

Wrexham Industrial Estate Plot C4

Abenbury Way- Ecology and Landscape

1 Introduction

This report summarises the baseline conditions of Plot C4, Wrexham Industrial Estate, with respect to ecology and landscape issues, assesses the likely impacts arising from the proposed development, and identifies appropriate mitigation measures.

2 Ecology

2.1 General

An Extended Phase 1 Habitat Survey of the site was carried out by J W Ecological Ltd in June 2013, which identified the existing habitats and potential protected species. See Appendix A. The findings of that survey and subsequent work are briefly summarised below.

2.2 Habitats

There are a number of habitats and species on site that would be affected by the development proposals. The majority of the site area is semi-improved neutral grassland, which as well as having its own value provides habitat for invertebrates and amphibians. The woodland and watercourse situated to the southern end of the development have significant value for wildlife and as wildlife corridors. A band of dense scrub runs through the site whilst a native hedgerow marks its northern boundary.

2.3 Great Crested Newts

Great Crested Newts have been recorded in a pond 20m north-west of the site, with terrestrial habitat on site (semi-improved grassland, scrub and woodland) providing suitable refuge and foraging areas. This is within the context of a known metapopulation within and around the Wrexham Industrial Estate. Consequently connectivity across the wider area is a key consideration and has been assessed in this case through a high resolution GCN model created and managed by The Amphibian and Reptile Conservation Trust (ARC). The first step in the assessment was the consideration of the baseline condition across the Industrial Estate, as the study area, and in relation to the proposed development area, the site.

The majority of the GCN ponds (nodes) are situated on the eastern side of the study site, closest to the bounds of the Industrial Estate. The ponds are densely distributed to the middle of the study area, with decreasing numbers present to the north and the south of the industrial estate. A small number of poorly connected/isolated ponds lie to the west of the development site. There are numerous good links between the ponds to the east, with a few tenuous links between a small cluster to the south west and the main cluster area. There are only two low importance links which cross the proposed development area.

2.4 Bats

There are a number of features onsite and adjacent, including mature trees that have the potential to support roosting sites. There are a small amount of trees which were classed as Category 1 and 2 for potential, these trees should be retained where possible. There are trees situated in the woodland area on the southern site boundary, which are classed as category 2 and mature oak and ash trees on the north-west and east site boundary which are classed as Category 1 and 2 respectively. Bat commuting and foraging areas also extend to the southern and western boundaries of the site

2.5 Reptiles:

There are several different habitat types on site, mainly the semi-improved grassland and scrub which have suitability for foraging and refuge areas for common species, which include slow worm and grass snake.

2.6 Birds:

Trees and scrub vegetation on site and in adjacent habitats provides nesting areas for birds. Ground nesting birds could also use the site as suitable habitat.

2.7 Badgers:

Evidence of Badgers was identified through badger paths which entered on the west side of the site and passed through the woodland on the southern boundary of the site, which provides a movement corridor.

2.8 Impacts of Development:

The proposed scheme would result in the development of 50% of the site area, and consequently in the loss of that proportion of the existing habitat. This would include the central band of dense scrub through the centre of the site and a large area of semi-improved neutral grassland. The woodland associated with the watercourse on the southwest boundary would be largely retained, as would the group of three mature oaks towards the southeast boundary. The existing hedgerow and trees on the northern boundary would be unaffected.

The ARC Model assessed the impact of the proposed development both without and with the proposed mitigation measures, summarised as follows:

Without Mitigation: There are two low importance links which cross the proposed development site, and only one of these will be lost as part of the development. No ponds will be lost as part of this and therefore there are no major impacts upon the network as part of the proposed site. The loss of this low importance link reduces the overall landscape value by 0.01%.

With Mitigation: Four ponds have been added to land adjacent to the building to the north/northwest. These form connections with the northeast cluster. Although a new connection has been made to the northeast, this does not replace the connection lost to the main node cluster to the east of the study site. This connection is lost due to the development, however with the addition of four new nodes to the network, which provides increased connectivity and therefore an increase in cohesiveness, an increase in overall landscape value of 4.5% is achieved.

Overall Assessment: The Modelling suggests that impacts on the GCN population through the development of the Abenbury Way C4 plot are minimal, with the loss of only one minor link which is of low importance for connectivity. Also no ponds are lost as part of this development, with four new ponds being created as part of the mitigation strategy ensuring that the development will more than adequately compensate for the loss of connectivity within the study area.

2.9 Ecological Mitigation:

See Drawing 2134/01D – Ecological Mitigation

The mitigation strategy for Plot C4 has been developed in order to mitigate for the habitat losses sustained by the onsite development, which predominantly affects Great Crested Newts and reptiles as well as birds and other wildlife. Grassland and scrub habitats would be lost as part of the development and therefore maintaining existing habitat and providing additional aquatic and terrestrial habitat is a key feature of the strategy. The site habitats would be enhanced through proposed planting of native species- scrub vegetation surrounding the borders of the plot which would improve connectivity and wildlife corridors throughout the site and with adjacent habitats.

A 1.8m high close-boarded fence to the west of the Service Yard would provide a 'dark zone' immediately behind this feature and will also ensure separation between the vegetated and developed areas. Lighting would also be kept minimal in order to provide 'dark zones' where possible for species such as Great Crested Newts and bats. Additional areas of brash/log piles and vegetated rubble piles will provide hibernacula for newts and reptiles, as well as basking areas on the south facing banks. Open water ponds to the north of the site, with a mix of marginal, aquatic and floating vegetation are a key feature for GCN and other amphibians that may be present on the site.

Improvements of onsite terrestrial habitat, including the creation of over seeded grassland to improve floral diversity, will ultimately provide enhanced foraging opportunities for birds and bats, through presence of a variety of insects and invertebrates. Root protection areas under the existing trees provide added security for retention of these features.

Additional mitigation would be provided in the form of a Great Crested Newt underpass to allow passage for GCN under the proposed car park access, thereby maintaining connectivity around and through the site. The adjacent woodland would include additional roosting sites in the form of bird and bat boxes.

A key element of the mitigation strategy would be the development of a Biodiversity Management Plan, to ensure that the site habitats are allowed to establish and mature for maximum biodiversity benefit, set against a series of defined objectives, and monitored through regular surveys and condition assessments.

3 Landscape

3.1 Trees

An arboricultural assessment was carried out by Jerry Ross in March 2014. The resulting Constraints Report is included in Appendix C.

The report assesses the Retention Category of the site trees, and notes that the most significant are a group of three oaks close to the frontage on Abenbury Way.

The proposed development scheme would result in the loss of a Category B Oak and a Category C Ash in the centre of the site, and loss of a small number of Category B Alders on the edge of the woodland to the west of the site.

The group of three Oaks (two Category A, one Category B) would be retained through careful positioning of the proposed car park and access outside their defined root protection areas (RPA). The car park levels would be determined to avoid impacts on the RPA, and would result in a small timber retaining wall along its northern edge. A no-dig construction approach would be adopted for the small area where car parking conflicts with the RPA, and for the proposed pedestrian path beneath the trees.

3.2 Landscape and Visual Impact

Within the context of the Industrial Estate the current site presents a 'green' space, with the three Oak trees having a significant visual impact on Abenbury Way, in combination with areas of scrub vegetation. The woodland along the southwest boundary provides a degree of visual separation from the adjacent industrial units, whilst the eastern boundary is very open, marked by only a security fence. The northern site boundary is more in character with the wider countryside context, adjacent fields and hedgerows.

The scheme proposal would retain the frontage oaks and provide a scrub hedge along the Abenbury Way boundary. Although including a security fence this treatment would maintain the vegetated character of the site, and would maintain the influence of the trees on the road corridor. Scrub planting would create a more defined and naturalistic eastern boundary, whilst the woodland associated with the western stream would be maintained.

The proposed building would be seen over and through the proposed and retained vegetation, but within the context of the Industrial Estate would not have a significant adverse landscape impact. The landscape and ecological measures in the site surroundings would provide a planted context and mitigate the effect of the building scale within the site.

The retention and enhancement of the ecological mitigation area north of the building would further mitigate any adverse landscape character effects on the adjacent countryside, particularly within the context of adjacent existing development.

Appendix A

Extended Phase 1 Habitat Survey

J W Ecological Ltd - June 2013

Appendix B

Great Crested Newt Model Report
Amphibian & Reptile Conservation
Trust – February 2014

Appendix C

Arboricultural Constraints Report

Jerry Ross – March 2014
