



**Land North of the Hollies
Ecological Appraisal
Atlas Planning Ltd
16 June 2022**



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1 Introduction

1.1 BACKGROUND

- 1.1.1 This report presents the findings of an Ecological Appraisal of habitats present on an area of land north of The Hollies, Hill Street, Calmore SO40 2RX. The site is centred on ordnance survey grid reference SU34081601 and the site location is shown in Figure 1. The desk study and survey work were carried out by Davidson-Watts Ecology Ltd on behalf of Atlas Planning Ltd.
- 1.1.2 The site consists of three grazed horse paddocks surrounded by post and wire fencing with boundary shrubs and trees. An aerial view map with associated red line boundary has been included in Figure 2.
- 1.1.3 The surrounding land use includes further close-grazed paddocks and other farmland and low density housing associated with the settlement of Hill Street. There is a wider mature hedgerow and woodland copse network surrounding the site. Further to this, to the west of the site is a wetland complex consisting of the River Test riparian corridor and associated drainage network as well as Testwood Nature Reserve and Broadlands Lake complex with the closest point 235m to the east.
- 1.1.4 The proposed development is for 9 dwellings on the land. The internal hedgerow will be retained as part of the internal garden boundaries. Plans of the proposed development have been included in Figure 3.

1.2 OBJECTIVES

- 1.2.1 The objectives of the report are to:
- To identify and describe all potentially significant ecological effects associated with the proposed development on ecologically important features,
 - To set out the mitigation measures required to ensure compliance with nature conservation legislation and to address any potentially significant ecological effects,
 - To identify how mitigation measures will/could be secured,
 - To provide an assessment of the significance of any residual effects,
 - To identify appropriate enhancement measures, and
 - To set out the requirements for post-construction monitoring where required.

2 Methodology

2.1 DESK STUDY

2.1.1 The purpose of the desk study is to review information available in the public domain. The following sources were checked for ecological information relating to a 2km radius around the site boundary:

- Hampshire Biodiversity Information Centre (HBIC) – 21st April 2021,
- Aerial mapping (Google Earth Pro),
- MAGIC (Multi-Agency Geographical Information for the Countryside) <http://www.natureonthemap.naturalengland.org.uk>, and
- NBN (National Biodiversity Network) <http://www.data.nbn.org.uk>.

2.2 FIELD SURVEY

2.2.1 The field survey of the site aimed to record both the habitat types present at the site as well as identify any evidence of protected and notable species (listed under Section 41 of the 2006 Natural Environment and Rural Communities (NERC) Act, Birds of Conservation Concern or locally notable species). This can be done by direct observation and through searching for field signs for each species. The survey was undertaken following 'Guidelines for Preliminary Ecological Appraisal' (CIEEM 2013).

2.3 ZONE OF INFLUENCE

2.3.1 The zone of influence has been identified as the area within the red line boundary. This has not been extended due to lack of access, but all adjacent fields were checked for evidence of important habitats or potential for protected or notable species.

2.4 HABITAT SURVEY

2.4.1 The walkover study area therefore consists of all habitats within the site. Attention was also given to any survey corridors that linked the site with other areas of ecological interest or value for protected and/or notable species. Ponds within 250m (Cresswells 2004) were noted, especially where there were good habitat linkages with the site. Non-native invasive species were recorded where present on the site. Plant species follow nomenclature from Stace (2010).

2.4.2 The field survey of the study area was conducted on the 21st April 2021. April is considered a sub-optimal month to survey vegetation as most plants and grasses are dormant at this time. However, the conditions were suitable to full identify all habitats present on site.

2.4.3 The dominant plant species were recorded and habitats classified according to their vegetation types and presented in the standard Phase 1 habitat survey format in Figure 4. Target notes (TN) were made on species and habitats of conservation interest and are included in Figure 5 and Appendix A. The abundance of species has been recorded with reference to the DAFOR scale:

- Dominant (D) >75%
- Abundant (A) 75 – 51%

- Frequent (F) 50 – 26%
- Occasional (O) 25 – 11%
- Rare (R) <10%

2.5 PROTECTED AND NOTABLE SPECIES SURVEY

- 2.5.1 Target notes were made of any habitats that had the potential to support protected or notable species and evidence of these species were also recorded where present.
- 2.5.2 All trees within the site boundary and immediately adjacent to the site were assessed from the ground for their potential to support bat roosts using the following criteria in Table 1 from Collins (2016).
- 2.5.3 For each tree, species and height were recorded along with a description of all potential roost cavities identified on the tree and accompanying grid reference. The surveyor used a Nikon D7300 camera and Opticron high power binoculars.

Table 1: Criteria for categorising trees for their potential to support a bat roost (taken from Collins, 2016)

Suitability	Description of tree
Negligible	Negligible features on the tree likely to serve as roosting habitat for bats.
Low	A tree of sufficient size and age to contain potential roost features but with none seen from the ground, or features seen with only very limited roosting potential.
Moderate	A tree with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions and surrounding habitat, but unlikely to support a roost of high conservation status.
High	A tree with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions and surrounding habitat.

2.6 ECOLOGICAL EVALUATION AND SIGNIFICANCE

- 2.6.1 Ecological features and resources have been evaluated based on the approach described in 'Guidelines for Ecological Impact Assessment in the United Kingdom' published by the Chartered Institute of Ecology and Environmental Management (2019) whereby the value of an ecological feature or resource is determined within a defined geographical context using the following criteria:
- International,
 - National (England),
 - Regional (South-east),
 - County (or Metropolitan) (Hampshire),
 - District (or Unitary Authority, City or Borough) (Southampton),
 - Local (or Parish) (Calmore),
 - Site, and

- Negligible
- 2.6.2 Significant ecological features have been determined as those valued above site level and/or where there are legal or planning policy obligations. Criteria have been applied as identified in CIEEM (2018) to evaluate the ecological features.
- 2.6.3 Consideration has also been given to any invasive species on Schedule 9 of the Wildlife and Countryside Act 1981 (e.g. Japanese knotweed *Fallopia japonica*, Himalayan balsam *Impatiens glandulifera* and giant hogweed *Heracleum mantegazzianum*) and as identified as injurious in the Weeds Act 1959 (as amended by the Ragwort Control Act 2003) to include common ragwort *Senecio jacobaea*, broad-leaved dock *Rumex obtusifolius*, curled dock *Rumex crispus*, creeping thistle *Cirsium arvense* and spear thistle *Cirsium vulgare*.
- 2.6.4 Ecosystem services including supporting services, provisioning services and cultural services are considered where relevant as well as the presence of natural capital and opportunities for enhancement to increase habitat value where they exist.

2.7 ASSESSMENT OF IMPACTS AND SIGNIFICANCE

- 2.7.1 The document Biodiversity: Code of practice for planning and development published by the British Standards Institute (BS 42020:2013) cites the CIEEM Guidelines for Ecological Impact Assessment (EclA) as the acknowledged reference on ecological impact assessment. EclA is a process of identifying, quantifying and evaluating potential effects of development related or other proposed actions on habitats, species and ecosystems. The EclA must provide reliable and defensible information about, and interpretation of, the likely significant ecological effects from inception to operation, maintenance and, where appropriate, closure and decommissioning.
- 2.7.2 The impact assessment assesses whether important ecological features will be subject to impacts (positive or negative), the characterisation of these impacts (extent, magnitude, duration, reversibility, timing and frequency) and their effects in the absence of mitigation. It is good practice for the EclA to make clear both the potential significant effects without mitigation and the residual significant effects following mitigation.
- 2.7.3 An assessment is required of the significance of the residual ecological effects of the project (after mitigation) including cumulative effects. For the purpose of EclA, 'significant effect' is an effect that either supports or undermines biodiversity conservation objectives for 'important ecological features' or for biodiversity in general. Conservation objectives may be specific (e.g. for a designated site) or broad (e.g. national/local nature conservation policy) or more wide-ranging (enhancement of biodiversity). Effects can be considered significant at a wide range of scales from international to local and legal and policy consequences should be also discussed.
- 2.7.4 Measures should be incorporated in line with the key principles of avoidance, mitigation, compensation and enhancement to reduce and compensate negative ecological impacts and their effects. Provision should be made for ecological enhancements, monitoring impacts and their effects. Evaluation should be undertaken of the success of the proposed mitigation, compensation and enhancement measures and rectification of unexpected negative effects or ineffective mitigation.

3 Baseline Conditions

3.1 DESK STUDY

- 3.1.1 MAGIC was checked for records of protected species and no records were shown from a 2km radius of the site.

3.2 PROTECTED SITES

Statutory Sites

- 3.2.1 The River Test Site of Special Scientific Interest (SSSI) is 920m offsite to the west at the closest point. This is a species-rich lowland chalk river with characteristic flora. Its water is abstracted for public use as well as receiving discharges from sewage treatment works and a paper factory and it supports nine fish farms. There are also associated former water meadows, fen pasture and riparian vegetation. Over 100 species of flowering plant, moss and liverwort and 232 invertebrate taxa have been recorded along its channel and banks. The Test and its adjoining vegetation provide valuable habitat for wetland birds', and it is also important for game fishery.
- 3.2.2 There are no drainage ditches around the site that link to the River Test SSSI. A dry ditch is present on the eastern side of Hill Street which is likely to carry excess water during heavy rain from the adjacent land and road. A further ditch is present along the south of the site that heads south after leaving the site and then is culverted before running south along the roadside. There are no direct drainage links to the River Test and given that it is 920m from the site, it is not considered likely that the proposed development would have an adverse impact on the SSSI.

Non-Statutory Sites

- 3.2.3 The Testwood Lakes Local Nature Reserve (LNR) is made up of Little Testwood Lake, Testwood Lake and Meadow Lake. It is a local reservoir and supports open water, wildlife meadows and woodland areas in a habitat mosaic. This LNR is 235m to the east.
- 3.2.4 As for the SSSI above, the site is not connected to the LNR through drainage systems and the land and residential dwellings between the house and the LNR would filter any ground or surface water from the pond before it reached the LNR.
- 3.2.5 The remaining non-statutory sites are too far from the site and/or are not ecologically linked to the site via green or riparian infrastructure, adjacent habitats or provision of ecological buffers. There is no habitat on site that would also provide similar habitat for species using these non-statutory sites. It is therefore not likely that they would be adversely affected by the proposed development.
- 3.2.6 Habitats listed under S41 of the Natural Environment and Rural Communities (NERC) Act 2006 that are in close proximity to the site include the woodland belt and copse immediately to the south west, the open water associated with the LNT and the river and adjacent meadows associated with the SSSI. The woodland forms a green corridor than links from the south-west corner of the site, linking the boundary hedgerow to the wider green infrastructure through the local landscape.

- 3.2.7 HBIC has produced a detailed ecological network map for Hampshire on behalf of the Local Nature Partnership (LNP).
- 3.2.8 An ecological network is a group of habitat patches that species can move easily between maintaining ecological function and conserving biodiversity. Through appropriate management, ecological networks can provide a connected collection of refuges for wildlife. Establishing the network will enable biodiversity to recover from recent declines and create a more resilient natural environment.
- 3.2.9 The aims of the network are to:
- improve the quality of current wildlife sites by better habitat management,
 - increase the size of existing wildlife sites,
 - enhance connections between sites, either through physical corridors or through 'stepping stones',
 - create new sites, and
 - reduce the pressure on wildlife by improving the wider environment.
- 3.2.10 HBIC have identified the eastern field of the site as a Network Opportunity on the Ecological Networking Mapping map. The woodland offsite to the south-west is also identified as a Network Opportunity.

3.3 FIELD SURVEY

3.3.1 The survey results below should be read in association with the Phase 1 habitat map in Figure 4, the target notes (TNs) in Figure 5 and Appendix A and the Plates in Appendix B.

3.3.2 No protected or notable plant records on or immediately adjacent to the site.

Tall ruderal herbs

3.3.3 A post and rail fence with barbed wire formed the eastern boundary. Along this was a species poor field layer indicative of nutrient enrichment including abundant common nettle *Urtica dioica* and ivy *Hedera helix* with frequent cuckoopint *Arum maculatum* and cleavers *Galium aparine* (TN1).

3.3.4 Around the base of a mature oak in the north-east corner was compacted bare ground which supported abundant common nettle and locally abundant lesser celandine *Ficaria verna*, frequent broad leaved dock *Rumex obtusifolius* and Cuckoopint *Arum maculatum* and occasional elder *Sambucus nigra* and bramble *Rubus fruticosus agg* (sparse low cover) (TN2).

3.3.5 The areas of tall ruderal herbs are present in isolated patches around the boundary and are dominated by nettle and ivy. The species present are locally common but would provide shelter and foraging resources for locally occurring small mammals, herpetofauna and invertebrates. The habitat value is therefore **site**.

Semi-improved grassland

3.3.6 The eastern field of the site consists of very close grazed species poor semi-improved grassland. Not all grass species were identifiable due close grazing with some forbs liable to be suppressed as a result. However, indicators of nutrient enrichment observed support low species diversity including *Agrostis* sp., *Lolium* sp., *Festuca* sp., Yorkshire-fog *Holcus lanatus*,

patches of common nettle, broad-leaved dock *Rumex obtusifolius*, creeping buttercup *Ranunculus repens*, meadow buttercup *Ranunculus acris*, yarrow *Achillea millefolium*, abundant white clover *Trifolium repens* and frequent dandelion *Taraxacum* sp. (TN5 and Plate 1).

- 3.3.7 The central field was also very close grazed species poor semi-improved grassland with the same species as the eastern field as well as corners dominated by low bramble and common nettle with abundant broad-leaved dock and occasional foxglove *Digitalis purpurea* (TN11 and Plate 2).
- 3.3.8 The western field also supported very close grazed species poor semi-improved grassland with species the same as the eastern two fields. (TN20 and Plate 3)
- 3.3.9 The southern boundary at TN7 consisted of barbed wire fence with bare ground along the edge inside site and species poor improved grassland immediately adjacent to the south.
- 3.3.10 The grassland on site is species poor and due to the regular grazing is unlikely to provide shelter or foraging resources for local wildlife. The localised enrichment will benefit dominant plant species that favour these conditions, ensuring that the species diversity remains poor and the compacted ground will only be suitable for annuals and early colonising perennials, due to regular disturbance. The semi-improved grassland is therefore valued at the **site** level.

Broadleaved trees

- 3.3.11 There is a notably large pedunculate oak *Quercus robur* of considerable age with full canopy in the north-east corner of the site. This is likely to support a large invertebrate biomass which in turn will provide food for local bird and small mammal species. The tree will provide nesting habitat for local bird species and the dead and rotting limbs and holes will provide habitats for specialist invertebrates (TN3 and Plates 4 and 5).
- 3.3.12 A group of mature oaks was also recorded in the north-eastern corner. One has lost a secondary leader and may not be suitable for retention (needs further arboricultural assessment) but no obvious potential bat roost features were observed from ground level (TN14 and Plate 6).
- 3.3.13 Two mature oaks were present at TN16 (Plate 7) and a further early mature oak was recorded at TN19 (Plate 9).
- 3.3.14 A line of maturing trees was recorded along the barbed wire fence on the northern boundary in the western corner) including hawthorn *Crataegus monogyna*, field maple *Acer campestre* and holly *Ilex aquifolium*. Under these trees was a species-poor field layer with abundant broad-leaved dock and occasional foxglove and cuckoo pint (TN18 and Plate 8).
- 3.3.15 The mature oaks provide a mature canopy in the local landscape and the maturity of the trees will support a high biomass of invertebrates that in turn will support other species including foraging birds and mammal species. The trees at TN3 and TN16 link to wider green canopy corridors which would facilitate the movement of species through the wider landscape. Given their maturity, the trees would be impossible to replace in the short to medium term and are therefore valued at the **local** level. The maturing trees at TN18 would be easier to replace if required but should be replaced with locally occurring native species and connectivity along

this boundary would benefit from enhancement. These trees would therefore be valued at the **site** level.

Scattered scrub

- 3.3.16 The northern margin consisted of low bramble with abundant common nettle and broad-leaved dock and few broadleaved saplings (TN4).
- 3.3.17 The eastern boundary is formed by unmanaged shrubs over an old chain link fence including scattered blackthorn *Prunus spinosa* hawthorn and bramble with rare occurrence of wayfaring tree *Viburnum lantana*. The field layer included frequent common nettle and broad-leaved dock (TN6 and Plate 1).
- 3.3.18 The habitat at TN10 (Plate 10) consisted of a defunct hedge more aligned with scattered scrub including individual bushes of hawthorn, hazel *Corylus avellana* and bramble. Similar habitat is present along the southern fence line in this section of site (TN12 and Plate 11). The northern boundary of the central field was a barbed wire fence with scattered blackthorn and bramble in places, again with a nutrient-rich field layer. There were also mature hawthorns and one immature holly along this length (TN14 and Plate 6).
- 3.3.19 Along the southern boundary of the western field was a line of bramble backed by corrugated steel sheets along part of the edge. Other species in this location included frequent rose *Rosa* and occasional elder and blackthorn. The field layer was dominated by common nettle with local frequent dog's mercury *Mercurialis perennis* (TN15). The western boundary is formed by a barbed wire fence with unmanaged gapped vegetation dominated by bramble but with frequent hawthorn and rose and occasional hazel and locally frequent blackthorn. The field layer was species-poor and nutrient enriched (TN17 and Plate 3).
- 3.3.20 The scattered scrub has formed around the unmanaged site boundaries due to the lack of management of these features. It does not form a continuous habitat feature but provides stepping-stones of cover as well as shelter, nesting habitat and/or nectar/berry resources for local small mammals, birds, herpetofauna and invertebrates. The species present around the site are locally common and provide a small area of habitat and are therefore valued at the site level.

Hedgerow

- 3.3.21 An unmanaged non-native Leyland cypress *Cuprocyparis leylandii* hedge (approx. six metres height) was recorded at TN8 (Plate 12).
- 3.3.22 An unmanaged species-poor hedgerow was present at TN13 (Plate 13) and included dominant blackthorn with abundant bramble (forming the main body of the hedge in places) and occasional rose. Some trees were present along this length including goat willow *Salix caprea*, hawthorn and one semi-mature oak (negligible bat roost potential).
- 3.3.23 A further unmanaged hedge dominated by blackthorn and hawthorn with occasional rose, elder, and abundant bramble. The field layer consisted of common nettle and broad-leaved dock (TN9 and Plate 2).
- 3.3.24 Native hedgerows are listed as a habitat of principal importance under S41 of the NERC Act 2006. They form green corridors through the centre of the site and facilitate movement for a

variety of local wildlife as well as providing shelter, nesting and or foraging resources. They are therefore valued at the **Local** level.

3.4 HABITATS ADJACENT TO THE DEVELOPMENT FOOTPRINT

- 3.4.1 Broadleaved woodland is present offsite to the south-west which is a habitat of principal importance under the NERC Act 2016 S41.

3.5 NON-NATIVE INVASIVE SPECIES

- 3.5.1 No non-native invasive species were recorded during the survey.

3.6 SURVEY CONSTRAINTS

- 3.6.1 All areas of the site within the red line boundary were fully accessible during the field survey. The weather conditions were suitable for undertaking the survey work. The time of year was suitable for identifying the habitats that were present.

3.7 PROTECTED AND NOTABLE SPECIES

Bats

- 3.7.1 A large pedunculate oak of considerable age though still with full canopy was recorded at TN3 on the north-east boundary. Some dead branch stubs were recorded with cracked deadwood and gaps between deadwood and branch collars are assessed, provisionally from ground level, to have moderate potential for bat roosts. There is also a large over extended limb towards the road (detailed arboricultural assessment required but may need work to reduce risk of failure). Features on this limb have only low potential for bat roosting and an inspection of the features would be advised by a licensed bat ecologist if removal is required.
- 3.7.2 Two further oak trees were recorded at TN16 on the south-west boundary which had minor features that could support roosting bats and would also have moderate potential.
- 3.7.3 An early mature pedunculate oak was recorded at TN19 which had very minor snags and was assessed as having low bat roosting potential
- 3.7.4 Habitat suitable for foraging bats is present as boundary vegetation and the oak at TN3 would provide a good source of prey species for local bat species.
- 3.7.5 Records of the following bat species have been provided within the 2km radius of the site including serotine *Eptesicus serotinus*, barbastelle *Barbastella barbastellus*, Daubenton's *Myotis daubentonii*, whiskered *Myotis mystacinus*, Natterer's *Myotis nattereri*, lesser noctule *Myotis leisleri*, noctule *Nyctalus noctula*, Nathusius pipistrelle *Pipistrellus nathusii*, common pipistrelle *Pipistrellus pipistrellus*, soprano pipistrelle *Pipistrellus pipistrellus* and brown long-eared *Plecotus auritus*.

Dormouse

- 3.7.6 There is a single record for dormouse within the 2km radius of the site. The boundary hedgerow and shrubs are very gappy and there is no direct connectivity with larger areas of woodland in close proximity that could support larger dormouse populations. The

Hedgehog

- 3.7.7 There are no records of hedgehog in close proximity to the site with the records being predominantly from Totton and the Test substation. Given the habitats present in close proximity to the site, it is reasonable to assume that hedgehogs are present in the local landscape.

Badger

- 3.7.8 No field signs of badgers were recorded on or immediately adjacent to the site and no cover was recorded that could shelter sett resources.
- 3.7.9 There are six records of badger from within 2km of the site but the locations of these records are unknown. Given the habitats present in close proximity to the site, it is reasonable to assume that badgers are present in the local landscape although no evidence was recorded on site.

Herpetofauna

- 3.7.10 Cover for reptiles on site is limited to patches of isolated shrubs and scrub around the site boundary with no continuous habitat that could support a self-sustaining population of reptiles. No ponds have been recorded within 250m of the site that could support breeding amphibians.
- 3.7.11 The majority of the herpetofaunal records are from the A30 corridor or the Test substation. There is a record of common toad *Bufo bufo* from the LNR 677m west of the site and a record of grass snake *Natrix helvetica* 280m to the south. There are no records of great crested newt within 2km of the site.

Nesting birds

- 3.7.12 Habitats recorded which were suitable for nesting birds included the boundary shrubs and the oak tree (TN3).
- 3.7.13 Most of the bird records provided are associated with the meadow, open water and riverine habitats of the LNR and River Test Valley. Bird records provided that could be reasonably expected to be nesting on site included house sparrow *Passer domesticus* (red list), song thrush *Turdus philomelos* (red list), mistle thrush *Turdus viscivorus* and starling *Sturnus vulgaris* (red list).

Invertebrates

- 3.7.14 There are no records of protected or notable invertebrates on site or in adjacent ecologically linked habitats. There are no habitats on site with the species diversity, maturity or structure required to support significant invertebrate populations.

4 Evaluation

4.1 SITES

4.1.1 No protected or notable sites will be adversely affected by the proposed development.

4.2 HABITATS

4.2.1 The mature broadleaved trees and native hedgerows are of local value. All other habitats are valued at the site level or lower and therefore will not be considered further in relation to habitats in this report.

4.2.2 The broadleaved trees adjacent to the site on the south-west will have roots that extend on to site as well as branches that overhang and should be considered for impacts.

4.3 PROTECTED SPECIES

4.3.1 The boundary features have the potential to support:

- foraging and commuting bats,
- sheltering hedgehog,
- nesting and foraging birds,
- commuting herpetofauna, and
- locally common invertebrates.

4.3.2 The mature trees have the potential to support nesting birds and invertebrates and a small number have the potential to support roosting bats.

5 Planning Policy and Legislation

5.1 NATIONAL PLANNING POLICY

5.1.1 The National Planning Policy Framework (NPPF) (2019) Chapter 15 outlines out how the planning system should contribute to and enhance the natural and local environment by protecting sites of biodiversity, recognising wide benefits from natural capital, minimising impacts on and providing net gains for biodiversity. If a proposed development would result in significant harm to the natural environment, Site of Special Scientific Interest or irreplaceable habitats which cannot be avoided (through the use of an alternative site with less harmful impacts), mitigated or compensated for (as a last resort) then planning permission should be refused. Development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to incorporate biodiversity improvements in and around developments should be encouraged, especially where this can secure measurable net gains for biodiversity.

5.1.2 To minimise impacts on biodiversity and geodiversity, planning policies should identify and map components of the local ecological networks, including the hierarchy of sites of importance for biodiversity, wildlife corridors and stepping stones that connect them and areas identified

by local partnerships for habitat management, enhancement, restoration or creation, promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species and identify and pursue opportunities for securing measurable net gains for (Paragraph 174b).

- 5.1.3 The NPPF retains protection for Local Wildlife Sites which are clearly recognised in the framework as locally designated sites of importance for biodiversity (Paragraph 174a). The policy provides the direction for local authorities to identify, map and protect these sites through local plans. The new policy also requires protection of Local Wildlife Sites to recognise the importance and the contribution that they make to wider ecological networks, as stated in the Government's own Natural Environment White Paper.
- 5.1.4 The government circular 06/2005: Biodiversity and Geological Conservation – Statutory Obligations and Their Impact within the Planning System still remains the key reference material to support obligations under the NPPF.
- 5.1.5 The Natural Environment and Rural Communities (NERC) Act came into force on 1st Oct 2006. Section 41 (S41) of the Act requires the Secretary of State to publish a list of habitats and species which are of principal importance for the conservation of biodiversity in England. The S41 list is used to guide decision-makers such as public bodies, including local and regional authorities, in implementing their duty under section 40 of the Natural Environment and Rural Communities Act 2006, to have regard to the conservation of biodiversity in England, when carrying out their normal functions. Fifty-six habitats of principal importance and 943 species of principal importance are included on the S41 list. These are all the habitats and species in England that were identified as requiring action in the UK Biodiversity Action Plan (UK BAP) and continue to be regarded as conservation priorities in the subsequent UK Post-2010 Biodiversity Framework. Bats are listed as priority species under the NERC Act 2006.

5.2 LOCAL PLANNING POLICIES

- 5.2.1 The New Forest National Park Local Plan Part 2: Plans and Policies (2014) has two saved policies relating to Nature Conservation.

Policy DM2: Nature conservation, biodiversity and geodiversity
- 5.2.2 Development proposals which would be likely to adversely affect the integrity of a designated or candidate Special Area of Conservation (SAC), classified or potential Special Protection Area (SPA), or listed Ramsar site will not be permitted unless there is no alternative solution and there are imperative reasons of overriding public interest which would justify the development.
- 5.2.3 Development proposals within or outside a Site of Special Scientific Interest (SSSI) which would be likely to adversely affect the site will not be permitted unless the benefits of the development outweigh both the adverse impacts on the site and any adverse impacts on the wider network of SSSIs.
- 5.2.4 Development which would result in damage to or loss of a site of biodiversity or geological value of regional or local importance (including Sites of Importance for Nature Conservation (SINC), Local Nature Reserves (LNR), Regionally Important Geological/Geomorphological Sites (RIGGS), and habitats of species of principal importance for biodiversity) will not be

permitted unless the benefits of the development clearly outweigh the harm it would cause to the site, and the loss can be mitigated to achieve a net gain in biodiversity/geodiversity.

- 5.2.5 Development proposals will be expected to incorporate features to encourage biodiversity and retain and, where possible, enhance existing features of nature conservation value within the site. Existing ecological networks should be identified and maintained to avoid habitat fragmentation, and ecological corridors should form an essential component of green infrastructure provision in association with new development to ensure habitat connectivity.
- 5.2.6 Where development is permitted, the local planning authority will use conditions and/or planning obligations to minimise the damage, provide mitigation and site management measures and, where appropriate, compensatory and enhancement measures.
- 5.2.7 Development will not be permitted which would adversely affect species of fauna or flora that are protected under national or international law, or their habitats, unless their protection can be adequately secured through conditions and/or planning obligations.

Policy DM9: Green Infrastructure linkages

- 5.2.8 Development proposals should maintain, and where possible enhance, the integrity of the network of green infrastructure within settlements.
- 5.2.9 In designing new development, even where the loss of some trees and hedgerows or other existing green infrastructure is unavoidable, developers should seek to:
- retain identified 'Landscape features';
 - minimise the loss of existing 'green' features on a site;
 - maximise the potential to create links with adjoining green infrastructure;
 - provide natural green spaces within a development; and
 - maintain or create wildlife corridors through a site.
- 5.2.10 The following green infrastructure linkage features, which have an important role in providing connectivity between other green infrastructure and open spaces, will be identified in the Green Infrastructure Strategy Supplementary Planning Document:
- (i) 'green links' between green spaces within the settlements and between the built-up area and the countryside;
- (ii) 'green buffers' between development and major transport routes;
- (iii) tree-lined streets and streets with spacious verges;
- (iv) watercourses and their banks.
- 5.2.11 The presence of these features should be taken into account and influence the design of development proposals.

5.3 LEGISLATION

- 5.3.1 Animal and plant species that are considered to be threatened as a result of their rarity, vulnerability or persecution are afforded protection through both European and UK law. The Conservation of Habitats and Species Regulations 2017, as amended protects a number of

rare and vulnerable animal and plant species listed for protection in Europe (including bats), whilst the Wildlife and Countryside Act, 1981 (as amended by the Countryside and Rights of Way Act, 2000 and NERC Act 2006) affords protection to wild bird species requiring protection in Europe and other rare or vulnerable native species of animals and plants. In addition, the Animal Welfare Act 2006 further protects wild animals from unnecessary suffering when under the control of man and combines with the Wild Mammals (Protection) Act 1996, which protects wild mammals from intentional cruelty.

6 Impact Assessment

6.1 HABITATS

- 6.1.1 All boundary trees and scrub habitat are to be retained during and after the development. There is the potential to damage trees and their roots during the development process which would be a **temporary negative impact at the local level**.
- 6.1.2 Significant planning and gap infill are proposed with native species which will strengthen green corridors within the site and connectivity to the wider landscape. This would be a **permanent positive impact at the local level**.

6.2 PROTECTED OR NOTABLE SPECIES

- 6.2.1 There is the potential for insensitive lighting design to negatively affect foraging and commuting bats along hedgerows or for light to spill onto trees that have potential for roosting bats. The landscape plan shows that significant planting to infill boundary gaps with proposed as well as tree planting within the development which will be beneficial for foraging and commuting bats and potentially provide increased roost habitat long term. Housing is proposed for the centre of the site away from the boundary features with gardens or green space backing onto the boundary features. The overall impact would be a **permanent positive impact at the site to local level**.
- 6.2.2 All habitat suitable for hedgehogs will be retained during and following the development. Significant infill planting is proposed around the boundaries which will increase the habitats available for hedgehogs, as well as the availability of lawns for foraging. This would be a **permanent positive impact at the site level**.
- 6.2.3 All habitat suitable for herpetofauna will be retained during and following the development. Significant infill planting is proposed around the boundaries which will increase the habitats available for foraging, commuting and sheltering herpetofauna. This would be a **permanent positive impact at the site level**.
- 6.2.4 There is the potential to disturb nesting birds in boundary vegetation removed at wrong time of year. All birds are protected while actively breeding in the UK under the Wildlife and Countryside Act 1981 (as amended). All birds, their nests and eggs are protected by law and it is thus an offence, with certain exceptions, to:
- Intentionally kill, injure or take any wild bird.

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

6.2.5 This would therefore have a **temporary (one season) negative impact at the site level with legal implications.**

7 Mitigation Recommendations

7.1 AVOIDANCE

7.1.1 The boundary hedgerows and trees will be protected during the development in line with British Standard 5837:2012 using appropriate fencing and signage as necessary. This will ensure the protection of habitats used by nesting birds, foraging and commuting habitat for bats, hedgehogs and herpetofauna.

7.2 MITIGATION

7.2.1 It is therefore recommended that trees and hedgerows within 10m of the proposed work areas are checked for evidence of nesting birds where they take place within the bird breeding season (generally March to August inclusive but dependent upon seasonal and species variation). Where breeding bird activity is confirmed, any clearance/demolition works that may cause disturbance such as to cause the adults birds to abandon the nest, be postponed until after the young have fledged or a suitable buffer put in place.

7.2.2 The lighting of the access road and housing should be sensitively designed to avoid spillage on the boundary features including the mature trees.

7.3 COMPENSATION

7.3.1 All habitats of local value or greater are being retained and enhanced and therefore there are no requirements for compensation habitat.

7.4 ENHANCEMENT

7.4.1 In accordance with the provision of Chapter 11 of the National Planning Policy Framework (Conserving and Enhancing the Natural Environment) and Local Planning Policy, every effort should be made to enhance the biodiversity value of the site.

7.4.2 Significant native tree and scrub planting is taking place around the boundaries of the site to infill gaps, buffer the northern boundary and enhance green corridors within the site and through to the wider landscape (Figure 3). This will increase the number of woody species on site and enhance habitat availability for bats, hedgehogs, herpetofauna, birds and invertebrates. The total new planting area proposed is 465m². Species proposed include:

- *Acer campestre*,
- *Betula sp.*,
- *Carpinus betuls*,
- *Corylus avellana*,

- *Malus sylvestris*,
- *Prunus avium*,
- *Prunus padus*, and
- *Quercus robur*.

7.4.3 95m² of new native hedgerow is proposed throughout the site including the following species:

- *Acer campestre*,
- *Conrnus sanguinea*,
- *Corylus avallana*,
- *Crataegus monogyna*,
- *Euonymus europaeus*,
- *Prunus spinosa*,
- *Rosa canina*, and
- *Viburnum opulus*.

7.4.4 This will provide fruit, berries and nectar throughout the season for a variety of local birds, small mammals and invertebrates.

7.4.5 Wildflower buffers are proposed along the northern buffer areas within the alternative natural recreation greenspace which will increase habitats for invertebrates and improve the floral species diversity on site. This includes 560m² of Emorsgate EH1 Hedgerow mix and 685m² of managed wildflower margins/verge seed mix.

7.4.6 All landscape works shall be implemented in accordance with British Standard 4428:1989 'Code of Practice for General Landscape Operations' as well as other relevant British Standards.

7.4.7 The above enhancements will meet the following requirements for the Ecological Network Map:

- enhance connections between sites, either through physical corridors or through 'stepping stones', and
- reduce the pressure on wildlife by improving the wider environment through enhancing the adjacent habitats.

7.5 MONITORING

7.5.1 All new tree planting should be monitored and maintained for a period of 36 months with all dead trees replaced on a like for like basis.

7.5.2 Wildflower areas will be mown in summer every two months in the first year, then mown once a year in Autumn after seeds have dropped with all arisings removed.

7.6 CONCLUSIONS AND RESIDUAL IMPACTS

7.6.1 All habitats that have been identified as of local value or higher are to be retained and protected.

- 7.6.2 These habitats will be enhanced through infill planting and a wildlife buffer along the northern boundary. This will strengthen the green corridors through the site and facilitate dispersal of species such as small mammals, herpetofauna and invertebrate to the wider landscape.
- 7.6.3 The new wildflower areas will increase the floral diversity and availability of nectar and seeds on site for birds and invertebrates.
- 7.6.4 With the above protection and enhancements in place, it is considered that the residual impacts will be a **permanent positive impact at the site level with all legal obligations adhered to.**

8 References

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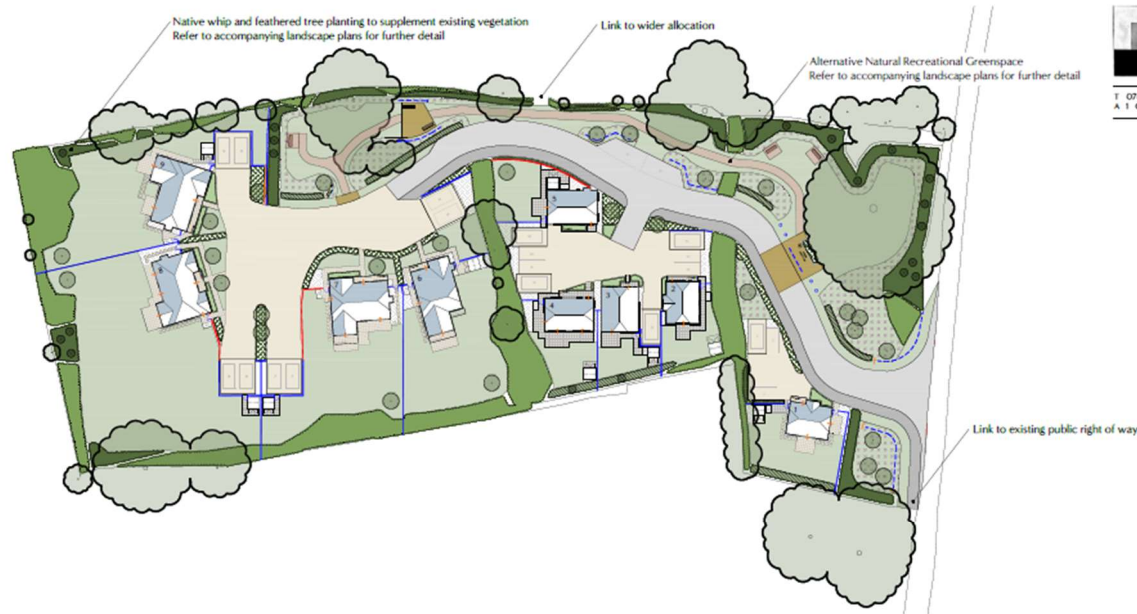
Figure 1 Site Location Plan



Figure 2 Aerial Map with Red Line Boundary



Figure 3 Proposed Development



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SOFT LANDSCAPE

- EXISTING TREES
- EXISTING VEGETATION / HEDGEROWS
- PROPOSED TREE
SIX OR FIVE STAGES STYLED; CROSS-HATCHED DENOTES FEATHERED
SEE SCHEDULE AND SPECIFICATION FOR FURTHER DETAIL
- PROPOSED NATIVE WHIP / FEATHERED TREE MIX
UNDERBOW WITH WILD DEW GARDEN MIX. SEE SCHEDULE AND SPECIFICATION
FOR FURTHER DETAIL
- PROPOSED NATIVE HEDGEROW
MANAGED TO 2m - 1.5m HIGH
UNDERBOW WITH WILD DEW GARDEN MIX. SEE SCHEDULE AND SPECIFICATION
FOR FURTHER DETAIL
- PROPOSED HEDGE
MANAGED TO 0.9m - 1.5m HIGH
SEE SCHEDULE AND SPECIFICATION FOR FURTHER DETAIL
- PROPOSED PERENNIAL & SHRUB PLANTING
SEE SCHEDULE AND SPECIFICATION FOR FURTHER DETAIL
- PROPOSED AMENITY GRASS / LAWN
SEE SCHEDULE AND SPECIFICATION FOR FURTHER DETAIL
- PROPOSED CONSERVATION GRASSLAND / WILDFLOWER MEADOW
SEE SCHEDULE AND SPECIFICATION FOR FURTHER DETAIL

HARD LANDSCAPE

- PROPOSED ROAD
TO ADOPTION STANDARDS
- PROPOSED ROAD
SAVED RESIDENTIAL SPACE TO ADOPTION STANDARDS
- PROPOSED PAVEMENT
- PROPOSED PAVING
400MM FLAGSTONES
- PROPOSED GRAVEL
DECORATIVE GRAVEL, BUFF COLOUR, MEDIUM SIZE FRACTION, ANGULAR
- PROPOSED ANBC BLOCK PAVING
E.G. HARBOURSIDE TIGGER A BINGLE
- PROPOSED ANBC PATH
SELF-BINDING AGGREGATE WITH TIMBER EDGE

BOUNDARY TREATMENTS & ACCESS

- PROPOSED CLOSEBOARD FENCE
1.8M HIGH
- PROPOSED BRICK WALL
1.8M HIGH
- PROPOSED TIMBER KNEE RAIL
0.9M HIGH
- PROPOSED TIMBER BOLLARD
- PROPOSED ACCESS GAP FOR MAINTENANCE
- PROPOSED ACCESS TO DWELLINGS

GENERAL NOTES
This drawing is to be read in conjunction with all other relevant discipline drawings, schedules, specifications and supporting information. The contractor is to verify all dimensions and conditions on site. This drawing should not be scaled. Only square dimensions are to be followed. Any discrepancies are to be reported to New Enclosure and resolution sought prior to proceeding. This drawing is subject to copyright www.newenclosure.com



REV	DESC	DATE	BY	CHK
B	Minor change to ANBC	2022-06-14	RC	RC
A	Cosmetic	2022-06-10	RC	RC
-	First Issue	2022-06-09	RC	RC

PROJECT
Land north of The Hollies, Hill Street, Calmore

CLIENT
Osman Homes Ltd

DRAWING TITLE
Landscape Plan

DRAWING NO.	REV	STATUS	SCALE
345_TN_01	B	PLANNING	1:500@A3

Figure 4 Phase 1 Habitat Map



Figure 5 Target Notes



Appendix A Target Notes

Ref	Notes
TN1	Post and rail fence with barbed wire with species poor field layer indicative of nutrient enrichment: stinging nettle <i>Urtica dioica</i> A, Cuckoopint <i>Arum maculatum</i> F, cleavers <i>Galium aparine</i> F, ivy <i>Hedera helix</i> A
TN2	Mostly compacted bare ground under canopy of oak (TN3) with NE corner containing stinging nettle <i>Urtica dioica</i> A, broad leaved dock <i>Rumex obtusifolius</i> F, elder <i>Sambucus nigra</i> O, lesser celandine <i>Ficaria verna</i> LA, bramble <i>Rubus fruticosus</i> agg. O (sparse low cover), Cuckoopint <i>Arum maculatum</i> F.
TN3	Notably large pedunculate oak <i>Quercus robur</i> of considerable age though still with full canopy; some dead branch stubs with cracked deadwood and gaps between deadwood and branch collars are assessed, provisionally from ground level, to have moderate potential for bat roosts; large over extended limb toward road (needs detailed arboricultural assessment but may need work to reduce risk of failure), but features on limb have only low potential for bat roosting; ground around tree mostly bare and compacted from ponies
TN4	Northern margin of low bramble <i>Rubus fruticosus</i> agg. D, stinging nettle <i>Urtica dioica</i> A, broad-leaved dock <i>Rumex obtusifolius</i> , and few broadleaved saplings
TN5	Very close grazed species poor semi-improved grassland (not all grass species identifiable due close grazing and some forbs liable to be suppressed as a result but indicators of nutrient enrichment support observed low species diversity): <i>Agrostis</i> sp. <i>Lolium</i> sp., <i>Festuca</i> sp., Yorkshire-fog <i>Holcus lanatus</i> , patches of stinging nettle <i>Urtica dioica</i> , broad-leaved dock <i>Rumex obtusifolius</i> , creeping buttercup <i>Ranunculus repens</i> , meadow buttercup <i>Ranunculus acris</i> , yarrow <i>Achillea millefolium</i> , white clover <i>Trifolium repens</i> A, dandelion <i>Taraxacum</i> sp. F
TN6	Eastern boundary of unmanaged shrubs over old chainlink fence: blackthorn <i>Prunus spinosa</i> D, bramble <i>Rubus fruticosus</i> agg., gappy in places, wayfaring tree <i>Viburnum lantana</i> R, hawthorn <i>Crataegus monogyna</i> D. Field layer: stinging nettle <i>Urtica dioica</i> , burdock <i>Arctium lappa</i> O, ivy <i>Hedera helix</i> D, broad-leaved dock <i>Rumex obtusifolius</i> F.
TN7	Barbed wire fence with bare ground along edge inside site and species poor improved grassland along outside.
TN8	Unmanaged Leyland cypress × <i>Cuprocyparis leylandii</i> hedge (approx. 6m high) and barbed wired fence with sparse, species poor field layer.
TN9	Hedge of blackthorn <i>Prunus spinosa</i> D, <i>Rosa</i> sp. O, elder <i>Sambucus nigra</i> O, hawthorn <i>Crataegus monogyna</i> D, bramble <i>Rubus fruticosus</i> agg A. Field layer: stinging nettle <i>Urtica dioica</i> A, broad-leaved dock <i>Rumex obtusifolius</i> F
TN10	Defunct hedge with wire fence; individual bushes of hawthorn <i>Crataegus monogyna</i> , hazel <i>Corylus avellana</i> and bramble <i>Rubus fruticosus</i> agg A.
TN11	Very close grazed species poor semi-improved grassland (not all grass species identifiable due close grazing and some forbs liable to be suppressed as a result but indicators of nutrient enrichment support observed low species diversity): <i>Agrostis</i> sp. <i>Lolium</i> sp., <i>Festuca</i> sp.,; edges and corners contain low bramble <i>Rubus fruticosus</i> agg D, broad-leaved dock <i>Rumex obtusifolius</i> A, foxglove <i>Digitalis purpurea</i> O, stinging nettle <i>Urtica dioica</i> D.
TN12	Barbed wire fence with some sections of hawthorn and bramble
TN13	Unmanaged hedge: blackthorn <i>Prunus spinosa</i> D, bramble <i>Rubus fruticosus</i> agg A (forming main body of hedge in places), <i>Rosa</i> sp. O. Some trees present including willow <i>Salix caprea</i> , hawthorn <i>Crataegus monogyna</i> and 1 x semi-mature oak <i>Quercus robur</i> (negligible bat roost potential)
TN14	Barbed wire fence with blackthorn <i>Prunus spinosa</i> with bramble <i>Rubus fruticosus</i> agg in places. Nutrient-rich, species poor field layer (similar to rest of site); mature hawthorns <i>Crataegus monogyna</i> , 1 x young holly <i>Ilex aquifolium</i> —negligible bat roost potential; group of mature oaks <i>Quercus robur</i> in NE corner—one has lost a secondary leader and may not be suitable for retention (needs further arboricultural assessment) but no obvious potential bat roost features obvious from ground level.

Ref	Notes
TN15	Boundary of bramble <i>Rubus fruticosus</i> agg backed by corrugated steel sheets along part of the edge; also <i>Rosa</i> sp. F, elder <i>Sambucus nigra</i> O, blackthorn <i>Prunus spinosa</i> O. Field layer of stinging nettle <i>Urtica dioica</i> D and dog's mercury <i>Mercurialis perennis</i> LF
TN16	2 x mature pedunculate oaks <i>Quercus robur</i> , some minor features with moderate bat roost potential
TN17	Western boundary of barbed wire fence with unmanaged gappy vegetation including bramble <i>Rubus fruticosus</i> agg making up much of body. Also hazel <i>Corylus avellana</i> O, hawthorn <i>Crataegus monogyna</i> F, <i>Rosa</i> sp. F, blackthorn <i>Prunus spinosa</i> LF; species poor field layer; bramble scrubbed NW corner
TN18	Barbed wire fence and line of maturing trees (no proper hedge) including: hawthorn <i>Crataegus monogyna</i> , field maple <i>Acer campestre</i> , holly <i>Ilex aquifolium</i> . Species-poor field layer with broad -leaved dock <i>Rumex obtusifolius</i> A, foxglove <i>Digitalis purpurea</i> O, cuckoo pint <i>Arum maculatum</i> O
TN19	Early mature pedunculate oak <i>Quercus robur</i> ; very minor snags—low bat roost potential
TN20	Very close grazed species poor semi-improved grassland of similar to other two fields (see TN5 and TN11)

Appendix B Plates

Plate 1: Eastern boundary (TN6) and semi-improved grassland (TN5)



Plate 2: Central section of boundary between eastern and middle field (TN9) and semi-improved grassland (TN11)



Plate 3: Western field (TN20) and western boundary fence with patches of bramble TN17)



Plate 4: Mature oak (TN3)



Plate 5: Several potential roosting features in oak (TN3)



Plate 6: Northern boundary of middle field (TN14)



Plate 7: Mature pedunculate oaks near south-west corner (TN16)



Plate 8: Northern boundary of western field (TN18)



Plate 9: Oak (TN19) and northern boundary fence



Plate 10: Gappy northern end of boundary between eastern and middle field (TN10)



Plate 11: Southern boundary of middle field (TN12)



Plate 12: Overgrown Leyland cypress forming part of boundary between eastern and middle field (TN8)



Plate 13: Boundary between middle and western fields (TN13)

