

AEWC Ltd

Animal Ecology & Wildlife Consultants

Biodiversity Net Gain Assessment

Land at Oaklands Barn

**Oaklands Barn
Coltstaple Lane
Horsham
Sussex
RH13 9BB**

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22-143
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Contents

Summary 2

1. Introduction..... 3

2. Background 3

3. Method and Constraints 5

4. Habitat Data..... 6

5. Results 7

6. Conclusions & Recommendations..... 7

7. Wildlife Enhancements 8

References 13

FIGURE 1: SHOWING THE SITE LOCATION 3

FIGURE 2: AERIAL VIEW OF THE SITE SHOWING THE BOUNDARY 4

FIGURE 3: PROPOSED WORKS 5

FIGURE 4: BASELINE ON-SITE HABITATS 6

FIGURE 5: POST-DEVELOPMENT ON-SITE HABITATS 7

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Summary

- AEWCLtd were commissioned by Alasdair Russell to undertake a Biodiversity Net Gain Assessment at Land at Oaklands Barn, Coltstaple Lane, Horsham, Sussex, RH13 9BB at grid reference TQ 17008 27909 to help inform the proposed development of the site.
- The estimated baseline and post-development biodiversity value of the habitats on the site is calculated using the Defra Statutory Biodiversity Metric Calculation Tool
- The development includes demolition of the existing barn and subsequent construction of two detached dwellings. This will involve the removal of the existing farm building as well as areas of hardstanding and shallow rooted grassland.
- Ecological enhancements built into the development include grassland enhancement and mixed scrub creation. In terms of the BNG metric, these are sufficient to offset the loss of the baseline habitats on the site.
- **The headline results indicate that there is an estimated net gain of 23.95% for habitat units. Trading rules have been satisfied.**

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The information and data which has been prepared and provided is true and has been prepared and provided in accordance with the 'Guidelines for Preliminary Ecological Appraisal' and 'Code of Professional Conduct' issued by the Chartered Institute of Ecology and Environmental Management (CIEEM). We confirm that the opinions expressed are our true and professional bona fide opinions.

1. Introduction

- 1.1 AEWC Ltd were commissioned by Alasdair Russell to undertake a Biodiversity Net Gain Assessment at Land at Oaklands Barn, Coltstaple Lane, Horsham, Sussex, RH13 9BB to help inform the proposed development of the site.
- 1.2 The purpose of this report is to give an estimate of the BNG units that may be achieved under the current development proposals, where a BNG of +10% is not achieved suggestions for additional ecological enhancement are provided.

2. Background

2.1 Previous ecology surveys have been conducted by AEWC Ltd, these are as follows:

- Protected Species Walkover Assessment: October 2022
- Protected Species Walkover Assessment: May 2025

2.2 The proposed development site is located at Land at Oaklands Barn, Coltstaple Lane, Horsham, Sussex, RH13 9BB at central grid reference TQ 17008 27909. The site is located in a rural area of Sussex within the southern outskirts of Horsham, 600m east of the A24. The surrounding landscape comprises Oaklands Farm gardens to the north and east and ancient and semi-natural woodland to the south. The wider landscape largely comprises agricultural farmland and woodland with areas of residential and commercial development. See Figure 1.

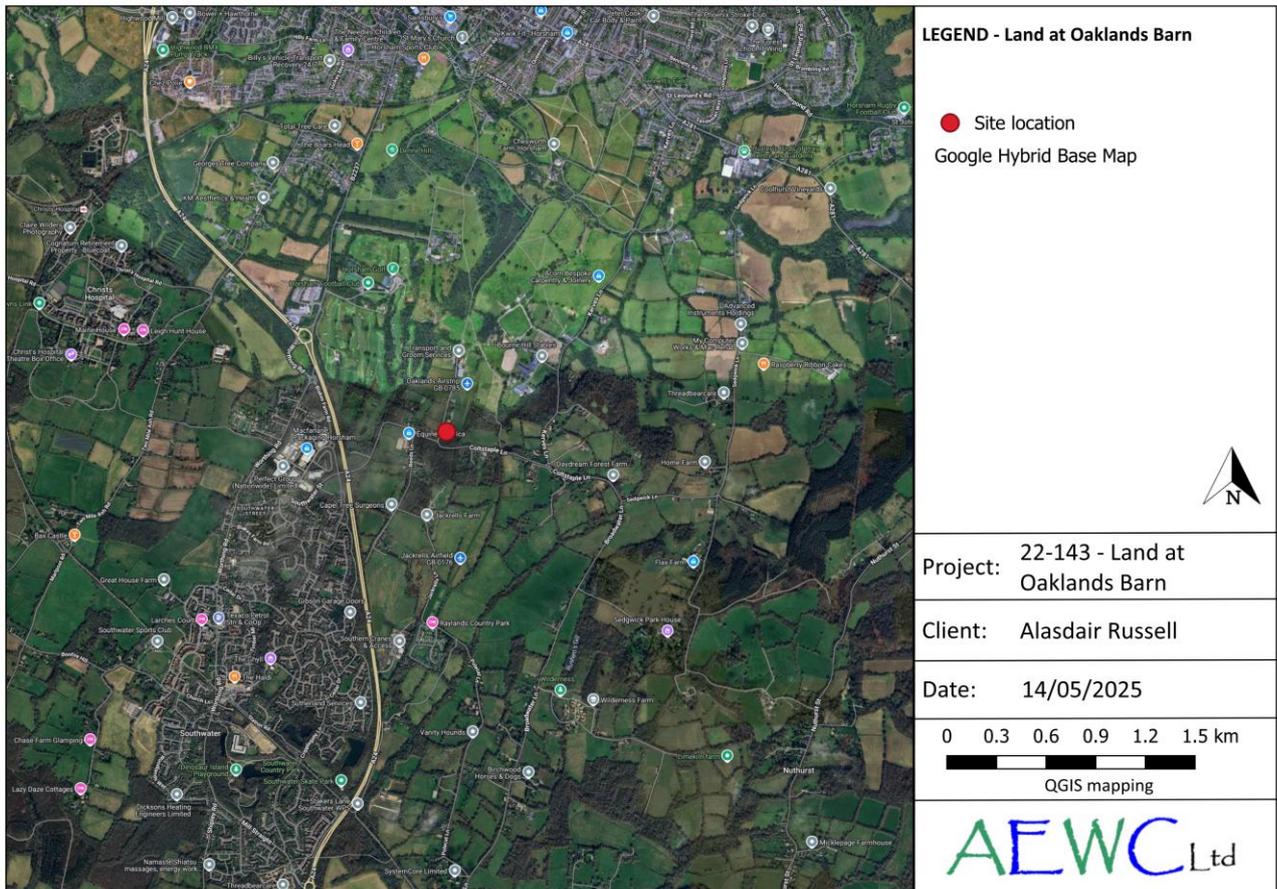


FIGURE 1: SHOWING THE SITE LOCATION

2.3 The proposed development site is approximately 0.2ha and largely comprises an existing barn with surrounding hardstanding which has been colonised by shallow rooting grasses and scrub. See Figure 2 and Photos 1 and 2.

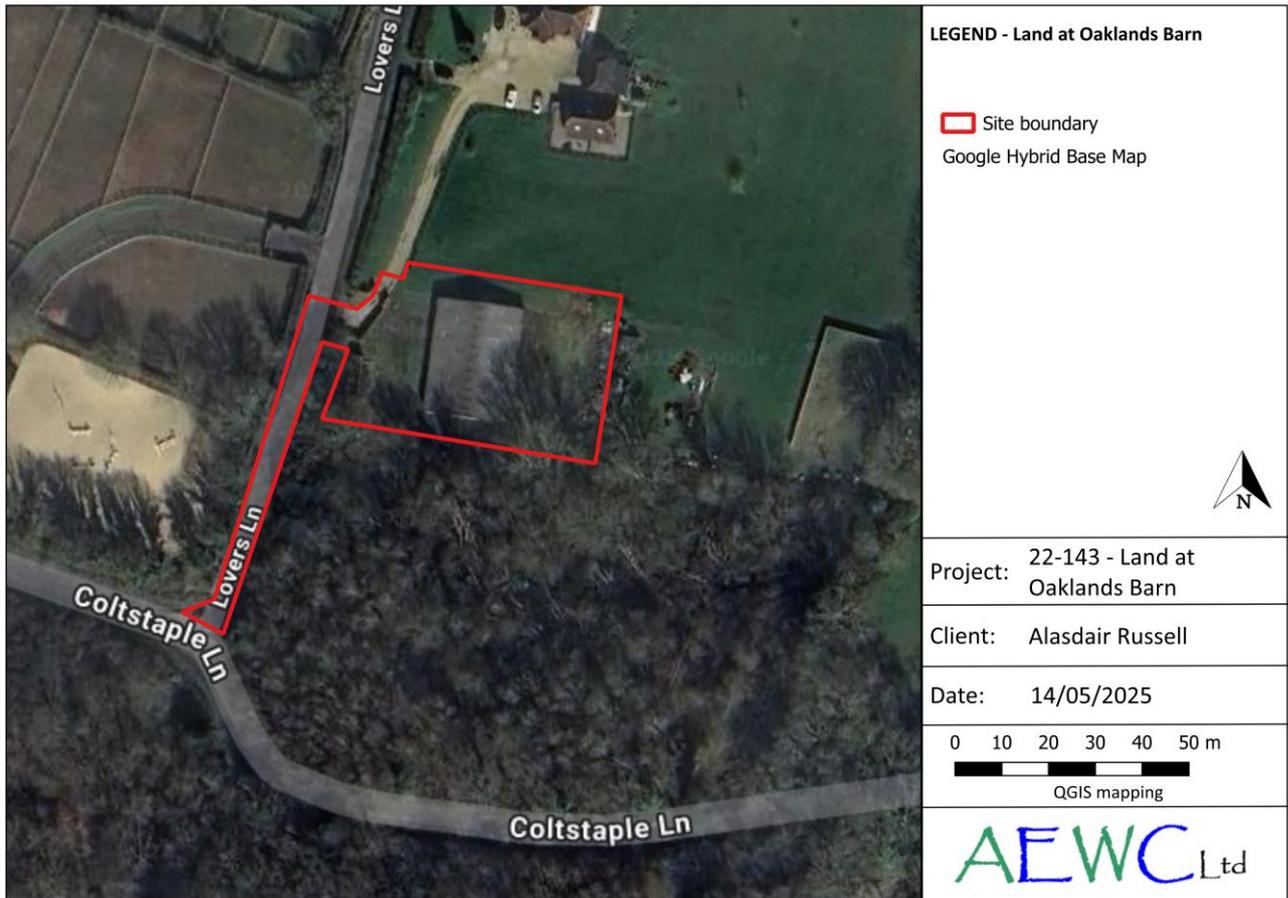


FIGURE 2: AERIAL VIEW OF THE SITE SHOWING THE BOUNDARY



Photo 1: The west elevation of the farm building



Photo 2: The land east of the farm building

2.4 The proposed development consists of the demolition of the existing barn, to allow for the construction of two attached dwellings, with private gardens and associated parking. This will involve the removal of areas of hardstanding and shallow rooted grassland. An area of communal grassland and native mixed scrub will be created

within the southern section of the site. The majority of the habitat area on site will be affected by these proposals. See Figure 3.

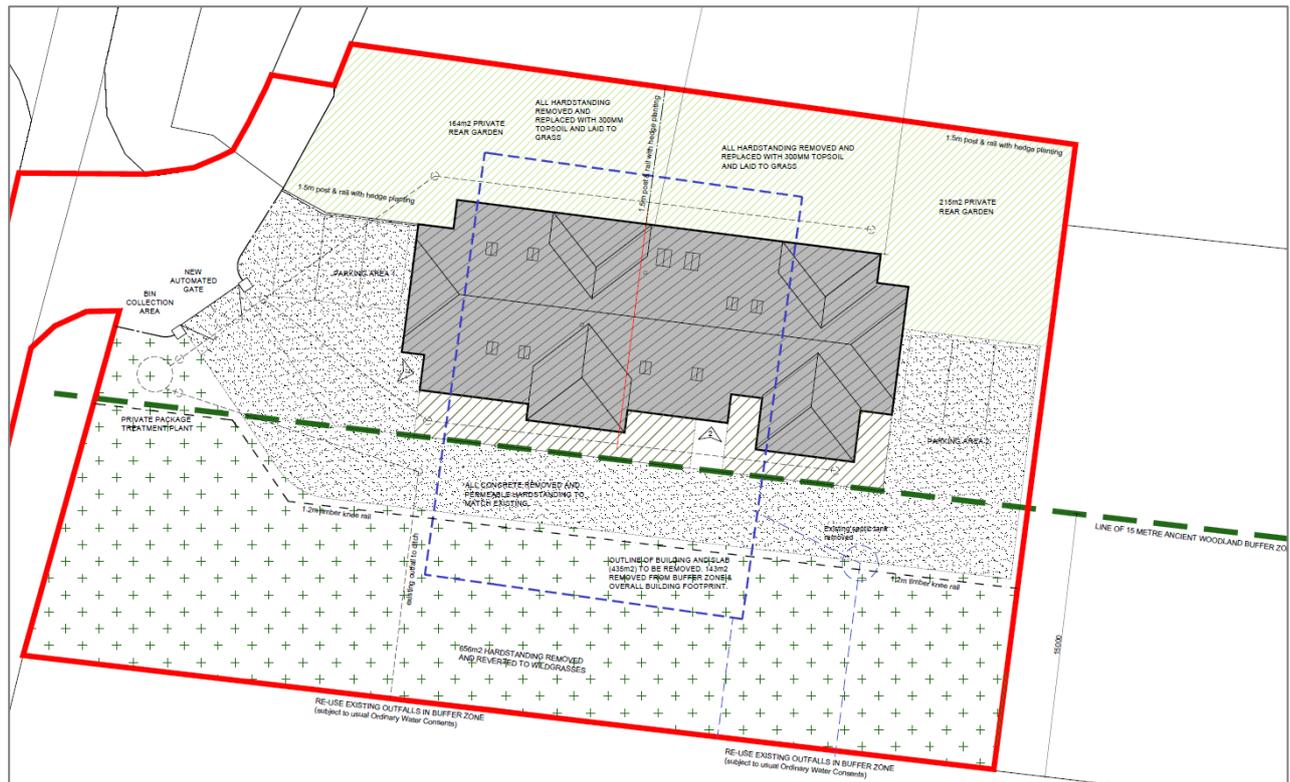


FIGURE 3: SHOWING THE EXISTING (BLUE) AND PROPOSED PLANS.

3. Method and Constraints

3.1 The estimated baseline and post-development biodiversity value of the habitats on the site is calculated using the Defra Statutory Biodiversity Metric Calculation Tool. Habitat condition was assessed using the Statutory Biodiversity Metric – Technical Annex 1 Condition Assessment Sheets.

3.2 The following assumptions have been made and therefore associated constraints should be considered when looking at BNG unit values obtained:

- The potential for protected and notable species is not covered within the scope of this report;
- Baseline habitats on-site are taken from those identified within the survey undertaken in May 2025;
- Post-development habitats have been inferred from those given with the Proposed Site Layout as shown in Figure 3;
- All areas and lengths are approximate;
- Areas in hectares and lengths in km are both given to four decimal places, therefore rounding errors and occasional adjustments to values, to ensure consistency of total areas in baseline and post-development habitat size, are unavoidable; and
- Habitat quality has been estimated in some instances (i.e. for post-development habitats).

- 3.3 Given the above constraints the values for BNG obtained should be considered to be an **estimate** only.
- 3.4 Calculations may need to be adjusted in future should the BNG metrics or requirements be revised.

4. Habitat Data

- 4.1 The baseline and post-development habitats used for this assessment are illustrated in Figures 4 and 5 respectively.



FIGURE 4: BASELINE ON-SITE HABITATS



FIGURE 5: POST-DEVELOPMENT ON-SITE HABITATS

5. Results

5.1 The headline results using the above habitats and calculations are given below (refer to the metric for full details).

Table 1: Headline estimated BNG values

FINAL RESULTS		
Total net unit change (Including all on-site & off-site habitat retention, creation & enhancement)	<i>Habitat units</i>	0.08
	<i>Hedgerow units</i>	0.00
	<i>Watercourse units</i>	0.00
Total net % change (Including all on-site & off-site habitat retention, creation & enhancement)	<i>Habitat units</i>	23.95%
	<i>Hedgerow units</i>	0.00%
	<i>Watercourse units</i>	0.00%
Trading rules satisfied?	Yes ✓	

6. Conclusions & Recommendations

6.1 The development includes the loss of areas of the modified grassland, ruderal vegetation, and scrub on the site.

- 6.2 Ecological enhancements built into the development design include grassland enhancement and mixed scrub creation. In terms of the BNG metric, these are sufficient to offset the loss of the baseline habitats on the site. Trading rules have been satisfied.
- 6.3 **The headline results indicate that there is an estimated net gain of 23.95% for habitat units.** Trading rules have been satisfied.
- 6.4 In England BNG is mandatory under Schedule 7A of the Town and Country Planning Act 1990 (as inserted by Schedule 14 of the Environment Act 2021). This came into force in February 2024 for major developments and April 2024 for minor developments. Under the legislation developers must deliver a biodiversity net gain of 10%.

7. Habitat Creation and Wildlife Enhancements

Habitat Creation

Modified Grassland

- 7.1 Initial preparation and seeding should ideally be undertaken in spring (March – April) or autumn (September – October).
- 7.2 The modified grassland will be created in an area to the south of the proposed new dwellings. Although grassland currently exists in this location, it will be temporarily cleared and reinstated to allow for the removal of old concrete from the ground. Seeding should ideally take place shortly after the soil has been replaced. However, if there is a delay and the soil becomes colonised by weeds, this vegetation will need to be removed before seeding.
- 7.3 Create a fine tilth suitable for seed sowing by harrowing or lightly tilling.
- 7.4 A UK native grass seed mix should be selected that includes a range of native grasses and wildflowers. This should be selected to suit the soil type, drainage, and regional conditions.
- 7.5 The seed mix should be sown at a density of 4-5 g/m². The seeds can be mixed with damp sand or similar for even distribution. They can then be hand sown or sown with a seed spreader. Following distribution of the seeds, the ground must be firmed with a roller or by treading to ensure good soil contact. Any specific guidance given by the seed mix provider should be followed.
- 7.6 In the first year of establishment, the grassland should be mown regularly to a height of 5-10cm whenever growth exceeds 10-15cm, to prevent competitive grass species overshadowing other species. Cuttings must be removed to prevent nutrient enrichment.
- 7.7 After the first year of establishment, the grassland can be mown as required for amenity purposes. Cuttings should continue to be removed to prevent nutrient enrichment and encourage species richness.

7.8 No fertiliser should be applied to the grassland. Herbicide should be used for spot treatments only. The grassland should be continually checked for invasive species, and removals undertaken as required.

Mixed Scrub

7.9 A small area of mixed scrub is to be created along the west boundary of the site of the site, in place of existing bramble scrub that is adjacent to the woodland.

7.10 Instructions for the scrub creation and initial aftercare are as follows:

- Scrub planting should be carried out between November and March, avoiding periods of frost, snow, or waterlogged soil.
- The ground must be cleared of vegetation and soil loosened prior to planting.
- UK native structural shrub species should be selected, such as hawthorn (*Crataegus monogyna*), blackthorn (*Prunus spinosa*), field maple (*Acer campestre*), and hazel (*Corylus avellana*). Secondary species should also be incorporated to provide diversity, such as dogwood (*Cornus sanguinea*), dog rose (*Rosa canina*), wild privet (*Ligustrum vulgare*), and goat willow (*Salix caprea*).
- Shrubs should be planted at a density of 1-2 shrubs per square metre.
- Dig holes large enough to accommodate the root systems of the shrubs.
- If using bare-root plants, soak the roots in water for 1-2 hours before planting to prevent drying out.
- Place each shrub so the base of the stem is at soil level and spread the roots out gently. Fill the holes with soil, firming it down gently.
- Apply a layer of mulch (such as wood chips or well-rotted compost) around the base of the plants to suppress weeds and retain moisture.
- Water regularly during the first 2 years, especially in dry spells, to help the plants establish.

7.11 Scrub should be managed through the removal of individual bushes, or bramble patches, as required in order to thin the habitat and maintain structural diversity. The scrub habitat should be managed on a minimum of a 4-year cycle, with no more than one quarter of the scrub removed in any given year, this should take place in September/October to fall outside of the bird nesting season, but prior to the hibernation period when hibernating amphibians, reptiles and hedgehogs may be present.

Wildlife Enhancement

Bats and Birds

7.12 To enhance the site for bats and birds known to be present within the local area it is recommended that two bat boxes and two bird boxes be installed within the site. Boxes can be integrated into the new development.

7.13 Ideally bat boxes would be woodcrete or similar hard-wearing material (rather than the less durable wooden boxes) and should be installed at least 3m above the ground (where safe installation is possible), sheltered from strong winds and exposed to the sun for part of the day (usually south or south-west facing).

7.14 Example tree-mounted bat boxes are shown below: Schwegler 1FF bat box (below left, suitable for pipistrelle bats *Pipistrellus sp.*), and a Schwegler 2F bat box (below right, suitable for long-eared bats *Plecotus sp.*), or similar bat boxes.



7.15 Example integrated bat boxes are shown below: Integrate Eco Bat Box (below left), Habibat Bat box - Plain for rendering (below centre) and a Schwegler 1WI Summer and Winter bat box (below right) or similar bat boxes.



7.16 Tree-hung bird boxes should comprise a mix of traditional '32mm round-holed' (below left: which are suitable for tits, sparrows, redstarts and nuthatches) and open-fronted boxes (below right: these are suitable for pied wagtails, robins and wrens) and also ideally be woodcrete or similar hard wearing material (rather than the less durable traditional wooden boxes). Boxes should be installed with an aluminium nail or screw to prevent tree damage between 2m and 4m above ground for round-holed and low down, below 2m, well hidden in vegetation for open-fronted boxes and (unless shaded by buildings or trees) be facing north or east.



7.17 Integrated bird boxes should comprise of swift bricks which are suitable for a range of species (below left), these should be installed at a minimum of 4m above the ground, north or east facing and with open flight access, or sparrow terraces (below centre) which should be installed in line with vegetation such as trees or hedge lines to allow the birds the use of jumping off points and be installed a minimum of 3m above the ground on a north or east elevation. Where suitable overhanging eaves are present house martin cups (below right) may also be suitable.



Reptiles and Amphibians

7.18 To enhance the site for reptiles and amphibians a ‘hibernaculum’ could be created in a sunny corner of the site. This will use materials such as logs, inert hardcore, bricks or building rubble to form the body of each hibernaculum, ensuring that materials likely to decompose are not placed beneath bricks or rubble to avoid collapse. Woodchips or soil may be incorporated to fill some of the larger cavities within the structure.

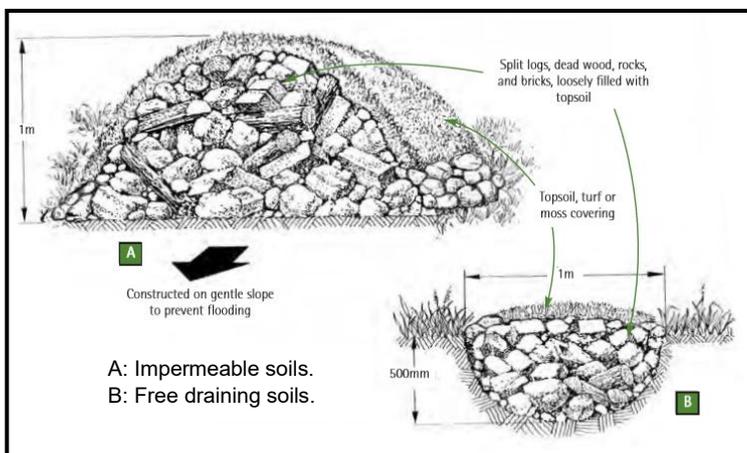
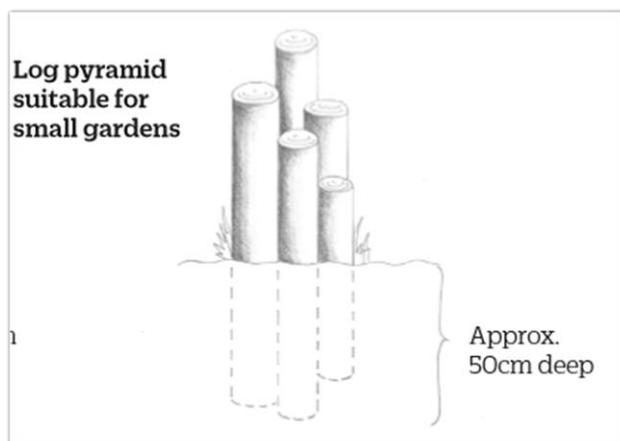


Diagram from Great Crested Newt Conservation Handbook

Stag Beetles

7.19 **A log stack could be created in a discrete corner of the site to provide dead wood habitat features for stag beetle and other species.**

7.20 A suitable log pile comprises a variety of lengths of hard wood at least 5cm in diameter, this should be sighted in partial shade and the wood partially buried to prevent it drying out. See below diagram and picture below from the PTES 'how to build a loggery' factsheet - (<https://ptes.org/get-involved/wildlife-action/help-stag-beetles/>)



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