# Ecological Mitigation Plan

## Channing Junior School, 1 Highgate High Street, Camden, London, N6 5JR

## Channing Junior School

| Status | Issue | Name | Date |
|---|---|---|---|
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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 193 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.

Contents

# 1.0 Introduction and Context

## *1.1 Background*

- Arbtech Consulting Ltd. was commissioned by Channing Junior School to produce an ecological mitigation plan (EMP) for the site of Channing Junior School, 1 Highgate High Street, Camden, London, N6 5JR
- A Preliminary Ecological Appraisal of the site (PEA, specifically an ecological site assessment) was conducted by Arbtech Consulting Ltd. in October 2017 to establish the current habitat value for ecological receptors. The report was updated by Arbtech Consulting Ltd in January 2019.
- No other ecological reports are known.
- This assessment is informed by evidence gathered in these previous surveys on site and should be read in conjunction with them.

## *1.2 Site location*

- The site is centred on National Grid Reference TQ 2863 8730 and has an area of approximately 5140m$^2$. Briefly and according to the previous PEA, the site currently consists of:

  *'The site currently consists of a main school building, outbuildings, hard standing playgrounds, amenity grass lawns, ornamental planting and scattered trees.'*

## ***1.3 Previous ecological survey results***

- The site's features are summarised below from the Arbtech PEA (latest version January 2019). For the desk study, please refer to this report for full details. The habitat map can be seen in figure 1 below, with a landscape map as figure 2.

  - **Ecological receptors summary**

    The majority of the Site consists of amenity grassland, buildings and hardstanding, with trees and ornamental planting. The following habitats were found within or adjacent to the Site:

    - Buildings
    - Amenity glassland
    - Trees
    - Ornamental Planting

- **Ecological receptors Detail**

  - **Building and Hardstanding**

    B1 is the main school building on site. It is a brick-built, four-storey structure with the fourth storey in the void of complicated hipped, mansard and flat roofs. The roofs are covered in slate tiles, of an excellent condition without any loose, missing or broken examples. Lead flashing around the roof vertices is unpeeling, and several brick chimney stacks are without cracks or crevices. A small timber deck is present on the roof, accessible by a ladder from which it can be observed more closely. The deck itself is of a good condition. Brick corbels are present around the roof, without holes or gaps. The exterior brickwork is without cracks or crevices, giving no access into a presumed cavity wall. There are no accessible loft voids across the building, with habitable rooms and roof windows instead. Aside from the main school building, there are several small outbuildings around B1 including a smoking stand, timber sheds, cycle stores and a small timber gazebo. Hard standing tarmac paving and play areas encircle the main school building and lead to a tennis court to the south of the site. A hard-standing gravel pathway leads to a car park to the east of the site.

  - **Broadleaf and Coniferous Trees**

    There are scattered broadleaf trees around the site, including cherry, elder, ash, beech, lime, maple, holm oak, holly, sycamore, mountain ash and whitebeam. None have any holes or crevices of roosting value. Yew and cedar trees are found around the site. Neither have any holes or crevices of roosting value.

  - **Amenity Grassland**

    Amenity grass lawn is found to the centre and east of the site, including down a slight slope from the playground to the tennis courts.

  - **Garden**

    The ‘garden’ habitat is used to describe any complicated mosaics of flowerbeds, ornamental shrubs, vegetable patches, ornamental hedges etc. that do not fall neatly within the Phase 1 habitat codes for England. Therefore, greater spatial variation exists within these than it may appear on the survey map in appendix I.

    On this site are a neatly trimmed privet hedge runs along part of the northern boundary. Elsewhere are small shrubs and saplings in ornamental borders, as well as vegetable plots. The non-native and problematic species, Himalayan balsam is found in a clump in the western end of the grass slope, where it is damper.

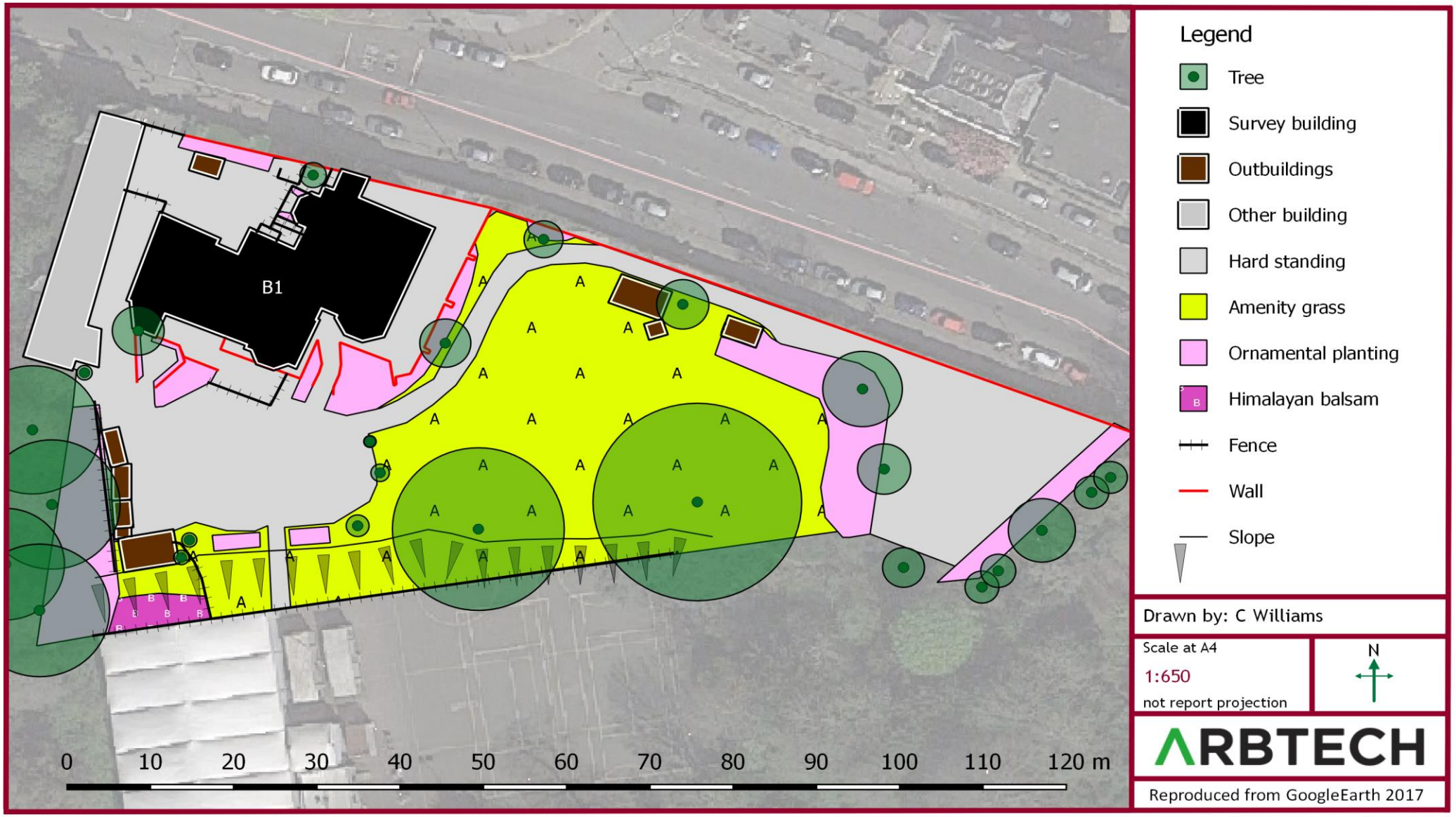


Figure 1: Phase 1 habitat survey of the site from November 2017


Figure 2: Local landscape map

**Main conclusions from the previous surveys regarding protected species ecological receptors:**

**Designated Sites:** The site itself is not subject to any designation, however there are several statutory and non-statutory nature sites in the local landscape (see map in Figure 1). Of the four non-statutory sites within 500m, one of these is adjacent to the south of the survey site (Waterlow Park CaBI03). In the BRD summary, this is '*The largest park Camden Council runs* [10.16ha]*, with good wildlife habitats….*'. Its habitats are listed as: Amenity grassland, Hedge, planted shrubbery, pond/lake, ruderal, scattered trees, scrub, semi-improved neutral grassland, Tall herbs, wet grassland.

**Bats:** An external inspection of all the buildings and trees was undertaken for roosting bat potential. Close-focussing binoculars and a high-powered *Clu-lite* torch were used to study all external faces.

**Bats & Buildings** An assessment of the roosting potential of the on-site buildings was made, using the criteria outlined in the table below.

| | |
|---|---|
| **Negligible** | No potential. Feature is unsuitable for bats or environment of feature makes it unsuitable for bats |
| **Low** | Feature has limited potential for bats. Unlikely to be used, but might provide temporary roost opportunity |
| **Medium** | Feature is suitable for bats |
| **High** | Feature is highly suitable for bats |
| **Confirmed** | Evidence of bats present |

*(Taken from BCT 2007)*

**Buildings.**

There was unimpeded access to all external aspects of this building. An internal inspection was also made, and all internal roof beams and joists were assessed for their bat roost potential. Based on Table 5 the buildings on site were therefore considered to have NEGLIGIBLE value to bats.

**Bats & Trees**

Table 6 presents a scoring system developed by the Bat Conservation Trust (BCT, 2012) when assessing trees for their potential to support roosting bats. Based on [the table to the right], the trees were considered to have negligible potential for roosting bats.

**Invasive Species**

Himalayan balsam was found in the south-west of the survey area, between the gazebo and tennis courts, down the slope in a damp area.

**Birds**

Birds could use the trees or shrubs on site for nesting.

| TREE CATEGORY | DESCRIPTION |
|---|---|
| **CONFIRMED ROOST** | |
| **HIGH (or Category 1*)** | • Trees with multiple, highly suitable features capable of supporting larger roosts |
| **MODERATE (or Category 1)** | • Tree with definite bat potential supporting fewer suitable features than HIGH potential trees;<br>• Or tree has potential for use by single bats |
| **LOW (or Category 2)** | • Trees with no obvious potential, although the tree is of an age or size that elevated surveys may find cracks or crevices;<br>• Or the tree supports some features which may have limited potential to support roosting bats |
| **NEGLIGIBLE (or Category 3)** | • No features present with bat potential |

*1.4 Project Description*

- This report is prepared in support of a granted planning application with Sefton Metropolitan Borough Council.

  - **Planning application [Unsubmitted]**

    The Proposed development is for a rear ground floor extension to the main building, alteration to the southern wing to provide additional teaching space and a subterranean extension for recreation changing facilities adjacent to existing tennis courts.

    The proposed site plans are included below as Figures 3.1 and 3.2..

*1.5 Scope of this report*

- Ecological receptors were found on site during the previous survey in 2017.

- The scope of this report is to provide a mitigation and enhancement plan for ecology in general, to outline the measures that would be used to comply with legislation. This strategy provides ecological mitigation and enhancements for the site to assist with the progression of condition discharge for the planning application, prior to the development itself. This is an iterative document and may be superseded by any further findings on site, especially in relation to any taxa that require a European protected species license (ESPL) due to disturbance (if great crested newt is found during the development for example).

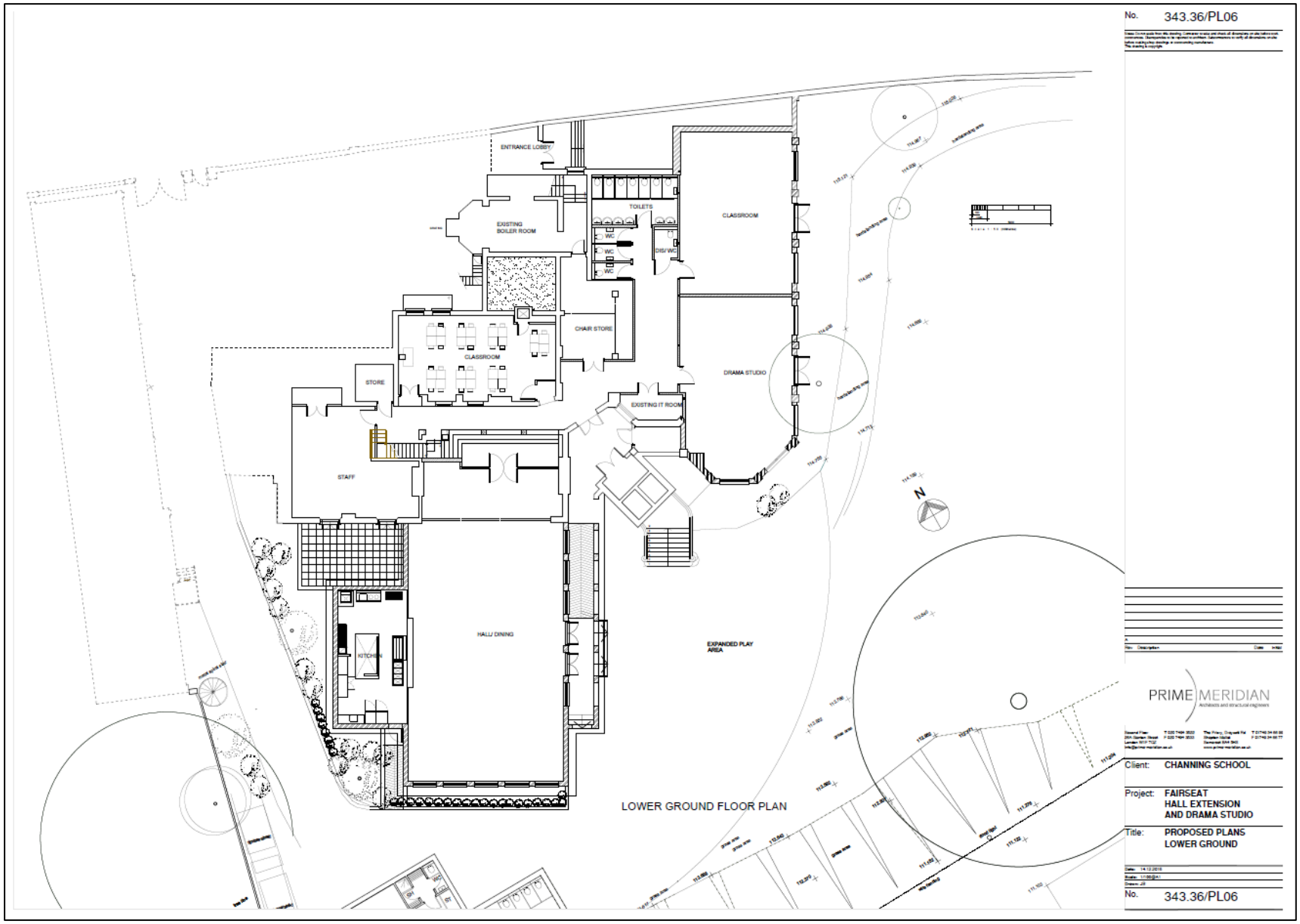


Figure 3.1: Proposed site (no ecological mitigation displayed)


Figure 3.2: Proposed site (no ecological mitigation displayed)

## 2.0 Ecological mitigation and enhancement details

### *2.1 Informative and EPSL statement*

The following Tables 1 and 2 detail the mitigation and enhancements of the site for ecology interest.

The enhancements will include a range of site-specific, suitable and achievable gains. Best practice management regimes will be implemented to further increase the ecological interest of the site. These are detailed below and should be undertaken in year 1 of the ecology enhancement plan.

- An application for any EPSM Licence for Natural England is not necessary for this development to remain legal, based on the current plans. None will be impacted.

**Table 1: Mitigation, Capital Works and Possible Enhancements in Year 1**

| **Work** | **Specification** |
|---|---|
| Prior to works commencing | The Himalayan balsam on site should be eradicated, ideally before works start. A dedicated problematic species management plan should be written to manage this. |
| Retained habitats | **Trees and scrub**<br>The scattered trees will be retained after the development. These will continue to act as botanical habitat and important commuting corridors for fauna in general and maintain ecological connectivity into the surrounding landscape. |
| New habitats | Although some trees and a grass area are being retained which will help ecological Connectivity, there is also some scope to enhance the site through new habitat creation on site.<br>These will consist of:<br>➢ Two log piles on the western boundary of the site<br>➢ Longer grass cover along the southern boundary of the site<br>➢ Bird boxes<br>➢ Bat boxes<br>➢ Invertebrate boxes<br>➢ Any new trees and areas of ornamental planting should comprise of native species. |

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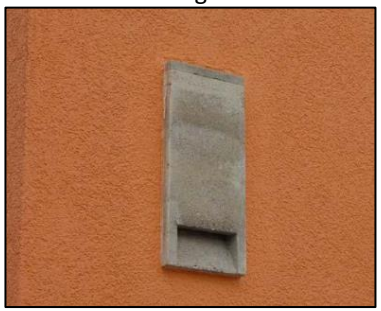
| Designated Site Mitigation and Enhancement | ➢ All materials should be handled and stored according to their COSHH advice and stored away from the southern boundary to avoid any run off into the park, and afterwards disposed of correctly.<br>➢ Measures to prevent dust blowing into the adjacent non-statutory wildlife site should be implemented:<br>• Any transport entering the site will not have materials open, rather sheeted to avoid dust escape.<br>• Dust extraction technology or water suppression will be used with drilling and grinding equipment, with wetted surfaces where applicable to avoid the generation of dust.<br>• If the site is dry for long periods, spoil and debris will be periodically wetted to avoid becoming a source of dust. Such heaps will be positioned into a fence and covered, alongside other containers to avoid dust being blown by wind.<br>After the Himalayan balsam is eradicated a 2m wide strip of long meadow grass along the southern boundary would act as both a buffer and an enchantment to the non-statutory park site. |
| Invertebrate Mitigation and Compensation | The site offers negligible habitat value for generalist invertebrates<br>***Provision of new habitat for invertebrates***<br>Two Butterfly Houses should be installed on the walls of the new buildings facing planting areas. Two invertebrate hotels/insect towers should be installed on new buildings facing planting areas. The green roof will also provide suitable habitat for use by invertebrates. |
| Bat Mitigation and Compensation | No roosting features were identified on site during the preliminary ecological survey, so no European protected species license is required.<br>***Provision of new roosting provision on site***<br>2x Schwegler 2FR bat tubes will be inserted into the southern elevations of the new buildings on site. These will provide excellent permanent roosting provision for local bats. These tubes will be installed within the fabric of the building but will be self-contained to **provide roosting in their own right without leading into cavity walls**. The tubes should be no less than three meters off ground level. No artificial light should shine on the tubes and clear flight paths to and from the boxes should be considered. A picture of the tube is below in figure 5:<br>  <br>Figure 5: A Schwegler 2FR bat tube within a wall<br>www.arkwildlife.co.uk |

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| | In addition to the bat tubes a minimum of 3 Schwegler type 1WQ bat boxes on the new buildings/ retained trees facing planting areas. These will be erected on retained trees on site prior to the commencement of works. They will face in a south/south-westerly direction approximately 3 – 5m above ground level and have clear flight paths to and from the entrances. No new lighting will illuminate any of the bat boxes or trees.<br>If bats are found during any stage of the development, work should stop immediately, and the suitably qualified ecologist will provide further advice, possibly including further survey in the active season and an EPSML application to Natural England. |
| Bats – Lighting Strategy | Lighting will be controlled across the developed site to avoid any effects on bats foraging on the adjacent tree lines.<br>• The lighting on the developed site will be limited to new buildings only. No lighting will be installed facing the tree lines, thereby maintaining the existing dark areas within the developed site for bats.<br>• Low impact lighting strategies will be adopted from the guidance outlined in the Bat Conservation Trust and ILP *Guidance Note 8 Bats and Artificial Lighting*: https://www.theilp.org.uk/documents/guidance-note-8-bats-and-artificial-lighting/<br>• The lighting on the site will:<br>- Use narrow spectrum light sources to lower the range of species affected by lighting<br>- Use light sources that emit minimal ultra-violet light<br>- Avoid white and blue wavelengths of the light spectrum to reduce insect attraction and where white light sources are required in order to manage the blue shortwave length content they should be of a warm / neutral colour temperature <4,200 kelvin.<br>- Not use bare bulbs and any light pointing upwards. The spread of light will be kept in line with or below the horizontal.<br>• Light spill will be reduced via the use of low-level lighting used in conjunction with hoods, cowls, louvers and shields. Lights will also be directional to ensure that light is directed to the intended areas only.<br>• External lighting will be positioned below the eaves, be on PIR sensors that are sensitive to large objects only (so that they are not triggered by passing bats) and will be set to the shortest time duration to reduce the amount of time the lights are on.<br>• Wall lights and security lights will be 'dimmable' and set to the lowest light intensity settings. There are several products on the market that allow the control of the light intensity and the duration that the lights are on. All lighting on the developed site will make use of the most up to date technology available.<br>All of the above will ensure that the replacement bat roosts within the developed site will not be affected by any external lighting ensuring their long-term use. |
| Tree clearance for bats | Any mature trees that require removal for the development should be felled in the presence of a suitably licensed bat worker. The felling of these trees should be undertaken at an appropriate time of year (e.g. outside of the bird nesting season of March to September). |

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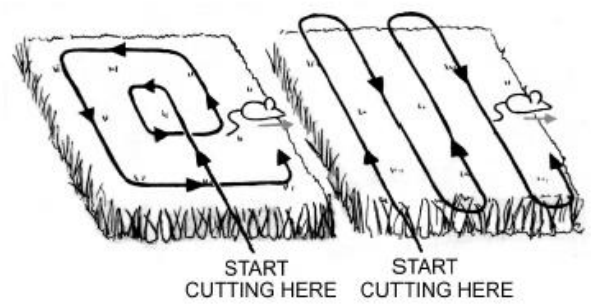
| Breeding Bird Mitigation | Any vegetation removal should be undertaken outside the period 1st March to 31st August. If this timeframe cannot be avoided, a close inspection of the building/trees and scrub to be removed should be undertaken immediately prior to clearance. All active nests will need to be retained until the young have fledged. |
| Breeding Bird Enhancements | ***Provision of new nesting provision on site***<br>Nesting boxes for birds will increase the value of the site.<br>All boxes will be of the Schwegler type. These are known to be used by those individual species they are designed for, and the materials used in their construction means that minimal maintenance is required as a lifespan of 25 years plus can be expected.<br>All boxes should be of the Schwegler type. These are made from woodcrete and are known to be used by those individual species they are designed for. The materials used in their construction means that minimal maintenance is required with an expected lifespan of 25 years plus can be expected.<br>Two 1SP Schwegler Sparrow Terraces should be installed either within the walls or on the new buildings. These will provide nesting provision for sparrows which are a LBAP and SAP.<br>Elsewhere, the following Schwegler bird boxes should be installed on the new buildings and/or retained trees on site:<br>➢ 2x Schwegler 1B nest boxes<br>➢ 2x Schwegler 2H Robin Boxes<br>These nest boxes should be positioned 3-5m in height. |
| Reptile and Amphibian Mitigation | ***Avoidance measures during works***<br>Below is a methodology to avoid harm to herptiles during the development works.<br>➢ Clearance of logs, brash, stones, rocks or piles of similar debris will be undertaken carefully and by hand, and then removed and used to create habitat piles in longer grass outside of the development area.<br>➢ If the grass around the development area grows above 100mm before the works start, it would need to be cut using a specific methodology to avoid harm to herptiles:<br>• Firstly, before any cutting the site should be walked over carefully from the north to the south, disturbing herptiles to encourage them to move outside of the development site. Care should be taken not to flatten the grass as it makes It more difficult to cut. |

- After the walkover, the clearance of vegetation should be undertaken on a warm day without rain, using a strimmer or brush cutter with all cuttings raked and removed the same day to create habitat piles outside of the development area. Cutting will only be undertaken in a phased way which will include:
- Cutting vegetation to a height of no less than 10mm (to avoid harm to reptiles in the basal zones of grasses), working to a pattern which avoids trapping reptiles in the middle and increasing the risk of injury (see figure below).
- On this site, it would be appropriate to work east to west and back in rows to encourage reptiles to move into the nature reserve to the south.




Two cutting patterns used to avoid harm to reptiles.

- Following removal of tall vegetation using the methods outlined above, remaining vegetation will be maintained at a height of 10mm through regular mowing or strimming to discourage common reptiles from returning.
- Ground clearance of any remaining low vegetation (if required) and any ground works will only be undertaken after a fingertip search of the areas.
- Any trenches left overnight will be covered or provided with ramps to prevent common reptiles from becoming trapped.
- Any building materials such as bricks, stone etc. will be stored on pallets to discourage reptiles from using them as shelter. Any demolition materials will be stored in skips or similar containers rather than in piles on ground.

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| | Should any herptiles be discovered during construction, which are likely to be affected by the development, works will cease immediately. The developer will then seek the advice of a suitably qualified, appropriately licenced and experienced ecologist and works will only proceed in accordance with the advice they provide. |
| Reptile and Amphibian Enhancement | ***Provision of new habitat on site***<br><br>Two log piles should be installed on the western boundary of the site to act as refugia. Grass should be left long along the southern boundary to provide cover for herptiles. |

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| Post-development inspection | A site visit will be undertaken upon completion of the development to check the lighting on site, habitat boxes, internal bat and bird provision, new and retained habitats and planting.<br><br>For any European protected species licences, A 'Report of Actions Taken Under Licence' will then be returned to Natural England within 14 days of the expiration date of the EPSM Licence in accordance with the terms and conditions of the licence. |

**Table 2 - Post Development Monitoring, Management and Maintenance**

| **Activity** | **Year 1** | **Years 2 to 10** |
|---|---|---|
| Habitat boxes | Minimal maintenance is required for Schwegler habitat boxes due to the materials used for their construction (i.e. woodcrete). The only maintenance required is to replace any boxes that are broken or fall down e.g. during storms.<br><br>Schwegler bat tubes and sparrow terraces require no maintenance as they are inserted into the fabric of the building during construction. | Maintain the boxes for 5 years to ensure entrances do not become blocked or the boxes become damaged or fall down e.g. during storms.<br><br>Replace any that become inviable or broken.<br><br>Add to the log piles and insect hotels as required with additional materials to ensure that they are still viable for use. |

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| New Trees | ➢ Replace any tree failures with planting of a similar species.<br><br>➢ Weeding - Control To reduce competition for water and nutrients while the tree is establishing itself a 1 m diameter circle should be kept clear of all vegetation and maintained for at least the first 3 years after planting.<br><br>• This can be achieved by careful use of an appropriate herbicide (making sure to avoid the trunk), by hoeing (taking care not to damage the roots), by using weeds suppressing membranes or mats, or by mulching. Mulching (again avoiding the trunk) is preferable. As well as suppressing weeds it helps retain soil moisture, raises soil temperature in the spring and breaks down to provide a slow release of nutrients. Straw, wood chippings or well-rotted farm yard manure can be used. Previously composted mulch is preferable as fresh wood chippings or straw will temporarily lock up nitrogen as they start to decay. This can be alleviated by applying the mulch in the Autumn, so it begins to break down while the tree is dormant. Mulch should be replenished as necessary maintaining a layer 5 cm deep.<br><br>Watering - Newly planted trees require watering when planted and regularly in the first weeks after, with the ground thoroughly wetted to ensure the water reaches the roots. Depending on soil and weather conditions further watering may be necessary during the first few | ➢ Replace any tree failures with planting of a similar species.<br><br>➢ Weed control as year 1.<br><br>➢ Ongoing management: The level of care in the first five years after planting is important in helping the tree become established. Most problems with establishing young fruit trees are caused by neglect and lack of management. Regular attention early on will help identify any problems as soon as they arise, when they will be easier to address.<br><br>Guards When stock are present guards should be checked as regularly as possible to make sure the animals have not moved them to reach the tree. Trees can be seriously damaged or killed very quickly. Guards should protect the trees from grazing animals for a minimum of 10 years after which it may be safe to remove them. However, even mature trees can be pushed over, have their lower branches stripped by cattle, or have the bark stripped from the trunk or branches by sheep or horses. They may therefore need long-term protection. |

| | | |
|---|---|---|
| | summers. Failure to water may lead to poor growth, smaller and fewer fruit or even the death of the tree. | |
| New grass buffer on southern boundary | Established grassland that is not mown each year will become rough and "tussocky" in character. Unwanted perennial weeds (docks, thistles) may need control by occasional spot treatment with a herbicide. | To control scrub and bramble development tussocky areas may need cutting every 2-3 years between October and February. The grass should be cut every two years on 50% rotation, so that there is always suitable cover on site for herptiles. Mowing established tussocky grassland may require heavy duty cutting equipment: lawn mowers are not tough enough to deal with thick tussocks or woody scrub. Tractor mounted flail mowers are suitable for large areas, petrol brush cutters (professional 'strimmers') are good for small or awkward areas. If brush cutters or strimmers are used then the area must be checked immediately prior for hedgehogs. |
| Lighting | The location and suitability of the external lighting will be checked by a bat licenced ecologist upon completion of the development. Recommendations for improvements will be made where applicable. | Maintain approved lighting levels across the developed site. No changes will be made until advice has been sought from a bat licenced ecologist. |

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# Appendix 1: Legislation and Planning Policy

**LEGAL PROTECTION**

**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 the, Article 3 requires the establishment of a network of important conservation sites (SACs) across Europe in order to conserve the 189 habitats and 788 species (non- bird) identified in Annexes I and II of the Directive (as amended).

SPAs are classified under Article 2 of the EC Birds Directive both for rare bird species (as listed on Annex I) and for important migratory species.
SACs and SPAs up to 12 nautical miles (nm) from the coast are afforded protection in the UK under the Conservation of Habitats and Species Regulations 2010 which consolidate all amendments made to the Conservation (Natural Habitats, &c.) Regulations 1994. In Scotland, the requirements of Habitats Directive are implemented through a combination of the 1994 and the 2010 (reserved matters) Regulations. The Offshore Marine Conservation (Natural Habitats, &c.) Regulations 2007 (as amended) provide a means for designating and protecting SACs in UK offshore waters (from 12‑200 nm).

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) 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).

***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. Further provisions for the protection and management of SSSIs have been introduced by the Countryside and Rights of Way Act 2000 (in England and Wales) and the Nature Conservation (Scotland) Act 2004.

***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 2010 (the Conservation Regulations) and the Offshore Marine Conservation (Natural Habitats, &c.) Regulations 2007 (as amended). 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 Mitigation (EPSM) licence, 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.
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**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) 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) and Nature Conservation (Scotland) Act 2004.

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 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 for any development works liable to affect an active badge sett, or to disturb badgers whilst they occupy a sett. Guidance has been issued by the countryside agency's 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.

***Herpetofauna (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 herpetofauna 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 Mitigation (EPSM) Licence issued by the relevant countryside agency (e.g. Natural England) will be required for works liable 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.

***Water voles***

The water vole Arvicola terrestris is fully protected under Schedule 5 of the WCA. This makes it an offence to:

- Intentionally kill, injure or take (capture) water voles
- Intentionally or recklessly damage, destroy or obstruct access to any structure or place used for shelter or protection
- Intentionally or recklessly disturb water voles while they are occupying a structure or place used for shelter or protection

Effects on development works:

If development works are liable to affect habitats known to support water voles, the relevant countryside agency must be consulted. It must be shown that means by which the proposal can be re-designed to avoid contravening the legislation have been fully explored e.g. the use of alternative sites, appropriate timing of works to avoid times of the year in which water voles are most vulnerable, and measures to ensure minimal habitat loss. Conservation licences for the capture and translocation of water voles may be issued by the relevant countryside agency (e.g. Natural England) for the purpose of development activities if it can be shown that the activity has been properly planned and executed and thereby contributes to the conservation of the population. The licence will then only be granted to a suitably experienced person if it can be shown that adequate surveys have been undertaken to inform appropriate mitigation measures. Identification and preparation of a suitable receptor site will be necessary prior to the commencement of works.

***Otters***

Otters Lutra lutra are fully protected under the Conservation 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

Otters are also currently protected under the WCA through their inclusion on Schedule 5. Under this Act, 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

Effects on development works:

An EPSM Licence issued by the relevant countryside agency (e.g. Natural England) will be required for works liable to affect otter breeding or resting places (often referred to as holts, couches or dens) or for operations likely to result in a level of disturbance which might impair their ability to undertake those activities mentioned above (e.g. survive, breed, and rear young). The licence is 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

***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:

Works which are liable 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.

***Dormice***

Dormice Muscardinus avellanarius are fully protected 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

Dormice are also protected under the WCA through their inclusion on Schedule 5. Under this Act, 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

Effects on development works:

Works which are liable to affect a dormice habitat 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.

***White clawed crayfish***

The white clawed crayfish Austropotamobius pallipes receives partial protection under Schedule 5 of the WCA in respect of Sections 9(1) and 9(5). This makes it an offence to:

- Intentionally take (capture) white-clawed crayfish.

Effects on development works:

The relevant countryside agency will need to be consulted about development which could impact on a watercourse or wetland known to support white clawed crayfish. Conservation licences for the capture and translocation of crayfish can be issued if it can be shown that the activity has been properly planned and executed and thereby contributes to the conservation of the population. The licence will only be granted to a suitably experienced person if it can be shown that adequate surveys have been undertaken to inform appropriate mitigation measures. Identification and preparation of a suitable receptor site will be necessary prior to the commencement of the works.

**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:

An EPSM licence will be required from the relevant countryside agency for works which are liable to affect species of planted listed on Schedule 5 of the Conservation or 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 land owner 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

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**

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 UK Biodiversity Action Plan priority species) 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; opportunities to incorporate biodiversity in and around developments are encouraged; 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 (Section 42 in Wales) 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.