



Land at Clywedog Rd North (Site 4) Wrexham Industrial Estate

Outline Habitat Management Plan

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CONTENTS

1	Introduction.....	2
1.1	Background	2
1.2	Habitat and Wildlife Summary	2
1.2.1	Habitats	2
1.2.2	Key Species	3
2	Outline Habitat Management Plan	5
2.1	Overview	5
2.1.1	Development Proposals	5
2.1.2	Mitigation Plan Aims	5
2.1.3	Management Plan Delivery	5
2.2	Proposals.....	6
2.2.1	Overview	6
2.2.2	Proposed Mitigation Area	6
2.2.3	Initial Habitat Preparation/ Habitat Creation	7
2.2.4	Habitat Management	8
2.2.5	Bat and Bird Boxes.....	9
2.2.6	Wardening, Monitoring and Reporting	9
2.2.7	Wider Habitat Management Strategy	10
3	Appendix.....	11

1 Introduction

1.1 Background

Kingdom Ecology have produced an Outline Habitat Management Plan to support the proposed development of 'Site 4' which is an approximate 1.1ha area of land located at the corner of Clywedog Road East and Clywedog Road North at Wrexham Industrial Estate, LL13 9XE (Ordnance Survey Grid Reference SJ 374 493).

This document identifies areas of land that will be subject to long term management to promote their biodiversity value and provides outline prescriptions for management of these habitats.

FI-REM own several sites at the Wrexham Industrial Estate. They are currently exploring options to develop some of these sites and to manage other sites exclusively for conservation benefit. Within this wider development plan, the development site concerned within this Management Plan is known as Site 4. An adjacent area of woodland which is also discussed within this Plan and which would be managed for its conservation benefit, is known as Site 1.

Figure 1 in the Appendix shows the Site locations.

This management plan includes proposals associated with these specific sites and also shows how these will tie-in with a wider strategy of long-term habitat management proposals to be located throughout the south western quarter of the industrial estate within other areas of FI-REM owned land. This wider strategic plan is shown on Figure 4 in the Appendix.

The outline recommendations within this document should be used to inform the preparation of detailed management prescriptions and method statements to support any future development of Site 4.

1.2 Habitat and Wildlife Summary

1.2.1 Habitats

An initial desk study and an Extended Phase 1 Habitat Survey of Site 4 was carried out on the 12th June 2017. Further surveys comprising of botanical, butterfly, bat, breeding bird and reptile surveys were completed in Spring/Summer 2018.

A walkover survey of woodland habitats within Site 1 was carried out in January 2018.

To summarise, Site 4 comprises of an area of grassland habitat that has undergone limited management over recent years.

The initial 2017 surveys recorded a range of successional habitats including areas of coarse semi-improved grassland which grades into areas of tall herb community, bramble scrub and hawthorn scrub. The site appears to be irregularly mowed/flailed during the late winter/early spring.

It was observed in May 2018, that all scrub and grassland habitats had been recently cut back with a tractor mower. However, by late summer, dense bramble scrub had returned to recolonise the previously identified areas of bramble/hawthorn scrub with the remainder of the site returning to typical tall, coarse grass and herb habitat.

There is a band of broadleaved woodland which runs along the south-eastern boundary of the site. The woodland is located either side of a watercourse. The woodland continues into Site 1.

The woodland and watercourse form part of a more-or-less unbroken corridor of semi-natural vegetation which runs from the southwestern edge of the Industrial Estate, through the estate itself, before joining Redwither Brook approximately 500m to the east of the site. Redwither Brook eventually flows into the River Clywedog at the south-eastern edge of the Industrial Estate.

The woodland and its associated watercourse is likely to function as a wildlife corridor through the industrial estate.

The scrub and grassland habitats present are of low botanical interest and are commonly occurring throughout the UK within similar neglected agricultural and industrial sites.

The woodland is also of considered to be of relatively low botanical interest, however owing to its function as one of the main wildlife corridors through the Industrial Estate, the woodland is considered to be a feature of locally important biodiversity value.

Mixed broadleaved woodland is listed under Section 7 of the Environment (Wales) Act 2016 as a habitat of 'principal importance' in Wales.

Further surrounding landuses largely comprise of industrial units with associated areas of hardstanding and patches of amenity grassland.

1.2.2 Key Species

Targeted protected species surveys were completed at Site 4 during the 2018 field season to determine the likely presence/absence of and importance of the site for breeding birds, bats, reptiles and notable butterflies.

Moderate numbers of common bird species were recorded at the site, with most birds recorded within the woodland and along the woodland edge habitats.

Bat activity surveys identified the site as supporting relatively low numbers of common bat species. Bats were generally encountered individually either commuting along or foraging over the woodland habitats.

No reptiles or notable butterfly species were identified at the site.

2 Outline Habitat Management Plan

2.1 Overview

2.1.1 Development Proposals

Within Site 4, development proposals are to construct several small industrial units with associated areas of hardstanding plus a SUDS attenuation pond. This will result in the loss of approximately 1.86ha of species-poor, semi-improved grassland and scrub habitats. The proposed development would include the retention of a 0.66ha area of land which would be managed principally for its conservation benefit. This land currently comprises of broadleaved woodland along the site's south eastern boundary plus areas of rough grassland and bramble scrub.

A further adjacent area of habitat located within Site 1 would also be managed for its conservation benefit. The area of land comprises of an approximately 0.8ha of woodland habitat that comprises of the continuation of the woodland and watercourse habitats that run along the site's south eastern boundary.

The locations of the two sites are shown on Figure 1 in the Appendix.

2.1.2 Mitigation Plan Aims

The habitat management plan for Site 4 and the adjacent woodland habitat within Site 1 has been designed around the following key principles and aims:-

- Where possible, retain blocks of interlinked habitat as opposed to isolated pockets of habitat;
- Maximise the biodiversity value of retained habitats at the site;
- Ensure the long-term viability of the habitat by appropriate, long-term management and long-term protection of the habitat;
- Allow for a flexible and iterative process with regards to the management of the habitats through an annual review of the habitats present and the management plan to allow biodiversity opportunities to be explored and promoted.

2.1.3 Management Plan Delivery

FI-REM will make provision to allow the appointment of an appropriate managing organisation who will be responsible for the maintenance and management of the FI-REM owned habitat compensation areas across the Wrexham Industrial Estate. The detail of this will be arranged at an appropriate stage in the future.

Detail on areas of habitat creation, management prescriptions and timetabling would be provided within detailed Habitat Management Method Statements to be produced at a later stage.

Funding for the ongoing management of the site would be secured ideally through a unilateral undertaking. The amount paid would need to take account of the following:-

- Initial habitat preparation and creation
- Ongoing management and maintenance over a 20 year period
- Wardening and monitoring of the site
- Production of an annual report for the site
- A contingency fund to allow for any modifications to the habitat management plan or ad-hoc remediation works

2.2 Proposals

2.2.1 Overview

Habitats Management proposals for Site 4 will aim to maintain the wildlife corridor that runs along the south eastern boundary of the site and where it continues on up to Coed Aben Road through Site 1.

Habitat management proposals will also aim to enhance the biodiversity value of the development site through the management of grassland, scrub and woodland habitats and through design of a proposed SUDS pond to be of benefit to wildlife.

There are further recommendations to provide a bat and bird box scheme within woodland habitats.

Proposed habitat management prescriptions are shown on Figure 2 in the Appendix.

2.2.2 Proposed Mitigation Area

The proposed mitigation area for Site 4 is located along the south eastern boundary of the site. Habitats present principally comprise of broadleaved woodland. Adjacent to the woodland, habitats comprise of patches of continuous scrub dominated by bramble with occasional nettle, great willowherb, broadleaved willowherb, teasel and hogweed.

The woodland habitats comprise mostly of young/semi-mature self-seeded hawthorn, sycamore, hazel, elder and ash with occasional mature white poplar which are likely to be of plantation origin.

The woodland field layer comprises principally of ivy with dog's mercury plus occasional wood avens, herb Robert, male fern, wood meadow-grass and hairy wood-rush.

There is a small watercourse that flows through the woodland and which joins Redwither Brook approximately 500m to the east of the site.

The proposed woodland management area extends into Site 1, continuing in a north-easterly direction until it joins Coed Aben Road. This extension of the woodland is also under FI-REM's ownership.

This woodland continues along the described watercourse. The woodland supports some mature oak trees with young willow, hawthorn, ash, sycamore and hazel.

Both woodlands are unmanaged and consequently dense and scrubby in parts.

2.2.3 Initial Habitat Preparation/ Habitat Creation

Proposals within the mitigation area will include:-

- Design of a SUDS pond to be of benefit to wildlife
- Restoration of grassland habitats
- Management of grassland, scrub and woodland habitat
- Implementation of a bat and bird box scheme

Areas for different habitat management prescriptions are shown on Figures 2 and 3 in the Appendix.

It is recommended that an Ecological Clerk of Works (EcOW) is appointed to produce detailed Method Statements for the initial habitat creation works and to oversee and advise on sensitive stages of the initial ground works.

Areas proposed for habitat creation/ management should be temporarily fenced off from the remainder of the construction site by the EcOW to prevent encroachment by construction vehicles and damage to habitats.

The proposed SUDS pond will measure approximately 600m² in area. The pond should have gently sloping sides that allow fauna to easily move between the terrestrial and aquatic habitats and to encourage a 'draw-down' zone at the pond margin which will be seasonally wet. These marginal habitats can be of value to invertebrates and aquatic vegetation. The pond should have an irregular shape to increase the length of pond margin habitat.

The pond should be planted up with appropriate marginal vegetation (to be determined by an ecologist). Marginal planting should be located around the northern edge of the pond to limit over-shading.

The non-wooded habitats surrounding the pond should be re-seeded with an appropriate wildflower mix (e.g. Emorsgate Seeds EM3).

The ground will need to be appropriately prepared- wild flower grassland requires a high-quality tilth. Any compacted soils will need to be broken up, at least in the upper horizon, using a power harrow or equivalent. Cultivation is best carried out in dry conditions during the summer with the grassland seed sown in late summer/early autumn.

Areas identified for scrub habitat management will be left to naturally succeed to thorny scrub. Given their location adjacent to the existing woodland, it is likely that bramble and other woody scrubby will quickly colonise these areas.

2.2.4 Habitat Management

Habitat management at Sites 1 and 4 should seek to encourage a diverse range of habitats.

This will be achieved within grassland habitats through the maintenance of low nutrient soils, through the control of scrub encroachment and by careful timing of cuts to allow grasses and herbs to flower and set seed.

No fertiliser should be applied to the mitigation grasslands.

The grassland habitats at the site should be mown just once a year, with the cut carried out September/October. This mowing regime will maintain a relatively tall sward of coarse grasses whilst preventing scrub encroachment.

Following mowing, all arisings must be removed from the site.

The biodiversity value of the woodland and scrub habitats should be enhanced.

To increase the value of woodland habitats it is recommended that it is thinned out and that any higher value trees are encouraged to come through. This can be achieved through 'haloing' (haloing involves the felling and pruning back of surrounding low-value trees and scrub so that they do not shade out and stunt the development of the more valuable adjoining trees). The thinning out of the woodland should allow more light through to the field layer potentially enhancing conditions for woodland ground flora.

Thinning of the woodland should be completed once every 10 years.

Some log piles and areas of dead wood should be retained within the woodland to provide additional habitat for invertebrates.

Scrub habitats at the site should be cut back on a 10 year rotation. With half the scrub cleared in years 1 and 10 the other half in years 5 and 15. Hawthorn and blackthorn scrub can be rich in insects and birds in the early and middle stages of growth. This cycle of cutting will retain early stage scrub habitats.

Intermittent management and control of vegetation within the SUDS pond may be required on a 3-5 year basis. The pond should be managed to retain at least 30% open water.

Any invasive aquatic plant species should be monitored and treated as appropriate to prevent colonisation of the pond.

If water levels within the deepest part of the pond fall regularly below 500mm, de-silting of the pond should be carried out by a long-armed excavator. Where possible this should be carried out from one entry point to limit disturbance to the pond and adjacent habitats. These works would ideally be carried out over the winter months.

Annual monitoring of the site will be undertaken to assess the success of the management regimes. The ecologist will also determine whether any pond and scrub maintenance is required.

Management of habitats should be carried out for at least 20 years, following the completion of construction.

2.2.5 Bat and Bird Boxes

A bat and bird scheme should be implemented within woodland habitats.

It is recommended that the following models and numbers of bat and bird boxes are installed on mature trees at Sites 1 and 4:-

- 16 x Schwegler 1B Bird boxes with 32mm entrances
- 8 x Schwegler 1B Bird boxes with 26mm entrances
- 16 x Schwegler 1FS Bat boxes
- 8 Schwegler 2FN Bat boxes
- 4 x Schwegler 2FN Bat boxes

Bat boxes should be positioned to face in a more-or-less southerly direction; should be located at a minimum height of 4m and should be located so that flight lines to the bat box are not obstructed by vegetation.

Bird boxes should be located at a minimum height of 3m and should be positioned in a sheltered location.

2.2.6 Wardening, Monitoring and Reporting

Land at Wrexham Industrial Estate can suffer some anti-social behaviour including fly tipping, unauthorised use of off-road vehicles and use of land by unauthorised gypsy and traveller encampments.

The Ecology Areas are set back from the road and located behind the proposed and existing industrial units. Consequently, vehicular access is restricted and the risk of the described undesirable activities are considered to be low.

Nevertheless, some infrequent wardening of the site should be carried out at least once every three months.

Where identified during wardening visits, remediation works should be promptly carried out at each site. This could include, clearance of fly-tipped debris, litter picking etc including from within the pond.

Monitoring of the site should be carried out annually during the summer to assess the success of the habitat management plan, to allow for any refinement of management practices and to check on the integrity of bat and bird boxes. The monitoring works should be completed by an appropriately qualified ecologist.

An annual monitoring report with management recommendations (where relevant) would be produced and submitted to the council.

2.2.7 Wider Habitat Management Strategy

A wider habitat management strategy has been produced for other areas of FI-REM land located around the southwest corner of the industrial estate.

This wider plan aims to provide inter-connected blocks of semi-natural habitat that are managed to maximise their biodiversity value.

Where possible, areas of land have been allocated where they adjoin other patches of semi-natural habitat both outside and inside of FI-REM's ownership, to provide large continuous blocks of valuable wildlife habitat.

This wider management strategy will include areas of managed woodland and managed grassland habitats. Bat and bird boxes will also be installed within the managed woodland habitats.

The habitat management areas associated with Sites 1 and 4 will form part of a continuous block of broadleaved woodland which runs through the Industrial Estate. The appropriate management of this woodland plus adjacent habitats will therefore contribute towards the wider Habitat Management Strategy.

Figure 4 in the Appendix shows the proposed layout of the wider habitat management strategy along with proposed habitat types to be managed.

3 Appendix







