

CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN FOR THE PROPOSED DEVELOPMENT AT SHORNE MEAD, PEAR TREE LANE, SHORNE, KENT, DA12 3JT.

FINAL Version 2.0

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For: Mr and Mrs. Coward C/O Mark Carter

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REMAIN ON SITE AT ALL TIMES DURING
DEVELOPMENT**

H2Ogeo

Hydrogeology & Environmental Consultancy

Author: David Walker MSci, FGS, IAH

Email: info@h2ogeo.co.uk

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1 Introduction

1.1 Background

A planning application was submitted to Gravesham Borough Council on the 23 December 2024 and validated on the 24 December 2024. The application was for the demolition of the existing dwelling, garage and outbuilding. Erection of a self-build detached two storey dwelling with submersed basement for parking and entertainment facilities.

Permission was granted on the 13 February 2025 with a set of planning conditions, these conditions included the recommendation for a Construction Environmental Management Plan (CEMP).

Condition 13 specifies:

Prior to commencement of works (including site clearance), a construction environmental management plan (CEMP) will be submitted to and approved in writing by the local planning authority.

The CEMP will be based on the recommendations in section 8.6 of the Preliminary ecological appraisal, Calumma, Oct 24 and Bat report, Calumma 30/4/24 and include the following:

- a) Risk assessment of potentially damaging construction activities;*
- b) The identification of biodiversity protection zones and the use of protective fences, exclusion barriers and warning signs;*
- c) Reference to the relevant, granted, protected species licences (e.g., bats) obtained in advance of site clearance/construction and any relevant mitigation measures required;*
- d) Practical measures (both physical measures and sensitive working practises) to avoid or reduce impacts during construction for bats, badgers, birds, dormice and hedgehogs (may be provided as a set of species or habitat-specific method statements);*
- e) The location and timing of sensitive works to avoid harm to biodiversity features;*
- f) The times during construction when specialist ecologists need to be present on site to oversee works;*
- g) Responsible persons and lines of communication; and*
- h) The role and responsibilities on site of an ecological clerk of works (ECOW) or similarly competent person.*

The approved CEMP will be adhered to and implemented throughout the construction period in accordance with the approved details.

H2Ogeo was commissioned to provide a Construction Environmental Management Plan to support the ecological scope of work provided by others to satisfy this planning condition of the planning permission.

This CEMP describes the techniques and controls required for successful environmental management during the demolition and construction phases of the development.

It presents the mitigation measures to be adopted by the construction team to ensure compliance with the Local Planning Authority, to meet the requirements of relevant Environmental Regulations and minimise the impact during the construction period on the wider environment. Ecological considerations have been addressed by other parties.

The CEMP is divided into the following sections:

- General Site Information;
- Environmental & Site-Specific Sensitivities;
- Construction Environmental Management Plan, including Mitigation Measures; and
- Monitoring.

It is a dynamic live document and must be updated when additional site-specific information becomes available. It must be kept on site during the development and undergo a review every three months during the project to identify changes.

Table 1 CEMP Review Schedule

Next Review Date	Review Date Undertaken	Comments/Revisions to CEMP
3 months from project commencement		

2 General Site Information

The following section outlines the site location, general overview and relevant contact details.

2.1 Site Setting & Location

The site is located at:

Shorne Mead
Pear Tree Lane
Shorne
Gravesend
Kent
DA12 3JT

The site is centred on National Grid Reference TQ70405 70837, (Easting: 570405, Northing: 170837), presented in Figure 1.

2.2 Overview of Development

The application consists of the demolition of the existing dwelling, garage and outbuilding. Erection of a self-build detached two storey dwelling with submersed basement for parking and entertainment facilities.

The approved plans for the development are presented in Annex A.

2.3 Working Hours

Construction work and associated activities, other than internal works, not audible outside the site boundary, will be carried out between 08:00 and 18:00 Monday to Friday and 08:00 and 13:00 on Saturdays.

There will be no work on Sundays or public holidays without the prior written permission from the Local Planning Authority.

If construction activities are required for reasons of engineering practicability, season, weather and/or safety, the associated extended working hours will be agreed with the Local Planning Authority (LPA) in advance.

Any works required in an emergency or, if not completed would be considered an environmental risk or unsafe, will be carried out with the LPA being informed as soon as feasibly possible with the reasons for the unforeseen activity and anticipated duration of remedial works.

3 Contact Details

The contact details for relevant personnel and organisations are shown below:

Main Contractor: TBD

Address: TBD

Telephone: TBD

Applicant: Mr. G Coward

Company: Shorne Mead, Pear Tree Lane, Shorne, Gravesend, Kent, DA12 3JT

Planning Agent/Architect: Mark Carter

Company: Mark Carter Associates

Address: Design Studio, Priestfield Stadium, Redfern Avenue, Gillingham, Kent, ME7 4DD

Telephone: 07709 494658

Planning Authority: Gravesham Borough Council

Address: Civic Centre, Windmill Street, Gravesend, Kent, DA12 1AU

Case Officer: Mrs. Alison Webster

Telephone: 01474 337391

Email: planning.general@gravesham.gov.uk

Environment Agency Incident Hotline: 0800 80 70 60

4 Environmental & Site-Specific Sensitivities

The following section outlines environmental and site-specific sensitivities.

4.1 Geology and Hydrogeology

The is underlain by bedrock of the Lambeth Group.

The Lambeth Group consists of vertically and laterally variable sequences mainly of clay, some silty or sandy, with some sands and gravels, minor limestones and lignites and occasional sandstone and conglomerate. The Lambeth Group was deposited in fluvial, estuarine, lagoonal or proximal marine environments¹.

The hydrogeology is classified as Secondary A Aquifer, the table below outlines the definitions:

Table 2 Aquifer Definitions

Designation	Description	Geology
Principal	Principal aquifers provide significant quantities of drinking water, and water for business needs. They may also support rivers, lakes and wetlands.	NA
Secondary A	Comprise permeable layers that can support local water supplies, and may form an important source of base flow to rivers.	Lambeth Group
Secondary B	Mainly lower permeability layers that may store and yield limited amounts of groundwater through characteristics like thin cracks (called fissures) and openings or eroded layers.	NA
Secondary Undifferentiated	Secondary undifferentiated are aquifers where it is not possible to apply either a Secondary A or B definition because of the variable characteristics of the rock type. These have only a minor value.	NA
Unproductive Strata	Unproductive strata are largely unable to provide usable water supplies and are unlikely to have surface water and wetland ecosystems dependent on them.	NA

The site lies in a Source Protection Zone Three (SPZ3) with the associated SPZ2 within 50m of the southern side of Peartree Lane.

4.2 Hydrology

The site lies in the Medway Management Catchment, one of the largest catchments in Southern England, covering 930sq miles. From its source at Turners Hill in West Sussex. Flowing from the High Weald, it passes through the regions iconic rural heartland as well as large urban areas such as Tonbridge and the Medway Towns. At Maidstone, the river becomes a tidal estuary, cutting through the chalk of the Kent Downs, before finally joining the Medway Swale Estuary at Rochester, 90 miles from its source. The catchment has an extensive network of tributaries including the Eden, Teise and Beult. Nearly three quarters of the Medway catchment is protected by landscape designations, with the River Beult classified as a Site of Special Scientific Interest The estuary is one of the most important natural wetlands in northern Europe. The catchment has a varied topography and diverse underlying soils and geology, creating high gradient watercourses in the Upper Medway and Teise and very low gradient watercourses in the Beult and Middle Medway².

¹ <https://webapps.bgs.ac.uk/lexicon/lexicon.cfm?pub=LMBE>

² <https://environment.data.gov.uk/catchment-planning/ManagementCatchment/3055>

4.3 Statutory Environmental Designations

There is a Site of Specific Scientific Interest, Great Crabbles Wood, located 100m south of the site. It runs along the southern boundary of Peartree Lane and includes Dunbar's Wood.

There are no other statutory designations within 500m of the site.

5 Construction Environmental Management Plan (CEMP)

The following section outlines the proposed approach to construction identifying the mitigation required to reduce and, where possible, remove the environmental impact of the demolition and construction on the wider environment. The ecological mitigation proposals are covered under separate cover.

The CEMP has been divided into the following sections:

- Ecology;
- Housekeeping;
- Dust;
- Surface Water Management; and
- Communication.

ALL STAFF WORKING ON SITE MUST BE MADE AWARE OF THE MITIGATION MEASURES IDENTIFIED IN THIS CEMP.

5.1 Ecology

5.1.1 Ecological Clerk of Works

The demolition and construction phases of this development project can present risks to legally protected species, sensitive habitats and compliance with the CEMP planning condition.

An Ecological Clerk of Works (ECoW) provides specialist ecological supervision and advice to ensure that all site works are carried out lawfully, safely, and in line with agreed mitigation strategies. The ECoW role is now considered best practice on sites where ecological constraints have been identified during the planning and survey stages.

The ECoW should be present on site to act as an on-site ecological guardian, ensuring that all ecological mitigation, avoidance and enhancement measures are implemented correctly. By working directly with site managers, contractors, and consultants, the ECoW helps reduce ecological risks, avoid project delays, and safeguard both biodiversity and legal compliance.

A summary of their responsibilities are listed below:

Pre-Works Checks

- Carrying out pre-demolition inspections of buildings, structures, or habitats to confirm the absence or presence of species such as bats, nesting birds, or badgers;
- Marking exclusion zones and identifying sensitive areas that require protection.

Contractor Briefings

- Delivering toolbox talks and site inductions to ensure all staff are aware of ecological sensitivities and legal responsibilities;
- Explaining the procedures for reporting unexpected wildlife encounters during works.

Active Supervision

- Overseeing demolition of buildings or vegetation clearance where protected species may be present;

- Supervising sensitive operations such as hand-stripping roof tiles, removing vegetation during bird breeding season, or working near ponds and watercourses.

Ongoing Monitoring

- Checking that mitigation measures (such as bat boxes, reptile fencing, or protective buffer zones) remain in place and functional throughout the construction phase;
- Recording compliance and reporting any breaches or required adjustments promptly to the project team.

5.1.2 Bat Survey

Calumma Ecological Services undertook bat emergence surveys on site in May, June and July 2024. The following section outlines the findings of that survey and is presented in Annex B.

The preliminary appraisal had indicated that the dwelling had moderate potential for roosting bats therefore prompting the need for detailed emergence surveys. All UK bat species are European Protected Species under the Habitats and Species Regulations 2017 and also protected under the Wildlife and Countryside Act 1981. It is an offence to kill, injure, disturb bats or damage/destroy their roosts.

Three dusk emergence surveys were completed following the Bat Conservation Trust guidelines. Four surveyors were deployed, using bat detectors and infrared cameras to monitor potential roosting features.

The surveys were carried out on 23rd May, 11th June, and 4th July 2024, each beginning shortly before sunset and ending about 90 minutes after. Weather conditions were generally suitable and reported as dry, still or light breezes and mild evening temperatures, the results are summarised below:

Table 3 Bat Survey Results

Date	Result
23 May 2025	A soprano pipistrelle emerged from beneath a tile on the southwestern gable end 12 minutes after sunset. Foraging activity on site was very limited, consisting mainly of common and soprano pipistrelles with occasional noctule and brown long-eared bat passes.
11 June 2025	Another soprano pipistrelle emerged from beneath a different hanging tile on the same elevation, considered the same roost as in May. Foraging activity remained very low, dominated by noctule with some pipistrelle passes and a single brown long-eared bat.
04 July 2024	A common pipistrelle emerged from beneath a hanging tile on the southwestern elevation, confirming the presence of a second roost. Foraging was again limited, with noctule and soprano pipistrelles most frequent and occasional common pipistrelle records.

Summary of Bat Survey Findings

Two individual day roosts were confirmed:

- One soprano pipistrelle; and
- One common pipistrelle.

Only one bat was seen emerging on each occasion, indicating use by individual males or non-breeding females. Overall bat activity on the site was very low, with most foraging activity occurring in nearby woodland rather than on the property itself.

5.1.3 Bat Mitigation

It is likely that the demolition of the dwelling will destroy two day-roosts and therefore requires a Natural England licence before works can proceed.

A Bat Mitigation Class Licence (BMCL) should be obtained to allow the demolition to proceed legally, ensuring mitigation and compensation measures are provided.

Mitigation measures should include obtaining a BMCL prior to works, installing a single tree mounted bat box as a temporary roost for any bats found during demolition, such as those provided by eco kent bat box (wildcare.co.uk), supervised hand removal of roosting features, timing works to avoid winter, and ensuring contractors receive a bat toolbox talk.

Post-construction, at least two built-in bat tubes should be installed in the new dwelling's southwestern elevations. Lighting design should avoid disturbing bats, using low-UV fittings directed away from green corridors and roost entrances.

5.1.4 Applicant Information

Licence applications can only be submitted once planning permission has been granted.

They must be prepared by a suitably qualified ecologist registered with Natural England. The application must include up-to-date survey evidence and a clear mitigation strategy to safeguard bats—for example, provision of replacement roosts (bat boxes, bat tubes), sensitive demolition methods under ecological supervision, and lighting controls. Natural England typically takes around 15 working days to approve a BMCL application. The licence, once granted, must be in place before any development activities affecting bats begin.

General ecological advice is provided below to consider on site where relevant:

5.1.5 Badgers

Setts: Maintain a minimum 30 m exclusion zone around active badger setts (100 m for piling or blasting). No works, lighting, or storage of materials should occur within this buffer without a licence from Natural England.

Construction fencing must not block badger commuting routes; maintaining underpasses or gaps and all excavations should be covered or ramped overnight to prevent badgers becoming trapped.

5.1.6 Birds (Breeding Season)

Avoid vegetation clearance, building demolition, or roof work between March–August inclusive, unless ECoW confirms no active nests are present.

The development should retain a minimum 5 m undisturbed buffer around active nests until young have fledged with bird boxes secured on retained trees or buildings to provide alternative nesting habitat.

5.1.7 Dormice

Where feasible continuous hedgerows and woodland edges should be maintained, where removal is necessary, cut vegetation in two stages under ecological supervision with buffers maintained as dark corridors with minimal lighting along hedgerows to allow safe commuting.

5.1.8 Hedgehogs

All piles of materials, compost and vegetation should be checked before movement and/or clearance.

Ramps should be provided in open trenches and pits and pipes over 200mm covered at the end of each day. **Wildlife-friendly site hoarding with gaps (13 cm x 13 cm) at ground level should be used to allow hedgehog passage.**

5.2 Housekeeping, Materials Storage & Pollution Incident Control

5.2.1 Storage of Plant and Materials

Good housekeeping and environmental management will reduce the risk of pollution incidents.

The layout presented in Figure 2 attempts to keep all storage and bunded areas away from site boundaries however, this may not be feasible throughout the entirety of the build. Close monitoring of storage locations in unison with weather observations will take place during the development of the site and relocation of materials and waste store will occur if required.

Storage will be carried out on impermeable surfaces in accordance with British Standards.

Storage of fuels, oils and any other chemicals on site must be contained within bunded areas capable of holding 110% of the total capacity of fluids.

Bunds must be secure and capable of capturing and holding fugitive emissions in the event of attempted theft and or accidental spills.

Regular maintenance of plant and machinery on site will ensure best practices are followed.

Where refuelling of plant and equipment is required on site, refuelling must take place using drip trays, with the operator present at all times during the filling. If access to a hardstanding area is not available then a temporary bunded and lined area must be used i.e. impermeable sheets, drip trays and sandbags.

On completion, all fuels must be returned to permanently bunded storage areas. These bunded store areas will be made secure at the end of each working day.

Due to the dynamic nature of the site, the location of Materials and Storage of will vary according to the schedule of works. At each stage of the development, the most appropriate location shall be utilised, keeping to the boundary of the development plot to maintain the most reasonable distance from the neighbouring properties.

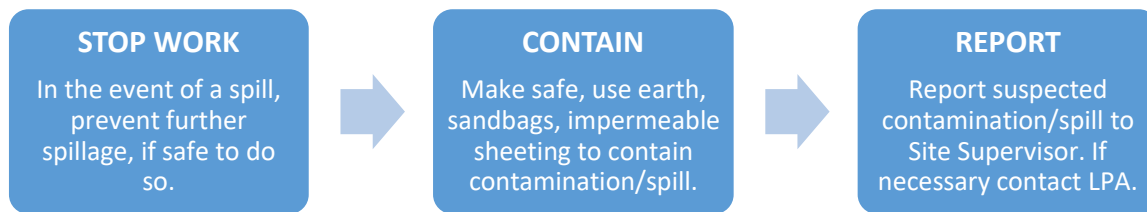
5.2.2 Pollution Spills and Environmental Incidents

In the event of a fugitive emission the following mitigation is recommended:

- Spill kits must be present on site at all times, including absorbent mats, pollution prevention booms, granules, shovels, gloves and temporary drain seals/covers;
- Refuelling of plant and machinery on site will take place using drip trays or in temporary bunded areas;
- All storage of hazardous liquids, for example hydrocarbons/fuels, will be carried out in a bunded area with an impervious base to prevent spillage and leaks;
- Maintenance of plant and machinery shall be carried out along with visual inspection to reduce the risk of catastrophic loss of product to the environment; and

- In the event of a significant leak/spill and/or discovery of contamination occurs the following procedure, presented in Chart 1, will be adopted:

Chart 1 Encountering Unexpected Contamination - Spill Response



If safe to do so, the spill kit on site must be used to clean up any spills and/or report to Local Planning Authority (LPA). In the event of unanticipated contamination in the sub-surface contact with the Environment Agency, LPA and a qualified environmental consultant will be made.

5.2.3 Fencing, Hoarding & Scaffolding

Temporary fencing (Heras fencing) will be erected along the boundary of development. As a means of pollution prevention it is recommended to line the base of the Heras fencing with silt traps/skirts or straw bales to prevent sediment runoff leaving the site.

Fencing and pollution prevention measures will undergo regular inspection to ensure integrity and to mitigate any vandalised portions where required during the construction period.

5.2.4 Waste Management & Mitigation

Waste will be derived during the demolition and development process.

Re-use, reduction and recycling is encouraged to limit the amount of waste produced on site.

All demolition and construction waste arising from site shall be removed by a licensed contractor and disposed of in line with duty of care. Waste should be disposed of appropriately at a permitted Waste Management facility and segregated to maximise reuse/recycling where possible.

Storage and segregation of waste during demolition and construction will prevent harm to human health, amenity and the environment through nuisances such as dust, odour or pests.

On site, construction waste will be stored in suitable containers and appropriately maintained:

- Recyclable - recycled containers/wheelie bins;
- Reusable – salvage;
- Compactable - visiting compactors/wheelie bins;
- Non-compactable – taken from site;
- Hazardous – specialist Licensed removal from site.

Prior to collection waste will be contained and covered using a suitable tarpaulin (or similar) to prevent fugitive emissions (dust) migrating off-site and protect it from the elements and rodents.

To reduce the potential for pests on site the waste areas will be kept tidy, clean and well maintained at all times.

5.3 Control of Noise & Vibration

Potential impacts from noise and vibration will be mitigated through adhering to Section 72 of Control of Pollution Act 1974 and the British Standard Code of Practice BS 5228:2009.

5.3.1 Noise and Vibration Control

Any works associated with the generation of ground borne vibrations and/or excessive noise are only to be carried out between the hours of 08:00 and 18:00 Monday to Friday and 08:30 and 13:00 on Saturdays.

During demolition and construction there is the requirement to ensure that all noise generated during works is controlled in compliance with British Standard Code of Practice BS 5228:2009. BS5228 refers to the need for the protection against noise and vibration of persons living and working in the vicinity of and those working on construction and open sites.

5.3.2 Noise & Vibration Mitigation

The effects of noise and vibration will be mitigated by using the following controls:

- No idling machinery, switch off engines when waiting or not in use;
- Hand-cutting materials where feasible, use of noise-reducing saw blades;
- Engineering controls to modify equipment or the work area to make it quieter such as substituting equipment with quieter equipment; retro-fitting equipment with damping materials, mufflers and erecting barriers;
- Noise reducing baffle boards to be erected around machinery such as cement mixer housings. Positioning of machinery to be away from the boundaries where feasible and within baffle board surrounds;
- Designing less cuts/on-site alterations to materials, having work carried out off-site and delivered where possible;
- Eliminating noise or substituting a process for a less noisy process is the optimum mitigation. Consideration of a less noisy solutions on Saturdays will take place and, if technically feasible, adopted;
- Noise levels from power tools will be considered when procuring equipment. Manufacturer or supplier information will be used to choose the quietest tools that are effective for the job; and
- Communication on site, at distance, will be carried out using mobile phones or radios.

5.4 Dust Management

5.4.1 Dust, Dirt and Emissions

Air quality can be temporarily impacted by extensive dust/exhaust fume inducing processes and non-road mobile machinery³. The provisions of the Air Quality Standards Regulations 2010, the Environment Act 1995, Environmental Protection Act 1990 and all other pertinent legislation will be complied with.

The following mitigation methods on site will be based on the following principles:

³ Non-road mobile machinery refers to mobile machines, transportable industrial equipment or vehicles which are fitted with an internal combustion engine and not intended for transporting goods or passengers on roads.

- Methods and materials will be used to ensure that dust generation is minimised;
- Prefabricated materials will be used wherever possible;
- Dust generating activities are to be located away from sensitive receptors. An adequate supply of water for damping down dust with sufficient hoses to reach all parts of the site will be present; and
- Water supplies will be conveniently located, for example, near dust generating activities and site exits⁴.

5.4.2 Air Quality, Dust, Smoke & Odour Mitigation

The following air quality and dust mitigation measures will be adopted, they have been divided into two work areas:

1. Practices in construction; and
2. Plant mitigation methods:

Table 4 Work Area Mitigation Methods

Work Area	Mitigation Method
Practices in Construction	Use of on-tool extraction units where feasible.
	Wetting down of ground and materials where dust is emitting (cleaning of high-level/scaffold walkways).
	Scaffold, where used, will be wrapped.
	Hand-cutting materials where feasible.
	No bonfires are permitted on site.
	Consideration of reducing dust emissions in the design and procurement phase through selecting the correct sized materials to reduce cutting on site.
	Where feasible carrying out dust emitting works off-site and getting materials delivered.
	All fuels, oils and other Volatile Organic Compounds (VOC's) will be stored in secure, sealed, labelled containers in the materials storage area.
	Consideration will be made to using prefabricated materials where possible to reduce the potential for localised air pollution.
	The design and layout of work areas will increase separation distances from potential sources of air pollution, i.e. cutting and breaking will not be carried out on the boundaries where feasible.
	Green infrastructure will be used to absorb dust and other pollutants, where present.
	Drop heights from chutes, where relevant, and loading should be kept to a minimum and kept enclosed.
	Mains electricity supply will be used in preference to generators and baffle boards to be used around cement mixers.
Plant Mitigation Methods	Switching off engines when not in use, no idling.
	Where possible plant and machinery exhausts should be directed up rather than down at the ground to prevent the mobilisation of dust particles from the ground.
	Reduce plant movements to a minimum during dry periods.
	Vehicles and plant must not be over-loaded to prevent labouring.
	All potentially dust emitting deliveries and, haulage leaving the site, must be covered/sheeted and appropriately secured.

5.5 Lighting

Lighting has the potential to cause direct and indirect impacts, to reduce these impacts:

- Lighting shall be directed and task focussed to mitigate light spill onto surrounding properties and adjacent sites;
- Site lighting will be required if the project occurs during darker Winter months and will use the minimum luminosity required for safe, secure works;
- Works will be scheduled to take place during day-time hours to prevent the need for night-time working;

⁴ [Document 12 - BRE - Control of Dust from Construction & Demolition Activities.pdf \(rbkc.gov.uk\)](#)

- Any lighting on site will comply with the Institution of Lighting Engineers' guidance note for the Reduction of Obtrusive Light 2020 and the provisions made in the Code of Practice for the Design of Road Lighting (BS5489);
- All non-safety related lighting will be turned off outside working hours; and
- Ecological considerations will be dealt with under separate cover.

5.6 Surface Water Management

To manage overland flow on site it is proposed to have a stock of sandbags and hay bales that will be deployed in the event of heavy rainfall. Runoff will be controlled on site using sandbags/hay bales (or similar).

In Winter months hay-bales will be installed close to works during construction to capture any sediment runoff and slow any flow.

Bunded areas will remain for the duration of construction and, if required, the applicant will use vacuum lorries to empty these bunded areas in the event of excessive surface water build-up. This liquid waste will be disposed of with a valid waste carrier's licence and relevant Duty of Care.

5.7 Communications

5.7.1 Reporting & Communication

Communication and engagement is key for the development and residents in the area.

Appropriate communication and distribution of information to the local community will be achieved by a Site Contact Board positioned at the site access outlining the anticipated tasks to be carried out in the forthcoming month.

This should also include a brief summary of works completed to date and the following information:

- Name of the main contractor, address and person to whom correspondence should be addressed;
- Name of the Site Supervisor/Foreman and contact details; and
- Anticipated completion timeframes of phases/works.

In the event of a complaint from the general public and/or Local Planning Authority the incident will be recorded.

Following investigation, the results shall be communicated to the complainant and reported to the Local Authority if deemed necessary.

The site manager must be informed of any deviations from this CEMP as soon as possible following identification of such issues.

6 Monitoring

Visual monitoring will take place on a daily (Monday to Saturday) and on an ad-hoc basis linked to the activities taking place.

Monitoring will be carried out by the appropriate member of staff and include observations of:

- Waste management controls such as ensuring containment of waste derived from construction;
- Litter;
- Dust;
- Notice boards and signs;
- Vehicular maintenance and bunded areas; and
- Complaints procedure – review of investigations and outcomes.

Where specific issues are noted the Site Supervisor, or appointed delegate, shall make the necessary arrangements to improve the operation and resolve the issue.

Findings must be reported back to the complainant along with the mitigation measures deployed, if required, and logged in the site records.

7 Figures

Figure 1 Site Location

Figure 2 Site Layout

Figure 1 Site Location

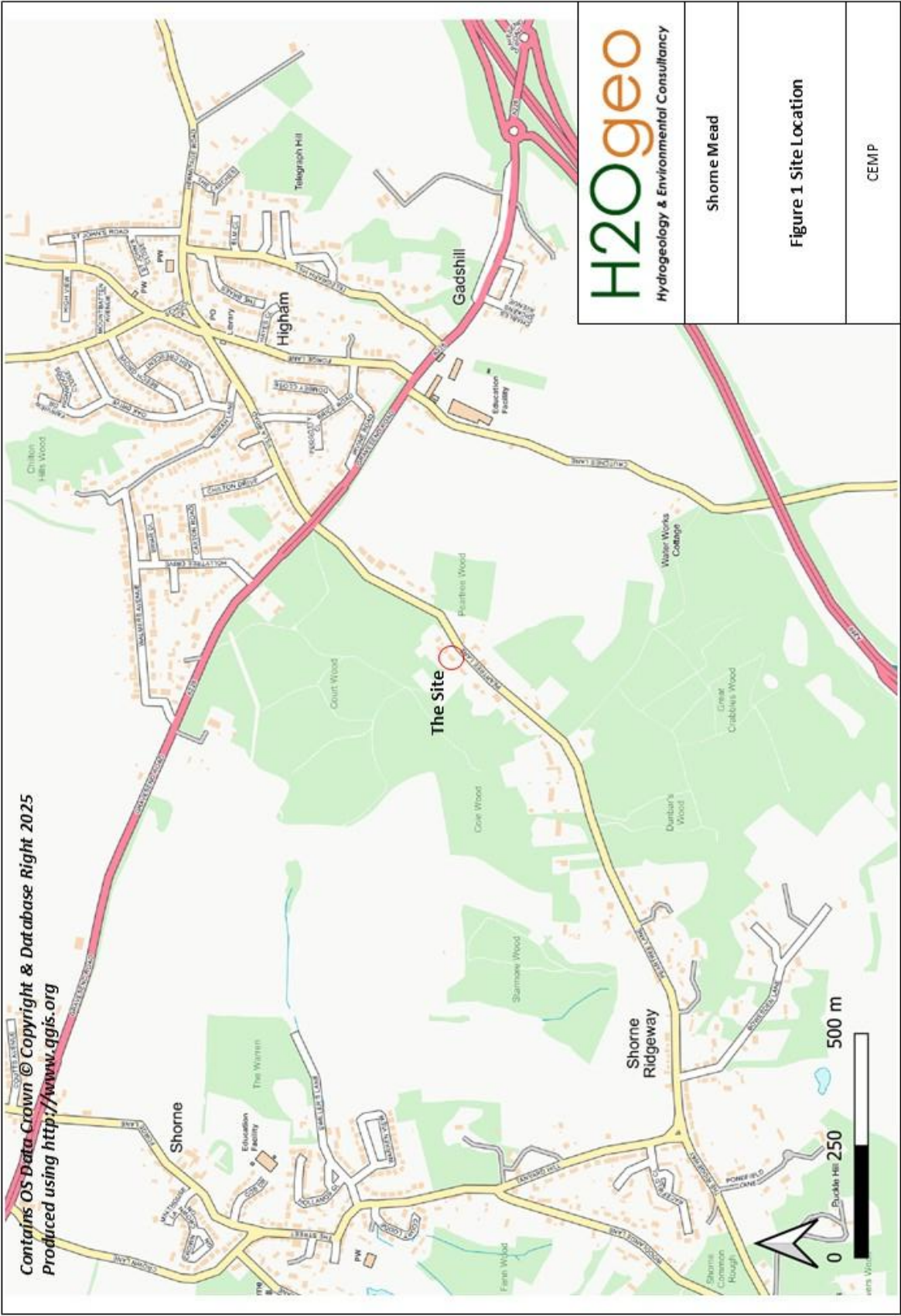
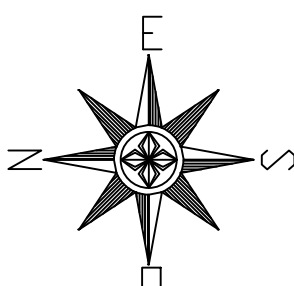
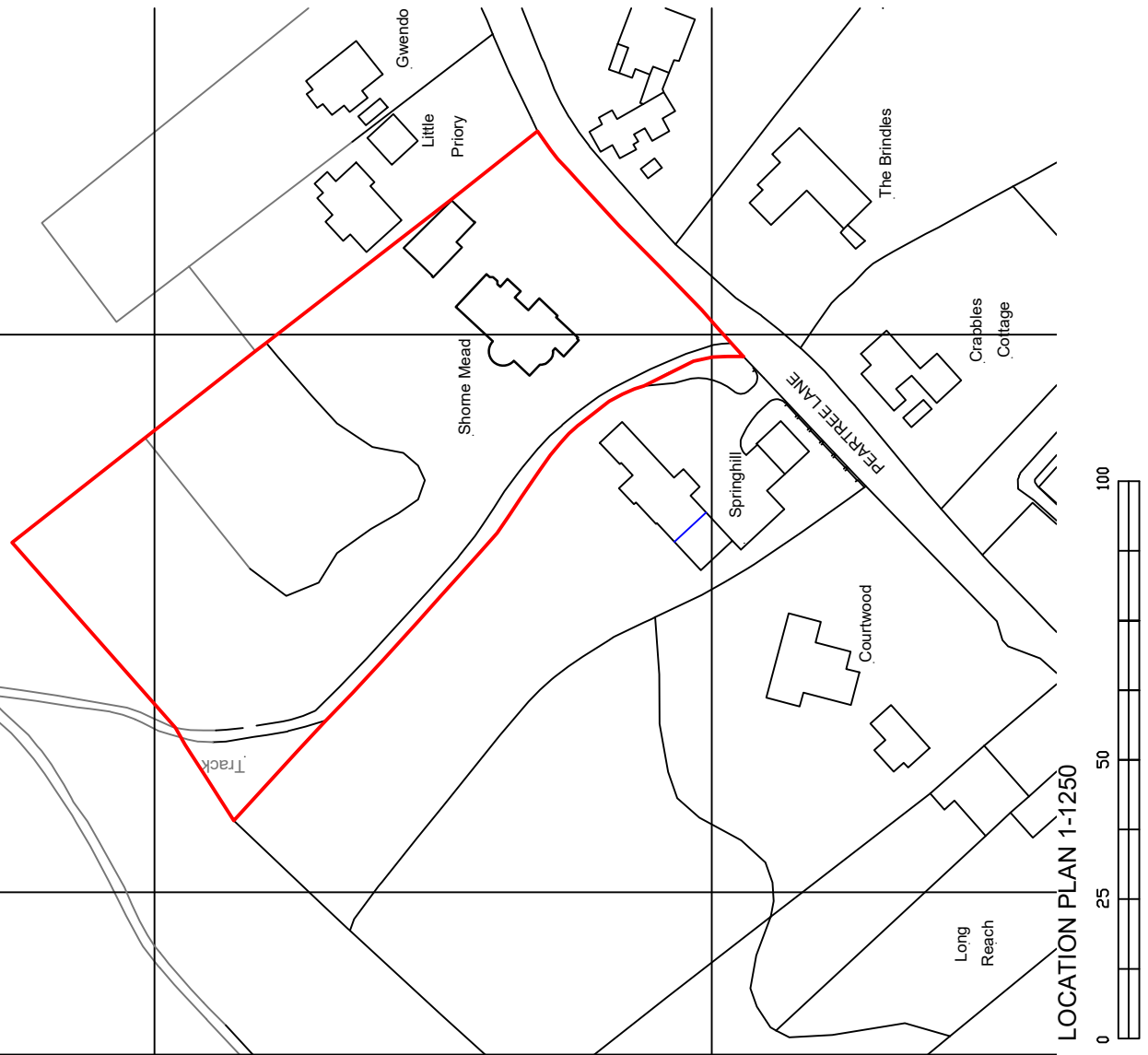
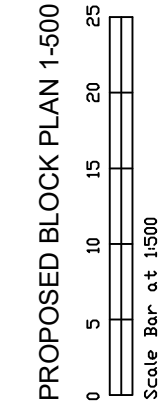
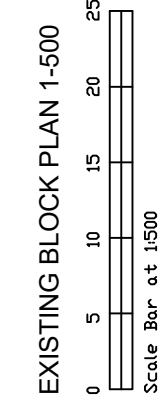


Figure 2 Site Layout

H2Ogeo Hydrogeology & Environmental Consultancy	Shorne Mead	Figure 2 Site Layout	CEMP
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Source: Mark Carter Associates

Annex A – Planning Drawings



Revision	Date	Description
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Scale	Planning
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Mark Carter ASSOCIATES

Architectural Design

design studio
priestfield stadium gillingham kent ME7 4DD
tel 01634 304700 fax 01634 850986
e mail : markcarter.design@virgin.net

Client
MR AND MRS COWARD

Drawing Title
LOCATION AND BLOCK PLANS

Project Title
NEW REPLACEMENT DWELLING AT
SHORNE MEAD
PEAR TREE LANE

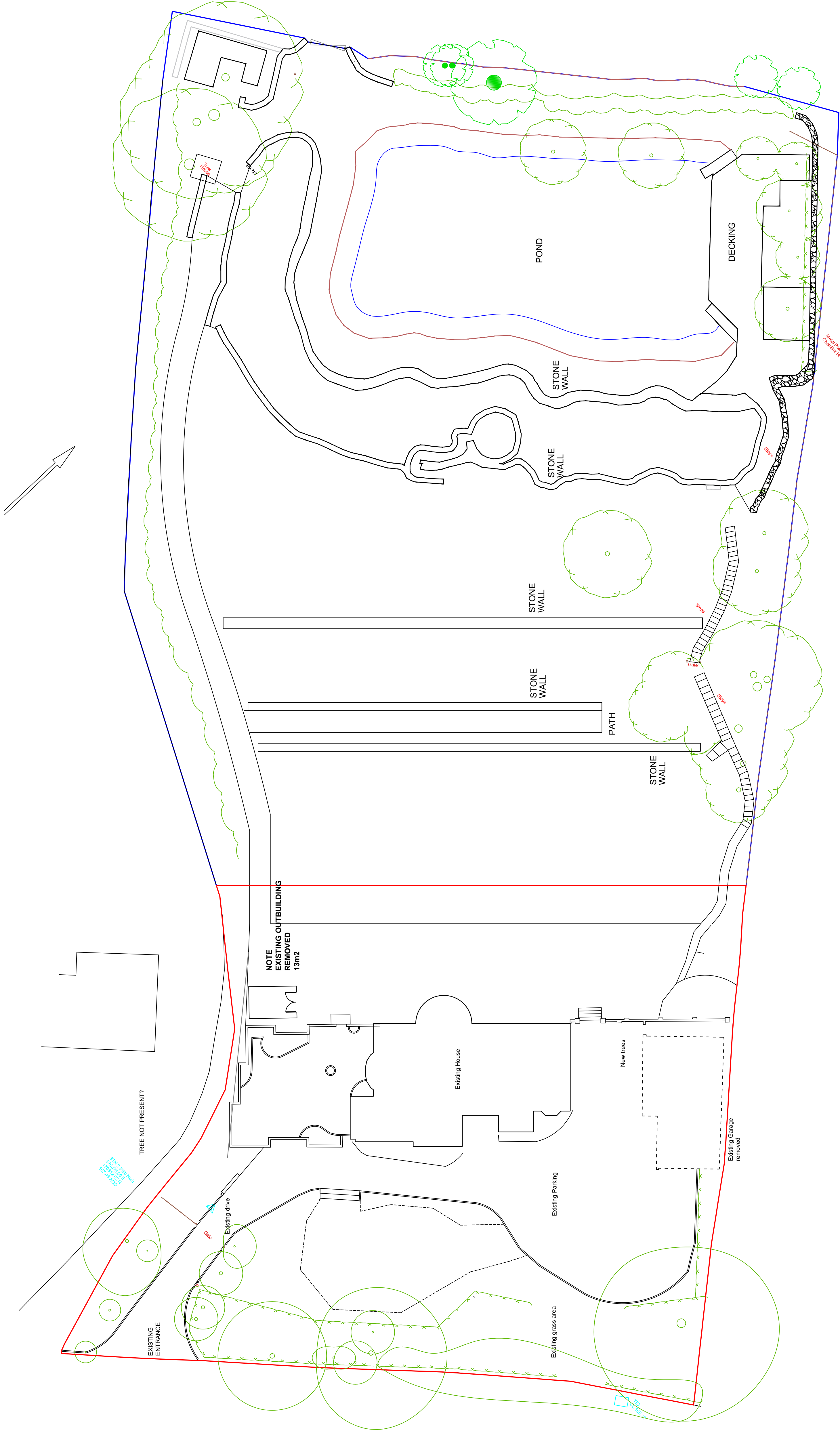
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Date
OCT 24

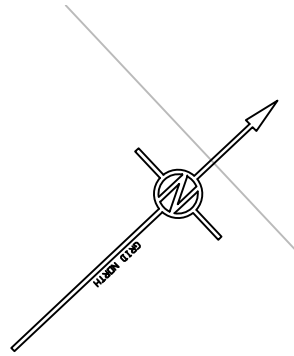
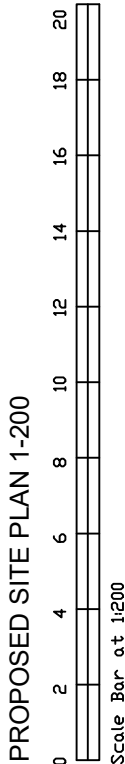
Drawn
MC

Drawing No
3316 - 027

Rev
-



NOTE LANDSCAPING TO REAR
GARDEN AS APPROVED UNDER
REF: 20220543



Revision	Date	Description
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STATUS	PLANNING
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Mark Carter
Associates

design studio
priestfield stadium gillingham kent ME7 4DD
tel 01634 304700 fax 01634 850986
e mail: markcarter.design@virgin.net

design studio
priestfield stadium gillingham kent ME7 4DD
tel 01634 304700 fax 01634 850986
e mail: markcarter.design@virgin.net

Client
MR AND MRS COWARD

Drawing Title
EXISTING SITE PLAN

Project Title
REPLACEMENT DWELLING AT
SHORNE MEAD
PEAR TREE LANE

Scale
1:200

Date
OCT 24

Drawn
MC

Drawing No
3316 - 028

Rev
C

Annex B Bat Survey

Calumma Ecological Services

Bat Emergence Survey

**Shorne Mead, Pear Tree Lane,
Shorne, Kent, DA12 3JT**

Report to:
Mrs. Dawn Coward

23rd July 2024
Revision 2 (21st August 2025)



Responsibilities:

This document has been prepared for the titled project and should not be relied upon or used for any other project without an independent check being carried out as to its suitability and prior written authority by the author.

Biological Data:

As part of membership of our professional body we are required to provide our species data results to the relevant biological records centre. As such, it is our intention to supply biological data unless directly instructed in writing not to do so by the commissioning client.

Length of Time Report is Valid:

Provided no significant changes are made to the proposal or to the proposed site (*e.g.* significant changes to management practices or habitats present) after the report's issue, this report can be considered valid for 12 months from the date of issue.

CONTENTS

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2 BACKGROUND INFORMATION	4
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4 RESULTS	6
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7 RECOMMENDATIONS AND MITIGATION.....	10
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SUMMARY

Bat emergence surveys of a single detached dwelling and garage at Shorne Mead, Pear Tree Lane, Shorne, DA12 3JT were undertaken in May, June and July 2024. The surveys were undertaken in support of a planning application for demolition of the existing buildings and construction of a replacement family home.

Two pipistrelle day roosts (1 x common pipistrelle and 1 x soprano pipistrelle) were identified on the southwestern elevation of the dwelling. A very low level of foraging activity was recorded, with common pipistrelle, soprano pipistrelle, noctule and occasional brown long eared bats.

A licence from Natural England is required for the demolition of the dwelling as it will result in the destruction of 2 day roosts, with potential to kill/injure/disturb the bats occupying them, which are offences under UK and European legislation. The proposal is considered to fit the criteria for a Bat Mitigation Class Licence (BMCL) from Natural England, which can be used for small numbers of roosts of low conservation significance.

Outline mitigation has been suggested.

1 AIMS OF THE STUDY

The focus of this report is a single detached dwelling and garage at Shorne Mead, Pear Tree Lane, Shorne, DA12 3JT.

To inform a planning application for the proposed demolition of the existing buildings and erection of a new family home, a Preliminary Ecological Appraisal (Calumma Ecological Services, 2024) was undertaken, which found the dwelling (B1) to hold moderate suitability for roosting bats and the detached garage (B2) to hold low suitability for roosting bats.

The Preliminary Ecological Appraisal recommended further survey work to meet the following objectives:

- Identify the presence or potential presence of roosting bats within the site.
- Identify the need for European protected species licensing.
- Make outline recommendations for any mitigation and or enhancement measures.

2 BACKGROUND INFORMATION

As part of the Preliminary Ecological Appraisal (Calumma, 2023), a bat risk assessment was undertaken of a single building (shown in Figure 1).

The Site is located within a predominantly rural setting, with a low density of housing. The area is surrounded by a large block of woodland with optimal suitability for foraging and year round roosting for bats.



Figure 1 – Site plan, showing buildings B1 and B2 (taken from Calumma, 2024)

Building	Description	Bat evidence
B1 dwelling	Semi-detached dwelling of brick construction with a pitched, tiled roof. The walls are partially clad with hanging tiles. The building is occupied. Externally the building is in a generally good condition. A low number of potential bat roost/access features were noted, in particular gaps under hanging tiles. The building was assessed as having moderate suitability for roosting bats in the PEA. There is low potential for hibernating bats.	None
B2 Garage	Detached garage of brick construction with a pitched, tiled roof, in an apparently good condition. A small west facing dormer is clad with hanging tiles. The building was assessed as having low suitability for roosting bats in the PEA. There is negligible potential for hibernating bats.	None
B3 Shed	Detached brick shed with negligible suitability for roosting bats.	None

Table 2. Building descriptions and bat potential

3 METHODOLOGY

3.1 Emergence Surveys

Three dusk emergence surveys were undertaken, in accordance with the Bat Conservation Trust Good Practice Guidelines (Collins, 2023). All features of bat roosting potential could be observed by 4 surveyors (See Figure 2).

The surveys started approximately 15 minutes before sunset and ended approximately 90 minutes after sunset.

Each surveyor was equipped with either Elekon Batlogger or Wildlife Acoustics EM Touch detectors, plus Nightfox Whisker InfraRed cameras.

Pre-dawn surveys were not undertaken, as it was considered that with the aid of IR cameras, an adequate assessment of all features of bat roosting potential could be undertaken during dusk emergence surveys.

The surveys were led by ecologist Kate Baldock MCIEEM (Level 2 bat survey licence 2015-12362-CLS-CLS, with 18 years of bat survey, mitigation and licensing experience), assisted by experienced bat surveyors Kathryn Clements, Dr Lee Brady MCIEEM and Oliver Westergaard.



Figure 2 – Surveyor Locations and Sightlines

3.2 Survey Dates, Times and Weather Conditions

Date	Sunset	Start	End	Weather	Temperature
23/05/2024	20:55	20:40	22:25	Overcast, light breeze, dry	17°C to 14°C
11/06/2024	21:19	21:04	22:49	Overcast, still, dry	14°C to 12°C
04/07/2024	21:16	21:01	22:46	Overcast, light breeze, dry	18°C to 16°C

Table 1 - Survey dates, times and weather conditions

4 RESULTS

23rd May 2024

At 21:07, 12 minutes after sunset, a single soprano pipistrelle emerged from beneath a tile on the southwestern gable end (See Figure 3).

A very low level of common pipistrelle and soprano pipistrelle foraging was recorded within the site, with occasional noctule and brown long eared bat passes.



Figure 3 – 23rd May 2024, soprano pipistrelle day roost on the south western elevation

11th June 2024

At 20:15, 4 minutes after sunset, a single soprano pipistrelle emerged from beneath a hanging tile on the southwestern elevation (see Figure 4). Although a different access point, this is considered to be the same roost as recorded on 23rd May.

A very low level of foraging activity was recorded within the site, which was dominated by noctule, with occasional common pipistrelle and soprano pipistrelle passes and a single brown long eared bat.



Figure 4 – 11th June 2024, soprano pipistrelle day roost on the south western elevation

4th July 2024

At 21:38, 22 minutes after sunset a single common pipistrelle emerged from beneath a hanging tile on the southwestern elevation (See Figure 5).

A very low level of foraging activity was recorded within the site, which was dominated by noctule and soprano pipistrelle, with occasional common pipistrelle passes.



Figure 5 – 4th July 2024 Common pipistrelle day roost on the south western elevation

Summary

Two pipistrelle day roosts used by individual bats (1 x soprano pipistrelle and 1 x common pipistrelle) were identified on the southwestern elevation of the dwelling, with a single bat emerging on each occasion.

Very low activity was recorded on all surveys. It is likely that bats are foraging in and around the surrounding woodland which provides higher quality habitat and foraging resources.

5 LEGISLATION

Habitats and Species Regulations 2017 (as amended)

All species of bat native to the UK are European Protected Species (EPS). As such under the Habitats and Species Regulations 2017 (as amended) it is an offence to:

- Deliberately capture, injure or kill any wild animal of a European Protected Species;
- Deliberately disturb wild animals of any such species. Disturbance of animals includes in particular any disturbance which is likely to impair their ability to survive, to breed or reproduce, or to rear or nurture their young; or in the case of animals of a hibernating or migratory species, to hibernate or migrate; or to affect significantly the local distribution or abundance of the species to which they belong;
- Deliberately damage or destroy a breeding site or resting place of such an animal.

Wildlife and Countryside Act 1981(as amended)

Bats are afforded full protection under Section 5 of the Wildlife and Countryside Act 1981(as amended). It is illegal to:

- Deliberately or recklessly kill, injure or disturb a bat;
- Deliberately or recklessly damage, destroy or obstruct access to a bat breeding site or resting place.

In summary, all species of bat in the UK, and their roosts, are protected from killing, injury, disturbance, damage/destruction/obstruction of their roosts.

Any works that have the potential to affect bats and/or their roosts should be undertaken under a European Protected Species Mitigation Licence or Bat Mitigation Class Licence (for low impact projects), granted by Natural England.

6 IMPACT ASSESSMENT

6.1 Limitations

The surveys were undertaken within the optimum time period for carrying out bat activity surveys, and all features of bat potential could be seen. There were therefore no constraints to the survey.

6.2 Potential Impacts

Day Roosts

Two day roosts of individual common pipistrelle and soprano pipistrelle bats were recorded during the surveys. These are likely to be males or non-breeding females.

Unmitigated demolition of the building will result in the destruction of 2 day roosts and potentially kill/injure/disturb roosting bats, all of which are offences under UK and European legislation.

Lighting

There is a risk of light disturbance to foraging bats and increased risk of predation from artificial lighting during both construction and operational phases of the project.

7 RECOMMENDATIONS AND MITIGATION

7.1 Further Survey

If the proposed development does not proceed within 12 months of the date of this report, an updated survey is recommended to confirm if the results of the current survey are still valid, and that the mitigation is still appropriate. For licencing purposes, Natural England require survey data to be '*up to date and have been conducted within the current or most recent optimal season*'.

7.2 Bat Mitigation Class Licence

The survey data has confirmed the presence of day roosts of individual common pipistrelle and soprano pipistrelle bats, which will be destroyed. The proposal is considered to fit the criteria for a Bat Mitigation Class Licence (BMCL) from Natural England, which can be used for small numbers of roosts of low conservation significance.

A BMCL is granted by Natural England to permit activities which would ordinarily be unlawful, such as damage or destruction of a roost.

BMCL applications can only be submitted once planning permission is granted and must be prepared by an ecologist who is registered with Natural England to work on BMCLs (the Registered Consultant). Applications should take 15 days or less to be granted by Natural England. The licence itself must be issued prior to any development activities taking place.

7.3 Outline Mitigation

To minimise impacts to bats and their roosts, the following mitigation measures are recommended and will be confirmed during the licence application.

- A single tree mounted bat box will be required as a temporary roost for any bats found during demolition, such as:
 - [eco kent bat box \(wildcare.co.uk\)](http://wildcare.co.uk)

This should be located:

- On a tree close to hedges or tree lines
 - Ideally at least 3.5m above the ground
 - Away from artificial light sources (to protect them from predation)
 - Sheltered from strong winds and exposed to the sun for part of the day (usually south, south-east or south-west)
- Prior to demolition, the overseeing ecologist will provide a toolbox talk to the contractors involved in the building demolition. The overseeing ecologist will be the Registered Consultant, or an Accredited Agent nominated by the Registered Consultant with sufficient experience to work on BMCLs.
- Hand removal of the features used by roosting bats (and any features to have suitability for roosting bats) must be supervised by the overseeing ecologist.
- Although the buildings are of low suitability for hibernating bats, it is recommended that the winter months (November to March) are avoided to minimise the risk of encountering hibernating bats which are extremely vulnerable to disturbance.
- **Breathable roofing membranes must not be used where bats can come into contact with them, as bats can become entangled in their fibres.**

- As a minimum, at least two bat tubes should be installed in the southern/southwestern elevations of the new building. Examples include:
 - [Verona Built-in Woodstone Bat Box \(wildcare.co.uk\)](http://wildcare.co.uk)
 - [Schwegler 2FR Bat Tube/Access Unit \(wildcare.co.uk\)](http://wildcare.co.uk)

These are designed to be built into the masonry of an external wall and can either be built flush with the wall or beneath a rendered surface. The boxes require no maintenance.

These should be located:

- At least 3.5m above the ground
- Away from artificial light sources (to protect them from predation)
- Away from windows and doors

7.4 Lighting

As bats were recorded within the site, it is recommended that any lighting is designed to minimise impact on foraging/commuting bats.

If lighting is required, this should be low or zero UV, which is preferred to reduce attraction of insects to lighting and therefore to reduce the attraction of foraging bats to these areas.

Lighting should be directed away or shielded from any green areas/woodland/hedgerows, and bat boxes/roost access points to allow bats safe foraging routes where they will not be visible to predators.

8 RELEVANT PUBLICATIONS

Calumma Ecological Services (2023). *Preliminary Ecological Appraisal – Shorne Mead, Pear Tree Lane, Shorne, DA12 3JT.* Calumma Ecological Services.

Collins, J. (ed.) (2023). *Bat Surveys for Professional Ecologists: Good Practice Guidelines.* 4th Edition. Bat Conservation Trust, London, UK.

English Nature (2002). *Bats in roofs: a guide for surveyors.* English Nature, Peterborough, UK.

Gunnel, K., Murphy, B. & Williams, C. (2013). *Designing for Biodiversity: A technical guide for new and existing buildings.* RIBA, UK

Mitchell-Jones, A. J. (2004). *Bat Mitigation Guidelines.* English Nature, Peterborough, UK.

Reason, P.F. and Wray, S. (2023). *UK Bat Mitigation Guidelines: a guide to impact assessment, mitigation and compensation for developments affecting bats.* Chartered Institute of Ecology and Environmental Management, Ampfield.



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For more details please contact:
Dr. Lee Brady, *Calumma Ecological Services*,

info@calumma.co.uk

www.calumma.co.uk