



Our Ref 5344,EC/Ltr001/TC,KL/08-01-21/V1

Rose Builders Limited
Riverside House
Riverside Avenue East
Lawford
Essex
CO11 1US

Date: 08 January 2021

For the attention of Mr Will Vote

By Email:

Dear Will,

**UNIT 2 STANSTED COURTYARD, PARSONAGE ROAD, TAKELEY, CM22 6PU -
BIODIVERSITY MITIGATION & ENHANCEMENT SCHEME**

1. Introduction

Geosphere Environmental Ltd has been commissioned by Rose Builders Limited to undertake a biodiversity mitigation and enhancement scheme for the site at Unit 2 Stansted Courtyard, Parsonage Road, Takeley, CM22 6PU.

The proposed development is shown on Drawing ref. 1384/101A within Appendix 2.

1.1 Planning Conditions

This report has been completed to assist in the discharge of planning conditions 2, 3 and 4 within planning application UTT/20/2293/FUL, pertaining to mitigation, enhancement and consideration of proposed lighting with regards to bats.

1.2 Background Information

As part of planning application UTT/20/2293/FUL, Geosphere Environmental Ltd has undertaken a Preliminary Ecological Appraisal (ref. **R.1**) dated October 2020. The report found the site comprised of predominantly hard standing, one building and an area of bare ground. Habitats in the wider area include semi-improved grassland, species-poor hedgerows, scattered trees and a dry ditch. The Phase 1 Habitat Survey Plan, Drawing ref. 5923,EC/001/Rev1 is included within Appendix 2.

The findings of the Phase 1 Habitat Survey confirm that the development is close enough to influence habitats that have the potential to support foraging bats and Badger. The existing building was not considered suitable to support roosting bats.

GEOSPHERE ENVIRONMENTAL LTD

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2. Mitigation Strategy

2.1 Bats

The northern and eastern hedgerows are being retained within the final development, which will allow bats to continue to forage on site.

The proposed development has designed new lighting to avoid the northern aspect of the building and therefore the retained northern hedge will be unaffected. This will allow bats to continue to forage along the hedgerow undisturbed.

The external lighting, pertaining to planning condition 4, has been specified to be run on proximity sensors to reduce the amount of unnecessary external lighting. The external lighting is shown on the Carport Conversion plan, Drawing ref. 1384/02/Rev B included within Appendix 2. No additional lighting will be installed within the car park to the south.

2.2 Badger



In addition, during construction, all open excavations will be covered overnight to prevent entrapment of Badgers or other mammals during development.

3. Biodiversity Enhancement

With regards to planning condition 3, there is opportunity to improve the biodiversity of the site by providing specific features that would improve the habitats. Features have been targeted for species likely to be using the site. These features are shown on Drawing ref. 5344,EC/001/Rev0 included in Appendix 2, and detailed within Table 1 below:

Table 1 – Biodiversity enhancement Features	
Design Feature	Biodiversity Benefit
Bird boxes: Three Sparrow boxes will be placed within the trees surrounding the site. The specified bird boxes are included in Appendix 3.	The bird boxes on the trees are specified to attract House Sparrow (LBAP). But may also be used by common garden birds.
Bat Boxes: Six bat boxes will be placed in clusters of two along the northern end of the building. Specified boxes are included within Appendix 4.	The provision of bat boxes within building onsite will ensure an improved availability for bat roosts in the area.
Log Piles: Three log piles should be installed within the grassland off site to the north. Guidance on log pile creation is included in Appendix 5.	Invertebrates will use the log piles as shelter and habitat, increasing the abundance and diversity of invertebrates the site can support. Hedgehogs and reptiles will make use of the log piles for shelter and hibernation.

4. Method Statement for Installation and Management of Enhancement Features

The locations of the biodiversity enhancement features are shown on Drawing ref. 5344,EC/001/Rev0, included in Appendix 2. A suitably qualified Ecologist should be present to ensure adequate siting of the enhancement features on the site.

4.1 Wildlife Boxes

4.1.1 Siting and Maintenance of Bird Boxes

Bird boxes should be installed in the locations shown at between 2.5 to 5m from the ground. Bird boxes will be installed prior to occupation of the building. The specified bird box is included within Appendix 3.

Within, general site maintenance, Bird boxes should be checked and cleaned annually, during winter, when not in use by nesting birds (November to January). If birds are making use of the nest box during winter then the box will not be cleaned. Any boxes noted to be damaged or missing will be replaced.

4.1.2 Siting and Maintenance of Bat Boxes

Bat boxes should be installed, approximately 2.5m to 5m from the ground. Bat boxes will be installed prior to the occupation of the building. The specified bat boxes are included within Appendix 4.

An Ecologist will be present when the boxes are placed to ensure the localities are suitable. If the locations shown on Drawing 5344,EC/001/Rev0 are no longer considered suitable, the ecologist will locate other areas of suitability for the boxes to be placed.

The recommended boxes are self-cleaning. Although hard wearing, any maintenance or replacements required can only be undertaken once the boxes have first been checked by a licenced bat worker.

4.2 Log Piles

Log piles should be created by piling large logs into approximately 2m x 1m x 1m piles. Logs should be placed in a shallow pit, approximately 150mm deep. The soil/turf removed to create the pit, should be placed on top of the logs to provide a light cover of soil/turf.

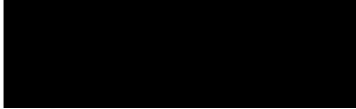
Logs should either be sourced from site or should be locally sourced "green" logs (untreated or dried), and ideally are as large as possible, at least 1m in length and 20cm in diameter. Log piles should be in place prior to occupation of the building. Additional guidance is included in Appendix 5.

The aim of the log pile is to create a habitat of rotting logs, so the logs are anticipated to degrade over time. The log piles should be maintained by using the arisings of vegetation management onsite. Not only logs can be used, any cuttings including grass cuttings, or hedge cuttings can be used to maintain the log piles once they are created. If log piles are removed or destroyed, new log piles should be created.

5. Conclusions

The biodiversity enhancements detailed within this report will ensure that impacts to protected species and biodiversity are reduced as far as practicable, and the proposals include biodiversity enhancements to improve the scheme for biodiversity.

Yours sincerely



Tom Cox
Ecological and Arboricultural Consultant
Geosphere Environmental Ltd

Checked and Authorised By:



Katie Linehan
Technical Director of Ecology
Geosphere Environmental Ltd

References:

- R.1.** Geosphere Environmental Ltd (2020) Preliminary Ecological Appraisal, Report reference number: 5923,EC/PEA/GG,KL/14.10.20,V3 Dated 14.10.20

Enclosures:

- Appendix 1 – Report Limitations and Conditions
- Appendix 2 – Drawings
- Appendix 3 – Bird Box Examples
- Appendix 4 – Bat Box Examples
- Appendix 5 – Log Pile Guidance



APPENDICES

GEOSPHERE ENVIRONMENTAL LTD

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Appendix 1 – Report Limitations and Conditions

This report refers, within the limitations stated, to the condition of the site at the time of the inspections. No warranty is given as to the possibility of future changes in the condition of the site.

This report has been prepared for the sole use of the Client for the purposes described and no extended duty of care to any third party is implied or offered. Third parties using any information contained within this report do so at their own risk.

This report is prepared and written for the use stated herein; it should not be used for any other purposes without reference to Geosphere Environmental Limited. The report has been prepared in relation to the proposed end-use should another end-use be intended a further re-assessment may be required. It is likely that over time practises will improve and the relevant guidance and legislation be amended or superseded, which may necessitate a re-assessment of the site.

The accuracy of any map extracts cannot be guaranteed. It is possible that different conditions existed onsite, between and subsequent to the various map surveys appended.

Whilst the report may express an opinion on possible configurations of strata between or beyond exploratory holes discussed or on the possible presence of features based upon visual, verbal or published evidence, this is for guidance only and no liability can be accepted for its accuracy.

Appendix 2 – Drawings

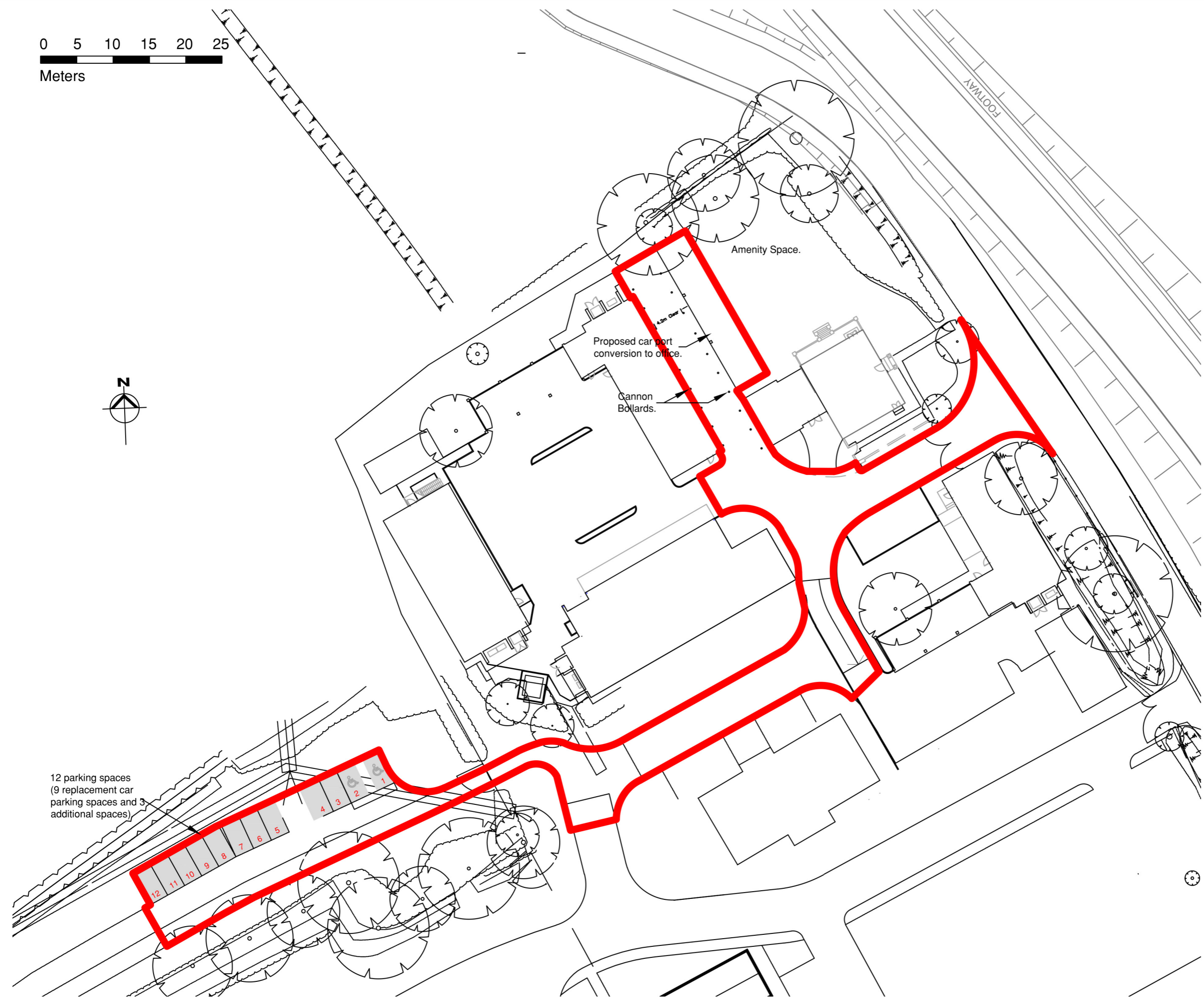
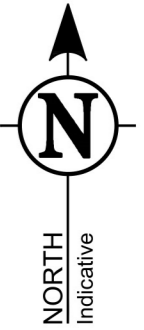
Proposed Development Plan – Drawing ref. 1384/101A

Phase 1 Habitat Plan – Drawing ref. 5923,EC/001/Rev1

Biodiversity Enhancement Plan – Drawing ref. 5344,EC/001/Rev0

Carport Conversion Plan– Drawing ref. 1384/02/B

0 5 10 15 20 25
Meters



12 parking spaces
(9 replacement car
parking spaces and 3
additional spaces)

ROSPER
ESTATES

CLIENT
Rosper Estates

PROJECT
Unit 2 Carport Conversion
Stansted Courtyard
Parsonage Road
Takeley
CM22 6PU

DRAWING TITLE
Site Plan

JOB NO. 1384

DATE 15/06/20

SCALES 1:500

DRAWN BY W.V.

CHECKED BY

DWG NO. 1384/101A

SHEET NO. Sheet 1

© Copyright Rosper Estates Limited

LEGEND

- Site Boundary
- SI** Semi-improved Grassland
- B1** Building
- Hardstanding
- Intact Species-poor Hedgerow
- Dry Ditch
- Scattered Trees
- Fencing
- TN → Target Notes and Direction
- Bare Ground

SOURCE

[© GoogleMaps](#)

PROJECT

Unit 2, Stansted Courtyard, Parsonage Road, Takeley, CM22 6PU

TITLE

Phase One Habitat Plan

DRAWING NUMBER

5923,EC/001/Rev1

SCALE

Not to Scale

DATE

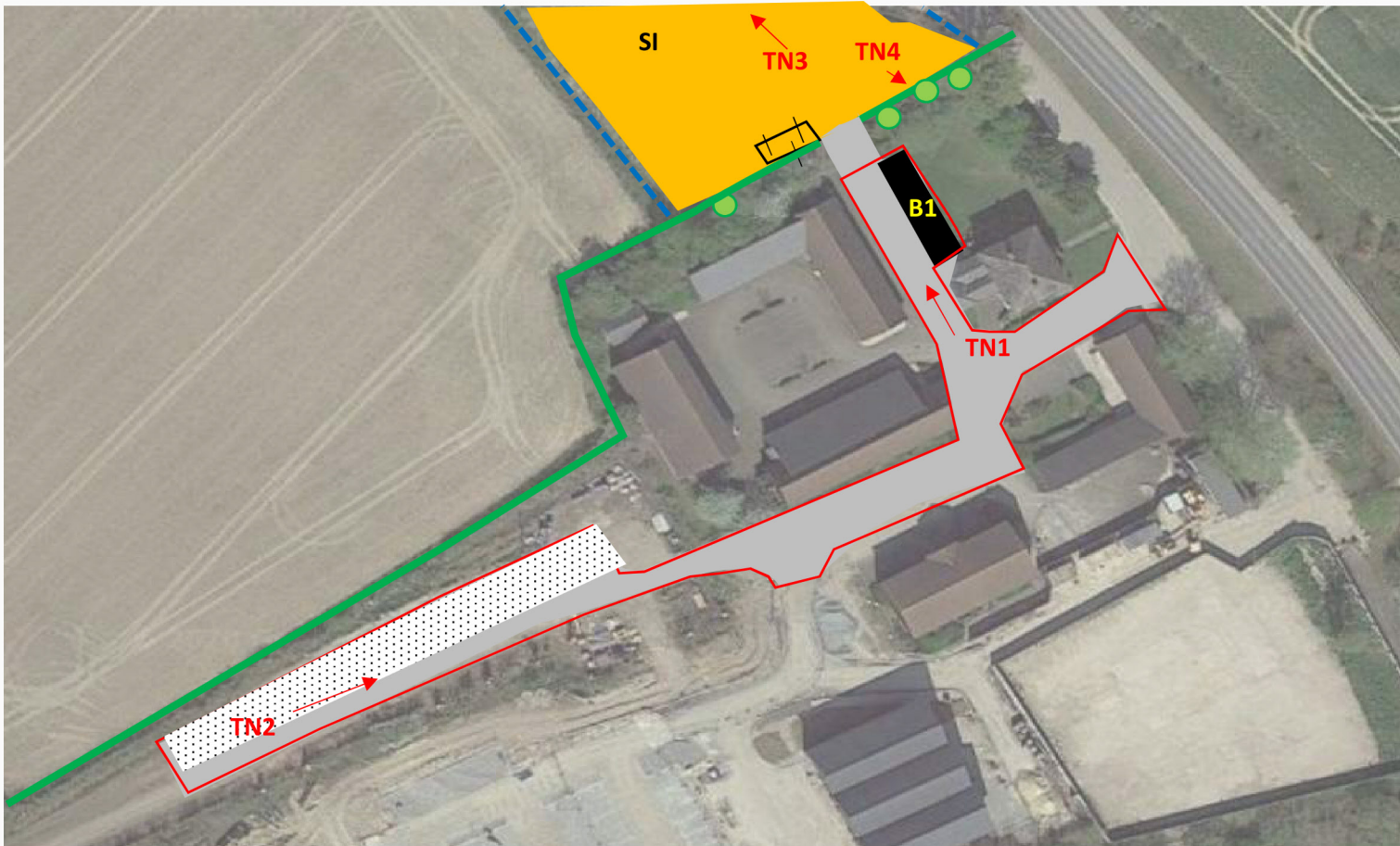
26/06/2020

DRAWN BY

KL




CHECKED BY

RF





LEGEND

-  Bird box location (to attract House Sparrows)
-  Bat Boxes placed in clusters of 2, providing external northern lighting can be removed
-  Bat boxes placed in existing trees if external northern lighting cannot be removed.

PROJECT

Unit 2, Stansted Courtyard, Parsonage Road, Takeley, CM22 6PU

TITLE

Bird and Bat Box Locations

DRAWING NUMBER

5344,EC/001/Rev0

SCALE

As marked

DATE

07/12/2020

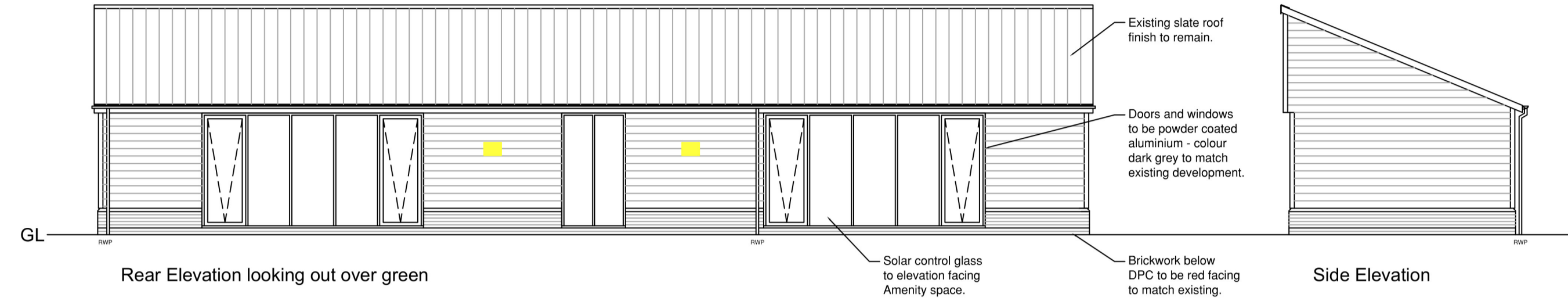
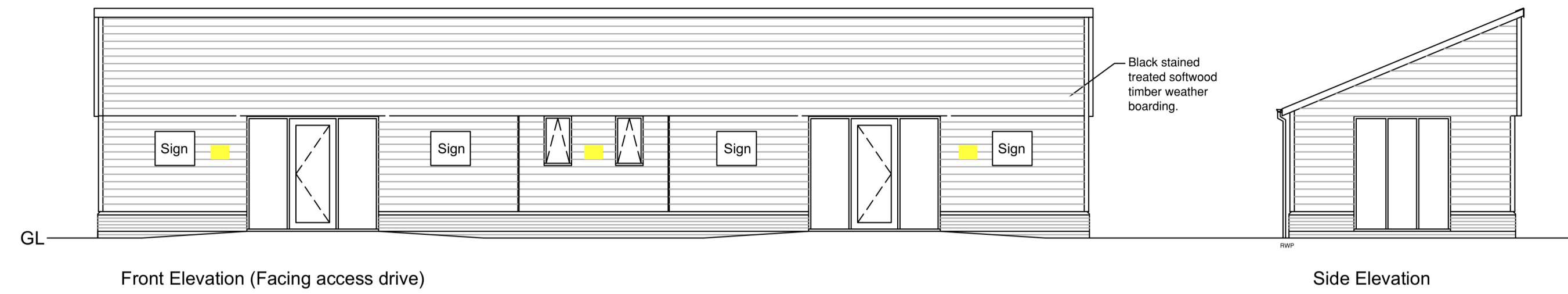
DRAWN BY

TC

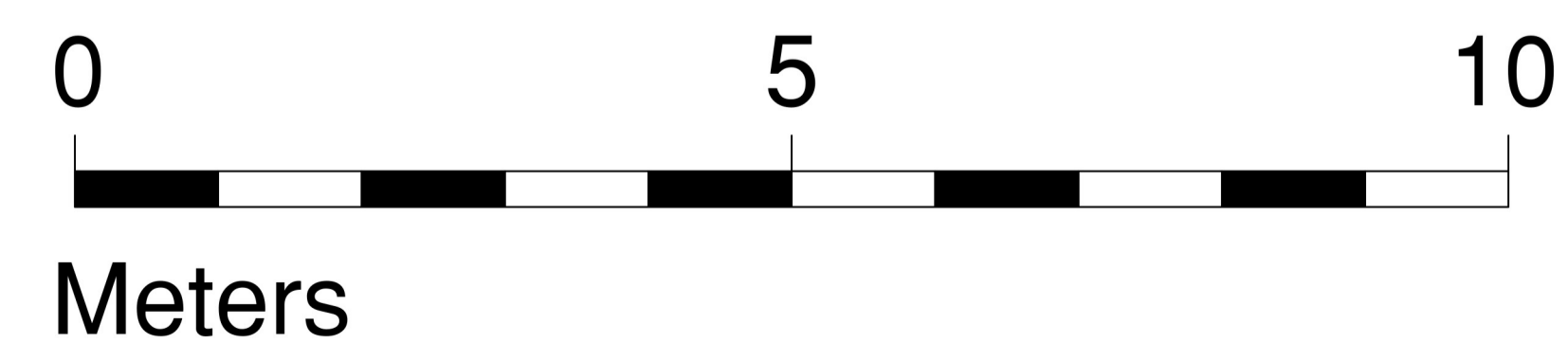
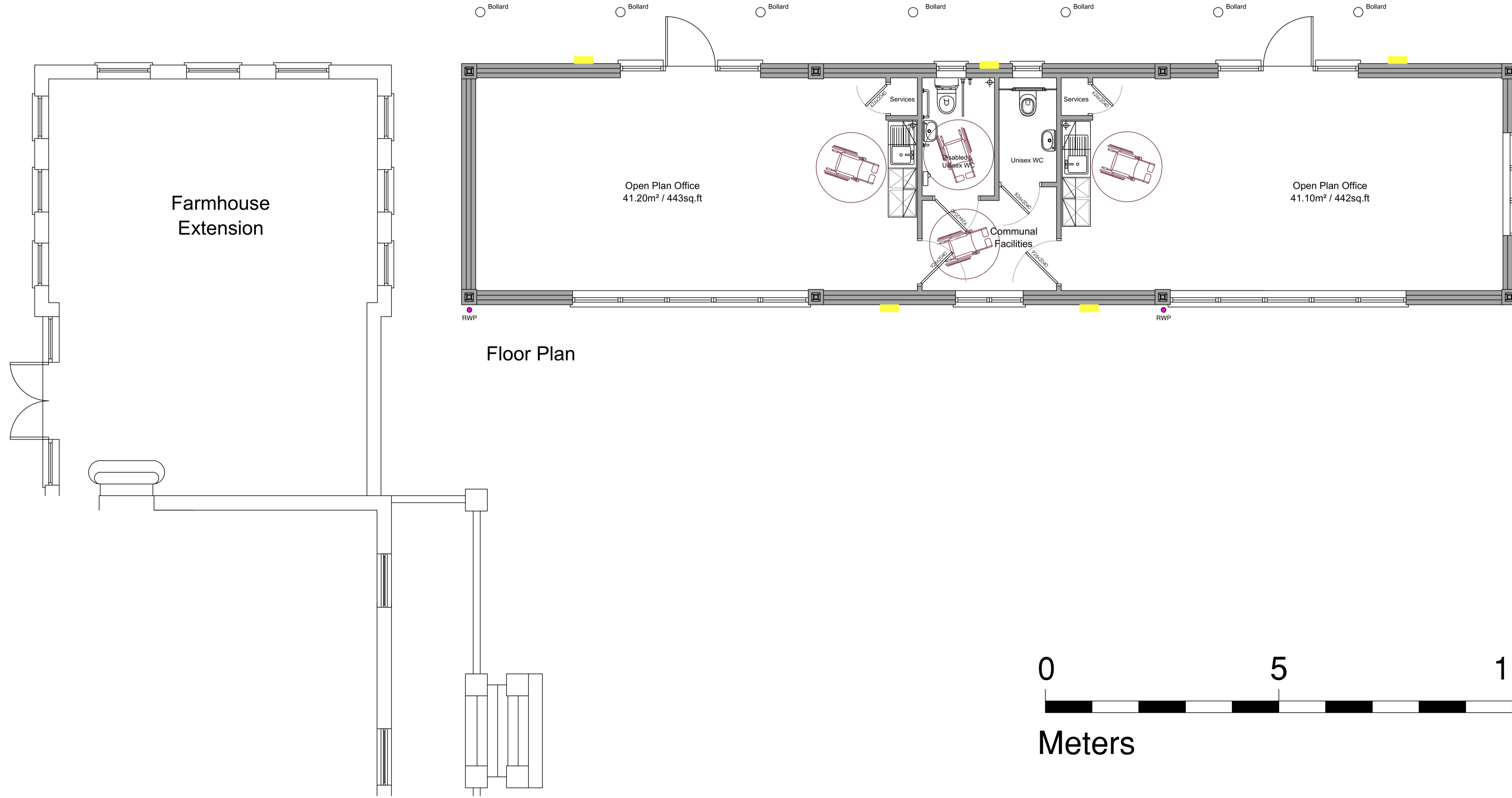
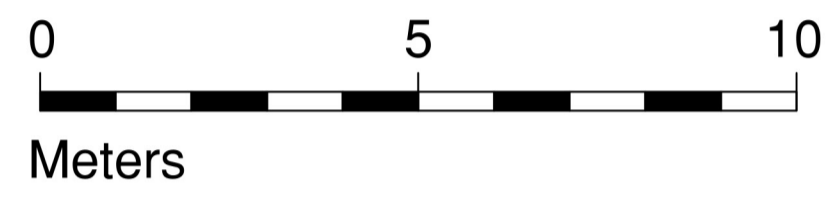
CHECKED BY

KL





Wall mounted external light: ANSELL ADLED2/BV/CCT with eyelid bezel to prevent uplight BZ/EYE/B. All external lighting controlled on photocell and presence detectors.



B. Canopies omitted. 10.09.20
A. Bird and Bat boxes added. 09.07.20

.logo.jpg

CLIENT Rosper Estates	
PROJECT Unit 2 Carport Conversion Stansted Courtyard Parsonage Road Takeley CM22 6PU	
DRAWING TITLE Carport Conversion	
JOB NO.	1384
DATE	15/06/20
SCALES	1:50/1:100
DRAWN BY	W.V.
CHECKED BY	
DWG NO.	1384/02/B.
SHEET NO.	Sheet 1
© Copyright Rosper Estates Limited	

Original Size - A1



Appendix 3 – Example Bird Box

EXAMPLE BIRD BOXES

External Bird House: CedarPlus Triple Sparrow House



Our native sparrow populations are at risk from lack of nesting sites. Having a sparrow nest box in your garden is a fantastic way to help these birds.

This attractive, natural wooden bird box is constructed from cedar for outstanding performance and maximum dependability. Both house and tree sparrows are sociable birds that like to nest in colonies, so the Triple Sparrow House is designed to provide comfortable accommodation for three pairs, nesting side-by-side. The front door hinges forward for inspection and is secured with a rust-proof catch.

The Triple Sparrow House is installed using the tree friendly nails included. These will not damage the tree and are safe if the tree is eventually felled.



SOURCE

<https://www.nhbs.com/cedarplus-triple-sparrow-house?bkfno=193072>

TITLE

Example Bird Bricks and Boxes

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Appendix 4 – Example Bat Boxes

EXAMPLE BAT BRICKS AND BOXES

External Bat Box: Schwegler 1FQ bat box



The structure of the 1FQ has been designed with bat behaviour in mind. For example, the outside of the front panel has been roughened to enable the animals to land and hang onto it securely. Access is via a step-like recess which enables even young and inexperienced bats, to safely access the box. The inside of the box has rough pieces of wood incorporated which provide good insulation and are also used by the bats as perches. The internal layout provides three different areas from which bats can hang and which offer different levels of light and temperature. There are also non-slip areas, gaps ranging from 1.5 to 3.5cm in width and various places for individuals to hide.

Installation of the 1FQ is achieved using the four screws and plugs provided. The back panel is initially screwed onto the wall (using four screws) and then the front panel is attached to this. It can easily be attached to most types of external brick, timber or concrete and can also be placed inside a roof space. (If fixing to timber then the gaps between the wall and the box should be sealed with silicone to prevent moisture being trapped here). The box should be positioned a minimum of three metres above the ground and where there is a clear flight path for bats entering and leaving. If desired, the front panel can be painted to match your building using an air-permeable paint.

External Bat Box: 1FF Schwegler Bat Box with Built-in Wooden Rear Panel



The Schwegler 1FF bat box is spacious enough for bats to use as a summer roost or nursery site and is open at the bottom, allowing droppings to fall out so it does not need cleaning. The 1FF is, therefore, especially suitable for hanging in inaccessible places such as high in trees, or on steep slopes and house walls.

The 1FF is manufactured from long-lasting Woodcrete, which is a blend of wood, concrete and clay which will not rot, leak, crack or warp, and will last for at least 20 - 25 years, making it suitable for long-term mitigation projects.

The inner dimensions of the 1FF have a reducing width making it ideal for bat species which inhabit crevices such as pipistrelle and noctule bats. For conservation projects and studies, the entire front of the box can be easily swung open for inspection purposes.

The 1FF bat box can be sited in trees or on buildings and is best positioned at a height of between 4 to 6 metres.

Please note that once bats have inhabited a roost (integrated or external box) they may only be disturbed by licensed bat workers.

SOURCE

http://www.nhbs.com/title/16055_1

SOURCE

<https://www.nhbs.com/1ff-schwegler-bat-box-with-built-in-wooden-rear-panel>

TITLE

Example Bat Bricks and Boxes

DATE

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Appendix 5 – Log Pile Guidance

LOG PYRAMID AND LOG PILE GUIDANCE

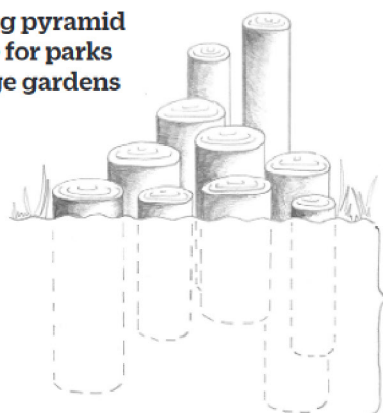
1. LOG PYRAMID

Establishing the Log Pyramid

Where space is limited and log piles are deemed unsuitable, log pyramids can be created as shown below.

- Drill holes into some of the logs. Drill holes to various depths.
- Dig holes into the ground ranging from 48cm deep to 60cm deep to give the pyramid shape. The final construction should be as shown below:

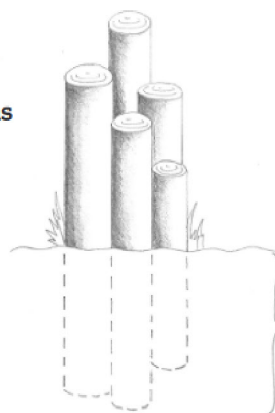
Large log pyramid suitable for parks and large gardens



Ground level

Approx. 50cm deep

Log pyramid suitable for small gardens



Approx. 50cm deep

2. STUMPERY

Taken and adapted from Buglife (<https://www.buglife.org.uk/activities-for-you/wildlife-gardening/create-your-own-dead-wood-habitats>)



Stumpery creation involves replicating a forest floor using a mix of different sized wood stumps, logs and even driftwood. They are similar to a rockery, but made with parts of dead trees such as stumps and logs.

Dig a hole in the ground. 'Plant' your logs in it, orientated vertically, so that half the log is in the hole. Pack soil in the gaps of the hole to bury the bases of the logs. This will support species like Stag beetle that like damp submerged dead wood. Interplant with ferns and other shade loving plants and bulbs. Stumperies are strongly recommended if you live in Stag beetle hotspots such as the New Forest, Home Counties and East Suffolk

SOURCE

Log pyramid drawing copyright of <https://ptes.org/wp-content/uploads/2016/11/Build-a-log-pile-for-stag-beetles.pdf>

TITLE

Log Pyramid and Log Pile Guidance

DATE

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3. LOG PILES

Resourcing Logs

Try to avoid taking logs from woods and hedges as you will be removing the resource from its natural environment, along with any associated flora or fauna. A local tree surgeon may be able to supply you with some logs.

Which Wood to Use

Logs at least 200mm thick with the bark still attached provide the best wood. Hard wood trees such as ash, oak and beech are particularly good. Birch logs can look particularly attractive.

Be careful of freshly cut willow and poplar logs, as these can easily re-sprout if left lying on the ground.

Establishing the Log Pile

Leaving woody cuttings from trees, shrubs and herbaceous plants in piles within a shrub bed is an ideal way of attracting invertebrate to site. The damp conditions behind peeling bark are very inviting for woodlice, spiders and beetles, while butterflies and ladybirds take up residence in the drier parts over winter.



It is best to not cut the wood into small pieces. Leave it in direct contact with the ground, in compact piles to maintain humidity. Larger diameter pieces are of most value, but even small twigs and branches should not be discounted.

Bury the lower logs into the soil 150mm centimetres. This keeps them damp and the resident creatures happy.

REFERENCE

Log pyramid drawing copyright of <https://ptes.org/wp-content/uploads/2016/11/Build-a-log-pile-for-stag-beetles.pdf>

TITLE

Log Pyramid and Log Pile Guidance

DATE

08/01/2021

PAGE NO.

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GEOSPHERE ENVIRONMENTAL

Ec

Ecology.

Fr

Flood Risk.

Ge

Geotechnical.

En

Environmental.

Kw

Knotweed.

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