Opus Land Ltd

ECOLOGYSOLUTIONS

Part of the ES Group

Plot C1,
Llantarnam Park

Ecological Assessment

July 2024
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ecology solutions for planners and developers

PROTECTED SPECIES

This report contains sensitive information
relating to protected species.
The information contained herein
should not be disseminated without the
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1. INTRODUCTION

1.1. Background & Proposals

1.1.1. Ecology Solutions was commissioned in June 2023 by Opus Land Ltd on behalf of MGTS St John High Income Property ICVC Bank of New York Mellon (International) to undertake an Ecological Assessment of Plot C1, Llantarnam Park, in Cwmbran, Wales, hereafter referred to as the 'application site' (see Plan ECO1).

1.1.2. The application site is currently allocated for the erection of a new build, two-storey unit for use class B1/B2/B8, to provide operational/warehousing space and office accommodation together with associated yards and parking, located at Plot C1 Llantarnam Industrial Park, Cwmbran, Torfaen, NP44 3SE. This study has been designed to inform emerging plans.

1.2. Site Characteristics

1.2.1. The application site is located to the south of Cwmbran, Wales in Llantaram Industrial Park. The application site is bordered to the east, south and west by existing commercial and industrial development. To the north, it is bordered by woodland and the Dowlais Brook with angling ponds located adjacent.

1.2.2. The application site itself predominantly comprises one parcel of mixed grassland, areas of ruderal dominated vegetation and a small block of broadleaved woodland in north of the application site. It is also bordered by mature vegetation.

1.3. Ecological Appraisal

1.3.1. This report sets out the recorded baseline conditions of the application site, setting these in the correct planning policy and legal framework and assessing potential impacts which may occur from potential emerging development proposals.

1.3.2. Appropriate mitigation and compensatory measures are identified so that it will provide mechanisms to offset negative impacts, and where possible, provide for the ecological benefits for the local area, in accordance with relevant planning policy.

2. SURVEY METHODOLOGY

2.1. The methodology utilised for the survey work undertaken can be split into three areas, namely, desk study, habitat survey and faunal survey. These are discussed in more detail below.

2.2. Desk Study

2.2.1. To compile background information on the application site and its immediate surroundings, Ecology Solutions initially contacted South-east Wales Biodiversity Record Centre (SWBDC) during June 2023. Additionally, local records were also obtained from the National Biodiversity Network (NBN) Atlas' online search tool.

2.2.2. Further information on designated sites from a wider search area was obtained from the online Multi-Agency Geographic Information for the Countryside (MAGIC) database.

2.3. Habitat Survey

2.3.1. A detailed habitat survey of the application site was undertaken during June and July 2023 to ascertain the general ecological value of the application site and to identify the main overarching habitats and site characteristics.

2.3.2. The site was surveyed based around a combination of extended Phase 1 survey methodology and UK Habitat Classification (UKHab) methodology. As recommended by Defra, whereby the habitat types present are identified and mapped together with an assessment of the general species composition of each habitat recorded at the time. This technique provides an inventory of the basic habitat types present and allows identification of areas of greater potential, which may require further survey.

2.3.3. Using the above methodology, the site was classified into areas of similar botanical community types. Where possible, a species list for each habitat recorded at the time of survey has been compiled.

2.3.4. An assessment of the site for notable and regulated invasive plant species (Schedule 9 part II) was also undertaken.

2.4. Faunal Survey

2.4.1. General faunal activity observed during the course of the survey work was recorded, whether visually or by call. Specific attention was paid to the potential presence of any protected, rare, notable or Priority Species, and the extent to which the site could provide any potential opportunities for these species / groups.

2.4.2. In addition, both specific scoping and / or detailed surveys were undertaken in respect of bats, reptiles, Badgers *Meles meles*, reptiles, Hazel Dormice *Muscardinus avellanarius,* Great Crested Newts *Triturus cristatus,* Otter *Lutra lutra,* Water Vole *Arvicola amphibious* and White-clawed Crayfish *Austropotamobius pallipes.*

2.4.3. **Bats.** Ground-based Preliminary Roost Assessment (PRA) surveys were undertaken within the application site during June 2023 to assess the

suitability of all trees within or immediately adjacent to the application site to support roosting bats. The work was undertaken by an experienced bat worker and aimed to establish the likelihood of presence / absence of roosting bats.

2.4.4. All field surveys were undertaken with regard to best practice guidelines issued by Natural Resources Wales, the Joint Nature Conservation Committee (2004[1]) and the Bat Conservation Trust (2016[2]). It is noted that this guidance was the most recent and relevant at the time of the initial site assessment work.

2.4.5. For a tree to be classed as having potential for roosting bats, it must usually have one or more of the following characteristics:

- obvious holes, e.g. rot holes and old woodpecker holes;
- dark staining on the tree below a hole;
- tiny scratch marks around a hole from bats' claws;
- cavities, splits and/or loose bark from broken or fallen branches, lightning strikes etc.; and/or
- very dense covering of mature Ivy *Hedera helix* over trunk.

2.4.6. The main requirements for a winter / hibernation roost site is that it maintains a stable (cool) temperature and humidity. Sites commonly utilised by bats as winter roosts include trees with cavities/holes, underground sites and parts of buildings. Whilst different species may show a preference for one of these types of roost site, none are solely dependent on a single type.

2.4.7. An initial assessment of the suitability of the site to support commuting and foraging bats in the local area was also undertaken.

2.4.8. To ascertain the level of use of the site by foraging and commuting bats (including species and the level of activity present), bat activity surveys were undertaken. Walked transect surveys were completed from June to October 2023.

2.4.9. The walked transect survey involved surveyors walking the site along a transect which encompassed all features of potential value for bats, recording all bat activity seen and heard.

2.4.10. Given the location of the application site and the proximity of known Lesser Horseshoe Bat *Rhinolophus hipposideros* roosts in the wider area, it was considered prudent to undertake prolonged transect surveys. As such, surveys started approximately 15 minutes before sunset and continued for approximately 2 hours and 45 minutes after sunset. Surveyors utilised EMT2 Pro bat detectors with digital tablets to aid identification of bats and to record data, with information subsequently analysed using Kaleidoscope bat sound analysis software.

2.4.11. Aside from the first June survey (see limitations), surveys were completed across the site during favourable weather conditions, as outlined in Table 1.

[1] Mitchell-Jones, A.J. & McLeish, A.P. (Eds.) (2004). *Bat Workers' Manual*. 3rd edition. Joint Nature Conservation Committee, Peterborough.
[2] Collins, J. (Eds.) (2016). *Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd edition)*. Bat Conservation Trust, London.

Date	Weather Conditions
06/06/23	16C, 100% cloud clover, moderate rain, moderate wind
27/06/23	18C, 100% cloud cover, dry, light wind
20/07/23	16C, 70% cloud cover, dry, light wind
29/08/23	16C, 80% cloud cover, light patchy rain, light wind
25/09/23	15C, 20% cloud cover, dry, light wind

Table 1. Dates, timings and weather conditions for bat activity transect surveys undertaken across the site.

2.4.12. In order to obtain longer-term data regarding the use of the site by bats, automated detector (SongMeter SM4 / SM4 mini bat detectors) surveys were undertaken in conjunction with the activity surveys. Detectors were deployed for at least five consecutive nights. The dates, locations and results of the static detectors surveys are illustrated on Plan ECO3 and within Section 4.

2.4.13. **Badgers.** Specific survey work was undertaken during June 2023 to search for evidence of Badgers within the application site. This survey work entailed two elements, the first of which was a thorough search for evidence of any Badger setts. For any setts encountered, each entrance would be recorded and plotted, even if the entrance appeared disused. The following information was recorded if appropriate:

i) The number and location of well used or very active entrances; these are clear of any debris or vegetation and are obviously in regular use and may, or may not, have been excavated recently.

ii) The number and location of inactive entrances; these are not in regular use and have debris such as leaves and twigs in the entrance or have plants growing in or around the edge of the entrance.

iii) The number of disused entrances; these have not been in use for some time, are partly or completely blocked and cannot be used without considerable clearance. If the entrance has been disused for some time all that may be visible is a depression in the ground where the hole used to be and the remains of the spoil heap.

2.4.14. Secondly, evidence of Badger activity, such as well-worn paths and run-throughs, snagged hair, footprints, latrines and foraging signs, was also searched for in order to build up a picture of the use of the site by Badgers.

2.4.15. **Amphibians (Great Crested Newt)**. Whilst no waterbodies are present in the application site, waterbodies and watercourses are present in the wider area. As such, scoping surveys were undertaken to identify the likelihood of these identified features to support GCN. This assessment is based on a number of factors such as water quality, shading, presence of fish, location and terrestrial habitat. Where features were identified as entirely unsuitable, these were subsequently scoped out from further survey work.

2.4.16. Whilst a number of other permanent waterbodies are located in the wider area, these are all either located a significant distance from the site (i.e. in excess of 500m from the site boundary), are located on the opposing sides of significant barriers to dispersal (including the Dolwais Brook, regularly used roads, large commercial development and other areas of built-form), and / or are known angling lakes and therefore stocked with predatory fish, indicating their unsuitability to GCN.

2.4.17. Notwithstanding the above, on a precautionary basis, relevant waterbodies within 250m of application were surveyed through eDNA testing.

2.4.18. **Birds**. During the 2023 survey work, a general assessment of the potential of the site to support bird species was undertaken. All species identified during the site visit were recorded, and the extent to which habitats present within and adjacent to the site to support this group was noted.

2.4.19. **Hazel Dormice.** Specific surveys to ascertain the presence or absence of Hazel Dormice were undertaken from June to November 2023.

2.4.20. The survey technique involves the erection of nest tubes within all hedgerows considered to be species-rich or of potential value to Dormice. A total of 50 nest tubes were installed in the woodland and around the boundaries of the application site.

2.4.21. Nest tubes were placed in accordance with the guidance provided by the Mammal Society and Natural Resources Wales and as recommended in the Dormouse Conservation Handbook[3]. Tubes were placed within hedgerows where suitable locations were identified. The nest tubes were attached with wire ties underneath suitably sturdy horizontal branches and positioned on average at approximately 1.5 metres above ground level.

2.4.22. Following deployment in June, monitoring surveys were undertaken monthly until November 2023. The dates and weather conditions of the surveys is shown in the table below. The locations are shown at Plan ECO4.

Date	Weather conditions
27/06/23	20C, 100% cloud cover, dry
20/07/23	18C, 85% cloud cover, dry
25/07/23	16C, 70% cloud cover, dry
29/08/23	15C, 0% cloud cover, dry
06/09/23	16C, 20% cloud cover, dry
04/10/23	15C, 90% cloud cover, light rain
09/11/23	7C, 100% cloud cover, heavy rain

Table 2: Monthly Score Weighting (Chanin & Woods 2003)

[3] Bright, P, Morris, P. & Mitchell-Jones, T. (2006). *The Dormouse Conservation Handbook*. Second Edition. English Nature, Peterborough.

2.4.23. The surveys can be scored for effort according to the method developed from the South-west Dormouse Project (Chanin and Woods 2003). The system used provides an overall score that reflects the chances of Dormice being discovered if present, and thus provides an indicator of 'thoroughness' of a survey. This score is calculated based on the number of tubes used and the number of months the tubes were in place.

2.4.24. The months of the year are weighted according to the likelihood of recording dormice as set out below.

Month	Weighting
April	1
May	4
June	2
July	2
August	5
September	7
October	2
November	2

Table 3: Monthly Score Weighting (Chanin & Woods 2003)

2.4.25. A score of 20 (or above) is deemed a thorough survey, and a score of 15 to 19 may be regarded as adequate where circumstances do not permit more time or more tubes (particularly if other survey methods have also proved negative).

2.4.26. The number of tubes used was 50, and were all checked between June and November, monthly. This results in a total score of 20 (2+2+5+7+2+2), therefore meeting the threshold of what can be considered a thorough survey effort.

2.4.27. **Reptiles.** Specific surveys to identify the presence or absence of reptiles within the application site (and wider area, where appropriate) were undertaken between June to October 2023.

2.4.28. Following an initial assessment to identify areas of suitable reptile habitat within the study site, refugia surveys were undertaken. A total of 50 'tins' (0.5 x 0.5 metre squares of heavy roofing felt which are often used as refuges by reptiles) were distributed throughout all suitable reptile habitat within the application site in July 2023. This included rough grassland and margins throughout the site and wider area.

2.4.29. These tins were left in place for two weeks to 'bed in' and subsequently surveyed for reptiles beneath or upon the tins during suitable weather conditions.

2.4.30. Suitable weather conditions to carry out surveys are when the air temperature is between 9°C and 18°C. Heavy rain and windy conditions should be avoided.

2.4.31. The tins provide shelter and heat up quicker than the surroundings in the morning and can remain warmer than the surroundings in the late afternoon. Being ectothermic (cold blooded), reptiles use them to bask and raise their body temperature which allows them to forage earlier and later in the day.

2.4.32. The dates and weather conditions of the reptile are outlined in Table 2 below. The locations of the reptile tins are shown at Plan ECO5.

Date	Weather Conditions
03/07/23	14C, 100% cloud cover, dry
20/07/23	18C, 0% cloud cover, dry
25/07/23	16C, 70% cloud cover, dry
28/07/23	15C, 0% cloud cover, dry
29/08/23	14C, 0% cloud cover, dry
06/09/23	16C, 20% cloud cover, dry
04/10/23	15C, 90% cloud cover, light rain
06/10/23	16c, 50% cloud cover, dry

Table 4: Weather conditions and dates for 2023 reptile surveys

2.4.33. **Water Vole.** The potential of the site and wider area to support Water Vole was assessed during June 2023 and September 2023.

2.4.34. The potential presence of Water Vole was surveyed by systematically searching all suitable habitat for any signs that would typically indicate the presence of Water Vole, including;

- faeces and latrines;
- feeding stations;
- burrows;
- footprints; and,
- runs or pathways.

2.4.35. This included the use of two surveyors searching the both in-channel and bankside features and faces. This included hard-to-reach areas including the reedbeds, and the scrub thickets at the water's edge. Animal pathways to and from the water's edge were inspected and where necessary followed inland to determine their source.

2.4.36. **Otter**. The potential of the application site and wider area to support Otter was assessed during June and September 2023.

2.4.37. The potential presence of Otter was surveyed by systematically searching all suitable habitat for any signs that would typically indicate the presence of Otter, including;

- Spraints (faeces);
- Holts (places of shelter);
- Feeding remains
- Slides
- Couches (resting sites); and,
- Footprints.

2.4.38. As with the Water Vole surveys, the surveys involved the use of two surveyors searching bankside and in-channel areas.

2.4.39. **White-clawed Crayfish.** Scoping surveys to help identify the potential absence or presence of white-clawed crayfish within the application site were undertaken throughout the summer of 2023.

2.4.40. These included opportunistic checks undertaken alongside the Water Vole and Otter surveys as the target habitats were broadly the same. The brook was sensitively searched for signs of Crayfish inhabitation, including refugia and around possible sheltering locations.

2.4.41. In addition to the above, complimentary eDNA sampling and analysis was undertaken from three target locations across the Dowlais Brook during September 2023. This included a sample location approximately 500m downstream of the site, 500m upstream of the site, and, from an area which runs immediately adjacent to the application site itself (see Plan ECO6 for all sample locations).

2.4.42. The survey methodology, which has been pioneered by researchers at SureScreen Scientifics and the University of Derby, involves the collection of multiple water samples across target sample locations. Collected samples are then subject to initial processing in the field, prior to being tested in laboratory conditions for the presence of White-clawed Crayfish eDNA. A positive result would indicate presence in at least the wider watercourse itself.

2.4.43. In addition to White-clawed Crayfish, the potential presence of Signal Crayfish *Pacifastacus leniusculus*, Marbled Crayfish *Procambarus virginalis* and Crayfish plague mold *Aphanomyces astaci* were also tested for.

2.4.44. **Other notable and / or protected species**. During the survey work undertaken, consideration was given to the sites potential to support a number of other protected or notable species.

2.5. Limitations / observations

2.5.1. During the first June bat activity survey, adverse weather conditions and initial issues with site health and safety meant the survey had to be abandoned almost immediately after it had begun. It was therefore repeated during late-June. Additionally, on two separate occasions, two single static detectors (static detector 5 and 7) experienced malfunctions towards the end of their recording periods. Static detector 5 recorded for 4 nights, static detector 7 recorded for 3 nights. However, given the quantity of data recorded across the entirety of the survey period, the very small size of the site, and, the areas of better quality bat habitat being located away from the main development zones, these incidents are not considered to be material limitations to the overall conclusions drawn.

2.5.2. The 7th reptile survey was undertaken during sub-optimal conditions, however was repeated (8 surveys total) shortly after. On that basis, it is considered that a suitable level of reptile survey effort was completed across the application site, and therefore, the occurrence of sub-optimal conditions during a single survey is not considered a material limitation.

3. ECOLOGICAL FEATURES

3.1. The site was subject to habitat survey work during June and August 2023. The vegetation present enabled an assessment to be made of the ecological interest and habitats present.

3.2. The location of all habitats recorded is shown at Plan ECO2. Each habitat present is described below using its UKHab identifier (or as close a match as possible).

3.3. The following main habitat / vegetation types were identified within the application site boundary:

- Other Neutral Grassland;
  - Ruderal dominated vegetation
  - Wet grassland
- Lowland Mixed Deciduous Woodland;
- Scattered Scrub;
- Hedgerow / Treelines;
- Running Water (Dowlais brook);
- Hardstanding; and,
- Recolonising Bareground

Other Neutral Grassland

3.4. The majority of the application site comprises a mosaic of grassland (G1) which, when considering its small spatial scale, varies in terms of botanical communities and structure.

3.5. Whilst there is evidence to suggest that the site has been subject to extensive clearance and disturbance works in the past, it is not currently being managed, resulting in a predominately long and varied sward. This has led to extensive scrub and ruderal dominant species encroachment, particularly where the grassland and woodland / boundary areas are in a close proximity to one another.

3.6. Notwithstanding these areas where tall ruderal species tend to dominate (including non-native schedule 9 species), there are small pockets of more open grassland which contain a more varied forb mix, including populations of several more notable species, including Common Spotted Orchid *Dactylorhiza fuchsia,* Southern Marsh-orchid *Dactylorhiza praetermissa* and Yellow Bartsia *Parentucellia viscosa*.

3.7. Likely resulting as a result of past modification, the site also contains a varied topography, sitting lower at its western most extent (adjacent to the access road), before rising in the east, and eventually dropping down to the brook within the bordering woodland.

3.8. Consequently, the grassland forms somewhat of a basin allowing for periodic inundation in the west of the site, resulting in wetter and drier sections of the site. Notwithstanding this, the wet and dry generally intertwine throughout the application site. Due to this variation in composition, in addition to the summary provided above, the grassland can be further categorised into distinct grassland communities. These are discussed in turn below.

Ruderal dominated vegetation

3.9. The drier sections of the site comprise roughly 75% of the overall grassland parcel and are generally homogenous in botanical structure and composition with ruderal vegetation dominating.

3.10. The vegetation in these areas is entirely unmanaged and rank in nature. As a result, the sward is entirely dominated by Bramble *Rubus agg*. Creeping Thistle *Cirsium arvense,* Common Nettle *Urtica dioica* and Hemlock Water Dropwort *Oenanthe crocata*, contributing to a uniformly tall sward that is ruderal in composition.

3.11. In addition to Bramble succession, Goat Willow *Salix caprea* saplings and young Goat Willow stands are successively encroaching across the site. Initially commencing in dense stands adjacent to the woodland.

3.12. Moreover, stands of Himalayan Balsam *Impatiens glandulifera* are also present across the site, particularly in the north-east adjacent to the woodland habitats.

3.13. It is considered that in the absence of active management, the overall grassland sward, including the areas of more open and wet grassland (see below), will be at risk of loss to eventual succession of these more ruderal dominated sub-communities.

Wet Grassland

3.14. The wetter sections of the grassland, predominately in the west of the site, are less homogenous in structure and composition than the drier areas. The sward is much shorter in height due to the prevalence of *Juncus sp.* and *Carex sp.* and has an overall greater degree of species diversity and species richness.

3.15. As a result, these areas of the grassland are considered to be of greater ecological value than the wider, continuous grassland. Notwithstanding this, it is clear that the Bramble and Willow succession occurring over the rest of the application site will also continue into these areas of better quality should the grassland remain unmanaged. Additionally, Himalayan Balsam will also continue to spread further across the site, increasing in even greater density throughout the wetter areas of the grassland.

3.16. Furthermore, despite the capacity of the wetter areas of the grassland to be periodically inundated as evidenced by the presence of *Juncus sp.* and *Carex sp.*, for much of the 2023 survey period the grassland was observed as being dry. As such, it is considered the wet areas of grassland do not hold water year-round, with the majority of the inundation occurring over the wetter months of the year.

3.17. Species recorded across all of the above grassland habitats include; Hard Rush *Juncus inflexus*, Yorkshire Fog *Holcus lanatus*, Rough Meadow Grass *Poa trivialis*, Creeping Buttercup *Ranunculus repens*, Ragged Robin *Lychnis flos-cuculi*, Hemlock Water Dropwort *Oenanthe crocata*, Oxeye Daisy *Leucanthemum vulgare*, Hairy Willowherb *Epilobium hirsutum*, Black Knapweed *Centaurea nigra*, Cock's Foot *Dactylis glomerata*, Hedge Bindweed *Calystegia sepium*, Curly Dock *Rumex crispus*, Common Spotted Orchid *Dactylorhiza fuchsii*, Bramble *Rubus fruticosus*, Perforate St. John's Wort *Hypericum perforatum*, Dog Rose *Rosa canina*, Marsh Woundwort *Stachys palustris*,

Common Nettle *Urtica dioica*, Southern Marsh Orchid *Dactylorhiza praetermissa*, Creeping Thistle *Cirsium arvense*, Greater Bird's Foot Trefoil *Lotus pedunculatus*, Red Clover *Trifolium pratense*, Self-heal *Prunella vulgaris*, Black Medick *Medicago lupulina*, Marsh Thistle *Cirsium palustre*, Wood Avens *Geum urbanum*, Marsh Bedstraw *Galium palustre*, Meadow Buttercup *Ranunculus acris*, Crested Dogs Tails *Cynosurus cristatus*, Compact Rush *Juncus conglomeratus*, Oval Sedge *Carex ovalis*, Everlasting Pea *Lathyrus latifolius*, Sweet Vernal Grass *Anthoxanthum odoratum*, Yellow Bartsia *Parentucellia viscosa*, Common Spikerush *Eleocharis palustris*, Glaucous Sedge *Carex flacca*, Ribwort Plantain *Plantago lanceolata*, Common Fleabane *Pulicaria dysenterica*, Creeping Bent *Agrostis stolonifera*, Marsh Foxtail *Alopecurus geniculatus*, Lesser Trefoil *Trifolium dubium*, Common Centaury *Centaurium erythraea*, Agrimony *Agrimonia eupatoria*, Common Ragwort *Senecio jacobaea*, Common Hogweed *Heracleum sphondylium*, Stone Parsley *Sison amomum*, Broad-leaved Willowherb *Epilobium montanum*, White Clover *Trifolium repens*, Silverweed *Potentilla anserina*, Common Sorrel *Rumex acetosa*, Wild Carrot *Daucus carota* and Common Vetch *Vicia sativa*.

Lowland Mixed Deciduous Woodland

3.19. A block of mature semi-natural broadleaved woodland (W1) is situated in the north-eastern section of the application site. This woodland lies on a gradient that steeply slopes down towards the Dowlais Brook.

3.20. The woodland displays a variety of age classes, with several mature trees present. However, it primarily consists of semi-mature trees that exhibit spindly growth. Additionally, various saplings can be found throughout the woodland.

3.21. The canopy, predominantly formed by Oak *Quercus robur*, Ash *Fraxinus excelsior*, Beech *Fagus sylvatica*, Wych elm *Ulmus glabra,* and Sycamore *Acer pseudoplatanus* trees, is well-developed, leading to a shaded woodland floor. The woodland understory demonstrates some structural variation, with a blend of open patches and densely vegetated areas. A clearing extends from the centre of the woodland down to the Dowlais Brook. Whilst the canopy is fairly well mixed for the majority, areas located closer to the site are dominated by Sycamore.

3.22. Other species recorded include Alder *Alnus glutinosa*, Goat Willow *Salix caprea*, Holly *Ilex aquifolium*, Hazel *Corylus avellana*, Dogwood *Cornus sanguinea*, Hawthorn *Crataegus monogyna*, Rowan *Sorbus aucuparia*, Buddleija *Buddleja davidii* and Silver Birch *Betula pendula*.

3.23. Ground-flora species recorded included Bracken *Pteridium aquilinum*, Bramble, Ramsons *Allium ursinum*, Hart's Tongue Fern *Asplenium scolopendrium*, Common Nettle, Cleavers *Galium aparine*, Wood Avens, Enchanter's Nightshade *Circaea lutetiana*, English Ivy *Hedera helix*, Tutsan *Hypericum androsaemum*, Wood Dock *Rumex sanguineus*, Ground Ivy *Glechoma hederacea*, Broad-leaved Willowherb *Epilobium montanum*, Herb Robert *Geranium robertianum*, Field Bindweed *Convolvulus arvensis*, Dog's Mercury *Mercurialis perennis*, Wood Millet *Milium effusum* and Himalayan Balsam.

3.24. A stand of Japanese Knotweed *Fallopia japonica* is located on the northern banks of the Brook, extending into the woodland (off-site) to the north-east.

Other Woodland; Broadleaved

3.25. A narrow band of secondary woodland (W2) runs along the southeastern boundary of the site before connecting to W1.

3.26. This band of woodland is distinctively different from W1 in terms of structure and composition. W2 is a much narrower band that appears to have been planted, likely for screening purposes for the adjacent development. As a result, this section of woodland is far younger, denser, contains no mature trees, and is far more limited in terms of species diversity. The woodland also has both limited understorey and ground flora. On that basis, it is considered to be more comparable to 'Other Woodland Broadleaved', and does not meet the threshold of 'Lowland Mixed Deciduous Woodland'.

3.27. The canopy and understorey predominantly comprises Crack Willow *Salix fragilis*, Silver Birch, Alder, Wild Cherry and Hazel. Oak saplings, Ash and Silver Birch are present within the scrub canopy.

3.28. Species recorded as part of the ground-flora included Bramble, Clustered Dock, Tutsan, Black Bryony and English Ivy. A single Bee Orchid *Ophrys apifera* was also recorded within W1 during the June 2023 survey.

Scattered Scrub

3.29. Individual scattered scrub, predominantly Goat Willow and well-developed Bramble patches, are interspersed throughout the grassland. These are no more than 2 to 3 years old and are functioning as part of the scrub succession occurring across the application site.

Hedgerow / Treelines

3.30. The application site supports one small hedgerow with trees.

3.31. H1 is a semi-mature boundary hedgerow up to 6m in height. The hedgerow is semi-continuous and contains large gaps. The ground flora of the hedgerow is generally continuous with the adjacent grassland. Trees are present across the length of the hedgerow but the majority of the hedgerow is dominated by Grey Willow *Salic cinerea*, in addition to English Oak, Silver Birch and Alder.

Running Water (Dowlais Brook)

3.32. The Dowlais Brook runs through much of Cwmbran and is located immediately adjacent to the application site.

3.33. Whilst heavily modified in areas, the brook is heterogeneous in terms of its geomorphology. There is variation in bank profile, channel width and in-channel features (including a combination of riffles, pools and glides) across the reach of the brook. Additionally, the brook has been subject to significant artificial modification with reinforced banks and artificially installed drainage channels present.

3.34. The substrate of the brook is mixed with some sections comprising a cobble and pebble bed, with other sections comprising a siltier mud bed. Flow was slow to moderate.

3.35. Both the banksides and channels were largely unvegetated with negligible aquatic or emergent growth present. Bankside vegetation, where present, is mostly limited to bryophytes and liverworts. Given the brooks location in the woodland, the banksides are intermittently lined with trees, often with exposed tree roots present.

3.36. Notably, two Schedule 9 invasive species were recorded along the banksides of the brook. These were Himalayan Balsam and Japanese Knotweed. Himalayan Balsam is found along the entirety of the brook, while a dense stand of Japanese Knotweed is located along the northern bank in eastern section of the brook.

3.37. Descriptions of sample upstream and downstream locations are provided within Section 4, however in summary these include both extensively modified channels (effectively, concrete chutes) as well as more semi-natural areas.

Hardstanding

3.38. There is a small area of hardstanding in the west of the site which is a lay-by from the adjoining road and comprises an entirely sealed surface.

Recolonising bareground

3.39. Leading from the area of hardstanding is a small area of compressed and well-trodden bare earth that is lightly vegetated, albeit these are species mainly recorded within the adjacent grassland habitats (described above).

Invasive Species

3.40. As outlined above, Himalayan Balsam have been recorded in both the grassland and woodland of the application site.

3.41. Japanese Knotweed and Himalayan Balsam were also recorded along the Dowlais Brook adjacent to the application site. Both of these species are identified as controlled species (Schedule 9 Part II) under the Wildlife and Countryside Act 1981.

Background information

3.42. **Background information.** The data search undertaken with SWBRC returned a single record of a notable plant species from within the application site boundary, this was a record of Yellow Bartsia (also recorded at the time of the 2023 survey).

3.43. Other records returned from within 2km of the application site boundary included: Spiked Water-milfoil *Myriophyllum spicatum*, Checkered Lily *Fritillaria meleagris*, Bee Orchid *Ophys apifera* and Great Butterfly-orchid *Platanthera chlorantha.*

3.44. Regarding invasive species, SWBRC returned no records of invasive species from within the application site boundary. The closest record of an invasive species was of Japanese Knotweed, returned from an area approximately 0.2k away from the application site boundary.

3.45. Other records returned from within 2km of the application site boundary included Himalayan Balsam *Impatiens glandulifera*, Three-cornered garlic *Allium*

triquetrum, Canadian Waterweed *Elodea canadensis*, Water fern *Azolla filiculoides* and Himalayan Cotoneaster *Cotoneaster simonsii.*

4. WILDLIFE USE OF THE SITE

4.1. General observations were made during the survey of any faunal use of the application site with specific attention paid to the potential of any protected or notable species.

4.2. The results of the detailed faunal species work is outlined below.

4.3. Bats

Trees

4.3.1. PRA surveys identified no trees adjacent to the development boundaries with potential to support roosting bats. Where there are more mature trees located within the woodland to the northeast (W1), these are not currently expected to be impacted by development.

Foraging / commuting bats

4.3.2. The application site mainly consists of mixed grassland, complemented by a hedgerow and woodland habitats. A brook is located adjacent to the north-eastern boundary.

4.3.3. Given the habitats present on site, bat activity and static monitoring surveys were undertaken across the application site during 2023. The results of these surveys are outlined below.

June 2023 Activity Survey

4.3.4. Bat activity was predominantly concentrated along the edge of W2 and along the north-east of the site. Occasional passes were recorded along the north-west of the site, with one individual Common Pipistrelle *Pipistrellus pipistrellus* observed foraging over the centre of the grassland.

4.3.5. The majority of activity was limited to Common Pipistrelle and Soprano Pipistrelle *Pipistrellus pygmaeus*, followed by activity from *Nyctalus sp*.

Species	Number of Registrations
Common Pipistrelle	47
Soprano Pipistrelle	237
Nathusius Pipistrelle	1
Nyctalus sp.	37
Myotis sp.	5
Brown-long Eared	3
Total	**330**

Table 5: June bat activity results for application site

4.3.6. During June, two separate sets of static detectors were deployed for a period of 6 consecutive nights each. These covered the period between early-June (static detectors 1 and 2), and late-June (static detectors 3 and 4).

4.3.7. The results from each individual static detector are summarised in the below tables. Static detector 1 (SD1) was located in the north of W1. Static Detector

2 (SD2) was located in the centre of W2 on the south-eastern boundary of the site. Static detector 3 (SD3) was located in the far east of W1, adjacent to Dowlais Brook. Static detector 4 (SD4) was located in the north-east of the woodland, adjacent to the Dowlais Brook. These locations are also represented graphically at Plan ECO3.

Static Detector 1							
Species	**06/06/23**	**07/06/23**	**08/06/23**	**09/06/23**	**10/06/23**	**11/06/23**	**Avg. per night**
Myotis sp.	9	32	2	15	0	0	**11.6**
Common Pipistrelle	0	0	0	2	0	0	**0.4**
Soprano Pipistrelle	6	0	14	0	0	0	**4**
Lesser Horseshoe	1	0	0	0	0	0	**0.2**

Static Detector 2							
Species	**06/06/23**	**07/06/23**	**08/06/23**	**09/06/23**	**10/06/23**	**11/06/23**	**Avg. per night**
Myotis sp.	1	0	1	0	2	6	**1.7**
Common Pipistrelle	13	14	6	8	61	54	**26**
Soprano Pipistrelle	17	68	53	34	66	74	**52**
Nathusius' Pipistrelle	1	1	1	1	1	3	**1.3**
Lesser Horseshoe	1	2	1	0	2	0	**1**
Nyctalus sp.	2	2	0	2	4	12	**3.7**

Table 6: Early June Static Detector Results

Static Detector 3							
Species	**27/06/23**	**28/06/23**	**29/06/23**	**30/06/23**	**01/07/23**	**02/07/23**	**Avg. per night**
Myotis sp.	154	358	392	188	286	275	**276**
Common Pipistrelle	0	0	2	1	0	1	**1**
Soprano Pipistrelle	96	201	481	190	362	570	**317**

Static Detector 4							
Species	**27/06/23**	**28/06/23**	**29/06/23**	**30/06/23**	**01/07/23**	**02/07/23**	**Avg. per night**
Myotis sp.	61	237	387	239	270	281	**245.8**
Common Pipistrelle	0	1	1	0	0	1	**0.5**
Soprano Pipistrelle	4	2	18	3	42	19	**14.7**
Lesser Horseshoe	0	0	0	1	0	0	**0.2**

Table 7: Late June Static Detector Results

July 2023 Activity Survey

4.3.8. During the July transect survey, bat activity was again mainly concentrated along the edge of W2 and along the treeline in the north-west of the application site.

4.3.9. Similar to the June transect survey, the majority of activity was limited to Common Pipistrelle and Soprano Pipistrelle.

Application site	
Species	Number of Registrations
Common Pipistrelle	41
Soprano Pipistrelle	79
Nyctalus sp.	1
Myotis sp.	3
Total	**124**

Table 8: July bat activity results for application site

4.3.10. Following the transect survey, two static detectors (5, 6) were deployed for a period of 5 consecutive nights. Static detector 5 (SD5) was deployed within H1, along the northern boundary of the site. Static detector 6 (SD6) was deployed within W1, in a close proximity to the Dowlais Brook.

4.3.11. Due to a technical error, Static Detector 5 stopped recording after the fourth night of the monitoring period.

Static Detector 5					
Species	**20/07/23**	**21/07/23**	**22/07/23**	**23/07/23**	**Avg. per night**
Myotis sp.	0	0	0	2	**0.5**
Common Pipistrelle	4	4	0	4	**3**
Soprano Pipistrelle	48	29	0	21	**24.5**
Nyctalus sp.	1	0	1	0	**0.5**

Static Detector 6						
Species	**20/07/23**	**21/07/23**	**22/07/23**	**23/07/23**	**24/07/23**	**Avg. per night**
Myotis sp.	361	308	0	246	334	**249.8**
Common Pipistrelle		0	0	0	2	**0.4**
Soprano Pipistrelle	198	193	0	108	57	**111.2**
Nyctalus sp.	1	0	0	2	1	**0.8**

Table 9: July static detector results

August 2023 Activity Survey

4.3.12. During the August bat transect survey, bat activity was again mostly concentrated along the outside edge of W2. In addition to this, activity was also focused in the north-eastern corner of the grassland just outside of the W1. Markedly different to previous survey efforts, general activity levels were notably lower than the June and July transect surveys.

Application site	
Species	Number of Registrations
Common Pipistrelle	4
Soprano Pipistrelle	10
Nyctalus sp.	2
Myotis sp.	1
Total	**17**

Table 10: August bat activity results for application site

4.3.13. Following the transect survey, two static detectors (7, 8) were deployed for a period of 8 consecutive nights. Static detector 7 (SD7) was located along W2, along the southern boundary of the site. Static Detector 8 (SD8) was located along H1, on the northern boundary of the site.

4.3.14. Due to a technical error, Static Detector 7 stopped recording after the third day of the monitoring period.

Static Detector 7				
Species	**29/08/23**	**30/08/23**	**31/08/23**	**Avg. per night**
Myotis sp.	2	2	1	**1.7**
Common Pipistrelle	5	19	2	**8.7**
Soprano Pipistrelle	21	20	8	**16.3**
Nyctalus sp.	1	2	1	**1.3**

Static Detector 8									
Species	**29/08/23**	**30/08/23**	**31/08/23**	**01/09/23**	**02/09/23**	**03/09/23**	**04/09/23**	**05/09/23**	**Avg. per night**
Myotis sp.	0	2	0	1	0	2	5	4	**1.8**
Common Pipistrelle	3	302	0	296	212	100	10	7	**116.3**
Soprano Pipistrelle	12	5	0	10	6	16	22	16	**10.9**
Nathusius Pipistrelle	0	0	0	1	2	0		1	**0.5**
Brown-long Eared	1	0	0	0	0	1	0	0	**0.3**
Nytalus sp.	1		1	3	2		2	3	**1.5**

Table 11: August static detector results

September 2023 Activity Survey

4.3.15. During the September transect survey, activity was predominantly concentrated along and within W1, with little activity recorded within the centre of the site, or along any other site boundaries. Similarly to the August transect survey, activity levels were reduced when compared to the June and July transect surveys.

Application site	
Species	Number of Registrations
Common Pipistrelle	1
Soprano Pipistrelle	21
Nyctalus sp.	1
Total	**23**

Table 12: September bat activity results for application site

4.3.16. Following the transect survey, two static detectors (9, 10) were deployed for a period of 5 consecutive nights. Static detector 9 (SD9) was deployed along H1, in the north of the site. Static detector 10 (SD10) was deployed along W2, in the south of the site.

Static Detector 9						
Species	**29/09/23**	**30/09/23**	**01/10/23**	**02/10/23**	**03/10/23**	**Avg. per night**
Common Pipistrelle	1	0	0	0	0	**0.2**
Soprano Pipistrelle	5	2	6	1	10	**4.8**
Nyctalus sp.	2	0	1	0	2	**5**

Static Detector 10						
Species	**29/09/23**	**30/09/23**	**01/10/23**	**02/10/23**	**03/10/23**	**Avg. per night**
Myotis sp.	3	2	3	0	1	**1.8**
Common Pipistrelle	5	69	17	2	6	**19.8**
Soprano Pipistrelle	10	71	29	1	6	**23.4**
Nathusius Pipistrelle	0	1	0	0	0	**0.2**
Nyctalus sp.	2	0	1	0	2	**1**

Table 13: September static detector results

Bat activity surveys summary

4.3.17. The 2023 bat transect surveys overall recorded a low level of bat usage across what are considered to be the main development areas of the application site (i.e. the main interior grassland). The highest concentration of activity was recorded within / adjacent to the areas of woodland (W1 predominately), and the brook. Very little foraging / commuting behaviour was noted within the interior of the site across any of the bat transect surveys.

4.3.18. There was a notable drop in bat activity levels between the early summer transect surveys (June and July) and the late summer / early autumn transect surveys (August and September). The June transect survey recorded the highest level of bat activity with a peak count of 237 registrations of Soprano Pipistrelle.

4.3.19. The highest count recorded during the static survey effort was by Static Detector 3 which was located in the W1 adjacent to the Dowlais Brook. This static detector mainly recorded Soprano Pipistrelle (nightly average of 317 registrations) followed by Myotis sp. (nightly average of 276 registrations).

4.3.20. By comparison, the greatest count by a static detector not positioned directly within either W1 or W2 was Static Detector 8 (nightly average of 116.3 Common Pipistrelle). It is worth nothing that this static detector was still located in close proximity to W1, and on balance, all other static detectors located along H1 recorded markedly lower levels of bat activity.

4.3.21. Species wise, activity was mainly dominated by generally common and widespread bat species, with occasional spikes in activity from Myotis sp. as evidenced by the number of registrations recorded by Static Detectors 3, 4, and 6 (all located within W1). Therefore, it is considered that the majority of these bats were likely utilising the brook and adjoining woodland corridor for the purpose of commuting / foraging, rather than strictly using / relying on the interior of the site itself.

4.3.22. Whilst a very small number of Lesser Horseshoe registrations were recorded by static detectors 1, 2 and 4, these were all recorded in negligible quantities (peak nightly average of 1 registration) and were only recorded during the June survey effort. Therefore, considering the small size of the site, habitats present, and the above records, it is considered that any Lesser Horseshoe bat use of the site is only transient in nature, and therefore, they do not rely on the site in any meaningful way.

4.3.23. **Background Information.** The data search undertaken with SWBRC returned several records of bats from the local area. Only a single record of an unidentified Bat *Chiroptera* was returned within the application site boundary.

4.3.24. Other records returned from within 2km of the application site boundary included Soprano Pipistrelle, Common Pipistrelle, Noctule *Nycatalus noctula*, Brown long-eared *Plecotus auratus* and Lesser Horseshoe.

4.3.25. Additionally, the data search returned a record of a known Lesser Horseshoe bat roost located in the Llantarnam Abbey Bat Roost Local Wildlife Site (LWS), which is situated approximately 0.9km to the south-east of the application site.

4.4. Badgers

4.4.1. During the 2023 surveys, no evidence of any Badger activity, including potential setts, was recorded either within or adjacent to the application site.

4.4.2. **Background Information.** The data search undertaken with SWBRC returned no records of Badger within or immediately adjacent to the

application site. The nearest record of Badger from the local area was approximately 0.8km from the application site.

4.5. Amphibians (Great Crested Newt)

4.5.1. The application site does not support any waterbodies considered suitable to support populations of breeding GCN. Whilst there are areas of periodically 'wet' grassland, these are only ephemeral in nature and were recorded to be entirely dry during key periods of the GCN breeding season.

4.5.2. Whilst a number of waterbodies are located within the wider area (i.e. within 500m of the site), these are all understood to be fishing ponds used for recreational angling purposes and form part of the Llantarnam Ponds Local Wildlife Site (LWS). On this basis alone, they are considered highly sub-optimal to GCN. Furthermore, they are all located on the opposing side of the Dowlais Brook, which is considered to be a significant barrier to dispersal.

4.5.3. However, purely on a precautionary basis, the two closest ponds that are located to the north of the site (on the opposing side of the Dowlais Brook) but are situated within 250m of the application site boundary, were subject to GCN eDNA surveys during June 2023. Both ponds returned a negative result. The results are found at Appendix 2.

4.5.4. Furthermore, as part of the reptile survey work undertaken, no evidence of GCN was recorded within the site. Whilst amphibians were not the target species group of this survey effort, it is not uncommon for GCN be recorded under reptile tins within areas they are present.

4.5.5. On that basis, potential impacts on GCN are expected to be negligible and therefore, no further consideration has been afforded to this species as part of this assessment.

4.5.6. **Background records.** The data search undertaken with SWBRC returned records of three species of amphibian in the local area. There were no records returned within the application site boundary. The closest record returned was approximately 0.9km north of the application boundary. This record was of Common Frog *Rana temporaria*.

4.5.7. Other records returned within 2km of the application boundary included Smooth Newt *Lissotriton vulgaris* and Common Toad *Bufo Bufo*.

4.6. Birds

4.6.1. The woodland and treeline habitats provide suitable foraging and nesting habitats for common bird species, particularly common woodland birds.

4.6.2. Given the availability of similar woodland habitat within the surrounding area, it is not expected that the site would be of any particular significance for breeding birds, particularly in terms of any protected or notable bird species or assemblages.

4.6.3. Within the interior of the site itself, whilst the sections undergoing scrub succession offer increased suitability, the sward itself remains fairly open and immature and the site is small, it is therefore considered sub-optimal

ground nesting birds. Furthermore, no ground nesting species, such as Skylark *Alauda arvensis*, were recorded on site during any of the 2023 survey work undertaken.

4.6.4. Species recorded during the 2023 surveys include: Great Tit *Parus major*, Blue Tit *Cyanistes caeruleus*, Chiffchaff *Phylloscopus collybita*, Wren *Troglodytes troglodytes*, Wood Pidgeon *Columba palumbus*, Blackbird *Turdus mersula*, Robin *Erithacus rubecula*, Magpie *Pica pica*, Goldfinch *Carduelis carduelis*. A Heron *Ardea cinera* was also recorded at the Llantarnam Ponds adjacent to the site.

4.6.5. **Background Information.** The data search undertaken with SWBRC did not return any records from either within, or adjacent to the application site. The closest record returned was of a Green Woodpecker *Picus viridis*, recorded approximately 0.2km away from the application site boundary.

4.6.6. Notable species within 2km of the application site boundary included: Willow Warbler *Phylloscopus trochilus,* Barn Owl *Tyto Alba*, Dunnock *Prunella modularis*, Bullfinch *Pyrrhula pyrrhula,* Black-headed gull *Chroicocephalus ridibundus*, Mistle Thrush *Turdus viscivorus*, House Sparrow *Passer domesticus*, Kingfisher *Alcedo atthis*, Starling *Sturnus vulgaris*, Redwing *Turdus iliacus* and Red kite *Milvus milvus.*

4.7. Hazel Dormice

4.7.1. Throughout the course of the 2023 survey effort, no evidence of Hazel Dormouse was recorded within the application site, or immediately adjacent areas.

4.7.2. On this basis, potential impacts on Hazel Dormice are expected to be negligible and therefore, no further consideration has been afforded to this species as part of this assessment.

4.7.3. **Background information.** The data search undertaken with SWBRC returned one individual record of the Hazel Dormouse from the local area (recorded approximately 1km to the west of the application during 2010).

4.7.4. No records were returned from within or immediately adjacent to the application site boundary**.**

4.8. Reptiles

4.8.1. A full suite of reptile surveys were undertaken within the application site during 2023. The dates and results are outlined in the below table.

Date	Results
03/07/23	No reptiles recorded
20/07/23	No reptiles recorded
25/07/23	No reptiles recorded
28/07/23	No reptiles recorded
29/08/23	No reptiles recorded
06/09/23	No reptiles recorded
04/10/23	No recorded reptiles
06/10/23	No reptiles recorded

Table 14. 2023 Reptile survey results

4.8.2. As shown in the above table, no reptiles were recorded within the application site boundary during the survey period. On that basis, potential impacts on reptiles are expected to be negligible and therefore, no further consideration has been afforded to this species group as part of this assessment.

4.8.3. **Background Records.** The data search undertaken with SWBRC returned records of three species of reptiles in the local area. There were no records returned within the application site boundary. The closest record returned was approximately 0.2km south-west of the application site boundary. This record was of a Common Lizard *Zootoca vivipara*.

4.8.4. Other records returned within 2km of the application boundary included Grass Snake *Natrix helvetica* and Slow Worm *Anguis fragilis.*

4.9. Water Vole

4.9.1. The Dowlais Brook offers some marginally suitable habitat for Water Vole where it runs in a close proximity to the application site, albeit these are limited to sections where the banks are steep and have some vegetation coverage. However, large sections of the brook is considered to be sub-optimal for Water Vole because it is well shaded by the surrounding broadleaved woodland, and the banksides are largely denuded of vegetation. Where vegetation is present, it primarily comprises bryophytes and liverworts.

4.9.2. Notwithstanding the above, no evidence of Water Vole was recorded either in the application site or along the Dowlais Brook during the 2023 surveys. On that basis, potential impacts on Water Vole are expected to be negligible and therefore, no further consideration has been afforded to this species as part of this assessment.

4.9.3. **Background Information** The data search undertaken with SWBRC did not return any records of Water Vole from either within, or immediately adjacent to the site. The nearest record of Water Vole was returned from an area approximately 1km east of the application site boundary.

4.10. Otter

4.10.1. As above, the brook offers some suitable commuting habitat for Otter mostly owing to exposed root systems and undercut banksides.

4.10.2. Notwithstanding the above, no evidence of Water Vole was recorded either within the application site or along the Dowlais Brook during the 2023 surveys. On that basis, potential impacts on Otter are expected to be negligible and therefore, no further consideration has been afforded to this species as part of this assessment.

4.10.3. **Background Information.** The data search undertaken with SWBRC did not return any records of Otter from either within, or immediately adjacent to the site. The nearest record of Otter was recorded 1km to the north-east of the application site boundary.

4.11. White-clawed Crayfish

4.11.1. As outlined in Section 2, eDNA sampling was undertaken at three distinct locations along the Dowlais Brook, this included a section adjacent to the application site boundary, a section upstream of the application site, and a section downstream of the application site. Each location differed in terms of its suitability for White-clawed Crayfish.

4.11.2. The upstream section contained heavily modified banks (gabions and brick banking) for the majority with a large culvert. The bed of the brook however was more natural with small gravel and silt / mud present which offers suitable habitat for White-clawed Crayfish.

4.11.3. The section of brook adjacent to the application site was considered partially suitable for White-clawed Crayfish due to a variation of in-channel features (i.e riffles and pools), cobble substrate, and overhanging banks / exposed roots providing refugia.

4.11.4. The downstream sampling location is considered to be entirely unsuitable for White-clawed Crayfish. This section of the brook was heavily artificially modified, comprising a uniform concrete chute leading to a large culvert and with several drainage tunnels discharging into the section.

4.11.5. All three sections returned positive results for White-clawed Crayfish. The results are provided at Appendix 3.

4.11.6. Given the marked difference in habitat suitability between the three sampling locations, with the downstream section being entirely unsuitable for White-clawed Crayfish, it is not entirely clear if White-clawed Crayfish are present within the entirety of the brook, or are simply present further upstream (in potentially more suitable habitat), with the DNA being washed downstream.

4.11.7. Furthermore, the opportunistic checks for White-clawed Crayfish undertaken during the Water Vole and Otter surveys did not record evidence of White-clawed Crayfish, including observations of actual specimens or burrows that could be attributed to Crayfish. In addition, the section of brook which runs adjacent to the site is potentially fragmented from the remainder of the watercourse by large culverts, located to the north and south, potentially limiting dispersal opportunities.

4.11.8. On that basis, it is not immediately clear if White-clawed Crayfish are present within a close proximity to the application site itself. However, at the very least, they are considered to be present within the wider watercourse itself (at least upstream). Therefore, in the absence of further information, presence in a proximity to the site is assumed at this stage, on a precautionary basis.

4.11.9. No evidence of any Signal Crayfish, Marbel Crayfish, or, Crayfish Plague was recorded within the sample locations.

4.11.10. **Background information.** The data search undertaken SWBRC returned no records of White-clawed Crayfish from either within or immediately adjacent to the application site boundary.

4.11.11. The nearest record was returned from a section of the Dowlais Brook, approximately 0.5km to the east of the application site. However this is a historical record from 1993.

Invertebrates

4.11.12. During the updated 2023 surveys, the habitats on site were deemed likely to support a range of common invertebrate species, albeit the majority of more significant features were limited to the wet sections of the grassland and adjacent woodland habitat.

4.11.13. **Background Information.** The data search undertaken with SWBRC did not return any records of notable invertebrates from either within, or immediate adjacent to the application site. The closest returned record was of Long-winged Cone-head *Conocephalus fuscus* and Holly blue *Celastrina argiolus*.

4.11.14. Other notable records returned from within 2km of the application site boundary included Shaded Broad bar *Scotopteryx chenopodiata*, Green-brindled crescent *Allophyes oxyacanthae*, Pied grey *Eudonia delunella*, Golden-ringed dragonfly *Cordulegaster boltonii*, Rosy rustic *Hydraecia micacea* and Hedge rustic *Tholera cespitis*.

4.11.15. Most notably, a record of Ten-Spotted Pot Beetle *Cryptocephalus decemmaculatus* was recorded approximately 0.6km to the west of the site, during 2015.

4.12. Other protected or notable species

4.12.1. Whilst there is considered to be potentially suitable habitat for small mammals, such as Hedgehog *Erinaceus europaeus,* no evidence of this species, or any other protected or notable species, was recorded during the course of the 2023 surveys.

4.12.2. **Background information.** The data search undertaken with SWBRC returned several records of terrestrial mammals from the local area, including four records of Hedgehog *Erinaceus europaeus* from within the application site boundary itself. These records were however recorded during 2008, and are therefore considered historical.

4.12.3. Other records returned within 2km of the application boundary included Polecat *Mustela putorius* and Weasel *Mustela nivalis.*

5. ECOLOGICAL EVALUATION

5.1. The Principles of Site Evaluation

5.1.1. The latest guidelines for ecological evaluation produced by CIEEM propose an approach that involves professional judgement, but makes use of available guidance and information, such as the distribution and status of the species or features within the locality of the project.

5.1.2. The methods and standards for site evaluation within the British Isles have remained those defined by Ratcliffe[4]. These are broadly used across the United Kingdom to rank sites, so priorities for nature conservation can be attained. For example, current Site of Special Scientific Interest (SSSI) designation maintains a system of data analysis that is roughly tested against Ratcliffe's criteria.

5.1.3. In general terms, these criteria are size, diversity, naturalness, rarity and fragility, while additional secondary criteria of typicalness, potential value, intrinsic appeal, recorded history and the position within the ecological / geographical units are also incorporated into the ranking procedure.

5.1.4. Any assessment should not judge sites in isolation from others, since several habitats may combine to make it worthy of importance to nature conservation.

5.1.5. Further, relying on the national criteria would undoubtedly distort the local variation in assessment and therefore additional factors need to be taken into account, e.g. a woodland type with comparatively poor species diversity, common in the south of Britain may be of importance at its northern limits, say in the border country.

5.1.6. In addition, habitats of local importance are often highlighted within a local Biodiversity Action Plan (BAP).

5.1.7. Levels of importance can be determined within a defined geographical context from the immediate site or locality through to the international level.

5.1.8. The legislative and planning policy context are also important considerations and have been given due regard throughout this assessment.

5.2. Habitat Evaluation

Designated sites

5.2.1. **Statutory sites.** There are no statutory designated sites of nature conservation interest located within or immediately adjacent to the application site.

5.2.2. There are a number of statutory designated sites within the local area. The nearest statutory designated is Llwyncelyn Local Nature Reserve (LNR) (1.3km North-west) of the application site boundary and covers 130,848m^2. The primary habitats for which the site is designated for are neutral hay

[4] Ratcliffe, D A (1977). *A Nature Conservation Review: The Selection of sites of Biological National Importance to Nature Conservation in Britain*. Two Volumes. Cambridge University Press, Cambridge.

meadows and species rich hedgerows with MG5a and MG5b habitat located to the east. The area has a significant assemblage of Yellow Rattle *Rhinanthus minor*, Burnet saxifrage *Pimpinella saxifrage*, Common spotted Orchid *Dactylorhiza fuchsii* and Pink Waxcap *Hygrocybe calyptriformis*.

5.2.3. The above designated site is buffered from the application site by an industrial site and several large fields. There are no known hydrological links to the designated sites from the application site boundary.

5.2.4. The next nearest designated statutory site is Henllys Open space LNR and is located approximately 2.4km west of the application site boundary. The LNR habitat includes semi natural ancient woodland, marshy grassland, streams, ditches, scrub and hedgerow. With several common marshy and grassland species.

5.2.5. The above designated statutory site is buffered from the application site by several large fields and the Monmouthshire and Brecon Canal. There are also no obvious hydrological links between the sites and the development area.

5.2.6. Given the level of separation between the application site and the above LNRs, it is considered unlikely any proposals will result in any significant impacts, either directly or indirectly, to these statutory designated sites.

5.2.7. The nearest European / International designated site is the River Usk / Afon Wysg Special Area of Conservation (SAC) approximately 2.9km south-east of the application site. With a catchment area of 1,258km², the River Usk is cited as being an essential migration route and key breeding area for many nationally and internationally important species, containing a variety of Annex I habitats and Annex II species including, but not limited to, 'Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitricho-Batrachion* vegetation', Otter, Atlantic Salmon *Salmo salmo*, Twaite Shad *Alosa fallax* and Bullhead *Cottus gobio*.

5.2.8. The River Usk SAC is also underpinned by the River Usk (Lower Usk) / Afon Wysg (Wysg Isaf) SSSI. This SSSI is designated on account of its ability to support the same habitats and species as the SAC, but also includes White-clawed Crayfish, which is not a qualifying feature of the SAC.

5.2.9. The above designated statutory site is buffered from the application site by the wider Llanataram industrial estate and expansive rural fields. There is however considered to be hydrological connectivity between the sites by way of the Dowlais Brook.

5.2.10. In order to avoid any potential hydrological impacts on the SAC, it is recommended that the Dowlais Brook be safeguarded from any potential development impacts, including from physical alternation of the brook / banks of the brook itself, to significant sedimentation of the brook through site discharge. Therefore, it is recommended that in the absence of a suitable multi-stage surface water treatment programme, the brook not be included within the hydrological strategy for the site. Furthermore, to avoid potential impacts from run-off, pollution and erosion (particularly during the construction phase), a suitable buffer should be installed around the site, with the adjacent woodlands habitats (W1) included as part of the ecological landscaping strategy for the site. Within these buffer areas, no impacts form

development should occur, and any interaction should be entirely beneficial from an ecological perspective (i.e. enhancement works within the woodland itself).

5.2.11. Regarding other potential impact pathways, given distance of the site and commercial nature of the proposals (i.e not residential), it is not considered that there remains any potential for impacts which may arise as a result of nutrient enrichment (from Wastewater Treatment Works) or recreational pressure. Furthermore, it is not considered that the ecological receptors are significantly susceptible to air quality impacts.

5.2.12. On that basis, subject to the adoption of the above measures, and in addition to further measures outlined below, it is considered that the above European designated site will be not adversely affected impacted by the development proposals.

5.2.13. Other statutory designated sites within 6km of the supplication site boundary include Church wood and Springvale ponds LNR approximately 3.1km north, Llandegfedd Reservoir SSSI approximately 5.8km north, Henllys Bog SSSI approximately 3.5km west, Coed-y-darren SSSI approximately 5.8km west, Allt-yr-Yn LNR approximately 4.1km south and St. Julian's Park LNR approximately 4.9km south.

5.2.14. **Non-statutory sites.** Measuring 3.3ha, Llantarnam ponds LWS is located adjacent to the eastern border of the application site boundary. Llantarnam ponds is designated on account of the series of ponds which is cited as being good habitat for species including: White clawed Crayfish, Otter, Goosander, Cormorant and Kingfisher. The habitat consists of wet woodland, Ancient Woodland and neutral grassland but also contains the Schedule 9 invasive species Japanese Knotweed and Himalayan Balsam.

5.2.15. The next nearest non-statutory designated site is located to the north of the application site boundary. This is the Ancient Semi Natural Woodland LWS, however the citation has very little information on size, habitat type and assemblage of species present.

5.2.16. Other non-statutory designated sites within 2km of the application site include Ty Coch Tip SINC (0.4km west), Llantarnam Abbey wetland 1 and 2 (0.5km and 0.8km east), Wilderness wood (0.9km south), Llantarnam bat roost (0.8km east), Llantarnam grassland and the alders (0.9km and 1.1km) and Land at Edgehill, Llanfrechfa, Cwmbran (1.3km).

5.2.17. Given the close proximity of the Llantarnam Ponds LWS to the application site, it is recommended that a series of standard engineering protocols and best practice guidelines be implemented (in the form of an agreed upon strategy) to ensure potential impacts on any designated sites, including the above reference European designated sites, are entirely avoided. These should include:

- Anti-pollution measures;
    - Spill kits provided to operators;
    - Safe storage of materials away from boundary areas (particularly off-site ditches);
    - Re-fuelling only to take place in identified operational areas;

- Interception bunds/board used to prevent contaminated run-off.

- Implementation of 'buffer' zones (ideally vegetated) to control out-flow from site and to capture/remove contaminates.

- Control of dust-deposition;
  - Spraying-down of materials, wet-cutting, wheel washers etc.

- Implementation of a sensitive lighting strategy, particularly along the retained areas of woodland, located to the north-east and south of the site;
  - Limiting work to day-time hours only, or where this cannot be avoided, using directional lighting in order to avoid light-spill into boundary areas;

5.2.18. It is considered that the principles of the above measures (or similar) should be incorporated into initial project design, with finder details secured via way of an appropriately worded planning condition.

Habitats Within the Application Site

5.2.19. The application site is predominately made up of mixed grassland and woodland, in addition to an individual single hedgerow.

5.2.20. Whilst the final development proposals are to be confirmed, it is expected that the majority of the grassland located within the application site boundary will be lost. Presently, the grassland is of mixed quality. Much of the grassland is of poor quality, comprising tall ruderal vegetative communities and is slowly being lost to Willow and Bramble scrub succession, while the wetter areas of the grassland are of markedly greater quality.

5.2.21. The majority of the woodland habitat located within the application site is of increased ecological value, particularly the areas of woodland (W1) which runs adjacent to the brook. The areas of secondary woodland (W2) are of markedly lower quality.

5.2.22. Whilst finalised plans, including what opportunities exist for ecological landscaping and mitigation, remain to be decided at this stage, it is recommended that a series of mitigation measures and other ecological principles be adopted as part of project design, particularly within the woodland habitats. This being in order to help preserve the habitats of the comparatively better quality located within and adjacent to the site, in addition to helping provide some opportunities for biodiversity as part of the project design.

5.2.23. A summary of recommended measures are outlined below.

5.2.24. **Retention / safeguarding of habitats / buffer habitats.** It is recommended that in order to safeguard the onsite woodland habitats which are set to be retained, in addition to those habitats located in the wider area (i.e. the adjacent LWS) which will not be impacted by development, protective

fencing be installed where appropriate prior to the commencement of physical construction.

5.2.25. Fencing should be undertaken in accordance with the current British Standard (BS 5837:2012) to avoid encroachment of machinery and personnel into offsite areas and to protect roots from compaction and shall be installed at canopy width from retained trees. This shall ensure that direct impacts and severance / asphyxiation of roots are avoided.

5.2.26. Where there are likely to be some losses of woodland habitats, these should ideally be entirely limited to areas of lower quality woodland (W2), however should be minimise as much as possible. As a minimum, should W2 be impacted, it is recommended that a suitably wide strip be retained along the south-eastern border in order to provide continued green connectivity around the sites border.

5.2.27. Impacts to W1 should ideally be avoided in their entirety. In addition to this, a suitable landscape buffer should be installed between the nearest areas of hard development and the woodland habitat. Within this buffer, complementary landscaping should be undertaken. This should be in the form of semi-natural habitat, such as species-rich grassland and mixed scrub planting. A mix of thorny species should be used in order to dissuade unintended access into the adjacent woodland.

5.2.28. **Enhancement of woodland habitats**. To provide opportunities within the application site, it is recommended that biodiversity enhancements be made within the woodland areas themselves.

5.2.29. It is recommended that this include for the adopted of a suitable management regime, which should include for bolster planting, thinning, coppicing etc. At this stage, it is recommended that the adoption of the following woodland management practices would be of significant value:

- Control/removal of non-native, undesirable and overly dominant species;
- Rotational management to seek a diverse woodland structure with a gradation of habitats from mature woodland/trees to shrub and open areas with an established, shade tolerant ground flora, maximising the value of edge habitats; and
- Retention of standing and fallen dead-wood.

5.2.30. Further to the above, areas of W1 which are dominated by Sycamore should be thinned out and bolster planted with a range of native tree / shrub species. This will help improve the diversity of the woodland in addition to increasing foraging opportunities for a range of faunal species.

5.2.31. Any areas of planted / thinned woodland should then be subject to longer-term management in order to ensure successful diversification of this habitat. Details of which should be outlined within a suitable Landscape and Ecological Management Plan (LEMP), or similar.

5.2.32. **Expansion of hedgerow / treeline habitats**. To provide net-increases in linear habitats, it is considered that additional areas of bolster planting could be delivered along hedgerow on the northern boundary of the application

site. This could be achieved through the new species-rich hedgerow planting.

5.2.33. A mix of native, berry / fruit bearing species should be used, with hedgerows planted in double-staggered rows. Once mature, this will help provide enhanced green links around the permitter of the site.

5.2.34. **In-plot planting / biodiverse roofs**. It is recommended that suitable in-plot landscaping be included in project design. Whilst it is expected that these areas may be limited more amenity focused habitats given their proximity to development, it is recommended that measures such as wildflower turf, mixed block / tree planting and low lying perennial shrubs could be utilised.

5.2.35. Furthermore, as an additional benefit, it is proposed that the use of green / brown biodiversity roofing be considered for suitable roof areas. Whilst these would require detailed design (particularly for green roofing), general principles should include the use of an appropriate growing medium, drainage boarding and the use of a stress tolerant albeit native seed mix.

5.2.36. **Offsite provisions.** As a further measure and to provide overall net gains to biodiversity, it is recommended that additional areas of off-site woodland / habitat (but ideally in the ownership of the landowner), be subject to the same measures as outlined above for the woodland habitats. It is considered that there remains ample scope to provide befits to the woodland habitats in the surrounding areas, primarily through invasive species management, bolster planting, thinning and other general woodland management practices.

5.2.37. It is recommended that, if required, any details of offsite provisions be outlined in response to an appropriately wording planning condition.

5.2.38. **Habitat summary.** Through the undertaking of the described on-site enhancements and bearing in mind the scope to undertake offsite enhancements, it is considered that there remains potential to offset the losses of habitat within the application site. Primarily, these measures should focus on improving connectivity and provide benefits for the adjacent Local Wildlife Site / areas of retained woodland.

5.3. Faunal Evaluation

Bats

5.3.1. **Site Evaluation, Mitigation and Enhancements.** None of the trees adjacent to the potential development areas (i.e fringes of the woodland / hedgerows) were identified to contain features capable of supporting roost bats.

5.3.2. In the event that any arboriculture works or potential clearance works are required outside of these areas (i.e. within the wider woodland) it is recommended that an updated PRA is undertaken on any potentially impacted trees prior to works occurring.

5.3.3. Whilst considered extremely unlikely, in the event any trees with potential to support roosting bats require arboriculture works (e.g. for reasons of health and safety or in order to facilitate unavoidable adaptations to development

or as part of the wider biodiversity mitigation proposals), these will be discussed and agreed with an ecologist in the first instance. Should these works be deemed likely to impact the suitability of the tree as a roost, further survey work may be required. Works to any trees which are confirmed to support roosting bats may need to be supported by the appropriate bat mitigation licence.

5.3.4. The results of the bat activity surveys indicated that the vast majority of bat activity was recorded within the adjacent woodland habitats (W1 primarily) and along the boundary areas. Very little activity was recorded within the interior grassland of the application site itself.

5.3.5. To preserve connectivity around the site and to retain commuting corridors, it is recommended that a sensitive lighting strategy be adopted for the site. This should include the use of 'dark corridors' along the boundary areas, with no outward facing luminaries. Where lighting is proposed near boundary areas, light-spill mitigation measures should be incorporated, such as cowls / hoods / baffles, in order to limit light spill and to keep lighting below the horizontal level.

5.3.6. As a result, opportunities for both commuting and foraging bats are likely to be retained compared to the current situation, with potential for enhanced opportunities created in the woodland and surrounding area through the implementation of the wider habitat measures recommended.

5.3.7. By way of direct enhancement, it is recommended 4 bat roosting boxes be installed on suitable mature trees in the adjacent woodlands. Examples of suitable boxes are included at Appendix 4 of this document.

Badgers

5.3.8. **Site Evaluation, Mitigation and Enhancements**. No evidence of Badger activity, including potential setts, was recorded within the application site. this basis, Badgers are considered to be absent from the application site.

5.3.9. Notwithstanding the above, and purely on a precautionary basis, it is recommended the following additional measures be implemented during the construction phase of the proposals:

- Wherever possible, new excavations (such as trenches) will not be left open overnight. Should excavations be required, scaffolding board (or similar) will be left within the feature in order to provide a means of escape for any animals which may become trapped;

- Where soil bunds (or similar) cannot be avoided, it is recommended that these features are subject to regular checks (daily where possible) in order to identify any areas of digging. Any new excavations will be filled in before a sett is excavated, wherever possible.

5.3.10. Additionally, as a further precautionary measure, it is recommended that an updated Badger Walkover Survey be undertaken within the application site prior to the commencement of works. In the unlikely event that an active Badger sett is identified, appropriate mitigation measures will be outlined to ensure that works remain entirely legally compliant.

5.3.11. It is expected that the above measures would be outlined within a Construction and Environmental Management Plan (CEMP), or similar document.

Birds

5.3.12. **Site Evaluation, Mitigation and Enhancements.** The site offers significant opportunities for nesting birds in the woodland and boundary habitats of the site, with the grassland being of low value to breeding birds.

5.3.13. As such, to avoid a possible offence, it is recommended that any clearance of suitable nesting vegetation (including any tree felling and scrub removal and clearance of grassland on a precautionary basis) at the site should be undertaken outside of the main breeding season (March to August inclusive), or that checks be made for nesting birds by an ecologist immediately prior to removal.

5.3.14. As outlined above, recommendations have been made, that if implemented will seek to retain and enhance woodland habitats. These measures are expected to provide benefits to the local bird population in the medium to long-term.

5.3.15. In order to provide immediate increases in nesting opportunities to birds, it is proposed that 5 bird nesting boxes be installed within the adjacent woodland boundary habitats. In order to maximise overall effectiveness, a range of designs should be used. The exact position of all boxes will be guided by the appointed Ecologist at the appropriate time. Example bird nesting boxes are shown on Appendix 4.

5.3.16. White-clawed Crayfish

5.3.17. **Site Evaluation, Mitigation and Enhancements.** As a minimum, it is considered that White-clawed Crayfish are present within the wider Dowlais Brook, given the positive indication of eDNA across the three sampling points.

5.3.18. However, owing to the general fragmentation of the brook where in a close proximity to the site, the potential for false positives, in addition to the lack of any other evidence (i.e. opportunistic checks), it is not immediately clear if White-clawed Crayfish are present within a close proximity of the site itself.

5.3.19. However, on a precautionary basis, it is recommended that the section of the Dowlais Brook located adjacent to the application site be entirely safeguarded as part of the project proposals. The brook should also be protected from potential contamination (including sedimentation and pollution) during the construction and operation phases of development, with a suitable buffer installed.

5.3.20. Following these recommendations, it is considered that any potential impact on White-clawed Crayfish will be avoided.

Invertebrates

5.3.21. It is recommended that the landscaping proposals for the site include for a number of invertebrate targeted measures, including: pollen / nectar-rich species to be included in the landscaping areas; retention / provision of deadwood in the buffer / woodland habitats; inclusion of brown / green roofs on areas of built-form.

5.3.22. With the inclusion of the above measures, it is considered that opportunities for invertebrates will be provided as part of the application proposals.

Other protected or notable species

5.3.23. Whilst no evidence of any other protected or notable species was recorded within the site during the survey work undertaken, it is recommended that prior to any site clearance, an updated walkover survey of the site is undertaken in order to fine tune any specific mitigation. The requirement of such would be included within a CEMP, or similarly worded document.

6. PLANNING POLICY CONTEXT

6.1.1. The planning policy that relates to nature conservation in Cwmbran is issued at two main administrative levels: nationally though the National Planning Policy Framework (NPPF) and at the local level through policies in the Torfaen Adopted Local Development Plan (2013-2021, and beyond), in addition to relevant Supplementary Planning Guidance documents (SPG).

6.1.2. Emerging development proposals will be considered in relation to the policies contained within these documents.

National Policy

Planning Policy Wales (Edition 12, February 2024)

6.1.3. Planning Policy Wales (PPW) sets out guidance with regard to nature conservation under Chapter 6 'Distinctive and Natural Places'. It provides guidance to local planning authorities relating to biodiversity and safeguarding statutory designated sites, non-statutory designated sites and protected species and their habitats. It also recognises the importance of trees, woodlands, and hedgerows.

6.1.4. PPW requires local authorities to fully consider the effect of planning decisions on natural heritage, inclusive of biodiversity and geological conservation in Wales, ensuring that development '*contributes to meeting international responsibilities and obligations for biodiversity and habitats* and that appropriate weight is attached to statutory nature conservation designations, protected species, and biodiversity within the wider environment.

6.1.5. PPW also considers the potential biodiversity and geological conservation gains which can be secured within developments, including the use of planning obligations.

6.1.6. Of the changes made to edition 12 of the PPW the most notable is the increased focus on the use of the Step-wise Approach in designing and assessing proposals. This is an approach which formalises previous best practice methodology and requires impacts to be avoided in the first instance, minimised or mitigated if this is not possible, and as a last resort compensated or offset.

6.1.7. Through the application of the Step-wise Approach, and the implementation of habitat- and species-specific enhancement measures, a Net Benefit for Biodiversity must be delivered by any proposals. Local authorities have a responsibility (Section 6 Duty) to ensure that development delivers this overall betterment for biodiversity, improves ecosystem resilience, and contributes to cumulative benefits at the landscape scale.

6.1.8. National policy therefore implicitly recognises the importance of biodiversity and that with sensitive planning and design, development and conservation of the natural heritage can co-exist, and benefits can, in certain circumstances, be obtained.

Technical Advice Note (Wales) 5: Nature Conservation and Planning

6.1.9. The purpose of Technical Advice Note (Wales) 5 (TAN5) is to supplement the information provided in PPW, insofar as it relates to nature conservation matters

6.1.10. TAN5 requires local planning authorities to fully consider the effect of planning decisions on biodiversity and ensure that appropriate weight is attached to statutory nature conservation designations, protected species and biodiversity and geological interests within the wider environment. It also considers the potential biodiversity and geological conservation gains which can be secured within developments, including the use of planning obligations.

Local Policy

Torfaen Adopted Local Development Plan (2013-2021)

6.1.11. Torfaen Adopted Local Development Plan (2013-2021) is the current planning document in place for planning control purposes applicable to the application site. While The adopted Local Plan is dated only until 2021, it is still the current adopted Local Plan in place for planning. The Council has commenced preparation of a new Replacement LDP (2022 to 2037) but no draft plan has yet been publicly published.

6.1.12. The Adopted Local Plan contains seven key policies relating to the nature conservation and ecology. These are summarised below.

6.1.13. Policy **S7 4.2.13** relates to protecting the strategic network of open spaces, ecological corridors along canal and the Afon Lwyd River to protect biodiversity and ecology.

6.1.14. Policy **S7 5.2.6** relates to having any new developments located so they don't compromise the natural environment and seek to enhance biodiversity resources and open spaces.

6.1.15. Policy **S7 5.7.4** relates to biodiversity networks being important to keep protected sites sustainable, by promoting the use of green infrastructure in building design and hedgerow connectivity.

6.1.16. Policy **S7 5.7.9** relates to the council resisting anything that causes harm to the countryside and that doesn't provost access to green space and outdoor recreation for local residents.

6.1.17. Policy **BW1 6.1.6** states all developments should in the first instance avoid the loss of biodiversity to contribute to conservation. If loss is acceptable and unavoidable then the loss should be mitigated for.

6.1.18. Policy **BW1 6.1.7** landscape features including river corridors, grassland and woodland are all important in the biodiversity network which should be maintained and enhanced.

6.1.19. Policy **SAA1 7.6.4** relates to biodiversity constraints to minimise impacts on local BAP species and SINC sites.

Supplementary Planning Guidance

6.1.20. SPG are documents produced by the Council to give further guidance when making planning applications. They provide supplementary information in respect of the policies in the adopted Development Plan. Any SPG relevant to ecology and biodiversity is identified below.

The draft Biodiversity, Ecosystem Resilience and Development SPG & draft Green Infrastructure SPG

6.1.21. Torfaen Country Borough Council consulted on the above draft SPGs between 15th June and 27th July 2023. Whilst yet to be fully adopted, it is currently set to be put forward for adopted during December 2023.

6.1.22. The following notes and draft policy are considered relevant in the context of ecology and the application site itself.

6.1.23. Applications should show how they have considered existing Green Infrastructure (GI) in and around the site, identifying needs and showing how development has considered these as part of project design. Emphasis is also placed on the consideration of how proposals can maintain, protect and enhance connectivity of GI in the surrounding area through project design.

6.1.24. There is also emphasis on how trees and woodland should be best considered and ideally protected through project design, including the implementation of buffer zones and root protection zones. The default position should be to retain all trees and woodland on site, unless there are sound reasons to the contrary.

6.1.25. The SPGs also introduce a stepwise approach to how biodiversity should be incorporated into development management processes at the earliest possible stage. Guidance on best practice in relation to timings, scale, and content of required ecological survey work is identified.

6.1.26. This includes for further guidance on what ecological reporting is required at the submission stage, including results of detailed species survey analysis, results of non-native species surveys. It also sets out how applicants are required to evidence how they have responded to the results of such survey work.

6.1.27. Finally, it sets out how the Council will seek to ensure that development provide net benefits to biodiversity. This will exclude exploring with the applicant what opportunities exist either within the site, or outside, to provide enhancements to biodiversity and ecosystem resilience.

6.2. **Discussion**

6.2.1. Initial recommendations have been put forward in this report that would ensure biodiversity measures have been considered as part of initial project design. Furthermore, a series of recommendations have been made regarding habitat management principles that would ensure some benefits to biodiversity are delivered in the wider site.

6.2.2. Consideration has been afforded to the presence and potential presence of protected and notable species within the site and measures have been outlined to enhance the site for such species moving forward. Consideration has also been afforded to nearby statutory and non-statutory designated sites, as well as other GI, to ensure there remains no likely significant chance for long-term negative effects to occur upon the adoption of the advised measures.

6.2.3. In conclusion, implementation of the measures set out in this report would enable emerging proposals at this site to fully accord with planning policy for ecology and nature conservation at all administrative levels.

7. SUMMARY AND CONCLUSIONS

7.1. Ecology Solutions was commissioned by Opus Land Ltd on behalf of MGTS St John High Income Property ICVC Bank of New York Mellon (International) Ltd in June 2023 to undertake an ecological assessment of land located at Plot C1, Llantarnam Park. The application site has been allocated in the Torfaen County Borough Local Plan (Allocated Site EET1/4 – Llantarnam Park C).

7.2. The emerging development proposals for the application site are for the erection of a new build, two-storey unit for use class B1/B2/B8, to provide operational/warehousing space and office accommodation together with associated yards and parking, located at Plot C1 Llantarnam Industrial Park, Cwmbran, Torfaen, NP44 3SE.

7.3. The majority of the application site comprises grassland habitats and woodland habitats. The Dowlais Brook network is located immediately north-east of the application site boundary. In order to mitigate for the losses of habitats within the application site boundary, high-quality enhancements to the woodland habitats have been recommended, the implementation of which will also aid in an effort to bolster green links throughout the locality.

7.4. A number of appropriate mitigation measures and safeguards have been identified in respect of key protected species / groups, with recommendations made to deliver enhancements, where possible, compared to the existing situation, highlighted in section 5 of this report.

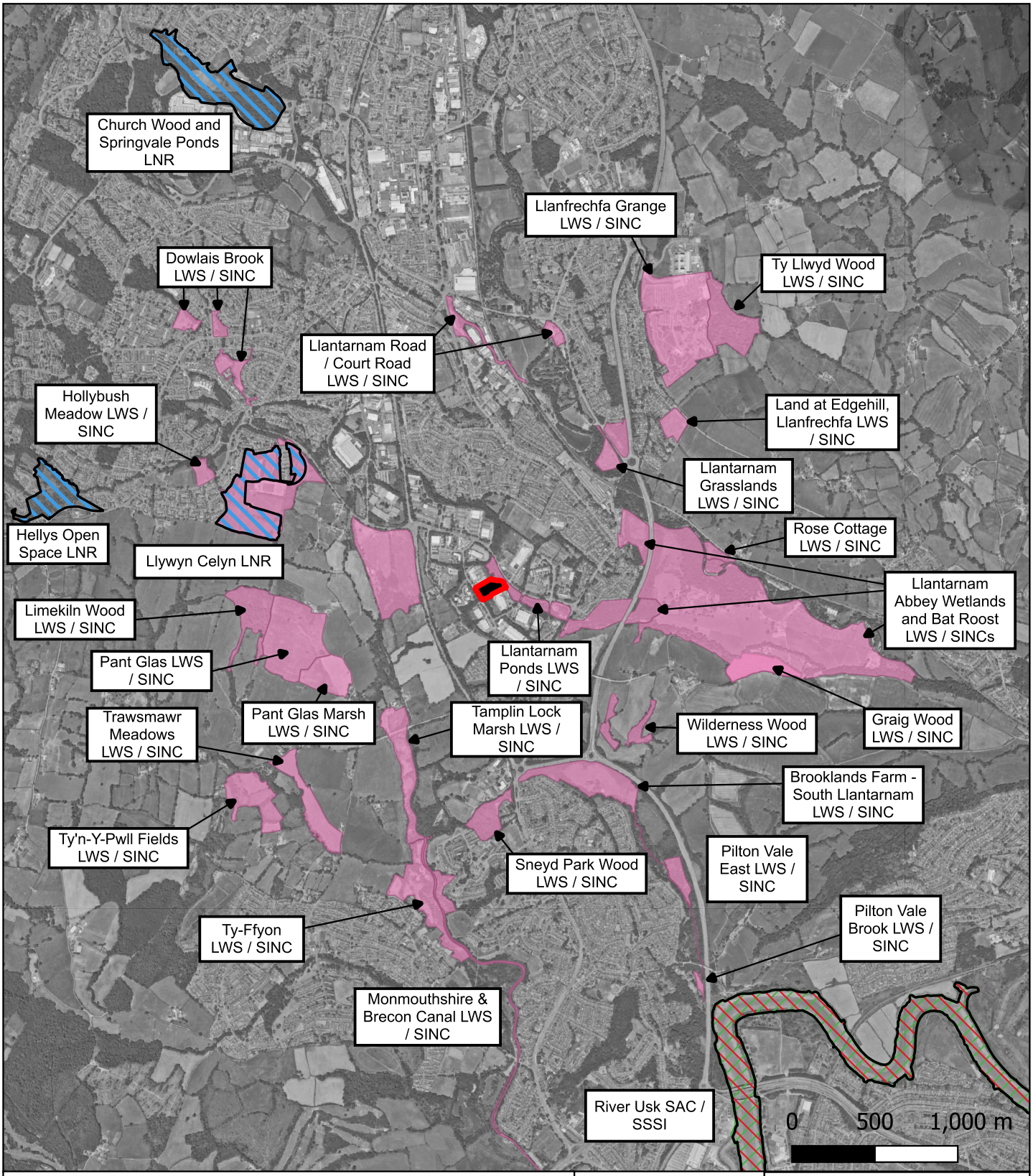
7.5. In conclusion, subject to the adoption of the measures outlined within this report, it is not considered that there are any overriding constraints to this site coming forward from an ecological perspective.

PLANS & APPENDICES

PLANS

PLAN ECO1

Application Site and Ecological Designations



KEY:

- APPLICATION BOUNDARY
- SPECIAL AREA OF CONSERVATION (SAC)
- SITE OF SPECIAL SCIENTIFIC INTEREST (SSSI)
- LOCAL NATURE RESERVE (LNR)
- LOCAL WILDLIFE SITE (LWR) / SITE OF IMPORTANCE FOR NATURE CONSERVATION (SINC)

N

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11583: CWMBRAN

PLAN ECO1: SITE LOCATION AND ECOLOGICAL DESIGNATIONS

Rev: A
JUNE 2024

PLAN ECO2

Ecological Features

Key:

- APPLICATION SITE BOUNDARY
- LOWLAND MIXED DECIDUOUS WOODLAND
- OTHER; WOODLAND BROADLEAVED
- OTHER NEUTRAL GRASSLAND
- RECOLONISING BAREGROUND
- HARDSTANDING
- PERIODICALLY WET GRASSLAND
- Scattered Scrub
- RUNNING WATER (DOWLAIS BROOK)
- HEDGEROW / TREELINES

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11583: PLOT C1, LLANTARNAM PARK, CWMBRAN

PLAN ECO2: ECOLOGICAL FEATURES

Rev: B

NOV 23

PLAN ECO3

Bat Survey Effort

Key:

- APPLICATION SITE BOUNDARY
- STATIC DETECTOR LOCATIONS

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11583: PLOT C1, LLANTARNAM PARK, CWMBRAN

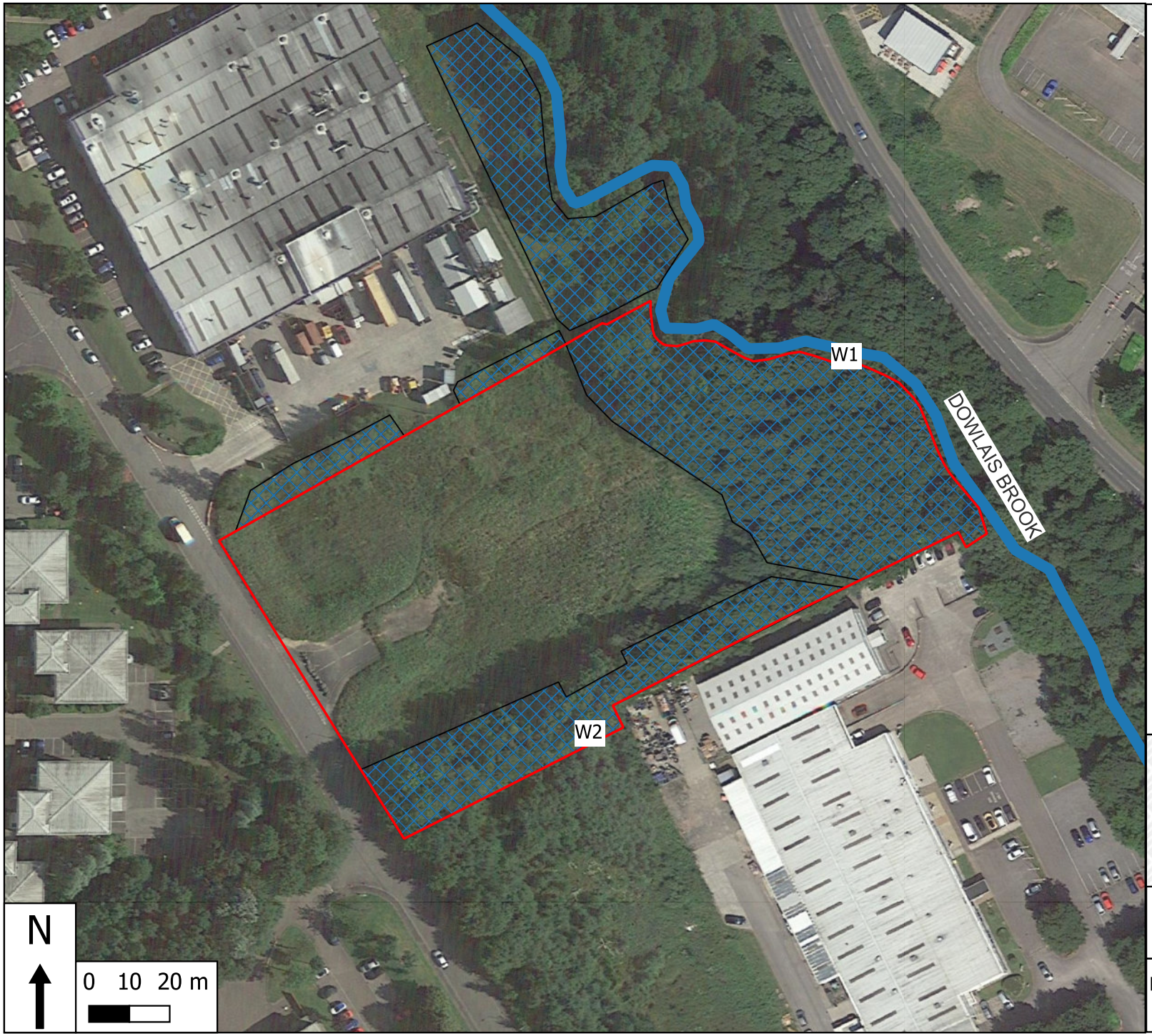
PLAN ECO3: BAT SURVEY EFFORT

Rev: 1

NOV 23

PLAN ECO4

Hazel Dormouse Survey Effort



Key:

- APPLICATION SITE BOUNDARY
- HAZEL DORMOUSE TUBE LOCATIONS (50 TUBES TOTAL)

N

0 10 20 m

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11583: PLOT C1, LLANTARNAM PARK, CWMBRAN

PLAN ECO4: HAZEL DORMOUSE SURVEY EFFORT

Rev: 1

NOV 23

PLAN ECO5

Reptile Survey Effort

Key:

- APPLICATION SITE BOUNDARY
- REPTILE TIN LOCATIONS (50 TINS TOTAL)

N

0 10 20 m

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11583: PLOT C1, LLANTARNAM PARK, CWMBRAN

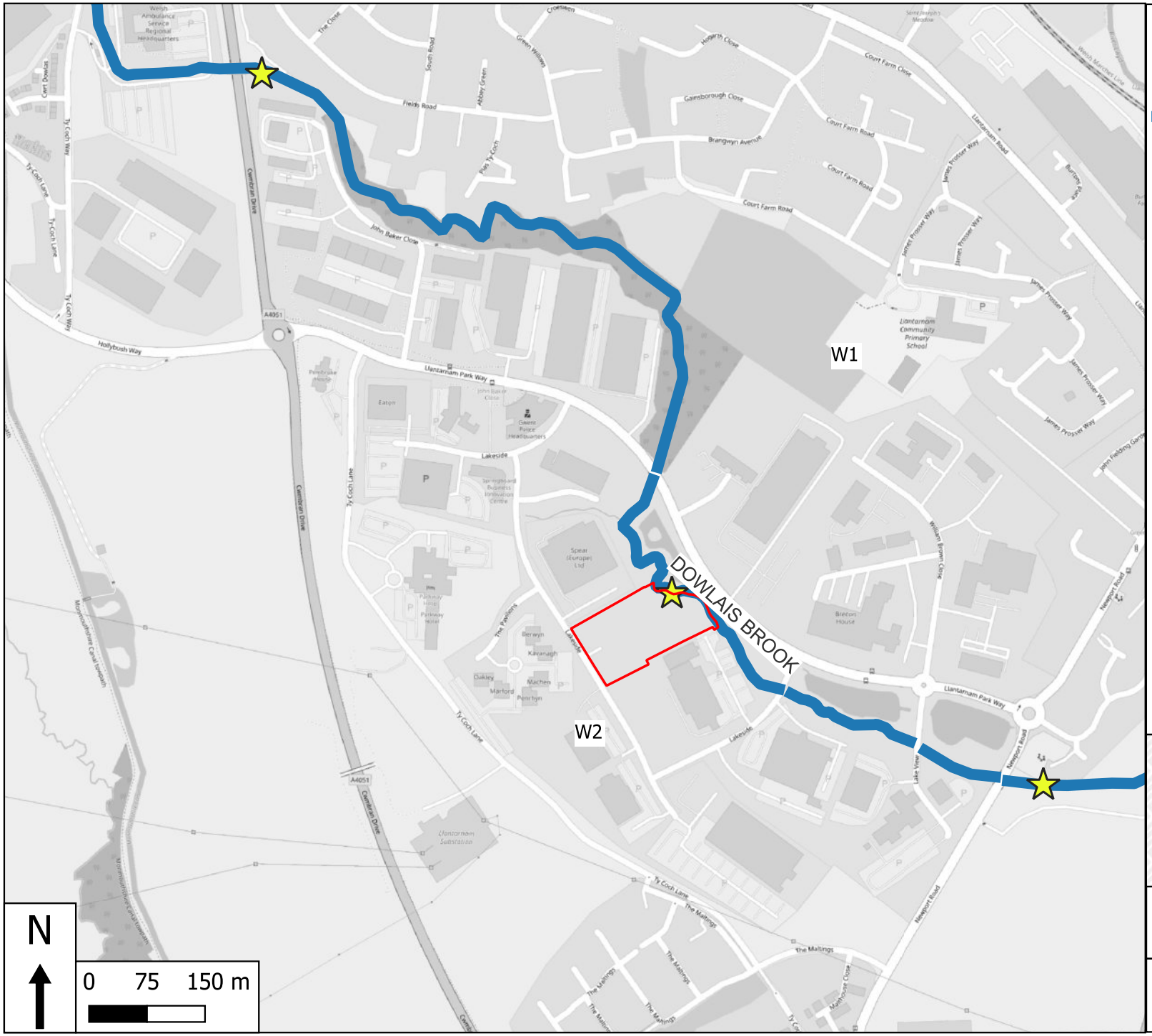
PLAN ECO5: REPTILE SURVEY EFFORT

Rev: 1

NOV 23

PLAN ECO6

White-clawed Crayfish eDNA Sample Points



Key:

- APPLICATION SITE BOUNDARY
- DOWLAIS BROOK
- WCC eDNA SAMPLE POINTS

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11583: PLOT C1, LLANTARNAM PARK, CWMBRAN

PLAN ECO6: WHITE-CLAWED CRAYFISH eDNA SAMPLE POINTS

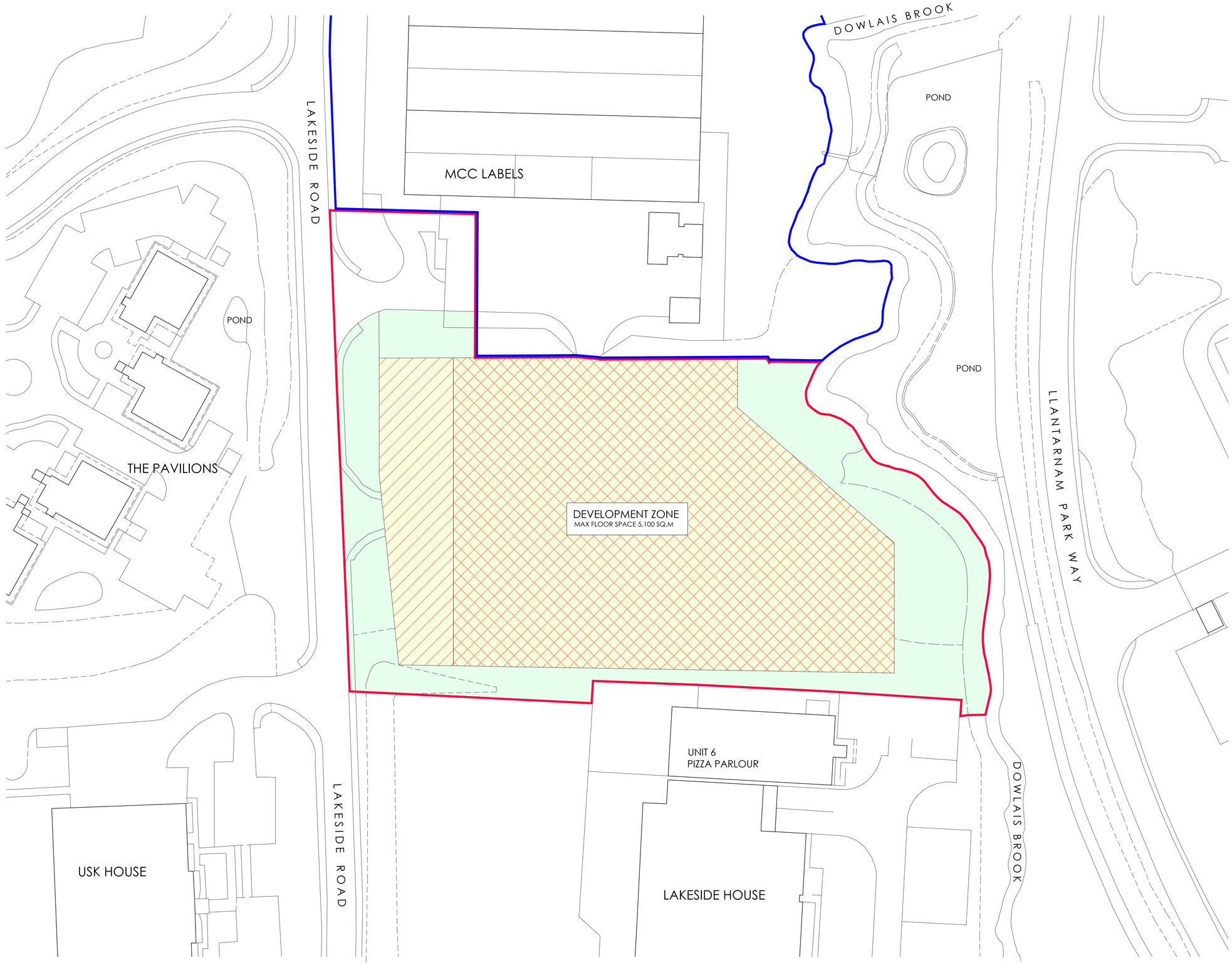
Rev: A

NOV 23

APPENDICES

APPENDIX 1

Parameters Plan



SCALE
10m 10m 20m 30m 40m 50m

KEY

PLANNING APPLICATION BOUNDARY
PLOT C1 AREA : 1.47 ha (3.63 acres)

ADDITIONAL LAND UNDER
THE APPLICANTS OWNERSHIP

DEVELOPMENT ZONE

Area for Use Classes : E(g)(iii) Light Industrial, B2 General Industrial, B8 Storage & Distribution & Ancillary Office (Use Class E(g)(i)

Area to contain buildings with a maximum height of 58.00m AOD hard and soft landscaping, car parking, yard areas, road and SuDS features

Area to contain buildings with a maximum height of 51.00m AOD hard and soft landscaping, car parking, yard areas, road and SuDS features

LANDSCAPE ZONE

Area to contain landscaping including amenity areas, swales, SuDS features and ecology initiatives

PLANNING ISSUE

client :
OPUS LAND

project :
POTENTIAL DEVELOPMENT

site :
PLOT C1
LLANTARNAM PARK
CWMBRAN, NP44 3DE

content :
PARAMETERS PLAN

MAY 2024

1:500 @ A1

ALL DIMENSIONS TO BE CHECKED ON SITE.DO NOT SCALE

DRAFT

GARRETT | McKEE
ARCHITECTS

RILEY HOUSE
RILEY ROAD
MARLOW
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T 01628 907000

drg.no : 2540/PL103

revision :

APPENDIX 2

GCN eDNA Results

SureScreen Scientifics

Folio No: E18016
Report No: 1
Purchase Order: 11583
Client: ECOLOGY SOLUTIONS LTD
Contact: Chris Donnellan

TECHNICAL REPORT

ANALYSIS OF ENVIRONMENTAL DNA IN POND WATER FOR THE DETECTION OF GREAT CRESTED NEWTS (TRITURUS CRISTATUS)

SUMMARY

When great crested newts (GCN), *Triturus cristatus*, inhabit a pond, they continuously release small amounts of their DNA into the environment. By collecting and analysing water samples, we can detect these small traces of environmental DNA (eDNA) to confirm GCN habitation or establish GCN absence.

RESULTS

Date sample received at Laboratory: 14/06/2023
Date Reported: 19/06/2023
Matters Affecting Results: None

Lab Sample No.	Site Name	O/S Reference	SIC	DC	IC	Result	Positive Replicates
0437	Cwmbran - P2	ST 302 929	Pass	Pass	Pass	Negative	0
0443	Cwmbran - P1	ST 299 931	Pass	Pass	Pass	Negative	0

If you have any questions regarding results, please contact us: ForensicEcology@surescreen.com

Reported by: Chris Troth **Approved by:** Jackson Young

METHODOLOGY

The samples detailed above have been analysed for the presence of GCN eDNA following the protocol stated in DEFRA WC1067 'Analytical and methodological development for improved surveillance of the Great Crested Newt, Appendix 5.' (Biggs et al. 2014). Each of the 6 sub-sample tubes are first centrifuged and pooled together into a single sample which then undergoes DNA extraction. The extracted sample is then analysed using real time PCR (qPCR), which uses species-specific molecular markers to amplify GCN DNA within a sample. These markers are unique to GCN DNA, meaning that there should be no detection of closely related species.

If GCN DNA is present, the DNA is amplified up to a detectable level, resulting in positive species detection. If GCN DNA is not present then amplification does not occur, and a negative result is recorded.

Analysis of eDNA requires scrupulous attention to detail to prevent risk of contamination. True positive controls, negative controls and spiked synthetic DNA are included in every analysis and these have to be correct before any result is declared and reported. Stages of the DNA analysis are also conducted in different buildings at our premises for added security.

SureScreen Scientifics Ltd is ISO9001 accredited and participate in Natural England's proficiency testing scheme for GCN eDNA testing. We also carry out regular inter-laboratory checks on accuracy of results as part of our quality control procedures.

INTERPRETATION OF RESULTS

SIC: **Sample Integrity Check** [Pass/Fail]
When samples are received in the laboratory, they are inspected for any tube leakage, suitability of sample (not too much mud or weed etc.) and absence of any factors that could potentially lead to inconclusive results.

DC: **Degradation Check** [Pass/Fail]
Analysis of the spiked DNA marker to see if there has been degradation of the kit or sample between the date it was made to the date of analysis. Degradation of the spiked DNA marker may lead indicate a risk of false negative results.

IC: **Inhibition Check** [Pass/Fail]
The presence of inhibitors within a sample are assessed using a DNA marker. If inhibition is detected, samples are purified and re-analysed. Inhibitors cannot always be removed, if the inhibition check fails, the sample should be re-collected.

Result: **Presence of GCN eDNA** [Positive/Negative/Inconclusive]
Positive: GCN DNA was identified within the sample, indicative of GCN presence within the sampling location at the time the sample was taken or within the recent past at the sampling location.
Positive Replicates: Number of positive qPCR replicates out of a series of 12. If one or more of these are found to be positive the pond is declared positive for GCN presence. It may be assumed that small fractions of positive analyses suggest low level presence, but this cannot currently be used for population studies. In accordance with Natural England protocol, even a score of 1/12 is declared positive. 0/12 indicates negative GCN presence.
Negative: GCN eDNA was not detected or is below the threshold detection level and the test result should be considered as evidence of GCN absence, however, does not exclude the potential for GCN presence below the limit of detection.

APPENDIX 3

White-clawed Crayfish eDNA Results

SureScreen Scientifics

Folio No: E19268
Report No: 1
Client: Ecology Solutions LTD
Contact: Chris Donnellan

TECHNICAL REPORT

ANALYSIS OF ENVIRONMENTAL DNA IN WATER FOR AQUATIC SPECIES DETECTION

SUMMARY

When aquatic organisms inhabit a waterbody such as a pond, lake or river they continuously release small amounts of their DNA into the environment. By collecting and analysing water samples, we can detect these small traces of environmental DNA (eDNA) to confirm the presence or absence of the target species within the waterbody.

RESULTS

Date sample received in laboratory: 28/09/2023
Date results reported: 11/10/2023
Matters affecting result: None

TARGET SPECIES: Crayfish plague *(Aphanomyces astaci)*

Lab ID	Site Name	OS Reference	SIC	DC	IC	Result	Positive Replicates
FK1296	DS1 Cwmbran	ST 3037 9282	Pass	Pass	Pass	Negative	0/12
FK1297	US1 Cwmbran	ST 2938 9373	Pass	Pass	Pass	Negative	0/12
FK1299	RL1 Cwmbran	ST 3003 9306	Pass	Pass	Pass	Negative	0/12

SureScreen Scientifics

TARGET SPECIES: Marbled crayfish *(Procambarus virginalis)*

Lab ID	Site Name	OS Reference	SIC	DC	IC	Result	Positive Replicates
FK1296	**DS1 Cwmbran**	**ST 3037 9282**	Pass	Pass	Pass	**Negative**	**0/12**
FK1297	**US1 Cwmbran**	**ST 2938 9373**	Pass	Pass	Pass	**Negative**	**0/12**
FK1299	**RL1 Cwmbran**	**ST 3003 9306**	Pass	Pass	Pass	**Negative**	**0/12**

TARGET SPECIES: Signal crayfish *(Pacifastacus leniusculus)*

Lab ID	Site Name	OS Reference	SIC	DC	IC	Result	Positive Replicates
FK1296	**DS1 Cwmbran**	**ST 3037 9282**	Pass	Pass	Pass	**Negative**	**0/12**
FK1297	**US1 Cwmbran**	**ST 2938 9373**	Pass	Pass	Pass	**Negative**	**0/12**
FK1299	**RL1 Cwmbran**	**ST 3003 9306**	Pass	Pass	Pass	**Negative**	**0/12**

SureScreen Scientifics

TARGET SPECIES: White-clawed crayfish *(Austropotamobius pallipes)*

Lab ID	Site Name	OS Reference	SIC	DC	IC	Result	Positive Replicates
FK1296	**DS1 Cwmbran**	**ST 3037 9282**	Pass	Pass	Pass	**Positive**	**12/12**
FK1297	**US1 Cwmbran**	**ST 2938 9373**	Pass	Pass	Pass	**Positive**	**10/12**
FK1299	**RL1 Cwmbran**	**ST 3003 9306**	Pass	Pass	Pass	**Positive**	**12/12**

If you have any questions regarding results, please contact us: ForensicEcology@surescreen.com

Reported by: **Chelsea Warner** Approved by: **Lauryn Jewkes**

METHODOLOGY

The samples detailed above have been analysed for the presence of target species eDNA following scientifically published eDNA assays and protocols which have been thoroughly tested, developed and verified for use by SureScreen Scientifics.

The analysis is conducted in two phases. The sample first goes through an extraction process where the filter is incubated in order to obtain any DNA within the sample. The extracted sample is then tested via real time PCR (also called q-PCR) for each of the selected target species. This process uses species-specific molecular markers (known as primers) to amplify a select part of the DNA, allowing it to be detected and measured in 'real time' as the analytical process develops. qPCR combines amplification and detection of target DNA into a single step. With qPCR, fluorescent dyes specific to the target sequence are used to label targeted PCR products during thermal cycling. The accumulation of fluorescent signals during this reaction is measured for fast and objective data analysis. The primers used in this process are specific to a part of mitochondrial DNA only found in each individual species. Separate primers are used for each of the species, ensuring no DNA from any other species present in the water is amplified.

If target species DNA is present, the DNA is amplified up to a detectable level, resulting in positive species detection. If target species DNA is not present then amplification does not occur, and a negative result is recorded.

Analysis of eDNA requires scrupulous attention to detail to prevent risk of contamination. True positive controls, negative controls and spiked synthetic DNA are included in every analysis and these have to be correct before any result is declared and reported. Stages of the DNA analysis are also conducted in different buildings at our premises for added security.

SureScreen Scientifics Ltd is ISO9001 accredited and participate in Natural England's proficiency testing scheme for GCN eDNA testing. We also carry out regular inter-laboratory checks on accuracy of results as part of our quality control procedures.

INTERPRETATION OF RESULTS

SIC: **Sample Integrity Check** [Pass/Fail]
When samples are received in the laboratory, they are inspected for any tube leakage, suitability of sample (not too much mud or weed etc.) and absence of any factors that could potentially lead to inconclusive results.

DC: **Degradation Check** [Pass/Fail]
Analysis of the spiked DNA marker to see if there has been degradation of the kit or sample, between the date it was made to the date of analysis. Degradation of the spiked DNA marker may indicate a risk of false negative results.

IC: **Inhibition Check** [Pass/Fail]
The presence of inhibitors within a sample are assessed using a DNA marker. If inhibition is detected, samples are purified and re-analysed. Inhibitors cannot always be removed, if the inhibition check fails, the sample should be re-collected.

Result: **Presence of eDNA** [Positive/Negative/Inconclusive]

Positive: DNA was identified within the sample, indicative of species presence within the sampling location at the time the sample was taken or within the recent past at the sampling location.

Positive Replicates: Number of positive qPCR replicates out of a series of 12. If one or more of these are found to be positive the pond is declared positive for species presence. It may be assumed that small fractions of positive analyses suggest low level presence, but this cannot currently be used for population studies. Even a score as low as 1/12 is declared positive. 0/12 indicates negative species presence.

Negative: eDNA was not detected or is below the threshold detection level and the test result should be considered as evidence of species absence, however, does not exclude the potential for species presence below the limit of detection.

Inconclusive: Controls indicate inhibition or degradation of the sample, resulting in the inability to provide conclusive evidence for species presence or absence.

APPENDIX 4

Bat and Bird Box Examples

Bat Boxes

Habibat Bat Box (Rendering)

The Habibat Bat Box is a large, solid box made of insulating concrete with an internal roost space, which can be incorporated into the fabric of a building as it is built or renovated. A variety of facings can be fitted to suit any existing brick, wood, stonework or rendered finish, rendering the box unobtrusive and aesthetically pleasing.

The Habibat box is suitable for species which are commonly found roosting in buildings in the UK.

Height: 440mm, Width: 215mm, Depth: 102mm, Weight: 8kg

Please note that the Habibat box should be located on southerly aspects and positioned ideally near the eaves or gable apex of the property with a minimum of 2m but preferably 5-7m above the ground. Placement above windows, doors and wall climbing plants should be avoided.

Enclosed Bat Box B

This bat box is designed specifically for the pipistrelle bats, providing a discrete roosting feature which is available in all brick types.

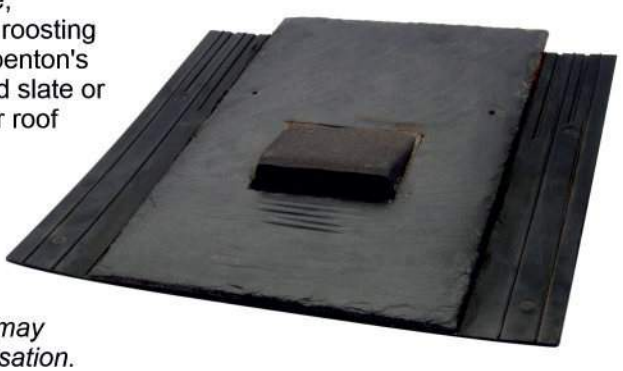
Bats are contained within the bat box itself, within which several roosting zones are provided.

This feature is maintenance free and ideal for new build & conservation work

Height: 290mm
Width: 215mm

Please note that this box is designed to be installed flush with a wall.

Habibat Bat Access Slate



The Bat Access Slate consists of a standard sized slate, with a capped vent which allows access to roof felt (for roosting Pipistrelles) or roof space (for Serotine, Leisler's, Daubenton's and Barbastelle Bats). We can supply either a standard slate or custom slate that is coloured and sanded to match your roof exactly.

Height: 215mm
Width: 65mm
Depth: 80mm

Habibat Bat Access Slates are made to order and you may need to provide a slate to the manufacturer for customisation. Slates are shipped direct from the manufacturer and will incur a shipping cost of £30-40 (ex VAT) for between one and ten slates. Delivery time is expected to be 2 - 3 weeks.

Images and text adapted from manufacturer's websites:

www.ibstock.com/eco-products
www.habibat.co.uk

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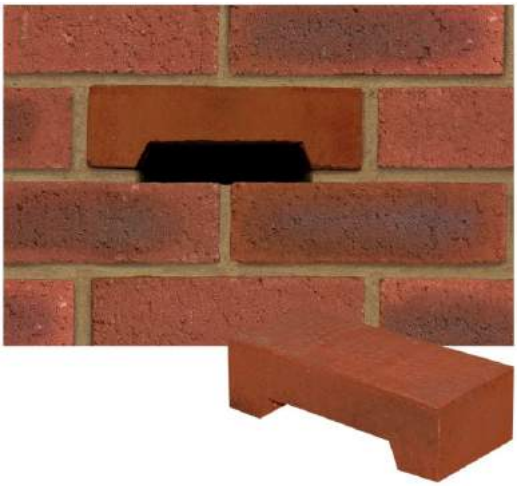
Bat Boxes

Ibstock Bat Box A

A discrete, easy to install single bat brick that allows bats to create a natural home habitat within the cavity of the building

Height: 215mm
Width: 65mm

Please note that this box is designed to be installed flush with a wall.



Enclosed Bat Box B

This bat box is designed specifically for the pipistrelle bats, providing a discrete roosting feature which is available in all brick types.

Bats are contained within the bat box itself, within which several roosting zones are provided.

This feature is maintenance free and ideal for new build & conservation work

Height: 290mm
Width: 215mm

Please note that this box is designed to be installed flush with a wall.

1FQ Bat Box

Designed to be installed onto buildings and can be painted to match the house design.

Woodcrete (75% wood sawdust, concrete and clay mixture)
Width: 35cm
Height: 60cm
Weight: 15.8kg

Images and text adapted from manufacturer's websites:

www.ibstock.com/eco-products
www.habibat.co.uk

Bird Boxes

Ibstock Swift Box

A specially designed Swift nesting feature which can be integrated into the fabric of the building.

Size / Width / Height - 327 x 140 x 140mm.

1SP Schwegler Sparrow Terrace

A Woodcrete bird box which allows for several Sparrow pairs to nest in a single location. The box can either be integrated within the fabric of a building or otherwise fitted to the exterior of the building walls.

Brood chamber dimensions: Height: 16cm, Width: 10.5cm, Depth: 15cm

External dimensions: Height: 24.5cm, Width: 43cm, Depth: 20cm

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APPENDIX 5

LEGISLATION OF RELEVANCE TO ECOLOGICAL MATTERS

APPENDIX 5 – LEGISLATION OF RELEVANCE TO ECOLOGICAL MATTERS

This Appendix provides further information regarding the legislation and planning policy of relevance to ecological matters, pursuant to the assessment of effects as outlined in the Ecological Assessment.

Legislation

The following section summarises the legislation of relevance to protected species/groups which have been identified to be present at the Site based on survey work undertaken from 2023.

Bats

1.1.1. **Legislation.** All bats are protected under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) and included on Schedule 2 of the Conservation of Habitats and Species Regulations 2017 ("the Habitats Regulations", as amended). These include provisions making it an offence:

- To deliberately kill, injure or take (capture) bats;
- To deliberately disturb bats in such a way as to: -
  - (i) be likely to impair their ability to survive, to breed or reproduce, or to rear or nurture their young, or to hibernate or migrate; or
  - (ii) affect significantly the local distribution or abundance of the species to which they belong;
- To damage or destroy any breeding or resting place used by bats;
- To intentionally or recklessly to obstruct access to any place used by bats for shelter or protection.

1.1.2. While the legislation is deemed to apply even when bats are not in residence, guidance suggests that certain activities such as re-roofing can be completed outside sensitive periods when bats are not in residence provided these do not damage or destroy the roost.

1.1.3. The words deliberately and intentionally include actions where a court can infer that the defendant knew that the action taken would almost inevitably result in an offence, even if that was not the primary purpose of the act.

1.1.4. The offence of damaging or destroying a breeding site or resting place (which can be interpreted as making it worse for the bat) is an absolute offence. Such actions do not have to be deliberate for an offence to be committed.

1.1.5. European Protected Species licences are available from Natural Resources Wales in certain circumstances, and permit activities that would otherwise be considered an offence.

1.1.6. Licences can usually only be granted if the development is in receipt of full planning permission and it is considered that:

(i) The activity to be licensed must be for imperative reasons of overriding public interest or for public health and safety;

(ii) There is no satisfactory alternative; and
(ii) The action authorised will not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status in their natural range.

Badgers

1.1.7. **Legislation**. The Protection of Badgers Act 1992 consolidates the previous Badgers Acts of 1973 and 1991. The legislation aims to protect the species from persecution, rather than being a response to an unfavourable conservation status, as the species is in fact common over most of Britain, with particularly high populations in the south.

1.1.8. As well as protecting the animal itself, the 1992 Act also makes the intentional or reckless destruction, damage, or obstruction of a Badger sett an offence. A sett is defined as "any structure or place which displays signs indicating current use by a Badger".

1.1.9. In addition, the intentional elimination of sufficient foraging area to support a known social group of Badgers may, in certain circumstances, be construed as an offence by constituting 'cruel ill treatment' of a Badger.

1.1.10. Previous guidelines were issued on the types of activity it considers should be licensed within certain distances of sett entrances. They stated that works that may require a licence include using heavy machinery within 30 metres of any entrance to an active sett, using lighter machinery within 20 metres, and light work such as hand digging within 10 metres. However, guidance issued in September 2007 specifically stated that:

"It is not illegal, and therefore a licence is not required, to carry out disturbing activities in the vicinity of a sett if no Badger is disturbed and the sett is not damaged or obstructed."

1.1.11. More recent guidance produced in 2009 states that Badgers are relatively tolerant of moderate levels of disturbance and that low levels of disturbance at or near to Badger setts do not necessarily disturb the Badgers occupying those setts. However, guidance continues by stating that any activity that will or is likely to cause one of the interferences defined in Section 3 (such as damaging a sett tunnel or chamber or obstructing access to a sett entrance) will continue to be licensed.

1.1.12. This guidance no longer makes reference to any 30/20/10 metre radius as a threshold for whether a licence would be required. Nonetheless, it is stated that tunnels may extend for 20 metres so care needs to be taken when implementing excavating operations within the vicinity of a sett and to take appropriate precautions with vibrations and noise, etc. Fires/chemicals within 20 metres of a sett should specifically be avoided.

1.1.13. This interim guidance allows greater professional judgement as to whether an offence is likely to be committed by a particular development activity, and therefore whether a licence is required or not. For example, if a sett clearly orientates southwards into an embankment it may be somewhat redundant to have a 30 metre exclusion zone to the north.

Birds

1.1.14. **Legislation.** Section 1 of the Wildlife and Countryside Act is concerned with the protection of wild birds, whilst Schedule 1 lists species which are protected by special penalties.

1.1.15. White-clawed Crayfish

1.1.16. **Legislation.** White-clawed crayfish are partially protected under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended), making it an offence to:

- Intentionally take White-clawed Crayfish from the wild;
- Sell or attempt to sell any part of a White-clawed Crayfish (dead or alive) or advertise that one buys or sells or intends to buy or sell any part of a white-clawed crayfish.

1.1.17. White-clawed Crayfish are also protected under Annexes II and V of the European Union Habitats and Species Directive and under section 41 of the Natural Environment and Rural Communities (NERC) Act 2006.

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