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Gladman Developments Ltd

Land off Halterworth Lane, Romsey

ECOLOGICAL IMPACT ASSESSMENT

January 2024

FPCR Environment and Design Ltd
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Report Scope and Methodology

- This Ecological Impact Assessment (EcIA) has been prepared by FPCR Environment and Design Ltd on behalf of the applicant, Gladman in support of Environmental Assessment for the residential development of land at Halterworth Lane, Romsey, herein referred to as 'the Site'.
- Outline planning application for the demolition of existing buildings and the erection of up to 270 dwellings, including affordable housing, with land for the potential future expansion of Halterworth Primary School, public open space, structural planting and landscaping, sustainable drainage system (SuDS) and vehicular access points. All matters reserved except for means of access.
- A suite of ecological surveys were undertaken to inform this assessment, including an extended phase 1 habitat survey, desk study, a Biodiversity Net Gain Assessment (BNG) and a range of protected/notable species surveys in 2021 and 2023.

Ecological Baseline

- There are six internationally designated sites within 15km of the Site, the closest of which are the Emer Bog SAC (c. 1.4km East), Solent and Southampton Water Ramsar/SPA (c. 5.7km south), Solent Maritime SAC (c. 6km south), New Forest SAC (c. 7.4km south-west), Mottisfont Bats SAC (c. 7.5km north west) and the River Itchen (c.8.2km East). There are two SSSI sites within 2km, Baddesley Common SSSI and the River Test, and a LNR Tadburn Meadows. There are 15 non-statutory designated sites of nature conservation value (Local Wildlife sites) within 2km.
- A shadow Habitats Regulation Assessment has been completed by FPCR (January, 2024) in support of this application, which assesses potential impacts the development may have on these internationally protected sites listed above.
- The Site is dominated by modified grassland field compartments used for sheep grazing, separated by hedgerows, treelines and fence lines. These represent common and widespread habitats supporting limited botanical diversity.
- The majority of the boundary hedgerows comprised of at least 80% native woody species, which are considered as habitats of principal importance under NERC S.41. Two of the hedgerows were considered to be 'important' under the Hedgerow Regulations.
- Surveys conducted to date have demonstrated that the Site is used primarily by common and widespread species, such a common pipistrelle. A low number of Annex II species, Barbastelle *Barbastella barbastellu*s have been recorded, which only equated to 0.69% of all the registrations. Thirteen trees identified with roosting bat potential were identified, all of which are to be retained, buffered and enhanced as part of the proposals. No buildings with bat roosting potential were recorded.
- Breeding bird surveys have demonstrated that the Site is used by assemblages typical of the habitats present, comprising common and widespread species, and were therefore considered to be of no more than Local importance.
- No evidence of dormice and reptile species have been identified using the suitable habitats on-site during the 2021 surveys. Furthermore, the habitats have been considered unsuitable for GCN, given the lack of ponds within 250m and connective habitat.
- Hedgehogs in the local area may use the Site for foraging and commuting purposes, although none were recorded during the surveys undertaken

Residual Effects

- The assessment has demonstrated that in the absence of mitigation, proposals would lead to, at most, **minor adverse effects at a local scale** for hedgerows, mature trees, bats, badgers, birds.
- A combination of intrinsic mitigation, targeted mitigation, compensation and ecological enhancement summarised within this EcIA and detailed within the ES Chapter, have demonstrated that overall the **mid- to long-term, to minor beneficial effects at a local level** for the most of the important ecological features.

- **Minor adverse effects** on the internationally protected sites were predicted at international and county level. However, following policy-led mitigation, the residual effects will be **negligible**.

1.0 INTRODUCTION

1.1 The following report has been prepared by FPCR Environment and Design Ltd on behalf of Gladman Developments Ltd., for land off Halterworth Lane, Romsey (central OS Grid Reference SU 37454 21271), here after referred to as the 'Site'.

1.2 To inform the assessment, a suite of ecological surveys have been undertaken on and around the Site. The full survey reports for these are appended to the ES chapter and include:

- Bat Survey Report (FPCR, 2024)
- Breeding Bird Survey Report (FPCR, 2024)
- [redacted] Survey Report (FPCR, 2024)
- Dormice Survey report (FPCR, 2024)
- Reptile Survey report (FPCR, 2024)
- Biodiversity Net Gain Report (FPCR, 2024)

Site Context

1.3 The Site is approximately 12.8ha in size, located on the eastern extent of Romsey, Hampshire. The habitats comprised large, modified grassland compartments used for pastoral farming, bound by hedgerows, mature treelines and garden boundaries. A public footpath bisects the Site in the northern extent, connecting Halterworth Lane and Highwood Lane to the east.

1.4 Large expanses of residential housing are located to the west and south of the Site, including a primary school on the southern boundary. To the north and east, the landscape is comprised of further grassland with compartments of broadleaved woodland present in the wider landscape.

Development Proposals

1.5 Outline planning application for the demolition of existing buildings and the erection of up to 270 dwellings, including affordable housing, with land for the potential future expansion of Halterworth Primary School, public open space, structural planting, landscaping, sustainable drainage system (SuDS) and vehicular access points. All matters reserved except for means of access.

2.0 LEGISLATION AND POLICY

2.1 Relevant national policy and legislation in relation to ecology and development are as follows:

- The Conservation of Habitats and Species Regulations (CHSR) 2019 (as amended) in relation to:
  - European Protected Species (EPS) great crested newt *Triturus cristatus* (GCN), bats (all species) and hazel dormouse *Muscardinus avellanarius*.
  - European protected sites - Special Areas of Conservation (SAC) and Special Protection Areas (SPAs).
- The Wildlife and Countryside Act (WCA) 1981 (as amended) in relation to:
  - All wild birds (including Schedule 1 species)
  - Schedule 5 species
  - Flora listed under Schedules 8 and 9
  - Sites of Special Scientific Interest (SSSI)
- Protection of [redacted] Act (PBA) 1992.
- Natural Environmental and Rural Communities (NERC) Act 2006 in relation to various priority species and habitats.
- Hedgerow Regulations 1997 made under Section 97 of the Environment Act 1995.
- National Planning Policy Framework (NPPF) December 2023.
- Test Valley Adopted Local Plan 2011 - 2029

3.0 METHODOLOGY

Desk Study

3.1 To compile existing baseline information, relevant ecological information was gathered from:

- Hampshire Biodiversity Information Centre (HBIC); and
- Multi Agency Geographic Information for the Countryside (MAGIC)[1]

3.2 The search area for biodiversity information was related to the significance of sites and species and potential zones of influence, as follows:

- 15km around the application area for sites of International Importance including SPAs, SACs and Ramsar sites.
- 2km around the application area for sites of National or Regional Importance including SSSIs.
- 1km around the application are for sites of County Importance including Biological Heritage Sites (BHS) and protected and notable species records.

Site Walkover

3.3 The initial survey was undertaken on 2nd March 2021 using methodology based on Handbook for Phase 1 Habitat Survey (JNCC, 2010)[2].This involved a systematic walkover of the site to classify the habitat types present (using the standardised Phase 1 Habitat classification system) and mapping these onto an OS base map. Where feasible, target notes and species lists were compiled for individual areas and assessments of abundance were made using the DAFOR scale. Vascular plant nomenclature follows Stace (2010)[3].

3.4 An update survey in August 2023 was completed based on the UKHab methodology[4] in order to fully map and condition assess the habitats, which support a biodiversity net gain (BNG) assessment. All surveys included a search for any Habitats of Principal Importance (HPI) listed within Section 41 (S41) of the NERC Act 2006.

Invasive Plants, Notifiable Weed Species and Other Notable Flora

3.5 Consideration has been given as to the presence of invasive species listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) (WCA 1981)[5] and the presence of any notable weeds including those covered under the Weed Act 1959[6] (where population is significant enough to be considered injurious).

Faunal Surveys

3.6 Following the initial assessment of the Site for protected/notable species potential, a series of further surveys were completed in 2021 and in 2023. Detailed methods are contained within the specific species reports, within the ES Chapter (FPCR, January 2024) *Appendix 7.2 to 7.8.*

[1] MAGIC Available at: https://magic.defra.gov.uk/
2 JNCC. (1990). Handbook for Phase 1 habitat survey – a technique for environmental audit. Peterborough: JNCC
3 Stace, C.A. (2010). New Flora of the British Isles. (3rd Ed.). Cambridge: Cambridge University Press
[4] Butcher, B., Carey, P., Edmonds, R., Norton, L. & Treweek, J. (2020) The UK Habitat Classification User Manual version 1.1. www.ukhab.org
[5] Act of Parliament, (1981). The Wildlife and Countryside Act 1981 (as amended), London: HMSO.
[6] Act of Parliament. (1959). The Weed Act 1959. London: HMSO.

Impact Assessment

3.7 The assessment of significant ecological effects has been undertaken in accordance with CIEEM EcIA guidelines[7]. In summary, the process involves:

- **Establish Baseline** – this is based on desk study and field surveys which describes the existing and potential Important Ecological Features (IEFs) within the zones of influence specified.
- **Determine the Scale of Importance of Ecological Features** - importance is determined using geographical frames of reference: Local, Country, Regional, National and International. This assessment is based on a variety of factors, including statutory protection, statutory designation, conservation status, abundance and rarity.
- **Assess Significant Ecological Effects** –based on the importance of the ecological feature, magnitude of the effect and sensitivity of the features considered. This is description-based rather than applying a matrix which considers construction and operation effects only where relevant. The assessment assumes the proposed layout, intrinsic mitigation and routine ecological mitigation normally conditioned, and these are outlined clearly.
- **Mitigation** – This will be based on the mitigation hierarchy – avoidance, mitigation, compensation and enhancement. Any further mitigation measures required will be outlined to ensure residual effects are lowered to a level considered acceptable. Enhancements will seek biodiversity net gain in line with the NPPF and Local Plan Policy DP19: Biodiversity, Geological Conservation and Green Infrastructure. Monitoring will be considered where applicable.
- **Future Baseline and Residual Effects** – final conclusionary statements for the short, medium and long term.

Limitations

3.8 This assessment aims to provide baseline ecological data for the Site and as such presents an overview of the habitats and features present during the specific surveys undertaken to date. Due to the transient and complex nature of ecosystems, no investigation can provide a complete representation or prediction of the natural environment present, however, every effort has been made to ensure an accurate description of the Site is presented, by following best practice guidance, experience and professional judgement.

3.9 The phase 1 habitat map (*ES Chapter Figure 3*) has been reproduced from detailed field notes and informed by aerial imagery, OS mapping and site maps provided by the client. The accuracy of this figure is therefore ultimately guided by the accuracy of these sources and can only be relied upon to a certain degree of resolution.

3.10 Data provided by third party sources collated during the desktop study is generally made up from a wide range of sources including (but not limited to) those submitted by ecological consultancies, wildlife conservation organisations and volunteers. As such, this data is typically focused on areas of known nature conservation, is reliant upon formal surveys having been undertaken within an area or the presence of an expert within the locality (particularly for invertebrate records) and as such this data can never be fully relied upon as a complete ecological dataset for any given area.

Rather, this data is used as a guide to likely presence of notable ecological features and can never be relied upon for likely absence.

3.11 Given the transient nature of natural processes, ecological data should never be relied upon for more than two years from completion of surveys.

3.12 No other limitations specific to this survey influenced this assessment.

4.0 RESULTS

Desk Study

Statutory Sites

4.1 Six internationally designated sites were located within a 15km radius of the Site, as summarised in *Table 1*.

Table 1. International Designations within 15km

Designated Area	Distance from Site Boundary	Designation Reason
Emer Bog SAC	1.4km E	This designated bog habitat is situated within a wet hollow, supporting scattered willow Salix sp. scrub as well as open bogland supporting species including bottle sedge *Carex rostrata*, marsh cinquefoil *Potentilla palustris*, common cotton grass *Eriophorum angustifolium* and bogbean *Menyanthes trifoliata*. Rush pastures on the edges of the bog support White *sedge Carex curta*, soft rush *Juncus effuses* and sharp flowered rush *J. acutiflorus*, as well as the two bog moss species Sphagnum fimbriatum and *S. squarrosum*.
Solent and Southampton Water Ramsar/SPA	5.7km S	This designated area stretches along the southern coastline, comprising estuaries, harbours, extensive mudflats and saltmarsh habitats. These habitats support a diverse assemblage of invertebrates, which in turn provides important summer and wintering grounds for a number of wading bird species including Dark-bellied Brent Goose *Branta b.bernicla*, Mediterranean gull *Larus melanocephalus*, and Roseate Tern *Sterna dougallii*. It additionally qualifies under Article 4.2 of the Directive (79/409/EEC), as the area regularly supports at least 20,000 waterfowl species.
Solent Maritime SAC	6km S	This area is designated as a SAC for its coastal Annex I habitats, primarily coastal plain estuaries, four bar built estuaries, Spartina swards *Spartinion maritimae* and Atlantic salt meadows Glauco-*Puccinellietalia maritimae*. Notably the spartina maritime swards is the only site in the UK to support smooth cord grass *Spartina alterniflora*, and one of only two sites where significant populations of small cord grass are found Spartina maritima. In addition to this the Solent contains the second largest expanse of Atlantic salt meadows in the UK, including a diverse range of maritime flora including sea-purslane *Atriplex portulacoides*, common sea-lavender *Limonium vulgare* and cordgrass *Spartina spp*.
New Forest Ramsar/SPA/SAC	7.4km SW	The New Forest qualifies as a Ramsar wetland, due to it supporting the highest concentration of intact valley mire habitat in Britain, providing important habitat for a diverse assemblage of wetland plants and animals, including a number of rare or scarce wetland invertebrates. The area also qualifies as a SAC primarily for supporting eleven Annex I listed habitat types, including Northern Atlantic wet heath, European dry heath, old acidophilous oak woodland, and bog woodland, as well as two Annex II listed species: southern damselfly *Coenagrion mercuriale* and stag beetle *Lucanus cervus*. Finally, the area is designated as an SPA under Article 4.1 of the Directive (79/409/EEC) as it supports populations of European Importance of breeding birds, including Dartford warbler *Sylvia undata*, nightjar *Caprimulgus europaeus* and woodlark *Lullula arborea*, in addition to wintering populations of European importance for Hen Harrier *Circus cyaneus*.

Designated Area	Distance from Site Boundary	Designation Reason
Mottisfont Bats SAC	7.5km NW to the nearest woodland compartment under the designation	This designated site is comprised of a mixture of woodland types including hazel coppice, broadleaved plantation and coniferous plantation. It is important for supporting one of only six known barbastelle *Barbastella barbastellus* maternity sites in the UK, and the only known site in Hampshire. In addition to this it provides an important breeding, roosting, commuting and feeing habitats for a variety of UK bat species.
River Itchen SAC	8.2km E	This site is primarily designated due to it being a good example of a sub-type 1 chalk river, dominated by aquatic vegetation including pond water crowfoot *Ranunculus peltatus,* stream water crowfoot *R. penicillatus spp. pseudofluitans* and river water crowfoot *R. fluitans.* These vegetation communities provide important habitats for white clawed crayfish *Austropotamobius pallipes,* Otter *Lutra lutra,* Southern damselfly *Coenagrion mercuriale* and bullhead *Cottus gobio.*

Statutory Sites of National Conservation Value

4.2 Two Sites of Special Scientific Interest (SSSIs) are identified within a 2km radius of the Site boundary; Baddesley Common and Emer Bog SSSI, and The River Test SSSI. In addition to this there was one Local Nature Reserve (LNR); Tadburn Meadows identified.

4.3 As part of the Emer Bog SAC designation detailed above, Baddesley Common SSSI is located 1.4km east from the Site boundary. This supports a mosaic of damp acidic grassland, heathland and developing woodland habitat across a valley. These habitat mosaics are rich in flora including petty whin *Genista anglica,* purple moor-grass *Molinia caerulea,* dwarf gorse *Ulex minor,* meadow thistle *Cirsium dissectum* and cross-leaved heather *Erica tetralix.*

4.4 The River Test is located approximately 1.5km north-west from the Site boundary and designated as a good example of a stream over chalk substrate. It is one of the most species rich lowland river systems in England, supporting brook water crowfoot *Ranunculus penicillatus* var. *pseudofluitans,* blunt flowered water-starwort *Callitriche obtusangula,* opposite leaved pondweed *Groenlandia densa,* and shining pondweed *Potamogeton lucens*. Further flood pastures and fen meadows are associated with this river habitat, which support species diversity including marsh marigold *Caltha palustris,* water avens *Geum rivale*, carnation sedge *Carex panicea*, adders tongue *Ophioglossum vulgatum* and southern marsh orchid *Dactylorhiza praetermissa*.

4.5 Tadburn Meadows local nature reserve is located approximately 165m west of the site boundary. This site is designated for its mosaic of wetland habitats including fen meadows, inundated grassland and freshwater habitats. In addition to this there is areas of wet willow and alder *Alnus glutinosa* woodland habitats. These habitats provide important areas for common spotted orchids *Dactylorhiza fuchsii*, European water voles *Arvicola amphibius*, kingfishers *Alcedo atthis* and green woodpeckers *Picus viridis*.

Non-Statutory Designations

4.6 The desk study undertaken with HBIC*,* identified fifteen non-statutory designated Local wildlife Sites (LWS), within a 1km radius of the Site boundary. These are detailed in *Table 2*, with their locations mapped on *ES Chapter Figure 1: Statutory and Non-statutory sites Plan*.

Table 2: Non-Statutory Designated Sites within 1km

Local Wildlife Site	Distance	Bearing	LWS Selection Criteria and Rationale
Tadburn Stream Woodland and Meadow	165m	West	A mixture of open freshwater, fen grassland and important woodland habitats.
Woodley Grange Western Meadow	290m	North	Area of inundated grassland, fen and good quality semi-improved grassland habitats.
Woodley Grange Eastern Meadow	380m	North	Designated for inundated grassland and fen habitats, with some of the grassland area showing improvement through poor management.
Cramp moor Glebe	520m	North-east	Site designated for agriculturally unimproved grassland.
Ganger Wood	550m	North	Mixture of ancient semi-natural woodland, as well as other areas of semi-natural woodland with ancient woodland indicators present.
Ganger Swamp	585m	North	Semi-natural woodland habitat on wet and inundated soils.
Beggarspath Wood	615m	South-West	Designated for a mixture of woodland types including ancient woodland, wet woodland areas and agriculturally unimproved grasslands.
Ganger Wood Meadow	625m	North	Area designated for its wet grassland and fen meadow habitats, as well as important woodland habitats.
Small Copse, extra Romsey	665m	North	Designated for ancient semi-natural woodland with area of wet woodland present.
Ganger Farm Meadow	680m	North	Farm area of good quality semi-improved and unimproved grassland habitats. This are also retains areas of damp inundated and few meadow grasslands.
Parkers Moor/Luzborough Plantation	685m	South	Designated as an area of ancient woodland with additional areas of notable wet woodland present.
Ganger Wood Strip	720m	North	Designated for ancient semi-natural woodland with area of wet woodland present.
Gypsy's Copse	750m	East	Area of semi-natural woodland with ancient woodland indicators, as well as the notable species wood horsetail *Equisetum sylvaticum.*
Cramp Moor	880m	North-east	Site designated for agriculturally unimproved grassland.
Warren Farm Copse	900m	East	Area of semi-natural woodland with ancient woodland indicators, with areas of wet woodland present including the notable species wood horsetail *Equisetum sylvaticum.*

4.7 Records of protected or otherwise notable taxa provided by HBIC, within 1km of the Site boundary, are listed in *Table 3* below. Locations of these records are also presented in *ES Chapter Figure 2: Protected and Notable Species Plan*.

4.8 Records have been provided from the last ten years; however, the whole set of data was analysed to establish the requirement for further surveys. In the case of bird species, only those species included on the BoCC Amber or Red lists, or on the Wildlife and Countryside Act Schedule 1 were included, unless otherwise considered a notable species.

Table 3: Protected and Notable Species Records

Species	Dates	Relevant Legislation	Approximate Location Relative to Site
Reptiles and Amphibians			
Common Toad *Bufo bufo*	2007-2015	NERC_s41	Single record, 500m south-east
Adder *Vipera berus*	2004-2014	NERC_s41 WCA_s5s91(t)	Single record, 200m north
Grass Snake *Natrix helvetica*	2004-2014	NERC_s41 WCA_s5s91(t)	Single record, 970m south
Slow-worm *Anguis fragilis*	2004-2017	NERC_s41 WCA_s5s91(t)	Multiple records, 190m north
Birds			
Kingfisher *Alcedo atthis*	2009-2017	EU_Bird_1 WCA_s1p1	Three records, 390m west
Red kite *Milvus milvus*	2006-2018	EU_Bird_1 WCA_s1p1 CR	Multiple records, 190m west
Osprey *Pandion haliaetus*	2012-2018	EU_Bird_1 WCA_s1p1	Single record, 250m south
House sparrow *Passer domesticus*	2009-2013	BOCC_Red NERC_s41	Three records, 390m west
Black redstart *Phoenicurus ochruros*	2014	BOCC_Red WCA_s1p1 CR	Single record, 300m south
Starling *Sturnus vulgaris*	2013	BOCC_Red	Single record, 390m west
Redwing *Turdus iliacus*	2013-2018	BOCC_Red WCA_s1p1	Single record, 470m north-east
Song thrush *Turdus philomelos*	2013-2018	BOCC_Red	Multiple records, 390m west
Barn owl *Tyto alba*	2012	WCA_s1p1	Single record, 285m south-east
Common (Mealy) redpoll *Acanthis flammea*	2008-2009	CI, BOCC_Red	Single record, 280m north-east
Fieldfare *Turdus pilaris*	2018	BOCC_Red WCA_s1p1	Single record, 610m north
Invertebrates			
Beaded Chestnut *Agrochola lychnidis*	2004-2018	NERC_s41	Two records, 235m south
Brindled beauty *Lycia hirtaria*	2004-2018	NERC_s41	Two records, 235m south
Buff ermine *Spilosoma lutea*	2004-2018	NERC_s41	Multiple records, 235m south
Cinnabar *Tyria jacobaeae*	2004-2018	NERC_s41	Three records, 235m south
Figure of eight *Diloba caeruleocephala*	2004-2016	NERC_s41	Two records, 235m south
Garden tiger *Arctia caja*	2012-2015	NERC_s41	Single record, 235m south

Species	Dates	Relevant Legislation	Approximate Location Relative to Site
Ghost moth *Hepialus humuli*	2013-2018	NERC_s41	Three records, 235m south
Green-brindled crescent *Allophyes oxyacanthae*	2006-2018	NERC_s41 nHS	Two records, 235m south
Grey dagger *Acronicat psi*	2012-2018	NERC_s41	One record, 600m east
Knot grass *Acronicta rumicis*	2004-2018	NERC_s41	Multiple records, 235m south
Latticed Heath *Chiasmia clathrata*	2018	NERC_s41	Single record, 235m south
Oak hook-tip *Watsonalla binaria*	2004-2018	NERC_s41	Multiple records, 235m south
Rosy minor *Litoligia literosa*	2010-2018	NERC_s41	Single record, 235m south
Stag beetle *Lucanus cervus*	2006-2019	EU_Hab_2np NS NERC_s41	Multiple records, 85m west
White ermine *Spilosoma lubricipeda*	2004-2018	NERC_s41	Multiple records, 235m south
White-letter Hairstreak *Satyrium w-album*	2018	IUCN_GB_2001:EN NERC_s41 CS	Single record, 235m south
Mammals (Terrestrial)			
West European Hedgehog *Erinaceus europaeus*	2006-2019	IUCN_GB_2001:VU NERC_s41	Multiple records, 100 north-east
Polecat *Mustela putorius*	2012	EU_Hab_5 NERC_s41	Single record, 660m south-west
[redacted]	2018	PBA	Three records, 80m north
European water vole *Arvicola amphibius*	2006-2015	IUCN_GB_2001:EN NERC_s41 WCA_s5s94a WCA_s5s94b WCA_s5s94c CI	Three records, 295m west
Mammals (Bats)			
Brown Long-eared bat *Plecotus auritus*	2001-2019	EU_Hab_4 HabReg_s2 NERC_s41 WCA_s5s94b WCA_s5s94c	Multiple records, 280m west
Common pipistrelle *Pipistrellus pipistrellus*	2001-2019	EU_Hab_4 HabReg_s2 WCA_s5s94b WCA_s5s94c	Multiple records, 290m west
Daubenton's bat *Myotis daubentonii*	2001-2019	EU_Hab_4 HabReg_s2 WCA_s5s94b WCA_s5s94c	Two records, 240m north-west
Noctule Bat *Nyctalus noctula*	2001-2019	EU_Hab_4 HabReg_s2 WCA_s5s94b WCA_s5s94c	Multiple records, 240m west
Serotine *Eptesicus serotinus*	2004-2019	EU_Hab_4 HabReg_s2	Multiple records, 240m west

Species	Dates	Relevant Legislation	Approximate Location Relative to Site
		WCA_s5s94b WCA_s5s94c	
Soprano pipistrelle *Pipistrellus pygmaeus*	2001-2019	EU_Hab_4 HabReg_s2 WCA_s5s94b WCA_s5s94c	Multiple records, 290m west
Invasive Species			
Himalayan balsam *Impatiens glandulifera*	1997-2015	WaCA9_2: 2010	Multiple records, 390m west
Rhododendron *Rhododendron ponticum*	2004- 2018	WaCA9_2: 2010	Multiple records, 610m north
Three-cornered Garlic *Allium triquetrum*	2018-2019	WaCA9_2: 2010	Single record, 630m west

Key: EU_Bird_1 – Annex I of the Birds Directive, EU_Hab_2 Annex II of the Habitats Directive (priority species), EU_Hab_2np – Annex II of the Habitats Directive (non-priority species), EU_Hab_4 – Annex IV of the Habitats Directive, EU_Hab_5 – Annex V of the Habitats Directive, IUCN_EN_2014 – See IUCN (2001(guidelines, covering England, BOCC_Red - Birds of Conservation Concern Red List, NR – Nationally rare (occuing in 15 or fewer 10km squares in Great Britain), NS – Nationally scarce (occurring in 16-100 10km squares in Great Britain), NN – Nationally notable (Occurring in 16-100 10km squares in Great Britain or less than 20 Vice counties), HBAP – Hampshire Biodiversity Action Plan Species, NERC_s41 - Priority species listed under Section 41 of the Natural England Environment and Rural Communities Act 2008, WCA1 - Schedule 1 of the Wildlife and Countryside Act 1981 (as amended), WCA5 – Schedule 5 of the Wildlife and Countryside Act 1981 (as amended), WCA9 - Schedule 9 of the Wildlife and Countryside Act 1981 (as amended), CVA_s8 - Schedule 8 of the Wildlife and Countryside Act 1981 (as amended), Hab_Reg_2 - Schedule 2 of Conservation of Habitats and Species Regulations 2010 (European Protected Species animal), HabReg_5 - Schedule 2 of Conservation of Habitats and Species Regulations 2010 (European Protected Species plant), PBA – Protection of Badgers Act 1992, NI- National Interest, CR – County rare, CS – County scarce, nHR – North Hampshire Rare (VC12), sHR – South Hampshire Rare (VC11), nHS – North Hampshire Scarce (VC12), sHS – South Hampshire Scarce (VC11).

Habitats

4.9 On the eastern residential fringe of the town of Romsey, the Site is bound by residential housing and gardens along the western boundary and a school to the south. The Site comprises of sheep grazed pasture fields, divided by hedgerows with trees and treelines. A PRoW bisects the site horizontally at the northern end of the Site, providing direct footpath access off the residential environs of Halterworth Lane. The locations of the habitats below are provided in *ES Chapter Figure 3*.

Modified Grassland

4.10 The majority of the Site comprised modified grassland, intensively sheep grazed resulting in a short tight sward. Grass species content included perennial rye grass *Lolium perenne*, creeping bent *Agrostis stolonifera* and rough meadow grass, with tussocks of cock's-foot *Dactylis glomerata* and Yorkshire fog *Holcus lanatus* indicating grassland improvement. A limited herbaceous composition was concentrated around the field margins including creeping buttercup *Ranunculus repens*, white clover *Trifolium repens,* cats ear *Hypochaeris radicata* and ragwort *Senecio sp.* Areas of disturbed ground were identified throughout the grassland, supporting typical disturbed ground species including annual meadow grass *Poa annua,* germander speedwell *Veronica chamaedrys,* ground ivy *Glechoma hederacea* and dandelion *Taraxacum officinale agg*.

4.11 A small compartment of unmanaged grassland and scrub mosaic was present adjacent the PRoW entrance off Halterworth Lane, in the north-western extent of the Site (*ES Chapter Figure 3 – TN1*). This compartment supported a tall sward dominated by grass species including cock's foot, red

fescue *Festuca rubra*, rough meadow grass *Poa trivialis* and Yorkshire fog. Limited herbaceous diversity supported common species including yarrow *Achilles millefolium*, broadleaved dock *Rumex obtusifolius*, cow parsley *Anthriscus sylvestris*, cleavers *Gallium aparine*, common hogweed *Heracleum sphondylium* and germander speedwell. In addition to this elm *Ulmus minor* and pedunculate oak *Quercus robur* saplings, as well as a number of ornamental species including stinking iris *Iris foetidissima*, daffodil *Narcissus sp.* and Spanish bluebell *Hyancinthoides hispanica* were present.

Tall Ruderal / Forbs

4.12 Tall ruderal species were sporadically recorded throughout the grassland compartments, including broadleaved dock, cow parsley, spear thistle *Cirsium vulgare* and creeping thistle *Cirsium arvense*. Further areas of established tall ruderal were associated with the borders, comprised of common nettle *Urtica dioica*, white dead nettle *Lamium album*, and common hogweed.

Mixed Scrub

4.13 A small compartment of unmanaged scrub was recorded in the north-east extent of the Site, dominated by bramble *Rubus fruticosus agg.,* blackthorn *Prunus spinosa* and garden privet *Ligustrum ovifolium*. Further sparse scrub vegetation was recorded around the peripheries of the field compartments comprised of bramble, blackthorn, elder *Sambucus nigra* and hawthorn *Crateagus monogyna.*

Built Development

4.14 Two built structures (B1 and B2) were identified in the northern western field compartment, associated with areas of hardstanding and bare ground.

4.15 Building B1 was a single storey barn, of a metal structure supporting single skinned horizontal wooden slat walls and a pitched, single skinned, corrugated metal sheet roof. During the time of survey, this building was in a dilapidated condition, used for storage with log piles surrounding parts. In addition to this, substantial ivy growth was present on the western aspect.

4.16 Building B2 was adjacent to building B1. At the time of survey, this structure was being used as a stable. The building was single storey, comprised of single sheet MDF wooden panels, with a pitched, single skinned corrugated metal sheet roof on a wooden beam. A small area of hardstanding was located on the eastern periphery of the building.

Bare Ground

4.17 An informal public footpath bisects the two field compartments, in the northern extent of the Site. This footpath supported a sparse number of ephemeral species including annual meadow grass, green alkanet *Pentaglottis sempervirens*, creeping buttercup and shepherd's purse *Capsella bursa-pastoris*. In addition to this, hedgerow ground flora species were recorded in associated with hedgerow H1, including wood avens *Geum urbanum,* lesser celandine *Ficaria verna*, bluebell *Hyacinthoides sp.* and cuckoopint *Arum maculatum.*

Hedgerows

4.18 A total of ten hedgerows bound the field compartments, connecting to further hedgerow networks in the wider area. The majority of the hedgerows were gappy and lacking a dense structure.

4.19 Using the Hedgerow Evaluation and Grading System (HEGS) the majority of hedgerows were assessed as moderately high - very high conservation value (*Table 3*) on account of species diversity and the number of standard trees present. The exception to this is hedgerows H2, H3, H5, and H10 which are residential boundary hedgerows and were assessed as moderate value, based on their limited species diversity and limited connections to the wider landscape.

4.20 Hedgerows H1 and H4 were considered 'important' under the ecological criteria of The Hedgerow Regulations 1997. In addition to this, notable ground flora species were identified along hedgerow H1, evident that the hedgerow is well established possibly forming the boundary of a historic woodland habitat. In contrast, the majority of the other hedgerows onsite were not considered important under the Hedgerow Regulations due to them forming residential boundaries or being semi-defunct field boundaries.

4.21 The majority of the hedgerows onsite qualified as NERC S41 habitats of principal importance, as they supported a canopy composition of 80% native species. The exception to this were ornamental hedgerows along the residential boundaries, H2, H3, H5 and H10.

Table 3: Summary of Hedgerow Survey

Ref	Canopy Sp.	Length (m)	Notes	HEGS Value and Score	Important Under REGS
H1	*Ps, Sn, Qr, Rosa sp., Ia Cm, Ap, Ra, Rf*	185	Field boundary hedge with public footpath adjacent. Mixed species dominance. 8 mature standards, 3 young standards. 30-10% gaps, 3 connections.	-1 High to Very High Value	**Regs Hedgerow** 4 sp / 30m (Runs alongside public byway, 1 standard/per 50m, 3 ground flora sp.)
H2	*Ia, Cm, Rf, Ca, Eucalyptus sp.*	29	Residential boundary hedge. 1-2 native dominance. No standards. No gaps. No connections.	3 Moderate value	**Not Assessed** (Residential Boundary)
H3	*Lo, Ia, Ap, Cup x ley*	50	Residential boundary hedge. Non-native dominance. 1 mature standard. 2 young standards. 30-10% gaps. 1 connection.	-2 Moderately High to High Value	**Not Assessed** (Residential Boundary)
H4	*Qr, Rosa sp., Um, Ia, Fe, Ac, Cm, Ap, Ps, Rf*	115	Field boundary hedge. Mixed native species dominance. 7 mature standards, 8 young tree. 10-0% gaps. 2 connections.	1 High to Very High Value	**Regs Hedgerow** 6 sp / 30m (Runs alongside public byway, 1 standard/per 50m, <10% gaps)
H5	*Rf, Cup x ley, Qr*	96	Residential boundary hedge. Non- native dominance. 10-0% gaps. No connections.	-3 Moderate value	**Not Assessed** (Residential Boundary)
H6	*Cm, Ps, Qr, Rf*	230	Semi-defunct field boundary hedge. 1-2 native species dominance. 6 mature standards, 1 young tree. 30+% gaps. 3 connections.	2 Moderately High to High Value	**Not Regs Hedgerow** 2 sp / 30m
H7	*Fe, Cm, Ps, Sn, Qr, Ca, Um, Ap, Rf, Rosa sp.*	245	Field boundary hedge. Mixed native dominance. 5 mature standards, 9 young trees. 30-10% gaps. Small Bank present. 3 connections.	1 High to Very High Value	**Not Regs Hedgerow** 4 sp / 30m

Ref	Canopy Sp.	Length (m)	Notes	HEGS Value and Score	Important Under REGS
H8	*Ca, Um, Fe, Ps, Cm*	181	Field boundary hedge defunct in southern extent. 1-2 native species dominance. 1 mature standards, 8 young tree. 30+% gaps. 3 connections.	2 Moderately High to High Value	**Not Regs Hedgerow** 3 sp / 30m
H9	*Qr, Ca, Um, Fe, Cm*	148	Roadside hedgerow, mixed species dominance, 0% gaps, PRoW, 2 connections	-2 Moderately High to High Value	**Not Regs Hedgerow** 4 sp / 30m
H10	*Ae, Pl, Rf*	45	Residential boundary hedge. Non-native species dominance. 1 mature standard. No gaps. 1 connection.	3 Moderate value	**Not Assessed** (Residential Boundary)

Key to hedgerow species: Ac *Acer campestre* Field Maple, Ah *Aesculus hippocastrum* Horse Chestnut, Ap *Acer pseudoplatanus* Sycamore, Bb *Bambusiodeae sp* Bamboo, Ca *Corylus avellana* Hazel, Cm *Crataegus monogyna* Hawthorn*, Cup x ley Cupressus x leylandii Leyland Cypress, Cot sp Contoneaster sp., Eucalyptus sp. Eucalyptus sp.,* Fe *Fraxinus excelsior* Ash, *Ia Ilex aquifolium Holly, Lo Ligustrum Ovalifolium Privet, Malus sp. Apple species, Pl Prunus laurocerasus Cherry Laurel, Pru Prunus species,* Ps *Prunus spinosa* Blackthorn Qr *Quercus robur* Pedunculate Oak, Rf *Rubus fruticosus* ag. Bramble aggregate, Ra *Ruscus aculeatus* Butcher's Broom, *Rosa sp.* Rose species, Sa *Sorbus aucuparia* Rowan, Sn *Sambucus nigra* Elder, Sx sp. *Salix species* Willow, Tb *Taraxacum bacata* Yew, Um *Ulmus minor* English elm

Treelines

4.22 Treelines border the northern and southern peripheries of the Site. Treeline TL1 bordering Halterworth Community Primary school comprised of semi mature broadleaved species including cherry *Prunus avium*, pedunculate oak *Quercus robur*, ash *Fraxinus excelsior*, beech *Fagus sylvaticum* and poplar *Populus* sp. TL2, a short treeline along the northern boundary of a residential property approx.148m) comprised of mature and semi-mature trees including pedunculate oak, ash and elm *Ulmus minor*. TL3 along the northern boundary comprised species including pendunculate oak, elm, ash and blackthorn.

4.23 The offsite treeline along the southern border comprised of a mixture of native and non-native woody species including leylandii *Cupressus x leylandii,* cherry, hazel *Corylus avellana,* Oregon grape *Mahonia aquifolium* and holly *Ilex aquifolium.*

Protected and Notable Species

4.24 The Site is considered to have the potential to support the following species/groups:

- [redacted]
- Bats
- Breeding birds
- Great crested newts (GCN) *Triturus cristatus*
- Hazel dormice *Muscardinus avellanarius*
- Reptiles
- Hedgehog

4.25 Full details of the further surveys completed in 2021 are provided in the appended reports that accompany the ES chapter, however *Table 5* summarises the key findings during such specific surveys.

Table 5: Protected/Notable Species Surveys Summary

Species/ Group	Site Suitability and Survey Results
[redacted] **(ES *Appendix 7.3*)**	Please refer to the [redacted] (ES Appendix 7.3) for all details regarding [redacted] as the results are sensitive. [redacted] **are common and widespread in England and the Site is therefore considered to be of no more than Local value for this species. The Protection of [redacted] Act 1992 however requires development proposals to have regard for this species.**
Bats (ES *Appendix 7.4*)	**Trees** – A total of 13 mature trees were identified as having roosting bat potential. Trees T1, T4, T5-T8, T11-T13 support moderate potential and trees T2 ,T3, T9 and T10 support low bat roosting potential. These trees are present on the boundaries of the Site and will be retained and buffered by the proposals and so were not subject to further surveys. Providing a sensitive lighting scheme is adopted it is considered that there will be **No impact to trees supporting roosting opportunities for bats.**
	Buildings – Two wooden structures were present on Site, in use for storage and stabling. Both lacked any suitable bat roosting features including a roof void, soffits/gable ends and were exposed and open to light and weather conditions. **The buildings were assessed as providing negligible potential for roosting bats and no constraints are posed to their removal for development.**
	Common Bat species - The hedgerows and trees provide suitable foraging and commuting habitats. The modified grassland offered limited value for bats. Transect and automated static surveys have identified moderate numbers of common and widespread species throughout the Site, particularly along boundary features. The eastern boundary hedgerows in particular, H6, H7 and the central Hedgerow H1 had a moderate volume of bat usage suggesting they are being used for foraging and as a commuting corridor with habitats in the wider landscape. **Common and widespread bat species recorded. The Site provides limited foraging and commuting habitat for an assemblage of common and widespread bat species and is therefore considered to be of Local importance.**
	Annex II Bat species – Barbastelle bats were recorded on the static detectors in low numbers. A total of 0.69% of total registrations on the static detectors and manual activity surveys detected barbastelle on 2 occasions across the ten surveys. Annex II bat activity varied across the study area with hot spots recorded at similar locations; H1 central hedgerow and the eastern boundary hedgerows H6 and H7. **The Site provides limited foraging and commuting habitat for Barbastelle bat species and is therefore considered to be of Local importance.**
Birds (ES *Appendix 7.5)*	Breeding bird surveys were completed in spring 2021. The range of habitats present onsite provided foraging and breeding opportunities for an assemblage of generalist species typical of hedgerow, grassland and urban edge habitats. **The Site is therefore considered to be of Local importance for nesting birds.**
Dormice (ES Appendix 7.6)	The hedgerows and treelines onsite were predominantly gappy and non-continuous providing limited corridors of movement across the Site. Surveys undertaken in 2021 did not identify any evidence of hazel dormice, and so it is likely they are absent from the Site and immediate surroundings. **No evidence or observations of hazel dormice have been identified onsite and this species therefore does not pose a constraint to the proposals.**
Reptiles (ES *Appendix 7.7*)	The hedgerow bases and associated scrub provided sub-optimal foraging habitat for common and widespread reptiles. Presence / likely absence reptile surveys undertaken in April, May June and September 2021 recorded no reptile species. **No evidence or observations of reptile species have been identified onsite and this species therefore does not pose a constraint to the proposals.**
GCN	**Breeding Habitat** – No ponds or waterbodies are present within the Site nor within 500m.
	Foraging and Refuge Habitat – Hedgerows, scrub and unmanaged grassland (present in NE corner) provided some suitable foraging and refuge habitat for GCN, while pasture

Species/ Group	Site Suitability and Survey Results
	grassland was considered to be of sub-optimal quality for this species. No records of GCN were returned for within 1km of the Site and given the lack of ponds in the surrounding landscape it is likely that GCN are absent from the Site and immediate surroundings. **It is therefore considered that this species does not pose a constraint to the proposals.**
Hedgehog	On Site habitats provide some foraging opportunities for hedgehog, with commuting habitat provided by the boundary hedgerows. Records were returned, with the closest being c.100m to the northeast, although no sightings have been recorded on Site to date.
Otter and Water Vole	No suitable riparian habitat that might support water vole or otter was identified within the survey area and no specific surveys targeted at this species were therefore completed.

Likely Future Baseline Conditions

4.26 The Site is managed by sheep grazing and should proposals not proceed, it is considered that habitats on Site would likely remain in the same condition as described.

Summary of Important Ecological Features

4.27 The suite of surveys has demonstrated that the proposals have the potential to affect a range of important ecological features. These are summarised in *Table 4* and assigned a geographic context based on survey results, relevant legislation and policy.

Table 4: Important Ecological Features on Site and within Local Area

Important Ecological Feature	Relevant Legislation/ Policy	Geographic Scale	Rationale
New Forest SAC	Habitats Directive, NPPF, Local Plan	International (SAC/SPA/RAMSAR)	These sites are located within the 15km search area for Statutory Designated Sites of International Importance designated for their biodiversity value.
Mottisfont Bat SAC			
Emer Bog SAC			
Solent and Southampton Water Ramsar/SPA			
Solent Maritime SAC			
River Itchen SAC			
SSSI and LWS	Habitats Directive, NPPF, Local Plan	National (SSSI, LNR) County (LWS)	Two SSSIs: Baddesley Common and the River Test. One LNR: Tadburn Meadows and fifteen Local wildlife sites are designated for their biodiversity value.
Hedgerows	NERC S41	Local	All hedgerows with exception of residential boundary hedgerows H2, H3 and H5 were identified as habitats of principal importance as they comprised >80% native woody species.

Important Ecological Feature	Relevant Legislation/ Policy	Geographic Scale	Rationale
Hedgerows (H1 and H4)	HREGS 1997, NPPF	Local	Two hedgerows (H1 and H4) were considered 'important' under the Hedgerow Regulations 1997.
Mature trees (within hedgerows)	NPPF	Local	This habitat represents an area of structural diversity that would take several decades to replace were it lost
[redacted]	PBA	Local	See ES Chapter Appendix 7.3.
Bats	CHSR, WCA Sched 5	Local	Low levels of common and widespread bat species activity on site. Commuting opportunities limited to boundary features, with foraging limited due to the habitat type's prey content. (ES Appendix 7.4).
Annex II Bats	CHSR, WCA Sched 5	County	Low levels of annex II bat – barbastelle, were recorded during the Site surveys (0.69% of total registrations across all ten automated surveys). These were concentrated along hedgerows in central and eastern boundary features.
Birds	WCA	Local	On-site habitats, predominately hedgerows and treelines, provided suitable habitat for an assemblage of common and widespread urban edge/generalist species.
Hedgehogs	NERC S41	Local	No evidence found on Site but known in local area.
Dormice	CHSR, WCA Sched 5	Local	No records of dormice in the local area. No evidence of dormice was identified in 2021 surveys, likely absent from the site (ES Appendix 7.6).
GCN	CHSR, WCA Sched 5	Local	Terrestrial habitat on site limited to site boundaries, hedgerow bases and treelines. No ponds within 250m nor any records provided, considered likely absent from Site, no further surveys were required.
Reptiles	WCA Sched 5, NERC S41	Local	No evidence of reptiles were identified in the 2021 surveys, likely absent from the Site (ES Appendix 7.7).

Where NPPF = National Planning Policy Framework 2023; NERC S.41 = Natural Environment and Rural Communities Act 2006 Section 41; CHSR = Conservation of Habitats and Species Regulations 2017 (as amended); WCA = Wildlife and Countryside Act 1981 (as amended).

5.0 IMPACT ASSESSMENT

Development Proposals and Intrinsic Mitigation

5.1 Outline planning application for demolition of existing buildings and the erection of up to 270 dwellings, including affordable housing, with land for the potential future expansion of Halterworth Primary School, public open space, structural planting and landscaping, sustainable drainage system (SuDS) and vehicular access points. All matters reserved except for means of access.

5.2 The proposals sought ecological input during an early phase of the design process to ensure that the impacts on ecological receptors, which include valuable habitat types will be kept to a minimum. BNG calculations have been completed (see Appendix 7.8 of the ES chapter) to ensure that a net gain can be achieved and the results of faunal surveys (See Appendices 7.3 – 7.7 of the ES chapter) have been used to ensure negative impacts are kept to a minimum.

5.3 An assessment of effects from the proposals on the surrounding internationally protected sites has been outlined in the shadow Habitat Regulations Assessment that accompanies this report and should be referred to for full details.

5.4 The status of the important ecological features (IEFs) identified on Site have been reviewed against the proposals and intrinsic mitigation to determine whether there are any impact pathways and whether any of these will lead to a likely significant effect. The requirement for additional mitigation measures above the intrinsic mitigation has been considered and are detailed in the ES Chapter.

5.5 The proposed scheme includes the following intrinsic ecological avoidance, mitigation and enhancement measures:

- The mature trees will be retained and have their root protection areas (RPA) adequately buffered in line with RPAs identified in the Arboricultural Impact Assessment.
- The retained hedgerows will be protected from damage, a minimum of a 5m buffer is provided along the length of retained hedgerows, and will exist outside of individual ownership, to protect them from damage and to allow sufficient room for management.
- Roads have been narrowed where they will create breaches in hedgerows, to reduce as far as possible the extent to which hedgerows will be lost across the scheme.
- Provision of two SuDS basins offer opportunities for unmanaged grassland to increase habitat diversity;
- A wildlife pond will be created in the open space in the northern boundary, which will have a deep centre and shallow scalloped edges providing valuable habitat for amphibians and other wildlife;
- Proposals include additional tree planting within the development area, with them included along streets and around the Site peripheries.

Biodiversity Net Gain and Habitat Enhancements

5.6 The development framework has been assessed using the DEFRA Metric Version 4.0 details of this assessment are provided in *Appendix 7.8*. Based on proposing habitats that are readily

achievable and commonplace in residential development of this type, the BNG calculations will result in a 12.37% gain in habitat units and 50.28% gain in hedgerow units. This will be achieved through the enhancement of existing retained habitats and through the creation of native species-rich grasslands, mixed scrub, hedgerows and a wildlife pond.

Core Documents

5.7 The following lists the core documents that will secure the mitigation and enhancement measures described in this report. They can be secured through appropriately worded pre-commencement planning conditions, attached to the application to be submitted and discharged prior to the commencement of works.

1. Construction and Environmental Management Plan for Ecology (CEMP: Ecology): This pre-commencement document contains the necessary Method Statements to ensure protected species are not unlawfully harmed during ground clearance, earthworks and during construction. The document will include an Ecological Constraints and Mitigation Plan drawing that clearly shows the location of constraints and details mitigation required, where necessary.
2. Habitat Management and Monitoring Plan (HMMP): this provides planting/landscape information that includes both the landscape and ecology features and their management for an appropriate period. The document will include ecological enhancement and management information as appropriate to demonstrate how the biodiversity net gain measures will be delivered and can also include the final Ecological Mitigation and Enhancement Plan that shows location of wildlife boxes and other proposed features.
3. A lux contour lighting plan produced by a qualified lighting engineer at Reserved Matters in consultation with an ecologist. The lighting scheme should meet the target Lux levels on the habitat features described in the impact assessment below, to ensure the features described remain accessible to light-sensitive bats.

Assessment of Likely Significant Effects on Important Ecological Features

5.8 The An assessment of effects from the proposals on the surrounding internationally protected sites has been outlined in the shadow Habitat Regulations Assessment that accompanies this report and should be referred to for full details. However, a high-level summary of the assessment of impacts is provided in *Table 7* below.

5.9 Table 7: Assessment of Effects on Important Ecological Features

IEF: The Emer Bog SAC	
Assessment of Impacts	The construction phase of development is unlikely to have a direct impact on the SAC given the intervening distance (as detailed in the sHRA)) Whilst there may be some increase in visitor pressure, it is considered extremely unlikely to lead to a significant effect due to its distance with no connecting PRoW and the GI provision on Site. This will include areas of GI for early morning and late evening dog walks, immediate opportunities for exercise and play. The Site lies outside of the critical catchment and wider catchment identified in the Emer Bog and Baddesley Common

IEF: The Emer Bog SAC	
	Hydrological Desk Study (Environmental Project Consulting Group, 2017[8]) that screens for proposals that would need an assessment to demonstrate that any changes to surface and/or groundwater would not adversely affect the site's hydrology.
Predicted Effect	**Construction Phase: Negligible (not significant)** **Operational Phase: Negligible (not significant)**
Mitigation	None
Enhancement	None
Residual Effects	**Construction and Operational Phase: Negligible (not significant)**
IEF: The Solent and Southampton Water Ramsar / SPA	
Assessment of Impacts	The proposals fall outside the 5.6km zone of influence for the Solent SPA designation[14]. As the Site is 5.7km from the Solent, recreational effects are unlikely and no mitigation measures are required. In accordance with the Bird Aware Solent Mitigation Strategy[15], the Site has no supporting habitats that are used by Solent Waders & Brent geese, so there is no effect on the SPA designated bird species. The Test Valley lies within the catchment of the River Test and the River Itchen, which flow into the Solent. As a result, the Proposed Development has been subject to a nutrient neutrality assessment, which has found there would be increases in the nutrient levels that could have an effect on the Ramsar/SPA.
Predicted Effect	**Construction Phase: Negligible (not significant)** **Operational Phase - Recreational: Negligible (not significant)** **Operational Phase – Nutrients: Mid- to Long-term Minor Adverse Effect at a national scale (significant)**
Mitigation	The Nutrient Neutrality Assessment and Mitigation Strategy[16] concludes the total nutrient budget that the Proposed DevelopmentPD will have an effect and therefore the total nutrient credits required to offset these effects will be provided via financial contributions to the LPA. All details are provided within the Nutrient Neutrality report and a summary provided in the HRA, Appendix 7.9.
Enhancement	None
Residual Effects	**Construction and operational Phase: Negligible (not significant)**
IEF: The New Forest SAC	
Assessment of Impacts	The construction phase of development is unlikely to have a direct impact on the SAC given the intervening distance. In accordance with advice from Natural England and the HRA of the Test Valley Borough Local Plan DPD, a net increase in housing development within 13.6km of the New Forest SPA is likely to result in impacts to the integrity of the New Forest SAC, through a consequent increase in recreational disturbance. The Proposed Development is approximately 7.4km from the New Forest SAC and within the recognised ZOI.
Predicted Effect	**Construction Phase: Negligible (not significant)** **Operational Phase: Mid- to Long-term Minor Adverse Effect at a national scale (significant)**

8 Allen R.H (2017). Emer Bog and Baddesley Common – Hydrological Desk Study. Prepared on behalf of Hampshire and Isle of Wight Wildlife Trust and Test Valley Borough Council. [Online]. Available at: https://www.testvalley.gov.uk/planning-and-building/guidance/solent-southampton-water-special-protection-area.

14 provided on the Test Valley Borough council website (see document titled '5.6km Solent SPA Buffer Map'),

15 https://birdaware.org/solent/wp-content/uploads/sites/2/2021/10/Solent_Recreation_Mitigation_Strategy.pdf

16 NUTRIENT NEUTRAL ASSESSMENT & MITIGATION STRATEGY Report Ref: NNAMS/329.Nutirentneutral 2023.

Mitigation	The New Forest Recreation Mitigation Framework[17], outlines a number of options for which a proposed development can mitigate its recreational impact on the New Forest SAC, either by providing Suitable Alternative Greenspace (SANG), by a bespoke mitigation package or through financial contribution (per dwelling) to offset proposed impacts. As a result of the limited space available within the redline boundary, provision of SANG is not achievable and therefore the Proposed DevelopmentPD will provide a financial contribution to the mitigation measures, which would be secured through a Section 106 agreement with the LPA.
Enhancement	None
Residual Effects	**Construction and operational Phase: Negligible (not significant)**
IEF: Mottisfont Bats SAC	
Assessment of Impacts	Mottisfont Bats SAC designated for significant numbers of barbastelle bats is present 7.5km north of the Site, to the nearest designated woodland compartment. A report for Natural England[18] concluded a distance extending 7.5km from the SAC boundary should be used to identify plans that would be likely to have an impact upon habitats used by the Mottisfont barbastelles. Therefore, land use and development which leads to the loss of or changes to these habitats within the 7.5km zone of influence (ZOI) around the SAC should be considered to be likely to have a significant effect on the Mottisfont Bats SAC. The Site is 7.5km from the Mottisfont Bats SAC and therefore lies on the boundary of the Mottisfont Bats' ZOI. The construction and operational phases of the Proposed DevelopmentPD is unlikely to have a direct impact on the SAC given the intervening distances from the Site. There are no direct green links from the Site to the SAC and the sites are separated by the residential environs of Romsey. The Proposed DevelopmentPD therefore is not considered to directly or indirectly affect the populations of bats using the Mottisfont Bat SAC, given the Site is not considered to offer functionally linked habitat. Low numbers of Barbastelle bats have been recorded on Site and these will be mitigated as outlined in the bats section below.
Predicted Effect	**Construction Phase: Negligible (not significant)** **Operational Phase: Negligible (not significant)**
Mitigation	None – see mitigation recommended in Bats section
Enhancement	None
Residual Effects	**Construction and Operational Phase: Negligible (not significant)**
IEF: Local Wildlife Site's	
Assessment of Impacts	The construction phase of development is not expected to have a direct impact on any LWSs due to the intervening distance between the Site with no connective habitat or road links. It is also considered unlikely that the proposals would lead to a significant effect on any of the LWS's as a result of increased visitor pressure as the proposals include areas of GI providing immediately accessible walking routes that will be attractive for residents. The CEMP produced for the scheme will further reduce the likelihood of indirect effects on these sites.
Predicted Effect	**Construction and Operational Phase: Negligible (not significant)**
Mitigation	None
Enhancement	None

[17] Test Valley Borough Council, New Forest International Nature Conservation, Designations: Recreational Mitigation, Framework Supplementary Planning Document, Nov 2021
[18] Jonathan Cox Associates (2010), Mottisfont Bats Special Area of Conservation (SAC) Protocol for Planning Officers.

Residual Effects	**Construction and Operational Phase: Negligible (not significant)**
IEF: Hedgerows (H1, H4, H6, H7,H8 & H9)	
Assessment of Impacts	The development proposals will retain and buffer the majority of the hedgerows onsite, with small gaps being made for access through hedgerows H1 and H4. Additional planning and management of these hedgerows will ensure minimal loss in diversity and functionality. No likely significant effect is anticipated on this habitat type, due to the limited loss and additional hedgerow planting and enhancement proposed. It is recognised that there will be a short-term loss in the overall presence of mature hedgerows while compensatory planting establishes, but this is not considered to be significant given the small-scale loss and the overall abundance of hedgerow and tree line habitats in the local area.
Predicted Effect	**Construction and Operational Phase: Short-term Minor Adverse Effect at a Site Scale (not significant)**
Mitigation	In order to maintain the integrity of the retained hedgerows and avoid their degradation through individual residential management (i.e. removal of sections, excessive cutting by homeowners), existing hedgerows will not be incorporated into gardens and will instead be managed as part of the site-wide green infrastructure. All hedgerows will be protected from damage during the construction phase via protective fencing in accordance with BS 5837 (2012) Trees in Relation to Design, Demolition and Construction and as indicated by the Arboricultural Impact Assessment.
Enhancement	The hedgerows will be brought into specific management to enhance their biodiversity value and longevity. to create species-rich hedgerow features.
Compensation	To compensate for the partial losses in hedgerows H1 and H4, native hedgerow planting will take place throughout the Site, in excess of that to be lost and this will use a mix of native species to create species-rich hedgerow features.
Residual Effects	**Construction Phase: Short – to Mid term Minor Beneficial Effect at a Site Scale (not significant)** **Operational Phase: Mid- to Long-term Minor Beneficial Effect at a Site Scale (not significant)**
IEF: Mature trees	
Assessment of Impacts	The mature trees will be retained with sufficient buffers for RPA and will not be included within garden boundaries. During construction works, all woodlands will be protected through RPA measures and protective fencing in accordance with BS 5837 (2012) Trees in Relation to Design, Demolition and Construction and as indicated by the Arboricultural Impact Assessment. Indirect impacts during construction, such as pollution, and increased light levels post-development have the potential to negatively affect the health of the trees and their function as a habitat for wildlife Direct impacts during the operational phase could be damage to existing and new specimens through recreational activities
Predicted Effect	**Construction Phase: Short-term Minor Adverse at a Site Scale (not significant)** **Operational Phase: Long-term Minor Adverse at a Site Scale (not significant)**
Mitigation	Measures to prevent damage and pollution during construction will be outlined in the CEMP and will include protective fencing.

	Measures to protected the trees during the operational phase would be covered by regular monitoring and management. Any dead or dying specimens would be replaced.
Enhancement	None
Residual Effects	**Construction and Operational Phase: Negligible (not significant)**
IEF: Bats (Appendix 7.4)	
Assessment of Impacts	The majority of commuting and foraging habitats (hedgerows and tree lines) will be retained within the GI (see above). The small losses of hedgerow H1 and H4 for access are considered to be minimal and still likely to be used by bats. The loss of some habitats might have a detrimental effect on the bats utilisation of the Site, particularly the scrub areas, and thiscould reduce the overall availability of foraging habitat for bats in the short term. Only a small percentage of the registrations were barbastelle bats (0.69%), with little evidence of foraging behaviour recorded, with most records comprising one or two registrations from bats passing by, commuting through or around the Site. The lack of any consistent pattern in the occurrence of Barb registrations on a given night, provides further evidence that the hedgerows that are lost, are not a key part of a commuting route for the local population and its partial loss to facilitate the Site access is unlikely to have a negative impact, given the other hedgerows will be retained and buffered providing alternative routes around the Site. Lighting during the construction phase during nocturnal hours could affect foraging and commuting bats. Proposals will increase light levels on Site through the introduction of street lighting, which would reduce the suitability of retained hedgerows and created habitats. Besides some mature trees, the habitats used on Site by bats are widely available in the surrounding area. However, the Site is used by light-sensitive Annex II species (Barbastelle) will be impacted negatively through lighting that illuminates commuting corridors, without suitable lighting mitigation. Thirteen trees with potential to support roosting bats were identified and will be retained and buffered by the proposals. The buildings onsite had negligible potential to support roosting bats and so do not pose a constraint.
Predicted Effect	**Construction Phase: Short-term Minor Adverse at Site Scale (not significant)** **Operational Phase: Long-term Minor Adverse at a Local Scale (not significant)**
Mitigation	The GI, buffers and sensitive lighting scheme will reduce impacts to local bat assemblages, as detailed in *Appendix 7.4*. Any lighting needed during the construction phase will be kept to a minimum and directional only, as outlined for the development below. The lighting and layout of the development will be designed to minimise light-spill on nearby habitats, this will be set out in a lighting plan, which will form part of a subsequent reserved matters application. This will include the maintenance of dark corridors along retained and newly created habitats through buffers between light sources and commuting routes used by bats for foraging and commuting. The lighting of any footpaths will be at low level and be in accordance with the Bat Conservation Trust bat lighting guidance including:

	• The avoidance of direct lighting and light spillage on nearby green infrastructure using directional lighting. • The use of low pressure sodium lights which emit one light wavelength and attract less insects. • Restricting the height of the light columns to reduce horizontal spill • Installing low wattage LED security lighting on properties close to green infrastructure during construction to avoid future homeowners installing unsuitable lighting for bats. Two SuDS will be incorporated into the proposals, along with a small wildlife pond, which will provide habitat that is not currently represented on-site. Unmanaged grassland within the SUDs and the pond habitat will provide opportunities for invertebrates, increasing their abundance and diversity, and thereby increasing foraging opportunities for bats. All retained hedgerows will be buffered from the built environment by greenspace and native shrub and tree planting. In accordance with the BNG assessment, the extent of hedgerows will be increased and managed specifically for wildlife value.
Enhancement	Bat boxes (Schwegler or similar design) will be installed on retained mature trees and new dwellings will have bat measures incorporated (bat bricks etc), which will increase roosting opportunities.
Residual Effects	**Construction Phase: Short-term Minor Adverse at a Site Scale (not significant)** **Operational Phase: Negligible to Minor Beneficial mid- to long-term at a Local Scale (not significant)**
IEF: Birds (Appendix 7.5)	
Assessment of Impacts	The Site supports an assemblage of common and widespread species that are able to adapt to residential environs and as such, while there may be changes in the overall bird assemblage utilising the Site with more opportunities for urban species such as starling, swallow and house sparrow, this is not anticipated to be a significant effect. Construction activities during breeding bird season could negatively impact nesting birds within habitats on Sites. Residential development usually leads to an increase in the local cat population and therefore an increased risk of predation.
Predicted Effect	**Construction Phase: Minor Adverse at a Site Scale (not significant)** **Operational Phase: Minor Adverse at a Site Scale (not significant)**
Mitigation	Vegetation removal will be avoided during breeding bird season (March to August inclusive) or will be carried out immediately following a nesting bird check by a suitably qualified ecologist. New tree and shrub planting will include thorny species to provide some protection against cats. Where sections of hedgerow are to be lost, new hedgerows will be planted through the Site that will include fruit and nut species to aid foraging. Management measures will also ensure that a good hedgerow structure is created, which will also limit predation by cats and increase nesting opportunities
Enhancement	The inclusion of green infrastructure planting and the maturation of gardens will lead to additional opportunities for a range of species. A mixture of nest boxes, such as the 1B Schwegler nest box or similar woodcrete design will increase nesting opportunities. Nest boxes specifically designed for urban species such as house sparrow, house martin and starling will also be provided. These also provide protection against predators.
Residual Effects	**Construction Phase: Minor Beneficial mid- to long-term at a Site Scale (not significant)**

	Operational Phase: Minor Beneficial mid- to long-term at a Site Scale (not significant)
IEF: [redacted] (Appendix 7.3)	
Assessment of Impacts	Please see confidential Appendix 7.3. Prior to works an updated [redacted] survey will be completed.
Predicted Effect	
Mitigation	
Enhancement	
Residual Effects	
IEF: Hedgehog	
Assessment of Impacts	No evidence was found on Site; however, they are known in the local area. Proposals will lead to a greater variety of foraging resources for hedgehog with the creation of new habitats, including hedgerows, grassland and wetland creation. There is an increased risk of road fatalities with newly created roads; however, this is not expected to be significant given the low-density and slow speeds of traffic anticipated. There is also an increased risk of hedgehogs becoming trapped within newly constructed gardens and a reduction in commuting ability.
Predicted Effect	**Construction phase: Negligible (not significant)** **Operation Phase: Negligible (not significant)**
Mitigation	All newly created garden fences and boundary treatments will feature a 'hedgehog highway' formed by a 13cm x 13cm hole in strategic locations to allow this species to move through the Site and into the surrounding area. The highway and adjacent habitat will be designed in such a way that it discourages hedgehogs from crossing newly constructed roads e.g. through planting and fencing that creates corridors parallel and away from roads. Excavations during construction will not be left open overnight or will be supplemented with a means of escape in case any nocturnal animals fall in and become trapped. Open pipework during construction will be capped overnight to prevent trapping animals.
Enhancement	None
Residual Effects	**Construction phase: Negligible (not significant)** **Operational: Minor Beneficial long term at a Site Scale (not significant)**

Additional Faunal Enhancements

5.10 The proposals for the Site offer a range of opportunities to incorporate enhancement features for a variety of faunal species. *Table 8* offers a number of recommendations that could be easily incorporated within the scheme.

Table 8: Recommended Faunal Enhancement

Target Species/Groups	Enhancement Opportunities	Recommended Specifications
Amphibians and reptiles	• The provision of artificial hibernacula and refugia would provide additional resources from amphibians and reptiles. • New ponds should be designed to hold some degree of water throughout the year, where feasible, and should be planted with a range of native species.	• Hibernacula and refugia can include log and/or rubble piles positioned in close proximity to new ponds and/or suitable areas of grassland and scrub. • Pond planting should be native species of local provenance ranging from marginals to deep water plants.
Invertebrates	• Invertebrates would also benefit from log piles and hibernacula. • Insect houses can provide refuge and breeding opportunities for a wide variety of species. • Invertebrate mounds provide important basking and breeding opportunities for some groups.	• A range of insect houses are available online, tailored for specific groups. These should be sited within or adjacent to species-rich grassland and scrub. • Rock piles and banks of chalk/bare ground can be used to create invertebrate mounds and should be south-facing.

6.0 CONCLUSIONS

6.1 The suite of ecology surveys identified a range of important ecological features on the Site and within its zone of influence. The impacts on these were assessed against the proposals for a residential development of Land at Halterworth Lane, Romsey for up to 270 dwellings and associated infrastructure.

6.2 The assessment has demonstrated that in the absence of mitigation, proposals would lead to, at most, **minor adverse effects at a local scale.** This did not apply to designated sites where predicted effects were **minor adverse at an international and county scale**.

6.3 A combination of intrinsic mitigation, targeted mitigation, compensation, and enhancement detailed within this EcIA (and the ES and appendices), have demonstrated that the proposals will lead to **mid- to long-term, to minor beneficial effects at a local level** for the most important ecological features. For the internationally protected sites, following policy led mitigation the residual effects would be **negligible**.

6.4 The development framework has been assessed using the DEFRA Metric Version 4.0. Details of this assessment are provided in Appendix 7.8. Based on proposing habitats that are readily achievable and commonplace in residential development of this type, the BNG calculations will result in a 10.11% gain in habitat units and 22.01% gain in hedgerow units. This will be achieved through the enhancement of existing retained habitats and through the creation of native species-rich grasslands, mixed scrub, hedgerows and a wildlife pond.