# Preliminary Ecological Apprasil

&

# Habitat Enhancement Plan

# Rackery Farm Dog Exercise Area, LLay

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# Introduction

## Background

ELM Associates Ltd was commissioned to carry out a Preliminary Ecological Assessment on the site belonging to Rackery Farm, Llay in preparation for a planning application for the building of a dog exercise area. The dog exercise area will be 15mx130m and fenced. It will involve the conversion of arable land to amenity grassland and hardstanding.

On site habitat enhancement has been identified and a management plan included so the works can commence. Reasonable Avoidance Measures have also been prepared for Great Crested Newts for use during the construction of the fence around the dog exercise area.

## Key Principles:

Following the updated Welsh Government policy PPW12 the Ecological Assessment follows guidance to demonstrate Net Benefit for Biodiversity through the "step wise approach": Avoid, Minimise, Mitigate, Compensate and Enhance.

# Site Description

The proposed dog exercise area is an arable field, currently a maize stubble. It is bordered by a native hedgerow along which there is a well-used public right of way. The proposed car park area is the edge of the maize field with a small amount of hardcore by the gateway. The agricultural land around the site is all arable predominantly managed as maize.

# Methodology

A desktop survey was undertaken to assess the surrounding habitat using the previous report completed by Arbor Vitae, google earth and historic records using MagicMap and NBN Atlas.

The site visit was undertaken on 20th January 2025 to find and record signs of use by protected species and note habitats present. The following protected species were considered:

- Badgers: 50m of site searched for setts, tracks, latrines & snuffle holes
- Bats: Potential roosting features noted, mainly the hedge along the footpath
- Breeding Birds: Site assessed for suitability
- Great Crested Newts: 7 ponds assessed for GCN

There were no constraints.

# Results

## Desk Study

The desk study found that within 2km of the site there were two nationally designated sites:

- Chwarel Singret (SSSI) a geological site

- Marford Quarry (SSSI) disused quarry notified predominantly for its entomological interest

The search included Ramsar, SSSI, SAC, SPA, LWS and LNR.

Two Local Wildlife Sites lie within 500 metres:

- Ballswood Quarry – 500 metres to the east
- Burton Tower Lake – 600 metres to the north

Results from the desk study revealed that within a 1km radius of the proposed development site the following protected and key species have been recorded: Common pipistrelle bat and Brown long-eared bat.

There are no records for amphibians or reptiles within 1 kilometre of the site. Several records of great crested newt exist for sites within a 2 km radius.

## Habitats Present

### Arable land

The proposed site is arable land managed as maize, currently this is a maize stubble, the remainder of the field will be resown in the spring into maize again.

### Hedgerow

The hedgerow bordering the site is a mature native hedgerow with sections cut to around 1.5m and some sections managed as overgrown around the mature oak trees. It is species poor, mainly hawthorn with occasional elder, hazel, holly and dog rose. There are significant gaps in sections. The base is dominated by nettle and cleavers.

### Adjacent Ponds

The series of seven ponds 100m NW of the site as still as described in the previous Arbor Vitae report. A new nature trail now runs between the ponds with seats for visitors to enjoy. They are still shaded by mature oaks with all the ponds having heavy leaf fall in them. There has been no obvious increase in aquatic plant species and the planting of some marginal plants would improve their wildlife and aesthetic value.

## Protected Species

**Badgers**: There are no field signs of badger use in the field or adjacent hedgerow.

**Bats:** The mature trees in the adjacent hedgerow provide roosting opportunities for bats with loose bark, ivy and small crevices. It is likely that bats will use the hedgerow for foraging.

**Breeding Birds:** The maize field offers no opportunities for ground nesting breeding birds. The hedgerow does offer opportunities for songbird nesting habitat.

# Potential Ecological Impact

## Habitats

**Arable Field**: The loss of 0.25 ha of arable land, with 0.2ha becoming grassland 0.05ha car park is of negligible ecological impact. The change of arable to permanent grassland will be beneficial for soil health and soil biology due to less soil disturbance and inputs.

**Hedgerows**: The proposed new fence is a minimum of 12m from the hedgerow to allow vehicle access for cutting and the public right of way to be undisturbed. There will be no impact to the hedgerow or its root zone.

## Species

**Badger**: No evidence of this species was found and no impact on this species is predicted.

**Bats**: Any increase in illumination may have an impact on their behaviour, bat friendly lighting will need to be adopted to ensure minimal impact.

**Great Crested Newts**: The present maize stubble is sub-optimal foraging habitat, the conversion of arable to grassland and a carpark will not impact GCN. The building of the fence should be carried out using Reasonable Avoidance Measures (RAMs).

# Mitigation and Enhancement

## See map 3a

Hedgerow Enhancement: It is proposed to gap up the adjacent hedgerow with native species and include hazel, guelder rose, field maple, dog rose and blackthorn to increase the species diversity. Sections of elder and hawthorn will be coppiced to allow for regrowth and better establishment of the new plants. There is approximately 40m of gap. The hedge is to then be managed sympathetically by cutting on rotation allowing more production of fruit and berries, growing up to 2m high and 1.5m wide. The total hedge length is 270m and this will mean a change from a poor condition native hedgerow to a good condition species rich hedgerow using UK Hab classification.

Additional Trees: There is an opportunity to plant additional tree species where the hedgerow has a curve creating a more varied wildlife habitat and additional complexity to the hedgerow. These will be 10 individual trees spaced between 2-4m apart: 4 x crab apple, 3 x field maple and 3 x rowan

Area of Wildflower Meadow: A 24m wide strip of new wildflower meadow will extend from the new dog exercise area to in front of the café, which will ammount to 0.25ha. This will be sown with a native grassland wildflower mix: Emorsgate EM2 General Purpose Meadow Mixture. Site preparation will be a deep plough to invert the soil and have the nutrient poorer soil at the

top to allow for good establishment. This will complement that to be sown under the farm shop habitat enhancement plan and will extend this area.

### Species: Bats

4 bat boxes to be erected along the adjacent hedgerow.

- 2 x 1FF Schwegler Bat Box With Built-in Wooden Rear Panel
- 2 x 2F Schwegler Bat Box (General Purpose)Species: Birds 4 bird boxes to be erected

### Species Birds

4 Bird boxes to be erected along the adjacent hedgerow.

- 2 x 2GR Schwegler Nest Box 3 hole 27mm hole. Suitable for great, blue, marsh tits.
- 2 x 2GR Schwegler Nest Box Oval 30x45mm hole. Suitable for coal-, marsh-, blue-, great- and crested tits, redstart, nuthatch, collared and pied flycatcher, tree and house sparrow.

## Conclusions

The proposed dog exercise area is not likely to impact on habitats or protected species. The conversion of arable land to permanent grassland is positive especially for soil biology. The loss of a small area of arable land to hardstanding car park is of negligible ecological loss as the present maize stubble is not of wildlife value.

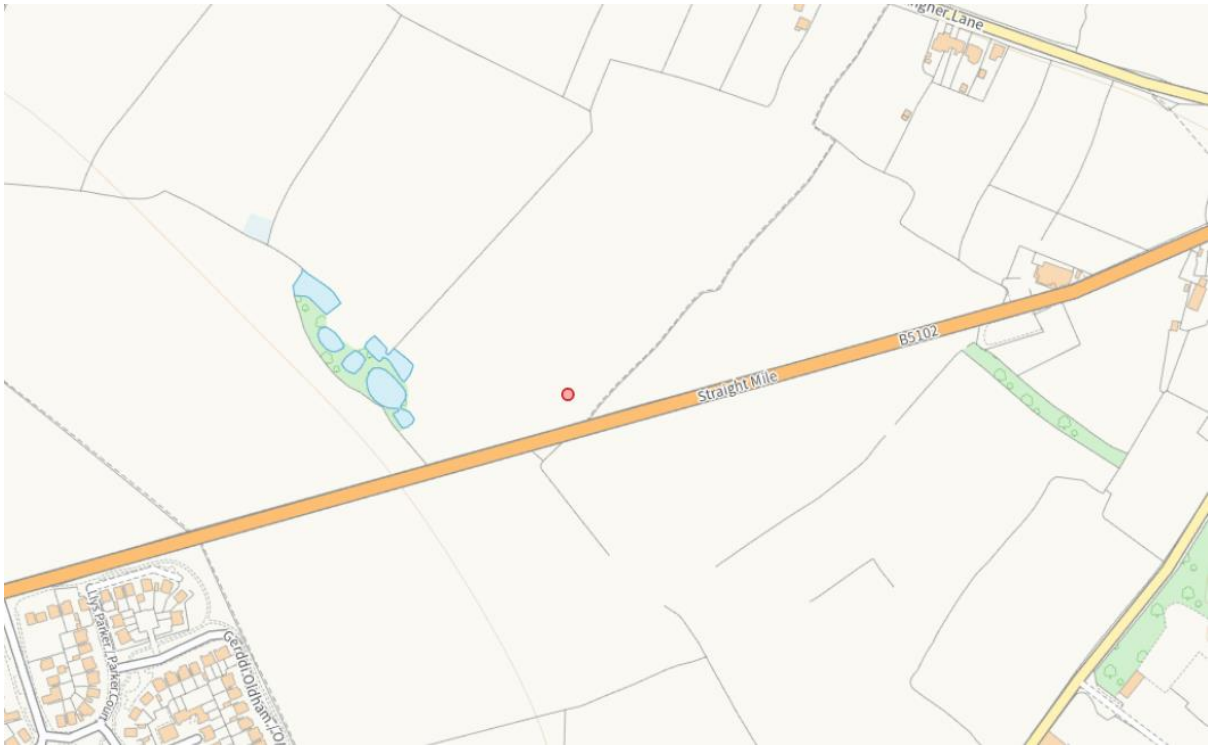
There are opportunities for wildlife enhancement to build upon those already underway from the previous farm shop development. The proposed new habitats will strengthen what is already present and extend the core wildlife habitat area around the farm shop and nearby ponds, it will create a link between two hedgerows.

Biodiversity Net Gain will be delivered by the creation of:

- 0.25ha of wildflower meadow
- Enhancement of 270m of native hedgerow from poor condition to good condition species rich hedgerow
- Planting of 10 trees
- Provision of 4 bird boxes and 4 bat boxes

# Maps

## Map 1: Location Plan



# Map 2a: Location of Habitat Features



Map 2b: Google earth view location of Habitat Features



## Map 3a: Proposed New Habitat



Map 3b: Google earth proposed New Habitat



# Photographs

| | |
|---|---|
| Photo 1<br><br>Current maize stubble |  |
| Photo 2<br><br>Current field edge where car park will be |  |

| | | |
|---|---|---|
| Photo 3<br><br>Adjacent hedgerow | |  |
| Photo 4<br><br>Adjacent hedgerow showing overgrown sections and gaps | |  |

| | |
|---|---|
| Photo 5<br><br>Gapping up proposed in all gaps along its length |  |
| Photo 6<br><br>Tree planting proposed where there is room. Crab Apple, Field Maple and Rowan |  |

| | | |
|---|---|---|
| Photo 7<br><br>Proposed location of 24m wide wildflower strip to adjoin that already established as part of the farm shop application |  | |

# Management Prescriptions

| Habitat | Species Mix | Management Task | Timings |
|---|---|---|---|
| **Native species rich hedgerow**<br><br>40m of gap to gap up | **240 plants**<br><br>20% blackthorn<br><br>20% hazel<br><br>20% dogrose<br><br>20% guelder rose<br><br>20% field maple<br><br>Ensure UK provenance stock us used.<br><br>Suggested supplier:<br>Prees Heath Forest Nurseries<br>Mill Lane, Higher Heath, Whitchurch, SY13 2HR<br><br>01948 841353 | **Preparation:** Clear area of vegetation for a 45cm wide strip along the gaps, coppice the overgrown elder and hawthorn if it is one stem with space either side<br><br>**Planting:** Plant 60-80cm bare rooted whips in a double staggered row at 6 plants/m. Group plants in clumps of 4-5 and have 5 different groups of the same plant every 30m to ensure species diversity along its whole length<br><br>**Protection:** Use 60cm spirals to protect the plants from rabbits and voles<br><br>**Weed control:** Use a wood chip mulch around the plants to supress surrounding vegetation<br><br>**Year 1 and 2:** Assess plants and replace any that have not established on a like to like basis.<br><br>Ensure grass growth is not out competing the plants.<br><br>**Year 3:** By now the plants should have established and growing well. Assess of spirals can be removed. | Feb-March 2025<br><br>March 2025<br><br>Jan 2026 & 2027<br><br>Jan 2028 |

| | | | |
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| **New individual trees** | **10 individual trees**<br><br>4 x crab apple<br>3 x field maple<br>3 x rowan<br><br>Supplier Prees Heath Forest Nurseries as above. | **Preparation:** Clear area of vegetation for a 50cm around the tree<br><br>**Planting:** Plant 1m + bare rooted tree<br><br>**Protection:** Use 1.2m tree tube and stake to protect the tree from rabbits and voles<br><br>**Weed control:** Use a wood chip mulch around the trees to supress surrounding vegetation<br><br>**Year 1 and 2:** Assess plants and replace any that have not established on a like to like basis.<br><br>Ensure grass growth is not out competing the plants.<br><br>**Year 3:** By now the plants should have established and growing well. Assess and remove tree rube. | Feb-March 2025<br><br>March 2025<br><br>Jan 2026 & 2027<br><br>Jan 2028 |
| **Wildflower Meadow** | **Emorsgate EM2 General Purpose Meadow Mixture**<br>Forbs (15%): yarrow, agrimony, knapweed, wild carrot, ladies bedstraw, field scabious, medow vetchling, oxeye daisy, musk mallow, ribwort plantain, salad burnet, cowslip, self heal and meadow buttercup<br><br>Grasses (85%%): common bent (9%), crested dogstail (31.50%), red fescue (27%), smaller cat's-tail (4.50%), smooth-stalked meadow grass (18%) | **Preparation**<br><br>A deep plough will bury nutrient rich topsoil and bring nutrient poor subsoil to surface. Prior to sowing the seed mix, the ground will need to be prepared by cultivation to create a find seedbed for sowing of the wildflower seed, weeds will be allowed to germinate and be sprayed off with a herbicide before sowing.<br><br>Once the seed bed is weed free and a medium tilth the wildflower seed will be broadcast and rolled.<br><br>1st Year Management<br><br>It is expected in the first year following sowing that the slower-growing perennials will not establish and it is more likely that | April 2025<br><br>August 2025 |

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| | Yellow rattle to be added at rate of 1g/$m^2$<br><br>Suggested Supplier:<br>EMORSGATE SEEDS<br>Neeps Bridge Farm<br>Middle Drove<br>Wisbech<br>Cambridgeshire<br>PE14 8JT<br>Call: **01553 829028**<br>Email: **enquiries@emorsgateseeds.com**<br>https://wildseed.co.uk/ | the faster growing grasses and weed species will establish first. This will be controlled via regular monthly cuts in the following growing season.<br><br>Once established, the grassland will be subject to a traditional meadow cut comprising a late summer hay cut in August once species have had opportunity to flower and set seed.<br><br>Do not top and leave toppings as this will increase the nutrients of the meadow, arisings must be baled and removed. | Summer 2026<br><br>Ongoing |
| **Bird boxes** | Suggested Supplier:<br>NHBS<br>01803 865913<br>E-mail:<br>customer.services@nhbs.com<br>Address:<br>NHBS Ltd<br>1-6 The Stables, Ford Road<br>Totnes<br>Devon<br>TQ9 5LE<br>UK<br><br>**https://www.nhbs.com/** | 2 x 1FF Schwegler Bat Box With Built-in Wooden Rear Panel<br><br>2 x 2F Schwegler Bat Box (General Purpose)<br><br>2 x 2GR Schwegler Nest Box 3-hole 27mm hole.<br><br>2 x 2GR Schwegler Nest Box Oval 30x45mm hole.<br><br>The bat boxes will be fixed 3-6 metres above ground level, have a clear flight line to/from the entrance and situated within a sheltered, preferably south facing tree along the adjacent hedge.<br><br>The bird boxes are to be located on mature trees in the existing hedge adjacent to the site. | |

# Delivery of the Habitat Enhancement

Mr A Jones will be the body responsible for the delivery of the habitat improvement. It will be the responsibility of Mr Jones and their appointed contractors to deliver the practical measures detailed in this plan i.e. ground preparation, planting and ongoing management. It will be Mr Jones's overall responsibility to ensure the prescriptions detailed in this management plan are delivered, and any remedial actions arranged and delivered.