



Ecological Mitigation and Enhancement Plan

High Ridge, Upper Warren Avenue, Reading, RG4 7ED

STL Architecture

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Guidelines

This assessment has been designed to meet:

- British Standard 42020 (2013) 'Biodiversity – Code of Practice for Planning and Development'.

Proportionality

The work involved in preparing and implementing all ecological surveys, impact assessments and measures for avoidance, mitigation, compensation and enhancement should be proportionate to the predicted degree of risk to biodiversity and to the nature and scale of the proposed development. Consequently, the decision-maker should only request supporting information and conservation measures that are relevant, necessary and material to the application in question. Similarly, the decision-maker and their consultees should ensure that any comments and advice made over an application are also proportionate.

This approach is enshrined in Government planning guidance, for example, paragraph 174 of the National Planning Policy Framework for England.

The desk studies and field surveys undertaken to provide a preliminary ecological appraisal (PEA) might in some cases be all that is necessary.

(BS 42020, 2013)

In consequence of the scale and intensity of the proposed development, this plan-led report is considered adequate and proportionate. It communicates all relevant information necessary to determine a planning application or support the recommendations for further surveys.

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1.0 Introduction and Context

1.1 Background

Arbtech Consulting Ltd was commissioned by STL Architecture to produce an Ecological Mitigation and Enhancement Plan (EMEP) for the proposed development at High Ridge, Upper Warren Avenue, Reading, RG4 7ED (hereafter referred to as the site).

The site has not been subject to previous ecological assessment by Arbtech Consulting Ltd. However, the site has been subject to the following ecological assessments in support of the planning application pertaining to the site:

- A Preliminary Ecological Appraisal and Preliminary Roost Assessment (Turnstone Ecology, 2020);
- A Habitat Suitability Index Assessment (Turnstone Ecology, 2020); and
- Two dusk emergence bat activity surveys (Turnstone Ecology, 2020).

The results of the 2020 ecological assessments undertaken by turnstone ecology detail the baseline ecological conditions at the site relevant to this EMEP.

1.2 Project Description

There are two planning applications pertaining to the site including the original approved application and a subsequent material amendment application (Reading Borough Council refs: 201331 & 211916). The planning applications describe the proposed development as: erection of a replacement dwelling with associated car parking and landscaping. A proposed development plan is provided in **Figure 1** below.

1.3 Site Location

The site is located at National Grid Reference SU 69715 75249 and comprises an area of approximately 0.83ha. The site is characterised by a derelict residential property alongside associated front and rear gardens. The site is located within a suburban area of north Reading and is positioned directly adjacent to a linear section of woodland approximately 110m north of the River Thames. The location of the site is shown in **Figure 2** below.

1.4 Scope of this Report

Following the submission of planning application ref: 201331, the proposed development was conditionally approved. It is noted that the Local Planning Authority Ecologist was consulted with regards to the material amendments detailed within updated planning application ref: 211916 and it was determined that planning conditions relating to ecology as detailed within the original planning approval remain suitable for the site. Relevant to this report, planning conditions 6 and 7 state:

Planning condition 6 states:

“No development shall take place (including demolition, ground works, vegetation clearance) until 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 to include potential impacts on bats, badgers and reptiles*
- 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 competent person*
- h) 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.”

Planning condition 7 states:

“Prior to the commencement of the development, a scheme of biodiversity enhancements, to include bird and bat boxes, tiles or bricks on and around the new buildings, native and wildlife friendly landscaping and details of how the southern lawn is to be managed for reptiles, is to be submitted to and approved in writing by the council. The scheme shall thereafter be installed and managed as approved.”

The scope of this report is to provide a plan to enhance the site for biodiversity post-construction and to mitigate impacts of the proposed development on protected and notable species identified through previous ecological assessment to comply with wildlife legislation and planning policy (see **Appendix 2**). As a result, this report provides evidence in support of the discharge of planning conditions 6 and 7.



Figure 1: The proposed development plan

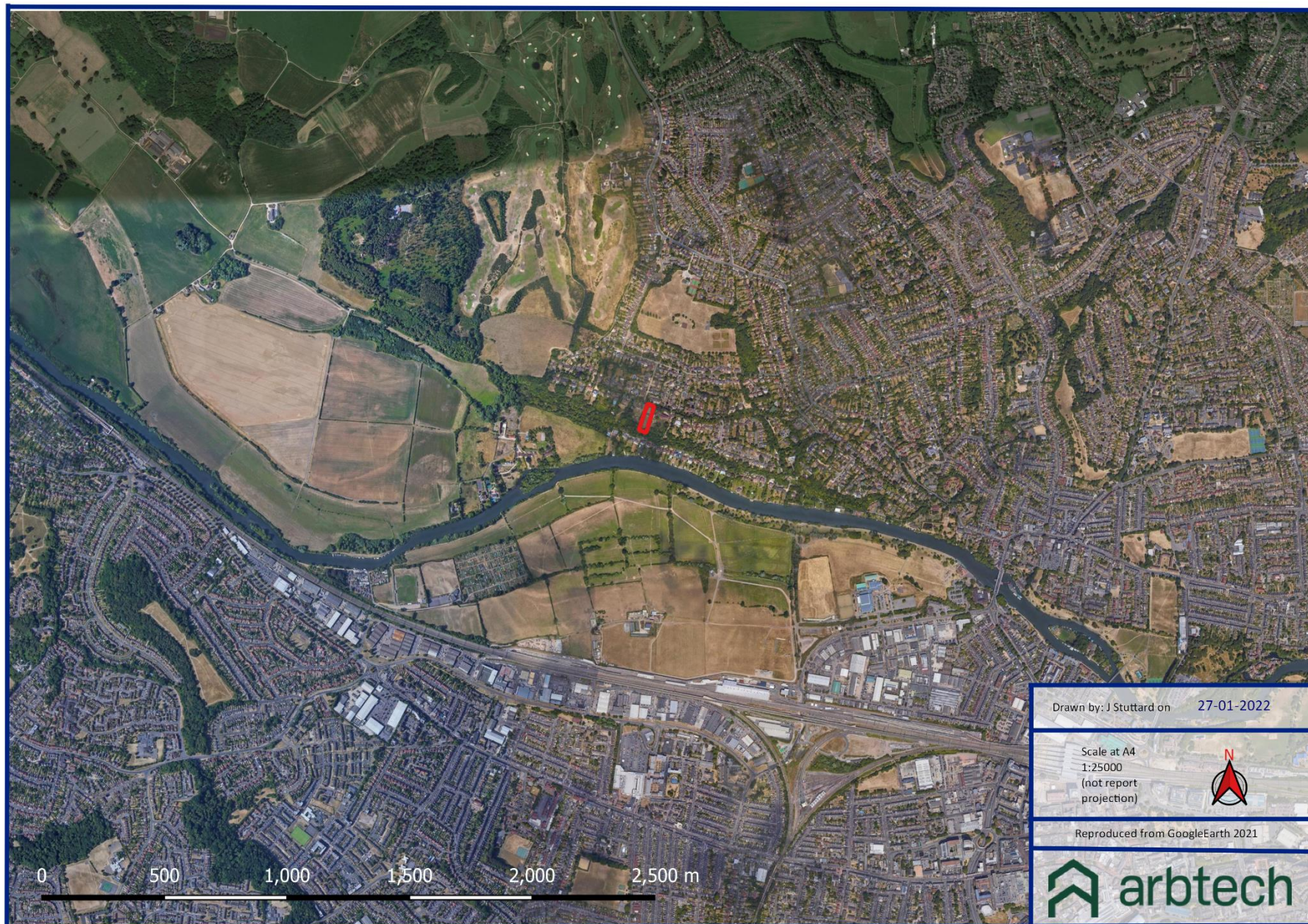


Figure 2: The location of the site in the context of the wider environment.

2.0 Ecological Baseline Conditions

The baseline ecological conditions of relevance to this report were determined as a result of the ecological assessments undertaken by Turnstone Ecology (Turnstone Ecology, 2020).

2.1 Habitats recorded on Site

The site is characterised by a derelict residential property alongside associated front and rear gardens. The site is located within a suburban area of north Reading and is positioned directly adjacent to a linear section of woodland approximately 110m north of the River Thames. Habitats recorded on site include amenity grassland, tall ruderal vegetation, Species-poor hedgerow, trees/ woodland, bare ground, building, and hardstanding.

Given the extent and type of habitats recorded, the site was assessed for its value to support the following protected and/ or notable species:

- Badgers *Meles meles*;
- Bats;
- Nesting birds;
- Great crested newts *Triturus cristatus*; and
- Reptiles.

2.2. Value to Protected/Notable Species

Badgers

An active badger sett was recorded within woodland adjacent to the south site boundary. Furthermore, the site was assessed to contain habitats of value to foraging and commuting badgers, predominantly within the rear garden in the form of grassland, woodland, and hedgerows. Construction activities are located over 30m from the badger sett recorded on site. However, the rear garden will be subject to new landscaping. No direct impacts to the badger sett are therefore anticipated as a result of the proposed development. However, there is potential for indirect disturbance to badgers potentially active within the rear garden during the construction phase of the development.

Bats

Two buildings are present on site that will be impacted by the proposed development; a derelict residential dwelling and a small timber shed. As a result of the PRA, the derelict residential dwelling was assessed to provide **moderate** value to roosting bats and the small timber shed was assessed to provide **negligible** value to roosting bats. The derelict residential dwelling was subsequently subject to two dusk emergence bat activity surveys. No bats were recorded roosting within the building. It was therefore assessed that no impacts to roosting bats would occur as a result of the proposed development. Furthermore, habitats recorded on site predominantly located within the rear garden, were assessed to provide foraging and commuting

opportunities for bats in the form of grassland, woodland, and hedgerows. The rear garden will be subject to new landscaping in association with the proposed development. Furthermore, three trees only are proposed to be removed due to their poor condition. As a result, vegetation removal was assessed to be inconsequential for foraging and commuting bats in the context of the wider landscape. However, it was assessed that there is potential for indirect disturbance to foraging and commuting bats during the construction phase and post-development.

Nesting birds

Due to the small extent and type of habitats recorded, the site was not assessed to provide opportunities for a significant assemblage of protected and/ or notable bird species. However, the derelict residential dwelling, trees, and the hedgerow were assessed to provide nesting opportunities for common species of breeding birds. The derelict residential dwelling is to be demolished and three trees are to be removed to facilitate the proposed development. As a result, it was assessed that demolition of this building and tree removal may result in the destruction of active bird nests.

Great crested newts

No water bodies were recorded on site. A single pond was recorded within 500m of the site, located 250m east within a residential garden. This pond was assessed to represent **poor** value to great crested newts as a result of the Habitat Suitability Index Assessment. Although habitats recorded on site were assessed to provide limited terrestrial opportunities for great crested newts in the form of grassland, woodland, and hedgerows, due to an absence of suitable aquatic habitat within 500m of the site, great crested newts were considered highly unlikely to be present on site.

Reptiles

Records indicating the presence of slow worm *Anguis fragilis* were returned within 2km of the site. Habitats recorded on site were assessed to provide foraging, commuting, basking, and refugia opportunities for reptiles in the form of long grassland within the rear garden and adjacent woodland edge and hedgerows. The site was also assessed to be suitably connected to the wider landscape via woodland adjacent to the south. As a result, the presence of reptiles on site could not be discounted. The site will be subject to new landscaping within the rear garden in association with the proposed development. Landscaping works were assessed to have potential to cause death or injury to reptiles, if present.

3.0 Ecological Mitigation and Enhancement Details

Recommended ecological mitigation and enhancement for the proposed development are detailed in **Table 1** below. The mitigation prescriptions aim to mitigate impacts to badgers, foraging and commuting bats, nesting birds, and reptiles. Enhancements are also recommended to demonstrate a net gain in biodiversity at the site post-development.

Table 1: Mitigation and Enhancement Recommendations

Ecological Receptor	Mitigation and Enhancement Prescriptions
Badgers	Pre-commencement badger survey Badgers are highly transient animals and often excavate new badger setts and extend foraging and commuting territories. As such, there is potential for a new badger sett to be excavated on site in the time prior to the commencement of the proposed development. A pre-commencement badger survey will therefore be undertaken by a suitably qualified ecologist (SQE) as close to the beginning of construction activities as is practicable, preferably within 1 month prior to construction activities. The pre-commencement badger survey will include a walkover survey of the site in addition to any accessible habitats adjacent to the site in order to complete a site wide search for field signs indicating the current use of the site by badgers such as badger setts, latrines, commuting pathways, foraging evidence, and discarded bedding material. Potential for licensable activities Should the pre-commencement badger survey record a newly excavated badger sett that will be impacted by the proposed development, further badger surveys will be required to characterise the sett types present and the usage of the site by badgers. This will comprise the deployment of wildlife cameras over a period of 3-4 weeks and such surveys can be undertaken throughout the year, in accordance with current survey guidelines (Harris et al, 1989). A development licence will be required from Natural England for any development works likely to impact an active badger sett, or to significantly disturb badgers whilst they occupy a sett. Specific details regarding a suitable survey effort to inform a licence will be informed by the results of the pre-commencement badger check, if required. Precautionary Methods of Working In line with current guidance (Natural England, 2014), a minimum 30m buffer between the proposed development works and the badger sett recorded adjacent to the south site boundary will be retained throughout the development. The buffer zone will be enforced using Heras fencing which will be installed to allow badgers to travel underneath the fence. It is noted that landscaping works may be undertaken within this buffer zone. Any works within 30m of the badger sett present must be undertaken using hand tools only. No landscaping works must take place within 5m of the badger sett. Furthermore, a precautionary working method will be implemented during the construction phase of the development, including the following measures: - Any excavations will be covered overnight, or a ramp will be installed to enable any trapped animals to escape. - Any chemicals or pollutants used or created by the development will be stored and disposed of correctly according to COSHH regulations. - The implementation of a wildlife sensitive lighting strategy that will prevent light spill over the woodland containing the badger sett adjacent to the south site boundary. Lighting prescriptions detailed below of benefit to bats will also be suitable to mitigate impacts of artificial lights on badgers.

Bats	Sensitive Lighting Strategy Any proposed external lighting will be installed in accordance with current guidance issued by the Bat Conservation Trust and Institute of Lighting Professionals: <i>Guidance Note 08/18: Bats and Artificial lighting in the UK</i> (BCT & ILP 2018). The below strategy utilises light prescriptions detailed within this guidance to limit impacts of artificial lighting on bats and other light sensitive species potentially utilising retained habitats on and directly adjacent to the site including badgers. In particular, the lighting strategy seeks to influence the lighting design so that impacts can be avoided to key habitats of value including: • The bat and bird enhancements; • Retained habitats present within the rear garden on site; and • The grassland enhancements. The following lighting design prescriptions are considered suitable for the type and scale of the Development to minimise the impacts of artificial lighting on site or within the public realm on bats and other light sensitive species. Lighting design prescriptions that will be implemented comprise: • Reducing the operating time of any installed public realm lighting and levels of illuminance provided via: Part-night operation – turning off lights between certain hours e.g. midnight and 06:00. • Avoiding light spill via: The use of directional lighting by using luminaires with rear shields and an upwards lighting ratio of zero; and Consideration to the height and spacing between lighting columns where practicable. Examples include stud LED or footpath lighting¹. • Light type: Use of lamps that minimise UV emissions or use UV filters to reduce the attractiveness of the lamp to invertebrates; Use high-pressure sodium or LED lamps, ideally warm white as this has a low relative attractiveness of invertebrates² Installing lighting systems that deliver no greater than a 3lux average illuminance, with a maximum horizontal illuminance of 0.6 uniformity (subject to appropriate maintenance factors) The use of landscaping as to block light spill where appropriate; and The use of lighting buffer zones which will encourage a gradual reduction of light spill. Provision of bat bricks Two bat bricks will be installed into the façade of the proposed new buildings. The locations are shown on the plan in Appendix 1. • 2x Integrated Eco Bat Box with Cavity (or similar) will be installed, as shown in Figure 3. This bat brick type is suitable for integration into a range of building types including brick walls, timber cladding, and stone and are suitable to support a range of species including common pipistrelles <i>Pipistrellus pipistrellus</i> and soprano pipistrelles <i>Pipistrellus pygmaeus</i> which are likely to be present in the local area.
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¹ Stone, E.L. (2013) *Bats and lighting: Overview of current evidence and mitigation*

² Eisenbeis, G. (2006) *Artificial night lighting and insects: attraction of insects to streetlamps in a rural setting in Germany. In Ecological consequences of artificial night lighting* (eds Rich, C. & Longcore, T.), pp. 281-304. Island Press, Washington.

- Bat boxes will be positioned 3-5m above ground level facing in a south, southeast, or south-west direction with a clear flight path to and from the entrance, away from artificial light and preferably facing vegetated habitats.



Figure 3: Integrated Eco Bat Box with cavity suitable for a range of crevice dwelling bat species.
(Photo credit: <https://www.wildcare.co.uk/integrated-eco-bat-box-cavity.html>)

Nesting Birds***Pre-commencement nesting bird check***

The demolition of the derelict residential building and removal of trees will be undertaken outside the typical breeding bird season between 1st March to 31st August. If this timeframe cannot be avoided, a pre-commencement check of the building by an SQE will be undertaken immediately prior to the commencement of work. Any active nests recorded will need to be retained until the young have fledged.

Provision of bird boxes

Two bird integrated brick boxes will be installed on site onto the façade of the proposed new buildings. The locations are shown on the plan in **Appendix 1**.

- 2x Schwegler No. 24 Brick Box (or similar) will be installed, which are suitable to support house sparrows *Passer deomesticus*, as shown in **Figure 4**.
- Bird brick boxes will be positioned approximately 3m above ground level where they will be sheltered from prevailing wind, rain and strong sunlight. House sparrow boxes will be fitted directly under the eaves of the proposed new building.

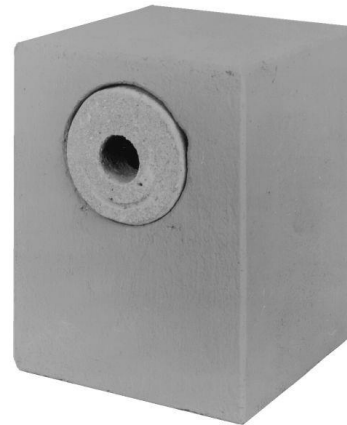


Figure 4: Integrated Schwegler No.24 bird brick box.

(Photo credit: <https://www.wildcare.co.uk/schwegler-no-24-brick-box-10153.html>)

Reptiles	<i>Pre-development vegetation clearance</i> Grassland located within the rear garden directly adjacent to the south of the new building (see Appendix 1) will require removal to facilitate the proposed development as to create a habitat unsuitable to support reptiles to ensure they are absent on and adjacent to the construction area during construction activity. Precautionary methods of working when removing this vegetation are required to prevent causing injury or death to reptiles, if present. <i>Vegetation clearance works must be supervised by an SQE who will act as an Ecological Clerk of Works</i> to ensure the precautionary methods of works are undertaken successfully. Vegetation clearance works are best undertaken between April and June. During this timeframe, reptiles are active and able to escape to adjacent areas when disturbed. If this timeframe cannot be achieved, vegetation clearance works can be undertaken between June and September. During this timeframe, all refugia present will need to be subject to detailed finger-tip searches prior to removal. Clearance works must not take place between October and March when reptiles are mostly torpid and thus highly vulnerable to injury or death. Grassland removal will comprise a phased cutting method in addition to cutting in systematic patterns. The phased cutting method will be undertaken in two stages; the first cut will remove all vegetation to approximately 150mm from ground level and the second cut will be to ground level/ bare ground. Reptiles are most likely to be present at or just below ground level; the phased technique allows any individuals present to disperse prior to reducing vegetation to ground level. The systematic vegetation cutting must be applied to both cutting phases and comprises cutting systematically towards areas of retained habitat to the south in an attempt to encourage any individual reptiles to retreat to retained habitat unharmed. This method also prevents the creation of habitat islands during the second cutting phase which has potential to trap reptiles in isolated pockets of habitat and thus increase the potential for injury or death during works. Two suitable systematic cutting techniques are schematically represented on Figure 5. Once the sensitive vegetation clearance has been completed, this area will then be managed as a short amenity lawn (sward length<50mm) which is unsuitable to support reptiles and is likely to prevent individuals from recolonising this section of the site prior to construction works. All vegetation arisings created from the cutting will be removed from the area; the arisings will be used to help create new hibernaculum within the retained grassland to the south on site (see below). This will enhance the retained grassland section for reptiles whilst ensuring the cleared section of the site is made unsuitable.
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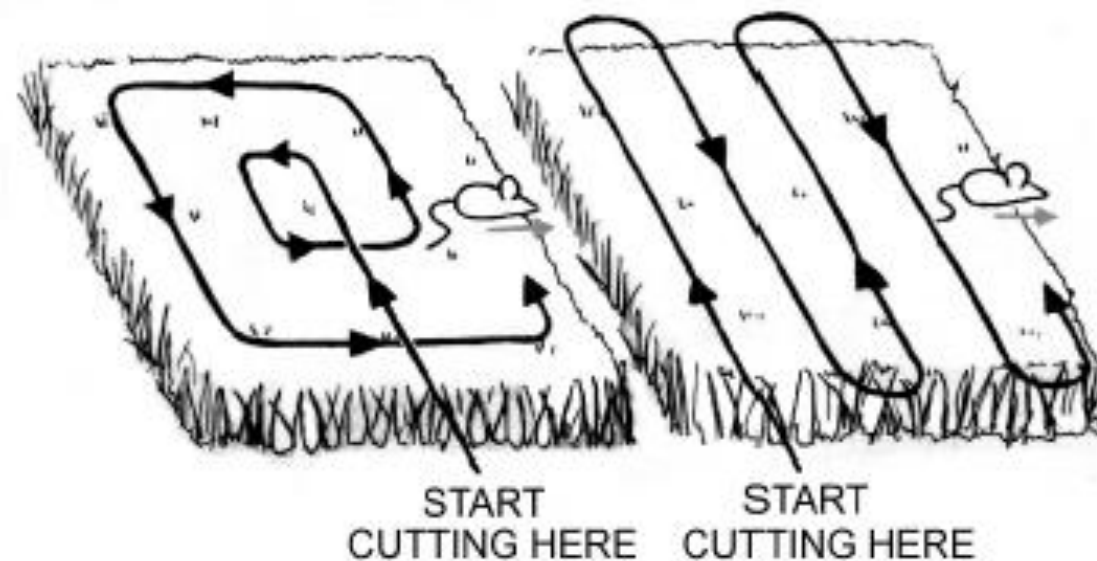


Figure 5: A schematic representation of vegetation cutting patterns as best to eliminate terrestrial opportunities for great crested newts within the construction zone.

Grassland Enhancement Within the South of the Site

Grassland located within the south of the site adjacent to woodland will be retained and enhanced as to provide a receptor site for any reptiles displaced by the works. The grassland within the south of the site (see **Appendix 1**) will be enhanced by seeding with a species rich seed mix suitable for south facing neutral grassland banks as to improve species diversity. Emorsgate Seed Mix EM1 – general purpose meadow mixture (<https://wildseed.co.uk/mixtures/view/2>) will be used. This seed mix provides a range of native grasses and wildflowers that will develop a species rich and structurally diverse grassland. The grassland will then be left to grow and

create tussocks as to provide enhanced foraging, commuting and refugia opportunities for reptiles. Furthermore, this grassland will remain terrestrially connected to woodland present in the south of the site and thus no habitat fragmentation will occur as a result of the proposed development.

Furthermore, two hibernacula will be created using natural materials such as logs (from the trees to be removed), stone, vegetation arisings (from grassland clearance) and earth (see **Figure 6**) within the enhanced grassland within the south of the site (see **Appendix 1**). Enhancing the retained vegetation on site will provide additional habitat suitable to support reptiles away from the construction zone and is likely limit requirements for these species to commute further afield towards the construction area, if present.

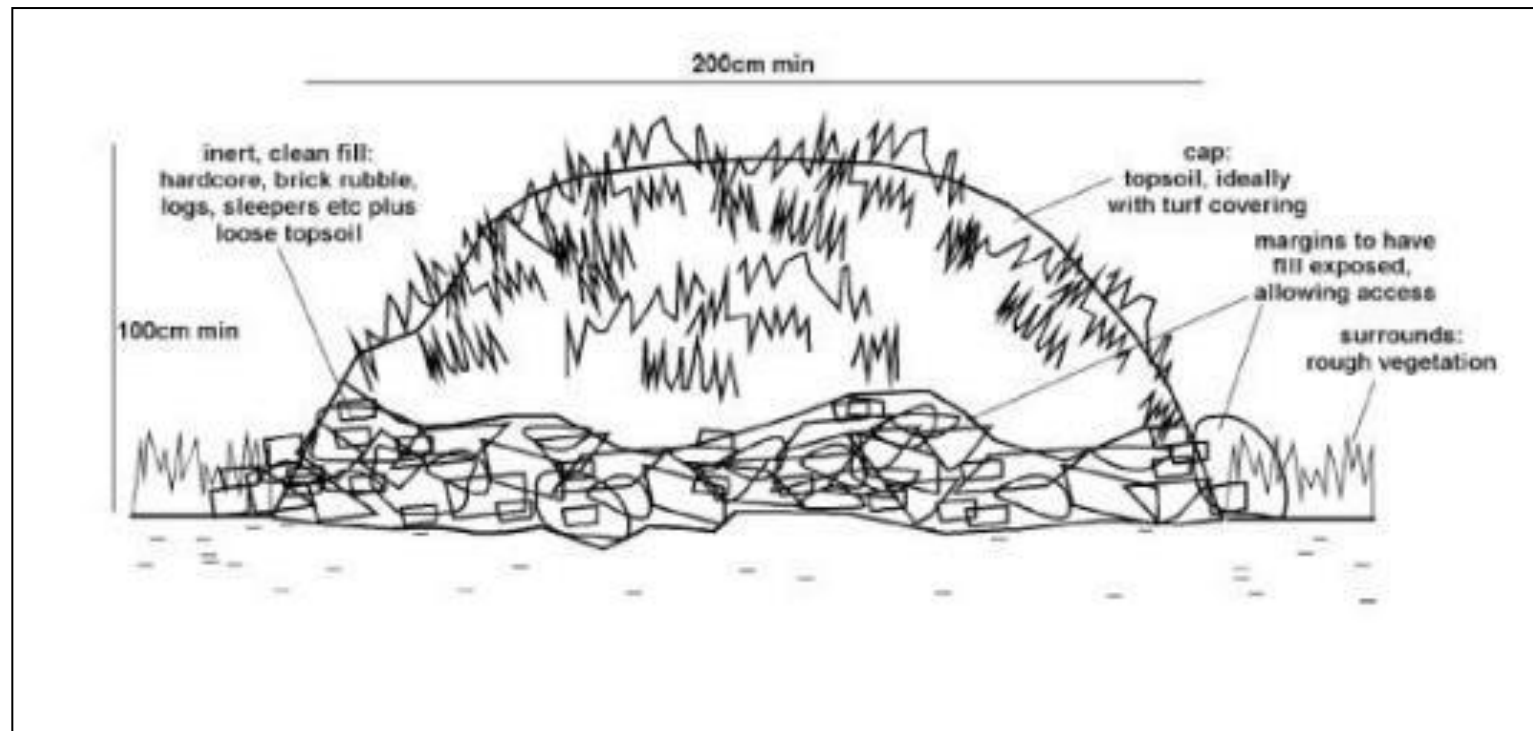
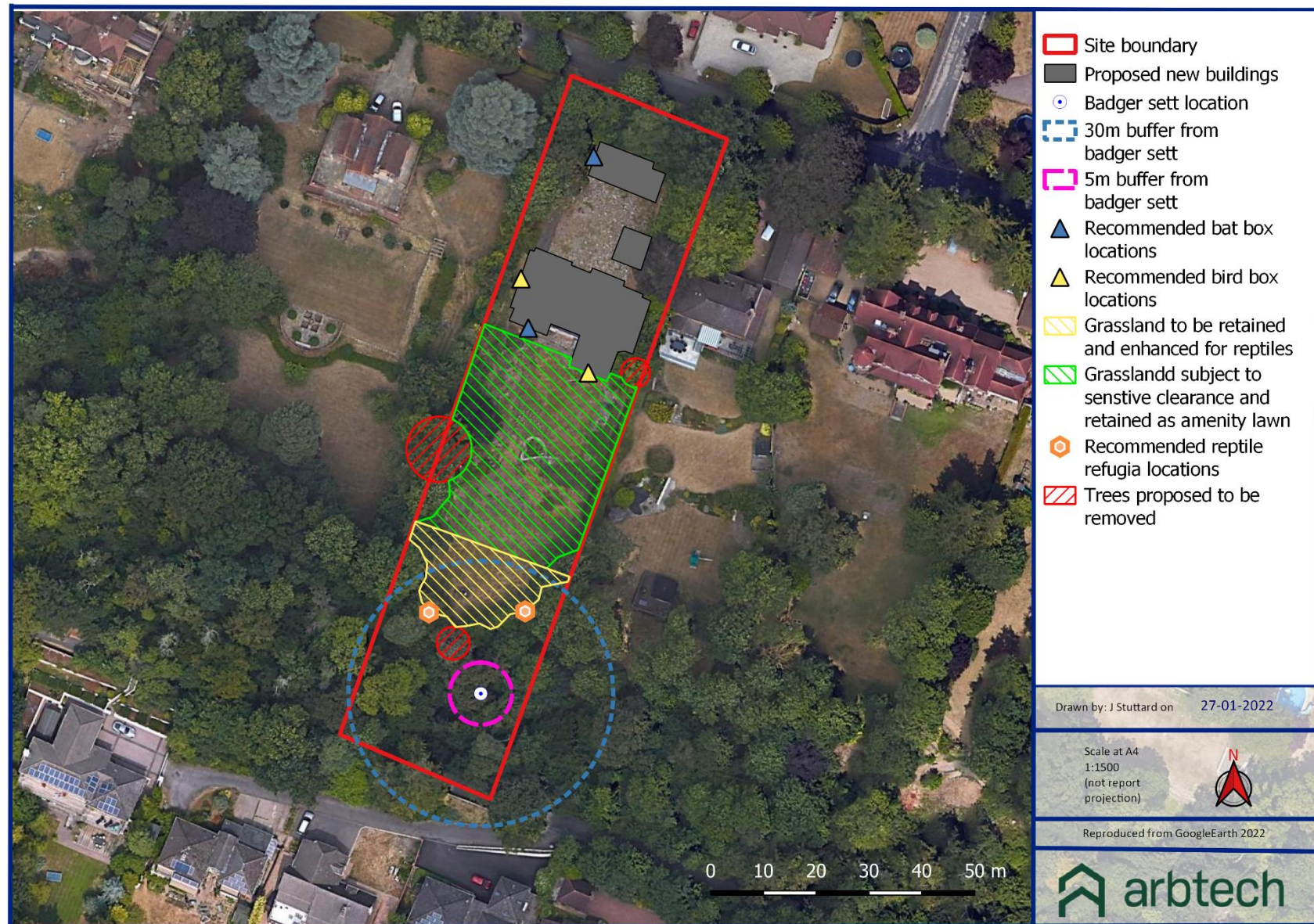


Figure 6: A schematic representation of a man-made reptile hibernacula to provide suitable refugia.

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Appendix 1: Ecological Mitigation and Enhancement Plan



Appendix 2: Legislation and Planning Policy

LEGAL PROTECTION

The ***Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019*** came into force when Britain left the European Union on 31st January 2020. It covered amendments relevant to this survey to:

Wildlife and Countryside Act 1981: England and Wales (x1 amendment)

Conservation of Habitats and Species Regulations 2017 (x29 amendments)

National and European Legislation Afforded to Habitats

International Statutory Designations

Special Areas of Conservation (SACs) and Special Protection Areas (SPAs) are sites of European importance and are designated under the EC Habitats Directive 92/43/EEC on the Conservation of natural habitats and of wild fauna and flora (the Habitats Directive) and the EC Birds Directive 2009/147/EC on the conservation of wild birds respectively. Both form part of the wider Natura 2000 network across Europe.

Under the Habitats Directive Article 3 requires the establishment of a network of important conservation sites (SACs) across Europe. Over 1,000 animal and plant species, as well as 200 habitat types, listed in the directive's annexes are protected in various ways:

Annex II species (about 900): core areas of their habitat are designated as sites of Community importance (SCIs) and included in the Natura 2000 network. These sites must be managed in accordance with the ecological needs of the species.

Annex IV species (over 400, including many annex II species): a strict protection regime must be applied across their entire natural range within the EU, both within and outside Natura 2000 sites.

Annex V species (over 90): Member States must ensure that their exploitation and taking in the wild is compatible with maintaining them in a favourable conservation status.

SPAs are classified under Article 2 of the Directive 2009/147/EC of the European Parliament and of the Council of 30 November 2009 on the conservation of wild birds both for rare bird species (as listed on Annex I) and for important migratory species.

SACs and SPAs up to 12 nautical miles from the coast (i.e. 'territorial waters') are afforded protection in the UK under the Conservation of Habitats and Species Regulations 2017 which consolidate all amendments made to the Conservation (Natural Habitats, &c.) Regulations 1994.

The Conservation of Offshore Marine Habitats and Species Regulations 2017 consolidate and update the Offshore Marine Conservation (Natural Habitats, &c.) Regulations 2007. The 2017 Regulations introduce amendments which transfer responsibility for European nature conservation in the Welsh offshore region to Welsh Ministers. This gives Welsh Ministers similar powers in Welsh offshore waters to those currently exercised by Scottish Ministers in Scottish offshore waters. These regulations transpose into national law Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora (Habitats Directive), and elements of Council Directive 2009/147/EC on the conservation of wild birds (Wild Birds Directive) in the UK offshore area. They came into force on 30th November 2017. These regulations apply to the UK's offshore marine area which covers waters beyond 12 nautical miles, within British

Fishery Limits and the seabed within the UK Continental Shelf Designated Area. The Conservation of Habitats and Species Regulations 2017 form the legal basis for the implementation of the Habitats and Birds Directives in terrestrial areas and territorial waters out to 12nm in England and Wales (including the inshore marine area) and to a limited extent in Scotland and Northern Ireland.

Ramsar sites are designated under the Convention on Wetlands of International Importance, agreed in Ramsar, Iran, in 1971. The Convention covers all aspects of wetland conservation and recognises the importance of wetland ecosystems in relation to global biodiversity conservation. The Convention refers to wetlands as “*areas of marsh, fen, peatland or water, whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh, brackish or salt, including areas of marine water the depth of which at low tide does not exceed six metres*”. However, they may also include riparian and coastal zones. Ramsar sites are statutorily protected under the Wildlife & Countryside Act 1981 (as amended 01.04.1996) with further protection provided by the Countryside and Rights of Way (CROW) Act 2000. Policy statements have been issued by the Government in England and Wales highlighting the special status of Ramsar sites. The Government in England and Wales has issued policy statements which ensure that Ramsar sites are afforded the same protection as areas designated under the EC Birds and Habitats Directives as part of the Natura 2000 network (e.g. SACs & SPAs). Further provisions for the protection and management of SSSIs have been introduced by the Nature Conservation (Scotland) Act 2004.

National Statutory Designations

Sites of Special Scientific Interest (SSSI) are designated by nature conservation agencies in order to conserve key flora, fauna, geological or physio-geographical features within the UK. The original designations were under the National Parks and Access to the Countryside Act 1949 but SSSIs were then re-designated under the Wildlife & Countryside Act 1981 (as amended). As well as reinforcing other national designations (including National Nature Reserves), the system also provides statutory protection for terrestrial and coastal sites which are important within the European Natura 2000 network and globally.

Local Statutory Designations

Local authorities in consultation with the relevant nature conservation agency can declare Local Nature Reserves (LNRs) under the National Parks and Access to the Countryside Act 1949. LNRs are designated for flora, fauna or geological interest and are managed locally to retain these features and provide research, education and recreational opportunities.

Non- Statutory Designations

All non-statutorily designated sites are referred to as Local Wildlife Sites (LWS) and can be designated by the local authority for supporting local conservation interest. Combined with statutory designation, these sites are considered within Local Development Frameworks under the Town and Country Planning system and are a material consideration during the determination of planning applications. The protection afforded to these sites varies depending on the local authority involved.

Regionally Important Geological Sites (RIGs) are the most important geological and geomorphological areas outside of statutory designations. These sites are also a material consideration during the determination of planning applications.

The Hedgerow Regulations 1997

The Hedgerow Regulations 1997 are designed to protect ‘important’ countryside hedgerows. Importance is defined by whether the hedgerow (a) has existed for 30 years or more; or (b) satisfies at least one of the criteria listed in Part II of Schedule 1 of the Regulations.

Under the Regulations, it is against the law to remove or destroy hedgerows on or adjacent to common land, village greens, SSSIs (including all terrestrial SACs, NNRs and SPAs), LNRs, land used for agriculture or forestry and land used for the keeping or breeding of horses, ponies or donkeys without the permission of the local authority. Hedgerows 'within or marking the boundary of the curtilage of a dwelling-house' are excluded.

National and European Legislation Afforded to Species

The Habitats Directive

The EC Habitats Directive aims to promote the maintenance of biodiversity by requiring Member States to take measures to maintain or restore wild species listed on the Annexes to the Directive at a favourable conservation status, introducing robust protection for those species of European importance. The Directive is transposed into UK law by The Conservation of Habitats and Species Regulations 2017 (the Conservation Regulations) and the Offshore Marine Conservation (Natural Habitats, &c.) Regulations 2007 (as amended). This has been amended by the ***Conservation of Habitats and Species Regulations (amendment) (EU Exit) Regulations (2019)*** which continue the same provision for European protected species, licensing requirements and protected sites after the UK leaves the EU.

The following notes are relevant for all species protected under the EC Habitats Directive:

In the Directive, the term 'deliberate' is interpreted as being somewhat wider than intentional and may be thought of as including an element of recklessness.

The Habitats Regulations do not define the act of 'migration' and, therefore, as a precaution, it is recommended that short distance movement of animals for e.g. foraging, breeding or dispersal purposes are also considered.

In order to obtain a European Protected Species Licence (EPSL), the application must demonstrate that it meets all of the following three 'tests':

- The action(s) are necessary for the purpose of preserving public health or safety or other imperative reasons of overriding public interest including those of a social or economic nature and beneficial consequence of primary importance for the environment;
- There is no satisfactory alternative; and
- The action authorised will not be detrimental to the maintenance of the species concerned at a favourable conservation status in their natural range.

The Wildlife and Countryside Act (WCA) 1981 (as amended)

The Wildlife and Countryside Act (WCA) 1981 (as amended) implements the Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention 1979, implemented 1982) and implements the species protection requirements of EC Birds Directive 2009/147/EC on the conservation of wild birds in Great Britain (the birds Directive). The WCA 1981 has been subject to a number of amendments, the most important of which are through the Countryside and Rights of Way (CROW) Act (2000).

Other legislative Acts affording protection to wildlife and their habitats include:

- Deer Act 1991
- Natural Environment & Rural Communities (NERC) Act 2006
- Protection of Badgers Act 1992
- Wild Mammals (Protection) Act 1996

Badgers

Badgers *Meles meles* are protected under The Protection of Badgers Act 1992 which makes it an offence to:

- Wilfully kill, injure, take, or attempt to kill, injure or take a badger
- Cruelly ill-treat a badger, including use of tongs and digging
- Possess or control a dead badger or any part thereof
- Intentionally or recklessly damage, destroy or obstruct access to a badger sett or any part thereof
- Intentionally or recklessly disturb a badger when it is occupying a badger sett
- Intentionally or recklessly cause a dog to enter a badger sett
- Sell or offers for sale, possesses or has under his control, a live badger

Effects on development works:

A development licence will be required from the relevant countryside agency (i.e. Natural England, Natural Resources Wales, Scottish Natural Heritage) for any development works likely to affect an active badger sett, or to disturb badgers whilst they occupy a sett. Guidance has been issued by the countryside agencies to define what would constitute a licensable activity. It is no possible to obtain a licence to translocate badgers.

Birds

With certain exceptions, all birds, their nests and eggs are protected under Sections 1-8 of the WCA. Among other things, this makes it an offence to:

- Intentionally (or recklessly in Scotland) kill, injure or take any wild bird
- Intentionally (or recklessly in Scotland) take, damage or destroy (or, in Scotland, otherwise interfere with) the nest of any wild bird while it is in use or being built
- Intentionally take or destroy an egg of any wild bird
- Sell, offer or expose for sale, have in his possession or transport for the purpose of sale any wild bird (dead or alive) or bird egg or part thereof.
- Intentionally or recklessly obstruct or prevent any wild bird from using its nest (Scotland only)

Certain species of bird, for example the barn owl, bittern and kingfisher receive additional protection under Schedule 1 of the WCA and Annex 1 of the European Community Directive on the Conservation of Wild Birds (2009/147/EC) and are commonly referred to as “Schedule 1” birds.

This affords them protection against:

- Intentional or reckless disturbance while it is building a nest or is in, on or near a nest containing eggs or young
- Intentional or reckless disturbance of dependent young of such a bird
- In Scotland only, intentional or reckless disturbance whilst lekking
- In Scotland only, intentional or reckless harassment

Effects on development works:

Works should be planned to avoid the possibility of killing or injuring any wild bird or damaging or destroying their nests. The most effective way to reduce the likelihood of nest destruction in particular is to undertake work outside the main bird nesting season which typically runs from March to August. Where this is not feasible, it will be necessary to have any areas of suitable habitat thoroughly checked for nests prior to vegetation clearance.

Schedule 1 birds are additionally protected against disturbance during the nesting season. Thus, it will be necessary to ensure that no potentially disturbing works are undertaken in the vicinity of the nest. The most effective way to avoid disturbance is to postpone works until the young have fledged. If this is not feasible, it may be possible to maintain an appropriate buffer zone or standoff around the nest.

Amphibians and Reptiles

The sand lizard *Lacerta agilis*, smooth snake *Coronella austriaca*, natterjack toad *Epidalea calamita*, pool frog *Pelophylax lessonae* and great crested newt *Triturus cristatus* receive full protection under Habitats Regulations through their inclusion on Schedule 2. Regulation 41 prohibits:

- Deliberate killing, injuring or capturing of Schedule 2 species
- Deliberate disturbance of species in such a way as:
 - To impair their ability to survive, breed, or reproduce, or to rear or nurture young;
 - To impair their ability to hibernate or migrate
 - To affect significantly the local distribution or abundance of the species
- Damage or destruction of a breeding site or resting place

With the exception of the pool frog, these species are also listed on Schedule 5 of the WCA and they are additionally protected from:

- Intentional or reckless disturbance (at any level)
- Intentional or reckless obstruction of access to any place of shelter or protection
- Selling, offering or exposing for sale, possession or transporting for purpose of sale.

Other native species of reptiles are protected solely under Schedule 5, Section 9(1) & (5) of the WCA, i.e. the adder *Vipera berus*, grass snake *Natrix natrix*, common lizard *Zootoca vivipara* and slow-worm *Anguis fragilis*. It is prohibited to:

- Intentionally or recklessly kill or injure these species.

Effects on development works:

A European Protected Species Licence (EPSL) issued by the relevant countryside agency (i.e. Natural England, Natural Resources Wales, Scottish Natural Heritage) will be required for works likely to affect the breeding sites or resting places amphibian and reptile species protected under Habitats Regulations. A licence will also be required for operations liable to result in a level of disturbance which might impair their ability to undertake those activities mentioned above (e.g. survive, breed, rear young and hibernate). The licences are to allow derogation from the relevant legislation, but also to enable appropriate mitigation measures to be put in place and their efficacy to be monitored.

Although not licensable, appropriate mitigation measures may also be required to prevent the intentional killing or injury of adder, grass snake, common lizard and slow worm, thus avoiding contravention of the WCA.

Bats

All species are fully protected by Habitats Regulations 2010 as they are listed on Schedule 2. Regulation 41 prohibits:

- Deliberate killing, injuring or capturing of Schedule 2 species (e.g. All bats)
- Deliberate disturbance of bat species in such a way as:
- To impair their ability to survive, breed, or reproduce, or to rear or nurture young;
- To impair their ability to hibernate or migrate
- To affect significantly the local distribution or abundance of the species
- Damage or destruction of a breeding site or resting place

Bats are afforded the following additional protection through the WCA as they are included on Schedule 5:

- Intentional or reckless disturbance (at any level)
- Intentional or reckless obstruction of access to any place of shelter or protection

Effects on development works:

A European Protected Species Licence (EPSL) issued by the relevant countryside agency (i.e. Natural England, Natural Resources Wales, Scottish Natural Heritage) will be required for works are likely to affect a bat roost or an operation which are likely to result in an illegal level of disturbance to the species will require an EPSM licence. The licence is to allow derogation from the legislation through the application of appropriate mitigation measures and monitoring.

Wild Mammals (Protection Act) 1996

All wild mammals are protected against intentional acts of cruelty under the above legislation. This makes it an offence to mutilate, kick, beat, nail or otherwise impale, stab, burn, stone, crush, drown, drag or asphyxiate any wild mammal with intent to inflict unnecessary suffering.

To avoid possible contravention, due care and attention should be taken when carrying out works (for example operations near burrows or nests) with the potential to affect any wild mammal in this way, regardless of whether they are legally protected through other conservation legislation or not.

Legislation Afforded to Plants

With certain exceptions, all wild plants are protected under the WCA. This makes it an offence for an 'unauthorised' person to intentionally (or recklessly in Scotland) uproot wild plants. An authorised person can be the owner of the land on which the action is taken, or anybody authorised by them.

Certain rare species of plant, for example some species of orchid, are also fully protected under Schedule 8 of the Wildlife and Countryside Act 1981 (as amended). This prohibits any person from:

- Intentionally (or recklessly in Scotland) picking, uprooting or destruction of any wild Schedule 8 species (or seed or spore attached to any such wild plant in Scotland only)

- Selling, offering or exposing for sale, or possessing or transporting for the purpose of sale, any wild live or dead Schedule 8 plant species or part thereof
- In addition to the UK legislation outlined above, several plant species are fully protected under Schedule 5 of The Conservation of Habitats and Species Regulations 2010. These are species of European importance. Regulation 45 makes it an offence to:
 - Deliberately pick, collect, cut, uproot or destroy a wild Schedule 5 species
 - Be in possession of, or control, transport, sell or exchange, or offer for sale or exchange any wild live or dead Schedule 5 species or anything derived from such a plant.

Effects on development works:

A European Protected Species Licence (EPSL) will be required from the relevant countryside agency (i.e. Natural England, Natural Resources Wales, Scottish Natural Heritage) for works which are likely to affect species of planted listed on Schedule 5 of the Conservation of Habitats and Species Regulations 2010. The licence is to allow derogation from the legislation through the application of appropriate mitigation measures and monitoring.

Invasive Species

Part II of Schedule 9 of the WCA lists non-native invasive plant species for which it is a criminal offence in England and Wales to plant or cause to grow in the wild due to their impact on native wildlife. Species included (but not limited to):

- Japanese knotweed *Fallopia japonica*
- Giant hogweed *Heracleum mantegazzianum*
- Himalayan balsam *Impatiens glandulifera*

Effects on development works:

It is not an offence for plants listed in Part II of Schedule 9 of the WCA 1981 to be present on the development site, however, it is an offence to cause them to spread. Therefore, if any of the species are present on site and construction activities may result in further spread (e.g. earthworks, vehicle movements) then it will be necessary to design and implement appropriate mitigation prior to construction commencing.

Injurious weeds

Under the Weeds Act 1959 any landowner or occupier may be required prevent the spread of certain 'injurious weeds' including (but not limited to):

- Spear thistle *Cirsium vulgare*
- Creeping thistle *Cirsium arvense*
- Curled dock *Rumex crispus*
- Broad-leaved dock *Rumex obtusifolius*
- Common ragwort *Senecio jacobaea*

Effects on development works:

It is a criminal offence to fail to comply with a notice requiring such action to be taken. The Ragwort Control Act 2003 establishes a ragwort control code of practice as common ragwort is poisonous to horses and other livestock. This code provides best practice guidelines and is not legally binding.

NATIONAL PLANNING POLICY (ENGLAND)

National Planning Policy Framework 2021

The National Planning Policy Framework promotes sustainable development. The Framework specifies the need for protection of designated sites and priority habitats and species. An emphasis is also made on the need for ecological infrastructure through protection, restoration and re-creation. The protection and recovery of priority species (considered likely to be those listed as species of principal importance under Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006) is also listed as a requirement of planning policy.

In determining a planning application, planning authorities should aim to conserve and enhance biodiversity by ensuring that: designated sites are protected from harm; there is appropriate mitigation or compensation where significant harm cannot be avoided; measurable gains in biodiversity in and around developments are incorporated; and planning permission is refused for development resulting in the loss or deterioration of irreplaceable habitats including aged or veteran trees and also ancient woodland.

The Natural Environment and Rural Communities Act 2006 and the Biodiversity Duty

Section 40 of the Natural Environment and Rural Communities (NERC) Act 2006, requires all public bodies to have regard to biodiversity conservation when carrying out their functions. This is commonly referred to as the 'biodiversity duty'.

Section 41 of the Act requires the Secretary of State to publish a list of habitats and species which are of 'principal importance for the conservation of biodiversity'. This list is intended to assist decision makers such as public bodies in implementing their duty under Section 40 of the Act. Under the Act these habitats and species are regarded as a material consideration in determining planning applications. A developer must show that their protection has been adequately addressed within a development proposal.

Local Planning Policy

Local Planning Policy

Reading Borough Local Development Framework: Core Strategy 2015

The Reading Borough Core Strategy is the key document outlining the long-term spatial vision for the borough. The Core Strategy outlines long-term spatial vision from its adoption in 2015 (updated). The Core strategy includes policies which relate to biodiversity and nature conservation which are relevant to this report. Such policies are detailed below:

Core Policy CS36: "Geodiversity and Biodiversity" States:

- a) *"Development should retain, protect and incorporate features of biodiversity or geological interest (including protected species and their habitats) found within the application site into their schemes. On sites with recognised biodiversity or geological value, development will not be permitted where there would be a direct or indirect adverse impact on the site, unless it can be clearly demonstrated that: -*
 - i. *The need for development clearly outweighs the need to protect the value of the site; and*
 - ii. *Appropriate compensation, impact minimisation, mitigation and compensation are provided.*

- b) Local Nature Reserves and Wildlife Heritage Sites will be safeguarded and where possible, enhanced. Permission will not be granted for any development that would adversely affect a designated nature reserve or Wildlife Heritage Site.*
- c) Any development that would sever or threaten the integrity of an established wildlife link, as indicated on an adopted proposals map, will not be permitted. Where applicable, developments should be designed to protect, consolidate, extend and enhance the network of wildlife links and corridors in and adjoining the Borough, working with neighbouring authorities where appropriate.”*

EUROPEAN PROTECTED SPECIES POLICIES

In December 2016 Natural England officially introduced the four licensing policies throughout England. The four policies seek to achieve better outcomes for European Protected Species (EPS) and reduce unnecessary costs, delays and uncertainty that can be inherent in the current standard EPS licensing system. The policies are summarised as follows:

- Policy 1; provides greater flexibility in exclusion and relocation activities, where there is investment in habitat provision;
- Policy 2; provides greater flexibility in the location of compensatory habitat;
- Policy 3; provides greater flexibility on exclusion measures where this will allow EPS to use temporary habitat; and,
- Policy 4; provides a reduced survey effort in circumstances where the impacts of development can be confidently predicted.

The four policies have been designed to have a net benefit for EPS by improving populations overall and not just protecting individuals within development sites. Most notably Natural England now recognises that the Habitats Regulations legal framework now applies to ‘local populations’ of EPS and not individuals/site populations.