# Biodiversity Method Statement associated with a swimming pool development on land at The Old Rectory, Yelling, Cambridgeshire, PE19 6SB.

**FINAL REPORT**

For
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No investigative method can completely eliminate the possibility of obtaining partially imprecise or incomplete information. Thus, we cannot guarantee that the investigations completely defined the degree or extent of e.g. species abundances or habitat management efficacy described in the report.

This report is only valid for external use in its final issued version.

**Document Information**

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# 1 INTRODUCTION

### Planning Reference Number

1.1 Application: 23/00940/HHFUL

### Development Address

1.2 The Old Rectory, Yelling, Cambridgeshire, PE19 6SB.

### Development Proposal

1.3 The development proposal involves the construction of a new swimming pool located on amenity grassland areas with fruit trees. It is expected that five of the fruit trees would be removed to accommodate the new swimming pool, along with some of the grassland vegetation.

### Site Description

1.4 The size of the proposed development covered an area of approximately 11x5m$^2$ within a site covering approximately 0.9ha. The site was located towards the eastern part of Yelling village. Yelling village is located approximately 19km to the west of Cambridge city centre. The centre of the development site was located at grid reference TL 26175 62511).

1.5 The site was located in a rural setting. The site was bordered by other residential properties with mature gardens and trees. In the wider context, the area was also surrounded by arable land with a limited network features linking the site to other habitats.

1.6 Currently the site sits on approximately 0.9ha of land, which comprises the existing residential building, mature garden, shrubs, bare ground, hard standing plus boundary hedgerows and trees.

1.7 Figure 1.1 shows the existing layout of the site.

1.8 The proposed development would involve the construction of a new swimming pool located on amenity grassland areas with fruit trees. Infrastructure associated with the new pool would be accommodated within an existing storage building.

1.9 It is expected that five of the fruit trees would be removed to accommodate the new swimming pool, along with some of the amenity grassland (lawn) vegetation.

1.10 It is recognised that there are two ponds within 250m of the site, which has been identified as being in the amber risk zone for Great Crested Newt in Cambridgeshire. However, no ponds or habitat suitable for Great Crested Newt would be affected by the proposed development.

1.11 Figure 1.2 shows the proposed layout of the site.

### Purpose of this Biodiversity Method Statement

1.12 As stated in the introduction, this management plan has been produced for two purposes, which are;

- to assist with discharging relevant conditions, which were imposed when outline approval for the development was granted; and,
- to outline measures for biodiversity enhancement

- to outline measures (if necessary) to prevent impacts on protected species and so avoid committing offences under the relevant legislation.

1.13 This Biodiversity Method Statement (BMS) focuses on the protection of biodiversity and ecological features on site, as required to discharge the planning condition. Therefore, some aspects usually covered within a typical BMS, such as noise, dust, traffic movements and air quality have not been included.

1.14 Conditions considered relevant to this management plan are as follows:

**Condition 6:**

6. Condition.
No development above slab level shall take place until a Biodiversity Method Statement which provides details of how the recommendations contained in the report Preliminary Ecological Appraisal Report prepared by Cambridge Ecology (received by the Local Planning Authority on 22nd September 2023) will be carried out has been submitted to and approved in writing by the Local Planning Authority. The statement shall include but not be limited to; specification of enhancement measures, location of enhancement measures, timing, an implementation programme and maintenance details. The development shall be carried out in accordance with the approved statement and thereafter retained as such.

6. Reason.
To ensure the conservation and enhancement of on-site biodiversity in accordance with Policy LP30 of the Huntingdonshire Local Plan to 2036.

**Previous Ecological Studies**

1.15 This BMS has been informed by a suite of ecological surveys, including:

- Preliminary Ecological Appraisal Survey associated with development proposals on land and buildings at The Old Rectory, Yelling, Cambridgeshire, PE19 6SB. September 2023 (Cambridge Ecology Ltd);

1.16 A summary of the ecological baseline, taken from this report, is included below to provide a context for the BMS.

**Summary of baseline Preliminary Ecological Appraisal Study**

1.17 The Preliminary Ecological Appraisal Survey report (Cambridge Ecology Ltd 2023) details the habitats and species that are likely to be affected, either directly or indirectly, by the proposed works and provides a detailed discussion of the current ecology of the site. The ecological considerations of the proposed works have been based upon Extended Phase 1 Habitat field survey and desk study review in that report.

1.18 There were no statutorily designated or non-statutorily sites of nature conservation value identified in the biological records search within 2km of the development site. Therefore, it is considered that the non-statutorily designated sites do not represent a constraint to the proposed development.

1.19 Habitat and species considerations for the proposed development are as follows:

**Habitats:**

- Amenity Grassland
- Individual Trees
- Introduced Shrub
- Tall Ruderal
- Pond

- Buildings
- Bare Ground

**Species:**

- **Great Crested Newt**
    - No breeding ponds or terrestrial habitat suitable for Great Crested Newt will be affected; and with the implementation of a suite of non-licensable measures, the likelihood of an offence is considered highly unlikely.
- **Nesting birds**
    - Habitat suitable for nesting birds was found (namely the five fruit trees that would be removed to make way for the new pool), mitigation would be required.
- **Mammals**
    - Foraging bats - habitat suitable for foraging and commuting bats was found. None of the buildings or trees on site have any suitability for roosting bats. While there would be no need for mitigation measures to address roosting bats, a suite of non-licensable measures would be recommended to address the potential presence of foraging and commuting bats.
- **NERC Act Section 41 Species - Species of Principal Importance (West European Hedgehog, Common Frog, Common Toad)**
    - Construction procedures would include measures to avoid killing these species.

**Summary of Proposed Works**

1.20 It is understood that the proposed works on the site would include the construction of a new swimming pool and a paved area around the edge of the pool.

1.21 The assumptions for the proposed works include.

- Minimal vegetation clearance of the development footprint and work areas.
- Minimal earth works and movement.
- Habitats affected restricted to amenity grassland areas and introduced shrubs.
- No structural changes to any buildings.
- No additional external lighting.

# 2 AIMS AND OBJECTIVES OF THE MANAGEMENT PLAN

## Scope of the BMS

2.1 This BMS has been produced to remove or reduce the ecological impacts of construction works for the proposed development with regards to amphibians and nesting birds and foraging bats.

2.2 Through the implementation of appropriate mitigation measures, the likelihood of detrimental impacts and breaches of current wildlife legislation will be minimised. Without these measures there is the risk of disturbing, injuring or killing nesting birds (during the nesting bird season), and other protected species such as amphibians and foraging bats that may be inhabiting suitable habitat adjacent to the site.

2.3 The following elements are included within this BMS:

- Objectives and targets
- Legislative requirements regarding the site ecology, including:
    - Person/s responsible for:
        - The compliance with legal consents relating to nature conservation.
        - Compliance with planning conditions relating to nature conservation.
    - Control of works during construction, including:
        - Person/s responsible for:
            - Installation of physical protection measures;
            - Implementation of sensitive working practices;
            - Regular inspection and maintenance of physical protection measures and monitoring of working practices;
- Implementation of appropriate mitigation strategies

## Aims and objectives

*Aim*

2.4 The overarching aim of this Management Plan is: *"To enhance protected and Priority species & habitats and allow the LPA to discharge its duties under the NPPF 2023 and s40 of the NERC Act 2006 (Priority habitats & species)".*

*Objectives*

- To ensure breach of wildlife legislation on site for the duration of the proposed development are minimised.
- To protect amphibians, nesting birds foraging bats and West European Hedgehog, from the proposed development and construction works.
- To minimise damage to adjacent habitats and protect habitats on site that are part of the final development.

### Ecological Issues

2.5 The priority ecological issues i.e. those that have legislative requirements or planning considerations and are relevant to the site and the proposed works, are as follows:

*British Legislation*

- Nesting birds are protected by the Wildlife and Countryside Act 1981 (as amended)

*Planning Considerations*

- BAP species – there is potential identified for the study site to support UK Priority Species including; Bats, Birds, Great Crested Newt/other amphibians and West European Hedgehog.

### Persons Responsible for Nature Conservation Legislation Compliance

2.6 The Ecological Clerk of Works will be responsible for nature conservation legislation compliance. These duties are detailed in Section 3 – Control of Works.

# 3 CONTROL OF WORKS

3.1 To ensure that the works are undertaken in accordance with the BMS a series of control measures will be utilised. These measures include:

1. The application of Natural England licences where applicable.
2. The appointment of an ecological management team.
3. The use of ecological permits.

**Legislative**

3.2 With current understanding (October 2024) of the presence/likely absence or usage of the site by protected species, no licences to undertake works are currently considered necessary from Natural England.

**Signage**

3.3 Appropriate signage will be included within the site office and in appropriate locations around the site.

3.4 The signage shall highlight what to do in the event that a protected species is found. It shall include the contact details of the Ecological Clerk of Works (ECoW).

**Ecological Clerk of Works**

3.5 A suitably qualified ecologist or appropriate site personnel will be appointed to supervise the implementation of this BMS in an Ecological Clerk of Works (ECoW) role. The ECoW is responsible for the following:

- Ensuring all works on site comply with relevant legislation in relation to protected species and that the BMS: Biodiversity is adhered to throughout the construction phase of development;
- Providing advice to developers and contractors on how best to minimise impacts on wildlife throughout the construction phase of development;
- Being the main point of contact should any issues relating to ecology arise during construction;
- Making the relevant people aware of any ecological issues that occur during the construction phase;
- Ensuring Toolbox Talks on protected species and sensitive habitats to contractors carrying out work within the site are undertaken.
- Ensuring supervision of any construction activities that have the potential to impact on protected species and / or sensitive habitats;
- Ensuring fence lines are monitored throughout the construction phase of development.

3.6 The ECoW will be provided with updated programme of works to determine watching brief requirements and associated ecological issues.

3.7 The times during construction when the ECoW is responsible for ensuring that the BMS is followed and when the ECoW or appointed representative needs to be present are shown in Table 3.1. Other persons responsible for ensuring that the BMS is adhered to at different times throughout construction are also shown in Table 3.1.

3.8 If the ECoW or appointed representative identifies any issues in relation to ecology or considers that the BMS is not being adhered to at any point during construction, the developer will be contacted, and measures will be taken to resolve any issues. If the developer identifies any ecology issues, the ECoW will be contacted for advice immediately.

**Current Site Conditions**

3.9 This BMS has been prepared based on ecological information collected in September 2023. If on visiting the site, nearer the time of construction the ECoW considers that the baseline has changed, they may approve changes to the mitigation measures as appropriate.

**Risk Assessment of Construction Activities**

3.10 The following construction activities will be required as part of the works. The ecological risk of each activity is assessed and measures for reducing the impact are detailed below. The time of year during which ecology surveys and ecologically sensitive works will be carried out can be found in Table 3.1.

*Site Clearance*

Potential Impacts

3.11 Building work will involve the use of mechanical equipment to excavate material to specialist skip for removal for recycling.

3.12 The site is generally level, and the proposed swimming pool will be laid on the current level and on current existing amenity grassland area. The current site condition is of habitat with low biodiversity value.

3.13 There is need for clearance of vegetation from the works site prior to the start of construction.

Measures to Minimise Impacts

3.14 To minimise the risk of killing and injury of protected species during vegetation clearance, the site clearance method statement in Appendices will be followed.

3.15 The ECoW will ensure toolbox talks are given to all contractors working on the development. These will cover all potential protected species, invasive species and habitats relevant to the site and what to do should any such flora or fauna be discovered during the works.

*Ground Clearance*

Potential Impacts

3.16 Ground/vegetation clearance will include the removal of small areas of mown vegetation and four small fruit trees only as the site is primarily comprised of amenity grassland and garden. This work has the minor potential to impact amphibians and breeding birds, if present.

3.17 Ground clearance will involve the use of machinery to remove topsoil, vegetation from the works area. This has the potential to impact, disturb, injure or kill amphibians. Ground clearance also has the potential to damage retained habitats and trees.

Measures to Minimise Impacts

3.18 Prior to site clearance, a destructive search of the works area will be carried out.

3.19 A root protection zone will be set up around any trees that will not be removed as part of the works. This will involve the installation of barrier fencing around trees or areas of hedgerow to stop works from encroaching into the root protection zone as detailed in BS 5837:2012 (British Standards, 2012).

3.20 The ECoW will ensure that toolbox talks are given to all contractors working on the development. These will cover any potential protected species and habitats that they may encounter within the site and what to do should any be discovered during the works.

*Ground Works*

Potential Impacts

3.21 Excavations are expected to be necessary as part of the ground works, intrusive digging will be expected. Therefore any holes required as part of the works, may cause animals such as small mammals to become trapped.

Measures to Minimise Impacts

3.22 Excavations will not be left open over night. Where this is not possible, they will be securely covered or a means of escape for any animals that may become trapped will be provided, such as a wooden board. All excavations will be checked for the presence of animals each morning and immediately prior to backfilling.

3.23 The ECoW will ensure toolbox talks to all contractors working on the development will be given. These will cover any potential protected species and habitats that they may encounter within the site and what to do should any be discovered during the works.

*General Construction Works*

Potential Impacts

3.24 Construction of the scheme has the potential to cause visual, vibration or noise disturbance to the site and surrounding area. Dust, emissions and accidental spillages may negatively impact the habitats and protected species present within and in close proximity to the site. Damage to retained habitats and protected species may occur from accidental or uncontrolled movement of construction vehicles or personnel. However, there were no habitats of high conservation value present at the site and protected species would be unlikely to be present in these habitats at this time of year.

Measures to minimise Impacts

3.25 While there is little likelihood of habitats of high conservation value and protected species being affected by these works a number of measures are recommended.

3.26 The existing fencing and notice signs will be erected around construction areas to contain works and to stop encroachment into areas of retained habitat. Root protection zones will be set up around any retained trees.

3.27 The ECoW will ensure toolbox talks to all contractors working on the development will be given. These will cover any potential protected species and habitats that they may encounter within the site and what to do should any be discovered during the works.

*Night Works*

Potential Impacts

3.28 No night time working will be necessary.

Measures to Minimise Impacts

3.29 Non applicable

**Biodiversity Protection Zones**

3.30 The site contains six fruit trees within the construction zone, four trees will be removed. The other two will be retained within the site. These will be protected from damaged by the use of fencing the create a suitable sized exclusion zone. Root protection zones for trees will therefore be created to avoid encroachment during construction.

3.31 Any other areas of habitat to be retained within the site will be protected from construction related impacts through the installation of fencing around retained habitat.

3.32 No particular animal barrier fencing is considered necessary for the site, existing perimeter fencing will remain in situ.

*Timeframes and Responsibility for Implementation*

3.33 The BMS will be implemented at the outset of development and will be adhered to until completion of all construction works. The persons responsible for ensuring that the BMS is adhered to at each phase have been allocated.

**Table 3.1: Timings for ecology surveys and ecologically sensitive works**

| Construction and Ecological Mitigation Phase | Start Date (provisional) | Duration | Responsible Person |
|---|---|---|---|
| Building/Vegetation clearance within works area | January 2025 | Approximately 1 week | Contractors, supervised by ECoW |
| Site fencing and welfare provisions | January 2025 | Approximately 1 week | Developer supervised by ECoW |
| Construction | January 2025 | Approximately 3 weeks | Developer |
| Landscaping – habitat enhancement and restoration | January 2025 | Approximately 1 week | Developer (under ECoW supervision) |
| Completion | February 2025 | | Developer |

# 4 METHOD STATEMENTS

## Site Clearance

4.1 All the following works will be undertaken in accordance with the Precautionary Method of Working (Appendix 1 and 2) and will be monitored through the quality process of inspection and test plan, working inspection sheets and Works Package Plan.

*Site Clearance*

4.2 Clearance work will be in accordance with Precautionary Method of Working, attached (Appendix 1 and 2).

4.3 Vegetation clearance will be carried out outside of the bird nesting period, (i.e. excluding March to September, inclusive). Where this is not possible, the ECoW will check all bird nesting habitats and verify that no nests are present. If a bird nest is identified, a buffer zone will be established around the nest (buffer distance to be determined based on site conditions). No works will be permitted within this buffer zone until all young have fledged, as confirmed by the ECoW.

4.4 To ensure that the proposed development of the site does not cause any harm to protected species which may be present vegetation clearance should be staged over a 2-day period, starting from the edge of the site and clearing 5-10m sections at a time. All cuttings will be raked off and removed from site on the same day they are generated, to avoid creating refugia.

4.5 If any invasive plant species are discovered during site clearance, works in the area will stop immediately and a specialist qualified to deal with invasive species will be contacted.

## Construction

4.6 Once the site is cleared there are not expected to be any potential protected species issues. However, being mindful of the potential for protected species move location from time to time, e.g. through the different seasons and times of day, a number of measures will be followed as a precaution.

4.7 All construction work will be carried out sensitively and with vigilance in case protected species have arrived in the area, especially those activities involving ground work, such as piling will be carried out in accordance with Precautionary Method of Working, attached (Appendix 1 and 2).

# 5 A SCHEME FOR BIODIVERSITY ENHANCEMENT

5.1 Based on the existing habitats at the site, as determined by the results of an ecology survey carried out in September 2023 (Cambridge Ecology 2023), a number of habitat creation/enhancement opportunities were identified.

5.2 The habitats to be created/enhanced as part of the BMS comprise the following:

- Habitats: creation of new habitats as part of the scheme design. These should include new hedgerows. All soft landscaping should use, suitable native plant species, planted to provide food including seeds, berries, nectar and pollen and areas of shelter.
- Birds: Installation of bird nest boxes of various designs. Figure 5.1
- Bats: Installation of bat boxes of various designs. Figure 5.1
- West European Hedgehog: Installation of Hedgehog house. Figure 5.1

***Hedgerows***

5.3 Table 5.1 provides an overview of the aims, timings, prescriptive creation and management methods for the new hedgerow habitat.

Aim

5.4 The main aim of the hedgerow planting is to ensure that a dense, healthy hedge line develops to provide habitat linkage and continuity. This will benefit a range of species (including bird species, small mammals and invertebrates) by enhancing habitat cover and shelter belts in the area. By varying the hedgerow management the edges of the hedgerows would develop a scalloped edge for optimum micro habitat potential.

5.5 In addition, the hedgerow will increase the botanical species diversity and sources of food and shelter for wildlife.

Area and specification

5.6 At least 50m of new hedgerow will be created to provide an increase in the overall network of hedgerow at the site.

5.7 Species will comprise a range of native species known for their benefit to biodiversity and shall include species that are characteristic of the area.

5.8 Hedgerow planting specifications:

| | | |
|---|---|---|
| • English Elm | *Ulmus procera* | 2% |
| • Field Maple | *Acer campestre* | 24% |
| • Hawthorn | *Crataegus monogyna* | 25% |
| • Pedunculate Oak | *Quercus robur as hedgerow standards* | 1% |
| • Hazel | Corylus avellana | 10% |
| • Blackthorn | *Prunus spinosa* | 10% |

| | | | |
|---|---|---|---|
| • | Dog Rose | *Rosa canina* | 1% |
| • | Crab Apple | *Malus sylvestris* | <1% |
| • | Dogwood | *Cornus sanguine* | <1% |
| • | Purging Buckthorn | Rhamnus cathartica | 5% |
| • | Alder Buckthorn | *Frangula alnus* | 5% |
| • | Spindle | *Euonymus europaeus* | 1% |

Location

5.9 The new hedgerow will be located within the site at the western and southern boundary next to the proposed location of the new pool. The location of the new hedgerow habitat is shown in Figure 5.2.

Timing

5.10 Planting should take place between November and February. The 50m of new hedgerow will be planted once the ground in these areas have been prepared to receive new planting. This is likely to be in January 2024 or if that timing is missed then planting will take place in November 2025.

Methods

5.11 An area of ground 600mm wide by 300mm deep should be tilled or dug over to produce a fine tilth.

5.12 Prior to planting, the ground will be weed free, achieved by either spraying with a systemic herbicide such as glyphosate or lay black mulching sheet (sold in rolls) and plant through this. The latter has the added benefit of suppressing weed growth for a number of years and helps retain moisture around the plants.

5.13 Bare-rooted transplants 2 years old and about 400-600mm tall will be used.

5.14 Planting will take place in early winter (November-February) providing the ground is moist but not frozen.

5.15 The hedge should be planted as two staggered rows. Rows and plants should be spaced 450mm apart.

5.16 It may be necessary to implement measures to protect young plants from grazing by rabbits or deer. If livestock are present, then fencing (rabbit/deer fencing) will need to be provided. A gap of at least 750mm gap is required between the fence and the hedge.

5.17 Any hedgerow standards should also be planted at this time and tagged so they can be identified and left uncut during the hedgerow management operations. Tree stakes would be used to hold the standards in position.

5.18 Once the hedgerow has been planted it should be cut back to 400mm as this encourages additional root growth and side shoots to create a bushy, dense, healthy hedge with a wide base.

After-care Management

5.19 All plants shall be watered adequately to ensure healthy growth. Plants which have become loosened, lifted up or out of the ground will be set upright and re-firmed by treading. All litter shall be removed from the site. Plants shall be kept free of pests and diseases. Control measures shall be carried out to eradicate unwanted pests and diseases. If tree ties and tree stakes are used, they will be checked and when necessary adjusted. Tree stakes, ties and other supports and also guards, shelters, etc., will be removed by the end of the second, or third planting season following planting if establishment is acceptable. The hole in the ground shall be back-filled with topsoil. Straggling stems, over-vigorous shoots, suckers and dead, misshapen or broken branches will be removed from trees and shrubs by pruning back with a clean smooth cut to the main stem, or a sound and living outward growing lateral. If any temporary fencing (e.g. rabbit/deer fencing) is used it will be checked and if necessary, repaired. Any temporary fencing will be removed at the end of the maintenance period. The ground surface shall be made good and left tidy.

5.20 Where plants are missing, have died or have failed to make satisfactory growth these shall be replaced in the first two months of the next scheduled planting season.

5.21 Weed control is important to ensure that a healthy, bushy, continuous hedge is established. This can be achieved by use of mulches including mulching sheets. Alternatively, a grass-specific herbicide may be used selectively. Weeds may also be controlled by strimming in autumn; however the cuttings must be removed.

5.22 Keep a check on the hedge to ensure the protection offered by any fencing is maintained. Hedge plants affected by wind rock (loosening their hold in the ground) need to be re-seated to ensure that the plants establish and that gaps in the hedge are avoided. Any gaps created where the hedge has not established would be re-planted.

5.23 Avoid the use of plastic protective guards, if any have to be used only use biodegradable material guards. Remove guards after establishment expected to be after year three.

5.24 The aim of the hedgerow management is to create a variety of dense continuous hedgerows between 2-4m high, 2-3m wide at the base and 1.5-2.5m wide at the crown. Avoid using flailing machinery.

5.25 Hedges would be trimmed in January-February (before breeding birds start nesting and after the wintering birds have fed on the berry crop. During cutting operations in will be important to avoid trimming the hedgerow standards.

5.26 To ensure a varied hedgerow structure, the hedgerows would be trimmed in a staggered sequence and therefore would avoid trimming all the hedges in the same year. After establishment, a schedule of hedge trimming will be on a three-year rotation.

5.27 Trimming will keep the hedgerow healthy and in good condition for many years. It is likely however, that for the long-term management of hedgerows (after about 10 years of trimming) there will need to be some restoration, e.g. to fill gaps or prevent them

from developing into a line of trees. This may be achieved by coppicing (cutting the stems to just above ground level) or hedge laying, which is less drastic than coppicing and maintains the character of the hedge, however it requires skilled labour. As with trimming, the hedge coppicing and laying should be done on a rotational basis and take place towards the end of winter.

5.28 Hedgerow standards are traditionally managed by pollarding, but this is not essential.

5.29 Dead wood will be stockpiled in discrete locations around the site as part of the management of hedgerows. The piles of dead wood will then support invertebrate communities and provide refugia for other wildlife.

Monitoring

5.30 A visual inspection of the hedgerow habitat and vegetation would be carried out annually as part of general monitoring tasks and the vegetation managed where necessary.

5.31 All the new hedgerow habitat shall be monitored to assess their viability as hedgerow habitats beneficial to wildlife. Monitoring of the hedgerows shall commence as soon as their creation is complete.

5.32 Targets of monitoring

- Hedgerow establishment - Monitoring of the establishment of the planted stems should be carried out regularly in the first three years by the planting contractor. The exact duration of this assessment will depend on the rate of successful establishment. Numbers of dead stems should be recorded and replaced annually. This should continue until the number of dead stems found is negligible.

- Hedgerow condition - Once the hedgerows are established their condition should be assessed on a periodic basis. A rapid assessment of dimensions, species composition and integrity is sufficient. The hedgerow network as a whole should incorporate a variety of different heights and widths. The majority of hedges should be between 2-4m high, 2-3m wide at the base and 1.5-2.5m wide at the crown. Hedgerows should be dense and continuous wherever possible.

**Table 5.1. Creation and management of new hedgerows**

| Management objective | Prescriptions | Detailed management actions | Timing |
|---|---|---|---|
| To provide additional hedgerow habitat for wildlife to enhance existing network of hedgerows. | Creation of at least 50m of new native species rich hedgerow habitat | **Year 1**<br>Prepare soil and plant species in most suitable locations. See Figure 5.2 | **Year 1**<br>As soon as possible before growing season commences in 2025 ideally in January alternatively November 2025 |
| | Management and maintenance of habitat in optimum condition | **Years 1, 2, 3, 6 and 9 every three years after**<br>After establishment, hedgerow management used to create a variety of dense continuous hedgerows between 2-4m high, 2-3m wide at the base and 1.5-2.5m wide at the crown.<br>Avoid using flailing machinery | **Years 1, 2, 3, 6 and 9 every three years after**<br>After establishment (after 3 years remove any protective guards.<br>Trimming to only occur between January and February |

## Structures - Bird Boxes, Bat Boxes, Hedgehog Houses

Aim

5.33 The addition of artificial structures suitable for wildlife would aim to enhance species diversity at the site by providing safe secure, robust breeding, sheltering and hibernation sites for wildlife.

Number and Specification

5.34 The structures suitable for wildlife will include the following:

- Bird nest boxes: 10 boxes of various designs (see Figure 5.1), suitable for species such as Starling, House Sparrow House Martin, Great Tit, and Robin
- Bat roost boxes: 6 boxes of various designs (see Figure 5.1) suitable for sheltering bats.
- Hedgehog houses: 2 boxes (see Figure 5.1) suitable for sheltering hedgehog.

5.35 Bird nest boxes and bat roost boxes must be of a design that is squirrel proof.

5.36 A local company with experience of installing wildlife structures should be contracted to carry out the installations.

Location

5.37 The structures shall be located in various positions around the site, chosen to give the best opportunity for use. See Figure 5.2 for an indicative guide to their various locations.

5.38 The actual location and installation of the structures will be chosen at the time of installation and under the supervision of an ecologist with experience of habitat creation and structure installation. This will ensure the structures are fitted correctly and in a location that gives them the best chance of success.

5.39 The specific location, design, methods and creation/installation of the structures will be based on the following:

**Bird nest boxes:**

5.40 Installation will follow the manufacturer's instructions. Flight paths immediately adjacent to bird nest box must be clear of obstructions to enable free flight access to the nest box entrance.

5.41 All types of bird nest box must be positioned in sheltered areas away from the prevailing wind and rain and direct sunlight. They should be situated at least 2-3m above ground level. They must face in a north east to south east or north west to south west orientation.

5.42 Two Starling nest boxes will be installed. One will be located on a mature tree of a size suitable to support the boxes and the others on the eastern side of the stable building. They will be situated in a sheltered location out of direct sunlight and the prevailing weather conditions at least 2.5m above ground level.

5.43 Two open-fronted nest boxes (e.g. for use by Robin) will be located on mature trees of a size suitable to support the boxes. The boxes will mainly be located along the boundary of the site. They will be situated in a sheltered location out of direct sunlight and the prevailing weather conditions at least 2.5m above ground level.

5.44 Two-hole fronted nest boxes (e.g. for use by tits) will be located on mature trees of a size suitable to support the boxes. The boxes will mainly be located along the boundary of the site. They will be situated in a sheltered location out of direct sunlight and the prevailing weather conditions at least 2.5m above ground level.

5.45 Two blocks of three hole-fronted boxes to be used by House Sparrow the boxes must be grouped together (see Photograph) and located on the stable building under the eaves. They will be situated in a sheltered location out of direct sunlight and the prevailing weather conditions at least 2.5m above ground level.

5.46 Two blocks of two House Martin boxes grouped together (see Photograph) and located on the main house under the eaves. They will be situated in a sheltered location out of direct sunlight and the prevailing weather conditions at least 2.5m above ground level.

5.47 All boxes must be affixed to the trees using attachments that allow for the expansion of the tree trunk. Nails must not be used to secure the boxes to the trees.

5.48 Table 5.2 provides an overview of the aims, timings, prescriptive creation and management methods for the bird nest boxes.

**Table 5.2. Installation and management of Bird Nesting Boxes**

| Management objective | Prescriptions | Detailed management actions | Timing |
|---|---|---|---|
| To provide a diversity of secure nesting sites for breeding bird species. | Installation of 10 bird nest boxes | **Year 1**<br>Placement of boxes in most suitable locations. See Figure 5.2 | **Year 1**<br>As soon as possible before breeding season commences in 2025 |
| | Maintenance of bird nest boxes | **Years 2, 5, 7 and 10**<br>Check boxes in years 2, 5, 7 and 10 for evidence of use and deterioration, replace any damaged boxes and remove any obstructions any mouldy/rotten material. | **Years 2, 5, 7 and 10**<br>Between September to March |

### Bat roost boxes

5.49 All bat boxes must be positioned away from artificial light, including security lighting. Whilst some bat species (e.g. Pipistrellus sp.) are reasonably light tolerant, for the best chances of success the entrances to the bat boxes must be kept unlit. Flight paths immediately adjacent to bat boxes must be clear of obstructions and never be lit as this could also inhibit the movement of bats between roosts within bat boxes on site and foraging areas elsewhere.

5.50 The bat boxes will be located on mature trees in groups of three, orientated to provide different thermal conditions at different times of the year. They must avoid south facing positions in direct sun. Therefore, they must face in a north east to south east or north west to south west orientation.

5.51 All boxes must be affixed to the trees using attachments that allow for the expansion of the tree trunk. Nails must not be used to secure the boxes to the trees.

5.52 Table 5.3 provides an overview of the aims, timings, prescriptive creation and management methods for the bat roost boxes.

**Table 5.3. Installation and management of Bat Roosting Boxes**

| Management objective | Prescriptions | Detailed management actions | Timing |
|---|---|---|---|
| To provide secure roosting sites for bat species. | Installation of 6 bat roost boxes | **Year 1**<br>Placement of boxes in most suitable locations. See Figure 5.2 | **Year 1**<br>As soon as possible in 2025 |
| | Maintenance of bat roost boxes | **Years 2, 5, 7 and 10**<br>Check boxes in years 2, 5, 7 and 10 for evidence of use and deterioration, replace any damaged boxes and remove any obstructions any mouldy/rotten material. | **Years 2, 5, 7 and 10**<br>Between September to March |

### Hedgehog Houses

5.53 All Hedgehog houses must be positioned away from artificial light, including security lighting. The boxes must also be located away from any potential sources of disturbance. Access to the entrance of the boxes must be clear of obstructions and never be lit as this could also inhibit the movement of Hedgehogs between resting area and foraging areas elsewhere.

5.54 The Hedgehog boxes will be located in the bases of dense vegetation such as the base of hedgerows. The entrance to the boxes should be orientated to avoid the prevailing weather conditions which could allow rain water and drafts to enter the box. Ideally the box entrance should be south facing positions but out of direct sunlight.

5.55 All boxes must be covered by a thick layer of soil and/or cut vegetation, but the entrance of the boxes must be clear of obstructions.

5.56 Table 5.4 provides an overview of the aims, timings, prescriptive creation and management methods for the Hedgehog boxes.

**Table 5.4. Installation and management of Hedgehog Boxes**

| Management objective | Prescriptions | Detailed management actions | Timing |
|---|---|---|---|
| To provide secure resting/sheltering sites for Hedgehog. | Installation of 2 Hedgehog boxes | **Year 1**<br>Placement of boxes in most suitable locations. See Figure 5.2 | **Year 1**<br>As soon as possible in 2025 |
| | Maintenance of Hedgehog boxes | **Years 2, 5, 7 and 10**<br>Check boxes in years 2, 5, 7 and 10 for evidence of use and deterioration, replace any damaged boxes and remove any obstructions any mouldy/rotten material. | **Years 2, 5, 7 and 10**<br>Between September to March |

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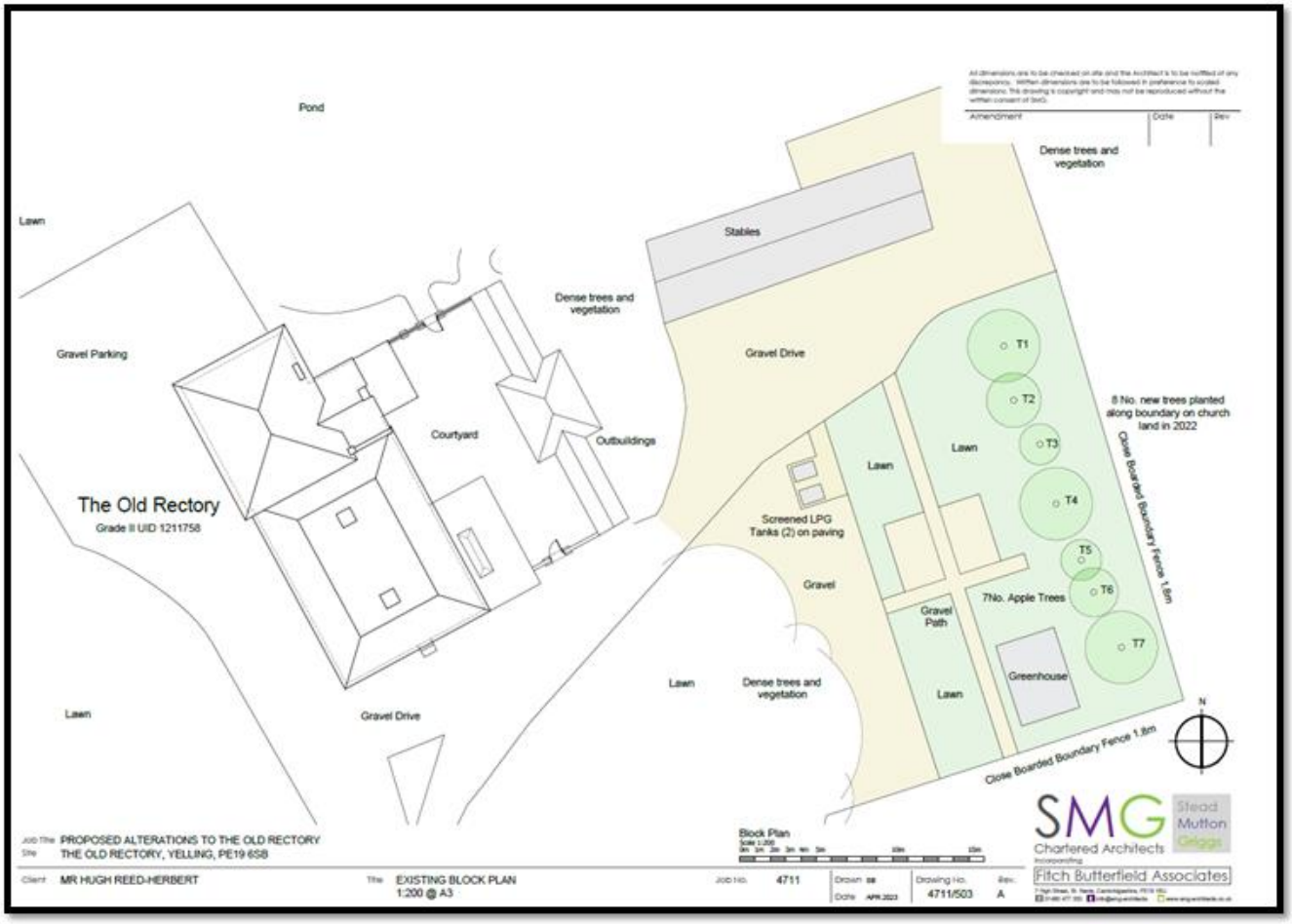
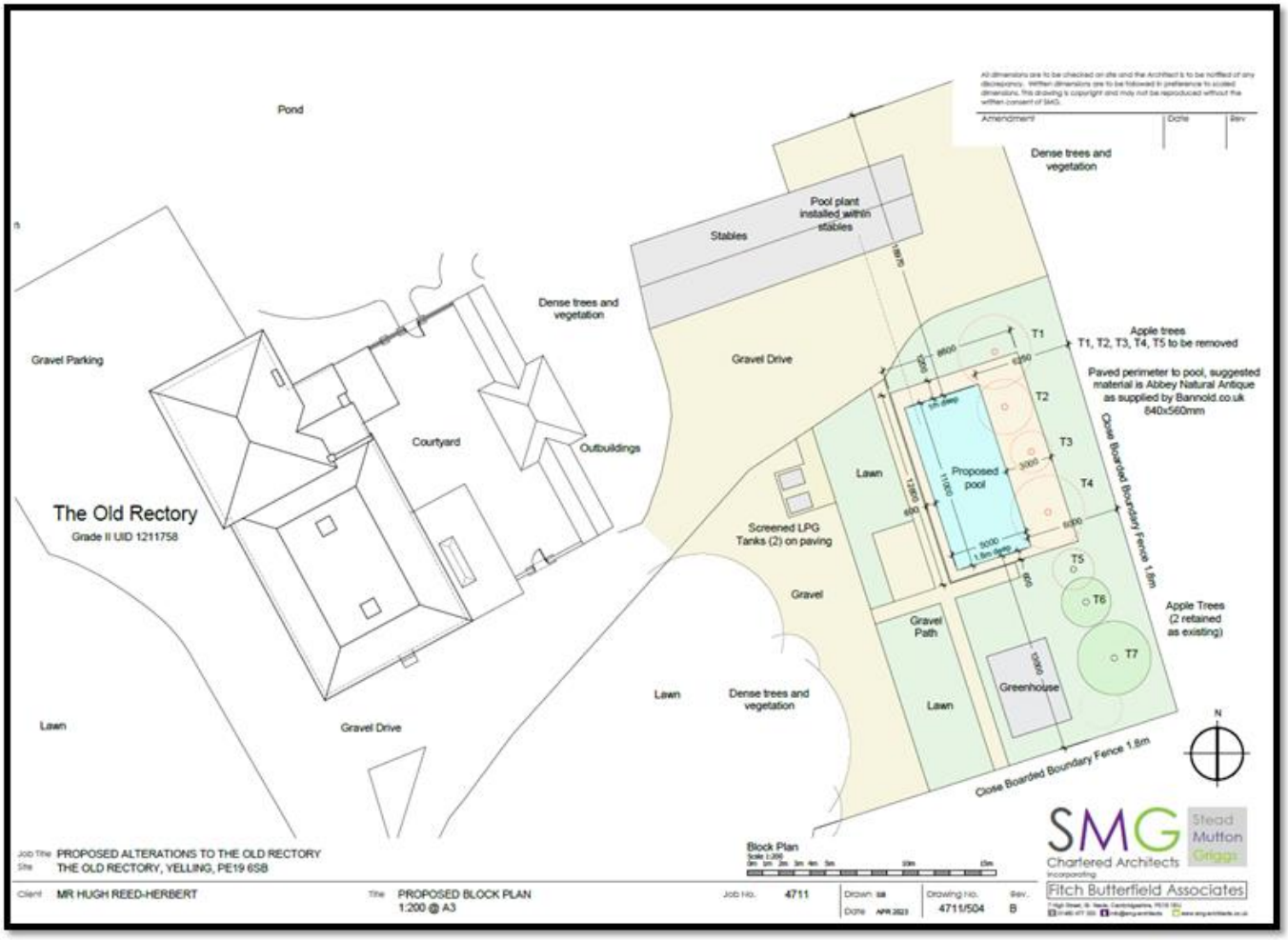
# 7 FIGURES

## Figure 1.1: Plan of the development site (redline boundary)



## Figure 1.2: Plan of Proposed Site Layout



## Figure 5.1: Suggested Designs of Ecological Enhancement Features



### Bird Boxes

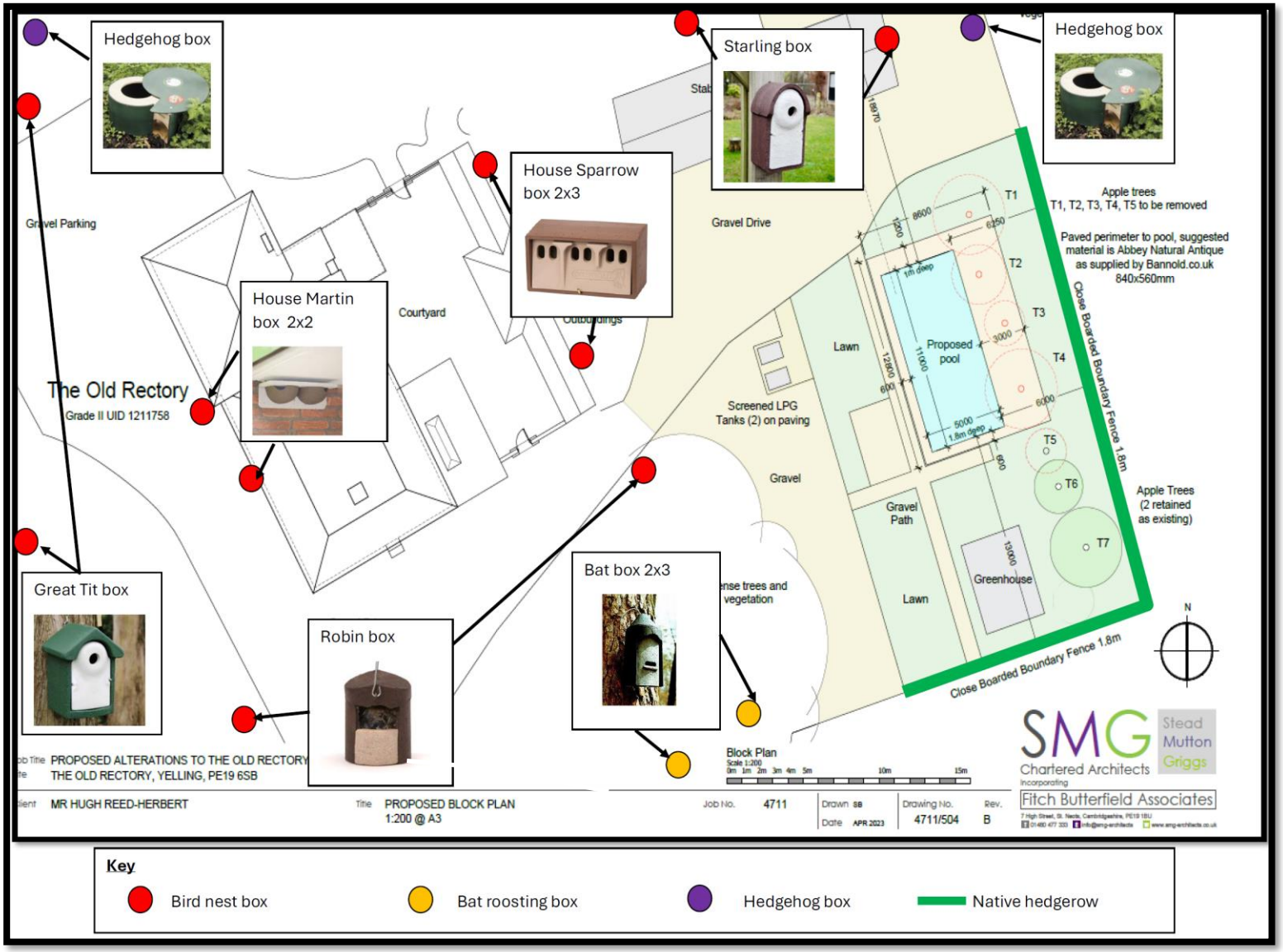


### Bat boxes



### Hedgehog House

**Figure 5.2: Indicative location of biodiversity enhancement features to be created at the site.**



# 8 APPENDICES

## Appendix 1 – Precautionary Method of Working

*Site Clearance*

8.1 Habitat on site is suitable for nesting birds, although none have been found on site to date. This Precautionary Method of Working (PMW) outlines actions which need to be taken to minimise any potential impact on these species while carrying out the construction of the proposed development on the proposed site.

8.2 Staff briefing: The Ecologist for the Site will be appointed by the Developer and will be responsible for ensuring that the measures detailed below are implemented. The Ecologist will be fully briefed on their required tasks by the Ecological clerk of Works. The Ecological Clerk of Works will be an experienced ecologist.

8.3 The details of this PMW will be presented by the Ecologist through a Toolbox Talk to all staff working on the Site prior to commencement of works. Where necessary, the Ecologist will remain on site to ensure the measures set out below are undertaken in accordance with the PMW.

8.4 Prior to any construction work and/or vegetation clearance on the Site, all suitable habitats within the working area will be surveyed by the ecologist for the presence of, nesting birds and other protected species. This will be carried out by an experienced ecologist, using appropriate techniques. For instance:

- prior to any clearance, any potential refugia/hibernacula, including rubble piles and scrubby vegetation, will be subject to a hand search. Hand searching will include carefully checking within and underneath any potentially suitable refuges such as sleepers, timber, leaf piles, logs, tree trunks, bush stems and general waste. Areas of dense vegetation may need to be strimmed/cut by a contractor, with the Ecologist on-hand to provide advice, to approximately 150mm height to enable the hand search to be undertaken. Once the relevant habitats have been hand searched, all the materials and cut vegetation comprising these habitats will be removed from the works area.
- for nest searches the area of vegetation requiring clearance is observed for at least half an hour to identify active nests through the identification of birds returning to the nest with food or leaving with faecal sacks. Any nests identified during this initial survey will be left undamaged with an appropriate buffer of vegetation of no less than a 5m radius. The buffer will be clearly marked with tape and appropriate signage and will remain in place for the entire nesting period.
- prior to any work associated with existing buildings, hand searches will be made of the building and roof structures for signs of the presence of bats e.g. bat droppings.

8.5 Any refugia/hibernacula within the working area will be dismantled by hand as far as possible and immediately removed from the working area, with the Ecologist on-hand to provide advice. Following an initial hand clearance, the remains of the hibernacula will be removed mechanically.

8.6 The methods highlighted within the PMW will be carried out with appropriate quality assessment procedures which will be checked by the Ecologist and will be audited by the ECoW.

## Appendix 2– Precautionary Method of Working

*Great Crested Newt and other protected species*

8.7 A number of non-licensable measures have been considered which would be implemented as part of the construction works protocol. These measures would be expected to minimise the risk of the construction works adversely affecting any potential breeding population and individual Great Crested Newts that may (albeit unlikely) present in the vicinity of the site. The non-licensable measures include the follow:

- Protected species toolbox talks prior to site clearance and construction work commencing. All appropriate site personnel must be informed of their legal obligations, responsibilities and what to do in the event that a protected species is found on site.
- No construction work would be carried out beyond the site boundary. Therefore, the risk of encountering a Great Crested Newt and damaging or destroying important terrestrial habitat used by Great Crested Newt would be considered negligible.
- Work would be restricted to the areas currently occupied by the working area, comprising amenity grassland, buildings and hard standing. Therefore, the likelihood of harming or obstructing Great Crested Newts would be considered negligible.
- The timing of the vegetation and site clearance work must take place when the protected species would be less likely to be affected by the work. Timing of the works would be scheduled to occur during the time of day (after 0930 and before 1630) and during weather conditions (dry, warm/hot). It would be unlikely for Great Crested Newts to be exposed and above ground or on dry land during the day, during these periods. Therefore, given that the construction works will occur during the daytime and over a short period of time, the likelihood of harming or obstructing Great Crested Newts would be considered negligible.
- Avoid night-time construction works.
- Cover any exposed excavations at night.
- Provide a means of escape for any animals, which may accidentally enter excavation works.
- Vegetation and site clearance work must proceed with vigilance and sensitivity to address the potential for protected species, to be present. If necessary, such works must only proceed following the completion of a finger-tip search undertaken by a suitably qualified/experienced ecologist acting as an Ecological Clerk of Works.
- No vegetation or refuges suitable for resting Great Crest Crested Newt would need to be cleared. Therefore, the risk of harming a Great Crested Newt would be considered negligible.

- Any vehicles used as part of the construction works would be restricted to the existing network of roadways and access tracks and hard standing.