

Construction Environment Management Plan:

Biodiversity



Dinting Road,
Glossop

March 2017

U R B A N
G R E E N



Quality Management

Job No	11298		
Project	Dinting Road		
Location	Glossop		
Title	Construction Environment Management Plan: Biodiversity		
Document Type	Report	Issue / Revision	1
Date	28 th March 2017		
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Revision Status / History

Rev	Date	Issue / Purpose / Comment	Prepared	Checked

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1 Introduction

1.1 Background to the scheme

An outline planning application has been approved in respect of proposals to develop a small area of land at Dinting Road, Glossop, Derbyshire. The proposals for the site relate to the construction of up to 65 dwellings, together with associated access on land south of Dinting Road.

The proposals have received outline planning consent¹ which was issued subject to conditions. This document has been produced to assist with a reserved matters application, while also promoting net landscape and biodiversity gains as a result of the proposed development.

To support the fulfilment of the above brief the following have previously been undertaken:

1. Desk study review;
2. An extended Phase 1 Habitat Survey;
3. A reptile survey; and
4. A bat activity and badger survey

The extended desk study and Phase 1 Habitat Survey was undertaken in March 2015 by Cheshire Ecological Services (CES 2015a). The report highlighted the existence or potential presence of hedgerows, foraging bats, birds and reptiles on site that have the potential to suffer detrimental impacts from the proposed development without appropriate mitigation and/or compensation.

Utilising the information from the above survey work, the current report details information of a construction ecological management plan with respect to hedgerows, birds, bats and reptiles.

1.2 Site context

The site is located at National Grid Reference 402725, 394517 and comprises a total area of 2.3ha (see Figure 1). The site comprises predominantly unmanaged grassland with areas of dense scrub, scattered trees and a tall, unmanaged boundary hedgerow.

The site is bounded by a railway line to the south, residential properties to the east and west and Dinting Road to the north.

As shown in Figure 1, the site is located in an area of urban fringe / rural mosaic and is located on the north-western outskirts of Glossop. The red line indicates the proposed development area.

¹ Planning reference HPK/2015/0412



1.3 Purpose of this management plan

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

- to assist with discharging relevant conditions, as part of the reserved matters, which were imposed when outline approval for the development was granted; and,
- to outline measures to prevent impacts on protected species and so avoid committing offences under the relevant legislation.
- This CEMP 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 CEMP, such as noise, traffic movements and air quality have not been included.

Conditions considered relevant to this management plan are as follows:

Condition 14 (C14):

"No development shall take place (including demolition, ground works, vegetation clearance) until a construction environmental management plan (CEMP: Biodiversity) has been submitted to and approved in writing by the Local Planning Authority. The CEMP (Biodiversity) shall include the following:

- a) Risk assessment of potentially damaging construction activities.*
- b) Identification of "biodiversity protection zones".*
- c) Practical measures (both physical measures and sensitive working practices) to avoid or reduce impacts during construction (may be provided as a set of method statements).*
- d) The location and timing of sensitive works to avoid harm to biodiversity features.*

- e) *The times during construction when specialist ecologists need to be present on site to oversee works.*
- f) *Responsible persons and lines of communication.*
- g) *The role and responsibilities on site of an ecological clerk of works (ECoW) or similarly competent person.*
- h) *Use of protective fences, exclusion barriers and warning signs.*
- i) *Details of Reptile clearance strategy*

The approved CEMP shall be adhered to and implemented throughout the construction period strictly in accordance with the approved details, unless otherwise agreed in writing by the Local Planning Authority.

Reason: To mitigate against the loss of existing biodiversity and nature habitats, in accordance with Policy EQ5 of the High Peak Local Plan 2016 and paragraph 17 and Section 11 of the National Planning Policy Framework."

1.4 Previous Ecological Studies

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

- Extended Phase 1 Habitat Survey, 2015 (Cheshire Ecological Services);
- Reptile Survey (Etive Ecology Ltd, 12 May 2015);
- Bat Activity and Badger Survey Report (Urban Green, October 2016)

A summary of the ecological baseline, taken from these reports, is included below to provide a context for the CEMP: Biodiversity.

1.5 Summary of baseline ecology likely to be affected

No statutory or non-statutory nature conservation designations apply directly to the site.

Derbyshire Wildlife Trust provided details of five Local Wildlife Sites (LWS) located within 1km of the proposed development site. They include: Dinting Vale Reservoirs and Brook LWS, Dinting Nature Reserve LWS, North Road Ponds LWS, Dinting Junction Ponds LWS, and Gamesley Sidings LWS. Additionally, two Potential Local Wildlife Sites, namely North Road Meadow and Ashes Farm Meadows, are located within 1km of the proposed development site.

The closest LWS is Dinting Vale Reservoirs and Brook, which is located approximately 250m to the south of the proposed development site. Ashes Farm Meadows Potential LWS is located adjacent to the site's northern boundary.

Cheshire Ecological Services report 1167/03-15/ML (CES 2015a) 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 brief the relevant ecological considerations for the proposed development are as follows:

Habitats:

- Semi-improved neutral grassland
- Dense/continuous scrub
- Scattered trees
- Wall – Dry-Stone wall
- Hedgerow

Species:

- Barn Owl
- Nesting birds
 - General;
- Mammals
 - Badger;
 - Bats
- Reptiles
- Great crested newts/other amphibians

Habitats recorded on or adjacent to the site have the potential to support the above noted species, however Badgers, Barn Owls and Great Crested Newts were not identified as being present on site and therefore appropriate mitigation measures have not been considered within this current report. See CES (2015a) and Urban Green Bat Activity and Badger Survey, October (2016) for details regarding these protected species.

1.6 Summary of Proposed Works

It is understood that the site is to be redeveloped for up to 65 new residential dwellings, with associated landscaping, access and an attenuation basin.

It is assumed the works will include:

- Vegetation clearance of the development footprint and work areas;
- Earth works and movement;

- Construction of retained wall features, as a result of the height changes across the site);
- Construction of up to 65 no. residential units;
- Amenity areas and soft landscaping;
- Inclusion of attenuation basin.

2 Aims and objectives of the Management Plan

2.1 Scope of the CEMP: Biodiversity

This CEMP has been produced to remove or reduce the ecological impacts of construction works for the proposed development with regards to badgers, reptiles and nesting birds.

Through the implementation of appropriate mitigation measures, detrimental impacts and breaches of current wildlife legislation will be avoided. Without these measures there is the risk of disturbing, injuring or killing nesting birds (during the nesting bird season), badgers occupying the site and reptiles that may be inhabiting suitable habitat on or adjacent to the site.

The following elements are included within this CEMP:

- 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

2.2 Aims and objectives

2.2.1 Aim

The overarching aim of this Management Plan is:

"The preservation of the sites ecology, with regards to bats, nesting birds and reptiles".

2.2.2 Objectives

- To ensure no breach of wildlife legislation occurs on site for the duration of the proposed development.
- To protect nesting birds, badgers, bats and reptiles for the proposed development and construction works.
- To minimise damage to adjacent habitats and protect habitats on site that are part of the final development.

2.3 Ecological Issues

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)
- Bats are protected under both European and British law....
- Reptiles are protected by the Wildlife and Countryside Act 1981 (as amended)

Planning Considerations

- Local Wildlife Site – Ashes Farm Meadows, located adjacent to the site's northern boundary, has been identified by DWT as a potential LWS for its unimproved grassland habitat.
- BAP habitats – at the time of the extended habitat survey (CES 2015a), the semi-improved neutral grassland was not considered to qualify as BAP Priority habitat (i.e. lowland meadows BAP Priority habitat), but may have the potential to be restored as such.
- BAP species – there is potential identified for the study site to support UK Priority Species including; Barn Owl, Badger, Bats, Birds, Great crested newt/other amphibians and Reptiles.

2.4 Legislative Requirements

2.4.1 Species legislation

Table 1 below details the legal situation in relation to nesting birds, bats and reptiles. Details of the legislation are provided in CES report (2015a).

Table 1: Species Legislative Issues

Legislative Issues	Legislation	UK BAP	Local BAP	Implications
Nesting Birds	Section 1 and Schedule 1 of the Wildlife & Countryside Act 1981 (as amended)	*	*	Disturbance to nesting birds is illegal
Bats	Schedule 5 of the Wildlife & Countryside Act 1981 (as amended) Schedule 2 of the Conservation of Habitats and Species Regulations 2010	✓	✓	Legal protection makes it an offence to intentionally or recklessly kill, injure or take bats from the wild. To damage, destroy or obstruct access to any structure or place which bats use for shelter or protection. To disturb bats while they are using such a place (Natural England 2008)
Reptiles	Schedule 5 of the Wildlife & Countryside Act 1981 (as amended)	✓	✓	Legal protection makes it an offence to intentionally or recklessly kill, injure or take reptiles from the wild. To damage, destroy or obstruct access to any structure or place which reptiles use for shelter or protection. To disturb reptiles while they are using such a place (Natural England 2008)
Key * = <i>species dependent</i>				

2.4.2 Planning regulations

Table 2 below summarises the relevant national, regional and local policies relating to nature conservation in relation to the current development proposals.

Table 2: Planning Policy

Legislative Issues	Legislation Information
National Planning Policy Framework (NPPF)	
Hedgerow Regulations	The Hedgerow Regulations 1997 protect most hedgerows from removal without prior consent from the Local Planning Authority (LPA). Where a hedgerow is considered as 'important' as defined by the criteria set out in the Hedgerow Regulations 1997, the LPA can order its retention.
UK Post-2010 Biodiversity Framework	
UK Biodiversity Action Plan	<p>The UK Biodiversity Action Plan (BAP) is the mechanism for dealing with biodiversity conservation in response to the Rio Convention 1992.</p> <p>Governments signing up to this convention are committed to create and enforce national strategies and action plans to conserve, protect and enhance biodiversity.</p> <p>Within the UK BAP, Species Statements and Broad Habitats Statements have been written to outline issues affecting species and semi-natural habitats and broad policies to address them. In addition to these, Priority Species and Habitats have been identified and targets determined in order to maintain and enhance their distribution and contribution to UK biodiversity. These species and habitats are those considered to be at most threat and reported as UK Species Action Plans (SAPs) and UK Habitat Action Plans (HAPs). The UK BAP is implemented through national, regional and local policy.</p>
Peak District National Park Local BAP	
High Peak Local Plan Policies: April 2016	<p>Strategic Objectives:</p> <p>SO2: To maintain, enhance and conserve the Borough's distinct landscape characteristics, biodiversity, and cultural and historic environment.</p> <p>Policy EQ 5: Biodiversity</p> <p>Policy EQ 9: Trees, woodland and hedgerows</p>
Protected Species	A number of species are protected under European and or UK Legislation. The key Legislations are: Bern Convention, The Wildlife & Countryside Act 1981 (as amended), Countryside and Rights of Way Act 2000 (CRoW)

2.5 Persons Responsible for Nature Conservation Legislation Compliance

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

To ensure that the works are undertaken in accordance with the CEMP 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.

3.1 Legislative

With current understanding (March 2017) of the presence/likely absence or usage of the site by protected species, no licences to undertake works are required from Natural England.

3.2 Ecological Clerk of Works

A suitably qualified ecologist has been appointed to supervise the implementation of this CEMP: Biodiversity, 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 CEMP: 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.

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

The times during construction when the ECoW is responsible for ensuring that the CEMP: Biodiversity is followed and when the ECoW or appointed representative needs to be present are shown in Table 1&2. Other persons responsible for ensuring that the

CEMP: Biodiversity is adhered to at different times throughout construction are also shown in Table 1&2.

If the ECoW or appointed representative identifies any issues in relation to ecology or considers that the CEMP: Biodiversity 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.

3.3 Current Site Conditions

This CEMP: Biodiversity has been prepared based on ecological information collected in February 2015 and October 2016. 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.

3.4 Risk Assessment of Construction Activities

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 1.

3.4.1 Vegetation and Rubble Pile Clearance

Potential Impacts

Clearance of vegetation from the works site will be required prior to the start of construction. This will include the removal of scrub, tall ruderal vegetation, semi-improved grassland, trees and other habitats present within the site. This work has the potential to impact reptiles, bats, breeding birds and badgers, if present.

Measures to Minimise Impacts

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

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

3.4.2 Ground Clearance

Potential Impacts

Ground clearance will involve the use of machinery to remove topsoil, rubble and debris piles from the works area. This has the potential to impact, disturb, injure or kill

reptiles. Ground clearance also has the potential to damage retained habitats and trees.

Measures to Minimise Impacts

A reptile translocation will be carried out prior to ground clearance. This will involve the installation of secure temporary reptile exclusion fencing around the perimeter of the works footprint prior to main vegetation clearance. Reptiles will then be trapped from the fenced area to a designated receptor site. Following the completion of trapping, a destructive search of the works area will be carried out. All works will be carried out during the active period for reptiles (April to September, weather dependent) and will be supervised by the ECoW. Detailed method statements for reptile trapping and destructive search, are provided in Section 3.

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 woodland to stop works from encroaching into the root protection zone as detailed in BS 5837:2012 (British Standards, 2012).

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.

3.4.3 Ground Works

Potential Impacts

Excavations created as part of the works may cause animals such as small mammals to become trapped.

Measures to Minimise Impacts

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.

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.

3.4.4 General Construction Works

Potential Impacts

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.

Measures to minimise Impacts

The existing buffer of vegetation between the LNR and the Station / Interchange Area will be retained and enhanced to reduce disturbance and provide screening. Contractors will comply with Environment Agency PPG 1: 'Basic Good Environmental Practices' (Environment Agency, 2013) in respect of implementation of pollution prevention measures and strict control of dust and other emissions. 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.

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.

3.4.5 Night Works

Potential Impacts

Night time working may be required as part of the proposed works. This will require the use of lighting which has the potential to impact foraging bats.

Measures to Minimise Impacts

Night time working will be kept to a minimum where possible. Where lighting is required, lights will be kept away from areas of woodland and hedgerows and lighting will be directed to where it is needed with minimal light spillage. Detailed specifications for the use of lighting during night works can be found in Section 3.

The ECoW will ensure toolbox talks to contractors carrying out night works 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.

Table 3: Timings for ecology surveys and ecologically sensitive works

Task	Timeframe	Duration	Responsibility
Vegetation clearance within works area	Between April and September when reptiles are active, prior to the start of construction	Prior to start of construction	Contractors, supervised by ECoW
Clearance of bird nesting habitat	Between September and February – no	As required	Contractors, supervised by ECoW (if required)

	ecological supervision required OR Between March and August – ecological supervision required		
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3.5 Biodiversity Protection Zones

The site contains a length of hedgerow along the northern boundary. This habitat will be retained within the site wherever possible.

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. Root protection zones for trees will also be fenced off to avoid encroachment during construction.

New habitat will be created as part of the proposed development, including an attenuation pond. This will form valuable habitat, which will connect into adjacent habitat areas, thus improving biodiversity connectivity.

3.6 Timeframes and Responsibility for Implementation

The CEMP: Biodiversity 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 CEMP is adhered to at each phase have been allocated.

Table 4: Timeframes and responsibility for Implementation

Construction / Ecological Mitigation Phase	Start Date (provisional)	Duration	Responsible Person
Vegetation clearance within works area	July 2017	Approximately 2 weeks	Contractors, supervised by ECoW
Clearance of bird nesting habitat	August 2017	August 2017	Contractors, supervised by ECoW (if required)
Ground Works	August 2017	May 2018	Developer
Construction	September 2017	December 2018	Developer
Landscaping – habitat enhancement and restoration	July 2018	November 2018	Developer (under ECoW supervision)
Completion	December 2018	-	Developer

4 Method Statements

4.1 Site Clearance

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

Vegetation

Vegetation will be cleared in accordance with Precautionary Method of Working, attached (Appendix 2).

Vegetation clearance will be carried out outside of the bird nesting period, 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.

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

All trees that require felling or pruning as part of the works will be assessed for their potential to support roosting bats through a ground level assessment. If any features with the potential to support roosting bats are identified, further survey would be required to determine the presence / likely absence of roosting bats. If bats are found to be roosting in any tree that requires felling or pruning, an EPSM licence from Natural England would be required.

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

Creation of Log Piles and Hibernacula

Log piles and hibernacula will be integrated into the landscaping design and will be created within areas of retained habitat and receptor areas. A specification sheet showing various designs for creation of log piles and hibernacula are shown in Appendix 4. These deadwood piles will be made from native hardwood locally cut from around the site. The piles will be stacked approximately 1m in height, either in a pyramidal shape (bound with wire to prevent them breaking apart over time) or

against a semi-mature/mature tree trunk. The piles will be placed equidistant from each other and will be oriented as such that their longest side faces to the south.

Hibernacula will be constructed above or below ground and will comprise native hardwood locally cut from around the site covered with turf or moss from within the site. Hibernacula should be approximately 1m in width and 2m in length. They will be interspersed with log piles within receptor areas and areas of retained and created habitat.

Log pile and hibernacula will be left untouched as regular disturbance will limit the diversity of invertebrates in log piles and hibernacula. As well as supporting many kinds of invertebrate, deadwood piles also provide good foraging areas for reptiles and birds such as robins and wrens. The piles could also provide hibernation sites for reptiles, amphibians and hedgehogs.

Procedure to follow if any Protected Species are discovered

All contractors working on the site will be given a toolbox talk about protected species and habitats that they may encounter within the site. In the event that any protected species are found during construction works, all works will stop immediately and advice sought from an ECoW immediately on how to proceed.

Lighting for Night Works

Night working may be required during the construction period. To avoid any disturbance to bats, the following measures should be carried out:

- Only the minimum amount of light needed for safety should be used and turned off when night works are not being carried out;
- Minimise light spill by eliminating any bare bulbs and upward pointing light fixtures. The spread of light should be kept near to or below the horizontal plane, by using as steep a downward angle as possible and/or shield hood;
- Use light sources that emit minimal ultra-violet light (Langevelde and Feta, 2011) and avoid the white and blue wavelengths of the light spectrum, so as to avoid attracting insects and thus potentially reducing numbers in adjacent areas, which bats may use for foraging;
- Avoid using reflective surfaces under lights or light reflecting off windows (e.g. onto potential bat flight lines);
- Artificial lighting should not directly illuminate hedge rows and tree lines;
- Artificial lighting should not directly illuminate any known bat roosting features; and
- Uplighters are to be avoided.

5 References

British Standards (2012). BS 5837:2012 – Trees in relation to design, demolition and construction. Recommendations.

CES (2015), *Site off Dinting Road, Glossop - Extended Phase 1 Habitat Survey*. March 2015

Etive Ecology Ltd, Reptile Survey Report, May 2015

IEA (1995). Guidelines for Baseline Ecological Assessment. E & F Spon.

JNCC (2010). Handbook for Phase One Habitat Survey – 2010 Edition. England Field Unit, Nature Conservancy Council, reprinted JNCC.

Urban Green (2016) Bat Activity and Badger Survey Report, October 2016

Appendix 2 – Precautionary Method of Working

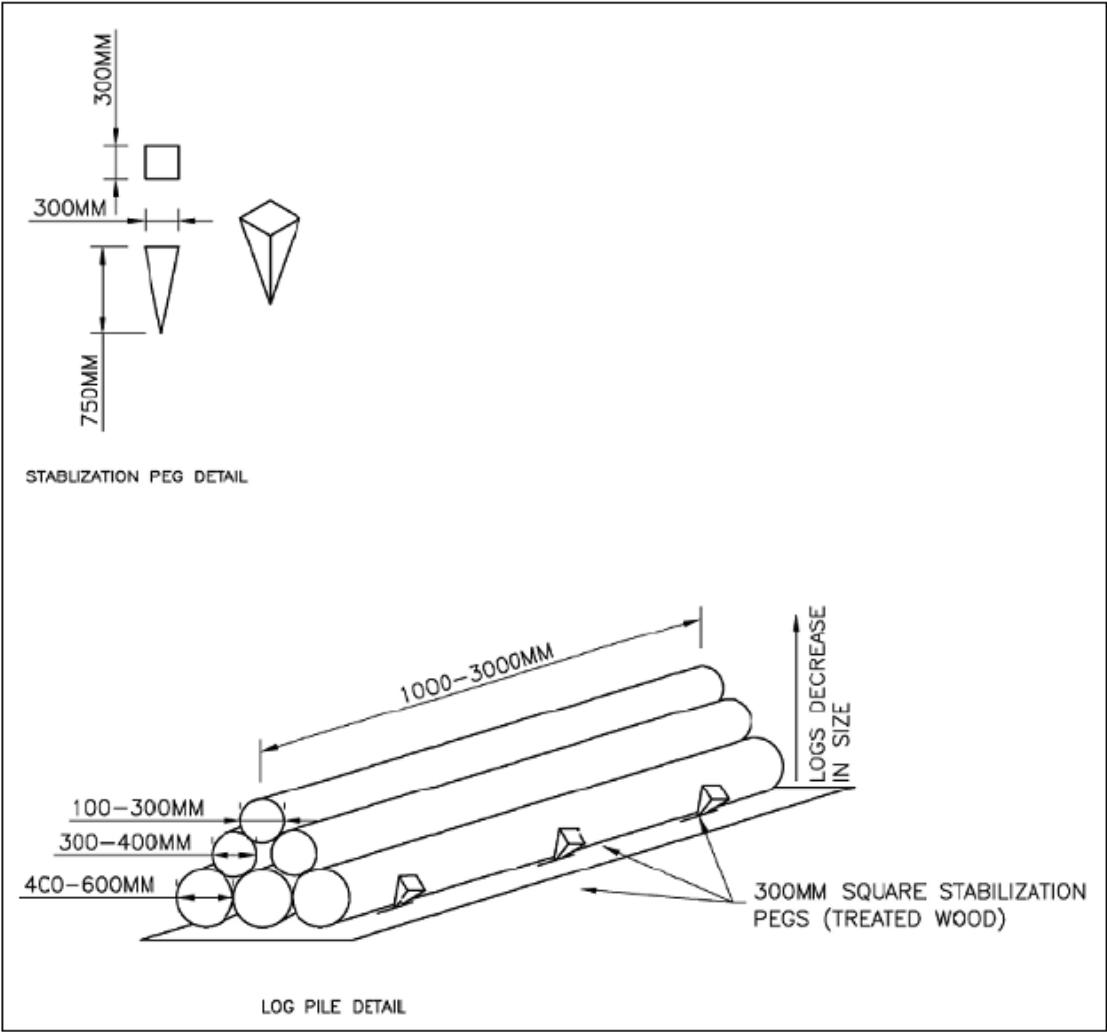
Initial Site Clearance

Habitat on site is suitable for reptiles and 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.

- 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.
- 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.
- Prior to any vegetation clearance on the Site, all suitable habitats within the working area will be surveyed by the ecologist for the presence of nesting birds. This will be carried out by an experienced ornithologist, using a nest identification procedure where 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 construction, any potential reptile hibernacula, including the dry stone wall, 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 trimmed/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.
- Any reptile hibernacula within the working area will be dismantled by hand as far as possible (with particular reference to the existing dry stone wall) 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 using a 360 excavator.
- 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 3 – Log Pile and Hibernacula Specification

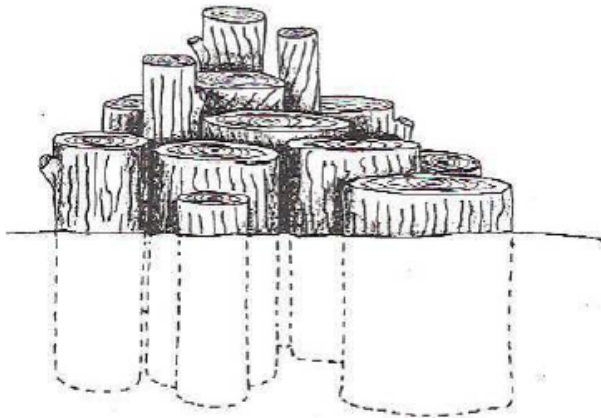
Example of an above ground log pile



Example of a small, log pile. Additional stability can be provided if needed by hammering posts into the ground at each end of the pile.



Example of a stag beetle loggery using timbers of 10-50cm diameter with bark attached and buried to depth of 60cm. Chipped wood can be included in the base or centre if the pile is large enough. Oak and beech are the best timbers but stag beetle will use timber from a variety of trees. Note these structures are stable and not easily moved.



Example of above and below ground hibernacula using branches or logs covered with turf or moss (taken from HA DMRB Volume 10 Section 4 Annex D)

