

Construction Ecological Management Plan

Survey site: 39 Station Road, Desford, Leicester, LE9 9FN

Client: Invicta Universal

Date: 24/09/2025

Project:

This report is prepared to inform a planning application with **Hinckley and Bosworth Borough Council**. The proposal is described as:

Proposed erection of dwelling with detached garage, landscaping and associated works including the demolition of existing outbuildings

Planning Application Number:

25/00175/FUL.

1.0 Introduction

This Construction Ecological Management Plan (CEMP) has been prepared for the above-named client to outline measures to be implemented during construction works at the above-named site.

The purpose of this plan is to ensure the protection and mitigation of ecological receptors, adhere to best practices and industry standards, and provide adequate supervision by licensed professionals. The CEMP also outlines the management frameworks required for the planning and implementation of construction activities that comply with legislation and the environmental commitments.

The following information is provided in the tables contained in this report:

- **Table 1:** Site context, landscape history and the relevant planning condition to application 25/00175/FUL (Hinckley and Bosworth Borough Council)
- **Table 2:** Ecological background information and value for protected species
- **Table 3:** Construction management and mitigation measures

Report Scope

This CEMP outlines construction and ecological measures for the following works (**Appendix 1**):

Proposed erection of dwelling with detached garage, landscaping and associated works including the demolition of existing outbuildings.

Report Aims and Objectives

This report aims to:

- Identify key stakeholder requirements,
- Ensure compliance by all stakeholders with all relevant legislation,
- Provide site specific methods to avoid, minimise and mitigate construction effects on the environment and protected/notable species; and
- To provide ecological and biodiversity enhancement measures for the site and include a management strategy to achieve long-term success and improvements.

Work Schedules

Work schedules will be developed to ensure activities with specific timing requirements are carried out in a manner that minimises harm to ecological receptors. These schedules will be provided for all relevant personnel and contractors involved in the project.

Ecological Clerk of Works

A qualified and suitably experienced ecologist will be present on-site during critical phases of construction activities, namely turf stripping. Their role will be to oversee and monitor compliance with the CEMP, provide guidance, and take immediate action to prevent any harm to ecological receptors. Should protected species be identified during vegetation clearance, work will be halted whilst a suitably licensed ecologist and/or Natural England is contacted.

Persons Responsible and Lines of Communication

A Development Biodiversity Champion is selected for the construction phase of the development. The Biodiversity Champion will be someone with significant influence during construction, such as the contract, site or project manager. They are responsible for ensuring all actions outlined in the approved CEMP are implemented including the provision of a toolbox talk prior to works commencing. Any queries with regards to the mitigation prescriptions will be addressed to the project ecologist and communication will be retained between the Development Biodiversity Champion and project ecologist throughout the construction phase of the development where necessary to ensure the mitigation is applied and impacts to adjacent 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 Biodiversity Champion informs the project ecologist the commencement of construction works and provides updates where necessary.

The following key personnel are responsible for the management and implementation of works in accordance with the CEMP/EMP:

- Site manager – Garry Warren
- Main contractor - TBC
- Site owners – Invicta Universal Ltd

Table 1. Site context, landscape history and the relevant planning condition to application 25/00175/FUL

Site Context and Landscape History	
A detailed description and history is provided in the Preliminary Ecological Appraisal (PEA) (Three Shires Ltd, 2025).	
Planning Conditions	
Condition 3	<i>No development shall take place (including ground works or vegetation clearance) until a Construction Environment Management Plan for Biodiversity (CEMP: Biodiversity) has been submitted to, and approved in writing by, the Local Planning Authority. The CEMP shall include, but shall not be limited to, the following details:</i> <i>(a) Identification of potentially damaging construction activities; and</i> <i>(b) practical measures and sensitive working practices to avoid or reduce impacts during construction on amphibians; and</i> <i>(c) timing of works to avoid harm to nesting birds; and</i> <i>(d) responsible persons for overseeing sensitive works; and</i> <i>(e) use of protective fencing where required hedgerows.</i> <i>The approved CEMP shall be adhered to and implemented throughout the construction period.</i> <i>Reason: In order to protect the protected wildlife species and their habitats that are known to exist on site in accordance with Policy DM6 of the adopted Site Allocations and Development Management Policies Development Plan Document (2016).</i>

Table 2: Ecological background information and value for protected species

Ecological Background Information Detailed using desk study and site survey.	
A PEA was undertaken during April 2025 by Three Shires Ltd followed by a Biodiversity Net Gain Assessment in February 2025. Habitats identified at the site (Appendix 2) include: • Vegetated garden • Artificial unvegetated, unsealed surface • Modified grassland • Native hedgerow • Buildings • Line of trees • Individual trees This does not include habitats identified outside of the development boundary, in the wider site landscape.	
Value for protected species (onsite and surrounding landscape)	
Birds	The onsite line of trees, native hedgerow, and the modified grassland provide habitat that could be utilised by nesting birds.
Badgers	There was no onsite evidence of badger presence however, the native hedge to the north of the site and the surrounding woodland offer some suitable habitat for sett building or foraging.
Bats	None of the trees onsite offer Potential Roosting Features (PRFs) and the buildings were classified as negligible suitability for roosting bats. The site offers some connectivity through fragmented lines of trees and some hedgerows bordering arable farmland.
Amphibians	The site has been identified as being in an amber risk zone for District Level Licensing of Great Crested Newts. However, surveys of accessible ponds confirmed an absence of GCN. More suitable terrestrial habitat for GCN and widespread amphibians exists outside the site boundary as a mosaic of woodland, hedgerows and modified grassland.
Terrestrial mammals	The native hedgerow offers suitable foraging and commuting for hedgehogs and the lawns on-site offer further foraging opportunities.

2.0 Construction Ecological Management Plan

Table 3. Construction and Ecological mitigation measures

Ecological Measures	Mitigation	This table includes any measure required to obtain or comply with planning permission or other consent and to comply with legislation.
Ecological Protection Areas and Buffer Zones		
Ecological protection areas and buffer zones within the project site. These areas will be demarcated using physical means of protection, such as exclusion fencing, to prevent unauthorised access and minimise disturbance to sensitive habitats. This will be implemented around the retained trees and native hedgerow.		
Tree Protection		
A buffer from retained trees and woodland will be established and protected throughout the duration of construction activity in line with the sites Tree Protection Plan and the site access plan agreed with Caitlin Conway-Lusted and the nominated contractor. Where possible, no trenches or ground works will be completed within 10m of any retained trees or the line of trees. Trees will be appropriately protected in accordance with BS 5837:2012 - “Trees in relation to design, demolition and construction – Recommendations”. As such, it is recommended that the trees are separated from construction works by protective fencing throughout the duration of the construction phase of the development. A fencing specification is included within Figure 1 below. Appropriate signage is to be included on the fencing to ensure that fences are not moved after establishing. As shown in Figure 2 .		

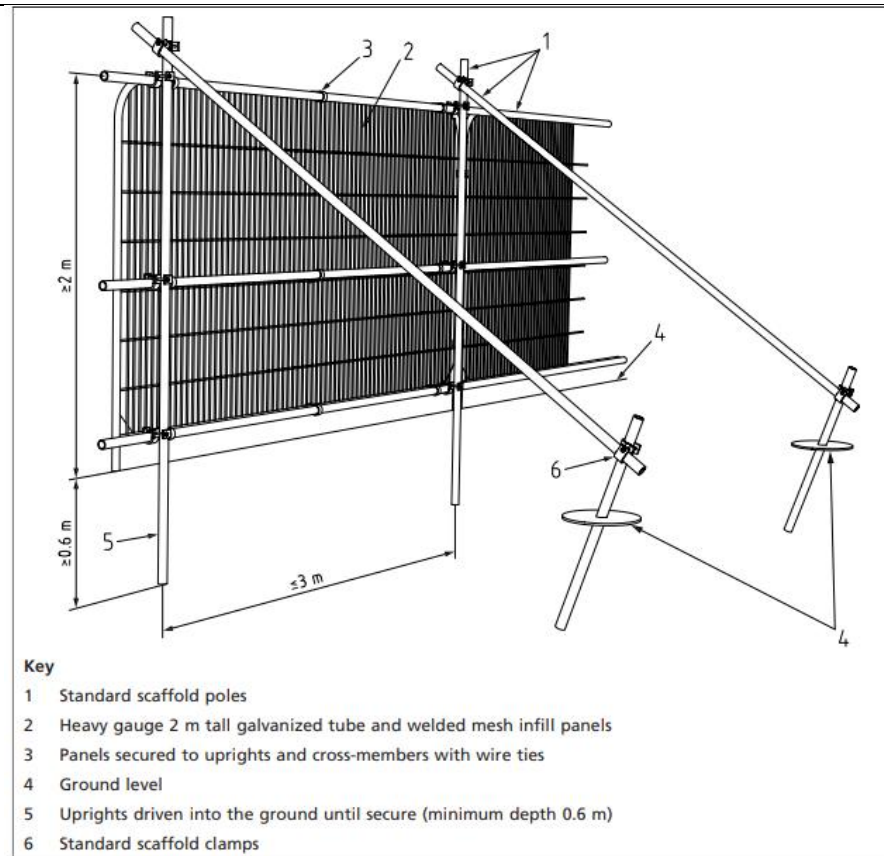


Figure 1: Default protective barrier specification (British Standards Institute 2012).



Figure 2 Appropriate signed to attached to root protection zone fencing- Source- www.SafetySignsandNotices.co.uk

Construction measures

Pollution Prevention

<i>Risk</i>	Pollution resulting from increased levels of water run-off, noise, and dust creation during construction works have potential to pollute the nearby pond (P1) and patch of woodland to the west, which is likely to enact adverse impacts upon and subsequently reduce both plant and animal diversity. The site is in a high soluble rock risk zone. Pollution resulting from groundwater percolation could enact adverse impacts on any groundwater dependant habitats connected to the site via any linked aquifers as identified on Magic.
<i>Statutory Compliance</i>	To limit impacts of pollution resulting from the construction phase of the development, construction works must be completed in accordance with current statutory guidelines relating to pollution prevention (Environmental Agency 2016). Furthermore, although withdrawn in 2015, pollution prevention guidelines detailed within guidance document: <i>PPG6: Working at Construction and Demolition Sites</i> (Environment Agency 2010) remain applicable to the site. Considering both the relevant statutory requirements and best practice measures detailed within guidance document PPG6, the below mitigation prescriptions are considered suitable to mitigate impacts of pollution during the construction

	phase of the development. The allocated Biodiversity Champion will be responsible for ensuring the below mitigation recommendations are undertaken successfully during the works.
<i>Materials Storage and Surface Water Runoff</i>	It is recommended that the Biodiversity Champion ensures that: • No stockpiles are created on exposed ground areas and ensure that all materials and chemicals are stored securely and safely on site in accordance with current Control of Substances Hazardous to Health (COSHH) regulations (HSE 2002). • Stockpiles are located as far away as possible from the LMDW and pond (P1) and on level ground to prevent any accidental run-off. • Contaminated materials, chemicals, and other hazardous substances must be stored on an impermeable surface, in a bunded area, within any area of the site. • All chemicals and hazardous substances are stored away from areas where there is heightened risk of damage from impact or collision such as site traffic. • All chemicals and hazardous substances are labelled; containers are sealed when not in use and inspected regularly and fit for purpose. • Any damaged or old containers are replaced in line with the duty of care requirements. Note such containers may be considered hazardous waste. • Staff are trained in use of spill kits and emergency procedures. • Ensure there is always a designated 'responsible person' on site. • Lock storage facilities when not in use.
<i>Site Drainage</i>	It is recommended that the Biodiversity Champion ensures that: • Pollution risks are identified pre-construction. • Pollutants are prevented from entering drains where possible. • If any pollutant enters a drain, immediately stop the pollution with a physical block, stop the activity causing the pollution, then notify the Environment Agency for surface water drains or the local sewerage provider for foul water drains. If there's a spill, accident, or emergency, try and prevent pollutants entering the drains. • Report all pollution incidents to site management and the Environment Agency. • Inspect drains and protection measures frequently and maintain them during the construction activity. Well maintained drains will also reduce risks of flooding and subsequent surface water run-off.

	As a last resort, should any pollutants be required to enter the drainage system on site, permission from Environment Agency or the local sewerage provider must be sought before discharging anything other than clean uncontaminated surface water to a drain and other surface waters or groundwater. Apply for permission early, as authorisation can take up to four months.
<i>Airborne particle suppression</i>	It is recommended that the Biodiversity Champion ensures that: - Carry out regular site inspections to monitor compliance. - Ensure all vehicles switch off engines when stationary. - Avoid the use of petrol- or diesel-powered generators and use mains electricity or battery power where possible. - Only use cutting, grinding, or sawing equipment fitted or in conjunction with suitable dust suppression techniques such as water sprays or local extraction. - Ensure an adequate water supply on the site for effective dust/ particulate matter suppression/ mitigation, using non-potable water where possible and appropriate. - Use enclosed shuts and conveyors and covered skips.
<i>Noise</i>	The Biodiversity Champion must ensure that noise levels are kept to a minimum in accordance with best practice as defined in the Control of Pollution Act 1974 to avoid unacceptable levels of noise and vibrations. Further guidance can be found in British Standard 5228-1:2009. Such measures applicable to the proposed development primarily include agreed working hours limiting night work, using the quietest equipment and plant available, shutting down equipment when not in use, and completing deliveries during working hours only. Most notably, prescriptions as to limit noise of plant machinery as detailed within Table B.1 within the code of practice for noise control (British Standards Institution, 2014) is likely to have the most significant impact during construction activity. Table B.1 is shown below.

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

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

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

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

	Table B.1 Methods of reducing noise levels from construction plant			
	Plant	Noise reduction of plant		Alternative plant
		Source of noise	Possible remedies (to be discussed with machine manufacturers)	A-weighted sound reduction dB
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	Sheet pile	Acoustically dampen sheet steel piles to reduce levels of resonant vibration		Drop hammer completely enclosed in box with opening at top for crane access
	Impact on pile	Use resilient pad (dolly) between pile and hammer head. Packing needs to be kept in good condition		Steel jacket completely enclosing drop hammer with dolly and polystyrene chips fed to impact surface to dissipate energy
	Cranes cables, pile guides and attachments	Careful alignment of pile and rig		Pressed-in piling which generates its driving force from the frictional restraint of other piles
	Power units or base machine	Fix more efficient sound reduction equipment or exhaust. Acoustically dampen panels and covers. When intended by the manufacturer, engine panels need to be kept closed. Use acoustic screens when possible		
Earth-moving plant: • bulldozer • compactor • crane • dump truck • dumper • excavator • grader • loader • scraper	Engine	Fit more efficient exhaust sound reduction equipment Manufacturers' enclosure panels need to be kept closed	5 to 10	Alternative super silenced plant might be available. Consult manufacturers for details
Implementation of the Waste Hierarchy	The Biodiversity Champion must ensure that all construction activity is completed in accordance with the Waste Hierarchy (Defra 2011) to reduce the amount of waste produced during the construction phase of the development. As such, the construction phase must be completed in accordance with the below core principles: <i>In the first instance:</i> • Re-use products and materials where possible. • Recycle and compost material resources where possible. • Attempt to recover energy from waste.			

	<i>Where none of the above options offer an appropriate solution, waste disposal is the final option:</i> • Only transfer controlled waste to an “authorised person” (Waste Collection Authority, the holder of an Environmental Permit, Registered Water Carrier or Waste Disposal Authority). • Ensure that non-hazardous waste is transferred under a Waste Transfer Note which must be retained for two years. • Hazardous waste is moved under a waste consignment note that provides a clear description of the waste material. The consignment note must be retained for three years. • The waste is the responsibility of the company until it has been fully recovered or finally disposed of.
Retained Turf and Soil Protection/Post construction Restoration	
<i>Retained Soil and Turf Conservation.</i>	Any areas of retained vegetation or bare soil accessed by vehicles and pedestrians is likely to become compacted by heavy machinery and repetitive footfall, which will negatively impact ecological functioning. • Clearance of turf and topsoil will be limited to the minimum required to facilitate the development. • Retained turf will be protected during construction to maintain its ecological function. • Post construction the entire soil profile must remain in a condition that promotes aeration, drainage and root growth.
<i>Compaction, Erosion and Retained Turf Damage Mitigation</i>	Retained soil and any retained turf will be protected from the impacts of compaction, erosion and other soil and turf damage by the following; • Protective boards lain around the construction zone will spread the weight and erosive impacts of plant, vehicles and feet. Plywood is a traditional option, but rubber lawn mats may be a more practical and effective solution. These can also be used to create temporary “roads”. Clear protection mats are available to permit UV penetration and thus continued grass growth. • The work zone will be restricted to the minimum required for operatives to work safely and will be clearly signposted/fenced with access prohibited to contractors. • Contractors will be audited by the biodiversity champion on a weekly basis and daily by the team leader for compliance with environmental protection strategies and will be provided with toolbox talks at induction. Repeated compliance failures will lead to termination of contracts. Ensure any compensation or reparative measures for turf damage are included within contractors’ contracts. • When stripping, stockpiling or placing soil, do so in the driest condition possible and use tracked equipment where possible to reduce compaction. • Confine traffic movement to designated routes.

	• Keep soil storage periods as short as possible. • Clearly define stockpiles of different soil materials. • Heavy plant/skids etc will be stored on hard standing, e.g. part of the new road. Whilst this is under construction, protective boards will be used. • Works will not take place during or after prolonged periods of rain and will use dry periods. • Plan work to avoid unnecessary journeys on either foot or vehicle across the grassed areas. • Some residual compaction may occur despite protective efforts. As such, aerating the retained grassed areas in the work zone post development would be beneficial.
Biosecurity and Invasive Species Management¹	
<i>Invasive/non-native Species Mgt</i>	No invasive non-native species as listed under the Wildlife and Countryside Act (1981) or known otherwise to be problematic are present on site. However, there is a risk that invasive and non-native species could be introduced onto the site during construction via boots, vehicle wheels and imported materials. In the case of this site, which hosts semi-natural habitats, there is an additional risk that native species from other habitats could be imported, which may alter the composition and relative abundances of locally characteristic communities. This risk will be managed via the implementation of appropriate biosecurity measures as listed below.
<i>Biosecurity</i>	A Biosecurity Declaration Form will be distributed via email to all contractors intending to send plant machinery to the development site. This instructs that power washing of all plant prior to entry on site to remove all traces of mud debris etc. The completed form must be returned to the site Biodiversity Champion prior to deliver/access. This form and a copy of the CEMP will be sent to all subcontractors that intend to bring machinery onto the site.

¹ <https://ccsbestpractice.org.uk/entries/biosecurity-preventing-the-introduction-of-invasive-species-to-site/>

[https://www.nonnativespecies.org/biosecurity/biosecurity-in-the-field/#:~:text=Basic%20biosecurity%20advice%20for%20site%20visits&text=If%20practical%20do%20not%20take,debris\)%20before%20leaving%20the%20site.](https://www.nonnativespecies.org/biosecurity/biosecurity-in-the-field/#:~:text=Basic%20biosecurity%20advice%20for%20site%20visits&text=If%20practical%20do%20not%20take,debris)%20before%20leaving%20the%20site.)

	Upon arrival to site the plant item is inspected at a designated quarantine area. This inspection ensures the delivered plant item has been thoroughly cleaned. Should the item of plant be deemed to be inadequately cleaned it will be refused entry. <i>Advice for Contractors on Site.</i> 1. Avoid taking any vehicles onto the site beyond those essential in completing works, keep to established tracks and park vehicles on established parking areas away from the pasture. 2. Arrive at the site with clean equipment, and vehicle, paying particular attention to wheels. 3. Ensure equipment and footwear is clean (visually from soil and debris) before entering/leaving the site. 4. Ensure vehicle is kept clean - in particular, remove any accumulated mud before leaving the site. 5. Facilities will be provided on the site in the work zone surrounding the buildings to clean footwear/equipment. 6. Keep access to a minimum. 7. Where possible avoid areas of livestock or known disease. 8. Plan visits so that the highest risk site/area is visited last. Such robust biosecurity measures will prevent the leaving behind of a degraded environment and subsequent financial bills for the control of introduced invasive species, or any species that may alter communities within nearby designated sites.
Wildlife Protection – Precautionary Methods of Working-	
<i>Herpetofauna</i>	Pre Development Searches and Vegetation Clearance Vegetation clearance works must take place outside of the typical hibernation period for reptiles and amphibians, which is typically between November and February. Reptiles and amphibians are mostly torpid during this timeframe and are thus most vulnerable to injury or death. Undertaking vegetation clearance works during their active period, typically between March and September, will allow individuals to disperse unperturbed to adjacent retained habitats. • All clearance works will be conducted under the supervision of a suitably qualified Ecologist (Ecological Clerk of Works). • A fingertip search will be conducted prior to the removal of any refugia or hibernacula (log piles) to identify and remove any amphibians, reptiles or mammals.

- Before any development, the ground flora on the affected parts of the site will be strimmed down to 500mm, directed towards off site suitable habitat. Any reptiles that are found will be encouraged to move away of their own volition, or if in immediate danger or likely to find itself in danger, deposited in a bucket and placed by gloved hand outside of the development area in retained suitable habitat by a suitably experienced ecologist.
- Any spoil/log or rubble piles will be destructively searched for amphibians/reptiles at the same time.
- Vegetation removal will be phased in two stages: with an initial cutting of all vegetation to approximately 200-300mm from ground level.
- This will be followed by a rest period of at least 24 hours.
- The second cut will be to ground level/ bare ground. Reptiles and amphibians are most likely to be present at or just below ground level; the phased technique allows any individuals present at this vegetation level to disperse. e) In addition to phasing, any cutting will be conducted systematically, towards areas of retained habitat to encourage any individual reptiles and amphibians to retreat to retained habitat unharmed and thus preventing individuals from becoming trapped in a central habitat island.
- The development zone will be managed thenceforth as bare ground or close mown vegetation.

A suitable systematic cutting technique is exemplified below in **Figure 3**.

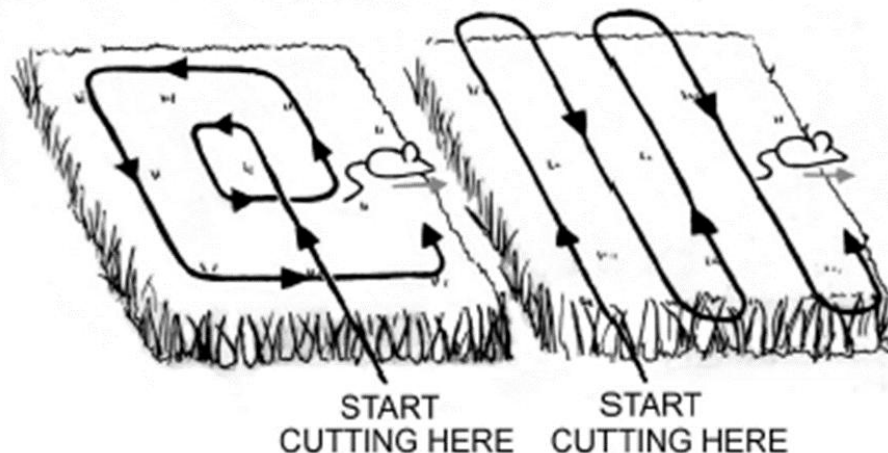


Figure 3: A schematic representation of vegetation cutting patterns as best to eliminate terrestrial opportunities for reptiles and amphibians within the construction zone.

	Site Management During Construction • Any materials will be stored on pallets away from tall vegetation or boundaries. • Rubble created during the development will be safely disposed of in a skip. If no skip is available the rubble will be stored off the ground (e.g. on pallets) until it can be removed from site, to prevent common reptiles and amphibians from using the rubble piles for hibernation or refugia. • All trenches will (where possible) be backfilled before nightfall, or a ramp will be left to allow amphibians to easily exit. Any trench that could not be closed the previous day must be checked for reptiles and amphibians at the beginning of the next working day; particularly where this is scheduled for infilling. • Any chemicals or pollutants used or created by the development will be stored and disposed of correctly according to COSHH regulations. • Where for any reason contractors are a non-compliant and rubble and other piled items are left on the floor overnight or for any period of time beyond that working day, they must be dismantled by hand. • Any reptiles or amphibians found must be encouraged to move away of their own volition, or if in immediate danger and unable to perambulate themselves, will be captured in gloved hand or by any other means avoiding injury and safely relocated to suitable cover within retained habitat. No amphibian will be handled via bare hand due to the risk they may absorb toxic compounds through their permeable skin. • If at any point GCN or reptiles are found during development, all works must cease until further advice has been obtained from a qualified ecologist and the relevant regulators.
<i>Birds</i>	Most of the scattered trees will be retained. The line of trees and native hedgerow will also be retained. However, works may see active nests destroyed in habitat areas to be removed, and disturbance to nesting birds in proximity and near the edges of the retained habitat areas. Precautions should be taken with machinery and noise levels when working close to any retained nests so as not to disturb any nearby nesting birds during construction works. At least a 3-5m buffer should be created between any machinery and active nests until the young have fledged. The buffer will need to be increased in the event of the presence of any Schedule 1 species as reckless disturbance as well of destruction of the nests of such species is an offence. Buffer zones regarding schedule 1 species are on a case by case, species by species basis and must be reflected accordingly. If schedule 1 species are identified nesting, these areas must be retained, and suitable fencing and signage installed to prevent encroachment into these areas. It is an offence to recklessly disturbed adult and independent young in proximity to their nests as well as the nests

	themselves. Examples of appropriate installed work signs are shown in Figure 4. Signs can also be installed in regard to non-schedule 1 species, installed in full view in areas where nesting birds have been identified on the pre-work checks. Figure 4. Work signage regarding nesting birds on the site. Source- www.Britishsafety signs.co.uk
<i>Badgers and other terrestrial mammals</i>	The following recommendations are given to mitigate against potential harm to hedgehogs, badgers and other mammalian fauna during the development works. • The work zone will be checked for wildlife prior to works commencing, with any fauna encouraged to move away via their own volition or transported by gloved hand to the reptile receptor area if this is not possible. This will only apply to smaller mammal species. Larger mammals such as badgers and foxes will not be transported by hand. • Any trenches dug will ideally be backfilled before contractors leave. If this is not possible, they will 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. They must be checked for wildlife before backfilling. • Security lighting must be directed away from undergrowth and vegetated site boundaries. • Any chemicals or pollutants used or created by the development will be stored and disposed of correctly according to COSHH regulations.

Lighting Strategy

The habitats on site have low habitat value for commuting and foraging bats and other nocturnal wildlife within what is at present a dark area.

Additional lighting could impact behaviour of wildlife and adversely affect the integrity of roosting and foraging resources. Any proposed external lighting will be installed in accordance with current guidance issued by the Bat Conservation Trust and Institute of Lighting Professionals: Guidance Note 08/23: Bats and Artificial lighting at night (BCT & ILP 2023).

The below strategy utilises light prescriptions detailed within this guidance to limit impacts of artificial lighting on bats and other light sensitive species using retained habitats on and directly adjacent to the site including badgers and hedgehogs.

In particular, the lighting strategy seeks to influence the lighting design so that impacts can be avoided to key habitats of value including:

- Any woodland or site boundaries/tree lines/scattered trees.
- The species-specific habitat enhancements detailed below, predominantly the bird and bat boxes.
- Retained habitats on and directly adjacent to the site.

The following lighting design prescriptions are considered suitable for the type and scale of the Development to minimise the impacts of artificial lighting on site or within the public realm on bats and other light sensitive species.

Lighting design prescriptions recommended for the Site comprise:

- The retained trees, line of trees and native hedgerow must not be illuminated to ensure any present dark zones are retained.
- Reducing the operating time of any installed public realm lighting and levels of illuminance provided via: Part-night operation. Turning off lights between certain hours, for example between midnight and 06:00.
- The use of motion sensors will be avoided to ensure no unnecessary light spill occurs during night-time hours. Where the use of motion sensors cannot be avoided, lights must be set to be turned on for no longer than 1 minute.
- Wall lights and security lights will be 'dimnable' 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.

- Avoiding light spill via: The use of directional lighting by using luminaires with rear shields and an upwards lighting ratio of zero; and Consideration to the height and spacing between lighting columns where practicable. Examples include stud LED or footpath lighting. There will be no bare bulbs and no light pointing upwards. The spread of light will be kept in line with or below the horizontal. Use low-level lighting in conjunction with hoods, cowls, louvers and shields.
- Lights will be directional to ensure that light is directed to the intended areas only.
- Light type: Use of lamps that minimise UV emissions or use UV filters to reduce the attractiveness of the lamp to invertebrates. Use high-pressure sodium or LED lamps, ideally warm white as its function as an invertebrate attractant is relatively low.
- The use of landscaping as to block light spill where appropriate.
- Install lighting systems that deliver no greater than a 3lux average illuminance, with a maximum horizontal illuminance of 0.6 uniformity (subject to appropriate maintenance factors).
- 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 will be of a warm / neutral colour temperature <4,200 kelvin.
- 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.
- All lighting on the developed site will make use of the most up to date technology available.

Consideration will be taken regarding internal lighting as well as external light. Measures to reduce light spillage from internal lighting are displayed below in **Figure 5**.

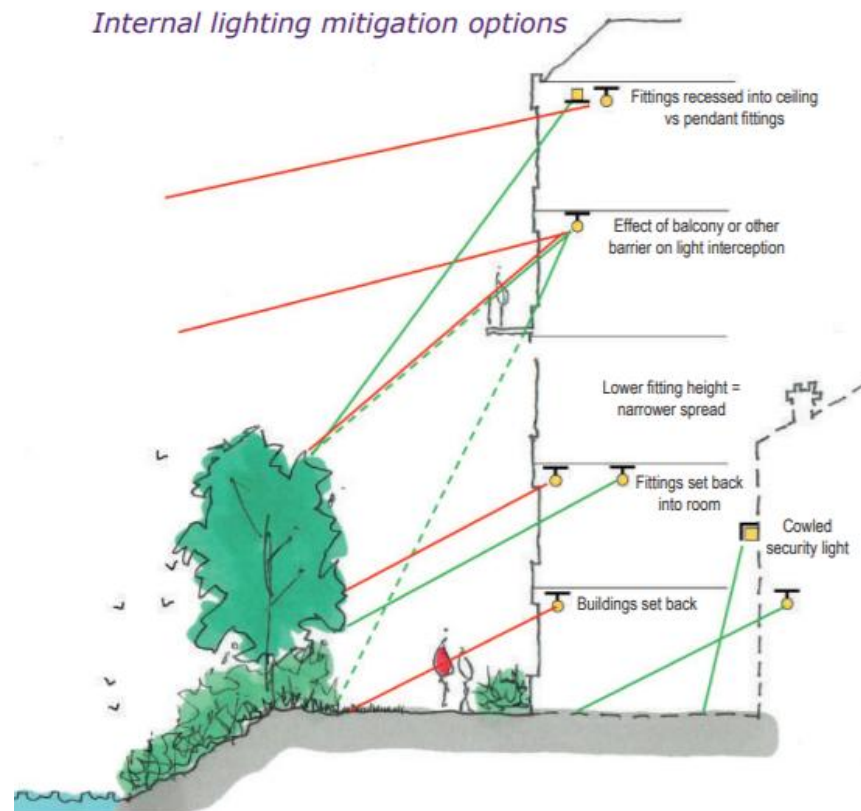


Figure 5. Mitigation measures for internal lighting.

Compliance and Reporting

The CEMP requires stakeholders to comply fully with the pre-construction and construction-related elements of any mitigation strategies agreed with the Local Planning Authority and Natural England under any license requirements. Construction activities will therefore be conducted strictly in accordance with the approved CEMP. Regular inspections and monitoring will be undertaken to ensure compliance with the plan's requirements.

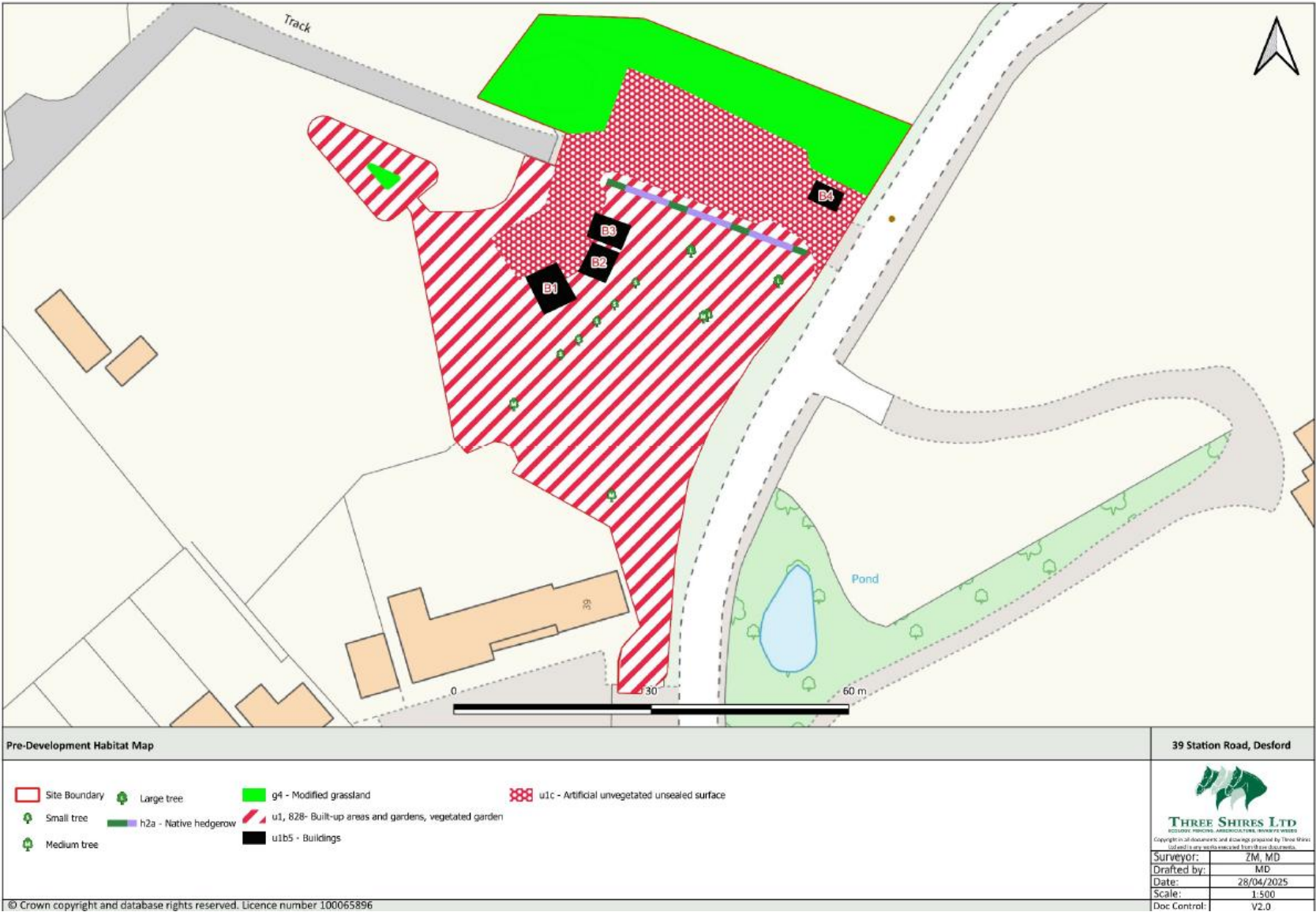
Any deviations or incidents that may affect ecological receptors will be immediately reported to the designated ecologist / Natural England. Updates to the CEMP will be relayed to the Local Planning Authority.

The CEMP will be periodically reviewed and updated as necessary throughout the construction phase to address changing site conditions and evolving ecological considerations.

Construction Ecological Management Plan



Appendix 2: Baseline Habitats



Limitations and Copyright

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Status	Issue	Name	Date
Final	1.0	Kat Aburrow BSc, Consultant Ecologist	25/09/2025