line.

Mitigation	A sensitive lighting scheme will be implemented to ensure the linear features and foraging areas remain suitable for foraging bats. Timing restrictions, ecological supervision and sensitive working practices will be adopted to ensure no nesting birds or mammals are impacted by the development. Retained and adjacent habitats will be protected during the construction phase. A Bird Hazard Assessment and Management Plan will be produced to avoid impacts from noise and light pollution on the sites associated with the Solent Waders and Brent Goose Strategy. The grassland/scrub habitats will be cleared in two stages under ecological supervision by first cutting to 150mm which will be left for 24 hours to allow for reptiles/amphibians to disperse before cutting again to ground-level. Best practice guidelines will be followed during the development to ensure there is no harm to badgers or other mammals using the site for foraging/commuting.
Compensation	A full Biodiversity Metric assessment has been undertaken using the Statutory Biodiversity Metric. The results of the BNG assessment indicate that the proposed development will result in a 30.44% net loss in habitat units, a 39.34% net gain in hedgerow units, and a 15.06% net gain in watercourse units. In order to deliver a 10% net gain in habitat units, offsite habitat enhancements and creation will need to be explored, or biodiversity credits can be purchased to compensate for the shortfall in habitat units onsite.
Enhancements	Specific enhancements for protected species should include incorporating bat and bird boxes into the structures of new dwellings, and creating hibernacula for reptiles, amphibians, and invertebrates in the form of log piles within the Application Site where suitable. Ornamental shrub planting should include flowering species suitable for invertebrates including pollinators.
Conclusions	Provided the measures outlined within this report are followed, the proposals will be in accordance with local planning policies and the NPPF.

2 INTRODUCTION

- 2.1. ACD Environmental Ltd were instructed by Eastleigh Borough Council to carry out a walkover survey on an area of land known as Land at King's Copse Avenue, Hedge End, SO30 0PP (see **Image 1**). This report provides an assessment of the ecological effects of the proposed development.

Background

- 2.2. The Application Site comprises 6.96ha of greenfield land, consisting largely of other neutral grassland, other lowland acid grassland, lowland meadow, purple moor grass and rush pasture, and lowland mixed deciduous woodland. Other habitats within the Application Site include a stream (tributary to Pudbrook Lake Stream), scattered trees, lines of trees, willow and mixed scrub, and bracken. There is an additional footpath to the north of the site, left of Ferndale Road, spanning approximately 190m. The Application Site is located at the south-eastern extent of Hedge End. The site is surrounded by a residential development to the north, Manor Farm LNR to the east, a combination of arable farmland and woodland to the south, and a combination of residential development and sports pitches to the west.

Competence

- 2.3. This report has been written by Jessica Haskell This report has been written by Jessica Haskell, Assistant Ecologist at ACD Environmental Ltd. Jessica has experience performing a variety of surveys, ranging from UK Habitat Classification Surveys to Phase 2 surveys for protected species, including bats, hazel dormice, and reptiles. Jessica has written various reports, including Preliminary Ecological Appraisals (PEAs), Ecological Impact Assessments (EclAs), and Construction Environmental Management Plans (CEMPs).
- 2.4. A Technical Review of this report has been undertaken in line with ACD Environmental Ltd's Quality Assurance procedures. The Technical Review was undertaken by Benjamin Prego, Consultant Ecologist at ACD Environmental Ltd. Benjamin has several years' experience carrying out a wide range of surveys including UK Habitat Classification Surveys and Phase 2 surveys for protected species and is highly competent undertaking Biodiversity Net Gain (BNG) assessments. Benjamin is a Qualifying Member of the Chartered Institute of Ecology and Environmental Management (CIEEM) and holds a Natural England Class Licence for great crested newts *Triturus cristatus*.

Purpose of the report

- 2.5. The purpose of this Ecological Impact Assessment (EclA) is as follows:

- To identify and describe all potentially significant ecological effects associated with the proposed development.
- To set out the mitigation measures required to ensure compliance with nature conservation legislation and relevant planning policy, and to address any potentially significant ecological effects.
- To identify how mitigation measures will/could be secured.
- To identify any significant residual ecological effects and set out any compensation measures proposed to address these.
- To identify appropriate enhancement measures in order to achieve Biodiversity Net Gain.
- To set out the requirements for post-construction monitoring.



Image 1: Approximate location of the Application Site boundary shown in red. Google Earth (2025).

3 PLANNING POLICY AND LEGISLATION

Legislation

3.1. The following pieces of legislation are of specific relevance to this assessment:

- The Environment Act 2021. This piece of legislation is of relevance because all planning permissions granted in England are mandated to deliver at least 10% Biodiversity Net Gain as of 12th February 2024.
- The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019¹. This piece of legislation is of relevance because the Application Site has the potential to support nesting birds, reptiles, hazel dormouse and bats.
- Wildlife and Countryside Act 1981² (as amended, including by the Countryside and Rights of Way Act 2000). This piece of legislation is of relevance because the Application Site has the potential to support reptile species, and it is an offence to:
 - deliberately kill, injure, disturb or capture them.
 - disturb them while they occupy a structure or place used for shelter or protection.
 - obstruct access to a place of shelter or protection.
- Natural Environment and Rural Communities (NERC) Act 2006³. Section 41 includes lists of habitats and species recognised as of 'principal importance' for the conservation of biodiversity. Section 40 of the NERC Act 2006 requires all public bodies to have regard for biodiversity conservation when carrying out their function. This is commonly referred to as the 'biodiversity duty'. This piece of legislation is of relevance because the Application Site has the potential to support a number of priority species. Native reptile species are also protected under this piece of legislation.
- Hedgerows Regulations 1997.

¹ Great Britain. *The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019* No.579 [online]. Available from: <https://www.legislation.gov.uk/ukdsi/2019/9780111179512/contents>

² Great Britain. *Wildlife and Countryside Act 1981* [online]. Available from: <http://www.legislation.gov.uk/ukpga/1981/69/contents>

³ Great Britain. *Natural Environment and Rural Communities Act 2006* [online]. Available from: <http://www.legislation.gov.uk/ukpga/2006/16/contents>

- Protection of Badgers Act 1992.
- Water Framework Directive 2000.

Environment Act 2021

- 3.2. In accordance with the Environment Act 2021⁴, mandatory Biodiversity Net Gain (BNG) came into effect from 12th February 2024 for all developments in the Town and Country Planning Act 1990, unless exempt. It also applies to small sites as of 2nd April 2024.
- 3.3. Schedule 7A of the Act makes provision for grants of planning permission in England to be subject to a condition, to secure that the 'biodiversity gain objective' is met.
- 3.4. The 'biodiversity gain objective' is met in relation to development for which planning permission is granted if the biodiversity value attributable to the development exceeds the pre-development biodiversity value of the onsite habitat by at least the relevant percentage.
- 3.5. The biodiversity value attributable to the development is the total of:
- a) the post-development biodiversity value of the onsite habitat.
 - b) the biodiversity value, in relation to the development, of any registered offsite biodiversity gain allocated to the development.
 - c) the biodiversity value of any biodiversity credits purchased for the development.
- 3.6. The relevant percentage is 10%, but the Secretary of State may by regulations amend this paragraph so as to change the relevant percentage.
- 3.7. The biodiversity value of any habitat or habitat enhancement are to its value as calculated in accordance with the 'Biodiversity Metric'.
- 3.8. Every planning permission granted for the development of land in England shall be deemed to have been granted subject to the condition in sub-paragraph (2), which states that the development may not be begun unless:
- a) a biodiversity gain plan has been submitted to the planning authority.
 - b) the planning authority has approved the plan.
- 3.9. Local Planning Authorities (LPAs) will have to approve a biodiversity net gain plan for

⁴ <https://www.legislation.gov.uk/ukpga/2021/30/contents/enacted>

development work before it can start.

Planning policy

National Planning Policy Framework 2024⁵

3.10. Paragraphs 187-191 of the NPPF relate to 'Conserving and enhancing the natural environment' and Paragraphs 192-195 relate to 'Habitats and Biodiversity'.

3.11. Paragraph 187 of the NPPF states the following:

"Planning policies and decisions should contribute to and enhance the natural and local environment by:

a) protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan);

b) recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland;

c) maintaining the character of the undeveloped coast, while improving public access to it where appropriate;

d) minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures and incorporating features which support priority or threatened species such as swifts, bats and hedgehogs;

e) preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. Development should, wherever possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans; and

f) remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate."

⁵ HM Government. *National Planning Policy Framework December 2024*. Available at: <https://assets.publishing.service.gov.uk/media/675abd214cbda57cacd3476e/NPPF-December-2024.pdf>

3.12. Paragraph 193 of the NPPF states the following:

“When determining planning applications, local planning authorities should apply the following principles:

“a) if significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;

b) development on land within or outside a Site of Special Scientific Interest, and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally be permitted. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact on the features of the site that make it of special scientific interest, and any broader impacts on the national network of Sites of Special Scientific Interest;

c) development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons and a suitable compensation strategy exists; and

d) development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to improve biodiversity in and around developments should be integrated as part of their design, especially where this can secure measurable net gains for biodiversity or enhance public access to nature where this is appropriate.”

Eastleigh Borough Local Plan 2016-2036⁶

3.13. The Eastleigh Borough Local Plan 2016-2036 is a key strategic planning document adopted in April 2022. Relevant policies relating to ecology and biodiversity are summarised below.

3.14. Policy DM1 (General criteria for new development) states the following:

“1. All new development should (as relevant):

a. not have an unacceptable impact on, and where possible should enhance:

ii. biodiversity (avoiding significant impacts)

d. not involve the loss of or damage to trees, woodlands, hedgerows, ponds, priority habitats or other landscape features of value to the character of the area, for appearance or biodiversity unless they can be replaced with features of equivalent or enhanced value, (recognising that some species and habitats may be irreplaceable).

⁶ Eastleigh Borough Council (2022). *Eastleigh Borough Local Plan*. Available at: <https://www.eastleigh.gov.uk/media/11806/to-be-published-final-local-plan-april-2022-v4.pdf>

g. provide satisfactory management arrangements for all landscape, green infrastructure and biodiversity enhancement.”

3.15. Policy DM11 (Nature Conservation) states the following:

“General Approach

1. The Council will work with statutory and voluntary agencies and developers, and will determine planning applications, to:

a. protect, conserve and enhance all:

i. international, national and local nature conservation designations; and

ii. networks of natural habitats and features, including the Local Ecological Network, Priority Biodiversity Areas and Priority Biodiversity Links, watercourses, wetland complexes, woodland trees, and trees and hedgerows important to biodiversity and local character; and facilitate their adaptation to climate change wherever possible;

b. assist in achieving national, county and local biodiversity targets as set out in Biodiversity Action Plans (BAPs);

c. seek a net gain of biodiversity on all development sites (including sites for redevelopment) through the protection, enhancement and connection of existing and provision of new habitats and features of nature conservation interest compatible with the native biodiversity characteristics of the Borough, having regard to local geodiversity and soils; and

d. contribute to major elements of the PfSH Green Infrastructure Strategy and other strategies for the provision and enhancement of multifunctional green infrastructure including green routes, ecological networks and biodiversity enhancements (see strategic policy S9).

International Designations

2. Development which is likely (either individually or in combination with other developments) to adversely affect the integrity of an international or European nature conservation site will not be permitted subject only to imperative reasons of overriding public interest and securing any necessary compensatory measures in the absence of alternative solutions. A ‘project level’ Habitat Regulations Assessment will be required where there are likely significant effects or uncertainty. Any mitigation measures required to ensure no adverse impact must be implemented at the appropriate time.

3. The Council will work with PfSH, Natural England, the Environment Agency and other wildlife organisations to develop and implement with developers a strategic approach to the protection and enhancement of international and European sites from the direct and indirect effects of development. Within Eastleigh Borough this will include:

a. implementing:

i. the Solent Recreation Mitigation Strategy (requiring contributions from residential developments within 5.6 kilometres of the Solent Special Protection Area to the Strategy); and

ii. the interim and any future New Forest Recreation Mitigation Strategy if required; or alternative agreed site specific measures to address recreational disturbance;

b. preserving the water quality and flows within the Itchen and Hamble, Southampton Water and Solent;

c. protecting the River Itchen SAC, in particular the maintenance and where appropriate restoration of habitats and qualifying species to favourable conservation status (as defined by article 1 of the Habitats Directive); and

d. seek contributions towards measures set out in the Southern Damselfly Conservation Strategy (or other strategy) specifically to deliver biodiversity net gain.

National and Local Designations

4. Development will not be permitted if it is likely (either individually or in combination with other developments) to have a direct or indirect adverse effect on a Site of Special Scientific Interest (SSSI), Site of Importance for Nature Conservation (SINC) or Local Nature Reserve (LNR) as shown on the policies map (or on a more recent plan provided by the Hampshire Biodiversity Information Centre) unless it can be demonstrated that:

a. there are no alternative solutions;

b. the adverse effects are unavoidable;

c. measures are taken to mitigate or, as a last resort, compensate for the adverse effects;

d. there is an overall biodiversity net gain; and e. if there are any residual adverse effects which cannot be avoided, mitigated or compensated, the benefits of the development must clearly outweigh the adverse effects on the nature conservation value of the site and any broader impacts on national and local designations.

Priority habitats, protected and priority species and the local ecological network

5. Development will not be permitted if it is likely (either individually or in combination with other developments) to have a direct or indirect adverse effect on priority habitats, protected or priority species, or on the local ecological network unless it can be demonstrated that:

a. there are no alternative solutions;

b. the adverse effects are unavoidable;

c. measures are taken to mitigate or, as a last resort, compensate for the adverse effects;

d. there is an overall biodiversity net gain; and e. if there are any residual adverse effects, the benefits of the development clearly outweigh the adverse effects on priority habitats, priority and protected species, and the local ecological network.

Irreplaceable habitats

6. Development will not be permitted if it results in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees), unless there are wholly exceptional reasons and a suitable compensation strategy exists.

Buffers

7. Buffers free from development will be provided to designated sites to avoid/mitigate impacts, including recreational impact and impacts on edge habitats, and to maintain dark skies

Surveys

8. Development will not be permitted unless it can be demonstrated that:

a. there have been thorough habitat and species surveys;

b. the great crested newt strategic survey and strategy have been considered in all developments within 500m of a great crested newt pond; and

c. the strategic bat trapping survey has been considered in all developments within the locality of a woodland or connected habitat networks.”

3.16. Policy S9 (Green Infrastructure) states the following:

“1. Through new development and other initiatives the Borough Council will seek to achieve the provision, retention and/or enhancement of the following forms of multi-functional green

infrastructure, including provision of:

- a. landscape scale strategic links across the Borough boundary, to and between the Borough's settlements, the countryside, the coast, and the major areas of open space including the country parks (see strategic policy S12);*
- b. interlinked publicly accessible open space through new and existing development including for example formal sports facilities and informal amenity spaces and cemeteries (see policies DM32-DM34, Chapter 5 and detailed proposals in Chapter 6);*
- c. green infrastructure incorporated into all new development with multifunctional spaces connected by primary, secondary and tertiary green links;*
- d. interconnected urban green infrastructure within the fine grain of existing and new development including green, cycle ways, paths and linkages between community facilities and open spaces to link community facilities;*
- e. green stepping stones such as street trees, green roofs and walls, pocket parks and urban copses (see policy DM1, Chapter 5);*
- f. connected habitats linking the network of designated sites and existing priority habitats, taking account of the Hampshire ecological network map (see policy DM11, Chapter 5);*
- g. incorporation of historic buildings and landscapes, including historic parks and gardens within the wider Green Infrastructure to protect their setting (see policy DM12, Chapter 5); and*
- h. opportunities for local food growing including allotments, community orchards and farms (see policies DM32 to DM34, Chapter 5 and detailed proposals in Chapter 6)."*

Nutrient neutrality⁷

- 3.17. According to MAGIC, the Application Site is considered to be situated within a Nutrient Impact Area.
- 3.18. Any mitigation approach that is taken should be specific to the waterways they are most likely to affect. The Solent region is made up of six 'fluvial catchment' zones that indicate which areas of land affect which waterways – developers should make sure that their nutrient offsetting efforts occur within the same region as their developments.
- 3.19. In response to the impact of nitrate pollutants, and to help ensure that developments achieve

⁷ Eastleigh Borough Council (2022) Nutrient Offset Schemes. Available at: <https://www.eastleigh.gov.uk/planning-and-building/nutrient-offset-schemes>

nutrient neutrality, Eastleigh Borough Council has put a scheme in place so that developers can offset excess nutrient outputs against Council-owned land through the purchase of nitrate and phosphate credits.

- 3.20. The initiative is a key part of Eastleigh Borough Council's Climate Change and Environmental Emergency action plan, and supports the Housing Development and Healthy Communities themes outlined in the Council's Corporate Action Plan 2015 - 2025. It also helps to prevent likely significant impacts on European designated sites.
- 3.21. A nutrient avoidance and mitigation package will be needed to achieve nutrient neutral development before a planning application can lawfully be issued in accordance with The Conservation of Habitats and Species Regulations 2017. Nitrate/phosphate calculations will need to be undertaken by drainage experts to determine the number of credits that need to be purchased.

Solent Recreation Mitigation Strategy⁸

- 3.22. Tens of thousands of coastal birds fly from as far as Arctic Siberia to spend the winter on the Solent. They need to be able to feed and rest undisturbed, if they are to survive the winter and fly back to their summer habitats. Three Special Protection Areas (SPAs) have been designated to safeguard the birds.
- 3.23. Over 60,000 new homes are planned around the Solent up to 2034. Research has shown that these will lead to more people visiting the coast for recreation, potentially causing additional disturbance to these birds.
- 3.24. The Strategy set out in the strategy aims to prevent bird disturbance from recreational activities. It seeks to do this through a series of management measures which actively encourage all coastal visitors to enjoy their visits in a responsible manner rather than restricting access to the coast or preventing activities that take place there. Prepared by the Solent Recreation Mitigation Partnership of local authorities and conservation bodies, the strategy was published for consultation in July 2017 and changes incorporated as a result.
- 3.25. The Strategy proposes:
- a team of 5-7 coastal rangers to advise people on how to avoid bird disturbance, liaise with landowners, host school visits, etc;
 - communications, marketing and education initiatives and an officer to

⁸ Bird Aware Solent (2017) Solent Recreation Mitigation Strategy.

implement them;

- initiatives to encourage responsible dog walking and an officer to implement them;
- preparation of codes of conduct for a variety of coastal activities;
- site-specific projects to better manage visitors and provide secure habitats for the birds;
- providing new/enhanced greenspaces as an alternative to visiting the coast;
- a partnership manager to coordinate and manage all the above.

3.26. Implementation of these measures and monitoring of their effectiveness are funded by 'developer contributions' calculated according to the bedroom numbers of the property (increased annually to take into account inflation), which as of 1 April 2025, is as follows:

- One bedroom property £482
- Two bedroom property £696
- Three bedroom property £907
- Four bedroom property £1,067
- Five bedroom property £1,251
- Flat Rate – £805 (usually used in cases of caravans, tents or gypsy and traveller sites)

3.27. This applies to new homes built within 5.6 kilometres of the SPAs. As the Application Site is situated within approximately 2km of the SPAs, contributions will be required.

Solent Waders and Brent Goose Strategy⁹

3.28. The Solent Waders and Brent Goose Strategy is a non-statutory document presenting evidence, analysis and recommendations to inform strategic planning and development proposals.

3.29. The primary aims of the Strategy are as follows:

⁹ For a wilder Hampshire & Isle of Wight (2024) Solent Waders and Brent Goose Strategy.

- to identify the network of core areas that are regularly used and are of fundamental importance to over-wintering waterfowl across the Solent;
- to maintain a network of sites through better management and protection from development and recreational pressure, and to ensure that they will be resilient to the pressures of climate change and predicted sea level rise in the future; and
- to provide a strategy that will ensure that the network of important sites is protected, whilst reducing the current uncertainty over site use, in order to better inform key coastal stakeholders.

3.30. The sites are classified as follows:

- Core Areas: All sites that were identified as having a network value and/or sites that have a max count of bird use of 1000 or more, and/or the max score in 3 metrics (7): GB Importance, SPA Importance and SPA Assemblage
- Primary Support Areas: Sites that score 3-6.
- Secondary Support Areas: Sites that score 1-2 and/or have max counts of 100 plus birds for any species
- Low Use: Sites that have records of birds but in low numbers (total score 0)
- Candidate: Sites that have records of high numbers of birds (max count => 100) and/or or a total score =>3 but have less than 3 records in total.
- SPA Sites: Sites within the SPA area that have birds records and form part of the ecological network
- Mitigation Areas: Sites that have previously served as mitigation for the partial or total loss of functionality of another site within the network.

3.31. Policy W&BG5 states the following regarding mitigation/compensatory measures:

“Development proposals which could affect important wading bird and brent goose sites outside of the statutory designated areas need to demonstrate levels of impact, alone and in combination with other proposals. Where a negative impact upon an important wading bird or brent goose site cannot be avoided or satisfactorily mitigated, and the tests of the 41 Habitats Regulations are met as necessary, appropriate mitigation measures will be sought, as per the

SW&BGS Guidance on Mitigation and Offsetting Requirements.”

Eastleigh Borough Council Biodiversity Strategy 2024-2034¹⁰

- 3.32. The Eastleigh Borough Council Biodiversity Strategy 2024-2034 explores issues facing biodiversity in the borough and provides a framework through delivery of a new Biodiversity Action Plan and Local Nature Recovery Strategy and new or revised Supplementary Planning Documents to achieve a greener, more diverse borough for the future.
- 3.33. The biodiversity strategy core principles set out its framework as follows:
- Protect
 - Reverse declines and restore
 - Extend and expand
 - Manage, maintain and monitor
 - Educate and engage
- 3.34. Within each principle, actions are set out which can be undertaken to provide measurable gains for biodiversity.

¹⁰ Eastleigh Borough Council (2024) *Eastleigh Borough Council Biodiversity Strategy 2024-2034*. Available at: <https://www.eastleigh.gov.uk/environment/climate-change-and-environment/what-the-council-is-doing-on-climate/biodiversity>

4 METHODOLOGY

Scope of Assessment

- 4.1. The EcIA focuses on 'important ecological features', i.e. those which are considered to be of relevance to the decision-making process and could be affected by the proposed development. Important ecological features include protected species, habitats/species of 'principal importance' for biodiversity conservation (i.e. Section 41 habitats/species¹¹), birds of conservation concern¹² and invasive non-native plant species¹³.

Zone of Influence

- 4.2. The 'zone of influence' (ZOI) is the area over which important ecological features (on-site or off-site) may be affected as a result of the proposed development and associated activities. The ZOI can vary for different ecological features, depending on their sensitivity to environmental change.
- 4.3. The ZOI for statutory designated sites has been informed by Natural England's Sites of Special Scientific Interest Impact Risk Zones¹⁴ (SSSI IRZs). IRZs define zones around each SSSI which reflect the particular sensitivities of the features for which it is notified and indicate the types of development proposal which could potentially have adverse impacts. This has been determined as part of the desk study, as discussed below.

Desk Study

- 4.4. The following information was requested from Hampshire Biodiversity Information Centre for a search area of 2km around the Application Site boundary.
- Legally protected and notable species records;
 - Statutory designated sites; and

¹¹ Section 41 (41) of the Natural Environment and Rural Communities (NERC) Act, which came into force on 1st October 2006, requires the Secretary of State to publish a list of habitats and species which are of principle importance for the conservation of biodiversity in England.

¹² Red list species are those that are globally threatened, whose population or range has declined rapidly in recent years (i.e. by more than 50% in 25 years), or which have declined historically and not recovered. Amber list species are those whose population or range has declined moderately in recent years (by more than 25% but less than 50% in 25 years), those whose population has declined historically but recovered recently, rare species (<300 breeding pairs or <900 wintering individuals), those with internationally important populations in the UK, those with localised populations, and those with an unfavourable conservation status in Europe. Species that meet none of these criteria are Green-listed.

¹³ Invasive non-native plants (Section 14) on Schedule 9 of the Wildlife & Countryside Act 1981 (as amended).

¹⁴ Natural England (June 2019). Natural England's Impact Risk Zones for Sites of Special Scientific Interest (For use by Local Planning Authorities to assess planning applications for likely impacts on SSSIs/SACs/SPAs & Ramsar sites and determine when to consult Natural England).

- Non-statutory designated sites.

4.5. The MAGIC website¹⁵ was used to carry out a 5km data search for SSSIs, Special Protection Areas (SPAs) and Special Areas of Conservation (SACs) with an IRZ that falls within the Application Site.

Field surveys

4.6. A summary of ecological field surveys is provided in **Table 1**, and a summary of historic ecological surveys is shown in **Table 2**. Descriptions of full survey methods are provided in **Appendix 3**.

Table 1: Field surveys

Survey	Surveyor/s	Survey date/s	Study Area	Relevant guidelines
UK Habitat Classification Surveys	Benjamin Prego Louise Aparo	3 rd July 2024 24 th February 2025	Red line boundary	UKHab Ltd (2023) ¹⁶
Bat potential roost feature assessment (PRF) survey	Benjamin Prego Brian Hicks	10 th December 2024	Trees within red line boundary	Andrews (2018) ¹⁷
Updated badger walkover survey	Benjamin Prego Jessica Haskell	11 September 2025	Red line boundary	Scottish Natural Heritage ¹⁸ (2018)
Hazel dormouse presence/absence Survey	Benjamin Prego	June 2024 – December 2024	Red line boundary	Wells, Chanin & Gubert (2025)

¹⁵ Multi Agency Geographic Information for the Countryside [online]. Available at: <https://magic.defra.gov.uk/>

¹⁶ UKHab Ltd (2023). UK Habitat Classification Version 2.0 (at <http://www.ukhab.org>)

¹⁷ Andrews H. (2018). *Bat Roosts in Trees - A Guide to Identification and Assessment for Tree-care and Ecology professionals: Bat Tree Habitat Key*. Pelagic Publishing, Exeter.

¹⁸ Scottish Badgers (2018). *Surveying for Badgers: Good Practice Guidelines*. Version 1.

Table 2: Historic field surveys

Survey	Surveyor/s	Survey date/s	Study Area	Relevant guidelines
UK Habs Survey	Ryan Yeates ACIEEM Hayley Roberts	20th November 2023	Red line boundary	UKHab Ltd (2023)
MoRPh5 River Condition Assessment	Ryan Yeates ACIEEM Louise Aparo	27th November 2023	Red line boundary	Gurnell and Shuker (2022) ¹⁹

Limitations

- 4.7. There were no limitations during any of the surveys.

Assessment methodology

- 4.8. The habitats and species evaluations and likely effects are made with reference to the Chartered Institute of Ecology and Environmental Management (CIEEM) Guidelines for Ecological Impact Assessment²⁰.
- 4.9. The importance of ecological features has been assessed by carrying out a suite of specialist surveys (**Table 1**) to determine whether protected species/habitats, and/or species/habitats of conservation concern are present in the Application Site or its ZOI, then comparing their status at the international/national/county/regional/local scale, through the use of available contextual information, to establish the importance of those features in a geographical context.
- 4.10. The overall effect of the proposed development on a given feature has been predicted, considering the baseline data collected through desk study and field survey, and the various

¹⁹ Gurnell and Shuker (2022) *Assessing river condition: A multiscale approach designed for operational application in the context of biodiversity net gain*, River Research and Applications.

²⁰ CIEEM (2019). *Guidelines for Ecological Impact Assessment in the UK and Ireland. Terrestrial, Freshwater and Coastal*, Version 1.1. updated September 2019. Chartered Institute of Ecology and Environmental Management, Winchester.

impacts expected to occur. An assessment has then been made as to whether the effect on each important ecological feature is likely to be significant or not.

- 4.11. Significance is the weight that should be attached to effects when decisions are made. For the purpose of EclA, a likely significant effect is an effect that either supports or undermines biodiversity conservation objectives for important ecological features (which could be species populations/groups of species, habitats, or a designated site), or for biodiversity in general. Effects have been considered significant at a wide range of scales, from national to local.
- 4.12. A sequential process has been adopted to avoid/mitigate, and if required, compensate for significant negative ecological effects. This is referred to as the 'Mitigation Hierarchy'. Avoidance includes measures to change the design of the proposed development to avoid an impact occurring. Mitigation includes measures to avoid or reduce the negative impacts of the proposed development. Compensation addresses significant negative residual effects (those likely to occur after avoidance and mitigation have been considered). It is this objective of compensation, and not its location, that distinguishes compensation from 'mitigation'.
- 4.13. In the EclA, it is only essential to assess and report significant residual effects that remain after mitigation measures have been taken into account. However, the potential significant effects without mitigation, as well as the residual significant effects following mitigation, have been presented where the mitigation proposed is experimental, unproven or controversial and/or to demonstrate the importance of securing the measures proposed through planning conditions or obligations.

Valuation

- 4.14. The value of important ecological features (sites, habitats and species) is assigned according to their scale of importance using the following terms:
- International importance – ecological features of international importance such as SPAs and SACs, and/or sites that support internationally-important populations of species.
 - National importance – ecological features of national importance such as SSSIs, features which meet the criteria for designation as a SSSI, and/or sites that support nationally-important populations of certain species.
 - Regional importance – ecological features of regional importance, such as a species population that is of importance at a scale greater than the County, but does not meet the criteria for National Importance

- County importance – ecological features of county-scale importance, including features that have been designated as local wildlife sites, or meet the criteria for designation as a local wildlife site, and/or county-important populations of species
- Local importance – ecological features of local importance, including habitats or species populations listed as being of nature conservation importance (e.g. S41, local BAP, or listed in local planning policy) which are not considered to be of County importance by virtue of the quality, size/number, rarity, the extent to which they are threatened throughout their range, or to their rate of decline.

Precautionary principle

- 4.15. The evaluation of significant effects is based on the results of the ecological surveys carried out in the Application Site and other available evidence. In cases of reasonable doubt, where it is not possible to robustly justify a conclusion of no significant effect, a significant effect is assumed. Where uncertainty exists, it has been duly acknowledged.

5 BASELINE ECOLOGICAL CONDITIONS

Context

- 5.1. The Application Site comprises 6.96ha of greenfield land, consisting largely of other neutral grassland, other lowland acid grassland, lowland meadow, purple moor grass and rush pasture, and lowland mixed deciduous woodland. Other habitats within the Application Site include a stream (tributary to Pudbrook Lake Stream), scattered trees, lines of trees, willow and mixed scrub, and bracken. There is an additional footpath to the north of the site, left of Ferndale Road. The Application Site is located at the south-eastern extent of Hedge End. The site is surrounded by a residential development to the north, Manor Farm LNR to the east, a combination of arable farmland and woodland to the south, and a combination of residential development and sports pitches to the south.

Designated Sites

- 5.2. SSSIs, SACs and SPAs with IRZs within the boundary of the Application Site are shown in **Table 3**.

Table 3: Statutory designated sites with an IRZ within the Application Site

Name of statutory designated sites	Approximate distance and direction from Application Site	Reason for designation	Scale of importance
Manor Farm LNR	In north-east of Application Site	Designated for its array of wildflowers, insects, and reptiles. Wide diversity of wildlife including curlew <i>Numenius arquata</i> , skylark <i>Alauda arvensis</i> and roe deer <i>Capreolus capreolus</i> .	Local
Upper Hamble Estuary and Woods SSSI	0.4km south	Twelve different types of ancient broadleaved woodland are present that collectively comprise one of the most ecologically diverse woodland areas in southern England – supporting purple emperor <i>Apatura iris</i> and leaf beetle <i>Orsodacne lineola</i> .	National

Solent & Southampton Water RAMSAR	1km south-east	One of the few major sheltered channels between a substantial island mainland in European waters, including a variety of habitats such as saline lagoons, saltmarshes, estuaries and coastal woodland. It also supports an important assemblage of rare plants and invertebrates. Notable species comprise ringed plover <i>Charadrius hiaticula</i> , dark-bellied brent goose <i>Branta bernicla bernicla</i> , Eurasian teal <i>Anas crecca</i> and black-tailed godwit <i>Limosa limosa islandica</i> .	International
Solent & Southampton Water SPA	1km south-east	Supports over 1% of the Great British population of Mediterranean gull <i>Larus melanocephalus</i> , sandwich tern <i>Sterna sandvicensis</i> , common tern <i>Sterna hirundo</i> , little tern <i>Sterna albirfrons</i> and roseate tern <i>Sterna dougalli</i> . The site also supports over 1% of the biogeographic population of regularly occurring migratory species of dark-bellied brent geese, teal <i>Anas crecca</i> , ringed plover <i>Charadrius hiaticula</i> and black-tailed godwit <i>Limosa limosa</i> , and the site is regularly used by over 20,000 waterfowl.	International
Solent Maritime SAC	1km south-east	Supports a number of Annex 1 habitats including estuaries, spartina swards, Atlantic salt meadows and coastal lagoons. Desmoulin's whorl snail <i>Vertigo moulinsiana</i> , an Annex II species, is also present. The only site for smooth cord-grass <i>Spartina alterniflora</i> in the UK.	International

Wildern LNR	1.3km north-west	Wetland habitat comprising a mosaic of ponds, flooded meadows, valley mire and woodland. Species recorded include green woodpecker <i>Picus viridis</i> , lesser redpoll <i>Acanthis cabaret</i> , broad bodied chaser <i>Libellula depressa</i> and purple hairstreak <i>Neozephyrus quercus</i> .	Local
Netley Common LNR	1.7km east	Designated for its open heathland habitat.	Local
Moorgreen Meadows SSSI	2.5km north-west	Neutral meadow habitat that is of exceptional importance for its population of northern marsh orchid <i>Dactylorhiza purpurella</i> .	National
Lincegrove and Hackett's Marshes SSSI	2.7km south	Mature saltmarsh habitat on the River Hamble estuary. Vegetation is dominated by sea purslane <i>Halmione portulacoides</i> and common cord-grass <i>Spartina anglica</i> . The marshes are one of the best examples of saltmarsh habitat on the south coast, and are one of only eight extensive saltmarshes between Poole and Pagham.	National
Hackett's Marsh LNR	2.7km south	Species-rich meadows that support a large population of hybrid heath spotted-orchid <i>Dactylorhiza maculata</i> . Areas of saltmarsh vegetation are also present that are dominated by cord grass <i>Spartina</i> sp. and saltmarsh grass <i>Puccinellia maritima</i> . The site is also of particular important for invertebrates and wading birds.	Local
Gull Coppice LNR	3.3km south-east	40 acres of grassland and secondary oak woodland.	Local

Botley Wood and Everett's and Mushes Copse SSSI	3.4km south-east	The site predominantly comprises conifer plantations that are of exceptional importance for their rich invertebrate populations, nectar sources and relic stands of semi-natural deciduous woodland. Botley Wood is a nationally outstanding area for butterflies, with over 30 species breeding annually including pearl-bordered fritillary <i>Clossiana euphrosyne</i> , small pearl bordered fritillary <i>Clossiana selene</i> and purple emperor.	National
Lee-on-The-Solent to Itchen Estuary SSSI	3.4km south	The site extends along the eastern shore of Southampton Water from Lee-on-the-Solent to the mid Itchen estuary and includes the lower estuary of the River Hamble. Habitats comprise extensive intertidal muds with a littoral fringe of vegetated shingle, saltmarsh, reedbed, marshy grasslands and deciduous woodland. The site also supports an outstanding assemblage of nationally scarce coastal plants.	National
Holly Hill Woodland Park LNR	3.7km south	Supports an area of ancient semi-natural woodland, known as Cawtes Copse.	Local
Round Coppice LNR	3.9km south-east	Designated for ancient woodland habitat.	Local
Mercury Marshes LNR	4km south	The reserve is of particular importance for invertebrates, and forms an important feeding area for waders and waterfowl. Water rail <i>Rallus aquaticus</i> , reed bunting <i>Emberiza schoeniclus</i> and warblers frequent the reedbed and willow carr.	Local

Hook with Warsash LNR	4.1km south	The site supports a number of habitats including reedbeds, saltmarsh, woodland and coastal grazing marsh. Species recorded include dark-bellied brent goose <i>Branta bernicla</i> , little egret <i>Egretta garzetta</i> and grass snake <i>Natrix Helvetica</i> .	Local
Westwood Woodland Park LNR	4.3km south-west	Ancient woodland and grassland.	Local
Millers Pond LNR	4.4km west	Semi-natural woodland and acid grassland.	Local

- 5.3. Manor Farm LNR is situated in the northeastern corner of the Application Site.
- 5.4. The Application Site also lies within the IRZ of Upper Hamble Estuary and Woods SSSI, which overlaps with Solent Maritime SAC, Solent & Southampton Water SPA and Solent & Southampton Water RAMSAR.
- 5.5. Local (non-statutory) Wildlife Sites, or Sites of Nature Conservation Importance (SINCs) as they are known in Hampshire, within 2km of the Application Site are shown in **Table 4**.

Table 4: Local Wildlife Sites within 2km of the Application Site

Name of SINC	Approximate distance and direction from the Application Site	Nature Conservation Interest	Scale of importance
Tanhouse Meadow	On Application Site	Designated for its fens, flushes, seepages, springs and inundation grasslands of floodplains that support a flora and fauna of less-improved wet conditions.	County
Kings Copse Meadow & Pond	400m south-east	Designated for its semi-improved or impoverished grasslands which retain a significant element of unimproved grassland and for its fens, flushes, seepages, springs and inundation	County

Name of SINC	Approximate distance and direction from the Application Site	Nature Conservation Interest	Scale of importance
		grasslands of floodplains that support a flora and fauna of less-improved wet conditions.	
Dockdell Copse	400m south-east	Designated for its Ancient Semi-natural Woodland habitat.	County
Manor Farm Meadows (Central Field)	500m east	Designated for its fens, flushes, seepages, springs and inundation grasslands of floodplains that support a flora and fauna of less-improved wet conditions.	County
Gould Copse	800m north-east	Designated for its Ancient Semi-natural Woodland habitat and for its other woodland where there is a significant element of ancient semi-natural woodland surviving.	County
Piland's Copse	1km south-west	Designated for its Ancient Semi-natural Woodland habitat.	County
Sandpit Copse	1km south-west	Designated for its Ancient Semi-natural Woodland habitat and for its other woodland where there is a significant element of ancient semi-natural woodland surviving.	County
Manor Farm Plantation	1.1km south-east	Designated for its other woodland where there is a significant element of ancient semi-natural woodland surviving.	County
Church Lane Meadows	1.2km east	Designated for its wet woodlands such as Alder or Willow Woods and Birch Bog Woods which support a good diversity of woodland and/or marsh/swamp/mire species and for its fens, flushes, seepages, springs and inundation grasslands of floodplains	County

Name of SINC	Approximate distance and direction from the Application Site	Nature Conservation Interest	Scale of importance
		that support a flora and fauna of less-improved wet conditions.	
Durncomb's Copse Meadow	1.3km south-west	Designated for its semi-improved or impoverished grasslands which retain a significant element of unimproved grassland.	County
Durncomb's Copse	1.3km south-west	Designated for its other woodland where there is a significant element of ancient semi-natural woodland surviving.	County
Bridget Mary Garden	1.4km south-west	Designated for its wet woodlands such as Alder or Willow Woods and Birch Bog Woods which support a good diversity of woodland and/or marsh/swamp/mire species and for the presence of purple moor-grass and rush-pasture.	County
Bloomfield & Wellspring Copses	1.5km south-east	Designated for its Ancient Semi-natural Woodland habitat.	County
Southlands Meadow West and East	1.6km south-east	Designated for its semi-improved or impoverished grasslands which retain a significant element of unimproved grassland.	County
Meadow South of Burr ridge Road	1.5km south-east	Designated for purple moor-grass and rush-pasture presence.	County
Wildern Nature Park	1.5km north-west	Designated for its other woodland where there is a significant element of ancient semi-natural woodland surviving and for its wet woodlands such as Alder or Willow Woods and Birch Bog Woods which support a good diversity of woodland and/or marsh/swamp/mire species.	County

Name of SINC	Approximate distance and direction from the Application Site	Nature Conservation Interest	Scale of importance
Woodhouse Gully Wood	1.5km north-east	Designated for its Ancient Semi-natural Woodland habitat and for its wet woodlands such as Alder or Willow Woods and Birch Bog Woods which support a good diversity of woodland and/or marsh/swamp/mire species.	County
Bottom Copse/Bushy Copse	1.6km north	Designated for its Ancient Semi-natural Woodland habitat and for its wet woodlands such as Alder or Willow Woods and Birch Bog Woods which support a good diversity of woodland and/or marsh/swamp/mire species.	County
Oakleigh Meadow	1.6km south-west	Designated for its semi-improved or impoverished grasslands which retain a significant element of unimproved grassland.	County
Pudbrook Lake	1.6km north-east	Designated for its other woodland where there is a significant element of ancient semi-natural woodland surviving or supporting some characteristics of ancient woodland and for being a Local Geological Site.	County
Peewit Hill	1.7km south-west	Designated for its areas of heathland vegetation including mosaics of dwarf shrub heath, acidic grassland, valley mire and scrub and for being a site which supports one or more Hampshire Notable Species: black bog-rush <i>Schoenus nigricans</i> .	County
Swanwick Wood	1.7km south-east	Designated for its Ancient Semi-natural Woodland habitat.	County

Name of SINC	Approximate distance and direction from the Application Site	Nature Conservation Interest	Scale of importance
Netley Hill Heath	1.8km west	Designated for its areas of heathland vegetation including mosaics of dwarf shrub heath, acidic grassland, valley mire and scrub and for its areas of heathland which are afforested or have succeeded to woodland.	County
Netley Common, Hound	1.8km west	Designated for its semi-improved or impoverished grasslands which retain a significant element of unimproved grassland and for areas of heathland vegetation including mosaics of dwarf shrub heath, acidic grassland, valley mire and scrub. Also, for its areas of heathland which are afforested or have succeeded to woodland and for its fens, flushes, seepages, springs and inundation grasslands of floodplains that support a flora and fauna of less-improved wet conditions.	County
Hogsty Corner	1.8km north-west	Designated for its Ancient Semi-natural woodland, heathland, wet woodlands such as Alder or Willow Woods and Birch Bog Woods which support a good diversity of woodland and/or marsh/swamp/mire species and for its areas of open freshwater which support good floristic assemblages.	County
River Hamble Mudflats & Saltmarsh – 2, 3, 4	1.9km south	Designated for its semi-natural coastal and estuarine habitats and for supporting one or more of	County

Name of SINC	Approximate distance and direction from the Application Site	Nature Conservation Interest	Scale of importance
		Hampshire's Notable Species: sea wormwood <i>Seriphidium maritimum</i> .	
Brixedone Saltmarsh & Mudflat	1.9km south	Designated for its semi-natural coastal and estuarine habitats and for being a site which supports one or more Hampshire Notable Species: purple glasswort <i>Salicornia ramosissima</i> , English scurvygrass <i>Cochlearia anglica</i> , and marsh mallow <i>Althaea officinalis</i> .	County
Trullmill & Pinkmead Copses	1.9km east	Designated for its Ancient Semi-natural Woodland habitat.	County
Windmill Fields Wood	1.9km south-west	Designated for its other woodland where there is a significant element of ancient semi-natural woodland surviving.	County
Netley Common, Southampton	2km west	Designated for its semi-improved or impoverished grasslands which retain a significant element of unimproved grassland and for its areas of heathland vegetation including mosaics of dwarf shrub heath, acidic grassland, valley mire and scrub.	County
Dumbleton's Copse	2km west	Designated for its areas of heathland which are afforested or have succeeded to woodland.	County
Land North of Bridge Road	2km south-west	Designated for its semi-improved or impoverished grasslands which retain a significant element of unimproved grassland.	County
Windhover (Netley Common South)	2km south-west	Designated for areas of heathland vegetation including mosaics of dwarf	County

Name of SINC	Approximate distance and direction from the Application Site	Nature Conservation Interest	Scale of importance
		shrub heath, acidic grassland, valley mire and scrub.	
Swanwick Nature Reserve	2km south-east	Designated for its Ancient Semi-natural Woodland habitat, areas of open freshwater and for its agriculturally unimproved grasslands which are not of recent origin. It supports one or more Hampshire Notable Species: long-horned bee <i>Eucera (Eucera) longicornis</i> , great crested newt <i>Triturus cristatus</i> , white admiral <i>Limenitis camilla</i> , sawfly <i>Melanapion minimum</i> , purple emperor <i>Apatura iris</i> .	County
Sherecroft Farm Meadow	2km north-east	Designated for its fens, flushes, seepages, springs and inundation grasslands of floodplains that support a flora and fauna of less-improved wet conditions. Supports one or more Hampshire Notable Species: smooth crosswort <i>Cruciata laevipes</i> , ragged robin <i>Lychnis flos-cuculi</i> .	County

5.6. The closest parcel of ancient semi-natural woodland, which is a Priority Habitat, is located approximately 530m south-east of the Application Site.

5.7. Furthermore, five sites associated with the Solent Waders and Brent Goose Strategy are present within 2km of the Application Site. These are as follows:

- E19 Low use site – approximately 0.4km east, one record
- E20 Secondary support area – approximately 1km east, four records
- F101 SPA site – approximately 1.2km east, three records

- F102 Low use site – approximately 1km south, two records
- F103 Low use site - approximately 1km south, two records

Habitats

- 5.8. Habitats are listed in order of importance. All the features described are shown on the Baseline Habitat Map in **Appendix 1**, and photographs in **Appendix 5**.

Tanhouse Meadow SINC/Manor Farm LNR:

Purple moor grass and rush pasture

- 5.9. Purple moor grass and rush pasture is present to the east of the on-site SINC/LNR area. Species identified include purple moor grass *Molinia caerulea*, sharp flowered rush *Juncus acutiflorus*, jointed rush, lesser spearwort *Ranunculus flammula*, meadow buttercup *Ranunculus acris*, meadow thistle *Cirsium dissectum*, and meadow grass *Poa* sp.
- 5.10. As this habitat forms the basis of the SINC designation, it is considered to be of **county importance**.

Lowland meadow

- 5.11. An area of lowland meadow is present in the northeast of the SINC/LNR. Species present here include meadow vetchling *Lathyrus pratensis*, common knapweed *Centaurea nigra*, common bent *Agrostis capillaries*, red fescue *Festuca rubra*, tufted hair grass *Deschampsia cespitosa*, common fleabane *Pulicaria dysenterica*, devil's-bit scabious *Succisa pratensis*, Tormentil, glaucous sedge *Carex flacca* and cut-leaved cranesbill *Geranium dissectum*.
- 5.12. The lowland meadow is considered to be of **county importance**.

Other lowland acid grassland

- 5.13. An area of other lowland acid grassland is present in the northeastern extent of the Application Site, within the SINC/LNR. In addition, small pockets of bramble scrub and ruderal are scattered throughout the grassland.
- 5.14. Species recorded within the grassland comprise scurvy-grass *Cochlearia officinalis*, mouse ear hawkweed *Pilosella officinarum*, woodrush *Luzula* sp., Tormentil *Potentilla erecta*, jointed rush *Juncus articulatus*, hemlock water dropwort *Oenanthe crocata*, and cocksfoot *Dactylis glomerata*. In addition, a number of unidentifiable fine leaved grasses and bryophyte species were also present.

- 5.15. As this habitat lies within the SINC designation and is of moderate ecological value, it is considered to be of **local importance**.

Lowland mixed deciduous woodland

- 5.16. An area of lowland mixed deciduous woodland is present in the east of the Application Site bordering the SINC/LNR. A dense bramble understory is present in areas and glades are present that have allowed the establishment of grasses and wildflowers. In addition, the western extent of the woodland was very damp due to water draining into the woodland from the adjacent other neutral grassland. The woodland also provides a buffer between the SINC/LNR and the remainder of the Application Site.
- 5.17. The woodland is connected to a number of ancient and/or semi-natural woodlands in the wider area by a network of hedgerows. These include Sandpit Copse SINC, Dockdell Copse SINC, Durncomb's Copse SINC and Woodhouse Gully Wood SINC.
- 5.18. Tree species within the woodland comprise common oak *Quercus robur*, ash *Fraxinus excelsior*, hazel *Corylus avellana*, holly *Ilex aquifolium* and hawthorn *Crataegus monogyna*. Ground flora comprised creeping buttercup *Ranunculus repens*, herb robert *Geranium robertianum*, lungwort *Pulmonaria officinalis*, meadowsweet *Filipendula ulmaria*, thistle *Cirsium* sp., false-oat grass *Arrhenatherum elatius*, wood dock *Rumex sanguineus*, bindweed *Convolvulus* sp., bracken *Pteridium aquilinum*, bramble *Rubus fruticosus*, common ivy *Hedera helix*, nettle *Urtica dioica*, and Yorkshire fog *Holcus lanatus*.
- 5.19. The lowland mixed deciduous woodland is considered to be of **local importance**.

Primary Site:

Line of trees

- 5.20. Three tree lines are present within this section of the Application Site. One runs along a section of the northern boundary, adjacent to the road. Another runs along the southern boundary of the Application Site, and the final line of trees runs along the northeastern boundary of the site, along the top of the SINC.
- 5.21. Species within the line of trees along the western boundary are predominantly semi-mature and comprise oak, ash, hazel, field maple *Acer campestre*, and willow *Salix* sp. Species within the ground flora predominantly comprise false-oat grass, dog rose *Rosa canina*, Yorkshire fog, common hogweed *Heracleum sphondylium*, common ivy, and dock *Rumex* sp.
- 5.22. Species present along the southern line of trees comprise mainly common oak, with some

willow, bramble, hazel, and blackthorn *Prunus spinosa*. Species within the ground flora predominantly comprise ragwort, Yorkshire fog, common fleabane, meadow buttercup, common hogweed, bracken, ribwort plantain *Plantago lanceolata* and creeping thistle *Cirsium arvense*.

- 5.23. Finally, species present within the line of trees along the northern border of the SINC primarily include common oak, ash and hazel, with some goat willow, damson *Prunus insititia*, and a Norway spruce *Picea abies*. Species within the ground flora comprise mainly bramble.
- 5.24. The tree lines are considered to be of **importance within the zone of influence**, which in this case is the Application Site boundary.

Species-rich native hedgerow with trees

- 5.25. Two sections of species-rich native hedgerow with trees are present within the Application Site. One runs along a section of the western boundary while the other runs along a section of the northern boundary.
- 5.26. Species along the western boundary comprise field maple, bramble, oak, blackthorn, birch, ivy and ash. Species within the ground flora predominantly comprise bracken, Yorkshire fog and false-oat grass.
- 5.27. Species along the northern boundary comprise mainly of field maple and oak, with some goat willow, bramble, and ash present. Species within the ground flora predominantly comprise nettle, ragwort, common fleabane, false-oat grass and dock.
- 5.28. Both species rich hedgerows with trees are considered to be of **importance within the zone of influence**, which in this case is the Application Site boundary.

Other neutral grassland

- 5.29. Other neutral grassland is widespread throughout the Application Site and is the dominant habitat on-site. This area of the Application Site has historically been used for arable farming. The grassland was very wet in places, especially in the southern extent, where areas of standing water are present for parts of the year.
- 5.30. Species recorded within the grassland include creeping buttercup, bristly oxtongue *Helminthotheca echioides*, spear thistle *Cirsium vulgare*, creeping thistle, creeping bent *Agrostis stolonifera*, Yorkshire fog, white clover *Trifolium repens*, dove' foot cranesbill *Geranium mole*, dandelion *Taraxacum* sp., ragwort *Jacobaea vulgaris*, red clover *Trifolium pratense*, mugwort *Artemisia vulgaris*, water pepper *Persicaria hydropiper*, quaking-grass *Briza*

media, bird's-foot trefoil *Lotus corniculatus*, common fleabane, perennial rye *Lolium perenne*, vetch *Vicia* sp., and chickweed *Stellaria media*.

- 5.31. The other neutral grassland is considered to have moderate ecological value and is therefore considered to be of **site level importance**.

Scattered trees

- 5.32. Scattered trees are present within the SINC/LNR at the northeastern extent of the Application Site.
- 5.33. Tree species recorded comprise primarily goat willow, with some silver birch and hawthorn.
- 5.34. The scattered trees are considered to be of **importance within the zone of influence**, which in this case is the Application Site boundary.

Mixed scrub

- 5.35. A dense ribbon of mixed scrub is present on the northern and southern boundaries of the SINC/LNR in the northern and eastern extent of the Application Site. The scrub also provides a buffer to the acid grassland and stream.
- 5.36. The scrub is considered to be species rich and supports a number of shrubs and trees. Species recorded comprise bramble, gorse *Ulex europaeus*, nettle, oak, silver birch *Betula pendula*, hawthorn, hazel, ash, bracken, holly, dog rose and rowan *Sorbus aucuparia*.
- 5.37. However, the habitat is widespread and common in the local area. Therefore, the mixed scrub is considered to be of **importance within the zone of influence**, which in this case is the Application Site boundary.

Other rivers and streams

- 5.38. A 0.25km section of the Tributary of Pudbrook Lake Stream runs eastwards along the northern boundary of the Application Site between the SINC/LNR and adjacent residential development. The stream flows for approximately 1.9km before reaching its confluence with the Pudbrook Lake Stream, and then another 0.2km before feeding into the River Hamble.
- 5.39. Within the Application Site, the stream is approximately 1.4m wide and comprised a mixture of sand/clay and hard, reinforced, engineered banks. The riverbed material was predominantly gravel pebble. Trace amounts of marginal vegetation were present and no aquatic vegetation was recorded. Large items of trash were recorded within the river channel.

5.40. The 10-metre riparian zone along the right-hand bank top (within the Application Site) mainly comprised scrub and wetland habitat, with patches of mosses/lichens and both short and tall herbs/grasses also present. The left-hand bank, opposite the Application Site, predominantly comprised residential buildings and associated gardens; although small areas of scrub, mosses/lichens and short and tall herbs/grasses were also present. A tree line also runs along this side of the bank. A couple of pedestrianised footbridges cross the channel at the western extent.

5.41. To inform the Biodiversity Metric, the stream was subject to a River Condition Assessment using the Modular River Physical (MoRPh5) survey methodology. Five contiguous survey modules were assessed, with modules of 10m length. These were assessed from the right bank and the results were processed using Cartographer, which returned a result of 'fairly poor' condition.

5.42. This stream is considered to be of **local importance**.

Willow scrub

5.43. Two distinct areas of willow scrub are present within the Application Site. One area is situated within the southern corner of the Application Site, with the other area situated within the SINC/LNR. The scrub is in poor condition, with only one age range present.

5.44. The willow scrub is considered to be of **negligible importance**.

Bracken

5.45. A strip of bracken is present along the southern boundary of the Application Site.

5.46. The bracken is considered to be of **negligible importance**.

Ruderal

5.47. A strip of ruderal habitat is present along the northwestern boundary of the Application Site.

5.48. Species within the ruderal habitat comprise nettle, bramble, spear thistle, dock and silver grass *Miscanthus sinensis*.

5.49. The ruderal habitat is considered to be of **negligible importance**.

Additional Footpath Area:

Line of trees

- 5.50. Two lines of trees border the adjacent footpath to the north of the Application Site. Species present include common oak, yew *Taxus baccata*, ash, hazel, holly, blackthorn, and cypress *Cupressus* sp.
- 5.51. Understory vegetation below the lines of trees included Pendulous sedge *Carex pendula*, bramble *Rubus fruticosus*, lesser celandine *Ficaria verna*, lords and ladies *Arum maculatum*, common longwort *Pulmonaria officinalis*, meadow cranes bill *Geranium pratense*, and mint *Mentha* sp.
- 5.52. The line of trees is considered to be of **site level importance**.

Wet ditch

- 5.53. A wet ditch runs along half the length of the western edge of the footpath area.
- 5.54. The wet ditch is considered to be of **site level importance** only.

Artificial unvegetated unsealed surface

- 5.55. A gravel pathway extends along the entire footpath.

Flora

- 5.56. Previous ecological surveys carried out on-site identified the suspected presence of Jersey cudweed *Laphangium luteoalbum* which is protected under Schedule 8 of the Wildlife and Countryside Act 1981, however, DNA analysis concluded that only marsh cudweed *Gnaphalium uliginosum* was present, which is not protected.
- 5.57. As such, all flora identified within the Application Site are common and widespread species and, the plants on-site are of **site level importance** only.

Fauna

Invertebrates

- 5.58. The data search returned records of the following notable invertebrate species within 2km that are relevant to the Application Site; small heath *Coenonympha pamphilus*, small phoenix *Ecliptopera silaceata*, stag beetle *Lucanus cervus*, common darter *Sympetrum striolatum*, purple emperor *Apatura iris*, cinnabar *Tyria jacobaeae*, ghost moth *Hepialus humuli*, knot grass moth *Acronicta rumicis*, silver washed fritillary *Argynnis paphia*, pearl-bordered fritillary *Boloria euphrosyne*, white admiral *Limenitis camilla*, white ermine *Spilosoma lubricipeda*, buff ermine *Spilosoma lutea* and blood-vein moth *Timandra comae*.

- 5.59. The habitats within the Application Site are considered likely to support a variety of invertebrates including pollinators, however, it is considered unlikely that these habitats would support important assemblages of notable invertebrates. As such, it is considered that the invertebrates present on-site are likely to be of **site level importance** only.

Great crested newts

- 5.60. The data search returned one record of great crested newt within 2km of the Application Site, located approximately 1.4km south-west of the Application Site, dated to 2021.
- 5.61. As identified on MAGIC, one EPS licence has been granted within 5km of the Application Site. The licence is located approximately 3.5km east of the Application Site and was granted in 2018.
- 5.62. There is one collection of smaller ponds within 500m of the Application Site to the , with no major dispersal barriers in between, but these ponds are surrounded by suitable terrestrial habitat and, if great crested newt are present in these ponds, it is considered highly unlikely that they would disperse to the Application Site given the suitability of adjacent habitat. Also, although there are areas of standing water within the acid grassland, these are considered too small in their extent and poor in quality to support great crested newt. In addition, the stream is considered too fast-flowing to support great crested newt.
- 5.63. The habitats on-site are considered largely suitable to support great crested newts during their terrestrial phase. These habitats consist of the woodland, grassland, hedgerows, ruderal, scrub and log piles. However, these habitats are common and widespread in the wider area and it is considered unlikely that great crested newts would commute to the Application Site to utilise it.
- 5.64. Given the lack of habitat suitable for great crested newts and the minimal records in the local area, it is considered that GCN are **likely absent** from the Application Site and have been scoped out of further assessment.

Other amphibians

- 5.65. The data search returned records of common toad *Bufo bufo* within 2km of the Application Site. The closest record is situated approximately 349m north of the Application Site and dates to 2009.
- 5.66. There are no suitable aquatic habitats for other amphibians within the Application Site. Although there are areas of standing water within the acid grassland, these are considered too small in their extent and poor in quality to support other amphibians. However, there are three

ponds within 500m of the Application Site.

- 5.67. As with great crested newt, the Application Site provides suitable terrestrial habitat for other amphibians. This habitat comprises the woodland, grassland, hedgerows, ruderal, scrub and log piles. However, these habitats are common and widespread in the wider area and it is considered unlikely that other amphibians would commute to the Application Site to utilise it.
- 5.68. Although the Application Site supports suitable terrestrial habitat, it is considered to be widespread in the local area. Therefore, due to the paucity of data search records and lack of suitable aquatic habitats on-site, other amphibians are considered to be **likely absent** from the Application Site.

Reptiles

- 5.69. The data search returned records of slow worm *Anguis fragilis*, grass snake *Natrix Helvetica*, adder *Vipera berus*, and common lizard *Zootoca vivipara* within 2km of the Application Site. The closest record identified was a grass snake on the northern boundary of the Application Site, adjacent to the SINC/LNR, dating back to 2010.
- 5.70. The Application Site supports numerous habitats with suitability for common reptile species. The woodland, grassland, hedgerows, ruderal, and scrub provide suitable habitat for foraging and refuge opportunities. In addition, the inundated grassland and stream within the SINC/LNR provide optimal habitat for grass snake and they also provide connectivity to additional suitable habitats in the wider area. Various log piles were identified in the updated site walkover (TN1), which provides further refuge opportunities.
- 5.71. Given the presence of suitable reptile habitat on-site and in the surrounding area, it is considered that the Application Site is of **site level importance** to reptiles.

Birds

- 5.72. The data search returned record for various bird species within 2km of the Application Site. The relevant species have been grouped by their UK conservation status according to the RSPB, where birds are split into conservation priority from red (most critical group) to amber (next most critical group) as displayed in the table below:

Table 5: Notable bird records within 2km of the Application Site.

Common name	Taxon name	Status
Cuckoo	<i>Cuculus canorus</i>	Red
Skylark	<i>Alauda arvensis</i>	Red
Fieldfare	<i>Turdus pilaris</i>	Red
Mistle thrush	<i>Turdus viscivorus</i>	Red

Common name	Taxon name	Status
Spotted flycatcher	<i>Muscicapa striata</i>	Red
Starling	<i>Sturnus vulgaris</i>	Red
House sparrow	<i>Passer domesticus</i>	Red
Linnet	<i>Linaria cannabina</i>	Red
Lapwing	<i>Vanellus vanellus</i>	Red
Yellow wagtail	<i>Motacilla flava</i>	Red
Yellowhammer	<i>Emberiza citrinella</i>	Red
Lesser spotted woodpecker	<i>Dryobates minor</i>	Red
Nightingale	<i>Luscinia megarhynchos</i>	Red
Marsh tit	<i>Poecile palustris</i>	Red
Turtle dove	<i>Streptopelia turtur</i>	Red
Woodcock	<i>Scolopax rusticola</i>	Red
Tree pipit	<i>Anthus trivialis</i>	Red
Redwing	<i>Turdus iliacus</i>	Amber
Song thrush	<i>Turdus philomelos</i>	Amber
Grey wagtail	<i>Motacilla cinerea</i>	Amber
Bullfinch	<i>Pyrrhula pyrrhula</i>	Amber
Reed bunting	<i>Emberiza schoeniclus</i>	Amber

- 5.73. Other notable bird species identified in the data search include white stork *Ciconia Ciconia*, hobby *Falco Subbuteo*, red kite *Milvus milvus*, and barn owl *Tyto alba*.
- 5.74. The Application Site has potential to support foraging and nesting birds due to the presence of suitable habitat on-site, including woodland, hedgerows, and scrub. The other neutral and acid grassland habitats were also considered to provide suitable habitat to support ground-nesting bird species.
- 5.75. Overall, the Application Site is considered to be of **site level importance** to breeding birds.

Bats

- 5.76. The data search returned records of the following bat species within 2km of the Application Site; Bechstein's *Myotis bechsteinii*, Daubenton's *Myotis daubentonii*, whiskered *Myotis mystacinus*, serotine *Eptesicus serotinus*, Leisler's *Nyctalus leisleri*, Nathusius's pipistrelle *Pipistrellus nathusii*, noctule *Nyctalus noctula*, common pipistrelle *Pipistrellus pipistrellus*, soprano pipistrelle *Pipistrellus pygmaeus*, barbastelle *Barbastella barabstellus* and brown long-eared *Plecotus auritus*.
- 5.77. According to MAGIC Maps there are five records of European Protected Species licenses being granted for bats within 2km of the Application Site, the nearest of which was for common pipistrelle in 2018, approximately 1050m west of the site.

Bats - Roosting

- 5.78. As individual trees are to be removed and/or impacted by the scheme, a ground-level tree assessment was completed in December 2024 to determine the roosting bat importance within the Application Site.
- 5.79. A number of trees are present within the Application Site that provide suitability for roosting bats, the majority of which are situated with the lines of trees and woodland. Noteworthy trees include various oaks on the southern boundary of the SINC/LNR that contain various cavities owing to low roosting potential, and one oak and ash on the southern boundary with moderate roosting potential due to split limbs, loose bark, and various cavities.
- 5.80. Two oaks within the line of trees surrounding the adjacent footpath were assessed as having roosting potential for bats. One oak to the north of the footpath was assessed as being of moderate roosting potential for bats, due to various holes throughout the body of the tree. Another oak to the south of the footpath was assessed as low potential due to a coverage of ivy across the tree body.
- 5.81. Therefore, the Application Site is considered to be of **site level importance** to roosting bats.

Bats - Commuting and foraging

- 5.82. The Application Site provides some suitable commuting habitat for bats in the form of the tree lines which provide connectivity to surrounding habitats, and foraging habitat in the form of the longer sward grassland, scrub and waterbodies. Therefore, The Application Site is considered to be of **importance within the zone of influence** to foraging/commuting bats.

Hazel Dormouse

- 5.83. The data search returned multiple records of hazel dormice within 2km of the Application Site. The closest record is situated approximately 1.5km south-west of the Application Site and dates to 2007.
- 5.84. A total of 13 EPS licences have been granted for hazel dormouse within 5km of the Application Site. The nearest licence is situated approximately 2.3km north-west of the Application Site and was granted for the damage to and destruction of a hazel dormouse resting and breeding place in 2015.

- 5.85. The Application Site supports suitable hazel dormouse habitat in the form of woodland, mixed scrub, hedgerows and tree lines. Furthermore, the Application Site is well connected to a number of ancient and/or semi-natural woodlands in the wider area by a network of hedgerows and tree lines. These woodlands provide optimal hazel dormouse habitat and include Sandpit Copse SINC, Dockdell Copse SINC, Durncomb's Copse SINC and Woodhouse Gully Wood SINC.
- 5.86. As such, hazel dormouse presence/absence surveys were carried out in 2024, which found no evidence of hazel dormouse within the Application Site.
- 5.87. During the surveys, several wood mouse *Apodemus sylvaticus* nests consisting of loose leaves in an irregular structure were identified including one tube with two juvenile wood mice.
- 5.88. Given that the majority of the boundary vegetation is to be retained, and that dormice are considered **likely absent** from the Application Site, it is considered that impacts on dormice are unlikely, and they have therefore been scoped out of further assessment.

Badgers

- 5.89. The data search returned multiple records of badgers *Meles meles* within 2km of the Application Site, with the closest record situated within the SINC/LNR in the east of the Application Site and dating to 2019.
- 5.90. The grassland, woodland and scrub habitats within the Application Site provide optimal habitat for badgers to commute, forage and build setts. In addition, foraging evidence in the form of mammal paths were noted between the other neutral grassland and woodland. A mammal hole (TN2) was also identified directly next to the offsite electrical pylon where works are planned to take place. This hole is considered to be a subsidiary or outlier sett given the lack of additional holes identified in the surrounding area.
- 5.91. Given the rural nature of the site and its surroundings, and the presence of several well-worn mammal tracks within the site, it is considered likely that badgers are present in the wider area and individuals may use the site for commuting or foraging.
- 5.92. As such, the Application Site is of **site level importance** to badgers.

Other mammals

- 5.93. The data search returned one record of Eurasian water shrew *Neomys fodiens*, and multiple records of Eurasian otter *Lutra lutra* within 2km of the Application Site. The closest otter record is situated approximately 1.1km south of the Application Site in the River Hamble and dates to 2006.
- 5.94. The stream within the Application Site is not considered suitable to support otter or water vole. However, the habitats present on the right-hand bank of the stream, comprising grassland, scrub and scattered trees, provide suitable opportunities for otter to rest and shelter. No evidence of otter was recorded during the updated walkover survey, although the density of scrub meant that it wasn't possible to access the bank along its full length.
- 5.95. 72 records of West European Hedgehog *Erinaceus europaeus* were identified within 2km of the Application Site. The closest record of hedgehog was situated approximately 54m north of the Application Site and dates to 2006. As such, it is considered possible that other small mammals such as hedgehogs are present and may occasionally utilise the site for foraging or commuting.
- 5.96. Although small mammals such as hedgehogs are not subject to legal protection in terms of their conservation status, they are subject to protection from cruelty under the Wild Mammals Protection Act and the Animal Welfare Act 2006²¹. Therefore, due diligence must be exercised during clearance/groundworks to ensure mammals that may be present are not harmed.

²¹ Great Britain. *Wild Mammals Protection Act and the Animal Welfare Act 2006* [online]. Available from: [Wild Mammals \(Protection\) Act 1996 \(legislation.gov.uk\)](https://www.legislation.gov.uk/ukpga/1996/12/section/1)

6 SCHEME DESIGN

- 6.1. Planning permission is being sought for the creation of up to 200 new residential units with associated parking and landscaping. The residential units will be comprised of a mixture of 2 and 2.5 storey houses and apartment blocks with mixed tenure. A 3m wide tarmac path is being created along the footpath to the north of the Application Site. Offsite works to an electrical pylon will be completed south of the Application Site. The development would result in the loss of other neutral grassland, a section of willow and mixed scrub, and some small sections of tree line.



Image 2: Proposed layout (Terraforma Landscape Architects, September 2025)

7 ASSESSMENT OF EFFECTS AND MITIGATION MEASURES

- 7.1. In accordance with CIEEM guidelines, the following important ecological features have been identified with the potential to be affected by the proposed development and carried forward for further assessment:

Table 6: Important ecological features brought forward for impact assessment

Statutory sites	Manor Farm LNR, Upper Hamble Estuary and Woods SSSI, Solent Maritime SAC, Solent & Southampton Water SPA and Solent & Southampton Water RAMSAR
Non-statutory sites	Tanhouse Meadows SINC, Solent Waders and Brent Goose Strategy Sites
Habitats	Lowland meadow, purple moor grass and rush pasture, other lowland acid grassland, lowland mixed deciduous woodland, other neutral grassland, scattered trees, lines of trees, and species-rich native hedgerows with trees
Species and species groups	Invertebrates, reptiles & common amphibians, birds, roosting & foraging/commuting bats, hazel dormice, badgers and other mammals

- 7.2. The following ecological features have been scoped out of the ecological impact assessment, owing to the conclusion that no significant effects are predicted:

Table 7: Ecological features scoped out of the impact assessment

Statutory sites	All other statutory sites
Non-statutory sites	All other non-statutory sites
Habitats	Mixed scrub, willow scrub, watercourses, bracken, ruderal vegetation, and bare ground
Species and species groups	Great crested newts, otters and water voles

Statutory Designated Sites

- 7.3. A parcel of Manor Farm LNR is situated in the northeastern extent of the Application Site. It is required that the LNR is retained and protected throughout the development with a minimum buffer of 20m. The retention of this LNR would also serve to retain and protect the most valuable habitats within the Application Site.
- 7.4. The Application Site is within the IRZ of Upper Hamble Estuary and Woods SSSI, which overlaps with Solent Maritime SAC, Solent & Southampton Water SPA and Solent & Southampton Water RAMSAR. The southern section of the Application Site falls within an IRZ which identifies a potential risk of impacts from residential development which will lead to a net gain of 50 or more residential units; whereas the northern section of the Application Site falls within an IRZ which identifies a potential risk of impacts on from residential development which will lead to a net gain of 100 or more residential units. It is recommended that Eastleigh Borough Council consult with Natural England to determine what further measures are required.
- 7.5. Furthermore, the Application Site falls within the Solent Nutrient Impact Area for new residential development with over-night accommodation. A nutrient avoidance and mitigation package will be needed to achieve nutrient neutral development before a planning application can lawfully be issued in accordance with The Conservation of Habitats and Species Regulations 2017. Nitrate/phosphate calculations will need to be undertaken by drainage experts to determine the number of credits that need to be purchased.
- 7.6. Finally, as the Application Site is situated within 5.6km of the Solent SPAs, financial contributions will be required to conform with the Solent Recreation Mitigation Strategy.

Non-statutory Designated Sites

- 7.7. Tanhouse Meadows SINC is situated in the in the northeastern extent of the Application Site. A minimum buffer of 20m to the SINC is required and shown on plans. The retention of this SINC would also serve to retain and protect the most valuable habitats within the Application Site.
- 7.8. In addition, five sites associated with the Solent Waders and Brent Goose Strategy are present within 2km of the Application Site. The nearest site is located 0.4km to the east of the Application Site. Therefore, to protect the integrity of these sites and to avoid impacts from noise and light pollution, it is recommended that a Bird Hazard Assessment and Management Plan is produced. Avoidance and mitigation measures may include carrying out construction works outside of the core winter period (October-March inclusive).

- 7.9. Furthermore, a Bird Hazard Assessment and Management Plan is required due to the site being located within the bird strike risk zone of Southampton Airport. As such, a BHMP is required in order to assess the risk of the current bird assemblages on site and set out a range of measures to manage risk of increases in bird strikes at Southampton Airport through the application of appropriate and effective bird control measures.

Habitats

- 7.10. The habitats within the Application Site that are considered the most ecologically valuable are the lowland meadow, purple moor grass and rush pasture, other lowland acid grassland, and lowland mixed deciduous woodland associated with the SINC/LNR area, and the species-rich hedgerows with trees, lines of trees, scattered trees, and other neutral grassland associated with the primary site.
- 7.11. It is understood that the majority of these habitats including the lowland meadow, purple moor grass and rush pasture, other lowland acid grassland, and most of the woodland will be retained and enhanced during the proposed development. Additionally, several of the lines of trees and hedgerows throughout the site will be retained and suitably buffered during the proposed works in line with the root protection areas (RPAs) of all trees.
- 7.12. It is understood that some sections of tree line and several scattered trees will be lost to facilitate new pedestrian walkways within the proposed development. Additionally, a large area of other neutral grassland will be lost to facilitate the proposed development. These habitats are considered to provide value to a number of species including reptiles, birds, invertebrates and bats. As such, it is considered that the loss of these habitats will require adequate compensation as per the Biodiversity Net Gain (BNG) calculations outlined in **Section 8**.

Fauna

Invertebrates

- 7.13. Several habitats on-site including the woodland, grassland habitats, and scrub are considered suitable to support common invertebrate assemblages. To mitigate potential impacts on invertebrates, including stag beetles, existing features of value such as deadwood and vegetation debris should be retained in-situ, where possible. Where removal is necessary, these features should be dismantled sensitively, by hand and under the supervision of an ecologist. Additionally, these features should be relocated to suitable areas of retained habitat.

Reptiles and common amphibians

- 7.14. Due to the number of local records of reptile presence, and the presence of suitable habitat on site, it is assumed that populations of reptiles are likely present within the Application Site.
- 7.15. The proposed development will involve the loss of suitable reptile and terrestrial amphibian habitat in the form of grassland, scrub, and hedgerows. Without appropriate mitigation there is potential for reptiles to be harmed during the site clearance works and construction phase, and for suitable habitat to be fragmented or lost. Therefore, a reptile mitigation strategy is required including a full trapping and translocation exercise prior to any ground clearance and the commencement of works in order to safeguard reptile populations within the Application Site, as well as any other common amphibians that are present.
- 7.16. The reptile mitigation strategy will involve installing reptile fencing around the perimeter of the site, following which, the site will be subject to a trapping and translocation exercise, involving the safe capture and release of reptiles and amphibians to a suitable receptor area.
- 7.17. Following the translocation phase, the vegetation on site will be subject to a destructive search under the supervision of a suitably qualified ecologist. This will involve a systematic stripping of the vegetation with the use of an excavator with a toothed bucket.
- 7.18. In the event that any reptiles or amphibians are discovered during the clearance works, these will be safely translocated to the receptor site outside of the works area.

Birds

- 7.19. The habitats on-site including woodland, hedgerows, lines of trees, scattered trees, and scrub were found to provide suitable foraging and nesting opportunities for birds. Additionally, the other neutral grassland areas were considered to provide suitable habitat to support ground-nesting bird species.
- 7.20. It is understood that these habitats will largely be retained and protected during the proposed development. However, without appropriate mitigation, there is the potential for nesting birds to be disturbed and for nests to be destroyed during the removal of sections of tree line and grassland.
- 7.21. Site clearance and construction will also cause an increase in noise pollution and dust in and around the Application Site. Increased levels of artificial noise will impact the audibility of territorial songs and mating calls, potentially impacting the ability to hold territories and successfully breed over the construction period.
- 7.22. Nesting birds are protected under the Wildlife and Countryside Act 1981 (as amended). Any removal of suitable nesting habitat must occur outside the bird nesting season, widely accepted

to be between March to August inclusive; however this is variable, and many birds have been noted to nest earlier in the year due to the ongoing effects of climate change. In the event that vegetation must be removed during the nesting season it must first be thoroughly checked by a suitably qualified ecologist prior to any work starting.

- 7.23. If a nest is identified, the ecologist will establish a suitably sized buffer appropriate for the species around the nest (usually 5m). No works will be permitted within the buffer, which must remain in place and undisturbed until the ecologist has confirmed the nest is no longer in use. Clearance of vegetation must occur no later than 48 hours after the ecologist has checked for nests to ensure no new nests are built in the meantime.
- 7.24. Compensation for the loss of suitable nesting bird habitat will be provided in the form of new tree planting and additional compensation will be provided through the implementation of integrated bird nesting boxes in the walls of new dwellings within the development.

Bats

- 7.25. A number of trees were identified within the Application Site that provide suitability for roosting bats, the majority of which are situated with the lines of trees and woodland. Noteworthy trees include a veteran oak on the northern boundary of the SINC/LNR that comprises large areas of lifted bark and a number of cavities, and another veteran oak on the western extent of the line of trees bordering the SINC, that comprises widespread splits in the trunk and cavities. No trees with roosting bat potential are due to be impacted by the proposed development.
- 7.26. The Application Site is also considered to offer high potential to foraging and commuting bats given the presence of green corridors in the form of tree lines and hedgerows with trees, and suitable foraging habitat in the form of long sward grassland, scrub, and the stream. Without appropriate mitigation, lighting during the construction phase could disturb bats.
- 7.27. To minimise the impact of the proposed development on commuting and foraging bats, the lighting scheme will be sensitively designed. During the construction phase, the following mitigation will be followed:
- All works will be undertaken during normal working daylight hours. Any artificial lighting (required) should not illuminate boundary vegetation.
 - Light levels should not exceed artificial levels already present.
 - Where security lighting is required, it is recommended that these are motion-activated with hooded luminaires.

7.28. Typically, at EclA stage, the broad ecological principles of a sensitive external lighting strategy are determined. However, there has been more detailed inputs for this proposed scheme through a remote meeting that took place between the lighting engineers at Enerveo Ltd and ACD Environmental Ltd on 6th August 2025 to agree on more detailed principles. Accordingly, the proposed external lighting will incorporate the following measures:

- There will be sheltered dark/low light areas that will maintain opportunities for nocturnal animals around the site boundaries.
- There will be reduced light level on the perimeter road P6 (2 lux ave, 0.4lux min), from standard road P5 (3 lux ave, 0.6lux min).
- Only LED lighting will be used.
- Only luminaires with an Upward Light Ratio (ULR) of 0% will be used.
- There will be rear louvres to minimise light spill to the rear of light fixtures.
- Only warm white lighting will be used with a Correlated Colour Temperature (CCT) of 2700K.

Hazel Dormouse

7.29. No hazel dormice, or evidence of their presence, was identified during the surveys. Therefore, it was concluded that dormice are likely absent from the Application Site. However, given the records of dormice in the surrounding area and the presence of suitable habitat on site, it is recommended that any clearance of scrub, hedgerow or tree line habitats on site should be carried out sensitively in a two-phased approach.

7.30. The vegetation will first be cut to 300mm during winter months when dormice are hibernating. The vegetation will then be left and cut to ground-level in April/May once dormice have emerged from hibernation. This will ensure that no dormice are harmed during the clearance works.

7.31. If any dormice are found during the clearance works, then all works must cease immediately, and an ecologist should be contacted to provide advice on how to proceed.

Badgers and other mammals

- 7.32. Evidence of badgers was recorded onsite during the site walkover in September 2025. A mammal hole was found directly next to the electrical pole to the south of the Application Site (TN2), and foraging evidence in the form of mammal paths was noted between the other neutral grassland and woodland. Given the rural nature of the site, it is possible that badgers will access the Application Site for commuting and foraging, as well as hedgehogs and other mammals.
- 7.33. The proposed development will involve works to the electrical pole which will impact the identified mammal hole. As such, further monitoring surveys will be undertaken to determine the importance of this mammal hole in relation to badgers.
- 7.34. Additionally, it is recommended that an update badger walkover of the Application Site is undertaken prior to commencement of works. This should be undertaken no less than three months prior to the commencement of the construction phase.
- 7.35. In order to protect foraging and commuting badgers (should they enter the site during construction works), the following measures will be implemented, which will also protect hedgehogs and other mammals:
- Any trenches or excavations within the site that are to be left open overnight will be provided with a means of escape should a mammal fall in. This could simply be in the form of a gently graded ramp or roughened plank of wood placed in the trench as a ramp to the surface. This is particularly important if the trench fills with water.
 - Any temporarily exposed open pipes (>150mm outside diameter) should be blanked off at the end of each working day so as to prevent wildlife gaining access, which may occur when contractors are off-site.
 - Any trenches/pits will be inspected each morning to ensure no wildlife has become trapped overnight. Should an animal be discovered trapped in a trench/pit, a suitably qualified ecologist will be contacted immediately for further advice.
 - The storage of any chemicals at the site will be contained in such a way that they cannot be accessed or knocked over by any roaming mammals.
 - Unsecured food and litter will not be left within the working area overnight.
- 7.36. The lighting strategy implemented for commuting bats will also benefit hedgehogs and other nocturnal mammals.

Table 8: Impact summary table

Feature	Scale of importance	Impact (before mitigation)	Type of impact (construction or operational)	Effect (without mitigation)	Mitigation	Residual effect
Invertebrates	Site	Loss of suitable invertebrate habitat	Construction	Negative impact at site level	Grassland to be enhanced for invertebrates, new log piles to be created	Neutral
Reptiles	Site	Potential harm to individuals during clearance of suitable habitat	Construction	Negative impact at site level	Trapping and translocation exercise and sensitive clearance of habitat under the supervision of an ecologist	Neutral
Birds	Site	Minor increase in disturbance to breeding birds and loss of suitable nesting habitat Accidental damage/disturbance of nests	Construction and operational	Negative impact at site level	Sensitive habitat clearance outside of nesting bird season/ nesting bird check by an ecologist Compensatory bird boxes to be incorporated into new buildings Bird Hazard Management Plan to be produced	Neutral
Bats	Site	Loss of potential roosting habitat Light spill on surrounding commuting/foraging habitat	Construction and operational	Negative impact at site level	Compensatory bat bricks to be incorporated into new dwellings Sensitive lighting scheme	Neutral
Dormice	Site	Loss of suitable habitat during clearance works of tree lines and hedgerows	Construction	Negative impact at site level	Sensitive two-stage clearance of suitable habitat	Neutral

Badgers and other mammals	Site	Potential harm to individuals during habitat clearance and construction	Construction and operational	Negative impact at site level	Reasonable avoidance measures implemented during construction	Neutral
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8 BIODIVERSITY NET GAIN

Biodiversity metric

- 8.1. A Biodiversity Metric assessment has been undertaken utilising the Statutory Biodiversity Metric in accordance with NPPF guidelines to demonstrate how a 10% Biodiversity Net Gain will be achieved.
- 8.2. This has been calculated using the baseline habitat information collected during the UK Habitat Classification Survey and using the latest post-development drawings. A full methodology is provided in **Appendix 6**. A completed version of the Metric has been submitted in full as a separate Excel document.
- 8.3. Full details of the habitat enhancement measures including long-term monitoring and management will be detailed in a separate Landscape and Ecological Management Plan (LEMP) report.

Table 9: A summary of the results of the Biodiversity Metric.

On-site baseline	Habitat units	63.00
	Hedgerow units	8.52
	Watercourse units	2.01
On-site post-intervention	Habitat units	43.83
	Hedgerow units	11.87
	Watercourse units	2.31
Total net unit change	Habitat units	-19.18
	Hedgerow units	3.35
	Watercourse units	0.30
Total net % change	Habitat units	-30.44%
	Hedgerow units	39.34%
	Watercourse units	15.06%

- 8.4. The results of the Biodiversity Metric assessment indicate that the proposed development within the Application Site will lead to a **30.44% loss** in habitat units, a **39.34% gain** in hedgerow units, and a **15.06%** gain in watercourse units. This meets the net gain target for both hedgerow and watercourse units but does not meet the net gain target for habitat units. The trading rules have not been satisfied regarding replacing medium distinctiveness habitats including other neutral grassland.
- 8.5. The proposed development will lead to a **39.34% gain** in hedgerow units due to the retention of the several existing lines of trees, and through the creation of new native hedgerows within the development in the form of clipped hedges, and the creation of a new species-rich native hedgerow along the north-eastern boundary of the development area.

- 8.6. The proposed development is currently resulting in a **15.06% gain** in watercourse units due to the retention of the existing stream along the northern boundary of the SINC/LNR area, and due to the enhancement of the wet ditch running along the western edge of the footpath area to the north of the site.
- 8.7. The proposed development is currently resulting in a **30.44% loss** in habitat units. The following habitat creation and enhancement measures have been incorporated into the Biodiversity Metric to achieve this result. For details on locations of these habitats please refer to the habitat creation plan which is presented in **Appendix 2**.
- Habitats within the SINC/LNR area in the north-eastern corner of the site including lowland meadow, purple moor-grass and rush pasture, and other lowland acid grassland will be enhanced from 'moderate' to 'good' condition. This will require bespoke enhancement measures which will be outlined in detail within an approved management and monitoring scheme.
 - Existing sections of retained other neutral grassland around the edge of the proposed development will be enhanced from 'moderate' to 'good' condition. This will be achieved by overseeding these areas with a grassland and wildflower seed mixture and applying a management regime. The proposed shaded and dry meadow areas will be overseed with a tussocky grassland and wildflower seed mixture and the proposed damp tolerant grassland areas will be overseeded with a specialised seed mixture for wet grasslands. To ensure that the target condition is reached long-term, these areas will be managed through a mowing regime to ensure a high species richness is maintained. This will involve cutting the areas once or twice a year with a first cut in August/September and a potential second cut in February/March.
 - Several areas of mixed scrub will be enhanced from 'poor' to 'moderate' condition, and new areas of mixed scrub in 'moderate' condition will also be created. This will be achieved by cutting back existing sections of bramble and nettle, and planting new native scrub species including hawthorn, hazel, alder, blackthorn, willow, and elder.
 - New areas of modified grassland in the form of mown species-rich grassland will be created throughout the development area. These will be in 'poor' condition, created through the seeding of EL1 Flowering Lawn Mix (or similar and approved alternative) and subject to regular mowing.
 - Four new waterbodies in the form of attenuation basins will be created around the boundaries of the development area. These will be in 'moderate' condition, achieved through the planting of marginal aquatic vegetation around the edges of the

waterbodies. Where possible, a 10m buffer of natural vegetation or grassland should be maintained between the waterbodies and the surrounding development areas, and the waterbodies should be managed to ensure they are overshadowed by surrounding trees and scrub. The waterbodies should also be managed to ensure the spread of filamentous algae or duckweed *Lemna sp.* are controlled.

- New areas of rain gardens will be created along a central strip through the proposed development area.
- Approximately 166 new small trees are to be planted throughout the development area within the Application Site to compensate for the loss of existing trees. These will consist of native species including fruit-bearing species.

- 8.8. The proposals are currently failing to achieve a net gain over the 10% target headline. In order to meet this target, it is recommended that offsite biodiversity enhancement and habitat creation options are explored to achieve a 10% net gain. Alternatively, biodiversity credits can be purchased to compensate for the shortfall in biodiversity units achieved by the proposed development within the Application Site.
- 8.9. A scope of general ecological enhancements can be incorporated into the proposed development including integrating bat and bird boxes into the new building within the Application Site to provide opportunities for these respective species. Additionally, bat and bird boxes can be installed onto retained mature trees within the Application Site and new log piles can be created to provide opportunities for reptiles and invertebrates such as stag beetles.
- 8.10. Bat boxes such as the Schwegler 1FF can be installed on retained, mature trees or integrated boxes such as the Ibstock bat brick/Schwegler 1FE bat access with back panel can be installed within the walls of the completed buildings around the Application Site. These should be installed at least 5m above the ground and away from artificial light sources. Boxes should be installed facing a south, south-west or south-east direction, to expose them to the sun for parts of the day and should be placed in an area that is sheltered from strong winds.
- 8.11. Swift bricks such as the Ibstock Eco-habitat for Swifts can be installed within the masonry of new buildings. The swift bricks must be installed at a minimum height of 5m above ground level, ideally under the eaves. No lighting will be directed towards or in the vicinity of these integrated bird boxes. These should be installed in areas that are sheltered from heavy rain and wind and should be north or east-facing to avoid being exposed to excessive sunlight. Additionally, bird boxes such as the Vivara Pro Seville 32mm WoodStone nest box can also be installed on the trunks of mature trees around the Application Site.

- 8.12. Any newly created areas of ornamental shrub planting within the Application Site will be designed to provide ecological opportunities for a number of species. Sweet nectar and protein-rich pollen, especially night-scented flowers, are excellent to encourage insects, a food source for bats. These species should be incorporated into the development where possible. It is recommended that any ornamental planting on site post-development should follow the 'RHS Plants for Pollinators' guidelines²² regarding the most suitable native and non-native plants to encourage pollinating insects.
- 8.13. Hibernacula in the form of log piles will be set up along the retained boundary areas around the development area. These will provide refuge for reptiles, amphibians and invertebrates within the Application Site. Log piles should be situated in sunny locations and constructed using timber and branches from pruned and/or coppiced trees on site. In order to reduce the risk of public disturbance, piles should be placed in discreet locations, such as within areas of long grass along the boundaries of the site.
- 8.14. To aid in the biodiversity of invertebrate species, particularly pollinating bees, Bee Bricks could be used in the construction of the proposed development. These bricks are designed to provide a safe nesting place for non-swarming solitary bees. In addition to these, bug hotels could be fixed to the rear of the proposed development upon completion.

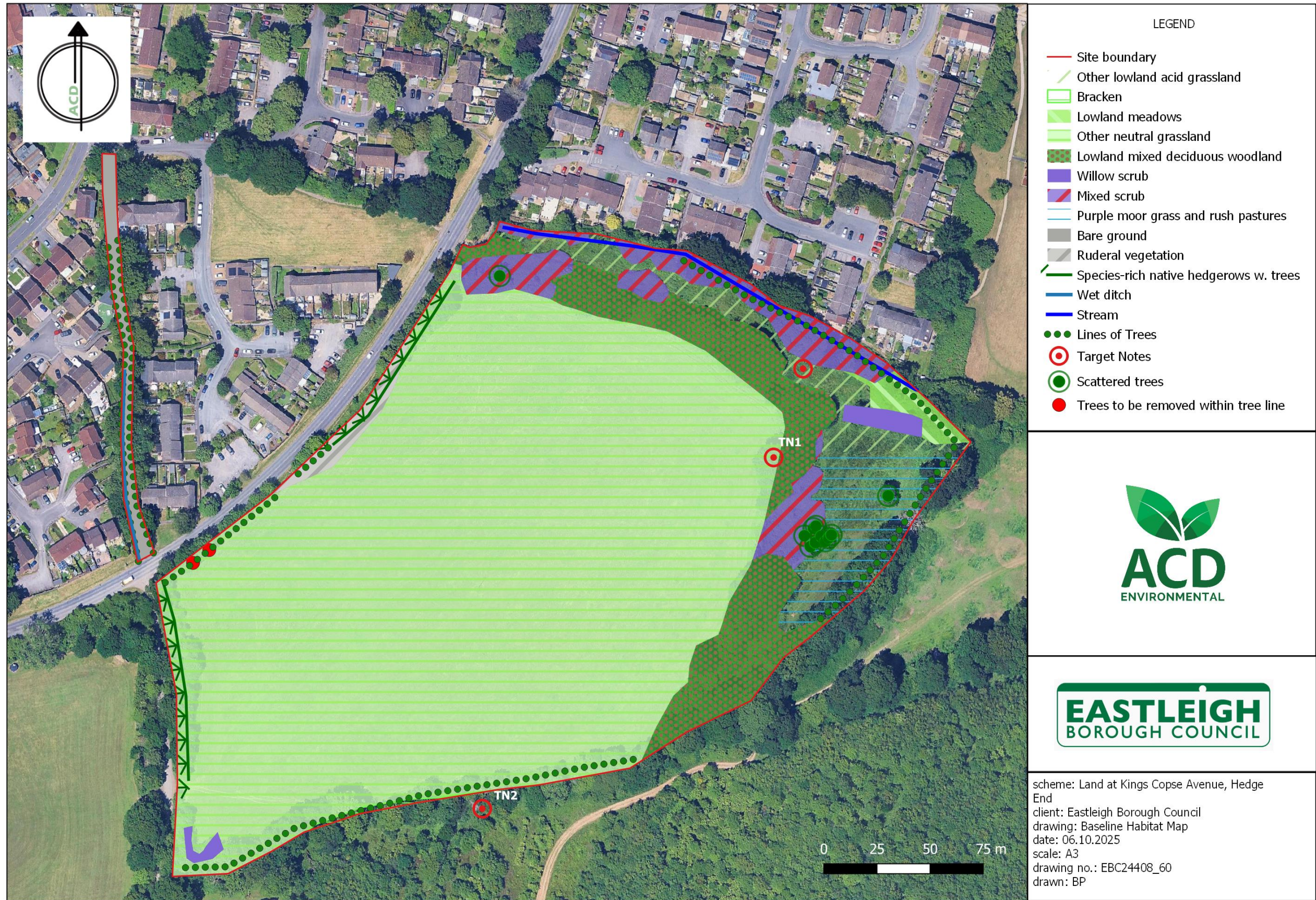
²² RHS [Online] '*Plants for Pollinators*'. Available at: www.rhs.org.uk/plantsforpollinators.

9 CONCLUSIONS

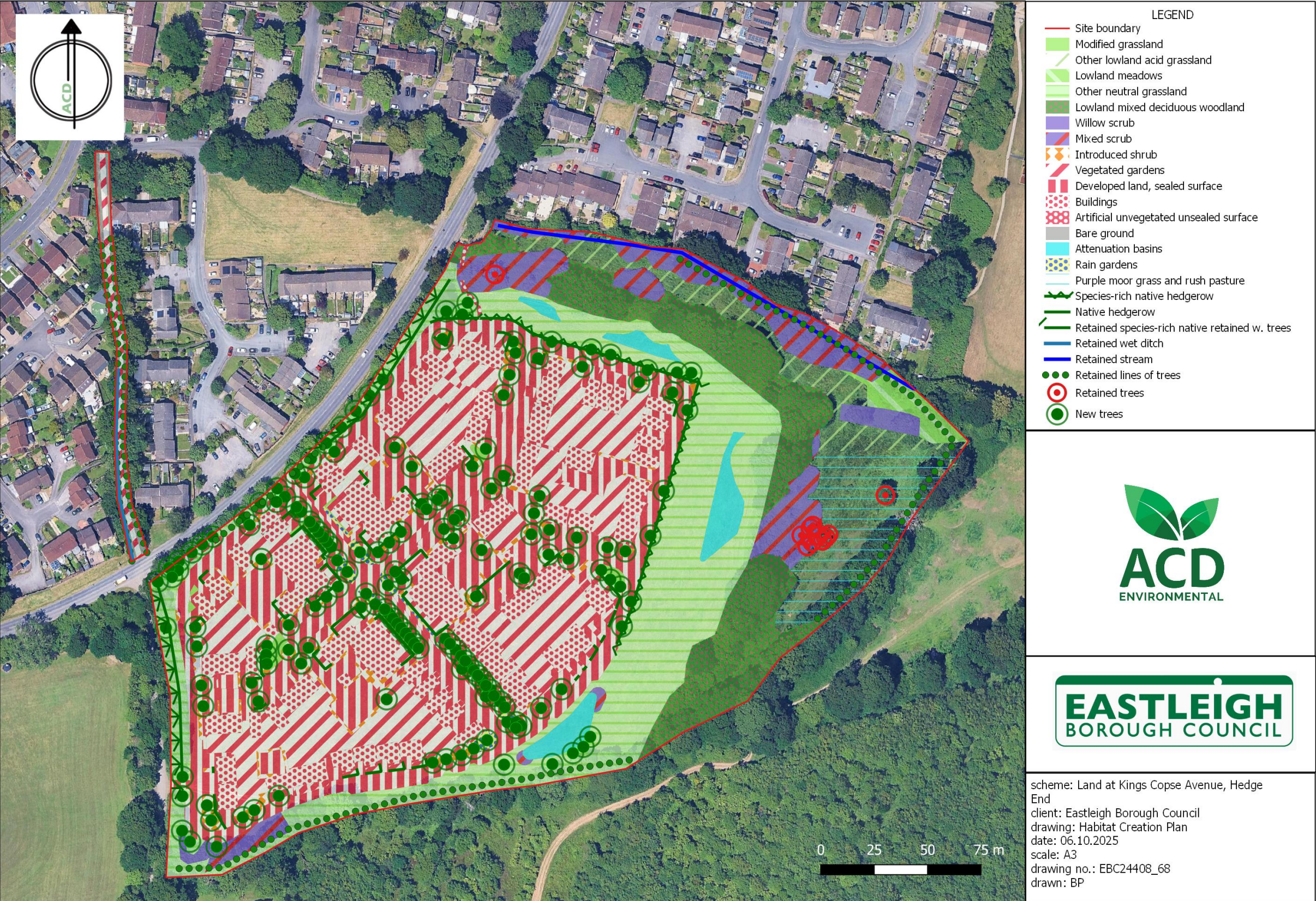
- 9.1. The Application Site consists largely of other neutral grassland surrounded by lowland mixed deciduous woodland, lines of trees and species-rich native hedgerows with trees. An area of Tanhouse Meadows SINC/Manor Farm LNR is situated in the north-eastern corner of the site consisting of lowland meadow, purple moor grass and rush pasture, and other lowland acid grassland. Other habitats within the Application Site include a stream (tributary to Pudbrook Lake Stream), scattered trees, willow and mixed scrub, and bracken.
- 9.2. The proposed development within the Application Site is for the creation of up to 200 new residential units with associated access and soft landscaping. The development would result in the loss of other neutral grassland, a section of willow and mixed scrub, and some small sections of tree line.
- 9.3. Manor Farm LNR and Tanhouse Meadows SINC are situated in the in the north-eastern extent of the Application Site. It is required that the LNR is retained and protected with a minimum buffer of 20m. The retention of this LNR would also serve to retain and protect the most valuable habitats within the Application Site.
- 9.4. The Application Site is within the IRZ of Upper Hamble Estuary and Woods SSSI, which overlaps with Solent Maritime SAC, Solent & Southampton Water SPA and Solent & Southampton Water RAMSAR. It is recommended that Eastleigh Borough Council consult with Natural England to determine what further measures are required.
- 9.5. Mitigation for invertebrates will involve the retention or sensitive relocation of valuable habitat features, with the creation of new log piles once development has been completed.
- 9.6. A reptile mitigation strategy involving a trapping and translocation exercise will be implemented onsite, followed by a destructive search of grassland and scrub vegetation under ecological supervision to ensure there is no harm to reptiles or amphibians.
- 9.7. For bats, general measures such as timing restrictions will also apply and a sensitive lighting strategy, as detailed in this report, will be implemented to protect suitable foraging and commuting features for bats on-site and maintain dark corridors for bats during the construction and operational phases of the development.
- 9.8. Any scattered trees, sections of tree line, and scrub to be removed will be subject to a nesting bird check prior to any works or will be carried out outside of the nesting bird season (March - August inclusive).
- 9.9. A Bird Hazard Assessment and Management Plan will be produced to avoid impacts from noise and light pollution on the sites associated with the Solent Waders and Brent Goose Strategy.

- 9.10. Any clearance of scrub and tree line habitat will be carried out sensitively in two stages to ensure there is no harm to dormice in the unlikely event they are present.
- 9.11. The Application Site has potential to support commuting and foraging mammals such as badgers and hedgehogs. Measures will be implemented to protect mammals from harm during the construction phase of the proposed development. Further monitoring will be undertaken of the identified mammal hole to the south of the site adjacent to the electrical pole.
- 9.12. The proposed development will result in a **30.44% loss** in habitat units, a **39.34% gain** in hedgerow units, and a **15.06%** gain in watercourse units. This will involve several habitat creation and enhancement measures that are outlined in the habitat creation plan in **Appendix 2**. Details regarding long-term management and maintenance of these habitats will be outlined in a LEMP report.
- 9.13. In order to achieve the required 10% net gain target headline in habitat units, offsite habitat enhancements and habitat creation opportunities will need to be explored, or alternatively biodiversity credits will need to be purchased to compensate for the shortfall in biodiversity units onsite.
- 9.14. Assuming the implementation of the mitigation and enhancement measure set out in this report, the proposed development would conform to relevant Local Planning Policies and deliver Biodiversity Net Gain in accordance with the NPPF and Local Planning Policies.

APPENDIX 1: BASELINE HABITAT MAP



APPENDIX 2: HABITAT CREATION PLAN



APPENDIX 3: FIELD SURVEY METHODOLOGY

UKHab Survey

The Baseline Habitat Plan is shown in **Appendix 1**.

The UKHab methodology²³ was used to classify the Application Site into habitat types, as listed in the UKHab User Guide. Secondary codes have been applied where appropriate.

Incidental records of fauna were made during the UKHab survey and the habitats identified were evaluated for their potential to support legally protected species and species of Principal Importance.

Limitations

There were no limitations associated with the UKHab Survey.

Badger field signs survey

A badger field signs survey was carried out by ACD Environmental Ltd. Badger field signs surveys comprised walking the perimeter and interior boundaries of the Site, searching for evidence of badgers, in accordance with Harris et al²⁴ (1989) and Scottish Natural Heritage²⁵ (2018).

Where badger setts were found, they were described using the following criteria:

- Number of well-used holes - one or more of the features: well-worn entrance; freshly excavated soil; bedding material.
- Number of partially-used holes - leaves or twigs in entrance and/or mosses and other plants growing in or around entrance).
- Number of disused holes - partially or completely blocked, with considerable amount of excavation required for reoccupation.

Where feasible, badger setts were classified into the following:

- Main sett - continuously used, breeding and over-wintering sett for a social group of badgers. Only one main sett will exist in each social groups territory, and will be relatively centrally located within the group's range.

²³ UKHab Ltd (2023). UK Habitat Classification Version 2.0 (at <http://www.ukhab.org>)

²⁴ Harris, S., Cresswell, P., and Jefferies, D. (1989). *Surveying Badgers*. Mammal Society.

²⁵ Scottish Badgers (2018). *Surveying for Badgers: Good Practice Guidelines*. Version 1.

- Annexe sett - annexe of the main sett, linked by well-used paths to the main sett (but not connected underground). Not continuously used.
- Subsidiary sett - distant from the main sett. Several entrances, but with no well-used paths connecting to the main sett, and only used seasonally.
- Outlier sett - distant from the main sett. Small, with only one of two entrances only. Used for short periods sporadically, with no obvious, well-used paths connecting to other setts.

Limitations

There were no limitations associated with the badger field signs survey.

Preliminary Bat Roost Assessment

There are no buildings within the Application Site. Therefore, an external Preliminary Roost Assessment (PRA) ²⁶ was undertaken on the trees to search for bats/evidence of bats (e.g. bat droppings and feeding remains) and assessed for their potential to support roosting bats. The purpose of which is to search for bats/evidence of bats and assess the likelihood of bats being present and the need for further survey and/or mitigation.

The features of bats were searched for on the trees with reference to the three broad categories of Potential Roost Features (PRFs) and sub-categories of PRFs from the Bat Tree Habitat Key²⁷. These are as follows:

Disease and decay PRFs:

- Woodpecker and squirrel holes;
- Knot holes;
- Pruning-cuts;
- Tear outs;
- Compression forks;
- Wounds;
- Cankers; and
- Butt rots.

²⁶ Collins J. (ed.) (2023) *Bat Surveys for Professional Ecologists: Good Practice Guidelines (4th edn)*. The Bat Conservation Trust, London.

²⁷ Bat Tree Habitat Key 2018. *Bat Roosts in Trees – A Guide to Identification and Assessment for Tree-care and Ecology professionals*. Exeter: Pelagic Publishing.

Association PRFs:

- Fluting; and
- Ivy.

Damage PRFs:

- Hazard beams;
- Frost cracks;
- Subsidence/shearing and helical splits;
- Lightning strikes;
- Desiccation fissures;
- Transverse snaps;
- Welds; and
- Lifting bark.

The following equipment was used for the bat survey:

- Binoculars.
- Powerful torch to illuminate dark crevices from the ground.
- Ladder.
- Collection pots and labels for corpses and droppings;
- Camera to record evidence and potential roosting sites; and
- Personal protective equipment (e.g. boots, gloves, helmet, mobile telephone).

Limitations:

There were no limitations to the Preliminary Roost Assessment.

Dormouse presence/absence survey

A presence/absence survey for hazel dormouse was carried out in accordance with Natural England survey guidelines²⁸.

In order to ensure adequate survey effort, a score is assigned to each month and in accordance with the Index of Probability, assumed absence cannot be based on a score less than 20. A score of 21 has been achieved for the Application Site.

Survey tubes are made from stiff, double-walled black plastic sheets or similar material, 25cm long with a 5cm x 5cm cross-section. A thin plywood tray is inserted into the tube with a short projection at one end and an end block at the other which seals the tube. The tubes are then tied in a suitable location along a sturdy horizontal branch in vegetation, positioned between 0.5m to 3m above ground level. Dormice are known to readily use these tubes to build their nests.

A total of 50 dormouse survey tubes were installed throughout the application site in June 2024, at distances of 15-20 metres, in suitable habitat, locations shown in **Appendix 4**. Nest tubes were checked for presence of hazel dormice, nests or feeding remains on one visit per month from June to December 2024.

Limitations:

There were no limitations to the dormouse presence/absence surveys.

²⁸ Natural England (2025). *Hazel or common dormice: surveys and mitigation for development projects* [online]. Available from: <https://www.gov.uk/guidance/hazel-or-common-dormice-surveys-and-mitigation-for-development-projects>

APPENDIX 4: DORMOUSE TUBE LOCATIONS



APPENDIX 5: SITE PHOTOGRAPHS



View of Southern Section of Footpath



Mammal Hole



Other Neutral Grassland



Stream



Oak with PRFs



Line of Trees

APPENDIX 6: BIODIVERSITY METRIC METHODOLOGY

Assessment Framework

For the purposes of this assessment, the Statutory Biodiversity Metric has been utilised.

The Statutory Biodiversity Metric is accompanied by a ‘Calculation Tool’. This was used to calculate the biodiversity units for the Application Site before (baseline) and after development. The User Guide²⁹ has been followed.

Habitat Measurements

Baseline habitat measurements were carried out in line with the results of the UK Hab Surveys. Measurements were made using QGIS.

Proposed habitat measurements were taken from the Latest Proposal Drawings.

Measurements were entered to the nearest 0.01ha.

Distinction Assessments

Habitats are assigned to distinctiveness bands automatically within the Metric. These are based on an assessment of the distinguishing features of a habitat or linear feature, including the consideration of species richness, rarity (at local, regional, national and international scales), and the degree to which a habitat supports species rarely found in other habitats.

The distinctiveness band of each habitat is preassigned in the Biodiversity Metric. The bands are based upon the UK habitat classification system. A combination of simple rules and professional judgement have been used to assign each habitat type to the appropriate distinctiveness band. The distinctiveness categories used are tailored to habitat type.

Distinctiveness Assessments are assigned according to **Table 10**.

Table 10: Distinctiveness Assessment

Category	Scores	Multiplier
Very High	8	Priority habitats as defined in Section 41 of the Natural Environment and Rural Communities (NERC) Act that are highly threatened, internationally scarce and require conservation action e.g. blanket bog

²⁹ STEPHEN PANKS A, NICK WHITE A, AMANDA NEWSOME A, JACK POTTER A, MATT HEYDON A, EDWARD MAYHEW A, MARIA ALVAREZ A, TRUDY RUSSELL A, SARAH J. SCOTT B, MAX HEAVER C, SARAH H. SCOTT C, JO TREWEEK D, BILL BUTCHER E and DAVE STONE A (2024). *Statutory Biodiversity metric: User Guide. Natural England*. Available at: <https://www.gov.uk/government/publications/statutory-biodiversity-metric-tools-and-guides>

Category	Scores	Multiplier
High	6	Priority habitats as defined in Section 41 of the NERC Act requiring conservation action e.g. lowland fens
Medium	4	Semi-natural habitats not classed as a Priority Habitat
Low	2	Habitat of low biodiversity value. Temporary grass and clover ley; intensive orchard; rhododendron scrub
Very Low	0	Little or no biodiversity value e.g. hard standing or sealed surface

Condition Assessments

Condition assessments for existing habitats can be found in a separate Excel document.

Strategic significance

The spatial location of a habitat is treated as a component of the quality of a habitat parcel in the same way as distinctiveness or condition. Strategic significance is used to determine whether the habitat is of increased importance due to its location.

Risk Factors

As part of any proposed habitat creation and restoration, risk factors must be taken into account to correct for disparity, delay or risk. These values are preassigned within the Statutory Biodiversity Small Sites Metric and take into consideration the following factors:

- Temporal risk; and
- Difficulty of creation and restoration.

Advance/delay in habitat creation takes into account any significant time difference in the creation of a habitat type. This time is measured in full years and is entered by the assessor.

Habitat creation in advance is rewarded by reducing the difficulty and temporal risk multipliers applied. This reflects the lower delivery risk - there is less risk of failure when a habitat is already making progress towards its target condition.

Any significant delay in the creation of a habitat type relative to loss of on-site habitats (e.g. due to phased developments and developments that temporarily require parts of the development site for construction purposes) is added to the pre-populated time to target condition and increases the effect of the risk multiplier accordingly.

Limitations

Although the Statutory Biodiversity Metric is a valuable tool underpinned by ecological evidence, there are certain limitations that must be considered when applying the metric. The key principles and rules for the use of the Statutory Biodiversity Metric have been followed at all times, in line with these limitations. Further detail is available within the Statutory Biodiversity Metric User Guide²⁹.

A large, stylized leaf graphic in a lighter shade of green, positioned on the left side of the page, extending from the top left towards the bottom right.

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