

# **Net Biodiversity Benefit Plan**

March 2023

**Land adjacent to Talfryn Cottage**

Erbistock

Wrexham

LL13 0DF

**National Grid Reference: SJ3445342855**



**Land adjacent to Talfryn Cottage, Erbistock, Wrexham, LL13 0DF**  
**Net Biodiversity Benefit Plan**

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| Prepared by    | Tyrer Ecological Consultants Ltd |

|                      |                                                                                   |
|----------------------|-----------------------------------------------------------------------------------|
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| Reviewed by          | Mr. M. Pritchard ACIEEM                                                           |
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| Approved by          | Mrs. K. Wilding CEnv MIEMA ACIEEM                                                 |
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| Supporting Documents | <b>Preliminary Ecological Appraisal</b> (Tyrer Ecological Consultants Ltd, 2022). |

## **Document Context**

### **Land Adjacent to Talfryn Cottage**

As part of a proposed planning application within Wrexham County Borough Council at Land adjacent to Talfryn Cottage, Erbistock in Wrexham, Tyrer Ecological Consultants Ltd were commissioned to undertake a preliminary Ecological Appraisal in March 2022; an amendment was made to this report following an update to the Site plans, which involved an updated Site walkover. The proposals pertinent to this application include the creation of a new agricultural shed to the east of a proposed new dwelling (App. Ref: P/2022/0924). The surveys and subsequent reports were commissioned by Blueprint Architectural Ltd.

The application site can be broadly described as section of pasture grassland forming part of a larger field extending to the north and east, bordered by a small broadleaved woodland to the west and hedgerow to the south. The immediate habitat is dominated by agricultural land, intersected with hedgerows and lines of mature trees, with stands of Restored Ancient Woodland (RAW) to the northeast, south and southwest of the site in the form of Drury's Plantation, Erbistock Gorse and Princess Wood respectively. Scattered trees and occasional ponds are also present throughout the immediate landscape. Collectively these features provide habitat that might be utilised by a variety of bat and bird species, along with terrestrial mammals and amphibians.

As part of the recommendations as issued within the Preliminary Ecological Appraisal, a number of enhancement measures were proposed, which could be implemented within the proposed development. The application was subsequently granted planning permission, subject to conditions, in February 2023; a number of conditions relate to ecological matters.

Tyrer Ecological were recommissioned by Blueprint Architectural Ltd to address the relevant conditions; through provision of a Net Biodiversity Benefit Plan this document seeks to address Condition 9, which states:

"No development shall commence until a plan to provide net benefit for biodiversity (NBB) i.e. a better outcome than if the site was left undeveloped has been submitted to and approved in writing by the Local Planning Authority. The measures should thereafter be implemented in full and maintained for the lifetime of the development."

For further context, the ecological documents issued thus far are as followed:

### **Preliminary Ecological Appraisal** (Tyrer Ecological Consultants, 2022)

## **Proposed Net Biodiversity Benefit (NBB) Plan**

An NBB plan encompassing bird boxes and bat boxes has been presented overleaf (see **Table 1** and **Figure 1**) with the objective of satisfying **Condition 9**, with further recommendations in relation to native planting that might be incorporated into the wider site found in **Table 2**.

The botanical species recommended improve the value of a site for a wide variety of native wildlife through provision of feeding opportunities and shelter, whereas non-native species are of lower value to our native species.

The plan comprises installation of one Beaumaris Woodstone Bat Box, situated on the apex of the southern aspect; two Woodstone Swallow Nest Bowl under the eaves of the overhang; and a single open fronted bird box suitable for a number of passerine bird species that are likely in the area. These inclusions will suitably satisfy the requirement of providing a net benefit for biodiversity through the creation of viable roosting/ nesting opportunities that were not previously there.

Further details on specification and mounting of the boxes is provided within Appendix I.

**Table 1 – Proposed Biodiversity Enhancement Plan Key**

| Key                                                                               |                                              |
|-----------------------------------------------------------------------------------|----------------------------------------------|
| Symbol                                                                            | Legend                                       |
|  | Woodstone Swallow Nest Bowl (Total: 2 bowls) |
|  | Open fronted bird box (Total: 1 boxes)       |
|  | Beaumaris Woodstone Bat Box (Total: 1 box)   |

## Native Planting

A series of trees, woody shrubs, climbers, herbaceous plants and ferns have been given within the table below which are suitable for incorporation into the development and wider Talfryn Cottage site and which would benefit local native fauna; the list of plants given below are also readily commercially available. Any new hedgerows should be primarily comprised of Blackthorn (*Prunus spinosa*), Hawthorn (*Crataegus monogyna*), Hazel (*Corylus avellana*), and Holly (*Ilex aquifolium*), whilst climbers/creepers such as Hops (*Humulus lupulus*) and Honeysuckle (*Lonicera periclymenum*) can be planted at the base of boundary features such as fences and walls, and new tree planting should include species such as Pedunculate Oak (*Quercus robur*), Wild Cherry (*Prunus avium*), and Alder Buckthorn (*Frangula alnus*). Climbers should also be incorporated to add natural cover from predators for the open-fronted nest boxes.

The applicant might consider re-sowing any lawns or verges with MG5 Meadow Seed mix, which contains a generic mixture of native grasses and forbs suitable for mesotrophic grasslands including Sweet Vernal Grass (*Anthoxanthum odoratum*), Crested Dog's Tail (*Cynosurus cristatus*), Red Clover (*Trifolium pratense*), Lady's Bedstraw (*Galium verum*) and Yellow-rattle (*Rhinanthus minor*).

**Table 2 – Suitable native plants for the development at Talfryn Cottage**

|                   | Common Name         | Scientific Name                  | Planting Preference                                 |
|-------------------|---------------------|----------------------------------|-----------------------------------------------------|
| Ferns             | Male Fern           | <i>Dryopteris filix-mas</i>      | Semi-shade or shaded                                |
|                   | Soft Shield-fern    | <i>Polystichum setiferum</i>     | Semi-shade or shaded                                |
|                   | Maidenhair Fern     | <i>Adiantum capillus-veneris</i> | Suitable for rockeries / walled gardens             |
|                   | Royal Fern          | <i>Osmunda regalis</i>           | Full sun in moist-damp areas                        |
| Herbaceous plants | Bloody Crane's-bill | <i>Geranium sanguineum</i>       | Dry soils - suitable for rockeries                  |
|                   | Columbine           | <i>Aquilegia vulgaris</i>        | Semi-shade or open areas                            |
|                   | English Bluebell    | <i>Hyacinthoides non-scripta</i> | Moist soils in semi-shade or open areas             |
|                   | Giant Bellflower    | <i>Campanula latifolia</i>       | Semi-shade or open areas                            |
|                   | Greater Knapweed    | <i>Centaurea scabiosa</i>        | Dry-moist soils. Suitable for borders               |
|                   | Greater Woodrush    | <i>Luzula sylvatica</i>          | Moist soils in semi-shade or open areas             |
|                   | Meadow Crane's-bill | <i>Geranium pratense</i>         | Humid-moist soils. Suitable for borders             |
|                   | Musk Mallow         | <i>Malva moschata</i>            | Dry-moist soils. Suitable for borders and rockeries |
|                   | Sea Campion         | <i>Silene uniflora</i>           | Dry soils - suitable for rockeries                  |
|                   | Stinking Hellebore  | <i>Helleborus foetidus</i>       | Semi-shade or open areas                            |

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|                     |                 |                              |                 |
|---------------------|-----------------|------------------------------|-----------------|
| <b>Climbers</b>     | Honeysuckle     | <i>Lonicera periclymenum</i> | Dry-moist soils |
|                     | Hops            | <i>Humulus lupulus</i>       | Dry-moist soils |
|                     | Ivy             | <i>Hedera helix</i>          | Dry-moist soils |
|                     | Sweet-briar     | <i>Rosa rubiginosa</i>       | Dry-moist soils |
| <b>Woody Shrubs</b> | Dogwood         | <i>Cornus sanguinea</i>      | -               |
|                     | Guelder Rose    | <i>Viburnum opulus</i>       | -               |
|                     | Hawthorn        | <i>Crataegus monogyna</i>    | -               |
|                     | Hazel           | <i>Corylus avellana</i>      | -               |
|                     | Holly           | <i>Ilex aquifolium</i>       | -               |
| <b>Trees</b>        | Alder Buckthorn | <i>Frangula alnus</i>        | -               |
|                     | Osier           | <i>Salix viminalis</i>       | -               |
|                     | Pedunculate Oak | <i>Quercus robur</i>         | -               |
|                     | Purple Willow   | <i>Salix purpurea</i>        | -               |
|                     | Rowan           | <i>Sorbus aucuparia</i>      | -               |
|                     | Silver Birch    | <i>Betula pendula</i>        | -               |
|                     | Wild Cherry     | <i>Prunus avium</i>          | -               |
|                     | Wych Elm        | <i>Ulmus glabra</i>          | -               |



**Figure 1 – Proposed location of provision for bats and breeding birds (adapted © Blueprint Architectural Ltd / Google Earth)**

### **Proposed Net Biodiversity Benefit (NBB) Plan**

Further to the requirements stipulated within Condition 9 of the granted permission, in relation to the conservation of bats, measures pertaining to lighting and reasonable avoidance measures to prevent risk of injury/ disturbance should be included within the NBB Plan.

A suitably qualified lighting technician should be contracted to provide an appropriate lighting plan.

Additionally, the lighting plan should aim to exclude light from the areas surrounding the structure, specifically on the area identified for the bat box provision at the south elevation.

Harsh artificial lighting has been proven to disturb bats and to have a negative impact on their ability to forage and commute to and from their roosts. The following measures should be considered in any lighting plan:

- Consideration of the available lighting technology to minimise impacts on bats, i.e. use of LED lighting as it emits little UV light, and these lamps can be programmed to switch off, or dim at certain times (as opposed to high pressure sodium, mercury and white SON). These have been shown to have the least impacts on bats (as well as invertebrates);
- Directional lighting where light spillage is avoided. Hoods / cowls can be used to direct light below the horizontal plane (ideally at an angle less than 70 degrees);
- Lights should be designed to be as low to the ground as possible (specifically not above 8 metres); and
- Lights switched off at night (particularly during the months of April to October inclusive when bats are active), or at least motion censored.

When designing a suitable bat-friendly lighting strategy, reference should be made to the Institute of Lighting Professionals (ILP) Guidance Note 08/18 Bats and artificial lighting in the UK.

Tyrer Ecological Consultants Ltd can confirm that the contents of this document can be relied upon, and the information contained within has been presented using best practice survey methodology and an understanding of the site, benchmarked by the long-standing experience of the Ecologists affiliated with the company.

Best wishes,

*D. Burrows*

Mr. D. Burrows Qualifying CIEEM (March 2023)  
**Consultant Ecologist at Tyrer Ecological Consultants Ltd**

## Appendix I – Guide to enhancement / mitigation for Bats and Breeding Birds

### **Birds**

#### **Breeding Birds - Swallows**

Swallows are a migratory species and annual visitor to the UK. Faithful to their nesting sites, they will return to nests on an annual basis for summer breeding purposes following long migrations from Africa. They nest in either single pairs or in small loose clusters of pairs, or colonies. Nests are typically made from straw, mud and saliva then lined with feathers to form a 'cup', open at the top, from which young hatchlings can often be observed awaiting feeding. Swallows are a species which have largely become accustomed to anthropogenic land manipulation by humans and will commonly nest within buildings, inclusive of barns, stables, porches, under bridges and so on. With adaptation to buildings, conflict with humans is commonplace, particularly with individuals seeking to develop their property/land. As a result, barn conversions, refurbishments and building demolition can lead to permanent loss of nesting sites, which inevitably impacts the conservation status of Swallows at a local level. A further issue is bird droppings, which can be undesirable in relation to new developments, particularly on a new housing plot.



Although Swallows are currently placed on the Green list for Birds of Conservation Concern (BoCC), meaning that they are under the least protection, numbers of this species can fluctuate heavily based on environmental and ecological factors, with high regional variation observed.

Swallows will readily adopt these nest cups which are based on the size and shape of natural swallow nests. The nest cup is ideal for placing in a garage, shed, stable, barn or even beneath an archway and should be placed beneath the roof with free access. It provides somewhere secure for swallows to nest and means that they will expend less energy in producing their own nest. It also means that they do not need to find suitable nest building mud which can be in short supply in a dry spring. This WoodStone® Swallow Bowl is made from durable WoodStone®, a mixture of concrete and wood fibres, that is guaranteed to last for years and is mounted on an exterior grade plywood board.

#### **Specifications**

- \* Height: 120mm
- \* Width: 200mm
- \* Depth: 110mm
- \* Weight: 600g

For more information: <https://www.nhbs.com/woodstone-swallow-nest-bowl>

In the case of the Springfield Farm barn, the cups should be erected within the existing garage which is currently permanently left open; alternatively they could be mounted within one of the large barn buildings to the north-west.

### Breeding Birds - Other

This open-fronted traditional design has proved to be highly effective in attracting Robins, as well as other small species such as Black Redstart, Spotted Flycatcher and Wren. In the case of Springfield Farm, it will recreate nesting opportunities for the active pied wagtail and blackbird nests identified within the building. It is designed to be installed on the walls of houses, barns, garden sheds or other buildings and should be hung so that the entrance is to one side (at an angle of 90° to the wall). The front panel can be easily removed for cleaning.



This type of box should not be made conspicuous on a tree or bush because small predators can enter through the unprotected opening. By hanging on a wall, predators won't be able to reach the box.

Alternatively hide the box in Ivy, Honeysuckle or other climbing plants, and, if hanging on a tree, ensure good foliage cover is present immediately above and no branches are directly below.

For more information:

<https://www.nhbs.com/2h-schwegler-robin-box>

<https://www.nhbs.com/vivara-pro-barcelona-woodstone-open-nest-box>

### Bats

#### Beaumaris Woodstone Bat Box

This bat box is made entirely from Woodstone, a robust material comprising concrete and wood fibres. Not only does the box have excellent insulating properties maintaining a more consistent temperature throughout the year, but it also provides excellent protection from predators. The Beaumaris box has a single narrow cavity which makes it suitable for crevice roosting bats such as the Common Pipistrelle, Soprano Pipistrelle, Nathusius' Pipistrelle, Brandt's bat and Whiskered bat, or singular/low numbers of loft-dwelling bat such as the Brown Long-eared. The interior of the box has a rough surface for bats to cling to and the front of the box features a subtle but attractive imprint of a bat in flight.



#### Specifications:

- \* Height: 390mm
- \* Width: 290mm
- \* Depth: 60mm
- \* Weight: 4.4kg

For more information: <https://www.nhbs.com/beaumaris-woodstone-bat-box>