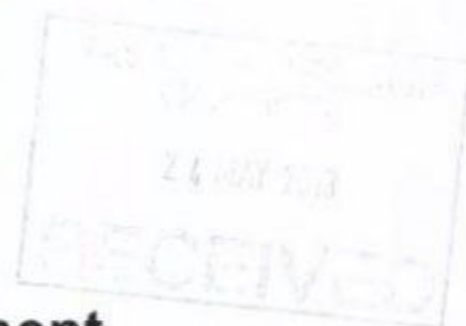




Ecological Mitigation Method Statement

For the site adjacent to New Lane, Havant

**On behalf of
Bloor Homes Southern**

July 2012
Rev A January 2013

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Revision	Purpose	Originated	Checked	Authorised	Date
Revision A	Minor client amendments and inclusion of timetable of works	SP	OR	OR	January 2013
		MCRD	OR	OR	July 2012
Job Number: JBA 11/04		Document Ref: Ecological Mitigation Method Statement, New Lane, Havant			

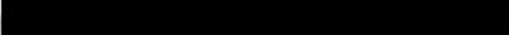
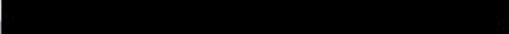
Disclaimer

James Blake Associates have made every effort to meet the client's brief. However, no survey ensures complete and absolute assessment of the changeable natural environment. The findings in this report were based on evidence from thorough survey: It is important to remember that evidence can be limited, hard to detect or concealed by site use and disturbance. When it is stated that no evidence was found or was evident at that point in time, it does not mean that species are not present or could not be present at a later date: The survey was required because habitats are suitable for a given protected species, and such species could colonise areas following completion of the survey.

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1.0 Executive Summary

- 1.1 James Blake Associates were commissioned to prepare an Ecological Mitigation Method Statement for a residential development at the site adjacent to New Lane, Havant.
- 1.2 Previous surveys undertaken by James Blake Associates and Baker Shepherd Gillespie identified potential habitat for reptiles, nesting birds, badgers, bats and newts.
- 1.3 Precautionary clearance of areas of suitable reptile habitat and the erection of an exclusion fence along the northern boundary will minimise the risk of harm to reptiles.
- 1.4 Precautionary destruction of the pond at an appropriate time of year will minimise the risk of harm to the exceptional population of smooth newts that are present.
- 1.5 An updating badger survey should be carried out prior to the start of works to ensure that badgers have not re-colonised the site.
- 1.6 Precautionary clearance of trees and scrub should be carried out to minimise disturbance to nesting birds, and low possibility of small numbers of roosting bats.
- 1.7 A sensitive lighting scheme should be adopted to minimise impacts to nocturnal species.
- 1.8 By following the proposed mitigation and undertaking the recommended enhancements (including bird and bat boxes), it was considered that impact to local wildlife would be minimised, and the site could be enhanced for wildlife, post-development.

2.0 Introduction

- 2.1 James Blake Associates were commissioned by Bloor Homes Southern to prepare an Ecological Mitigation Method Statement for a residential development at the site adjacent to New Lane, Havant. (SU 721 065, taken from the centre of the site). This document details the results of previous surveys and proposed methods for the appropriate mitigation for protected species that may be present on site (reptiles, bats, badgers, newts and nesting birds), and local wildlife in general.
- 2.2 A Phase 1 Habitat Survey was undertaken in 2010 by Baker Shepherd Gillespie (BSG), which updated previous surveys undertaken in 2005/6 also by BSG. A bat and badger survey was carried out by James Blake Associates (JBA) in February 2011; a great crested newt survey was also carried out by JBA in 2011. The site was playing fields (amenity grassland) and a mature hedgerow. An outdoor education area included an immature woodland with an established educational pond.
- 2.3 An inactive badger sett was recorded within the outdoor education area. No great crested newts were recorded within the pond; however, large populations of smooth newts and common frogs were present. No confirmed bat roosts were identified; however, a number of mature hawthorn trees along the southern boundary of the site provided potential roosting opportunities.

Aim of the Mitigation Strategy

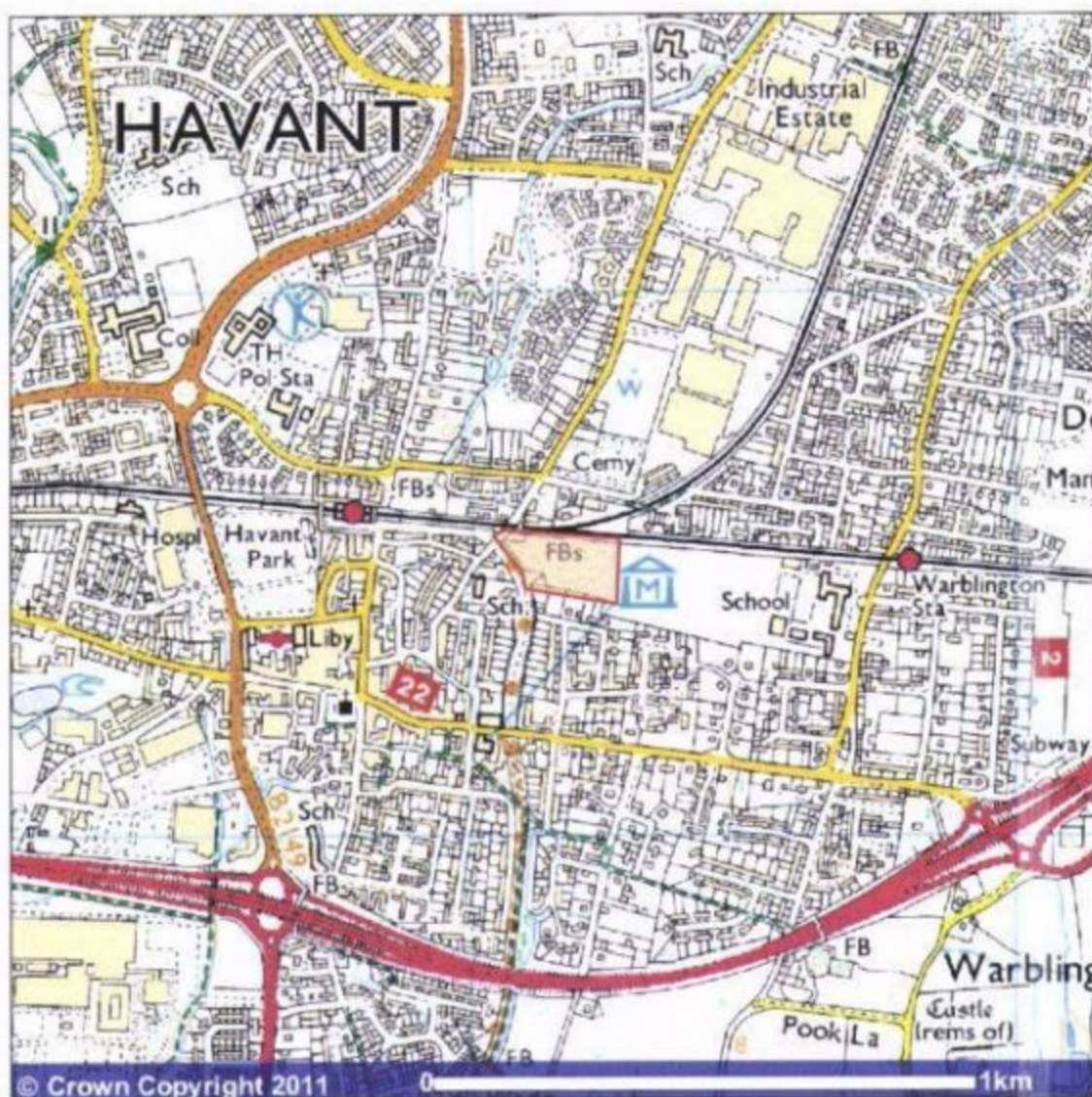
- 2.4 To protect wildlife that may be present on the site from any harm that might arise during construction works. This will be facilitated by timing restrictions to works and precautionary clearance of suitable habitat.

Site Description

- 2.5 The site was located to the west of Warblington School playing fields. A railway line forms the northern boundary of the site with a footpath immediately adjacent to the west. Residential and industrial buildings dominate the wider area (see Figure 1 below).

- 2.6 The site is split into two distinct areas: Warblington School playing fields to the east and Fairfield Infant School Outdoor Education Area to the west: an immature woodland with coarse grass ground flora. A well vegetated pond was also present in this area, dominated by yellow flag iris (*Iris pseudacorus*) but with a large amount of debris in the open water, which was of limited extent due to extensive Iris encroachment.

Figure 1: Ordnance Survey Map of site location



Reproduced from Ordnance Survey map data by permission of Ordnance Survey

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3.0 Rational for Mitigation

- 3.1 The rationale for mitigation is based on suitable habitat being present within the site for widespread reptile species (status on the site unknown), smooth newts, bats and badgers. The majority of the trees within the outdoor education area will be removed, and the pond will also be re-located, to facilitate the development.
- 3.2 The following recommendations are proposed to minimise potential harm or disturbance to protected species and local wildlife that may be present at the site.
- 3.3 A table of the proposed timetable of works is shown at the end of Section 3. A map of suggested bat and bird box locations is presented in Appendix B.

Reptiles

- 3.4 Suitable grassland habitat along the northern boundary (adjacent to the railway line) should be cleared using precautionary methods under ecological supervision to minimise the risk of harm to reptile species that may be present.
- *The vegetation should be sequentially trimmed, to a height of no less than 5cm, and left for 24 hours (care should be taken not to allow the blade/trimmer wire to make contact with the ground).*
 - *Trimming should be carried out in a northerly direction, to encourage any reptiles that may be present to move into appropriate surrounding habitat (adjacent to the railway).*
 - *Once the quality of the vegetation has been sufficiently reduced in this way, and reptiles have been given time to move off the site, a reptile exclusion fence should be erected along the length of the northern site boundary, to prevent any reptiles straying back onto the site during the construction phase. This fence can be removed on completion of the development.*
 - *This process should be carried out (or overseen) by a suitably qualified ecologist and during the active reptile season (March – September) in appropriate weather conditions, when reptiles would be active (9 to 19°C, little wind and no rain).*

Newts

- 3.5 The pond within the site was used by an exceptional population of smooth newts and large numbers of common frogs. Although these species are not legally protected, it is best practise to use precautionary methods when in-filling the ponds to minimise the risk of harm to all wildlife. The Local Planning Authority has a duty to ensure no net loss of biodiversity under the National Planning Policy Framework (NPPF, 2012).
- 3.6 The Primary School to the west of the site will create a new pond within a newly designated outdoor education area. An additional swale will be created within the site which will also provide habitat for amphibians post development.
- 3.7 To minimise the risk of harm to amphibians that use the pond within the site it is recommended that the following precautionary methods are used:
- *The pond should be drained down during the autumn and left for a period of 24 hours (over at least one night).*
 - *Substrates from the existing pond could be transferred to the new swale (and/or new Primary School pond), if this is being created at the same time.*
 - *Following this, the pond can be in-filled.*

Bats

- 3.8 A number of potential crevice roost sites were identified associated with the mature hawthorn trees in the mature hedgerow/ woodland buffer to the south of the playing fields.
- 3.9 Seven trees are scheduled to be removed from this hedgerow to facilitate the development. These do not have high bat-roosting potential; however, to minimise the low risk of harm to bats it is recommended that precautionary felling techniques are undertaken and that the work is supervised or undertaken by a suitably qualified, bat-licensed ecologist.
- 3.10 An additional group of trees (of low roosting potential) to the south of the outdoor education area will also be removed.

Soft felling methodology:

- All trees highlighted with roosting potential should be soft-felled under supervision of an ecologist fully licenced by Natural England to handle bats, and with tree climbing ability (or a MEWP provided), to enable any bats found to be placed within bat boxes in adjacent trees.
- Three bat boxes (Schwegler 2F, or similar), should be installed on retained trees prior to the start of any felling (to provide an alternative roost for any bats found during works). These should face east, south and west to provide a variety of aspects – as advised on site by a licenced bat ecologist. Those detailed in Appendix B are suitable for this.
- A precautionary inspection for signs of bats in the trees, should be carried out prior to the start of tree works, by the bat licenced ecologist.
- Where possible, cross cutting in the proximity of cavities or hollows should be avoided.
- Limbs with internal fissures should be pruned carefully to maintain integrity of features as potential roost sites.
- Any felled sections containing cavities, should be left on the ground (for 24 hours) with the openings clear, allowing any bats inside an opportunity to escape.
- Split limbs that are under tension may need to be wedged open to prevent their closure when pressure is released, potentially trapping bats.
- Waking a bat from hibernation would pose a significant risk, therefore, soft felling should only be carried out when there is no chance of bats being in deep torpor. The weather must have been suitable for night-time flying over a number of days previous to the tree works (usually over 8 degrees and not raining). The hibernation period (November until April) should be avoided for any tree works.
- Should bats be found during the tree works which are not supervised by an ecologist, all activity should stop immediately while advice is sought from Natural England or the Project Ecologist.

Badgers

- 3.11 A disused badger sett was identified within the Outdoor Education Area and a single entrance to a potential outlier sett was identified within the mature hedgerow/linear woodland to the south of the playing fields. Both of these setts were considered to have been inactive for some time when surveyed in February 2011, due to the absence of evidence suggesting recent activity and the dense coverage of ivy over the entrance holes.
- 3.12 Although the badger sett appeared to have been inactive at the time of survey in 2011, badgers can colonise areas very rapidly. Therefore, it is recommended that an updating badger survey is undertaken just prior to site clearance, to ensure that no individuals have moved into the area. Ideally, this will be in the 3 weeks prior to site clearance, and no more than three months before works start.

Nesting birds

- 3.13 Trees and scrub within the site provided potential nesting habitat for birds. All nesting birds are protected by the Wildlife and Countryside Act 1981 (as amended).
- 3.14 Trees/ hedgerows proposed for retention should be suitably protected from harm during the construction works following British Standard: BS5837 (2012).
- 3.15 Site clearance and works proposed to any trees or hedges should be conducted outside the main bird breeding season (which is March until September). If vegetation removal is necessary between these dates, an ecologist should survey the site for active bird nests immediately prior to works. If nests are identified, there may be a delay in the clearance of some vegetation until all young birds have fledged.

Proposed timetable of works

Order of works	Mitigation works to be undertaken	Suggested timings of works
1	Erection of bat and bird boxes on retained trees	At the start of site works.
2	Creation of hibernacula	Following fencing and infilling of the pond
3	Clearance of scrub and trees (trees to be felled under supervision)	From beginning of March until Oct/Nov (weather dependant), when bats are active, and following nesting bird survey.
4	Clearance of grassland	Between March and September (during suitably weather).
5	Erection of reptile exclusion fence	Following completion of grassland clearance,
6	Creation of swale (within the site)	Between March and September.
7	Erection of bird boxes on houses	On completion of building works.

4.0 Key Recommendations

- 4.1 All works should follow this Mitigation Method Statement to ensure that disturbance and/or harm to protected wildlife is minimised.
- 4.2 Post development lighting should be low level wherever possible and should not illuminate the retained hedgerow to the south of the site or any proposed woodland/ tree planting within the new development.
- 4.3 Any necessary security lighting should ideally be set on short timers and be sensitive to large moving objects only.
- 4.4 Ideally, lights should be low pressure sodium lamps with covers made from glass rather than plastic, as this minimises the amount of UV light, reducing the attraction effects of lights on insects (BCT, 2009).

5.0 Enhancements

- 5.1 The addition of three bat boxes on existing/ retained trees will provide additional roosting opportunities. Schwegler 2F bat boxes are long lasting, and suitable for pipistrelle bats which are likely to use the site. Bat boxes should ideally be located facing south east, south and south west: high up (above 5m), and located under the supervision of a licensed bat ecologist for maximum effect (JBA 11/04-03).
- 5.2 Native and/or wildlife attracting hedgerows or lines of trees planted along the northern and eastern boundaries of the site will provide commuting and foraging routes for bats. Hedgerows along these boundaries would link existing areas of vegetation, enhancing the ecological links in the area.
- 5.3 The inclusion of a wildflower rich sward will enhance the area for invertebrates, which will in turn benefit bats in the area (JBA 11/04-03).
- 5.4 Habitat piles (Hibernacula) will be incorporated into the public open space along the northern boundary of the site (along the railway corridor) to provide shelter habitat for reptiles post development, as specified on the Landscape Plan JBA11/04-03.
- 5.5 The addition of bird boxes on the new buildings, sheds or existing, retained trees on site will provide additional nesting opportunities for birds in the local area.

Three house sparrow terraces (Schwegler 1SP or other manufacturers alternative) and three standard bird boxes (Schwegler 1B or other manufacturers alternative), as specified on the Landscape Plan JBA11/04-03 would provide additional nesting opportunities for birds likely to use the site. Boxes should be located appropriately, out of direct sunlight and close to vegetation, but out of reach of domestic cats.

6.0 Conclusion

- 6.1 Through completing the mitigation methods detailed in this report, it is considered that the wildlife at the site will suffer no net loss of conservation status in a local context. It is also considered likely that the creation of additional areas of suitable habitat, and appropriate management of these areas, may enhance the site for wildlife in the future.

7.0 References

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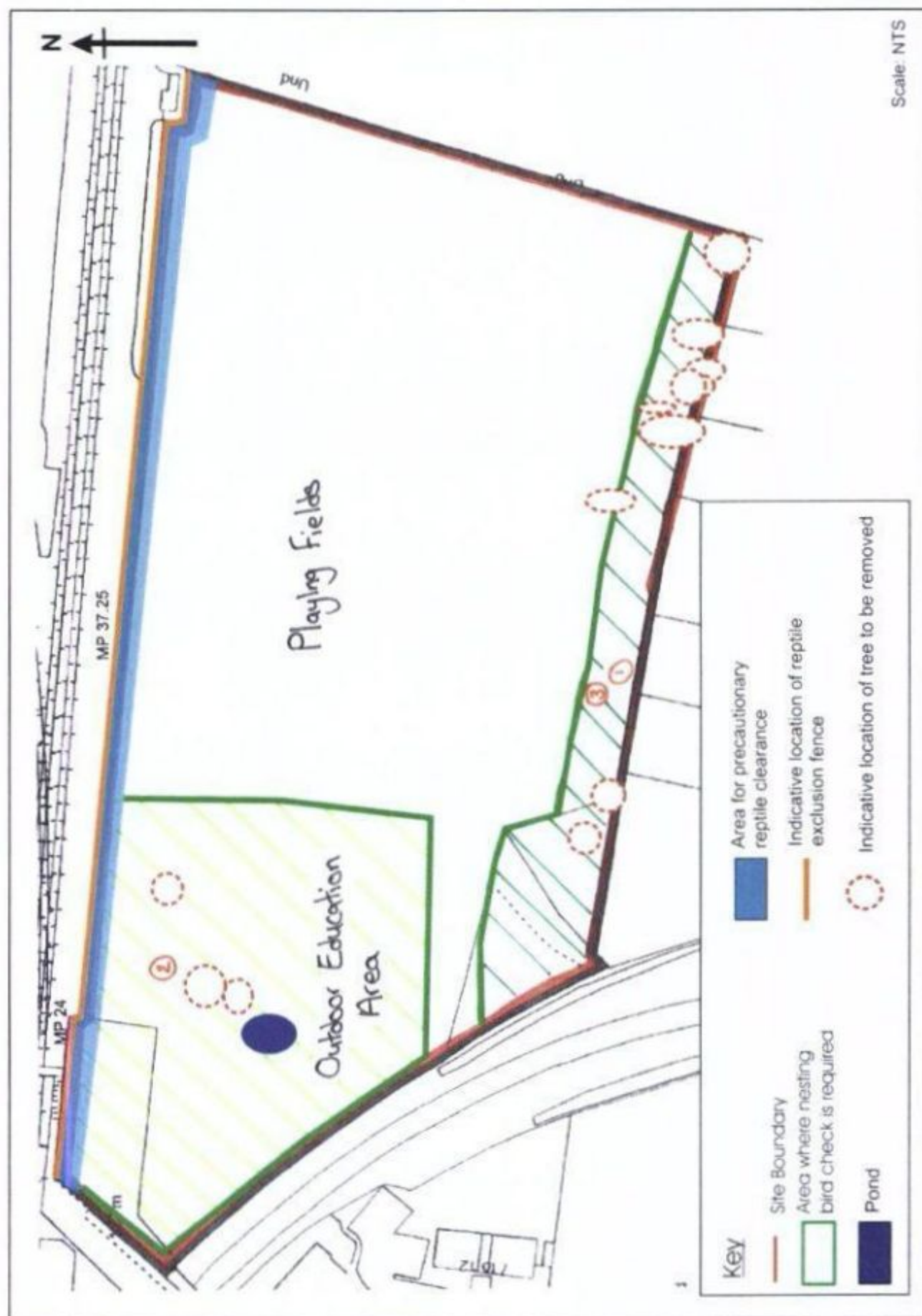
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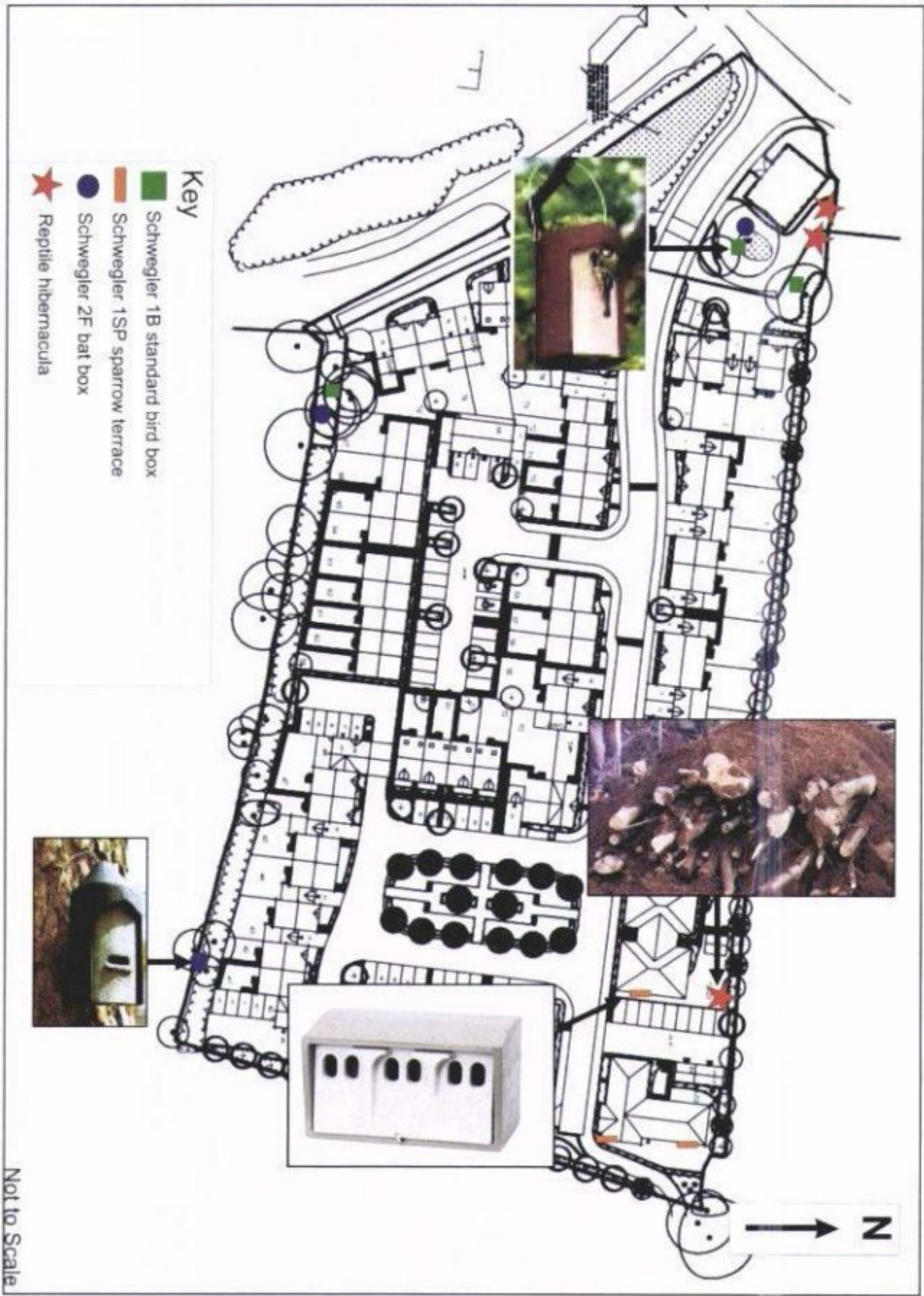
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Stace, C (2005) *Field Flora of the British Isles*. Cambridge University Press.

Appendix A: Mitigation Plan

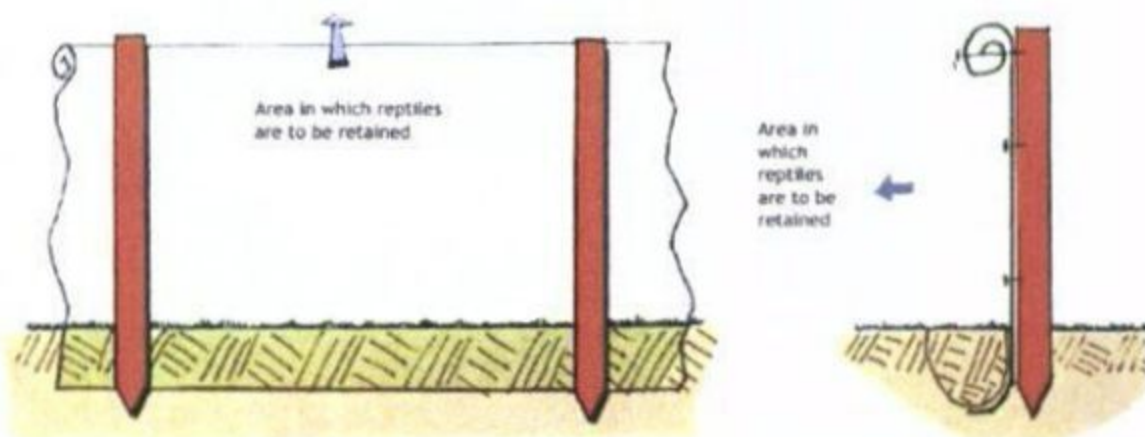


Appendix B: Suggested locations of birds and bat boxes and hibernacula



Appendix C: Reptile exclusion fencing specification

Reptile Fencing Specification



Reptile Fence Installation

Excavate a trench to the required depth (200mm), preferably by hand digging. If this is not possible, it is important to use a machine that will cause minimum disturbance to the site and is able to follow the line required. The spoil should be placed along the outside line of the trench.

Drive in tanilised soft wood timber posts 37x37x1200mm so that they are firm in the ground. Spacings at 1500mm centres. The line of the posts should be on the inside line of the trench.

Roll out the polythene sheet along the outside line of the trench. Take up as much slack as possible.

Attach the polythene sheet to the posts using nails, screws or staples through a nylon washer. The washer spreads the load over a wider area and prevents the polythene being easily torn off the stakes.

Allow for a minimum 100mm underlap of polythene in the base of the trench. Along the top line, allow 100mm of polythene to create a top roll. This has the dual effect of adding a lot of strength to the top fixing point, and creating an overlap which cannot be scaled by reptiles.

The overall height of the fence should be 600mm above ground level.

A minimum of three fixings per post with washers should be allowed for. The polythene should be free of major creases. Particular care should be taken at changes of slope.

Backfill trench. Care should be taken where soils are heavy that large clumps of soil do not damage the sheet or pull the sheet off the post. The fill material should be carefully compacted around the fence to ensure that reptiles do not burrow underneath.



A. Washer

B. Wood screw, nail or staple.

C. Plastic newt fencing 700mm above ground to include top roll. 1000 gauge Green tinted polythene. Total depth of polythene 1000mm

D. Wooden stake 37x37x1200mm

E. Trench depth 200mm

F. Horizontal return 100mm