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Part of the ES Group

5 BOYNE RISE
KINGS WORTHY
HAMPSHIRE

Ecological Assessment

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ecology solutions for planners and developers

PROTECTED SPECIES

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1. INTRODUCTION

1.1. Background & Proposals

1.1.1. Ecology Solutions was commissioned in January 2021 to undertake an Ecological Assessment for land at 5 Boyne Rise, Kings Worthy (see Plan ECO1), hereafter referred to as the Application Site.

1.1.2. The 'development proposals' are for four new residential dwellings, access and new residential gardens.

1.1.3. It is noted that the Application Site is in receipt of planning consent for residential development (planning ref: 20/00018/FUL), with that consent supported by ecological survey work undertaken in 2020.

1.1.4. Notwithstanding the development proposals would result in comparable ecological impacts and opportunities relative to the consented scheme, updated ecological assessment work has been undertaken in 2021 in order to support the revised proposals.

1.2. Application Site Characteristics

1.2.1. The Application Site is located within the village of Kings Worthy and is within a residential setting. Existing residential dwellings form the southern, western and northern boundaries. A tree lined public footpath forms the eastern boundary of the Application Site, with further residential development beyond.

1.2.2. The Application Site itself comprises an existing bungalow, associated garden space and outbuildings.

1.3. Ecological Assessment

1.3.1. This document assesses the ecological interest of the Application Site as a whole. The importance of the habitats present is evaluated with regard to current guidance published by the Chartered Institute of Ecology and Environmental Management (CIEEM)[1].

1.3.2. The report also sets out the existing baseline conditions for the Application Site, setting these in the correct planning policy and legal framework, and assessing any potential impacts which may occur from the proposed development. Appropriate mitigation, where necessary, is identified such that it will offset any negative impacts and, where possible, provide for the ecological enhancement of the Application Site, in accordance with relevant planning policy.

[1] *CIEEM (2018) Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine version 1.1. Chartered Institute of Ecology and Environmental Management, Winchester.*

2. SURVEY METHODOLOGY

2.1. The methodology utilised for the survey work was split into three areas. Namely desk study, habitat survey and faunal survey. These are discussed in more detail below.

2.2. Desk Study

2.2.1. In order to compile background information on the Application Site and its immediate surroundings, Ecology Solutions undertook a desk study using the online Multi-Agency Geographic Information for the Countryside (MAGIC)[2] database.

2.2.2. This information included for selected protected species records, and information on designated sites. Information on designated sites is also reproduced on Plan ECO1.

2.3. Habitat Survey Methodology

2.3.1. A habitat survey was carried out in February 2021 to ascertain the general ecological value of the land contained within the boundaries of the Application Site, and to identify the main habitats and associated plant species, with notes on fauna utilising the Application Site.

2.3.2. This survey followed the completion of previous ecological surveys undertaken in April 2020 in support of the previously consented scheme (ref: 20/00018/FUL).

2.3.3. The Application Site was surveyed based around extended Phase 1 survey methodology[3], as recommended by the Joint Nature Conservation Committee (JNCC), whereby the habitat types present are identified and mapped, together with an assessment of the species composition of each habitat. This technique provides an inventory of the basic habitat types present and allows identification of areas of greater potential which require further survey. Any such areas identified can then be examined in more detail.

2.3.4. Using the above method, the Application Site was classified into areas of similar botanical community types, with a representative species list compiled for each habitat identified. The habitats within the Application Site are illustrated on Plan ECO2.

2.3.5. All the species which occur in each habitat would not necessarily be detected during survey work carried out at any given time of the year, since different species are apparent during different seasons. Given the habitats present and the amenity setting, it is considered an accurate and robust assessment has been made.

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[2] http://magic.defra.gov.uk

[3] Joint Nature Conservation Committee (2010). *Handbook for Phase 1 Habitat Survey – a Technique for Environmental Audit*. England Field Unit, Nature Conservancy Council, reprinted JNCC, Peterborough.

2.4. **Faunal Survey**

2.4.1. General faunal activity observed during the course of the survey, whether visually or by call, was recorded. Specific attention was paid to the potential presence of any protected, rare, notable or Priority Species. In addition, specific surveys were undertaken for bats (activity surveys and initial tree/building assessments) and Badgers *Meles meles.*

2.4.2. As above, previous survey work was undertaken at the Site in 2020, and included for bat emergence survey work, as well as consideration to nesting birds and reptiles. The findings of this previous work are referenced where appropriate within this report, with the report also provided at Appendix 1.

2.4.3. **Bats**. The probability of a building/structure being used by bats as a summer roost site increases if it:

is largely undisturbed;
dates from pre 20th century;
has a large roof void with unobstructed flying spaces;
has access points for bats (though not too draughty);
has wooden cladding or hanging tiles; and
is in a rural setting and close to woodland or water.

2.4.4. Conversely, the probability decreases if a building/structure is of a modern or pre-fabricated design/construction, is in an urban setting, has small or cluttered roof voids, has few gaps at the eaves, or is a heavily disturbed premises.

2.4.5. The main requirements for a winter/hibernation roost site is it maintains a stable (cool) temperature and humidity. Sites commonly utilised by bats as winter roosts include trees with cavities/holes, underground sites, and parts of buildings. Whilst different species may show a preference for one of these types of roost site, none are solely dependent on a single type.

2.4.6. All trees within the Application Site were assessed for their potential to support roosting bats. For a tree to be classed as having some potential for roosting bats it must usually have one or more of the following characteristics:

obvious holes, e.g. rot holes and old woodpecker holes;
dark staining on the tree below a hole;
tiny scratch marks around a hole from bats' claws;
cavities, splits and/or loose bark from broken or fallen branches, lightning strikes etc.;
very dense covering of mature Ivy *Hedera helix* over trunk.

2.4.7. The buildings on Site were subject to internal and external inspections by Ecology Solutions in February 2021, updating survey work previously undertaken at the Site in April 2020.

2.4.8. As above, a bat emergence survey was conducted at the Site in May 2020, in support of a now consented scheme. This survey was undertaken in accordance with the adopted best practice measures, commencing 15 minutes before sunset and continuing until 1.5 hours after sunset.

2.4.9. The survey was carried out by two experienced bat surveyors, and utilised a Petterson D240x ultrasound detector and Echometer Touch bat detector with associated recording and analysis equipment.

2.4.10. **Badgers**. Specific surveys for Badgers were carried out in February 2020.

2.4.11. The surveys comprised two main elements. Firstly, searching thoroughly for evidence of Badger setts. For any setts encountered standard survey practice records the location of each sett entrance, even if the entrance appears disused. The following specific information was recorded where appropriate:

i) The number and location of well used or very active entrances; these are clear of any debris or vegetation and are obviously in regular use and may, or may not, have been excavated recently.

ii) The number and location of inactive entrances; these are not in regular use and have debris such as leaves and twigs in the entrance, or have plants growing in or around the edge of the entrance.

iii) The number of disused entrances; these have not been in use for some time, are partly or completely blocked and cannot be used without considerable clearance. If the entrance has been disused for some time all that may be visible is a depression in the ground where the hole used to be, together with the remains of the spoil heap.

2.4.12. Secondly, any evidence of Badger activity such as well worn paths, run-throughs, snagged hair, footprints, latrines, and foraging signs was recorded so as to build up a picture of the use of the Application Site by this species.

3. ECOLOGICAL FEATURES

3.1. The Application Site was subject to a habitat survey by Ecology Solutions in February 2021, with this serving to reaffirm the habitat work previously undertaken at the Site in April 2020. The vegetation present enabled the habitat types to be satisfactorily identified and an accurate assessment of the ecological interest of the habitats to be undertaken.

3.2. The following main habitat/vegetation types were identified within the Application Site:

Buildings and hardstanding;
Amenity garden; and
Boundary vegetation.

3.3. The location of these habitats is shown on Plan ECO2.

3.4. Each habitat present is described below with an account of their representative plant species.

3.5. Buildings and Hardstanding

3.5.1. Four buildings are present within the Application Site (**B1 to B4**). Each are identified on Plan ECO2, and detailed in the text below. These buildings remain unchanged since previous ecological survey work was completed in 2020.

3.5.2. **B1** comprises a brick built, residential bungalow with a pitched, machine cut, concrete tile roof. At its northern end the building supports a small, reduced height extension, again with a pitched concrete tile roof, partially covered in dense Ivy *Hedera helix*. At its southern end the building supports a small flat roof extension (felt). The building supports glazed PVC windows throughout and is generally in a good state of repair, having been an occupied residential dwelling until recently. Due to its construction, the building generally lacks any ingresses or crevices that would be of potential value to faunal species, albeit some minimal opportunities were noted, and are discussed in the Faunal Section below.

3.5.3. Internally, the ground floor comprises several rooms, all well lit with no obvious entrance points. The second storey has been partially converted into a living space along approximately half of its length. All converted areas feature several lights and remain well lit and in a good state of repair. Unconverted areas (approximately half of the roof space) have been left in their original state and feature a pitched apex roof supported by wooden rafters, with bitumen felt underlying the concrete tiles. The void itself was dark, with no obvious points of access. It was heavily cobwebbed and rodent droppings were present.

3.5.4. The building is of negligible intrinsic ecological value.

3.5.5. **B2** comprises a wooden garden shed with a pitched felt roof, and windows. There is no associated void. The building is of negligible

intrinsic biodiversity value and, moreover, of no potential value to faunal species.

3.5.6. Similar to B2, **B3** comprises a wooden shed. It supports a pitched corrugated metal roof and again supports several windows, resulting in a light interior environment (no voids). The building is of negligible intrinsic biodiversity value and is of negligible value to faunal species.

3.5.7. **B4** comprises a breezeblock garage with a pitched asbestos sheet roof. It is internally well lit, with no voids present. The building is of negligible intrinsic biodiversity value and of negligible value to faunal species.

3.5.8. In addition to the buildings, the Site supports areas of hardstanding in the form of an access drive to the existing property. These areas lack any significant vegetation and are of negligible ecological significance.

3.6. **Amenity Garden**

3.6.1. The existing property is wrapped by an amenity garden which supports a limited structural and botanical diversity.

3.6.2. The majority of the garden comprises amenity grass. This habitat supports a typical species assemblage with Perennial Rye *Lolium perenne* and Red Fescue *Festuca rubra* well represented. The limited forb assemblage included for Common Daisy *Bellis perennis*, Ragwort *Jacobaea vulgaris*, Ribwort Plantain *Plantago lanceolata*, Broad-leaved Plantain *Plantago major* and Ground Ivy *Glechoma hederacea*. Occasional Snowdrop *Galanthus sp.* and Cowslip *Primula veris* were also recorded.

3.6.3. Elsewhere, the ground flora was more disturbed in nature, with a more ruderal composition, including some shade tolerant species. In addition to those species recorded in amenity grassland, these areas included for Wild Strawberry *Fragaria vesca*, Ground Elder *Aegopodium podagraria*, Wood Avens *Geum urbanum*, Common Nettle *Urtica dioica* and Lords and Ladies *Arum maculatum*, alongside occasional amenity species.

3.6.4. Areas of shrub planting included for *Buddleja*, Box *Buxus* sp., Tutsan *Hypericum androsaemum* and Rose *Rosa* sp.

3.6.5. The amenity habitats within the Site are not deemed to be of any particular ecological significance.

3.7. **Boundary Vegetation**

3.7.1. The boundaries of the Site are typically formed by garden fencing, or otherwise comprise short stretches of linear shrubs including Box, Laurel *Prunus laurocerasus* and Cypress .

3.7.2. The northern boundary of the Site includes for a scattered, Ivy clad tree/shrub line with Elder *Sambucus nigra,* Holly *Ilex aquifolium*, Box and Hazel *Corylus avellana*.

4. WILDLIFE USE OF THE APPLICATION SITE

4.1. During the survey work undertaken across the Application Site, general observations were made of any faunal use, with specific attention paid to the potential presence of protected or notable species. Moreover, specific surveys were completed for bats, birds and Badger.

4.2. Given the Site's small size and urban context, opportunities for protected and notable species are limited. Nonetheless, the use of the Application Site by protected species has been summarised below.

4.3. Bats

Tree inspections

3.1.1. None of the trees within or immediately adjacent to the Application Site were deemed to be of potential value to roosting bats.

Building inspections

4.3.1. The outbuildings (**B2 to B4**) within the Application Site are unsuitable to support roosting bats on account of being open and light, with no roosting features. No evidence of past or present roosting activity was recorded during an inspection of this feature.

4.3.2. **B1** was deemed to be of negligible to low suitability to support roosting bats on account of localised damage to roof tiles, as well as an area of raised lead flashing.

4.3.3. It is noted the same conclusion was reached following survey work in April and May 2020 (see Appendix 1), and the building is considered to have remained unchanged since this previous assessment work.

4.3.4. On a precautionary basis given the low roosting potential, the building was subject to an emergence survey in May 2020. The date and weather conditions and findings are summarised in Table 1 below.

4.3.5. No evidence of bats emerging or re-entering the building was noted, and as such the building is not considered to support a roost site.

Survey Date	Timings	Temperature (C)	Weather Conditions
15.05.2020	20:35 to 22:25 (Sunset at 20:49)	Start: 14 End: 10	Calm, clear sky, dry.

Table 1. Dates and weather conditions for bat emergence survey of **B1**

Bat Activity

4.3.6. Given its small size and limited habitat diversity, the Application Site is deemed highly unlikely to be of any significant value to foraging and commuting bats.

4.3.7. During the course of the emergence survey, modest levels of activity pertaining to Common Pipistrelle *Pipistrellus pipistrellus* and Soprano Pipistrelle *Pipistrellus pygmaeus* bats were recorded, alongside five registration of Serotine *Eptesicus serotinus,* and a single registration of Brown Long-eared bat *Plecotus auratus*.

4.3.8. This activity is typical of a residential setting where such species will make opportunistic use of amenity habitats as part of a much wider foraging resource.

4.3.9. **Background records.** Several bat roost records were returned from a review of MAGIC, the closest of which pertained to a Common Pipistrelle roost approximately 0.5km to the south-east of the Application Site at its closest point, dating to 2009 .

4.4. Badgers

4.4.1. A Badger survey was undertaken at the Application Site in February 2021. No Badger setts were recorded within the Application Site. Moreover, no other evidence of Badger was recorded, such as snuffle holes or latrines.

4.4.2. As such, it is not considered Badgers are present within the Site, nor that they would be in any way reliant on the Application Site for foraging, commuting or sett building purposes.

4.5. Reptiles

4.5.1. A proportion of the garden habitats would offer some limited opportunities to support common reptiles, and indeed a single Slow Worm *Anguis fragilis* was recorded during previous survey work in April 2020.

4.5.2. Nonetheless, given the extremely limited extent of suitable (albeit sub-optimal) semi-natural habitat, it is not considered that habitats within the Application Site would offer any significant opportunities for common reptile species, nor would the Application Site have the potential to support viable populations in its own right.

4.5.3. In reaching this conclusion, it is noted that extensive areas of comparable or improved habitat are present in the wider area, with well apportioned gardens commonplace. It is deemed that the Application Site therefore represents a small proportion of a much wider resource for common reptiles, and would offer only incidental opportunities for individual specimens.

4.5.4. In light of the above, it is not considered there would be any merit in undertaking a further reptile survey for the Site. Nonetheless, and on a purely precautionary basis, it is proposed for any Site clearance works to adopt a sensitive methodology such that any potential for harm could be avoided. This is considered further in Section 5 of this Ecological Assessment.

4.6. **Amphibians (Great Crested Newts)**

4.6.1. Great Crested Newts *Triturus cristatus* (GCN) are known to travel up to 500m – without barriers that inhibit dispersal – to a breeding pond. However, it is widely accepted they most commonly utilise suitable terrestrial habitat within a much closer distance. Activity is usually concentrated within 100m of breeding ponds, and key habitat is located within 50m (termed by NE as core habitat). The presence of roads and other types of built form can pose a significant barrier to dispersal for GCN.

4.6.2. Indeed, current guidance by NE takes this a step further, stating '*impacts beyond the core area often have little or no tangible impact on the viability of populations*'[1].

4.6.3. The Application Site is within an urban setting, with all waterbodies well distanced from the Site, and with significant urban development (barriers to dispersal) in between. With this in mind, and noting the very small extent of sub-optimal terrestrial habitat present, it is considered highly unlikely GCN would have the potential to be present within the Application Site or be, in any way, reliant on the habitats present. On this basis, no further consideration is given to this species as part of this Assessment.

4.6.4. **Background records.** The desk review using MAGIC did not return any records of GCN within a 1km radius of the Site.

4.7. **Birds**

4.7.1. The habitats within the Application Site are likely to offer some limited opportunities to support nesting birds, albeit the small extent of the Application Site and the limited range of habitats would prevent it from supporting any significant or notable populations. As such, the Application Site would not be of any significance for breeding or foraging birds.

4.7.2. Bird species recorded within and passing over the Application Site during the survey included Blackbird *Turdus merula*, Collared Dove *Streptopelia decaocto*, Starling *Sturnidae* Wren *Troglodytes troglodytes*, Goldfinch *Carduelis carduelis*, Greenfinch *Chloris chloris*, Wood Pigeon *Columba palumbus,* Blue Tit *Cyanistes caeruleus*, Long-tailed Tit *Aegithalos caudatus,* and Magpie *Pica pica.*

4.8. **Invertebrates**

4.8.1. The habitats at the Application Site are likely to support a limited range of common invertebrate species, but there is no reason to suggest any protected or notable species may be present, not least given the small size of the Application Site, and the lack of floristic diversity across the habitats present.

[1] Natural England. Great Crested Newt Method Statement for EPS Licence Application.

4.9. **Other Mammals**

4.9.1. No evidence of any other mammals was recorded during the surveys and it is considered that the Application Site is unlikely to be of significance to any other protected or notable species.

4.9.2. In regards Hazel Dormice *Muscardinus avellanirius*, the Site supports very little in the way of well structured, woody vegetation, with boundary habitat (where present) comprising of non-native species or ornamental specimens of very low potential value. Moreover, the Site is located within an urban setting, with no connectivity to suitable habitats in the wider landscape. It is noted this same conclusion was reached in respect of the consented proposals for the Site.

4.9.3. The habitats would have some limited potential to provide limited opportunities for European Hedgehog *Erinaceous europaeus* as part of a wider resource.

4.9.4. **Background records.** The desk review using MAGIC returned three records of Dormouse in the local area, the closest being approximately 300m to the south of the Application Site, dating to 2012. As above, there is no connecting habitat linking this record to habitats within the Application Site.

5. ECOLOGICAL EVALUATION

5.1. The Principles of Site Evaluation

5.1.1. We have had regard to the latest guidelines for ecological evaluation produced by Chartered Institute of Ecology and Environmental Management (CIEEM) who propose an approach that involves professional judgement, but makes use of available guidance and information, such as the distribution and status of the species or features within the locality of the project.

5.1.2. The methods and standards for site evaluation within the British Isles have remained those defined by Ratcliffe[4]. These are broadly used across the United Kingdom to rank sites, so priorities for nature conservation can be attained. For example, current Site of Special Scientific Interest (SSSI) designation maintains a system of data analysis that is roughly tested against Ratcliffe's criteria.

5.1.3. In general terms, these criteria are size, diversity, naturalness, rarity and fragility, while additional secondary criteria of typicalness, potential value, intrinsic appeal, recorded history, and the position within the ecological/geographical unit are also incorporated into the ranking procedure.

5.1.4. Any assessment should not judge sites in isolation from others, since several habitats may combine to make it worthy of importance to nature conservation.

5.1.5. Further, relying on the national criteria would undoubtedly distort the local variation in assessment, and therefore additional factors need to be taken into account, e.g. a woodland type with comparatively poor species diversity, common in the south of England may be of importance at its northern limits, say in the border country.

5.1.6. In addition, habitats of local importance are often highlighted within a local Biodiversity Action Plan (BAP). The Biodiversity Action Plan for Hampshire, as compiled by the Hampshire Biodiversity Partnership, identifies a number of habitat and species specific action plans.

5.1.7. Levels of importance can be determined within a defined geographical context from the immediate site or locality through to the international level.

5.1.8. The legislative and planning policy context are also important considerations and have been given due regard throughout this Assessment.

[4] Ratcliffe, D A (1977). *A Nature Conservation Review: the Selection of sites of Biological National Importance to Nature Conservation in Britain*. Two Volumes. Cambridge University Press, Cambridge.

5.2. **Designated Sites**

5.2.1. There are no designated sites of nature conservation interest located within or immediately adjacent to the Application Site.

5.2.2. Given the significant separation of the Application Site from any designated sites, as well as the small scale of the proposals (i.e. a net gain of one dwelling relative to the consented scheme), it is considered that potential adverse impacts would be limited to impacts on the water environment through nutrification.

5.2.3. All other potential impact pathways can be scoped out. Consideration is given to potential nutrification impacts below.

Consideration of Nutrient Neutrality

5.2.4. The Application Site is located within an area where NE consider nutrient enrichment has the potential to lead to adverse impacts on nearby European Designated sites through eutrophication. The potential for harm to arise through this pathway was first identified through an Integrated Water Management Study (IWMS) published in March 2018.

5.2.5. Subsequent to the publication of the IWMS, NE have required proposals for new residential development (as well as other developments which would lead to overnight stays) to demonstrate they would not adversely impact upon European Sites in the Solent region.

5.2.6. NE recommend applications for new residential development in the local area are supported by a nutrient budget calculation, demonstrating the net impact of the proposals. Where a development is demonstrated to give rise to additional nutrient enrichment, appropriate mitigation is required to off-set this impact and ensure the proposals are nutrient neutral (as a minimum). Both NE and Winchester County Council consider that this mitigation can be appropriately secured by way of a Grampian Condition.

5.2.7. NE have provided guidance on how to calculate a nutrient budget in their document entitled *Advice on Achieving Nutrient Neutrality for New Development in The Solent Region*, dated June 2020 (Version 5).

5.2.8. A nutrient budget calculation has been undertaken in respect of the proposals and is detailed overleaf.

Stage 1	CALCULATE TOTAL NITROGEN LOAD FROM DEVELOPMENT WASTEWATER	Value	Notes
A	Net number of new 'dwellings' (rooms x occupancy rate)	3	There is an existing dwelling. The proposals seek four new dwellings. This represents a net gain of three. [N.B. this is a net gain of one dwelling relevant to the consented scheme]
B	Average population per dwelling	2.4	Figure Taken from 2011 Population Census.
C	Additional population arising from development (AxB)	7.2	
D	Maximum water use per person per day (litres)	110	Natural England advises a 110 litre maximum. This would be secured by planning condition
E	Wastewater generated by development per day (litres) (CxD)	792	
F	Permit limit for total nitrogen concentration at WWTW (mg/l)	27	Based on using Harestock WWTW, which does not operate with a set permit level.
G1	Adjusted permit limit to account for WWTW operating at 90% efficiency (mg/l)	N/A	Only applicable to WWTW with an existing Nitrogen permit.
G2	Deduct 2mg/l for TN loading	25	Deduct acceptable TN loading (@ 2 mg/l TN) (as defined in paragraph 4.40 of Natural England guidance)
H	Total Nitrogen discharged after treatment (mg/day)	19800	
I	Wastewater TN load per annum (kg/yr) (H/1,000,000 x 365)	7.23	

Stage 2	CALCULATE NITROGEN LOAD FROM CURRENT LAND USE		
J	Total area of site (ha)	0.13	Exact measurement is 1,288 metres squared.
K	Total area of existing agricultural land lost to development (ha)	0	Under Natural England guidelines site is classified as 'urban development' (inclusive of built form and garden).
L	Nitrate loss associated with agricultural land (kg/ha/yr)	0	N/A
M	Total Nitrogen load of current agricultural land use (kg/yr) (KxL)	0	N/A

Stage 3	CALCULATE NITROGEN LOAD FROM FUTURE LAND USE		
N	Area of land changing to urban use (ha)	0	Land use does not change from pre-development to post-development.
O	Nitrogen load from new urban land use (kg/yr) (N x 14.3)	0	Land use does not change from pre-development to post-development.
P	Area of land designated as open space / SANG (ha)	0	N/A
Q	Nitrogen load from SANG / open space (kg/yr) (P x 5)	0	N/A
R	Total Nitrogen load from development not passing through WWTW (kg/yr) (O+Q)	0	N/A

Stage 4	NET CHANGE IN TOTAL NITROGEN LOAD FROM DEVELOPMENT		
S	Total Nitrogen load from wastewater (kg/yr) (I)	7.23	
T	Net change in Nitrogen from land use change (R-M)	0.00	
U	Nitrogen Budget (without buffer) (kg/yr) (S+T)	7.23	
V	Nitrogen Budget (with 20% buffer) (kg/yr) (U/1.2)	8.67	Natural England recommends incorporating a 20% precautionary buffer.

Table 2. Nutrient Nitrogen Calculation undertaken for the proposed development at 5 Boyne Rise

5.2.9. As was the case for the consented scheme at the Application Site (planning ref: 20/00018/FUL), the development proposals would result in a net increase in nutrients entering the local water environment.

5.2.10. Noting the potential for nutrification, it is the view of NE that potential harm cannot be ruled out when the proposals are considered in combination with other plans or projects in the local area. On this basis, mitigation and avoidance measures would be required in order to ensure potential adverse impacts are avoided.

5.2.11. As above, both NE and Winchester County Council consider this mitigation/avoidance can be appropriately secured by way of a Grampian Condition. Indeed, an appropriately worded Condition was attached to the consented scheme (planning ref: 20/00018/FUL) for the Site. This Condition, which is replicated below, would be equally sufficient to ensure potential adverse impacts are avoided in respect of the proposed development.

"The development hereby permitted shall NOT BE OCCUPIED until:

a) A water efficiency calculation which demonstrates that no more than 110 litres of water per person per day shall be consumed within the development, and this calculation has been submitted to and approved in writing by the Local Planning Authority.

b) A mitigation package addressing the additional nutrient input arising from the development has been submitted to, and approved in writing by the Local Planning Authority. Such mitigation package shall address all of the additional nutrient load imposed on protected European sites by the development and be implemented in full prior to first occupation and shall allow the Local Planning Authority to ascertain on the basis of the best available scientific evidence that such additional nutrient loading will not have an adverse effect on the integrity of the protected European Sites, having regard to the conservation objectives for those sites; and

c) All measures forming part of that mitigation have been secured and submitted to the Local Planning Authority."

5.2.12. It is noted that numerous nutrient mitigation schemes are now coming forward in the water catchment area. These mitigation schemes operate by ensuring a net reduction in nutrient release in the water network (typically through reducing nutrients generated through agricultural practices), allowing 'nutrient credits' to be sold to developers. The purchase of a proportional quantum of credits allows a developer to ensure nutrient neutrality for their scheme. In addition to the strategic schemes coming forward, individual developers can also bring forward a bespoke mitigation/avoidance package in the local area.

5.2.13. The above worded planning Condition would enforce the adoption of an appropriate nutrient mitigation scheme prior to occupation. As it is only at the point of occupation that potential impacts can arise (as there would be not water use/nutrient generation prior to this point), it can be assured that potential impacts would be avoided.

5.2.14. As such, and in summary, an appropriately worded Grampian Condition will provide certainty (as is required under the Habitat Regulations 2017) for potential adverse impacts on European Sites to be avoided. Therefore, there would be no potential for any adverse impacts to arise on any European sites, either alone or in combination with other plans or projects. As such, Winchester County Council, as the competent authority, could safely conclude that planning permission could be lawfully granted in line with tests set out at Regulation 63 of the Habitat Regulations 2017 (as Amended).

5.3. **Habitats Within the Application Site**

5.3.1. As identified in the Baseline Section above, the habitats within the Application Site are not of any significant ecological value,

comprising an amenity garden with limited structural and botanical diversity.

5.3.2. Noting the low ecological value of these habitats, losses would be of no significant ecological consequence and would be appropriately mitigated for through the provision of new garden space as part of the proposals. This would ensure the provision of habitats of comparable ecological interest.

5.3.3. In reaching this conclusion, it is noted the development proposals would result in comparable biodiversity impacts to the consented scheme for the Application Site, with the proposed development designed to fit within the footprint of the approved scheme.

5.3.4. Indeed, opportunities exist for small scale native tree, hedge and/or shrub planting within the scheme, including at Site boundaries. This would offer modest enhancements relative to the existing situation.

Summary

5.3.5. In summary, the habitats present within the Application Site are of no ecological significance, and no specific mitigation would be required for their loss. The retention/creation of amenity garden space as part of the proposals would ensure the provision of habitats of comparable ecological interest, and ensure the existing value of the Site is retained.

5.3.6. Nonetheless, opportunities have been identified to deliver new landscaping and habitat creation within the Site, such as through native tree and hedge planting along the boundaries of the Site. Whilst modest in extent, these opportunities would nonetheless realise meaningful enhancements relative to the existing situation and will allow for a net gain in biodiversity on Site.

5.4. **Faunal Evaluation**

Bats

5.4.1. **Legislation.** All bats are protected under Schedule 5 of the Wildlife and Countryside Act 1981 (as Amended) and included on Schedule 2 of the Conservation of Habitats and Species Regulations 2017 (“the Habitats Regulations”), as Amended. These include provisions making it an offence to:

Deliberately kill, injure or take (capture) bats;
Deliberately disturb bats in such a way as to:

i. be likely to impair their ability to survive, to breed or reproduce, or to rear or nurture their young, or to hibernate or migrate; or
ii. affect significantly the local distribution or abundance of the species to which they belong

Damage or destroy any breeding or resting place used by bats;

Intentionally or recklessly to obstruct access to any place used by bats for shelter or protection.

5.4.2. While the legislation is deemed to apply even when bats are not in residence, NE guidance suggests certain activities such as re-roofing can be completed outside sensitive periods, when bats are not in residence, provided these do not damage or destroy the roost.

5.4.3. The words 'deliberately' and 'intentionally' include actions where a court can infer the defendant knew the action taken would almost inevitably result in an offence, even if that was not the primary purpose of the act.

5.4.4. The offence of damaging or destroying a breeding site or resting place (which can be interpreted as making it worse for the bat) is an absolute offence. Such actions do not have to be deliberate for an offence to be committed.

5.4.5. European Protected Species licences are available from NE in certain circumstances, and permit activities that would otherwise be considered an offence.

5.4.6. Licences can usually only be granted if the development is in receipt of full planning permission and it is considered that:

(i) The activity to be licensed must be for imperative reasons of overriding public interest or for public health and safety;
(ii) There is no satisfactory alternative; and
(ii) The action authorised will not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status in their natural range.

5.4.7. **Application Site Evaluation.** Specific bat survey work at the Application Site has confirmed the absence of roosting bats.

5.4.8. Moreover, given its small size and limited habitat diversity, the Application Site is deemed highly unlikely to be of any significant value to foraging and commuting bats.

5.4.9. **Avoidance, Mitigation and Enhancements**. Given the small scale of the proposals, and the very limited value of the Site to bats, no specific mitigation would be required. Where habitat losses will arise, these are not considered to be of any significance to bats and no mitigation would be required.

5.4.10. In order to ensure modest enhancements, the development proposals will deliver new boundary hedgerow and/or scrub planting, providing improved semi-natural habitat within the Site.

5.4.11. As an enhancement for roosting bats, two bat roost features are to be provided as part of the proposals. This will include for two Ibstock *enclosed bat boxes* upon the new buildings. These features will ensure a net gain in roosting opportunities within the Site, post development. New features should be installed below the eaves of

the buildings (at a height >3m), at a southern or south-western aspect and away from areas of direct light spill (including glare from windows).

5.4.12. The proposed locations of these features are detailed on Plan ECO3.

Badgers

5.4.13. **Legislation**. The Protection of Badgers Act 1992 consolidates the previous Badgers Acts of 1973 and 1991. The legislation aims to protect the species from persecution, rather than being a response to an unfavourable conservation status, as the species is in fact common over most of Britain, with particularly high populations in the south.

5.4.14. As well as protecting the animal itself, the 1992 Act also makes the intentional or reckless destruction, damage, or obstruction of a Badger sett an offence. A sett is defined as “any structure or place which displays signs indicating current use by a Badger”.

5.4.15. In addition, the intentional elimination of sufficient foraging area to support a known social group of Badgers may, in certain circumstances, be construed as an offence by constituting ‘cruel ill treatment’ of a Badger.

5.4.16. Previous guidelines were issued by NE on the types of activity it considers should be licensed within certain distances of sett entrances. They stated works that may require a licence include using heavy machinery within 30m of any entrance to an active sett, using lighter machinery within 20m, and light work such as hand digging within 10m. However, guidance issued by NE in September 2007 specifically stated:

“It is not illegal, and therefore a licence is not required, to carry out disturbing activities in the vicinity of a sett if no Badger is disturbed and the sett is not damaged or obstructed.”

5.4.17. More recent guidance produced by NE in 2009 states that Badgers are relatively tolerant of moderate levels of disturbance and that low levels of disturbance at or near to Badger setts do not necessarily disturb the Badgers occupying those setts. However, NE’s guidance continues by stating that any activity that will or is likely to cause one of the interferences defined in Section 3 (such as damaging a sett tunnel or chamber or obstructing access to a sett entrance) will continue to be licensed.

5.4.18. This guidance no longer makes reference to any 30/20/10m radius as a threshold for whether a licence would be required. Nonetheless, it is stated that tunnels may extend for 20m so care needs to be taken when implementing excavating operations within the vicinity of a sett, and to take appropriate precautions with vibrations and noise, etc. Fires/chemicals within 20m of a sett should specifically be avoided.

5.4.19. This interim guidance allows greater professional judgement as to whether an offence is likely to be committed by a particular development activity, and therefore whether a licence is required or not. For example, if a sett clearly orientates southwards into an embankment it may be somewhat redundant to have a 30m exclusion zone to the north.

5.4.20. **Application Site Evaluation**. No evidence of Badger was recorded within the Application Site and, as such, the Site is not considered to be of any value to Badger populations in the local area.

5.4.21. **Avoidance/Mitigation Opportunities**. In line with best practice and noting that Badgers are a mobile species which can rapidly excavate new setts, an updated survey should be undertaken if construction works are not commenced within 12 months of the previous surveys.

Reptiles

5.4.22. **Legislation**. Rare, endangered or declining species receive 'full protection' under the Wildlife and Countryside Act 1981 as well as protection under The Conservation of Habitats and Species Regulations 2017 (as Amended), which transposed into UK law the European Community Directive on the Conservation of Natural Habitats and of Wild Fauna and Flora, more commonly known as the Habitats Directive. Species that are fully protected include Smooth Snake *Coronella austriaca* and Sand Lizard *Lacerta agilis*. These receive the following protection from:

killing, injuring, taking;
possession or control (of live or dead animals, their parts or derivatives);
damage to, destruction of, obstruction of access to any structure or place used for shelter or protection;
disturbance of any animal occupying such a structure or place; and
selling, offering for sale, possession or transport for purposes of sale (live or dead animal, part or derivative).

5.4.23. Given the geographical location of the Application Site, and the habitats present, it is considered that neither of these species would be present.

5.4.24. Due to their abundance in Britain, Common Lizard, Slow-worm, Grass Snake and Adder *Vipera berus* are only 'partially protected' under the Wildlife and Countryside Act 1981 (as Amended) and as such only receive protection from:

deliberate killing and injuring;
being sold or other forms of trading.

5.4.25. **Application Site Evaluation**. A single juvenile Slow Worm was recorded during a Site visit in 2020.

5.4.26. Noting the extremely limited extent of suitable reptile habitat, it is not considered the habitats within the Application Site would offer any significant opportunities for common reptile species in the local area.

5.4.27. The development proposals will result in losses to very small areas of suitable (sub-optimal) reptile habitat (i.e. during construction). However, new landscaping will realise the delivery of comparable habitats post-development.

5.4.28. **Mitigation/Enhancements.** The proposals will result in minor losses to suitable (sub-optimal) reptile habitat during Site clearance and construction operations. However, given the very limited extent and sub-optimal nature of these habitats, it considered any losses would be of negligible significance to common reptile populations in the local area (comprising a tiny proportion of a wider resource).

5.4.29. Moreover, and as set out above, the proposals will deliver comparable habitats post-development.

5.4.30. Notwithstanding the above, and on a precautionary basis, in order to avoid the potential for injury or death of reptiles during construction, it is proposed for a sensitive avoidance strategy to be adopted at the Application Site. Given the size of the Application Site, it is considered, at this stage, that one such suitable avoidance strategy could comprise a habitat manipulation exercise, a methodology for which is summarised below.

5.4.31. Prior to any construction related works commencing, areas of suitable reptile habitat will be subject to a habitat manipulation exercise to encourage reptiles to leave the Application Site of their own accord. This manipulation exercise will include an initial exercise to collect and remove any potential refugia (i.e. garden waste, fence panelling), with this undertaken by hand. In the unlikely event any reptiles are uncovered, they will be relocated to the eastern boundary of the Site (allowing dispersal into the wider area).

5.4.32. Subsequently, a two stage, stepwise cut of suitable reptile habitat (i.e. grassland/ruderal vegetation) will be undertaken. The first cut will be undertaken to a height of 10cm and the second to ground level (or as close as is practical). Any debris on Site would also be removed from the Site as part of this exercise.

5.4.33. Cutting will be in a directional manner, encouraging any reptiles present to disperse away from the Application Site (and into suitable habitat in the wider area). This exercise will ensure no ‘islands’ of suitable habitat are created (within which reptiles may otherwise remain). Where required, arisings will be carefully removed alongside the cutting regime.

5.4.34. Habitat manipulation works will be overseen by a suitably qualified ecologist, and will only commence during suitable weather conditions within the main active season for reptiles (typically mid-March to October, but weather dependent). Works should be

undertaken in dry, sunny conditions with a minimum temperature of around 10°C.

5.4.35. Following the completion of this cut, habitats within the Application Site will be maintained as unsuitable for reptiles (e.g. through regular mowing) in order to prevent any potential for recolonization during construction. Should this maintenance not be practical, herpetofauna fencing will instead be installed along the relevant boundaries of the Site in order to exclude reptiles until the completion of works.

5.4.36. The above methodology will ensure potential adverse impacts on reptiles will be fully avoided as part of the development proposals.

Nesting Birds

5.4.37. **Legislation**. Section 1 of the Wildlife & Countryside Act is concerned with the protection of wild birds. With certain exceptions all wild birds and their eggs are protected from intentional killing, injuring and taking; and their nests, whilst being built or in use, cannot be taken, damaged or destroyed.

5.4.38. Schedule 1 of the Wildlife & Countryside Act 1981 is a list of the nationally rarer and uncommon breeding birds for which all offences carry special (i.e. greater) penalties. These species also enjoy additional protection whilst breeding, as it is also an offence to disturb adults or their dependant young when at the nest.

5.4.39. **Application Site Evaluation.** The habitats within the Application Site offer some limited opportunities to support nesting birds, albeit the small extent of the Site and the limited range of habitats would prevent it from supporting any notable populations. As such, the Application Site would not be of any significance for breeding or foraging birds. A typical range of birds were recorded during the course of the Phase 1 survey.

5.4.40. **Mitigation and Enhancements.** As all species of birds receive general protection whilst nesting, to avoid a possible offence, it is recommended that any clearance of suitable nesting vegetation (including any scrub clearance should be undertaken outside the main breeding season (March to August inclusive), or checks made for nesting birds by an ecologist immediately prior to removal.

5.4.41. Where losses to features of potential value to nesting birds are required as part of any forthcoming planning application, it is considered these could be more than compensated for through the provision of a range of suitable nesting boxes.

5.4.42. As an enhancement over the existing situation, it is proposed for a total of two House Sparrow nesting terraces to be installed at the northern aspect of the new buildings. This will provide new nesting opportunities for a declining urban bird species. House Sparrow boxes should be installed at the highest point of the building (just below the eaves) and ideally at least 3m above the ground. The boxes should be situated at a northern aspect to reduce solar gain.

The proposed location and design of House Sparrow boxes are detailed on Plan ECO3.

Other Species

5.4.43. **Application Site Evaluation**. No evidence of the use of the Application Site by protected or notable species was recorded. Noting the habitats present, it is not considered the Application Site would have the potential to provide significant opportunities to any other protected or notable species.

5.4.44. Should they be present in the local area, Hedgehog will benefit from new habitat creation measures, as well as the provision of hedgehog tunnels in the main development footprint. Hedgehog tunnels will comprise small (13cm by 13cm) openings in the base of garden fences and boundary walls, providing a means for this species to migrate between gardens in the Application Site.

5.4.45. It is proposed for one hedgehog tunnel to be provided at each aspect of adjoining residential gardens (i.e. 3 in total per garden), as well as within any boundary walls. This will ensure hedgehogs are able to disperse throughout residential parcels. The proposed location of hedgehog tunnels is provided on Plan ECO3.

5.4.46. This would provide a significant enhancement should hedgehogs colonise the Application Site in the future.

Invertebrates

5.4.47. **Application Site Evaluation** Given the habitats present it is likely only common invertebrate species would be present within the Application Site, and there is no evidence to indicate any protected or notable species' may utilize the Application Site. As such, no specific mitigation is considered likely to be required as part of any development proposals.

5.4.48. **Enhancements.** The creation of a wildflower buffer along the Application Sites northern boundary will offer new nectar and pollen sources, offering a food source for a range of pollinator insects.

6. PLANNING POLICY CONTEXT

6.1. The planning policy framework that relates to nature conservation in Kings Worthy, Winchester is issued at two main administrative levels: nationally through the Revised National Planning Policy Framework (NPPF), at the local level through the Winchester District Local Plan Part 1. Any proposed development will be judged in relation to the policies contained within these documents.

6.2. National Policy

Revised National Planning Policy Framework

6.2.1. The National Planning Policy Framework (NPPF) sets out the Government's requirements for the planning system and was adopted on 27 March 2012. A revised version of the NPPF was adopted on 24 July 2018 and updated on 19 February 2019.

6.2.2. The key element of the NPPF is that there should be '*a presumption in favour of sustainable development*' (paragraph 11).

6.2.3. The revised NPPF is broadly comparable to the previous version, including reference to minimising impacts on and providing net gains for biodiversity and ensuring that Local Authorities afford appropriate weight to statutory and non-statutory nature conservation designations, protected species and biodiversity (paragraph 170).

6.2.4. The NPPF also considers the strategic approach which local authorities should adopt with regard to the protection, enhancement and management of green infrastructure, priority habitats and ecological networks, and the recovery of priority species.

6.2.5. Paragraphs 175 and 176 of the NPPF outline a number of principles which planning authorities should apply, including: provision for refusal of planning applications if significant harm cannot be avoided, mitigated or as a last resort compensated for; applying the protection given to 'habitats sites' (SPAs and SACs) to potential SPAs, possible SACs, listed or proposed Ramsar sites and sites identified (or required) as compensatory measures for adverse effects on 'habitats sites' (as defined within the NPPF); and the provision for the refusal for developments resulting in the loss or deterioration of 'irreplaceable' habitats unless there are wholly exceptional reasons and a suitable compensation strategy exists.

6.2.6. Paragraph 177 states that 'The presumption in favour of sustainable development does not apply where the plan or project is likely to have a significant effect on a habitats site (either alone or in combination with other plans or projects), unless an appropriate assessment has concluded that the plan or project will not adversely affect the integrity of the habitats site.'. It is noted that paragraph 11d provides further guidance in relation to this matter.

6.2.7. National policy therefore implicitly recognises the importance of biodiversity and that, with sensitive planning and design, development and conservation

of the natural heritage can co-exist, and benefits can, and should be obtained.

6.3. Local Policy

Winchester District Local Plan Part 1 – Joint Core Strategy

6.3.1. There are two principal documents for planning control purposes in Winchester District. The first, Winchester District Local Plan Part 1 – Joint Core Strategy, was adopted in March 2013. It provides the strategic planning policy framework for the district up until 2031.

6.3.2. Policy CP15 is concerned with the maintenance, protection, enhancement and provision of green infrastructure. It encourages onsite provision of infrastructure that integrates with the identified green network, and links areas of biodiversity, among other objectives.

6.3.3. Policy CP16 states development will be supported where it delivers a net gain in biodiversity. The policy refers to the protection afforded to sites of international, national and local importance. New development will be required to avoid adverse impacts, it states, or to mitigate where necessary. Compensation measures are described as a last resort. Development must have regard to the District's Biodiversity Action Plan (BAP).

6.3.4. Policy CP19 relates to the South Downs National Park. This is not relevant to this planning application, as the Application Site does not fall within this area.

6.4. Discussion

6.4.1. Recommendations have been put forward in this report that would fully safeguard the existing ecological interest of the Application Site, and wherever possible, measures to enhance biodiversity value have been clearly indicated. Based on the surveys undertaken and the assessment for the presence and potential presence of protected species due regard to the necessary measures to enhance the Application Site for such species have been put forward in this report.

6.4.2. In conclusion, implementation of the measures set out in this report enable the proposals to fully accord with planning policy for ecology and nature conservation at all administrative levels.

7. SUMMARY AND CONCLUSIONS

7.1. Ecology Solutions was commissioned in January 2021 to undertake an Ecological Assessment for land at 5 Boyne Rise, Kings Worthy.

7.2. The 'development proposals' are for four new residential dwellings, access and new residential gardens.

7.3. The Application Site was surveyed by Ecology Solutions in February 2021, based around extended Phase 1 habitat survey methodology, as recommended by JNCC. In addition, general faunal activity, such as birds or mammals observed visually or by call during the course of the surveys, was recorded. Due consideration to the presence or potential presence of protected species was also taken into account during the assessment of impacts, biodiversity value and mitigation recommendations.

Designated Sites

7.4. There are no statutory or non-statutory designated sites (designated for reasons of nature conservation) located within or adjacent to the Application Site.

7.5. Given the significant separation of the Application Site from any designated sites, as well as the small scale of the proposals (i.e. a net gain of one dwelling relative to the consented scheme), it is considered that potential adverse impacts would be limited to impacts on the water environment through nutrification. All other potential impact pathways can be scoped out.

7.6. In regards potential nutrification impacts, the proposals will result in a net gain in nutrients entering the local water environment. As such, potential impacts on Solent European Sites cannot be ruled out, in the absence of mitigation.

7.7. A suitably worded planning condition is proposed to ensure potential impacts in this regard are avoided. NE and Winchester County Council consider this mitigation/avoidance can be appropriately secured by way of a Grampian Condition. Indeed, an appropriately worded Condition was attached to the consented scheme (planning ref: 20/00018/FUL) for the Site. This Condition would be equally sufficient to ensure potential adverse impacts are avoided in respect of the proposed development.

7.8. An appropriately worded Grampian Condition will provide certainty (as is required under the Habitat Regulations 2017) for potential adverse impacts on European Sites to be avoided. Therefore, there would be no potential for any adverse impacts to arise on any European sites, either alone or in combination with other plans or projects. As such, Winchester County Council, as the competent authority, could safely conclude that planning permission could be lawfully granted in line with tests set out at Regulation 63 of the Habitat Regulations 2017 (as Amended).

7.9. No other potential impacts are identified in respect of any other designated sites (or through any other impact pathways), either alone or in combination with other plans or projects.

Habitats

7.10. the habitats within the Application Site are not of any significant ecological value, comprising an amenity garden with limited structural and botanical diversity.

7.11. Noting the low ecological value of these habitats, losses would be of no significant ecological consequence, and would be appropriately mitigated for through the provision of new garden space as part of the proposals.

Protected Species

7.12. In terms of protected species, no further survey effort is deemed necessary as the majority of the habitats within the Application Site are of low value to protected species. Any further species surveys are unlikely to result in changes to the overall conclusions regarding the acceptability of the development.

7.13. Surveys and desk based assessments have ruled out the potential presence of GCN, Badgers and Dormouse. Targeted surveys found no evidence of roosting bats within or adjacent to the site and moreover the habitat present would not be of any significant value to foraging or commuting bats.

7.14. There is some limited potential for birds to utilise habitats within the Application Site for nesting, and for bats to use these features for foraging and navigating purposes. Moreover, there are small areas of potentially suitable reptile habitat, with a single Slow Worm recorded within the Application Site.

7.15. The survey work undertaken has been sufficient for appropriate avoidance, mitigation and enhancement measures to be proposed in respect of each of these faunal groups. Subject to the implementation of mitigation measures as outlined above in respect of these species, opportunities for key faunal groups may be retained and moreover enhanced post development.

7.16. Subject to the adoption of the measures set out in this report, it is considered potential adverse impacts on these features of interest will be fully avoided or mitigated.

7.17. There is no evidence to suggest there are any overriding ecological constraints which would prevent an appropriate planning application coming forward for the Application Site. With the implementation of the recommendations in this report, it is considered that any forthcoming proposals would conform to relevant legislation as well as national and local policy with respect to nature conservation and biodiversity.

Overall Conclusions

7.18. In conclusion, it is considered there is no evidence to suggest there would be any overriding ecological constraints which would prevent the delivery of an appropriately designed development at the Application Site.

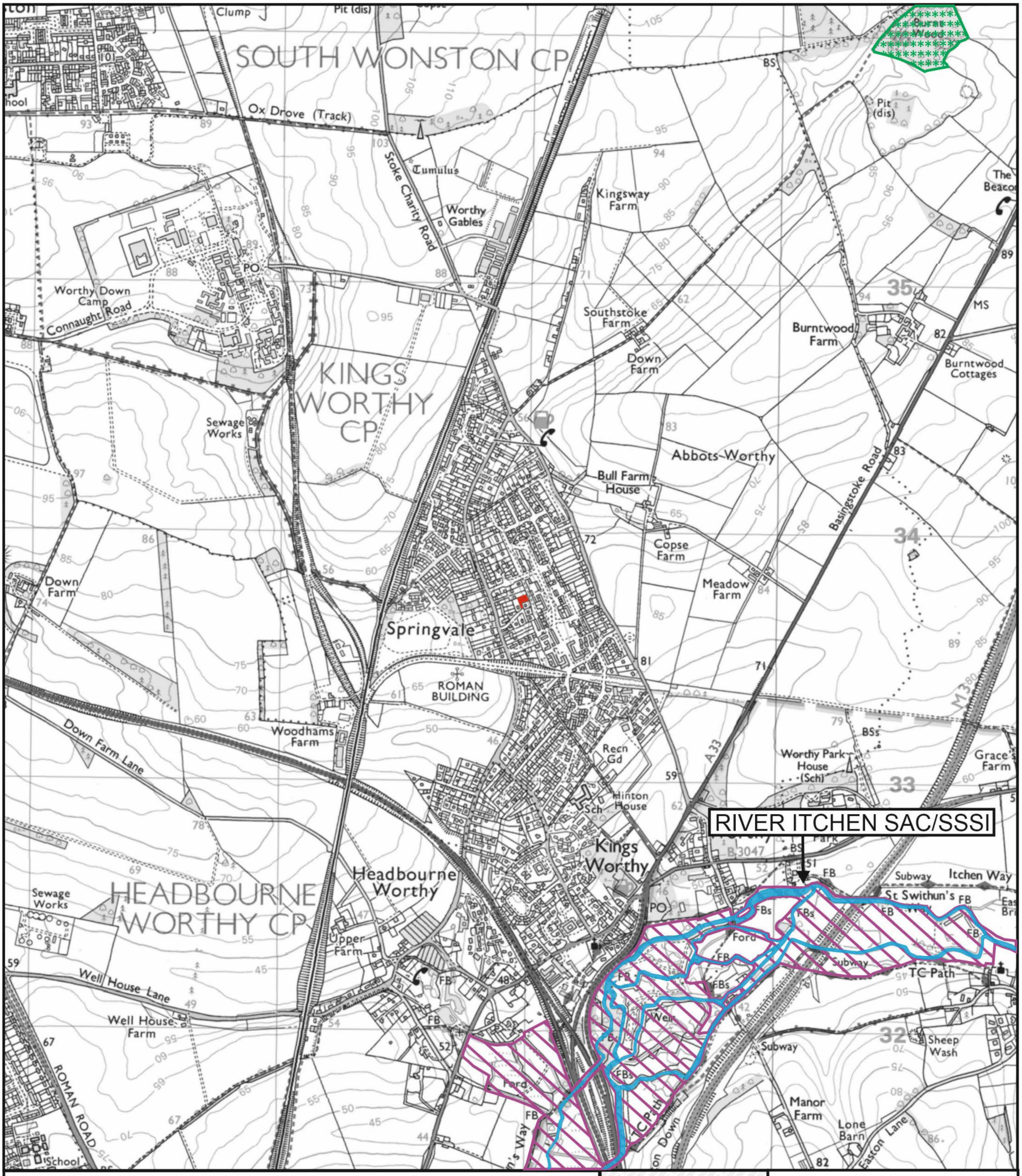
PLANS & APPENDICES

PLANS

PLAN ECO1

Application Site Location

and Ecological Designations



KEY:

- SITE LOCATION
- SPECIAL AREA OF CONSERVATION (SAC)
- SITE OF SPECIAL SCIENTIFIC INTEREST (SSSI)
- ANCIENT WOODLAND

N

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9531: 5 BOYNE RISE, KINGS WORTHY

PLAN ECO1: SITE LOCATION AND ECOLOGICAL DESIGNATIONS

Rev: A

FEB 2021

PLAN ECO2

Ecological Features

B1

B2

B3

B4

H1

H1.1

H2

H3

EF

PUBLIC FOOTPATH

4 BOYNE RISE

6 BOYNE RISE

KEY:

- SITE OUTLINE
- AMENITY GRASS
- VEGETATED DISTURBED GROUND
- AMENITY PLANTING
- HARDSTANDING
- BUILDING
- AMENITY HEDGE / TREE LINE

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9531M: 5 BOYNE RISE, KINGS WORTHY

PLAN ECO2: ECOLOGICAL FEATURES

Rev: A

FEB 2021

PLAN ECO3

Proposed Wildlife Features

KEY:

- SITE OUTLINE
- INTEGRATED IBSTOCK ENCLOSED BAT BOX
- INTEGRATED HOUSE SPARROW TERRACE
- HEDGEHOG TUNNELS

PUBLIC FOOTPATH

PLOT 1

PLOT 2

PLOT 3

PLOT 4

PROPOSED HEDGE AND TREE PLANTING TO BOUNDARY WITH NO 4 BOYNE RISE

WORKSHOP TO BE DEMOLISHED

POTENTIAL SUDS COMPONENT

EXISTING HOUSE TO BE DEMOLISHED

GARAGE TO BE DEMOLISHED

EXTENT OF APPROVED SCHEME

LOW RETAINING WALL

6 BOYNE RISE

SITE SECTION PP1392-130-03

BASE IMAGE PRODUCED BY POPE PRIESTLY ARCHITECTS

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9531M: 5 BOYNE RISE, KINGS WORTHY

PLAN ECO3: PROPOSED WILDLIFE FEATURES

Rev: A

FEB 2021

APPENDICES

APPENDIX 1

Pre-Existing Ecology Report

5 BOYNE RISE, KINGS WORTHY, WINCHESTER

EXTENDED PHASE 1 ECOLOGICAL SURVEY UPDATE & PHASE 2 BAT SURVEY UPDATE

Final Document

May 2020

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5 BOYNE RISE KINGS WORTHY, WINCHESTER

EXTENDED PHASE 1 SURVEY UPDATE & PHASE 2 BAT SURVEY UPDATE

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EXECUTIVE SUMMARY

- An Extended Phase 1 Ecological Update Survey was undertaken on 27th April 2020 at 5 Boyne Rise, Kings Worthy, Winchester, SO23 7RE. The site was originally surveyed on 21st April 2017 in connection with a proposal for the demolition of the existing residential property and the erection of one detached house and two semi-detached houses.

- The Extended Phase 1 Ecological Survey involved an examination of the existing residential building and associated garden and outbuildings to look for evidence of protected species.

- No direct evidence of bat presence was found in the residential building or outbuildings. There is potential bat access to an inaccessible roof void at the northern end of the residential building. The habitat of the surrounding gardens is consistent with that of common breeding birds. A single slow worm (*Anguis fragilis*) was found at the north-west corner of the site.

- As with the original Phase 1 survey, a single precautionary Phase 2 emergence survey for bats was undertaken on 15th May 2020 with a negative result. Recommendations are provided in respect of common breeding birds and common reptiles.

- No other evidence of the presence of, or suitable habitat for, protected species was found during this survey.

1.0 INTRODUCTION

1.1 Background

The author has been contracted by Mr and Mrs Senna to carry out an Extended Phase 1 Ecological Survey Update at 5 Boyne Rise, Kings Worthy, Winchester, SO23 7RE, approximately located at National Grid Reference: SU 48983 33707.

The site was the subject of an Extended Phase 1 Survey previously on 21st April 2017, (report dated 13th June 2017), and a single Phase 2 bat emergence survey on 8th August 2017, (report dated 5th September 2017). These are referred to below as the 2017 Phase 1 and Phase 2 reports respectively. This report updates the survey findings previously reported in 2017, and presents the findings of the Extended Phase 1 Survey Update carried out on 27th April 2020.

1.2 Aims and Scope of Report

This report is based on an Extended Phase 1 Ecological Survey aimed at establishing the potential of the site to support protected species. The assessment of the site is based on the evidence found during the survey and the potential of the habitats on the site to support protected species.

1.3 Site Setting and Description

The proposal site consists of a plot of land at the northern end of Boyne Rise currently occupied by a dormer bungalow. The site is surrounded by similar residential properties and domestic gardens.

1.4 Site Proposals

The site is subject to a proposal for the demolition of the existing property and the erection of a single detached house and two semi-detached houses.

2.0 METHODS

2.1 Introduction

This section provides details of the methods used to assess the potential of 5 Boyne Rise, Kings Worthy, Winchester, to support protected species.

2.2 Extended Phase 1 Ecological Survey

The Extended Phase Ecological Survey Update was carried out on 27th April 2020. The survey involved the examination of the garden area of the plot for evidence of the presence of protected species or habitats consistent with the presence of protected species. The survey involved a walkover of the site to identify the habitat types present and to record evidence of protected species such as badger (*Meles meles*), dormouse (*Muscardinus avellanarius*), bats, breeding birds, reptiles and great crested newt (*Triturus cristatus*). In addition, external and internal examinations of the residential building and various outbuildings on the site were undertaken in search of evidence of bat occupation and to assess the potential of the buildings to support roosting bats.

2.2.1 Initial Protected Species Assessment - Bats

The assessment criteria used to determine the potential ecological value of the site for bats during the Extended Phase 1 Ecological Survey are outlined below. This is usually based on the on-site habitat features and their suitability for the species considered. However, in many cases Phase 2 surveys will be required to assess the status of species and hence the importance of a population at the site, therefore the assessment of value should be considered a provisional assessment.

The potential for on-site habitat to support bats is based upon the following criteria:

High Potential/Bats In Situ - such buildings are those that have many features that may be utilised by roosting bats, such as gaps around soffits, loose fascias, or hanging tiles. Extensive evidence of bat presence, such as abundant and fresh droppings may be present. This category would also include surveys where direct observations of bats are made.

Medium Potential - such buildings have a moderate number of features that may be utilised by bats for roosting. Direct evidence of bats may be present such as limited numbers of old droppings, perhaps indicating a low status roosts (albeit still protected under current legislation).

Low Potential - Low potential buildings are those that provide only limited bat roosting potential although some features that may be utilised by bats may be present.

Negligible Potential - Negligible potential buildings are those that provide little or no bat roosting potential.

2.2.2 Initial Protected Species Assessment – Badger, Dormouse, Common Reptiles, Common Breeding Birds

The assessment criteria used to determine the potential ecological value for these species are as follows:

Badger: a detailed investigation of the site to identify evidence of badger residence, foraging or territorial activity is undertaken. Particular emphasis was placed on locating badger setts, paths, and signs of territorial activity such as dung piles.

Dormouse: an assessment of favourable habitat features for this species such as food sources including hazel (*Corylus avellana*) and honeysuckle (*Lonicera periclymenum*) is undertaken. Additionally, the structure, diversity and connectivity to adjacent woodland are considered.

Common Reptiles: an assessment of favourable habitat features for these species is based on the presence of dense or tussocky grassland with some open ground and good exposure to the sun.

Breeding Birds: an assessment of favourable habitat features for these species is based on the presence of suitable cover and feeding areas provided by trees, scrub or dense grassland.

2.3 Survey Conditions and Timing

The Extended Phase 1 Ecological Survey was carried out by Andrew Quayle BSc. (Hons), and Matthew Norris-Hill MSc. BSc. (Hons), on 27th April 2020. Weather conditions during the survey were dry with hazy sunshine and an air temperature of 17º Celsius. The surveyors were equipped with a digital SLR camera, binoculars, and 1 million candlepower torches.

2.4 Survey Limitations

Direct evidence of protected species may not be visible depending upon the site conditions and the time of year. In these circumstances the assessment of the site is based upon the apparent suitability of the habitat present.

3.0 RESULTS AND ASSESSMENT

3.1 Introduction

This section details the results of the Extended Phase 1 Ecological Survey Update carried out at 5 Boyne Rise, Kings Worthy, Winchester, and provides an assessment of the potential of the site to support protected species.

3.2 Extended Phase 1 Survey - Buildings & Trees

3.2.1 Building Description and Phase 1 Bat Survey

The existing detached residential property on the site is a dormer bungalow with a central pitched roof, (**Figure 1**), a small flat-roofed extension at the southern end and a single storey extension at the northern end of the bungalow.

Figure 1: View of east elevation of bungalow (rear garden)

The tiles and soffit boards were observed to be in a good state of repair and no significant deterioration compared to the 2017 survey was noted. However, as noted in the previous report, there remains a potential access point for bats provided by a broken tile on the single storey extension (**Figure 2**). This lies above an inaccessible roof void. In addition there are gaps in the lead flashing at the southern extremity of the eastern elevation (**Figure 3**) which provide potential access for bats.

Figure 2: View of west elevation of bungalow, showing gap in tiles and partial ivy covering of roof on western roof pitch.

Figure 3: East elevation gaps in flashing

There is an accessible roof void below the main pitch of the roof, which is of conventional tile and felt construction (**Figure 4**). The roof void was found to be heavily cobwebbed throughout (**Figure 5**). Numerous rodent droppings consistent

with woodmouse (*Apodemus* sp.) were found throughout the accessible part of the roofspace.

Figure 4: View across Roof Void

Figure 5: Gable End of roof space showing heavy cobwebbing

No direct evidence of bats or bat occupation was found in any area of the roof space. There is a smaller, inaccessible roof void above the single-storey extension shown in **Figure 3**. This space was subject only to external examination. No bat droppings were found on any of the external walls.

Given the absence of any direct evidence of bat presence or activity in the roof space, the generally much cobwebbed nature of the accessible roof space, but the presence of a potential bat access point into an inaccessible roof space at the northern end of the bungalow, it is considered that the bungalow is of **low potential** for supporting roosting bats. In practice, this means that the condition of the bungalow with respect to potential bat occupation, remains substantially the same as when surveyed in 2017.

In addition to the residential building, there are three garden sheds and a garage present on the site. All of these were found to be as described in the 2017 report. No evidence of bat occupation was found in any of the outbuildings, and all of them are single-skin structures with no apparent significant potential to support roosting bats. Accordingly, the outbuildings are considered to be of **negligible potential** as bat roosts.

3.2.2 Bats - Tree Assessment

The trees on site are considered to be in approximately the same condition as found in the 2017 survey. On the date of the current survey there were no trees considered to have significant potential as bat roosts on the site. The existing boundary hedges consist predominantly of mature shrubs and small to medium-sized trees, none of which were found to be sufficiently old to have developed the features consistent with roosting bats.

Accordingly, the garden area of the site is considered to be of **negligible potential** for supporting roosting bats.

3.3 Extended Phase 1 Survey - Garden

3.3.1 Garden - Site Description

The garden area surrounding the bungalow remains substantially unchanged from the 2017 Phase 1 report, to which the reader is referred for a description of the plant species present. The garden vegetation, with the exception of the shrubs, has been kept reasonably close-mown.

3.3.2 Phase 1 Reptile Survey

The 2017 Phase 1 report refers to evidence of some recent tree removal potentially changing the site from relatively shady to a more open condition. The site now has moderately good exposure to the sun, although the close-mown vegetation of the site is not considered to offer good potential habitat for common reptiles, as it is generally lacking in the dense grassland cover favoured by these species. That notwithstanding, a single juvenile slow worm (*Anguis fragilis*) was found in short grassland at the north-west extremity of the site, (**Figures 6 & 7**).

Figure 6: Juvenile slow worm at NW extremity of site

Figure 7: refuge used by juvenile slow worm at NW extremity of site

It should be noted that the slow worm is listed on Schedule 5 of the 1981 Wildlife and Countryside Act which protects it from killing or injuring, which is a likely consequence of the proposed site development.

As a result of this finding, all other flat stones or potentially suitable refuges were examined for further slow worms with a nil result. The size of the individual found is consistent with an animal born in late 2019. The author is aware of an unpublished reptile survey (B. Willers, 2019, unpublished BSc undergraduate thesis), which found new-born slow worms in very short vegetation, but with the absence of any recorded larger juveniles or adults. The surrounding vegetation of the location of the single slow worm consists solely of recently grown ground elder (*Aegopodium podagraria*) which is not generally associated with reptiles, (**Figure 7**). As a result, the presence of this animal is considered to be a result of overspill from a nearby slow worm population, although the site itself is unlikely to support a significant population.

Accordingly, the site is considered to be of **low potential** for supporting common reptiles.

3.3.3 Phase 1 Common Birds Survey

The condition of the site with respect to common birds is considered essentially unchanged from the 2017 Phase 1 survey. The site boundaries to the south and east are considered to be consistent with the habitats of a range of common breeding birds. The current survey recorded single specimens of dunnock (*Prunella modularis*), blackbird (*Turdus merula*), house sparrow (*Passer domesticus*), and great tit (*Parus major*).

Accordingly, the site is considered to be of **medium potential** for common breeding birds

3.3.4 Phase 1 Hazel Dormouse Survey

The vegetation of the site, whilst holding a few species associated with hazel dormouse, lacks the dense mixed-species structure generally favoured by this species. In addition, the garden is surrounded by similar suburban gardens with no effective connectivity to such habitats on the edge of Kings Worthy. Accordingly, the site is considered to be of **negligible potential** for hazel dormouse.

3.3.5 Phase 1 Badger Survey

No evidence of badger residence, such as setts or latrines, or foraging activity by badgers, was found on the site. Accordingly, the site is considered to be of **negligible potential** for badger.

3.3.6 Great Crested Newt

There are no waterbodies on the site, and an examination of aerial photographs of the site shows no apparently suitable wetlands within a 500m radius of the site. Accordingly, the site is considered to provide **negligible potential** for great crested newt.

4.0 EVALUATION, IMPACTS AND RECOMMENDATIONS

4.1 Introduction

The results of the Extended Phase 1 Survey Update have been used to provide a summary of the further survey needs of the site, if the development is to proceed.

The recommendations comprise two categories:

- Those species or issues for which further surveys or precautionary measures are deemed necessary;
- Those species or issues for which no further action is recommended.

4.2 Further Surveys for Bats

As the potential of the site for bats is considered to be unchanged from the 2017 survey, i.e. of **low suitability** for roosting bats, a Phase 2 Bat Survey in accordance with Bat Conservation Trust (BCT) guidelines was undertaken on 15th May 2020 and the results of this survey are provided in the second section of this document.

4.3 Further Precautionary Measures for Common Reptiles

As a result of the presence of a single slow worm on the site, the following dispersal measures are recommended. The site is to be kept close-mown, ideally by use of a strimmer or brushcutter, to ensure that all grassy and herbaceous vegetation is maintained in as short a state as is reasonably possible. Ideally, cutting should commence from the centre of the site, around the bungalow, and spiral outwards to the site boundaries, to promote dispersal of any remaining slow worms to the site periphery. In addition, it is recommended that potential reptile refugia such as unfixed paving stones, (i.e. not sealed concreted paving), and any flat pieces of wood or similar debris be removed from the site. It should be noted that the likelihood of a significant established population of slow worms on the site is considered to be of low probability, and the recommendations given should serve to render the habitat as unsuitable as is reasonably possible.

4.4 Further Precautionary Measures for Breeding Birds

No further survey work is recommended in respect of breeding birds. However, as the boundary hedgerows of the site will, almost inevitably, support common breeding birds, it is recommended that no significant removal of any shrub or tree cover on the site is undertaken between the periods March to August inclusive.

4.5 Species requiring No Further Action

Based on the survey undertaken, the site is considered to be of negligible ecological value for common reptiles, badger, hazel dormouse, and great crested newt. It is

considered that the development will have no deleterious impacts on these species, and no further survey is considered necessary.

4.6 Updating Surveys

Due to the mobile nature of some of the species discussed above, it is considered there will be a requirement to update the current survey if the development work has not commenced within two years of the date of this report.

5.0 PHASE 2 BAT EMERGENCE SURVEY UPDATE

5.1 Introduction

Based on an Extended Phase 1 Survey Update detailed in the previous section above, a single Phase 2 bat dusk emergence survey was carried out above carried out on 15th May 2020 at 5 Boyne Rise, Kings Worthy, Winchester, SO23 7RE and the results are provided below.

6.0 SURVEY METHODS

6.1 Introduction

This section provides details of the methods used to investigate the presence or probable absence of bats at 5 Boyne Rise, Kings Worthy, Winchester, SO23 7RE.

6.2 Phase 2 Bat Survey

The Phase 2 bat surveys were aimed at establishing the level of bat occupation in the property, following the findings of the Extended Phase 1 Survey Update on 27th April 2020.

6.2.1 Emergence/Return Surveys

The bat surveys were carried out to the guidelines provided by the Bat Conservation Trust[1]. The survey consisted of a single dusk emergence survey, using two surveyors positioned to view the maximum number of potential bat access/egress points. Dates, times, and weather conditions for the survey are given in Table 1.

Table 1: Survey times & Conditions

Survey Date & Timing	Sunset/Sunrise Time	Temp. Degrees C	Weather Conditions
15.5.20 Start: 20.35 Finish: 22.25	Sunset 20.49	At 20.35: 14.0 At 22.25: 10.0	No wind. Clear sky. Dry.

6.2.2 Staffing and Equipment

The survey were carried out by two experienced bat surveyors, one equipped with a Petterson D240x ultrasound detector, the second with an Echometer Touch bat detector with associated recording and analysis equipment.

6.3 Survey Limitations

The overall "detectability" of different bat species varies. For instance long-eared bats (*Plecotus* sp.) often emerge only in full darkness and do not produce strong echolocation calls. Clearly such species will be under-recorded compared to species with more conspicuous behaviours. In addition, it is not always possible to directly observe all possible access/egress points of a building at all times. However, it is considered that, on the basis of the data gathered, a robust assessment of the use of the site by bats has been obtained.

[1] Source: Collins, J. (ed) (2016) Bat Surveys for Professional Ecologists- Good Practice Guidelines (3rd edn). The Bat Conservation Trust, London ISBN – 13 978-1-872745-96-1

7.0 RESULTS

7.1 Introduction

This section details the results of the Phase 2 Bat Survey carried out at 5 Boyne Rise, Kings Worthy, Winchester, SO23 7RE.

7.2 Phase 2 Bat Survey

7.2.1 Dusk Activity Survey

The significant results of the bat survey are given below.

Dusk Emergence Survey 15th May 2020

This survey recorded moderate levels of foraging activity, predominantly by common pipistrelle bat (*Pipistrellus pipistrellus*), the first registration of which occurred at 21.04. There were fewer, but frequent, registrations of soprano pipistrelle (*Pipistrellus pygmaeus*), the first registration of this species was noted at 21.07. There were five registrations of serotine (*Eptesicus serotinus*), the first noted at 21.16. There was a single registration of brown long-eared bat (*Plecotus auritus*) at 21.16.

Intermittent registrations of both pipistrelle species continued until the end of the survey. Bat vocalisations were predominantly navigational, but numerous feeding "buzzes" were noted over the garden of the property.

No bats of any species were seen to leave or enter any parts of the building or garden structures.

7.2.2 Evaluation

The Extended Phase 1 Report Update for the site recommended that, although no direct evidence of the presence of bats was found, a single precautionary survey of the building should be undertaken based on the presence of potential access points to the roof space and under the roof tiles. Based on the results above, carried out to BCT guidelines, no evidence of roosting bats was found.

7.3 Impact Assessment in the Absence of Mitigation

In the absence of any indication that bats are using the building, it is considered that the proposed demolition of the property will not impact the local bat population. No further ecological surveys or mitigation measures in respect of bats are considered necessary.

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