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PLANNING APPLICATION ASSESSMENT

SITE

Land at Rhosrobin
Rhosrobin
Wrexham
LL11 4RB

CLIENT

SG Estates
Unit 1
Rhosddu Industrial Estate
Old Rhosrobin
Wrexham
LL11 4YL

JOB No.

1025

DATE

July 2023

GRID REFERENCE

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(site centred)

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1.0 INTRODUCTION

Following consultations between the LA planning Department and that the original survey was undertaken July 2021, an updated ecological assessment has been requested. As previously stated, the original supporting ecological surveys were undertaken by Cheshire Ecology Ltd, March-June 2014 as part of previous planning application and EDC undertook a review the original report and update any variations to the original findings and recommendations within the report, July 2021.

This report will review the original reports and update the information as required to enable the findings in the report to address the requirements as set out in Planning Policy Wales-Edition 1, 2021, Environment (Wales) Act 2016, (Section 6 Duty) and (Section 7) and the Welsh Assembly Government Technical Advice Note 5, 'Nature Conservation and Planning' and local development policy, to enable an assessment of impacts and mitigation to negate impact as a consideration, material to the determination of planning consent and active protected species and habitat legislation at the time of survey

2.0 SUMMARY

The following main points have been identified on site and are addressed fully in the main text:-

1. The walk over surveys recorded little variation to the original reports issued.

2. Predominantly the main area of development is on semi-improved grassland.

3. Three mature oak trees are recorded within the development area.

4. The tree which offered the greatest potential for use by bats has suffered storm damage, resulting in the loss of a major branch and opening up the trunk to more adverse weather.

5. Tawny Owl pellets have been recorded in the vicinity of T1, T2 and T3

6. The boundary features are being retained and managed to maintain their bio-diversity – little variation in height and width recorded

7. A GCN breeding site is recorded within 270 m of the north western boundary of the site, however connectivity is compromised by 'B' Class highways.

8. No major adverse impacts on species or habitats have been identified.

9. No invasive non-native species have been identified within the development boundary

3.0 SITE

The survey area description is as the 2011 surveys, the survey area is 'L' shaped in plan amounting to approximately 6.5 Ha in area. The site is comprised of 4 areas of grazing pasture with boundary hedgerows. A public footpath dissects the northern field from the three southern fields. The footpath connects between the B5425, Ffordd Newydd Llai and the Plas Acton Road. The western boundary is formed by a tall mix species hedgerow onto the B5425, the south eastern boundary is formed by a partial mixed species hedgerow bordering onto existing housing developments

and the Wrexham to Chester railway line embankment. The smallest north eastern boundary is onto an old small holding and cottages. The North western and north eastern boundaries are onto the Plas Acton Cemetery, the boundaries consist of palisade fencing and beech hedging on the cemetery side of the fencing. The remaining hedgerow is the continuation of the western boundary hedgerow on the B5425 onto Plas Acton Road.



Fig 1 – Survey area and Site Boundary



Fig 2 – Development Area and Site Boundary

The development proposals are to utilise the southern three fields. It is proposed that the new access will be via a new roundabout at the junction of Rhosrobin Rd and the B5425 Ffordd Newydd Llai. The eastern fields will form an area of POS and Biodiversity Offset. See drawings ref: 1025-Rhosrobin Mitigation Plan-MIT-01C, 1025-Rhosrobin Mitigation Plan-MIT-02

4.0 EXISTING DATA

Data search from the NBN gateway and local records. COFNOD eMapper Link: https://emapper.cofnod.org.uk/?id=9176&key=a35f42c031ba423e

***AMPHIBIAN**: -*

The NBN data records are as recorded 2021, with the local distribution as set out within the previous Cheshire Ecological Pond surveys.

The Cheshire Ecology Pond survey identified 11 water bodies within 500 m of the site boundaries.

'The water bodies include three traditional field ponds (WB1, WB7 and WB8), a river (WB4), a seasonal water-body (WB5), an artificial lake (WB6), two flooded ditches (WB10 and WB11), two ponds associated with former industrial use (WB2 and WB3) and an ornamental pond (WB9)'

The survey results recorded a positive for ponds Wb6 and Wb7. The NBN and the COFNOD data sets have both of these sites noted as records. Pond WB1 has positive records for GCN. Pond 1(WB1) is located approximately 270m from the north eastern development boundary. The pond is situated in foraging pasture and has been historically poached by cattle. The water-body is roughly oval in shape and measures approximately 550m2. (A copy of CE pond plan and COFNOD plan extract are attached within the report appendix)

No other waterbodies are recorded within 500 m of the site boundaries with GCN records nor has the site recorded any permanent water bodies suitable to support breeding amphibians.

REPTILES: -

The local records stand as per the 2011 data, there are no records for this taxon group within 500 m of the site boundaries.

The Cheshire Ecology surveys did not identify a presence for reptiles within the boundaries of the site. The NBN data has a negative for reptiles within 500 m, however the COFNOD data set has a single record for Grass Snake at approximately 170 m to the north east of the site boundary.

MAMMAL: -

Badger *Mele mele* –

The 2021 surveys identified activity associated with large mammal crossing entering and exiting the site in the north eastern corner. The data sets record this species, as noted below 170m north of the site.

The Cheshire Ecology surveys did not identify a presence for Badger within the or adjacent to the site boundaries. The NBN data set has a single record for Badger within the housing development

to the east of the site, this record is replicated on the COFNOD data set. The COFNOD data set records a 2-to-3-hole sett approximately 170m to the north of the site boundaries.

Bat *Chiroptera* - The Cheshire Ecology surveys did not identify a presence for bat within the site boundaries. The NBN data set has local records for Pipistrelle, Long-eared bat and Big Bat undetermined. The COFNOD Data set has records for Pipistrelle and Long-eared bat. None of the records are within 500 m of the site boundaries.

The 2021 emergence survey recorded a negative, as did the transect survey

The following species are recorded at both local and at a county level:-

Pipistrelle Pipistrellus *pipistrellus/pygmaeus*
Brown Long-eared *Plecotus auritus*
Lesser Horseshoe *Rhinolophus hipposideros*
Daubenton's *Myotis daubentonii*
Whiskered/Brandt's *Myotis mystacinus/brandtii*
Natterer's *Myotis nattereri*
Noctule *Nyctalus noctula*

Hedgehog *Erinaceus europaeus* – No variations to the data set records for this species, none of the records are within 500 m of the site boundaries.

The data sets have records for Otter *Lutra lutra* and American Mink *Neovison vison,* however, these records are restricted to the River Alyn system to the north of the site.

Designated Sites – As previously defined, none identified within 500 m of the site. The site has no water bodies or linear corridors that directly connect to any locally recorded sites.

The nearest sites are:-

Statutory –

- Gatewen Marsh SSSI

Non-Statutory –

- Pant Yr Ochain
- Moss Valley
- Alyn Waters

5.0 SURVEY AREAS

As outlined in Fig 1 and the attached phase 1 plan.

6.0 LEGAL PROTECTION

Under the 1981 Wildlife & Countryside, and the 2000 Countryside Rights Of Way (CROW) Act, it is an offence to “intentionally” or “recklessly” kill, injure or take any legally protected species. In some cases, even the species' habitat and places of shelter are protected.

6.1 GREAT CRESTED NEWT/BAT:

Both British and European laws protect the species and its habitat. In Britain it is protected under Section 9 (Schedule 5) of the Wildlife & Countryside Act 1981 (as amended), and by The European Union's “Habitats Directive” (Council Directive 92/43/EEC (a) on the Conservation Of Natural Habitats and of Wild Fauna and Flora. The Habitats Directive is implemented in Britain by the Conservation Regulations 1994. Under this legal protection (and with the minor amendments of the CROW Act 2000 in England & Wales), to be superseded by the introduction of “The Conservation of Habitats and Species Regulations 2010” which came into force on the 1 April 2010, it is an offence to:

- Intentionally or deliberately capture, kill or injure.
- Intentionally or recklessly disturb them in a place used for shelter or protection.
- Damage or destroy a breeding site or resting place.
- Intentionally or recklessly damage, destroy or obstruct access to a place used for shelter or protection.
- Possess an animal, or any part of it, unless acquired legally.
- Sell, barter, exchange or transport or offer for sale or parts of them.

6.2 BIRDS:

All British birds, their nests and eggs are protected in law. It is an offence under Part 1 of The Wildlife & Countryside Act 1981 as amended (and with the minor amendments of the CROW Act 2000 in England & Wales) to intentionally or recklessly kill or injure any wild bird or to take, damage, or destroy any nest or egg of any wild bird. However, Schedule 1 of the Act provides an additional tier of protection so that rare species (e.g., barn owl) are specially protected by increased penalties and cannot be intentionally or recklessly disturbed when nesting.

Some native bird species are listed as rare and most threatened species under Section 41 of the Natural Environment and Rural Communities Act (2006). Ref: Environment (Wales) Act 2016, Section 7 list of species. You must have due regard for the conservation of Section 41 species as part of a planning application.

6.3 MAMMALS:

All of the British species of bat are protected under the W&C Act 1981 (as amended). This protection is also extended to the otter (Lutra lutra), and the water vole (Arvicola terrestris). **The badger** (Meles meles) is protected under the Protection of Badgers Act 1992. Included in the Act it is an offence to damage any part of a sett or destroy it; obstruct access to any entrance of a sett; or to disturb a badger when it is in its sett.

Some native species are listed as rare and most threatened species under Section 41 of the Natural Environment and Rural Communities Act (2006). Ref: Environment (Wales) Act 2016, Section 7 list of species. You must have due regard for the conservation of Section 41 species as part of a planning application.

6.4 REPTILES:

All of the British species of reptile are protected under the W&C Act 1981 (as amended). See above for Smooth Snake, Natterjack Toad and Sand Lizard.

- Intentionally or deliberately kill or injure.

All native reptiles are listed as rare and most threatened species under Section 41 of the Natural Environment and Rural Communities Act (2006). You must have due regard for the conservation of Section 41 species as part of a planning application.

7.0 LIMITATIONS

None that would be considered to vary the species and habitats as recorded.

8.0 METHODOLOGIES

8.1 GREAT CRESTED NEWT:

A walkover survey to identify any potential breeding pools and refugia sites within the survey area was conducted. This was followed up by a desktop survey to identify any local records for this species within 500m of the site.

8.2 REPTILES:

Walkover to identify any potential basking/foraging areas for this species, and visual sightings.

8.3 BADGER:

Search for field signs (paths, latrines, foraging) indicating the presence of this species and if discovered an extended search up to 30m beyond the survey boundary for the presence of a sett(s).

8.4 BATS:

Walkover to identify any potential roosts or foraging habitat within the survey area.

8.5 WATER VOLE:

Walkover to identify any field signs, i.e., feeding stations, latrines, burrows etc. and an assessment of habitat suitability together with connectivity.

8.6 BIRDS:

An assessment of habitat suitability for nesting sites.

8.7 HABITATS:

The site was surveyed following the NCC (JNCC) methodology. Habitat types across the site were mapped and individual species found within the boundaries of the survey area were recorded including a biodiversity site assessment.

9.0 RESULTS

9.1 *GREAT CRESTED NEWT:*

Similarly, to the original surveys undertaken during 2014 by Cheshire Ecology (CE), EDC did not identify any water bodies within or immediately adjacent to the site suitable to support breeding amphibians.

The site does record two dry ditches, these have succeeded and did not record any recent evidence of wetting up to a level that could sustain breeding amphibians.

Similarly, to the original surveys by CE small areas of marshy grassland are recorded on site. The grassland records Juncus species but the areas are dry and do not retain water sufficient to sustain breeding by amphibians. This year's surveys also recorded similar areas of Juncus species, however there is little recent evidence of this area holding water.

The nearest pond with a GCN record is located approximately 270m to the north west of the site boundary. The pond is located within the field with no direct connectivity to the field boundaries. The field is used as foraging pasture and has recorded poaching of the perimeter by cattle. The B5425 compromises the connectivity between the pond and the development site to the western boundary and similarly Plas Acton Road to the northern boundary.



Fig2 – GCN Pond Location

The site does offer a small potential for foraging and refugia habitat for this species, primarily along the boundary features to the north west.

Historical OS mapping from 1850's onwards does not record any significant water bodies within the or adjacent to the site boundaries, suitable to support breeding amphibians.

9.2 *BADGER:*

This seasons walkover survey found similar evidence on the site for badger in the north eastern corner of the site in the form of large mammal track, similar to that record in the previous surveys by CE and EDC. The entrance and egress point is in the same location as previously recorded within the hedgerow dividing the field 5 and the adjacent properties formal garden. No other evidence of use was recorded at the time of survey.

The COFNOD Data set does record a small sett to the north of the site, within the tree line to the north of the car retail garage.

The survey did not record any snuffle holes, dung pits, scats etc during the survey. The area records a good mosaic of ant hill, none showing signs of disturbance.



Photograph 1 – Large Mammal tracks leaving site in the north eastern corner

[redacted]

9.3 *BATS:*

There is no variation to the data sets, the data sets record only three potential species of bat within the 1000 m of the site, Pipistrelle, common and soprano, Long-eared and Big Bat, probably more likely to be Noctule from the data recording, however as a recorder and COFNOD bat record verifier this record would be classed as Big Bat. The data set records are as follows:-

COFNOD Data set

Pipistrellus sp. – 959m NW of site, GR SJ324537, Detector – None Given, Date - 2003

Pipistrellus sp. – 730m W of site, GR SJ323530, Detector – None Given, Date - 2003

Pipistrellus pipistrellus – 1037m W of site, GR SJ320531, Detector – None Given – Flyover record, Date - 2017

Pipistrellus pipistrellus – 974m E of site – no linear connection, GR SJ340529, Detector – None Given, Date - 1998

Pipistrellus pygmaeus – 674m E of the site - no linear connection, GR SJ3352, Detector – Heterodyne, Date - 2012-2013

Plecotus auritus – 783m W of site – old railway line, GR SJ3252, Detector – None Given, Date – 2005

NBN Data Set

Nyctalus Eptesicus – 867m S of site, Detector – None Given, Date – 2012, (As the COFNOD verifier of bat records for north east Wales and as the recorder for the Clwyd Bat Group, the surveyor is sceptical of the record and would from the information given, class this record as Big Bat)

The Pipistrelle records are located within housing developments and the single Long-eared record is within a woodland corridor former railway, adjacent to housing. The records to the east of the site are all located to the east of both the Wrexham bypass and the Wrexham/Cardiff main railway line. These records have no linear connection with site. The Big Bat record is a fly over record as opposed to a roost record.

As previously recorded, the site is dominated by semi-improved grazing pasture, which is managed seasonally by grass cutting and historically by grazing, however the level sampling and scrub growth within field 1 would suggest no recent grass management by cutting has been undertaken. The boundary features are formed by a mix species rich and poor hedgerow, these remain in a similar condition, height and width as previously recorded.

The hedgerows have been allowed to develop to a mean height of about 2 – 2.5 m. The hedgerows do show signs of historical management. The hedgerows are interplanted with individual trees, however the tree stock is juvenile in age. The surveys did not identify any defects, damage or decay within the hedgerows which offers potential for roosting bats.

Only three mature oaks are recorded on site with only one oak offering roost potential. Secondary surveys have been carried out on the oak tree with potential. The emergence survey recorded a negative and the visual inspection recorded web over the single large knot hole. At the time of survey, the transects recorded no flight activity across the site.

The site is a triangular parcel of land abutting the Wrexham/Cardiff railway, separated from adjacent habitats by the housing developments and managed open grassland to the west, the new cemetery which records no structures or other potential for roosting bats. The nearest habitats of greater foraging diversity are the River Alyn corridor to the north of Plas Acton Road The only connecting corridor is potentially the railway set within a cutting running alongside of the south eastern corridor.

The on-site habitats are considered of low foraging potential for the species recorded locally. The classification of the habitats is as recorded within the previous surveys undertaken circa 2014



Photograph 2 – Mature Oak with Knot Holes (2021)



Photograph 2a – Mature Oak with Knot Holes (2023)

9.4 REPTILES

As previously recorded**, t**he data sets record a single presence for Grass Snake to the north of the industrial development on Plas Acton Road, at approximately 200 m distance. A reptile survey was undertaken by CE during April May 2014, the survey produced a negative. Not only did the survey record a negative for any species of reptiles, only a single record for Toad was recorded.

The habitats identified during the 2014 season are as identified during EDC survey of the site. It was noted that ant hills where present within the CE survey and a lack of bank vole burrow was also recorded, these are similar results to the survey undertaken by EDC.

9.5 BIRDS

The updated survey recorded no variation for this species group. There are potential nesting sites for many species within the boundary scrub/hedgerows that form the site boundaries. The data search recorded approximately 70 species within 1km of the site. Of the 70 species recorded approximately 53 species are likely to be recorded within the site boundaries, with potentially 29 species that could use the site for nesting. At the time of survey, the following species were active on or over the site, Blackcap, Whitethroat, Goldfinch, Dunnock, Swift and Chiffchaff.

Nearly all of the potential nest sites are located within or adjacent to the hedgerow boundaries of the site within the ruderal herb and bramble cover.

9.6 HABITATS

This seasons walkover recorded similar habitats to the previous surveys, the only variation being that the season is later this year and the site would seem to show a wetter season, with less seasonal dieback.

The development site is formed by three fields split by a fenced out public footpath. The site is generally flat in profile. The boundaries are formed from a mix of species rich hedgerow that runs parallel to the B5425, and species poor which runs parallel to Ffordd Newydd Llai, which is dominated by the single species Hawthorn. The dominant habits identified across the site are as follows:-

A 2.2 Scattered Scrub

The main areas of scrub abut the hedgerow boundaries and consists of Ruderal Herb and small pockets of Bramble.

B 2 Neutral Semi-improved Grassland.

The main development areas are dominated by semi-improved grassland. Species noted during survey included Yorkshire fog *Holcus lanatus*, Red Fescue *Festuca rubra,* Common Bent *Agrostis capillari,* Sweet-scented vernal grass *Anthoxanthum odoratum,* Meadow Grass Poa pratensis, Cock's-foot *Dactylus glometra* and Crested Dog's-tail Cynosurus cristatus. A small area of marshy grassland occurs in the largest south western field and records small pockets of Soft Rush *Juncus effusus,* Hard Rush *Juncus inflexus* and Tufted Hair-grass *Deschampsia cespitosa*.

Broad-leaved species occur within the grassland and these include Creeping Buttercup *Ranunculus repens*, ragwort *Senecio jacobaea*, field buttercup *Ranunculus acris*, dandelion *Taraxacum officinale, R*ibwort plantain *Plantago lanceolata,* Cleavers *Galium aparine,* Bramble *Rubus fruticosus*, Field woodrush *Luzula campestris* Bird's-foot Trefoil *Lotus corniculatus,* Common vetch *Vicia sativa*, Cat's-ear *Hypochoeris radicata*, Hogweed *Heracleum sphondylium*, Common Celandine *Ficaria verna*, Common Mouse-ear *Cerastium fontanum,* Meadow Buttercup *Ranunculus acris*, Cow Parsley *Anthriscus sylvestris*, Melancholy Thistle *Cirsium hetrophyllum*

HEDGEROWS

The majority of the original grassland boundaries are formed by a mix of species rich and poor hedgerows. The hedgerows show signs of management and laying in most cases. Presently the hedgerows are topping out at approximately 2 to 2.5 m in height. Most of the hedgerows are continuous other than field access openings and small sections of the hedgerow running parallel to the railway track.

J 3.1 Species Rich Hedgerows with Trees

This section of hedgerow runs parallel to Plas Acton Road and is the most diverse of the hedgerows. The dominant species within the hedgerows is Hawthorn, *Crataegus monogyna,* with infill of Ash, *Fraxinus excelsior*, Sycamore *Acer pseudopatanus*, holly *Ilex aquifolium*, hazel *Corylus avellana* and elder *Sambucus nigra*.

J 3.2 Species Poor Hedgerows with Trees

These species dominate the hedgerow boundaries and record limited species. The dominant species being Hawthorn, *Crataegus monogyna.*

OTHER BOUNDARIES

The boundary onto the cemetery located to the north east of the site is formed by steel palisade fencing backed with an introduced beech hedgerow to the cemetery side.

The boundary that borders onto the old farm located to the north east of the site is formed by Cypress hedging

TREES

The site records no free-standing trees, the majority of the tree species form part of the hedgerows and consist of juvenile specimens that have been managed similarly to the remaining sections of the hedgerows.

Only three mature trees are recorded on the site, these are located within the hedgerows abutting the cemetery boundary. The trees are mature oaks, one tree (T1) records no defects or deadwood, a second tree (T2) records some deadwood but no visible defects. The third tree (T3) records two knot holes from the loss of limbs which have rotted out. This tree has lost a further limb recently which has opened up the main trunk further to rain, potentially increasing rot and reducing nesting and roosting potential.

10.0 RECOMMENDATIONS

Following the updated walkover survey carries out on the 17 July 2023, the surveyors did not record any considerable variations to surveys undertaken July 2021. The only notable variations being the lateness of the season comparatively to the 2021 season. It can be seen on record that the 2021 season was an early season and both the 2022 and 2023 are later by approximately 2 to 3 weeks. Secondly mid-season storms are impacting on mature tree stock in leaf, resulting in limb damage. This has been recorded in relation to tree T3 large mature oak. Therefore, the following recommendations as set out below and as noted in the 2021 survey stand.

10.1 *GREAT CRESTED NEWT:*

The data sets record a breeding site for this species which is located within 270 m of the north western boundary of the site in the direction of the junction of the Plas Acton Road and Ffordd Newydd Llai. The roads do dissect the habitat connectivity between the pond site and the development area.

The site records no water bodies suitable to support a breeding population of GCN's. The habitat recorded on site semi-improved grassland, which is off moderate value for GCN's.

If the above assessment is taken into consideration there will be no direct loss of breeding site or foraging habitat for this species. However, the site does lie within 270 m of the recorded GCN Pond site and based on this fact a small percentage may be able to cross the road system into the development site. It is therefore recommended that as a precautionary measure to prevent injury to this species during the development process exclusion fencing is to be installed along the northern boundaries of the site on the field side.

Reasonable Avoidance Measure

Prior to installing the amphibian exclusion fencing the following operations are to be undertaken.

- The grassland areas are to be cut and cleared to neutralise the development area to make it less favourable for use as refugia for amphibians.

- The grass cut is to be undertaken in two passes, an initial cut set at 150 mm above ground level. The cut is to be undertaken utilising a 'Rytec' cut and collect mower.

- The grassland is to receive a walkover terrestrial search prior to the remaining grass sward being cut a minimum 50 mm sward.

- On setting up the site facilities the retained ecologist is to undertake a tool box talk to make aware the possibility of the presence on site of the protected species GCN.

- A one-way type amphibian fencing is to be erected parallel to the field side of the boundary hedgerow. The fence is to be located in a position so as not to impact onto the root structure of the boundary features.

- The fence membranes are to be set into the ground by a minimum of 150 mm with a 150 mm horizontal toe facing outward to the boundaries and back filled with friable vegetation free materials.

- The fence is to be erected to an approximate 500 mm height above the ground level and supported off 50 x 50 tantalised posts set at approx. 1.2m c/c's.

- The fence is to be set to allow any amphibians within the working area the ability to self-clear to the outer areas of the fence line by either forming open channel crossings/inclined fencing or whichever achieves the objective.

- The fencing is to be checked each morning of work and the integrity maintained for the extent of the development period.

- The fencing is to remain in place until all of the ground works are completed.

- At any time, any GCN's are encountered within the development zone the works are to cease and further advice is to be sort by contacting the resident ecologist who in turn will notify NRW for further advise.

- It may be found that the developer applies for a GCN derogation license to enable works to proceed if GCN's are encountered on site during the work phase, this in turn will alleviate any delays in the development program. Further consultation with NRW is therefore advised for their guidance.

10.2 *BADGER:*

Neither the survey or the data set identified any Badger activity within the site boundaries, other than the recorded large mammal tracks entering the site within the north eastern corner.

The tracks were limited to this area at the time of survey and the overall survey of the site did not record any signs of foraging, dung pits or latrines within the site.

Reasonable Avoidance Measure

The identified sett is located to the north of the site and is well within range for this species so therefore the following RAM's statement is recommended.

- access to through the north eastern boundary is to be retained.

- Any Block and Mesh Site Security fencing to be installed along the perimeter of the development site in the north eastern area is to be set into the blocks so as to maintain a minimum gap of 150 mm to the underside of the panels where the fencing crosses any recorded large mammal tracks. [redacted]

- On erection of the fencing a suitably experienced ecologist is to check the alignment and fitting of the fencing for compliance with the recommendation.

- All excavations are to be back filled where feasible overnight.

- Any excavations left open should have at least one ramped approach, to enable any large mammal, access to escape to prevent then becoming trapped within the trenches.

- Any open, previously installed pipe work above 150 mm in diameter is to be blocked over night during the construction phase; this is to prevent any large mammal taking refuge in the system.

- Any bunded material stores, topsoil's etc are to be checked on a regular basis for any burrowing associated with the potential formation of a sett.

- Pre commencement badger check survey is to be undertaken to establish any variants to the survey and mitigated for accordingly.

Other than the above general site recommendations, prior to works being undertaken on site a pre works biodiversity assessment it to be undertaken by the retained ecologist, this is to establish any variation to the findings of the ecological surveys. Large mammal runs/tracks that could be associated with Badger are to be logged and marked and the information is to be used to inform the erection of any security, tree protection, boundary fencing and reformation works.

10.3 BATS:

The local data did not show any records for bats within or adjacent to the survey area, with the nearest record being greater than 670 m to the east of the site. Following comment from NRW late season secondary transect surveys, an aerial and an emergence survey of the mature oak tree has been carried out. Both the emergence survey, aerial inspection and transect surveys produced a negative result, however our original comments and observations still stand and that random surveys of this type, especially when no breeding roosts or sites suitable to support breeding roosts are present on or adjacent to site can produce false negatives as bat activity varies considerably during the active seasons, which have been greatly extended by the impacts of global warming, these observations are based on the surveyors 37 years of licensed field survey and assessment.

Although the secondary surveys were carried out within guidance, the transect, aerial inspection and emergence surveys returned a negative. It is still however the surveyor's view that, as the local area records most of the species resident within the UK, bar a few habitat specific species, none of these habitats were recorded within the site boundaries. It is therefore likely that the site at some time during the season will be foraged or transected by migratory individual bats, predominantly along the boundary cover for smaller bat species.

Only three mature oak trees are recorded on site and of the three trees only one tree at the time of survey offers roost potential. The secondary surveys however found no evidence of use by bats. However, the fact that the survey produced a negative the potential for use as a bat roost is still present. None of the other trees recorded within the site boundaries had a potential for roosting bats. The majority of the recorded stock was Juvenile/Semi-mature offering little potential for use by bats due to life stage and minimal recorded defects.

The following recommendations are therefore being recommended to ensure the potential for bats to transect the site and utilise the potential within the mature oak tree is retained as part of the development proposals.

Connectivity

- The development proposals retain the existing boundary and intersecting hedgerows across the site where feasible. The hedgerows are to be maintained at a minimum height of 1.8 m to both act as wind cover for smaller insect species and for shading from any light pollution, especially along the intermediate hedgerow between the development and the mitigation/POS area to the north east of the site and the northern hedgerow to the grassland beyond.

- The partial hedgerow abutting the railway is to be enhanced where feasible, this is to protect the dark corridor to the rail line.

Lighting (see addendum)

Research with regards to impacts from lighting on bats has identified that lighting which emits ultra violet radiation attracts flying insects. This has been recorded as being potentially beneficial to some foraging species of bat, namely Pipistrelle, Noctule, Leisler's, however high levels of ultra violet radiation has been found to have an adverse impact on other bat species, Horseshoe, Myotis species, which forage in low light levels. Historically lights emitting low levels of ultraviolet radiation, SONS etc have been recommended but with the requirement for lighting on adoptable roads, lighting with a low carbon footprint and the movement towards promoting dark skies, lighting is moving towards the installation of LED lighting. Although this type of lighting is more efficient, it does emit a level of ultraviolet radiation

- Therefore shading, filtering, and directional lighting is to be promoted where feasible.

- Any lighting plans provided by the electrical engineers are to show compliance with the above requirements as part of the scheme and specifically in proximity to the retained hedgerow boundaries, where L.A. highway lighting approvals allow

It is to be considered that the greatest impact on lighting on bats is at emergence and if this is directly onto a roost entrance it is shown that a delayed emergence can occur, this however is not a factor to be considered as this is newly created housing stock.

Security lighting is likely to be fitted by the householders to the rear plots; this is to be discouraged where feasible to reduce the light pollution over the boundary trees and hedgerows to the rears of the properties.

- Therefore, any fixed security lighting is to include automatic control to include timed and light sensitive switching, with an average illumination time of approximately 1 to 2 minutes, this approach is to be promoted to reduce the impact.

Roost Potential

- To confirm that the mature oak tree with roost potential is to be retained as part of the development proposals together with the abutting boundary hedgerow.

Conservation Gain

- The introduction of a water body with a secondary water feed from closed roof water supply will greatly enhance the foraging potential for bats locally, specifically Pipistrellus pygmaeus.

- Variation to grass sward and improved species enrichment will promote a greater diversity of foraging insect for bats.

- Bat bricks are to be located on the perimeter plots facing the adjacent habitats, hedgerows or the internal POS areas. The bat bricks are to positioned so as to face all aspects, north, south, east and west and spread across properties as the layout allows. The positioning of the bricks should take into consideration of the mandatory LA adoptable lighting schemes.

This approach will ensure that the long-term favourable conservation status for this species is maintained and, in this case, enhance by the conservation gain proposed.

10.4 REPTILES:

The data sets did not record a presence for this taxon group on the site. The immediate data search only identified a single record for grass snake to the north east of the site. The record was within an area of grassland adjacent to the River Alyn corridor.

The 2014 CE reptile survey also recorded a negative for this species and only a single record for toad. The survey also recorded a low presence for bank vole on site. The EDC survey also recorded a low presence for bank vole/small mammal on site.

It is suggested that the habitats in this case offer low potential for this species and therefore no further recommendations are being offered for this taxon group.

10.5 BIRDS

The areas of scrub and hedging within the survey area have the highest potential for use by nesting birds. It is therefore recommended that any scrub clearance or hedge works are undertaken outside of the nesting season.

Generally, the guidance given within the UK with regards to the nesting season is set from March 1st to 31st July each year. Due to climatic change this advice is now seriously out of date. Nesting birds are now recorded as early as January through to late September and in some cases outside of this period. Owls, Doves, Pigeon, regularly nest outside of this period. Brood no's have also seen an increase, in the case of Swallow, Sparrow, 4 broods per year is now quite common.

As a general rule any tree, shrub, plant that retains leaves (evergreen) offers cover for nest sites and should be removed with care. A large percentage of British birds are ground nesting and choose to nest within, bramble, nettle, tall ruderal plants etc. these areas provide important nest sites and should also be cleared with care.

Due to the variants identified within the UK bird nesting season, a general walk over survey prior to vegetation clearance is advised. The pre works survey is to concentrate on the potential for early nesting birds, Collared Dove, Wood Pigeon, with Collared Dove being recorded nesting in

exposed nets sites from January onwards. Specific emphasis to evergreen vegetation which has early nesting potential. Ground cover and leaf generally doesn't develop pre-March/April each season however seasonal variations occur.

If works are undertaken post March 1st, then it is recommended that advice from a suitably qualified ecologist must first be sought and secondary check surveys should be undertaken immediately prior to undertaking the works, i.e., within 24 hrs. to ensure no nests have been built since the survey.

Potential nesting areas, should **not** be protected by netting, this methodology is now condoned as many species can be inadvertently trapped.

10.6 HABITATS AND BIODIVERSITY:

The dominant habitats recorded on site is the semi-improved grassland and the boundary hedgerows. It is likely that the majority of the development will result in the loss of the grassland and some of the primary entrance hedgerows. The development layout retains the remaining perimeter and internal hedgerows. The eastern area of the site is being left over as a mix of POS and Biodiversity enhancement. The Public footpath maintains its position across the site.

As a requirement of Planning Policy Wales-Edition 1, 2021 any loss of biodiversity habitats or species is to be offset by enhancement as a material requirement. It is therefore recommended that where feasible the areas offset for POS and biodiversity enhancement should incorporate the retention of the existing more diverse grassland and hedgerow boundaries.

The landscaping to the site and specifically to the POS areas should include species offering biodiversity enhancement.

It is recommended that the hedgerow boundaries are managed and retained on site and enhanced where required. Where sections of hedgerows have been lost on site, primarily the new site entrance layout, hedges of native species should be planted and any standard trees planted should be selected to provide foraging opportunities for insects (blossom) and birds (berries), and year-round cover and nesting sites for birds.

Planting should include shrub beds to provide cover and additional nesting sites for birds, and flower borders to provide foraging opportunities for insects.

Open grassland is also important for ground feeding birds like Blackbird

A new wildlife pond is to be formed with a percentage of secondary roof water feeds being fed directly into the wildlife pond, as previously used by EDC. This method ensures that the ponds are topped up during the year, so as to retain as much standing water throughout the season. This is becoming more of an issue with long periods of dry spring weather and higher evaporation rates due to global warming impacts.

The grassland to the Biodiversity Offset area is to be managed back to a hay meadow were feasible. A management plan is to be developed to promote the reestablishment and retention of the hay meadow going forward. The grassland within the POS area is similarly to be managed to promote species diversity, but managed to form short swards to the majority of the areas for potential foraging by bird species like Starling, Blackbird etc. and large mammal, Fox, Badger.

The inclusion of nest/bat boxes/bricks on the new housing stock, to include a mix of, House Martin and Swallow cups, Swift, Sparrow and Starling boxes. The boxes are to be sighted so not to impact on bedrooms, doorways or windows.

Bird boxes are to be located generally on eastern elevations.

Bat bricks are to be located on the perimeter plots facing the adjacent habitats or the internal POS areas. The bat bricks are to positioned so as to face all aspects, north, south, east and west and spread across properties as the layout allows. The positioning of the bricks should take into consideration of the mandatory LA adoptable lighting schemes.

A landscape management scheme should take into consideration, nesting birds in the case of hedgerow and scrub management. The grassland should be selective to produce both short and intermediate swards to provide varying habitats for invertebrates, small mammals and wild flower. A site composting scheme for the land manager should be considered within the scheme layout to provide added habitats, the grass compost sites should abut hedgerow boundaries.

The development of the varied grassland swards will also promote/retain some of the ant nests across the site which supplement foraging for fauna in general.

The landscape and site boundaries are to consider the movement of large and medium sized mammals across the site and specifically the locally recorded biodiversity species Hedgehog, therefore careful design of the garden boundaries is to be considered to allow passage from area to area for this species. If enclosed fencing is to be used, then Hedgehog friendly gravel boards are to be used, this will allow access for locally threatened biodiversity species like Hedgehog which are impacted heavily by closed gardens.

Root protection zones should be included for any hedgerow or boundary trees as part of the development process. The hedgerows are also considered to offer wildlife corridors, refuge, nest sites and foraging for multiple species.

Careful consideration to the landscape plan is to be undertaken, to ensure that no INNS (Invasive Non-Native Species) species are inadvertently introduced as part of the scheme.

11.0 CONCLUSION

There is a slight potential for ingress to the development area by the protected species GCN, however the development of the site is not considered to have an adverse impact on this species and is considered to be negligible over the medium to long term

It is therefore the surveyor's opinion that the proposed development proposals are considered to be negligible, but with a good landscaping showing increased species diversity this could show slight beneficial gain through appropriate management and is likely to have no long-term impact on the favorable conservation status of locally recorded protected species, or their ecological functionality if the works are carried out in accordance with the recommendations given within this report

Tim Hodnett
July 2023

12.0 APPENDICES

12.1 Plans

12.2 Species Lists

12.3 Photographs

12.4 EMapper GCN/BAT Data Plan

12.5 CE Pond reference plan

12.6 Lighting Addendum

12.1 Plans

Drawing Ref:-

1025-Phase 1 Plan PH-01

1025-Rhosrobin Mitigation Plan-MIT-01C

1025-Rhosrobin Mitigation Plan-MIT-02A



KEY

- A 2.2 scattered scrub
- B 2 neutral semi-improved grassland
- B 5 marshy grassland
- J 3.1 native species rich hedge with trees
- J 3.2 species poor hedge with trees
- J 2.3.6 dry ditch
- J 2.4 fence

client

SG ESTATES
AWARD WINNING HOUSING DEVELOPER

project title

Proposed Housing Development
Rhosrobin Wrexham

drw. title

Extended Phase 1 Plan

scale	date	drawn
NTS@A3	JUL'21	TJH
rev.	chkd.	

project ref.	drawing no.
1025	PH-01

NOTES:
To be read in conjunction with Engineers, Services drawings etc. All dimensions to be checked prior to construction on site. All works to be carried out to the satisfaction of LA and relevant B.S. All discrepancies to be reported immediately.

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NOTES:
To be read in conjunction with Engineers, Services drawings etc. All dimensions to be checked prior to construction on site. All works to be carried out to the satisfaction of LA and relevant B.S. All discrepancies to be reported immediately.

12 no. Bat box/brick to be attached or built in to the southern and western elevations at eaves height. Boxes/bricks to be adjacent to non habitable areas i.e. landings, bathrooms. Boxes/bricks are not to be positioned above doors or windows.

14 no. Bird boxes to be a mix of sparrow and swift nest boxes. Bird boxes to be erected at eaves height on the eastern elevations. Boxes/bricks to be adjacent to non habitable areas i.e. landings, bathrooms. Boxes/bricks are not to be positioned above doors or windows.

Plot fencing to be mammal friendly to allow migration and movement for hedgehog. Fencing is to be set at a 150 mm above ground level or have access. If the fencing is to be set to the ground then Hedgehog friendly access holes are to be cut/formed. Access holes to be no less than 130 x 130 mm. Holes to be located to allow connectivity to adjoing area/plots etc., this will allow access for locally threatened biodiversity species like Hedgehog which are impacted heavily by closed gardens.

The existing hedgerow boundaries are to be retained, and enhanced where required. The landscape planting is to include standard trees planted to provide foraging opportunities for insects (blossom) and birds (berries), and year-round cover and nesting sites for birds. (crab apple, flowering currant,)

Planting is to include shrub beds to provide cover and additional nesting sites for birds, and flower borders to provide foraging opportunities for insects.

Open grassland is also important for ground feeding birds like Blackbird

REV C: sub station added
REV B: notes ammended
REV A: mitigation area revised layout

client

SG ESTATES
AWARD WINNING HOUSING DEVELOPER

project title

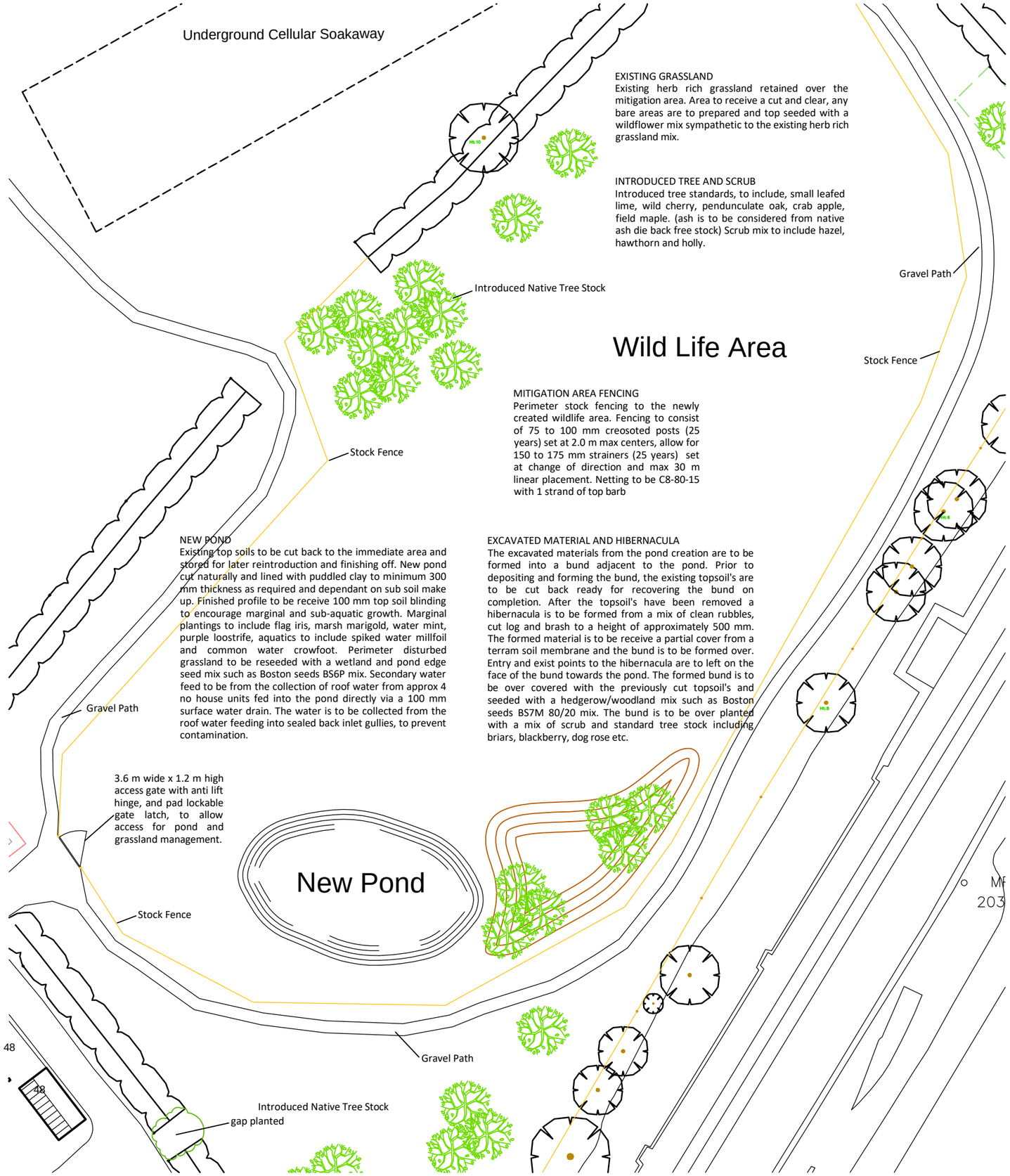
Llay New Road, Rhosrobin, Wrexham

drw. title

Biodiversity/Mitigation Plan

scale	date	drawn
NTS @A3	Jan '22	TJH
rev.	chkd.	
C		
project ref.	drawing no.	
1025	MIT-01	

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Mechanism for ensuring delivery of post-development works

The developer/wildlife land manager is to enter into a unilateral agreement. The housing stock and development site are a mix of Private Housing and Housing Association. The development consists of areas of POS and Mitigation, requiring cyclical monitoring and management. The funding for the management and monitoring will be from agreed service charges on transfer of the plots onto private ownership. The appointed management company will be responsible for the collection and distribution of the service charge for both POS and Mitigation. The developer/appointed land management company, will lease the mitigation land to Countryside Wildlife Management Ltd or other equally experienced ecological wildlife manager for the minimum period of 25 years. The appointed ecological wildlife manager will be responsible for the monitoring and maintenance of the wildlife areas, all costs to be index linked going forward.

In the interim period of appointing an ecological land manager the responsibility of the management of the wildlife areas will be undertaken by either their main contractor or in house management teams under the supervision of the retained ecologist all in accordance with the management plan

Contingency Actions

In consultation with NRW, it is recommended that the site owner/manager sets out the contracts for engagement of the ecological manager/consultant in such a way that if the contracted manager/consultant cannot fulfill the requirements of the contract, then the appointed manager/consultant must make provision for alternative managers/consultants to undertake their contracted works on their behalf.

If, however this cannot be undertaken the land owner/manager must be allowed to appoint a secondary/alternative mangers/consultant to undertake the management, monitoring works in accordance with the management/surveillance prescriptions.

Skills, Competencies and Licenses for undertaking Management

The appointed ecological managers/consultants are required to work under the cover of either the EPS IROPI derogation license, as applied for, to cover the implementation works, or a conservation license under the Wildlife and Countryside Act 1981 (as amended) and/or the Conservation of Habitats and Species Regulation 2017 (as amended).

In respect of the IROPI purpose license managers/ecologists are to be accredited on the license if working on behalf of the license holder. If the ecologist is undertaking monitoring works without the provision of either and EPS or conservation license, the ecologist must hold the requisite licenses for the species concerned and the UK area, to enable monitoring to be undertaken in accordance with the protected species legislation.

It is recommended that the appointed managers/ecologists can show relevant experience in management works and/or monitoring of species in a professional capacity and hold all requisite species licenses, insurances, equipment, Health and Safety Risk assessment etc. to undertake the works in a professional capacity. It is advocated that evidence of competencies is included as part of tendering processes, including proven experience in managing adverse factors such as invasive non-native species.

It is recommended that any bodies, and voluntary bodies in particular, are not appointed as principal managers/monitors unless clear evidence of professional competencies can be demonstrated, together with evidence of policies identifying long term retention of required skills and competencies associated with the full range of species on site.

Updating Management Plan

Management plans are developed to cover the species identified, mitigated for and in due relation to the prevailing climatic conditions at the time of first implementation. It may be found that the management prescriptions are required to be amended, updated due to the change in growth rates, succession rates to ponds, ingress of INNS flora and fauna and the impacts due to global warming. It is anticipated that the appointed ecologists/managers have sufficient experience to identify change and develop and adapt the management plans accordingly. It is however expected that any variation to management is implemented following consultation with the site manager/owner, NRW species advisors and the county ecologists and some cases local voluntary bodies, Badger Group, Bat Group etc.

Formal revues of the plan shall be carried out every 10-15 years for the lifetime of the development unless agreed with relevant regulatory bodies.

REV A:Notes amended

client

SG ESTATES
AWARD WINNING HOUSING DEVELOPER

project title

Llay New Road, Rhosrobin, Wrexham

drw. title

Biodiversity/Mitigation Plan Detail

scale	date	drawn
NTS @A3	Jan '22	TJH
rev.	chkd.	
A		
project ref.	drawing no.	
1025	MIT-02	

NOTES:
To be read in conjunction with Engineers, Services drawings etc. All dimensions to be checked prior to construction on site. All works to be carried out to the satisfaction of LA and relevant B.S. All discrepancies to be reported immediately.

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12.2 Species Lists

Scientific name	**Common Name**
Quercus robur	Common Oak
Fraxinus excelsior	Ash
Fagus sylvatica	Beech
Acer pseudoplatanus	Sycamore
Prunus avium	Wild Cherry
Prunus sp.	Ornamental Cherry
Corylus avellana	Hazel
Crataegus monogyna	Hawthorn
Prunus spinosa	Blackthorn
Salix caprea	Goat Willow
Ilex aquifolium	Holly
Hedera helix	Ivy
Sambucus nigra	Elder
Rubus fruticosis	Bramble
Mercurialis perennis	Dog's-mercury
Ranunculus acris	Meadow Buttercup
Ranunculus repens	Creeping Buttercup
Hyacinthoides non-scriptus	Bluebell
Ranunculus ficaria	Lesser Celandine
Arum maculatum	Lords and Ladies
Taraxacum officinale	Dandelion
Trifolium repens	White Clover
Urtica dioica	Stinging Nettle
Prunella vulgaris	Self-heal
Plantago lanceolata	Ribwort Plantain
Luzula campestris	Field Woodrush
Lotus corniculatus	Bird's-foot Trefoil
Rumex acetosa.	Common Sorrel
Epilobium angustifolium	Rosebay willowherb
Cirsium arvense	Creeping thistle
Cerastium fontanum	Common Mouse-ear
Digitalis purpurea	Foxglove
Galium aparine	Cleavers
Heracleum sphondylium	Hogweed
Hypochoeris radicata	Cat's-ear
Senecio jacobaea	Ragwort
Vicia sativa	Common vetch
Anthriscus sylvestris	Cow parsley
Cirsium hetrophyllum	Melancholy thistle
Rumex crispus	Curled dock
Rumex obtusifolius	Broad-leaved dock
Senecio vulgare	Groundsel
Symphoricarpos albus	Cloudberry
Cirsium vulgare	Spear Thistle

Scientific name	**Common Name**
Dactylorhiza fuchsii	Common Spotted Orchid
Centaurea nigra	Common Knapweed
Leontodon sp.	Hawkbit
Filipendula ulmaria	Meadowsweet
Achillea millefolium	Yarrow
Trifolium pratense	Red Clover
Geum urbanum	Wood Avens
Geranium robertianum	Herb Robert
Tragopogon pratensis	Meadow Salsify
Agrostis capillaris	Common bent
Cynosurus cristatus	Crested dog's-tail
Lolium perenne	Perrenial Ryegrass
Dactylis glomerata	Cock's-foot
Deschampsia cespitosa	Tufted hair-grass
Eltrygia repens	Couch
Festuca rubra	Red fescue
Glyceria fluitans	Floating sweet-grass
Holcus lanatus	Yorkshire fog
Anthoxanthum odoratum	Sweet-scented vernal grass
Poa pratensis	Meadow Grass

Scientific name	**Common Name**
Turdus merula	Blackbird
Parus caeruleus	Blue Tit
Parus major	Great Tit
Erithacus rubecula	Robin
Fringilla coelebs	Chaffinch
Columba palumbus	Wood Pigeon
Prunella modularis	Dunnock
Chloris chloris	Greenfinch
Carduelis carduelis	Goldfinch
Curruca communis	Whitethroat
Apus apus	Swift
Sylvia atricapilla	Blackcap
Phylloscopus collybita	Chiffchaff
Bombus hypnorum	Tree Bumble Bee
Bombus pascuorum	Common Carder Bee
Sympetrum striolatum	Common Darter
Maniola jurtina	Meadow Brown
Aphantopus hyperantus	Ringlet
Thymelicus sylvestris	Small Skipper

Polyommatus icarus	Common Blue
Argynnis pandora	Cardinal
Vanessa atalanta	Red Admiral
Pieris rapae	Cabbage White

12.3 Site Photographs



Photo 1 – north eastern boundary 2021



Photo 2 – north eastern boundary 2023



Photo 3 – hedgerow H3 2021



Photo 4 – hedgerow H3 2023



Photo 5 – south eastern boundary 2021



Photo 6 – south eastern boundary 2023



Photo 7 – field 3 looking north east 2021



Photo 8 – field 3 looking north east 2023



Photo 9 – field 1 looking north west 2021



Photo 10 – field 1 looking north west 2023

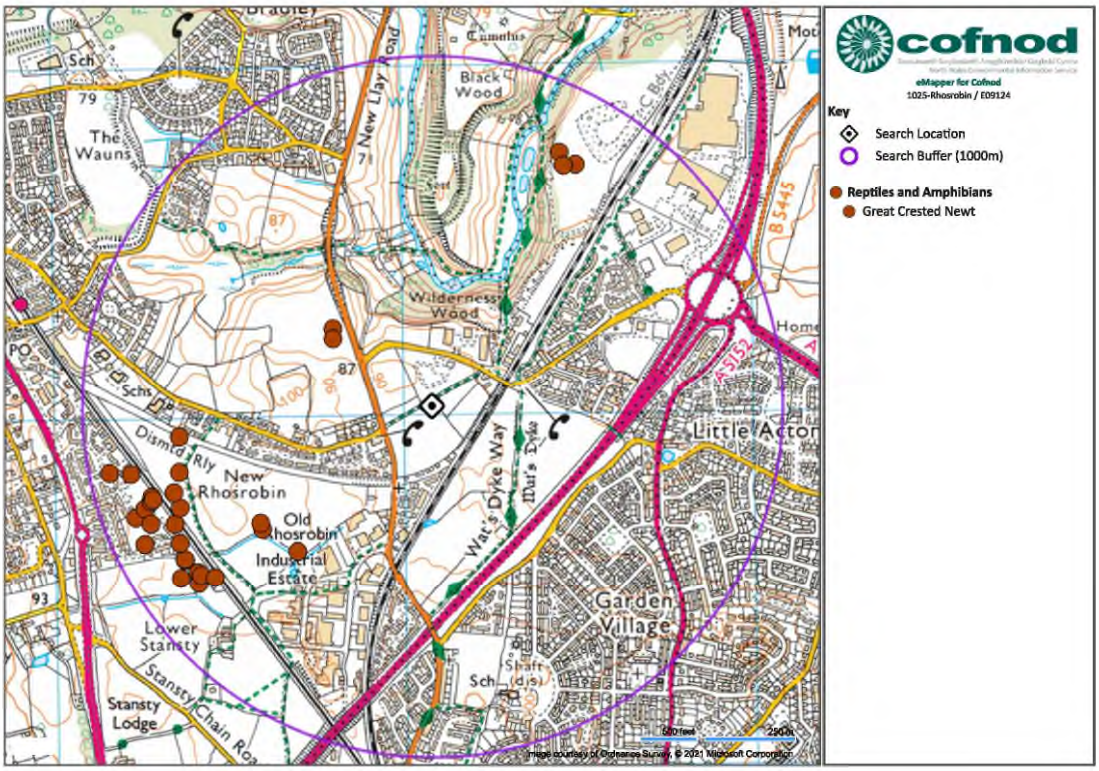


Photo 11 – hedgerow H1 2021

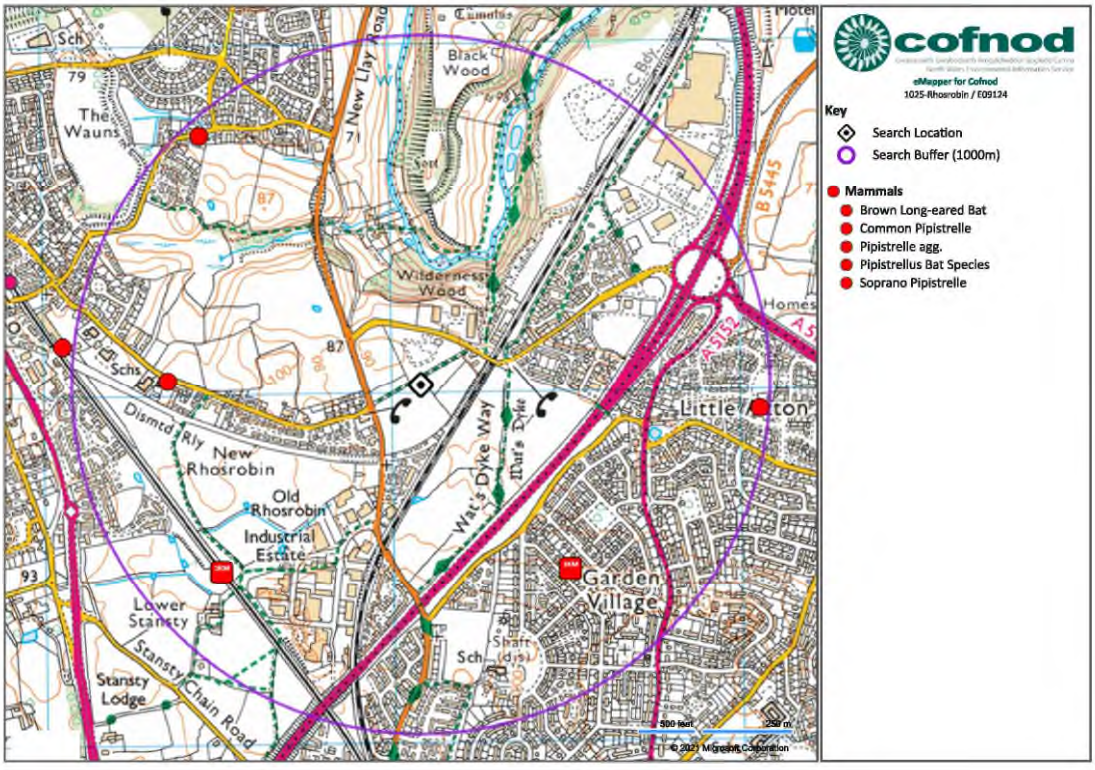


Photo 12 – hedgerow H1 2023

12.4 EMapper GCN Data Plan



EMapper BAT Data Plan



12.5 CE Pond reference plan



Figure 2: Location of water-bodies

12.6 Lighting Addendum

Hyperlink to the BCT current guidance for Bats and Lighting, please note that this guidance will be replaced shortly with a revised approach on Bats and Lighting

https://cdn.bats.org.uk/uploads/pdf/Resources/ilp-guidance-note-8-bats-and-artificial-lighting-compressed.pdf?v=1542109349&_gl=1*18xkvvd*_ga*MTMyMDU4ODEwNS4xNjEzNTA0MzE1*_ga_G28378TB9V*MTY4OTg0OTE5MS4xLjAuMTY4OTg0OTE5MS4wLjAuMA..