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ECOLOGICAL ENHANCEMENT PLAN

At

Carlton Garden Centre

Pinfold Lane
Llay Industrial Estate
LL12 0PX

NGR: SJ 33061 56210

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A handwritten signature in black ink that reads 'K James'.

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1 INTRODUCTION

1.1 Author and qualifications

This report is compiled and written by Ysobella Cox BSc MBiol, Graduate Ecologist for United Environmental Services Ltd (UES).

It has been verified by Kathryn James BSc MRes MCIEEM, UES Ecology Project Manager.

1.2 Objectives and scope

This ecological enhancement plan (EEP) has been produced for Carlton Garden Centre, Llay Industrial Estate. It provides further details on the proposed habitat creation and enhancement measures to be implemented on site, as requested within the pre-planning application response received from Wrexham County Borough Council on 20th March 2023 (see reference ENQ/2023 /0062).

The proposed development includes demolition of the buildings onsite, except for the WC building, followed by the construction of a new haulage yard. There is an area of land located directly adjacent to the northeastern boundary of the site which may be acquired; however, this area is offsite and not currently included within the development boundary. If the area of offsite woodland is acquired then this EEP should be updated accordingly.

This document details the habitat creation that is proposed in order to maximise the benefit of the landscaping scheme for wildlife, and the provision of bat and bird boxes to increase roosting and nesting opportunities.

This document should be read in conjunction with Appendix 1 – Bat and bird box plan.

2 LANDSCAPING AND HABITAT ENHANCEMENT

2.1 Landscape proposals

At the time of writing this report, detailed landscaping proposals were not available. However, the proposed site plan, produced by Go 2 Plan Design and Planning (drawing number CGL 003a), shows the retention of the trees onsite. This report should be updated following receipt of detailed landscaping and planting proposals, and if the area of offsite woodland is acquired.

Landscaping can be used to promote biodiversity through the appropriate design of habitats and creating habitat mosaics, which promote natural linkages and hence the dispersal of target species. Principles and landscaping ideas beneficial to wildlife and appropriate for this site include native scrub planting and wildflower grassland, as detailed below.

2.1.1 Native species-rich scrub planting

To increase biodiversity onsite the landscape design includes native scrub planting in the south of the development site. Native scrub species that will be incorporated into the landscape design include:

- Blackthorn *Prunus spinosa*
- Common dogwood *Cornus sanguinea*
- Hawthorn *Crataegus monogyna*
- Hazel *Corylus avellana*
- Holly *Ilex aquifolium*

The areas of shrub planting will also be sown with Emorsgate EG1 general purpose meadow grass mixture to create the ground flora of the shrub habitat.

The provision of native scrub planting will provide foraging opportunities for invertebrates including larval stages, adult herbivorous species and pollinators. Providing a range of planted species will support a greater diversity of invertebrate species, which will in turn benefit other faunal species that will predate these invertebrates, such as bats and birds. In addition, the planting of berry and nut bearing shrub species will encourage winter birds, and the planting and management of shrubs which develop a mosaic of structures will also support breeding birds. The scrub planting will also provide foraging and sheltered commuting opportunities for amphibians, bats and other mammals.

Management of the areas of scrub will aim to create a varied habitat. This should be achieved by cutting small and discrete patches to promote heterogeneity and scalloped edges. Cut materials can either be removed from site, or stacked together to create habitat log piles and hibernacula for nesting birds, small mammals, amphibians and invertebrates. Cutting will occur between September and February to avoid the breeding bird season. Where possible, cutting of berry-bearing shrubs should occur in January or February so that they can continue to provide a food source for as long as possible throughout the winter months.

2.1.2 Native species-rich wildflower grassland

The landscaping plan also includes the creation of a new species-rich wildflower grassland in the north of the site, which will encourage invertebrates (such as bees, flies, beetles and butterflies) onto site. The wildflower grasslands will be created by sowing the Emorsgate EM3 special general purpose meadow mixture. The composition of the Emorsgate EM3 mixture is detailed below:

Wildflowers

- Agrimony *Agrimonia eupatoria*
- Black medick *Medicago lupulina*
- Bladder campion *Silene vulgaris*
- Bulbous buttercup *Ranunculus bulbosus*
- Common knapweed *Centaurea nigra*
- Common vetch *Vicia sativa* ssp.
- Segetalis*
- Cowslip *Primula veris*
- Crosswort *Cruciata laevipes*
- Field scabious *Knautia arvensis*
- Great burnet *Sanguisorba officinalis*
- Greater knapweed *Centaurea scabiosa*
- Hedge bedstraw *Galium album*
- Hoary plantain *Plantago media*
- Kidney vetch *Anthyllis vulneraria*
- Lady's bedstraw *Galium verum*
- Meadow cranesbill *Geranium pratense*
- Meadow vetchling *Lathyrus pratensis*
- Musk mallow *Malva moschata*
- Oxeye daisy *Leucanthemum vulgare*
- Red campion *Silene dioica*
- Ribwort plantain *Plantago lanceolata*
- Rough chervil *Chaerophyllum temulum*
- Sainfoin *Onobrychis viciifolia*
- Salad burnet *Poterium sanguisorba* ssp. *sanguisorba*
- Selfheal *Prunella vulgaris*
- Tufted vetch *Vicia cracca*
- Viper's-bugloss *Echium vulgare*
- Wild carrot *Daucus carota*
- Wild marjoram *Origanum vulgare*
- Yellow rattle *Rhinanthus minor*

Grasses

- Common bent *Agrostis capillaris*
- Crested dog's-tail *Cynosurus cristatus*
- Red fescue *Festuca rubra*
- Smaller cat's-tail *Phleum bertolonii*
- Smooth-stalked meadow-grass *Poa pratensis*

Alternative wildflower grassland mixtures could be used; however, these will be agreed with the project ecologist to ensure they contain similar and appropriate native species.

The provision of wildflower grassland will provide immediate benefits for wildlife in the form of foraging, breeding and sheltering opportunities. In the longer term, the grassland will also be colonised naturally by additional native plant species.

The initial sowing and ground works should be carried out by a suitably experienced contractor and may take place between April and October. In the first year, the likely flush of weeds should not be cut until mid-late summer. The EM3 mix includes yellow rattle, which is a hemi-parasite of grasses and will help to reduce the vigour of competitive grass species without the need for cutting, and will therefore encourage growth of wildflowers. The first cut should be undertaken from early August; mown vegetation should be left *in situ* for 48 hours, before being collected and disposed of appropriately. The cuttings must not be left, as this will increase the level of nutrients within the soil and prohibit the establishment of the wildflower grassland. The grassland can then be mown regularly until late March, with competitive weeds removed as needed over this period.

From the second year onwards, the grassland can be subject to a summer hay cut in August, following which cuttings should be left to dry and shed seed for 1-7 days before being removed. The grassland can then be mown regularly as considered necessary until spring, from which time no cutting or grazing should occur until the August hay cut.

Any litter or debris should be removed from the area prior to cutting and underneath these materials should be checked for sheltering wildlife.

2.2 Bat and bird box provision

The exact location of the bat and bird boxes are indicated in Appendix 1 – Bat and bird box plan. If the area of offsite woodland is acquired, then the bat and bird box plan should be updated accordingly.

If the proposed model of bat / bird box is not available due to stock shortages, an alternative model can be used instead. However, all proposed changes must be discussed and agreed with the project ecologist to ensure that it provides similar roosting opportunities. The use of woodcrete or woodstone boxes will be prioritised due to their durability and longevity.

Bat / bird boxes can be installed any time of the year. External lighting will be directed away from the entrance of the box, where feasible, in order to minimise disturbance and increase the likelihood of occupancy.

Alternative siting should be discussed and agreed with UES.

2.2.1 Bat boxes

A bat scoping survey was undertaken by UES on 29th June 2023. Two of the buildings onsite (Buildings 1 and 2) were assessed as having low potential to support roosting bats due to gaps between the bargeboards / fascia and the walls. As per the Bat Conservation Trust survey guidelines, a further presence / absence survey of Buildings 1 and 2 was undertaken on 25th July 2023. No bats were found to be using either building for roosting purposes.

The WC building onsite (Building 3) was assessed as having negligible potential to support roosting bats, as such no further surveys or mitigation measures were required for this building in relation to bats.

The provision of a bat box as part of the development proposals will increase the roosting opportunities for bats on site, securing suitable habitat for roosting bats in the long term. The following bat box is considered suitable for site:

- 1x 2F Schwegler bat box – affixed to a mature tree on site as per Appendix 1. It should be placed at a height of 3-6m, and should be positioned on a southerly aspect to expose the box to high levels of sunlight.

It should be noted that once inhabited by a bat, a box may only be inspected by a licenced bat ecologist.

2.2.2 Bird boxes

A single bird nest box should be affixed to mature tree which is due to be retained within the proposed development site, and two bird nest boxes are to be affixed to the retained buildings onsite. The bird boxes installed will provide nesting opportunities for a wide range of bird species that have the potential to be present on site and are likely to be present within the local area. The following bird boxes will be installed:

- 2 x Vivara Pro woodstone house sparrow nest box – affixed to the retained buildings at a minimum height of 2m and should be positioned on the north-eastern aspect of the buildings thus avoiding the strongest sunlight and wettest winds.



- 1x 1B Schwegler bird nest box (28mm entrance) – affixed to a mature tree on site as per Appendix 1. The box will be positioned on the northern or eastern aspect of the selected tree, thus avoiding the strongest sunlight and wettest winds.



3 CONCLUSION

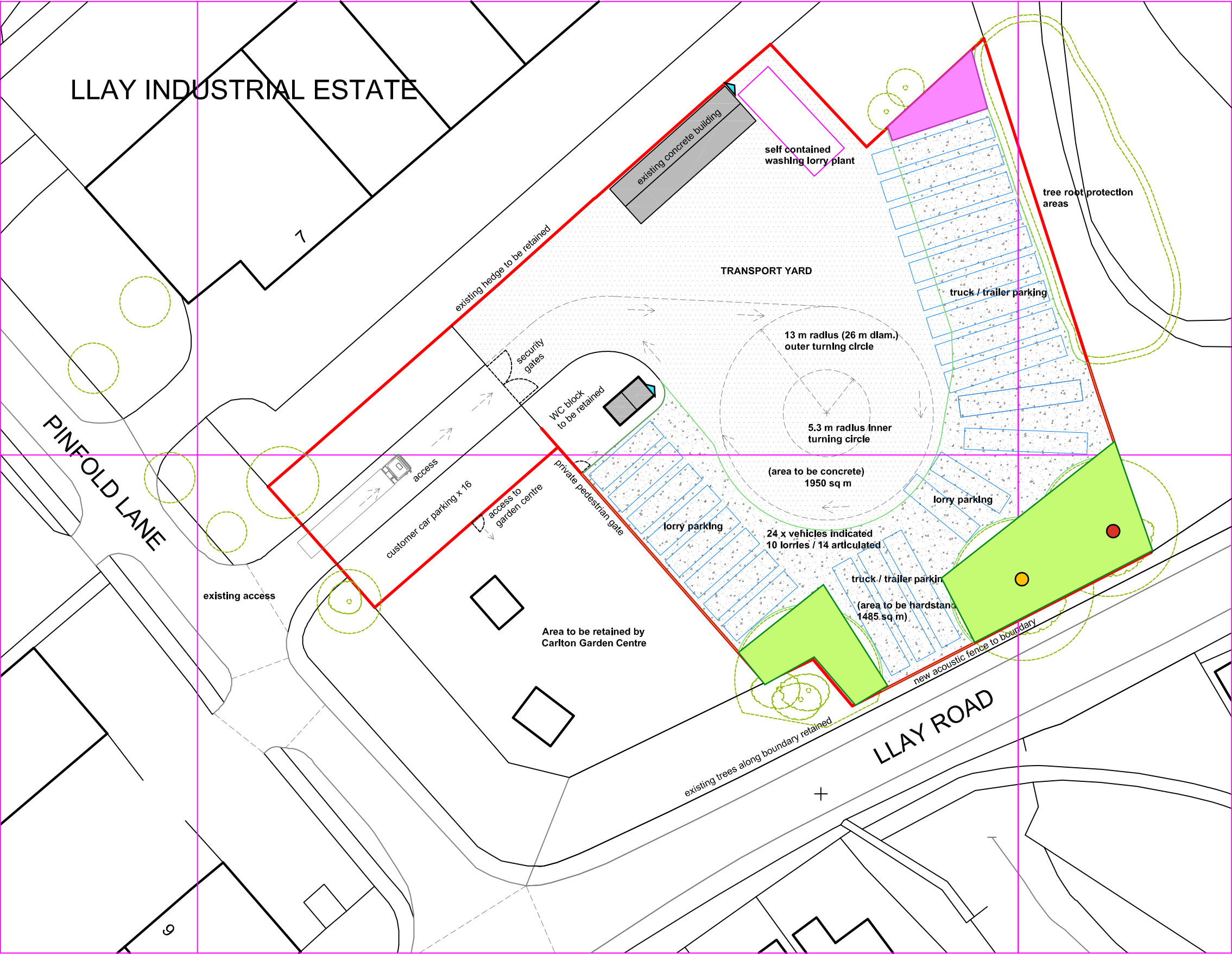
This EEP aims to provide ecological enhancements beyond what is currently present on site. Landscaping recommendations, as detailed in section 2.1, will ensure a bottom-up approach to improving the biodiversity on site is applied. This will ensure that the habitats on site can support a range of invertebrate species and provide other food sources, which will then in turn benefit fauna further up the food chain.

The bat and bird box provisions will also ensure that roosting and nesting habitats will be readily available for the local population of bat and bird species in the vicinity.



APPENDICES

Appendix 1 – Bat and bird box plan



- Carlton Garden Centre,
Llay Industrial Estate
- Bird and Bat Box Plan
- Vivara Pro woodstone house sp
 - 1B Schwegler bird nest box
 - 2F Schwegler bat box
 - Wildflower grassland
 - Native scrub planting

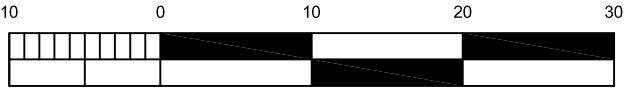
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go2plan

Design & Planning

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PROPOSED SITE PLAN - CLWYD TRANSPORT LTD.
CARLTON GARDEN CENTRE SITE, PINFOLD LANE
LLAY INDUSTRIAL ESTATE
LLAY, WREXHAM
LL12 0PX



Scale bar in metres

Dwg No. CGL 003a
Scale: 1: 500 @ A3
date: 03.05.24
drawn: jon evans