



ETIVE ECOLOGY Ltd

**Land off Clywedog Road North,
Wrexham Industrial Estate
Proposed Industrial/Warehouse Unit
Preliminary Ecological Appraisal**

Produced for:



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CONTENTS

1	INTRODUCTION	1
1.1	The Scheme	1
1.2	Scope of this Report	1
2	METHODOLOGY	2
2.1	Desk Study	2
2.2	Extended Phase 1 Habitat Survey	2
2.3	Assessment of Ecological Value	3
2.4	Limitations	3
3	RESULTS	4
3.1	Desk Study	4
3.2	Extended Phase 1 Habitat Survey	5
3.3	Notable Species	8
3.4	Invasive Species	8
3.5	Key Ecological Receptors	9
4	DISCUSSION	10
4.1	Proposed Scheme	10
4.2	Likely Impacts	10
4.3	Recommendations	11
5	CONCLUSION	13
6	REFERENCES	14

APPENDIX A

Phase 1 Habitat Map
Proposed Development Layout

APPENDIX B

Site Photographs

Quality Assessment Record

Report Version	Written by	Date	Reviewed by	Date
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1 INTRODUCTION

1.1 The Scheme

- 1.1.1 Etive Ecology Ltd was commissioned by Caulmert Ltd to undertake an ecological appraisal of a plot of land off Clywedog Road North, Wrexham Industrial Estate. The application site is centred on National Grid References SJ 3741 4943.
- 1.1.2 The proposed scheme is to develop the site for an Industrial/Warehouse Unit. The landowner is looking to submit an application for full planning consent for the development and the scheme includes a new site access, parking and a new warehouse building.

1.2 Scope of this Report

- 1.2.1 The ecological appraisal of the proposed scheme is broadly based upon the *Guidelines for Preliminary Ecological Appraisal* (Chartered Institute of Ecology and Environmental Management, 2017).
- 1.2.2 The aim of the assessment is to obtain information on the existing ecological composition and value of the site, and to conduct a preliminary assessment of the likely significance of ecological impacts. To achieve this, the following steps were taken:
- The field survey area and the 'zone of influence' of the scheme, have been identified
 - A desk study has been undertaken, utilising freely available sources of information and previous studies in close proximity to the site.
 - Baseline information on the site and surrounding area has been recorded through an 'extended Phase 1 survey', including a Phase 1 habitat survey (JNCC 2010) and consideration of notable and/or protected habitats and species (IEA 1995)
 - The ecological features found to be present have been evaluated (CIEEM, 2019)
 - Invasive plant and animal species (such as those listed on Schedule 9 of the Wildlife & Countryside Act [WCA]) have been identified
 - Potential constraints to the proposed development and potentially significant ecological impacts have been identified
 - Recommendations for further survey have been made, where appropriate
 - Mitigation recommendations have been provided based on current information.
- 1.2.3 A Phase 1 Habitat Map of the survey area is presented in **Appendix A**. Target notes are marked on the Phase 1 Habitat Map and are used to link the report text to locations on site. Photographs taken during the survey are presented in **Appendix B**.

2 METHODOLOGY

2.1 Desk Study

2.1.1 A desk study was undertaken to identify any nature conservation sites within 1km of the site. The desk-based exercise also considered the potential for protected and/or notable species of fauna to be found within 1km of the site.

2.1.2 The following sources of information were utilized:

- MAGIC website (<http://www.magic.gov.uk/MagicMap.aspx>)
- Wrexham County Borough Council website (<http://www.wrexham.gov.uk>)
- Natural Resources Wales website (<https://naturalresources.wales/>)
- Wales Biodiversity Partnership (<https://www.biodiversitywales.org.uk/>)

2.1.3 A data request was not made to the North Wales Environmental Information Service (COFNOD). It is considered that the level of existing knowledge for the site and surrounding area, as obtained from freely available sources and reports, is perfectly adequate in establishing the ecological baseline and context for the site.

2.2 Extended Phase 1 Habitat Survey

2.2.1 The initial site visit was made on 8th June 2020.

2.2.2 The survey comprised an extended Phase 1 Habitat Survey. This survey method follows the habitat assessment and classification procedure outlined by the Handbook for Phase 1 Habitat Survey (JNCC, 2010), whereby all habitats are identified, described and mapped using a standard classification.

2.2.3 The extended component of the survey is developed from the methodology described in Guidelines for Baseline Ecological Assessment (IEA, 1995). All habitats and features within the survey area are assessed for their potential to support legally protected or notable species (nationally or locally).

2.2.4 These species include:

- **Amphibians:** ponds within 250m of the site were considered for their suitability to support a range of amphibians, including great crested newts (GCN).
- **Reptiles:** the site was assessed for suitable habitats including rough grassland, cloddiau, brownfield sites and habitat edges in general which would provide cover, basking and foraging habitat for reptile species.
- **Otters:** watercourses within 100m of the site were checked for signs of otter and assessed for their suitability to support the species.
- **Water voles:** watercourses on site were checked for signs of water vole presence and assessed for their potential to support the species.
- **Bats:** all trees and structures on site were assessed as to their suitability to support roosting bats at any point during the year. Trees and structures were then categorised for their potential to support roosting bats as per the *Bat Surveys for Professional Ecologists – Good Practice Guidelines* (Collins, J., 2016).

- **Birds:** the site was assessed for suitable habitats for nesting birds, including habitats suitable for ground-nesting species.
- **Badgers:** all habitats within 30m of the site were surveyed where possible to identify the presence of any setts or signs of badger activity.
- **Invasive plant species:** this assessment does not constitute a full Schedule 9 species survey. The potential for any Schedule 9 species was assessed and any species that were encountered were mapped and noted.

2.3 Assessment of Ecological Value

2.3.1 The value and sensitivity of ecological features was determined based on the guidance given in *Guidelines on Ecological Impact Assessment* (CIEEM, 2019). Individual ecological receptors (habitats and species that could be affected by the development) were assigned levels of importance for nature conservation in one of the following categories:

- International
- UK
- National
- County
- District;
- Local, or
- within the immediate zone of influence or site only.

2.3.2 For a given receptor, determination of value includes consideration of the size, secondary or supporting value/function, conservation status and quality of the species or feature.

2.4 Limitations

2.4.1 The initial Phase 1 Habitat survey was undertaken within the recommended survey season. Therefore, it was possible to identify the majority of species of flora present. However, given the current land use and management of the site no notable species are considered likely to be present.

2.4.2 Access was permitted to all land within the proposed development footprint. Access beyond the site boundary was restricted but much of the adjacent land was at least visible to the surveyor.

2.4.3 There are considered to be no significant limitations to the undertaking or accuracy of the survey work or subsequent ecological appraisal.

3 RESULTS

3.1 Desk Study

Designated Sites

- 3.1.1 There are no statutory designated sites for nature conservation located within 2km of the site.
- 3.1.2 There are three Local Wildlife Sites (LWS) located within 2km of the study site. These comprise Wrexham Industrial Estate LWS (composed of Bryn Road Grassland, Erlas Black Wood and the Oaks), Peter's Dingle LWS and Cefn Park LWS. The WIE LWS supports a mosaic of habitats, mature trees and a significant meta-population of GCN.
- 3.1.3 Ancient woodland is also identified within 1km of the site.

Species Records

- 3.1.4 Species records summarised below are taken from a review of existing ecology reports relating to nearby sites¹. The records below are therefore for land within 1km of the site:
 - Amphibians; great crested newt
 - Bats; common pipistrelle, soprano pipistrelle, noctule and whiskered bat.
 - Birds; numerous bird species including notable species such as barn owl, dunnoek, goshawk, house martin, linnet, spotted flycatcher, house sparrow, bullfinch, redwing, willow warbler, song thrush and mistle thrush.
 - Invertebrates; latticed heath, small heath, dingy skipper, grizzled skipper, shaded broad-bar and cinnabar.
 - Mammals; badger, hedgehog and polecat.
 - Reptiles; slow worm and adder.

Previous Ecological Studies

- 3.1.5 The land immediately opposite the site and on the other side of Clywedog Road North was subject to a suite of ecological surveys in 2018 (Kingdom Ecology). The site was found to comprise a range of successional habitats forming a mosaic of semi-improved grassland, tall herb and scrub communities, with a block of woodland alongside a minor watercourse. The site was subject to reptiles surveys (no reptiles recorded), breeding bird surveys (23 species, 3 of which were 'amber' listed), bat surveys (low levels of activity, 4 species of bat) and butterfly surveys (only green-veined white recorded). A single badger sett was also recorded. A Habitat Management Strategy was also produced for the site and other parcels of land owned by the same landowner, to provide a long-term framework for developing land without resulting in biodiversity loss. For the site itself, the habitat management was focused on retaining and enhancing the woodland/riparian corridor, so that the land adjacent to Clywedog Road North could be developed.
- 3.1.6 Etive Ecology Ltd have been involved with the implementation of an approved development off Ash Road South, approximately 800m to the northeast of the site. The scheme is to extend an existing warehouse facility, with the creation of a wildlife corridor along the southern boundary. The site was sensitive in terms of the likely presence of GCN and of terrestrial invertebrates.

¹ Land opposite to this proposed development and land at Demon Tweeks, Ash Road South.

Environment (Wales) Act 2016

- 3.1.7 Section 7 of the Act replaced the 'Biodiversity duty' in Section 40 of the Natural Environment and Rural Communities (NERC) Act 2006, which requires all public bodies to have regard to biodiversity conservation when carrying out their functions. This is commonly referred to as the 'Biodiversity duty'.
- 3.1.8 The Section 7 list is now used to identify those habitats and species of Principal Importance in Wales under the Environment (Wales) Act. The following relevant habitats and species are found on this list:

Table 3.1.1 Relevant Section 7 Habitats/Species

Habitats	Species
Hedgerows	Hedgehog
Lowland meadow	Slow worm
	Great crested newt
	Various invertebrate species
	Various bird species
	Various bat species

3.2 Extended Phase 1 Habitat Survey

- 3.2.1 The walkover survey was undertaken by Russell Grey (BSc, MCIEEM, CEnv). The survey was undertaken on a bright and sunny day, with no constraints to the survey of any part of the red line application site.
- 3.2.2 The proposed development site is located off Clywedog Road North, in the southwest sector of Wrexham Industrial Estate and ~3km to the east of Wrexham town centre. The site covers an area of approximately 0.55ha and is comprised of improved grassland with landscape planted broadleaved trees along the site frontage and rear. The site is located between existing light industrial / warehouse units, with surrounding landscape planting. On the opposite (eastern) side of Clywedog Road North is an area of semi-improved grassland and a watercourse ~90m away. The OS map indicates that there are no ponds located within 250m of the site boundary.

Habitats

- 3.2.3 The eastern edge of the site abuts Clywedog Road North and is marked by a young goat willow (Target Note 1) and a line of young whitebeams (Target Note 2) on top of a small earth embankment. At the southern end of the embankment is an area of dense/continuous scrub comprised of blackthorn and field maple (Target Note 3), with a young ash tree close to the south-eastern corner of the site. Immediately adjacent to the southeast corner is a mature oak tree and a mix of other young planted trees including silver birch (Target Note 4).
- 3.2.4 The main body of the site is comprised of a species-poor improved grassland sward, stretching from the eastern site boundary across to the western boundary (Target Note 5). The sward is comprised of Yorkshire fog, common bent and meadow foxtail, with frequent dandelion, white clover and birdsfoot trefoil. The sward appears to be managed by regular mowing – at least twice a year – with the cuttings left on site. There is a small area of hard-standing in the southwest corner of the site (Target Note 6) which forms part of the yard and storage area for the adjacent industrial unit. On the northern edge of the hard-standing is a cluster of semi-mature field maple (Target Note 7). The western edge of the site comprises a 3m wide corridor

of scattered broadleaved trees (Target Note 8) including whitebeam and goat willow, and a bed of tall ruderal vegetation (Target Note 9) dominated by greater willowherb, creeping thistle and common nettle.

- 3.2.5 The northern and western site boundaries are marked by security fences and adjacent to the north is a light industrial unit and a line of young broadleaved trees including ash, sycamore and oak (Target Note 10). To the south of the site is another operational industrial unit, comprising a warehouse type building and an area of hard-standing immediately adjacent to the site, used as a storage area and yard for vehicle movements (Target Note 11).

Protected Species

- 3.2.6 The following text summarises the suitability of the survey area to support various legally protected species, based on the descriptions provided in the above target notes.

Amphibians

- 3.2.7 There are no ponds located within the site boundary and none known to be present within 250m of the site boundary. Beyond 250m, there are a number of ponds scattered across WIE and surrounding farmland, some of which are likely to support GCN and to form part of the GCN meta-population that the area is known to support.
- 3.2.8 The terrestrial habitat present within the site boundary comprises improved grassland of low value to amphibians, small pockets of tall ruderal and scrub of low value (given their poor connectivity to other suitable GCN habitat) and scattered trees of negligible value to amphibians. The land surrounding the site is comprised of active industrial units to the north, south and west, surrounded by landscape planting which offers a low degree of connectivity for amphibians. To the east of the site is Clywedog Road North which is considered to be a likely barrier to GCN movement to/from this direction.
- 3.2.9 There are no records of GCN or any other amphibians within 500m of the site from within the last 20 years. It is acknowledged however, that the WIE does support good numbers of GCN, scattered across the site. Given the very low value of the site as a foraging or commuting resource for GCN, and the low suitability of immediately surrounding land to the site, it is considered that the likelihood of GCN being present within the site boundary of low-negligible.

Badgers

- 3.2.10 The improved grassland pasture that dominates the site is of relatively low value to badgers, offering limited foraging value. The cover offered by scattered trees and small pockets of scrub and ruderals is of limited value given their size and poor connectivity to larger foraging areas or good corridors for dispersal. Surrounding land use to the north, south and west is light industrial and of similarly low value.
- 3.2.11 During the walkover survey, no evidence of any badger activity could be found within 30m of the site boundary. There are records of badgers within 1km of the site, including a sett within the woodland approximately 100m to the southeast on the opposite side of Clywedog Road North. It is therefore concluded that badgers are absent from the site but present within the local area.

Bats

- 3.2.12 There is a cluster of semi-mature field maples at Target Note 7, within the site boundary. The 3-4 trees here are all of a diameter <300mm and have main trunks that branch at ~2m height into numerous smaller limbs of diameter <150mm. None of the main trunks or minor limbs on any of the trees were found to offer any potential roosting features (PRFs) for bats following a ground-up visual inspection. All of the hornbeam and willow found on site are of small size and stature, with diameters at breast height of <150mm and lacking in an PRFs. As a result, all of the trees on site are considered to be of Negligible Bat Roost Potential (BRP²). There are no structures found within the red-line development boundary.
- 3.2.13 The site as a whole is considered to be of low value as a foraging or commuting resource to bats. Although the site is comprised entirely of semi-natural habitats the improved grassland that dominates the site is species-poor, lacking in structural diversity and therefore likely to support very small numbers of insect prey. The tree-lined eastern and western boundaries are of much greater value and offer good foraging and commuting routes for bats but are in close proximity to industrial buildings or roads and associated security lighting. The land adjacent to the east was surveyed in 2018 and found to support only low levels of bat activity, despite comprising a much greater area of semi-natural habitat, diversity and connectivity to the application site.
- 3.2.14 There are records of four species of bat within 1km of the site, all of which were recorded on land adjacent to the east of the site, but no roosts were found. It is therefore concluded that roosting bats are absent from the site boundary and that the value of the site for foraging/commuting bats is low.

Birds

- 3.2.15 The opportunities for nesting birds within the red line site boundary are confined to the scattered trees and isolated small blocks of scrub and ruderal vegetation around the edges of the site. These features have the potential to support a small number of nesting birds given the area of habitat available. The site as a whole offers low-moderate foraging value.
- 3.2.16 Records for the area include a mix of relatively common and widespread species of passerine, migratory songbird, and raptor. Overall, the site is considered to be of low value to nesting birds.

Reptiles

- 3.2.17 The well managed improved grassland that dominates the site is not considered to offer suitable habitat for reptiles, given the lack of shelter/cover and poor quality foraging. The small patch of scrub at the site frontage is isolated and unlikely to be of value to reptiles, whilst the tall ruderal at the rear/west of the site is of low value, but is likely to be shaded by the adjacent trees and buildings. This combination of habitats offers very limited opportunities

² **High** = trees with one or more potential roost sites suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time. **Medium** = trees with one or more potential roost sites that could be used by bats but unlikely to support a roost of high conservation status. **Low** = trees with one or more potential roost sites that could be used by individual bats opportunistically, but are not suitable to be used on a regular basis by larger numbers of bats. **Negligible** = negligible features likely to be used by roosting bats (Collins, J., 2016).

for reptiles. There are also poor dispersal links both on and off site and it is noted that the grassland is disturbed on a regular basis by mowing.

- 3.2.18 There are records of slow worm and adder within 1km of the site, but no reptiles were found during presence/absence surveys in the highly suitable habitat on the opposite side of Clywedog Road North in 2018. No signs of any reptile activity were found on site during the survey, although sightings are rare even in suitable habitat. It is concluded that reptiles are absent from the site and from the immediately surrounding land.

Riparian Mammals

- 3.2.19 There are no main watercourses, or any minor ditches or drains, found within the site boundary. The closest watercourse is a ditch approximately 40m to the north of the site, flowing between industrial units and under culverts in an easterly direction. There is also a small stream (Redwither Brook) approximately 100m to the southeast of the site and on the opposite side of Clywedog Road North. The stream flows northwards and is a tributary to the Afon Clywedog, as is the ditch. The terrestrial habitat within the site boundary are of negligible value to any riparian mammals owing to the managed grassland sward, frequent disturbance from management and industrial activities and the lack of any substantial vegetation cover.
- 3.2.20 No signs of any riparian mammals were found within the red line site boundary during the walkover survey. Access to land beyond the red line boundary was limited. There are no records of otter within 1km of the site, but the species has been recorded ~2km downstream on the Afon Clywedog. Overall, it is concluded that both otter and water vole are absent from the site and from the immediately surrounding land.

3.3 Notable Species

- 3.3.1 There are records for numerous invertebrates, hedgehog and polecat within 1km of the site, all of which are listed as species of Principal Importance under the Environment (Wales) Act 2016. However, the site is considered to be of low suitability to support invertebrates and hedgehog, and unsuitable for polecat.
- 3.3.2 No notable or locally rare species of flora were recorded on site, and given the lack of any notable land management, no such species would be likely to be present. There are no records of any such species within 1km of the site.

3.4 Invasive Species

- 3.4.1 No non-native invasive species (NNIS) of flora listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) were identified during the walkover survey of the site.

3.5 Key Ecological Receptors

3.5.1 The extended Phase 1 Habitat Survey has identified the following key ecological receptors associated with the site:

- GCN; the species is known to be present locally but the habitat on site indicates that it is unlikely to be present. A precautionary approach is recommended to avoid harm. *Local Value*
- Badgers; known to be present locally but not setts found <30m of the site. Possible foraging use of the site. *Local Value*
- Bats; there is no BRP associated with the site and only low foraging and commuting opportunities. *Local Value*
- Nesting Birds; low potential for nesting birds to use scrub, trees and ruderal vegetation on site. Minor foraging opportunities are also present. *Local Value*
- Notable Species; site offers low suitability habitat for invertebrates and hedgehog. *Local Value*

3.5.2 The protected species / ecological receptors not bullet-pointed above are considered to be of *less than local value*.

4 DISCUSSION

4.1 Proposed Scheme

The Development

4.1.1 The proposed outline scheme is illustrated on **Figure 2**, detailed within the planning application and is summarised in the following bullet points:

- Develop the site for Industrial/Warehouse use by constructing a c.2150m² warehouse.
- Creation of a new access off Clywedog Road North in the eastern site boundary.
- Removal of the earth bund and a number of landscape trees along the eastern site boundary.
- Provision of car parking and turning circle at the front/east of the new building.
- Retention of a green 'edge' to the northern and eastern boundaries of the site.

4.2 Likely Impacts

GCN

4.2.1 GCN are considered to be likely absent from the red line application site boundary, given the absence of suitable and well-connected habitat for the species. However, given the local sensitivity of the species and the known presence of a large meta-population within the WIE, there remains a low risk that GCN could be encountered on site during construction works. Based on this assessment, there is a very low risk that the construction phase of the development will pose a risk of harming/killing individual GCN (and other amphibians) and will disturb and disrupt their dispersal across and around the site.

4.2.2 The scheme will also result in the permanent loss of ~0.5ha of low value habitat to the footprint of the scheme. This loss is likely to represent a negligible impact on GCN, as the suitability of the habitat is low and GCN are considered to be absent from the immediate area.

Badgers

4.2.3 There are no badger setts found within 30m of the site, therefore there are no direct impacts anticipated on badger setts or disturbance of badgers within their sett. However, badgers are known to be present <100m of the site and therefore there is a risk that badger may access the site for foraging or dispersal. It is noted that this risk is low given the absence of any evidence of badgers using the site and the partial barrier/deterrent of Clywedog Road North which separates the site from the known badger sett.

4.2.4 If badgers were to access the site during the construction phase of the development then there would be a risk of causing harm to individual badgers from the presence of open excavations, machinery and materials.

Bats

4.2.5 There are no suitable roosting features present on site, therefore there are no anticipated impacts on roosting bats. However, the scheme will result in the loss of habitat and features of low value to foraging/commuting bats. There is also the potential for artificial lighting of the site post-development to impacts foraging/commuting bat activity.

Nesting Birds

- 4.2.6 The scheme will result in the loss of semi-natural habitat suitable for nesting birds. The loss of scattered broadleaved trees, scrub and tall ruderal vegetation will be permanent and there may also be the short-term loss of adjacent boundary trees from use by nesting birds during the construction period, as a result of disturbance.
- 4.2.7 There will be a risk of direct harm to nesting birds, their eggs and chicks if vegetation clearance is undertaken during the nesting bird season (march to August inclusive).

Notable Species

- 4.2.8 It is anticipated that the scheme will result in a loss of habitat for hedgehog and for invertebrates. There will also be a risk of harm to notable species during the site clearance and construction phases.

4.3 Recommendations

Habitats

- 4.3.1 In order to retain the low level of functionality of the site for foraging/commuting bats, nesting birds, hedgehogs and invertebrates, the following recommendations should be followed:
- Broadleaved native trees should be planted along the northern and eastern site borders.
 - All newly planted trees will be of native species and local provenance. Silver birch, alder and rowan would be suitable for these locations.
 - Wildflower grassland should be created within the northern and eastern boundaries, beneath and around the proposed native trees.
 - 2 x brush piles should be created within the northern border, to provide shelter for hedgehog, other small mammals and invertebrates.
- 4.3.2 All newly planted trees should be managed appropriately in perpetuity and any failed stock within the first 5 years of development will be replaced on a like-for-like basis. The wildflower grassland should be created using a wildflower seed mix such as Emorsgate EM2 (standard general purpose meadow mix). The wildflower grassland will be managed by a twice annual cut (early-July and late-September).

GCN

- 4.3.3 To avoid the low risk of harming/disturbing GCN during the construction phase of the scheme, the following Reasonable Avoidance Measures (RAMs) will be implemented:
- Clearance of ground vegetation, rubble, detritus and any other potentially suitable refugia for GCN (such as at the edge of concrete slabs & made-ground) will be undertaken in the period March – October inclusive. During the early part of this period amphibians are likely to be in or near to breeding ponds and therefore less likely to be encountered on site. During the latter part of this period amphibians will be active and therefore less sensitive to disturbance, i.e. outside of the hibernation period.
 - Any clearance works described above will be undertaken with care and by hand.
 - If any GCN are encountered, works in the area of the discovery should cease immediately and an experienced GCN-licensed ecologist called for advice.
 - During construction works;

- all materials will be stored off-ground on stillages or pallets.
- all rubble/spoil/earth arising from works is skipped or removed from site daily.
- any excavations left overnight will either be back-filled and compacted or else covered by plastic sheeting and secured by plywood batons (or similar) to prevent amphibians from gaining access to them.
- pre-start checks of the working area will be undertaken each morning, looking for any amphibians.
- all site workers will be made aware of the potential presence of GCN and an identified sheet will be kept on site in case any amphibians are encountered.

4.3.4 The above RAMs have been designed such that the site can be carefully cleared without harming GCN and that subsequently the site is kept tidy and unsuitable for GCN to utilise, so that they do not take refuge within the working area. Provided this scheme of RAMs is followed in full, the risk of encountering, disturbing or harming GCN is considered to be very low. However, if GCN are encountered, then works will cease until the risk posed to GCN is re-assessed by the licensed ecologist. If the risk posed to GCN is considered to be significant, then a license may be required in order for works to recommence.

Badgers

4.3.5 To avoid the low risk of impacting badgers during the construction phase the RAMs provided above for GCN will be effective in protecting badgers from accidental harm. In addition, any chemicals or potentially hazardous substances used during the works will be safely and securely stored overnight to prevent any accidental spillages which might impact foraging and inquisitive badgers.

Bats

4.3.6 The proposed habitat corridors around the northern and eastern boundaries of the site should retain the low level of suitability currently offered by the site to foraging/commuting bats. In addition, no artificial lighting is to be installed along the northern or western boundaries and any such lighting installed along the eastern boundary must avoid any light spillage onto the boundary trees.

Nesting Birds

4.3.7 It is recommended that all vegetation clearance work is undertaken outside of the nesting bird season, i.e. vegetation should be removed during the period September to February inclusive. Where this is not possible, any clearance work undertaken during the nesting season must be preceded by a nesting bird survey undertaken by a suitably experienced ecologist. Only those areas of the site where no active nests are present will be available for clearance during the nesting season.

4.3.8 The provision of replacement trees is considered to be appropriate compensation for the loss of existing low value nesting opportunities.

Notable Species

4.3.9 To avoid the low risk of impacting notable species during the construction phase the RAMs provided above for GCN will be effective in protecting animals such as hedgehogs from accidental harm. Impacts on notable species will be offset by the native planting to be implemented as described in 4.3.1.

5 CONCLUSION

- 5.1 Etive Ecology Ltd was commissioned by Caulmert Ltd, to undertake an ecological appraisal of a plot of land off Clywedog Road North, Wrexham Industrial Estate. The site is proposed for the construction of an Industrial/Warehouse Unit.
- 5.2 The assessment comprised an Extended Phase 1 Habitat survey, a desk study, an assessment of the likely impacts on the ecological value of the site and recommendations for further survey and/or mitigation measures to be implemented.
- 5.3 A desktop data search identified no statutory nature conservation sites and three non-statutory nature conservation sites <2km of the site. Protected species records for <1km of the site include GCN, four species of bat, numerous bird species, badger and slow worm.
- 5.4 The site is located off Clywedog Road North, in the southwest sector of Wrexham Industrial Estate. The site covers an area of approximately 0.55ha and is comprised of improved grassland with occasional scattered broadleaved trees. The site is located between existing light industrial/warehouse units, with surrounding landscape planting. On the opposite (eastern) side of Clywedog Road North is an area of semi-improved grassland and a watercourse ~90m away. The OS map indicates that there are no ponds located within 250m of the site boundary.
- 5.5 The development footprint is dominated by improved grassland with young and occasionally semi-mature scattered trees, small areas of scrub and tall ruderal and an area of hard standing. The site has low potential to support foraging/commuting bats, nesting birds and notable species such as hedgehog, as well as foraging badgers. It is also acknowledged that GCN are present across the WIE but that the risk of presence within the site is very low/negligible. No field evidence of any protected species was recorded during the site survey.
- 5.6 The proposed scheme is to develop the site for Industrial/Warehouse use. The proposed layout includes a new access of Clywedog Road North, a 2150m² footprint warehouse, the retention of boundary habitats to the north and east and the provision of car-parking. The development would result in the loss of ~0.5ha of semi-natural habitats of low ecological value with low potential value to foraging/commuting bats, nesting birds and notable species. There would also be a risk of harm to these species, plus GCN and badger, during the construction phase. It is anticipated that the proposed development would result in a minor loss in the biodiversity value of the site.
- 5.7 It is recommended that a scheme of RAMs (given within this report) is implemented during the construction phase to avoid and minimise the risk of impact on all protected and notable species. As part of the site layout it is recommended that semi-natural habitats are included along the northern and eastern boundary corridors, to retain ecological functionality to the site. Vegetation clearance should be timed to avoid the nesting bird season.
- 5.8 In conclusion, the application site has been found to be of low ecological value and with low potential to support a number of protected and/or notable species. Recommendations are given to avoid, manage and mitigate the minor impacts that are anticipated to arise. As a result, the proposed scheme is anticipated to result in no significant biodiversity net loss.

6 REFERENCES

CIEEM (2012), *Guidelines for Preliminary Ecological Appraisal*. Chartered Institute of Ecology and Environmental Management.

CIEEM (2019), *Guidelines on Ecological Impact Assessment*. Chartered Institute of Ecology and Environmental Management.

Collins, J., (2016), *Bat Surveys for Professional Ecologists; Good Practice Guidelines, 3rd edition*. Bat Conservation Trust, London.

Institute of Environmental Assessment, (1995), *Guidelines for Baseline Ecological Assessment*. E & FN Spon. London.

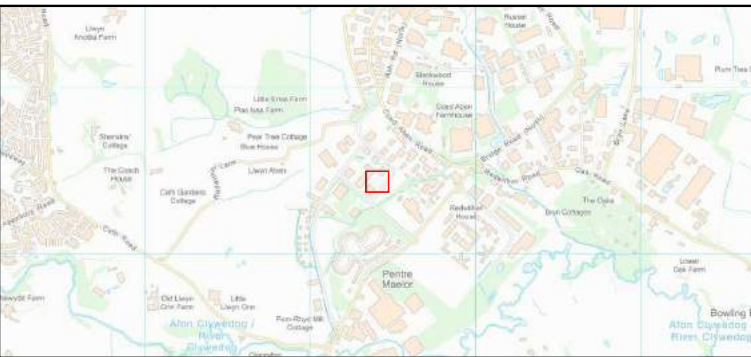
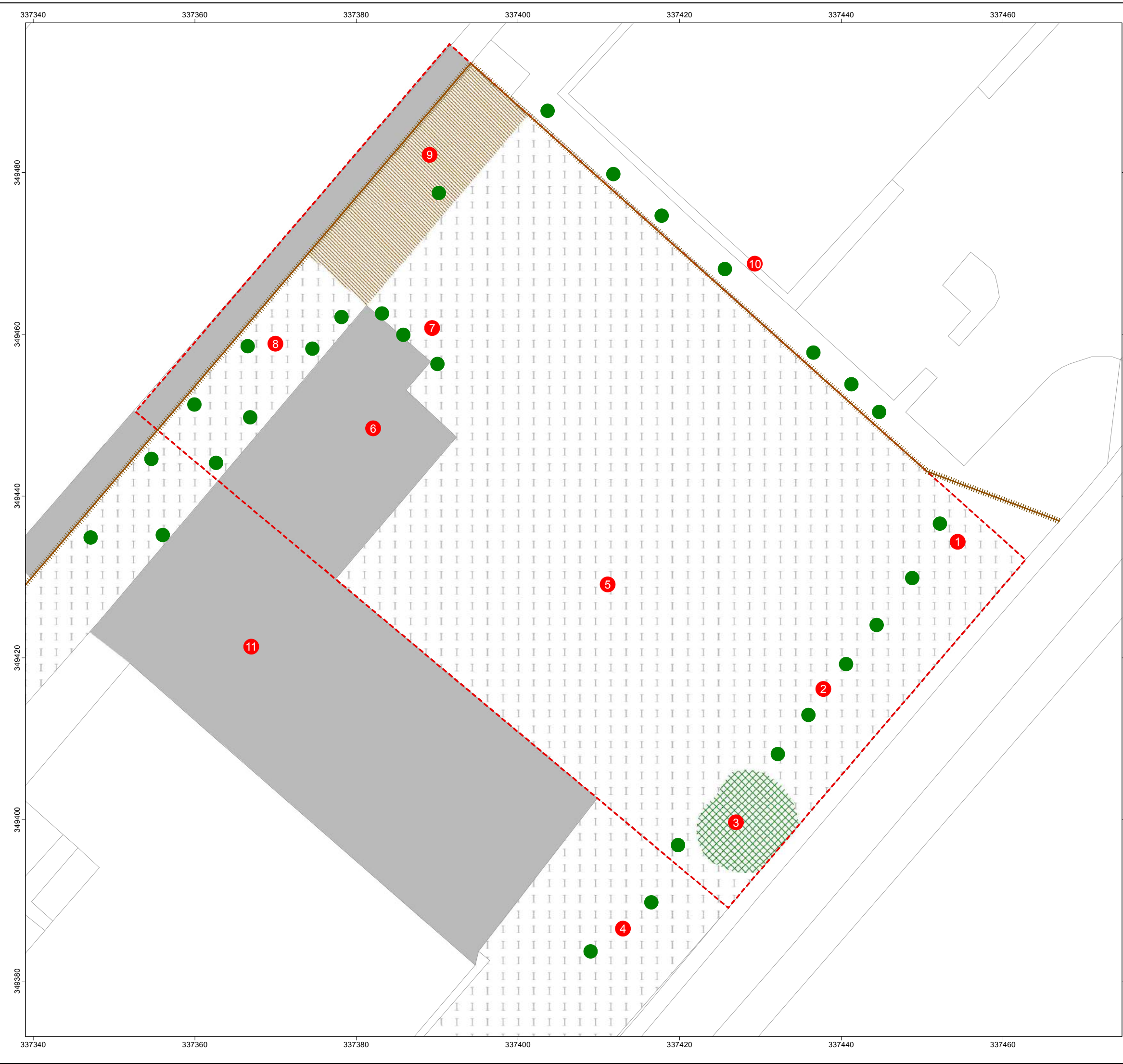
Joint Nature Conservation Committee, (2010), *Handbook for Phase 1 Habitat Survey – a technique for environmental audit*.

Oldham R.S., Keeble J., Swan M.J.S. & Jeffcote M. (2000), *Evaluating the suitability of habitat for the Great Crested Newt (Triturus cristatus)*. Herpetological Journal 10 (4), 143-155.

Appendix A - Figure 1

Phase 1 Habitat Map

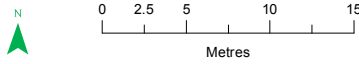
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Survey Information	
	Site boundary
Phase 1 Habitat Survey	
	Dense scrub
I I I	Improved grassland
	Tall ruderal
	Hardstanding
	Fence
	Scattered tree
X	Target note

Additional Information:
Please see associated report for further information relating to each target note location.

Source:
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PROJECT TITLE
CLYWEDOG ROAD NORTH, WREXHAM INDUSTRIAL ESTATE

DRAWING TITLE
Figure 1, Phase 1 Habitat Map

VER	DATE	REMARKS	Drawn	Checked
1.0	22/07/20	Habitat Map	MP	RG

DRAWING NUMBER:
ETIVEECOLOGY/Clywedog/Phase1

SCALE	1:450	PLOT SIZE	A3	DATUM	OSGB	PROJECTION	BNG
-------	-------	-----------	----	-------	------	------------	-----

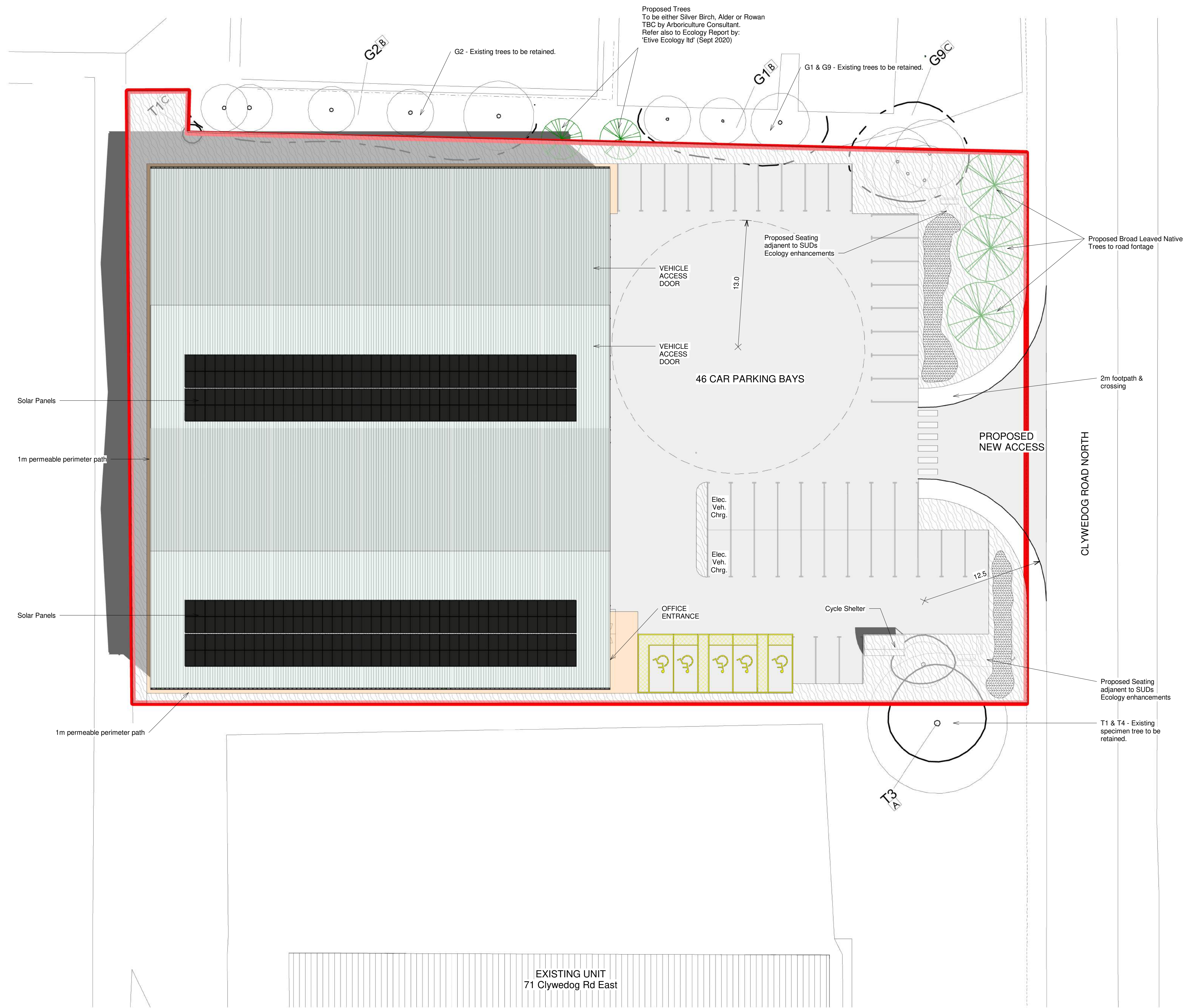
ETIVE ECOLOGY Ltd

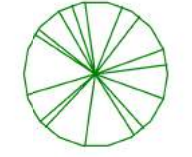
www.etiveecology.co.uk T: 07825291827 T: 07824394564

Appendix A - Figure 2

Proposed Development Layout

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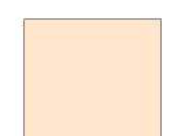




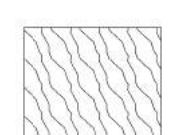
PROPOSED TREE



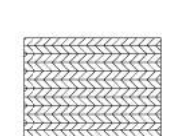
PROPOSED COMPOUND SURFACE
Refer to proposed SUDs Drainage Design by 'Caulmert'.



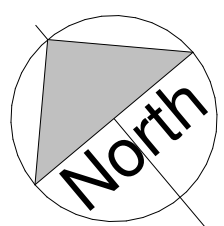
PROPOSED BUILDING PERIMETER PAVING
Refer to SUDs Drainage Design by 'Caulmert'.



PROPOSED WILDFLOWER GRASSLAND
Refer to Ecology Report by: 'Elive Ecology Ltd' (Sept 2020)



PROPOSED SUDs DRAINAGE SWALE
Refer to Drainage Scheme by 'Caulmert'



North



GRAPHIC SCALE 1:200

 engineering environmental planning	
 CONSTRUCTION - N.W. LTD.	
PURPOSE OF ISSUE PLANNING	
PACE ARCHITECTURE www.pace-architecture.co.uk	
PROJECT PROPOSED INDUSTRIAL/WAREHOUSE UNIT	
ADDRESS Clywedog Road North, LL13 9XN	
TITLE PROPOSED SITE PLAN	
CLIENT JCP Investments Ltd	
DRAWN BY nc	CHECKED BY client
DATE 09.10.20	
SCALE (@ A1) 1 : 200	PROJECT NUMBER 1149
DRAWING NUMBER 1149 . P . 003	REV

1 Proposed Site Plan
1 : 200

09/10/2020 10:41:33

Appendix B - Site Photographs

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Target Notes 1 & 2



Target Notes 3 & 4



Target Note 5



Target Notes 6 & 8



Target Note 7



Target Note 9



Target Note 10



Target Note 11