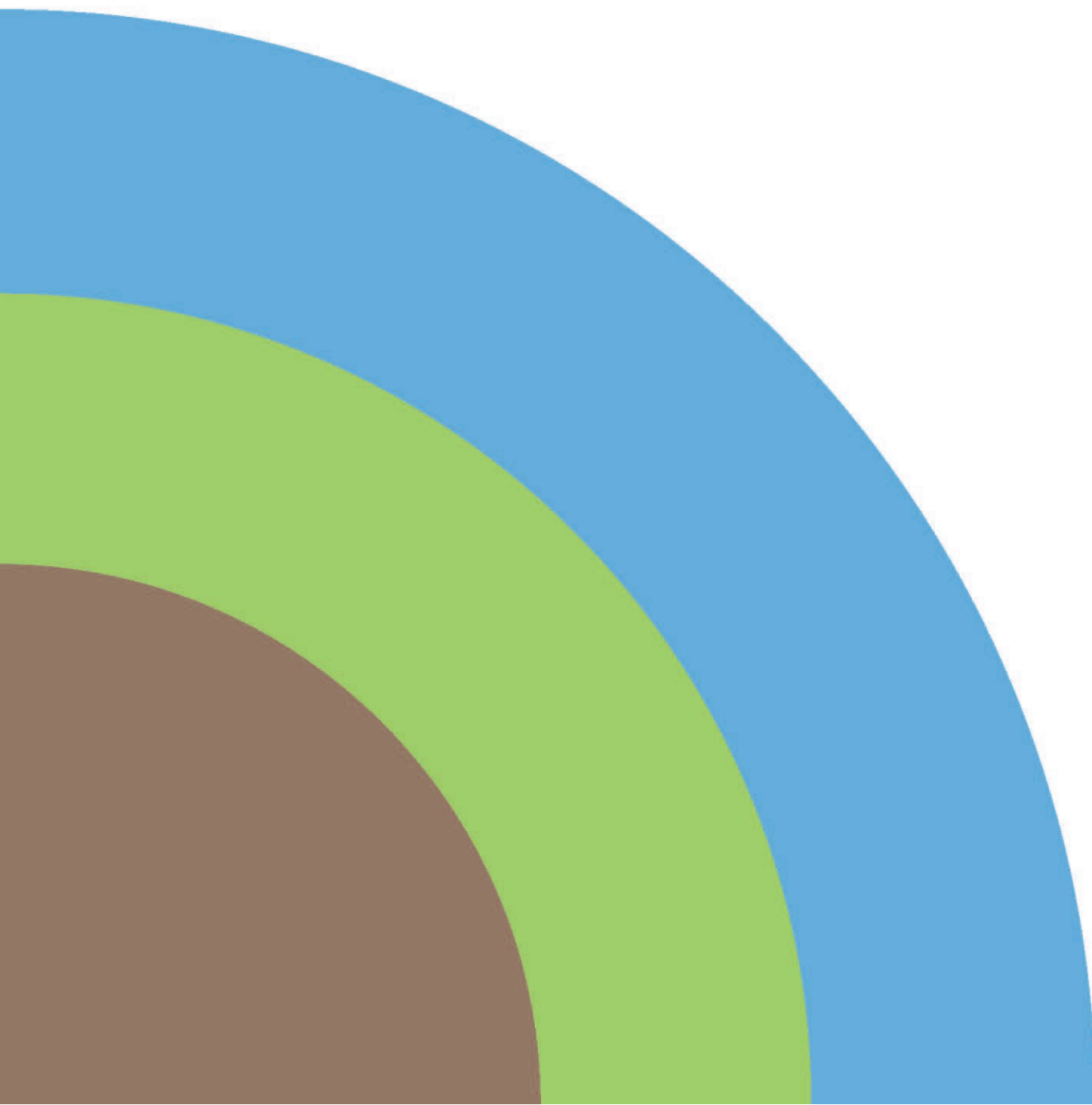




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**LAND SOUTH OF BRONDEG & WEST OF UPPER
COLLIERS ROW, HEOLGERRIG**

Updated Ecological Appraisal





COMMISSIONED BY
Pine Fields plc

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Updated Ecological Appraisal

September 2020

Bioscan Report No.
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SUMMARY

This report sets out the results of an updated ecological appraisal of Land South of Brondeg & West of Upper Colliers Row, Heolgerrig, Merthyr Tydfil, including a review of extant data sets for the site and surrounding area and a site visit in January 2020.

Planning consent (with conditions) for residential development on the site was granted in 2013 and again in 2017, consistent with allocations in both the previously and more recently adopted Local Plans. An extension of time application was submitted in November 2019, but due to the age of the supporting ecological information further detail was requested by Merthyr Borough Council's ecologist.

The desk and field surveys find that such changes that have occurred on the site since planning determination in 2017 are minor and non-material in respect of the extension of time application. There has been no substantial change in management or habitat distribution and correspondingly no substantive change in the site's known or potential value to species of conservation importance. No mobile species of elevated conservation value are likely to have colonised or changed in terms of population, and no additional or heightened constraints have been identified over and above those that were duly appraised and considered at the time of the 2017 determination. Indeed, in respect of one factor (the necessity of provision for measures to ensure legal compliance in respect of Japanese knotweed), the level of constraint has diminished in the intervening period thanks to control measures that have been implemented.

In view of the volume, quality and currency of the data available on matters such as protected species, no need for further novel or repeat biodiversity surveys has been identified for determination purposes.

In consideration of the above, there are no new or altered biodiversity considerations that require to be taken into account by the Council in determining whether the time to implement the extant housing consent should be extended.

1 INTRODUCTION

1.1 Purpose of document

1.1.1 This document provides updated ecological material to assist determination of an extension of time application for a previously consented residential development at Land South of Brondeg & West of Upper Colliers Row, Heolgerrig, Merthyr Tydfil (Figure 1). Planning consent (with conditions) for residential development on the site was granted in 2013 and again in 2017, consistent with allocations in both the previously and more recently adopted Local Plans.

1.1.2 An extension of time application was submitted in November 2019 with the following supporting reports on ecology:

- 'Extended Phase 1 Habitat and Great Crested Newt Survey' (Hawkeswood Ecology 2013)
- 'Extended Phase 1 Habitat and Survey Review' (Hawkeswood Ecology 2014)

1.1.3 Commenting on this application in January 2020, Merthyr Borough Council's ecologist remarked that these two supporting reports comprised information that was 'out of date' by reference to industry guidance¹, and thus unsuitable for determination purposes.

1.1.4 Bioscan were subsequently commissioned to undertake a review and update of the previously submitted information, including carrying out a site visit and drawing in relevant survey information they have collected for the site and adjoining land since 2015, and to provide a report to enable MBC to proceed to determination of the extension of time application.

1.1.5 The results of this collation, review and update exercise are presented in this report. They provide refreshed and current data on the status of the ecological resources on the site and discuss the extent (if any) that these have changed from the position conveyed by previously submitted material.

¹ CIEEM (April 2019) "On the Lifespan of Ecological Reports and Surveys". CIEEM advice note.

2 METHODOLOGY

2.1 Review of third-party data, including previous supporting information

2.1.1 As well as the two Hawkeswood reports from 2013 and 2014 that were submitted with the extension of time application, a tranche of earlier documentation of direct relevance to the development site was reviewed prior to conducting a site visit. This included the following additional reports:

- Phase 1 Habitat Survey report – Hawkeswood Ecology - undated copy reporting on surveys carried out in October 2006.
- Great Crested Newt Surveys – Land at Colliers Row, Heolgerrig (2007 report by Hawkeswood Ecology)
- Survey report for otters and bat roosts – Hawkeswood Ecology - undated copy but reporting on surveys carried out in 2007.
- Bat Activity Surveys – Land at Colliers Row, Heolgerrig – Report by Hawkeswood Ecology October 2007.
- Heolgerrig, Merthyr Tydfil, Glamorgan, Marsh Fritillary Study 2007 - Report by Oliver Howells, October 2007
- “Refugia and Hydrology Report” by Blandford Consulting dated 2008, which included consideration of terrestrial-phase great crested newts in respect of the site.

2.1.2 A wealth of additional third-party data relating to the adjoining landholding to the south is also held in Bioscan’s archives. This includes reports dating from 1994 to 2008 and produced by various consultants in connection with past development proposals by Merthyr Village Limited, as well as reports produced by the former Countryside Council for Wales (now NRW) and which provide supporting information for the Cwm Glo a Glyndrys SSSI (which is near-adjacent to the current application site²). Information obtained from the SSSI file held by NRW and more recent information produced by Merthyr Borough Council in support of the adjoining SNCI designation³ was also reviewed.

2.1.3 Finally, submitted ecological information related to the consented residential development adjoining the site to the north (MBC planning ref: P/19/0228), and hydrological SSSI/SINC buffer information related to applications to the north-west (P/19/0259 and P/19/0260) was also reviewed by Bioscan as part of the present commission. Amongst other things, this draws in data from a recent data request to South East Wales Biodiversity Records Centre (SEWBRc) for a search area covering the entirety of the Brondeg consented development site, replicating and updating earlier such requests to SEWBRc by Bioscan in 2015 and 2018 which also covered the consented development site.

² Some of this NRW commissioned work includes the western portion of the current application site

³ SINC No.12 Cwm Glo.

2.2 Bioscan field survey work 2015-2018

2.2.1 In addition to the third-party information discussed above, Bioscan holds a wealth of additional survey data from its own surveys between 2015 and 2018 which covered part or all of the site, or immediately adjoining land, in conjunction with the adjoining land to the south and west. These data were in order to comprehensively update the ecological baseline information for the extensive landholding to the south and west of the current application site. Initial surveys of this landholding were scoped with NRW and Merthyr's ecologist and subsequently carried out in the course of 2015 and 2016. The resultant data have periodically been refreshed or expanded upon by subsequent surveys up to and including 2018, again in accordance with further scoping discussions with NRW and MBC. While this work primarily relates to the ongoing promotion of this adjoining land for a mixed-use development (known as Rhydyar West), it is also of direct or indirect relevance to the Brondeg site and the current extension of time application. Relevant extracts from this dataset are therefore incorporated into this assessment and serve to further bolster an already voluminous baseline data set.

2.2.2 The spatial scope, timing and methodologies of these Bioscan surveys is summarised below:

- Habitat classification and mapping and botanical surveys (Phase 1, Phase 2, NVC). These were carried out mainly in 2015 for the purposes of refreshing, validating and where necessary updating earlier community classification work and botanical surveys, in particular the high-quality work carried out for the then CCW by Bosanquet and Stevens in 2005. Targeted searches for locally and nationally scarce plants were also conducted by Bioscan in 2015 and 2016. Part of the current application site was included in these surveys.
- Mycological (grassland fungi) surveys (focused on Clavariaceae, Hygrocybe spp and Geoglossaceae) were carried out in 2015 with a partial update in 2018. The main focus of these was grasslands within the SSSI and SINC designated land south and west of the Brondeg development site, but the grassland within the current application site was also examined as part of this commission.
- Invertebrate surveys (including standing water aquatics, and overnight moth trapping) were carried out in 2015 and 2018. The study area in both cases encompassed part (2015) or most (2018) of the current application site. Targeted butterfly surveys (including marsh fritillary larval web surveys) were also carried out in 2015 and 2018 and included the entirety of the current application site.
- Great crested newt surveys were carried out in spring 2015 (bottle trapping, netting, torching and egg-search) and updated in 2018 (mainly eDNA and egg-search). These covered the known ponds within 250m and 500m of the Brondeg development site and therefore provide recent information on this species sufficient for determination purposes.
- Bat surveys (including transect and static surveys of bat activity, swarming surveys and detailed examination of built structures for winter and summer roosts) were carried out on the land to the south and west in 2015 and 2016: these included surveys along the Nant Cwm Pant Bach along the southern edge of the application site. A further eight

transect surveys were carried out during 2018 and these took in the application site. Datalogger surveys were also carried out on immediately adjoining land.

- Breeding bird surveys (continuous transect method) of the land to the south and west in 2015 and 2018 included the margins of the Brondeg development site with wintering bird surveys covering the same area carried out in winter 2015-2016. Supplementary observations of key species (e.g. nightjar and willow tit) were made as part of the other survey work detailed above.
- Dormouse nest-tube surveys of the land to the south and west were conducted in 2015. These did not include the application site but focused on the most suitable habitat in the vicinity which was around 300m to the south. A negative result was obtained that was deemed to be robustly conclusive in determining the absence of this species from the area.
- Otter and water vole surveys were conducted along the various stream courses (including the Nant Cwm Pant Bach) in 2015 and 2016 as an adjunct to other survey work.
- Badger surveys of the land to the south and west, extending to cover part of the application site, were carried out in 2015 and 2016.
- By agreement with MBC, specific reptile surveys (using artificial refugia) of the land to the south and south-west were scoped out of the baseline survey requirements agreed in 2015 and 2016, albeit incidental observations of reptile species were made and recorded in the course of other survey work, and these identified focal locations for resident populations (including of adder) some distance to the south and west.

2.2.3 The above work accorded with a survey programme scoped with both NRW and Rolf Brown (Merthyr Borough Council) in e-mail correspondence dated June 2015, with the later 2018 work also carried out in light of further scoping meetings with NRW and Merthyr BC.

2.3 2020 'refresher' survey and PEA

2.3.1 For the specific purpose of the current commission, the application site was subject to an update Phase 1 habitat survey by Bioscan on 25th February 2020. This involved mapping and classifying the habitats present, noting their species composition, checking habitat features and quality in respect of the potential for protected or notable species and verifying relevant data both from third-party surveys and results obtained by Bioscan during 2015-2018. Searches for field sign evidence of protected species were made having regard to habitat suitability and season.

3 BASELINE CONDITIONS – DESIGNATIONS

3.1 Overview

- 3.1.1 As indicated on Figure 1, the Brondeg development site (comprising the land encompassed by the extant consents and current extension of time application site boundary) is not subject to any statutory or non-statutory designation. Indeed, it forms part of an adopted development plan allocation (adopted LP Policy SW3 - site reference 4). It should be noted that the application red-line (as taken from WYG drawing A97974[ST1]drf01_v1) excludes the stream course of Nant Cwm Pant Bach and therefore excludes that part of the allocated site that overlaps with the adopted Cwm Glo SINC.
- 3.1.2 As well as adjoining the Cwm Glo SINC, the site is also near-adjacent to the 181.3ha Cwm Glo a Glyndrys SSSI which extends to within a few metres of the south-western corner of the application site and which is protected both by statute and in adopted Local Plan policy EnW2.
- 3.1.3 The previous Merthyr LP identified the presence of “TPO and Ancient/Ancient Semi-Natural Woodland” to the west of the application site. The delimitation of this zonation is shown on Figure 1, although the adopted Replacement LDP 2016-2031 no longer includes it on the proposals map.
- 3.1.4 An overview of all these designations is given below in the approximate order of weight afforded them in planning constraint terms:

3.2 Cwm Glo a Glyndrys SSSI

- 3.2.1 The application site does not impinge on the Cwm Glo a Glyndrys SSSI, but development there has the potential to affect the SSSI indirectly. This was recognised in the determination of the extant consents and is the subject of conditions on them.
- 3.2.2 The current delimitation of the SSSI, at 181.3ha, is an expansion of a previously much smaller 29.1ha designated site which covered several enclosures some distance further to the south and west of the application site. The focus of interest supporting the SSSI at the time of first designation was unimproved grassland habitats, however this was expanded later in the context of previous land remediation and redevelopment proposals during the mid-2000’s. In response to this threat, CCW commissioned a series of surveys of both the grassland fungi across the wider site, and of the habitats more generally. The results of these surveys underpinned an expansion of the SSSI to its current extent around 2008. These comprehensive surveys included much of the current application site and it is relevant to note that the application site was specifically excluded from the final delimitation of the SSSI.

3.3 Cwm Glo Site of Importance for Nature Conservation (SINC)

- 3.3.1 Non-statutory or 'second tier' SINC designations in Merthyr are designated with reference to the "Criteria for the selection of Sites of Importance for Nature Conservation in the County Borough Councils of Caerphilly, Merthyr Tydfil and Rhondda-Cynon-Taff (Mid Valleys Area) (2008)" and afforded protection under adopted policy EnW3.
- 3.3.2 The application site does not encompass any SINC-designated land, but it is immediately adjacent to and therefore has the potential to affect parts of the Cwm Glo SINC (SINC 12). This SINC encompasses a large area (127.1ha) that includes the Nant Cwm Pant Bach adjoining the southern edge of the application site, and the areas of wet woodland adjacent to the west. The SINC is stated to qualify for designation under a range of applicable criteria, including on the basis of the mosaic of unimproved and species-rich grassland, heath and other open habitats, 'ffridd' complexes and both wet and upland oak woodland, as well as for the presence of great crested newts and other more common amphibians, reptiles including adder, UK BAP Priority bird species (equivalent to 'Welsh Priority' species as referred to elsewhere in this document), a population of marsh fritillary, the butterflies dingy skipper and grayling, up to eleven nationally scarce species of invertebrates, the possibility of water vole and otter, a range of uncommon or scarce vascular plants and because of the land's importance for grassland fungi.

3.4 Other non-statutory nature conservation (or related) designations

- 3.4.1 The Local Plan in force at the time of the previous consents included a categorisation "*TPO and Ancient/Ancient semi-natural woodland*" on the Proposals Map which included land immediately to the west of the application site (Figure 1). No further elaboration of this designation was given in the Local Plan and no breakdown provided as to which of the marked areas were TPO (Tree Preservation Order) and which were believed by the Council to be ancient woodland. It was understood however that the basis for the TPOs on the land adjoining the Brondeg site was mainly for non-ancient woodland reasons (R. Brown *pers comm*).
- 3.4.2 The "*TPO and Ancient/Ancient semi-natural woodland*" land use zonation has not been carried forward into the current adopted Local Plan and is absent from the Proposals Map. Nevertheless, the possibility of ancient woodland being affected by the proposals is considered below.
- 3.4.3 A file note obtained from the NRW SSSI file, which sets out the results of a desk and field based investigation carried out by Dr Jim Latham in 2005 into the presence and extent of any ancient woodland on the site, concludes that "*The available evidence suggests a long-term woodland presence in the vicinity, but cannot confirm its continuity at any given point required for the formal label of 'ancient woodland'*", going on to say "*The area of woodland (some 3ha) along the northern fringe probably has the best claim to be 'ancient' as there is less obvious disturbance than across the rest of the site and to this day it holds the highest density of*

mature trees. However, given the degree of disturbance in the area, more evidence would be needed (e.g. maps from the 1700s) to be confident about this”.

- 3.4.4 Ribbon woodland along the more undisturbed stretches of the incised stream courses local to the site (including the wooded sections of the adjoining Nant Cwm-pant-bach upstream of the site) may also be at least part ancient in origin, and these are assumed to be the areas ‘along the northern fringe’ being referred to by Latham in 2005. All fall within the adopted Cwm Glo SINC and are protected in accordance with the associated policy EnW3.

4 BASELINE CONDITIONS – FLORA AND FAUNA

4.1 Overview

- 4.1.1 The site is comprised of two land parcels bisected by a track that runs southwards from Heolgerrig, and which is itself the course of a former C19th mineral tramway serving the former Coedcae Pit (Figure 2). The smaller land parcel to the north-west of this track is at lower elevation (c.215m AOD) than the eastern parcel; the latter has a raised flat-topped topography at around 220m AOD with steep slopes at its margins consistent with its historic origins as part of a former colliery tip.
- 4.1.2 Historic map evidence shows that this eastern parcel was in use as a colliery tip into the mid-1800s, but that the western parcel comprised open rough grassland with scattered trees around that time. The western parcel later appears to have had a trackway laid across it and by the end of the 1800s the northern part of it had been subdivided into small enclosures. The form of these is visible on 1945 aerial photographs and again in 2001, but the boundary vegetation was then largely cleared, albeit there has been significant recovery of scrub since. The 1964 OS 1:2500 identifies a section in the northern part of this western parcel as allotment gardens.
- 4.1.3 The eastern parcel has seen less frequent change, although sometime in the 1990s the tip was subject to planting (possibly in connection with the dualling of the A470) and it is around this time that use of the central open area for equestrian purposes seems to have started. 2008 aerials show use of land adjoining the road at the easternmost boundary for parking/storage of construction machinery and containers. This use had ceased by 2010 and the disturbed ground has subsequently developed into a mixture of scrub and grassland.

4.2 Habitats and vegetation

- 4.2.1 The following broad habitat types are present on the site:

- Plantation woodland
- Modified neutral-acidic grassland – grazed
- Modified neutral grassland – ungrazed
- Neutral grassland
- Marshy grassland
- Scrub and ruderal
- Mature, non-woodland trees
- Bare/disturbed ground and built structures

- 4.2.2 Each of the above habitats is mapped at Figure 2, with each described in further detail below with reference to their dominant and/or more notable plant species and other characteristics, and drawing upon previous survey information where relevant and appropriate.

Plantation woodland

- 4.2.3 Fenced-in blocks of deciduous plantation, now mature at approximately 20-30 years of age, surround the eastern field unit of the site on three sides - west, south and east. These are predominantly comprised of dense stands of alder *Alnus sp.* and locally ash *Fraxinus excelsior* with more scattered oak *Quercus sp.* and downy birch *Betula pubescens*, much of the latter likely to be self-sown. Encapsulated within these plantations are some older specimens of common alder *Alnus glutinosa* showing coppice regrowth – particularly in the south-eastern and eastern sections. Understorey varies from non-existent between dense pole-stage stands of the above species, to areas where hawthorn *Crataegus monogyna*, hazel *Corylus avellana* and/or dog rose *Rosa canina* occur, particularly towards the margins. The ground-layer in these areas is typically leaf-litter dominated, with frequent low-growing bramble *Rubus fruticosus* agg., patches dominated by ivy *Hedera helix*, and scattered other herbs and grasses including lesser celandine *Ficaria verna*, herb Robert *Geranium robertianum*, Yorkshire fog *Holcus lanatus* and dandelion *Taraxacum officinale* agg. There are occasional to frequent seedings of ash, sycamore *Acer pseudoplatanus* and holly *Ilex aquifolium*. Moss cover is frequent, and very locally dominant in the south-east, but nowhere luxuriant, with *Kindbergia praelonga*, *Rhytidiadelphus squarrosus* and *Thuidium tamariscinum* the typical species.
- 4.2.4 The steeper banks of the stream course of the Nant Cwm Pant Bach, just outside the site boundary to the south, are characterised by more open woodland cover dominated by mature common alder (including coppiced specimens) with locally frequent ash and occasional hazel and hawthorn. The ground flora in these areas is sparse, but includes scattered herb Robert, wood avens *Geum urbanum* male fern *Dryopteris filix-mas* and bramble. One previous-season dried stem of Japanese knotweed was found just south of the south-western corner of the application site (target note 1 on Figure 2).
- 4.2.5 Other than in respect of the (perhaps reduced) presence of Japanese knotweed (possibly related to Council-led interventions – see below), and possibly some further closure of canopy, the composition and condition of these habitats on the site appears unchanged from the Hawkeswood Survey of 2014.

Modified neutral-acidic grassland – grazed

- 4.2.6 The eastern field unit is a sown or over-sown grassland on former colliery spoils, which has evidently been intensively horse-grazed for some time, and contains part of a trotting track. The grassland community is reflective both of the compacted and nutrient poor soils, and of past partly failed attempts to establish a grassland sward by seeding and fertilisation. Consequently, it has a wider range of species than is typical of improved grassland on more conducive soils. Dominant species over large areas include perennial rye-grass *Lolium perenne*, smooth meadow grass *Poa pratensis*, strong creeping red fescue *Festuca rubra* subsp. *commutata* and creeping bent *Agrostis stolonifera* with associated herbs being typically daisy *Bellis perennis*, white clover *Trifolium repens*, ribwort plantain *Plantago lanceolata*, greater plantain *Plantago major*, sticky mouse-ear *Cerastium glomeratum*, creeping buttercup *Ranunculus repens*, meadow buttercup *Ranunculus acris*, dove's-foot cranesbill *Geranium molle*, yarrow *Achillea millefolium* and self-heal *Prunella vulgaris*. The

moss *Calliergonella cuspidata* is frequent and scattered specimens of *Cladonia* lichen were also noted. In less well-trafficked areas, the above species are joined or supplanted by crested dog's-tail *Cynosurus cristatus*, cock's-foot *Dactylis glomerata*, timothy *Phleum pratense* and herbs such as perforate St. John's wort *Hypericum perforatum* or more locally stinging nettle *Urtica dioica*. More localised in occurrence are lesser trefoil *Trifolium dubium*, common centaury *Centaureum erythraea*, sheep's sorrel *Rumex acetosella* and cat's-ear *Hypochaeris radicata* as well as small upstanding specimens of dog rose, hawthorn and pockets of bramble. Additional species noted from this area by Hawkeswood in either 2007 or 2012 included bird's-foot trefoil *Lotus corniculatus* and (more surprisingly) common sedge *Carex nigra* and rough hawkbit *Leontodon hispidus*.

4.2.7 Taking into account the early period of the year of the Bioscan walkover survey, the composition and condition of this habitat appears essentially unchanged from the Hawkeswood Survey of 2014.

4.2.8 While these habitats ostensibly provide conditions suitable for the grassland fungi for which the nearby Cwm Glo a Glyndrys SSSI is partially designated, specialist fungi surveys carried out by Dr Peter Sturgess CEnv MCIEEM, on behalf of Bioscan, between September and December 2015 found the grassland within the application site to be of low importance for the waxcap populations of the wider locality. Three species of waxcap fungi were found here in the 2015 surveys – in descending order of abundance these were cedarwood waxcap (*Hygrocybe russocoriacea*), snowy waxcap (*Hygrocybe virginea*), and parrot waxcap (*Hygrocybe psittacina*) all of which are fairly common and widespread across the western and upland parts of the UK. Appendix 1 presents an extract of the fungi distribution maps resulting from this survey and shows the approximate locations and distribution of the waxcap species within the site relative to what was found in nearby parts of the wider study area. It conveys that the important areas for grassland fungi in the locality lie outside the Brondeg site.

Modified neutral grassland - ungrazed

4.2.9 Ranker grassland dominates much of the open area of the western parcel of the site. This is tending towards tussocky in places, and has a high complement of ruderals (mainly broad-leaved dock *Rumex obtusifolius*). The dominant constituents are cock's-foot, Yorkshire fog, creeping bent and locally crested dog's-tail with frequent creeping buttercup, ribwort plantain, meadow buttercup, common sorrel *Rumex acetosa* and hogweed *Heracleum sphondylium*. The habitat grades into the other dominant habitats of this part of the site: ruderal and scrub, disturbed ground and marshy grassland. The habitat structure militates against the possibility of significant waxcap interest, and indeed this area was scoped and excluded from the 2015 surveys for that reason.

Neutral grassland

4.2.10 A further pocket of unmanaged circumneutral grassland occurs at the eastern edge of the eastern field unit, in a location subject to previous disturbance but subsequent revegetation.

It is distinguished from the above habitat by a richer species-complement, indicative of more semi-natural composition in the absence of seeding or fertiliser interventions. The grasses comprise Yorkshire fog, creeping bent, cocksfoot and red fescue, but with herbs such as creeping cinquefoil *Potentilla reptans* and wild strawberry *Fragaria vesca* locally dominant, and a suite of other species including tormentil *Potentilla erecta*, perforate St John's wort, knapweed *Centaurea nigra*, wild carrot *Daucus carota*, *Polytrichum* mosses, glaucous sedge *Carex flacca* and spiked sedge *Carex spicata*. Scattered scrub becomes denser and grades into the adjoining plantation blocks creating a transition from grass-dominated to herb and then moss-dominated areas in response to increasing shade. The scrub constituents are mainly buddleia *Buddleja davidii*, but also include some gorse *Ulex europaeus* and scattered rose, most of which appears to be dog or field rose, but with some hybrids with or even full specimens of *Rosa sherardii* suspected (based on fruiting characters).

- 4.2.11 Additional species noted from this area by Hawkeswood in either 2007 or 2012 included field woodrush *Luzula campestris* and lady's mantle *Alchemilla mollis*. Pryce Consultant Ecologists also reported blue fleabane *Erigeron acer* from this area in 2019.

Marshy grassland

- 4.2.12 This habitat occurs along the southern fringes of the westernmost part of the western parcel of the site. Here the land slopes towards the south and becomes waterlogged, seemingly by the action of spring or flush-lines. The grassland in these areas is characterised by the frequency or abundance of soft rush *Juncus effusus* and/or jointed rush *Juncus articulatus*, with increased dominance of creeping bent and a change in the herb component towards species such as chickweed *Stellaria media* (in more nutrient rich areas) or lesser spearwort *Ranunculus flammaea*. Other species noted in the representations of this habitat that fall within the site included marsh thistle *Cirsium palustre* and cuckooflower *Cardamine pratensis*. A significant number of additional species, including valerian *Valeriana officinalis*, marsh marigold *Caltha palustris* and bog stitchwort *Stellaria alsine* were recorded by Hawkeswood in 2007 or 2012, although it is unclear to what extent these relate to the parts of this habitat within the current application site, as against those they surveyed on the adjoining land immediately to the south.

Scrub and ruderal

- 4.2.13 Other than as a small component of the grassland and plantation woodland areas described above, scrub occurs on the site in association with former boundaries, such as along the edges of the former mineral tramway bisecting the site, and as defined pockets of thicket within the western parcel. The former, although often linear in arrangement, do not appear to be hedgerows in the traditional sense, so are dealt with here as scrub.
- 4.2.14 Along the western side of the former tramway are scattered bushes of hazel and hawthorn and grey willow *Salix cinerea*, with occasional mature trees of sycamore, along a boundary demarcated by a post and wire fence. Associated with this vegetation are patches of bramble, bracken *Pteridium aquilinum*, scattered herbs such as stinging nettle, broad-leaved dock,

creeping buttercup and herb Robert, and grasses such as Yorkshire fog and cock's-foot. End of season remains of Japanese knotweed (one stem) were found in the southern part of this track-side vegetation (target note 2 on Figure 2). Hawkeswood (in 2013) and latterly Pryce consultants mapped more extensive stands in the northern part, but these areas now support disturbed and sparsely vegetated ground, indicative of eradication measures that appear to have been successful by and large. It is understood this action was carried out by the Council. It may also have been the Council who cleared a former area of scrub adjoining but just outside the site to the north. In doing so, it would appear the mapped locations of dwarf elder *Sambucus ebulus* noted by Pryce consultants may have been lost, as no sign of this species was noted in February 2020.

- 4.2.15 The other main focus of scrub is within and at the margins of the western parcel. The scrub here includes boundary vegetation at the backs of adjoining gardens to the north, the remnants of former enclosure boundaries within the parcel, and mixed stands with non-native species within. The typical constituents are hawthorn, hazel, garden privet *Ligustrum ovalifolium*, holly, grey willow, and locally oak and alder. The patches of scrub within the parcel frequently comprise the non-native Wilson's honeysuckle *Lonicera nitida*, with hawthorn, grey willow and saplings of ash and sycamore also noted. These often grade into the adjoining grasslands via *Holcus/Rubus* underscrub and locally stands of rosebay willowherb *Chamerion angustifolium*.

Mature, non-woodland trees

- 4.2.16 Other than specimens of mature trees subsumed into the plantation woodlands discussed above, the handful of mature non-woodland trees on the site are associated with the outer boundaries of the western parcel. They include the following:

- a) A large, open grown and impressive pedunculate oak *Quercus robur* growing on the northern boundary (T1 on Figure 2);
- b) A large sycamore growing along the eastern edge of the western parcel, adjoining the track (T2 on Figure 2);
- c) An over-mature pedunculate oak along the southern boundary of the western parcel, with epiphytic vegetation including male fern and polypody *Polypodium* sp (T3 on Figure 2).
- d) A mature alder, also along the southern boundary (T4 on Figure 2).

Bare/disturbed ground and built structures

- 4.2.17 In addition to the trotting track in the eastern parcel (and described above) recently disturbed ground is present locally within the western parcel in association with overspill of building work in one of the adjoining houses to the north. Early colonists of the disturbed ground include cock's-foot, chickweed, creeping buttercup, smooth sow thistle *Sonchus oleraceus* and ribwort plantain. Next to this is an old disused shed, probably related to the former allotment use in this area.

4.3 Fauna

4.3.1 Bioscan's survey on 20th February 2020 recorded a number of bird species, noted the potential for small numbers of reptiles to be present, (particularly in the western parcel of the site) and conducted ground-based assessments of trees and checks of structures for potential to support bat roosts. Signs of badger activity were also searched for as well as any evidence of otter along Nant Cwm Pant Bach immediately to the south of the site. The results are combined with previous and background information in the commentary given in the following paragraphs:

Badgers

4.3.2 No evidence of badger presence on the site was noted in February 2020 and the nearest badger sett known to Bioscan is around 1km to the south. Badgers may nevertheless use the site, possibly to access adjoining gardens, but its value as a foraging habitat will undoubtedly be limited by the compacted and nutrient poor nature of the colliery tip soils in the eastern parcel, and the relatively wet soil profile in the western parcel.

Bats

4.3.3 Various bat surveys have been carried out on the site and the cumulative dataset provides a good understanding of the bat species that use it, and the types of use. A summary of this accumulated information is given in chronological sequence below.

4.3.4 Bat activity surveys of the site were undertaken in July, August and September 2007 by Hawkeswood Ecology. The results of these surveys were reported in October 2007 and the following summary is taken from that report:

"The surveys showed that the site was widely used by bats for both foraging and commuting purposes. Three species of bats were identified from the site, common pipistrelle, brown long-eared bat and serotine bat. The latter is uncommon in Wales although there are an increasing number of records throughout the region.

The use of different areas of the site varied through the time of the observations. Commuting bats were noted early in the evening along the unmade track, with bats appearing to come from both Brondeg to the north and Colliers Row to the south. Bats were later found to forage in the tree planted areas to the east of the track and around the woodland edge in the field to the west of the track.

The use of the site changed with increasing darkness as the pipistrelles ventured further into more open areas foraging over scrub. Brown long-eared bat was recorded in the western field after dark flying from the housing and foraging in shrubs near the gardens before flying to the woodland to the south.

On the second visit, a serotine bat was recorded flying fast over the field from the housing to the woodland to the south.

On the third visit, 23rd September, a large amount of social activity amongst the common pipistrelles using the site was noted around the mature trees adjacent to the track in the western field.

A wider ecological study relating to a previous, much larger, development application, (Merthyr Village, Land at Rhydyar, Merthyr Tydfil Environmental Statement, Williams Thomas Consulting, 2004) where the main bat activity recorded was commuting from houses in Brondeg and foraging along the unmade track. However, the outcome of the present survey effort shows that the site is more widely used by bats. As well as the lane being used for commuting purposes, the tree planted areas to the east and the field to the west of the track are used for foraging and/or commuting by three species of bat. There is some evidence of social activity, possibly part of the mating process, taking place towards the end of the season."

4.3.5 In addition to the above, Table 1 below summarises the results of other bat surveys local to and in some cases including part of the current application site.

Table 1: Other bat survey information relevant to the site

Year	Survey type	Species recorded
1997	Bat activity survey of land to south.	Foraging pipistrelles (Pipistrellus pipistrellus and/or P. pygmaeus). One noctule. Group of Daubenton's bat feeding over former reservoir >1km south of site.
1997	Emergence survey of stone tunnel (part of former Cfarthfa Canal) approximately 900m south of current application site	Pipistrelle sp. and Daubenton's bat observed emerging.
2002	Bat roost inspection of buildings and mature trees on land to south	No bat roosts found.
2002	Emergence survey of stone tunnel approximately 900m south of current application site	No bats emerging.
2005 (June and July)	Bat activity survey of land to south	Common pipistrelle, soprano pipistrelle, Daubenton's bat, one noctule and two Myotis sp.
2005	Bat roost inspection of buildings and mature trees on land to south	No roosts found
2007 and 2008	Tree and building assessments (land to south)	No roosts found
2008	Bat activity survey of land to south.	Common pipistrelle and soprano pipistrelle
2015#	Three transect surveys carried out in May, June and July by Bioscan – focused on the land to the south. Autumn swarming survey	Common pipistrelle, soprano pipistrelle and Myotis sp. (WAB), with some borderline Nathusius' pipistrelle calls
2016#	Two transect surveys by Bioscan in August and September, again focused on the land to the south and supplemented by automated detector surveys, including one placed in Nant Cwm Pant Bach, c10m south of the site in August.	Common pipistrelle, soprano pipistrelle and Myotis sp. (WAB), with some borderline Nathusius' pipistrelle calls.

Year	Survey type	Species recorded
2018#	Transect surveys carried out by Bioscan monthly between April and September. Focused on land to the south, but transects passed within 50m of application site and were again supplemented by automated detector surveys (one detector placed in Nant Cwm Pant Bach, c10m south of the site between April-September).	Common pipistrelle, soprano pipistrelle and <i>Myotis</i> sp. (WAB, Daubenton's), with noctule and <i>Nathusius'</i> pipistrelle on single occasions

= full results of these surveys are tabulated at appendices 3a (transects) and 3b (automated detectors)

4.3.6 Bioscan carried out transect surveys that included part or all of the site in each of 2015, 2016 and 2018. The data from these surveys is presented in a series of maps at Appendix 2, and relevant extracts from the wider dataset are tabulated Appendix 3.

4.3.7 In summary, at least eight bat species have been recorded within and immediately adjacent to the consented development site over the various surveys between 1997 and the end of 2018. These species comprise common pipistrelle, soprano pipistrelle, noctule, brown long-eared bat, Daubenton's bat, Natterer's bat, serotine and unidentified *Myotis* species (based on call registration analysis likely to be from the whiskered/*Alcathoe*/Brandt's group). The only species that has been recorded on the site but which did not appear in the most recent (2015-2018) surveys by Bioscan is serotine – one brief registration of which was reported from the site by Hawkeswood in 2007.

4.3.8 Notably, there have been no recorded registrations on or close to the site at any point of the rarer bat species recorded by Bioscan from the landholding to the south – i.e. greater and lesser horseshoe and barbastelle. The nearest registration of these species is from the incised stream course of the Nant Rhyd-y-car, some 500m to the south.

4.3.9 On the site itself, the most commonly recorded species has consistently been common pipistrelle. The static detectors placed by Bioscan in 2016 and 2018 also picked up a lot of *Myotis* activity along the adjacent Nant Cwm Pant Bach, with most of this attributable to Daubenton's bat and broadly suggestive of a roost nearby⁴. Due to the timing of registrations in April and May, the possibility of common pipistrelle pre-maternity roosts in the near vicinity was also indicated by the static detector.

4.3.10 In terms of the potential for bat roosts to be present within the site itself, there are no built structures capable of supporting bat roosts; the dilapidated shed in the western parcel offers

⁴ On six occasions, between April-September 2018, *Myotis* or Daubenton's bats were recorded at the static detector location within 45 minutes after sunset. On 13th of August 2018 a *Myotis* was recorded at this location just 12 minutes after sunset, and on two occasions in April and June 2018 Daubenton's were recorded just 45 and 51 minutes before sunrise.

no more than negligible roosting potential. Most of the trees on the site are also of insufficient age to have developed structural features capable of supporting bat roosts, although a comprehensive examination of all of the younger tree stock for potential roosting features such as squirrel damage or tear-out wounds has not been undertaken. Slightly higher roosting potential is associated with the non-woodland trees in the western part of the site (T1-T4 on Figure 2). All of these have 'low' bat roosting potential save for T3 which is assessed as having 'medium' bat roosting potential. These conclusions are consistent with those arrived at by a specific roost assessment survey carried out in 2007, as reported on previously by Hawkeswood Ecology, and upon which basis conditions requiring tree protection and retention and control of lighting were imposed on the previous consents.

- 4.3.11 Immediately south of the application site, the Nant Cwm Pant Bach emerges from two stone culverts. If these were used for bat roosting, their proximity to the development site might be cause for concern, albeit they are at a different elevation and shaded by dense tree canopy. The southern of these (see Photo 1 below) was subject to an emergence survey in September 2016 with no bat activity noted in or around the culvert on that date. It was also noted that the interstices in the stone within the culvert were largely damp and, in some cases, dripping, although a full inspection was not carried out. The northern culvert is of a similar size and construction, and when examined in January 2020, was found to also be very damp inside the first few metres, although the structure was not entered for a full examination. The more modern concrete culvert further downstream that takes the stream beneath the A470 to the south-east of the site is of much lower suitability for bats. Overall, the possibility of roosts being present in any of these nearby features is low.

Photo 1: Culvert carrying Nant Cwm Pant Bach to the south of the site and surveyed for bats in 2016 – location marked as D1/A on Figure 3.



Dormouse

- 4.3.12 The 2008 Environmental Statement (ES) for the land to the south did not report on any historic records for dormouse being found in the data trawl process and on that basis no

dormouse survey was undertaken during the preparation of that ES. There remain no records of dormice on the National Biodiversity Network gateway within a 20km radius of the application site, nor in the accumulated SEWBrEC data. Despite this, the presence of ostensibly suitable habitat and the patchy recording of this species prompted Bioscan to carry out a specific nest-tube based survey in 2016. This also found no evidence of the species and consequently dormice are concluded with a high degree of certainty not to be present in the locality.

Otter

- 4.3.13 No evidence of otter presence was found along the Nant Cwm Pant Bach in the specific surveys conducted for this species in 2007, and the same position was found to prevail in 2020. Otters are of course present locally, and transient use of the watercourse cannot be ruled out (it does not provide suitable habitat for any more than transient use). If it occurs, such transient use would not be impinged upon by the consented development as there would remain a significant stand-off from the stream.

Great crested newt

- 4.3.14 In their 2013 report, Hawkeswood Ecology reported the presence of a single female great crested newt found by netting a pond some 140m to the south-west of the current application site. The location of this pond is shown at Figure 3. In response to requests for mitigation proposals from MBCs Countryside Officer relating to the possibility that terrestrial-phase animals from this pond could range into the site, they proposed amphibian exclusion fencing be erected along the southern edge of the current application site. The 2013 permission was granted with a condition securing these suggested mitigation measures for great crested newts and this same condition was carried forward and attached to the extant 2017 permission.
- 4.3.15 Surveys by Bioscan in 2015 and 2018 also found great crested newts in the same pond (Pond P14), with a small population size class⁵ deduced to be present on the basis of a single individual in both years. No evidence of breeding (e.g. eggs) was found in either year. In 2018 eDNA surveys by Bioscan again returned a positive result for the species from this pond, indicative of the continued presence of a small population size class. An additional, but very small, waterbody nearby to the north-west (possibly an old bell pit) was not found to support the species (location shown on Figure 3). The baseline position as regards great crested newts does not therefore appear to have changed from that reported to and taken into account by MBC when granting permission (with conditions) in 2017.
- 4.3.16 Interestingly, Pryce Consultant Ecologists, reporting in 2019 on the allocated land adjoining the current application site to the north, concluded that the potential for impacts on GCN did not merit significant consideration due to SEWBrEC data indicating that the nearest breeding pond is in excess of 500m distant. This conclusion does not appear to take into account the

⁵ E.g. after English Nature, (2001) *“Great Crested Newt Mitigation Guidelines”*

confirmed breeding records for pond P14, nor the references in the 2008 ES for Merthyr Village Limited to the species' past presence at what is now Trago Mills to the north of the site.

Birds

4.3.17 A total of 22 bird species were noted either on or within 100m of the development site over the 2015 and 2018 breeding bird surveys carried out by Bioscan. This is broken down into 19 species recorded in 2015, and 18 species recorded during in 2018. Table 2 below provides further details, including the extent of any breeding evidence observed and where applicable, the number of territories assessed to be present during the breeding season in both years.

Table 2: Breeding bird survey results from 2015 and 2018

Survey period:		May-Jun 2015			April-June 2018		
Species name / BTO code	Status ⁶	Highest breeding evidence ⁷	Estimated n° of territories		Highest breeding evidence	Estimated n° of territories	
			Site	Buffer		Site	Buffer
Blackbird / B <i>Turdus merula</i>	-	Permanent territory	0	1-2	Permanent territory	0-2	1-2
Blackcap / BC <i>Sylvia atricapilla</i>	-	Permanent territory	0	1-2	Permanent territory	1-2	1-2
Blue tit / BT <i>Cyanistes caeruleus</i>	-	Permanent territory	0	2-3	Permanent territory	0	1
Bullfinch / BF <i>Pyrrhula pyrrhula</i>	SPI/Amber	Permanent territory	0	1	Suitable habitat	-	-
Buzzard / BZ <i>Buteo buteo</i>	-	Flying over	-	-	-	-	-
Chiffchaff / CC <i>Phylloscopus collybita</i>	-	Permanent territory	0	1	Permanent territory	0-1	2-3
Chaffinch / CH <i>Fringilla coelebs</i>	-	Permanent territory	0	0-1	Permanent territory	0	0-1
Dunnock / D <i>Prunella modularis</i>	SPI/Amber	Permanent territory	0	1	Permanent territory	0-1	2-3
Goldcrest / GC <i>Regulus regulus</i>	-	Permanent territory	0	1	-	-	-
Goldfinch / GO <i>Carduelis carduelis</i>	-	Suitable habitat	-	-	-	-	-
Great tit / GT <i>Parus major</i>	-	Permanent territory	0	1-2	Suitable habitat	-	-
House sparrow/HS	SPI/Red	Flying over, but probably breeding in Heolgerrig	-	-	Flying over, but probably breeding in Heolgerrig	-	-
Long-tailed tit / LT <i>Aegithalos caudatus</i>	-	-	-	-	Suitable habitat	-	-

⁶ *Sch1: Species subject to special protection due to inclusion on Schedule 1 of the Wildlife & Countryside Act 1981 (as amended).
 *SPI: Species of Principal Importance or 'priority species' further to s.41 of the Natural Environment & Rural Communities Act 2006.
 *Red/Amber: Species having undergone a decline of >50% in the 25 years to 2015 (Red List) or a 25-49% decline over the same period (Amber List) (After Eaton et al. (2015))

⁷ Based on the methodology of the UK Breeding Bird Atlas 2007-11

Survey period:		May-Jun 2015			April-June 2018		
Species name / BTO code	Status ⁶	Highest breeding evidence ⁷	Estimated n° of territories		Highest breeding evidence	Estimated n° of territories	
			Site	Buffer		Site	Buffer
Nuthatch/NH <i>Sitta europaea</i>	-	Suitable habitat	-	-	Suitable habitat	-	-
Robin / R <i>Erithacus rubecula</i>	-	Permanent territory	0-1	2-4	Permanent territory	0-1	0-1
Siskin/SK <i>Spinus spinus</i>	-	-	-	-	Suitable habitat	-	-
Starling/SG <i>Sturnus vulgaris</i>	SPI/Red	-	-	-	Flying over	-	-
Song thrush / ST <i>Turdus philomelos</i>	SPI/Red	Singing	-	-	Permanent territory	1	1
Swift/SI <i>Apus apus</i>	Amber	Flying over	-	-	-	-	-
Treecreeper/TC <i>Certhia familiaris</i>	-	Suitable habitat	-	-	Suitable habitat	-	-
Willow warbler / WW <i>Phylloscopus trochilus</i>	Amber	Singing	-	-	Singing	-	-
Wren / WR <i>Troglodytes troglodytes</i>	-	Permanent territory	1	4	Permanent territory	0	2-3

4.3.18 The species using the Brondeg site or adjacent habitats in the 2015 and 2018 breeding bird surveys were mostly typical of woodland and woodland edge habitat. Whilst they include species on the Birds of Conservation Concern 'Red list'⁸ (e.g. song thrush), the assemblage is unremarkable overall.

4.3.19 Of greater note are two records from land outside but quite close to the site which were made outside the formal breeding bird surveys. They include a single record of nightjar *Caprimulgus europaeus*, which was recorded by Bioscan near the Nant-Cwm Pant-Bach stream, approximately 10-20m south of the current application site boundary (during a bat survey on the 20th of August 2015). This is likely to be a foraging individual wandering from the breeding territories recorded by Bioscan further to the south and south-west. Also of note are several records of willow tit made by Bioscan from the damp woodland to the south-west of the development site (as well as elsewhere within the landholding to the south).

4.3.20 In terms of non-breeding birds recorded from the site or immediate environs, again while these include a number of species of conservation concern (e.g. mistle thrush, redwing, song thrush, bullfinch) the assemblage recorded in previous surveys is in line with expectations for this type and area of habitat in this part of the country. Willow tit does however occur in the damp woodland to the south-west in a wintering capacity.

⁸ Eaton M.A., Aebischer N.J., Brown A.F., Hearn R.D., Lock L., Musgrove A.J., Noble D.G., Stroud D.A. and Gregory R.D. (2015) *Birds of Conservation Concern 4: the population status of birds in the United Kingdom, Channel Islands and Isle of Man*. British Birds 108, 708–746.

Invertebrates

- 4.3.21 The 2015 and 2018 invertebrate surveys identified 857 and 268 invertebrate species within their respective study areas (the latter encompassing the site and significant parts of the large landholding to the south). This included several NERC Act 'Priority' species, red list species and nationally scarce species. None of these species of conservation importance were specifically identified within the bounds of the Brondeg site, albeit the application site contains habitats which are to some extent an extension of those within the adjoining SSSI and SINC and may therefore form part of the wider habitat resource for species such as the nationally scarce bee *Andrena humilis* and the plant bug *Hoplamachus thunbergii*.
- 4.3.22 Marsh fritillary butterflies (*Euphydryas aurinia*) are a species of principal importance in Wales, and surveys in 2015 and 2018 found them to be present in either the adult or larval stage in areas adjacent to the current application site, where their food plant (devils scabious) grows. The vast majority of the Brondeg development site does not provide suitable habitat or food plant resource and the species is adjudged to be absent from it.

5 EVALUATION AND IMPACT ASSESSMENT

5.1 Evaluation methodology

- 5.1.1 While some level of subjectivity is unavoidable when apportioning value to ecological features and resources, certain parameters and points of reference can be used to help ensure consistency. Those used in this appraisal are explained below.
- 5.1.2 Sites already possessing statutory or non-statutory nature conservation designations will have been subjected to some form of evaluation process in the past, and their importance defined at a geographical scale (e.g. international, national, local). For these, the evaluation process will consider the qualifying attributes of a site, with reference to applicable criteria⁹. Typically, it will reaffirm the basis for designation but, in some cases, it may identify that continued designation is no longer appropriate or merited.
- 5.1.3 Factors such as extent, naturalness, rarity, fragility and diversity are all relevant to the determination of ecological value, and for the evaluation of sites and habitat features outside designated sites, these and other criteria as described by Ratcliffe¹⁰ (1977), may be applied. Ratcliffe's criteria are integral to the procedure for selecting both Sites of Special Scientific Interest and many non-statutory designation systems in the UK, and therefore remain an accepted standard for site evaluation.
- 5.1.4 In applying these criteria, attention may be drawn to the relative scarcity or abundance of features within the survey area and in the wider geographical context. Some criteria are however absolute and not relative to scale. Ancient woodland, for example, is fragile irrespective of whether it is being considered in an international or local context. Similarly, the value of an otherwise poor habitat may be elevated if it is central to the survival of a rare species.
- 5.1.5 Where evaluation is important for the purposes of informing decisions related to land-use planning and development control, the above approach needs to be supplemented by consideration of whether individual species are subject to legal protection¹¹, or whether habitats or species are present which have been identified as of 'principal importance' for biodiversity conservation in Wales¹² (HPI and SPI respectively). Planning authorities have a statutory duty¹³ to have regard to protected species and to further biodiversity objectives and

⁹ e.g. Guidelines for the Selection of Wildlife Sites in South Wales (South Wales Wildlife Partnership, 2004)

¹⁰ Ratcliffe (1977) *A Nature Conservation Review*.

¹¹ Principal legislation being the Wildlife and Countryside Act 1981 (as amended) and The Conservation of Habitats and Species Regulations 2017 which consolidates The Conservation (Natural Habitats &c.) Regulations 1994 (as amended), both of which implement the EC Habitats Directive and Birds Directive. Some animals are protected under separate legislation (e.g. the Protection of Badgers Act 1992).

¹² As published by the Secretary of State further to their duties under Sections 40-42 of the Natural Environment and Rural Communities Act 2006.

¹³ Section 40 of the Natural Environment and Rural Communities Act 2006.

the presence of such resources may therefore be material to the determination of development control decisions¹⁴.

5.1.6 Finally, attention may be drawn to species not necessarily subject to legal protection or identified by Government as a priority for biodiversity conservation, but which nonetheless have an 'unfavourable' conservation status as defined by the Red Data Book system¹⁵ or the Red and Amber lists for birds¹⁶, or which are otherwise known to be rare or scarce in a local or regional context.

5.1.7 Scales of comparison varying from international to the context of the local area may be used to define the measure of importance (or value) attached to individual features. The definition of geographic terms can vary, but in this evaluation the geographic frame of reference contained within the CIEEM guidelines¹⁷ is used.

5.2 Evaluation and impact assessment

5.2.1 The site is not subject to any statutory or non-statutory nature conservation designation, and indeed forms part of an allocation for housing development that has been tested via two Local Plan examinations and remains part of adopted forward planning policy.

5.2.2 Because the site adjoins the Cwm Glo Site of Importance for Nature Conservation (SINC no.12 in the adopted Local Plan) to the south and west and is near adjacent to the Cwm Glo a Glyndrys Site of Special Scientific Interest (SSSI), consideration of the potential for the development of the site to comply with adopted LP policies EnW2 and EnW3 in respect of indirect impacts is necessary.

5.2.3 In essence, this issue has not changed since it was previously considered as part of the process of awarding consent to the proposed development in 2013 and again in 2017. Conditions were imposed on the 2013 and 2017 permissions in order to ensure the protection of the SSSI, SINC and protected species, and nothing has happened in respect of these designations in the interim to suggest that these conditions are not still fit for purpose. The development site has furthermore retained its allocation for housing through the most recent Local Plan examination and adoption process.

5.2.4 The site's habitats also remain as previously described other than in respect of minor changes such as some increased maturation of the plantation woodlands and reduced incidence of Japanese knotweed, the latter apparently due to Council-led control interventions.

¹⁴ Planning Policy Wales (PPW) as supplemented by Technical Advice Note 5- Nature Conservation and Planning (TAN 5).

¹⁵ Following the British Red Data books published by the JNCC/RSNC and the Nationally Notable (Nationally Scarce) categorisations recognised by the JNCC

¹⁶ Eaton *et al.* (2015). *Birds of Conservation Concern 4: the population status of birds in the United Kingdom, Channel Islands and Isle of Man*. British Birds 108, pp708-746.

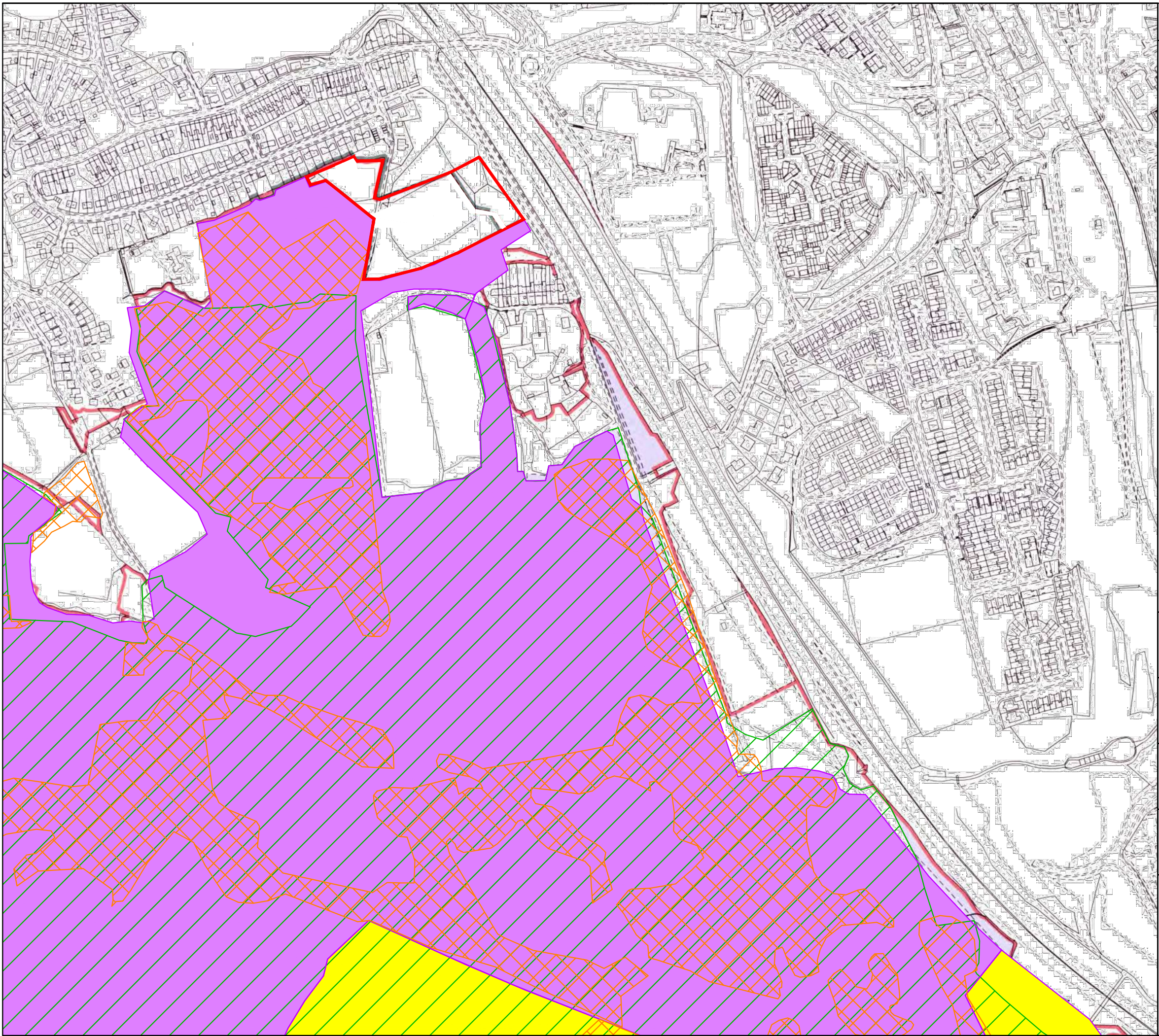
¹⁷ CIEEM (September 2018) *Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater and Coastal and Marine*. Chartered Institute of Ecology and Environmental Management, Winchester. (Version 2 September 2019)

- 5.2.5 The previous conclusions as to the site's value (or lack of) for great crested newts, bats, reptiles and other protected species remain valid in the context of the verification surveys discussed in this report and taking account of additional relevant and recent datasets that provide a significant cumulative fund of knowledge and certainty about these species' use or likely use of the site.
- 5.2.6 Use of the site by small numbers of transient terrestrial-phase great crested newts, by small numbers of reptiles and the possibility of tree-roosts of common bat species being present remain as possibilities that are of relevance to the construction phase, and to compliance with adopted policy EnW2. However, nothing has been found to suggest that the conditions imposed on the extant consent will not remain sufficient to assist and/or ensure legal and policy compliance and the maintenance of favourable conservation status for these species. Similarly, the previous informative and conditions in respect of ensuring the development does not eliminate commuting or foraging opportunities for bats are not considered to require any review in the context of the updated and expanded information on bats that is contained within this report.
- 5.2.7 In respect of other biodiversity resources, the overall impact of the consented development remains within the compass previously considered, assessed and tested against prevailing local and national policy, and no new or heightened constraints have been identified in the process of conducting the survey and collating the additional information presented in this report.
- 5.2.8 In short, this survey and review has not identified any factor that could cause the principle of the development to be revisited, in the context that the current application is for an extension of time only.

6 CONCLUSIONS

- 6.1.1 A site survey in January 2020 and the drawing in of additional data relevant to the consented development site has served to both update and validate the previous supporting information on biodiversity upon which the 2017 planning decision and extant permission was based.
- 6.1.2 Such changes that have occurred on the site since planning determination in 2017 are minor and non-material in respect of the extension of time application. There has been no substantial change in management or habitat distribution and correspondingly no substantive change in the site's known or potential value to species of conservation importance. No mobile species of elevated conservation value are likely to have colonised or changed in terms of population, and no additional or heightened constraints have been identified over and above those that were duly appraised and considered at the time of the 2017 determination. Indeed, in respect of one factor (the necessity of provision for measures to ensure legal compliance in respect of Japanese knotweed), the level of constraint has diminished in the intervening period thanks to control measures that have been implemented.
- 6.1.3 In view of the volume, quality and currency of the data available on matters such as protected species, no need for further novel or repeat biodiversity surveys has been identified to inform the determination process.
- 6.1.4 In consideration of the above, there are no new or altered biodiversity considerations that require to be taken into account by the Council in determining whether the time to implement the extant housing consent should be extended.

FIGURES



Key

- Application/consented development site
- Cwm Glo a Glyndrys SSSI
- SINC 12 (Cwm Glo)
- SINC 36 (Rhyd-y-car west)
- TPO & Ancient/Ancient Semi-natural Woodland (as taken from former Merthyr LP Proposals Map)

SSSI: Site of Special Scientific Interest

SINC: Sites of Importance for Nature Conservation



DO NOT SCALE

Title
Site location & designations

Project	Client
Land south of Brondeg, Heolgerrig	Pine Fields plc

Drawing No.	Revision	Project No.
Figure 1	-	E1835a

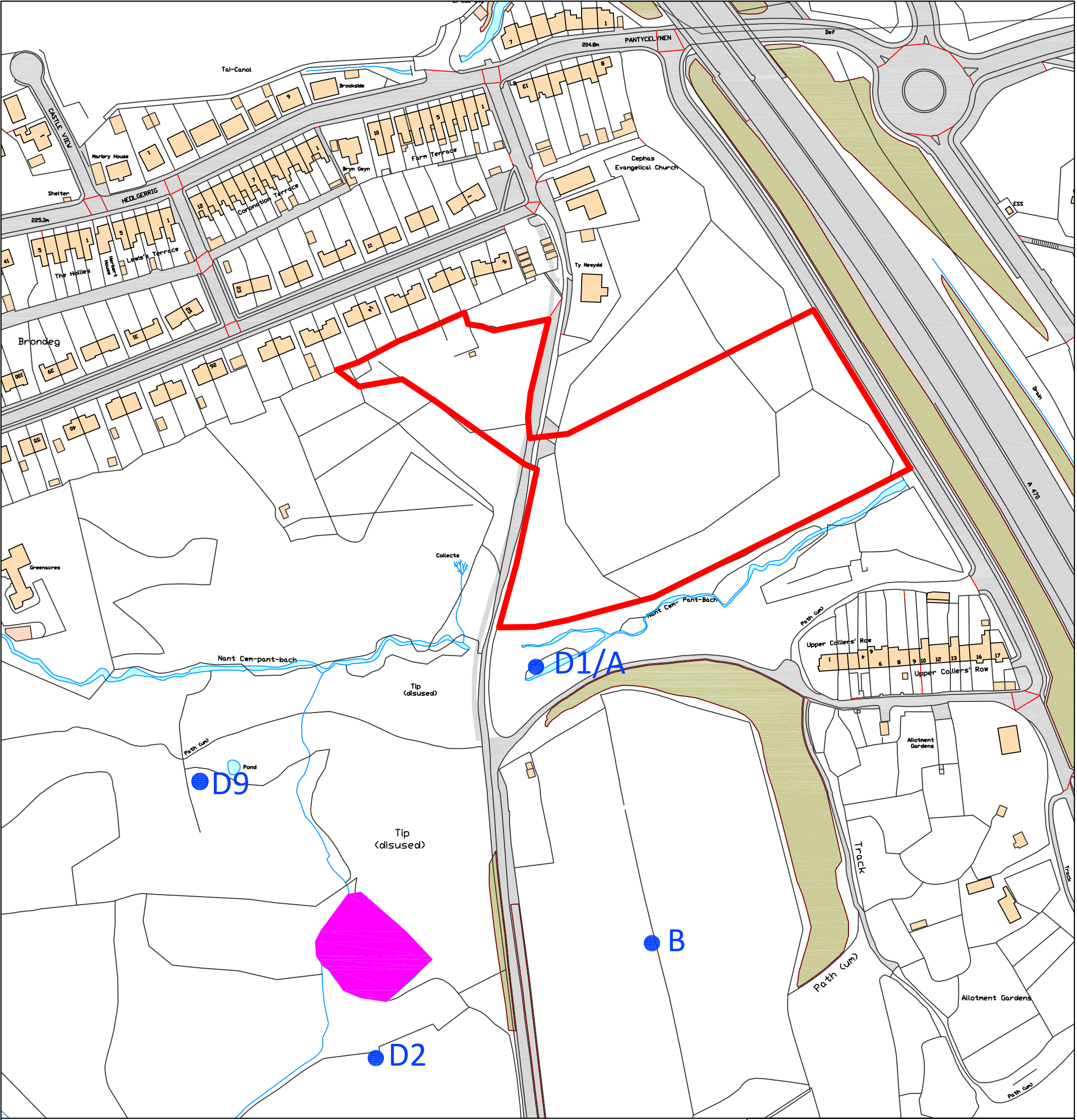
Drawn	Checked	Date
CD	DW	September 2020

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Key		Title Protected species information		
Application site boundary Static detector identity and location D1 - In place during August 2016 D2 - In place during August 2016 D9 - In place during September 2016 A - In place between April and September 2018 B - In place between May and September 2018 Pond with great crested newts (pond P14)		Project Land south of Brondeg, Heolgerrig Client Pine Fields plc		
		Drawing No. Figure 3	Revision -	Project No. E1835a
		Drawn CD	Checked DW	Date September 2020
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APPENDIX 1



aerial photograph © getmapping.com

Key

Application site boundary 2015 study area 2007 study area

Fungi species key

<i>Hygrocybe aurantiosplendens</i>	<i>Hygrocybe helobia</i>	<i>Hygrocybe psittacina</i>
<i>Hygrocybe cantharellus</i>	<i>Hygrocybe ingrata</i>	<i>Hygrocybe punicea</i>
<i>Hygrocybe calyptriformis</i>	<i>Hygrocybe insipida</i>	<i>Hygrocybe quieta</i>
<i>Hygrocybe ceracea</i>	<i>Hygrocybe intermedia</i>	<i>Hygrocybe reidii</i>
<i>Hygrocybe chlorophana</i>	<i>Hygrocybe irrigata</i>	<i>Hygrocybe russocoriacea</i>
<i>Hygrocybe citrinovirens</i>	<i>Hygrocybe laeta</i>	<i>Hygrocybe splendidissima</i>
<i>Hygrocybe coccinea</i>	<i>Hygrocybe miniata</i>	<i>Hygrocybe virginea</i>
<i>Hygrocybe colemanniana</i>	<i>Hygrocybe mucronella</i>	<i>Hygrocybe vitellina</i>
<i>Hygrocybe conica</i>	<i>Hygrocybe nitrata</i>	
<i>Hygrocybe flavipes</i>	<i>Hygrocybe phaecoccinea</i>	
<i>Hygrocybe fornicata</i>	<i>Hygrocybe pratensis</i>	
<i>Hygrocybe glutinipes</i>	<i>Hygrocybe pratensis var pallida</i>	



DO NOT SCALE

Title
Relevant 2015 grassland fungi survey results

Project
Land south of
Brondeg, Heolgerrig

Client
Pine Fields plc

Drawing No.
Appendix 1

Revision
-

Project No.
E1835a

Drawn
CD

Checked
DW

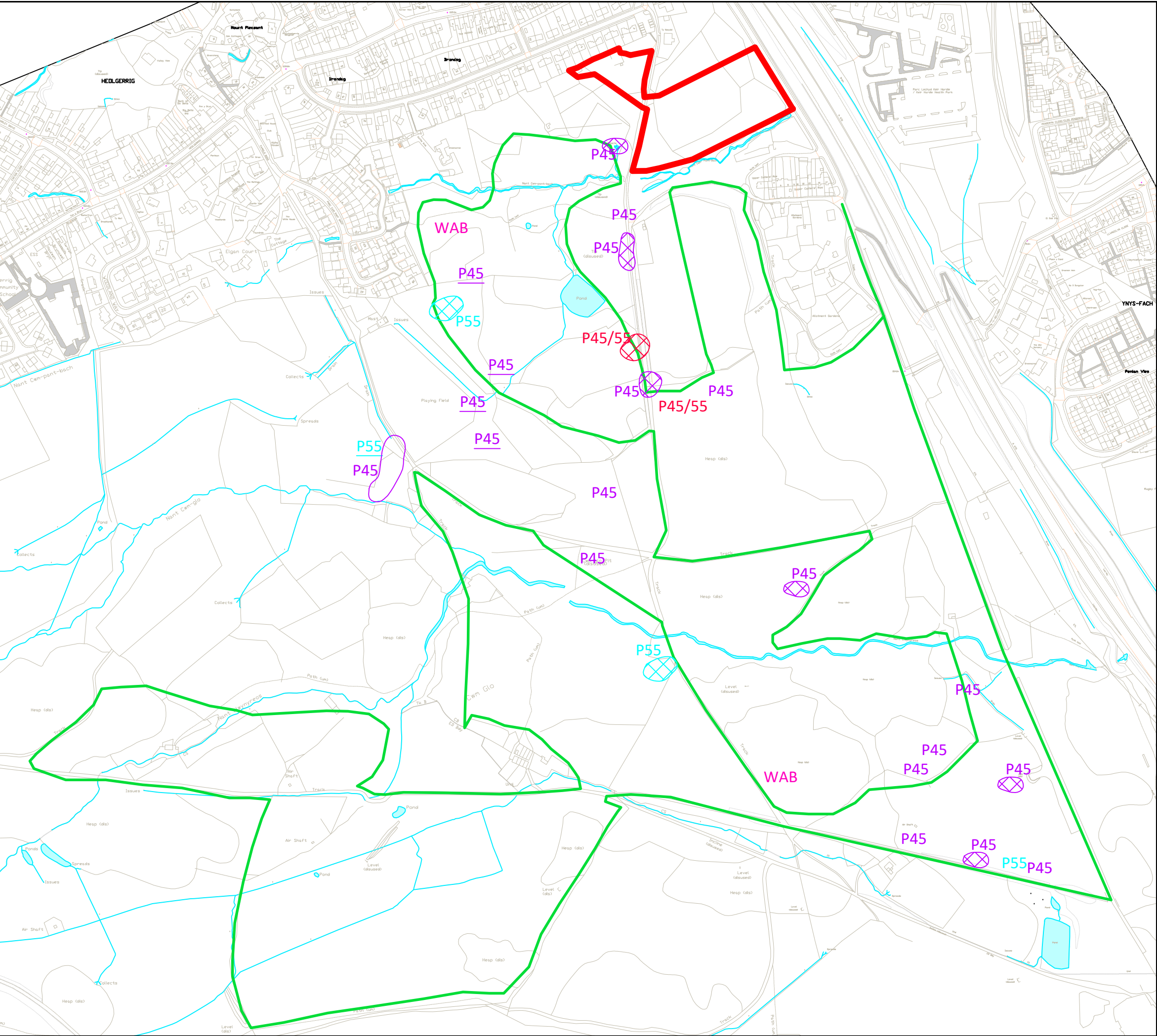
Date
September 2020

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APPENDIX 2



Key

- Application site boundary
- Transect route
- P45 Common pipistrelle
- P55 Soprano pipistrelle
- P45/55 Common or soprano pipistrelle
- WAB Whiskered/Alcathoe/ Brandt's
- Foraging area
- Pp Bat commuting showing direction
- Pp Bat passing by
- Bat activity in the area



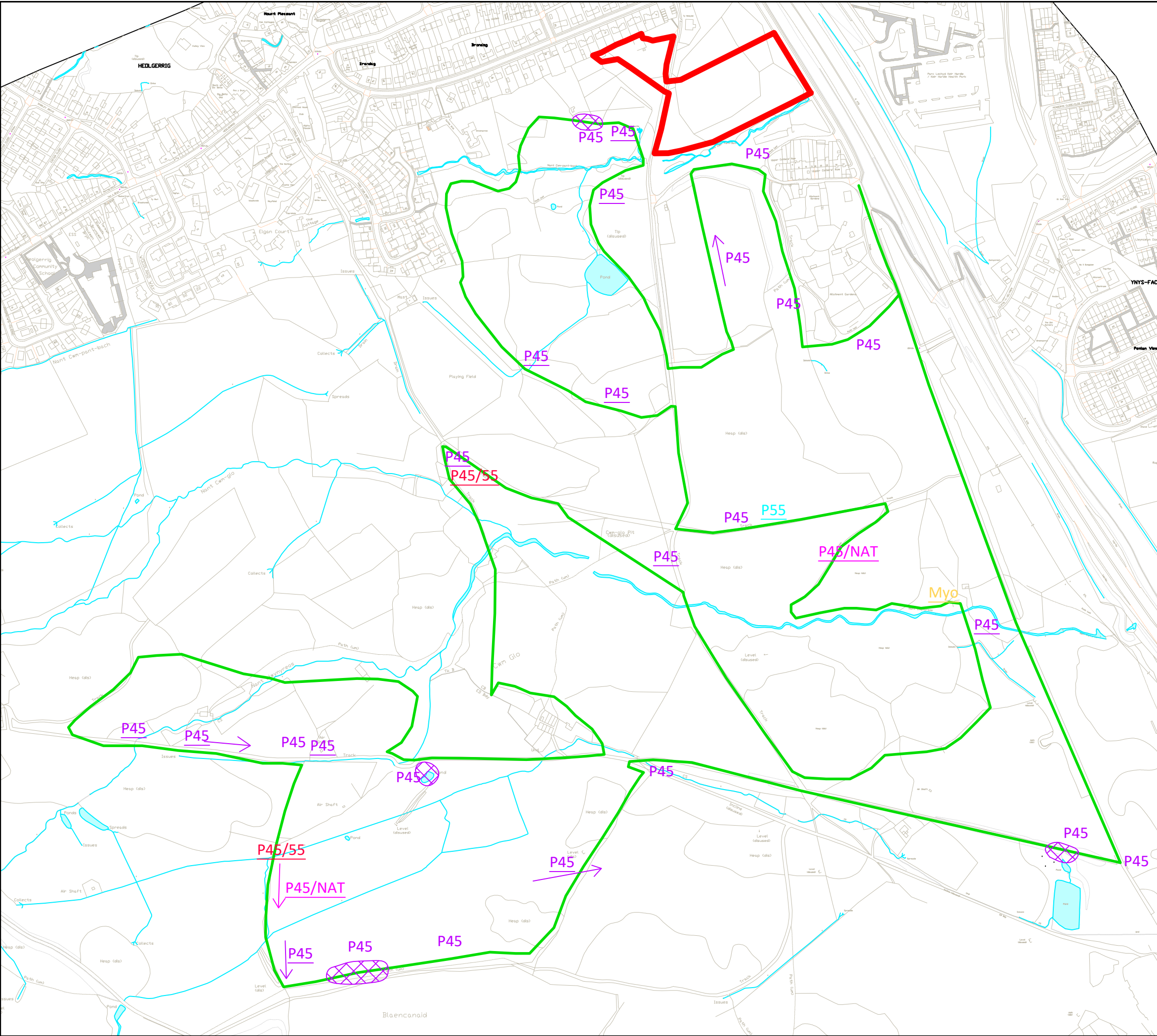
DO NOT SCALE

Title		
Dusk survey 26.05.2015		
Project	Client	
Land south of Brondeg, Heolgerrig	Pine Fields plc	
Drawing No.	Revision	Project No.
Appendix 2a	-	E1835a
Drawn	Checked	Date
CD	DW	September 2020

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Key

- Application site boundary
- Transect route
- Common pipistrelle
- Soprano pipistrelle
- Common or soprano pipistrelle
- Nathusius' or common pipistrelle
- Myotis species
- Foraging area
- Bat commuting showing direction
- Bat passing by

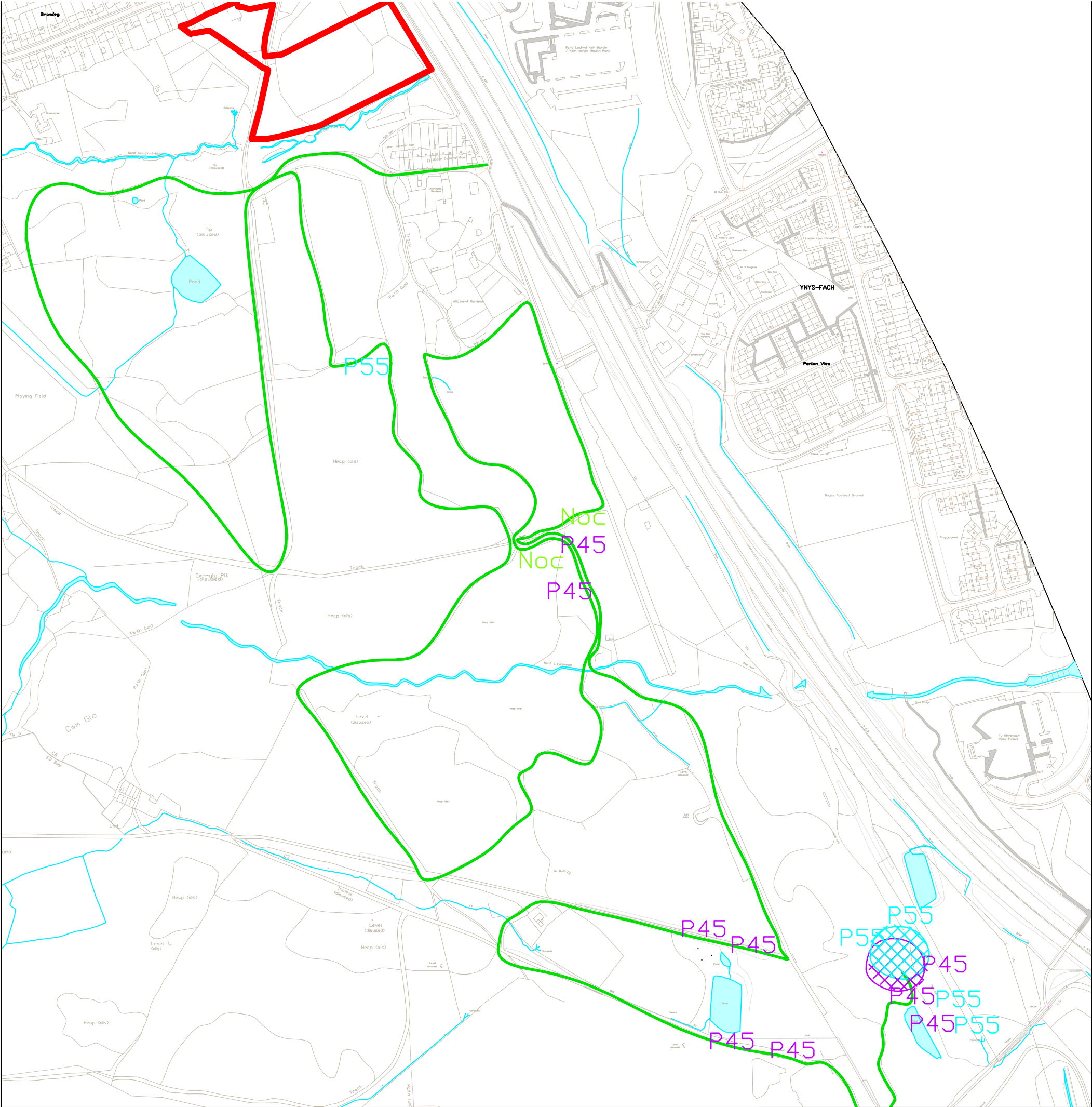
DO NOT SCALE

Title		
Dusk survey 24.06.2015		
Project	Client	
Land south of Brondeg, Heolgerrig	Pine Fields plc	
Drawing No.	Revision	Project No.
Appendix 2b	-	E1835a
Drawn	Checked	Date
CD	DW	September 2020

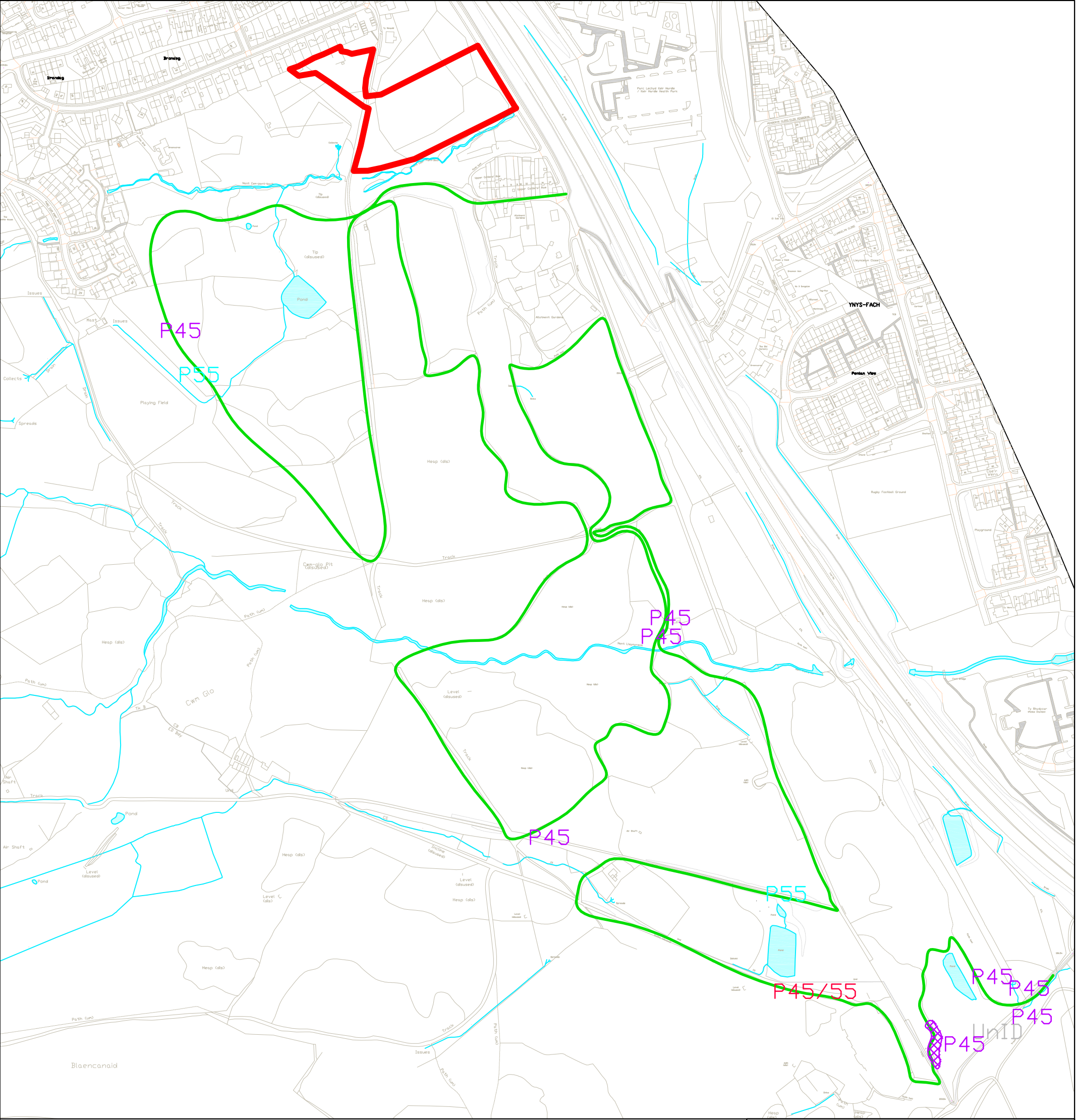
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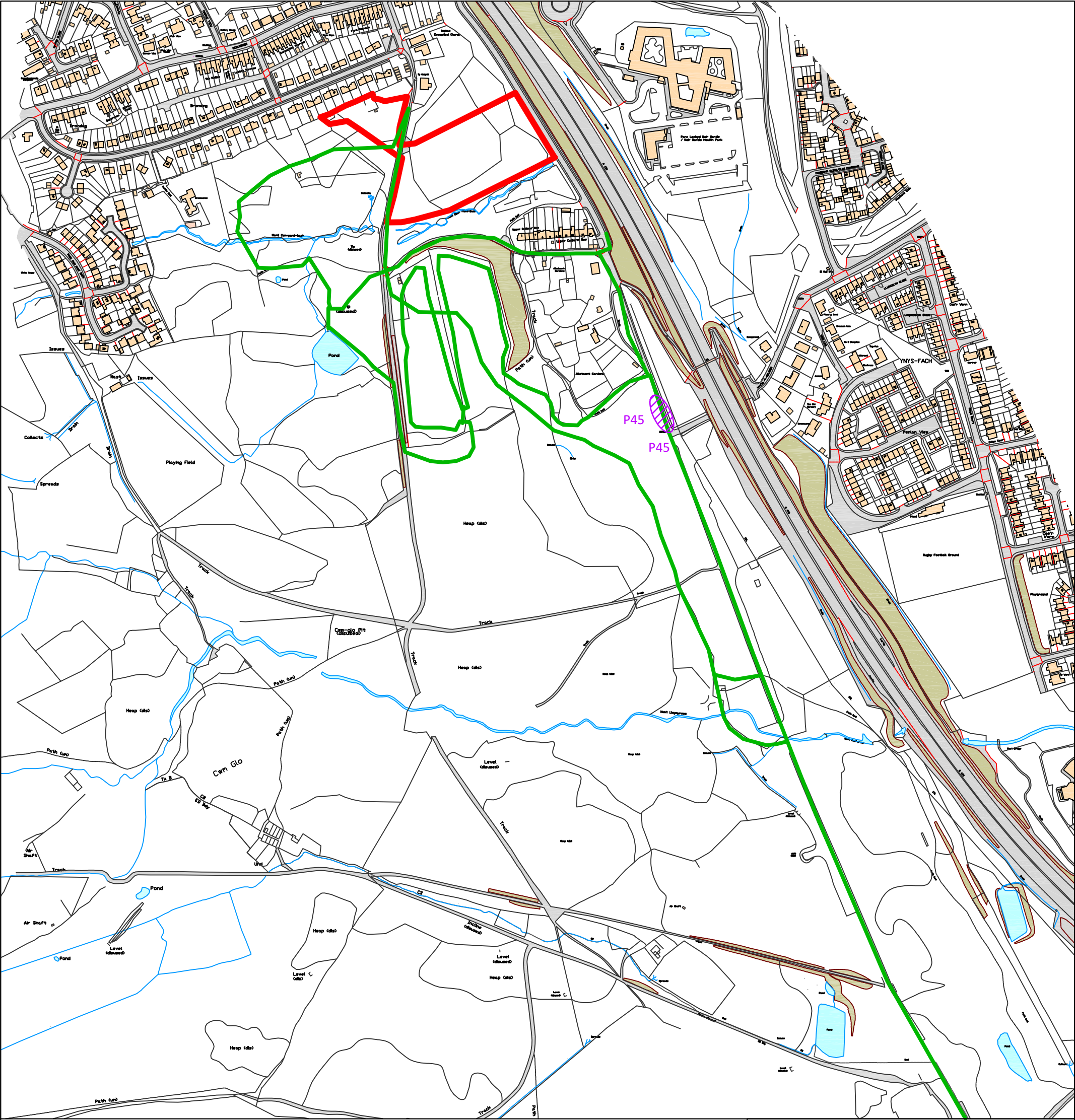
Key		Title Dusk transect 23.08.16		
Application site boundary Transect route P45 Common pipistrelle P55 Soprano pipistrelle Noc Common noctule Foraging	Project Land south of Brondeg, Heolgerrig		Client Pine Fields plc	
	Drawing No. Appendix 2d		Revision -	Project No. E1835a
	Drawn CD	Checked DW	Date September 2020	
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Key		Title Dawn transect 24.08.16		
Application site boundary Transect route P45 Common pipistrelle P55 Soprano pipistrelle P45/55 Common or soprano pipistrelle UnID Unidentified bat species Foraging	Project Land south of Brondeg, Heolgerrig		Client Pine Fields plc	
	Drawing No. Appendix 2e		Revision -	Project No. E1835a
	Drawn CD	Checked DW	Date September 2020	
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DO NOT SCALE



Key

- Application site boundary
- Transect route
- Common Pipistrelle
- Foraging area

BC
20:26-22:30
100% cloud
Light breeze
Rain stopped 20 mins before start
Light drizzle towards end



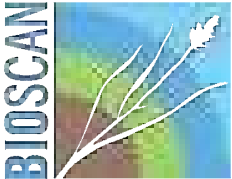
Title
Dusk transect 24.04.2018

Project
Land south of Brondeg, Pine Fields plc
Heolgerrig

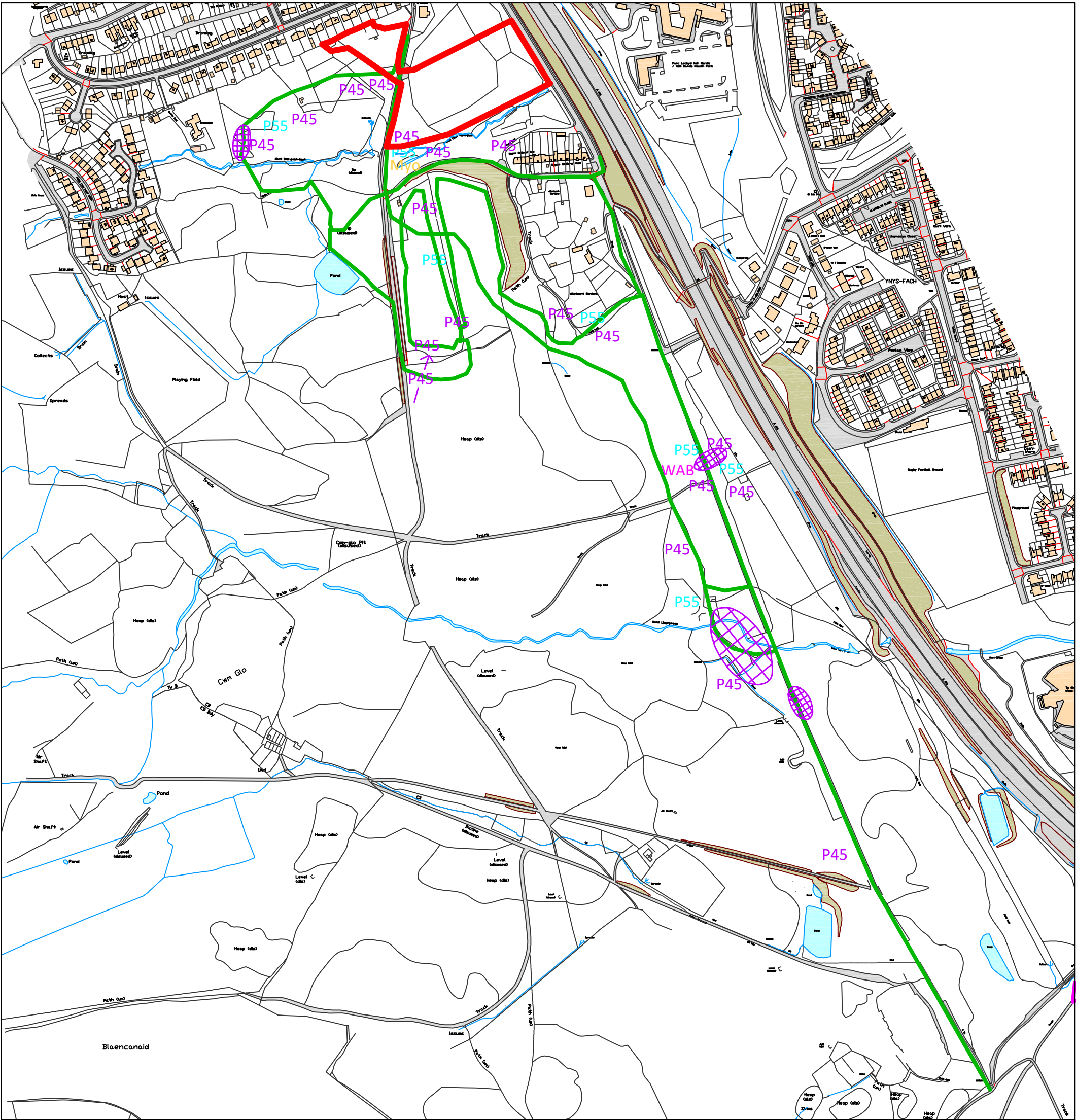
Drawing No. Revision Project No.
Appendix 2h - E1835a

Drawn Checked Date
CD DW February 2020

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Key

- Application site boundary
- Transect route
- P45 Common Pipistrelle
- P55 Soprano Pipistrelle
- Myo Myotis species
- WAB Whiskered/Alcathoe/Brandt's bat
- Foraging area
- Bat Bat passing by

BC
13°C No wind, 0/8
21:00 - 23:06
SS: 21:07

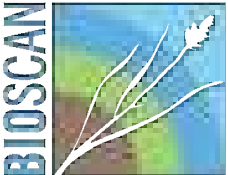
Title
Dusk transect 17.05.2018

Project Client
Land south of Brondeg, Pine Fields plc
Heolgerig

Drawing No. Revision Project No.
Appendix 2i - E1835a

Drawn Checked Date
CD DW September 2020

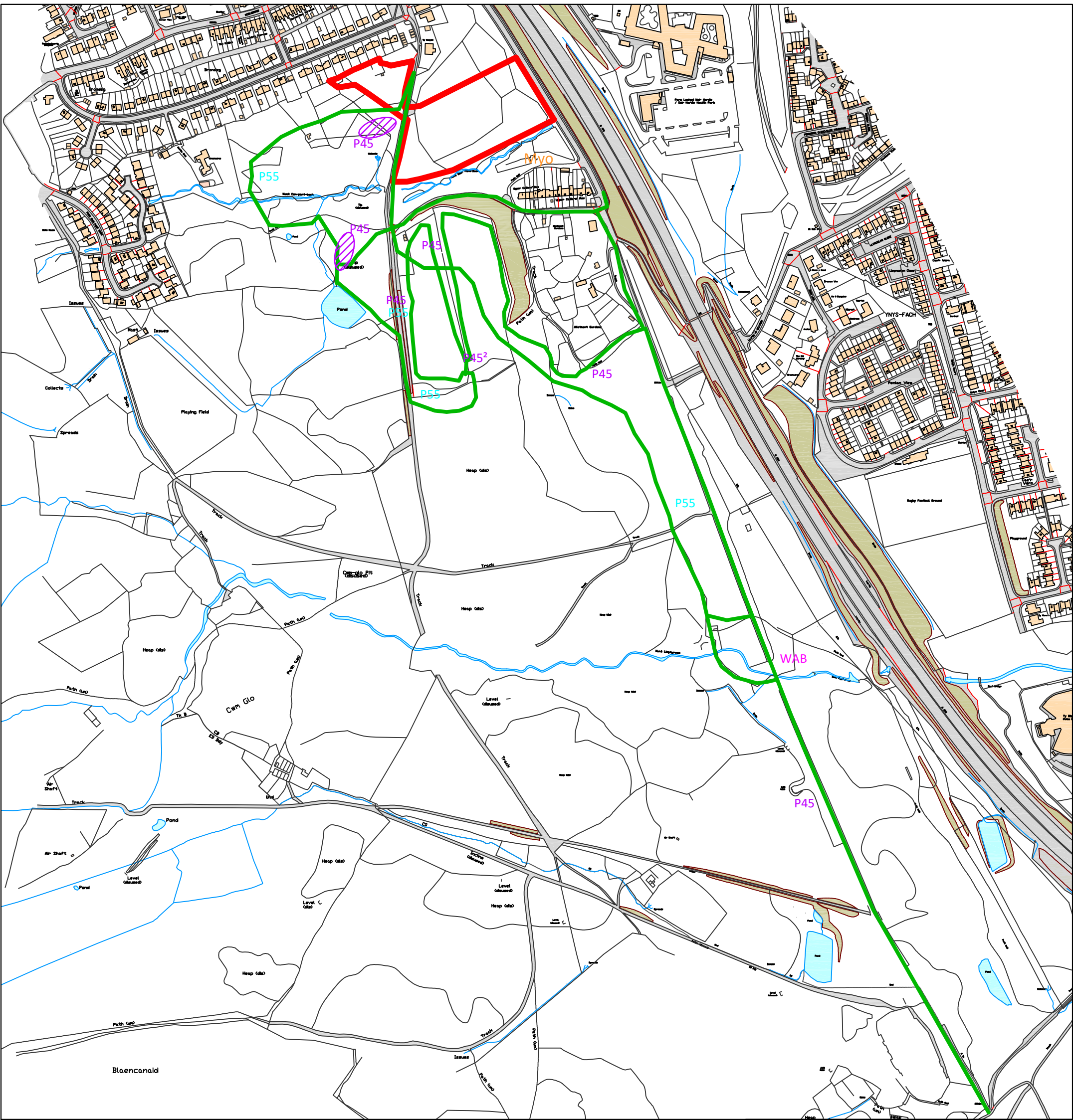
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DO NOT SCALE



Key

- Application site boundary
- Transect route
- P45 Common pipistrelle
- P55 Soprano pipistrelle
- WAB Whiskered/Alcathoe/Brandt's
- Myo Myotis species
- Foraging area
- Bat² Two bats

BC
21.33-23.40
12.5°C
0% cloud
No wind

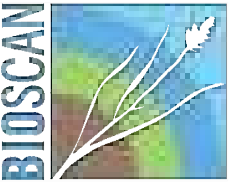
Title
Dusk transect 14.06.2018

Project Client
Land south of Brondeg, Pine Fields PLC
Heolgerrig

Drawing No. Revision Project No.
Appendix 2j - E1835a

Drawn Checked Date
CD DW September 2020

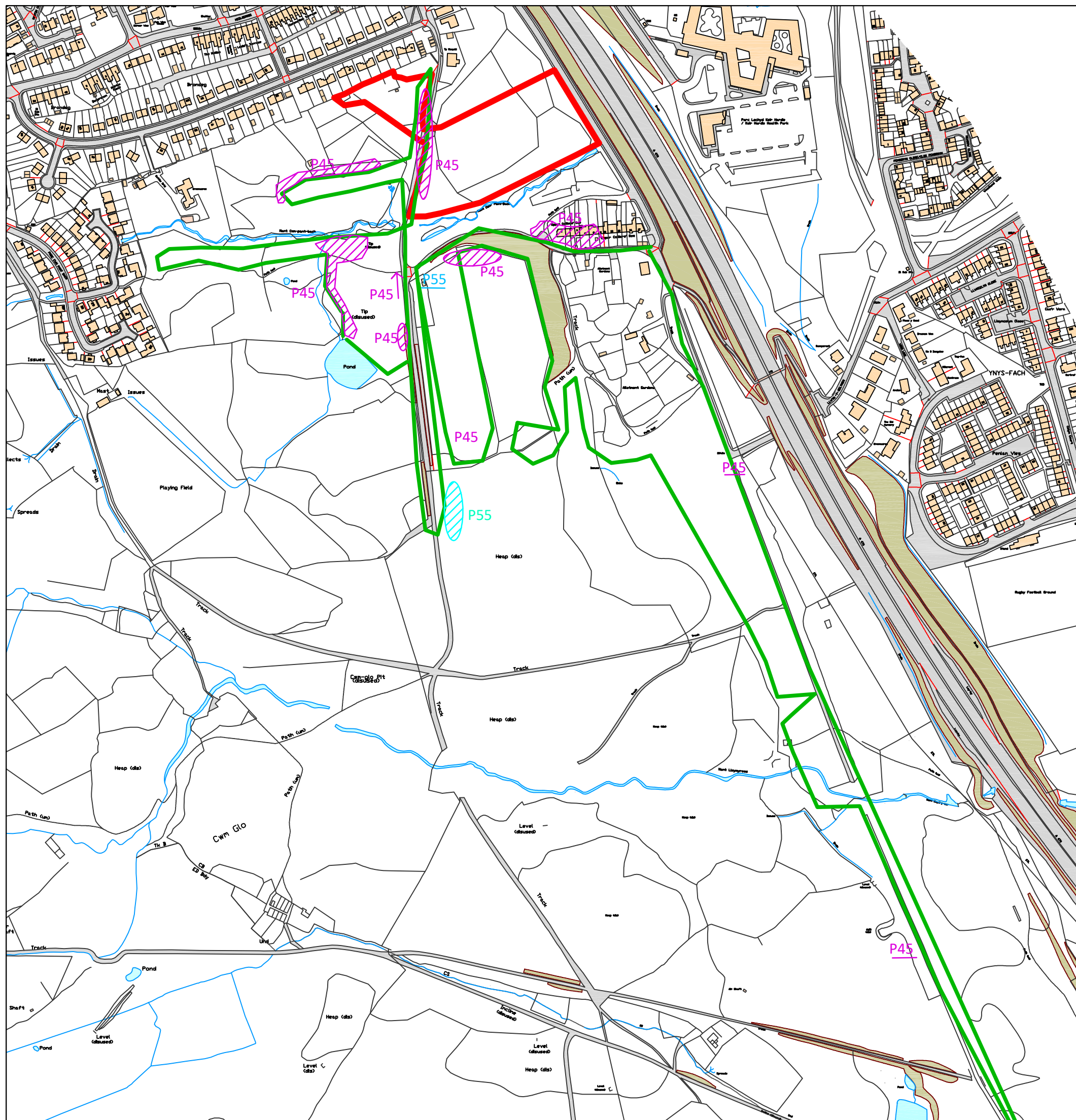
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Key

-  Application site boundary
-  Transect route
-  Common Pipistrelle
-  Soprano Pipistrelle
-  Bat commuting showing direction
-  Foraging area
-  Bat passing by

GM
21:36-23:36
24-21°C
10% cloud
No wind

Title

Dusk transect 26.06.2018

Project	Client
Land south of Brondeg, Heolgerig	Pine Fields plc

Drawing No.	Revision	Project No.
Appendix 2k	-	E1835a

Drawing No.	Revision	Project No.
Appendix 2k	-	E1835a

Drawing No.	Revision	Project No.
Appendix 2k	-	E1835a

Drawing No.	Revision	Project No.
Appendix 2k	-	E1835a

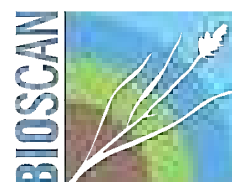
Drawn	Checked	Date
CD	DW	September 2020

Drawn	Checked	Date
CD	DW	September 2020

Drawn	Checked	Date
CD	DW	September 2020

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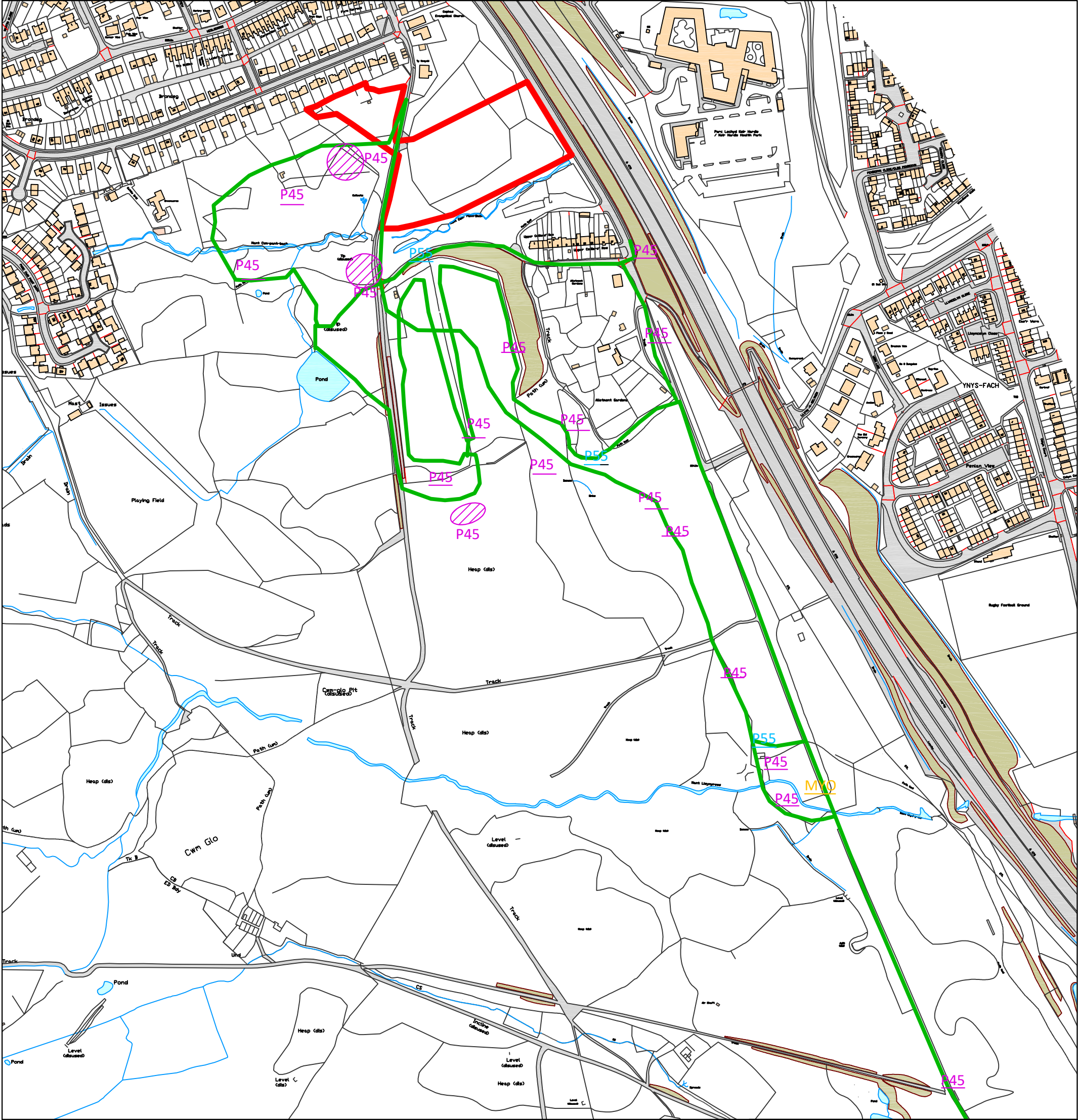
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Key

- Application site boundary
- Transect route
- P45 Common Pipistrelle
- P55 Soprano Pipistrelle
- MYO Myotis Species
- Foraging area
- BAT Bat passing by

BC
21:30-23:36
18.5°C
75% cloud
No wind

Title
Dusk transect 12.07.2018

Project
Land south of Brondeg, Pine Fields plc
Heolgerrig

Drawing No. Appendix 2I
Revision -
Project No. E1835a

Drawn CD
Checked DW
Date September 2020

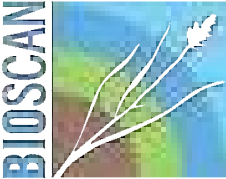
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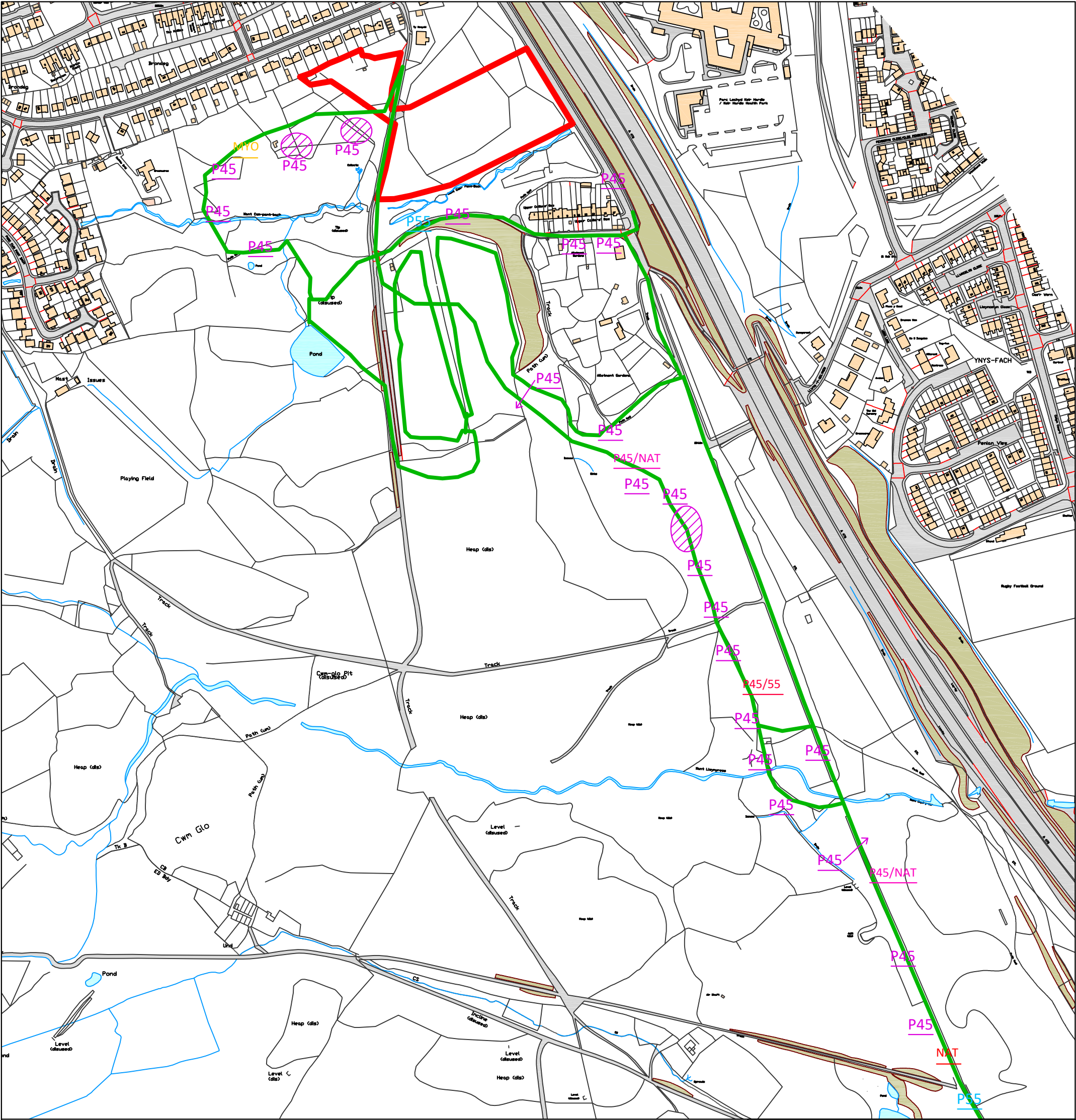
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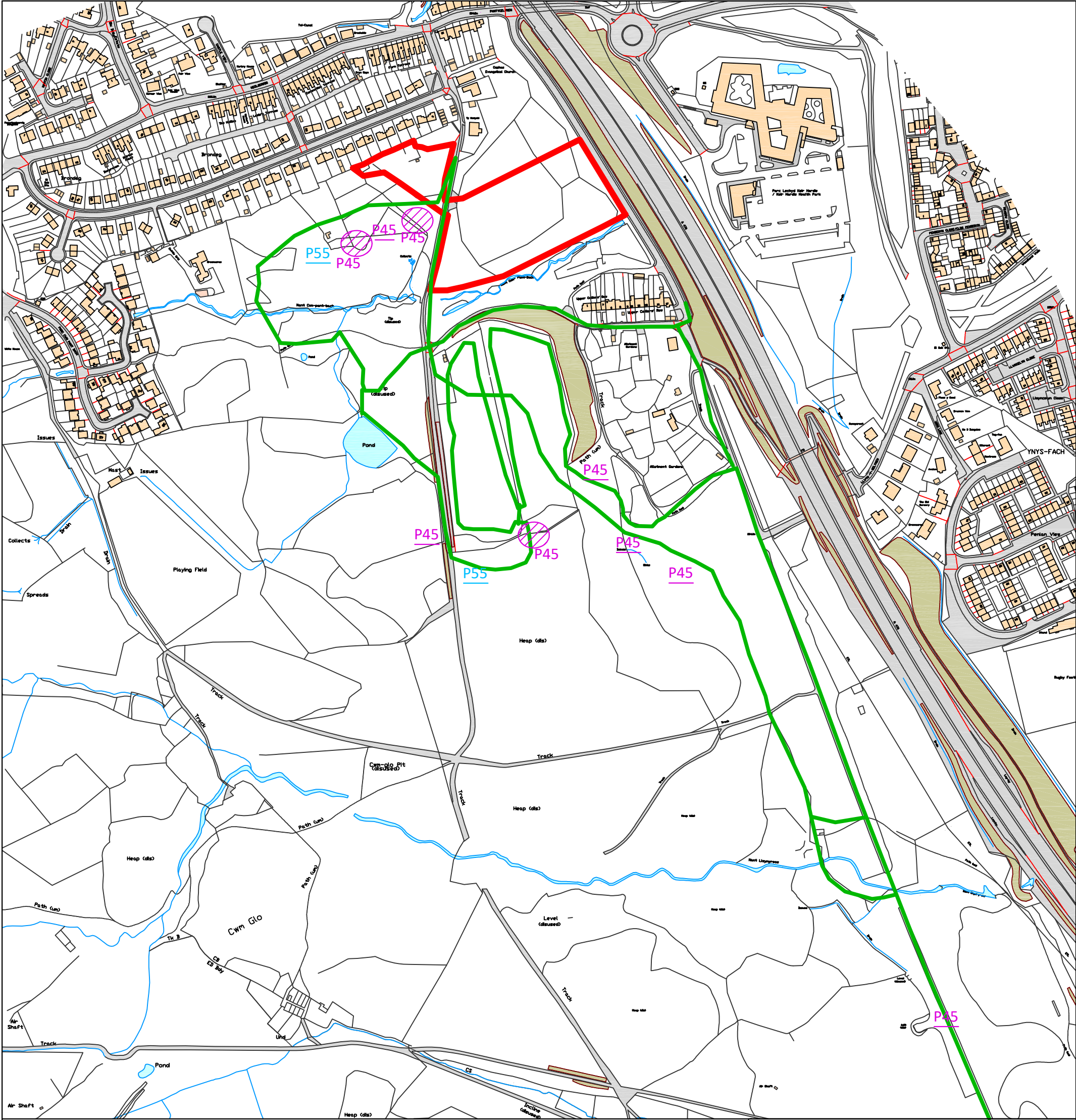


DO NOT SCALE





Key		Title Dusk transect 18.07.18	
Application site boundary Transect route P45 Common Pipistrelle P55 Soprano Pipistrelle MYO Myotis Species NAT Nathusius' Pipistrelle P45/55 Common or Soprano Pipistrelle P45/NAT Common or Nathusius' Pipistrelle Foraging area BAT Bat passing by Commuting	BC 21:24-23:37 17.5°C 0% cloud No wind	Project Land south of Brondeg, Pine Fields plc Heolgerrig	
		Drawing No. Revision Project No. Appendix 2m - E1835a	
		Drawn Checked Date CD DW September 2020	
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		DO NOT SCALE	



Key

- Application site boundary
- Transect route
- P45 Common Pipistrelle
- P55 Soprano Pipistrelle
- Foraging area
- BAT Bat passing by

BC
20:48-22:50
13°C
10% cloud
No wind

Title
Dusk Transect 09.08.18

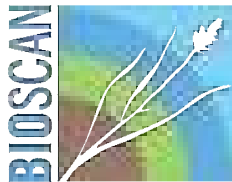
Project Client
Land south of Brondeg, Pine Fields plc
Heolgerrig

Drawing No. Revision Project No.
Appendix 2n - E1835a

Drawn Checked Date
CD DW September 2020

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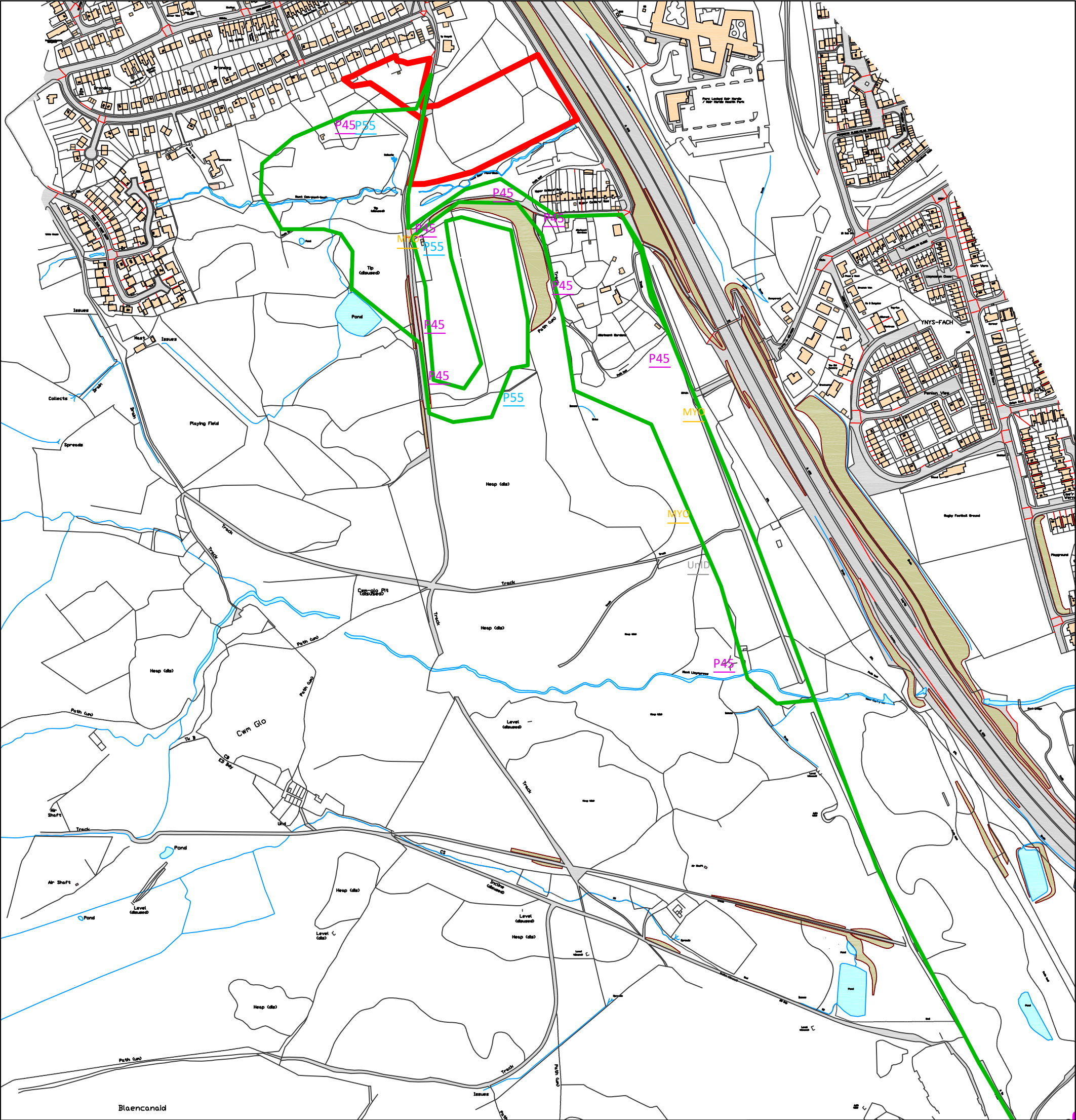
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Key

Application site boundary

Transect route

P45

Common pipistrelle

P55

Soprano pipistrelle

MYO

Myotis species

UnID

Unidentified bat species

BAT

Bat passing by

SW

19:01-20:45

15-13°C

Wind 0-1 (Beaufort)

Title

Dusk transect 27.09.18

Project

Land south of Brondeg, Heolgerrig

Client

Pine Fields plc

Drawing No.

Appendix 2q

Revision

-

Project No.

E1835a

Drawn

CD

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Date

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APPENDIX 3

Survey session		May-15	Jun-15	Jul-15	Aug-16		Sep-16		Apr-18	May-18	Jun-18		Jul-18		Aug-18			Sep-18		Total number of calls	Percentage of calls
Date		26/05	24/06	15/07	23/08	24/08	15/09	16/09	24/04	17/05	14/06	26/06	12/07	18/07	09/08	20/08	21/08	13/09	27/09		
Transect (see fig xx)		T2	T2	T2	T1	T1	T1	T1	North	North	North	North	North	North	North	North	North	North	North		
Species		Number of files	Number of files	Number of files	Number of files	Number of files	Number of files	Number of files	Number of files	Number of files	Number of files	Number of files	Number of files	Number of files	Number of files	Number of files	Number of files	Number of files	Number of files		
Common Pipistrelle		34	36	45	22	10	8	10	3	61	19	33	35	50	23	44	13	22	9	477	78.2
Soprano Pipistrelle		12	3	1	5	2	1	4	0	13	8	4	3	2	2	8	1	3	3	75	12.3
Nathusius'/common pipistrelle ¹		0	3	3	0	0	0	0	0	0		0	0	2	0	0	0	0	0	8	1.3
Common/soprano Pipistrelle ²		4	4	0	0	0	1	2	0	5	2	0	0	1	0	0	2	0	0	21	3.4
Nathusius' pipistrelle		0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0.2
Noctule		0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3	0.5
Myotis sp. ³	WAB ⁴	2	1	0	0	0	0	0	0	1	2	0	0	0	0	0	0	0	0	6	1.0
	Myotis sp.	0	1	1	0	0	2	7	0	1	1	0	1	1	0	0	0	0	3	18	2.8
	Daubenton's bat	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0.2
Unidentified bat		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0.2
Total		52	48	50	27	12	13	23	3	81	32	37	39	57	25	56	16	25	16	611	

¹ Where calls were around 40kHz these have been noted to genus level only, as the calls could not be definitively attributed to either Nathusius' or common pipistrelle.

² Where Pipistrelle calls were at approximately 50kHz these have been noted as Pipistrelle sp. Both common and soprano pipistrelle can produce calls at or around 50kHz and as such it is not possible to directly attribute a call of this frequency to either species.

³ The use of the slope function in Analook is used to aid in the identification of Myotis species (Myotis calls are generally difficult to attribute to a specific species); however, where slope is ambiguous these have been noted as Myotis sp. The Myotis species above (Daubenton's bat, Natterer's bat, whiskered/Alcathoe/Brandt's bat) are probable identifications.

⁴ Whiskered/Alcathoe/Brandt's Bat

Survey period	Aug-16				Sep-16			
Detector location (see Figure 3 for the location of these detectors)								
	D1		D2		D9		Total number	
Species	Number of files	%	Number of files	%	Number of files	%	Total	%
Common Pipistrelle	0	0	572	95.4	13	8.6	585	77.8
Soprano Pipistrelle	0	0	14	1.6	22	16.6	36	4.8
Pipistrelle sp. ⁵ (common/soprano)	0	0	0	0.0	14	9.8	14	1.9
Noctule	0	0	4	0.6	1	2.5	5	0.7
Brown long-eared ⁶	0	0	8	2.2	100	62.6	112	14.9
Myotis sp. ⁷	4	100	572	95.4	13	8.6	585	77.8
Total	4		598		150		752	

⁵ Where Pipistrelle calls were at approximately 50kHz these have been noted as Pipistrelle sp. Both common and soprano pipistrelle can produce calls at or around 50kHz and as such it is not possible to directly attribute a call of this frequency to either species.

⁶ There are two long-eared bat species with a resident population within the UK: the brown long-eared bat and the grey long-eared bat *Plecotus austriacus*, which cannot be reliably distinguished on the basis of echolocation calls alone. The brown long-eared bat is described as “common and widespread in Britain”; whereas by contrast, the grey long-eared bat “is rare and confined to the extreme south of the country” (S M Swift. (1998) “*Long-eared bats.*” T & AD Poyser Ltd.). Given that there are no local records for grey long-eared bat it is concluded highly likely that all *Plecotus* calls from the Application Site derive from brown long eared bats.

⁷ The use of the slope function in Analook is used to aid in the identification of Myotis species (Myotis calls are generally difficult to attribute to a specific species); however, where slope is ambiguous these have been noted as Myotis sp. The Myotis species above (Daubenton’s bat, Natterer’s bat, whiskered/Alcathoe/Brandt’s bat) are probable identifications.

Survey period		Apr-18		May-18				Jun-18				Jul-18				Aug-18				Sep-18				Total number			
Detector location (see Figure 3 for the location of these detectors)		A		A		B		A		B		A		B		A		B		A		B					
Species		Number of files	%	Number of files	%	Number of files	%	Number of files	%	Number of files	%	Number of files	%	Number of files	%	Number of files	%	Number of files	%	Number of files	%	Number of files	%	A	%	B	%
Common Pipistrelle		188	72.3	55	31.1	149	91.4	0	0.0	280	65.9	0	0.0	223	56.5	0	0.0	533	84.9	0	0	139	72.0	243	22.9	1324	73.4
Soprano Pipistrelle		63	24.2	1	0.6	4	2.5	3	0.8	12	2.8	14	42.4	126	31.9	31	13.7	53	8.4	0	0	13	6.7	112	10.6	208	11.5
Pipistrelle sp. (common/soprano) ⁸		1	0.4	0	0.0	0	0.0	0	0.0	3	0.7	0	0.0	5	1.3	29	12.8	11	1.8	0	0	23	11.9	30	2.8	42	2.3
Noctule		0	0.0	1	0.6	3	1.8	0	0.0	0	0.0	0	0.0	16	4.1	3	1.3	11	1.8	0	0	0	0.0	4	0.4	30	1.7
Unidentified bat ⁹		0	0.0	2	1.1	0	0.0	0	0.0	0	0.0	0	0.0	1	0.3	1	0.4	1	0.2	1	10	0	0.0	4	0.4	2	0.1
Brown long-eared	Brown long-eared	0	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	7	70	0	7	0.7	0.7	0	0.0
	Query ¹⁰	0	0.0	0.0	0.0	4	2.5	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	2	0.3	0	0	5	0	0.0	0.0	11	0.6
Myotis sp. ¹¹	Daubenton's	4	1.5	57.6	59.3	1	0.6	215	60.7	118	27.8	7	21.2	7	1.8	124	54.9	4	0.6	0	0	0	452	42.6	42.9	130	7.2
	Myotis sp.	4	1.5	6.2	6.2	2	1.2	136	38.4	12	2.8	12	36.4	17	4.3	38	16.8	13	2.1	2	20	13	203	19.2	19.2	57	3.2
Total		260		172		163		354		425		33		395		226		628		10		193		1055		1804	
																								2859			

⁸ Where Pipistrelle calls were at approximately 50kHz these have been noted as Pipistrelle sp. Both common and soprano pipistrelle can produce calls at or around 50kHz and as such it is not possible to directly attribute a call of this frequency to either species

⁹ Unidentified bat⁹ is used to describe calls which cannot be reliably ascribed to any species, for example when only a single pulse (or portion of a pulse) from a call was captured by the detector.

¹⁰ Calls which were probable brown long-eared bats, but the survey could not be 100% confident in the identification.

¹¹ The use of the slope function in Analook is used to aid in the identification of Myotis species (Myotis calls are generally difficult to attribute to a specific species); however, where slope is ambiguous these have been noted as Myotis sp. The Myotis species above (Daubenton's bat, Natterer's bat, whiskered/Alcathoe/Brandt's bat) are probable identifications.



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