

DORMOUSE SURVEY REPORT

KENT COUNTY COUNCIL
WALDESLADE ROUND WOODS
WALDESLADE WOODS, BOXLEY, KENT

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LLOYD BORE LTD
33 ST GEORGES PLACE
CANTERBURY
KENT CT1 1UT

Tel: 01227 464 340
Fax: 01227 464 341

mail@lloyd bore.co.uk
www.lloyd bore.co.uk



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1. EXECUTIVE SUMMARY

- S.1 The development proposals involve the redevelopment of the site to provide 12 residential units. This development will fund a 25 year management plan for the adjacent woodland, which forms part of the Walderslade Woods Local Wildlife Site.
- S.2 The majority of the site comprises poor quality semi-improved grassland. On the periphery of the site, the habitats comprise bramble scrub and ruderal vegetation, which are encroaching into the site. The site is bounded on all sides by mature broad-leaved woodland.
- S.3 One adult, non-breeding female hazel dormouse was found on 22nd August 2015. In addition, two hazel dormouse nests were found on the same day.
- S.4 There is limited scope within the development proposals to retain suitable dormouse habitat within the construction zone. Furthermore, this area of suitable habitat is a very small fraction of that available within the wider woodland and is of poorer quality compared to that present within the wider woodland area.
- S.5 The development proposals provide an opportunity to secure long-term, dormouse friendly management of the adjacent woodland. This in turn provides opportunities to improve the quality and extent of habitat for dormouse (and other species). The long-term funding of wildlife friendly management practices will secure the favourable conservation status of dormice in Walderslade Wood.
- S.6 A European Protected Species Mitigation Licence will be required to facilitate development prior to works starting. Planning permission will need to have been granted before a licence can be applied for.
- S.7 An ecology mitigation strategy will be produced to support the European Protected Species Licence. This document will detail the precise working methods and timing of works associated with the project. Approximately 0.15ha of suitable dormouse habitat will be lost as a result of the development proposals.
- S.8 Kent Wildlife Trust is producing a wildlife management plan for the wider woodland site. This will improve habitats for a range of species, including hazel dormice.
- S.9 In general, the timing of habitat clearance works will avoid the most sensitive times within the life-cycle of dormice and, where possible, it will also avoid the nesting bird season. If it is not possible to avoid the bird nesting season because of the constraints associated with dormice works, a nest check will be conducted prior to works. In addition, all habitat clearance works will be supervised by a licenced dormouse ecologist when required.
- S.10 An ecological management and enhancement plan will be produced which should be compatible with the presence of hazel dormice and reptiles.

2. INTRODUCTION

INSTRUCTION

- 2.1. Lloyd Bore Ltd was instructed by Henry Clark of Kent County Council on 19th June 2015 to conduct a dormouse (*Muscardinus avellanarius*) survey associated with a development proposal at Walderslade Round Woods, Walderslade, Kent (approximate centre TQ 76978 61732).

DESCRIPTION OF PROPOSED DEVELOPMENT

- 2.2. Proposals involve the construction of 12 residential units.
- 2.3. The outline development plan is shown in drawing 'Cheney Thorpe & Morrison Site Location Plan & Proposed Site Plan 07.10.02' dated June 2007 (see Section 4, Figure 2).

SCOPE OF WORKS

- 2.4. The instructed works included a hazel dormouse presence / likely absence survey of land at Walderslade Round Woods, Walderslade, Kent.

SURVEY OBJECTIVES

- 2.5. The objectives of the survey and report are to:-
- Identify whether hazel dormice are present within habitats at Walderslade Round Woods, Kent;
 - Determine whether a European Protected Species Mitigation (EPSM) is likely to be required to facilitate development; and
 - Make recommendations, if required, regarding appropriate avoidance measures, mitigation or, if necessary, compensation measures.

3. SITE LOCATION

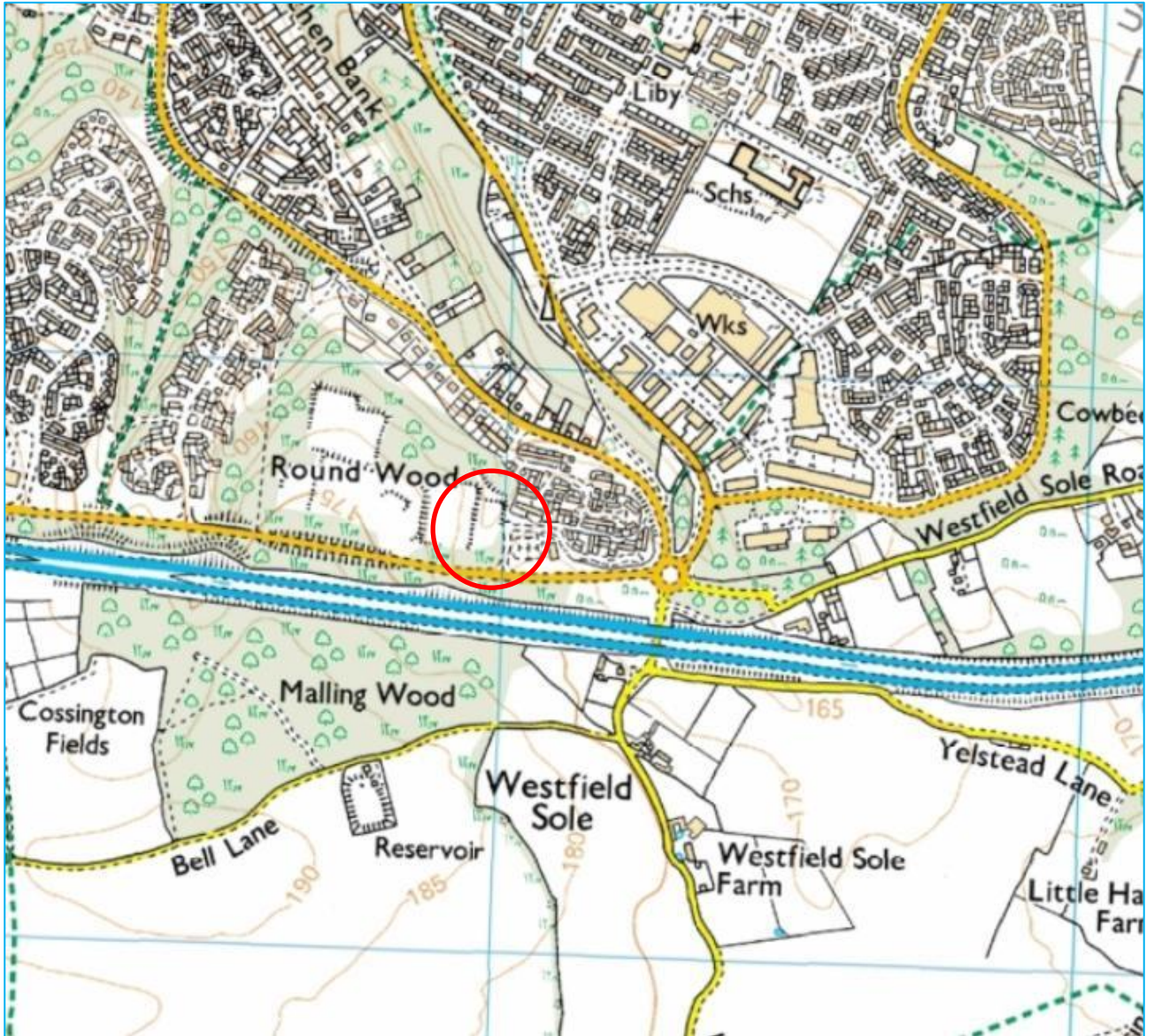


Fig. 1: Site location plan. Reproduced from (OS explorer 148, 1:25,000) by permission of Ordnance Survey. © Crown Copyright (2008), All rights reserved. AR 100029570.

4. RED LINE BOUNDARY OF SITE

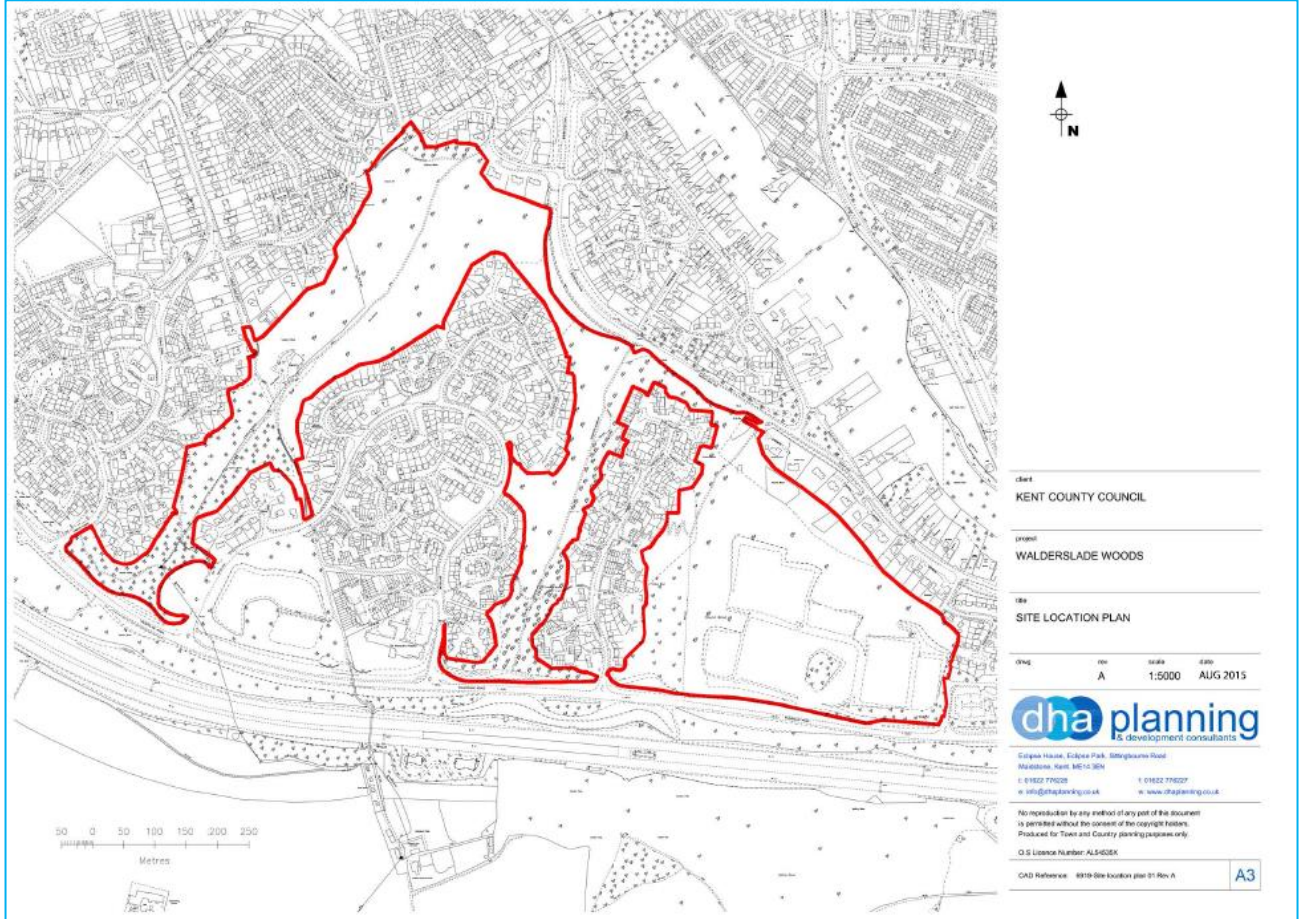


Fig. 2: Red line boundary of the site to include adjacent woodland habitats. The survey area comprises the plot present in the south-east corner (drawing 'DHA Planning Walderslade Woods Site Location Plan Revision A' dated August 2015').

5. PROPOSED DEVELOPMENT

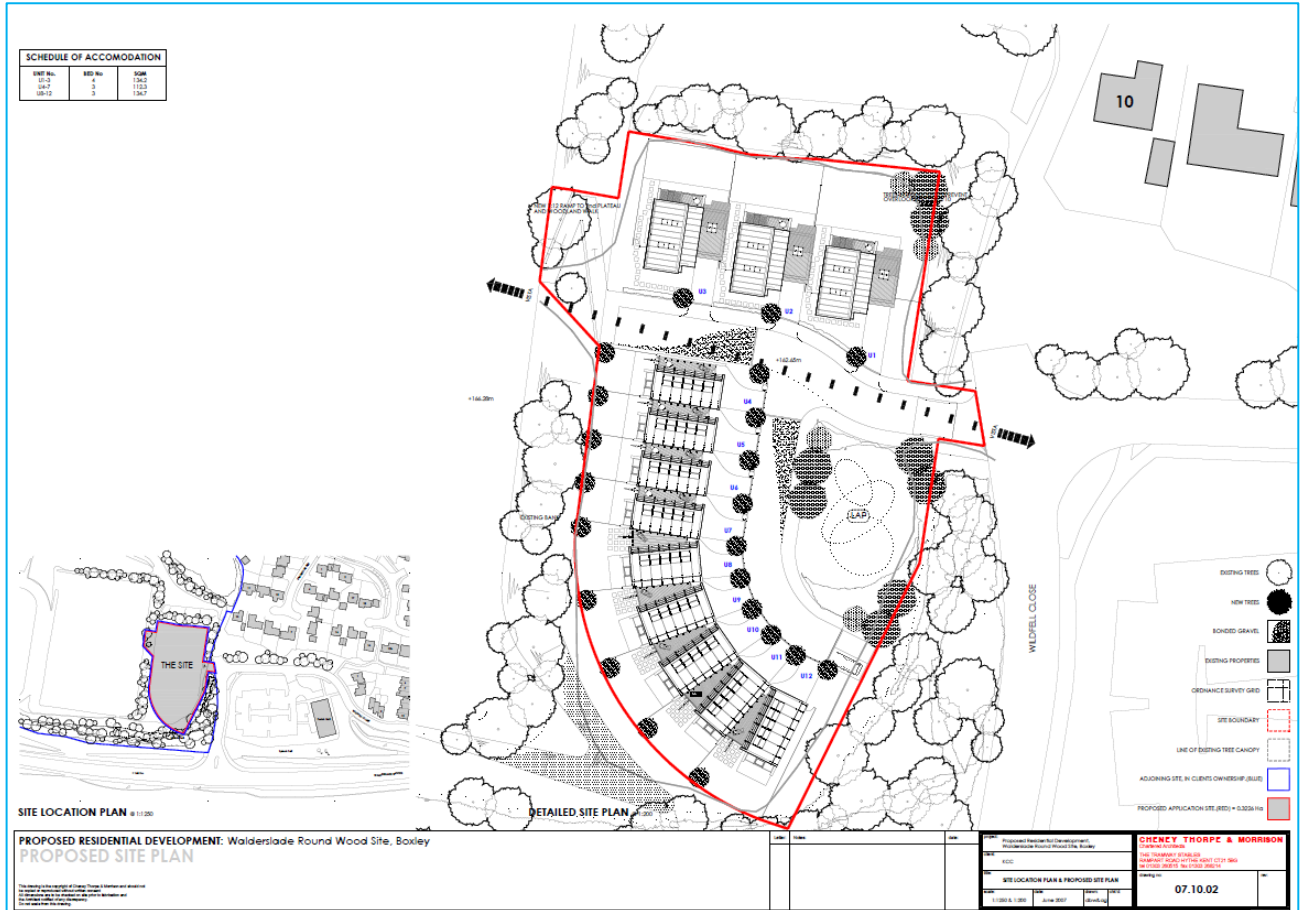


Fig. 3: Preliminary proposed site plan (Drawing 'Cheney Thorpe & Morrison Site Location Plan & Proposed Site Plan 07.10.02' dated June 2007).

6. METHOD

DESK STUDY

- 6.1. Data was obtained from the Kent and Medway Biological Records Centre (KMBRC) in April 2015. A 1km search radius was used.

NEST TUBE SURVEY

- 6.2. Dormice are usually active between April and November (inclusive) dependent on the prevailing weather conditions, and will readily use nest tubes or boxes for nest building and/or shelter.
- 6.3. The Dormice Conservation Handbook (Bright *et al.*, 2006) recommends that a minimum of 50 nest tubes are deployed at a density of one per 20 metres in suitable dormouse habitat.
- 6.4. A scoring system based on the index of probability of finding dormice in 50 nest tubes or boxes in any one month across the season of April to November is used. Each month carries an associated index of probability or score (see Table 1). Surveys for dormice can be conducted either monthly or every other month.
- 6.5. To indicate likely absence of dormice, a minimum effort score of 20 points is recommended (Bright *et al.*, 2006). Surveys can cease once signs of hazel dormice are found.
- 6.6. 60 nest tubes were placed within the grounds of Walderslade Round Woods, Walderslade, Kent on 26th June 2015 by Kate Baldock BSc (Hons), MSc, MCIEEM, (Class Licence No CLS0 1452) and Kathryn Tennant BSc (Hons) MSc Grad CIEEM.
- 6.7. Two visits were conducted between 24th July 2015 and 22nd August 2015. Details of survey visits are shown in Table 1.
- 6.8. The surveys were led by Kate Baldock.
- 6.9. For each nest tube or box, surveyors recorded signs of dormouse occupancy, which included:-
- Dormouse nests;
 - Distinctive feeding remains; and
 - The presence of animals;
- 6.10. When animals were present, where possible, the life stage, sex and weight of animals were recorded.
- 6.11. Evidence of use by other small mammals, such as wood mouse (*Apodemus sylvaticus*) or yellow-necked mouse (*Apodemus flavicollis*), and/or birds was also recorded.

Table 1: Index of probability of finding dormice present in 50 nest tubes in any one month (as taken from Bright et al., 2006).

Month	Index of Probability/Score
April	1
May	4
June	2
July	2
August	5
September	7
October	2
November	2

Table 2: Survey details.

Date of survey	Start time	Tubes checked	Finish time	Accumulated probability score	Lead surveyor	Weather
24th July 2015	10:15	60	11:15	2.2	Kate Baldock Kathryn Tennant	Dry, light breeze, 18°C
22nd August 2015	-	60	-	7.7	Kate Baldock	Dry, light breeze, 30°C

LEGISLATION AND PLANNING POLICY

- 6.12. The Conservation of Habitats and Species Regulations 2010 (as amended) and the Wildlife and Countryside Act 1981 (as amended) afford legal protection to hazel dormice.
- 6.13. The specific legal protection afforded to hazel dormice can be found within the Sections and Schedules of the relevant legislation and relevant case law.
- 6.14. In general, any person and/or activity that:-
- Damages or destroys a breeding or resting place of hazel dormice. (This is sometimes referred to as the strict liability or absolute offence);
 - Deliberately captures, injures or kills a hazel dormouse/dormice;
 - Deliberately disturbs hazel dormice, and in particular disturbance likely to impair animals ability to survive, breed or nurture young, their ability to hibernate and migrate and disturbance likely to have a significant effect on local distribution and abundance;
 - Intentionally or recklessly disturbs a hazel dormouse/dormice while occupying a structure or place used for shelter and/or protection (Wildlife and Countryside Act 1981 (as amended)); and
 - Intentionally or recklessly obstructs access to any structure or place that a hazel dormouse/dormice use for shelter or protection (Wildlife and Countryside Act 1981 (as amended)).
- ...may be guilty of an offence.
- 6.15. Actions affecting multiple animals can be construed as separate offences and therefore penalties can be applied per animal impacted.
- 6.16. Under certain circumstances licences can be granted by the Statutory Nature Conservation Organisation (Natural England in England) to permit actions that would otherwise be unlawful.
- 6.17. There are some very specific defences associated with the Conservation of Habitats and Species Regulations 2010 (as amended), however these are unlikely to apply to construction related projects. The Sections of the Regulations provide further details of these defences.
- 6.18. The Wildlife and Countryside Act (1981) includes defence for those aspects of the legislation that apply to hazel dormice. These defences are unlikely to apply to construction related projects and do

not apply to those acts included in the Conservation of Habitats and Species Regulations 2010 (as amended). The Schedules of the Act provide further details of defences.

- 6.19. Local authorities have obligations under sections 40 and 41 of the Natural Environment and Rural Communities Act (NERC) 2006 to have regard to the purpose of conserving biodiversity in carrying out their duties.

ASSESSMENT AND EVALUATION

- 6.20. The Dormouse Conservation Handbook (Bright *et al.*, 2006) and associated guidelines have been used to:-
- Assess the habitat's potential to support hazel dormice; and
 - To inform the scope of the survey works required to assess whether hazel dormice are using the habitats within the construction zone.
- 6.21. Natural England Standing Advice (undated), which is a material consideration in planning, also provides details on survey methodology and how the implementation of mitigation measures, such as using recognised techniques at the appropriate time of year, can reduce the scope of survey work required.
- 6.22. The Guidelines for Ecological Impact Assessment (IEEM, 2006) were used as guidance to determine the importance (or value) of the site, and the habitats immediately surrounding the site, for hazel dormice.

ZONE OF INFLUENCE (ZOI)

- 6.23. The potential impact of a development is not always limited to the boundaries of the site concerned. The area over which a development may impact ecologically valuable receptors is known as the Zone of Influence (Zoi).
- 6.24. The Zoi is determined by the source/type of impact, a potential pathway for that impact and the location and sensitivity of the ecologically valuable receptor beyond the boundary.
- 6.25. Potential sources of impact associated with the proposed development include loss of habitat, disturbance and predation by domestic pets (cats).
- 6.26. With appropriate avoidance, mitigation and avoidance measures, the Zoi is likely to be confined to the construction zone and areas just beyond.

SURVEY LIMITATIONS

- 6.27. Numerous tubes were found to have been disturbed during the survey dated 24th July 2015. This is not considered to be a significant limitation because tubes were replaced. Furthermore, hazel dormice were found during the survey work.
- 6.28. This report is considered suitable to fulfil the requirements of planning.

7. SURVEY RESULTS

DESK STUDY

- 7.1. Hazel dormice have been recorded within Walderslade Round Woods Local Wildlife Site in 2009 (grid ref: TQ 769 619). Animals have also been recorded north-east of the site in 2008 (grid ref: TQ 777 623) from Arundel Close, Lordswood.
- 7.2. Animals have also been recorded within Tunbury Woods (grid ref: TQ759616), which lies south of the development site. However, this woodland is separated from the development site by the M2 motorway which forms a barrier to movement.

SURVEY RESULTS

- 7.3. One hazel dormouse was found within tube 3 on 22nd August 2015. The nest comprised seed coatings from *Salix sp.* trees. The dormouse was a non-breeding adult female weighing 22g.
- 7.4. One likely hazel dormouse nest was present in tube 25 on 24th July 2015 and 22nd August 2015. This comprised brown leaves with limited woven structure. It was not considered to be significantly similar to an *Apodemus sp.* nest.
- 7.5. One hazel dormouse nest was found in nest tube 4 on 22nd August 2015. The nest comprised seed coatings from *Salix sp.* trees.

OTHER SPECIES

- 7.6. A moderate population of slow worm (*Anguis fragilis*) are present within the site, and the results of reptile surveys are provided in the associated reports (Lloyd Bore Ltd, 2015).

8. EVALUATION AND RECOMMENDATIONS

EVALUATION

- 8.1. The mature woodland beyond the site boundary comprises silver birch (*Betula pendula*), field maple (*Acer campestre*), blackthorn (*Prunus spinosa*), goat willow (*Salix caprea*), oak (*Quercus sp.*), ash (*Fraxinus excelsior*), hazel (*Corylus avellana*), hawthorn (*Crataegus monogyna*) and sweet chestnut (*Castanea sativa*). This provides a large area of suitable dormouse habitat.
- 8.2. The dense bramble scrub and woodland on the site boundary provides suitable habitat within the site.
- 8.3. Hazel dormice are present within the site and approximately 0.15ha will be lost to facilitate development. Therefore, a European Protected Species Mitigation (EPSM) licence will be required.
- 8.4. The development site is only likely to be of local value for dormice because the extent of suitable habitat is very limited and only comprises a very small proportion of the suitable habitat present within the wider woodland.
- 8.5. The wider woodland, beyond the development zone, is likely to be of value a Borough/District level, and it may possibly be of County value dependent on the size of dormouse population within the wider Walderslade Woodland.
- 8.6. There is very limited scope to retain suitable hazel dormouse habitat within the development zone. However, through sensitive management of the adjacent woodland, the development proposals provide an opportunity to secure and improve the quality and extent of habitat in the long-term. This is particularly important because the lack of woodland management is known to adversely affect the quality of woodland for wildlife. Therefore, the funding arising from the development proposals provide the opportunity to secure and maintain the favourable conservation status of the local dormouse population.

RECOMMENDATIONS

- 8.7. The precise works, timing of works and other measures will be included within the European Protected Species Mitigation Licence.
- 8.8. In general, habitat clearance will avoid sensitive period of the dormouse lifestyle (i.e. the breeding and hibernation season) and clearance works will be supervised by a suitably qualified ecologist.
- 8.9. If suitable dormouse habitat is cleared during the nesting bird season, a check for nesting birds will be undertaken by a suitably experienced ecologist prior to commencement of works. Any active nests will need to be left in situ until the birds have stopped using it.
- 8.10. Where possible, existing boundary habitat will be retained and protected using standard tree protection measures. Compensatory planting, using native dormouse friendly species, along the woodland boundary is also recommended.

9. ECOLOGICAL ENHANCEMENT MEASURES

- 9.1. Where possible, and where it does not conflict with resident access on and off-site, any existing hedgerow that will be retained should be enhanced by filling in gaps with native species planting. This will enhance the quality of the hedgerows. A species mix should replicate the existing species composition.
- 9.2. Any new hedgerows could be planted with a mix of hawthorn (50%), field maple (30%), hornbeam (10%), guelder rose (3%), dogwood (3%), spindle (2%) and dog rose (2%) (Smith and Day, 2012).
- 9.3. Climbing species, such as honeysuckle (*Lonicera sp.*) could be used along fencing or walls, where suitable. Honeysuckle could also be planted within newly created hedgerows.
- 9.4. Vegetation should be cut yearly once established, in the period mid-December to early February. During this time, no vegetation should be cut to a height of less than 40cm.
- 9.5. Standard Environment Agency Pollution Prevention Guidelines should be followed to minimise the risk of ecological impacts arising from fuel or chemical spillages.

10. REFERENCES

Bright, P., Morris, P., and Mitchell-Jones, A. (2006). The Dormouse Conservation Handbook, 2nd Edition, English Nature, Peterborough.

IEEM (2006). Guidelines for ecological impact assessment in the United Kingdom. Institute of Ecology and Environmental Management, Winchester.

Lloyd Bore Ltd (2015). Reptile Survey Report 3478_RP_002.

Natural England (undated). Standing Advice Species Sheet: Dormice

Smith, D.W, and Day, J. (2012). Using BREEAM Assessments to Deliver Benefits for Urban Wildlife. In Practice, **75**, 30-35.

11. APPENDIX 1: LOCATION OF NEST TUBES

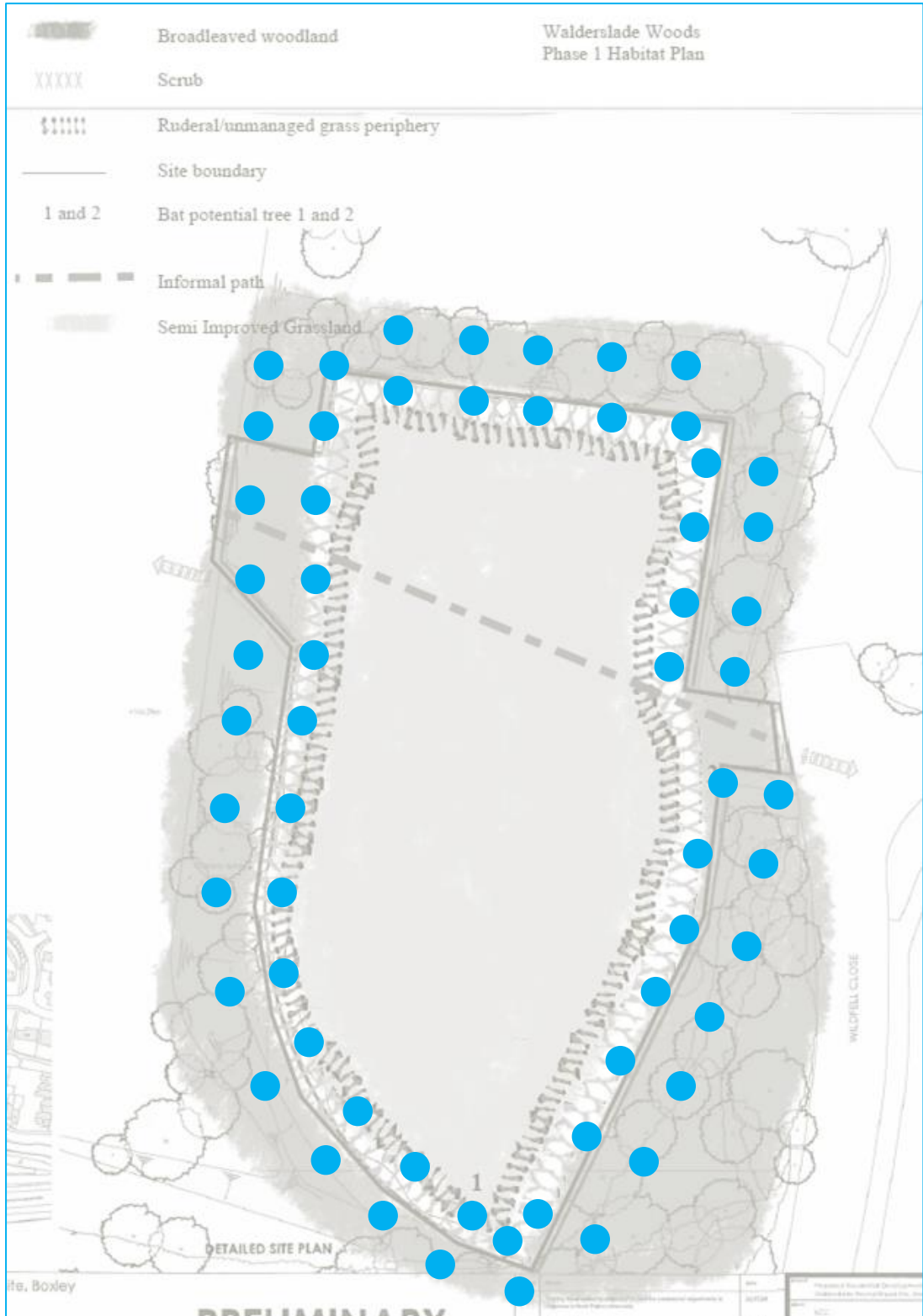


Fig. 4: Location of nest tubes as shown with blue circles. The tubes were placed within the bramble scrub and the woodland boundary. (Drawing adapted from the 'Phase 1 habitat plan 3478').