

### 7.2.2 Non-Statutory Designated Sites

Non-statutory designated sites within 1 km of the site were returned in the desk study records from BIS. Eight sites were identified, all of which are adopted Sites of Importance for Nature Conservation (SINC). They are listed in Table 3 below.

Table 3. Non-statutory designated sites within 5 km of the site

Site Name	Designation	Approximate Distance and Orientation from Site
Gorsllwyn Meadows	SINC	Partially within the site boundary; occurs in the northern part of the Washery.
Onllwyn Coal Washery	SINC	Partially within the site boundary; occurs in the north eastern part of the Washery
Dyffryn Cellwen	SINC	Within the site; occurs in the south eastern part of the Washery.
Intervalley Road, Banwen	SINC	Immediately adjacent; south of the Washery.
Banwen Pond	SINC	500 m south of the Site.
Adjacent to Gorsllwyn	SINC	Immediately adjacent, north of the Washery.
Aberhenwaun Uchaf	SINC	600 m south.
Land behind Marigold Place	SINC	800 m south.

### 7.2.3 Other Notable Habitats

Other notable habitats within 1 km were returned in the desk study records from BIS.

A Wildlife Trust Reserve is present approximately 1 km west of the site. Marsh fritillary butterflies are present within the reserve.

There were 57 areas of ancient woodland, the closest of which is within the site. Areas of ancient woodland within 1 km of the site are shown on Figure 4.

Habitats listed as Habitats of Principal Importance (HPI) in response to the requirements of Section 7 of the Environment (Wales) Act 2016 were also identified. These included: blanket bog and limestone pavement.

### 7.2.4 Protected and Notable Species

Records of protected and/or notable species identified within 5 km of the site are summarised in Table 4 below. The distance given is that to the closest point on the site boundary.

Table 4. Protected and notable species within 5 km of the site

Species / Group	Scientific Name	Status <sup>22</sup>	Number of Records	Approximate distance of closest record (m)
<b>Bats</b>				
Soprano pipistrelle	<i>Pipistrellus pygmaeus</i>	EPS, WCA	10	300
Common pipistrelle	<i>Pipistrellus pipistrellus</i>	EPS, WCA	27	400
Unidentified bat	<i>Chiroptera</i>	EPS, WCA	10	400
Daubenton's bat	<i>Myotis daubentonii</i>	EPS, WCA	7	400
Noctule bat	<i>Nyctalus noctula</i>	EPS, WCA	11	400
Pipistrelle species	<i>Pipistrellus</i> spp.	EPS, WCA	14	600
Brown long-eared bat	<i>Plecotus auritus</i>	EPS, WCA	7	1000
Myotis bat	<i>Myotis</i> spp.	EPS, WCA	2	1700
Nathusius' pipistrelle	<i>Pipistrellus nathusii</i>	EPS, WCA	2	2000
Natterer's bat	<i>Myotis nattereri</i>	EPS, WCA	2	2000
Lesser horseshoe bat	<i>Rhinolophus hipposideros</i>	EPS, WCA	1	2000
<b>Other mammals</b>				
Hare	<i>Lepus europaeus</i>	S7	3	Within the site
Otter	<i>Lutra lutra</i>	EPS, WCA, S7	27	400
Badger <sup>23</sup>	<i>Meles meles</i>	BA	3	700
Hedgehog	<i>Erinaceus europaeus</i>	S7	32	800
Polecat	<i>Mustela putorius</i>	HDir, S7	4	1500
Harvest mouse	<i>Micromys minutus</i>	S7	1	2000
<b>Birds</b>				
Cuckoo	<i>Cuculus canorus</i>	S7	23	Within the site
House sparrow	<i>Passer domesticus</i>	S7	81	Within the site

<sup>22</sup> EPS = European Protected Species as listed under Schedule 2 of the Conservation of Habitats and Species Regulations (2017).

HDir = Animals and plants that receive protection under the Council Directive 92/43/EEC (The Habitats Directive).

BDir = Birds that receive protection under the Directive 2009/147/ED (The Birds Directive).

WCA = Species protected under Schedule 1 (birds), Schedule 5 (animals) or Schedule 8 (plants) of the Wildlife and Countryside Act (1981) as amended.

S7 = Species listed on Section 7 of the Environment (Wales) Act 2016.

<sup>23</sup> BA = Protection of Badgers Act (1992).

Kestrel	<i>Falco tinnunculus</i>	S7	27	Within the site
Lesser black-backed gull	<i>Larus fuscus</i>	BDir	6	Within the site
Red kite	<i>Milvus milvus</i>	WCA, BDir	44	Within the site
Starling	<i>Sturnus vulgaris</i>	BDir, S7	68	Within the site
Hawfinch	<i>Coccothraustes coccothraustes</i>	S7	1	100
Dunnoek	<i>Prunella modularis</i>	S7	51	300
Merlin	<i>Falco columbarius</i>	BDir, WCA	1	300
Mistle thrush	<i>Turdus viscivorus</i>	BDir	31	300
Bullfinch	<i>Pyrrhula pyrrhula</i>	S7	24	400
Common crossbill	<i>Loxia curvirostra</i>	WCA	24	400
Skylark	<i>Alauda arvensis</i>	BDir, S7	26	400
Woodcock	<i>Scolopax rusticola</i>	BDir	12	400
Grasshopper warbler	<i>Locustella naevia</i>	S7	12	600
Pied flycatcher	<i>Ficedula hypoleuca</i>	S7	11	600
Wood warbler	<i>Phylloscopus sibilatrix</i>	S7	13	600
Barn owl	<i>Tyto alba</i>	WCA	5	700
Curlew	<i>Numenius arquata</i>	BDir, S7	4	800
Linnet	<i>Linaria cannabina</i>	S7	9	800
Mallard	<i>Anas platyrhynchos</i>	BDir	33	800
Snipe	<i>Gallinago gallinago</i>	BDir	17	800
Song thrush	<i>Turdus philomelos</i>	BDir, S7	57	800
Brambling	<i>Fringilla montifringilla</i>	WCA	1	900
Fieldfare	<i>Turdus pilaris</i>	BDir, WCA	13	900
Lapwing	<i>Vanellus vanellus</i>	BDir, S7	7	900
Redwing	<i>Turdus iliacus</i>	WCA, BDir	17	900
Reed bunting	<i>Emberiza schoeniclus</i>	S7	27	900
Peregrine	<i>Falco peregrinus</i>	BDir, WCA	18	1000
Lesser redpoll	<i>Acanthis cabaret</i>	S7	32	1200
Hen harrier	<i>Circus cyaneus</i>	BDir, S7	2	1300
Jack snipe	<i>Lymnocyptes minimus</i>	BDir	3	1400
Water rail	<i>Rallus aquaticus</i>	BDir	2	1500
Hobby	<i>Falco subbuteo</i>	WCA	4	1600

Honey buzzard	<i>Pernis apivorus</i>	BDir WCA	2	1600
Goshawk	<i>Accipiter gentilis</i>	WCA	7	1700
Herring gull	<i>Larus argentatus</i>	S7	7	1700
Tree pipit	<i>Anthus trivialis</i>	S7	15	1700
Nightjar	<i>Caprimulgus europaeus</i>	BDir, S7	8	1800
Osprey	<i>Pandion haliaetus</i>	BDir, WCA	1	1900
Short-eared owl	<i>Asio flammeus</i>	BDir	3	2000
Spotted flycatcher	<i>Muscicapa striata</i>	S7	2	2500
Goosander	<i>Mergus merganser</i>	BDir	9	2900
Kingfisher	<i>Alcedo atthis</i>	BDir, WCA	2	2900
Willow tit	<i>Poecile montana</i>	S7	1	3400
Yellowhammer	<i>Emberiza citrinella</i>	S7	2	3400
Golden plover	<i>Pluvialis apricaria</i>	BDir, BDir, S7	1	3600
Wigeon	<i>Anas penelope</i>	BDir	2	3600
Mute swan	<i>Cygnus olor</i>	BDir	9	3700
Ring ouzel	<i>Turdus torquatus</i>	S7	1	4000
<b>Reptiles and Amphibians</b>				
Common toad	<i>Bufo bufo</i>	WCA	12	200
Common lizard	<i>Zootoca vivipara</i>	WCA	14	700
Common frog	<i>Rana temporaria</i>	WCA	32	700
Grass snake	<i>Natrix helvetica</i>	WCA	7	1000
Palmate newt	<i>Lissotriton helveticus</i>	WCA	5	1700
Slow worm	<i>Anguis fragilis</i>	WCA	10	2000
<b>Fish</b>				
Atlantic salmon	<i>Salmo salar</i>	HDir, S7	2	600
Bullhead	<i>Cottus gobio</i>	HDir	2	2000
<b>Invertebrates</b>				
Broom moth	<i>Ceramica pisi</i>	S7	7	800
Marsh fritillary	<i>Euphydryas aurinia</i>	EPS, WCA, S7	49	900
Dark-barred Twin-spot Carpet	<i>Xanthorhoe ferrugata</i>	S7	9	900
Small phoenix	<i>Ecliptopera silaceata</i>	S7	9	900
Small heath	<i>Coenonympha pamphilus</i>	S7	16	1000

Knot grass	<i>Acronicta rumicis</i>	S7	7	1200
Dot moth	<i>Melanchra persicariae</i>	S7	2	1300
Rosy minor	<i>Litoligia literosa</i>	S7	2	1300
Rosy rustic	<i>Hydraecia micacea</i>	S7	2	1300
Sallow	<i>Cirrhia icteritia</i>	S7	2	1300
Ear moth	<i>Amphipoea oculatea</i>	S7	2	1400
Oak hook-tip	<i>Watsonalla binaria</i>	S7	1	1500
Oblique carpet	<i>Orthonama vittata</i>	S7	4	1500
Autumnal rustic	<i>Eugnorisma glareosa</i>	S7	2	1500
Hedge rustic	<i>Tholera cespitis</i>	S7	1	1600
Grayling	<i>Hipparchia semele</i>	S7	9	1800
Double dart	<i>Graphiphora augur</i>	S7	1	1800
Blood-vein	<i>Timandra comae</i>	S7	1	1900
Buff ermine	<i>Spilosoma lutea</i>	S7	2	1900
Garden tiger	<i>Arctia caja</i>	S7	2	1900
Shoulder-striped wainscot	<i>Leucania comma</i>	S7	1	1900
Small square-spot	<i>Diarsia rubi</i>	S7	5	1900
White ermine	<i>Spilosoma lubricipeda</i>	S7	5	1900
Centre-barred sallow	<i>Atethmia centrargo</i>	S7	1	1900
Dusky brocade	<i>Apamea remissa</i>	S7	1	1900
Ghost moth	<i>Hepialus humuli</i>	S7	2	1900
Small Pearl-bordered Fritillary	<i>Boloria selene</i>	S7	4	2200
Small blue	<i>Cupido minimus</i>	WCA, S7	1	2300
Wall	<i>Lasiommata megera</i>	S7	15	2300
Brindled beauty	<i>Lycia hirtaria</i>	S7	1	2400
Cinnabar	<i>Tyria jacobaeae</i>	S7	3	2500
Narrow-bordered bee hawk-moth	<i>Hemaris tityus</i>	S7	1	3700
Dingy skipper	<i>Erynnis tages</i>	S7	2	4000
<b><i>Vascular plants</i></b>				

Small-flowered Sticky Eyebright	<i>Euphrasia officinalis subsp. anglica</i>	S7	1	100
Bluebell	<i>Hyacinthoides non-scripta</i>	WCA	47	100
Globeflower	<i>Trollius europaeus</i>	S7	1	600
Eyebright	<i>Euphrasia officinalis subsp. pratensis</i>	S7	1	1700
<b>Bryophytes &amp; lichens</b>				
A lichen	<i>Parmotrema perlatum</i>	S7	6	Within the site
A lichen	<i>Usnea articulata</i>	S7	6	Within the site
Scarce Turf-moss	<i>Rhytidiadelphus subpinnatus</i>	S7	6	500
Witches' Whiskers Lichen	<i>Usnea florida</i>	S7	2	1300
Varnished Hook-moss	<i>Hamatocaulis vernicosus</i>	HDir, WCA	1	1400
A lichen	<i>Pachyphiale carneola</i>	S7	1	1900
A lichen	<i>Pannaria conoplea</i>	S7	1	1900
A lichen	<i>Parmeliella triptophylla</i>	S7	1	1900
A lichen	<i>Phyllopsora rosei</i>	S7	1	1900
A lichen	<i>Sticta canariensis (dufourii)</i>	S7	1	1900
A lichen	<i>Sticta fuliginosa</i>	S7	2	1900
A lichen	<i>Sticta limbata</i>	S7	2	1900

## 7.3 Field Survey

A brief description of each of the habitats found within the site boundary is given in Section 7.3.1 below. An assessment of the site for supporting protected species is given in Section 7.3.2 and target notes recorded during the field survey and other surveys on site during 2019 are given in Section 7.3.3.

### 7.3.1 Habitats

Forty habitat types were identified within the Site. These are described below and shown on Figure 5.

## Broadleaved woodland – semi-natural

There were areas of semi-natural broadleaved woodland on the edges of the Site. Species compositions were broadly similar throughout the site and comprised willow (*Salix* sp.), silver birch (*Betula pendula*), hawthorn (*Crataegus monogyna*), rowan (*Sorbus acuparia*), sessile oak (*Quercus petraea*) and hazel (*Corylus avellana*). Along the access road to the Nant Helen site, there was a small area of large mature oak trees with a bluebell (*Hyacinthoides non-scripta*) understorey (TN51, Figure 5). This area of woodland is on the Ancient Woodland Inventory.

## Broadleaved woodland – plantation

Small areas of semi-mature planted woodland were present throughout the Site and formed some of the previously restored mining areas. Species compositions were similar to those of the semi-natural woodlands on Site.

## Coniferous woodland – plantation

A large conifer plantation was present in the north-west of the Site and extends outside of the site boundary. Larch trees (*Larix* sp.) were the dominant species, with pine (*Pinus* sp.) and spruce (*Picea* sp.) also present. The ground flora was sparse and was dominated by mosses and common wintergreen (*Pyrola minor*), which occurred extensively through the plantation. Bee orchids were identified within the woodland, but they were outside of the site boundary (TN1, Figure 5). In parts of the woodland, the understorey supported establishing broadleaved species such as oak and birch.

It is noted that part of this area is recorded as PAWS (in the Ancient Woodland Inventory<sup>24</sup>), although did not support any indicator species of ancient woodland. Furthermore, a separate technical note (Appendix C) confirms that the plantation is on backfilled material following mining and extending over the area recorded as a PAWS; rather than as implied, the plantation replacing semi-natural woodland on the in situ woodland soils.

## Mixed woodland – plantation

This habitat type was present in restored mining areas on Site. Species present included: larch, spruce, hazel, hawthorn, field maple (*Acer campestre*) and willow species.

## Scrub – dense/continuous

Dense scrub was present around settling lagoons in the south-east of the Site. Bramble, European gorse (*Ulex europeaus*), dogwood (*Cornus sanguinea*), willow and self-seeded birch trees were present.

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<sup>24</sup> <https://naturalresources.wales/evidence-and-data/research-and-reports/ancient-woodland-inventory/?lang=en>

## Scrub – scattered

Scattered willow and gorse scrub was present throughout the Site. Other species present included bramble and birch seedlings.

## Broadleaved parkland/scattered trees

Scattered broadleaved trees were present throughout the site. Species present included English oak (*Quercus robur*), willow, hawthorn and rowan.

## Coniferous parkland/scattered trees

An area of scattered larch, pine and spruce trees was present in the north of the Site.

## Coniferous woodland – recently felled

A recently felled conifer plantation was present in the south-west, just outside the site boundary. It has been colonised by scrub species including bramble and willow. Stacked logs were present throughout the area.

## Neutral grassland – unimproved

Areas were present alongside tracks within the Washery and comprised a moderately diverse flora including grasses: Yorkshire fog (*Holcus lanatus*), sweet vernal grass (*Anthoxanthum odoratum*), false oat-grass (*Arrhenatherum elatius*), crested dogs tail (*Cynosurus cristatus*), creeping bent (*Agrostis stolonifera*), and sedges: glaucous sedge (*Carex flacca*) and black sedge (*C. nigra*). Herbs included common yellow rattle (*Rhinanthus minor*), cowslip (*Primula veris*), hairy tare (*Vicia hirsuta*), cuckoo flower (*Cardamine pratensis*) and marsh thistle (*Cirsium palustre*). In unmanaged areas, ruderal and scrub species were present including rose-bay willowherb (*Chamerion angustifolium*), docks (*Rumex* spp), rushes (*Juncus* spp) and tufted hair grass (*Deschampsia cespitosa*), in addition to willow and hawthorn scrub, and oak saplings.

## Acid grassland – semi-improved

The centre of the Site comprised short acid grassland. Species present included red fescue (*Festuca rubra*), sheep's fescue (*F. ovina*), cat's ear (*Hypochaeris radicata*), heath grass (*Danthonia decumbens*), bent grass (*Agrostis* sp.), tormentil (*Potentilla erecta*), pearly everlasting (*Anaphalis margaritacea*) and wild strawberry (*Fragaria vesca*).

## Improved grassland

Grazed fields were present to the east of the Site. They were dominated by perennial rye-grass (*Lolium perenne*). Other species present included Yorkshire fog, white clover (*Trifolium repens*) and rush species.



## Marsh/marshy grassland

Large areas of the site comprised grasslands dominated by rushes. Species present included hard rush (*Juncus inflexus*), soft rush (*Juncus effusus*), yarrow (*Achillea millefolium*), meadowsweet (*Filipendula ulmaria*), cock's foot (*Dactyla glomeratus*), valerian (*Valeriana* sp.), common sorrel (*Rumex acetosa*), ribwort plantain (*Plantago lanceolata*), vetch species (*Vicia* spp.), Yorkshire fog and teasel (*Dipsacus fullonum*). Some areas of this habitat were dominated by purple moor grass. These grasslands were often heavily grazed by sheep, cattle and horses.

## Poor semi-improved grassland

A species-poor semi-improved grassland was present south of the improved fields. Species here included: Yorkshire-fog, soft rush, creeping thistle (*Cirsium arvense*), creeping buttercup (*Ranunculus repens*) and stitchwort (*Stellaria* sp.)

## Bracken – scattered

Stands of bracken (*Pteridium aquilinum*) were present within grasslands outside the site boundary to the west.

## Dry dwarf shrub heath – acid

This habitat, which occurred in the north east corner of the site and in a smaller area which was restored from previous mining activities; was dominated by common heather (*Calluna vulgaris*). Other species present included purple moor grass (*Molinia caerulea*), bilberry (*Vaccinium myrtillus*), soft rush, marsh willowherb (*Epibolium palustre*), hawthorn, Yorkshire fog, willow, bracken, foxglove, red fescue, silver birch, rowan, and *Cladonia* lichens (*Cladonia* spp.).

## Wet dwarf shrub heath

The area that was restored from previous mining activities in the centre of the site comprised an area of wet heath. Common heather and cross-leaved heather (*Erica tetralix*) were present, along with purple moor grass and sphagnum mosses (*Sphagnum* spp.).

## Dry heath/acid grassland

An area of heath/acid grassland mosaic was present south of the overburden mound. Species present included: common heather and European gorse, mouse-ear-hawkweed (*Pilosella officinarum*), cowslip (*Primula veris*) and great wood-rush (*Luzula sylvatica*), with locally abundant willowherb (*Epibolium* sp.).

## Acid/neutral flush

A flush was present within the field in the restored mining area and was dominated by rush species. Water was present at the time of the survey.

## Fen – basin mire

A fen was present within the restored mining area, likely to be fed by the flush within the same field. Common cotton-grass (*Eriophorum angustifolium*) and common club-rush were present (*Schoenoplectus lacustris*).

## Swamp

A reedbed was present on site close to settling lagoons. The vegetation here was dominated by common reed (*Phragmites australis*).

## Standing water

Numerous lagoons and settling ponds were present across the site. The lagoons were generally bordered by scattered scrub or ruderal vegetation with reedmace (*Typha* spp.) often present. Four ponds were present in the centre of the site in a previously restored mining area. These were bordered by rushes, reedmace and sphagnum mosses.

## Running water

Various drains and streams were present throughout the Site. These were typically up to 1 m wide with beds formed of rocks. The River Dulais flows east to west, from the Washery, in the south eastern corner of the site.

## Acid/neutral natural inland cliff

A sharp rock face was present in the acid grassland towards the south of the site.

## Quarry

The opencast mine site comprises a large quarry to the north-west of the Site. A pool of standing water is present at the bottom of the quarry.

## Spoil

Multiple spoil heaps were present on Site, comprised of coal.

## Amenity grassland

A small area of amenity grassland formed an island along Onllwyn Road in Onllwyn village.

## Ephemeral/short perennial

Various areas of the mine site had been colonised by ephemeral/short perennial vegetation. Colt's foot (*Tussilago farfara*) was abundant. Foxglove (*Digitalis purpurea*), mouse-ear hawkweed, and mosses were also present.

## **Intact hedge – species-poor**

Hawthorn-dominated hedges formed borders between fields in the east of the Site.

## **Species-poor intact hedge with fence**

A network of species-poor hedgerows was present in the restored land to the east of the Site. Hawthorn was the dominant species present. A stock fence ran along the hedges and earth banks were present on both sides.

## **Defunct hedge – species-poor**

Species poor hedges with large gaps were present in the restored area to the east of the Site. The dominant species present was hawthorn with occasional willow.

## **Fence**

Stock fences formed borders around fields throughout the Site.

## **Fence with trees**

Part of the access road to Site was bordered by a fence with broadleaved trees, including oak, hazel, hawthorn and willow.

## **Wall**

A length of brick wall was present along an access road connecting the Nant Helen site to the coal Washery.

## **Dry ditch**

Dry ditches formed borders between fields to the west of the site.

## **Earth bank**

Earth banks were present on both sides of species-poor hedgerows in the east of the Site.

## **Buildings**

Single-storey buildings and cabins were present at the Nant Helen opencast mine site.

## **Bare ground**

Areas of bare ground were present on site in the operational mining areas.

## **Gravel/hard standing**

Car parks and operational areas on site comprised areas of hard standing.

## Tarmac surface

Tarmac access roads were present at the Nant Helen opencast mine site. The site is bordered to the north and east by the A4221 and to the south by the A4109.

### 7.3.2 Species

#### 7.3.2.1 Badger

The site contains large areas of woodland and grasslands that offer suitable habitat for badger sett building, commuting and foraging.

During the field survey, two badger outlier setts were recorded in the east of the site. Badger latrines were identified in the grassland to the west of the site and in the conifer plantation north of the site. A badger footprint was found in the mud to the north of the site and pathways and snuffle holes were also recorded. Additionally, during a bat transect survey, a badger was seen crossing the site. During the fungi survey, badger activity was recorded across the site in the form of an outlier sett, badger hair and foraging activity and footprints.

Badger records are confidential due to badgers protected status for welfare reasons. As such, references to locations of badger signs have been excluded from this report including target notes. A full version of this report will be available on request to those who have a legitimate need to view the information.

#### 7.3.2.2 Bats

There are woodlands, hedgerows and waterbodies on site that could be used by bats for foraging and commuting. There are also buildings, structures and trees that may support bat roosts.

Various trees were identified during the field survey as having potential roosting features (TN16, TN17, TN18, TN19, TN20 & TN21, Figure 5). Additionally, three trees with bat boxes were recorded in woodland in the west of the site (TN22, TN23 & TN24, Figure 5). A road bridge (TN25, Figure 5) and railway bridge (TN26, Figure 5) are present to the south-east of that site that may also provide roosting opportunities for bats.

#### 7.3.2.3 Dormouse

No records of dormouse were returned from the desk study and no dormice were found during previous surveys.

However, there is suitable habitat for dormice on site in the form of broadleaved woodland, scrub and hedgerows. These habitats are relatively well connected to other suitable woodland and scrub habitats in the wider area.

#### 7.3.2.4 Otter

There are numerous watercourses on site, which may provide suitable commuting and foraging opportunities for otter. The woodlands and scrub on site may also provide suitable terrestrial habitat for this species.

During the field survey, an otter spraint and a mammal pathway were identified in a stream bed in the north-west of the site (TN27, Figure 5).

#### 7.3.2.5 Water Vole

No records of water vole were returned from the desk study and no signs of water vole were recorded during previous surveys.

However, there are small watercourses on site, which may provide suitable habitat for water vole.

#### 7.3.2.6 Birds

There are woodlands, hedgerows and scrub on site that provide suitable nesting opportunities for birds. The opencast mine may also provide nesting opportunities for species such as peregrine. The wet grasslands on site may provide suitable habitat for wintering bird species. A reedbed was present within the centre of the site (TN54, Figure 5) that may also provide suitable nesting/wintering habitat.

During the field survey, a peregrine was seen flying just south of the mine (TN28, Figure 5). Skylark and cuckoo were also heard on site (TN29, Figure 5). A snipe was seen on top the spoil from the mine and a lapwing was heard here (TN30, Figure 5). During bat transect surveys, nightjars have been heard and seen in recently felled woodland (TN31, Figure 5).

#### 7.3.2.7 Reptiles

The majority of the site provides suitable foraging habitat for common reptiles (adder (*Vipera berus*) common lizard, grass snake and slow worm)) in the form of scrub, tussocky grasslands. Linear features, including pathways, roads, railways and hedgerows may provide suitable habitat for basking reptiles.

#### 7.3.2.8 Amphibians

No records of great crested newts (GCN) were identified and none were recorded during previous surveys.

Numerous waterbodies are present within the site, which may support GCN and other amphibians. The woodland and scrub on site may provide suitable terrestrial habitat for these species. Additionally, seven smooth/palmate newts (*Lissotriton* sp.) were recorded in a puddle during the field survey (TN32).

### 7.3.2.9 Other Species

Mustelid<sup>25</sup> pathways, footprints and scats were recorded on site during the field survey (TN33, TN34, TN35 & TN36, Figure 5). A brown hare was seen during the field survey in the south-west of the site (TN52, Figure 5).

The grassland on site may provide suitable habitat for notable invertebrate species, although none were recorded during the field survey.

### 7.3.2.10 Invasive Non-native Species

Japanese knotweed (*Fallopia japonica*), montbretia (*Crocasmia x crocosmiiflora*), wall cotoneaster (*Cotoneaster horizontalis*) and rhododendron (*Rhododendron ponticum*) were all identified on or near the site (TN37, TN38, TN39, TN40, TN41, TN42 & TN43). A potential American mink (*Neovision vision*) scat was recorded in a ravine on site (TN44). These species are all listed on Schedule 9 of the WCA and/or Part 2 Schedule 2 of The Invasive Alien Species (Enforcement and Permitting) Order 2019.

### 7.3.2.11 Fungi

Various wax cap mushrooms were identified on site during the field survey (TN45, TN46, TN47 & TN48, Figure 5). They were not identified to species level.

## 7.3.3 Target Notes

The target notes identified during the field survey are described in Table 5 below. Photographs are given in Appendix B.

Table 5. Target notes recorded on site.

Target Note Number	Target Note Description
TN1	Bee orchid in woodland.
TN2	Ant hills present within the grassland. Suitable reptile habitat.
TN3	Confidential record
TN4	Confidential record
TN5	Confidential record
TN6	Confidential record
TN7	Confidential record
TN8	Badger footprint.
TN9	Confidential record
TN10	Mammal track.
TN11	Confidential record

<sup>25</sup> Of the Mustelidae family, including pine marten (*Martes martes*), polecat, American mink, stoat (*Mustela erminea*), weasel (*M. nivalis*), badger and otter.

Target Note Number	Target Note Description
TN12	Confidential record
TN13	Confidential record
TN14	Confidential record
TN15	Confidential record
TN16	Oak tree with high bat roost suitability. Knot holes present and possible smoothing from use.
TN17	Oak tree with high bat roost suitability. Knot holes and staining present.
TN18	Oak tree with high bat roost suitability. Multiple cavities and rotten limbs.
TN19	Mature birch tree with bat roost suitability. Large callous cavity at base of trunk to 1.5m high.
TN20	Oak tree with bat roost suitability. Multiple holes and cracks.
TN21	Tree with 3 bat boxes. No bats present.
TN22	Tree with 3 bat boxes. No bats present.
TN23	Tree with knot hole and possible cavity. Bat roost potential.
TN24	Oak with two wooden bat boxes. No bats visible but possible staining. Need long extension inspection camera to check fully.
TN25	Road bridge in good condition. Some holes in brickwork on adjoining wall and under the bridge. Low bat roost suitability.
TN26	Railway bridge. Not possible to view closely to assess bat roost suitability.
TN27	Otter spraint on rock in stream bed by culvert. Mammal path crossing track over top.
TN28	Peregrine spotted flying over the opencast mine.
TN29	Skylark seen. Cuckoo heard in the distance.
TN30	Snipe seen. Lapwing heard in distance.
TN31	Nightjar seen in recently felled woodland.
TN32	Seven newts ( <i>Lissotriton</i> sp.) in puddle on track.
TN33	Mustelid tracks, 40cm stride.
TN34	Mustelid prints.
TN35	Small mustelid prints.
TN36	Mustelid scat x2. Twisted at end. Unpleasant odour but not of fox or mink. Fur in scat.
TN37	Single Japanese knotweed stand in coal washery just outside fenced ponds.
TN38	Montbretia along cycle track.
TN39	Cotoneaster near path.
TN40	Cotoneaster near path.
TN41	Rhododendron in woodland.
TN42	Various stands of rhododendron.
TN43	Japanese knotweed, 10 m x 5 m stand.
TN44	Potential mink scat. Unpleasant odour.

<b>Target Note Number</b>	<b>Target Note Description</b>
TN45	Wax caps.
TN46	Wax caps.
TN47	Wax caps.
TN48	Wax caps.
TN49	Railway track.
TN50	Sand horse arena.
TN51	Woodland with bluebell understorey.
TN52	Brown hare sighting.
TN53	Flower-rich marshy grassland.
TN54	Reedbed. Suitable for breeding/wintering birds.



## 8 Conclusions

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The site is in close proximity to fourteen statutory designated sites, the closest of which is Gors Llwyn, Onllwyn SSSI. Eight non-statutory designated sites (all SINCs), were identified within close proximity to the site, three of which were within the site: Dyffryn Cellwen, Gorsllwyn Meadows and Onllwyn Coal Washery.

Semi-natural broadleaved woodlands and conifer plantations were present on the borders of the site, with marshy and acid grassland making up the majority of the central area of the site. Scrub and ephemeral vegetation were present in the operational areas of the opencast mine. Buildings, tarmac, and bare ground were also present in operational areas of the site. Previously restored mining areas comprised heathland habitat and semi-improved grasslands. Improved and semi-improved fields on site were generally bordered by species-poor hedgerows and various flowing ditches bisected the site. Standing water bodies were also present on site in the form of ponds and settling lagoons.

Habitat with the potential for supporting the following protected and/or notable species was identified during the surveys: badger, bats, dormice, otter, water vole, birds, reptiles, amphibians, other mammals, invertebrates, and fungi. Invasive non-native species were also identified within the site, comprising rhododendron and cotoneaster.

A full ecological impact assessment will be included within the Environmental Statement for the project and this will include an assessment of the significance of impacts from the project on the ecological receptors on site. This will also detail any necessary mitigation or compensation measures required to ensure there is no significant effect on ecological receptors within the site.

This report is the result of the survey work undertaken between November 2018 and November 2019. This report refers, within the limitations stated, to the condition of the site at the time of the surveys. Changes in legislation, guidance, best practice, etc. may necessitate a re-assessment/survey. No warranty is given as to the possibility of future changes in the condition of the site.

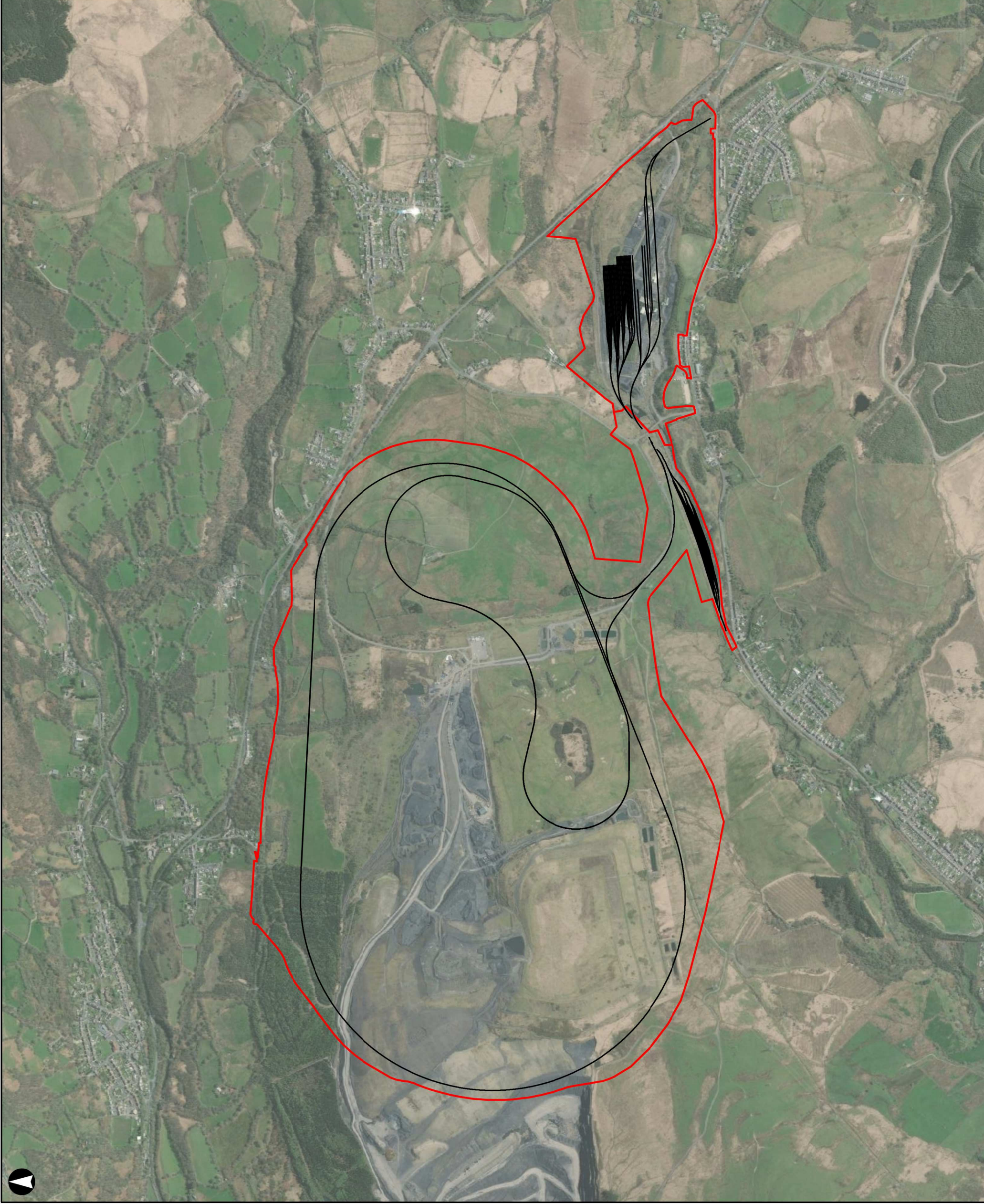
The results of these surveys are considered valid for a minimum of 18 months to a maximum of 3 years. If more than 18 months elapses before any planning application is submitted, the requirement for repeat surveys should be reviewed<sup>26</sup>.

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<sup>26</sup> Chartered Institute of Ecology and Environmental Management (2019). *Advice Note on the Lifespan of Ecological Reports and Surveys*.

## Figures

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**Legend**

- Planning Development Boundary
- Site Layout Plan
- Proposed Access Road

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

P01.3	2020-06-05	KD	CP	NH
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Job Title  
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Figure Title  
**SITE LOCATION**

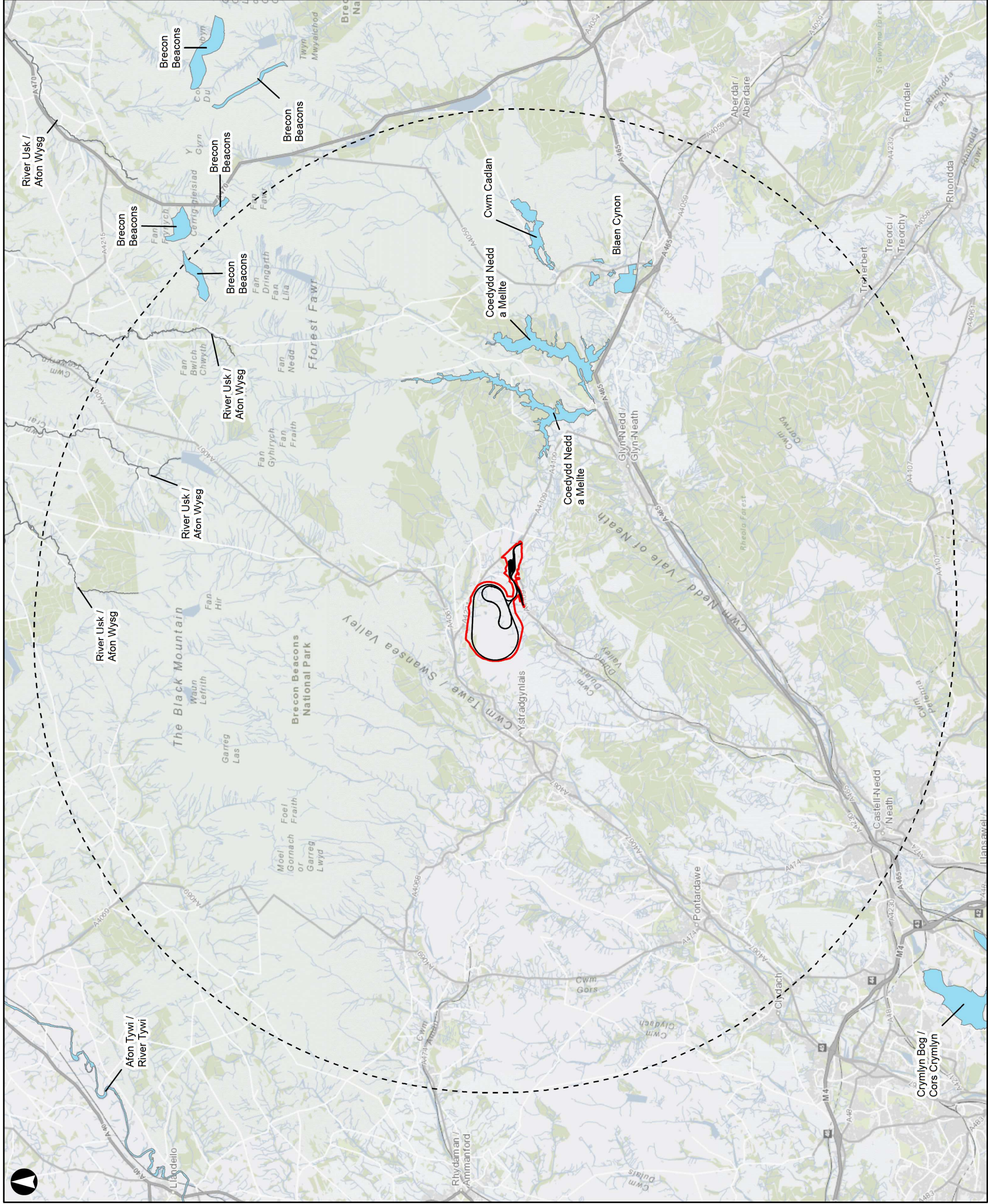
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Job No  
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Drawing Status  
**For Issue**

Drawing No  
**Figure 7.1**

Issue  
**P01.3**



- Legend**
- Planning Development Boundary
  - Site Layout Plan
  - Proposed Access Road
  - Study Area - 15km Buffer
  - Special Area of Conservation (SAC)

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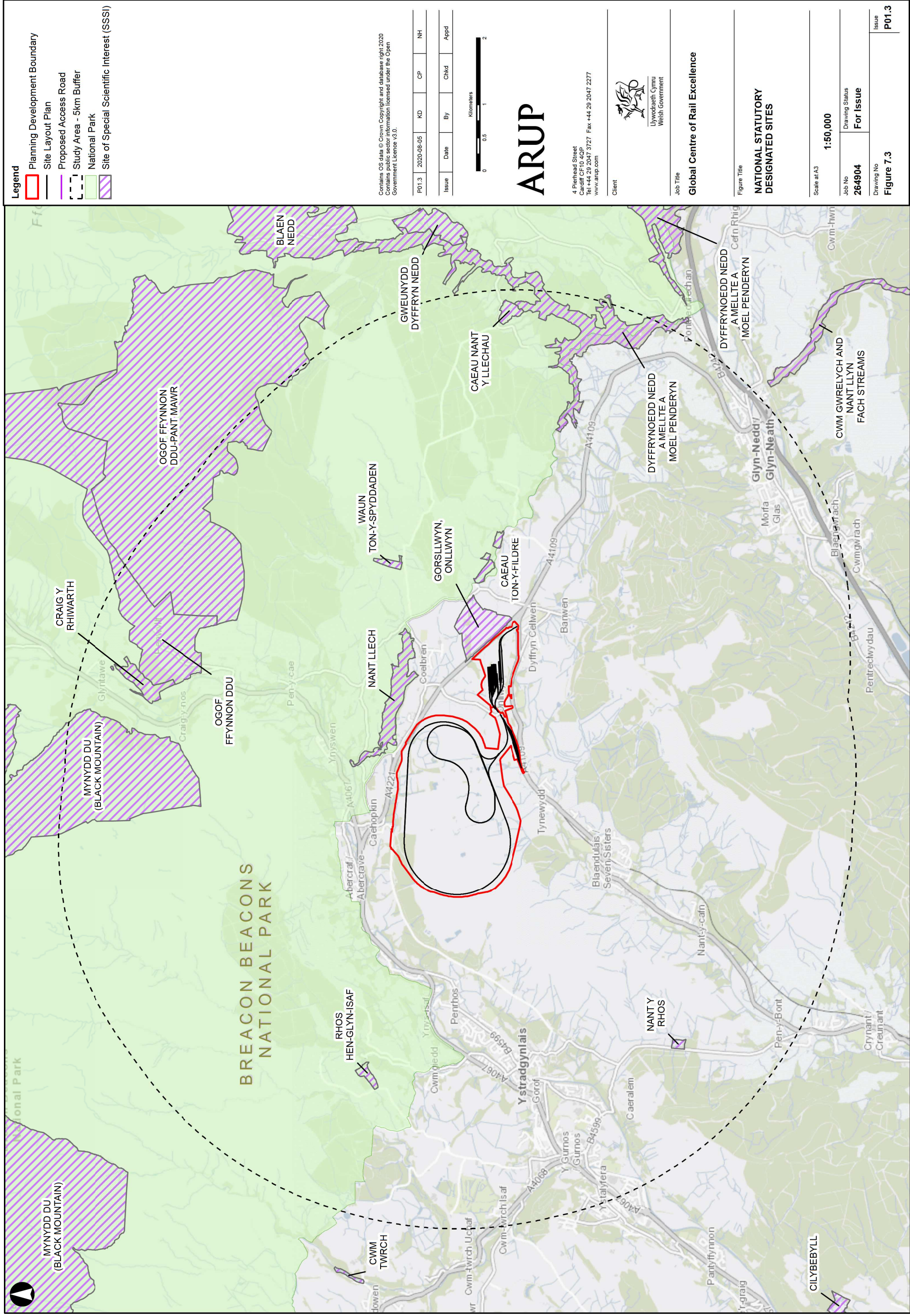
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Job No  
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Drawing Status  
**For Issue**

Drawing No  
**Figure 7.2**



- Legend**
- Planning Development Boundary
  - Site Layout Plan
  - Proposed Access Road
  - Study Area - 5km Buffer
  - National Park
  - Site of Special Scientific Interest (SSSI)

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Figure Title  
**NATIONAL STATUTORY  
 DESIGNATED SITES**

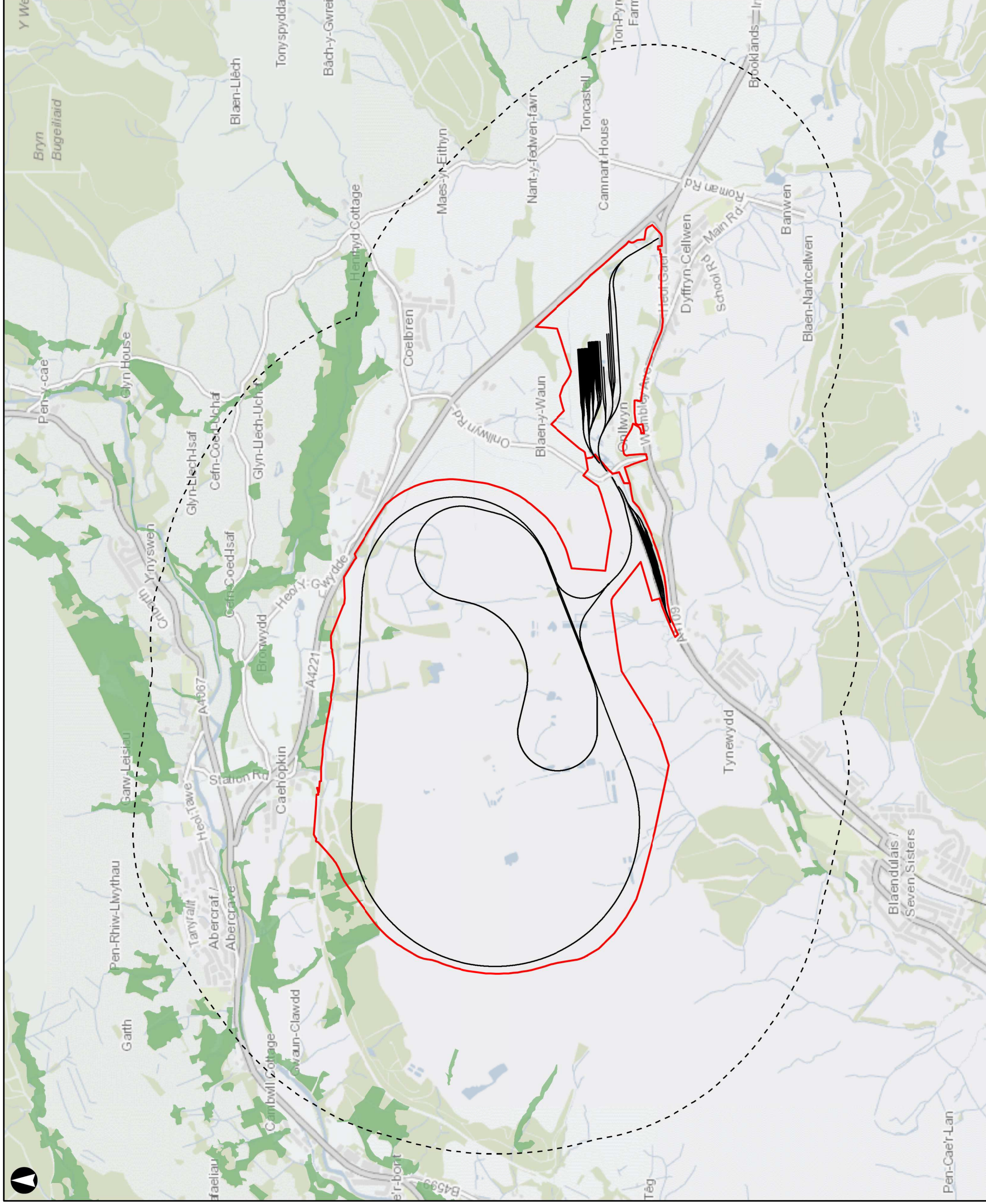
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Job No  
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Drawing Status  
**For Issue**

Drawing No  
**Figure 7.3**

Issue  
**P01.3**



- Legend**
- Planning Development Boundary
  - Site Layout Plan
  - Proposed Access Road
  - Study Area - 1km Buffer
  - Ancient Woodland Inventory

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Figure Title  
**ANCIENT WOODLAND**

Scale at A3  
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Job No  
**264904**

Drawing Status  
**For Issue**

Drawing No  
**Figure 7.4**

Issue  
**P01.3**