



Building B, Lords Wood Barns, Petworth, West Sussex, GU28 9BS

Tel: 01798 861 800 - E-Mail: info@ecologyco-op.co.uk - www.ecologyco-op.co.uk

Habitat Enhancement Plan

**Reading Golf Club, 17 Kidmore End Road, Reading,
RG4 8SQ**

Author: Owen Crawshaw BSc (Hons), MCIEEM

Reviewed by: Paul Whitby BSc (Hons), MCIEEM, CEcol

Updated by: Owen Crawshaw BSc (Hons), MCIEEM

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The Ecology Co-operation Ltd
Registered Office: Greens Court, West Street, Midhurst, West Sussex, GU29 9NQ
Company number: 8905527



Document Control

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Original	OC	PW	11/05/22	N/A	
Rev 1.1	OC		03/08/22	Updated to reflect latest layout plan Reference to off-site habitat creation removed	
Rev 1.2	OC		10/11/22	Updated to reflect comments received from RGC Natural Environment Officer	
Rev 1.3	OC		24/07/23	Minor amendments following comments from RGC Natural Environment Officer	
Rev 1.4	OC		24/08/23	Minor amendments following comments from RBC Ecology Consultations All reference to planting/non-species-specific habitat creation removed	Non species-specific habitat creation/management included within LEMP.
Rev 1.4.1	OC		31/08/23	Minor amendments made to bat box, swift box and sparrow terraces plot numbers and elevations to ensure consistency with architects.	
Rev 1.4.2	OC		05/10/23	Sparrow terraces locations amended to ensure they are located at least 3m above ground on new buildings.	

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Report Summary

1. The Ecology Co-operation was commissioned by Vistry Group to produce a Habitat Enhancement Plan detailing habitat creation, enhancement and management measures for a proposed residential development (comprising 223 plots) at Reading Golf Club.

2. Species-specific enhancements to be incorporated within the development site include:

- installation of twenty new bat boxes on trees
- integration of twenty new bat roosting features within new buildings
- installation of twenty new bird boxes on trees
- integration of twenty swift boxes and ten house sparrow boxes within new buildings
- creation of five large log piles within suitable habitat
- installation of ten new hedgehog houses within gardens
- creation of 'hedgehog highways' throughout the development



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1 INTRODUCTION

1.1 Purpose of the Report

The Ecology Co-op was commissioned by Vistry Group to provide details regarding habitat creation/enhancement and management plans for a residential development at Reading Golf Club, Reading. This document has been written to demonstrate how the development of up to 223 new dwellings will provide targeted enhancement measures through habitat creation and the management of these habitats over a 10-year period.

The prescribed enhancement measures described within this document will be issued to relevant works contractors to ensure that they are carried out in full. Implementation of this will be overseen by a suitable ecological consultancy, and the works contractor will be given contact details for an ecologist so that any issues can be resolved promptly.

1.2 Background

The site is located at Reading Golf Club, 17 Kidmore End Road, Emmer Green, Reading RG4 8SQ. The central grid reference for the site is SU 7150 7689. The location of the site is shown in Figure 1.

The application site covers approximately 12ha (the entire course covers approximately 43.5ha) and operated as an active golf course up until 2020, containing: fairways, greens, tree belts. The clubhouse building and an adjacent dwelling, located at the south-eastern corner of the site, are included within the current assessment.

The proposed development includes construction of 223 residential plots along with associated soft and hard landscaping (see Figure 2).

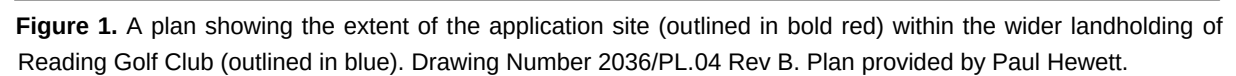




Figure 2. Proposed scheme layout for the development at Reading Golf Club, reproduced from ECE Architecture (Drawing No. PL-054 Rev C) (Dated 09.06.22).

Outline planning consent for the scheme was granted in March 2022. Condition 19 of planning consent reference 211843 states:

“No development shall commence on site (including demolition or preparatory works) until details of a habitat enhancement scheme have been submitted to and approved in writing by the Local Planning Authority. The scheme is to include a programme for implementation and ongoing maintenance of the habitat enhancement measures and shall include specific measures to ensure the ensure the green links across the site are retained. The habitat enhancement scheme shall thereafter be implemented and adhered to in accordance with the agreed programme.

REASON: Details are required prior to commencement as insufficient information was submitted with the application and in order to avoid harm to habitats and species whilst securing biodiversity enhancement in the long term. This accords with Paragraph 175 of the NPPF (2019), Policy EN12 of the Reading Borough Local Plan 2019, the Wildlife and Countryside Act 1981 (as amended) and The Conservation of Habitats and Species Regulations 2017.”

This report serves to allow for the discharge of condition 19.



1.3 Policy & Legislation

The National Planning Policy Framework (NPPF) sets out the Government's view on how planners should balance nature conservation with development and helps ensure that Government meets its biodiversity commitments with regards to the operation of the planning system.

Paragraph 174b, states that council policies should;

- “promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species; and identify and pursue opportunities for securing measurable net gains for biodiversity.”

Paragraph 175d, states that when determining planning applications, authorities should:

- Refuse permission “if significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for”
- Encourage “opportunities to incorporate biodiversity improvements in and around developments, especially where this can secure measurable net gains for biodiversity.”

Circular 06/2005 provides further guidance in respect of statutory obligations for biodiversity and geological conservation and their impact within the planning system¹.

In accordance with the NPPF, it is important that developments should contribute to local policies that enhance the natural environment by:

- minimising impacts on existing biodiversity and habitats and designated features,
- establishing coherent ecological networks that are more resilient to current and future pressures
- providing net gains in biodiversity and habitats, wherever possible.

1.4 Management Plan Strategic Vision

The aims and objectives for the landscape and biodiversity at this site are as follows:

- enhancement of the site for bats, birds, invertebrates and hedgehogs.

2 SPECIES-SPECIFIC ENHANCEMENTS

The following sections outline the enhancement measures proposed to specifically benefit: bats, nesting birds, notable invertebrates and hedgehogs.

¹ HM Government (2005) ODPM Circular 06/05 Government Circular: *Biodiversity and Geological Conservation – Statutory Obligations and their Impact within the Planning System*. Available online at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/7692/147570.pdf.



2.1 Bats

To enhance the site for roosting bats, twenty new bat boxes will be installed on retained trees within the development site. It is recommended that a combination of different bat box designs are used (Figure 3).



Figure 3. Left to right – 2F Schwegler bat box, 1 FD Schwegler bat box, 2FN Schwegler bat box, Vivara Pro Woodstone bat box, Eco Kent bat box and Improved Cavity bat box

Figure 4 shows proposed approximate positions for the bat boxes. The boxes would be hung by a suitably qualified ecologist to ensure that this positioning is most suitable, but generally locations above 3.5 metres in the most south easterly facing aspect of a tree is best.



Figure 4. Proposed locations of bat boxes to be installed on retained trees within the development site at Reading Golf Club. Produced using QGIS Software (Version 3.16 Hannover).

As a measure to further enhance roosting opportunities for bats ‘built in’ roosting features will be incorporated into the dwellings. Twenty 1FR Schwegler bat tubes (Figure 5) will be integrated into the walls (primarily at the southern elevations), no less than 4 metres above ground level, but as close to the apex of a gable wall where possible, as demonstrated in Figure 11. Figure 6 shows proposed locations of these bat roosting features. The bat tubes will be installed within the following plot numbers of the development:

- 1
- 13
- 17
- 24
- 49
- 51
- 63-64
- 75
- 86
- 96
- 100
- 105
- 129
- 148



- 154
- 162-173
- 176
- 181
- 215
- 223

Elevation plans showing the location of bat tubes are provided in Appendix 1.



Figure 5. Left – A bat tube integrated into a brick wall. Right – a cross section diagram of a bat tube.



Figure 6. Proposed locations of bat tubes to be integrated into new buildings within the development site at Reading Golf Club. Produced using QGIS Software (Version 3.16 Hannover).

2.1.1 *Timeframe & Implementation*

Tree mounted bat boxes will be installed following completion of the site's construction phase (Linden Phase 2 & Bovis Phase 2 completed – see Construction Phasing Plan) and prior to the first occupation of the site.

Integrated bat tubes will be installed during the construction phase as they will need to be built-in to the walls of new dwellings.

2.1.2 *Sign Off*

A suitably qualified ecologist will attend site to confirm the bat boxes and bat tubes have been installed as per this document. A sign off letter will be produced by the ecologist and will be submitted to the local authority.

2.2 *Nesting Birds*

In order to enhance the site for nesting birds twenty nesting bird boxes, incorporating a variety of designs (Figure 7), will be installed on retained trees across the site. Proposed locations for the boxes are shown in Figure 8.



Figure 7. Left to right – Vivara Pro Seville 28mm Woodstone Nest Box, Vivara Pro Barcelona Woodstone Open Nest Box, Vivara Pro Tawny Owl Nest Box, FSC Treecreeper Nest Box, 2GR Schwegler Nest Box and a Traditional Wooden Nest Box.



Figure 8. Proposed locations of bird boxes to be installed on retained trees within the development site at Reading Golf Club. Produced using QGIS Software (Version 3.16 Hannover).

As a further enhancement to nesting birds, a total of 20 swift nest boxes and 10 integrated house sparrow nest boxes (Figure 9) will be integrated into the new buildings within the site. Swift boxes will be installed as high as possible below the eaves, whereas sparrow boxes will be installed at least 3m above ground in close proximity to areas of shrubs within new gardens. Boxes will be integrated into the northern or eastern elevations of buildings; proposed locations of integrated bird boxes are shown in Figure 10.



Figure 9. Left – Woodstone Build-in Swift Box B. Right – Vivara Pro Woodstone House Sparrow Nest Box.



Two integrated swift boxes will be installed together within each of the following plot numbers of the development:

- 3
- 145
- 151
- 159
- 108
- 111
- 115
- 180
- 214
- 215

The integrated house sparrow boxes will be installed within the garage buildings of the following plot numbers of the development:

- 25
- 32
- 42
- 86
- 98
- 109
- 161
- 201
- 203
- 210

Elevation plans showing the location of swift boxes and house sparrow boxes are provided in Appendix 1.



Figure 10. Proposed locations of bird boxes to be integrated into new buildings within the development site at Reading Golf Club. Produced using QGIS Software (Version 3.16 Hannover).

2.2.1 Timeframe & Implementation

Tree mounted bird boxes will be installed following completion of the site's construction phase (Linden Phase 2 & Bovis Phase 2 completed – see Construction Phasing Plan) and prior to the first occupation of the site.

Integrated swift boxes and house sparrow boxes will be installed during the construction phase as they will need to be built-in to the walls of new dwellings.

2.2.2 Sign Off

A suitably qualified ecologist will attend site to confirm the bird boxes have been installed as per this document. A sign off letter will be produced by the ecologist and will be submitted to the local authority.

2.3 Invertebrates

New deadwood habitat will be incorporated within these new habitats as well as amongst areas of open space within the development site itself. These areas of deadwood will provide an enhancement for a variety of saproxylic invertebrates including stag beetles *Lucanus cervus*.

A total of five large log piles will be created in shaded areas within the development site. Alternatively, larger logs can be sunk vertically into the ground with holes drilled into the wood to create opportunities



for saproxylic invertebrates. A further ten large log piles will be created off-site within the newly created species-rich grassland and existing/newly created woodland.

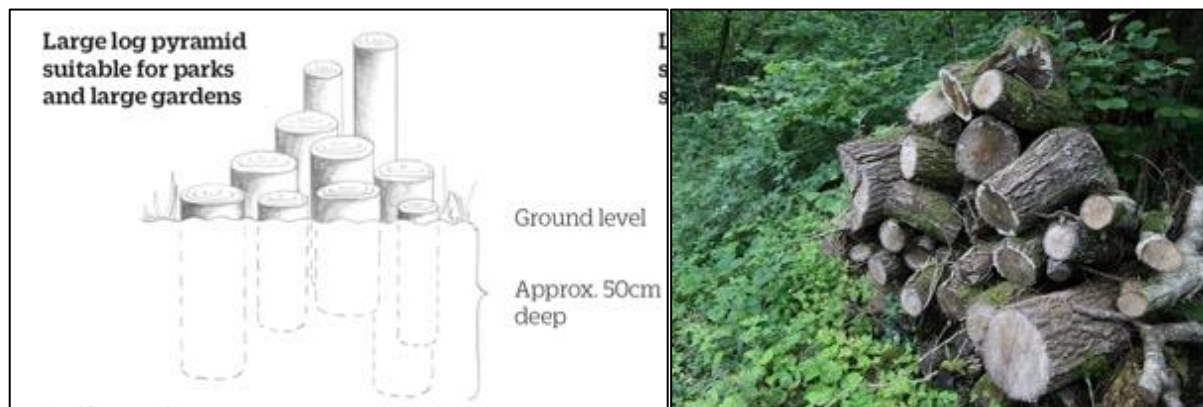


Figure 11. Left – a diagram of a vertical log pile designed specifically for stag beetles (Source: Peoples Trust for Endangered Species). Right – A traditional horizontal laid log pile.



Figure 12. Proposed locations of new log piles within the development site at Reading Golf Club. Produced using QGIS Software (Version 3.16 Hannover).

2.3.1 Timeframe & Implementation

Log piles will be created following completion of the site's construction phase (Linden Phase 2 & Bovis Phase 2 completed – see Construction Phasing Plan) and prior to the first occupation of the site.



2.3.2 Sign Off

A suitably qualified ecologist will attend site to confirm the suitability of the log piles, as per this document. A sign off letter will be produced by the ecologist and will be submitted to the local authority.

2.4 Hedgehogs

Garden fencing will contain accessible gaps (10cm x 15cm) at their base to allow movement of hedgehogs between garden plots. A total of ten hedgehog houses will be installed within gardens and suitable areas of public space of the new development. The locations of hedgehog houses and extent of the 'hedgehog highways' created by gaps in garden fencing are shown in Figures 14-19.



Figure 13. Left – a hole at the base of garden fencing to allow hedgehog movement. Right – an Igloo Hedgehog Home.



Figure 14. Proposed locations of hedgehog house within the development site at Reading Golf Club. Produced using QGIS Software (Version 3.16 Hannover).

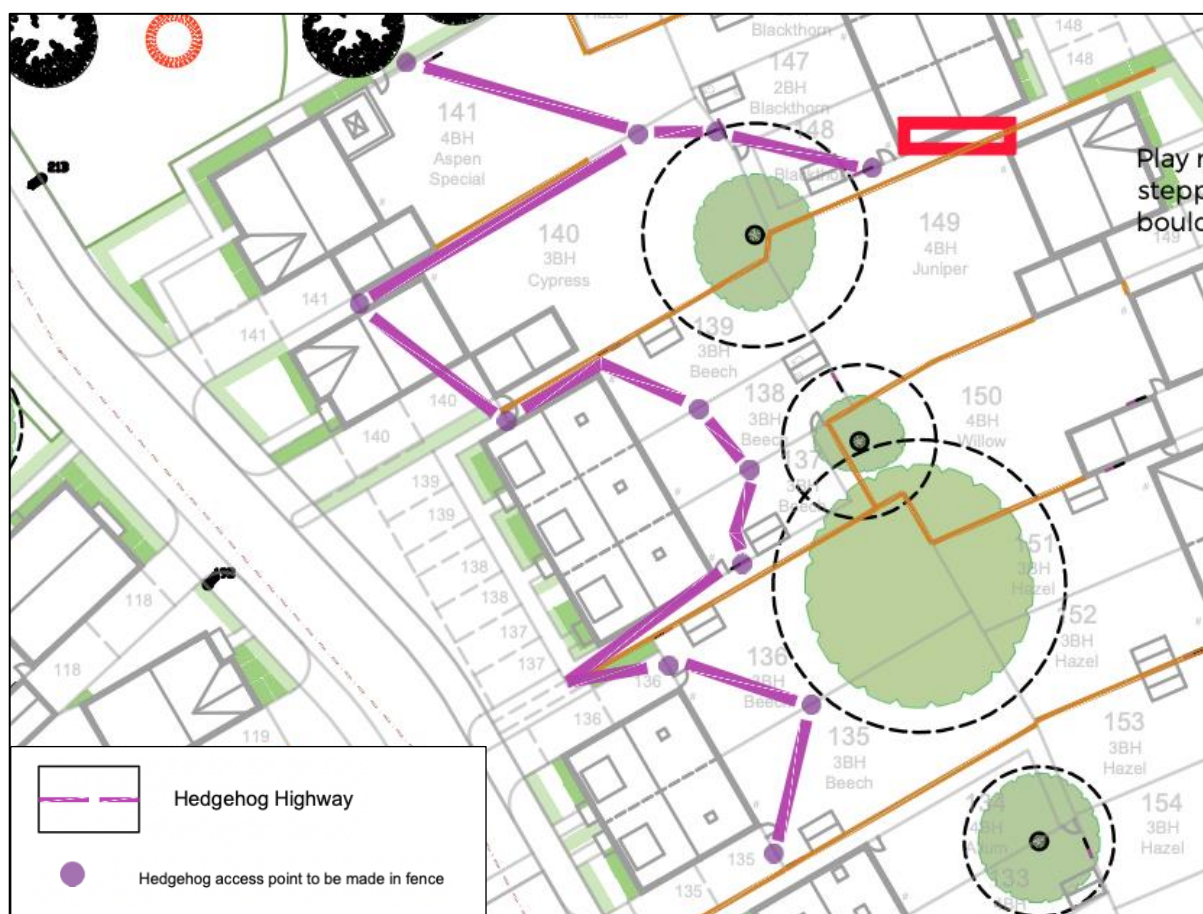


Figure 15. A plan showing where holes will be cut into fencing within the north-eastern section of the development to create the 'hedgehog highways' through the site. Reproduced courtesy of ACD Environmental Drawing No.VYH2378120. Dated April 23.

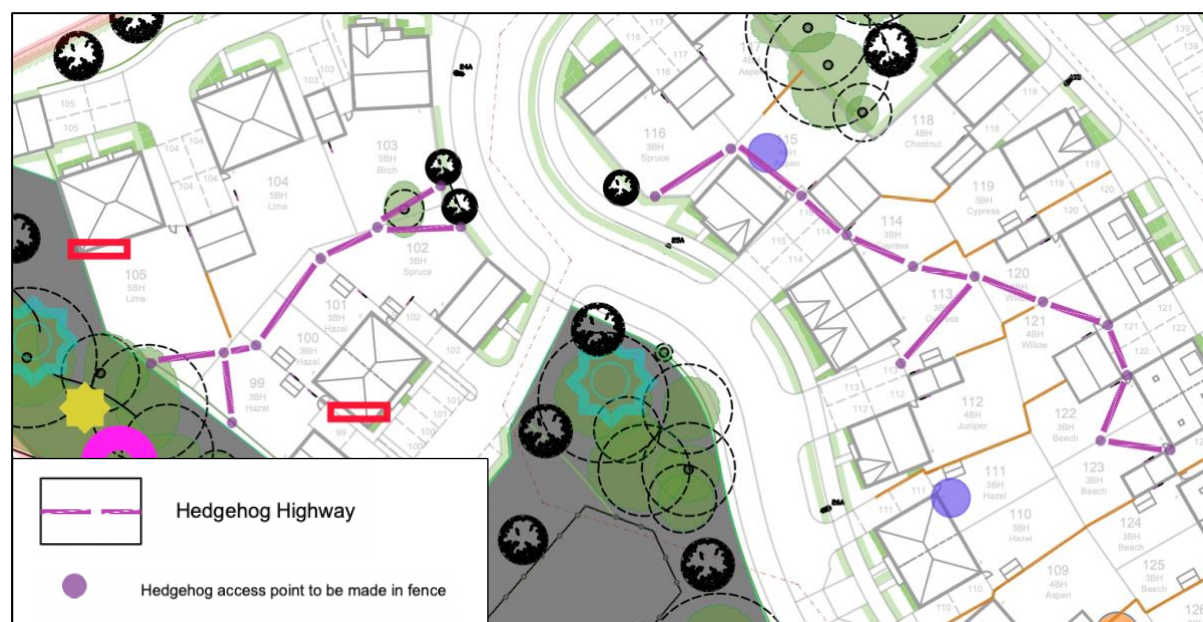


Figure 16. A plan showing where holes will be cut into fencing within the north-western section of the development to create the 'hedgehog highways' through the site. Reproduced courtesy of ACD Environmental Drawing No.VYH2378120. Dated April 23.



Figure 17. A plan showing where holes will be cut into fencing within the south-western section of the development to create the 'hedgehog highways' through the site. Reproduced courtesy of ACD Environmental Drawing No.VYH2378120. Dated April 23.



Figure 18. A plan showing where holes will be cut into fencing within the north-eastern section of the development to create the 'hedgehog highways' through the site. Reproduced courtesy of ACD Environmental Drawing No.VYH2378120. Dated April 23.



Figure 19. A plan showing where holes will be cut into fencing within the south-eastern section of the development to create the 'hedgehog highways' through the site. Reproduced courtesy of ACD Environmental Drawing No.VYH2378120. Dated April 23.

2.4.1 Timeframe & Implementation

Hedgehog houses will be installed following completion of the site's construction phase (Linden Phase 2 & Bovis Phase 2 completed – see Construction Phasing Plan) and prior to the first occupation of the site.

Holes in fencing to create the 'hedgehog highways' will be installed during the construction phase as the fencing is installed.

2.4.2 Sign Off

A suitably qualified ecologist will attend site to confirm the hedgehog houses have been installed and that holes in fencing have been created as per this document. A sign off letter will be produced by the ecologist and will be submitted to the local authority.

3 POST CONSTRUCTION MANAGEMENT

Bat and bird boxes on trees are to be inspected to check they have not become detached or damaged each year and any damaged boxes are to be replaced like for like up to at least 5 years from the date of the completion of the development.

Old bird nests are to be cleared out from bird boxes in September to reduce parasitic load build up.

4 WORK SCHEDULE

Table 1 below provides the timetable for the annual management plan actions for the 10-year management period. The management operations can be continued outside of this proposed 10-year period.

**Table 1.** Work schedule for the 10-year management period.

Action	Jan	Feb	Mar	April	May	June	July	Aug	Sep	Oct	Nov	Dec
Inspection of bat and bird boxes									X	X	X	
Clearance of old bird nests from bird boxes									X	X	X	

5 MONITORING AND REVIEW

Monitoring of the retained and new biodiversity assets will be undertaken to determine the success or failure of each compartment through a site visit by a suitably qualified ecologist 2 years and 5 years post construction. If necessary, changes to management actions can be prescribed along with additional planting of hedgerows, structural boundary planting and within the pond in the event that plants or shrubs fail to establish. Furthermore, in the event that invasive species are identified within any of the compartments suitable control methods would be outlined in detail.

An internal inspection is to be undertaken 10 years post construction to assess the progress of habitat development and determine any changes required for future management as the habitats continue to mature.



6 *Appendix 1 – Bat Tube, Swift Box & House Sparrow Box Elevation Mark Ups*

Spruce – Plot 145 – swift brick



Front Elevation
Plot - 145

Glade

1

Blackthorn – Plot 148 – bat tube



Side Elevation

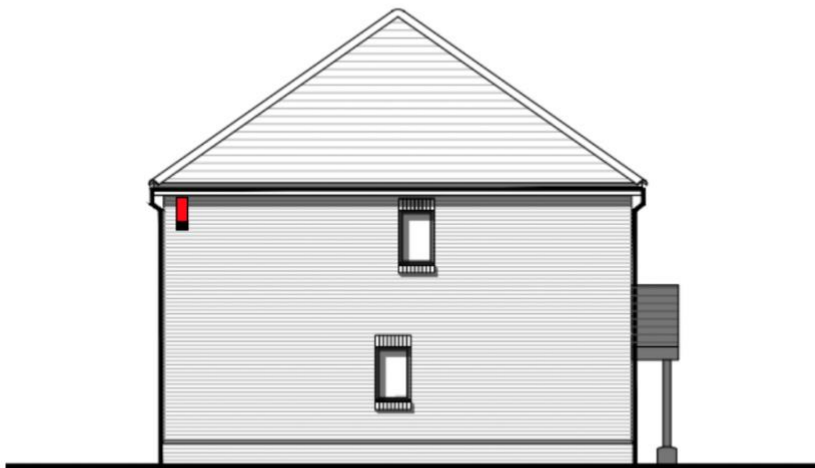


Hazel – Plot 151 – swift brick



Front Elevation
Plots - 111, 152, 154
Handed - 110, 151, 153

Hazel – Plot 154 – bat tube



Side Elevation



Aspen Special– Plot 159 – swift brick



Side Elevation

Aspen – Plot (handed) 129 – bat tube



Side Elevation



Aspen – Plot 115 – swift brick



Rear Elevation

Hazel – Plot 111 – swift brick



Rear Elevation



Juniper – Plot 108 – swift brick



Rear Elevation

Lime – Plot 105 – bat tube



Rear Elevation

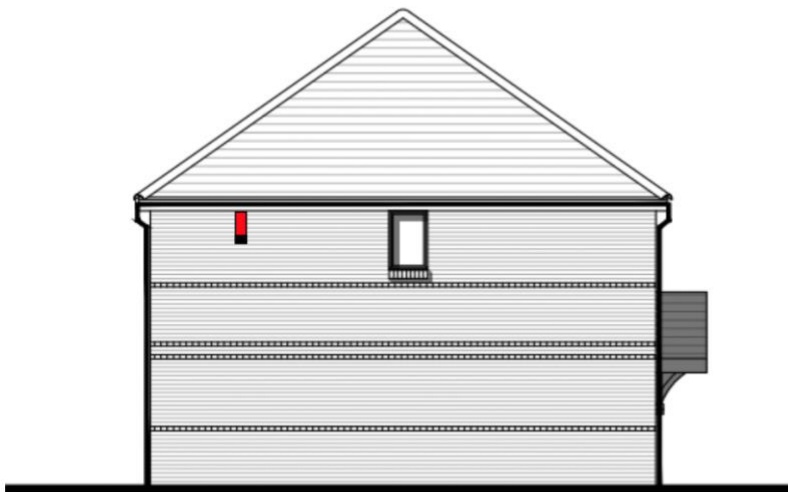


Hazel- Plots 96 & 100 – bat tube



Side Elevation

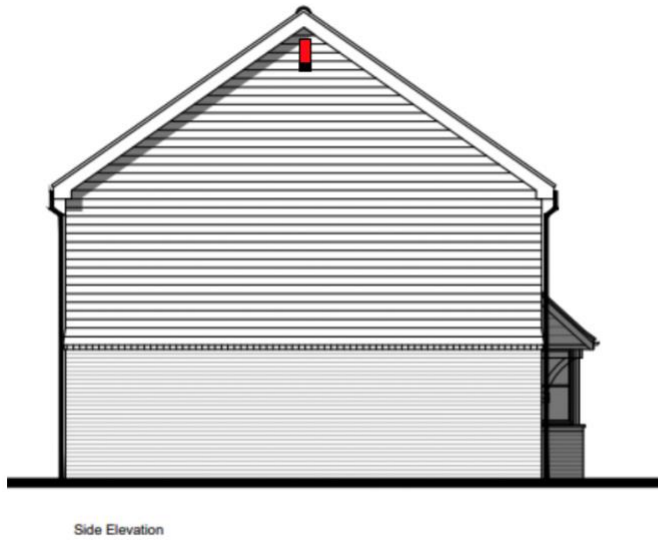
3B5P 02 Plot 75– bat tube



Side Elevation

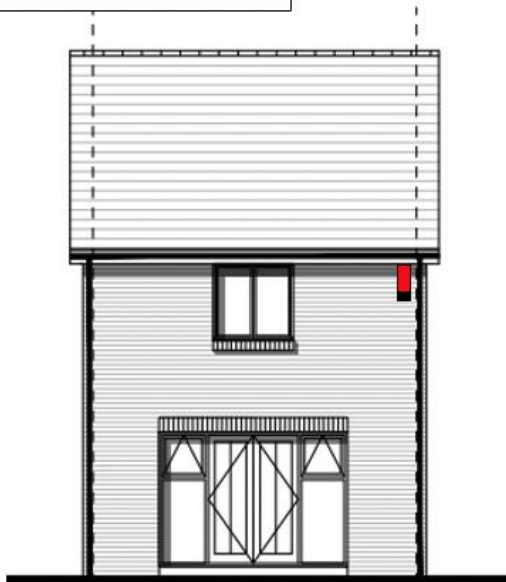


4B7P Plot 86– bat tube



Side Elevation

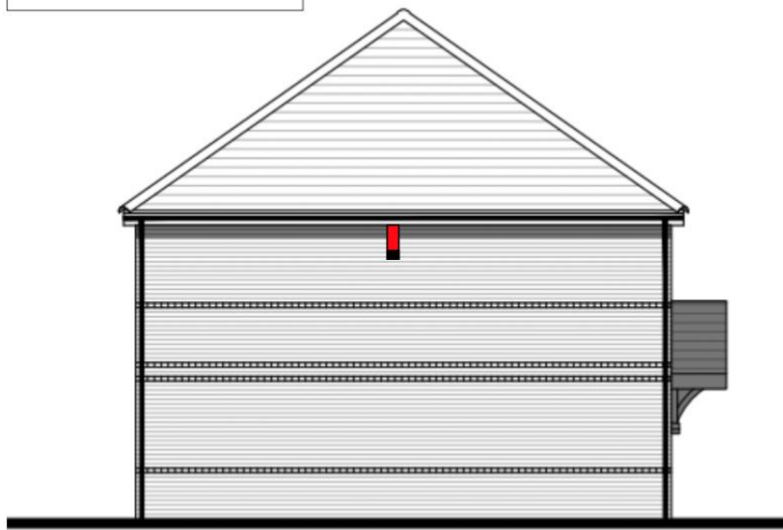
2B3P 01 Plot 49– bat tube



Rear Elevation

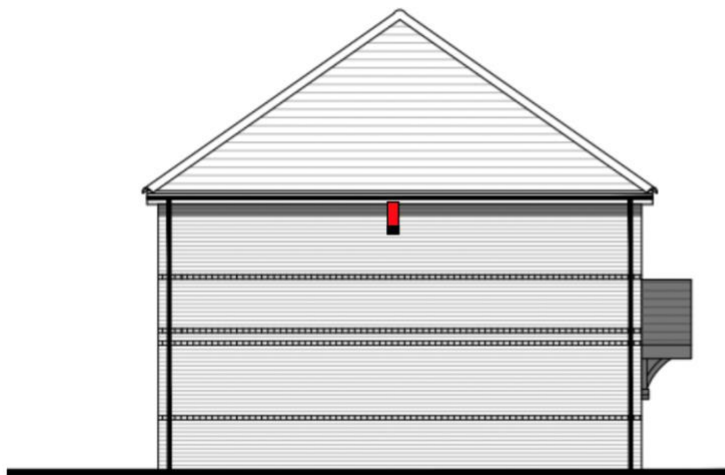


Asher Plots 17 & 24 – bat tube



Side Elevation

Atkins Plot 13 – bat tube



Side Elevation



Birch Plot 1– bat tube



Side Elevation

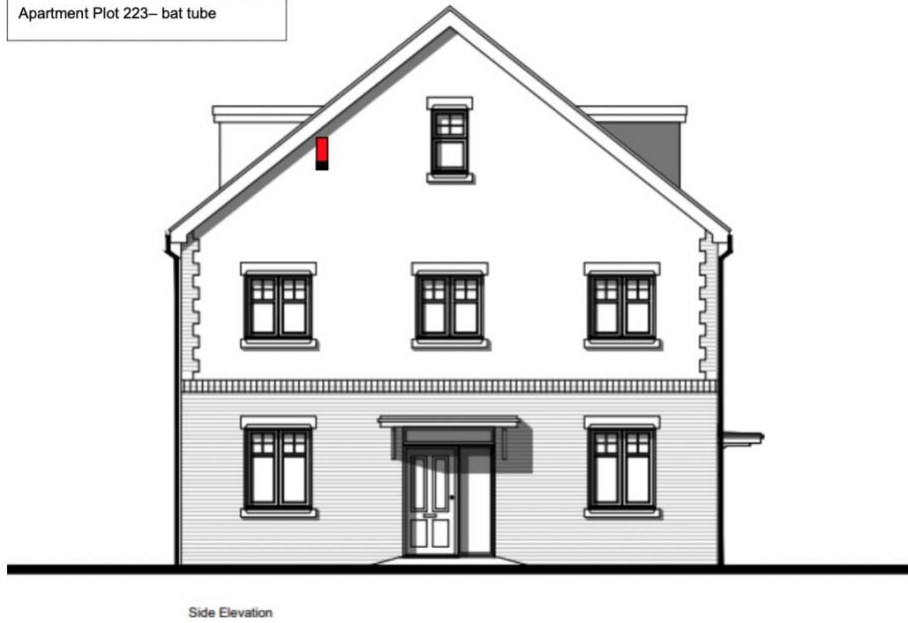
Aspen Plot 3– swift brick



Side Elevation



Apartment Plot 223– bat tube



Apartment Plot 215 & 223– swift brick & bat tube





4B5p 01 Plot 214– swift brick



Rear Elevation

SH101 Plot 181-182– bat tube



Side Elevation



SH101 Plot 63– bat tube



Side Elevation

3B5P 03 Plot 180– swift brick



Side Elevation



2B3P 01 Plot 176– bat tube



Side Elevation

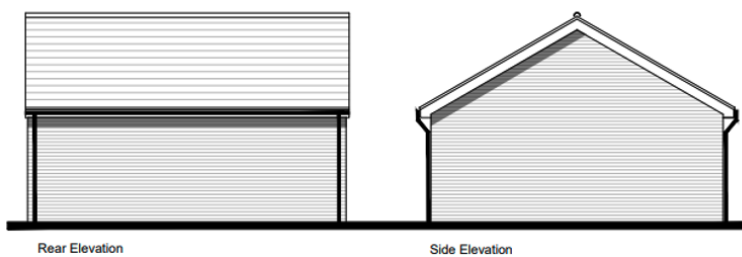
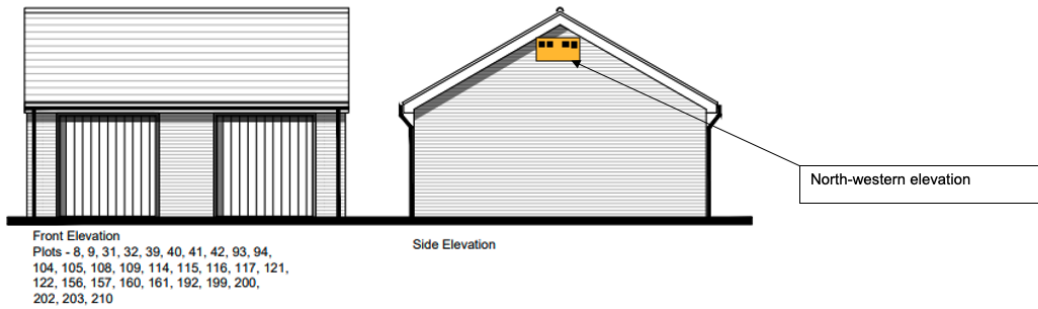
Apartment – bat tube



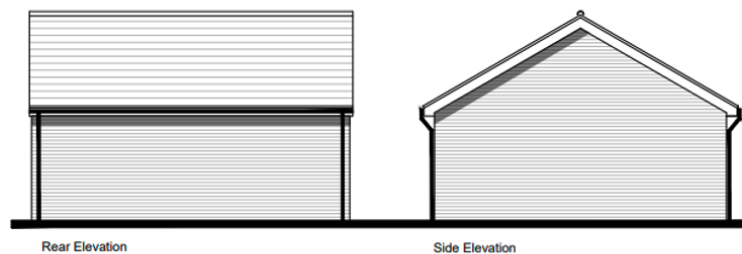
Front Elevation



Garage – Plot 109 – sparrow terrace



Garage – Plots 32, 42, 201, 203, 210 – sparrow terrace





Garage – Plot 25, 86, 98, 161 – sparrow terrace

CDM 2015 Health & Safety Information:
This information is for use only in conjunction with the Design's Hazard Register and is to be used in conjunction with the Designer's Hazard Register.

