

Biodiversity Enhancement Measures

Trevor Basin

Report prepared for Canal and River Trust

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Version 2

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Appendix 1 Proposed development and outline biodiversity enhancement plan

Appendix 2 Native tree and shrub listings

1. Introduction

1.1 Background to the project

The client is seeking to secure planning permission for the regeneration of the Trevor boat basin to include moorings and a new building on the site in the same (approximate) position of the old building. During pre-planning consultations with the Ecology officer (Wrexham BC) the need for a biodiversity enhancement measures report was confirmed.

This report seeks to support the development by providing a scheme for Biodiversity enhancement measures to assist in the provision of biodiversity across the site that are designed to support the planning application.

The proposal is included in Appendix One and generally consists of the new building and associated infrastructure and environmental improvements.

1.2 Site Location and Context

The site is located within the area of Llangollen in a rural environment and enclosed by existing residential and commercial land uses. The habitat on site comprises of Woodland, scattered tress, tall ruderal, amenity grassland, standing water habitat including areas of hard standing.

1.3 Existing ecological reporting and purpose of this report

Enhancement measures shall be using the base ecological data contained in the Ecological Assessment which followed CIEEM guidelines (*Guidelines for Preliminary Ecological Appraisal*)

Section 40 of the Natural Environment and Rural Communities Act 2006 places a statutory duty on all public authorities in England to conserve biodiversity. Therefore, the purpose of this report is to outline the biodiversity enhancement measures proposed for the redevelopment of this site.

1.3.1 Author information

Simon Brain has attained a Post Graduate Certificate in Biological Recording and has attended residential FSC Field Courses for Land mammal identification, Songbird identification, Barn Owls (CIEEM) and Advanced Bird Survey Techniques (Level M) and various bat mitigation and training courses and European workshops. He holds a NE Class 2 bat license (17334-CLS). He has attended various designated sites and carried out vascular plant identifications with verifiers. He has been working as an appointed person trapping Great Crested Newt and has experience with amphibians and carrying out reptile surveys. In addition, he is a Chartered arboriculturist.

1.4 EXECUTIVE SUMMARY – PROPOSED BIODIVERSITY ENHANCEMENTS

Woodland

The woodland to the north of site is to be maintained around the canal fork areas and it shall be underplanted with native tree species. The pollarding of any dead trees shall apply.

Uncultivated meadow

An uncultivated meadow using the existing grasses will be managed as shown.

Bulb planting

The use of various bulbs including Snowdrop, Wild garlic, Bulebell and Wood anemone shall be utilised in the woodland areas as shown on the enhancement plans.

Non native vascular plants

Pampas grasses and Rhus typhinia shall be excavated by hand and removed from site.

2. Existing ecological interest

2.1 Existing ecological appraisal – opportunities for enhancement

The existing ecology report identified the following general biodiversity measures could apply to the sites re development:

- Habitats. Retention of mature trees
- Non natives vascular plants to be removed
- Fauna, bats. Suitable lighting provision, artificial roosting provision
- Fauns, birds. Artificial nesting provision
- Uncultivated meadow
- Native tree and shrub planting through a landscaping plan to include native woodland bulb planting

3. Ecological aims and objectives

3.1 Aims and objectives

The aim of this plan is to provide a specification, guidelines and proposals for general and site specific biodiversity enhancements as mentioned in section 2.2.

These measures shall be aimed at European protected species and also nationally protected or locally important species.

4. Site specific enhancement measures

4.1. Habitat and species measures – site specific proposals

4.2 Habitats. Retention of mature trees

The implementation of retained tree protection measures shall mean the retention of the arboriculture assets located on the site. The retention of these trees shall be managed by the following means:

- A site visit shall be carried out by the arboricultural clerk of works to delineate the actual RPA in accordance with BS5837:2012.
- The position of the RPA shall become the Construction Exclusion Zone and be fenced off with hears fencing securely staked to the ground.
- The clerk shall receive digital images to demonstrate the CEZ is fit for purpose prior to any other work commencing on site.
- All works shall conform to the approved Arboricultural Impact Assessment and Method Statement

4.3 Woodland Management Plans (WMP)

Woodland to the north of site. The broad principles of this plan are that the woodland growing on the site shall be retained and enhanced over a ten year period using silvicultural practices.

The WMP seeks to recognise the threats to plant health over the WMP term and prescribe an appropriate planting regime using native plants. The WMP recognises the status of the woodland in terms of its contribution to local biodiversity.

The WMP seeks to manage biodiversity enhancements by eradicating non native vascular plants and creating conditions favourable for the development of native protected plants including Bluebell. Favourable conditions for native vascular plants will be created by selective felling (10% thin) and tree planting using species that foster native flora development. The current species diversity is poor and as well as restructuring the species mix glade creation

from coupe felling will develop areas suitable for invertebrates. The creation of deadwood, both standing and fallen, will assist in the increasing of avian diversity and features suitable for woodland bats. Fruit tree planting assists in the development of the woodland for badger and hedgehog. Artificial nesting and roosting provision provide for breeding sites.

4.4 Non natives vascular plants. Pampas and Rhus eradications.

The impact of these plants in the site is to remove the possibility of native flora and fauna developing in the areas in which the non natives are growing

4.5 Fauna, bats. Suitable lighting provision, artificial roosting provision and planting

The provision of artificial roosting opportunities within trees under suitable lighting provision will be central to the maintenance of a healthy bat population. Bat species utilise a variety of roosting opportunities and do use many different roost sites throughout the year depending on the time of year. Roost purposes can range from simple day roosts to roosting positions used in the night-time for short periods and therefore the provision of different artificial roosts using different thermal properties will best suit the bats annual cycle and therefore create conditions for the sustainable development of a bat population.

Woodland roosting will be provided by schwegler 2F bat boxes. All boxes will face south and be installed by a bat expert.

Planting of tree and shrub species shall include *Acer campestre* and *Sorbus torminalis*. When new planting is planned for the site, native tree and shrub species of local provenance are recommended in preference to non-native, ornamental species. Planting of tree and shrub species that support a high insect biomass and provide a potential food source for bats throughout the bat activity period (spring to autumn) such as rowan, buckthorn, dogwood, crab apple and wild plum are recommended.

A short compliance report will be generated following provisions installation and suitable lighting provision will be met by the compilation of a bat sympathetic lighting plan.

4.6 Fauns, birds. Artificial nesting provision and avian friendly planting

Breeding bird habitat shall be provided using ground shrubs and trees within the development but. Shrubs shall consist of the following species: Viburnum opulus, Juniperus communis, Ulex europaeus and Euonymus europaeus and those provided in Appendix 2.

In addition the following shall be supplied and fitted to trees:

- 4 no. Schwegler 1B boxes for Tits
- 4 no. Schwegler 2H boxes, open fronted boxes for robins (to be installed on trees with ivy where possible).

4.7 Meadow cultivation

The Illustrative Masterplan shows an area of land buffered between the woodland and the core development areas within the site allowing existing grasses and native plants to grow by change of management regime in an uncultivated meadow. The western section is phase 1 and the eastern section is phase 2/3 which will be implemented within 24 months, depending on the initial phase 1 success.

4.8 Native tree and shrub planting through a landscaping plan

The provision of a detailed landscaping plan will be based on the provision of native trees and shrubs as contained in Appendix 1.

Appendix One – Enhancement plans

Ecological enhancements

Woodland Enhancement

WOODLAND MANAGEMENT DETAILS

The WMP seeks to recognise the threats to plant health over the WMP term and prescribe an appropriate planting regime using native plants. The WMP recognises the status of the woodland in terms of its contribution to local biodiversity. The WMP seeks to manage biodiversity enhancement by eradicating non native vascular plants and creating conditions favourable for the development of native protected plants including Bluebell. Favourable conditions for native vascular plants will be created by selective felling (10% thin) and tree planting using species that foster native flora development

Uncultivated Meadow

Non native plant eradication

