

Land off Lingards Road, Slaithwaite Ecological Design Strategy 27th July 2023



Version

Document ref: MBE/OTH/2023/7/02				
Purpose and Description	Originated	Checked	Reviewed	Date
Amended following changes to final planning conditions	G Slack MCIEEM REDACTED	P Middleton MCIEEM REDACTED	G Slack MCIEEM REDACTED	01/11/2023

Prepared by:

Middleton Bell Ecology, School House, Green Moor, Sheffield, S35 7DQ

Disclaimer

This report is issued to the client for the sole use and for the intended purpose as stated in the agreement between the client and Middleton Bell Ecology (MBE) under which this work was completed, or else as set out within the report. This report may not be relied upon by any other party without the express written agreement of MBE. The use of this report by unauthorised third parties is at their own risk and MBE accepts no duty of care to any such party.

MBE has exercised due care in preparing this report, it has not, unless specifically stated, independently verified information provided by others. No other warranty, express or implied, is made in relation to the content of this report and MBE assumes no liability for any loss resulting from errors, omissions or misrepresentation made by others.

Any recommendations, opinion or finding stated in this report is based on circumstances and facts as they existed at the time that MBE performed the work. Nothing in this report constitutes legal opinion. If legal opinion is required, the advice of a legal professional should be secured.

Introduction

This document has been written to provide information intended to assist with the discharge of provisional Planning Condition 23 and 24 of Planning Permission 2020/62/93954/W. **Condition 23** required the EDS to accord with the biodiversity net gain calculations and to include:

- a) *Purpose and conservation objectives for the proposed works.*
- b) *Review of site potential and constraints.*
- c) *Detailed design(s) and/or working method(s) to achieve stated objectives.*
- d) *Details on the establishment of hedgerow planting on the site.*
- e) *Type and source of materials to be used where appropriate, e.g. native species of local provenance.*
- f) *Timetable for implementation demonstrating that works are aligned with the proposed phasing of development.*
- g) *Persons responsible for implementing the works and long-term maintenance.*
- h) *Details of initial aftercare and long-term maintenance, for a minimum of 30 years.*
- i) *Details for monitoring and (where the results from monitoring show that conservation aims and objectives of the EDS are not being met) how contingencies and/or remedial action will be identified, agreed and implemented so that the development still delivers a measurable biodiversity net gain.*
- j) *Details for disposal of any wastes arising from works.*

The EDS shall be implemented in accordance with the approved details and all features shall be retained in that manner thereafter.



Introduction

This document has been written to provide information intended to assist with the discharge of provisional Planning Condition 23 and 24 of Planning Application 2020/62/93954/W. **Condition 24** required:

- *The location, both within the site and upon dwellings, and design of 1 swift box per dwelling (100% provision across site)*
- *The location, both within the site and upon dwellings, and design of 1 bat box per five dwellings (20% provision across site)*
- *Location and design of access holes for hedgehogs (i.e., “hedgehog holes”) within fences throughout the site*

This EDS includes the information required by both provisional planning conditions.



Ecological Design Strategy – Background



The site which is a largely triangular area of c2.3ha of land in a somewhat rural location, is accessed off Lingards Road on the western fringes of Slaithwaite at Grid Reference SE 0732 1336.

The site is bordered to the north by residential properties and the A62, and to the east and south by Lingards Road and associated residential properties. The River Colne is approximately 150m to the north of the site, beyond the A62. The wider area comprises mainly broadleaved woodland and grassland. The location is shown in the adjacent figure.

The planning application is for a residential development comprising 42 dwellings.

An Extended Phase 1 Habitat Survey was produced for the site in August 2015 (SLR, 2015). A Preliminary Ecological Appraisal (PEA) for the site was undertaken in June 2020 (MBE 2020) and an Ecological Impact Assessment was completed in January 2023.

The measures included in this document are informed by the previous site assessments.



Ecological Design Strategy – 23a *Purpose and conservation objectives for the proposed works*

The conservation objectives of the measures included within this document are to reduce any negative impacts arising from the construction of the proposed development and to maximise the potential on-site benefits to nature conservation.

This aligns with the National Planning Policy Framework which states that plans should 'promote the conservation, restoration and re-creation of priority habitats, ecological networks and the protection and recovery of priority species'.

This ecological design strategy details the following ecological mitigation and enhancement measures:

- Translocation of the highest quality semi-improved acid grassland (shown in the adjacent photo);
- Creation of new other neutral grassland (area of proposed wildflower grass seed), and species rich flowering lawns;
- Mixed scrub and hedgerow planting;
- Provision of bat and bird boxes;
- Hedgehog access provision.



Specific objectives to obtain the habitat condition required for the biodiversity net gain calculations are detailed for each vegetation type where appropriate.

Ecological Design Strategy – 23b *Site potential and constraints*

The proposed development will result in the land-take of approximately 2.34ha largely comprising poor semi-improved grassland together, with semi-improved acid grassland, marshy grassland, scattered and dense scrub, tall ruderal vegetation and scattered trees.

Nesting birds may be present within trees and shrubs. Site clearance should not be undertaken during the bird nesting period (March-August (inclusive)). If limited clearance is required during the breeding season, then this should be preceded by a nesting bird check.

Two small areas of semi-improved acid grassland will be retained.

Most of the stream (shown below) will be retained.



Ecological Design Strategy – 23b Site potential and constraints

The scheme includes the translocation of approximately 0.1ha of the highest quality semi-improved acid grassland to cover an area of marshy grassland, to be first excavated during the creation of attenuation tanks.

A total of 0.38ha of land will comprise new areas of community open space.

A total of 0.74ha of land will comprise new domestic gardens

A total of 0.17ha of land will comprise mixed scrub and dwarf shrub on green retaining walls.



Hedgehog *Erinaceus europaeus* will be afforded free movement through the site through the creation of access holes provided at the bottom in corners or junctions of all new fences.

Built land including dwellings, roads and drives will account for 1.1ha of the site.

437m of new hedgerow will be planted

Ecological Design Strategy – 23d Details on the establishment of hedgerow planting on the site



The site location is shown on Page 3.
The proposed works are shown on the adjacent extract from the Landscape Masterplan. Where scaling and full details of the landscaping are required the original Landscape Masterplan drawing (Drawing Number: R/2646/1E) should be consulted.

KEY



Existing vegetation to be retained



Proposed Extra heavy standard (14-16cm girth) tree



Proposed heavy standard (12-14cm girth) tree



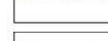
Proposed selected standard (10-12cm girth) tree



Proposed Beech hedging



Proposed native species hedge



Proposed ornamental shrub planting



Proposed mixed native species scrub



Proposed turf



Rear gardens



Proposed species rich flowering lawn mix



Proposed wildflower grass seed



Proposed green retaining wall



Proposed 1500mm high close boarded timber fencing with 300mm trellis on top (detailed by others)



Proposed 1800mm high close boarded timber fence to 2m from wall of house then 1200mm for the rest of its length (detailed by others)



Proposed walls (detailed by others)



Proposed retaining walls (detailed by others)



Proposed 900mm vertical metal railing (detailed by others)



Proposed 900mm post and rail fence (detailed by others)



Existing stone boundary wall (detailed by others)



Existing stone boundary wall (detailed by others)



Proposed tarmac surface (detailed by others)



Proposed block paving (detailed by others)

Ecological Design Strategy – 23d Details on the establishment of hedgerow planting on the site

Ornamental Hedge Planting

Hedges will be planted into frontages to strengthen boundaries in the locations circled orange on the adjacent extract from the Landscape Masterplan.

Ornamental hedge planting will consist of beech *Fagus sylvatica* to be planted as a double staggered row of 40-60cm high hedging plants.



Native Hedge Planting

Native hedgerows will be planted to the frontage of properties on Lingards Road and within open spaces throughout the site circled red on the adjacent Landscape Masterplan extract.

Native hedge planting will consist of blackthorn *Prunus spinosa*, spindle *Euonymus europaeus*, dog rose *Rosa canina*, guelder rose *Viburnum opulus* and hazel *Corylus avellana*.

Hedges are to be planted as a single row of 40-60cm high hedging plants.

Ecological Design Strategy – 23e *Type and source of materials to be used where appropriate, e.g. native species of local provenance*

The hedgerow, scrub, and tree planting will be of British provenance with plants sourced from a reputable supplier such as Habitat Aid <https://www.habitataid.co.uk/collections/british-hedges>, or Mires Beck Nursery <https://www.miresbeck.co.uk/our-trees-and-plants/tree-nurseries/>.



The wildflower grass mix will comprise: the LWXM Dual Purpose Wildflower Seeds mix available from https://www.wildflower.co.uk/spec-sheets/LWX_Dual_Purpose.pdf . This seed mix will provide colourful annuals in the initial year or two and more traditional meadow grasses and flowers once established.

The proposed species rich flowering lawn mix will comprise: the LW12 Low Growing Wildflower Seeds mix available from https://www.wildflower.co.uk/spec-sheets/LW12_Low_Growing.pdf . This seed mix will provide a variety of nectar rich low-growing species.

Ecological Design Strategy – 23h & i *Details of 30 year maintenance, monitoring and remedial measures*

Hedgerow

The native hedgerows will aim to be at least 1.5 m wide and high with no gaps of more than 0.5 m and plant species indicative of nutrient enrichment dominating less than 20% of cover of undisturbed ground.

The hedgerows will be established as specified on the Landscape Masterplan.

Hedges must be trimmed every other year to allow the hedges to flower and fruit. Hedges should be trimmed in January or February to allow the berry crop to be harvested by wintering birds.



The hedgerow plants should be inspected in late summer (August – September) during Years 1 and 2 by the landscape management contractor. Any dead plants should be replaced the subsequent winter.

The hedges should be laid if they become too large, or too gappy either within their length or at the bases.

The success of the management and the need for remedial measures, and the need for hedge laying or re-laying should be determined during inspections in Years 1, 3, 4, 7, 14, 21, and 28.

If non-native invasive plant species are identified within the hedgerows on site, they should be removed. The method for removal will be species specific with additional species-specific control measures likely to be required. At present invasive non-native species can usually be treated or buried on site, in accordance with Regulatory Position Statement 178 ([https://www.gov.uk/government/publications/treatment-and-disposal-of-invasive-non-native-plants-rps-178](https://www.gov.uk/government/publications/treatment-and-disposal-of-invasive-non-native-plants-rps-178/treatment-and-disposal-of-invasive-non-native-plants-rps-178)), or removed from site by a licensed waste disposal contractor. The contractor should be notified if they are transporting a species listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended).

Ecological Design Strategy – 23h & i *Details of 30 year maintenance, monitoring and remedial measures*

Native mixed scrub

The scrub will aim to comprise at least three native woody species with no one species making up more than 75% cover. No non-native invasive species will be present, and the scrub will have a well defined edge which grades into the adjacent grassland.

The scrub will be established as specified on the Landscape Masterplan.

Once sufficiently mature, flowering and seeding (anticipated to be no sooner than Year 8), dense scrub will be thinned as required to prevent any one species dominating the mix.

The thinned area should not exceed 10% of the total area of scrub, taking account of any natural thinning or damage, or other management required to remove invasive species. The frequency and extent of the required thinning operations should be determined following inspections in Years 1, 3, 5, 7, 14, 21, and 28. It is anticipated that thinning would be undertaken once every seven years from Year 8 onwards. All removed scrub should be used to create brash/habitat piles within/on the edge of the mixed scrub habitat.

If non-native invasive species are recorded within the scrub during the inspections, the entire extent of the invasive plants should be removed at the first opportunity by mechanical or chemical control by the landscape management contractor or a specialist invasive species removal firm if required.

The method for removal of non-native plants will be species specific and should be dealt with as identified in the Hedgerow Section above.

If more than 10 % of the area of scrub (total) requires clearance in order to remove non-native invasive species, supplemental planting will be undertaken by the landscape management contractor during the following winter.



Ecological Design Strategy – 23h & i *Details of 30 year maintenance, monitoring and remedial measures*

Grassland (acid and other neutral)

Both the translocated and retained acid grassland and the other neutral grassland (area of proposed wildflower grass seed) will aim to ensure there is an absence of species indicative of sub-optimal conditions, and to keep the cover of bare ground and bracken at less than 5%.

The grassland will be established as specified on the Landscape Masterplan.

The grassland will be mown two to three times a year. Grass cutting will be completed in March - April, August and (if required) September.



The arisings from all mowing will be collected and composted on site in a specified location within scrub in the public open space or removed from site. Undesirable weeds should be spot sprayed or hand-pulled by the landscape management contractor. As a minimum this should be completed during May in Years 1, 2, 3, and 5, with additional management undertaken as required.

The grassland should be inspected in Years 1, 3, 5, 7, 14, 21, and 28.

If non-native invasive plant species, undesirable weeds or excessive scrub are identified within the sward then they should be notified to, and removed by, the landscape management contractor. The method for removal of undesirable plants will be species specific with additional control measures likely to be required. Invasive, non-native, species should be treated as described in the Hedgerow Section.

If evidence of a poorly timed mowing regime is recorded then the management contractor will be contacted to discuss the timing of cuts detailed in the LEMP.

If problems are arising from use of the area by the public (fly tipping, littering, dog fouling etc) then consideration will be given to restricting or altering access via the use of fencing, or changes to hedgerows or the mowing regime.

Ecological Design Strategy – 23j *Details for disposal of any wastes arising from works. The EDS shall be implemented in accordance with the approved details and all features shall be retained in that manner thereafter*

The arisings from all mowing will be collected and composted on site in a specified location within scrub in the public open space or removed from site.

All brash arising from scrub clearance and hedge trimming will be piled within the areas of remaining scrub.

These piles will create additional habitat for a wide range of species within the site.



Condition 24

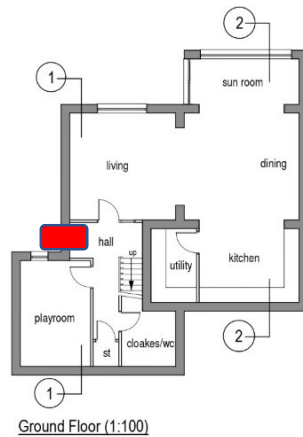
Planning Permission 2020/62/93954/W. **Condition 24** required:

- A) The location, both within the site and upon dwellings, and design of 1 swift box per dwelling (100% provision across site)*
- B) The location, both within the site and upon dwellings, and design of 1 bat box per five dwellings (20% provision across site)*
- C) Location and design of access holes for hedgehogs (i.e., “hedgehog holes”) within fences throughout the site*

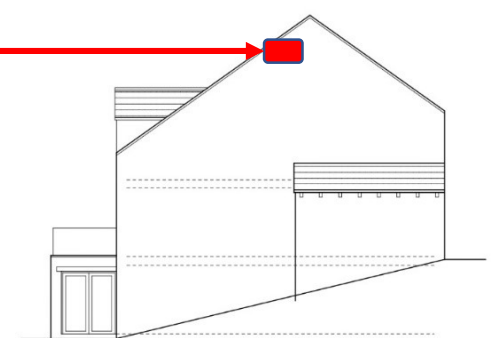
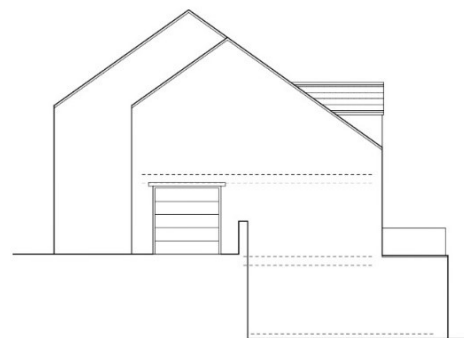
This EDS includes the information required by both provisional planning conditions.



Ecological Design Strategy – 24a & 24b Bat box and swift box provision – House Type A1

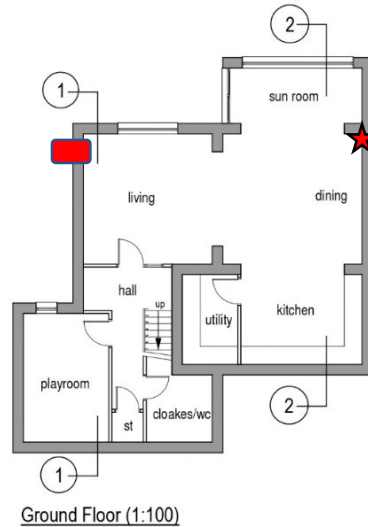


The swift boxes will comprise a Manthorpe swift brick installed at the top of the gable on the side elevation.



Ecological Design Strategy – 24a & 24b Bat box and swift box provision – House Type A2

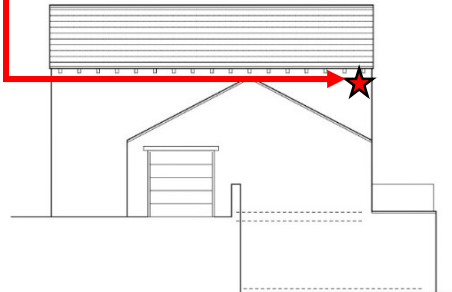
The [Vivara Pro build-in woodstone bat box](#) will be installed at wall top height above the garage on the side elevation.



The swift boxes will comprise a Manthorpe swift brick installed at wall top height on the side elevation.



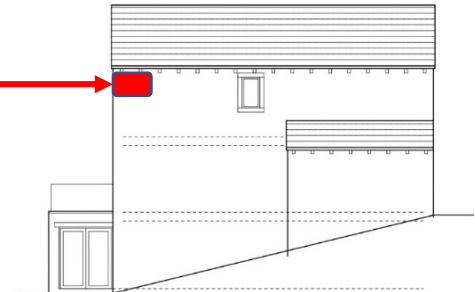
Front elevation (1:100)



Side elevation (1:100)

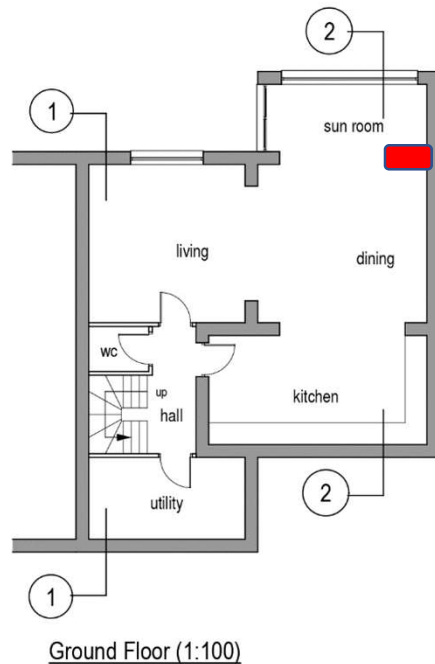


Rear elevation (1:100)



Side elevation (1:100)

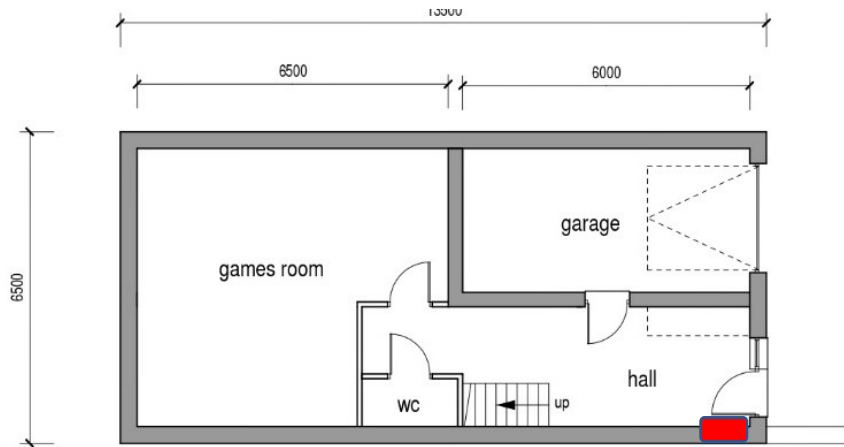
Ecological Design Strategy – 24a & 24b Bat box and swift box provision – House Type A3



The swift boxes will comprise a Manthorpe swift brick installed at wall top height on the rear elevation.



Ecological Design Strategy – 24a & 24b Bat box and swift box provision – House Type B1

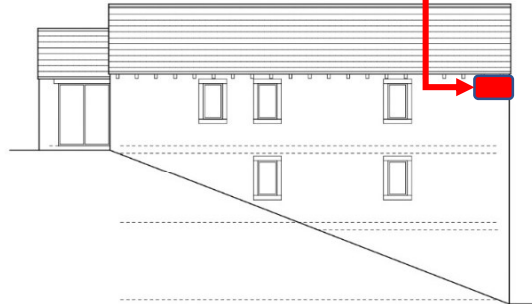


Ground Floor (1:100)

The swift boxes will comprise a Manthorpe swift brick installed at wall top height on the side elevation.



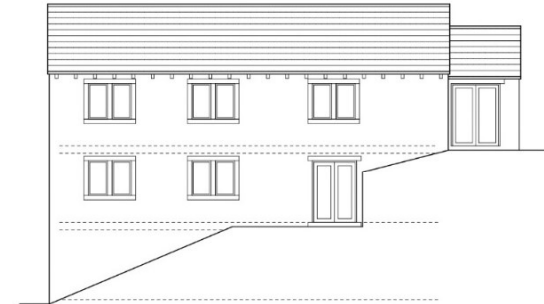
Front elevation (1:100)



Side elevation (1:100)

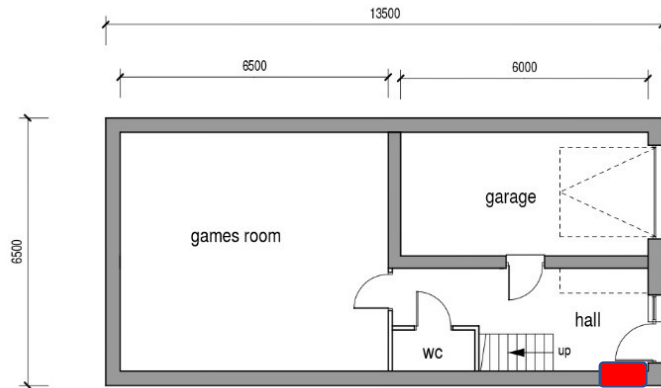


Rear elevation (1:100)



Side elevation (1:100)

Ecological Design Strategy – 24a & 24b Bat box and swift box provision – House Type B2

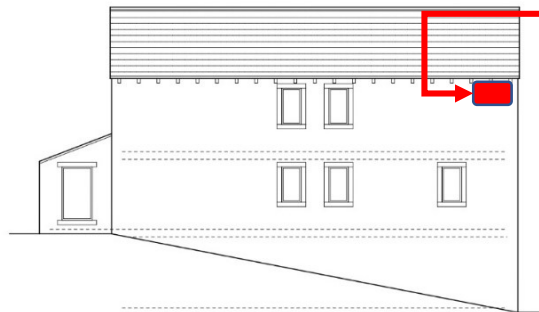


Ground Floor (1:100)

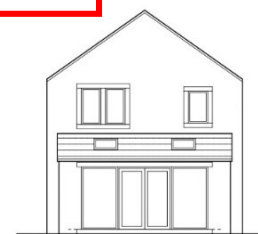
The swift boxes will comprise a Manthorpe swift brick installed at wall top height on the side elevation.



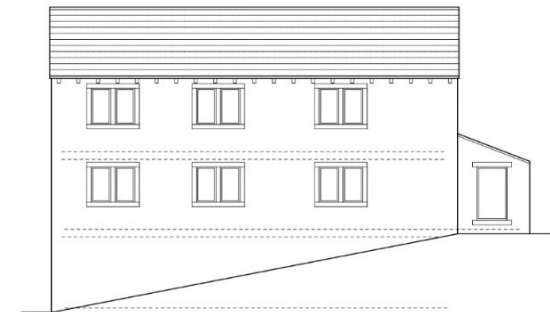
Front elevation (1:100)



Side elevation (1:100)

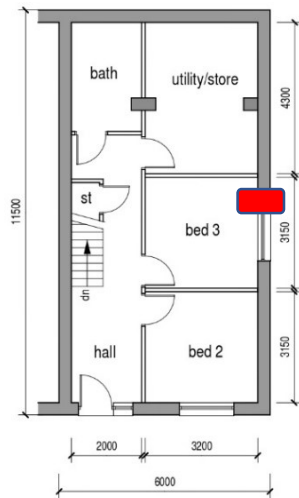


Rear elevation (1:100)



Side elevation (1:100)

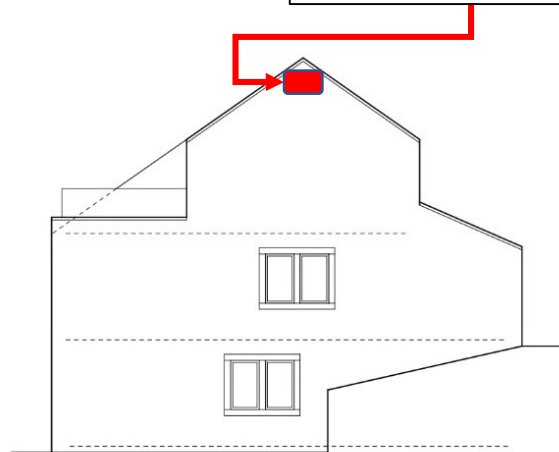
Ecological Design Strategy – 24a & 24b Bat box and swift box provision – House Type C1



Ground Floor (1:100)



Front elevation (1:100)



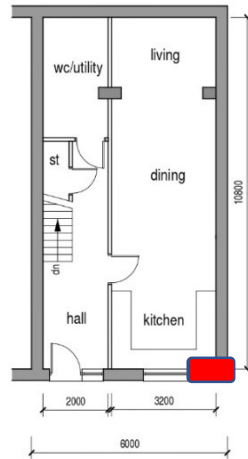
Side elevation (1:100)



Rear elevation (1:100)

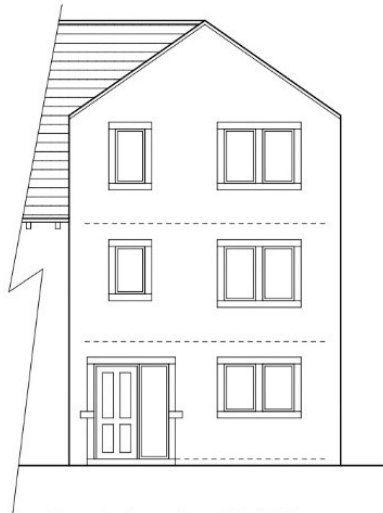
The swift boxes will comprise a Manthorpe swift brick installed at the top of the gable on the side elevation.

Ecological Design Strategy – 24a & 24b Bat box and swift box provision – House Type C2

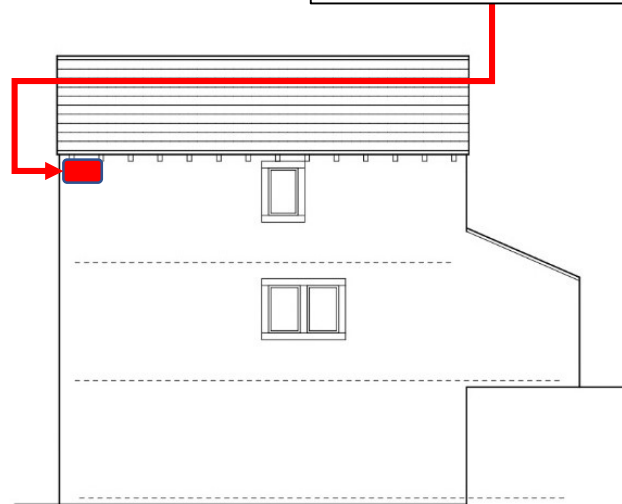


Ground Floor (1:100)

The swift boxes will comprise a Manthorpe swift brick installed at wall top height on the side elevation.



Front elevation (1:100)



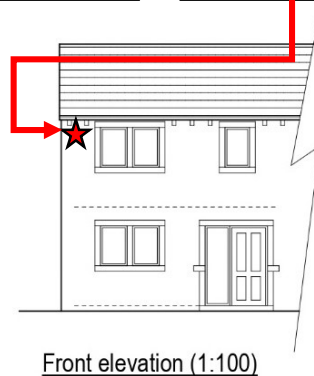
Side elevation (1:100)



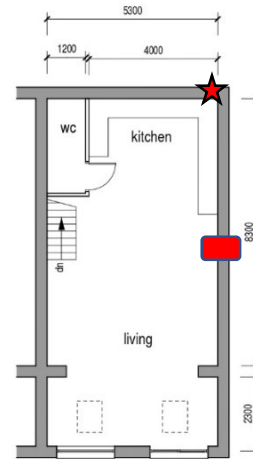
Rear elevation (1:100)

Ecological Design Strategy – 24a & 24b Bat box and swift box provision – House Type C3

The [Vivara Pro build-in woodstone bat box](#) will be installed at wall top height on the front elevation.

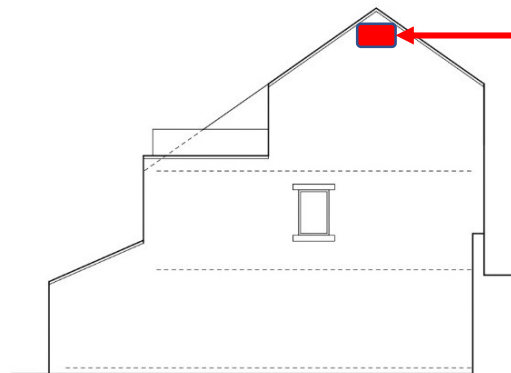


Front elevation (1:100)



Ground Floor (1:100)

The swift boxes will comprise a Manthorpe swift brick installed at the top of the gable on the side elevation.



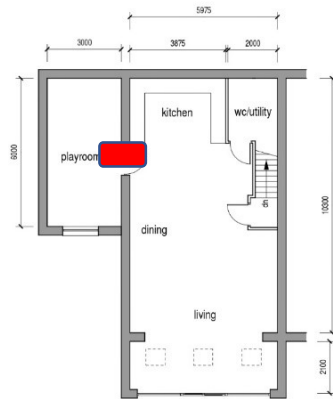
Side elevation (1:100)



Rear elevation (1:100)

Ecological Design Strategy – 24a & 24b Bat box and swift box provision – House Type D1

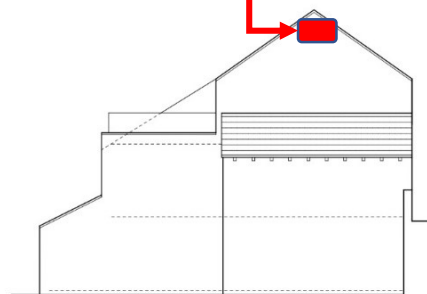
The swift boxes will comprise a Manthorpe swift brick installed at the top of the gable on the side elevation.



Ground Floor (1:100)



Front elevation (1:100)

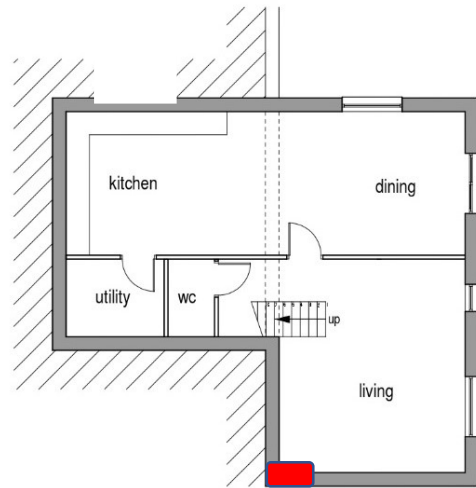


Side elevation (1:100)



Rear elevation (1:100)

Ecological Design Strategy – 24a & 24b Bat box and swift box provision – House Type E



Ground Floor (1:100)



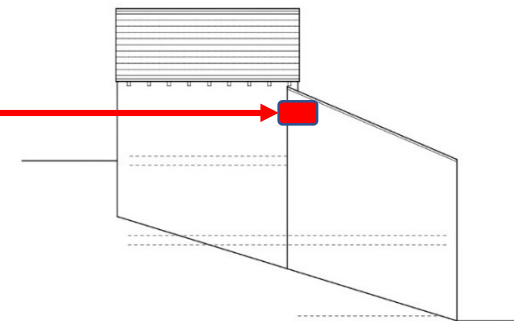
Front elevation (1:100)



Side elevation (1:100)



Rear elevation (1:100)



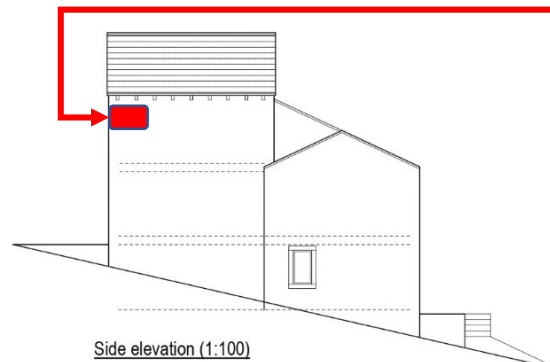
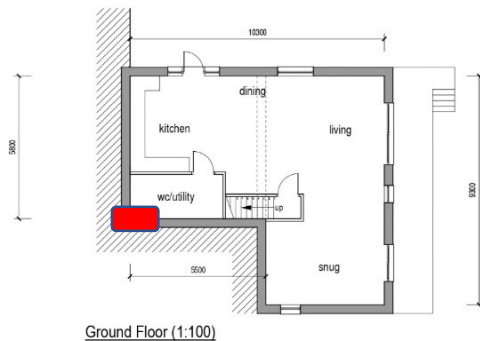
Side elevation (1:100)



The swift boxes will comprise a Manthorpe swift brick installed at the top of the side elevation.

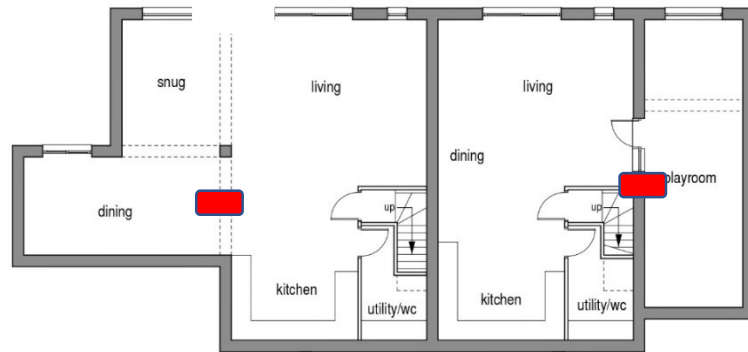
Ecological Design Strategy – 24a & 24b Bat box and swift box provision – House Type F

The swift boxes will comprise a Manthorpe swift brick installed at the top of the side elevation.



Ecological Design Strategy – 24a & 24b Bat box and swift box provision – House Type G1 and G2

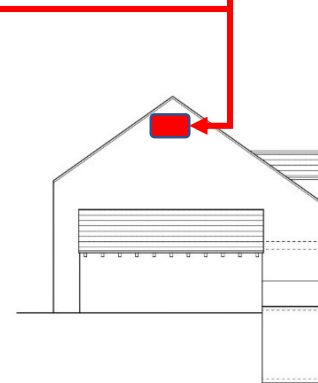
The swift boxes will comprise Manthorpe swift bricks installed at the top of the side elevations.



Ground Floor (1:100)



Front elevation (1:100)



Side elevation (1:100)

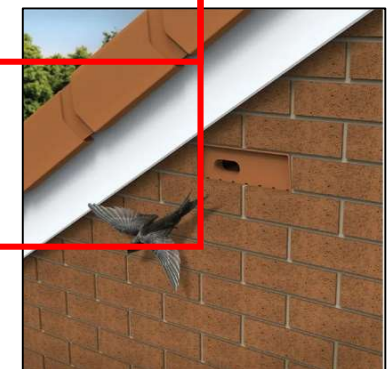
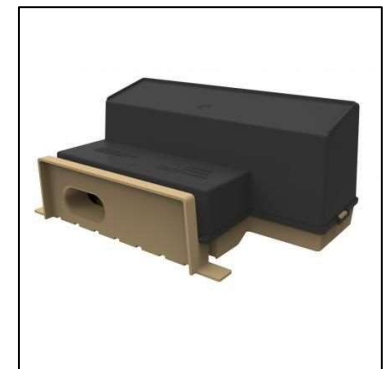
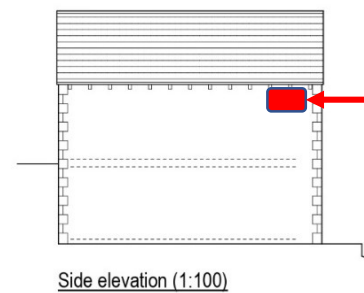
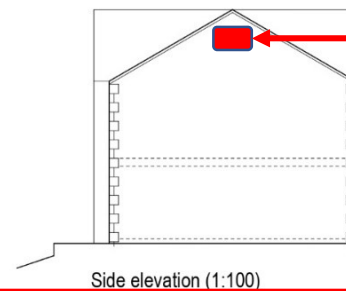
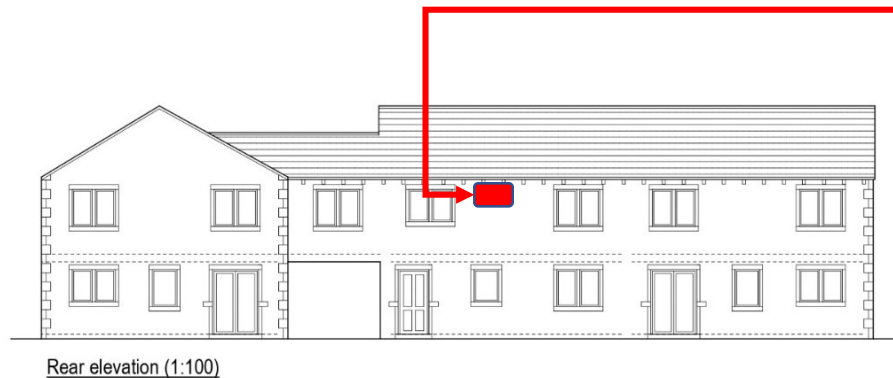
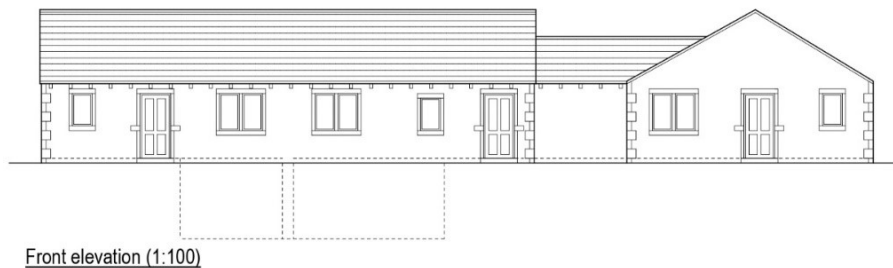
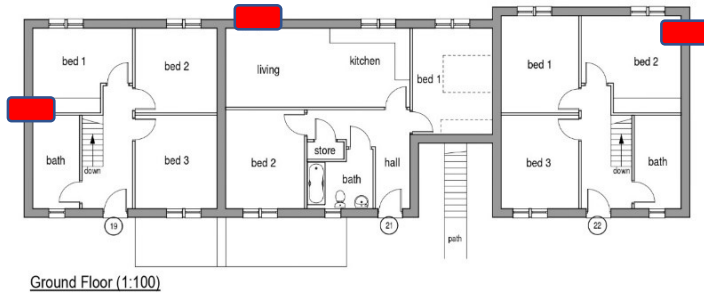


Rear elevation (1:100)

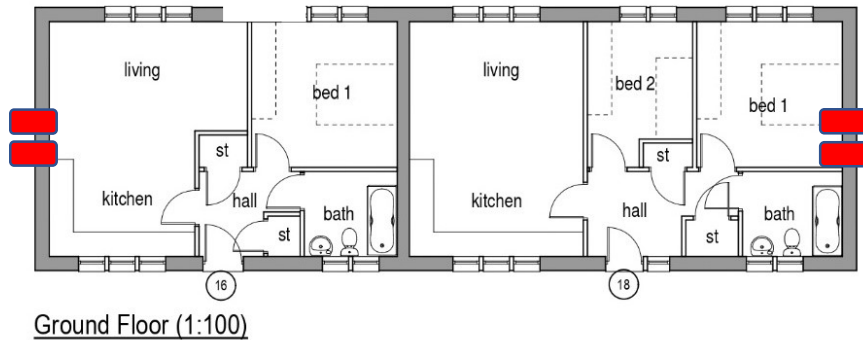
Side elevation (1:100)

Ecological Design Strategy – 24a & 24b Bat box and swift box provision – House Type J

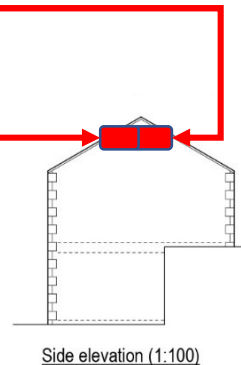
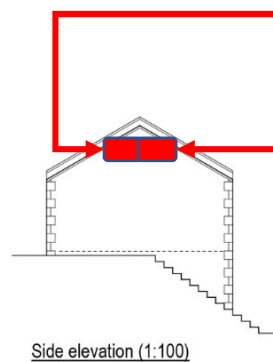
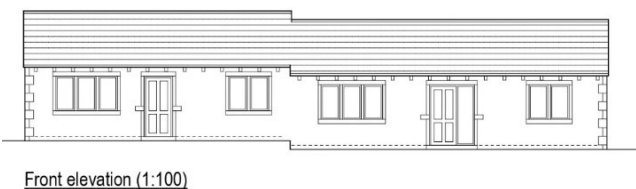
The swift boxes will comprise Manthorpe swift bricks installed at the top of the side elevations.



Ecological Design Strategy – 24a & 24b Bat box and swift box provision – Flat Type H1

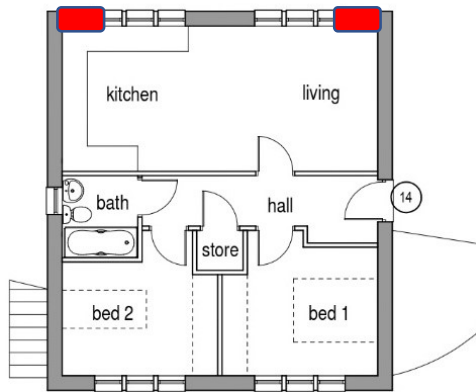


The swift boxes will comprise Manthorpe swift bricks. Two boxes will be installed next to each other near the top of each of the two gable ends.

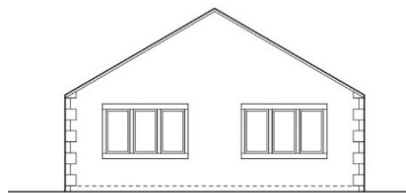


Ecological Design Strategy – 24a & 24b Bat box and swift box provision – Flat Type H2

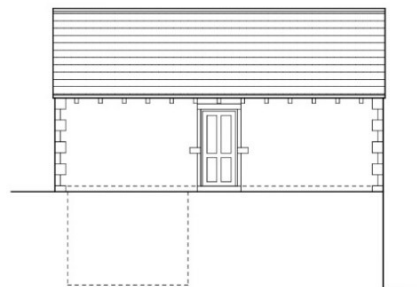
The swift boxes will comprise Manthorpe swift bricks installed near the eaves on the rear elevation.



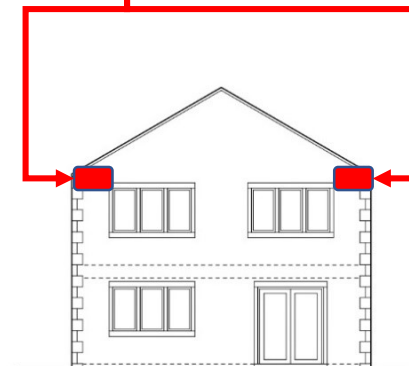
Ground Floor (1:100)



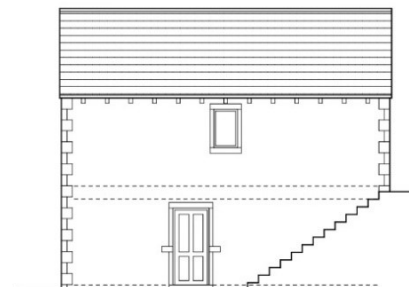
Front elevation (1:100)



Side elevation (1:100)



Rear elevation (1:100)



Side elevation (1:100)

Ecological Design Strategy – 24a & 24b Bat box and swift box provision – Site view

- ★ Bat box (total of nine to be installed, one each in house type A2 and C3)
- Swift box (total of 42 to be installed – one on each unit)



Not to scale

Ecological Design Strategy – 24c Location and design of access holes for hedgehogs

A total of 32 Hedgehog holes (13 x 13 cm) will be included in the boundary fences to allow hedgehogs *Erinaceus europaeus* to access garden habitat. The holes will be dressed with signage that makes their intended purpose clear.

● Hedgehog hole location



Signage will be “Hedgehog Highway” signs available from The British Hedgehog Preservation Society:
<https://shop.britishhedgehogs.org.uk/product/2-x-hedgehog-highway-signs-5/>
or the Hedgehog Gate available from Fallen Fruits:
<https://www.fallenfruits.co.uk/details.php?Plv=&P1=&Clv=1&C1=14&id=7170>

Not to scale

Ecological Design Strategy – 23f and 23g Timing and Maintenance

Timing

Development activities and timing		
Activity	Timing	Notes
Acid grassland translocation	First autumn or winter once attenuation tanks have been installed.	The acid grassland should be translocated to cover the attenuation tanks in accordance with the specifications provided in the landscape plan.. Before this is done the area of grassland for translocation should be fenced off and retained in situ.
Fitting of swift boxes	During construction	To be fitted at the top of the wall on the northern elevation during wall construction
Fitting of bat boxes	During construction	To be fitted at the top of the wall on the southern elevation during wall construction
Installation of hedgehog holes	On completion of construction work/ during boundary fence installation	To be installed in boundaries between adjacent gardens, and between gardens and public open space.
Grassland, hedgerow, and scrub creation	On completion of construction work	To be established as specified in the Landscape Masterplan and subsequently managed as specified in this document for a minimum of 30 years.

Details of maintenance.

Within the curtilage of the private dwellings the ongoing maintenance and management of features will be the responsibility of the owner/occupiers. The habitat within the public open space will be managed by a landscape management contractor. This will be the responsibility of SB Homes unless this responsibility is transferred to a management company.