



LIZARD

Landscape Design and Ecology

Ecological Design Strategy Mitigation Method Statement

Land at Fontwell Avenue, Fontwell, West Sussex

Prepared by	GS
Checked by	CO
Date	28 th July 2021
Project Reference	LLD2398
Document Reference	LLD2398-ECO-REP-001
Revision	00

Contents

	Page No.
1.0 Introduction	01
2.0 Baseline Ecological Conditions	03
3.0 Detailed Protection and Compensation Measures	06
4.0 Detailed Enhancement Measures	08
5.0 Ongoing Management of Hedges for Wildlife	08
6.0 Conclusions	09



1.0 INTRODUCTION

- 1.1 Lizard Landscape Design and Ecology has been commissioned by Hampshire Homes Group to formulate an Ecological Design Strategy and Mitigation Method Statement for the protection of hedges on land approved for development at Fontwell Avenue, Fontwell, West Sussex (*Grid Reference: SU 94717 06264 – hereafter referred to as ‘the site’*). A preliminary ecological appraisal (PEA) was undertaken on 04th September 2018, to appraise the existing ecological resource within the land and the surrounding area. Badger, Reptile and Bat Activity Surveys were undertaken to establish use of the site by protected species, to guide mitigation.
- 1.2 This Statement has been produced to satisfy Condition 5 of planning approval *BN/50/20/PL*, which states: “*No development shall commence until a mitigation method statement has been submitted to and approved in writing by the Local Planning Authority to provide details of how those retained hedgerows are to be protected and enhanced. There must be a 5.0 m buffer zone in place secured by fencing around the retained hedgerows during construction. The development shall thereafter proceed in accordance with the approved hedgerow protection and enhancement measures.*”
- 1.3 A summary of the results of the previous surveys, potential impacts of proposals, and full details of avoidance, mitigation, compensation, and enhancements measures have been detailed within this report. This report has been prepared by George Sayer (*CIEEM MArborA, Senior Ecologist; Lizard Landscape Design and Ecology*) and reviewed by Catherine O’Reilly (*CIEEM, Senior Ecologist; Lizard Landscape Design and Ecology*).

1.4 This report has been produced based on the following data and surveys:

- *LLD1544-ECO-DWG-001-00 – Ecological Enhancement Plan, with accompanying Enhancement Plan Specifications;*
- *D2776-FAB-00-XX-L-DR-1000 - Colour Landscape Masterplan;*
- *LLD1544-ARB-REP-001-00 – Arboricultural Impact Assessment;*
- *LLD1544-ARB-DWG-002-04 – Tree Retention and Protection Plan;*
- *LLD1544-ECO-REP-002-03 – Ecological Impact Assessment;*
- *LLD1544-ECO-REP-003-00 – Bat Activity Survey.*

1.5 The original Tree Retention and Protection Plan has been altered to include the proposed hedge buffers, and is included as follows;

- *LLD2398-ARB-DWG-001-00 – Tree Retention and Protection Plan;*

2.0 BASELINE ECOLOGICAL CONDITIONS

2.1 Designated Sites

- 2.1.1 The site is located 1.0 km south of the South Downs National Park boundary. The site is located within the Impact Risk Zone of Fairmile Bottom SSSI however proposals do not meet the criteria which would require the LPA to consult with Natural England regarding potential impacts. Impacts to any designated sites are not anticipated as part of proposals and the potential for impacts to designated sites to occur will not be considered further in this strategy.

2.2 Habitats

- 2.2.1 No evidence was recorded on site which would suggest that the development proposals are likely to have a major adverse effect upon biodiversity. The main body of the site is formed of improved grassland grazing paddocks, with limited species diversity; the habitats on site are of limited ecological value.

2.3 Protected Species

Bats

- 2.3.1 Bat activity surveys were undertaken through 2020. The results of the Bat Activity Survey suggest that bat activity at the site is 'low / moderate', with the site boundaries being used for commuting and foraging, and the site itself being used for foraging by a low number of common bats, namely common pipistrelles, and serotine bats, and rarely by less common species of soprano pipistrelle, noctule, Myotis bats and barbastelle, an Annex II species.

- 2.3.2 No buildings with bat roosting features are present within the red line boundary. A metal shipping container and large wooden storage shed are located along the south-eastern boundary of the site. The storage shed is open fronted with a corrugated metal roof. Both buildings lack an enclosed loft void and are too thermally unstable to support a bat roost. The north and eastern tree line boundaries within the site are not of a size or age which provide suitable roosting features. The site is considered to offer 'negligible' bat roost suitability.

Great Crested Newts.

- 2.3.3 No waterbodies are present within the redline boundary. No access was available to the pond located 120.0 m south-west, however inspection via satellite imagery suggests that this pond is surrounded by bare ground and possibly stocked with fish therefore is likely to be unsuitable as a breeding pond. The site is dominated by well-grazed improved grassland; as such the majority of the site lacks the suitable structure for hibernation, shelter, and foraging. The tree belt adjacent the western boundary may provide some limited terrestrial habitat for GCN and toads; this area is to be retained and protected within the proposals. The construction zone is of 'negligible' value to amphibians.

Dormice

- 2.3.4 The site offers no suitable habitat for dormouse usage. The hedgerow to the south of the site is connected to a large woodland 400.0 m northwest of the site. The woodland extends for a further 1.0 km north and has a mosaic of woodland habitat further west. Given the far superior suitable habitat to the north and the thin, exposed, and distanced hedgerow, it is considered unlikely to be used by dormice. The northern and eastern species-poor hedgerows are routinely managed to a height of <2.0m and lack the size and species diversity to support dormice. The western treeline may offer some limited habitat suitability however this is negated by the lack of direct connectivity between the site and areas of woodland in the wider environment. No signs of dormice were noted during the site visit. The habitat on site is considered to offer 'negligible' potential for dormice.

Reptiles

- 2.3.5 A reptile survey of suitable reptile habitat within the site was undertaken during March – May 2019 which did not record any reptiles on site. All surveys were undertaken during suitable weather conditions at the optimal time of the year therefore there is nothing to suggest this may be a false negative. The site is of 'negligible' value to reptiles.

Breeding Birds

- 2.3.6 The grassland within the main body of the site is too short to offer suitable nesting habitat for ground nesting birds however the surrounding hedge / tree lines offer suitable nesting habitat for a range of species. These areas are of site value to nesting birds.

Badgers

- 2.3.7 A detailed badger sett monitoring survey undertaken on site March – May 2019 did not record badgers utilising any of the mammal holes within or adjacent to the site. Evidence from camera traps deployed on site shows these areas to be used by foxes and rabbits only. Squirrels, birds, rats, and mice were also recorded by the camera traps however no badgers were recorded passing the cameras at any point during the survey. No direct evidence of badgers on site such as snuffle holes or latrines were recorded within the main body of the site. The site is therefore of 'negligible' value to badgers, however they may very occasionally commute across the site.

Other Species

- 2.3.8 The site is considered to offer 'negligible' potential for water voles and only site value for invertebrates. The site is suitable for hedgehogs and partially suitable for more widespread amphibians such as common toad.

3.0 DETAILED PROTECTION AND COMPENSATION MEASURES

3.1 Habitats

Protection of Retained Habitats

- 3.1.1 All trees and hedges to be retained will be protected during construction in accordance with *BS5837:2012. (BSI, 2012)* using tree protection fencing. No access to machinery or storage of materials will be permitted within the RPA's of retained trees or hedgerows on site. All fuel and other hazardous materials will be stored away from the RPA's of retained trees with suitable spill kits available. A detailed tree package accompanies the planning application.
- 3.1.2 A 5.0 m buffer shall be instated around all retained hedges through the construction phase, in accordance with Condition 5 of the planning permission. For the purposes of this statement, the 'retained hedges' are considered to be:
- *The remaining sections of hedge along the eastern boundary;*
 - *The woodland / tree line boundary to the west.*
- 3.1.3 The proposed buffer shall extend from the edge of the hedge foliage and shall consist of 2.0 metres minimum height 'Heras' Welded Wire Mesh Fencing secured to a scaffolding framework, set into the existing ground. Where existing ground conditions do not allow for the above method, the Welded Wire Mesh Fencing Panels may be mounted on concrete or rubber feet, supported on the inner side with stabiliser struts fixed on a block tray or secured with ground pins; and positioned as specified. The barrier should be strained and fixed to fences where possible to provide a complete protected area. The fencing shall have 2.0 m width fine debris mesh mounted to provide complete protection from dust and fine debris.
- 3.1.4 Day-glo ribbons shall be maintained to the fencing during the main works by the Main Contractor, attached to the top of the barrier to ensure that the fencing is clearly visible during the works. The fencing shall display all-weather notices starting 'Construction Exclusion Zone – NO ACCESS'. All such barriers shall be maintained for the full contract period.

- 3.1.5 Should there be any necessary excavations, facilitation works or cultivation within this area, this shall be undertaken by hand and under supervision by the arboriculturalist or ecologist as appropriate.
- 3.1.6 No commencement of construction operations should occur prior to the inspection of the installed hedge buffer protection by the Ecological / Arboricultural Consultant. Within the protected areas the following activities must not take place;
- *No vehicles are to be used in the fenced off areas;*
 - *No materials are to be stockpiled or stored;*
 - *No chemicals are to be stored;*
 - *No excavation or increase in the soil level shall occur;*
 - *No fires shall be lit on site.*
- 3.1.7 The condition of hedges and barriers shall be confirmed at the end of each week, and remedial actions taken if needed before works recommence. Any foliage which becomes dusty shall be carefully hosed down.
- 3.1.8 No construction phase lighting shall be permitted to spill onto the surrounding vegetation, and any lighting shall be the absolute minimum required. An assessment shall be undertaken of light spill by the ecologist between dawn and dusk immediately following installation, whereby any areas of lighting concern shall have light levels recorded, and recommendations made to alter lighting. The lighting shall hereby not be permitted for use until the ecologist has approved the lighting.

Compensation Planting

- 3.1.9 Compensation for the loss of the eastern hedgerow will be achieved through the planting of a new native mixed species hedge, set slightly further back from the original, with semi-mature trees at regular intervals. This planting shall use larger stock to ensure rapid establishment and replacement of the lost vegetation.

4.0 DETAILED ENHANCEMENT MEASURES

Enhancement of Hedges

- 4.1 The existing hedges are almost entirely formed of hawthorn and field maple. Whilst desirable these species offer limited diversity. As an enhancement, new hedge planting shall be of much greater diversity, including at least five species and further species offering ecological value. Species shall include at least three from the following:

- *Guelder Rose (Viburnum opulus);*
- *Wayfaring Tree (Viburnum lantana);*
- *Bird Cherry (Prunus padus);*
- *Crabapple (Malus sylvestris);*
- *Blackthorn (Prunus spinosa).*

Enhancement of Tree Planting

- 4.2 New tree species shall further enhance the diversity of the site and shall include:

- *Crab Apple (Malus sylvestris);*
- *Rowan (Sorbus aucuparia);*
- *Whitebeam (Sorbus aria);*
- *Wild cherry (Prunus avium).*

5.0 ONGOING MANAGEMENT OF HEDGES FOR WILDLIFE

- 5.1 To ensure the hedges continue to be a useful ecological feature, they shall not be cut overly frequently and shall be allowed to become relatively dense and tall. The hedges shall be cut outside of the bird nesting season (*which generally runs March-August inclusive*) and not more than once every three years. Minor trimming of stray branches over paths etc. can be carried out more regularly if required.

6.0 CONCLUSIONS

- 6.1 The protection, compensation and enhancement detailed herein have been designed to ensure the ongoing favourable status of retained hedges on-site, and the protected species which use these. Additionally, adherence to the methods detailed will ensure that all works accord with the relevant wildlife legislation and planning conditions.

Tree Protective Measures - No-Dig Construction

A 'no-dig' Construction method shall be employed during the construction in order to avoid damage to existing tree roots and localised compaction of subsoil within the tree root protection areas of trees proposed for retention.

Existing surfacing materials shall be left undisturbed and retained during the construction period for as long as possible in order to protect the tree root protection area of the existing trees to be retained; existing soft ground layers shall be removed carefully by hand within the existing tree root protection areas. A ground stabilising geo-mesh ('TDP SN20 GeoGrid' or equal and approved), shall be rolled out over the existing ground level and evenly covered with a No Fines - Open Graded Aggregate (in accordance with Highways Agency Specification; Clause 805 (Type 3) or equal and approved.)

The granular fill shall be incorporated within a 3 dimensional GeoCell (Terram Geocell 22/20 or equal and approved) and shall ensure a minimum supportive construction depth of 200 mm. A geo-textile filter membrane is to be laid over the granular fill construction (Geotextile filter membrane to be TDP 115 Non-woven Geotextile Fabric or equal and approved.)

A permeable system and construction method shall be installed over the prepared sub-base layers. A bedding layer of crushed aggregate (to BS EN13242; range size; 4 - 14 mm) is to be laid level and compacted above the Geotextile filter membrane to a depth of 25 mm. A permeable top layer, which could consist of (for example) resin-bound gravel, permeable tarmac or permeable block-paving shall then be installed above the bedding layer to create the terrace areas.

Ground Protection Zone - Manual Excavation/ Demolition and Minimal-Dig Construction Zone

Where the proposed dwelling foundations increases the depth of construction within the tree RPA, a manual excavation and 'minimal-dig' construction method shall be employed in order to avoid damage to existing tree roots and localised compaction of subsoil within the tree root protection areas of existing trees.

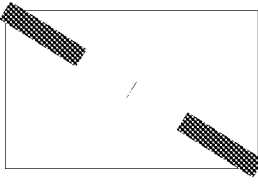
Tree Protection Zone - Demolition Zones

Demolition Zone shall be implemented, in accordance with BS 5837:2012 - 'Trees in Relation to Design, Demolition and Construction'. Any demolition of existing structures within the tree RPA shall be undertaken with due care with hand held tools, inwards within the footprint, 'top down, pull back' demolition method.

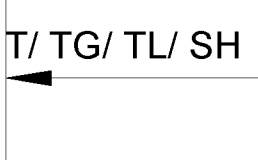
Tree Protective Barrier

All Tree Protection and Tree Protective Barrier to be in accordance with BS 5837:2012 - 'Trees in Relation to Design, Demolition and Construction - Recommendations'. Tree Protective Fencing - to be 2.0 metres height 'Heras' Welded Wire Mesh Fencing secured to a scaffolding framework, set into the existing ground, and positioned to the outside edge of the existing Tree Root Protection Area, or as specified.

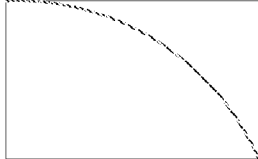
Legend



Site Survey Area.

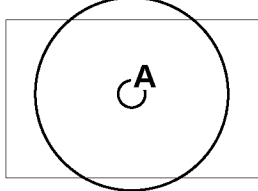


T/ TG/ TL/ SH



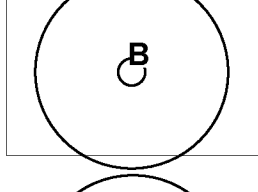
Tree Root Protection Areas.

Tree Root Protection Areas calculated and specified in accordance with BS 5837:2012 - 'Trees in Relation to Design, Demolition and Construction'.



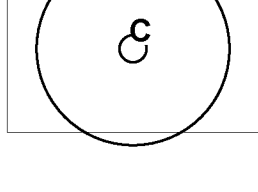
Category A Trees

Trees of High Quality and Value.



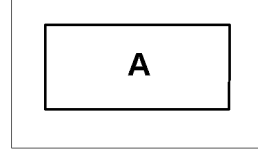
Category B Trees

Trees of moderate Quality and Value.



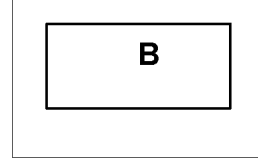
Category C Trees

Trees of Low Quality and Value.



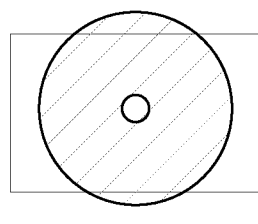
Existing Hedgerow

Vegetation of High Quality and Value.



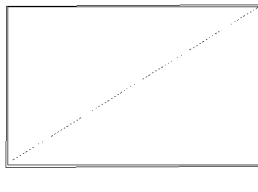
Existing Hedgerow

Vegetation of Moderate Quality and Value.



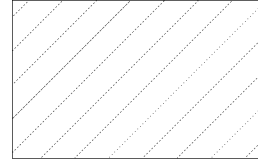
Existing Trees to be removed.

Tree Surgery operations to be in accordance with BS3998:2010 - 'Tree Works - Recommendations'.

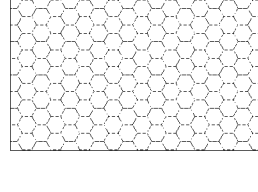


Tree Protection Barrier

All Tree Protection and Tree Protection Barriers to be in accordance with BS 5837:2012 - 'Trees in Relation to Design, Demolition and Construction - Recommendations'. Tree Protective Barrier to be 2.0 metres height 'Heras' Welded Wire Mesh Fencing secured to a scaffolding framework, set into the existing ground, and positioned to the outside edge of the existing Tree Root Protection Area, or as specified.



Existing Hedgerow to be removed.



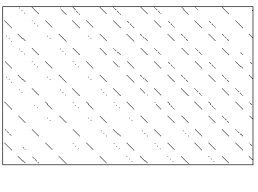
Tree Protection Zone - 'No Dig' Construction

A 'No Dig' Construction shall allow for construction to be implemented without intrusion or change of existing ground levels, in accordance with BS 5837:2012 - 'Trees in Relation to Design, Demolition and Construction'.



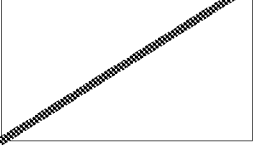
Tree Protection Zone - Manual Excavation / Demolition

Limited Manual Excavation / Demolition Zone shall be implemented, in accordance with BS 5837:2012 - 'Trees in Relation to Design, Demolition and Construction'. The excavation of bank to widen the vehicular access to demolition site shall be undertaken with due care with hand held tools under Arboricultural Supervision only.



Proposed Tree Surgery Works

Existing trees to have crown reduced prior to protection measures being implemented. Tree Surgery operations to be in accordance with BS 3998:2010 - 'Tree Works - Recommendations'.



Proposed Hedge Buffer

As specified within LLD2398-ECO-REP-001. Shall consist of 2.0 metres minimum height 'Heras' Welded Wire Mesh Fencing secured to a scaffolding framework, set into the existing ground. Where existing ground conditions do not allow for the above method, the Welded Wire Mesh Fencing Panels may be mounted on concrete or rubber feet, supported on the inner side with stabilizer struts fixed on a block tray or secured with ground pins; and positioned as specified. The barrier should be strained, and fixed to fences where possible to provide a complete protected area. The fencing shall have 2m width fine debris mesh mounted to provide complete protection from dust and fine debris.

3.14 Day-glo ribbons shall be maintained to the fencing during the main works by the Main Contractor, attached to the top of the barrier to ensure that the fencing is clearly visible during the works. The fencing shall display all-weather notices stating 'Construction Exclusion Zone - NO ACCESS'. All such barriers shall be maintained for the full contract period.

PLANNING ISSUE

Rev	Description	Date	Initials
00	Planning Issue	22.07.21	GS



LIZARD

Landscape Design and Ecology

The Old Bank, 34 South Street, Torring, Worthing, West Sussex, BN14 7LH
T: 01903 216033 E: lizardlandscape@btconnect.com W: lizardlandscapeecology.com

Project Title and Location

Land West of Fontwell Ave

Client

Hampshire Homes Group

Drawing Title

Tree Retention Protection Plan

Scale

1:500@A1

Drawn

LB

Approved

GS

Date

22.07.2021

Drawing No

LLD2398-ARB-DWG-001

Revision

00

CAD Filename

LLD2398-ARB-DWG-001

Tree Retention and Protection Plan
Land West of Fontwell Ave, Eastergate, West Sussex

