BIODIVERSITY MITIGATION AND ENHANCEMENT PLAN



John Dickie Associates
Chartered Building Engineers
5, Victor Way,
Cherry Holt Road, Bourne, Lincs PE10 9PT
Tel 07778 297733 jda@ndirect.co.uk

Proposal : Demolition of Class Q Consented Agricultural Buildings and Erection of Three Dwellings, Associated Hard and Soft Landscaping and Creation of a Re-wilding Area at Witteman Nurseries South Drove, Spalding. Lincs. PE11 3BD

February 2024

Project No JDA/2023/720

Contents

1. INTRODUCTION
2 SCOPE OF THE BIODIVERSITY MITIGATION AND ENHANCEMENT PLAN
3 EVALUATION AND OBJECTIVES
3.1 Enhancement Objectives and Rationale
3.2 Rationale for Objectives
3.2.1 Objective 1: Provide nesting opportunities for declining bird species
3.2.2 Objective 2: Provide roost sites for pipistrelle bat species
3.2.3 Objective 3: Maintain foraging and commuting opportunities for bats
3.2.4 Objective 4: Retain hedgehog commuting routes
3.2.5 Objective 5: Increase biodiversity on site with specified native planting and enhancements
4 MANAGEMENT PRESCRIPTIONS
4.1 Provide nesting opportunities for declining bird species
4.2 Provide roost sites for pipistrelle bat species
4.3 Maintain foraging and commuting opportunities for bats
4.4 Retain hedgehog commuting routes

4.5 Increase biodiversity on site with native planting and enhancements
5 WORK PROGRAMME
6 BIBLIOGRAPHY
APPENDIX A Bird and Bat boxes
APPENDIX B Scheme details

1. INTRODUCTION

This Biodiversity Mitigation and Enhancement Plan has been prepared by John Dickie Associates to provide details of the biodiversity mitigation and enhancement measures to be implemented on site with a work program in connection with the demolition of Class Q Consented Agricultural Buildings and Erection of Three Dwellings, Associated Hard and Soft Landscaping and Creation of a Re-wilding Area at Witteman Nurseries South Drove, Spalding. Lincs. PE11 3BD

-

2 SCOPE OF THE BIODIVERSITY MITIGATION AND ENHANCEMENT PLAN

This Biodiversity Mitigation and Enhancement Plan refers to the site as before described.

The following report provides a management plan for the area with work prescriptions and a work program.

-

3 EVALUATION AND OBJECTIVES FOR MITIGATION AND ENHANCEMENT

Enhancement Objectives and Rationale

The enhancement objectives for the site are as follows:

1 Provide nesting opportunities for declining bird species, to include Starling (Sturnus Vulgaris) and House Sparrow Passer domesticus.
2. Provide roost sites for pipistrelle Pipistrellus sp. bat species.
3. Maintain foraging and commuting opportunities for bats.
4. Retain hedgehog Erinaceus europaeus commuting routes – fencing spec.
5. Increase biodiversity on site with native planting and enhancements.

Rationale for Objectives

Objective 1: Provide nesting opportunities for bird species

Many once-common bird species are suffering declines, partly as a result of reduced nesting habitat. Birds that are known to nest successfully in close proximity to human activity are the focus of this enhancement objective.

House sparrow and starling are both species of principle importance (NERC, 2006) and are red- listed within the Birds of Conservation Concern 5.

Objective 2: Provide roost sites for pipistrelle bat species

Bat populations in the UK have experienced declines in recent years in part as a result of roost loss. The specified provision of roost units on the site will improve the site value for bats.

Objective 3: Maintain foraging and commuting opportunities for bats

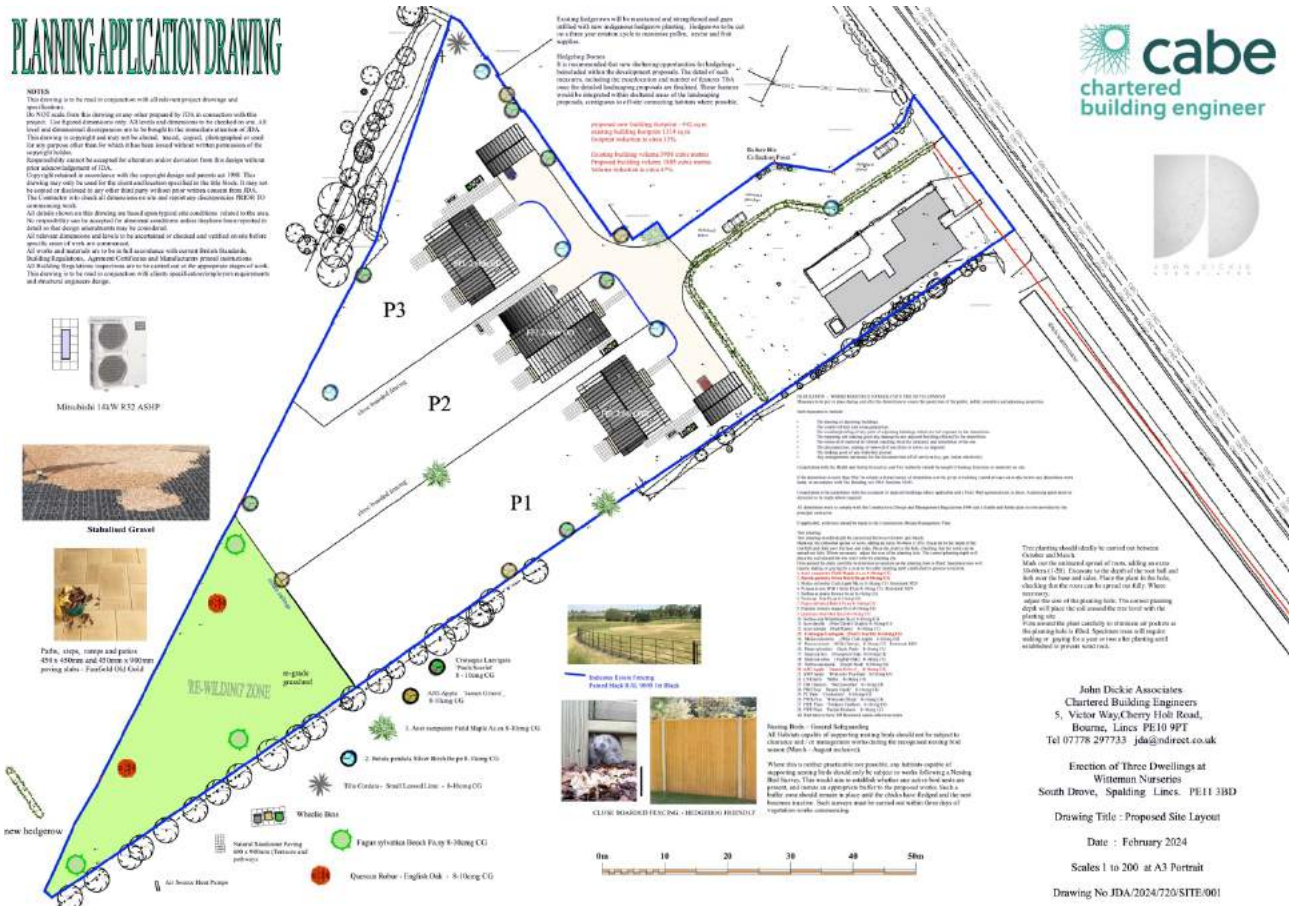
Habitat loss and fragmentation has had an adverse impact on bat populations in the UK. The use of Bat friendly lighting will ensure bats can continue to use the site for foraging and commuting. This in turn can benefit other wildlife.

Objective 4: Retain hedgehog commuting routes

Hedgehog populations have declined by a third in the last 10 years, mainly as a result of habitat loss and fragmentation; they are now a Species of Principle Importance (SPI) and were recently classified as 'vulnerable' on the IUCN red list due to their decline in this country. Measures within the proposals will maintain commuting opportunities for hedgehogs.

Objective 5: Increase biodiversity on site with native planting and enhancements

The proposed site landscaping will be implemented to create opportunities for a broad range of invertebrate species. Many of the target species for enhancement measures forage on invertebrate prey and increasing opportunities for insects will improve the overall value of the development site. The new circa 1.1m deep ponds to each new property will provide for and enhanced habitat for a broad range of invertebrate species.



LOG PILES
Allow for the formation of two log piles, one to each rear corner of the ponds to provide refuges for hedgehogs, beetles and amphibians.

-

4. MANAGEMENT PRESCRIPTIONS

Provide nesting opportunities for declining bird species
Refer to site layout and elevations for full details.
Maintain foraging and commuting opportunities for bats
To allow bats to continue to use the site for foraging and commuting, external lighting will be kept to a minimum. External lighting will be limited to the immediate surrounds of the buildings and must be sensor-activated and on a timer in order to limit the impact of light pollution. All external lighting has been carefully designed to minimise disturbance to bats, by using down-lights rather than up-lighters using low bollards where possible and using shields to limit light spill.
Any external lighting used should emit minimal ultra-violet light, be narrow-spectrum (avoiding white and blue wavelengths).
Refer to LIGHTING/001 for full details.

-

Retain hedgehog commuting routes

Hedgehogs have the potential to occur on the development site. To maintain commuting routes for hedgehogs between the site and the surrounding areas, all new fences must have a 13cm x 13cm hole at the base or be raised off the ground. Fencing types can be found at https://www.jacksons-fencing.co.uk/hedgehog-fencing and https://www.stockportfencing.co.uk/product/6-x-1-concrete-hedgehog-base-panel-gravel-board/.



-

Increase biodiversity on site with native planting and enhancements

Any new (or strengthened) hedgerows to be planted on site must comprise only native species that provide pollen, nectar and fruit in order to provide a food source for birds, as well as those that provide opportunities for invertebrates. Hedgerows will include a mixture of at least five of the following species; hazel (*Corylus avellana)*, holly (*Ilex aquifolium)*, hawthorn (*Crataegus monogyna)*, elder (*Sambucus nigra)*, blackthorn (*Prunus spinosa),* dog rose (*Rosa canina)*, wild cherry (*Prunus avium),* field maple (*Acer campestre)* and guelder rose (*Viburnum opulus).* - *all to* be planted in double rows to ensure a dense hedgerow.

Refer to Landscaping Specification and the Site Layout for full details.

Any hedgerows must be appropriately managed with traditional techniques where possible to maximise their benefit for wildlife using hedge-laying rather than flailing or trimming. If trimming is necessary, ensure it is carried out every 2 to 3 years and in sections so that not all parts of the hedgerow are cut at the same time (except at visibility splays). Flailing must be avoided.

Any proposed trees to be planted must comprise native species which provide foraging opportunities for various invertebrate and bird species.

Planted borders within any landscaped areas must include some night scented flowers to attract moths and other night flying insects (which will provide foraging opportunities for bats). Species should include evening primrose *Oenothera biennis*, sweet rocket *Hesperis matronalis*, honeysuckle species *Lonicera sp.*, lavender *Lavendula sp.*, white jasmine *Jasminum officinale*, night-scented catchfly *Silene noctiflora*, night-scented stock *Matthiola longipetala* and soapwort *Saponaria officinalis*.

-

5. WORK PROGRAMME

The following work programme has been developed to last for five years. However, activities scheduled at regular intervals can easily be extended forward over at least a fifteen-year period.

6.0 Bibliography

Gunnell, K., Grant, G. & Williams, C. (2012). Landscape and Urban Design for bats and Biodiversity. Bat Conservation Trust.

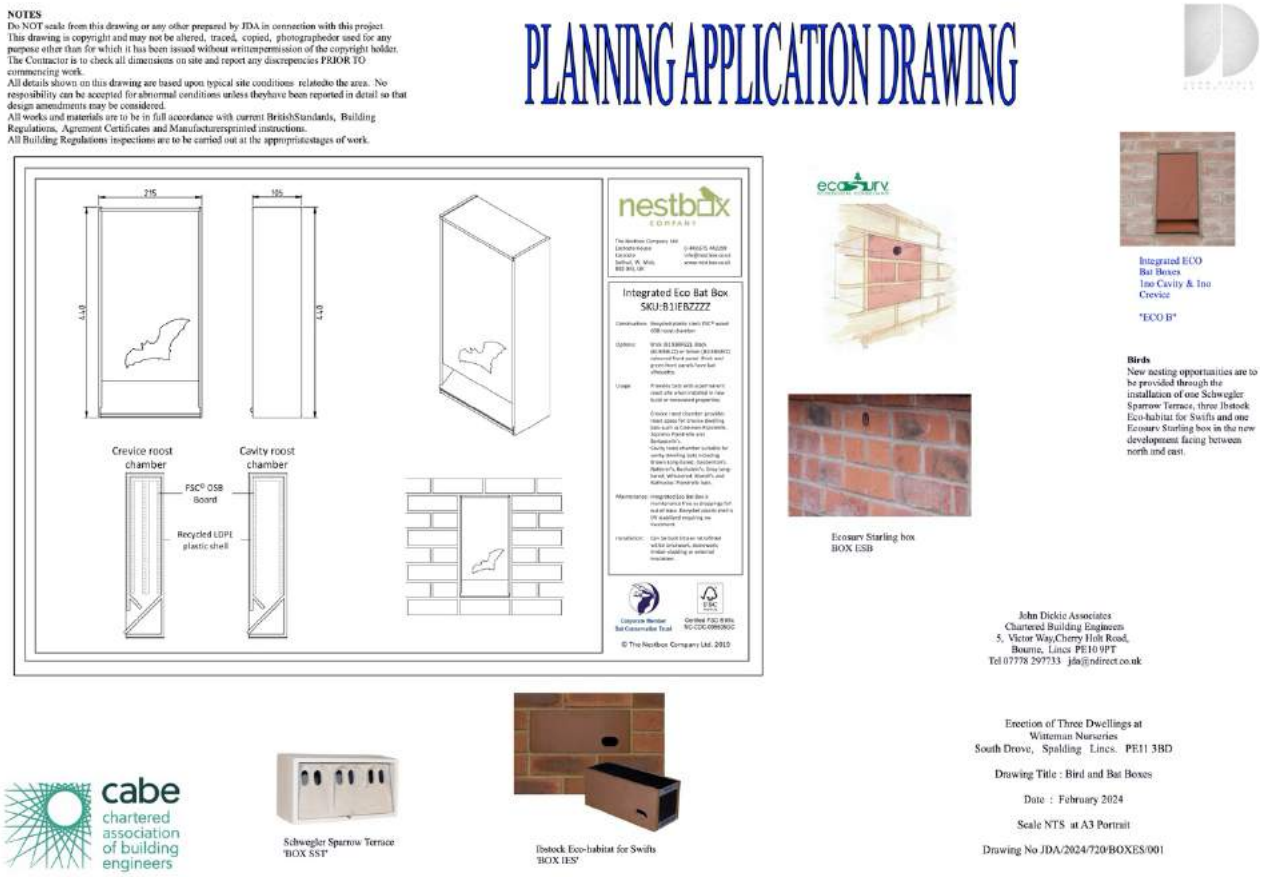
Stanbury A. et al (2021). The status of our bird populations; The fifth Birds of Conservation Concern in the United Kingdom, Channel Islands and Isle of Man and second IUCN Red List assessment of extinction risk for Great Britain. British Birds 114, pp723–747.

The Installation of Lighting Professionals (2018). Guidance Note 8 – Bats and Artificial Lighting. https://www.theilp.org.uk/documents/guidance-note-8-bats-and-artificial-lighting/.

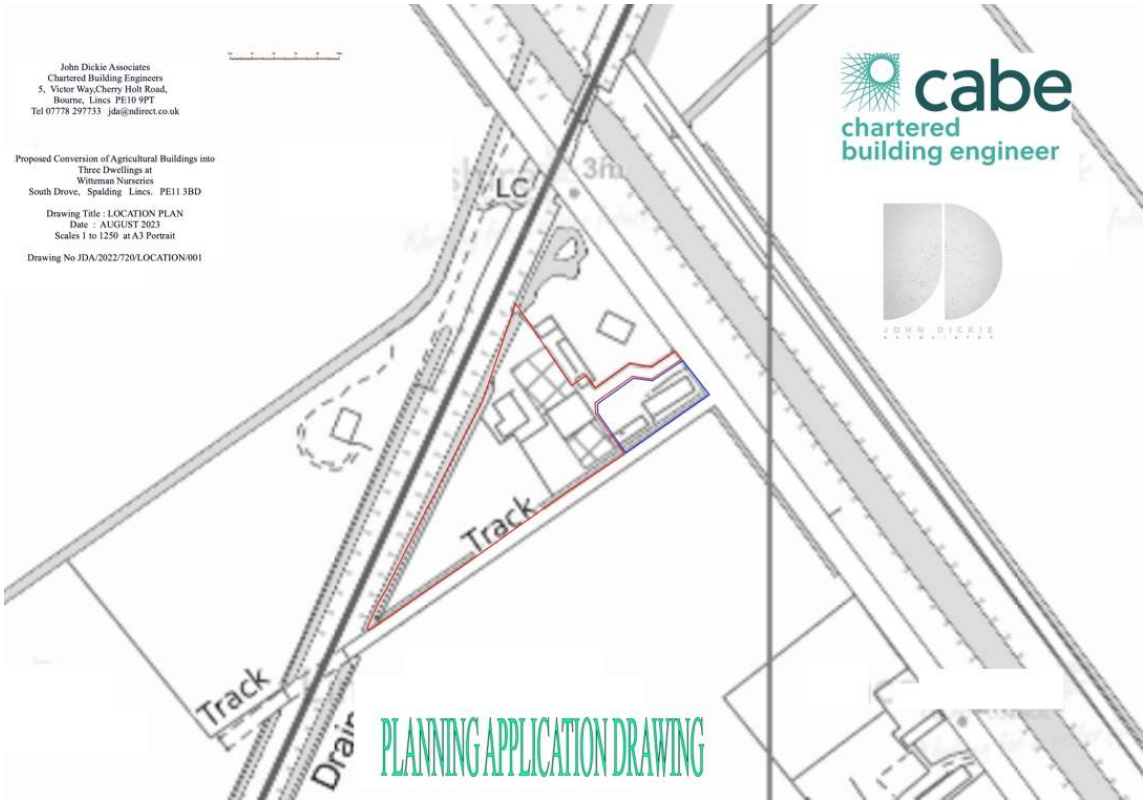
Operation	Year 1	Year 2	Year 3	Year 4	Year 5
Enhancement features					
Provision of bird boxes on buildings on site.	As soon as possible.	N/a	N/a	N/a	N/a
Provision of bat box on building on site.	As soon as possible.	N/a	N/a	N/a	N/a
Habitat management					
Initial planting of trees and hedgerows.	Nov-March	Nov to March: Check and replace any plants that have failed.	Nov to March: Check and replace any plants that have failed.	Nov to March: Check and replace any plants that have failed.	Nov to March: Check and replace any plants that have failed.
Inspect tree/hedgerow stakes/ties/guards and repair/replace if required.	Monthly	6-monthly	6-monthly	6-monthly	6-monthly
Undertake pruning of young trees, shrubs and hedgerows to encourage good growth and shape.	N/a	Annually as required Oct-Nov.	Annually as required Oct-Nov. Hedgerows between Oct-Nov.	Annually as required Oct-Nov. No hedgerow trimming	Annually as required Oct-Nov. Hedgerows between Oct-Nov.
Weed control around planted trees/shrubs/hedgerows by hand where required.	Monthly between March -Oct.	Monthly between March -Oct.	Monthly between March -Oct.	Monthly between March -Oct.	Monthly between March -Oct.
Plant any public borders with wildlife-friendly plants.	April-September	Check and replace any plants that have failed.	Check and replace any plants that have failed.	Check and replace any plants that have failed.	Check and replace any plants that have failed.
Mitigation measures					
Careful consideration and installation of lighting used on site.	As required.	N/a	N/a	N/a	N/a
All new fences on site to be permeable to hedgehog.	Once fencing installed.	March: Check to ensure access gaps still present and functioning	March: Check to ensure access gaps still present and functioning	March: Check to ensure access gaps still present and functioning	March: Check to ensure access gaps still present and functioning

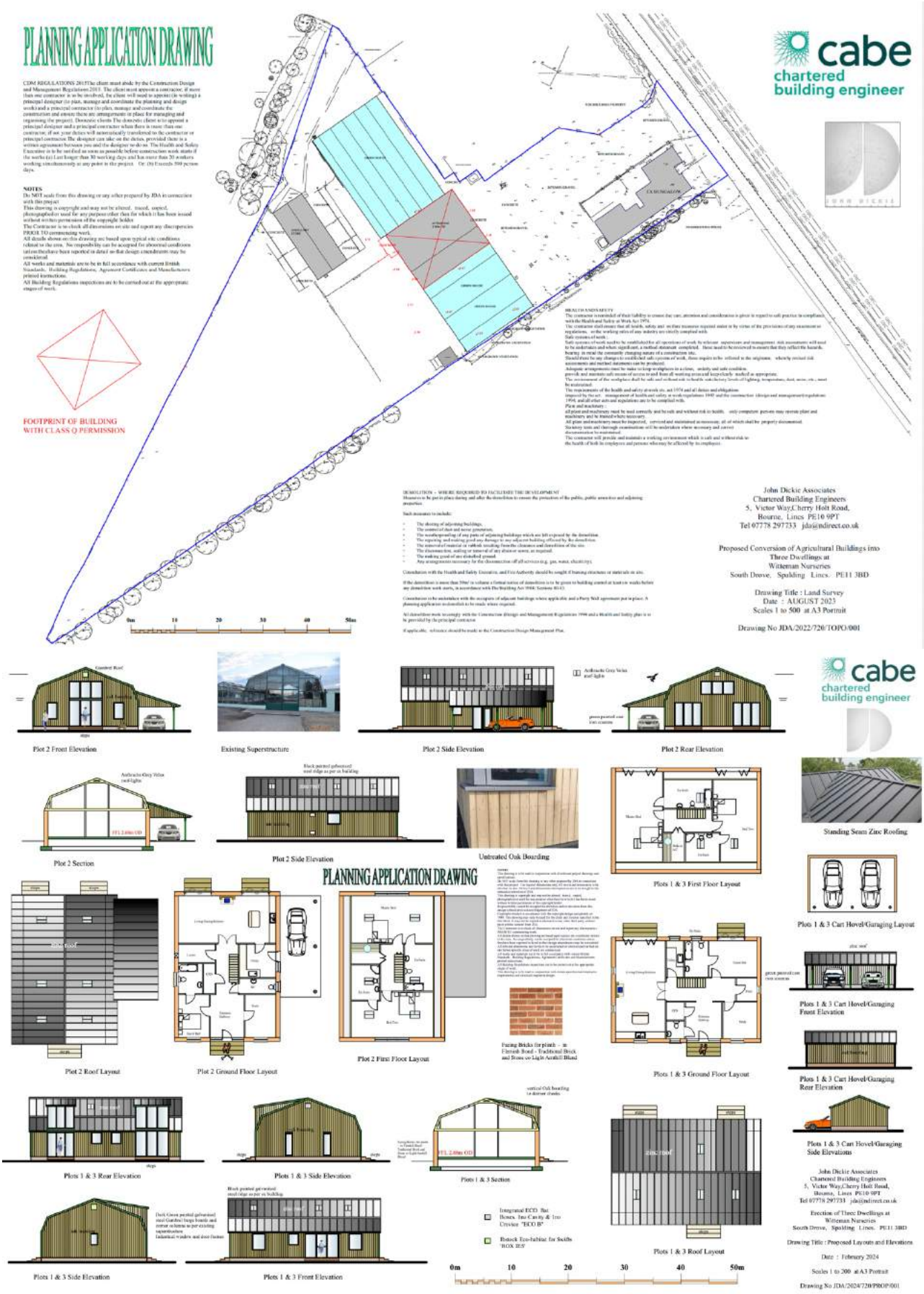
-

Appendix A Bird and Bat Boxes

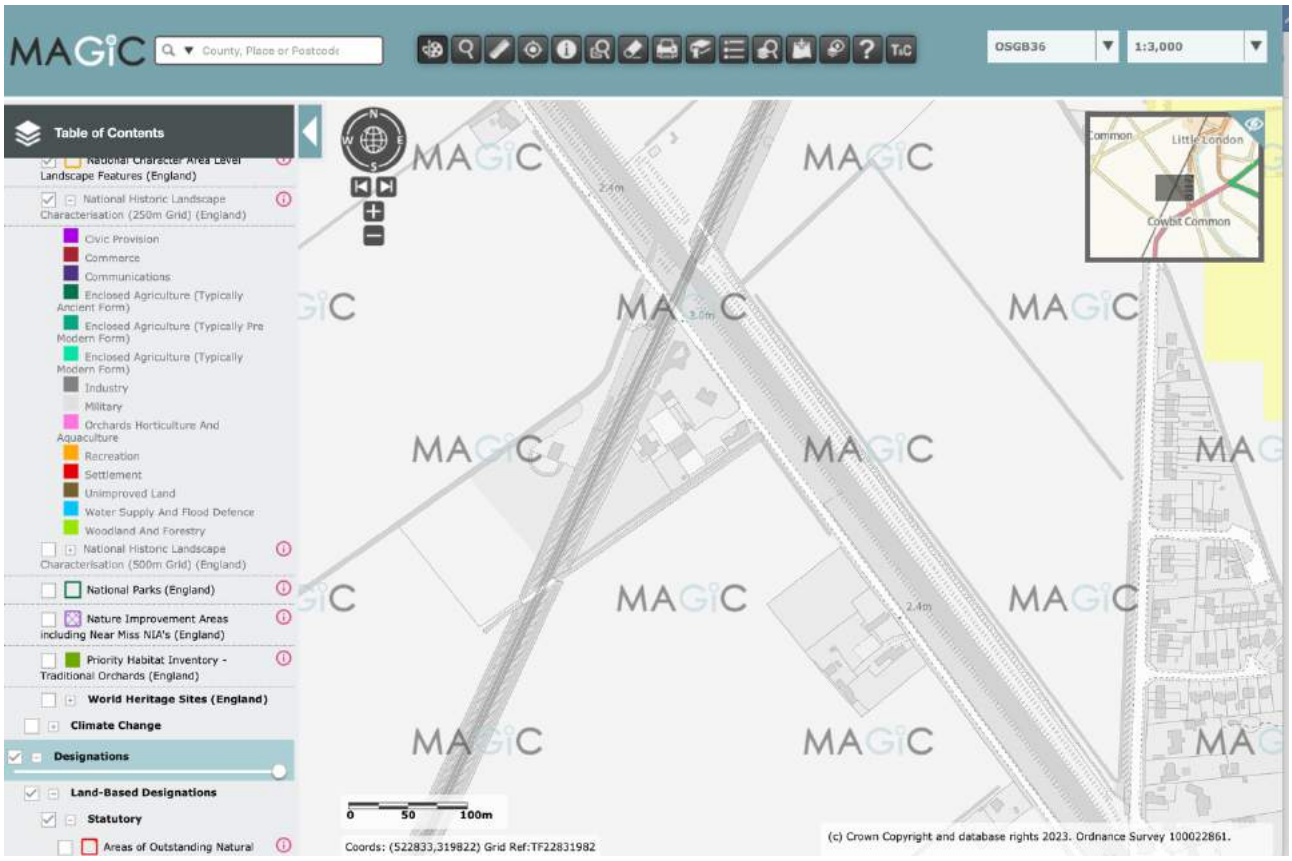


Appendix B Scheme Drawings

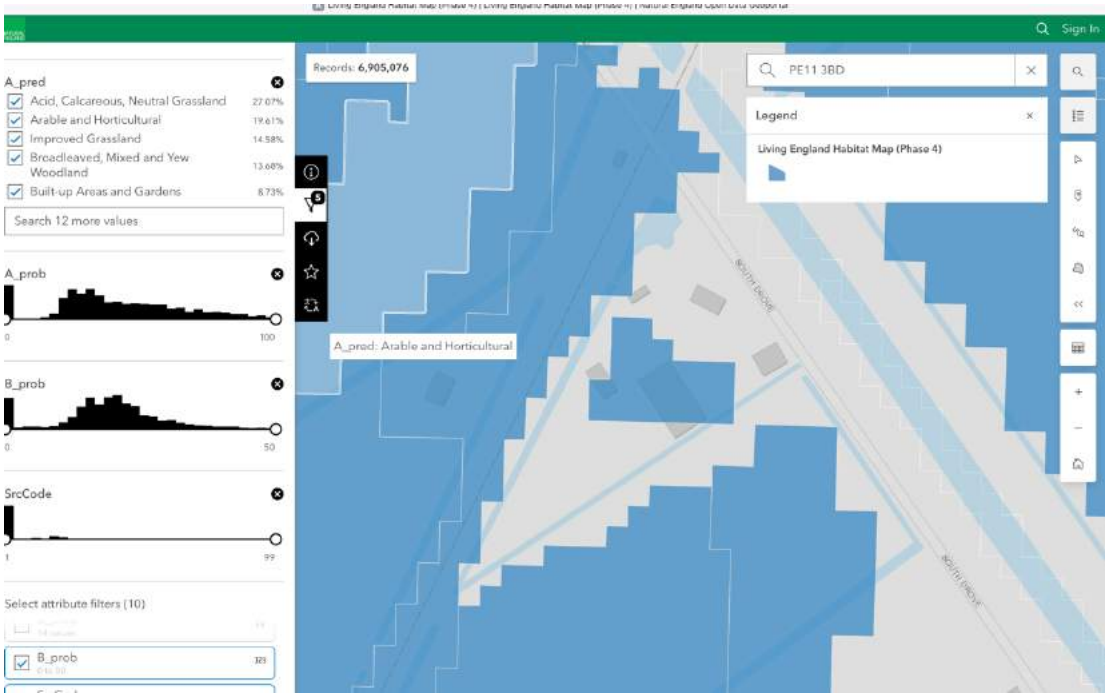



PLANNING APPLICATION DRAWING
cabe
chartered
building engineer
FOOTPRINT OF BUILDING
WITH CLASS Q PERMISSION
John Dickie Associates
Chartered Building Engineers
5, Victor Way,Cherry Holt Road,
Bourne, Lincs PE10 9PT
Tel 07778 297733 jda@ndirect.co.uk
Proposed Conversion of Agricultural Buildings into
Three Dwellings at
Witteman Nurseries
South Drove, Spalding Lincs. PE11 3BD
Drawing Title : Land Survey
Date : AUGUST 2023
Scales 1 to 500 at A3 Portrait
Drawing No JDA/2022/720/TOPO/001
Plot 2 Front Elevation
Existing Superstructure
Plot 2 Side Elevation
Plot 2 Rear Elevation
Plot 2 Section
Plot 2 Side Elevation
Untreated Oak Boarding
Standing Seam Zinc Roofing
Plots 1 & 3 First Floor Layout
Plots 1 & 3 Cart Hovel/Garaging Layout
Plots 1 & 3 Cart Hovel/Garaging
Front Elevation
Plots 1 & 3 Cart Hovel/Garaging
Rear Elevation
Plots 1 & 3 Cart Hovel/Garaging
Side Elevations
Plot 2 Roof Layout
Plot 2 Ground Floor Layout
Plot 2 First Floor Layout
Facing Bricks for plinth - to
Flemish Bond - Traditional Brick
and Stone or Light Aerahll Blend
Plots 1 & 3 Ground Floor Layout
Plots 1 & 3 Rear Elevation
Plots 1 & 3 Side Elevation
Plots 1 & 3 Section
Plots 1 & 3 Roof Layout
Plots 1 & 3 Side Elevation
Plots 1 & 3 Front Elevation
Integrated ECO Bat
Boxes. Ino Cavity & Ino
Crvsice "ECO B"
Bstock Eco-habitat for Swifts
"BOX IES"
0m 10 20 30 40 50m
John Dickie Associates
Chartered Building Engineers
5, Victor Way,Cherry Holt Road,
Bourne, Lincs PE10 9PT
Tel 07778 297733 jda@ndirect.co.uk
Erection of Three Dwellings at
Witteman Nurseries
South Drove, Spalding Lincs. PE11 3BD
Drawing Title : Proposed Layouts and Elevations
Date : February 2024
Scales 1 to 200 at A3 Portrait
Drawing No JDA/2024/720/PROP/001

Appendix C Natural England Magic extract – all relevant layers activated



Living England Habitat Map. To include ;



None of the designated/protected sites identified are not adversely affected by the proposed development. In fact, by virtue of the extensive biodiversity enhancement scheme, will augment and strengthen ecological diverseness in the immediate area.

John Dickie C. Build E MCABE

John Dickie Associates
Chartered Building Engineers
5, Victor Way,
Cherry Holt Road, Bourne, Lincs PE10 9PT
Tel 07778 297733 **jda@ndirect.co.uk**