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Construction Environmental Management Plan & Ecological Enhancement Plan

Survey site:

Abbey Gardens, 4-6 Abbey Street, Reading, RG1 3BA.

Client:

Randalswood Construction UK Ltd.

Report date:

2nd July 2026.

Project:

This report is prepared to inform a planning application with Reading Borough Council. The proposal is described as:

"External works to partial areas of all elevations at ground floor level and all areas of each elevation from 1st to 7th floor level, including replacement windows and doors, installation of brickwork following removal of existing glazing, the provision of Juliet balconies on all elevations and protruding balconies on the east and south elevations at 2nd floor level and above, and other associated works".

Planning Application Number:

PL/26/0091.

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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, section 15 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 Limited was commissioned by Randalswood Construction UK Ltd. to produce a Construction Environmental Management Plan: Biodiversity (CEMP) and an Ecological Enhancement Plan (EEP) for the proposed development at Abbey Gardens, 4-6 Abbey Street, Reading, RG1 3BA (hereafter referred to as "the site").

The site has been subject to the following previous ecological and arboricultural assessments of relevance to this report:

- Preliminary Roost Assessment - PRA- Abbey Gardens, RG1 3BA - 46526393 - 27.03.26 - V2 (Arbtech Consulting Ltd., 2026).
- Tree Protection Plan – Abbey Gardens, Reading (Randalswood Construction UK Ltd., 2026).

1.2 Project Description

The planning application pertaining to the site (Reading Borough Council Reference: PL/26/0091) describes the development as: *external works to partial areas of all elevations at ground floor level and all areas of each elevation from 1st to 7th floor level, including replacement windows and doors, installation of brickwork following removal of existing glazing, the provision of Juliet balconies on all elevations and protruding balconies on the east and south elevations at 2nd floor level and above, and other associated works* (hereafter referred to as the proposed development). A proposed development plan is provided in **Appendix 1.**

1.3 Site Context

The site is located at National Grid Reference SU7196473435 and has an area of approximately 0.42ha comprising one building. The site is located in an urban setting, immediately surrounded by urban development within the town of Reading. The site is adjacent to the river Kennet on the eastern and northern elevations and further urban development on all other elevations. The local landscape is a densely urbanised one, containing small, scarcely vegetated gardens with only a scattered covering of trees/in which trees are largely absent. The river Thames is located 530m north of the site and there is open parkland to the north. The river Kennet is adjacent to the site on the eastern and northern boundary. The site sits on a variable soil and subsoil, typically Peat or layered clay, sand and silt (riverine), and is mildly acidic to neutral (pH: 4.5 - 6.5). A site location plan is provided in **Appendix 2**.

1.4 Scope of This Report

Following the submission of the planning application (PL/26/0091), the proposed development was conditionally approved. The Decision Notice included pre-commencement planning conditions pertaining to ecology; of relevance to this report, planning conditions 5 and 7, which state:

"5) No development shall take place until a Construction Environmental Management Plan: Biodiversity (CEMP: Biodiversity) has been submitted to and approved in writing by the Local Planning Authority. The CEMP: Biodiversity shall include the following:

a) Risk assessment of potentially damaging construction activities.

b) Identification of "biodiversity protection zones".

c) Practical measures (both physical measures and sensitive working practices) to avoid or reduce impacts during construction (may be provided as a set of method statements).

d) The location and timing of sensitive works to avoid harm to biodiversity features.

e) The times during construction when specialist ecologists need to be present on site to oversee works.

f) Responsible persons and lines of communication.

g) The role and responsibilities on site of an Ecological Clerk of Works (ECoW) or similarly competent person.

h) Use of protective fences, exclusion barriers and warning signs.

The approved CEMP: Biodiversity shall be adhered to and implemented throughout the construction period strictly in accordance with the approved details.

Reason: To minimise impacts on biodiversity in accordance with Paragraphs 187 and 192 of the NPPF and Policy EN12 of the Reading Borough Local Plan 2019.

7) A) Prior to commencement of the development (excluding any demolition and site preparation works), details of biodiversity enhancements, to include 1a) bird and bat boxes, or 1b) bird and bat bricks or tiles built into the walls of the building, and 2) proposals for native and wildlife friendly landscaping, shall be submitted and approved in writing by the Local Planning Authority. All bird and bat boxes should be installed in accordance with British Standard BS 42021:2022, and the submitted details shall include specification, location, installation details and monitoring and maintenance arrangements in line with BS: 42021:2022.

B) Prior to the first occupation of any part of the building for residential use, a brief letter report shall be submitted and approved in writing by the Local Planning Authority, confirming that the approved biodiversity enhancements have been installed. The report will include photographs of the features in situ and a simple plan showing their location. Thereafter the biodiversity enhancements shall be permanently retained and maintained in accordance with the approved details.

Reason: To secure the delivery of sustainable long-term biodiversity enhancements on site. This accords with Paragraph 193 of the NPPF, Policy EN12 of the Reading Borough Local Plan 2019, the Wildlife and Countryside Act 1981 (as amended) and The Conservation of Habitats and Species Regulations 2017".

The aims of this CEMP & EEP are to provide ecological mitigation and enhancement prescriptions to ensure ecological receptors recorded during previous ecological assessments are suitably protected during construction and that viable enhancements are provided to ensure gains to biodiversity are achieved as a result of the development. As such, this report aims to provide sufficient detail to support the discharge of planning conditions 5 and 7.

2.0 Ecological Baseline Conditions Relevant to This Report

The ecological and arboricultural baseline conditions at the application site were determined as a result of the PRA (Arbtech Consulting Ltd, 2026) and Tree Protection Plan (Randalswood Construction UK Ltd., 2026).

2.1 Habitats Recorded on Site

The site is characterised by a main commercial building, surrounded by hardstanding and scattered amenity modified grassland, with occasional ornamental shrub and tree planting. Habitats recorded at the site include:

- Building;
- Hardstanding;
- Modified grassland;
- Introduced shrub;
- Ornamental hedgerow; and
- Scattered trees.

2.2. Value to Protected/Notable Species

Given the type and extent of habitats recorded, and the assessed connectivity between the site and the wider landscape, the site was assessed to provide opportunities for the following protected and/or notable species:

- Common species of nesting birds;
- Foraging and commuting bats; and
- Foraging and commuting terrestrial and riparian mammals (badgers, hedgehogs, otters).

The site is not considered suitable to support any other protected and/or notable species.

Foraging and commuting bats

While the building on site is assessed to provide negligible habitat value for roosting bats, due to a lack of suitable roosting features across and within its parts, the site is located immediately adjacent to the River Kennet, which is identified as a Green Network Link and Area of Biodiversity Interest under Policy EN12 of the Reading Borough Council local Plan (2019). The adjacent watercourses, as well as the scattered vegetated habitats surrounding the building on site, are considered to provide suitable foraging and commuting opportunities for local bat populations, as the aquatic, riparian and terrestrial habitats are likely to provide micro-climatic conditions that support invertebrates, which will in turn provide foraging opportunities for local bat populations. Furthermore, the linear nature of the nearby watercourses, together with the soft landscaping along their embankments, is likely to provide excellent commuting opportunities for bats. These features traverse through Reading town centre, connecting to the River Thames, as well as Thames Valley Nature Reserve, adding to the continuity of vegetated linear features present in the wider landscape. Bats are well known to utilise linear features to aid navigation whilst travelling between foraging resources and roost sites. The proposed development includes the installation of new artificial lighting at the site, which will likely result in an increase in the amount of current lighting of surrounding habitats, which could disturb existing foraging and commuting routes for local bats, without mitigation.

Foraging and commuting terrestrial and riparian mammals (badgers, hedgehogs, otters)

The site does not provide any sett building opportunities for badgers or holt building opportunities for otters. The site provides limited nesting value for hedgehogs, predominantly isolated to scattered ornamental shrub planting surrounding the site. Furthermore, foraging opportunities on site are considered absent for otters, and suboptimal for terrestrial mammals, due to the limited distribution of soft landscaping. The amenity grassland provides some value to terrestrial mammals, as this can be used to scratch and dig for invertebrates, and the ornamental shrub and tree planting may provide some fruits. Despite the site providing suboptimal value for terrestrial and riparian mammals, the adjacent River Kennet provides foraging and commuting value for otters, as the river extends through Reading town centre, connecting to the River Thames, and creates connectivity between the site and wider landscape for this species. Due to the steep concrete banks and highly urban location of the site and surrounding watercourses, it is assessed that no suitable holt building habitat is present within 30m of the development. Although the site is located within an urban environment, badgers and hedgehogs are highly mobile creatures, and regularly occur in these areas. As such, the use of the site as part of a wider commuting route for badgers and hedgehogs within the locale cannot be discounted. The proposed development will not result in the removal of any vegetated habitats or any ground excavations; however, the proposed development includes the installation of new artificial lighting at the site, which will likely result in an increase in the amount of current lighting of surrounding habitats, which could disturb existing foraging and commuting routes for terrestrial and riparian mammals, without mitigation.

Common Species of Nesting birds

While the building on site is assessed to provide negligible habitat value for nesting birds, the surrounding ornamental shrub and tree planting provides some nesting opportunities. Furthermore, the site is located immediately adjacent to the River Kennet, which is identified as a Green Network Link and Area of Biodiversity Interest under Policy EN12 of the Reading Borough Council local Plan (2019). The adjacent watercourses, together with the soft landscaping along their embankments, provide suitable habitat for waterfowl and other aquatic bird species. The proposed development will not result in the removal of any vegetated habitats or any ground excavations; however, construction activities could result in the disturbance and subsequent abandonment of any nearby active bird nests, if present.

2.3 Scope for Mitigation and Enhancement

Although foraging and commuting bats, common species of nesting birds and foraging and commuting terrestrial and riparian mammals (badgers, hedgehogs, otters) do not represent significant ecological constraints, there remains connectivity between the site and the wider landscape for these species. As a result, the future presence of these species cannot be discounted. It is therefore assessed that mitigation through precautionary working methods are required to reduce the potential for impacts to these species to an acceptable low level during construction. It is also assessed that enhancement of the site targeting these species groups will have a viable probability of occupation and will thus represent effective ecological enhancement.

3.0 Construction Environmental Management Plan: Biodiversity & Ecological Enhancement Plan

3.1 Mitigation & Biodiversity Protection Zones

Mitigation prescriptions to reduce adverse impacts to ecological receptors as identified through previous ecological assessment are detailed in **Table 1** below.

Table 1: Mitigation Prescriptions

Mitigation	Specification
Persons Responsible and Lines of Communication & Ecological Clerk of Works	A Development Biodiversity Champion will be selected for the construction phase of the development. The Biodiversity Champion will be someone with significant influence during construction, such as the contractor or project manager. The Development Biodiversity Champion is responsible for ensuring all actions outlined in this CEMP & EEP are implemented. Any queries with regards to the mitigation and enhancement prescriptions will be addressed to the project ecologist and communication will be retained between the Development Biodiversity Champion and project ecologist throughout the project. The project ecologist's contact details are located on the title page of this report. The Biodiversity Champion should inform the project ecologist of the commencement of enhancement installation works and will provide updates where necessary. The Development Biodiversity Champion will be responsible for understanding when an ECoW is required on site to supervise works, requirements of which are listed below, and detailed within each mitigation section where necessary. • Pre-commencement nesting bird check if works are completed within the active nesting season (March-August inclusive). Once the ecological enhancements have been installed, a Post-Development Biodiversity Champion will be allocated who has influence on site once the development is complete, such as a long-term maintenance contractor or the landowner. The Post-Development Biodiversity Champion will be responsible for ensuring all recommended management is undertaken and any associated remedial measures are completed where necessary.
Post-Development Inspection	A post-development inspection of the proposed enhancements will be undertaken by a suitably qualified ecologist once works are complete. This is to ensure the recommended enhancements have been installed successfully and to recommend any remediation measures where necessary. Should significant remediation be required, additional site visits may be recommended following completion of the remediation until the enhancement installation is considered satisfactory.
Mitigation Pertaining to Foraging and Commuting Bats	The proposed development is located immediately adjacent to the River Kennet, which is identified as a Green Network Link and Area of Biodiversity Interest under Policy EN12 of the Reading Borough Council local Plan (2019). The adjacent watercourses, together with the soft landscaping along their embankments, as well as the scattered vegetated habitats surrounding the building on site, are considered to provide suitable foraging and commuting opportunities for local bat populations, and as such, the use of

	artificial lighting at the site during and post-development could disturb key foraging and commuting routes for bats present within the vicinity. ***Timing of works*** All works on site will be restricted to daytime hours, specifically **8:00-16:00 during autumn/winter months (November-March)** and **7:30-17:30 during spring/summer months (April-October).** Where sunrise and sunset times fall within these specified timeframes, working hours will be adjusted to start and end **AT LEAST 30 minutes after sunrise and before sunset**, respectively. ***Biodiversity protection zones*** Given the lack of suitable roosting opportunities across the main building, no impacts to roosting bats are anticipated, and therefore no biodiversity protection zones are considered necessary for roosting bats. Furthermore, as all construction works are to be restricted to daylight hours, artificial lighting at the site during development activities will not be used, and no mitigation for lighting during construction is required for foraging and commuting bats. However, future lighting proposed on/within the building and around the site will be installed in such a way as to minimise light spill onto surrounding foraging and commuting habitat. Further details can be found within the Wildlife Sensitive Lighting Strategy section of this report.
Nesting Bird Check	The surrounding ornamental shrub and tree planting on site provides some nesting opportunities. Furthermore, the site is located immediately adjacent to the River Kennet, which is identified as a Green Network Link and Area of Biodiversity Interest under Policy EN12 of the Reading Borough Council local Plan (2019). The adjacent watercourses, together with the soft landscaping along their embankments, provide suitable habitat for waterfowl and other aquatic bird species. The proposed development will not result in the removal of any vegetated habitats or any ground excavations; however, construction activities could result in the disturbance and subsequent abandonment of any nearby active bird nests, if present. ***Timing of works and biodiversity protection zones*** If construction activities are to take place during the active nesting bird period (1st March to 31st August), a pre-commencement inspection of the surrounding vegetation will be undertaken, no longer than 48 hours prior to the commencement of works, by a suitably qualified ecologist, to check for active nests. Any active nests identified will require a minimum 5m buffer (depending on the species identified) to be created between any construction activities and the identified active nest(s), until the young have fledged. Precautions must be taken with machinery and noise levels when working close to any retained nests so as not to disturb any nearby nesting birds during construction works.

Mitigation Pertaining to Terrestrial and Riparian Mammals (badgers, hedgehogs, otters)	The site does not provide any sett building opportunities for badgers or holt building opportunities for otters, and provides limited nesting value for hedgehogs. The amenity grassland provides some value to terrestrial mammals, as this can be used to scratch and dig for invertebrates, and the ornamental shrub and tree planting may provide some fruits. The adjacent River Kennet provides foraging and commuting value for otters, as the river extends across the town centre, connecting to the River Thames, and creates connectivity between the site and wider landscape for this species. The proposed development will not result in the removal of any vegetated habitats or any ground excavations; the use of artificial lighting at the site during and post-development could disturb key foraging and commuting routes for terrestrial and riparian mammals present within the vicinity. ***Timing of works*** All works on site will be restricted to daytime hours, specifically **8:00-16:00 during autumn/winter months (November-March)** and **7:30-17:30 during spring/summer months (April-October).** Where sunrise and sunset times fall within these specified timeframes, working hours will be adjusted to start and end **AT LEAST 30 minutes after sunrise and before sunset**, respectively. ***Biodiversity protection zones*** Given that the proposed development will not result in the removal of any existing vegetated habitats, or any ground excavation works, as well as the site lacking any suitable sett and holt building habitat, no biodiversity protection zones are considered necessary for terrestrial and riparian mammals. Furthermore, as all construction works are to be restricted to daylight hours, artificial lighting at the site during development activities will not be used, and no mitigation for lighting during construction is required. However, all future lighting proposed on/within the building and around the site will be installed in such a way as to minimise light spill onto surrounding foraging and commuting habitat. Further details can be found within the Wildlife Sensitive Lighting Strategy section of this report. Additionally, precautions must be taken with regards to individual foraging and commuting mammals accessing the site for transient periods, as detailed below. ***Precautionary methods of working*** If any badgers, hedgehogs or otters are found in the working area these will be allowed to disperse of their own accord. If a hedgehog is found to be at immediate risk, it must be moved by gloved hand to a sheltered, vegetated area away from disturbance, such as ornamental shrub and hedgerow planting outside of the development boundary. Larger mammals such as badgers or otters must not be transported by hand. Should a badger sett or otter holt be identified on or within 30m of the development, all works must cease and advise sought from a suitably qualified ecologist as to how to legally progress with the development. Should a badger or otter be found to be at immediate risk, all works must cease, and advice must be sought from the project ecologist/appointed ECoW. Any chemicals or pollutants used or created by the development will be stored and disposed of correctly according to COSHH regulations. Any inadvertently injured wildlife will be taken to an appropriate local wildlife carer or vet.

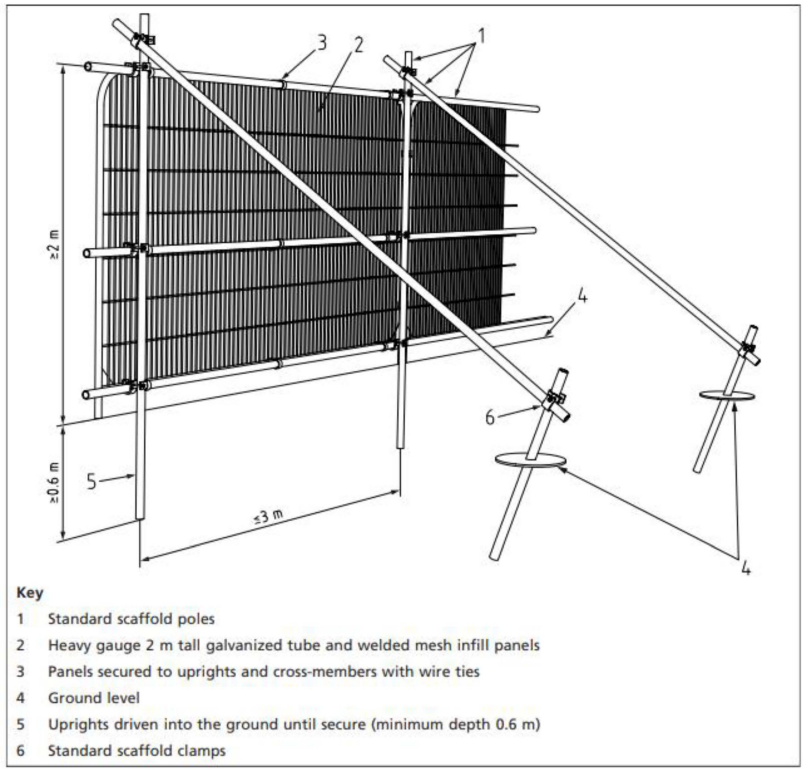
Protection of Retained Trees and Hedgerows	The scattered trees and hedgerows on and immediately surrounding the site will be protected during construction in accordance with the Tree Protection Plan (Randalswood Construction UK Ltd., 2026) and BS 5837:2012 - "Trees in relation to design, demolition and construction – Recommendations". ***Biodiversity protection zones*** Where required, protective fencing will be installed throughout the duration of the construction phase of the development. A fencing specification is included within **Figure 1** below. Appropriate signage is to be installed surrounding all trees in order to ensure that buffers are clearly marked, and fences are not moved after establishing. Exemplary signage is included within **Figure 2** below. Details pertaining to the installation of fencing and signage surrounding retained scattered trees at the site can be found within the **Tree Protection Plan Report** (Randalswood Construction UK Ltd., 2026), and the locations of such features are marked on the Tree Protection Zones plan in **Appendix 3.**  **Key** 1 Standard scaffold poles 2 Heavy gauge 2 m tall galvanized tube and welded mesh infill panels 3 Panels secured to uprights and cross-members with wire ties 4 Ground level 5 Uprights driven into the ground until secure (minimum depth 0.6 m) 6 Standard scaffold clamps **Figure 1.** Default protective barrier specification (British Standards Institute 2012).

	 **Figure 2.** Appropriate signage to attach to root protection zones (image credit: www.Safetysignsandnotices.co.uk)
Wildlife sensitive lighting strategy	The site is located within an area already subject to high levels of artificial lighting emitted from surrounding street lighting and residential/commercial infrastructure. The built-up town of Reading has a light pollution rate of approximately 6-7 bortle (as identified by https://lightpollutionmap.app/ for the town in in 2025), indicating high levels of artificial lighting and associated light pollution. Despite the high levels of existing artificial lighting surrounding the site, future lighting proposed on/within the building and around the site will be installed in such a way as to minimise light spill onto surrounding foraging and commuting habitat. Specifications for the installation of artificial lighting within/on the building and around the site so as to protect existing dark corridors are detailed within the **Wildlife Sensitive Lighting Strategy Report** (WSLS; Arbtech Consulting Ltd., 2026). All works will be undertaken in full accordance with the prescriptions outlined within the WSLS report.
Prevention of construction-related impacts	The proposed development comprises the removal of the existing building façade on site, to be replaced with a new exterior finish with the addition of balconies, for its conversion to residential use. Without appropriate mitigation, the construction works are likely to result in increased levels of noise, dust and water run-off pollution on site, which could disperse into the immediate surrounding landscape, of particular concern, the River Kennet immediately adjacent to the site. This could result in adverse impacts upon the surrounding terrestrial and aquatic habitats, and subsequently negatively impact existing plant and animal diversity. Consideration must be taken to limit impacts of pollution resulting from the construction phase of the development, and construction works must be completed in accordance with current statutory guidelines relating to pollution prevention (Environmental Agency 2016). Furthermore, although withdrawn in 2015, pollution prevention guidelines detailed within guidance

	document: PPG6: Working at Construction and Demolition Sites (Environment Agency 2010) remain applicable to the site. Considering both the relevant statutory requirements and best practice measures detailed within guidance document PPG6, the below mitigation prescriptions are considered suitable to mitigate impacts of pollution during the construction phase of the development. The allocated Development Biodiversity Champion will be responsible for ensuring the below mitigation recommendations are undertaken successfully during the works. ***Pollution prevention – biodiversity protection zones for waterbodies*** A minimum of a 10m buffer from the River Kennet, located immediately east and north of the site, must be retained from construction activity and material storage for the duration of the construction phase in accordance with current guidelines (Environmental Agency 2016). If a 10m buffer cannot be retained, then secondary containment measures must be put in place in this area to prevent pollution entering the river, for both hazardous and non-hazardous waste. Secondary measures implemented within 10m must comprise the use of a secondary containment system such as the construction of an impermeable bund or the use of drip trays. Secondary containment systems must be implemented in accordance with current guidance published by the Construction Industry Research and Information Association (CIRIA) within guidance document C736F: Containment systems for the prevention of Pollution (CIRIA 2014). ***Materials storage and surface water runoff*** The Development Biodiversity Champion will ensure that no stockpiles are created on exposed ground areas and that all materials and chemicals are stored securely and safely on hardstanding on site, in accordance with current Control of Substances Hazardous to Health (COSHH) regulations (HSE 2002). Any stockpiles will be located as far away as possible from the river immediately adjacent to the site, and on level ground to prevent any accidental run-off. Should any contaminated materials, chemicals, and other hazardous substances be present on site, these must be stored on an impermeable surface, in a bunded area, within any area of the site. Any chemicals and hazardous substances will be stored away from areas where there is a heightened risk of damage from impact or collision, such as site traffic, and all chemicals and hazardous substances must be labelled, containers sealed when not in use and inspected regularly to ensure fit for purpose. Any damaged or old containers will be replaced in line with the duty of care requirements; note such containers may be considered hazardous waste. Staff will be trained in the use of spill kits and emergency procedures, and a designated 'responsible person' must be on site at all times. Any materials and chemicals must be stored in lock storage facilities when not in use. ***Site drainage*** The Development Biodiversity Champion will ensure that any pollution risks are identified pre-construction, and that pollutants are prevented from entering drains where possible. If any pollutant enters a drain, immediately stop the pollution with a physical block, stop the activity causing the pollution, then notify the Environment Agency for surface water drains or the local sewerage provider

	for foul water drains. If there's a spill, accident, or emergency, try and prevent pollutants entering the drains. All pollution incidents must be reported to site management and the Environment Agency and drains and protection measures will be frequently inspected and maintained during construction activity. Well maintained drains will also reduce risks of flooding and subsequent surface water run-off. As a last resort, should any pollutants be required to enter the drainage system on site, permission from Environment Agency or the local sewerage provider must be sought before discharging anything other than clean uncontaminated surface water to a drain and other surface waters or groundwater. Permission must be applied for early, as authorisation can take up to four months. ***Airborne particle suppression*** The Development Biodiversity Champion will ensure that explosive blasting is avoided, using appropriate manual or mechanical alternatives. Effective water suppression must be used during demolition operations, handheld sprays are more effective than hoses attached to equipment, as the water can be directed to where it is needed. In addition, manually controlled high volume water suppression systems can produce fine water droplets that effectively bring the dust particles to the ground. Any biological debris must be bagged and removed or such material dampened down before demolition. Regular site inspections to monitor compliance will be carried out. All vehicles must switch off engines when stationary and the use of petrol- or diesel-powered generators will be avoided, using mains electricity or battery power where possible. If required, only use cutting, grinding, or sawing equipment fitted or in conjunction with suitable dust suppression techniques such as water sprays or local extraction. An adequate water supply must be supplied on the site for effective dust/particulate matter suppression/mitigation, using non-potable water where possible and appropriate. If required, use enclosed chutes and conveyors, and covered skips. ***Noise*** The Development Biodiversity Champion will ensure that noise levels are kept to a minimum in accordance with best practice as defined in the Control of Pollution Act 1974 to avoid unacceptable levels of noise and vibrations. Further guidance can be found in British Standard 5228-1:2009. Such measures applicable to the proposed development primarily include agreed working hours avoiding night work, using the quietest equipment and plant available, shutting down equipment when not in use, and completing deliveries during working hours only. Most notably, prescriptions as to limit noise of plant machinery as detailed within Table B.1 within the code of practice for noise control (British Standards Institution, 2014; see **Figures 3** and **4**) is likely to have the most significant impact during construction activity.

Table B.1 **Methods of reducing noise levels from construction plant**

Plant	Noise reduction of plant			Alternative plant
	Source of noise	**Possible remedies** (to be discussed with machine manufacturers)	**A-weighted sound reduction** dB	
Hammer drive piling equipment	Pneumatic/diesel hammer or steam winch vibrator driver	Enclose hammer head and top of pile in acoustic screen	5 to 10	Bored piling Vibratory system Drop hammer completely enclosed in box with opening at top for crane access Steel jacket completely enclosing drop hammer with dolly and polystyrene chips fed to impact surface to dissipate energy Pressed-in piling which generates its driving force from the frictional restraint of other piles
	Sheet pile	Acoustically dampen sheet steel piles to reduce levels of resonant vibration		
	Impact on pile	Use resilient pad (dolly) between pile and hammer head. Packing needs to be kept in good condition		
	Cranes cables, pile guides and attachments	Careful alignment of pile and rig		
	Power units or base machine	Fix more efficient sound reduction equipment or exhaust. Acoustically dampen panels and covers. When intended by the manufacturer, engine panels need to be kept closed. Use acoustic screens when possible		
Earth-moving plant: • bulldozer • compactor • crane • dump truck • dumper • excavator • grader • loader • scraper	Engine	Fit more efficient exhaust sound reduction equipment Manufacturers' enclosure panels need to be kept closed	5 to 10	Alternative super silenced plant might be available. Consult manufacturers for details

Figure 3. Methods for reducing noise levels from construction (British Standards Institution, 2014)

Table B.1 **Methods of reducing noise levels from construction plant** *(continued)*

Plant	Noise reduction of plant			Alternative plant
	Source of noise	**Possible remedies** (to be discussed with machine manufacturers)	**A-weighted sound reduction** dB	
Compressors and generators	Engine Compressor or generator body shell	Fit more efficient sound reduction equipment Acoustically dampen metal casing Manufacturers' enclosure panels need to be kept closed	Up to 10	Super silenced plant is available. Consult manufacturers for details Electric-powered compressors are available as opposed to diesel or petrol Sound-reduced compressor or generator can be used to supply several pieces of plant. Use centralized generator system
	Total machine	Erect acoustic screen between compressor or generator and noise-sensitive area. When possible, line of sight between top of machine and reception point needs to be obscured	Up to 10	
		Enclose compressor or generator in ventilated acoustic enclosure	Up to 20	
Pneumatic concrete breaker, rock drills and tools	Tool	Fit suitably designed muffler or sound reduction equipment to reduce noise without impairing machine efficiency	Up to 15	Hydraulic and electric tools are available For large areas of concrete, machine designed to break concrete in bending can be used Thermic lance
		Ensure all leaks in air line are sealed		
	Bit	Use dampened bit to eliminate ringing		
	Total machine	Erect acoustic screen between compressor or generator and noise-sensitive area. When possible, line of sight between top of machine and reception point needs to be obscured	Up to 10	
		Enclose breaker or rock drill in portable or fixed acoustic enclosure with suitable ventilation	Up to 20	
Rotary drills, diamond drilling and boring	Drive motor and bit	Use machine inside acoustic shed with adequate ventilation	Up to 15	Thermic lance

Figure 4. Methods for reducing noise levels from construction continued (British Standards Institution, 2014)

	Implementation of the Waste Hierarchy The Development Biodiversity Champion will ensure that all construction activity is completed in accordance with the Waste Hierarchy (Defra 2011) in an attempt to reduce the amount of waste produced during the construction phase of the development. As such, the construction phase must be completed in accordance with the below core principles: <u>In the first instance:</u> Re-use products and materials where possible, recycle and compost material resources where possible and attempt to recover energy from waste. <u>Where none of the above options offer an appropriate solution, waste disposal is the final option:</u> Only transfer controlled waste to an "authorised person" (Waste Collection Authority, the holder of an Environmental Permit, Registered Water Carrier or Waste Disposal Authority). Ensure that non-hazardous waste is transferred under a Waste Transfer Note which must be retained for two years. The waste is the responsibility of the company until it has been fully recovered or finally disposed of. ***Retained soil and turf conservation*** Any areas of retained vegetation or bare soil accessed by vehicles and pedestrians is likely to become compacted by heavy machinery and repetitive footfall, which will negatively impact ecological functioning. Use of the site for construction activities and material storage will be restricted to areas of existing hardstanding, as best as possible. The clearance of turf and topsoil will be limited to the minimum required to facilitate the development, and any retained turf will be protected during construction to maintain its ecological function. Post construction, the entire soil profile must remain in a condition that promotes aeration, drainage and root growth. ***Compaction, erosion and retained turf damage mitigation*** Retained soil and any retained turf will require protection from the impacts of compaction, erosion and other soil and turf damage. Protective boards must be lain around the construction zone to spread the weight and erosive impacts of plant, vehicles and feet. Plywood is a traditional option however rubber lawn mats may provide a more practical and effective solution; these can also be used to create temporary "roads". Clear protection mats are available to permit UV penetration and thus continued grass growth. The work zone must be restricted to the minimum area required for operatives to work safely, and must be clearly signposted/ fenced with access prohibited to contractors. Contractors will be audited by the Development Biodiversity Champion on a weekly basis, and on a daily basis by the team leader, for compliance with environmental protection strategies, and will have been provided with toolbox talks at induction. Repeated compliance failures should lead to the termination of contracts. It is advised that any compensation or reparative measures for turf damage be included within contractors' contracts.

	When stripping, stockpiling or placing soil, this will be done in the driest condition possible, and tracked equipment will be used where possible to reduce compaction. Traffic movement will be confined to designated routes. Soil storage periods must be kept as short as possible, with clearly defined stockpiles of different soil materials. Heavy plant/skips etc. will be stored on hardstanding, e.g. on existing hardstanding within the wider ownership boundary. Works will not take place during or after prolonged periods of rain, and works must be planned so as to avoid unnecessary journeys on either foot or vehicle across the grassed areas. Some residual compaction may occur despite protective efforts. As such, aerating the retained grassed areas in the work zone post development will be beneficial.

3.2 Enhancement

Enhancement of the site through the provision of species-specific features in addition to any subsequent management requirements are detailed in **Table 2** below.

The proposed species-specific enhancements are illustrated on the plan in **Appendix 3**.

Table 2: Species-Specific Enhancement Prescriptions

Ecological Enhancement	Specification
Provision of soft landscaping	As the proposed development works are restricted to the main building on site only, and will not alter the existing hard and soft landscaping layout surrounding the building, the proposed development will not include the creation of soft landscaping enhancements at the site. However, species-specific enhancements targeting bats and birds to be installed onto the exterior walls of the main building have been maximised.
Provision of bat boxes	Six bat boxes will be installed onto the exterior walls the building, as shown on the plan in **Appendix 3.** These bat boxes represent ecological enhancement that will support an increase in biodiversity on site through the provision of additional bat roosting habitat. Bat boxes to be installed are detailed below. Due to structural constraints associated with the proposed full-fill insulation and thin-profile brick slip cladding system on the main building elevations, integrated wildlife boxes are structurally unfeasible. To maintain the thermal and fire-barrier integrity of the building while meeting biodiversity gain targets, the specification has been updated to durable, non-combustible external surface-mounted boxes. These will be securely anchored to the exterior walls, bypassing the internal insulation envelope. ***Bat boxes to be installed onto exterior walls of building*** • The external bat boxes will be constructed of woodcrete/woodstone. Boxes of this construction are known to require minimal maintenance and have a lifespan of 25 years plus.

- 6no. "Vivara Pro Low Profile Woodstone Bat Boxes" (or similar) (see **Figure 5**) will be installed on the southern and western exterior walls of the main building, across areas where no windows are proposed. This bat box type is suitable to support a range of species, including common pipistrelles *Pipistrellus pipistrellus* and soprano pipistrelles *Pipistrellus pygmaeus,* confirmed to be present in the local area through EPSL data.
- The bat boxes will be positioned 3-6m above ground level, or higher where necessary, with a clear flight path to and from the entrance. The bat boxes will not be positioned directly above any windows and should be away from or high above artificial light, with the box entrance remaining in the dark.



Figure 5. Vivara Pro Low Profile Woodstone Bat Box
(image credit: https://www.nhbs.com/equipment?qtview=194583)

Recommended management

The proposed bat boxes are designed to require no management or maintenance. Furthermore, preventing physical disturbance of bat boxes will increase the chances of occupation by roosting bats. However, the Post-Development Biodiversity Champion is responsible for visually inspecting the bat boxes annually for the first five years, to ensure no damage or removal has occurred. All bat boxes must be replaced if they are damaged or removed from their recommended location. Damaged bat boxes must be inspected by a Natural England Bat Licence Holder (Level 1 or higher) prior to their replacement, to check for the presence of roosting bats.

Provision of Bird Boxes	Six bird boxes will be installed onto the exterior walls the building, as shown on the plan in **Appendix 3.** These bird boxes represent an ecological enhancement that will support an increase in biodiversity on site through the provision of additional bird nesting habitat. Bird boxes to be installed are detailed below. Due to structural constraints associated with the proposed full-fill insulation and thin-profile brick slip cladding system on the main building elevations, integrated wildlife boxes are structurally unfeasible. To maintain the thermal and fire-barrier integrity of the building while meeting biodiversity gain targets, the specification has been updated to durable, non-combustible external surface-mounted boxes. These will be securely anchored to the exterior walls, bypassing the internal insulation envelope. ***Bird boxes to be installed onto exterior walls of building*** • The bird boxes will be constructed of woodcrete/woodstone. Boxes of this construction are known to have minimal maintenance and have a lifespan of 25 years plus. • A combination of boxes suitable for a range of bird species will be installed, including 2no. "Vivara Pro WoodStone House Sparrow Nest Box" (or similar) (see **Figure 6**) and 4no. "Vivara Pro Barcelona Open Nest Box" (or similar) (see **Figure 7**), to be installed into the eastern and northern exterior walls of the main building, across areas where no windows are proposed. Sparrow nest boxes are designed to provide enhanced nesting opportunities for house sparrow *Passer domesticus,* a priority species listed on Section 41 of the NERC Act. However alternative small cavity-nesting species, such as tits, will also utilise these boxes if sparrows are not present. • The bird boxes will be placed at least 5m above ground level, under the eaves of the building, where they will be sheltered from prevailing wind, rain, and strong sunlight.  **Figure 6**. Vivara Pro WoodStone House Sparrow Nest Box Nest Box (image credit https://www.nhbs.com/vivara-pro-woodstone-house-sparrow-nest-box)



Figure 7. Vivara Pro Barcelona Open Nest Box
(image credit: https://www.wildcare.co.uk/woodstone-barcelona-open.html)

Recommended management

The Post-Development Biodiversity Champion is responsible for visually inspecting the bird boxes annually for the first five years, between December-January, to ensure no damage or removal has occurred. This can be undertaken from ground level using binoculars. Any maintenance or replacement works required will take place outside of the typical breeding bird season, when birds a most likely to use the boxes for nesting, which is between March and August inclusive, i.e. remediation works must take place between September and February, where necessary. Bird boxes must be replaced if they are damaged or removed from their recommended location.

3.3 Timetable for Delivery of Enhancements

Timings for delivery of enhancements of the site detailed in **Table 3** below.

Table 3: Timetable for Enhancement Delivery

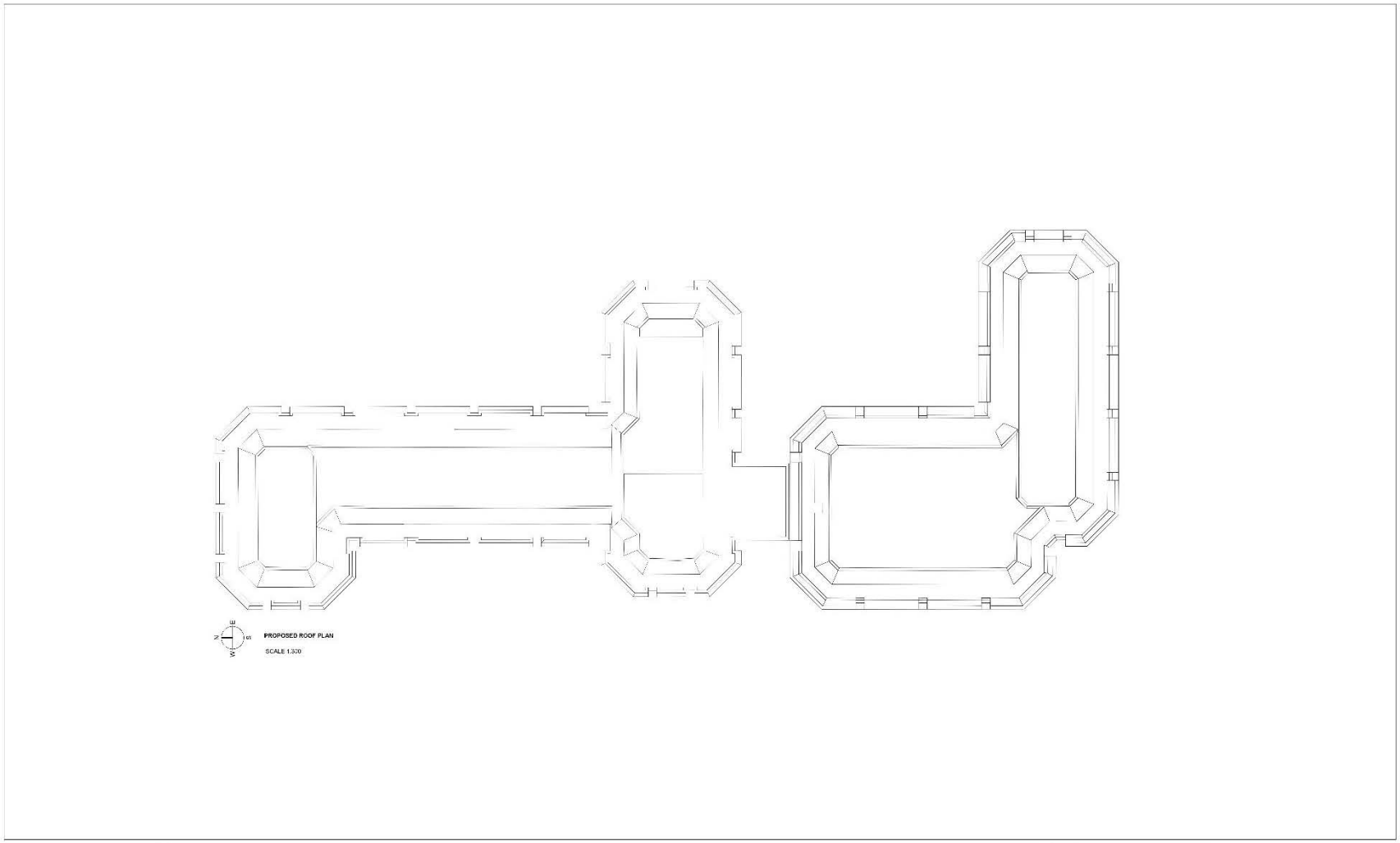
Task	Timing
Species-Specific Enhancements	Yr 1 • Install all above specified features across the main building, as appropriate, during construction. Yr 2-5 • Perform any maintenance activities as recommended within this report and by manufacturers (note occupied bat boxes must not be disturbed by anyone other than an appropriate Natural England Bat Licence Holder (Level 1 or higher)).

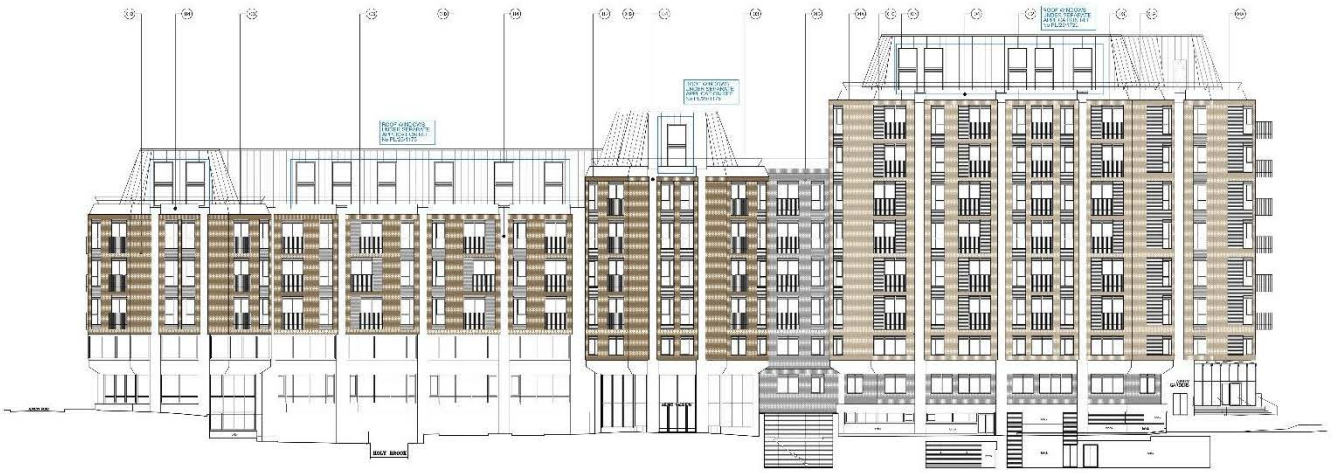
4.0 Bibliography

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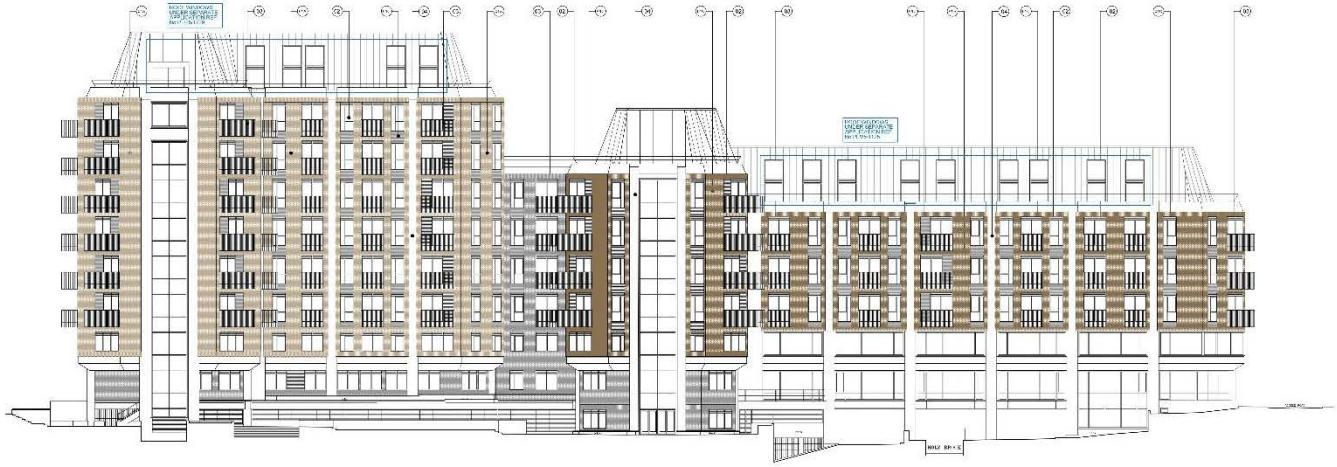
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Status	**Issue**	**Name**	**Date**
Draft	0.1	Emma Taylor BSc (Hons) Consultant Ecologist	27/05/2026
Proof	0.2	Robbie MacKenzie BSc (Hons) Technical Manager	03/06/2026
Final	1.0	Trystan Figuères BSc (Hons), MSc Consultant Ecologist	03/06/2026
Updated	2.0	Trystan Figuères BSc (Hons), MSc Consultant Ecologist	04/06/2026
Updated	2.1	Emma Taylor BSc (Hons) Consultant Ecologist	15/06/2026
Proof	2.2	Robbie MacKenzie BSc (Hons) Technical Manager	15/06/2026
Final	3.0	Emma Taylor BSc (Hons) Consultant Ecologist	15/06/2026
Updated	4.0	Emma Taylor BSc (Hons) Consultant Ecologist	02/07/2026

Appendix 1: Proposed development plan





2. PROPOSED WEST ELEVATION
SCALE 1:200



1. PROPOSED EAST ELEVATION
SCALE 1:200

NOTES

DO NOT SCALE - USE FIGURED DIMENSIONS ONLY.

ALL DIMENSIONS TO BE CHECKED ON SITE PRIOR TO CONSTRUCTION AND ANY DISCREPANCIES TO BE REPORTED TO CONTRACTOR.

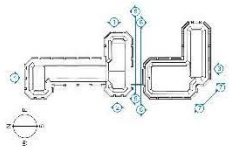
THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT SPECIFICATIONS AND DRAWINGS.

ALL LEVELS ARE TO FINISHED LEVELS UNLESS OTHERWISE INDICATED.

LEGEND

- 01(A) - Brick Type 1
- 01(B) - Brick Type 2
- 01(C) - Brick Type 3
- 02 - Aluminium Framed Windows
- 03 - Painted Steel balustrade
- 04 - Existing finish to be retained

0 1 2 5 8 10 m 20 m



Issued for Status: PLANNING

Revision:	Description:	Date:
P.01	Issued for Information	14.01.26

PLANNING

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Project: 24-013 Abbey Gardens
Drawing: Proposed east and West Elevation
Date: 10.07.2025 drawn by: RN check: SMC
Scale: 1:200@A1 dwg no: 8-500 rev. no.: P.01

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4. PROPOSED NORTH ELEVATION
SCALE 1:200



3. PROPOSED SOUTH ELEVATION
SCALE 1:200

NOTES

DO NOT SCALE - USE FIGURED DIMENSIONS ONLY.

ALL DIMENSIONS TO BE CHECKED ON SITE PRIOR TO CONSTRUCTION AND ANY DISCREPANCIES TO BE HIGHLIGHTED BY CONTRACTOR.

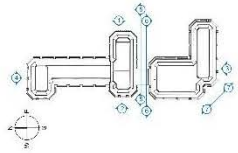
THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT SPECIFICATIONS AND DRAWINGS.

ALL LEVELS ARE TO FINISHED LEVELS UNLESS OTHERWISE INDICATED.

LEGEND

- 01(A) - Brick Type 1
- 01(B) - Brick Type 2
- 01(C) - Brick Type 3
- 02 - Aluminium Framed Windows
- 03 - Painted Steel balustrade
- 04 - Existing finish to be retained

0 1 2 3 5 10 m 20 m



Drawing Status: PLANNING

Revision	Description	Date
P.01	Issued for Information	14.01.26

PLANNING

SADAarchitecture
P : 26C George Street, St Albans, AL3 4ES
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Project: 24-013 Abbey Gardens
Drawing: Proposed North and South Elevation

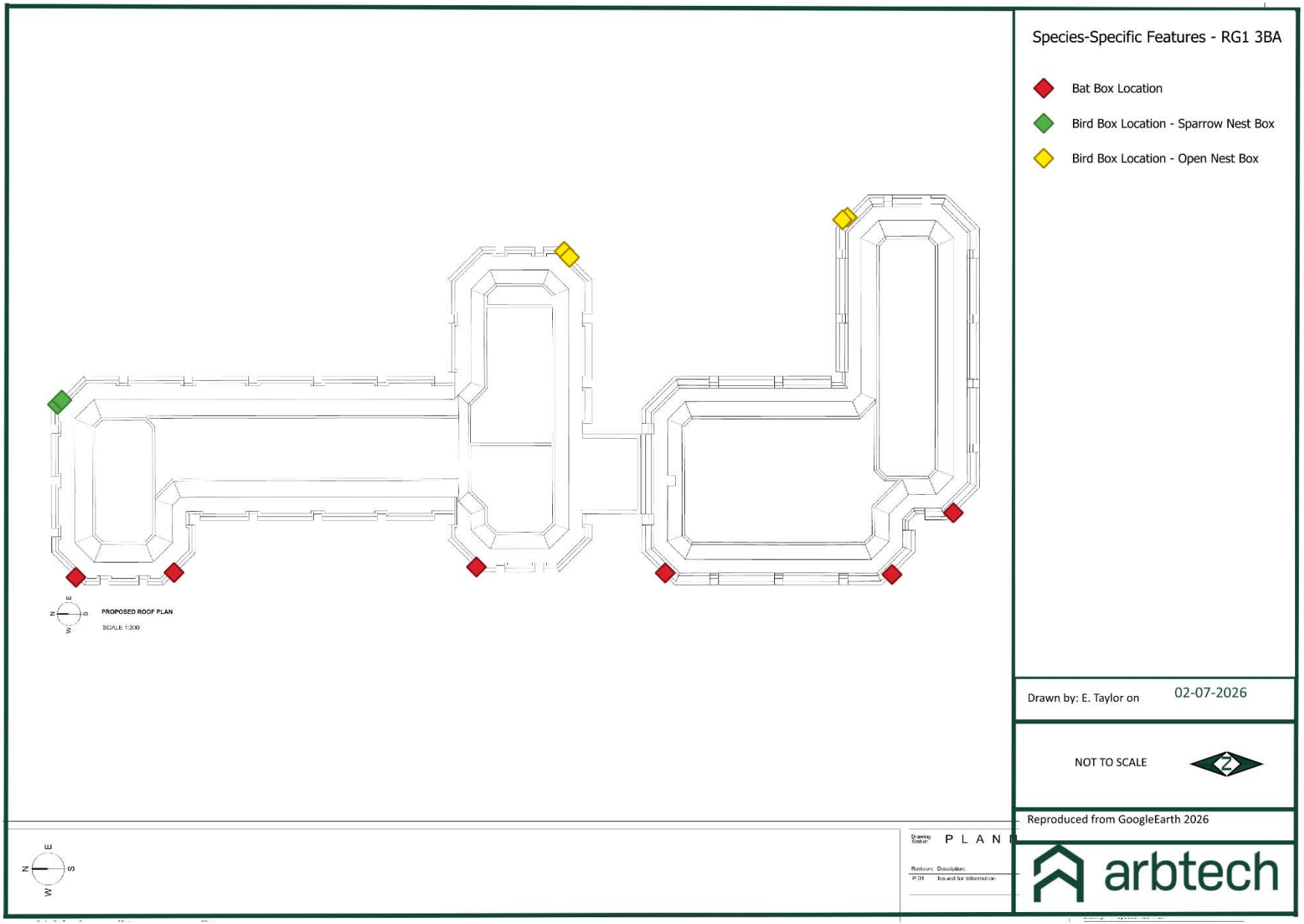
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Appendix 2: Site location plan



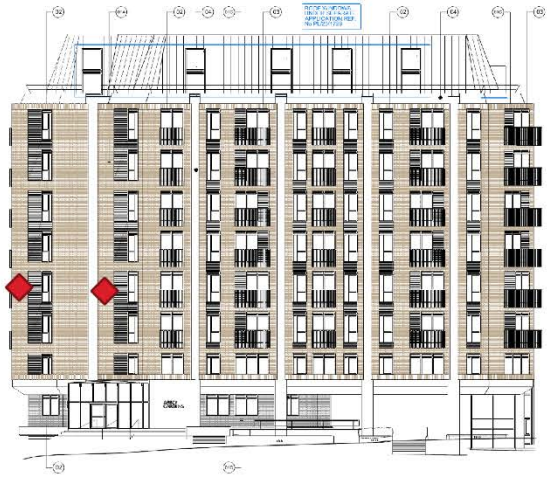
Appendix 3: Ecological enhancement plan




2. PROPOSED WEST ELEVATION
SCALE 1:200
1. PROPOSED EAST ELEVATION
SCALE 1:200
LEGEND
01(A) - Brick Type 1
01(B) - Brick Type 2
Species-Specific Features - RG1 3BA
Bat Box Location
Bird Box Location - Sparrow Nest Box
Bird Box Location - Open Nest Box
Drawn by: E. Taylor on 02-07-2026
NOT TO SCALE
Reproduced from GoogleEarth 2026
PLANNING
arbtech



4. PROPOSED NORTH ELEVATION
SCALE 1:200



3. PROPOSED SOUTH ELEVATION
SCALE 1:200

LEGEND
01(A) - Brick Type 1
01(B) - Brick Type 2

Species-Specific Features - RG1 3BA

- Bat Box Location
- Bird Box Location - Sparrow Nest Box
- Bird Box Location - Open Nest Box

Drawn by: E. Taylor on 02-07-2026

NOT TO SCALE

Reproduced from GoogleEarth 2026

arbtech


Tree Protection Zones - RG1 3BA
Development Boundary
Scattered Trees
Protective Tree Fencing with Signs
Protective Tree Signs
Drawn by: E. Taylor on
15-06-2026
Scale at A4
(not report projection)
1:675
Reproduced from GoogleEarth 2026
arbtech
0
20
40
60
80
100 m

Appendix 4: 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, 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.
-

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

<u>Effects on development works:</u>
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.

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.

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.

EFFECT OF LEGISLATION AND POLICY ON DEVELOPMENT WORKS

A European Protected Species Licence (EPSL) issued by Natural England will be required for works likely to affect a bat roost 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, rear young and hibernate). The licence is to allow derogation from the relevant legislation but also to enable appropriate mitigation measures to be put in place and their efficiency/success to be monitored. The legislation may also be interpreted such that, in certain circumstances, important foraging areas and/or commuting routes can be regarded as being afforded *de facto* protection, for example, where it can be proven that the continued usage of such areas is crucial to maintaining the integrity and long-term viability of a bat roost (Garland & Markham, 2008).

There are 17 species of bat breeding in England and Natural England issues licences under Regulation 55 of the Habitats Regulations to allow you to work within the law.

Licences are issued for specific purposes stated in the Regulations, if the following three tests are met:

- The purpose of the work meets one of those listed in the Habitats Regulations (see below);
- That there is no satisfactory alternative;
- That the action authorised will not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status (FCS) in their natural range

The Habitats Regulations permits licences to be issued for a specific set of purposes including:

1. ***include preserving public health or public safety or other imperative reasons of over-riding public interest including those of a social or economic nature and beneficial consequences of primary importance for the environment;***
2. scientific and educational purposes,
3. ringing or marking
4. conserving wild animals

Development works fall under the first purpose and Natural England issues bat mitigation licences for developments.

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.