



Ecological Mitigation, Management and Enhancement Plan

Barn at Lower Farm (Plot 6), Bowling Bank, Wrexham, LL13 9RY

Mr Tony Walsh

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Industry Guidelines and Standards

This report has been written with due consideration to:

- Chartered Institute of Ecology and Environmental Management (2017). Guidelines for Preliminary Ecological Appraisal. 2nd edition. Chartered Institute of Ecology and Environmental Management, Winchester.
- Chartered Institute of Ecology and Environmental Management (2018). Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine. Version 1.1. Chartered Institute of Ecology and Environmental Management, Winchester.
- Chartered Institute of Ecology and Environmental Management (2017). Guidelines on Ecological Report Writing. Chartered Institute of Ecology and Environmental Management, Winchester.
- Chartered Institute of Ecology and Environmental Management (2020). Guidelines for Accessing, Using and Sharing Biodiversity Data in the UK. 2nd Edition. Chartered Institute of Ecology and Environmental Management, Winchester.
- British Standard 42020 (2013). Biodiversity – Code of Practice for Planning and Development.
- British Standard 8683:2021 (2021). Process for Designing and Implementing Biodiversity Net Gain.

Proportionality

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

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

The desk studies and field surveys undertaken to provide a Preliminary Ecological Appraisal (PEA) might in some cases be all that is necessary.

(BS 42020, 2013)

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1.0 Introduction and Context

1.1 Background

Arbtech Consulting Limited was instructed by Tony Walsh to produce an Ecological Mitigation, Management and Enhancement Plan for Barn at Lower Farm (Plot 6), Bowling Bank, Wrexham, LL13 9RY (hereafter referred to as “the site”).

A planning application for the conversion of an existing agricultural building into a residential dwelling (hereafter referred to as “the proposed development”) was granted approval, with conditions, by Wrexham County Borough Council in February 2022 (planning application reference: ISY P/2021/0604). This plan has been produced to inform the discharge of **Conditions 16, 20, 21 and 24**, which state:

Condition 16

No part of the development shall commence until details of the proposed Reasonable Avoidance Measures (RAMs) have been submitted to and approved in writing by the Local Planning Authority. The details shall include the following:

- a) Details of a toolbox talk on the identification and ecology of great crested newts to be made available to all construction staff employed on the project;*
- b) Details of an artificial amphibian hibernacula to be constructed adjacent to the site (Details of the design can be found in great crested newt mitigation guidelines – August 2001);*
- c) Details of a walk over survey of the site prior to commencement of development, and a destructive search (under the supervision of a licensed great crested newt handler) made of any potential great crested newt habitat (such as rubble piles or sheet materials that are on the site). Any amphibians found should be relocated to the artificial hibernacula;*
- d) Details of storage of material on pallets off the ground and bulk materials which are to be delivered on site and used within the day of delivery;*
- e) Confirmation that excavated trenches will be covered over at the end of each working day with plywood and the edges sealed with sand or soil. Trenches are to be checked each morning for amphibians. Any amphibians located are to be moved to the artificial hibernacula.*

The development shall be carried out in strict accordance with the RAMs as are approved.

Condition 20

No part of the development shall commence until an external bat-friendly lighting scheme has been submitted to, and approved in writing by, the Local Planning Authority. The scheme shall:

- a) Identify those areas and features on site that are particularly sensitive for wildlife and that are likely to cause disturbance in or around their foraging or commuting routes; and*
- b) Indicate where external lighting will be installed and the type of lighting to be used.*

The scheme as is approved shall be fully implemented in strict accordance with the details as are approved and no other external lighting shall be installed on any part of the site.

Condition 21

No part of the development shall commence until a site wide Biosecurity Risk Assessment has been submitted to and approved in writing by the Local Planning Authority. The risk assessment shall include measures to control or remove invasive species both during construction and operation.

Condition 24

No part of the development shall commence until full details of bat mitigation measures, including timescale for implementation of these measures, have been submitted to, and approved in writing by, the Local Planning Authority. The mitigation measures as may be approved shall be fully implemented, within the approved timescales, and shall thereafter be permanently maintained on the development.

A plan showing the proposed development is provided in Appendix 1.

The aim of this plan is to outline mitigation measures required to minimise impacts on biodiversity as well as to outline management and enhancement opportunities which will ensure that a net gain in biodiversity is achieved and maintained on the site, in accordance with the National Planning Policy Framework (NPPF).

This plan has been informed by *Preliminary Ecological Appraisal and Preliminary Roost Assessment* and *Bat Emergence and Re-entry Surveys* reports, completed by Arbtech Consulting Ltd in 2021.

1.2 Site Context

The site is located at National Grid Reference SJ 40912 50546 and has an area of approximately 0.7ha. The site consists of improved grassland, hard standing surface, and a disused barn.

A site location plan is provided in Appendix 2.

1.3 Baseline Survey Information

Table 1 summarises the survey findings for the site and outlines any potential impacts as a result of the proposed development along with recommendations and biodiversity enhancement opportunities, as detailed in *Preliminary Ecological Appraisal and Preliminary Roost Assessment* and *Bat Emergence and Re-entry Surveys* (Arbtech Consulting Ltd, 2021).

Table 1: Summary of baseline survey information, potential impacts, recommendations, and biodiversity enhancement opportunities for the site.

Feature	Summary of Survey Findings and Impacts	Recommendations Measures required to adhere to guidance, legislation and planning policies.	Biodiversity Enhancement Opportunities The Local Planning Authority has a duty to ask for enhancements under the NPPF (2021)
Bats	Building B1 was recorded to be a confirmed day roost of three common pipistrelle bats. The proposals include the conversion	A European Protected Species Mitigation Licence (EPSML) will be required from Natural Resource Wales prior to the commencement of works, once planning has been granted.	The mitigation/compensation detailed for the EPSML will provide sufficient enhancements of the developed site for bats.

	and re-roofing of B1, and as such the bat roost in the barn will be damaged and/or destroyed. Any bats present during the works could be injured or killed.	Detailed mitigation will be required under the licence including: • the erection of a bat box positioned 3-5m above ground level and facing in a south/south-westerly direction with a clear flight path to and from the entrance. • Pre-works inspection of the known roosting locations by the licence Named Ecologist or their Accredited Agent immediately prior to the commencement of the destructive search. • Destructive search via soft stripping by hand of the roof during re-roofing works. • Any bats located during the pre-works inspection and destructive search will be carefully captured by hand and transported to an appropriate bat box by the Licence Named Ecologist or their Accredited Agent. • Permanent replacement roosting provision will be incorporated into the new developed site this will include bat access tiles. • No post-development monitoring is required for low numbers of common species. Evidence to confirm that the bat compensation measures detailed within the EPSML have been installed will be provided by the Licensee for the Licence Return which will be submitted to Natural Resource Wales within 14 days of the Licence expiration date. • Lighting will be controlled across the developed site. Research into the effects of artificial lighting on bats has shown that it can impact upon bat emergence times and lead to a reduced foraging time (particularly for the light sensitive Brown long-eared bat). As bats are faithful to their roost sites, often returning to the same site for many years, the impact of lighting on emergence times and in turn reduced foraging times can ultimately result in the roosts being abandoned. • Key areas of the site which are sensitive to artificial lighting are the site boundaries which consist of hedgerows and tree lines providing foraging and commuting routes for bats. • No lighting will be installed along the site boundaries, thereby maintaining the existing dark areas within the developed site for bats. • Low impact lighting strategies will be adopted from the guidance outlined in the new Bats and Lighting Publication produced by the Institution of Lighting Professionals and the Bat Conservation Trust "Guidance Note 08/18 Bats and artificial lighting in the UK Bats and the Built Environment series" publication: • http://www.bats.org.uk/news.php/406/new_guidance_on_bats_and_lighting • The lighting on the site will: • Use narrow spectrum light sources to lower the range of species affected by lighting. • Use light sources that emit minimal ultra-violet light.	
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		• 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 short wavelength content they should be of a warm / neutral colour temperature <4,200 kelvin. • Not use bare bulbs and any light pointing upwards. The spread of light will be kept in line with or below the horizontal. • 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. • 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. • 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. 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.	
Badgers	The site supports suitable foraging habitat for badgers, albeit no evidence of badger was found within the site, or within 30m of the development area.	No impacts are anticipated from the proposed development, albeit the following recommendations are given in order to mitigate against potential harm to badgers during works in the unlikely event that they enter the site: • Any trenches dug should either be covered at night or have a rough sawn plank placed in them to act as a ramp for any wildlife which may fall in. • Security lighting to be directed away from the undergrowth. • Any chemicals or pollutants used or created by the development should be stored and disposed of correctly according to COSHH regulations.	None.
Hedgehog	The site supports suitable habitat for hedgehog. Any hedgehogs present during works could be injured or killed.	No further surveys are required. However, the following recommendations are given in order to mitigate against potential harm to hedgehogs during the development works. • Any trenches dug should either be covered at night or have a rough sawn plank placed in them to act as a ramp for any wildlife which may fall in. • Security lighting to be directed away from the undergrowth. • Any chemicals or pollutants used or created by the development should be stored and disposed of correctly according to COSHH regulations.	None.
Amphibians	There is no suitable terrestrial amphibian habitat located within the site boundary. There are	Reasonable Avoidance Measures (RAMs) approach for the site during the construction process. Contractors will adopt the following practices to safeguard common amphibians and GCN during the works:	Waste materials created during the development e.g., log piles, brash, rocks etc. can be used to create hibernacula and

	ponds in the area with historical records of GCN, however, the development will not impact any ponds for suitable terrestrial habitat. Any amphibians present during the works could be injured or killed. It is highlight unlikely that amphibians will be found during the works.	- Any materials will be stored on pallets on areas away from the vegetation. - Rubble created during the development will be safely disposed of in a skip. If no skip is available the rubble will be stored on pallets off the ground until it can be removed from site, to prevent common amphibians and GCN from using the rubble piles for hibernation. If a great crested newt is found at any stage of the development, works must stop, and a licenced ecologist should be contacted for advice. The planning condition states that a full GCN mitigation plan is required. However, now that the site has been split in two and the proposals are for internal conversion only and is located away from the ponds and any suitable terrestrial habitat, a full mitigation plan will not be required.	refugia for amphibians. These should be positioned on the site boundaries below the existing hedgerow which will be retained.
Birds	B1 contained evidence of nesting birds in the form of old swallow nests internally. The swallows no longer have access into the barn. House sparrows were observed nesting in the brickwork. No evidence of barn owl was identified. The work may result in the destruction of active bird nests if present.	Works should be undertaken outside the period 1st March to 31st August. If this timeframe cannot be avoided, a close inspection of the building should be undertaken immediately prior to the commencement of work. All active nests will need to be retained until the young have fledged.	Two swift nest boxes/nest cups should be positioned inside a building/covered area/outbuilding with open access for birds. Two sparrow Terraces/nest boxes should be positioned at the eaves of the dwelling or garage.

2.0 Bat Mitigation and Enhancement Strategy

2.1 Informative

The following Bat Mitigation and Enhancement Strategy (BMES) has been designed to detail the mitigation and enhancement measures, including a detailed lighting design strategy, to be used in conjunction with the details outlined in the BMCL for the site. The below plan will be understood and followed by all workers on site, and a copy will be made available to all construction staff and visitors to the site throughout the proposed works. It is considered that, subject to the understanding and implementation of the strategy below, potential impacts to local bat populations can be reduced to an acceptably low level, and as such no breach of legislation is anticipated. Furthermore, the following strategy is produced in support of the discharge of **Conditions 20** and **24** of the conditional planning consent (ref: ISY P/2021/0604).

2.2 Lighting Scheme

A detailed lighting design is required to discharge **Condition 20** of the condition planning consent. The below strategy identifies areas and features on site that are particularly sensitive for wildlife and that are likely to cause disturbance in or around their foraging or commuting routes. A plan indicating the position of external lighting, proposed dark areas and bat box locations is provided in **Appendix 3**.

Table 2: Bat-friendly lighting strategy

Works	Specification
Background	Lighting will be controlled across the developed site. Research into the effects of artificial lighting on bats has shown that it can impact upon bat emergence times and lead to a reduced foraging time. As bats are faithful to their roost sites and commuting routes, often returning to the same site for many years so the impact of lighting on emergence times and in turn reduced foraging times can ultimately result in the roosts and foraging habitat being abandoned with impacts on survival and fecundity.
Site details and usage by bats	Two known bat roost locations are present within building B1, located under the eaves on the eastern elevation and a gap in the brickwork on the southern gable end. Other key areas of the site which are sensitive to artificial lighting are the key flight areas and vegetated boundaries. Research has shown that if lighting is increased by more than 1 lux (equivalent to full moonlight) this could have an adverse impact upon bat commuting routes (Stone, 2013). Therefore, the new lighting will be strictly confined to areas of necessity such as structure entrances and exits, thereby leaving dark corridors of no more than +1 lux and preventing light spilling outside of the site boundary.
Lighting design	The following recommendations have also been made to prevent light spilling onto this area of the site, protecting the bat foraging areas and commuting routes: • No lighting will be installed within or shining into the emergence/re-entry area of the roof or bat boxes, thereby maintaining the existing dark areas within the developed site for bat commuting and roosting. There must be no artificial lighting that illuminates the bat roost area or key flight paths. • Low impact lighting strategies will be adopted from the guidance outlined in the new Bats and Lighting Publication produced by the Institution of Lighting Professionals and the Bat Conservation Trust "Guidance Note 08/18 Bats and artificial lighting in the UK Bats and the Built Environment series publication: http://www.bats.org.uk/news.php/406/new_guidance_on_bats_and_lighting. The lighting on the site will: • Use narrow spectrum light sources to lower the range of species affected by lighting • Use light sources that emit minimal ultra-violet light

	• 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. • Not use bare bulbs and any light pointing upwards. The spread of light will be kept in line with or below the horizontal. • 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. • External lighting will 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. • 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.
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These measures will ensure that existing bat foraging areas and commuting routes are protected from light from the developed site. It will also ensure the recurrent usage of the bat boxes that are to be placed around the site. The recommendations are further to those recommended within the original *Preliminary Ecological Appraisal and Preliminary Roost Assessment* and *Bat Emergence and Re-Entry Survey* reports (Arbtech Consulting Ltd, 2021).

2.3 Mitigation and Enhancement Measures

Table 3 details the ecological mitigation measures to be implemented at the site, to satisfy **Condition 24** of the conditional planning consent.

Table 3 – Mitigation Measures

Works	Specification
EPSML	A European Protected Species Mitigation Licence (EPSML) will be required from Natural Resource Wales prior to the commencement of works once planning has been granted.
Bat mitigation measures	• Pre-works inspection of the known roosting locations by the licence Named Ecologist or their Accredited Agent immediately prior to the commencement of the destructive search. • Destructive search via soft stripping by hand of the roof during re-roofing works. Any bats located during the pre-works inspection and destructive search will be carefully captured by hand and transported to an appropriate bat box by the License Named Ecologist or their Accredited Agent. • Permanent replacement roosting provision will be incorporated into the new developed site this will include bat access tiles.
Bat enhancement measures	A single bat box is recommended to be installed on a retained, mature tree at the site boundary, whilst an additional integrated bat tube is recommended to be installed within the fabric of the new building. Bat boxes should be located as high as possible, located as close to the eaves as possible, and in a south or south-western elevation. Proposed locations for the alternative bat roosting habitat are provided in Appendix 3. <i>Bat Box Specification:</i> • The recommended bat boxes will be constructed of woodcrete/woodstone. Boxes of this material are designed to require no maintenance and have a lifespan of > 25 years. • 1 x Vivara Pro Woodstone Bat Box is recommended for a retained, mature tree, as shown in Figure 1 below. This bat box type is suitable to support a range of species including common pipistrelle and soprano pipistrelle which are likely to be present in proximity of the site given the historic evidence of roosting bats on the site.

	1 x Vivara Pro Build-in Woodstone Bat Box is recommended to be integrated into the fabric of the new structure, as shown on Figure 2 below. This bat box is suitable for a range of bat species including common and soprano pipistrelle and can support one or more specimens as a resting or breeding place. - Bat boxes should be positioned 3m above ground level and facing in a south or south-western aspect with a clear flight path from the entrance, located away from artificial light sources.  Figure 1: Vivara Pro Harlech Woodstone Bat Box Figure 2: Vivara Pro Build-in Woodstone Bat Box (UK Brick Size)
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2.4 Management Requirements

Table 4 details the ecological management requirements for the site.

Table 4 – Management Requirements

Works	Specification
Bat Enhancement Measures	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, it is recommended that the bat boxes are inspected annually for the first five years outside of the typical active season (May to September inclusive) following installation. Bat boxes must be replaced if they are damaged, removed or have fallen from their recommended location.

3.0 Ecological Mitigation, Management and Enhancement Measures

3.1 Informative

General environmental mitigation, management, and enhancement measures for protected and notable habitats or species, including great crested newt, is detailed to avoid or reduce impacts during construction and enhance the resulting site following development resulting in a net gain for local biodiversity. The following ecological mitigation, management and enhancement measures are detailed to satisfy **Conditions 16** and **21** of the conditional planning consent.

3.2 Mitigation Measures

Table 5 details the ecological mitigation measures to be implemented at the site.

Table 5 – Mitigation Measures

Works	Specification
Amphibian mitigation and RAMs	<u>Background</u> A precautionary working methodology, or Reasonable Avoidance Measures (RAMs), will be implemented throughout works to ensure that, in the unlikely event that they were to enter the site during construction works, amphibians would be fully safeguarded under the proposals. A detailed method statement is required due to the potential suitability of the site to support great crested newt, which are fully protected under the Habitat Regulations through their inclusion on Schedule 2, Regulation 41, which prohibits: • The deliberate killing, injury or capture of Schedule 2 species; • Damage of destroy a breeding or resting place; or • Deliberate disturbance of such a species in such a way as to: ○ Impair their ability to survive, breed, reproduce or rear young; ○ Impair their ability to hibernate or migrate; and ○ Significantly affect the local distribution or abundance of the species. <u>RAMs</u> • All construction workers and contractors within the site undertaking works which may pose potential harm to amphibians will be made aware of the potential presence of great crested newt and other amphibians prior to the commencement of their work. A toolbox talk is provided in Appendix 5, detailing information relating to great crested newt, identification, and procedure in the unlikely event one is encountered during works. The documentation will be made readily available to all construction workers and visitors throughout the course of the development. • Clearance of any existing rubble, brash or log piles located within the working area will be undertaken by hand under a watching brief, whereby the pile is slowly disassembled to check for any amphibians located within, including a general site walkover and search. • Existing grassland within the development area will be maintained at a short sward height in proximity of the construction area to discourage use of the habitat by herpetofauna. Any vegetation that requires clearance that is particularly dense of over 30cm in length should be cleared under supervision of a suitably qualified person.

	- Materials and construction items should be stored off the ground on pallets where possible to prevent amphibians seeking refuge under - During construction, all trenches and other excavations will be backfilled before nightfall where possible. Should the trench be required to remain, a ramp comprising a tactile length of wood will be placed within the trench to provide trapped animals a means of escape. - Duration of groundworks will be kept to a minimum to ensure the period of disturbance is reduced as much as reasonably practicable.
Terrestrial mammal mitigation (badger & hedgehog)	The following recommendations are given in order to mitigate against potential harm to mammals during the development works: - Any trenches dug should either be covered at night or have a rough sawn plank placed in them to act as a ramp for any wildlife which may fall in. - Security lighting to be directed away from the undergrowth. - Any chemicals or pollutants used or created by the development should be stored and disposed of correctly according to COSHH regulations. - Security lighting to be directed away from any undergrowth and the denser vegetation. - Cap any pipes over-night on site to avoid animals becoming trapped.
Nesting bird mitigation	Vegetation clearance and structural works in locations which have potential to support nesting birds should be undertaken outside the period 1st March to 31st August, where possible. If this timeframe cannot be avoided, a close inspection of the trees and vegetation should be undertaken immediately prior to the commencement of works. All active nests will need to be retained until the young have fledged, with appropriate buffers where necessary.

3.2 Ecological Enhancement and Management

Table 6 details the ecological management requirements for the site. Details for the proposed locations of enhancement measures is outlined in Appendix 4.

Table 6 – Management Requirements

Works	Specification
Amphibian enhancements	It is recommended that arisings created by development activities, such as logs, brash or rock piles, should be retained and used to create a hibernaculum suitable to support amphibians, as shown in Figure 3 below. The hibernaculum is recommended to be installed within areas of soft landscaping, located at the north-east of the site within the grassland area adjacent to the trees and near to the off-site woodland. The hibernaculum will provide suitable refugia and hibernation opportunities for common species of amphibian and reptile which are known to utilise garden habitats and may be present in the wider landscape.

	Hibernaculum on free-draining ground Where ground conditions allow, the hibernaculum should be incorporated into a shallow pit. This design is more likely to remain frost-free, and will be less obtrusive and thus unlikely to be subject to interference. Hibernaculum on impermeable ground Where ground conditions are impermeable, then an 'above-ground' or mounded design should be utilised in order to prevent the hibernaculum from flooding. This design should also be used if it is not possible to excavate a pit for any other reason. Figure 3: hibernacula specification on free-draining and impermeable ground (image credit: publicaccess.staffmoorlands.gov.uk) <u>Management</u> The reptile hibernacula should be left unmanaged. Leaving the hibernacula undisturbed will allow the topsoil to self-colonise with plant species appropriate in structure and species diversity for the local area in the absence of any management. This will enhance the hibernacula for reptiles. However, it is recommended that the hibernaculum is inspected annually for the first five years following installation. Should the hibernacula be significantly damaged, it should be repaired by infilling any holes or subsidence with natural materials similar to those used during construction.
Nesting enhancements	bird A single bird box is recommended to be installed on site upon a retained, mature tree at the site boundary. The recommended location is shown in Appendix 4. <u>Bird Box Specification</u> • The recommended bird box will be constructed of woodcrete/woodstone. Boxes of this material are designed to require no maintenance and have a lifespan of > 25 years. • 1 x Woodstone Nest Box is recommended – with 28mm entrance holes to attract house sparrow, blue tits, coal tits, great tits and crested tits are proposed, as shown in Figure 4.

	• The bird box should be positioned approximately 3m above ground level on retained trees where they will be sheltered from prevailing wind, rain and intense sunlight.  Figure 4: Vivara Woodstone 28mm Nest Box <u>Management</u> The proposed bird box is designed to require no management or maintenance. Furthermore, preventing physical disturbance of the bird box will increase the chances of occupation by nesting birds. However, it is recommended that the bird box is inspected annually for the first five years outside of the typical active season (March to August inclusive) following installation. The bird box must be replaced if it is damaged, removed or has fallen from the recommended location.
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4.0 Work Schedule and Responsible Persons

Details of the schedule of work and responsible persons during and following development are required to ensure the effectiveness of enhancement measures to achieve a biodiversity net gain.

4.1 Work Schedule

The schedule of implementation for ecological enhancement measures is set out in Table 7 below.

Table 7 – Schedule of operations for enhancement measures

Activity	Prior to commencement	Year 1	Every year for 25 years
Lighting	Artificial light sources required to facilitate development to be directed away from known bat roosts and boundary habitats to create ongoing dark corridors, as per Appendix 3.	Installation of dimmable narrow spectrum lighting connected to PIR sensors activated by large objects only.	Check annually and repair or replace that are broken, as required, maintaining specifications set out within the lighting strategy.
Bat boxes	Install provisioned bat boxes on suitable, retained trees.	Install provisioned integrated bat boxes within new structure.	Check annually and replace any boxes that are broken or have fallen e.g., during periods of bad weather.
Bird nest boxes	-	Install provisioned bird nest boxes following construction to mitigate potential disturbance.	Check annually and replace any boxes that are broken or have fallen e.g., during periods of bad weather.
Amphibian hibernacula	Toolbox talk delivered to construction team by a suitably qualified ecologist. Installation of provisioned hibernacula.	-	Check annually and repair any holes or subsidence with natural materials similar to those used during construction.

A post-development site visit by a suitably qualified ecologist will be undertaken to confirm the successful installation of the biodiversity enhancements. A short report will be produced detailing the results of the site visit and any remediation recommendations, if necessary.

4.2 Responsible Persons

It is recommended that a Development Biodiversity Champion (DBC) is selected for the construction phase of the development. This person should be someone with significant influence during the construction phase, such as the chief contractor or project manager. The DBC is responsible for ensuring all actions outlined above are implemented. Any queries with regard to the enhancement prescriptions should be addressed to the project ecologist, and communication should be maintained between the DBC and the project ecologist throughout the installation of

the enhancements to ensure the mitigation is applied and impacts for ecological receptors are effectively minimised. The project ecologist's contact details are located on the title page of this report. It is recommended that the DBC informs the project ecologist of the commencement of enhancement installation works and provides updates where necessary.

Once the enhancements have been installed and the construction phase has been completed, a Post-development Biodiversity Champion (PBC) should be allocated, who has influence on the site post-development. Given that the proposals for the site comprise a single residential dwelling, it is recommended that the PBC is the new homeowner who is responsible for the ongoing maintenance of the site. The PBC should undertake the annual inspections of the biodiversity enhancements and seek advice from the project ecologist as required.

5.0 Bibliography

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Architectural elevation drawing of a building facade. The building is long and low, with a dark, textured roof. The facade features several large windows and a central entrance area. The drawing is in a stylized, line-art manner.

Front Elevation



Side Elevation

Estimate to be accurate in power source and room condition gathering and examples, changes in waysways, notes in person.



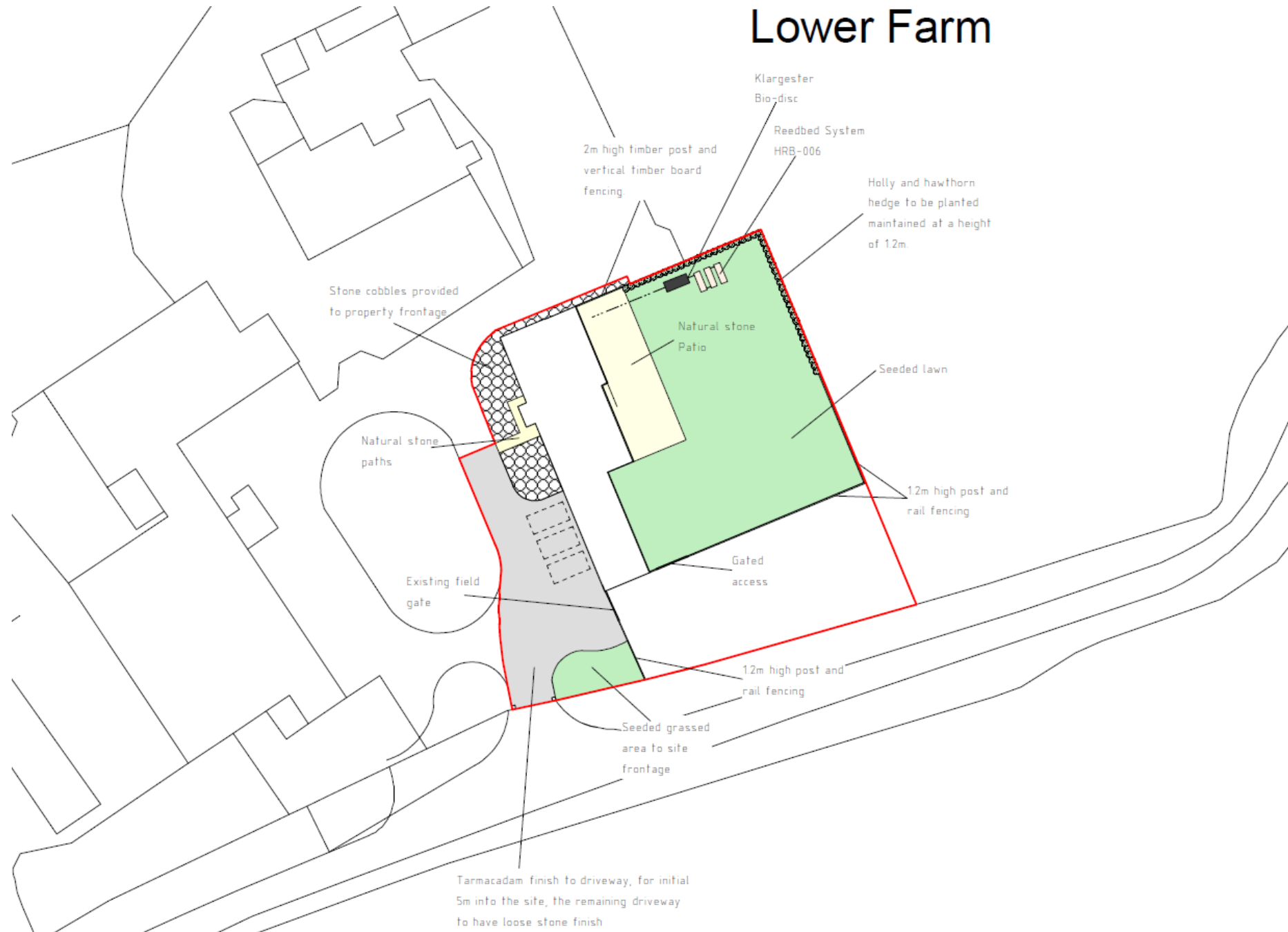
Rear Elevation



Side Elevation

Rev	Date	Detail			Issue
Project:					
Convert existing farm building to residential dwelling at Lower Farm, Bwelling Bank, Wrexham					
Title			Scale: (A2)		
Planning Elevations			1:100		
Drawn By:			Date:		
S Hatherall			June 2021		
Drawing No:			Sheet:		
W0178/001			1 of 1		
					
					
Office 3K4, Redbridge Business Tower, Wrexham, LL13 9JL Tel: 01978 365650 www.blueprintarchitectural.com  copyright of title reserved					

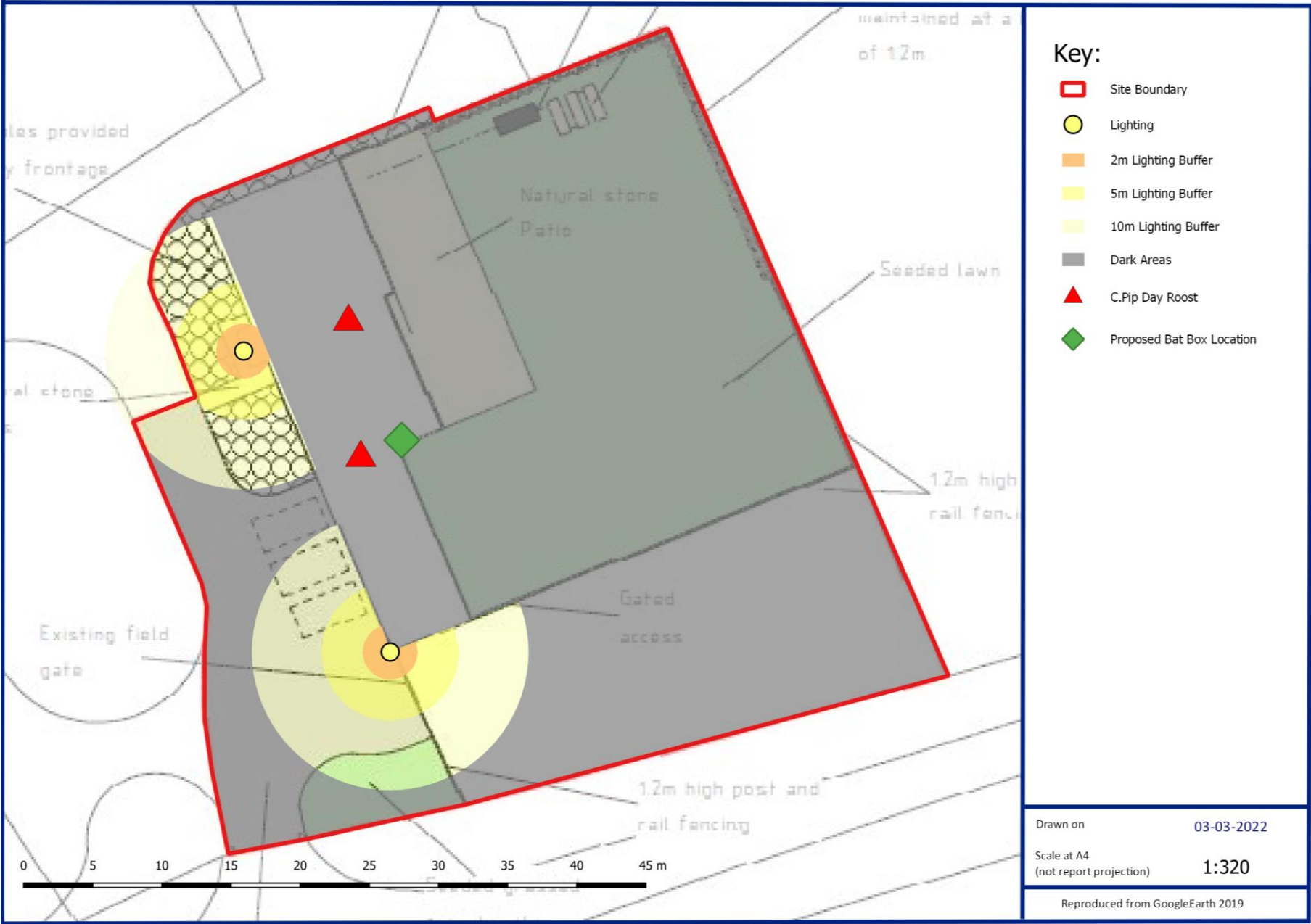
Lower Farm



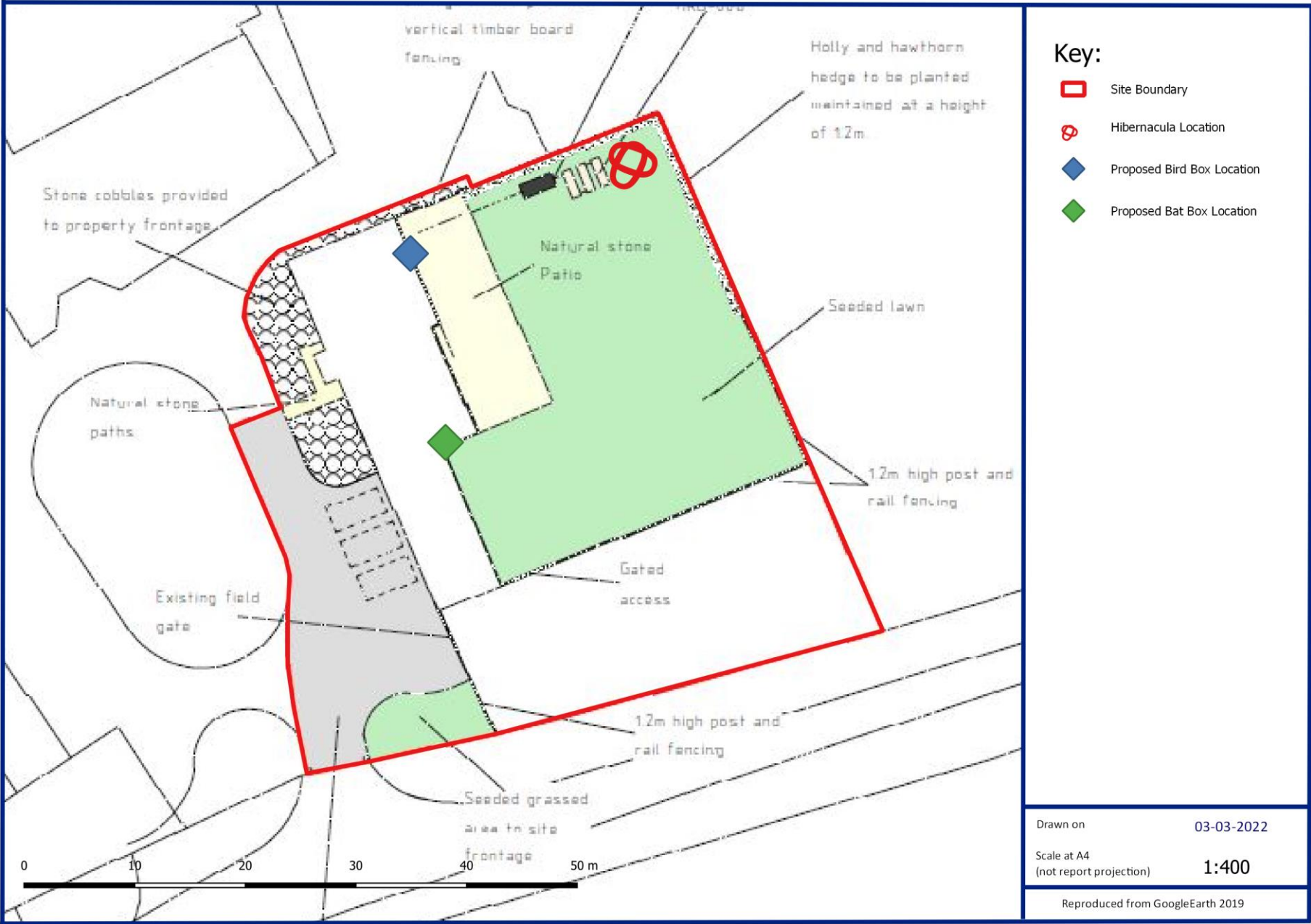
Appendix 2: Site Location Plan



Appendix 3: Bat Mitigation, Enhancement and Lighting Strategy



Appendix 4: Environmental Enhancement Strategy



Appendix 5: Great Crested Newt Toolbox Talk

Toolbox talk 7: protected species
Great crested newt

What are they and how are they recognised?

Newts are amphibians – they can live both in water and on land. Adult great crested newts (GCN) are 110-170 mm long (about twice as big as other newts) and are black or dark brown. During spring and summer, males have a jagged crest along the back and the tail has a silver stripe along it. The females do not have the crest or silver tail stripe, but have a bright orange stripe along the bottom of their tail. Both males and females have bright orange bellies with black spots.

Where are they found?

GCN occur in rural, urban and suburban sites. GCN usually prefer medium to large ponds in which to, but can be found in any body of water on site including temporary pools. GCN spend most of their time on land – they can be found in grass, scrub and woodland and under logs and stones within 250 m to 500 m of the breeding pond.

When are they found?

GCN are nocturnal and are seen mostly at night. They are found in ponds between March and June, but can be seen on land at any time of year.

What should be done if a GCN is found?

GCN are fully protected against killing, capture, injury and disturbance, and the places they use for shelter or protection are protected against damage, destruction or obstruction. If a GCN (adult, juvenile or tadpole) is found (or suspected) on site after works have started, all works in the area must stop immediately and expert advice must be sought.

If there is any doubt of the newt species that has been found, stop work and consult an expert.



What else may be seen?

If GCN are found in a pond, common and/or palmate newts may also be found. Common and palmate newts do not receive the same protection as GCN except in Northern Ireland where the common newt is fully protected. Adults of these species are about the same size as young GCN but are a lighter colour.

Penalties

Breaking the law can lead to fines of up to £5000 per offence and, potentially, prison sentences of up to six months. Any vehicle used to commit the offence may be held liable.

Appendix 6: 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 (the Wild Birds Directive) respectively. Both form part of the wider Natura 2000 network across Europe.

Under the Habitats Directive Article 3 requires the establishment of a network of important conservation sites (SACs) across Europe. Over 1000 animal and plant species, as well as 200 habitat types, listed in the directive's annexes are protected in various ways:

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

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

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

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

The Conservation of Habitats and Species Regulations 2017 form the legal basis for the implementation of the Habitats and Birds Directives in terrestrial areas and territorial waters out to 12 nautical miles in England and Wales (including the inshore marine area) and to a limited extent in Scotland and Northern Ireland.

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

National Statutory Designations

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

Local Statutory Designations

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

Non- Statutory Designations

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

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

The Hedgerow Regulations 1997

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

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

National and European Legislation Afforded to Species***The Conservation of Habitats and Species Regulations 2017 (as amended)***

The Conservation of Habitats and Species Regulations 2017 (as amended) aims to promote the maintenance of biodiversity by requiring the Secretary of State to take measures to maintain or restore wild species listed within the Regulations at a favourable conservation status.

The Regulations make it an offence (subject to exceptions) to deliberately capture, kill, disturb, or trade in the animals listed in Schedule 2, or pick, collect, cut, uproot, destroy, or trade in the plants listed in Schedule 4. However, these actions can be made lawful through the granting of licenses by the appropriate authorities. Licenses may be granted for a number of purposes (such as science and education, conservation, preserving public health and safety), but only after the appropriate authority is satisfied that there are no satisfactory alternatives and that such actions will have no detrimental effect on wild population of the species concerned.

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

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

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

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

Badgers

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

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

Effects on development works:

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

Birds

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

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

Certain species of bird, for example the barn owl, bittern and kingfisher receive additional protection under Schedule 1 of the WCA and are commonly referred to as “Schedule 1” birds.

This affords them protection against:

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

Effects on development works:

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

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

Amphibians and Reptiles

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

- Deliberate killing, injuring or capturing of Schedule 2 species
- Deliberate disturbance of species in such a way as:

- To impair their ability to survive, breed, or reproduce, or to rear or nurture young;
- To impair their ability to hibernate or migrate
- To affect significantly the local distribution or abundance of the species
- Damage or destruction of a breeding site or resting place

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

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

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

- Intentionally or recklessly kill or injure these species.

Effects on development works:

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

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

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 likely to affect habitats known to support water voles, the relevant countryside agency (i.e. Natural England, Natural Resources Wales, Scottish Natural Heritage) 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 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:

A European Protected Species Licence (EPSL) issued by the relevant countryside agency (i.e. Natural England, Natural Resources Wales, Scottish Natural Heritage) will be required for works likely to affect 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:

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

Hazel Dormice

Hazel 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 a European Protected Species Licence (EPSL) issued by the relevant countryside agency (i.e. Natural England, Natural Resources Wales (NB: Hazel Dormouse are entirely absent from Scotland)). The licence is to allow derogation from the legislation through the application of appropriate mitigation measures and monitoring.

White Clawed Crayfish

There is a considerable amount of legislation in place in an attempt to protect the White-clawed crayfish *Austropotamobius pallipes*. This species is listed under the European Union's (EU) Habitat and Species Directive and is listed under Schedule 5 of the Wildlife and Countryside Act (1981). This makes it an offence to:

- Protected against intentional or reckless taking

- Protected against selling, offering or advertising for sale, possessing or transporting for the purpose of sale

It is also classified as Endangered in the IUCN Red List of Endangered Species. As a result of this and other relevant crayfish legislation such as the Prohibition of Keeping of Live Fish (Crayfish) Order 1996, a series of licences are needed for working with White-clawed and non-native crayfish. These are:

- A licence to handle crayfish (therefore survey work) in England
- A licence for the keeping of crayfish in England and Wales with an exemption for Signal crayfish (England).
- People in the post-code areas listed with crayfish present prior to 1996 do not need to apply for consent for crayfish already established. It does not, however, allow any new stocking of non-native crayfish into waterbodies. Consent for trapping of non-native crayfish for control or consumption is most likely to be granted in Thames and Anglian regions in the areas with "go area" postcodes.
- Harvesting of crayfish is prohibited in much of England and in any part of Scotland and Wales.

Effects on development works:

The relevant countryside agency (i.e. Natural England, Natural Resources Wales, Scottish Natural Heritage) 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:

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

Invasive Species

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

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

Effects on development works:

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

Injurious weeds

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

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

Effects on development works:

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

NATIONAL PLANNING POLICY (ENGLAND)

Environment Act 2021

The Environment Act 2021 (EA 2021) received Royal Assent on 9 November 2021 and is expected to become fully mandated within the next couple of years. The Act principally creates a post Brexit framework to protect and enhance the natural environment. Through amendments to the Town and Country Planning Act 1990, the Act will require all planning permissions in England (subject to exemptions which is likely to include householder applications) to be granted subject to a new general pre-commencement condition that requires approval of a biodiversity net gain plan. This will ensure the delivery of a minimum of 10% measurable biodiversity net gain. The principal tool to calculate this will be the Defra Biodiversity 3.0 Metric. Works to enhance habitats can be carried out either onsite or offsite or through the purchase of 'biodiversity credits' from the Secretary of State. However, this flexibility may be removed (subject to regulations) if the onsite habitat is 'irreplaceable'. Both onsite and offsite enhancements must be maintained for at least 30 years after completion of a development (which period may be amended).

National Planning Policy Framework 2021

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

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

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

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

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

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.