

**Liberty Properties Developments
Ltd - Wrexham**

Extended Phase 1 Survey

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1 Summary

- 1.1 The proposed development is a Roadside Service Area comprising a 150 cover pub restaurant, a drive through restaurant, a petrol filling station, a lorry rest area and associated car parking. It is proposed on an area of land on the north eastern edge of Wrexham, centred on National Grid Reference SJ35945179.
- 1.2 The development will include a pumping station to take foul water drainage from the Site to the main sewer. A series of gravel filled filter drains and infiltration basins will attenuate and treat surface water flows arising from the Site. The eastern edge is to undergo significant reinforcement planting and some other areas of the Site will be landscaped. The car park area will have occasional amenity trees planted as part of the landscaping design.
- 1.3 The Site is a rank grassland field with its boundaries delineated by a combination of recently planted hedgerows, defunct hedgerows with standard trees, and fence lines. The new hedgerows are recently planted and have yet to form a cohesive habitat.
- 1.4 BSG Ecology was commissioned to carry out an ecological assessment of the site. The aim of this study is to identify potential ecological constraints to the proposed work, detail further survey work that may be required, and make recommendations for mitigation measures and/or ecological enhancements, should they be required.
- 1.5 A Phase 1 habitat survey was carried out according to standard methods (JNCC 2010). During the survey, note was also taken of evidence of protected or otherwise notable species, or habitats that have the potential to support them. The survey was informed by a desk study of existing ecological data and consultation with Wrexham Council's ecologist. The Midlands Meres and Mosses Ramsar site is 2km north of the site, and this area of the multi-component RAMSAR Site is also designated as Vicarage Moss SSSI. In addition to this five locally-designated Local Wildlife Sites are present within a 2km radius of the Site, the closest of which, Borrass Bog, is located 0.6km north-west.
- 1.6 The Phase 1 survey did not identify any evidence of protected species. The site was stripped and used as a storage compound in 2011 and has re-vegetated since then. It was assessed as having some limited potential to support common species of reptiles. A small block of trees present outside of the site was found to contain features with potential to support roosting bats. Both reptiles and bats are referred to by Section 42 of the NERC act and protected under UK Legislation. Bats are further protected under European Legislation (see Appendix 4).
- 1.7 Numerous records of great crested newt (GCN) were returned in the data search undertaken, the closest GCN record being 45m from the site, south of the A534 in a gully pot. No other records of newts were returned for locations within 500m of the site. A single defunct pond was identified on the golf course adjacent to the site, but was dry and had not held water for some time. Two other ponds were identified within 500m of the site: one was found 230m north of the site on the golf course and was found to support large numbers of goldfish and was assessed as being unsuitable for GCN. The second pond identified is south of the A534 approximately 220m from the site. No access was possible to this pond. The A534 is between the site and the closet record and the closest potentially suitable pond. This busy road is considered to form a substantive barrier to newt movement.
- 1.8 The potential for GCN to be present it considered to be low. This was discussed with the Council ecologist and it was agreed in principle that further survey would not be required.
- 1.9 Development on the site could potentially give rise to negative impacts on common species of reptile, roosting bats in the adjacent trees and breeding birds. The tree on site has very little potential to support roosting bats.
- 1.10 A number of Risk Avoidance Measures (RAMs) to avoid impacts on roosting bats, breeding birds and common species of reptiles have been included in the report to prevent the development of the site from breaching wildlife legislation.
- 1.11 These measures include:

- A sensitive lighting scheme to avoid light spill on to the block of trees adjacent to the eastern boundary of the site. By avoiding light spill, disturbance of potential bats roosts will be avoided.
- Potential reptile refugia within the site should be searched and removed from the development footprint prior to works commencing, with refugia retained and placed on the eastern edge of the site which is going to be planted with trees. The rank grassland present on the site will be subject to a phased mowing program to displace any reptiles present on the site into the surrounding habitat.
- It is recommended that the tree to be lost to the development is removed outside of the breeding bird season or, if this is not possible, then after having been checked by an experience ecologist.

1.12 If the RAMS proposed above are implemented, then the proposed development is considered unlikely to have a significant negative impact on biodiversity or lead to a breach of wildlife legislation.

2 Introduction

Site Description

- 2.1 The Site is a field that was stripped, at least in part, and used as a storage compound in 2011. It is centred on National Grid Reference SJ35945179 and situated between Wrexham Golf Course to the east, and the A5156 which forms the western boundary of the Site. The A534 runs East to West just to the south of the southern edge of the Site. The Site is currently dominated by rank grassland and appears to be largely un-managed apart from occasional mowing. The north, western and southern boundaries are delineated by fences with the eastern boundary formed by a largely defunct hedgerow with standard trees. A new hedgerow has been recently planted around much of the field boundary but it has yet to form a cohesive habitat.
- 2.2 Figure 1 in Appendix 1 shows the boundaries of the Application Site.
- 2.3 The Site is on the edge of the built environment of Wrexham with residential housing occupying the land to the west of the Site. A golf course is present to the north and east of the Site beyond which lies agricultural land and a large gravel works. Agricultural land under arable and pastoral management is present to the south of the Site on the opposite side of the A534.

Description of Project

- 2.4 The proposed development on the Site is for Roadside Service Area that includes a 150 cover pub restaurant, a drive through restaurant, a petrol filling station, a lorry rest area all associated car parking. The development will include a pumping station to take foul water drainage from the Site to the main sewer. A series of gravel filled filter drains and infiltration basins will attenuate and treat surface water flows arising from the Site. The eastern edge is to undergo significant reinforcement planting and some other areas of the Site will be landscaped. The car park area will have occasional amenity trees planted as part of the landscaping design.

Aims of Study

- 2.5 The aim of this study is to identify potential ecological constraints to the proposed development, recommend further survey targeted work if required, and to make recommendations for mitigation measures, should they be required.

3 Methods

Consultation

- 3.1 Prior to visiting the Site, Wrexham Council's ecologist was consulted on the scheme and advice sought on protected species issues in the local area. Further consultation was undertaken on 12 December 2014 after the field work had been completed.

Desk Study

- 3.2 The desk-study involved a review of the following sources of contextual ecological information with the aim of informing the field survey and interpretation of results.
- 3.3 A desk study was undertaken for data held on species, statutory and non-statutory Sites by Cofnod, the Local Records Centre for North Wales. The search included an area extending to approximately 2km around the proposed development.
- 3.4 Statutory designated site information was obtained from the website www.magic.defra.gov.uk (accessed on 8th December 2014).
- 3.5 Aerial photographs from Google Earth and Ordnance Survey maps from <http://www.getamap.ordnancesurvey.co.uk> (accessed on 8th December 2014) were used to provide landscape context for the Site.

Field Survey

Phase 1 Habitat Survey

- 3.6 A Phase 1 habitat survey was carried out on 28 November 2016 in accordance with standard methodology (JNCC 2010). This involved walking the Site and mapping the habitats present using standard codes. The survey was extended to take note of any evidence of protected or otherwise notable species, or habitats that had the potential to support them. Figure 1 illustrates the results of the survey.

HSI Assessment

- 3.7 During the Phase 1 Survey, a Habitat Suitability Index (HSI) assessment (Oldham et al., 2000) of all ponds/water bodies identified through Ordnance Survey data and online aerial photography, within a 250m radius of the Site (where access was possible) was undertaken. Information on the physical features and characteristics of each pond was collected in order to allow a great crested newt (GCN) Habitat Suitability Index (HSI) score to be derived for each pond by applying the scoring system developed by the Herpetological Conservation Trust (HCT, 2008). The suitability index is calculated by allocating scores to features associated with each pond; these include features such as size, quality of surrounding habitat and presence of fish. These scores are then used to calculate the overall HSI for each pond as a number between 0 and 1, with 0 being the least suitable and 1 being the most suitable. The HSI score allows each pond to be placed in one of five categories defining its suitability for GCN as follows:

- <0.5 = poor
- 0.5 – 0.59 = below average
- 0.6 – 0.69 = average
- 0.7 – 0.79 = good
- >0.8 = excellent

Limitations to Methods

- 3.8 The survey was carried out outside of the optimum period for botanical survey (generally May – August inclusive) so it is possible that some species of plant could have been missed. However

given the nature of the Site's habitats (rank grassland developed on recently disturbed ground) it is not considered likely to be particularly species rich or to support any rare or notable plant species. The timing of the survey is therefore not considered to be a significant constraint to achieving the aims of the survey.

- 3.9 Access was not possible to a pond identified 220m south of the Site, as it is situated within private land. An assessment of the intervening habitats and connectivity to the Site was made from the public road and using aerial imagery.

4 Results and Interpretation

Consultation

- 4.1 Initial consultation with Emma Broad, the Wrexham County Borough Ecologist was undertaken before the Site was visited. During the initial discussion the local status of GCN, badger and otter was discussed.
- 4.2 After the Phase 1 survey had been undertaken and the Cofnod data search results had been received, a further discussion was held with Emma Broad on the 12 December 2014. During this discussion it was agreed in principle that GCN could be scoped out of further survey due to the presence of busy wide roads (the A5156 and the A534) which form substantive barriers to potential newt dispersal between the Site and the closest records and suitable ponds. Emma Broad also referred to the presence of solid concrete crash barriers in the centre of the road which strengthen this barrier effect.

Desk Study

Statutory Designated Sites

Midlands Meres and Mosses Ramsar site

- 4.3 Part of the multi-component Midlands Meres and Mosses Ramsar site is present 2km north of the site. The Meres and Mosses form a geographically diverse series of lowland open water and peatland sites in the north-west Midlands of England and north-east Wales. These have developed in natural depressions in the glacial drift left by receding ice sheets which formerly covered the Cheshire/Shropshire Plain. The wide range of resulting habitats support nationally important flora and fauna.

Vicarage Moss SSSI

- 4.4 The same site as above is also covered by a SSSI designation for its outstanding geomorphological interest as it supports the largest example of a basin mire in Clwyd.
- 4.5 The ecological interest of the SSSI relate to the mire vegetation communities and zoning patterns present within the basin Mire.

Non-statutory designated sites

Borras Bog Wildlife Site

- 4.6 Located 0.6km north-west of the site, Borras Bog covers a 1.96 ha area and supports unusual habitats for lowland Wrexham. The main feature is birch woodland with extensive rhododendron invasion of the understorey, growing over an acid *Sphagnum* bog. There is a small area of pond and marsh to the east of the site which supports the notable plant golden dock *Rumex maritimus* and nodding bur-marigold *Bidens cernua*.

Pant- Yr-Ochain Wildlife Site

- 4.7 Located 1.2km north-west of the site, Pant-Yr-Ochain is a multi-component site that covers 20.2 ha in total and is primary of interest for birds. Comprising a complex of ponds and lakes scattered between improved and semi-improved neutral grassland pastures. Some semi-natural woodland is present around the main lake and there are patches of wet alder/willow woodland and some marginal vegetation.

Cefn Park Wildlife Site

- 4.8 Cefn Park covers 11.3 ha and is located 1.5km south of the site. It comprises a series of broadleaved woodlands within the Cefn Park Estate. Typically dominated by ash with oak,

sycamore and an occasional mature wych elm, supporting a rich ground flora. Some wetter areas of woodland are also present along with an area of fen, dominated by common reed.

Vicarage Gorse Wildlife Site

- 4.9 A 3.28 ha woodland located 1.3km north of the site. Vicarage Gorse has had extensive planting of sycamore, conifers and poplars with occasional oak and birch. Supporting an understorey of hazel, hawthorn and holly and a species poor field layer dominated by bramble and bracken. On the western edge is a series of ponds which support GCN.

Borras Wood North Wildlife Site

- 4.10 Located 1.7km north east of the site this ancient woodland over marshy ground covers an area of 6.25 ha. The majority of the site has been planted up with poplars. Beneath this is a ground flora dominated by marshy species, including early purple orchid.

Records of notable and protected species

- 4.11 Extensive records were returned from Cofnod with numerous records returned for species of bird. Given the nature of the habitats present within the site these records have not been considered in depth as the opportunities for nesting are limited.
- 4.12 The most relevant results of the Cofnod data search have been summarised and are presented in Table 1 below.

Table 1: Summary of Important Species and Habitats

Species / Habitat	Location	Summary of relevant policy and legislation
Great crested newts	In excess of 50 records were returned for great crested newt. The closest was for newts trapped in a gully pot 45m south of the Site on the A534 in 2009. All other records were at least 750m distant from the Site.	Conservation Regulations 2010, Wildlife and Countryside Act 1981, Section 40/42 (NERC) species, Local BAP Species
Badger	26 records, the closest is 629 m from the Site	Local BAP Species
Grass snake	Four records, the closest 600 m north-east	Section 40/42 (NERC) species, Wildlife and Countryside Act 1981
Adder	Single record, 600m north-west	Section 40/42 (NERC) species, Wildlife and Countryside Act 1981
Water vole	Single records 830m north-east	Section 40/42 (NERC) species, Wildlife and Countryside Act 1981
Otter	Single record 1.5km east of Site	Conservation Regulations 2010, Wildlife and Countryside Act 1981, Section 40/42 (NERC) species, Local BAP Species

Aerial Imagery

- 4.13 Aerial imagery of the site and its immediate surrounds were assessed and a small pond not shown on OS maps was found to be present on the golf course. This pond was then assessed during the Phase 1 survey

Extended Phase 1 Survey

- 4.14 The Site was visited on 28 November 2014, by Niall Lusby CMIEEM, an ecologist with 8 years' experience of undertaking Phase 1 survey and ecological assessment. The weather conditions during the survey were mild, dry and clear.

Habitats

Rank neutral grassland

- 4.15 The field that forms the vast majority of the Site (TN1) has developed on land that has been subject to at least partial clearance and is dominated by a species-poor rank neutral grassland sward dominated by Yorkshire fog *Holcus lanatus* with occasional cocksfoot *Dactylis glomerata*. Tall fescue *Festuca arundinacea*, oxeye daisy *Leucanthemum vulgare* and common knapweed *Centaurea nigra* all occurred infrequently, with some ruderal species also present in the sward. Scrub species were present very rarely and where present displayed evidence of being mown, including broom *Cytisus scoparius* ssp *scoparius* and elder *Sambucus nigra*.

Recently planted hedgerows

- 4.16 The western boundary of the Site has been planted with a new hedgerow (TN2) in the last few years with the tree guards and weed barrier membrane still present and in sound condition. The trees are typically up to 1m tall though occasional larger trees have been planted which are up to 3m tall. A standard species mix has been used to plant the hedgerow with hazel *Corylus avellana*, hawthorn *Crataegus monogyna* and blackthorn *Prunus spinosa* dominating with maple species *Acer* sp., pedunculate oak *Quercus robur*, hornbeam *Carpinus betula*, holly *Ilex aquifolium* and a rose sp. *Rosa* sp.
- 4.17 A similar recently planted hedgerow is present on the Site's eastern boundary to the south of the block of trees (TN5).

Defunct hedgerows

- 4.18 A defunct hedgerow (TN4) is present on the Site's north-eastern boundary. This is made up of fragments of mature overstood hedge, scattered along the boundary with a post and wire running along the boundary also.

Mature Trees

- 4.19 A mature sycamore *Acer pseudoplatanus* (TN6) is present on the south-eastern boundary which has a diameter at breast height (DBH) of 1m. Several mature trees are present in the block of trees present along the Site's eastern boundary (TN5). These are predominantly crack willows *Salix fragilis* with very occasional alder *Alnus glutinosa*.

Defunct Pond

- 4.20 A shallow depression is present outside of the Site boundary (TN5), but adjacent to it. This depression appears to have been at one time a large pond. It is not shown on current OS base data as a pond (online data from <http://www.getamap.ordnancesurvey.co.uk/> at a 100m scale, accessed on 8th December) and was found to be dry at the time of the survey. The vegetation present in the base of the depression is suggestive of occasional inundation with creeping bent dominating *Agrostis stolonifera* with frequent patches of reed canary grass *Phalaris arundinacea*. Also occurring rarely were soft rush *Juncus effusus* and pendulous sedge *Carex pendula*.
- 4.21 The presence of creeping bent as the dominant vegetation in the base of the pond is typical of areas subject to occasional inundation, as is the presence of reed canary grass. Both of these species tolerate occasional inundation very well, but do not cope with long term flooding.

Golf Course

- 4.22 Adjacent to the Site's northern and eastern boundary is a golf course (TN3). The golf course is dominated by tightly mown amenity grassland with occasional stands of trees and areas of longer grassland and scrub.

Protected Species

Badger

- 4.23 No evidence of the presence of badger was recorded during the Phase 1 survey undertaken on the Site. All areas of the Site were fully walked and no areas were constrained by impenetrable vegetation or other limiting factors.
- 4.24 Given the lack of evidence of this species recorded during the Phase 1 survey, it is not considered further in this report.

Bats

- 4.25 There are no buildings present within the Site.
- 4.26 The north-eastern corner of the Site is bounded by an area of mature trees that fringe a defunct pond (TN5). These trees (which are off Site) are mostly crack willow but some alder is also present. Several of the crack willows have become over-mature and have subsequently collapsed, resulting in longitudinal splits and tear outs which offer potential for roosting bats.
- 4.27 A large sycamore (TN6) is present outside of this area. This was not found to support any features suitable for use by roosting bats such as rot holes or thick plates of ivy, etc.
- 4.28 The Site itself is assessed as being of limited value for foraging bats, with no strong linear features as typically favoured by many bat species for commuting, and which provide connecting habitat with the wider landscape. The Site's habitats are homogenous and the small size of the Site means that it would not form a significant part of any bat's feeding territory. This is further reinforced by the presence of a lit roundabout on the Site's south-western corner with the lighting spilling over a significant proportion of the Site which is likely to deter more light sensitive species of bat from utilising the Site.

Breeding birds

- 4.29 The grassland and hedgerow on the Site's margins have limited potential to support the nests of common species of bird.

Great crested newt

- 4.30 During the Phase 1 survey a single pond was identified adjacent to the Site's eastern boundary, within an area of trees on the golf course. The pond was dry at the time of survey with grass growing in its base. Photographs received from the client taken in early spring, show that the base of the pond was holding water to an approximate depth of 5cm.
- 4.31 The presence of a grass sward in the pond's base and the lack of water during the winter months (and with only a small amount present in the photos provided by the client) suggest that this pond is defunct and no longer holds water for more than a few days at a time.
- 4.32 Two other ponds were identified within 500m of the Site boundary. Of these only one was accessible (viewed from a public footpath that crosses the golf course). This pond is 230 metres north of the Site boundary and is a small pond stocked with large numbers of goldfish. The second pond was in an area of private farmland and could not be accessed. Details of the HSI survey are provided in Table 2 below. Both ponds are assessed as being Poor in terms of their potential to support GCN.

Otter

- 4.33 No evidence of the presence of otter was recorded during the survey. The Site's habitats have been assessed as being of low value for this species due to the lack of hydrological features and the presence of busy roads to the west and south and the well-used golf course to the north and east.
- 4.34 Given the lack of evidence of this species recorded during the Phase 1 survey, it is not considered further in this report.

Reptiles

- 4.35 The rank grassland sward present within the Site offers some potential to support common species of reptile.
- 4.36 A small rubble pile (TN7) was identified during the Phase 1 survey that has potential to be used as a hibernacula for this species group.
- 4.37 Images viewed through Google Street View show that the Site was used as a compound for road works in 2011 during which time the Site was covered in hardcore and all suitable habitats for reptiles were lost.
- 4.38 Based on the Site's current habitats and historical use, it is considered possible that the Site might support very low numbers of common reptile species that may have colonised since the Site was used for a road works compound. The Site is also relatively isolated by the roads to the west and south and the tightly mown fairways of the golf course to the east and north.

Other species

- 4.39 The habitats on the Site have not been assessed as having potential to support other protected or notable species and none were recorded during the Phase 1 survey.

Habitat Suitability Index

The results of the HSI assessment are provided in Table 2 below.

Table 2 – Results of HSI Assessment

Pond	Location	HSI Score	HSI Category
Defunct pond	5m east of Site	0.49	Poor
Golf course Ponds	230m North of Site	0.43	Poor
Pond in farmland to south	220m south of Site	No access possible	unknown

5 Potential Impacts and Recommendations

Statutory Designated Sites

- 5.1 No statutory designated Sites will be affected by the proposed development due to the intervening distances and the nature of the proposed development.

Non-Statutory Designated Sites

- 5.2 No non-statutory designated Sites will be affected by the proposed development due to the intervening distances.

Habitats

Rank Grassland

- 5.3 The proposed development of the Site will result in the loss of all of the rank grassland within the Site. The rank grassland is not assessed as being of particular ecological value and this loss is not considered to be significant.

Mature Trees

- 5.4 A single mature tree will be lost to the proposed development. This tree is a semi-mature crack willow with a DBH of 35cm that has been pollarded at approximately 1m. It does not support any features suitable for use by bats.
- 5.5 The loss of this tree is not assessed as being significant.

Species

Bats

- 5.6 Bats and their roosts are fully protected under the Wildlife and Countryside act as well as being listed on Annex II of the Habitats Directive.
- 5.7 Some of the trees present around the dry pond were found to support features that could potentially be used by roosting bats. These trees will not be directly impacted by the development and the current proposals include reinforcement planting along this feature. It is possible that light from the development could impact these features. It is recommended that excessive light spill onto these features is avoided through careful design.
- 5.8 If measures are taken to avoid excessive light spill onto this area of the Site no adverse impacts on bats are anticipated if undertaken during the breeding bird season.

Breeding Birds

- 5.9 All species of bird are protected while breeding, under the provisions of the Wildlife and Countryside act 1981 (as amended).
- 5.10 The removal of a single tree during the proposed development has some limited potential to cause offences relating to breeding birds. Therefore it is recommended that this tree is removed outside of the breeding bird season. The breeding bird season runs from March to September inclusive. If it is not possible to remove the tree outside of this period then the tree should be checked beforehand by an experienced ecologist.

Great Crested Newt

- 5.11 GCN are fully protected under the Wildlife and Countryside act as well as being listed on Annex II of the Habitats Directive. This means this species and its habitat are fully protected under UK and European law.

- 5.12 The defunct pond adjacent to the Site is not assessed as being suitable to support this species as it no longer holds water for sufficient periods of time to allow successful breeding. The pond on the golf course is also assessed as being suboptimal for this species due to its small size and the high numbers of goldfish present. Both ponds were scored as being Poor in the HSI survey undertaken.
- 5.13 No access was possible to the pond to the south of the Site, so it was not possible to undertake a HSI assessment of this pond.
- 5.14 A record of juvenile GCN was returned in the data search undertaken, for a location approximately 45m south of the Site. The record related to 5 juveniles in a gully pot on the A354, it was supplied by a construction operative. No further verification details were supplied with the record. This record suggests that the pond to the south of the Site could support a breeding population of GCN.
- 5.15 Despite the proximity of the Site to this pond (approximately 220m), and the closest record being only 45m south of the Site, the A354 is a very busy road and it has high kerbs and gully pots which are known to trap newts of all species. The road is crossed by a culvert, but this culvert is very small (200mm) in diameter and is located on the south side of the road at 250m east of the Site, with the exit of the culvert being some 300m east of the Site. All of the previous factors combine to form what is likely to be an effective barrier to the dispersal of GCN. As a result the Site is not considered to offer terrestrial habitat for this species and the development is not considered likely to cause an impact on this species.

Reptiles

- 5.16 Reptiles are protected from intentional harm under the Wildlife and Countryside Act 1981 (as amended).
- 5.17 The isolation and historical use of the Site as a road works compound mean the Site is assessed as having low potential to support reptiles. Consequently a full presence / absence survey is considered unnecessary; instead a series of precautionary good practice Risk Avoidance Measures (RAMs) should be implemented prior to construction works taking place on the Site.
- 5.18 Any habitat capable of acting as a refugia should be removed and placed in the area of the Site that will be used for the reinforcement planting and waste water treatment and disposal system on the eastern edge of the Site. If any reptiles are found these should be moved to the same area. The field should then be sequentially mown, starting on the western edge of the Site, and working towards the area to be retained. The mowing should take place over several days with each cut getting lower each time until the grass length is tight to the ground.
- 5.19 These works should be undertaken during the active period for reptiles which runs between Spring to early Autumn.
- 5.20 All contractors undertaking this work should be briefed via a toolbox talk on the potential presence of reptiles and how to deal with them if encountered.

Recommended enhancements

- 5.21 Section 4 of Technical Advice Note 5 (TAN5) states that local authorities should seek to ensure developments identify ways to build nature conservation into the design of new schemes. The following proportionate elements are recommended for inclusion in the final design:
- It is recommended that any planting used in the scheme uses species of local provenance and that a diverse planting mix is used.
 - Any materials removed during the reptile works should be placed in retained areas of the Site to form habitat piles.

6 References

English Nature (2001). Great Crested Newt Mitigation Guidelines. English Nature.

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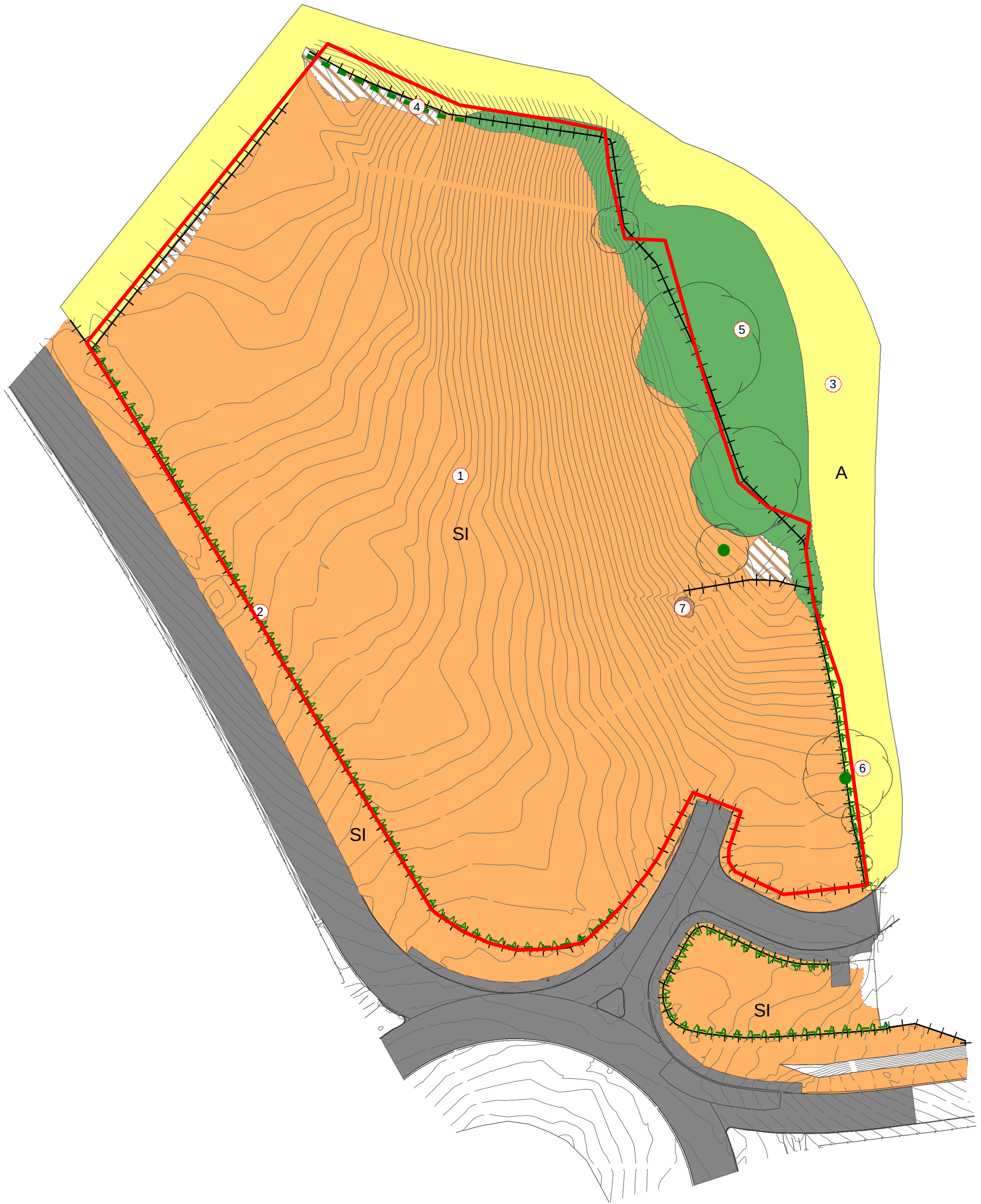
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Appendix 1: Figures

(overleaf)

V:\Contracts\Live Contracts\7901-8000\7928 Marstons Wrexham\Mapping\02 GIS\01 projects\7928_phase1_v2.mxd



BSG | ecology

OFFICE: Monmouth
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JOB REF: 7928.00

PROJECT TITLE
MARSTONS WREXHAM

DRAWING TITLE
Figure 1: Phase 1 Habitat Map

DATE: 24.05.2016

CHECKED: NB

SCALE: 1:850

DRAWN: COH

APPROVED: JG

STATUS: FINAL

LEGEND



Site boundary

①

Target note



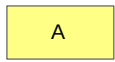
Broadleaved woodland



Semi-improved neutral grassland



Tall ruderal vegetation



Amenity grassland



Tarmac



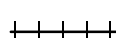
Individual tree



Species-rich defunct hedge



Species-poor defunct hedge



Fence

Appendix 2: Photographs



Photo 1: Rank grassland field



Photo 2: Recently planted hedgerow



Photo 3: Defunct pond



Photo 4: Tree to be lost to development



Photo 5: Piled up rubble that could act as a refugia for reptiles



Photo 6: Tree with bat potential

Appendix 3: Target Notes

1	Field with a 15cm long coarse sward dominated by Yorkshire fog <i>Holcus lanatus</i>, with abundant cocksfoot <i>Dactylis glomerata</i>, and occasional curled dock <i>Rumex crispus</i>, creeping thistle <i>Cirsium vulgare</i>, ribwort plantain <i>Plantago lanceolata</i>, common nettle <i>Urtica dioica</i>, cow parsley <i>Anthriscus sylvestris</i>, yarrow <i>Achillea millefolium</i>, creeping buttercup <i>Ranunculus repens</i>, meadow buttercup <i>Ranunculus arvensis</i>, mugwort <i>Artemisia vulgaris</i> and ragwort <i>Senecio vulgaris</i>. Tall fescue <i>Festuca arundinacea</i>, oxeye daisy <i>Leucanthemum vulgare</i> and common knapweed <i>Centaurea nigra</i> all occur infrequently. Scrub species are present very rarely with evidence of having been mown, including broom <i>Cytisus scoparius</i> ssp <i>scoparius</i> and elder <i>Sambucus nigra</i>.
2	Recently planted hedge with whips to 1m tall along a post and rail fence. With abundant hawthorn <i>Crataegus monogyna</i>, hazel <i>Corylus avellana</i>, blackthorn <i>Prunus spinosa</i>, with frequent holly <i>Ilex aquifolium</i>, and rose species <i>Rosa</i> sp. Occasional larger saplings are present, presumable intended to form standard trees, with pedunculate oak <i>Quercus robur</i>, hornbeam <i>Carpinus betulus</i>, alder sp. <i>Alnus</i> sp. and <i>Acer</i> sp.
3	Golf course with closely mown amenity grassland comprising of <i>poa</i> sp. and <i>fescue</i> sp. with very few broad leaved species apart from dandelion <i>Taraxacum officinalis</i> agg.
4	Defunct hedge line along a post and wire fence with occasional short sections of hedgerow with hawthorn, ash <i>Fraxinus excelsior</i>, elder and sycamore <i>Acer pseudoplatanus</i> present. But otherwise comprising ruderal species and bracken <i>Pteridium aquilinum</i> along the fence line.
5	Large pond, dry at the time of survey. Creeping bent <i>Agrostis stolonifera</i> dominates the base of the ponds with frequent small stands of reed canary grass <i>Phalaris arundinacea</i>, a few rarely occurring clumps of soft rush <i>Juncus effusus</i> and pendulous sedge <i>Carex pendula</i> are also present. The depression is fringed by mature crack willows <i>Salix fragilis</i> and occasional alder <i>Alnus glutinosa</i> several of which have large splits and raised root plates.
6	Mature sycamore tree with a 1m DBH, healthy with no apparent potential for bats but dense ivy obscures most of its larger limbs, the hedge line underneath the tree has been under planted with hawthorn whips.
7	Rubble pile with grass partially covering it that could act as a hibernacula for reptiles.

Appendix 4: Policy and Legislation

Legislation

European protected species - Bats

- 6.1 The Conservation of Habitats and Species Regulations 2010 consolidates the various amendments that have been made to the Regulations. The original (1994) Regulations transposed the EC Habitats Directive on the Conservation of Natural Habitats and of Wild Fauna and Flora (Council Directive 92/43/EEC) into national law.
- 6.2 “European protected species” (EPS) are those which are present on Schedule 2 of the Conservation of Habitats and Species Regulations 2010. Great crested newts, otter and all species of bats are included on the Schedule. They are subject to the provisions of Regulation 41 of those Regulations. All EPS are also protected under the Wildlife and Countryside Act 1981 (as amended). Taken together, these pieces of legislation make it an offence to:
- Intentionally or deliberately capture, injure or kill any wild animal included amongst these species.
 - Possess or control any live or dead specimens or any part of, or anything derived from a these species.
 - Deliberately disturb wild animals of any such species.
 - Deliberately take or destroy the eggs of such an animal.
 - Intentionally, deliberately or recklessly damage or destroy a breeding site or resting place of such an animal, or obstruct access to such a place.
- 6.3 Disturbance of animals includes in particular any disturbance which is likely
- to impair their ability a) to survive, to breed or reproduce, or to rear or nurture their young, or b) in the case of animals of a hibernating or migratory species, to hibernate or migrate;
 - or to affect significantly the local distribution or abundance of the species to which they belong.
- 6.4 Although the law provides strict protection to these species, it also allows this protection to be set aside (derogation) through the issuing of licences. The licences in Wales are currently determined by Natural Resources Wales (NRW) for development works. In accordance with the requirements of the Regulations (2010), a licence can only be issued where the following requirements are satisfied.
- The proposal is necessary ‘to preserve public health or public safety or other imperative reasons of overriding public interest including those of a social or economic nature and beneficial consequences of primary importance for the environment’.
 - ‘There is no satisfactory alternative’.
 - The proposals ‘will not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status in their natural range.’

Breeding birds

- 6.5 All nesting birds are protected under the Wildlife and Countryside Act 1981 (as amended) which makes it an offence to intentionally kill, injure or take any wild bird or take, damage or destroy its nest whilst in use or being built, or take or destroy its eggs. Those listed on Schedule 1 of the Act receive full protection. In addition to the protection from killing or taking that all birds, their nests and eggs have under the Act, Schedule 1 birds and their young must not be disturbed at the nest.

Common Reptiles

- 6.6 All species of British reptile are protected by the Wildlife and Countryside Act 1981 (as amended). The common species (adder, grass snake, slow worm and common lizard) are only protected against intentional killing and injuring (but not taking).

Policy**National Biodiversity Policy**

- 6.7 The UK Biodiversity Action Plan sets out the national strategy that has been developed to conserve native species and habitats (following commitments made at the 'Rio Earth Summit' in 1992). This has resulted in the production of action plans for the most threatened habitats and species. These plans set out the means to address and monitor species recovery.
- 6.8 The Natural Environment and Rural Communities (NERC) Act came into force on 1 October 2006. Section 40(1) of the Act placed a duty on every public authority, in exercising its functions, to "have regard, so far as is consistent with the proper exercise of those functions, to the purpose of conserving biodiversity". Section 41 of the Act required the Secretary of State, in consultation with Natural England, to publish, review, revise and act on lists of organisms of principal importance in the principality. This list is closely based on those species and habitats identified in the UK Biodiversity Action Plan.

TAN 5 Nature Conservation and Planning

- 6.9 Technical Advice Note (TAN) 5 supplements Planning Policy Wales and provides advice about how the land use planning system in Wales 'should contribute to protecting and enhancing biodiversity and geological conservation.'
- 6.10 The TAN provides guidance to local planning authorities on: 'the key principles of positive planning for nature conservation; nature conservation and Local Development Plans; nature conservation in development management procedures; development affecting protected internationally and nationally designated sites and habitats; and, development affecting protected and priority habitats and species.'
- 6.11 In section 2.4 when deciding planning applications that may affect nature conservation, 'local authorities should:
- contribute to the protection and improvement of the environment...seeking to avoid irreversible harmful effects on the natural environment;
 - ensure that appropriate weight is attached to designated sites of international, national and local importance;
 - protect wildlife and natural features in the wider environment, with appropriate weight attached to priority habitats and species in Biodiversity Action Plans;
 - ensure that all material considerations are taken into account and decisions are informed by adequate information about the potential effects of a development on nature conservation;
 - ensure that the range and population of protected species is sustained;
 - adopt a stepwise approach to avoid harm to nature conservation, minimise unavoidable harm by mitigation measures, offset residual harm by compensation measures and look for new opportunities to enhance nature conservation; where there may be significant harmful effects local planning authorities will need to be satisfied that any reasonable alternative sites that would result in less or no harm have been fully considered.'
- 6.12 Section 4 includes specific and detailed guidance, expanding on the principles set out in 2.4, in respect of the development control process including pre-application discussions, preparing planning applications, requests for further information and ecology in respect of Environmental

Impact Assessment (EIA). The broad principles of development control requirements are set out as follows:

- 'adopting the five-point approach to decision-making – information, avoidance, mitigation, compensation and new benefits;
- ensuring that planning applications are submitted with adequate information, using early negotiation, checklists, requiring ecological surveys and appropriate consultation;
- securing necessary measures to protect, enhance, mitigate and compensate through planning conditions and obligation;
- carrying out effective planning enforcement; and
- identifying ways to build nature conservation into the design of new development.'