



REGENTS PARK CALNE

LANDSCAPE AND ECOLOGICAL MANAGEMENT PLAN (LEMP)



Written By:	C. Read
Checked By:	L. Gilbert
Date:	11.09.2024
Document File Ref:	HILLS24602_LEMP
Revision:	B
Date of last revision:	12.01.2025
Revised by:	N. Jones

QUALITY ASSURANCE

This report has been prepared in accordance with the Chartered Institute of Ecology and Environmental Management (CIEEM) Guidelines for Ecological Report Writing (2nd Edition, December 2017).

The facts stated in this report are true to the best of our knowledge and belief, and any opinions expressed are held genuinely and in accordance with the accepted standards of the profession. ACD Environmental Ltd is a CIEEM Registered Practice.

Client:	Hills Home Developments
Site/job:	Regents Park, Calne
Author:	Cerys Read
Technical review:	Lily Gilbert



CONTENTS

1	INTRODUCTION	4
2	AIMS AND OBJECTIVES	6
3	BASELINE ECOLOGICAL CONDITIONS	8
4	ROLES AND RESPONSIBILITIES	18
5	HABITAT CREATION AND ENHANCEMENT	19
6	MANAGEMENT, MAINTENANCE AND MONITORING	25
7	SCHEDULE OF WORKS	32
8	CONCLUSIONS	35
	APPENDIX 1: PHASE 1 HABITAT MAP	36
	APPENDIX 2: LANDSCAPE PROPOSALS	37
	APPENDIX 3: ECOLOGICAL ENHANCEMENT PLAN	38
	APPENDIX 4: ARBORICULTURAL IMPACT ASSESSMENT	39
	APPENDIX 5: TREE PROTECTION PLAN	54

1 INTRODUCTION

- 1.1. ACD Environmental Ltd was instructed by Hills Home Developments in July 2024 to produce a Landscape and Ecological Management Plan (LEMP) for a parcel of land at Regents Park, James Avenue, Calne, Wiltshire, SN11 8NA (OS Grid Reference: SU 00759 71135). This land is hereafter referred to as the 'Approved Development Site'.
- 1.2. The Approved Development Site has outline planning permissions for 17 residential houses (**planning ref: 20/07659/OUT**).
- 1.3. This report has been produced to address **Condition 8** of the planning permission. Condition 8 states:

"No development shall commence on site (including ground works, vegetation clearance) until a Landscape and Ecological Management Plan (LEMP) has been submitted to and approved in writing by, the Local Planning Authority. The LEMP shall include, but not necessarily be limited to, the following:

- a) Description and evaluation of features to be managed.*
- b) Ecological Constraints on site that might influence management*
- c) Aims and objectives of management prescriptions of management actions*
- d) Details of the body or organisation responsible for the implementation of the plan*
- e) Ongoing monitoring framework and remedial measures*

The LEMP shall include details of the legal and funding mechanisms by which the long term implementation of the plan will be secured by the developer with the management body responsible for its delivery. Monitoring reports shall be submitted to the Local Planning Authority in accordance with the framework and shall include clear recommendations for any necessary remedial measures or changes to the management prescriptions and maintenance schedules required to achieve long term management objectives.

The site shall be maintained in accordance with the approved LEMP (as amended through monitoring) in perpetuity thereafter"

- 1.4. This Landscape and Ecological Management Plan (LEMP) has been written to fulfil Condition 8 and provides ongoing management and maintenance prescriptions.

- 1.5. This LEMP focuses on ongoing management, maintenance and monitoring of retained, enhanced and created habitats. For details on lost habitats, and on measures undertaken during the construction phase to protect habitats and wildlife please refer to the original Ecological Assessment¹ produced by Ecology Solutions Ltd and the CEMP: Biodiversity².
- 1.6. This LEMP must be read in conjunction with the Ecological Assessment produced by Ecology Solutions Ltd, and both the Construction Environmental Management Plan (CEMP: Biodiversity) and the High-Level Lighting Scheme Report ³ written by ACD Environmental Ltd.
- 1.7. The landscape proposals⁴ is provided within **Appendix 2** and the Ecological Enhancement Plan is provided within **Appendix 3**.

Competence

- 1.8. This report has been written by Cerys Read who is a Graduate Ecologist at ACD Environmental Ltd. Cerys has experience of carrying out a wide range of ecology surveys ranging from Extended Phase 1 Habitat Surveys to Phase 2 surveys for protected species including badger *Meles meles*, bats, great crested newt *Triturus cristatus* and reptiles. Cerys has completed different types of reports including Ecological Impact Assessments, Landscape and Ecological Management Plans and technical notes. Cerys is a Qualifying member of Chartered Institute of Ecology and Environmental Management CIEEM.
- 1.9. A Technical Review of this report has been undertaken in line with ACD Environmental Ltd's Quality Assurance procedures. The Technical Review was undertaken by Lily Gilbert. Lily has over 11 years' experience working for commercial consultancy and specialises in European Protected Species (EPS) legislation and mitigation, holding licences for bats, barn owl, hazel dormouse and great crested newt. Lily has significant experience of EcIA and is a Full Member of the Chartered Institute of Ecology and Environmental Management (MCIEEM).

¹ Ecology Solutions Ltd (2020). *Ecological Assessment* – 6338 EcoAss. August 2020.

² ACD Environmental Ltd (2024). *Construction Environmental Management Plan: Biosecurity*. Document ref: HILLS24602_CEMP.

³ ACD Environmental Ltd (2024). *Lighting Scheme*. Document ref: HILLS24602_Lighting Scheme.

⁴ ACD Environmental Ltd (2024). *Landscape Proposals*. Drawing ref: HILLS24602-11.

2 AIMS AND OBJECTIVES

Aims

2.1. The aims of this LEMP and how this relates to specific sections of this report are as follows:

- Provide a summary of the previous ecology surveys and results in order to provide the context to subsequent recommendations (**Section 3.0, Appendix 1**).
- Provide details of the roles and responsibilities for future actions (**Section 4.0**).
- Provide details of habitat creation and enhancement, including artificial wildlife habitats (**Section 5.0, Appendix 2 and 3**).
- Provide details on management and maintenance of retained and created habitats (**Section 6.0**).
- Provide details on monitoring and review (**Section 6.0**).
- Provide details of a schedule of works for implementation and subsequent management, maintenance and monitoring (**Section 7.0**).
- Provide conclusions to the points raised (**Section 8.0**).

Objectives

2.2. To ensure the success of the landscape and ecological design in perpetuity, the programme of maintenance and management within this report will aim to achieve the following objectives:

- Ensure features of ecological value are protected and managed in a way that ensures their ecological value is maintained.
- Create new habitats of ecological value and ensure delivery of net biodiversity gain through appropriate management.
- Create and maintain ecological corridors for commuting wildlife across the completed development to ensure connectivity of habitats is maintained.
- Establish a flexible management and maintenance regime, able to respond to changing needs or objectives.
- To ensure that the required protected species enhancement measures remain in

place in perpetuity and are not disturbed.

3 BASELINE ECOLOGICAL CONDITIONS

- 3.1. The Approved Development Site comprises approximately 0.5ha of land. The Ordnance Survey Grid Reference for the approximate centre of the site is SU 00759 71135.
- 3.2. The Approved Development Site is located to the east of Calne in Wiltshire within an area of new housing development. The location of the Approved Development Site is shown within **Image 1**.



Image 1: Approximate boundary of the Approved Development Site. (QGIS, 2024).

- 3.3. The Approved Development Site is situated within an urban context, with areas of housing located to the east, south, and west of the Approved Development Site. To the north of the Approved Development Site are open grassland areas, including a water attenuation feature and children's play area, beyond which there are arable fields.
- 3.4. The Approved Development Site has been subject to a range of ecological surveys, which were undertaken by Ecology Solutions. An update Extended UK Habitat Classification Survey was undertaken by ACD Environmental Ltd in July 2024. The surveys carried out at the Approved Development Site are summarised within **Table 1** below.

Table 1: Details of field surveys.

Survey Type	Survey date	Surveyor
Extended Phase 1 Habitat Survey	2014, 2015 & 2016	Ecology Solutions Ltd

Badger Surveys	2014, 2015, 2016	Ecology Solutions Ltd
Great Crested Newt Aquatic Survey (Pond 1)	May & June 2014	Ecology Solutions Ltd
Reptile Surveys (with artificial refugia)	July 2014	Ecology Solutions Ltd
Bat Activity Surveys	July & August 2014	Ecology Solutions Ltd
Updated Phase 1 Site Surveys	June & July 2018 May 2020	Ecology Solutions Ltd
Updated Reptile Surveys	June & July 2018	Ecology Solutions Ltd
Updated Bat Activity Surveys	June - August 2018	Ecology Solutions Ltd
Great Crested Newt eDNA Survey (Pond 2)	May 2020	Ecology Solutions Ltd
Updated Extended UK Habitat Classification Survey	16 th July 2024	ACD Environmental Ltd

- 3.5. An updated UK Habitat Classification survey was undertaken by ACD Environmental Ltd on 16th July 2024 to update the baseline, and to inform the recommendations within this LEMP.
- 3.6. A summary of the results of the update walkover and of previous surveys is provided below for context. For further details please refer to the original Ecological Assessment.

Designated Sites

- 3.7. The MAGIC website⁵ was used to carry out a data search for granted EPS licences, Sites of Special Scientific Interest (SSSIs), Special Protection Areas (SPAs) and Special Areas of Conservation (SACs) with an Impact Risk Zone (IRZ) that falls within the Application Site.
- 3.8. Statutory designated sites are the most significant ecological receptors and include SPAs, SACs and Ramsar sites of international value and SSSIs and National Nature Reserves (NNRs) of national value.
- 3.9. A desk study was conducted originally for the Ecology Assessment produced by Ecology Solutions Ltd, in which Wiltshire and Swindon Biological Records Centre (WSBRC) produced a data search. This report will give mention to the results of this data search.

Statutory designated sites

Table 2: Statutory designated sites within the 5km of the application site.

⁵ Multi Agency Geographic Information for the Countryside [online]. Available at: <https://magic.defra.gov.uk/>

Name of statutory designated site	Approximate distance from Approved Development Site	Reason for designation
Calstone and Cherhill SSSI	3.5km to the southeast	Designated for herb-rich chalk grasslands which are of exceptional botanical quality, Supports flora and invertebrates.
North Wessex Downs AONB	3.8km to the southeast	Area of Chalkland located in Wiltshire, designated for being an Area of Outstanding National Beauty.
Morgan's Hill SSSI	4.2km to the southeast	Designated for being a southern chalk grassland and a botanically rich area. Supports flora and invertebrates.
Bencroft Hill Meadows SSSI	4.8km to the northwest	Grassland with areas of good species diversity including MG5 meadow habitat. Abundant orchid species
King's Play Hill SSSI	4.8km to the south	Designated for chalk grassland and being a botanically rich area. Supports both locally and nationally rare species. Supports flora and invertebrates.

3.10. The Approved Development Site is located within the 'Impact Risk Zone'⁶ (IRZ) of four SSSI within a 5km distance. However, the proposed development does not fall into the categories of:

- *"Infrastructure: Airports, helipads and other aviation proposals."*
- *"Air Pollution: Livestock & poultry units with floorspace > 500m², slurry lagoons > 750m² & manure stores > 3500t"*
- *"Combustion: General combustion processes >50MW energy input. Incl: energy from waste incineration, other incineration, landfill gas generation plant, pyrolysis/gasification, anaerobic digestion, sewage treatment works, other incineration/ combustion"*

⁶SSSI Impact Risk Zones. Available at: <https://naturalengland-defra.opendata.arcgis.com/datasets/sssi-impact-risk-zones-england/explore>

3.11. Due to the Approved development site not falling within these categories, the developer does not need to consult Natural England on the proposed development at this location.

Non-statutory designated sites

3.12. The nearest non-statutory designated site is Sands Farm Quarry, a Local Wildlife Site (LWS), which is located approximately 0.4km to the east of the Approved Development site. This LWS is designated for series of sediment lagoons and sand quarry processing plant. The Ecological Assessment states that a number of non-statutory sites are located within the buffer zone, however it is expected that there will be no significant effects on any of the non-statutory designated sites.

Habitats

3.13. The site habitats comprise:

- Modified grassland.
- Hedgerows.
- Scattered trees.
- Log pile.

Modified grassland

3.14. The majority of the Approved Development Site is comprised of modified grassland. It should be noted that the grass had been freshly cut just prior to the updated survey conducted by ACD Environmental Ltd on 16th July 2024. Therefore, the uncut grassland to the north-west of the Approved Development Site, separated only by a footpath, was surveyed as a proxy assessment of the grassland within the Approved Development Site.

3.15. Species identified include red clover *Trifolium pratense*, cock's foot *Dactylis glomerata*, meadow barley *Hordeum secalinum*, creeping bent *Agrostis stolonifera*, false oat-grass *Arrhenatherum elatius*, Yorkshire fog *Holcus lanatus*, ragwort *Jacobaea vulgaris*, curly dock *Rumex crispus*, wild garlic *Allium ursinum*, buttercup *Ranunculus acris*, silverweed *Potentilla anserina*, cow parsley *Anthriscus sylvestris*, creeping thistle *Cirsium arvense*, white clover *Trifolium repens*, pineapple weed *Matricaria discoidea*, bitter dock *Rumex obtusifolius* and creeping Jenny *Lysimachia nummularia*.

Hedgerows

3.16. There are a total of two hedgerows within the Approved Development Site.

Hedgerow one

- 3.17. Hedgerow one (H1) is situated along with north-eastern boundary of the Approved Development Site. Hedgerow H1 comprised blackthorn *Prunus spinosa*, field maple *Acer campestre*, hawthorn *Crataegus monogyna*, and bramble *Rubus fruticosus*. Ground flora species included nettles *Urtica dioica*, ragwort *Jacobaea vulgaris*, bush vetch *Vicia sepium*, bird's foot trefoil *Lotus corniculatus*, sow thistle *Sonchus oleraceus*, lords and ladies *Arum maculatum*, St John's wort *Hypericum perforatum*, bindweed *Calystegia sepium*, betony *Stachys officinalis*, brooklime *Veronica beccabunga*, great willowherb *Epilobium hirsutum*, bitter dock *Rumex obtusifolius*, and common mugwort *Artemisia mugwort*.
- 3.18. There is also a ditch within hedgerow H1, which adjoins a pipe that flows along an offsite hedgerow towards the north-west and flows into the River Marden, a small tributary for the River Avon, which sits approximately 100m to the north-west of the Approved Development Site.

Hedgerow two

- 3.19. Hedgerow two (H2) is situated along the south-eastern boundary of the Approved Development Site. Comprising fewer species in comparison to hedgerow H1, hedgerow H2 included blackthorn, hawthorn, and bramble. The majority of the ground flora species recorded were also noted along hedgerow H1, including nettle, bitter dock, great willowherb, bush vetch, betony. Other ground flora species recorded amongst hedgerow H2 included honeysuckle *Lonicera periclymenum* common ivy *Hedera helix*, cleavers *Galium aparine*, and dog rose *Rosa canina*.

Scattered Trees

- 3.20. All trees within the Approved Development Site are situated within hedgerows H1 and H2. Tree species recorded include ash *Fraxinus excelsior*, white willow *Salix alba*, oak *Quercus robur*, field maple, and blackthorn.

Log Pile

- 3.21. Situated to the south of the site within the grassland area is a pile of dead logs which is dominated by nettle, hairy willowherb, sticky weed *Galium aparine* and common rush *Juncus effusus*.

Fauna

- 3.22. For ease of reference, descriptions of relevant fauna have been provided alphabetically, below.

Amphibians

Great crested newt

- 3.23. There are no waterbodies within the red line boundaries of the Approved Development Site. Two ponds have previously been recorded within 500m of the Approved Development Site. Pond one (P1) underwent aquatic sampling in May and June 2014, however no great crested newts were identified. Pond P1 was recorded as being dry between April and July 2017 and was subsequently lost to an adjacent development. Pond two (P2) is a water attenuation feature situated approximately 23m north of the Approved Development Site. Pond P2 underwent eDNA sampling in May 2020 which returned a negative result for great crested newt.
- 3.24. Since the Approved Development Site sits within an Amber Zone for great crested newts, the 2024 UK Habitat Classification survey assessed pond P2 using Habitat Suitability Index (HSI) methodology, which determined pond P2 to have 'excellent' suitability to support great crested newts. Although this 'excellent' suitability has been recorded, there are barriers to dispersion including the surrounding housing developments, a flowing river running to the north and a road to the east. The habit surrounding pond P2 is high-quality terrestrial habitat and there are no ponds on the southern side of the application site so it is unlikely that potential great crested newts would travel through the site.
- 3.25. Although previous results have not identified any great crested newt within this feature, due regard must be given to the potential for great crested newts to be present within pond P2. Precautionary works are to be implemented and if any great crested newts are found within the Approved Development Site works must stop with immediate effect and a licence must be sought.

Common Toad

- 3.26. It should be noted that the UK Habitat Classification Survey conducted by ACD in July 2024 recorded a population of common toad *Bufo bufo* toadlets on site. It is expected that toads are using the attenuation pond to the north of the Approved Development Site and the ditch running through the north-eastern site boundary of the Approved Development Site. Compensation for toads can be found in Section 5.

Badger

- 3.27. No evidence of badger *Meles meles* activity was observed within the Approved Development Site during surveys in 2014, 2015, 2016, 2018, and 2020. However, the Ecological Assessment (2020) states that an active badger sett was recorded approximately 360m to the east of the Approved Development Site.
- 3.28. The update walkover in 2024 observed evidence of badger activity, comprising well-worn mammal

paths into hedgerows and snuffle marks.

- 3.29. No badger setts have been found within the Approved Development Site to date. However, it is considered possible that badgers could build setts amongst hedgerows, and the grassland and hedgerow habitats provide suitable foraging habitat for badgers. Therefore, due regard must be given to the potential for badgers to be present within the Approved Development Site given their known presence within the local area and use of the Approved Development Site for commuting and foraging.

Bats

Bats: commuting/foraging

- 3.30. The Approved Development Site provides suitable commuting and foraging habitat for bats within the grassland habitat and along the two native hedgerows.
- 3.31. All previous ecological surveys undertaken within the Approved Development Site have identified a combined total of five species of bat using the Approved Development Site for commuting/foraging: common pipistrelle *Pipistrellus pipistrellus*, soprano pipistrelle *Pipistrellus pygmaeus*, serotine *Eptesicus serotinus*, lesser horseshoe *Rhinolophus hipposideros*, and barbastelle *Barbastella barbastellus*, as well as *Nyctalus* sp., *Myotis* sp., and *Long-eared* sp.
- 3.32. The Ecological Assessment (2020) reports that only occasional and individual registrations of barbastelle and lesser horseshoe bats were recorded within the Approved Development Site. Therefore, it was considered that neither species were using the site for foraging due to their habitat preferences of woodland edges and rides, and fields associated with cattle grazing, respectively, and were using the site for occasional and infrequent commuting.
- 3.33. The hedgerows and trees within the Approved Development Site are to be retained, however indirect effects such as increased lighting have the potential to impact bats commuting within the Approved Development Site, particularly rarer bats, such as barbastelle.

Bats: roosting

- 3.34. The data search returned no records of bats from within the Approved Development Site. The data search returned records of a pipistrelle bat roost 0.6km northwest, a brown long-eared roost 0.3km northwest and a soprano pipistrelle roost 1km southeast. Lesser horseshoe, brown long-eared, serotine and natterer's bat *Myotis nattereri* were recorded in the wider area from the Approved Development Site. Although it should be noted that all above records were dated from 1995 – 2013.
- 3.35. All trees within the Approved Development Site were considered to have negligible suitability for

roosting bats, with the exception of the mature white willow tree located on the south-western site boundary which has low suitability for bats, however this tree will be retained within a dark corridor (refer to Lighting Scheme) and will be protected with protective fencing within a Biodiversity Protection Buffer Zone.



Image 2: Mature white willow.



Image 3: White willow trunk with dominating common ivy.

Birds

- 3.36. The hedgerows within and surrounding the Approved Development Site provide suitable nesting habitat for birds. The grassland and hedgerows both provide suitable foraging opportunities for birds, including over-wintering fieldfare *Turdus pilaris*, which are categorised as a Red-listed species on the UK Red List for birds⁷ and Schedule 1 bird species under the Wildlife and Countryside Act 1981 (as amended)⁸.
- 3.37. The data search detailed in the Ecological Assessment (2020), returned no records of notable birds from within the site. Species noted within a 1km buffer zone included mediterranean gull *Larus melanocephalus*, house sparrow *Passer domesticus*, fieldfare *Turdus pilaris*, song thrush *Turdus philomelos*, kingfisher *Alcedo atthis*, starling *Sturnus vulgaris*, herring gull *Larus argentatus*, red kite

⁷ Stanbury, A.J., Eaton, M.A., Aebischer, N.J., Balmer, D., Brown, A.F., Douse, A., Lindley, P., McCulloch, N., Noble, D.G. & Win, I. (2021). *Birds of Conservation Concern 5 (BOCC5)*.

⁸ Great Britain. *Wildlife and Countryside Act 1981* [online]. Available from: <http://www.legislation.gov.uk/ukpga/1981/69/contents>

Milvus milvus, and peregrine falcon *Falco peregrinus*.

3.38. Data records also confirmed nearby presence of barn owl *Tyto alba*. Although the Approved Development Site provides limited foraging opportunities for barn owl, a barn owl pellet was discovered within the Approved Development Site during the 2024 update survey, the pellet was located centrally to the site within the open grassland. This suggests that barn owl are using the grassland within the Approved Development Site as foraging habitat. Therefore, due consideration must be given to the potential for owls, including barn owl, to be present within the Approved Development Site given their known presence within the local area.

3.39. The updated site walkover conducted by ACD Ecology Ltd noted magpie *Pica pica*, crow *Corvus* and pigeon *Columba livia* on site, as well as buzzard *Buteo buteo* and common gull *Larus canus* flying overhead. The updated site walkover concluded that the site has suitable potential for nesting birds in the hedgerows and trees, although no nests were observed during the site visit.

3.40. The Approved Development will result in the loss of much of the grassland habitat within the Approved Development Site.

Hazel Dormouse

3.41. The Ecological Assessment has not scoped in hazel dormouse, it is assumed that no records were returned from the data search. Due to the lack of connecting hedgerows within the site, hazel dormouse are not likely to be using the site and can be scoped out.

Invertebrates

3.42. Some species of note included gatekeeper butterfly *Pyronia tithonus*, dark bush-cricket *Pholidoptera griseoaptera*, red soldier beetle *Rhagonycha fulva* and violet ground beetle *Carabus violaceus*. The site provides good habitat for invertebrates, particularly in the fallen white willow tree located to the south of the site, and within the log pile.

Reptiles

3.43. The Reptile Surveys conducted by Ecology Solutions Ltd in July 2014 recorded a small population of grass snake *Natrix helvetica*. The Updated Reptile Survey conducted by Ecology Solutions Ltd in 2018 again recorded a small population of grass snake present. Refer to the Ecological Assessment for further information on the survey results.

3.44. The Updated Site Walkover carried out in July 2024 concluded that the site continues to provide suitable habitat for reptiles, and it should be assumed that a grass snake population is still present on the site. The log pile on site provides excellent habitat for reptiles.

3.45. As previously suggested in the Ecological Assessment, it is suggested that a habitat manipulation exercise be undertaken, and further to this sensitive clearance should be conducted. This will allow not only any reptiles to move away from clearance and construction areas, but also any amphibians. Refer to the CEMP for further details on sensitive scrub clearance recommendations.

Other Mammals

3.46. Evidence of other mammals on site included multiple mole *Talpa europaea* hills. Rabbit *Oryctolagus cuniculus* droppings were also found on site. Other signs of mammals included well-worn mammal paths into the hedgerow and snuffle marks. The site would further provide good habitat for hedgehogs *Erinaceus europaeus* as there are some opportunities for nest-building, navigating and foraging within vegetation along the site boundaries.

3.47. Although mole, rabbit and hedgehog are not subject to legal protection in terms of their conservation status, they are subject to protection from cruelty under the Wild Mammals Protection Act and the Animal Welfare Act 2006 (hedgehog is also protected under this legislation). The works may therefore proceed with caution whereby care must be taken during clearance/groundworks to ensure any mole, rabbit or hedgehog that may be present are not harmed.

4 ROLES AND RESPONSIBILITIES

- 4.1. This report should be read in conjunction with other environmental reports for Regents Park, Calne.
- 4.2. The overall responsibility for the design of the scheme under The Construction (Design and Management) Regulations 2015 is with the Principal Designer.
- 4.3. The implementation of this LEMP (including habitat creation) during site preparation and construction is the collective responsibility of the appointed Project Manager, and the Developer, Hills Home Developments. This collective will ensure that all appointed contractors are aware of the ecological requirements of the Application Site and will distribute this LEMP to relevant parties.
- 4.4. All materials, workmanship, quality and operations should be in accordance with all relevant British Standards, Codes of Practice and legislation including relevant Health and Safety legislation.
- 4.5. Once the construction phase is complete, the maintenance and management of the habitats on the Application Site and associated funding will be the responsibility of a private management company appointed by the Developer. Once a management company is appointed, their details should be inserted here:

Length of agreement

- 4.6. The minimal length of the initial agreement with the management company will be five years. Following the five years, management practices will be reviewed, and a new contract drawn up as necessary, to ensure the Approved Development Site is managed in line with the aims and objectives of this LEMP for a minimum of 20 years as per Condition 8. Management should continue in perpetuity.

5 HABITAT CREATION AND ENHANCEMENT

5.1. The following habitats will be retained within the Approved Development Site:

- Mixed Hedgerows.
- Trees.

5.2. The following habitats will be retained and enhanced:

- Hedgerow 2 and trees within hedgerow 2 to be enhanced by mixed native planting.

5.3. The following habitats will be created:

- Tree planting.
- Hedgerows.
- Amenity Grassland.
- Mixed Shrub.
- Wildflower Grassland.
- Artificial Wildlife Habitats.

5.4. The approved soft landscaping plans provide details and locations of planting. These are provided within **Appendix 2**. In addition, the Ecological Enhancement Plan is included within **Appendix 3**.

Habitat Enhancement

Hedgerows

5.5. Infill planting will be carried out along hedgerow 2, the south-east native hedgerow with trees, to fill gaps in the hedgerow and increase species richness. Infill planting will comprise field maple *Acer campestre*, hazel *Corylus avellana*, common holly *Ilex aquifolium*, blackthorn *Prunus spinosa*, European crab apple *Malus sylvestris*, English oak *Quercus robur*, hawthorn *Crataegus monogyna* and common dogwood *Cornus sanguinea*.

Habitat Creation

Tree planting

-
- 5.6. A total of 26 trees are to be planted, with mixed native tree species planted within the existing hedgerow and ornamental trees planted in front gardens. Species will comprise field maple, English oak, common hornbeam *Carpinus betulus*, black alder *Alnus glutinosa*, callery pear *Pyrus calleryana*, snowy Mespilus *Amelanchier lamarcki*, white Himalayan birch *Betula utilis jacquemontii*, small-leaved lime *Tilia cordata* and Chonosuki crab apple *Malus tschonoskii*.
- 5.7. This planting will enhance the habitat by providing foraging and nesting interest for birds and invertebrates once mature.

Hedgerows

- 5.8. As shown on the landscape proposals, hedgerows are to be planted in a single row and maintained to a maximum height of 1.2m. Each native plant is to be protected with spiral rabbit guards/ shrub guards 600mm in height supported by a cane. Hedgerows are to receive 75mm of lightly consolidated bark mulch immediately after planting.

Native hedgerow

- 5.9. Native hedgerow planting will take place on the southern boundary of the Approved Development Site, continuing around to the south-western boundary. This planting will create a new hedgerow on the south-western boundary, which will connect to hedgerow H2 where infill planting will be done. Species will comprise field maple, hazel, common holly, blackthorn, European crab apple, English oak, hawthorn, common dogwood and guelder-rose *Viburnum opulus*.

Single species hedgerow

- 5.10. Single species hedgerows will be planted in front gardens. Species to be planted comprise European beech *Fagus sylvatica* and New Zealand broadleaf *Griselinia littoralis*.
- 5.11. Hedgerow planting will enhance the habitat by providing good habitat for invertebrates, foraging and nesting interest for birds and foraging for bats.

Amenity Grassland

- 5.12. Amenity grassland will be laid with good quality grass turves in front gardens and on the northern site boundary. The turves are to be laid on prepared ground following good horticulture practices.

Mixed Shrub

- 5.13. As shown within the landscape proposals, the proposed shrub plantings are to have plants evenly distributed throughout their designated area and to appear as random and natural in accordance with percentages set out in planting schedule. All plants are to be protected by spiral rabbit guards/ shrub guards 600mm in height supported by a cane. The beds are to receive 75mm of lightly

consolidated bark mulch immediately after planting.

5.14. Mixed native shrub will be planted on the southern boundary. Species will include field maple, common hazel, hawthorn, common holly and common dogwood.

5.15. Proposed planting beds are to be planted in front gardens, with a variety of mixed shrub. Species comprise common hornbeam, fortune's spindle 'Emerald Gaiety' *Euonymus fortune*, *Hebe* 'Midsummer Beauty' *Veronica speciosa*, *St John's wort*, daisy bush *Olearia haastii*, *Elizabeth* *Potentilla fruticose*, goldflame *Spiraea japonica*, *Gloire de Versailles* *Ceanothus*, smooth hydrangea 'Annabelle' *Hydrangea arborescens*, 'Miss Jessop's Upright' *Rosmarinus offi.*, lady's mantle *Alchemilla mollis*, Oregon grape *Mahonia aquifolium*, sweet box *Sarcococca confuse*, *Skimmia japonica* 'Veitchii' and *Skimmia japonica* 'Rubella'.

Wildflower Grassland

5.16. The proposed planting of wildflower grassland will create green space areas on the southern boundary. The wildflower grassland will be sown with EM1 Basic General Purpose Meadow seed mix at a sowing rate of 4g/m² on unimproved/ subsoil in line with good horticultural practices.

Artificial Wildlife Habitats

5.17. Locations of artificial wildlife habitats are shown within **Appendix 3**.

Bat boxes

5.18. A total of 4 bat boxes will be installed on trees and buildings across the Approved Development Site to provide a net increase in bat roosting opportunities. The following boxes will be installed:

- 2 x Schwegler 2FN Bat Boxes (or a suitable alternative) will be installed on suitable trees located in the southern site boundary of the Approved Development Site. Boxes should be installed at a height of approximately 3m, out of the prevailing weather and out of the reach of cats.
- 2 x 2FR Schwegler Bat Tubes (or suitable alternative) will be integrated into the masonry of the new buildings near the eaves or gable apex of the plots on a south or west facing elevation away from artificial light sources and in close proximity to linear features. Boxes should be installed at a minimum height of 3m, but preferably 5 to 7m above ground, out of the prevailing weather and the reach of cats. Avoid placement above windows, doors and wall climbing plants, thereby reducing the likelihood of predation by cats.



Image 4: 2FN Schwegler Bat Box⁹.



Image 5: 2FR Schwegler Bat Tube¹⁰.

Bird boxes

5.19. A total of 4 bird boxes will be installed on trees and buildings across the Approved Development Site to provide a net increase in bird nesting opportunities. The following boxes will be installed:

- 2 x 1B Schwegler Nest Box (or a suitable alternative) will be installed on suitable trees located in the southern site boundary of the Approved Development Site. Boxes should be installed at a height of approximately 3m, out of the prevailing weather and out of the reach of cats.

⁹ NHBS, 2014. *2FN Schwegler Bat Box*. Available at: <https://www.nhbs.com/2fn-schwegler-bat-box>

¹⁰ NHBS, 2014. *2FR Schwegler Bat Tube*. Available at: <https://www.nhbs.com/2fr-schwegler-bat-tube>

- 2 x 1HE Schwegler Brick Box (or a suitable alternative) will be integrated into the masonry of the new buildings, at least 2m above the ground. Bird boxes should be placed on north or east facing elevations.



Image 6: 1B Schwegler Nest Box¹¹.



Image 7: 1HE Schwegler Brick Box¹²

Hedgehog holes

- 5.20. The development will contain a number of new gardens that will provide habitat for hedgehogs *Erinaceus europaeus*, a UK BAP priority species.
- 5.21. To ensure hedgehogs are able to utilise the new garden habitats, installed closed board fencing will include a small hole (13cm x 13cm) cut into the base of the panel to facilitate hedgehog movement by creating a 'hedgehog highway'. This size gap is too small for most pets to fit through. A total of 14 hedgehog holes will be present within the Approved Development Site.
- 5.22. To encourage residents not to block holes, signs will be placed above gaps to illustrate their purpose.

¹¹ NHBS, 2024. 1B Schwegler Nest Box. Available at: <https://www.nhbs.com/1b-schwegler-nest-box>

¹² NHBS, 2024. 1HE Schwegler Brick Box. Available at: <https://www.nhbs.com/1he-schwegler-brick-box>



Image 8: Hedgehog hole with accompanying sign¹³.

Wildlife Kerb

5.23. Due to confirmed reptile presence on the Approved Development Site, ACO kerbs will be installed around each gully within the Approved Development Site to prevent amphibians such as toads and snakes from falling into drainage gullies.



Image 9: ACO Wildlife Kerb¹⁴.

5.24. Gullies will also be fitted with ACO wildlife ladders which will provide a means of escape should amphibians fall in.

¹³ NHBS, 2024. *Hedgehog Highway Sign*. Available at: <https://www.nhbs.com/hedgehog-highway-warning-sign>

¹⁴ ACO, 2024. *ACO Wildlife Kerb*. Available at: <https://www.aco.co.uk/products/wildlife-kerb>

6 MANAGEMENT, MAINTENANCE AND MONITORING

Management prescriptions

General management

6.1. The following general management measures will be followed throughout the Approved Development Site:

- Small loose objects of litter (e.g. plastic bottles, food packets etc.) should be removed regularly;
- Fly-tipping should be safely removed and reported to Wiltshire Council;
- Should planting be found to be in poor health, professional help will be sought and appropriate remedial/replacement measures taken;
- If invasive plant species are discovered, these must be removed using a species appropriate method; and
- Herbicide and pesticide use will be avoided, except where required for removal of invasive species.
- The works will be carried out in accordance with Guidance for Pollution Prevention (GPPs¹⁵) to prevent pollutants from entering habitats and to appropriately deal with any pollution incidents should they arise

Lighting

6.2. A sensitive lighting scheme will be implemented to protect key species during the operational phase. Principles of the sensitive lighting scheme are outlined below and are in line with best practice guidance^{16 17}.

Operational lighting mitigation options include:

- Luminaires will not be directed at sensitive habitats, boundary vegetation or onto bat and bird boxes and hedgehog highways. Where required, lights can be fitted with hoods, baffles or louvres to reduce back-spill;

¹⁵ Netregs, 2021. Guidance for Pollution Prevention. Available at: <https://www.netregs.org.uk/media/1898/guidance-for-pollution-prevention-1-2022-update.pdf>

¹⁶ LP and BCT. (2018). *Bats and Artificial Lighting in the UK. Bats and the Built Environment*. ILP. Warwickshire.

¹⁷ Voigt, C *et al.* (2018). *Guidelines for consideration of bats in lighting projects*. EUROBATs Publication Series No. 8. UNEP/EUROBATs Secretariat, Bonn, Germany, 62 pp.

- Only luminaires with an upward light ratio of 0% will be used, and low-level bollard lighting will be used where feasible to retain darkness above the luminaire;
- All external luminaires used on site will lack UV elements and will be warm-white coloured (ideally <2700 Kelvin) to reduce blue-light components;
- LED luminaires will be used due to their sharp cut-off, lower intensity, good colour retention and dimming capability;
- Where security lighting is installed this will be motion-activated; and
- For street lighting consider part night lighting and/or dimming.

6.3. For further details on the proposed lighting scheme, refer to the Lighting Scheme report produced by ACD Environmental Ltd in September 2024.

Bats

6.4. A dispersal route for bats will be implemented within the southern boundary, where retained hedgerow and proposed tree planting, amenity grassland and native shrubs will create habitat connectivity. The Lighting Scheme produced by ACD Environmental Ltd in September 2024 further details how dark corridors will be implemented to reduce impact on bats and other wildlife, this will further create connectivity and flight paths for foraging and commuting bats during the construction phase.

Trees

Retained trees

- 6.5. All trees within the Approved Development Site will be subject to visual checks undertaken annually and after major storm events. These checks should be staggered so that the trees are inspected at different times in the year. If any tree displays signs of decline, distress or damage then a competent person should be instructed to undertake a tree inspection where necessary.
- 6.6. Annual checks for tree pests and diseases will be carried out. Should any trees with notifiable pests and/or diseases be discovered, they will be dealt with accordingly, in collaboration with competent and qualified contractors.
- 6.7. Where safety considerations allow, trees will be managed by non-intervention as a principle. If large branches or entire trees need to be removed or felled, tree works are to be undertaken by an Arboricultural Association approved contractor to British Standard BS3998:2010 'Tree Work Recommendations'. The trees in question must be surveyed by an ecologist prior to works to ensure

there is no roosting bat potential and to ascertain whether further ecologist supervision will be necessary.

- 6.8. Tree works must be undertaken with due regard for nesting birds. Ideally, all trimming and pruning operations should be timed to avoid the breeding bird season, which runs from February-August inclusive.
- 6.9. During any tree works, operations must be carried out in a sensitive manner, taking care not to unnecessarily damage the tree(s) being worked on, or any neighbouring vegetation. Further details on required tree protection zones can be found within the Arboricultural Impact Assessment and Tree Protection Plan both produced by ACD Environmental Ltd, which are shown in **Appendix 4 and 5**.
- 6.10. Removed wood should be left for a minimum of 24 hours prior to cutting into sections to disperse any fauna. Any arisings created from tree work undertaken, including leaf material, branches, wood chip and logs should be used to create log piles in discreet areas of the Approved Development Site.

Planted trees

- 6.11. Post-planting management and maintenance of trees will be undertaken in accordance with BS8545:2014 section 11 'Trees: from nursery to independence'.
- 6.12. A formal assessment of young tree health and development will be undertaken annually. This assessment will include foliar appearance, leaf size and leaf canopy density, extension growth and incremental girth development. Trees will also be assessed continually throughout the year on an *ad hoc* basis.
- 6.13. Formative tree pruning is to be undertaken until a permanent structurally sound scaffold system of branches typical of the species and appropriate to the Approved Development Site circumstances is produced. Minor pruning of dead or damaged wood will be carried out annually.
- 6.14. If the young trees are not thriving or are in poor condition, then growing conditions should be amended as necessary. If the specimen does not recover the tree will be replaced in the next available planting season.
- 6.15. All stakes and ties will be removed as soon as the developing root system is strong enough to support the tree, usually after five full growing seasons.

Tree health – non-native species and diseases

- 6.16. Annual checks for tree pests and diseases, will be carried out. Should any trees with notifiable pests and/or diseases be discovered, they will be dealt accordingly, in collaboration with competent and

qualified contractors.

Mixed hedgerows and shrub

- 6.17. All new planting should ideally take place during the Autumn or Spring. Bare-root stock can be planted between the end of October and the end of March. Generally, it is best to plant early in the season, before January, to allow the plants more time to establish a network of feeder roots before the onset of spring. Never plant during freezing weather or if the ground is waterlogged. Ideally plant on a still, moist day, to minimise root drying and stress to the plants.
- 6.18. Unless there is a known problem with rabbits or hares, spiral guards may prove counterproductive, encouraging spindly growth and being difficult to remove as well as unsightly. Therefore, it is recommended that guards are not used unless considered necessary. However, during establishment, it is recommended that timber and wire fencing is installed along the edges of the new hedgerows, to prevent pedestrian access and trampling, and to discourage over-grazing.
- 6.19. Native species-rich hedgerows are to be planted in double staggered rows, to maximise density, vigour, cover, and food resources for wildlife.
- 6.20. Where hedgerows and informal native shrubs meet informal/public open space meadow/tussocky grassland, a scalloped edge should be maintained to provide a diversity of habitat niches suitable for use by invertebrate species and reptiles. Ruderal growth within this area should be encouraged by leaving a 1m margin of uncut grass where this meets scrub/hedgerow. However, if there is vigorous growth of undesirable species such as a common nettle then selective removal should take place.
- 6.21. Light, regular, trimming of the hedgerow in the early years of hedgerow establishment will encourage dense, bushy growth. The hedgerows should be managed in this way to encourage a species-rich and dense shrub layer, with minimal gaps.
- 6.22. Established hedgerows are to be cut on a rotational basis whereby one side of the hedgerow is cut alternatively each year (i.e. year 1 - side, year 2 - hedgerow top, year 3 - remaining side). No more than one third of the hedges should be cut in any one year. It is also recommended that some hedges are left uncut for longer in order to produce extra large flower and fruit crops.
- 6.23. All informal hedgerows will be maintained at a minimum width of 1.5m and minimum height of 2m to maximise opportunities for biodiversity. At this size or larger, a hedgerow will provide shelter for nesting birds and foraging habitat for insects, bats and birds.
- 6.24. All native hedgerows will be checked annually for signs of damage, deterioration or distress. If hedgerows are in poor condition, growing conditions will be amended as necessary. If the hedgerow does not recover it will be replaced in the next available planting season.

-
- 6.25. If any hedgerows are showing signs of prolonged deterioration/destress over a number of years, such as lack of bushy growth, limited production of fruit/leaves, large gaps, and/or lack of height, consideration should be given to laying the hedge, either mechanically or manually.
- 6.26. Trimming operations should be timed to avoid the breeding bird season, which runs from February-August. Where works between February and March are necessary, a nesting bird check must be undertaken by an ecologist within 24 hours prior to the works starting. If the ecologist discovers an active nest during this check, works must stop, and an appropriate buffer zone (as determined by the ecologist, usually 5m) must be established around the nest. No works may commence in this case until the bird breeding season has ended.
- 6.27. Overall, the optimal time to cut hedgerows is January as this allows birds and small mammals time to utilise fruits throughout the winter months. It should also be noted that a particularly early or late spring or winter will impact wildlife activity accordingly, and this should be considered in all habitat and hedgerow management.
- 6.28. If any management was to include the removal of hedgerows, this should not be undertaken during the winter months to avoid disturbing species in hibernation at ground level.
- 6.29. All hedgerows and shrubs will be checked annually for signs of damage, deterioration or distress.
- 6.30. Ongoing maintenance operations for existing ornamental shrubs will predominantly include litter removal, weeding, trimming, removal of dead plants and reinstatement of plant materials. Chemicals must not be used on the hedgerows or in the vicinity of the hedgerows. Hedgerows will be trimmed annually using suitable mechanical cutters.

Amenity Grassland

- 6.31. Proposed amenity grassland areas will receive good quality amenity grass turves laid in line with good horticultural practices. The amenity grassland in residential grassland areas will not require any further management as they are within residential plots.

Wildflower Grassland

- 6.32. The areas of wildflower grassland will comprise EM1 Basic General Purpose Meadow seed mix by Emorsgate. Seeds should be sown at 4g/m², or similar. The ground should not be highly fertile or have existing issues with perennial weeds.
- 6.33. The seed mix will be best sown in the autumn or spring, or when there is sufficient warmth and moisture. Aim to control weeds and produce a good quality seed bed before sowing by removing weeds using repeated cultivation. Then plough or dig to bury the surface vegetation, harrow, or rake to produce a medium tilth, and roll, or tread, to produce a firm surface.

-
- 6.34. The seed must be surface sown for application by machine or sown by hand. Divide the seed into two or more parts and sow in overlapping sections. Do not incorporate or cover the seed, but firm in with a roll, or by treading, to give good soil/seed contact.
- 6.35. In the first year of management, most of the sown species will be slow to establish. A flush of annual weeds will arise from the soil seed bank soon after sowing. These should be left as they provide shelter for sown seedlings and benefit invertebrates. Therefore, resist cutting the annual weeds until mid to late summer (early August). Then cut, remove, and compost the material. Keep the sward short by mowing or grazing until the end of March of the following year and dig out any remaining perennial weeds such as docks.
- 6.36. Once established, the best results typically come from traditional meadow management, based on a summer hay cut in combination with autumn and possibly spring mowing/grazing. After flowering in July or August, cut back to c 50mm. Leave the 'hay' to dry and shed seed for 1-7 days then remove from the Application Site. Mow or graze the re-growth through to late autumn/winter to c 50mm and again in spring if needed.

Artificial Wildlife Habitat

- 6.37. Once installed, the artificial wildlife habitats will require minimal maintenance.

Monitoring and feedback into LEMP

- 6.38. On completion of the construction phase, the Approved Development Site will be inspected by an ecologist to confirm the development has adhered to the LEMP. Where discrepancies are identified, these are to be reported to the Developer and Wiltshire Council. The discrepancies will be corrected under the supervision of the ecologist where required. Discrepancies can include missing bird and bat boxes, hedgerow or tree failure etc.
- 6.39. Following this, the Application Site will be monitored every three years by an ecologist, and management regimes amended as required to meet the management aims and objectives.
- 6.40. The LEMP will be reviewed after five years by an ecologist and will be amended as necessary. Following this, the Application Site will continue to be monitored by an ecologist every three years and adjusted as considered necessary. Relevant data from the surveys will be sent to the following organisations where necessary:
- Wiltshire Council;
 - Local Records Centre;
 - Relevant national recording scheme; and

-
- ACD Environmental Ltd (if required).

7 SCHEDULE OF WORKS

7.1. The work schedule for monitoring, maintenance and management activities are set out within **Table 3**. The works schedule below may be subject to changes in timings subject to the construction phase schedule. In the instance that any changes in timings are required, the Developer and/or the appointed management company is to contact an ecologist at ACD Environmental Ltd to confirm agreement to any amendments.

7.2. The colour coding within **Table 3** is as follows:

	Optimal months
	Sub-optimal months (may be acceptable if appropriate mitigation/supervision undertaken)
	Unsuitable months

Table 3: Work schedule for management, maintenance and monitoring schedules.

Action		J	F	M	A	M	J	J	A	S	O	N	D
POST COMPLETION - YEAR 1													
Year 1	Year 1 monitoring survey undertaken by an ecologist. Results used to feedback into LEMP as required and to rectify any issues.												
	Regular removal of litter and check for invasive species.												
	Amenity grassland areas mown regularly to 40-60mm.												
	Annual pruning of hedgerows (on rotation), introduced shrub and developing trees as required.												
	Annual check of habitats to include trees, shrubs, grassland, and hedgerows, to check for signs of disease/pests, damage, deterioration, and distress.												
POST COMPLETION - YEAR 2 ONLY													
Year 2	EM1 grassland areas cut regularly to 40-60mm as required until March. (see section below for ongoing management measures).												
POST COMPLETION - YEAR 2 ONWARDS													
Weekly-Monthly	Regular removal of litter and check for invasive species.												
	Amenity grassland mown regularly to 25-40mm in height. A 1m margin of uncut grass will be left adjacent to hedgerows/scrub.												
	Monthly visual inspection of artificial habitats for any signs of damage. Remedial action/replacement undertaken as necessary.												
Bi-annual	Bi-annual cuts of EM1 meadow grassland areas to 50-60mm. If required, re-growth can be cut back through mowing throughout autumn and early winter. A 1m margin of uncut grass will be left adjacent to hedgerows/scrub.												
Annual	Annual check of habitats to include hedgerows, scrub and trees to check for signs of damage, deterioration or distress.												
	Annual pruning of formal hedgerows, shrubs, and developing trees as required.												

2-3 years	Monitoring surveys undertaken by an ecologist every three years. Results used to feedback into LEMP as required and to rectify any issues.												
	Cut established and new species-rich hedgerows in January once every three years; or on a rotation of one side/top per year.												
5 years	Five-year review of LEMP undertaken. Results provided to Wiltshire Council, Local Records Centre and Developer as required. LEMP updated and monitoring continued in line with LEMP.												
	Coppicing and some removal of small sections of scrub undertaken on a long rotation of 5-7 years. No more than 20% of scrub pruned back/coppiced at any one time.												

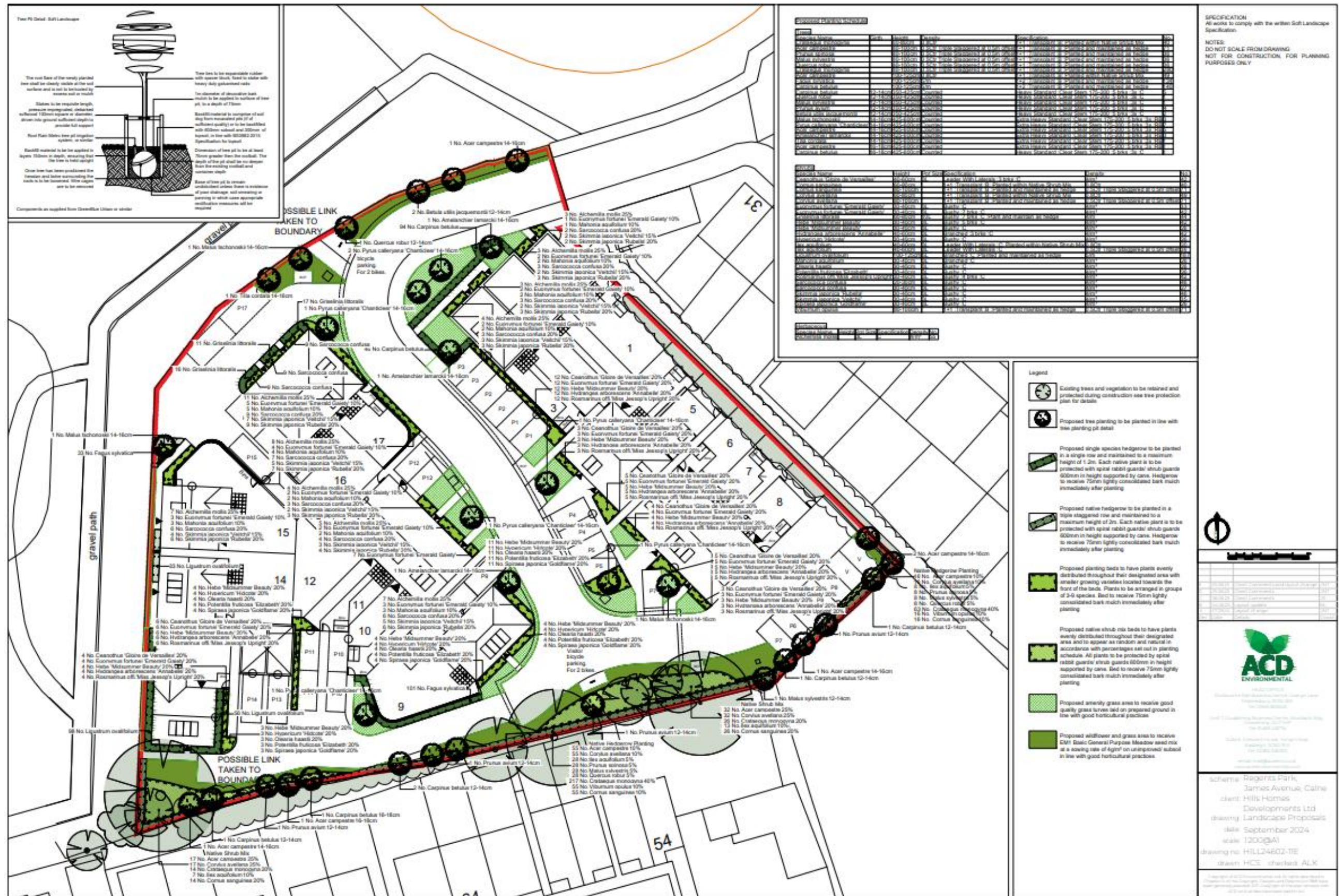
8 CONCLUSIONS

- 8.1. This LEMP has been produced to fulfil **Condition 8** of the planning consent for the Approved Development Site (**Wiltshire Council: 20/07659/OUT**).
- 8.2. The Developer and Site Manager will be responsible for ensuring that the habitats are created, as described within this report and detailed within the landscape proposals. Once the construction phase is complete, the maintenance and management of the habitats on the Approved Development Site will be the responsibility of a private management company appointed by the Developer.
- 8.3. This LEMP sets out the ongoing maintenance, management and monitoring programme to be undertaken at the Approved Development Site post-completion.
- 8.4. With implementation of the measures outlined within this report, it is considered that the ecologically valuable habitats within the Approved Development Site will be maintained in a favourable condition in perpetuity.

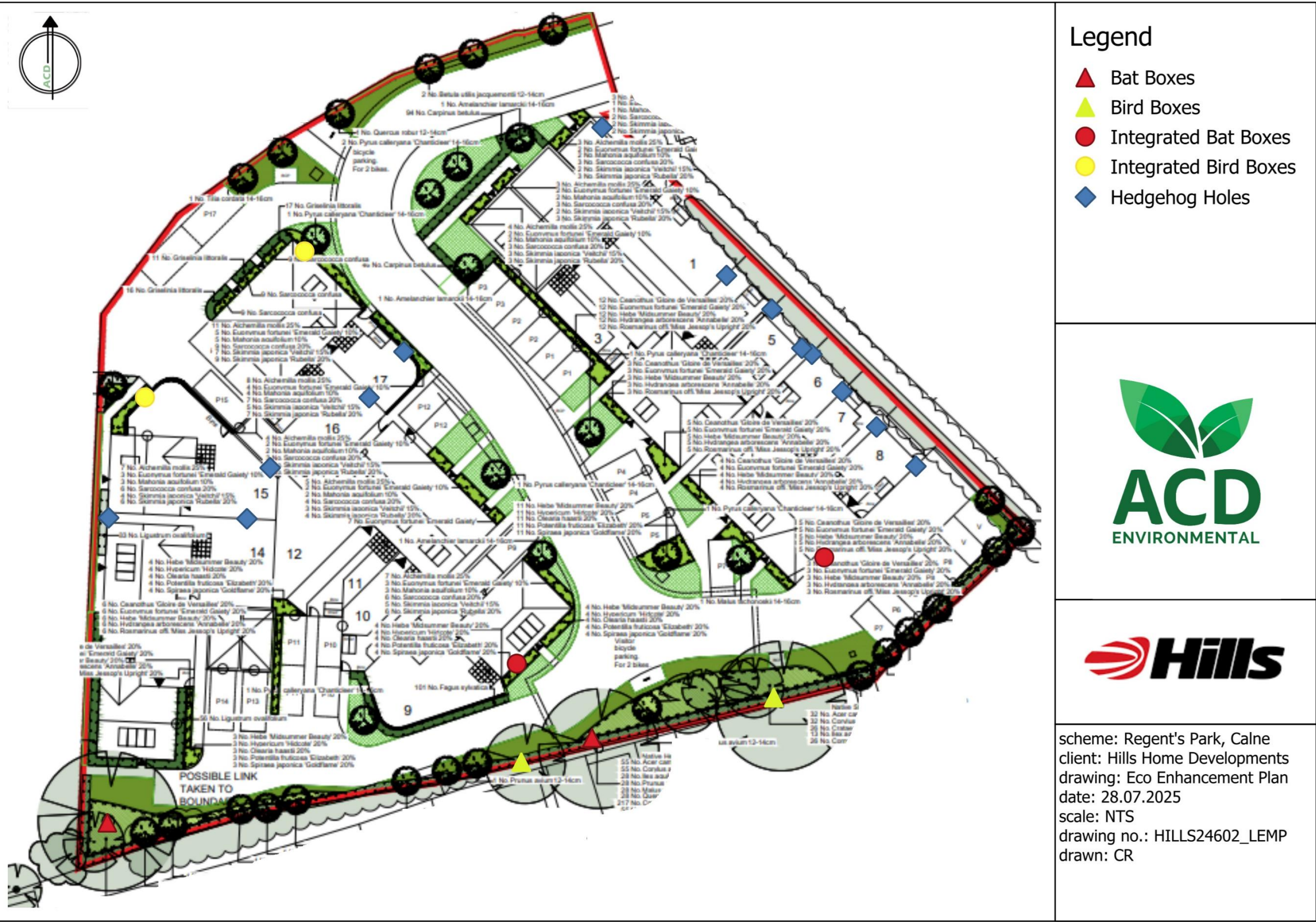
APPENDIX 1: PHASE 1 HABITAT MAP



APPENDIX 2: LANDSCAPE PROPOSALS



APPENDIX 3: ECOLOGICAL ENHANCEMENT PLAN



APPENDIX 4: ARBORICULTURAL IMPACT ASSESSMENT



LAND OFF
JAMES AVENUE
REGENTS PARK
CALNE

ARBORICULTURAL IMPACT ASSESSMENT

(Including Tree Survey Schedule)

for

HILLS HOMES
DEVELOPMENTS
LTD

Written By:	W. Wareing
Checked By:	A. Bigg
Date:	21/07/2025
Revision:	A: 24/07/2025
Ref:	HILLS24602aiaA

TABLE OF CONTENTS

1.	Executive Summary	3
2.	Introduction	4
3.	Arboricultural Impact Assessment	5
3.6.	Evaluation of impact of proposed tree losses	5
3.7.	Trees to be pruned	6
3.8.	Protection for retained trees	6
3.9.	Barriers	6
3.10.	Ground protection	6
3.11.	Demolition	7
3.12.	New Hard Surfaces within RPAs	7
3.13.	Construction within RPAs	7
3.14.	Services	7
3.15.	Levels and Landscaping	7
3.16.	Boundaries	8
3.17.	Supervision & monitoring	8
4.	Conclusions & Recommendations	9
	Appendix 1: Summary of Categories BS5837:2012	10
	Appendix 2: Tree Survey Schedule	11

1. Executive Summary

- 1.1. The site is currently an open section of grassland adjacent to the rear of existing residential properties and a connecting footpath to a play area. The proposed development is an addition of 17 plots with associated road infrastructure.
- 1.2. This report has been revised as 'A' on the 24th of July 2025 following an update to the layout. No further arboricultural impacts have been identified.
- 1.3. This impact assessment is intended to evaluate the direct and indirect effects of the proposed design on the trees on site, and where necessary recommends mitigation.
- 1.4. The development proposals are in accordance with BS5837:2012 'Trees in relation to design, demolition and construction – Recommendations'.
- 1.5. Adequate protection can be provided to ensure all retained trees are protected throughout development in the form of barriers and/or ground protection.
- 1.6. Given the number of trees on the site, the development proposals incorporate the majority of the better, more sustainable specimens.
- 1.7. All of the trees proposed for removal are in the lower two categories, 'C' and 'U', and are not of a quality that should represent any constraint to development.
- 1.8. Where proposed new hard surfaces encroach into the RPA of trees highlighted for retention, sensitive surface construction will be required.
- 1.9. Number of trees to be removed as a direct result of the current design (see section 4 for details):

BS Category	Number of individual trees	Tree Groups
U	5	2
A	~	~
B	~	~
C	2	1

- 1.10. The relationship between the buildings and retained trees is sustainable and does not result in any situations which may result in unreasonable pressure to prune requests from future occupants.

2. Introduction

- 2.1. ACD Environmental was instructed in July 2025 to prepare the following impact assessment by Hills Homes Developments Ltd.
- 2.2. This report is based on the recommendations given in BS5837:2012 'Trees in relation to design, demolition and construction – Recommendations'.
- 2.3. Details of the Tree Survey Data is found within appendix 2 of this report.
- 2.4. This assessment is based upon the supplied layout drawing from Trower Davies Architectural Consultants Project No. 936 Drawing No. 101 Revision E.
- 2.5. No details have been supplied or sought of any statutory protection which may cover the subject trees.
- 2.6. The controlling authority is Wiltshire Council, who can be contacted at: County Hall, Bythesea Road, Trowbridge, Wiltshire, BA14 8JN, Tel: 0300 456 0114.

3. Arboricultural Impact Assessment

- 3.1. The site is currently an open section of grassland adjacent to the rear of existing residential properties and a connecting footpath to a play area. The proposed development is an addition of 17 plots with associated road infrastructure.
- 3.2. This report has been revised as 'A' on the 24th of July 2025 following an update to the layout. No further arboricultural impacts have been identified.
- 3.3. This impact assessment is intended to evaluate the direct and indirect impacts on the trees on the site in relation to the proposed development. Where appropriate mitigation is proposed, with details given of any issues to be addressed by the arboricultural method statement to ensure the development is acceptable in arboricultural terms.
- 3.4. Any potentially damaging activities proposed in the vicinity of retained trees are identified, such that mitigation to significantly reduce or avoid this impact can be detailed in the Arboricultural Method Statement and Tree Protection Plan as recommended in BS5837:2012 section 5.4.2.
- 3.5. Details of the Tree Survey Data is found within appendix 2 of this report.
- 3.6. Those trees which are to be removed are shown with a red dashed canopy outline, and a dashed emblem around the trunk on the Tree Protection Plan ACD reference HILLS24602-03A.
- 3.7. **Evaluation of impact of proposed tree losses**

Table 1: Trees to be removed as a direct consequence of development

BS Category	Number of individual trees	Tree Groups
U	5	2
A	~	~
B	~	~
C	2	1

- 3.7.1. Those trees which are to be removed are shown with a red dashed canopy outline, and a dashed emblem around the trunk on the Tree Protection Plan ACD reference HILLS24602-03A.
- 3.7.2. G4, T5, T6, T7, G8, T9, T11, T13, T14 & G16 are to be removed as a result of the development proposals.
- 3.7.3. All the trees proposed for removal are in the two lower categories ('C' & 'U') and as such it is judged that they are not of a quality that should present any constraint to development of the site.
- 3.7.4. In terms of the effects of the tree loss required to implement the design, the trees to be removed are all unremarkable trees of very limited merit, such that they can be replaced with tree planting as part of the landscape proposals, (or even future residents).
- 3.7.5. It is therefore deemed acceptable to remove the listed trees and, as part of the detailed landscape design for the scheme, include suitable and sustainable replacements as and where appropriate.

3.7.6. Replacement trees will be proposed through landscape design and will more than mitigate for their removal by providing robust long term tree cover in keeping with the proposal and surrounding properties.

3.8. Trees to be pruned

3.8.1. At this time the following tree surgery works are proposed.

Tree number	Species	Operation
T1	White Willow	Remove tree to a high stump (height of 2 metres) due to impaired condition of tree near base. Stump to be retained for ecological purposes.
G2	Various	Remove section of group as shown on the Tree Protection Plan, retaining section in the southwest corner of site.
G3	White Willow	Prune back any overhanging canopy to allow for 0.5m working room of new hard surfacing
T12	White Willow	Reduce northern aspect of crown by approx. 2.5m to achieve a more balanced crown. The lower northern crown is to be lifted to 5m over the proposed new hard surfacing.
G15	Blackthorn, Hawthorn	Prune canopy back to site boundary, to allow for adequate working room for installation of new hard surfacing.
G17	Various	Prune canopy back to site boundary, to provide adequate working room for construction and sufficient garden space.

3.9. Protection for retained trees

3.9.1. BS5837:2012 section 6.2.1. states: 'All trees that are being retained on site should be protected by barriers and/or ground protection (see 5.5) before any materials or machinery are brought onto the site, and before any demolition, development or stripping of soil commences. Where all activity can be excluded from the RPA, vertical barriers should be erected to create a construction exclusion zone. Where, due to site constraints, construction activity cannot be fully or permanently excluded in this manner from all or part of a tree's RPA, appropriate ground protection should be installed (see 6.2.3).' As such, protection for all retained trees is shown on the Tree Protection Plan according to this specification.

3.10. Barriers

3.10.1. BS5837:2012 figure 2 recommends a default specification for protective barrier. Due to the scale of the site a specification of Heras type panels on 'boots', well braced by attachment to scaffold pole uprights driven firmly into the ground, will be used. This is perfectly adequate for this site and all the retained trees can be suitably protected by its erected before any works start on site whatsoever.

3.11. Ground protection

3.11.1. In certain areas, space required to construct new hard surfaces will require encroachment into RPAs. Potential damage cause by foot traffic and associated works can be mitigated by the use of ground protection as specified in BS5837:2012 section 6.2.3. To ensure the ongoing survival of the retained trees, this is detailed on the Tree Protection Plan where required.

3.12. Demolition

- 3.12.1. To ensure damage does not occur to trees highlighted for retention, tree protection fencing must be erected prior to ANY plant machinery entering site whatsoever. This should be subject to a pre-commencement site meeting between the developer, their project arboriculturist and a representative from the Local Authority. No special demolition procedures need be observed on this site, other than respecting the tree protection fencing.

3.13. New Hard Surfaces within RPAs

- 3.13.1. Where the proposed road encroaches into the RPA of G3 and the proposed bin collection point within the RPA of T11 is shown. Surface construction will be undertaken in a sensitive manner, with the use of hand-tools or a 'toothless' bucket, incrementally scraping the ground until the desired depth has been achieved.
- 3.13.2. It is anticipated that the associated new hard surfacing works will be of detriment to either tree/group, due to the regenerative nature of Willow specimen. However, additional rooting environment has been afforded within the CEZ for T12.
- 3.13.3. As per the recommendation of BS5837:2012 section 7.4.2.3, the new permanent hard surfacing does not exceed 20% of any existing unsurfaced ground within the RPA.

3.14. Construction within RPAs

- 3.14.1. It has been confirmed that there is no construction other than new hard surfacing within the RPAs of retained trees.

3.15. Services

- 3.15.1. It is fundamental to tree protection that infrastructure design is sensitively approached, as trenching close to trees may damage roots and affect tree health and stability. Details of services have not been provided at the time of writing. The Tree Protection Plan, showing the constraints posed by retained trees will be passed to the infrastructure engineers to inform their design, ensuring that all services avoid areas of potential conflict. As per BS5837:2012 Figure 1, once further details become available as part of the detailed/technical design for the site, the TPP and AIA will be revised to incorporate these details for services for inclusion in the Tender documentation.
- 3.15.2. Full details of the service and utility provisions for the site remain to be finalised. It is fundamental to tree protection that infrastructure design is sensitively approached, as trenching close to trees may damage roots and affect tree health and stability. Constraints posed by retained trees must be passed to the infrastructure engineers to inform their design, ensuring that all services avoid areas of potential conflict.

3.16. Levels and Landscaping

- 3.16.1. Full details of any changes in ground levels on site remain to be finalised. Any alterations to levels close to trees may damage roots and affect tree health and stability. Unless no-dig methodology is proposed for installation of surfaces within RPAs the original levels in these areas must be noted, retained, and integrated into the engineering design of the site. Landscaping operations within the RPAs of retained trees must be carried out in a sensitive manner and be subject to a detailed method statement and arboricultural supervision.

3.17. **Boundaries**

- 3.17.1. All plot boundaries will need to be designed, positioned and installed to avoid damage to retained trees. When within RPAs, this will include hand excavation of all post holes, and the lining of any post holes with a non-porous membrane to stop leachates from the concrete damaging tree roots.

3.18. **Supervision & monitoring**

- 3.18.1. The development process should be subject to arboricultural supervision, especially areas where incursion into the RPA of retained trees is required. Supervision is recommended during the excavation works within retained RPAs.

4. Conclusions & Recommendations

- 4.1. An Arboricultural Method Statement will be compiled if required by the LPA, in conjunction with the Tree Protection Plan (HILLS24602-03A) for the purpose of feasibility and planning, as per Figure 1 of BS5837:2012.
- 4.2. Once further engineering details become available as part of the detailed/technical design for the site, the TPP and AIA will be revised to incorporate these for inclusion in the Tender documentation.
- 4.3. Any fencing and other tree protection measures should be erected after tree surgery but before any demolition or construction contractor enter the site, and before any soil stripping takes place. It is recommended that protection measures are monitored during the development process by a representative of ACD or an alternative consultant acceptable to the LPA, who should be responsible to both the developer and the LPA for the enforcement of the protection as agreed by both parties.
- 4.4. There must be no changes in levels, service routing, machine activity, storage of materials or site hut positioning within areas to be protected and the protective fencing must remain in position for the duration of the construction process.
- 4.5. Surgery may also be required in order to allow trees to be retained close to structures, to allow access for construction or future site traffic, or in the interests of the future health and safety of the trees and users of the site. Detailed recommendations for surgery should be provided prior to site commencement. All surgery should comply with BS3998:2010 or more recently accepted arboricultural good practice.

Will Wareing *ND Arb*
Arboriculturist

21 July 2025

Revision A – 24 July 2025 – W. Wareing

LIMITATIONS OF USE AND COPYRIGHT

This assessment has been prepared for Hills Homes Developments Ltd. All rights in this report are reserved. No part of it may be reproduced or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording or otherwise, or stored in any retrieval system of any nature, without our written permission. Its content and format are for the exclusive use of the addressee in dealing with Land off James Avenue, Regents Park, Calne. Until all invoices rendered by the Consultant to the Client have been paid in full, the copyright of any documents, forms, statements, maps, plans and other such material will remain vested in ACD Environmental, and no unauthorised use of such material may be made by the Client or any person purporting to be acting on his/her behalf. It may not be sold, lent, hired out or divulged to any third party not directly involved in this site without the written consent of ACD Environmental ©.

Appendix 1: Summary of Categories BS5837:2012

BS5837:2012 Table 1 - Cascade chart for tree quality assessment			
Category and definition		Criteria (including subcategories where appropriate)	
Trees unsuitable for retention (see Note)			
Category U Those in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years		*Trees that have a serious, irremediable, structural defect, such that their early loss is expected due to collapse, including those that will become unviable after removal of other category U trees (e.g., where, for whatever reason, the loss of companion shelter cannot be mitigated by pruning) *Trees that are dead or are showing signs of significant, immediate, and irreversible overall decline *Trees infected with pathogens of significance to the health and/or safety of other trees nearby, or very low quality trees suppressing adjacent trees of better quality <i>NOTE Category U trees can have existing or potential conservation value which it might be desirable to preserve; see 4.5.7.</i>	
	1 Mainly arboricultural qualities	2 Mainly landscape qualities	3 Mainly cultural values, including conservation
Trees to be considered for retention			
Category A Trees of high quality with an estimated remaining life expectancy of at least 40 years		Trees that are particularly good examples of their species, especially if rare or unusual; or those that are essential components of groups or formal or semi-formal arboricultural features (e.g., the dominant and/or principal trees within an avenue)	Trees, groups or woodlands of particular visual importance as arboricultural and/or landscape features
Category B Trees of moderate quality with an estimated remaining life expectancy of at least 20 years		Trees, groups or woodlands of significant conservation, historical, commemorative or other value (e.g., veteran trees or wood-pasture)	Trees present in numbers, usually growing as groups or woodlands, such that they attract a higher collective rating than they might as individuals; or trees occurring as collectives but situated so as to make little visual contribution to the wider locality
Category C Trees of low quality with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150mm		Trees with material conservation or other cultural value	Unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories
		Trees present in groups or woodlands, but without this conferring on them significantly greater collective landscape value; and/or trees offering low or only temporary/transient landscape benefits	Trees with no material conservation or other cultural value

SITE: Land off James Avenue, Regents Park, Calne
CLIENT: Hills Homes Developments Ltd
DATE: 17/07/2025

SURVEYOR: W. Wareing

TAGGED? No

Appendix 2: Tree Survey Schedule

No.	Name	Ht (crown)	Dia (stems)	Canopy spread N E S W				Life stage	ERC	Comments & preliminary recommendations	BS Cat
T1	Salix alba (White Willow)	14(0.1)	800(1)	12	7	6	7	M	<10	Significant failure of stems at approx. 1.5m large resulting cavity. Northern dominant Crown. Tree could be considered for retention if weight of crown alleviated. Recommend to pollard tree to suitable height for development	U
G2	Prunus spinosa (Blackthorn), Crataegus monogyna (Hawthorn), Acer campestre (Field Maple), Salix caprea (Goat Willow)	5(0.1)	90(1)	2	1.5	1.5	1.5	EM	10+	Understorey and screening adjacent to rear gardens. Bramble prevalent throughout group. All dimensions are an estimated average.	C2
G3	Salix alba (White Willow)	5(0.1)	400(1)	3	3	3	3	M	10+	Fallen section of Willow, noticeable foliage is of regenerative growth. Dimensions estimated.	C2
G4	Crataegus monogyna (Hawthorn)	5(0.1)	300(1)	4	3.5	3.5	3.5	M	10+	Group of two trees making distinct crown within boundary group. Stems obscured by Brambles, diameter estimated.	C2
T5	Acer campestre (Field Maple)	4(0.1)	250(1)	4	4	4	4	EM	10+	Tree as part of boundary group. Stem obscured by G2 had brambles. Appears to be remaining section of dilapidated tree. All dimensions estimated.	C3
T6	Acer campestre (Field Maple)	6(0.1)	200(3)	5	5	5	5	EM	<10	Tree as part of boundary group. Stem obscured by brambles. Tree in noticeable decline, unlikely to live beyond 10 years. Diameter estimated.	U

Notes: **Dia (stems):** trunk diameter in mm at 1.5m above ground level (number of stems) | **HT (crown):** Tree height (crown clearance) | **Life stage:** **Y:** Young (obviously planted within the last three years (unless as a heavy or extra-heavy standard)). **SM:** Semi mature (recently planted and yet to attain mature stature; up to 25% of attainable age.). **EM:** Early mature (almost full height, crown still developing and seed bearing; up to 50% of attainable age.). **M:** Mature (full height, crown spread, seed bearing; over 50% of attainable age.). **OM:** Over mature (full size, die-back, small leaf size, poor growth extension.) | **FSB:** First significant branch (& compass bearing) | **ERC:** Expected remaining contribution in years- <10, 10+, 20+, 40+ (assuming that there will be no physical changes to its immediate environment) | **BS Category:** Refer to appendix 1 of this report or BS5837:2012 Table 1 for detailed descriptions.

SITE: Land off James Avenue, Regents Park, Calne
CLIENT: Hills Homes Developments Ltd
DATE: 17/07/2025

SURVEYOR: W. Wareing

TAGGED? No

No.	Name	Ht (crown)	Dia (stems)	Canopy spread N E S W				Life stage	ERC	Comments & preliminary recommendations	BS Cat
T7	Fraxinus excelsior (Ash)	5(1)	140(1)	2	2	2	2	SM	<10	Tree showing symptoms associated with Ash Dieback Disease.	U
G8	Fraxinus excelsior (Ash)	5(1)	90(1)	2	1.5	1.5	1.5	SM	<10	Two trees displaying symptoms associated with Ash Dieback Disease.	U
T9	Fraxinus excelsior (Ash)	5(1)	160(1)	3	2.5	2.5	2.5	SM	<10	Tree showing symptoms associated with Ash Dieback Disease.	U
T10	Crataegus monogyna (Hawthorn)	3(0.5)	75(1)	2	1.5	1.5	1.5	Y	10+	Small boundary tree.	C2
T11	Fraxinus excelsior (Ash)	5(1)	120(1)	3	2.5	2.5	2.5	SM	<10	Tree showing symptoms associated with Ash Dieback Disease.	U
T12	Salix alba (White Willow)	7(0.5)	250(1)	6	3.5	3.5	3.5	EM	10+	Section of tree still standing. Historic failed limb noticeable on ground still growing, referenced as T13. Ivy covered tree, stem obscured by Bramble, diameter estimated.	C2
T13	Salix alba (White Willow)	6(0.1)	-1	2	1.5	1.5	1.5	M	10+	Fallen stem, regenerating.	C2
T14	Fraxinus excelsior (Ash)	15(1)	380(2)	6	5.9	5.9	5.9	M	<10	Tree showing symptoms associated with Ash Dieback Disease. Tight compression fork from base with no adaptive growth. Two stem fusing at approx. 2m.	U
G15	Prunus spinosa (Blackthorn), Crataegus monogyna (Hawthorn)	5(0.1)	90(1)	3	2.5	2.5	2.5	EM	10+	Boundary group. All dimensions are an estimated average.	C2
G16	Fraxinus excelsior (Ash)	6(1)	150(1)	3	2.9	2.9	2.9	SM	<10	Three trees displaying symptoms associated with Ash Dieback Disease, within boundary group.	U

Notes: **Dia (stems):** trunk diameter in mm at 1.5m above ground level (number of stems) | **HT (crown):** Tree height (crown clearance) | **Life stage:** **Y:** Young (obviously planted within the last three years (unless as a heavy or extra-heavy standard)). **SM:** Semi mature (recently planted and yet to attain mature stature; up to 25% of attainable age.). **EM:** Early mature (almost full height, crown still developing and seed bearing; up to 50% of attainable age.). **M:** Mature (full height, crown spread, seed bearing; over 50% of attainable age.). **OM:** Over mature (full size, die-back, small leaf size, poor growth extension.) | **FSB:** First significant branch (& compass bearing) | **ERC:** Expected remaining contribution in years- <10, 10+, 20+, 40+ (assuming that there will be no physical changes to its immediate environment) | **BS Category:** Refer to appendix 1 of this report or BS5837:2012 Table 1 for detailed descriptions.

SITE: Land off James Avenue, Regents Park, Calne
CLIENT: Hills Homes Developments Ltd
DATE: 17/07/2025

SURVEYOR: W. Wareing

TAGGED? No

No.	Name	Ht (crown)	Dia (stems)	Canopy spread N E S W				Life stage	ERC	Comments & preliminary recommendations	BS Cat
G17	Prunus spinosa (Blackthorn), Crataegus monogyna (Hawthorn), Corylus avellana (Hazel), Fraxinus excelsior (Ash), Acer campestre (Field Maple)	5(0.1)	100(1)	3	2.5	2.5	2.5	EM	10+	Species rich boundary group. All dimensions are an estimated average.	C2
T18	Quercus robur (Common Oak)	6(3)	200(1)	2	2.3	2.3	2.3	SM	10+	Tree within G17. Not shown on topo, location estimated. Stem obscured by undergrowth, diameter estimated.	C1
T19	Ulmus sp (Elm)	10(2)	245(1)	3	3	3	3	EM	10+	Tree within boundary group. Likely to succumb to Dutch Elm Disease, no symptoms of such showing at time of survey.	C2
T20	Crataegus monogyna (Hawthorn)	6(0.5)	150(4)	2	2	2	2	M	10+	Tree on edge of group. Minor dieback in tip of crown.	C1

Notes: **Dia (stems):** trunk diameter in mm at 1.5m above ground level (number of stems) | **HT (crown):** Tree height (crown clearance) | **Life stage:** **Y:** Young (obviously planted within the last three years (unless as a heavy or extra-heavy standard)). **SM:** Semi mature (recently planted and yet to attain mature stature; up to 25% of attainable age.). **EM:** Early mature (almost full height, crown still developing and seed bearing; up to 50% of attainable age.). **M:** Mature (full height, crown spread, seed bearing; over 50% of attainable age.). **OM:** Over mature (full size, die-back, small leaf size, poor growth extension.) | **FSB:** First significant branch (& compass bearing) | **ERC:** Expected remaining contribution in years- <10, 10+, 20+, 40+ (assuming that there will be no physical changes to its immediate environment | **BS Category:** Refer to appendix 1 of this report or BS5837:2012 Table 1 for detailed descriptions.

A large, stylized leaf graphic in a dark green color, positioned on the left side of the page. It has a prominent central vein and a smooth, curved edge.

**Arboriculture
Archaeology
Ecology
Landscape Architecture**

www.acdenvironmental.co.uk



APPENDIX 5: TREE PROTECTION PLAN

www.acdenvironmental.co.uk

