



Preliminary Ecological Appraisal (PEA)



Minagish
Hound Road, Netley Road, Southampton,
SO31 5FZ

GR: SU 46778 08636

April 2022



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Preliminary Ecological Appraisal		
Grid Reference	SU 46778 08636	
Client	Mr Andy Baker	
Architect/Planning Consultant	Studio Four Architects Ltd – Jez Davies	
Date of Survey & Report Expiry	27/04/2023	04/2024
Surveyor(s)	T. Woo-Glover BSc (Hons), MSc NE Class 2 Bat Licence S. Woo-Glover BSc (Hons), MSc	
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PEA Author	S. Woo-Glover BSc (Hons), MSc	
Verified by	Paul Diamond RHS Cert (Hort), BSc (Hons), MSc; MCIEEM; MArborA; Associate Member of the Landscape Institute	
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Ecological Surveys Ltd Contact Details	Sui Generis, Tredallett Farm, Duloe, Cornwall PL14 4PR 07474 681276 help@ecological-surveys-ltd.co.uk www.ecological-surveys-ltd.co.uk	
Company Registration Number	Incorporated in England and Wales- No 08262426.	
VAT Registration Number	224 3182 38	

**Declaration of Compliance****BS 420202013**

This study has been undertaken in accordance with British Standard 420202013 Biodiversity, Code of practice for planning and development, unless specifically stated otherwise.

Code of Professional Conduct

The information which we have prepared is true and has been prepared and provided in accordance with the Chartered Institute of Ecology and Environmental Management's Code of Professional Conduct. We confirm that the opinions expressed are our true and professional bona fide opinions.

Validity of Survey Data and Report

The findings of this report are valid for 12 months from the date of survey, unless the site has been maintained in exactly the same condition, in which case the report can be considered valid for 24 months once verified by the acting ecologist. Please be aware that some Local Planning Authorities (LPAs) require an update once 12 months has elapsed. If work has not commenced within this period, an updated survey by a suitably qualified ecologist may be required.

Legal and Moral Constraints and Responsibilities Summary

An overview of relevant legislation and responsibility is given within the Appendices Planning Policy and Legislation. Constraints exist for development where specific habitats or species are, or are potentially, within or adjoining a site proposed for development.

It is the responsibility of the client and those in receipt of this report to ensure ALL personnel or associated peoples likely to be involved in ANY management or works to this site - including but not limited to the seasonal flailing of hedgerows or cutting of grassland/scrub - are fully informed of any restrictions in force regarding the possible presence of protected species on this site as outlined in this report. If there is any doubt as to what works or management of habitats may legally occur, consultation with the acting ecologist is essential.

Avoidance, mitigation, compensation and enhancement are site specific and apply as herein.

In all instances where Mitigation is given, also refer to:

- Any further survey work for protected species (Phase 2 Surveys) recommended, or their results.
- General Good Practice during Construction Stage.
- Law and Legislation pertaining to specific species (plants and animals)
- Prevention of the spread of native and non-native invasive plants and animals.
- Avoidance of Wildlife Crime <http://www.nwcu.police.uk/>

Further advice if species are found onsite during development may be sought from Ecological Surveys Ltd (Tel 01503 240846 or 07736 458609) or Natural England.



1 INTRODUCTION

1.1 Executive Summary

Table 1

Purpose of the report:	To present the results of the Extended Phase 1 Habitat Survey undertaken at the named site; assess the impacts of the proposed development on the important ecological features identified and detail applicable compensation, mitigation measures and biodiversity enhancements as appropriate.
Project Description	It is understood that the proposed work is for a one and a half storey side extension with extended rear dormer, raised decking, elevational alterations and replacement porch following demolition of integral garage.
Summary of Habitat	The site is comprised of two structures, a house with integral garage and a detached two storey garage building set within a residential garden. To the north-west of the house, in land within ownership, lies an area of woodland and a stream. These form part of the Spear Pond Gully SINC.
Summary of Impact	Proposed works, whilst modest in terms of habitat removal, could result in negative impacts to the surrounding area, specifically through accidental damage, increased artificial lighting and minor silt pollution. Mitigation is therefore required.
PEA sufficiency	This report is considered sufficient for the size and scale of predicted impacts as a result of the proposal.
Habitat/Species Mitigation	Required: - • Impact Avoidance During the Construction Phase • Construction Exclusion Zones (CEZ) • Silt Fencing • Artificial Lighting Strategy
Habitat & Species Enhancement/Creation	Required: - • Bat Roosting Provision • Bird Nesting Provision • Landscaping for the Benefit of Wildlife
The LPA should ensure that any mitigation and compensation measures identified in this report, together with enhancement recommendations are 'conditioned' where appropriate.	



1.2 Requirement for Ecological Survey/Assessment

Ecological Surveys Ltd were commissioned to undertake a Preliminary Ecological Appraisal (PEA) to include the potential for legally protected and notable species of the Site, and to assess the potential impact of the development on the biodiversity of the Site and its immediate environs. Ecological Surveys Ltd has not been informed of any previous surveys undertaken on this site that need to inform this report.

All ecological data and information gained through both the desktop survey and the survey work were evaluated. The important ecological features were then identified and evaluated against the potential impacts/effects that the proposed development may have on the ecology of the Site and surrounding area.

The biodiversity importance of each designated site, habitat and species is evaluated on a geographic scale: international, national, county and local.

Evaluation of designated sites considers their designation; their ecological and landscape relationship with the proposed site; and the species and/or habitat types for which the site was designated.

Evaluation of habitats considers their designation; their area, quality and viability; diversity and connectivity to the wider landscape; and structural diversity and species-richness.

Evaluation of species considers their designation, including legal protection and rarity.

When assessing the impact of the development and changes to the baseline conditions on site, predictions will be made which focus solely on the zone of influence whilst taking into consideration the lifespan of the development and the significant impacts as identified from the proposed work operations throughout the lifespan of the development.

The proposed development aims to firstly avoid and then mitigate against any potential effects/impacts on the local ecology/biodiversity, ensuring compliance with nature conservation legislation. It aims to achieve this by applying the mitigation hierarchy (as mentioned in Paragraph 118 of the National Planning Policy Framework and detailed in Paragraph: 018 Reference ID: 8-018-20140306 of National Planning Practice Guidance) as follows:

Avoidance – Significant harm to wildlife species and habitats should be avoided through design.

Mitigation – where significant harm cannot be wholly or partially avoided, it should be minimised by design, or by the use of effective mitigation measures that can be secured by, for example, conditions or planning obligations.

Enhancement - Ecological enhancement measures are those that improve the ecological condition of the development site (or an alternative site) after the development is complete. Ecological enhancement measures must, therefore, be over and above any avoidance, mitigation and compensation measures required to neutralise the impacts of the development on wildlife.

Compensation – where, despite whatever mitigation would be effective, there would still be significant residual harm, as a last resort, this should be properly compensated for by measures to provide for an equivalent value of biodiversity.



Appropriate measures to avoid and/or minimise the significant negative effects on the important ecological features have been identified. These mitigation measures aim firstly to avoid the overall effect/impact, or for those that cannot be avoided, reduce their overall effect value. It is not always possible to fully mitigate an adverse effect to neutral levels.

Under the National Planning Policy Framework, NPPF, (HM Government, 2019) local 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;
- 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.

[Taken from NPPF 2019, Section 15. Conserving and enhancing the natural environment, paragraph 170, p49]

Thus, the mitigation hierarchy should be applied when considering the impacts of developments and local planning decisions on the natural environment, with the protection of important wildlife sites, habitats, species and ecosystem services; the avoidance of impacts, mitigating these impacts where appropriate, and then achieving biodiversity net gain through enhancements.

Section 15 of the NPPF 2019 goes on to state that '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 incorporate biodiversity improvements in and around developments should be encouraged, especially where this can secure measurable net gains for biodiversity.'

[Taken from NPPF 2019, Section 15. Conserving and enhancing the natural environment, paragraph 175, p50]

The aim of development should be to deliver biodiversity net gain on site as well as limiting damage to important ecological features. Using the information gained during the desktop survey and the extended Phase 1 habitat survey, and the ecological requirements of habitats, species and local environmental conditions, biodiversity enhancements for the Site have been considered, providing opportunities to increase the diversity of habitats and species on site.

1.3 Limitations to Report

Ecological surveys are limited by factors which affect the presence of plants and animals such as the time of year, migration patterns and behaviour. The current survey was carried out in late April 2023. This is not an optimal time for undertaking ecological field surveys for all species/groups. The ecological survey has not produced a definitive list of plant and animal species present on site and the absence of evidence of any particular species should not be taken as conclusive proof that the species is not present or that it will not be present in the future. However, the results of field- and desk-based surveys are considered to have been sufficient to evaluate ecological features within the predicted zone of influence to a high degree of confidence and to enable an initial assessment of potential impacts likely to require mitigating actions.

It should be noted that habitats, and the species they may support, change over time due to natural processes and because of human influence. In line with current guidelines, the survey on which this report is based is only valid for two years, after which time it will need updating. It being accepted that some LPA's now expect a survey to be updated after twelve months.



2 METHODS

2.1 Desk Based Assessment

An initial desk-based assessment was carried out by Ecological Surveys Ltd collating data relating to the site itself and up to a 2km radius or greater depending upon the import of information gathered and includes:

- Statutory and non-statutory wildlife and earth science sites
- BAP Priority Inventory Habitats
- Legally protected and nationally notable species
- Sites primarily utilised included MAGIC, National Biodiversity Network and HBIC.

The data gathered is considered sufficient along with the field survey to reach appropriate conclusions for the mitigation and enhancement of this site.

2.2 Phase 1 Field-based Assessment

The field survey included carrying out an Extended Phase 1 Habitat Survey, consisting of a walkover assessment of the Site using Phase 1 Habitat Survey methodology (JNCC, 2010, as amended by the Institute of Environmental Assessment (IEA, 1995)). This is a standard technique for classifying and mapping British habitats. All areas within the Site were surveyed, the main plant species recorded, and habitat type mapped. Indicators of ecological value were also noted, including the presence or signs of any legally protected or rare species.

A search was also made to identify the presence of any invasive non-native species (particularly those listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended)), including Japanese knotweed (*Reynoutria japonica*) and Himalyan balsam (*Impatiens glandulifera*).

2.2.1 Vegetation

All broad habitat types were identified, and a list was compiled of characteristic plant species within each habitat type. Where necessary, habitat types of particular botanical interest are subject to more detailed survey using methods developed for the National Vegetation Classification (NVC) (Rodwell, 1992). The vegetation recorded on site during this Extended Phase 1 Ecological Survey is described here with reference to Joint Nature Conservation Committee Phase 1 habitat terminology.

Table 2 Protected Species Grading Criteria

Grading Criteria	Justification
Confirmed Presence	Species confirmed on site through direct sighting, presence of unambiguous field signs (e.g. scat, hair, prints, nest, eggs, habitation etc.) or through desk-based assessment.
High Potential	Presence of optimal habitat features for species. Surveyed site within known range/close to known occurrence. Excellent connectivity to optimal habitat. No justification for discounting presence of species.
Moderate Potential	Presence of some suitable habitat features for species. Surveyed site within/close to known range or known occurrence but factors such as isolation/fragmentation may reduce potential. Presence of



	species is more likely than not.
Low Potential	Minimal suitable habitat present or, if present, highly degraded/fragmented. Minimal linkage to suitable habitat beyond site. Presence of species unlikely.
Negligible Potential	Site is entirely unsuitable for species. Presence of species highly unlikely.

2.2.2 Buildings

Protected Species – Built Structures

All built structures were assessed for their potential to support protected species. All external and internal areas were inspected for the presence of suitable access, egress nesting or roosting features. Such features include open access for entry or free flight, missing, slipped, broken or bowed roof materials; gaps within soffits; gaps behind fascia; gaps/holes within brickwork; louvers; lifted lead flashing and gaps around window and door casements. Features were inspected using binoculars/close range monocular and the surveyor was equipped with a high-powered torch. All accessible internal void spaces were inspected for actual evidence (field signs) of protected presence (living or dead) nesting material, droppings, fur and urine staining.

2.2.3 Badger

The surveyed area and adjacent habitats were inspected for field signs of badger activity. This includes badger setts, latrine sites, dung piles, well-used trails, prints and hairs.

2.2.4 Bats – Trees

Trees within and immediately adjacent to the surveyed area were subject to detailed visual inspection from ground level using binoculars in order to identify potential roost features (PRF) which may offer suitable opportunities for bats. These features include dense ivy cladding; woodpecker holes; rot holes; limb stubs; cavities; flaking bark; cracks and splits.

Each tree has been graded for its suitability for supporting bats based on criteria within 'Bat Surveys for Professional Ecologists Good Practice Guidelines 3rd Edition' (Collins, 2016). These criteria are detailed in Table 3.

Table 3 Bat Roost Tree Grading Criteria

Grading Criteria	Reason
Confirmed Bat Roost	Unambiguous evidence of roost bats seen emerging/entering, bats audible, droppings/urine-/fur- staining visible or known roost based on desk-based assessment.
1* - High Suitability	Trees with obviously suitable PRFs which are considered capable of supporting larger, established roosts of high conservation significance.
1 - Moderate Suitability	Trees with potentially suitable PRFs but which are not likely to support roosts of high conservation



	status.
2 - Low Suitability	Trees of sufficient size/age to exhibit PRFs but nonvisible from ground-level or features seen appear to offer limited potential.
3 - Negligible Suitability	Trees with no /negligible potential to support bats.

2.2.5 Bats – Foraging and Commuting Habitat

An assessment was made of the suitability of the surveyed area and the surrounding landscape to support foraging and/or commuting bats. The assessment was based on the presence of key habitat features such as woodland, scrub, hedgerows, grassland and open water, which are highly attractive to bat species. Of importance, is the presence of unlit semi-natural vegetation and habitat linkage between the site and the surrounding landscape such that the site may form an integral part of landscape-scale habitat for bats.

The quality of bat foraging and commuting habitat has been assessed using the criteria detailed in Table 4.

Table 4 Bat Foraging and Commuting Habitat Grading Criteria

Grading Criteria	Reason
Optimal Quality	Presence of optimal habitat features such as unlit woodland, scrub, hedgerows, grassland and open water with excellent linkage to similar habitats within the wider landscape. Presence of high potential buildings/trees and/or known roosts within immediate landscape. Sites are generally rural in character.
Moderate Quality	Presence of optimal habitat features such as woodland, scrub, hedgerows, grassland and open water with reasonable linkage to similar habitats within the wider landscape. Limiting factors may include size of site.
Low Quality	Presence of some limited habitat features such as scrub or hedgerows, with minimal linkage to suitable habitats within the wider landscape.
Poor Quality	No suitable habitat present or, if present, highly degraded/fragmented. Minimal unlit areas with no linkage to suitable habitat beyond site. Generally urban in character.

2.2.6 Hazel dormouse

An assessment was made of the suitability of habitat within the site to support hazel dormice *Muscardinus avellanarius*. Key habitats are woodland, scrub and hedgerows, particularly where dense vegetation within which to nest/hibernate is offered along with key resources such as hazel nuts, fruiting/nectar-rich plants (e.g. hawthorn, bramble) and honeysuckle (for nesting material). Of importance is the presence of landscape-scale habitat linkages such as hedgerows, and where the site is linked to such habitat this will raise the potential for the species to occur.



2.2.7 Birds

An assessment was made of the site's suitability to support breeding and wintering bird species. Birds will utilise a broad range of habitats, including built structures; trees; scrub; isolated shrubs; dense herbaceous vegetation (terrestrial and aquatic) and open grassland among others. All bird species observed on site were recorded.

2.2.8 Reptiles

An assessment was made of the site's suitability to support reptile populations. Key habitat features include tussocky/patchy grassland; scrub edge; linear watercourses; ponds; compost heaps; brush piles and rubble/soil heaps. Linkage to suitable habitat within the surrounding landscape will increase the potential for reptiles to occur, although populations can occur within isolated/fragmented habitats even within otherwise-unsuitable areas.

2.2.9 Amphibians

An assessment was made of all waterbodies and terrestrial habitat within the site for their suitability to support populations of amphibians. Suitable waterbodies will generally be characterised by the presence of good quality freshwater, diverse macrophyte cover and an absence of fish.

For the European-protected great crested newt *Triturus cristatus*, each waterbody was, where considered necessary, assessed using the Habitat Suitability Index (HSI) system (Oldham et al., 2000) and assigned a grading score between zero (poor suitability) and 1 (excellent suitability).

2.2.10 Invertebrates

The presence of important invertebrate species or assemblages is generally dependent upon distinct micro-habitats such as dead wood (standing, fallen, of all decay stages), sap runs, damp/wet soils, mixed sun/shade, bare/friable soils (e.g. exposed sand/soil banks) and a diversity of plant species.

For aquatic invertebrates, important species/assemblages will generally be associated with high-quality aquatic habitats such as ponds, rivers, streams and ditches where water quality is good, and vegetation is diverse. Other key factors will include substrate and waterbody morphology. An assessment of the site's potential to support a diverse invertebrate assemblage and/or specialist species is based loosely on the presence of habitat features described in Kirby (2001). Where possible, a list of all invertebrate species encountered has been made.



3 PROJECT DETAILS

The site relates to a residential property located on the outskirts of Netley. Ecological Surveys Ltd were commissioned by the clients to undertake a Preliminary Ecological Survey (PEA) of this site in relation to the one and a half storey side extension with extended rear dormer, raised decking, elevational alterations and replacement porch following the demolition of the integral garage.

3.1 Site Location Description

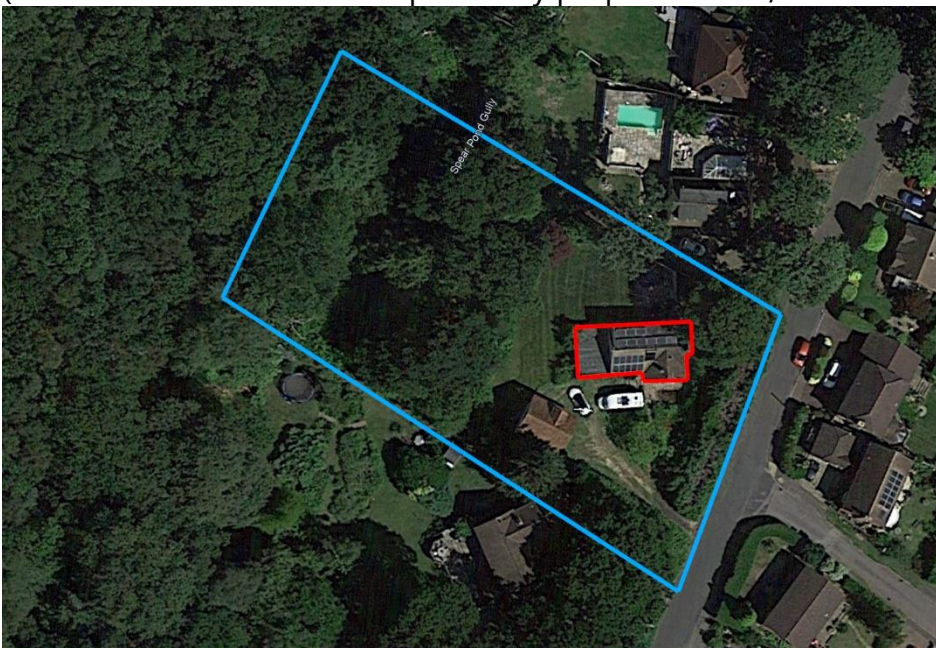
The site is located as indicated.

Figure 1 Site Location



Figure 2: Surveyed Area

(red line = structure to be impacted by proposed work/ blueline = in ownership)

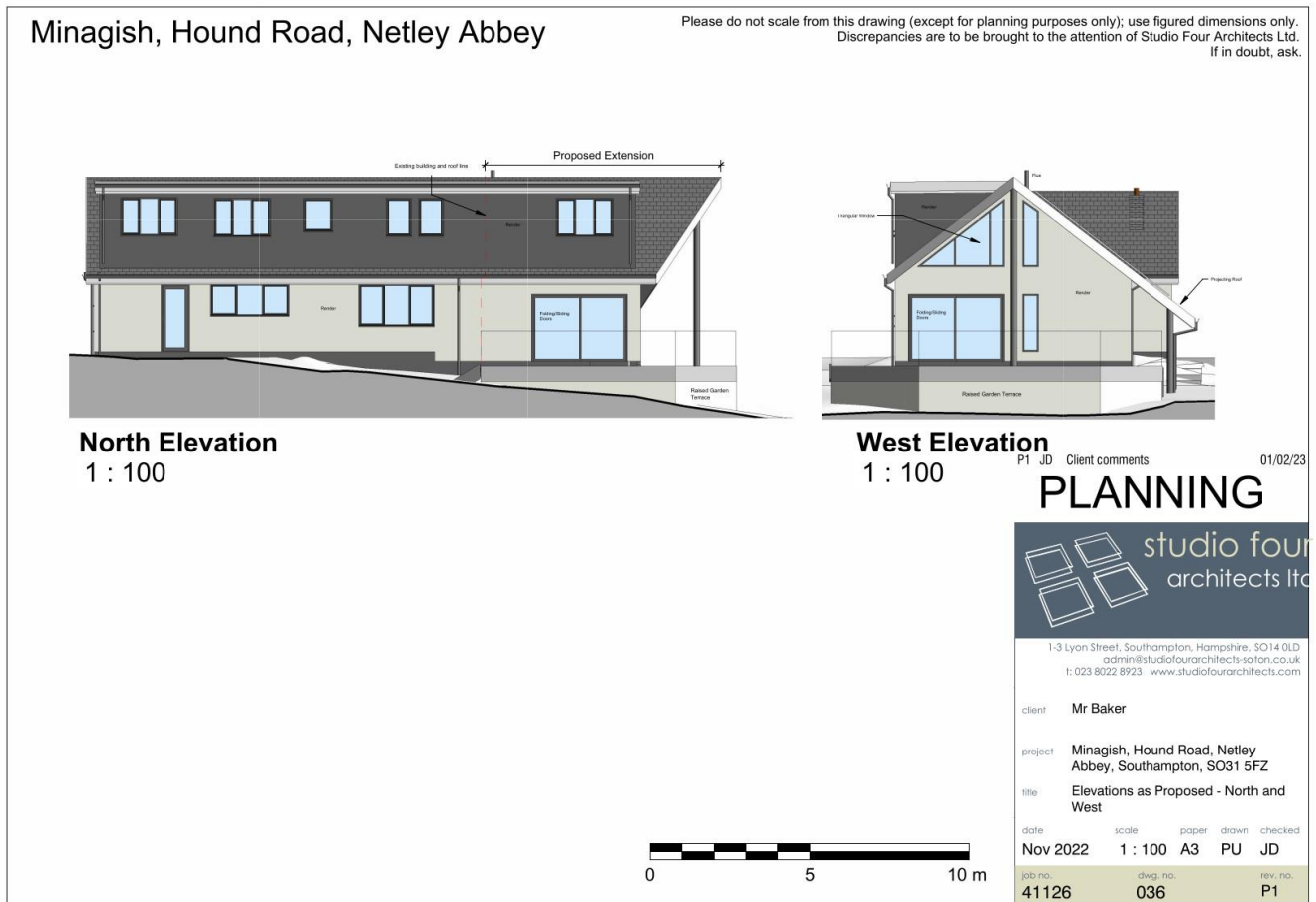




3.2 Illustrated Proposal

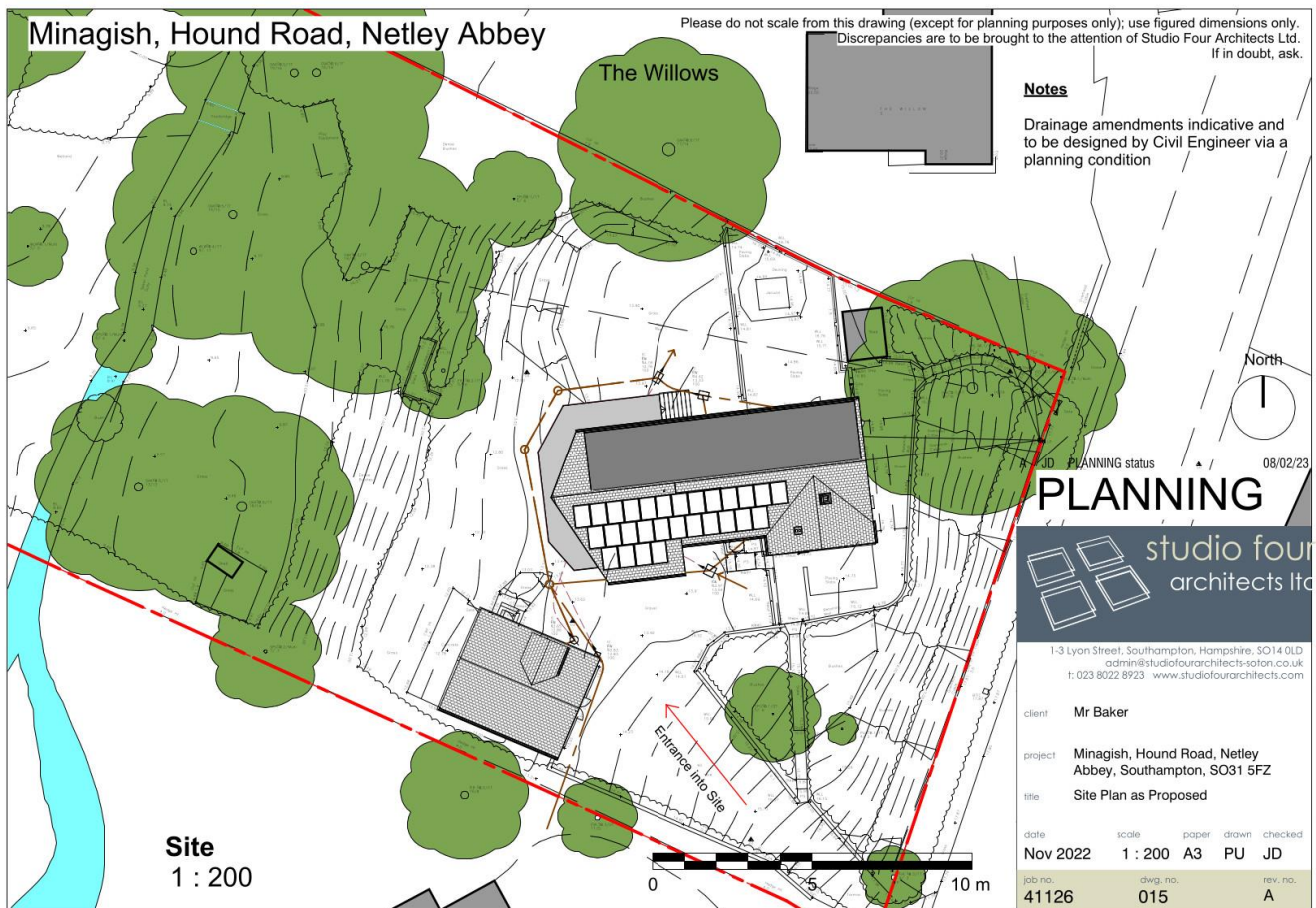
It is understood that the proposed works are for a one and a half storey side extension with extended rear dormer, raised decking, elevational alterations and replacement porch following demolition of integral garage. The proposed extension will have large windows facing directly towards the Spear Pond Gully SINC west of the house, which will cause light pollution and have an impact on light adverse species such as bats and hedgehogs. The demolition and construction work may also cause silt runoff into the Spear Pond Gully SINC watercourse as it is down the slope.

Figure 3 Illustrated Proposal



Proposed Elevations Plans (North and West Elevations)

The proposed extension is to the west of the house where new large windows will be facing directly towards the Spear Pond Gully SINC.



Proposed Site Plan

The vegetation near the house and garage, labelled as dense bushes within the Proposed Site Plan, will not require removal to make way for the proposed works and will act as a buffer between the proposed construction work and the SINC.



4 RESULTS

4.1 Introduction

This section provides details of the results of the Extended Phase 1 Ecological Survey of the named site. A biological records search was commissioned from HBIC and where appropriate details are included within this report.

4.2 Desk-based Assessment

4.2.1 Internationally and Nationally Designated Sites

Table 5: Internationally and Nationally designated sites located within 2km of the site.

Site Name Distance & Direction	
Special Area of Conservation (SAC):	Solent Maritime (1.80km southeast)
Special Protection Area (SPA):	Solent and Dorset Coast (1.35km east, 1.80km southeast) Solent and Southampton Water (1.11km southwest, 1.42km east)
RAMSAR:	Solent & Southampton Water (1.11km southwest, 1.42km east)
Site of Special Scientific Interest (SSSI):	Lee-On-The Solent to Itchen Estuary (1.11km southwest) Lincegrove And Hackett's Marshes (1.42km east)
National Nature Reserve (NNR):	None found
Local Nature Reserve (LNR):	Hackett's Marsh (1.74km northeast) Mercury Marshes (1.90km southwest) Westwood Woodland Park (0.95km northwest)

4.2.2 Locally Designated Sites

Table 6: Non-statutory designated sites located within 1km of the site.

Site Name & Grid reference	
Netley Farm Closed Landfill Site SINC	SU46251006
Netley Lodge SINC	SU46100820
Priors Hill Brickworks SINC	SU47300980
Priors Hill Copse/Hound Grove SINC	SU46900920
Spear Pond Gully SINC (On site)	SU46600850 (On site)
St. Mary's Road Wood SINC	SU46600860
West Wood (Royal Victoria Country Park) SINC	SU47000750
West Wood Grange Field SINC	SU45750955



4.2.3 Priority Habitats

Table 7: UK BAP Priority Habitat Inventory habitats within 2km of the site.

Priority Habitats Distance & Direction
Ancient woodland Coastal saltmarsh Coastal vegetated shingle Deciduous woodland (on site) Intertidal substrate foreshore Lowland fens Mudflats Reedbeds Traditional orchard Wood-pasture and parkland

4.2.4 Protected Species

Table 8: Records of protected and notable species within 1km of the site.

Species Group	Species
Bats:	Brown Long-eared Bat (<i>Plecotus auritus</i>) Common Pipistrelle (<i>Pipistrellus pipistrellus</i>) Daubenton's Bat (<i>Myotis daubentonii</i>) Natterer's Bat (<i>Myotis nattereri</i>) Noctule Bat (<i>Nyctalus noctula</i>) Serotine (<i>Eptesicus serotinus</i>) Soprano Pipistrelle (<i>Pipistrellus pygmaeus</i>) Whiskered Bat (<i>Myotis mystacinus</i>) Whiskered/Brandt's Bat (<i>Myotis mystacinus/brandtii</i>)
Other mammals:	Eurasian Badger (<i>Meles meles</i>) European Water Vole (<i>Arvicola amphibius</i>) West European Hedgehog (<i>Erinaceus europaeus</i>)
Birds	Arctic Tern (<i>Sterna paradisaea</i>) Barn Owl (<i>Tyto alba</i>) Black Redstart (<i>Phoenicurus ochrurus</i>) Black-headed Gull (<i>Chroicocephalus ridibundus</i>) Black-tailed Godwit (<i>Limosa limosa</i>) Black-throated Diver (<i>Gavia arctica</i>) Brambling (<i>Fringilla montifringilla</i>) Bullfinch (<i>Pyrrhula pyrrhula</i>) Caspian Tern (<i>Hydroprogne caspia</i>) Cetti's Warbler (<i>Cettia cetti</i>) Common Redpoll (<i>Acanthis flammea</i>) Common Scoter (<i>Melanitta nigra</i>)



Common Tern (*Sterna hirundo*)
Crossbill (*Loxia curvirostra*)
Cuckoo (*Cuculus canorus*)
Curlew (*Numenius arquata*)
Dark-bellied Brent Goose (*Branta bernicla*)
Dartford Warbler (*Curruca undata*)
Fieldfare (*Turdus pilaris*)
Firecrest (*Regulus ignicapilla*)
Golden Plover (*Pluvialis apricaria*)
Goosander (*Mergus merganser*)
Grasshopper Warbler (*Locustella naevia*)
Great Black-backed Gull (*Larus marinus*)
Great Crested Grebe (*Podiceps cristatus*)
Great Northern Diver (*Gavia immer*)
Green Sandpiper (*Tringa ochropus*)
Grey Wagtail (*Motacilla cinerea*)
Herring Gull (*Larus argentatus*)
Hobby (*Falco subbuteo*)
Honey-buzzard (*Pernis apivorus*)
House Sparrow (*Passer domesticus*)
Kingfisher (*Alcedo atthis*)
Kittiwake (*Rissa tridactyla*)
Lapwing (*Vanellus vanellus*)
Lesser Black-backed Gull (*Larus fuscus*)
Lesser Redpoll (*Acanthis cabaret*)
Lesser Spotted Woodpecker (*Dryobates minor*)
Linnet (*Linaria cannabina*)
Little Egret (*Egretta garzetta*)
Little Gull (*Hydrocoloeus minutus*)
Little Ringed Plover (*Charadrius dubius*)
Long-tailed Duck (*Clangula hyemalis*)
Marsh Harrier (*Circus aeruginosus*)
Mediterranean Gull (*Ichthyaetus melanocephalus*)
Mistle Thrush (*Turdus viscivorus*)
Nightingale (*Luscinia megarhynchos*)
Nightjar (*Caprimulgus europaeus*)
Osprey (*Pandion haliaetus*)
Oystercatcher (*Haematopus ostralegus*)
Peregrine (*Falco peregrinus*)
Pied Flycatcher (*Ficedula hypoleuca*)
Red Kite (*Milvus milvus*)
Redstart (*Phoenicurus phoenicurus*)



	Red-throated Diver (<i>Gavia stellata</i>) Redwing (<i>Turdus iliacus</i>) Reed Bunting (<i>Emberiza schoeniclus</i>) Rock Pipit (<i>Anthus petrosus</i>) Sandwich Tern (<i>Thalasseus sandvicensis</i>) Scaup (<i>Aythya marila</i>) Shelduck (<i>Tadorna tadorna</i>) Short-eared Owl (<i>Asio flammeus</i>) Shoveler (<i>Spatula clypeata</i>) Siskin (<i>Spinus spinus</i>) Skylark (<i>Alauda arvensis</i>) Slavonian Grebe (<i>Podiceps auritus</i>) Snipe (<i>Gallinago gallinago</i>) Song Thrush (<i>Turdus philomelos</i>) Spotted Flycatcher (<i>Muscicapa striata</i>) Starling (<i>Sturnus vulgaris</i>) Tree Pipit (<i>Anthus trivialis</i>) Tree Sparrow (<i>Passer montanus</i>) Tundra Swan (<i>Cygnus columbianus</i>) Velvet Scoter (<i>Melanitta fusca</i>) Water Rail (<i>Rallus aquaticus</i>) Wheatear (<i>Oenanthe Oenanthe</i>) Whimbrel (<i>Numenius phaeopus</i>) Whinchat (<i>Saxicola rubetra</i>) Wood Warbler (<i>Phylloscopus sibilatrix</i>) Woodcock (<i>Scolopax rusticola</i>) Woodlark (<i>Lullula arborea</i>) Yellow Wagtail (<i>Motacilla flava</i>) Yellowhammer (<i>Emberiza citrinella</i>)
Reptiles:	Adder (<i>Vipera berus</i>) Common Lizard (<i>Zootoca vivipara</i>) Grass Snake (<i>Natrix helvetica</i>) Slow-worm (<i>Anguis fragilis</i>)
Amphibians:	Common Toad (<i>Bufo bufo</i>)
Fish:	European Eel (<i>Anguilla anguilla</i>)
Invertebrates:	Alder Leaf Beetle (<i>Agelastica alni</i>) Alder Moth (<i>Acronicta alni</i>) <i>Alydus calcaratus</i> <i>Aulacobaris lepidii</i> Beaded Chestnut (<i>Agrochola lychnidis</i>) Beautiful Yellow Underwing (<i>Anarta myrtillin</i>) Bird's Wing (<i>Dypterygia scabriuscula</i>)



Blood-vein (*Timandra comae*)
Bordered Beauty (*Epione repandaria*)
Bordered White (*Bupalus piniaria*)
Broom-tip (*Chesias rufata*)
Buff Ermine (*Spilosoma lutea*)
Buttoned Snout (*Hypena rostralis*)
Campion (*Sideridis rivularis*)
Cinnabar (*Tyria jacobaeae*)
Cistogaster globose
Coelotes terrestris
Common Darter (*Sympetrum striolatum*)
Common Wainscot (*Mythimna pallens*)
Cypress Pug (*Eupithecia phoeniceata*)
Dark Crimson Underwing (*Catocala sponsa*)
Dichroscytus gustavi
Dot Moth (*Melanchra persicariae*)
Dotted-margin Smoke (*Diplodoma laichartingella*)
Double Kidney (*Ipimorpha retusa*)
Downy Emerald (*Cordulia aenea*)
Dusky Brocade (*Apamea remissa*)
Dusky Cockroach (*Ectobius lapponicus*)
Ear Moth (*Amphipoea oculatea*)
Early Long-horn (*Adela cuprella*)
Elm Bent-wing (*Bucculatrix albedinella*)
Emperor Moth (*Saturnia pavonia*)
Enicmus brevicornis
Ero tuberculata
Eurygaster maura
Evarcha arcuate
False Cacao Moth (*Ephesia woodiella*)
Galium Carpet (*Epirrhoe galiata*)
Ghost Moth (*Hepialus humuli*)
Goat Moth (*Cossus cossus*)
Golden Plusia (*Polychrysia moneta*)
Gorse Knot-horn (*Pempelia genistella*)
Grass Emerald (*Pseudoterpna pruinata*)
Grey Dagger (*Acronicta psi*)
Hedge Rustic (*Tholera cespitis*)
Helops caeruleus
Knot Grass (*Acronicta rumicis*)
Lackey (*Malacosoma Neustria*)
Large Black Slug (*Arion (Arion) ater*)



Large Velvet Ant (*Mutilla europaea*)
Larinioides patagiatus
Lesne's Earwig (*Forficula lesnei*)
Light Crimson Underwing (*Catocala promissa*)
Little Emerald (*Jodis lactearia*)
Lixus scabricollis
Long-legged Tabby (*Synaphe punctalis*)
Minor Shoulder-knot (*Brachylomia viminalis*)
Mottled Rustic (*Caradrina morpheus*)
Neocoenorrhinus interpunctatus
Neocrepidodera impressa
Nigma puella
Oak Hook-tip (*Watsonalla binaria*)
Olive (*Ipimorpha subtusa*)
Onthophagus medius
Orange Sallow (*Tiliacea citrigo*)
Paracorymbia fulva
Pinion-streaked Snout (*Schrankia costaestrigalis*)
Plain Pug (*Eupithecia simpliciata*)
Plain Wave (*Idaea straminata*)
Pretty Chalk Carpet (*Melanthia procellata*)
Ray Spider (*Theridiosoma gemmosum*)
River Skater (*Aquarius najas*)
Rosy Rustic (*Hydraecia micacea*)
Rustic (*Hoplodrina blanda*)
Sallow (*Cirrhia icteritia*)
Satin Wave (*Idaea subsericeata*)
Scallop Shell (*Rheumaptera undulata*)
Shaded Pug (*Eupithecia tenuiata*)
Sharp-collared Furrow Bee (*Lasioglossum malachurum*)
Silpha obscura
Slender-horned Leatherbug (*Ceraleptus lividus*)
Small Emerald (*Hemistola chrysoprasaria*)
Small Engrailed (*Ectropis crepuscularia*)
Small Heath (*Coenonympha pamphilus*)
Small Phoenix (*Ecliptopera silaceata*)
Small Scallop (*Idaea emarginata*)
Small Square-spot (*Diarsia rubi*)
Small Yellow Underwing (*Panemeria tenebrata*)
Southern Wainscot (*Mythimna straminea*)
Stag Beetle (*Lucanus cervus*)
Streak (*Chesias legatella*)



	Sulphur Pearl (<i>Sitochroa palealis</i>) Tawny Cockroach (<i>Ectobius pallidus</i>) Tawny Pinion (<i>Lithophane semibrunnea</i>) Varied Coronet (<i>Hadena compta</i>) Wall (<i>Lasiommata megera</i>) White Admiral (<i>Limenitis Camilla</i>) White Ermine (<i>Spilosoma lubricipeda</i>) White-point (<i>Mythimna albipuncta</i>) Wood Cricket (<i>Nemobius sylvestris</i>) Yellow Belle (<i>Aspitates ochrearia</i>)
Flowering Plants:	Annual Beard-grass (<i>Polypogon monspeliensis</i>) Autumn Lady's-tresses (<i>Spiranthes spiralis</i>) Bird's-foot Clover (<i>Trifolium ornithopodioides</i>) Boreau's Ramping-fumitory (<i>Fumaria muralis subsp. boraei</i>) Butcher's-broom (<i>Ruscus aculeatus</i>) Climbing Corydalis (<i>Ceratocarpus clavicate</i>) Cornflower (<i>Centaurea cyanus</i>) Fiddle Dock (<i>Rumex pulcher</i>) Grass-of-Parnassus (<i>Parnassia palustris</i>) Great Lettuce (<i>Lactuca virosa</i>) Greater Duckweed (<i>Spirodela polyrrhiza</i>) Green-winged Orchid (<i>Anacamptis morio</i>) Heath Dog-violet (<i>Viola canina</i>) Ivy Broomrape (<i>Orobancha hederae</i>) Large-flowered Hemp-nettle (<i>Galeopsis speciosa</i>) Large-leaved Lime (<i>Tilia platyphyllos</i>) Lesser Spearwort (<i>Ranunculus flammula</i>) Red Hemp-nettle (<i>Galeopsis angustifolia</i>) Rough Clover (<i>Trifolium scabrum</i>) Sea Mouse-ear (<i>Cerastium diffusum</i>) Smith's Pepperwort (<i>Lepidium heterophyllum</i>) Southern Polypody (<i>Polypodium cambricum</i>) Stinking Chamomile (<i>Anthemis cotula</i>) Subterranean Clover (<i>Trifolium subterraneum</i>) Suffocated Clover (<i>Trifolium suffocatum</i>) Weasel's-snout (<i>Misopates orontium</i>) Yellow Bartsia (<i>Parentucellia viscosa</i>)
Non-flowering plants:	Awl-leaved Screw-moss (<i>Tortula subulate</i>) Bristly Pottia (<i>Tortula viridifolia</i>) Lance-leaved Pottia (<i>Tortula lanceola</i>) Slender Haircap (<i>Polytrichastrum longisetum</i>)
Lichen:	<i>Catillaria nigroclavata</i>



	<i>Lecanora albella</i>
Schedule 9 non-native invasive plants:	American Skunk-cabbage (<i>Lysichiton americanus</i>) Bay (<i>Laurus nobilis</i>) Broad-leaved Bamboo (<i>Sasa palmata</i>) Butterfly Bush (<i>Buddleja davidii</i>) Cherry Laurel (<i>Prunus laurocerasus</i>) Corsican Pine (<i>Pinus nigra</i>) Evergreen Oak (Holm Oak) (<i>Quercus ilex</i>) False-acacia (<i>Robinia pseudoacacia</i>) Garden Privet (<i>Ligustrum ovalifolium</i>) Himalayan Cotoneaster (<i>Cotoneaster simonsii</i>) Hybrid Bluebell (<i>Hyacinthoides hispanica x non-scripta</i>) Indian Balsam (Himalayan Balsam) (<i>Impatiens glandulifera</i>) Italian Alder (<i>Alnus cordata</i>) Japanese Knotweed (<i>Fallopia japonica</i>) Japanese rose (<i>Rosa rugosa</i>) Lawson's Cypress (<i>Chamaecyparis lawsoniana</i>) Montbretia (<i>Crocasmia x crocosmifolia</i>) Pampas-grass (<i>Cortaderia selloana</i>) Portugal Laurel (<i>Prunus lusitanica</i>) Red Oak (<i>Quercus rubra</i>) Rhododendron (<i>Rhododendron ponticum</i>) Shallon (<i>Gaultheria shallon</i>) Trailing Bellflower (<i>Campanula poscharskyana</i>) Turkey Oak (<i>Quercus cerris</i>) Wall Cotoneaster (<i>Cotoneaster horizontalis</i>) Western Red-cedar (<i>Thuja plicata</i>)

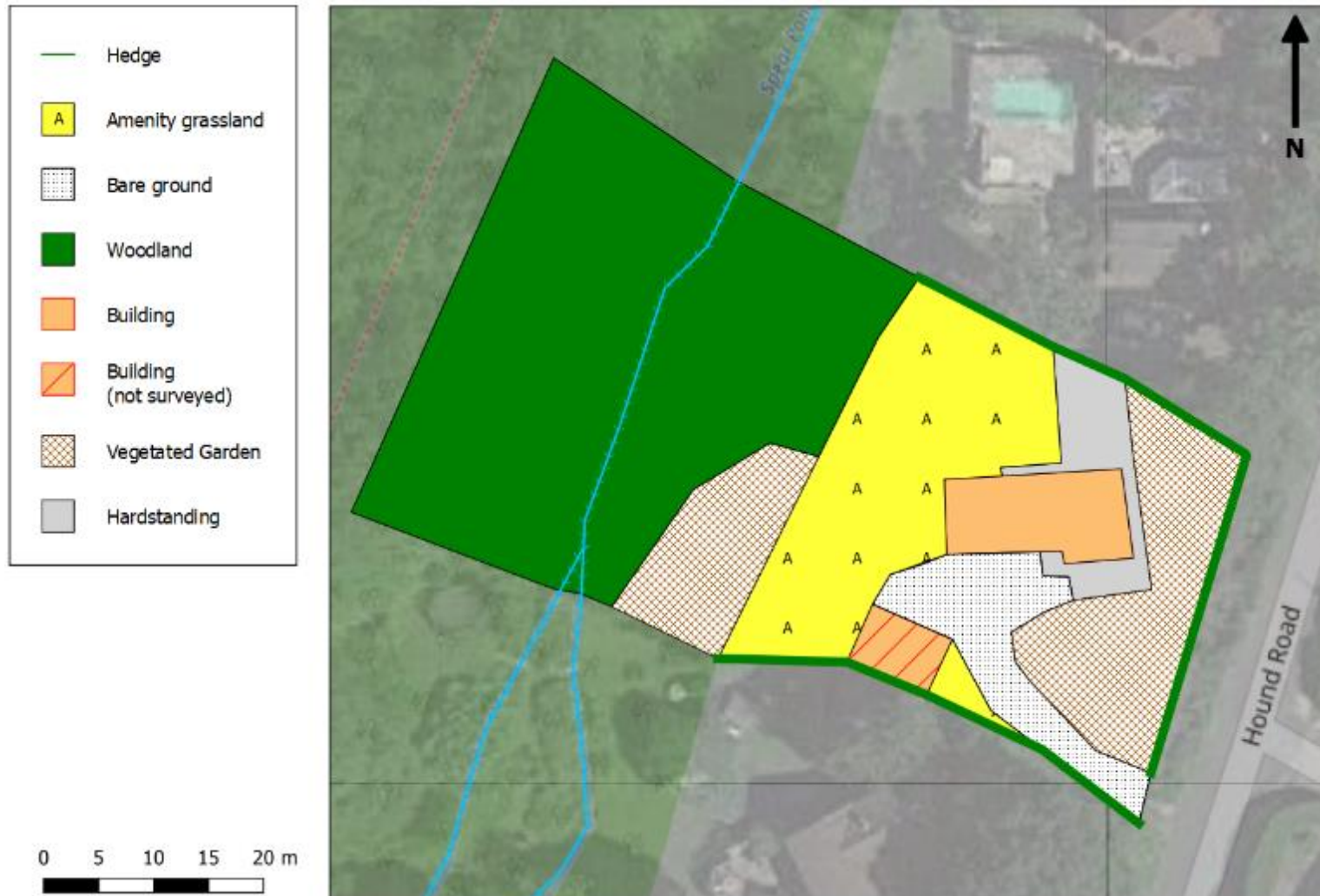


4.3 Field Survey

The broad distribution of each habitat and its general composition is described below. The location of each surveyed area is shown in Figure 4 Habitat Map.

Habitat Map

Figure 4 Habitats Map





4.4 Habitats

The following habitats have been assessed as having no / negligible ecological value and no potential to support protected species – Hardstanding; Bare ground. These habitats are not considered further. In addition, the detached garage structure which was not fully surveyed has not been further described.

4.4.1 Amenity Grassland



Garden Lawn

The area of the site immediately surrounding the house is predominantly composed of relatively short sward height amenity grassland. There are flowering plants such as primrose cowslip hybrids and violets within the lawn area which could provide nectar for foraging wildlife. However, this habitat is relatively regularly mown resulting in it being structurally poor with no thatch. The grassland on site is therefore considered to be of low ecological value. No evidence of or potential for protected species was recorded.

4.4.2 Buildings



The house surveyed



The accessible side loft void



The integral garage and its inner roof structure

Two buildings exist on site, the house with an integral garage and a detached garage building (not being impacted by proposed works). The house is a brick-built rendered structure with a bitumen lined, pitched, interlocking tile roof. Vertical wooden cladding exists on the eastern aspect. The roof structure and the wooden cladding are all tight with no potential bat access points found. The loft void of the house has been previous converted to a living area with only an accessible side loft void present. No evidence of bat roosting was found within the side loft. The integral garage of the house has a disconnected flat bitumen roof. No potential roosting features or evidence of roosting bats was noted within this part of the structure. Consequently, this structure is assessed as having negligible potential to support roosting bats. No evidence of bird nesting was noted.



4.4.3 Vegetated Garden



Vegetated Garden with introduced shrub

An area of vegetated garden with introduced shrub (Japanese cherry, Japanese maple, rhododendron) (labelled as dense bushes within the Proposed Site Plan) exists to the east and west of the surveyed structure. These shrubs are not of high ecological value, although do have potential to support protected species such as foraging/commuting bats and nesting birds. It is also possible that dormice could be present on occasion.

4.4.4 Steam (part of Spear Pond Gully SINC)



Spear Pond Gully

A stream exists on site. This stream is the Spear Pond Gully SINC which is a main watercourse. This provides habitat and connectivity for a range of wildlife including potentially foraging/navigating bats and amphibians. There are records of bats, swifts, hedgehogs, and stag beetles very close to this site.



4.4.5 Woodland (part of Spear Pond Gully SINC)



The woodland which is part of the Spear Pond Gully SINC with the Spear Pond Gully running through it

An area of woodland exists to the north-west of the house. This habitat connects well with the surrounding countryside and is considered to be ecologically valuable with potential to support a range of wildlife, including protected species such as foraging dormice, foraging / commuting / roosting bats, and nesting birds.

4.4.6 Hedgerow



Hedges along the eastern (L) and southern (R) boundaries

Hedges bound the site on the north, east, and south boundaries. These hedges are maintained garden hedges predominantly being single species, such as Leyland cypress and beech. Whilst this habitat offers some value for nesting birds and possible occasional passing dormice, hedges on site are of low ecological value.



4.5 Protected Species

4.5.1 Bats

The house surveyed on site has an interlocking tile roof with no bat access points found within the roof structure or the wooden cladding. The integral garage has a flat roof and no features suitable for bat roosting found. Consequently, with the absence of evidence, potential bat access points, or other suitable roosting features, it is considered that the structure has negligible potential to support roosting bats.

The site does, however, have value for foraging and commuting bats. Bats are likely to forage and navigate on site, in particular along the stream and the edge of the woodland. Good connectivity exists to higher value habitat in the surrounding landscape, including several areas of woodland.

4.5.2 Badger

The surveyed area and adjacent habitats were inspected for field signs of badger activity. This includes badger setts, latrine sites, dung piles, well-used trails, prints and hairs. No evidence of badger was recorded.

4.5.3 Birds

The site has value for both foraging and nesting birds. Specifically, the shrubs and woodland habitat on site have the capacity to support nesting birds. No past evidence of nesting was noted on the surveyed house or integral garage.

4.5.4 Hazel Dormouse

Woodland habitat on site, and to a lesser extent garden shrubs, has potential to support dormice. These habitats provide sufficient 3D structure, dormice were not found within the 1km radius search of the site, making it unlikely that dormice are present within the proposed development area.

4.5.5 Reptiles

Grassland on site has a short sward height with little to no thatch present. Consequently, the cover of habitat is considered to be insufficient to support a population of reptiles.

4.5.6 Amphibians

Although there is a flowing stream that is suitable for amphibians foraging, it is unstable for breeding due to its flowing nature. Nonetheless, the woodland habitat on site is likely to support foraging amphibians.



5 IMPACTS

5.1 Introduction

This section is supported by the results of the Extended Phase 1 ecological survey and presents the likely impacts, *in the absence of any mitigating actions*, on protected and notable habitats and species associated with the proposed works. Only those features confirmed as present on site or considered to have from low to high potential occurrence on site have been taken forward for further assessment. In addition, any designated sites located within 0.5km of the site have been taken forward for further assessment.

5.2 Designated Sites: SSSI/SPA/SAC/RAMSAR

The Solent Maritime SAC (1.80km southeast), Solent and Dorset Coast SPA (1.35km east, 1.80km southeast), Solent and Southampton Water SPA (1.11km southwest, 1.42km east), Solent & Southampton Water RAMSAR (1.11km southwest, 1.42km east), Lee-On-The Solent to Itchen Estuary SSSI (1.11km southwest) and Lincegrove And Hackett's Marshes SSSI (1.42km east) are highly unlikely to be impacted by any works at this site. The Site lies within a SSSI Impact Risk Zone, but the type of development does not require Natural England to be consulted.

A '**Habitats Regulation Assessment' (HRA)** is unlikely to be required on this site.

5.3 Habitats

It is understood the current proposal will result in the loss of a small area of grassland habitat, to make way for the proposed extension. This habitat is of low ecological value and has no potential to support protected species. Consequently, given the small amount of habitat to be impacted, no mitigation is required for this.

It is understood that the shrubs (dense bushes), hedges, woodland and steam will be retained with no direct impacts proposed. Indirect impacts through increased artificial lighting and accidental damage are, however, possible. Consequently, Construction Exclusion Zones, Artificial Lighting Strategy and Silt Fencing are required. This will minimise light spill, prevent degradation of the site for nocturnal species such as bats, and prevent degradation of the steam, as well as protect the SINC from accidental damage during the construction phase.

5.4 Protected Species

5.4.1 Bats

The site has been assessed as capable of supporting foraging and navigating bats. To ensure no negative impacts to bats, mitigation is required. Construction Exclusion Zones will ensure no accidental damage to retained habitat, while an artificial lighting strategy should be put in place to minimise disturbance.



5.4.2 Birds

Shrubs and woodland habitats have been assessed as having potential to support nesting birds. To ensure no negative impacts to birds, mitigation is required. Specifically, accidental damage to retained habitat can be avoided through Construction Exclusion Zones.

5.4.3 Hazel Dormouse

The site has been assessed as having value for dormice, particularly within woodland habitat. This is to be retained and consequently no direct impacts to dormice are considered likely. Accidental damage to retained habitat can be avoided through Construction Exclusion Zones. In addition, new hedgerow planting will enhance the site for dormice.



6 FURTHER SURVEYS, MITIGATION & ENHANCEMENT

6.1 Introduction

This section provides details of recommendations considered necessary in order to ensure that ecological issues are considered fully. This includes recommendations for further ecological surveys to inform the assessment of impacts as well as mitigation, compensation or enhancement measures to avoid, lessen or offset the identified impacts to ecological features arising from the proposed works. Ecological Constraints and Opportunities (Avoidance/Mitigation/Enhancement) are mapped (where mappable) in Section 8.

6.2 Mitigation

This section provides general recommendations for mitigation and enhancement measures. The Ecological Constraints and Opportunities map (ECOPS) should be consulted for locations and area.

6.2.1 Impact Avoidance During the Construction Phase

All activities on site should bear in mind the potential for wildlife or the environment being harmed through the process of development from inception to end, with a proactive approach occurring for lawful protection of wildlife and the environment regarding use of materials, machines, chemicals, and human activity on site.

- Contractors must ensure that no harm can come to wildlife by maintaining the site efficiently, clearing away any material such as wire in which animals can become entangled and preventing access to toxic substances.
- Trenches or large excavations should be covered overnight to prevent wildlife such as badgers or hedgehogs falling in and failing to escape. If this is not possible then a strategically placed plank may provide a means of escape.
- Any large bore pipes should be capped at the end of the day to reduce the potential for badgers and other wildlife entering and becoming trapped.
- If there is a substantial delay before development commences, the site should be maintained in a way that would prevent wildlife colonising it and causing constraints in the future. Such management should include mowing grassland at least twice a year and preventing scrub encroachment.
- Piles of brush wood and or log piles should be carefully inspected for signs of wildlife prior to their removal. This is especially crucial during the period March – September (inclusive) as some species of bird choose such sites to construct their nests. Ideally removal of such features should be done outside of the nesting season. If this is not possible, it is recommended that these features are covered in such a way as to exclude / prevent birds and / or reptiles taking up residence. If nesting birds or reptiles are discovered, work must cease immediately with ecological advice sought.



6.2.2 Construction Exclusion Zones (CEZ)

Areas that are being retained should be protected from damage during the groundworks and construction phase of the development by erecting Heras (or similar) fencing around these features. The only exception to this is at existing access points. Heras fencing is not intended to restrict the access of species to other areas of the site, therefore, mindful procedure by site workers and visitors to the site is always necessary.

No development work should be undertaken within the CEZs and no materials, machinery, chemicals etc. should be stored within these zones. No development or any associated works should be located within these Construction Exclusion Zones.

Appropriate signs should be placed at regular intervals along the fencing to ensure everyone on site is aware of the CEZ and understands its relevance e.g. CONSTRUCTION EXCLUSION ZONE – NO ACCESS.

Any areas proposed for planting post-development should also be fenced off where possible to prevent compaction of the soil through vehicle movements.

6.2.3 Silt Fencing

Site fencing should be erected during the groundworks / construction phase to avoid potential runoff of water and soil towards the stream to the west. Silt should not be removed from any waterbody/watercourse without prior contamination reports or water-invertebrate studies.

6.2.4 Artificial Lighting Strategy

Any new windows, particularly those on the western aspect of the extension facing the Spear Pond Gully SINC, must be installed with light reducing glass or black out blinds to prevent light spill towards the SINC.

- LED and/or low-pressure sodium lamps with glass glazing should be utilised instead of mercury or metal halide lamps. This type of lighting can be utilised more directionally and will reduce the range of light wavelengths emitted thus significantly reducing the levels of UV light which may attract increased levels of invertebrate bat prey items.
- Light ONLY when and where it is needed for health and safety.
- Prevent light-spill and spread. Eliminate bare bulbs, upward pointing lights, keep light near to or below the horizontal. E.g. flat cut-off lanterns. Such light should be positioned to only illuminate the required areas, limiting light spill, both horizontally and vertically. Additionally, hoods, cowls, louvers and/or shields may be utilised to further direct any lighting.
- When external lighting is needed for safety reasons, dynamic lighting schemes that are switched on only when needed should be considered. Dynamic lighting schemes are usually triggered via motion sensors by a pedestrian, bicyclist or cars.
- Timer switch on any proposed outdoor lighting to facilitate dark periods.



6.3 Enhancement

6.3.1 Bat Roosting Provision

One built in bat provision of a type similar to that illustrated is required to be installed on the southern or western aspect of the proposed extension.

- Bat tubes/boxes erected on properties offer potential bat roosts and augment the natural roosting opportunities. These tubes/boxes should be erected not less than 3m high and ideally 4m plus.
- Bat tubes must be built into the fabric of the building, ideally on the southern and western aspects, and not bolted on to the outside and are therefore only suited to structures, not trees. A choice of styles is sometimes available, and the most suitable style can be agreed with the LPA.
- Where bat-tubes are unsuited owing to the type of construction of the proposed structures, other bat boxes or specifically designed bat habitation of an equally durable condition may be substituted for bat-tubes (subject to LPA approval.)
- Where enhancement recommends bat tubes or bat boxes on structures, aspects of the Artificial Lighting Strategy must be followed to ensure artificial lighting does not shine on the access points /boxes or flight paths.



6.3.2 Bird Nesting Provision

One built in swift provision of a type similar to that illustrated is required to be installed on the northern or eastern aspect of the proposed extension. In-built bird bricks provide a long-lasting solution. LPA approval of external mounted boxes is generally required.

- Only boxes of robust or permanent construction are suitable. Some account must be taken of the potential need to maintain and replace boxes after a number of years in use.
- Boxes/bricks should be positioned with orientation preferably between north and east with external positions of not less than 3m, preferably 5m, high to avoid cat predation and vandalism.
- Site nest boxes in locations that are accessible for maintenance, but away from bird feeders. Ideally boxes should be a discrete distance away from other nest boxes.





6.3.3 Landscaping for the Benefit of Wildlife

Landscaping in sympathy with the needs of native wildlife is relevant to all important wildlife species. It helps to support birds by providing plant species which carry seeds, fruits, nuts, and/or support insects (nectar and pollen) upon which birds feed and supports bats by attracting insects to the garden. The list below is not exhaustive, neither is it prescriptive, and recommendations can be applied with discretion.

- The landscape architect/or appointed person should plant a variety of flowering plants, biased towards native and near-native species. Exotics are not required; however, a selection of exotics to extend the flowering season and potentially provide resources for specialist groups now and in the future, is becoming increasingly important owing to climatic changes, and should be given serious consideration by any with a view to protecting and sustaining present and future biodiversity. Plant holistically for biodiversity value: nectar rich plants/shrubs which yield fruits /nuts of benefit to a multitude of species.
- Where grass is planted, use a grass mix other than low amenity lawn grass. Plant mixes with diverse grass species support a wealth of insects when allowed to seed and flower before being cut back.
- Provide green corridors (hedges/trees/water features/lawns or mixed diversity species and beds) with attention to other neighbouring green spaces. The garden itself, when taken as one of many within the neighbourhood, will become part of a wider green corridor.
- Select a variety of plants that will produce foods in different seasons. For winter residents as well as migrants that return early in spring, plants that hold their fruits throughout the winter ("winter-persistent" plants) are a vital food source.
- Leave rough areas of vegetation and native trees and shrubs around the vicinity of any replacement building will also maintain nesting opportunities.
- Avoid pesticide and insecticide use.
- For garden areas: improve the area of green habitat within the garden wherever feasible and where paved spaces and balconies must be used also consider:
 - Planters and raised beds
 - Courtyard trees, low level shrubs, hedges
 - Planting climbers and creepers.
- Provide shelter using low shrubs, thickets or hedges where birds can nest, perch, and escape from predators.
- Leave tree stumps, dead wood (where safe to do so) tree limbs, leaf piles and compost to encourage insects and worms for birds to feed on.
- Appropriate aftercare and management should ensure that these areas are maintained to give optimum benefit to wildlife.



7 CONCLUSIONS

The Extended Phase 1 Habitat Survey undertaken along with the data searches are considered to have collected enough information about the ecological condition of the site to have been able to adequately assess the impact of the proposed development. Further survey work is therefore not required.

A strategy of 'Avoidance' must be employed to significant harm to wildlife species and habitats is avoided through the design of the Site.

Where significant harm cannot be wholly or partially avoided, Mitigation measures have been set out to avoid and reduce the effects/impacts of the development on the important ecological features and the local environment as a whole. All measures should be included as a planning condition for the proposed development.

Ecological enhancement measures are required to improve the ecological condition of the development site (or an alternative site) after the development is complete. Ecological enhancement measures must, therefore, be over and above any avoidance, mitigation and compensation measures required to neutralise the impacts of the development on wildlife. These enhancements should result in a net ecological gain for the site and should be included as a planning condition for the proposed development.

Providing the recommendations within this report are adhered to, with the mitigation measures and enhancements agreed, there would appear to be no ecological constraints to prevent this development.

The local planning authority (LPA) should ensure that the mitigation measures, together with enhancement recommendations, are either 'conditioned' where appropriate, or that full permission is withheld pending the agreement of mitigation, compensation (where necessary) and enhancement measures.

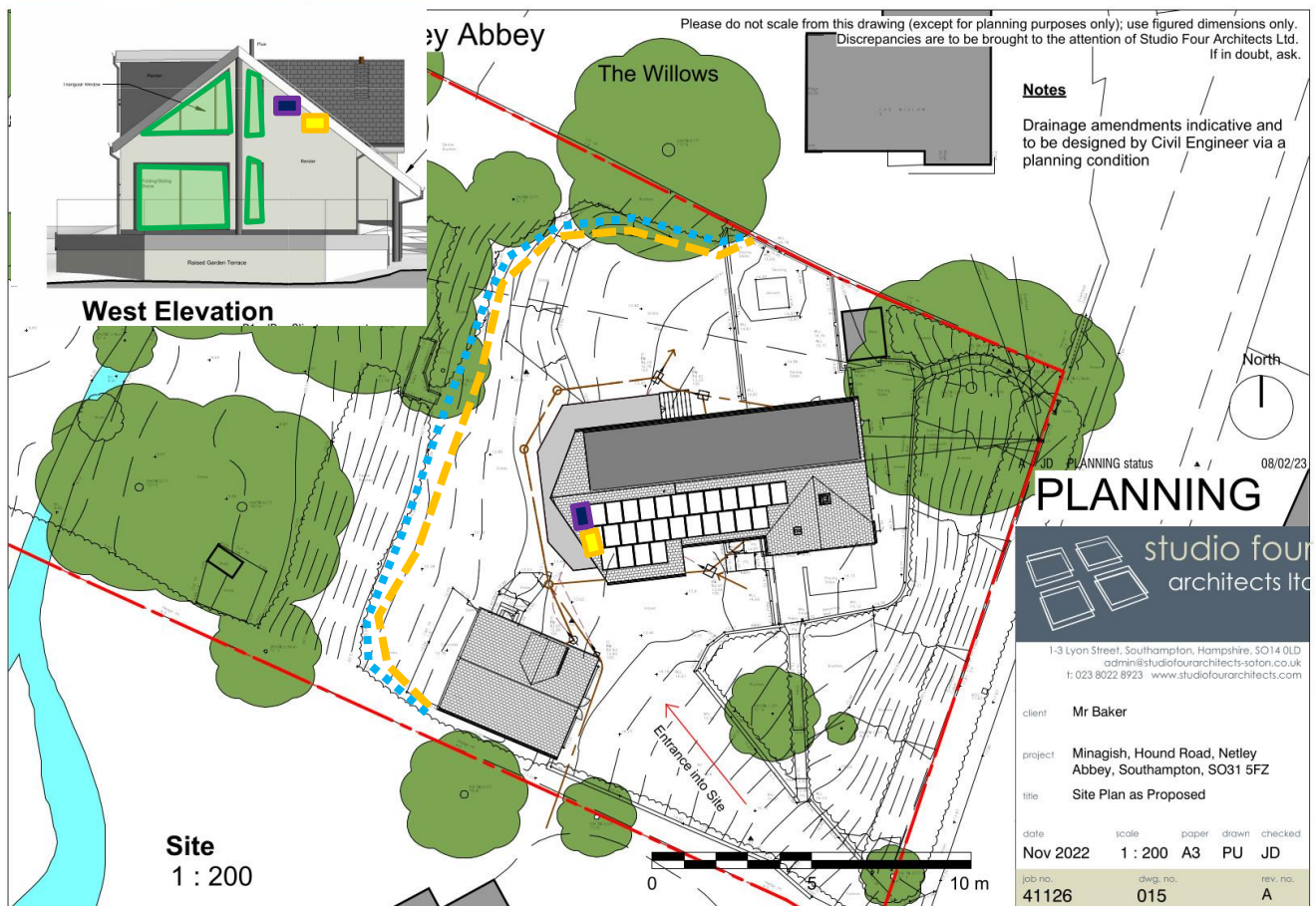
It is the responsibility of all those involved with the proposed development works at this site to ensure that wildlife protection and nature conservation legislation is complied with throughout the lifespan of the development, at every stage. Although no current evidence of protected species was found on site it cannot be assumed that they are not present when the development work commences. Care should therefore be taken during all stages of the development and if any protected are discovered they must not be handled; works must stop immediately, and advice sought from a licensed ecologist.



8 MAP OF ECOLOGICAL CONSTRAINTS & OPPORTUNITIES

Construction Exclusion Zones		Artificial Lighting Strategy (part, window mitigation)	
Silt Fencing		Bat Roosting Provision	
Bird Nesting Provision			

This plan is approximate and not to scale.



Further Mitigation/Enhancement is required but could not be easily mapped without a development plan including: - Impact Avoidance During the Construction Phase; Artificial Lighting Strategy (part); Landscaping for the Benefit of Wildlife.

Refer to the report throughout for the full details of the mitigation/enhancement.



9 REFERENCES

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9.1 Data Search Websites

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- Multi Agency Geographical Information for the countryside: www.magic.defra.gov.uk
- National Biodiversity Network Atlas: www.nbnatlas.org
- UK Biodiversity Action Plan: - www.ukbap.org.uk/NewPriorityList.aspx
- Hampshire Biodiversity Action Plan:
- <http://www.hampshirebiodiversity.org.uk/action.html>
- Hampshire and the Isle of Wight Wildlife Trust: - <http://www.hiwwt.org.uk/>
- Prevent the spread of harmful invasive plants: www.gov.uk/prevent-the-spread-of-harmful-invasive-and-non-native-plants
- <https://freshwaterhabitats.org.uk/projects/million-ponds/pond-creation-toolkit/#Core>