



Surrey Wildlife Trust
Ecology Services

Construction Environmental Management Plan (Biodiversity)

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**Wildlife Trust
Consultancies**



Constructionline
Gold Member



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Project number		6441	
Report and version number		Summary of changes	
V 3.0		Original	
Commission date		03/06/2026	
Validity of report (CIEEM, 2019)	In most cases, this report will be valid for 12 months. Where habitat management has not been altered and new features have not formed, it is possible the report remains valid for between 12 and 18 months, however it is advised an updated site visit is undertaken to confirm this. Where more than 18 months have elapsed an ecologist should review the information to confirm whether the information in this report can be relied upon. Reports more than three years old are unlikely to remain valid.		

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Acronyms

Acronym	Definition
BCT	Bat Conservation Trust
BNG (sic)	Biodiversity Net Gain
CEMP	Construction Environmental Management Plan
CIEEM	Chartered Institute of Ecology and Environmental Management
EIA	Environmental Impact Assessment
GIS	Geographic Information System
HGBI	Herpetofauna Groups of Britain and Ireland
HMCTS	HM Courts and Tribunal Services
HPI	Habitats of Principal Importance
ILP	Institute for Lighting Professionals
LED	Light-emitting diode
LPA	Local Planning Authority
MCIEEM	Full member of CIEEM
NERC	Natural Environment and Rural Communities
PTES	People's Trust for Endangered Species
SPI	Species of Principal Importance
SSSI	Site of Special Scientific Interest
SWT	Surrey Wildlife Trust

1 Summary

1.1.1 This Construction Environmental Management Plan (Biodiversity), hereafter referred to as 'CEMP (Biodiversity)', has been prepared to discharge Condition 8 of planning application number PL/25/0616.

1.1.2 This is a dynamic document which can be reviewed throughout the construction phase, in line with identification of new information which is to be added as appropriate.

Project overview

Aim of the report	• Provide a map showing the location of the ecological features that require protection during construction • Present a risk assessment of potentially damaging construction activities that includes: ○ Measures to protect the ecological receptors in the development area or any additional impact zones during construction such as use of protective fences ○ Timing of works to avoid impacts ○ Detail the mitigation measures required to minimise the residual risk • Detail responsible persons, and lines of communication • Present monitoring required and/or auditing processes to ensure corrective action or mitigation measures are implemented.
Project description	The proposed development is for change of use from E(g)(i) offices to F1(g) Law Courts, including internal alterations, additional external lift, additional sub-station and landscaping works Relevant development plans reviewed: • 100099718_HMCTS Reading_Arboreal Impact Assessment_P03__18.07.25 • ReadingSovereignHouse_EcIA_AtkinsRealis_2025_Rev4.0_ForIssue • HMCTS Reading_Tree Protection Plan_P02_19.06.25 • Sovereign House BGN Calc V1 Relevant landscaping plans reviewed: • 100099718-ATR-XX-XX-D-L-401001 (dated 19/06/25) Any changes to the proposed plans will need to be reflected in this CEMP (Biodiversity) to ensure all ecological features are adequately protected.
Construction period	Start: September 2026 End: October 2027
Optimal period for vegetation removal/impacts	September/October, refer to Table 1 for the optimal period for each separate ecological receptor.
Planning consent type	Full planning consent

Condition	8. <u>No development shall commence on site until</u> a construction environmental management plan (CEMP: Biodiversity) has been submitted to and approved in writing by the Local Planning Authority. The CEMP (Biodiversity) shall include the following. (a) Risk assessment of potentially damaging construction activities. (b) Identification of "biodiversity protection zones". (c) Practical measures (both physical measures and sensitive working practices) to avoid or reduce impacts during construction (may be provided as a set of method statements). (d) The location and timing of sensitive works to avoid harm to biodiversity features. (e) The times during construction when specialist ecologists need to be present on site to oversee works. (f) Responsible persons and lines of communication. (g) The role and responsibilities on site of an ecological clerk of works (ECoW) or similarly (h) competent person. (i) Use of protective fences, exclusion barriers and warning signs. The approved CEMP shall be adhered to and implemented throughout the construction period strictly in accordance with the approved details, unless otherwise agreed in writing by the local planning authority
Local planning authority	Reading Borough Council

Table 1: Summary of CEMP (Biodiversity) measures to implement for ecological receptors

Receptor number	Ecological receptor	CEMP (Biodiversity) measures to protect biodiversity	Pre-construction walkover survey required (Y/N)	ECoW supervision required (Y/N)	Timing to minimise impacts to ecological receptors											
					Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.	Terrestrial habitats	Protection measures and buffer required during construction activities including: - Protection of trees in line with Tree Protection Plan and BS 5837:2012 - Implementation of a pollution incidence response plan. - Appropriate storage of fuel, material, and chemicals. - Appropriate dust control. Fenced Habitat Protection Zones (Figure 2) - Pre-construction check to identify new ecological constraints not previously considered.	Y	N (confirmation habitat protection zones created required)												
2.	Invertebrates	Habitats will be retained in the habitat protection zone: - Undertake a pre-works walkover between May and August and record location of dead/decaying wood. - Where dead/decaying wood is recorded in the construction zone, supervise the translocation of this suitable stag beetle habitat to the habitat protection zone.	Y (May to August)	N												
3.	Birds	Undertake vegetation removal or building demolition between September and February, outside the breeding bird season. Where this cannot be avoided, works will need to be supervised by an ecologist, and identified nests adequately protected until chicks have fledged.	Y (if during breeding bird sensitive period [orange])	Y (if during breeding bird sensitive season [orange])												
4.	Badger	Prior to any vegetation removal, undertake walkover survey within works area and a 30m buffer: - Three months before works commence (to allow for any mitigation licenses to be applied for prior to works commencing) - One month before works commence (to allow for monitoring to occur to determine level of use prior to works commencing) - One day before works commence Best-practice construction methods are recommended, including: - Establishing appropriate exclusion zones, reflective of walkover survey results - Avoiding noisy plant and machinery work in close proximity to mammal holes, two hours before sunset - Directing security lighting near mammal holes - Covering any holes or trenches overnight, placing a ramp in larger holes so that fallen animals can escape in the eventuality they fall into the holes. - Safeguarding water sources If a badger licence is required, mitigation measures can only be implemented from 1st July to 30th November.	Y (any time, at least three months before construction starts)	Y												
5.	Bats – foraging and commuting habitat	- Direct lighting away from treed habitat (e.g. hedgerows, trees) and focus on works area. - Work will not be undertaken within 30 minutes of sunrise or sunset. - Lighting of dark zones to not exceed baseline levels.	N	N												

Receptor number	Ecological receptor	CEMP (Biodiversity) measures to protect biodiversity	Pre-construction walkover survey required (Y/N)	ECoW supervision required (Y/N)	Timing to minimise impacts to ecological receptors											
					Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
		LED lighting in the warm spectrum (<2700K) to minimise impacts on bats will be used. Timers, dimmers and off-times could be considered, where possible.														
6.	Bats – roosting habitat	Works to proceed under a precautionary method of working that comprises: - Prior to works commencing a pre-construction check undertaken by a suitably experienced ECoW which comprises inspecting the lofts to identify bats or evidence of bats. - A pre-construction bat emergence survey of B1 (low suitability) and B3 (low suitability). - No trees are proposed for removal, however if this changes, prior to undertaking works, these will be checked by an ecologist for any new bat potential roosting features that may have developed over time. - Impacts through lighting will be managed as per the risk management measures for foraging and commuting bats.	Y	Y												
7.	Hedgehog	Covering any holes or trenches overnight, placing a ramp in larger holes so that fallen animals can escape in the eventuality they fall into the holes. Log piles in winter (November to February) will be checked by an appropriately qualified ecologist and dismantled by hand. In retained habitat, deploy shelters to encourage the species to use these. Aim to ensure retained habitat is connected to the wider area.	N	Y (where required)												
8.	Other mammals	Where possible, any works should avoid disturbing or blocking active mammal holes. Where active mammal holes, not including badger, require removal, this should be undertaken under the supervision of a suitably experienced ecologist following a precautionary method of working to ensure the works comply with the Wild Mammals (Protection) Act 1996.	N	Y (where required)												
9.	Invasive non-native species, including Schedule 9 invasive species under the Wildlife and Countryside Act 1981, as amended	Systematic removal of non-native invasive species. Species included on list of Schedule 9 should be treated and removed by a suitability trained specialist and measures to limit any spread and/or introduction of invasive species during construction period.	N	Y (where required, including during breeding bird sensitive period [orange])												

Key

Planning Boundary

Enhancement Features

Log pile

Proposed tree

Retention of bird boxes

Retention of hedgehog box

Tree mounted bat box

Tree mounted bird box

Retention of hanging bug hotel

UK Habitat Classification

h3h - Mixed scrub

g4 - Modified grassland

u1 - 847 - Introduced shrub

u1b5 - Buildings

u1b - Developed land; sealed surface

h2b - Native hedgerow

Trees

Proposed tree

Retained tree



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 Scale: 1:350
 Produced by: Surrey Wildlife Trust Ecology Services

Created By: EB
 Map Revision Number: 1.1
 6441, 17/06/2026

Figure 1:
Sovereign House
Post Intervention Habitat Plan

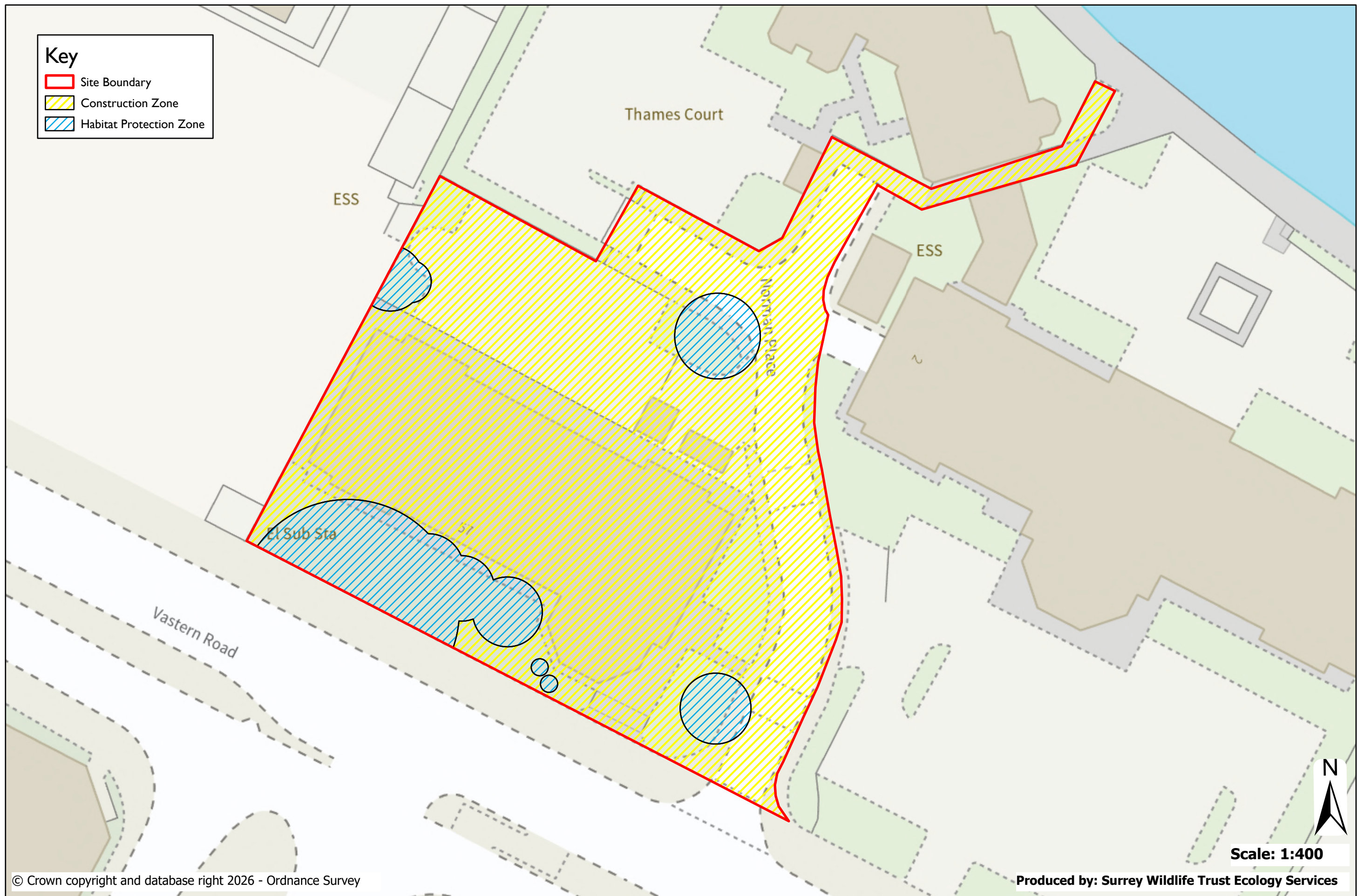


Figure 2:
Sovereign House
CEMP

Created By: EB
Map Revision Number:
Landscape Plan: 100099718-ATR-XX-XX-D-L-401002_Softworks plan.pdf
6441, 10/06/2026



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2 Construction specifics

2.1 Construction programme

- 2.1.1 The detailed construction programme will be made available for review at the site office. This has been prepared by Bowmer & Kirkland. This CEMP (Biodiversity) relates specifically to measures to protect biodiversity and does not cover general construction activities.

3 Legislative framework

- 3.1.1 All activities need to comply with relevant UK legislation, as detailed in Appendix 1.
- 3.1.2 Appendix 2 provides a calendar for the implementation of mitigation measures to ensure these are timed to minimise impacts to protected species and those of conservation concern.

4 Responsibilities

- 4.1.1 Table 2 presents the roles and responsibilities for delivering the CEMP (Biodiversity).
- 4.1.2 The site manager will ensure good communication with the project team to ensure the CEMP (Biodiversity) is successfully delivered and measures detailed in this plan are implemented.

Table 2: Roles and responsibilities

Role	Responsibilities
Site manager	- Ensuring the CEMP (Biodiversity) is held on site and that it is implemented throughout all the phases of the project. - Ensuring the CEMP (Biodiversity) details are updated where relevant and is provided to the relevant stakeholders. - Ensuring that all contractors and visitors comply with the CEMP (Biodiversity). - Ensuring that the environmental issues identified in the pre-construction information, site surveys and relevant information gathered from agencies, local councils etc. are addressed. - Producing environmental project-specific controls for all significant risks identified and implementing these to minimise the risk of damage to the environment. - Communicating the CEMP (Biodiversity) and other documents to employees, contractors and client representatives. - Liaising with the relevant stakeholders on environmental issues and making sure that all environmental matters relating to the project are discussed, documented and managed.
Ecological clerk of works	- Ensuring compliance with the relevant environmental legislation and consents, objectives, targets and the CEMP (Biodiversity). - Undertaking ecological supervision, where this is required.
Contractors and visitors	- All contractors and visitors will be made aware of the relevant environmental requirements and the controls applicable to their presence and activities. This will include, but not be limited to: - Method statements - Risk assessments - Site inductions - Toolbox talks

5 Risk assessment of project activities

5.1.1 The CEMP (Biodiversity) requires a risk assessment of potentially damaging activities on biodiversity and details of how these impacts would be avoided and/or mitigated for. The risk assessment is presented in Table 3 and only relates to ecological receptors scoped into the EcIA for which mitigation measures have been identified as required to minimise risk to these.

Table 3: Risk assessment of construction activities

Receptor number	Ecological Receptor	Figure 1 map reference	Impacts from construction activities	Impact assessment (risk)	Avoidance and mitigation measures	Residual risk
1.	Terrestrial habitats		- Habitat loss - Habitat degradation	Moderate	Protection measures and buffer required during construction activities including: - Protection of trees in line with Tree Protection Plan and BS 5837:2012 - Implementation of a pollution incidence response plan. - Appropriate storage of fuel, material, and chemicals. - Appropriate dust control. Fenced Habitat Protection Zones (Figure 2) - Pre-construction check to identify new ecological constraints not previously considered.	Low
2.	Invertebrates		- Habitat loss - Injury or killing	Low	Habitats will be retained in the habitat protection zone - Undertake a pre-works walkover between May and August and record location of dead/decaying wood. - Where dead/decaying wood is recorded in the construction zone, supervise the translocation of this suitable stag beetle habitat to the habitat protection zone.	Low
3.	Birds		Habitat loss, disturbance	Low	Undertake vegetation removal or building demolition between September and February, outside the breeding bird season. Where this cannot be avoided, works will need to be supervised by an ecologist, and identified nests adequately protected until chicks have fledged. Supervision includes checking the vegetation within 24 hours of proposed removal.	Low
4.	Badger		Injury or killing, disturbance	Low	Prior to any vegetation removal, undertake walkover survey within works area and a 30m buffer: - Three months before works commence (to allow for any mitigation licenses to be applied for prior to works commencing) - One month before works commence (to allow for monitoring to occur to determine level of use prior to works commencing) - One day before works commence Best-practice construction methods are recommended, including: - Establishing appropriate exclusion zones, reflective of walkover survey results - Avoiding noisy plant and machinery work in close proximity to mammal holes, two hours before sunset - Directing security lighting near mammal holes - Covering any holes or trenches overnight, placing a ramp in larger holes so that fallen animals can escape in the eventuality they fall into the holes. - Safeguarding water sources If a badger licence is required, mitigation measures can only be implemented from 1st July to 30th November.	Low
5.	Bats – foraging and commuting habitat	B1 and B3	Indirect impact through noise, vibration and lighting.	Low	- Direct lighting away from treed habitat (e.g. hedgerows, trees) and focussed on works area. - Work will not be undertaken within 30 minutes of sunrise or sunset. - Lighting of dark zones to not exceed baseline levels. - LED lighting in the warm spectrum (<2700K) to minimise impacts on bats will be used. Timers, dimmers and off-times could be considered, where possible.	Low

Receptor number	Ecological Receptor	Figure 1 map reference	Impacts from construction activities	Impact assessment (risk)	Avoidance and mitigation measures	Residual risk
6.	Bats – roosting habitat	B1 and B3	Indirect impact through noise, vibration and lighting.	Low	Works to proceed under a precautionary method of working that comprises: - Prior to works commencing a pre-construction check undertaken by a suitably experienced ECoW which comprises inspecting the lofts to identify bats or evidence of bats. - A pre-construction bat emergence survey of B1 (low suitability) and B3 (low suitability). - No trees are proposed for removal, however if this changes, prior to undertaking works, these will be checked by an ecologist prior to commencing works for any new bat potential roosting features that may have developed over time. - Impacts through lighting will be managed as per the risk management measures for foraging and commuting bats.	Low
7.	Hedgehog		- Direct injury or killing - Habitat loss	Low	Covering any holes or trenches overnight, placing a ramp in larger holes so that fallen animals can escape in the eventuality they fall into the holes. Log piles in winter (November to February) will be checked by an appropriately qualified ecologist and dismantled by hand. In retained habitat, deploy shelters to encourage the species to use these. Aim to ensure retained habitat is connected to the wider area.	Low
8.	Other mammals		Direct injury or killing	Low	- Where possible, any works should avoid disturbing or blocking active mammal holes. - Where active mammal holes, not including badger, require removal, this should be undertaken under the supervision of a suitably experienced ecologist following a precautionary method of working to ensure the works comply with the Wild Mammals (Protection) Act 1996. - The location of all mammal holes will be identified prior to construction taking place. - Soft material will be stored in closed containers, or on raised pallets. Where this is not possible and requires moving, this will be done gradually under ecological supervision. Temporary covering will be considered to further exclude mammal species. - Trenches will not be left open overnight. - The site manager will check trenches daily. - Any temporarily exposed open pipes exceeding 150mm diameter will be blocked overnight to prevent animals gaining access. - Unsecured food and litter will not be left in the working area overnight. - No fires will be allowed in the development area. - Where any injured mammals are encountered, these will be secured safely, where possible, and Wildlife Aid or a similar wildlife rescue organisation will be contacted, and their instructions will be followed.	Low
9.	Invasive non-native species, including Schedule 9 invasive species under the Wildlife and Countryside Act 1981		Spread	Moderate	Systematic removal of non-native invasive (cherry laurel and <i>Cotoneaster microphyllus</i>) species following a separate invasive species management plan. Butterfly-bush and snowberry should also be removed. Biosecurity will be adhered to including: - Check clothes and equipment for plant material and remove and leave on site. - Clean clothes and equipment thoroughly. - After cleaning, ensure clothes and equipment are thoroughly dried. - Boots and vehicle wheels may require leaning prior to leaving site. Wash stations will be provided by the site access.	Low

6 Mitigation measures

6.1 Training, awareness and competence

- 6.1.1 The raising of environmental awareness is viewed as a crucial element in the appreciation and implementation of the CEMP (Biodiversity). As part of the site induction, biodiversity will be covered.
- 6.1.2 Where supervision is required, a toolbox talk will be provided by the ECoW. Attendees will sign the attendance form to record the receipt of the toolbox talk.

6.2 Supervision of construction activities

- 6.2.1 Ecological supervision will be required in some instances, as detailed in Table 1. The site manager will be responsible for notifying the ECoW of activities where their presence will be required.

6.3 Ecological environmental protection measures

- 6.3.1 The ecological features requiring protection, mitigation or ongoing monitoring are detailed in Tables 1 and 3. Figure 1 presents the biodiversity enhancement plan and ecological features, and Figure 2 presents the location of the habitat protection zones. The habitat protection zone fencing will include a sign, as detailed in Appendix 3.

6.4 General environmental protection measures

Noise

- 6.4.1 Monitoring will be undertaken to ensure that noise and vibration levels at nearby properties or other sensitive locations are kept to a minimum.
- 6.4.2 Construction activities will be assessed individually to ensure local residents, visitors and business owners are affected as little as possible by the development.
- 6.4.3 Strict controls on the sequencing of works and provision of noise protection will be developed on an activity-by-activity basis. This will include:
- Mobile plant will be turned off when not in use.
 - Mortar silos to reduce operating noise.
 - The quietest possible plant that can be reasonably obtained will be used for each construction task.
 - Percussive plant will be avoided where alternative non-percussive plant is available for a given task.
- 6.4.4 Further measures detailed in the CEMP (Biodiversity) in relation to noise will need to be implemented.

Water quality, drainage and hydrology

- 6.4.5 Construction phase operations will be carried out in accordance with guidance contained within the Health and Safety Plan, Method Statements and Waste Management Plan and will consider the following:
- General guide to the prevention of pollution.
 - Above-ground oil storage tanks.
 - Working at construction and demolition sites.
 - High pressure water cleaners.

- Control of spillages.
 - Pollution incident response planning to comprise:
 - No pumping to controlled waters without a Discharge Consent obtained from the Environment Agency.
 - No pumping into surface water drains without the permission of the Environment Agency.
 - No pumping into the foul sewer without the permission of the Water Company.
 - To prevent water pollution resulting from worker-generated sewage effluents, portable toilets (for initial site setup works only) and good quality temporary toilet facilities will be provided for construction worker use.
- 6.4.6 The potential for impacts to occur resulting from storage of materials will be minimised by the following measures:
- Storage compounds (for the storage of construction materials or temporary stockpiling of excavated soils) will be located away from the surface watercourses and drains in a designated area.
 - Drums and barrels will be stored in a designated bunded safe area within the compound.
 - All drums and barrels will be fitted with flow control taps.
 - All drums and barrels will be properly labelled.
 - All fuel containers will be double bunded and positioned away for watercourses.
- 6.4.7 The potential for impacts to occur resulting from disturbance of silt will be minimised by the following measures:
- Where relevant, all pumped drainage from the construction works, including areas for temporary storage of construction materials or excavated soils, will be passed through silt settlement treatment prior to discharge to drains. Silt settlement treatments may, for example, include straw bales, grassland soakaways or silt settlement lagoons.
 - All roads and hardstanding will be cleaned regularly to prevent the build-up of oil and dirt that may be washed into a watercourse or drain during heavy rainfall (including regular sweeps with a mechanical sweeper).
 - The use of water sprays to reduce dust or washing down of construction areas will be carefully regulated to avoid washing substantial quantities of silt etc. into surface water drains. Where large quantities of gravel, mud or other such material require cleaning, the area will be swept prior to any subsequent hosing down.
- 6.4.8 The potential for impacts occurs resulting from contamination of water by wet cement or concrete will be minimised by the following measures:
- Manholes and catch pits will be covered to prevent concrete/cement ingress.
 - Concreting at watercourse/drain culvert sites will be closely supervised to prevent concrete contamination of the watercourse/drain.
 - The washing of any concrete mixing plant or ready-mix lorries will be carried out to prevent effluent from cleaning from being allowed to flow into any watercourse or drain.
- 6.4.9 The potential for impacts to occur resulting from contamination of water by oil or other liquids will be minimised by the following measures:

- Storage compounds for fuels, oils or other liquid chemicals will be sited away from surface water drains. They will have an impermeable base and bund with a capacity of 110% and will not drain directly into the surface water drains.
 - Small plant such as pumps will be equipped with drip trays.
 - Drums and barrels will be stored in a designated bunded safe area within the site compound.
 - All drums and barrels will be fitted with flow control taps.
 - All drums and barrels will be properly labelled.
- 6.4.10 The potential for impacts to occur resulting from contamination from accidental spillages will be minimised by the following measures:
- Emergency response procedures will be established to deal with instances of leakages or spillages of potentially contaminating substances.
 - Spill kit will be located on sites near to stored chemicals and within the works compounds.
 - Staff will be trained in the use of spill kits.
- 6.4.11 The following measures will be implemented to minimise potential impacts on groundwater during earthworks:
- Prior to pumping from excavations, permits to operate pumps will be issued to the pump operator, indicating the point of discharge and all other necessary control procedures.
 - Subsoil will be exposed for a minimum length of time after topsoil strip. Cutoff trenches, where necessary, will be excavated to prevent excessive surface water runoff into watercourses. Cutoff trenches will discharge into sediment lagoons, with discharge to watercourse subject to the prior consent of the Environment Agency.
 - Topsoil/vegetation along watercourses will be retained to aid attenuation and sediment infiltration.
- 6.4.12 Any risk of contamination of groundwater resulting from piling will be controlled through adequate casing of the piles, selection of suitable concrete mixes with short curing periods and localised control of the groundwater level should this prove necessary.
- 6.4.13 Consents will be required from the Environment Agency under the Water Resources Act 1991 for temporary discharges or construction works affecting controlled watercourses. Applications for consents will be made to the Environment Agency in accordance with these requirements and works will be undertaken in accordance with any conditions imposed.

Air quality and emissions

- 6.4.14 Care will be required to maintain dust emissions at a practicable minimum when working in the vicinity of residential properties and environmentally sensitive areas. best practice mitigation will be required during dry conditions.
- 6.4.15 A Construction Generated Noise and Dust Receptor Identification Plan will be distributed to all contractors at the Tender stage and all onsite operatives to ensure consideration is given to dust-generating activities in areas close to local residents and businesses.
- 6.4.16 Dust reduction measures will include:

- Careful management of earth stockpiles.
 - Sheeting of vehicles transporting materials to and from the site.
 - Limiting the speed of general vehicles within the site to 10mph.
 - Surfacing of the haul roads as soon as possible in the construction programme.
 - Haul roads to be regularly cleaned.
 - Provision of wheel cleaning point at access points into local roads (to prevent mud from getting on the public highways).
 - Visual monitoring will be carried out at sensitive locations on a daily basis.
- 6.4.17 By using effective dust mitigation techniques, including good site planning, the potential for dust emissions to arise at a construction site and impact on surrounding receptors can be minimised. The site manager will be elected as the responsible person regarding any dust-related disputes raised by operatives, local residents and local business owners.
- 6.4.18 The Head Office and Site Manager contact information will be displayed on the site hoarding and will be viewable for members of the community and site visitors. The Site Manager's contact information will be shown on the regular letter drop.
- 6.4.19 The potential for dust to arise during the ground-breaking, earth moving and excavation stages of the construction phase is highly weather-dependent. If the works are carried out in dry weather, increased water spraying may be required to ensure that the surface material remains damp. In wet weather, greater attention will be paid to vehicle cleaning to ensure significant quantities of mud are not trafficked onto local roads, which once dry can become a significant source of dust.
- 6.4.20 Throughout the construction period, care will be taken to ensure the adequate control of dust from vehicles delivering and removing materials to and from the site. Drop heights when loading and unloading materials will be minimised. All dusty loads will be sheeted appropriately. The Site Manager will ensure that the hard surfacing of heavily-used areas and adjacent public roadways are regularly cleaned.
- 6.4.21 Once the construction of superstructures commences, there will be less potential for significant emissions of dust from the site, although emissions may still arise from the storage of dusty materials. Generally, the storage compounds will be screened both for security and to prevent wind whipping. In addition, there are certain construction activities that are inherently dusty and will require additional controls e.g. stone or brick cutting. In these particular circumstances, a pressure water bottle attachment can be used to dampen dust. Such activities may require local screening, or the activities may be limited to certain areas within the site or restricted to certain time periods in order to limit impacts.
- 6.4.22 Specific measures to prevent dust and air pollution will include the following practices:
- The provision of easily cleaned hard standings for vehicles (to include the areas close to the site access).
 - The regular cleaning by brushing and water spraying of heavily used hard surface areas.
 - The provision of wheel washing facilities with high pressure hoses to ensure all vehicles leaving site are in a satisfactory state of cleanliness.

- Dusty materials stockpiles and dusty activities such as stone cutting and grinding to be sited away from the site boundary and/or effectively screened where practicable.
 - The application of a 'no burning' policy on site throughout the construction phase.
- 6.4.23 The site manager will be responsible for recording all dust and air quality related complaints, identifying cause, proposing resolutions, and ensuring resolutions are implemented. The site will be walked over daily to ensure areas of dust generation are checked, such as roads or cutting activities.

Waste management

6.4.24 Proposals will be drawn up for dealing with waste arising from the construction of the project within a Waste Management Plan for the site.

6.4.25 These will include:

- Storing and reusing earthwork materials, including topsoil, and general arisings to negate the export or import of inert materials.
- Reduction of site-generated waste through waste minimisation, segregation, and recycling initiatives.
- Identification, storage, and management of potentially contaminated materials.
- Appropriate methods of waste disposal linked to a robust waste disposal audit trail.
- All topsoil and subsoil will be handled and stored carefully to minimise the potential for damage to the soil structure.
- Where possible, construction risings will be reused within the site as structural or non-structural fill.
- Where practicable, all concrete and redundant road pavements will be transported to a dedicated crushing and recycling facility for reuse on the project or within the local area.
- Detailed procedures and guidance will be developed and implemented through the construction phase to minimise the import of non-sustainable raw materials and for identifying opportunities for reusing or recycling waste.
- Site office wastes will be collected in separate containers to maximise the opportunities for recycling. This will include can, bottle and paper banks.

Light pollution

6.4.26 Works will occur during daylight hours only; therefore no floodlighting is considered necessary.

6.4.27 If any lighting is required during the development, this will take account of ecologically sensitive zones and best-practice guidance (BCT & ILP, 2023).

7 Monitoring

7.1.1 The Ecological Clerk of Works will undertake a site monitoring visit as required, to ensure the environmental mitigation measures are being appropriately implemented. A site diary will be kept daily during supervision works, detailing the actions undertaken and record of significant findings. The site diary will be shared with the project team for their records.

8 References

- BCT & ILP. (2023). *Guidance Note 08/23: Bats and artificial lighting at night*. London & Rugby: BCT & ILP.
- CIEEM. (2019). *Advice note: On the Life-span of Ecological Reports and Surveys*.
- CIEEM. (2022b). *Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine (Version 1.2)*. Winchester: Chartered Institute of Ecology and Environmental Management.
- Herpetofauna Groups of Britain and Ireland. (1998). *Evaluating local mitigation/translocation programmes: maintaining best practice and lawful standards*. HGBI: Advisory Notes for Amphibian and Reptile Groups.
- London Wildlife Trust. (2019). *Stag Beetle: An advice note for its conservation in London*. London: London Wildlife Trust.
- Natural England. (2022). *Reptiles: advice for making planning decisions*. Natural England.
- PTES. (2014). *Stag Beetle Fact Sheet*. London: PTES.

Appendix 1: Legislation

Conservation of Habitats and Species Regulations 2017 (as amended)

Provides for the protection of Natura 2000 sites (SACs, SPAs and Ramsar sites), European Protected Species and habitats. Species listed under Schedule 2 are protected from:

- Deliberate capture, injury or killing.
- Deliberate disturbance [...], such that it impairs their ability to breed, reproduce or rear their young, hibernate or migrate or significantly affect their local distribution or abundance.
- Deliberate taking or destroy effect.
- Damage or destroying a breeding site or resting place.
- Keeping, transporting, selling or exchanging any live, dead or part.

Species listed under Schedule 2 include, but are not limited to:

- Great crested newt
- Natterjack toad
- Otter
- Smooth snake
- Sand lizard
- All bat species
- Hazel dormouse

The LPA will be aware of its legal duty under Regulation 9(3) of Conservation of Habitats and Species Regulations 2017, as amended, which states that “*a competent authority in exercising any of its functions, must have regard to the requirements of the Directives so far as they may be affected by the exercise of those function*”.

Also, under Regulation 55 (9b) of the above regulations, the LPA must apply the following three tests when deciding whether to grant planning permission where a Protected Species (bats) may be harmed, in line with the Conservation of Habitats and Species Regulations 2017, as amended.

- The activity must be for imperative reasons of overriding public interest or for public health and safety;
- There must be no satisfactory alternative;
- Favourable conservation status of the species must be maintained.

Natural England has stated that they would expect these three tests to be adequately considered by the LPA before planning permission is granted. Natural England will require evidence from the applicant that the LPA has considered the three tests and how they were met, before a mitigation licence can be issued. Where a mitigation licence is required to avoid breach of legislation, development cannot proceed even where a valid planning permission is granted.

Wildlife and Countryside Act 1981 (as amended)

Key piece of legislation consolidating existing wildlife legislation to incorporate the requirements of the Bern Convention and Birds Directive. It includes additional protection measures for species listed under the Conservation of Habitats and Species Regulations 2017 (as amended) and includes a list of species protected under the Act. It also provides for the designation and protection of Sites of Special Scientific Interest (SSSI).

Development which would adversely affect a SSSI is not acceptable except only in special cases, where the importance of a development outweighs the impact on the SSSI when planning conditions or obligations would be used to mitigate the impact. Developments likely to impact on a SSSI will likely require an Environmental Impact Assessment (EIA).

The Impact Risk Zones dataset is a GIS tool which details zones around each SSSI according to the particular sensitivities of the features for which it is notified and specifies the types of development that have the potential to have adverse impacts. Natural England uses the Impact Risk Zones to make an initial assessment of the likely risk of impacts on SSSIs and to quickly determine which consultations are unlikely to pose risks and which require more detailed consideration. Local Planning Authorities (LPAs) have a duty to consult Natural England before granting planning permission on any development that is in or likely to affect a SSSI.

Further information on specific legislation relating to species protected under the Wildlife and Countryside Act 1981 (as amended) is detailed below, under Protection of Protected Species and Habitats.

Environment Act (2021)

The Environment Act (2021) makes a provision for biodiversity net gain to be a condition of planning permission in England. Planning applications will need to demonstrate a 10% biodiversity net gain can be met. A biodiversity net gain plan must be submitted and must include:

- (a) information about the steps taken or to be taken to minimise the adverse effect of the development on the biodiversity of the onsite habitat and any other habitat
- (b) the pre-development biodiversity value of the onsite habitat,
- (c) the post-development biodiversity value of the onsite habitat,
- (d) any registered offsite biodiversity gain allocated to the development and the biodiversity value of that gain in relation to the development,
- (e) any biodiversity credits purchased for the development,

Countryside and Right of Way Act 2000

Amends and strengthens the Wildlife and Countryside Act 1981 (as amended). It also details habitats and species for which conservation measures should be promoted.

Natural Environment and Rural Communities Act 2006

Section 40 of the Act places a duty on local planning authorities to conserve and enhance biodiversity in England whilst carrying out their normal functions. Section 41 comprises a list of Habitats of Principal Importance (HPIs) and Species of Principal Importance (SPIs) which should be considered.

Section 41 details 56 HPIs, of which the following could be present in south-east England: Lowland calcareous grassland, Lowland dry acid grassland, Lowland meadows, Lowland Heathland, Open Mosaic Habitats on Previously Developed Land, Lowland fens, Lowland raised bog, Reedbeds, Lowland beech and yew woodland, Lowland mixed deciduous woodland and Wet woodland.

Impacts to HPI are of material planning consideration.

The LPA will need to have particular regard to any relevant local nature recovery strategies, and any relevant species conservation strategy or protected site strategy prepared by Natural England.

Hedgerows Regulations 1997

Under the Hedgerows Regulations 1997 it is against the law to remove or destroy certain hedgerows without permission from the LPA, which are also the enforcement body for offences created by the Regulations. LPA permission is normally required before removing hedges that are at least 20 m in length, more than 30 years old and contain certain plant species. The authority will assess the importance of the hedgerow using criteria set out in the regulations. The regulations **do not** apply to hedgerows within the curtilage of, or marking a boundary of the curtilage of, a dwelling house.

Hedgerow is a HPI.

Wild Mammals (Protection) Act 1996

Under this act wild mammals are protected from the intentional unnecessary suffering by crushing and asphyxiation.

Protection of protected species and habitats

Amphibians

Natterjack toad, pool frog and great crested newt are protected under the Conservation of Habitats and Species Regulations 2017 (as amended). They are also afforded additional protection under the Wildlife and Countryside Act 1981 (as amended).

Natterjack toad, common toad, great crested newt and northern pool frog are also SPIs.

Reptiles

Smooth snake and sand lizard are protected under the Conservation of Habitats and Species Regulations 2017 (as amended). They are afforded additional protection under the Wildlife and Countryside Act 1981 (as amended).

Adder, grass snake, common lizard and slow-worm are all protected from killing and injury under the Wildlife and Countryside Act 1981 (as amended). All UK reptile species are SPIs.

Birds

All wild birds are protected under the Wildlife and Countryside Act 1981 (as amended). This includes damage and destruction of their nests whilst in use, or construction. Species listed under Schedule 1 of the Act, such as barn owl, are afforded protection from disturbance during the nesting season.

The following 50 bird species are SPIs: lesser redpoll, aquatic warbler, marsh warbler, skylark, white-fronted goose, tree pipit, scaup, bittern, dark-bellied brent goose, stone-curlew, nightjar, hen harrier, northern harrier, hawfinch, corncrake, cuckoo, Bewick's swan, lesser spotted woodpecker, corn bunting, curl bunting, yellowhammer, reed bunting, red grouse, herring gull, black-tailed godwit, linnet, twite, Savi's warbler, grasshopper warbler, woodlark, common scoter, yellow wagtail, spotted flycatcher, curlew, house sparrow, tree sparrow, grey partridge, wood warbler, willow tit, marsh tit, dunnoek, Balearic shearwater, bullfinch, roseate tern, turtle dove, starling, black grouse, song thrush, ring ouzel and lapwing.

Badger

Badger is protected under the Protection of Badgers Act 1992. Under this legislation it is an offence to kill or injure a badger; to damage, destroy or block access to a badger sett; or to disturb badger in its sett. The Act also states the conditions for the Protection of Badgers licence requirements.

Bats

All bat species are protected under the Conservation of Habitats and Species Regulations 2017 (as amended), as detailed above. Bats are further protected under the Wildlife and Countryside Act 1981 (as amended), making it an offence to:

- Deliberately or recklessly damage or destroy any structure or place which bat(s) use for shelter or protection.
- Disturb bat(s) while occupying a structure or place which it uses for shelter or protection.
- Obstruct access to any structure or place which they use for shelter or protection.

Furthermore, seven bat species are SPIs, covered under Section 41 of the NERC Act 2006. These include western barbastelle, Bechstein's, noctule, soprano pipistrelle, brown long-eared, lesser horseshoe and greater horseshoe.

Beaver

Beaver is provided under Conservation of habitats and Species Regulations 20217 (as amended). Beaver is also afforded additional protection under the Wildlife and Countryside Act 1981, as amended.

Hazel dormouse

Hazel dormouse is protected under the Conservation of Habitats and Species Regulations 2017 (as amended). It is afforded additional protection under the Wildlife and Countryside Act 1981 (as amended), including obstruction to a place of shelter or rest.

Hazel dormouse is also a SPI.

Otter

Otter is protected under the Conservation of Habitats and Species Regulations 2017 (as amended) and is afforded additional protection under the Wildlife and Countryside Act 1981 (as amended). Otter is also a SPI.

Water vole

Water vole is fully protected from capture, killing or injury; damage, destruction or blocking access to a place of shelter; disturbance whilst in a place of shelter or possessing, selling any part of a water vole, dead or alive under the Wildlife and Countryside Act 1981 (as amended).

Water vole is also a SPI.

Other mammals

West European hedgehog, brown hare, mountain hare, pine marten, harvest mouse, polecat and red squirrel are all SPIs.

The following mammals are listed under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended): wildcat, brown hare (Schedule 5A), mountain hare (Schedule 5A), pine marten and red squirrel.

Invertebrates

Fifty-six terrestrial and freshwater invertebrate species are listed under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). These include Reddish buff, Norfolk hawker, Purple emperor, High brown fritillary, Northern brown argus, White-clawed crayfish, Pearl-bordered fritillary, DeFolin's lagoon snail, Chequered skipper, Fairy shrimp, Rainbow leaf beetle, New Forest cicada, Southern damselfly, Large heath, Small blue, Wartbiter, Fen raft spider, Ivell's sea anemone, Mountain ringlet, Ladybird spider, Marsh fritillary, Spangled diving beetle, Mole cricket, Field cricket, Duke of Burgundy, Silver-spotted skipper, Medicinal leech, Lesser silver water beetle, Moccas beetle, Wood white, Violet click beetle, Large copper, Freshwater pearl mussel, heath fritillary, Glanville fritillary, Glutinous snail, Starlet sea anemone, Large tortoiseshell, Brackish hydroid, Swallowtail, Bembridge beetle, Barberry carpet, Silver-studded blue, Adonis blue, Chalk hill blue, Fiery clearwing, Sandbowl snail, Black hairstreak, White-letter hairstreak, Black-veined moth, Sussex emerald, Brown hairstreak, Northern hatchet-shell, Lulworth skipper, Tadpole shrimp, New Forest burnet.

A total of 398 invertebrates are Species of Principal Importance. These include: beetles (including stag beetle), butterflies (high brown fritillary, large heath, small blue, white-letter hairstreak, brown hairstreak, damselflies (southern damselfly), moths (marsh moth), ants, bees etc. Impacts to SPI must be considered by the LPA when assessing planning applications.

Non-native invasive plant species

Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) is a list of non-native plant species for which Section 14 of the Act applies. It is an offence to plant, or otherwise cause to grow in the wild species listed under Schedule 9 of the act. These include, but are not limited to:

- Himalayan balsam
- Cotoneaster sp.
- Japanese knotweed
- Giant hogweed

Appendix 2: Timing of works to reduce impacts on protected species

Indicative optimal timings for undertaking works

Receptor	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Invertebrates												
Amphibians												
Reptiles												
Birds												
Badger												
Bats												
Hazel dormouse												
Otter												
Water vole												
Hedgehog												

	Optimal	Sub-optimal	Outside acceptable season
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Appendix 3: Signage for protective measures

