



RHYDYCAR WEST, MERTHYR TYDFIL

HEADS OF TERMS
for
NATURE CONSERVATION MANAGEMENT PLAN

November 2024
Bioscan Report ref: E1835-MP-v3



COMMISSIONED BY

Marvel Ltd

**Rhydycar West, Merthyr Tydfil
Heads of Terms
for
Nature Conservation Management Plan**

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1. BACKGROUND, SCOPE AND PURPOSE OF THIS MANAGEMENT PLAN

1.1. Site location and planning context

1.1.1. This document sets out the Heads of Terms (HOT) for a Nature Conservation Management Plan (NCMP) for undeveloped Land at Rhydycar West, Merthyr Tydfil. It accompanies a planning application for development of a “*mixed leisure development comprising Indoor Snow Centre (up to 39,200 sq m), Water park (up to 7,500 sq m), Indoor Activity Centre (up to 9,000 sq m), Outdoor Activity Centre, Hotel Accommodation (up to 418 bedrooms), Woodland Lodge accommodation (up to 30 units), car parking (up to 830 spaces) and associated earthworks, access, drainage, servicing and utilities connections/infrastructure*” (Merthyr Tydfil County Borough Council Planning Application reference P/23/0065). The proposed development site, which extends to some 30.4 hectares, is shown on **Figure 1**¹. The NCMP relates to the balance of the applicant’s landholding, being some 209.75 hectares of undeveloped land surrounding the proposed development and which includes land subject to SSSI and/or SINC designations.

1.1.2. Planning application P/23/0065 has yet to be determined. It is envisaged that as and when a positive determination (i.e. a grant of planning consent) is achieved, the Heads of Terms set out within this document will be worked up into a fully detailed and finalised Nature Conservation Management Plan, in liaison with relevant stakeholders such as Natural Resources Wales and Merthyr Council. It is envisaged that this finalisation process would be secured by means of a planning condition on any such consent.

1.2. Scope and purpose

1.2.1. The purpose of providing a HOT version of the NCMP at this stage is to provide consultees such as Natural Resources Wales with sufficient detail to enable them to provide advice and comment on the relative weight to be attached to the delivery of positive nature conservation management for the balance of the landholding, as set against the acknowledged impacts from the development (as set out and assessed in the submitted Environmental Statement).

1.2.2. The scope of the management plan therefore covers the undeveloped balance of the Marvel landholding at Rhydycar West, comprising some 175.3ha of the Cwm Glo a Glyndyrys SSSI, and some 17.3ha of additional land, mostly falling within the Rhydycar West SINC.

1.2.3. The management plan also covers some 17ha of additional adjoining SINC land at Blaencanaid Farm acquired for the purposes of compensatory habitat creation.

¹ It should be noted that the redline boundary for the proposed development encompasses a larger area of land than required for construction and operation: specifically, it includes a number of scheduled monuments that will be subject to restoration and/or stabilisation works as part of the benefits of the scheme. These areas will fall outside the operational development site and therefore are included within the scope of this nature conservation management plan. The works proposed to these structures are detailed in a Heads of Terms Conservation Management Plan produced by EDP.

2. BASELINE ECOLOGICAL STATUS AND CONDITION

2.1. Introduction

- 2.1.1. The extent of the land that would be subject to nature conservation management under the terms of a future planning consent is shown on **Figure 1**. Almost the entirety of this area falls within the Cwm Glo a Glyndyrys SSSI, with the remainder almost entirely covered by SINC designations². The extent of the applicable SSSI and SINC designations is also shown on **Figure 1**.
- 2.1.2. The ecological resources within this land area have been documented to an unusually high level of detail in the course of several survey campaigns since the mid-1990s. Most recently, this includes a series of intensive surveys across a wide range of taxa carried out by Bioscan since 2015, the results of which have informed the design and impact assessment of the leisure development proposed under application P/23/0065.
- 2.1.3. The baseline conditions on the land subject to this NCMP are therefore well known. They are described in detail in the application submission documents, and summarised below in terms of four categories: land falling within the SSSI, land falling outwith the SSSI but subject to SINC designation, non-designated land within the Marvel landholding at Rhydycar West and additional land at Blaencanaid Farm secured expressly for delivery of compensatory habitat enhancement and management.

2.2. The Cwm Glo a Glyndyrys SSSI

- 2.2.1. The SSSI was first notified in 2003 and extended to its current extent (181.3ha) in 2008/09. It is designated due to the presence of extensive areas of unimproved marshy, neutral and acid grassland, the intimate association of these habitats as a matrix with others (including woodland and heath) and the “outstandingly diverse” assemblage of grassland fungi, for which it is cited as one of the best sites in Britain, and one of the best sites for waxcaps (*Hygrocybe* spp) in western Europe. The citation is reproduced at **Appendix 1**. Some 6ha of the SSSI will be lost to the development, whilst the remainder (175.3ha) will come under the scope of this management plan.
- 2.2.2. The Site Management Statement (SMS) for the SSSI is reproduced at **Appendix 2** and the list of PDOs (potentially damaging operations) is attached at **Appendix 3**. The SMS states that the SSSI has four special features, as follows:

“Species-rich neutral grassland is now very rare. In the past, much of the grassland in Britain on free draining soils would have been like this. However, between the 1930s and 1980s, it has been estimated that 97% of this habitat was

² As will be noted from Figure 1, the SSSI overlies most of the Cwm Glo SINC and much of the Rhydycar West SINC. References to land within the SSSI should also therefore be taken to include reference to this underlying SINC designated land. Land at Blaencanaid Farm is subject to SINC designation only, although it was contemplated for SSSI designation in the past.

lost, mainly to intensive agricultural improvement. Cwm Glo a Glyndyrys SSSI is one of the largest remaining fragments in the Mid Glamorgan area.

Species rich neutral grassland is very rich in plant life, and can support as many as 30 species of plant per square metre. These in turn provide food for large numbers of insects, birds and mammals. By comparison, modern agricultural grassland may have as few as one or two species of plant and supports few insects and birds.

Marshy grassland *is also of particular interest on this site. This is a very rare habitat, found on more waterlogged ground. Much of the remaining lowland marshy grassland in Britain is found in Wales and we have a special responsibility for its conservation. Like species rich neutral grassland, most has been lost in the 20th century. It is rich in plant species, and is particularly important for a number of rare butterflies, such as the marsh fritillary. Cwm Glo a Glyndyrys SSSI is one of the largest remaining examples of lowland marshy grassland in the Mid Glamorgan area.*

Lowland acid grassland *is also a rare habitat in Wales, found where the pH of the soil is between 4 and 5. Like species-rich neutral grassland, much of this habitat has been lost to agricultural intensification, and in some areas, afforestation. Acid grasslands tends to be managed as pasture. At Cwm Glo a Glyndyrys this habitat has developed on former mining spoil heaps.*

*Finally, Cwm Glo a Glyndyrys is also important for its assemblage of **grassland fungi**. The mushrooms and toadstools that can be seen on the site, particularly in the autumn, are the fruiting body of the fungi, most of which is hidden below ground. These species rely on grassland that has been not been disturbed by ploughing or subject to applications of fertiliser or other agro-chemicals. As these habitats have become increasingly scarce in modern Wales, the fungi that rely on them have become increasingly rare. Nearly 40 species of fungus have been recorded at Cwm Glo a Glyndyrys making it one of the best sites in Britain."*

- 2.2.3. The SMS also recognises that the SSSI contains a number of other habitats and species that add to the overall wildlife interest, including woodland, wet heath and dry heath, smaller areas of swamp and small ponds. Surveys commissioned by the then CCW in the 1990s and 00s documented the presence of locally rare and nationally scarce plants, breeding birds and invertebrates.
- 2.2.4. There is understood to have been no subsequent site condition assessments by NRW but surveys undertaken since 2009 and up to 2022 (and in particular those carried out by Bioscan since 2015) have added to this baseline understanding and provide a very good appreciation of current site condition. There follows a discussion of site condition drawing on the results of the extensive survey work undertaken by Bioscan since 2015 considered against the principal and secondary interest features of the SSSI, and against the position as documented by CCW in 2005-2008.

2.3. Current condition of SSSI principal interest features

- 2.3.1. Grassland fungi: against the baseline set by Evans and Mitchell (Evans and Mitchell 2007) reporting on the distribution and abundance of target grassland species (particularly *Hygrocybe* spp.), there have been changes associated with fluctuations in grazing patterns, particularly on the free-draining acid and short-cropped grasslands on former colliery tips. The most recent survey commissioned by Bioscan (Sturgess 2020) found that the site assemblage still comfortably exceeded the threshold for SSSI designation, and the main loci of importance remained the same, albeit it recorded a substantially lower number of fruiting bodies and some contraction in the spatial extent of areas where high waxcap diversity was formerly found. A general reduction in grazing was identified as a likely cause, albeit also implicated at a smaller scale was localised overgrazing and supplementary feeding. Reduced grazing pressure leads to taller and in some cases ranker swards which suppress fruiting body production and in time further leads to scrub development which has been a significant influence on the site over the last twenty years. **The current condition of the grassland fungi resource on the site can therefore be best described as still undoubtedly of national importance, but potentially in decline and certainly under threat from lack of suitable grazing management.**
- 2.3.2. Marshy grassland, species-rich neutral grassland and acid grassland communities: change in the overall distribution of these habitats has been subtle and ostensibly slight but locally significant since the comprehensive survey carried out for CCW in 2005 (Bosanquet and Stevens 2005). As discussed later in this document, analysis of historic habitat mapping against the current position suggests particular losses have arisen in marshy grassland habitats in the north-west and north of the site, with much more localised losses of drier grassland (or deterioration in quality), including in the latter case to expansion of bracken. Equally, the condition of these habitats has been subject to varied levels of change, depending on regularity of grazing management and issues such as localised burning. Application of Common Standards Monitoring (CSM) principles by Bioscan in 2015 indicated that in general the more expansive representations on the site are in good to moderate condition and only minor loss of the area of these habitats to scrub has been experienced since 2005, generally in more outlying examples in the extreme NW and NE of the site. It was commented by Bioscan at that time that speed of invasion is evidently retarded or held in abeyance in some areas by ground conditions unfavourable to rapid tree and shrub establishment. In general, the site retains extensive representations of all these grassland habitat types, and the intimate juxtaposition of these with adjoining woodland, scrub, heath and mire is intact. **However, scrub invasion and deterioration of condition due to undergrazing are accelerating threats, particularly it seems to damper grasslands, but also to dryer grasslands on the site.**

2.4. Current condition of SSSI secondary interest features

- 2.4.1. Woodland, heath and mire habitats (NB –Molinia dominated M24-M25 mire communities are covered under ‘marshy grassland’ principal interest feature above): there has been little significant change in terms of the total areas of these habitats

relative to the 2005-2007 position, although as discussed above there appears to have been a disproportionate reduction in the extent of M23 in the north and north-west of the site to scrub encroachment as compared with other habitats. Some representations of dry heath on former colliery tip slopes are also now being shaded out by adjacent overshadowing scrub. Whereas slight positive changes in the diversity of secondary woodlands on the site due to advancing maturity would be expected, there is very little evidence that this is as yet a substantial influence on overall woodland condition, albeit subtle increases in the availability of standing and dead wood on the site, (and by extension opportunities for cavity nesting/roosting fauna) have been noted in the longer-established woodland areas. **In general, whilst the condition of the more established woodland habitats on the site may be improving very gradually as a consequence of time (and some outward expansion of extent), the position with heath and mire habitats is one where scrub invasion appears to have reduced extent and condition since the 00s and it poses a more immediate, tangible and ongoing threat to future condition.**

- 2.4.2. Scarce plants: locally uncommon or rare species documented from the site such as whorled caraway, meadow thistle, petty whin and intermediate lady's mantle remain present, albeit some stations for such species are under threat from scrub invasion, particularly where in occluding clearings in otherwise dense scrub/woodland. **The site remains of at least county (Glamorgan) importance for scarce plants, but again vagaries in grazing management, ongoing scrub development and the implications of these factors for open habitats, present a risk to maintaining that status.**
- 2.4.3. Marsh fritillary: as at 2020, the status of this species on the site (full UK protection, Annex II EC Habitats Directive, Section 6 Environment (Wales) Act 2016) appeared arguably at its healthiest since the 1990's with larval webs and adults found in several areas of the site where the foodplant (devil's-bit scabious) is abundant. **The future prospects of this species are considered to remain good in the short term, but grazing management will need to be optimised to ensure that there is always a mosaic of proximal habitat patches with some areas where the foodplant is in the apparent 'sweet' zone of short to medium height in swards which are neither over- or under- grazed. A significant challenge for management will be ensuring a sufficient stepping stone network of such habitat patches to enable colonisation/re-colonisation of peripheral areas, including those where more direct habitat links might be affected by the intervening development site.**
- 2.4.4. Other invertebrates: surveys since 2015 have recorded a notable assemblage of wetland beetles (including two nationally rare and eleven nationally scarce species from this taxonomic group), confirmation of the presence of the moths white barred clearing (first record for Glamorgan since 1910) and scabious longhorn (first record for Glamorgan since 1920), several other nationally scarce species, the 'Welsh Priority' butterflies marsh fritillary (discussed above), small pearl bordered fritillary and dingy skipper and the 'Welsh Priority' brown banded carder bee. Additional rare, scarce or 'Priority' species, recorded include the millipede *Ceratosphys amoena* subsp. *confusa*, the brown banded nomad bee, and a number of additional Hymenoptera and Coleoptera of note. The flower-rich grasslands and colliery spoil

habitats are a focus for several of these species, with the area of marshy and standing water habitats in the south-east of the SSSI abutting the A470 also of note. Other macro-habitats that are important include the 'ffridd' habitats on the higher slopes in the western part of the site that are the focus of the site's small pearl-bordered fritillary population, as well as open grown birch trees in the same area that are likely favoured by white barred clearwing. **The condition of the invertebrate assemblage is adjudged, on the basis of the available data, as stable and/or good, albeit scrub encroachment and lack of grazing presents a long-term threat, along with the occlusion and terrestrialisation of ponds and other wetland habitats.**

2.4.5. Birds: Since 2015 the SSSI has supported up to three breeding territories of nightjar (Welsh Priority species, Annex 1 Birds Directive, UK Red List), as well as willow tit (Welsh Priority, UK Red List), redstart (UK Amber List), cuckoo, (Welsh Priority, UK Red List), wood warbler (Welsh Priority, UK Red List) tree pipit (Welsh Priority, UK Red List), spotted flycatcher (Welsh Priority, Red List), lesser redpoll (Welsh Priority, UK Red List), stonechat, tawny owl (Amber List), raven and high densities of willow warbler (Amber List), bullfinch (Welsh Priority, UK Amber List), song thrush (Welsh Priority, UK Amber List) and other more common species. Species confirmed to date only on a transient basis within the Application Site, but which may breed nearby, include crossbill (Schedule 1), kingfisher (Schedule 1) and dipper (Amber List). **Taking into account national population dynamics, the site is assessed to be in fairly stable condition as regards retaining this assemblage, but factors such as long-term effects of scrub invasion into open areas and/or the likely increase in recreational pressure on the SSSI following the development are relevant considerations for this management plan.**

2.4.6. Great crested newt: The fortunes of this species at this site have been subject to some fluctuations in pond occupancy, range and population size since 2015, but no large-scale change. The presence of ponds used by the species within the proposed development area will require that licensed mitigation be implemented for this species, including necessary compensatory measures to ensure favourable conservation status is maintained. The management of the wider site will therefore incorporate these measures, licenced as and where necessary, to enhance the overall availability and quality of habitat for this species. **The current status of this species on the site is assessed as likely to be one of long-term decline due to terrestrialisation of ponds and their transition to suboptimal habitat and eventual loss, and the scope for improved management of such features to substantially improve conditions for great crested newts is a key opportunity for this management plan.**

2.5. The Cwm Glo a Glyndyrys and Rhyddcar West SINC

2.5.1. The Cwm Glo SINC (SINC 12) is largely coterminous with the northern part of the SSSI although it includes small areas of additional land, and excludes a couple of very small areas. The site is stated to qualify under a range of applicable SINC criteria 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 site's importance for grassland fungi.

- 2.5.2. The Rhydycar West SINC (SINC36): straddles the southern boundary of the landholding, with about 50% of the designated area falling within it and the rest covering land further to the south. This SINC covers all of the area within the landholding that falls outside the SSSI boundary in the south-east. The designated area is stated to qualify under a range of applicable SINC criteria on the basis of the mosaic of unimproved and species-rich grassland, heath and other open habitats, extensive wet woodlands, areas of upland oak woodland, 'ffridd' complexes, the presence of great crested newts, badgers and noctule and pipistrelle bats, the possibility of water vole and marsh fritillary, a range of nationally scarce invertebrates, UK BAP Priority bird species (equivalent to 'Welsh Priority' species as referred to elsewhere in this document), the butterflies dark-green fritillary and small pearl-bordered fritillary and a range of uncommon or scarce vascular plants.

2.6. Current condition of SINC interest features (where not already considered above)

- 2.6.1. Bats: Active and static surveys of bat activity since 2015 have recorded a diverse range of 14 bat species with summer, autumn and winter roosts confirmed (or strongly suspected on balance of evidence) in a number of built structures falling within the management plan area. Species found in roosts to date have included lesser horseshoe and brown long-eared bat, with *Myotis* species suspected to roost in bridge structures and both *Myotis* and horseshoe bats suspected to roost in the nearby Aberdare tunnel.
- 2.6.2. In addition to the above bat species confirmed as using roost sites, the following additional bat species have been recorded on the site during activity surveys since 2015: greater horseshoe, barbastelle, Daubenton's, Whiskered/Alcathoe/Brandt's, noctule, serotine, common, soprano and Nathusius' pipistrelle. **The current status of bat species on the site is assessed to be stable.**
- 2.6.3. Reptiles: Adder, grass snake, slow worm and common lizard have all been recorded on the landholding since 2015, although specific surveys of the Application Site in 2021 only confirmed populations of the last three. This included exceptional numbers of common lizard. These species are distributed across the landholding wherever suitable habitat structure (open habitats and habitat edges, not woodland) persists. **The current status of reptile species on the site is assessed to be stable and likely near-optimum, albeit the lack of grazing pressure poses a long-term threat in terms of grassland structure, loss of basking opportunities and habitat edges.**

- 2.6.4. Badger: Badgers are resident on the site with field sign evidence (prints, worn paths, snagged hair and snuffle holes) found throughout, though only one sett has been located to date. **The status of this species on the site is assessed to be stable.**

2.7. Blaencanaid Farm

- 2.7.1. The Blaencanaid SINC (SINC No. 35) covers some 17.5ha of land adjoining the Cwm Glo a Glyndyrys SSSI to the south-west. Marvel have agreed an option to acquire this land.
- 2.7.2. The SINC is described as a *“series of species-rich semi-improved neutral grassland enclosures surrounded by a large conifer plantation. Also contains small areas of acid and marshy grassland and some scattered scrub and hedges”*. There are relicts of MG5a and MG5c unimproved grassland, as well as pockets of M23 marshy grassland and a little U4 acid grassland, alongside scrub, bracken and hedgerows, albeit much of the grassland on the site falls within the category of ‘semi-improved’. There is also an area that has been used as a motorbike scrambling track, which is a complex of relict MG5, semi-improved grassland, disturbed ground and other habitats.

3. DESIRED STATE

3.1. SSSI Site Management Vision

- 3.1.1. The Site Management Statement for the Cwm Glo a Glyndyrys SSSI includes the following vision statement:

“A visit to Cwm Glo a Glyndyrys SSSI during the summer months reveals the wide range of habitats that can be found across the site. Different grassland types are mixed with areas of heathland and woodland, which create an attractive mosaic of habitats rich in wildlife. These habitats exist not only on undisturbed land, but have also developed on the numerous mine spoil heaps that are scattered across the hillside.

The species-rich neutral grassland is an attractive mix of herbs such as black knapweed, bird’s foot trefoil, autumn hawkbit, cat’s ear and red clover, together with grasses such as crested dog’s-tail, red fescue and common bent. Where the soils become slightly acidic, species such as tormentil, devil’s bit scabious and heath grass can also be seen.

From a distance, the marshy grassland can look a slightly ‘brownier’ green than any agriculturally improved fields in the surrounding area.

This grassland can range from a mix of grasses and sedges such as purple moor-grass and glaucous sedge, dotted with flowers such as devil’s bit scabious and meadow thistle. In places, rushes such as soft rush and sharp-flowered rush predominate, with herbs such as greater bird’s-foot trefoil, ragged-robin and water mint. In places the marshy grassland has quite a ‘heathy’ character, with heather and cross-leaved heath both present, together with lousewort and a range of sedges.

Where the soil is still acid, but drier, lowland acid grassland can be found. The main grasses here are sheep’s fescue, mat-grass and common bent, with a range of herbs. Some areas of acid grassland can have relatively few herb species, such as heath bedstraw, but in places these can be joined by heather, and bilberry. Very locally, the acid grassland can be quite species rich, with betony, devil’s bit scabious and bird’s-foot trefoil all present. On the sides of spoil heaps, the acid grassland can be very freely draining. Here, species capable of withstanding long periods of drought, such as mouse-ear hawkweed and sheep’s sorrel, are found. All the grasslands range from around 5cm in height up to about 30cm, and are usually easy to walk though. Species that might indicate agricultural improvement or the application of fertilisers, such as rye grass, docks or nettles are comparatively rare. Bracken is present on parts of the site, but its range is not increasing.

In autumn, the grasslands are studded with a wide range of mushrooms, toadstools and other fungi. Particularly noticeable are the colourful waxcap species, so named because their waxy appearance."

- 3.1.2. There is no equivalent 'official' vision for the non-SSSI parts of the site, but it is considered that the following paragraph encapsulates an appropriate extension of the above for these non-SSSI (and in part SINC) areas, including Blaencanaid Farm:

"The non-SSSI parts of the site, comprising extensive areas of well-established secondary woodland and mature scrub in the south, and localised areas of pasture within and at the periphery of the site, provide a contrast to the open hillsides, damp grasslands and former colliery tips. They comprise of damp woodlands, often along stream-sides, where the calls of willow tit and spotted flycatcher ring out, and drier stands with over-mature and/or veteran trees and with a good standing and fallen deadwood component providing a resource for invertebrates, hole nesting birds and bats. The pastures are in slow transition and recovery from past agricultural improvement, disturbance or overgrazing, with invasive species issues addressed, and they now provide an essential cog in the management machine in the form of turn out or rotational resting areas for the livestock that are critical to the optimal maintenance of the site, as a source for hay and winter feed, and as an extension to the Lowland Meadow habitats within the SSSI, including additional habitat for species such as marsh fritillary and great crested newt."

3.2. Desired state

- 3.2.1. It is relevant to the task of settling on a point in time (or multiple points in time) where the site can be considered to have been (or in future again be) in optimum or near-optimum condition, to consider the position at the time of the SSSI expansion in 2008/09. As part of the process of investigating the potential for, and ultimately pursuing the extension of the SSSI at that time, a thorough field and desk-based study was commissioned by the then CCW and carried out between 1994 and 2005 (Bosanquet and Stevens 2005). One output of this study was a habitat map which (*inter alia*) accurately plotted the extent at that time of woodland and scrub cover (and indeed bracken cover) relative to the grassland, mire (including marshy grassland) and heathland habitats that form the principal interest features of the site.
- 3.2.2. Given that this study formed the scientific platform for SSSI notification, the condition of the site at that time, as recorded and mapped by Bosanquet and Stevens, is considered to provide an appropriate 'desired state' to which management prescriptions can aim to work towards, at least for the first 5-10 years prior to comprehensive review. This desired state is indicated at **Figure 2**. Consideration of the site's status at that time with the NRW vision statement in the SMS as quoted above, as extended by the supplementary paragraph for non-SSSI land at 3.1.2, and in consideration of the requirements of the various species of conservation interest discussed in the previous section of this document, reinforces

that this approach does not generate any conflict with other appropriate nature conservation aims.

- 3.2.3. To assist with identifying location-specific prescriptions and management strategies for achieving this desired state, Bioscan have undertaken an exercise of overlaying Bosanquet and Stevens' habitat map from their 2005 report with modern day aerials, calibrated by ground truthing and close experience of the site. This allows the main loci of habitat losses to scrub invasion, expansion of dense bracken cover, Japanese knotweed invasion and other changes in the distribution and quality of the habitats on the site to be identified and mapped, and priorities for management intervention thereby highlighted.
- 3.2.4. The outline management prescriptions on the following pages are a response to and product of the outputs of this exercise.

4. MANAGEMENT PRESCRIPTIONS

4.1. Management compartments

- 4.1.1. The site has, in the recent past, been divided into separate grazing compartments, and whilst some of these have lapsed as distinct operational entities, much of the fencing that demarcated them is still present. The operational development site will also be securely enclosed with perimeter fencing which will create, *de facto*, additional compartmentalisation in the southern part of the site.
- 4.1.2. Aside from these factors, considerations relevant to the definition of management compartments include matters such as livestock type, availability and practical issues such as access for import/export of stock, rotation of stock, hay and winter feed, husbandry, and (not least) the network of formal and informal footpaths across the site. Also relevant is the hierarchy of priority areas for intervention to arrest negative factors, and practical considerations around managing and delivering such intervention.
- 4.1.3. In light of all of the above, a series of seven management compartments has been settled upon, the provisional delimitation of each being shown on **Figure 3**. For much of the SSSI land, the demarcation of these compartments on the ground will be virtual rather than physical – by means of fenceless grazing, albeit where existing boundaries remain, such fences will be repaired and/or maintained. Existing enclosed pastures within and at the periphery of the SSSI, including those within Blaencanaid Farm, will be maintained as such. Wholly new areas of fencing will be limited to a short section west of the proposed development site where a pinch point will be created that offers a logical compartment division. This will segregate the Abercanaid slopes area in the south from the northern part of the SSSI.

4.2. Management prescriptions by compartment

- 4.2.1. Outline management prescriptions for each of the compartments shown on **Figure 3** are provided below.

Compartment	Proposed management
1 – land west of Gernant Lane. Already fenced and managed by horse grazing, albeit this has not prevented significant scrub development into habitats of value, and supplementary feeding has created a locus of damage near the Lane itself.	- Adjust grazing density/duration to optimum (e.g. 0.4. LU/ha/yr) and consider a total or partial switch to cattle in conjunction with stock grazing of compartment 2 below. - Identify fixed location or locations for supplementary feeding/water stations on low value habitat (e.g. freshly cleared scrub). - Remove 2.2577ha of developing and/or mature scrub from habitats of value (e.g. M23, M24, M25) (see Figure 2) in a 10 yr phased campaign of c.0.225ha per year, prioritising obviously recoverable areas and/or areas at 'tipping point' prior to loss

	to overshadowing (survey required). Aim for phased reversion over time to extents shown on desired state map. • Unless easily accessible and extractable without damage to ground, dispose of scrub arisings on-site through chipping into 'sacrificial' established scrub areas (to be identified and marked on a map for contractors' use) or use as dead hedging to control or discourage livestock access to sensitive habitats within compartment, if felt appropriate. Explore other use/disposal options in liaison with local groups (e.g. charcoal making). • Identify, remove and control any growth/re-growth of non-native species (not to date identified as an issue with this compartment). • Consider active control of bracken by cutting/trampling/herbicide application if expanding into open habitats of interest and/or shading out U4 vegetation. • Restore ponds within this compartment identified for enhancement as part of the EPS Conservation Strategy and as identified at Appendix 5 and consider need for restoration of other ponds if becoming terrestrialised, overly shaded or dominated by single species and in accordance with appropriate licensing measures where GCN present. • Manage to minimise/discourage public access (as at present).
2 – large and diverse compartment encapsulating original 2003 SSSI and expanses of M23/M24/M25 on gentle slopes with associated invertebrate fauna including marsh fritillary. Also a number of colliery tips of value for heath, acid grassland and waxcaps, and wooded stream courses. The compartment also contains a small patch of non-SSSI land and buildings.	• Adjust grazing density/duration to optimum (e.g. 0.4. LU/ha/yr) and consider exclusive use of suitable lightweight cattle (e.g. Dexter) and/or cattle horses in conjunction with stock grazing of compartment 1 above. • Livestock to use collars to allow fenceless grazing of compartment. • If supplementary feeding/water stations necessary, provide these on non-SSSI land. Use hay from on-site species rich meadows (e.g. at Blaencanaid Farm) as preferential supplementary or winter feed. • Remove 8.8567ha of developing and/or mature scrub from habitats of value (e.g. M23, M24, M25) in a 10 yr phased campaign of around 0.88ha/yr), prioritising obviously recoverable areas and/or areas at 'tipping point' prior to loss to overshadowing (survey required). Aim for phased reversion over time to extents shown on desired state map. • Unless easily accessible and extractable without damage to ground, dispose of scrub arisings on-site through chipping into 'sacrificial' established scrub areas (to be identified and marked on a map for contractors' use) or use as dead hedging to control or discourage livestock access to sensitive habitats within compartment, if felt appropriate. Explore other use/disposal options in liaison with local groups (e.g. charcoal making).

	• Identify, remove and control any growth/re-growth of non-native species (not to date identified as an issue with this compartment). • Consider active control of bracken by cutting/trampling/herbicide application if expanding into open habitats of interest and/or shading out U4 vegetation. • Restore ponds within this compartment identified for enhancement as part of the EPS Conservation Strategy and as identified at Appendix 5 and consider need for restoration of other ponds if becoming terrestrialised, overly shaded or dominated by single species and in accordance with appropriate licensing measures where GCN present. • Manage public access to prevent excessive trampling of mire/marsh grassland habitats in particular.
3 – Northernmost part of the site, comprising both SSSI and non-SSSI land, and including some of the best waxcap grasslands, areas where mire habitats are being lost to scrub/woodland, ponds and stands of Japanese knotweed in scrub woodland south of Upper Colliers Row.	• Adjust and/or reintroduce grazing targeted towards maintaining short sward grasslands on former pit tops for waxcaps, whilst maintaining more neutral or marshy grassland areas too. Sheep grazing may be appropriate in this compartment, subject to compatibility and efficacy of fenceless grazing (e.g. at 0.25. LU/ha/yr). Otherwise use suitable lightweight cattle (e.g. Dexter) and/or cattle/horses. Non-SSSI pastures adj A470 can be used as resting/rotational/turn out areas. • Livestock to use collars to allow fenceless grazing of compartment. • If supplementary feeding/water stations necessary, provide these on non-SSSI land. • Remove 4.2142ha of developing and/or mature scrub from habitats of value (e.g. M23, M24, M25 in clearings in large woodland block adj Heolgerrig) in a 10 yr phased campaign of around 0.4ha/yr, prioritising obviously recoverable areas and/or areas at 'tipping point' prior to loss to overshadowing (survey required). Aim for phased reversion over time to extents shown on desired state map. • Unless easily accessible and extractable without damage to ground, dispose of scrub arisings on-site through chipping into 'sacrificial' (species-poor) woodland areas (to be identified and marked on a map for contractors' use) or use as dead hedging to control or discourage livestock access to sensitive habitats within compartment, if felt appropriate. Explore other use/disposal options in liaison with local groups (e.g. charcoal making). • Commence phased removal by repeat herbicide treatment of Japanese knotweed in land south of Upper Colliers Row and pastures adjoining A470.

	• Consider active control of bracken by cutting/rolling/trampling/herbicide application where shown as expanding into open habitats of interest and/or shading out U4 vegetation. • Restore ponds within this compartment identified for enhancement as part of the EPS Conservation Strategy and as identified at Appendix 5 and consider need for restoration of other ponds if becoming terrestrialised, overly shaded or dominated by single species and in accordance with appropriate licensing measures where GCN present. • Manage public access to prevent excessive trampling of mire/marsh grassland habitats in particular (well used compartment).
4- Central compartment encompassing significant expanses of woodland (including old woodland) as well as open areas of heath and unimproved grassland in clearings. Also an area of non-SSSI pasture adj A470. Abuts the proposed development boundary on its southern side.	• Assess feasibility of periodic fenceless mob-grazing with cattle in isolated clearings, with stock otherwise stationed in pasture adj A470 and/or rotated with other compartments. • Livestock to use collars to allow fenceless grazing of compartment. • If supplementary feeding/water stations necessary, provide these on non-SSSI land. • Control c.3.2632ha of invading scrub (se Fig 2) over a 10 yr phased campaign of around 0.326ha/yr), prioritising obviously recoverable areas and/or areas at 'tipping point' prior to loss to overshadowing (survey required). Aim for phased reversion over time to extents shown on desired state map. • Unless easily accessible and extractable without damage to ground, dispose of scrub arisings on-site through chipping into 'sacrificial' (species-poor) woodland areas (to be identified and marked on a map for contractors' use) or use as dead hedging to control or discourage livestock/human access to sensitive habitats within compartment, if felt appropriate. Explore other use/disposal options in liaison with local groups (e.g. charcoal making). • Commence phased removal by repeat herbicide treatment of Japanese knotweed in localised areas where it is present, and Himalayan balsam along streams. • Consider active control of bracken by cutting/rolling/trampling/herbicide application where shown as expanding into open habitats of interest and/or shading out U4 or heath vegetation. • Restore ponds within this compartment identified for enhancement as part of the EPS Conservation Strategy and as identified at Appendix 5 and consider need for restoration of other ponds if becoming terrestrialised, overly shaded or dominated by single species and in accordance with appropriate licensing measures where GCN present.

	• Consider 'haloing' mature/veteran trees where being suppressed by surrounding scrub/woodland growth. • Introduce management into more open woodland areas to diversify vertical structure (e.g. via coppicing) • Manage public access to encourage/restrict to existing well-used routes and prevent excessive trampling of other habitats and disturbance to sensitive bird species (e.g. nightjar). This is likely to be a well-used compartment following completion of the development.
5 – Fairly diverse compartment encapsulating expanse of mire/marshy grassland and wet heath habitat (with marsh fritillary) on Abercanaid slopes, with non-SSSI woodland on diverse topography influenced by mining, tramways and watercourse systems to the south.	• Adjust grazing density/duration to optimum (e.g. 0.4. LU/ha/yr) and consider exclusive use of suitable lightweight cattle (e.g. Dexter) and/or cattle horses in conjunction with stock grazing of compartment SSSI-1. • Livestock to use collars to allow fenceless grazing of compartment. • If supplementary feeding/water stations necessary, provide these on non-SSSI land. • Remove 2.88ha developing and/or mature scrub from habitats of value (e.g. M23, M24, M25) in a 10 yr phased campaign of around 0.28ha/yr, prioritising obviously recoverable areas and/or areas at 'tipping point' prior to loss to overshadowing (survey required). Aim for phased reversion over time to extents shown on desired state map. • Unless easily accessible and extractable without damage to ground, dispose of scrub arisings on-site through chipping into 'sacrificial' established scrub areas (to be identified and marked on a map for contractors' use) or use as dead hedging to control or discourage livestock access to sensitive habitats within compartment, if felt appropriate. Explore other use/disposal options in liaison with local groups (e.g. charcoal making). • Identify, remove and control any growth/re-growth of non-native species (not to date identified as an issue with this compartment). • Consider active control of bracken by cutting/trampling/herbicide application if expanding into open habitats of interest and/or shading out U4 vegetation. • Restore ponds within this compartment identified for enhancement as part of the EPS Conservation Strategy and as identified at Appendix 5 and consider need for restoration of other ponds if becoming terrestrialised, overly shaded or dominated by single species and in accordance with appropriate licensing measures where GCN present. • Manage public access to prevent excessive trampling of mire/marsh grassland habitats in particular. • Consider 'haloing' mature/veteran trees where being suppressed by surrounding scrub/woodland growth.

	• Introduce management into more open woodland areas to diversify vertical structure (e.g. via coppicing) • Manage public access to encourage/restrict to existing well-used routes and prevent excessive trampling of other habitats and disturbance to sensitive bird species (e.g. tree pipit). This is likely to be a well-used compartment following completion of the development.
6 – small compartment encompassing lower lying pastures, woodland and wetland areas close to the A470. Some potential marsh fritillary habitat but not confirmed from this compartment to date. A focus for wetland invertebrate interest.	• Adjust and/or reintroduce grazing targeted towards maintaining species-rich pastures on dryer ground and optimum structure for marshy grassland areas too. Use suitable lightweight cattle (e.g. Dexter) and/or cattle/horses. Non-SSSI pastures adj A470 in Compartment 4 can be used as resting/rotational/turn out areas. • Livestock to use collars to allow fenceless grazing of compartment. • If supplementary feeding/water stations necessary, provide these on non-SSSI land. • Remove c.2ha developing and/or mature scrub from habitats of value (e.g. wetland areas) in a 10 yr phased campaign of around 0.2ha/yr, prioritising obviously recoverable areas and/or areas at 'tipping point' prior to loss to overshadowing (survey required). Aim for phased reversion over time to extents shown on desired state map. • Unless easily accessible and extractable without damage to ground, dispose of scrub arisings on-site through chipping into 'sacrificial' (species-poor) woodland areas (to be identified and marked on a map for contractors' use) or use as dead hedging to control or discourage livestock access to sensitive habitats within compartment, if felt appropriate. Explore other use/disposal options in liaison with local groups (e.g. charcoal making). • Commence phased removal by repeat herbicide treatment of Himalayan balsam where present along watercourses. • Consider need for restoration of ponds where becoming terrestrialised, overly shaded or dominated by single species, in accordance with appropriate licensing measures where GCN present, and to optimise conditions for wetland invertebrates. • Manage public access to prevent excessive trampling of mire/marsh grassland habitats in particular (likely to be a well-used compartment in future).
7 – Blaencanaid Farm. A series of pasture fields encompassing relict or recoverable species-rich grassland (including MG5, U4), with areas of damper pasture	• Install new fencing/stock husbandry as required, ensuring feeding/watering areas are located sensitively having regard to extant/recoverable grassland interest. • Adjust and/or reintroduce grazing targeted towards maintaining and enhancing species-rich pastures on dryer ground and optimum structure for marshy grassland areas too.

(inc. M23) and pockets of disturbed ground, improved/semi-improved grassland, bracken, scrub and hedgerows.	Use suitable lightweight cattle (e.g. Dexter) and/or a cattle/horse mixture. Operate in rotation with SSSI and non-SSSI pastures in main body of the site to ensure grazing is maintained at optimum pressure. • Restore motorcycle track area using green hay and/or seed harvested from MG5 fields. Remove developing and/or mature scrub and bracken from peripheral field units in a 10 yr phased campaign, prioritising obviously recoverable areas and informed by detailed surveys of fauna. Aim for phased reversion over time to extents shown on desired state map. • Restore other semi-improved or improved components via hay cropping and grazing, considering scarification and green hay application if management not sufficient to trigger community enhancement/recovery. • Create 4no new ponds in line with design guidance set out in the Great Crested Newt conservation handbook (see indicative locations in Appendix 5). Once established, manage to ensure optimum conditions for the species.
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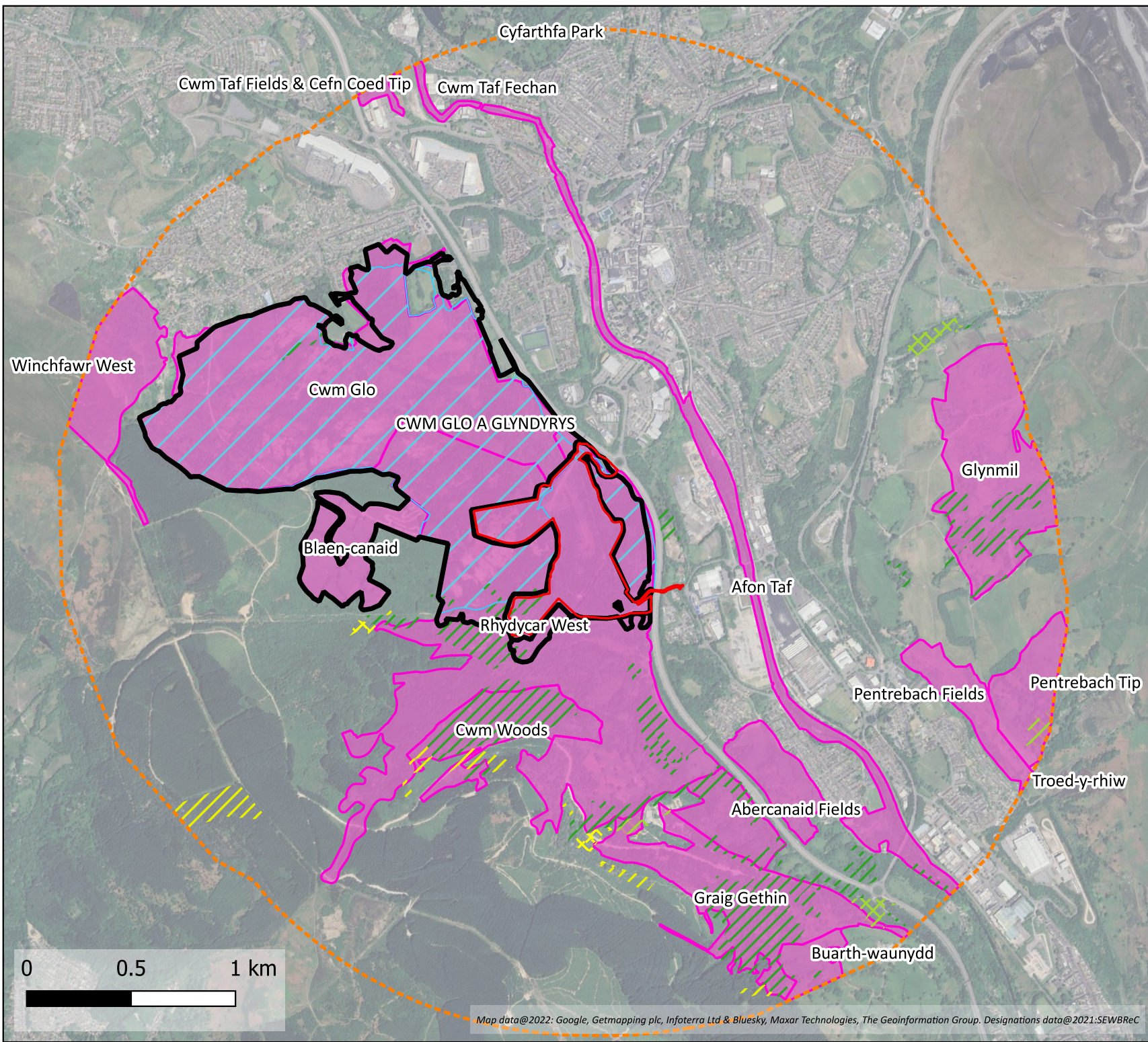
5. MONITORING AND REVIEW

- 5.1.1. It is envisaged that the NCMP will be reviewed by a suitably qualified ecological consultant, in liaison with NRW and Merthyr Tydfil County Borough Council, after years 2, 5 and 10, and thereafter at 5-year intervals for the lifetime of the development. Review dates in each of those years will be agreed with the stakeholder parties in advance.
- 5.1.2. In advance of the agreed review dates, the site operator will be required to carry out sufficient survey work to measure the progress and efficacy of management actions to that point in time, including application of common standards methodology, relevant species surveys and GIS based measures of progress on altering habitat extents. It is envisaged that this will result in a progress report that will be submitted to NRW and MTCBC in advance, with follow up meetings and discussions as appropriate to decide upon on changes that are required to be incorporated for the next implementation phase, in order to remain on track for achieving the desired state/target condition, and/or maintaining it once reached.
- 5.1.3. In the event that NRW and/or MTCBC are of an opinion that the NCMP is not being adhered to at any time, or that objectives are not being realised, a meeting will be convened between all relevant stakeholders (e.g. the site operator and/or their ecological consultant, NRW, MTCBC and any relevant contractors), with the purpose being to discuss the reasons why it is not being followed and/or why its content is no longer relevant, and then to determine appropriate next steps.
- 5.1.4. In respect of the SSSI elements of the land, this would include actions compatible with the exercise of statutory duties further to Section 28G of the Wildlife and Countryside Act, up to and including enforcement action deemed necessary over and above any such action arising through breach of planning commitments.

6. REFERENCES

- Benyon, P.R. (2005). *Land at Rhydycar, Merthyr Tydfil - baseline ecological report: assessment of current nature conservation interest*. Humphries Rowell/White Young Green Environmental Ltd report to Merthyr Village Ltd.
- Bioscan UK Limited (2022) *Land at Rhyd-y-car West / Cwm Glo a Glyndyrys, Pre-Application Consultation (supporting information), Ecological Impact Assessment*. Report for Marvel Ltd.
- Bosanquet, S.D.S & Stevens, D.P. (2005) *Vegetation Survey and Conservation Assessment of Cwm Glo and Environs*, Merthyr Tydfil. Report for Countryside Council for Wales .
- Carney Sweeney (March 2023): *Rhydycar West – Environmental Statement*. ES submitted in support of planning application P/23/0065
- David Clements Ecology Ltd (2006). *Merthyr Tydfil County Borough Sites of Importance for Nature Conservation SO 00NW/7: Cwm Glo: Survey & Assessment for SINCE Designation*.
- Merebrook Science and Environment Limited (2008) *Merthyr Village Limited: Reclamation Scheme, Land at Rhydycar, Merthyr Tydfil*. Environmental Statement
- Latham, J. (2005) *Presence and Status of Ancient Woodland near Merthyr Tydfil, around SO043050*. File note for CCW.

FIGURES



Key

- Application site
- Land in Marvel ownership subject to this HOT Management Plan
- 2km radius
- Cwm Glo a Glyndyrys Site of Special Scientific Interest (SSSI)
- Sites of Importance for Nature Conservation
- Ancient semi-natural woodland
- Restored ancient woodland site
- Plantation on ancient woodland site
- Ancient woodland site of unknown category



Title
Management Plan Area and Relevant Designations

Project	Client
Rhydyar West	Marvel Ltd

Drawing No.	Revision	Project No.
Figure 1	-	E1835

Drawn	Checked	Date
RB	DW	April 2024

Bioscan (UK) Ltd

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OX44 9PU.

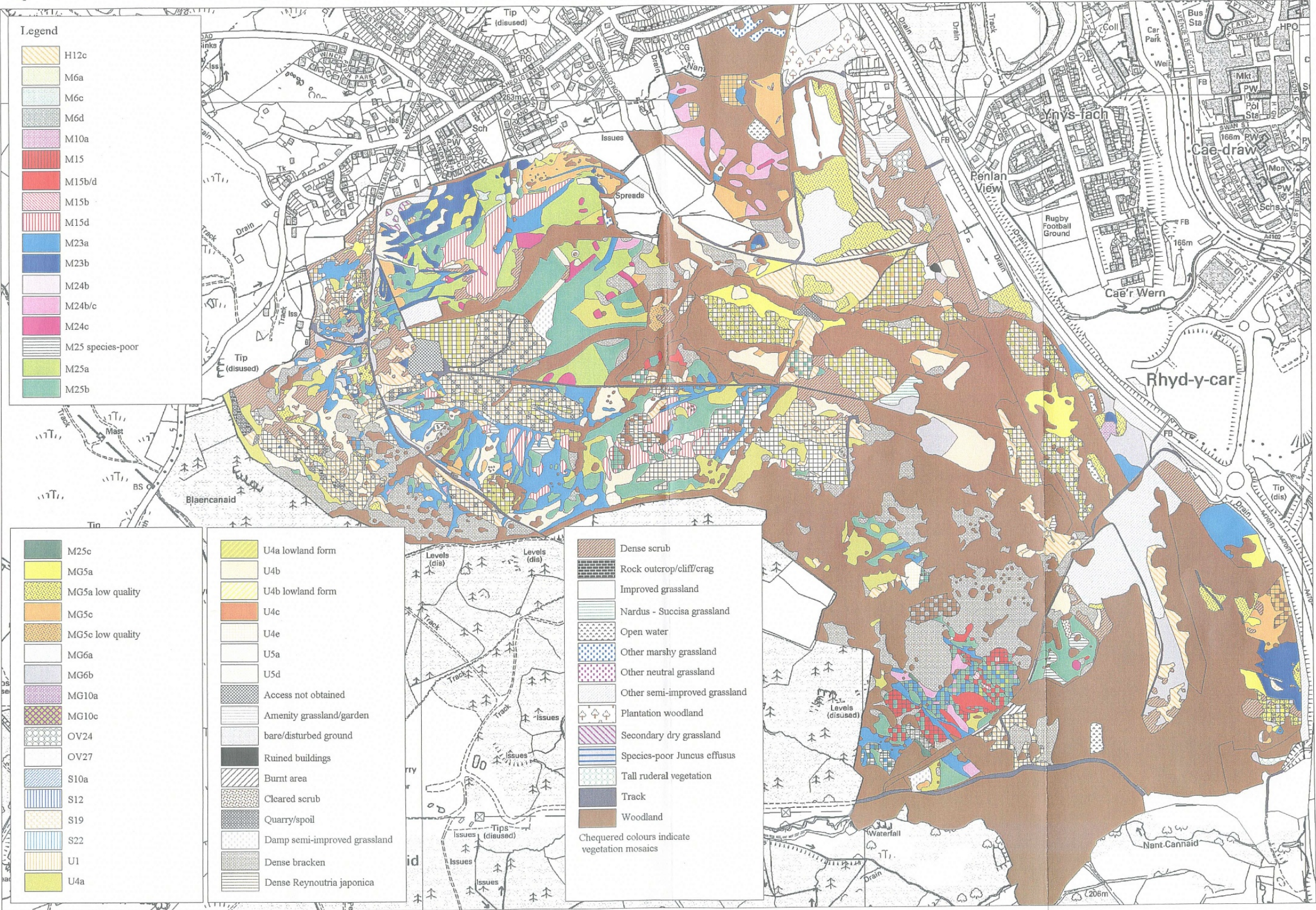
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See Legend

Map 1a: Cwm Glo and environs NVC map - north and central sections



Mapped by CCW between 1994 and 2005
Scale 1:8000

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Atgynhychir y map hwn o ddeunydd yr Arolwg Ordnans gyda chaniatâd Arolwg Ordnans ar ran Rheolwr Llyfrfa Ei Mawrhydi © Hawffraint y Goron. Mae atgynhychu heb ganiatâd yn torri hawffraint y Goron a gall hyn arwain at erlyniad neu achos sifil. Cyngor Cefn Gwlad Cymru, 100018813 2005

Cyngor Cefn Gwlad Cymru
Countryside Council for Wales

Title

Desired State

Project

Rhydyar West

Client

Marvel Ltd

Drawing No.

Figure 2

Revision

-

Project No.

E1835

Drawn

RB

Checked

DW

Date

April 2024

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Key

Desired vegetation categories

-  MG5
-  Dense scrub/hedgerow/woodland
-  M23
-  U4



Title

Desired State - Blaencanaid Farm

Project

Rhydyrcar West

Client

Marvel Ltd

Drawing No.

Figure 3

Revision

Project No.

E1835

Drawn

ED

Checked

DW

Date

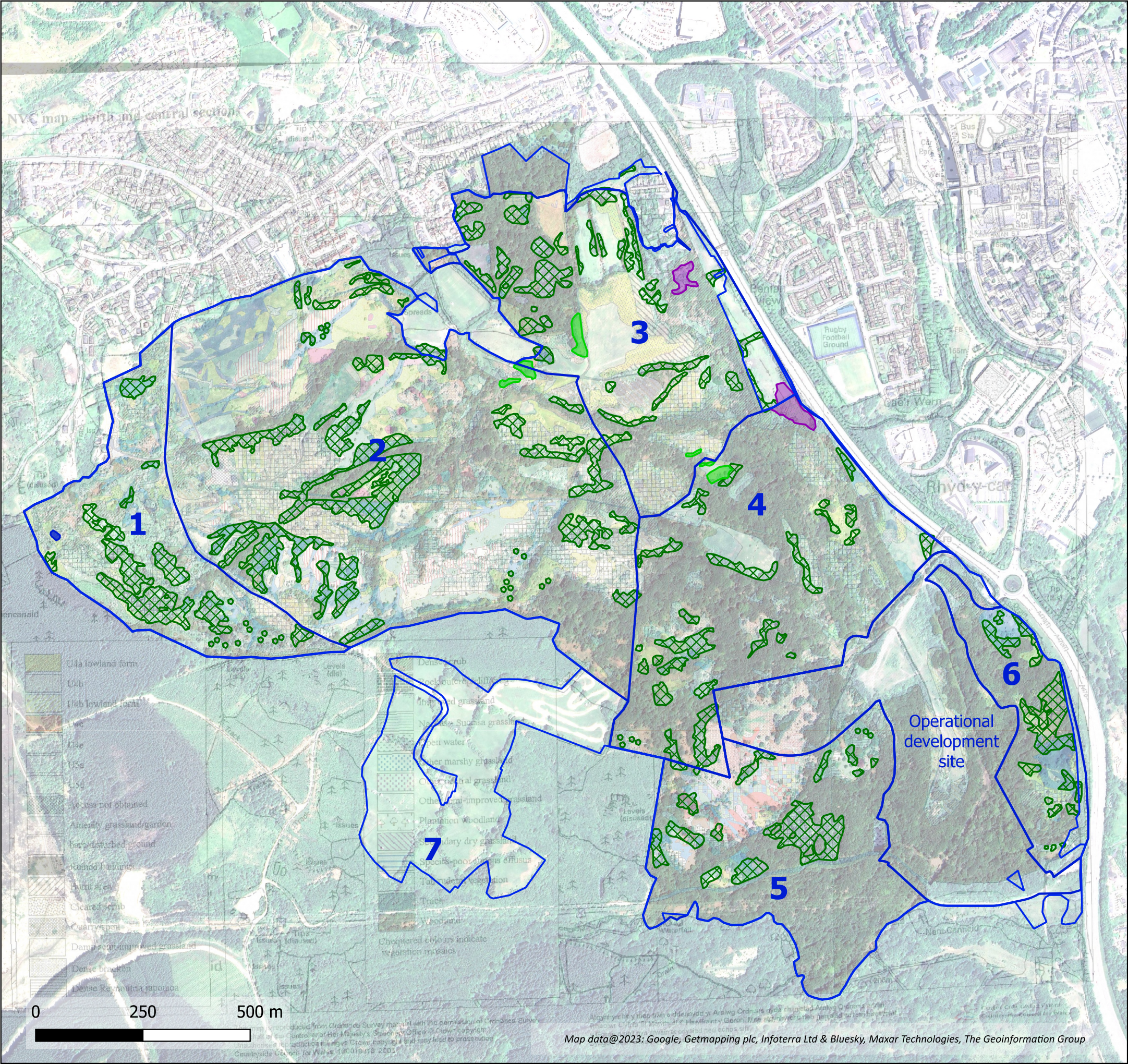
April 2024

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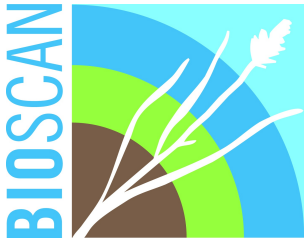
- Key**
- Management compartments
 - Scrub encroachment
 - Bracken encroachment
 - Japanese knotweed encroachment

Title		
Management Compartments and Areas of Intervention		
Project	Client	
Rhydyar West	Marvel Ltd	
Drawing No.	Revision	Project No.
Figure 3	-	E1835
Drawn	Checked	Date
RB	DW	April 2024

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APPENDIX 1

**CYNGOR CEFN GWLAD CYMRU
COUNTRYSIDE COUNCIL FOR WALES**

SITE OF SPECIAL SCIENTIFIC INTEREST: CITATION

MERTHYR TYDFIL

CWM GLO A GLYNDYRYS

Date of Notification: 17 July 2008

National Grid Reference: SO 040052

OS Maps: 1:50,000 Sheet number: 160
1:10,000 Sheet number: SO 00 SW; SO 00 NW

Site Area: 181.3.ha

Description:

Cwm Glo a Glyndyrys is of special interest for its extensive areas of marshy grassland, species-rich neutral grassland and acid grassland, and for the association of these habitats with others including woodland and heath. It is also of special interest for its outstandingly diverse assemblage of grassland fungi, including 32 species of waxcap *Hygrocybe* spp, making it one of the best sites in Britain.

This large site is situated on the northeast and east facing slopes to the West of Merthyr Tydfil, at an altitude of between 200m and 370m, overlying Carboniferous mudstones and siltstones of the Middle Coal Measures. The site comprises a series of small enclosures surrounded by woodland, extensive areas of open land with scattered mature trees, scrub and woodland. A key part of the site is the series of remnant colliery spoil tips that are between one hundred and two hundred years old. These have been colonised by a variety of semi-natural habitats, providing a unique opportunity to study the colonisation of abandoned coal and iron workings from one of the earliest periods of the industrial revolution in the world.

In the north east of the site there are a series of small enclosures, sheltered by mixed woodland. Drainage is mainly impeded across this area, which supports base-rich fen-meadow communities characterised by meadow thistle *Cirsium dissectum*, devil's bit scabious *Succisa pratensis* and a number of sedge species, including glaucous sedge *Carex flacca*, carnation sedge *C. panicea*, common sedge *C. nigra*, tawny sedge *C. hostiana*, common yellow sedge *C. viridula* ssp *oedocarpa* and flea sedge *C. pulicaris*.

In places this fen-meadow community grades into drier species-rich neutral grassland. Typical species here include bird's-foot-trefoil *Lotus corniculatus*, black knapweed *Centaurea nigra* and a range of grasses including common bent *Agrostis capillaris* and sweet vernal-grass *Anthoxanthum odoratum*. A slight acid nature to the soil is suggested by the presence of heath-grass *Danthonia decumbens* and tormentil *Potentilla erecta*, whilst, in places flushing is indicated by quaking-grass *Briza media* and great burnet *Sanguisorba officinalis*.

Elsewhere on the site, the landscape is more open, with pastures separated by steep, wooded streams and the remnants of former field boundaries. The fen-meadow community is present here also, but has a conspicuous ericoid element with cross-leaved heath *Erica tetralix* and heather *Calluna vulgaris*. Other wet pasture communities also occur in this area, dominated by purple moor-grass *Molinia caerulea*, sweet vernal grass, sheep's fescue *Festuca ovina* and mat-grass *Nardus stricta*, with lousewort *Pedicularis sylvatica*, tormentil and heath wood-rush *Luzula multiflora*.

In the drier areas, and on the ancient spoil heaps, two types of grassland have developed. Species-rich neutral grassland occurs where the soils are not too acidic. Typical grass species here include common bent, crested dog's tail *Cynosurus cristatus* and red fescue *Festuca rubra*. Bird's foot trefoil, black knapweed, autumn hawkbit *Leontodon autumnalis*, common cat's ear *Hypochaeris radicata*, eyebright *Euphrasia* sp., and, locally, wild thyme *Thymus praecox*, are all present, together with spring sedge *Carex caryophylla*, glaucous sedge and pill sedge *C. pilulifera*.

In places, this neutral grassland grades into vegetation more associated with dry, acid conditions. The main grass species are common bent and sheep's fescue, together with heath bedstraw *Galium saxatile*. A variety of other herbs can be found in different areas of acid grassland across Cwm Glo a Glyndyrys. These range from daisy *Bellis perennis* and common mouse-ear *Cerastium fontanum* where soils are only slightly acid, to heather and bilberry *Vaccinium myrtillus* where the grassland assumes a more 'heathy' character. Although acid grassland is generally a habitat of the uplands and upland fringe, in places at Cwm Glo a Glyndyrys it can have a marked 'lowland' character. These areas can be particularly species-rich, with plants such as bird's foot trefoil, betony *Stachys betonica* and devil's bit scabious.

The significant grassland fungal community has developed on the drier, more freely drained areas of the site, predominantly occurring in association with species rich neutral grassland and dry acid grassland habitats on site. The tips present throughout the site support much of the fungi interest. Species of note include three of the four grassland species listed on the UK Biodiversity Action Plan list – the big blue pinkgill *Entoloma bloxamii*, the olive earthtongue *Microglossum olivaceum* and the dark-purple earthtongue *Geoglossum atropurpureum*. Other species of note include smoky spindles *Clavaria fumosa* and the diverse assemblage of waxcap *Hygrocybe* spp. fungi. Some 32 species of waxcaps have been identified at Cwm Glo a Glyndyrys, including the pink waxcap *Hygrocybe calyptriformis* and such uncommon species in Wales as *H. ingrata* and the nitrous waxcap *H. nitrata*, making the area one of the best sites for these attractive fungi in western Europe.

Cwm Glo a Glyndyrys has a number of other habitats that add to the interest of the site. There are extensive areas of woodland, some of which is known to have been present at the site since at least 1800. This woodland is mostly oak *Quercus robur* and birch *Betula pendula* with occasional beech *Fagus sylvatica* and rowan *Sorbus aucuparia*, together with alder *Alnus glutinosa* and willows *Salix* spp in the wetter areas. The ground flora includes several ancient woodland indicator species, such as bluebell *Hyacinthoides non-scripta* and wood sorrel *Oxalis acetosella*. Patches of heath can be found across the site where soils are acid. Characteristic species include heather, bilberry and a rich carpet of *Cladonia* lichens where soils are dry, and cross-leaved heath and deer-grass *Scirpus cespitosus* in damper areas. Small areas of flushes and springs are dominated by *Sphagnum* mosses or sedges such as flea sedge and tawny sedge. Other habitats include small ponds and small areas of swamp.

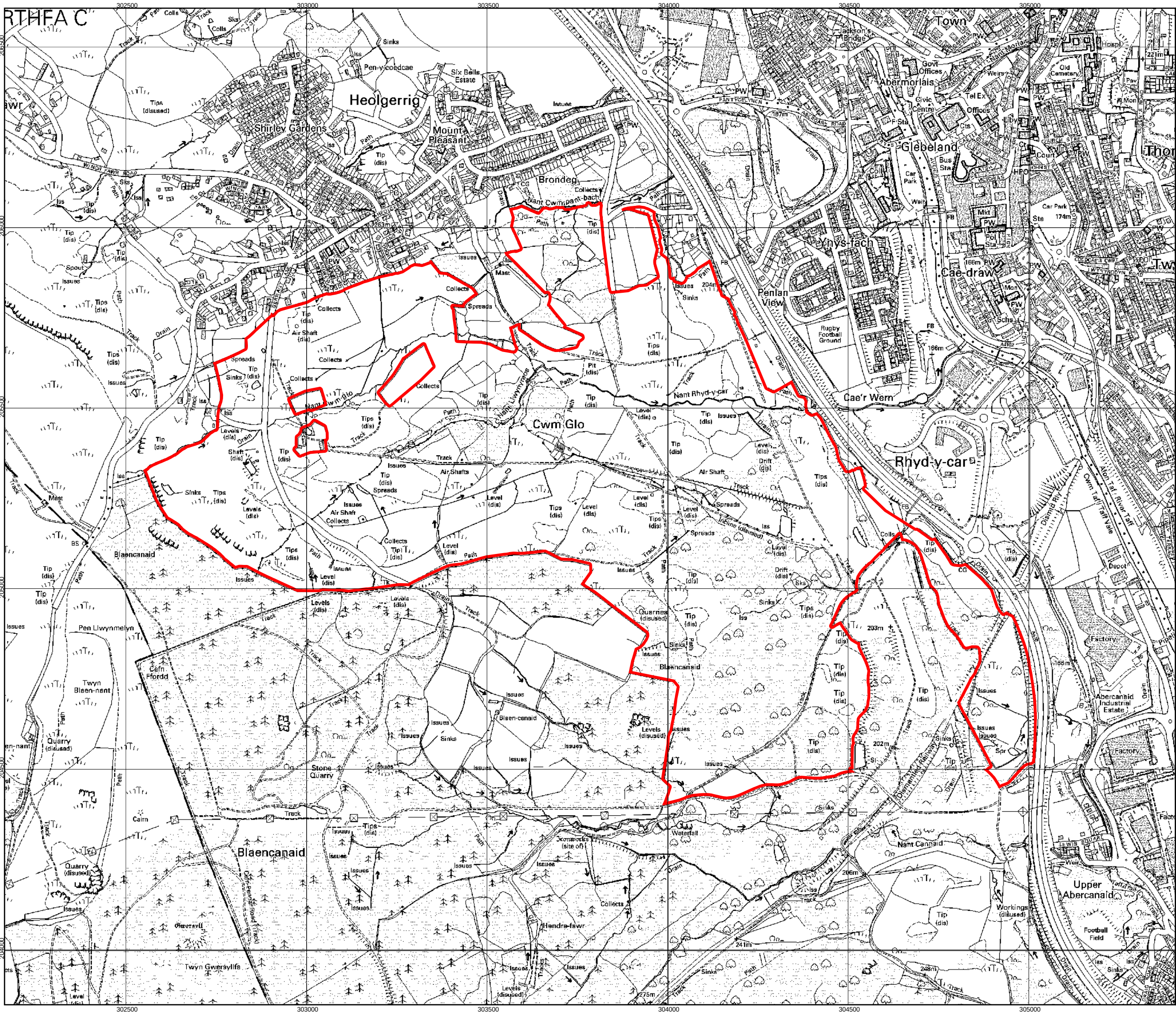
The grasslands and woodlands at Cwm Glo a Glyndyrys provide habitat for a range of scarce and local species. Several relatively uncommon plant species are present, including whorled caraway *Carum verticillatum*, petty whin *Genista anglica*, bladder sedge *C. vesicaria*, soft-leaved sedge *C. montana*, hairy lady's-mantle *Alchemilla filicaulis*, intermediate lady's-mantle *A. xanthochlora*, narrow buckler-fern *Dryopteris carthusiana* and adder's tongue *Ophioglossum vulgatum*. The marsh fritillary butterfly *Eurodryas aurinia* has been noted in the marshy grassland areas, where its food plant, devil's bit scabious occurs. A nationally scarce moth, the cloaked carpet *Euphyia biangulata*, has been recorded in the southern part of the site. A number of bird species are found at Cwm Glo a Glyndyrys and, including nightjar *Caprimulgus europaeus*, cuckoo *Cuculus canorus*, tree pipit *Anthus trivialis*, whinchat *Saxicola rubetra*, wood warbler *Phylloscopus sibilatrix* and redstart *Phoenicurus phoenicurus*. Great crested newts *Triturus cristatus* have been recorded in ponds on the site.

Remarks:

Cwm Glo a Glyndyrys SSSI lies within the Merthyr Tydfil Landscape of Outstanding Historic Interest, identified on the CCW/Cadw/ICOMOS Register of Landscapes of Outstanding Historic Interest in Wales and noted for its evidence of industrial activity that dates back to about 1750. The Cyfartha Canal Level (GM467) Scheduled Ancient Monument is within the boundary of the site.

Cwm Glo SSSI was originally notified in 2003. Cwm Glo a Glyndyrys SSSI includes this original site together with a significant extension to the South East and West.

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CWM GLO A
GLYNDYRYS

Merthyr Tudful / Merthyr Tydfil

— Safe o Ddiddordeb Gwyddonol Arbennig
Site of Special Scientific Interest

1:10000

Graddfa
Scale

181.3 ha

Arwynebedd
Area

23/1/03

Hysbyswyd am y tro cyntaf
First notified

17/07/08

Hysbysiad o ehngiad
Notification of enlargement

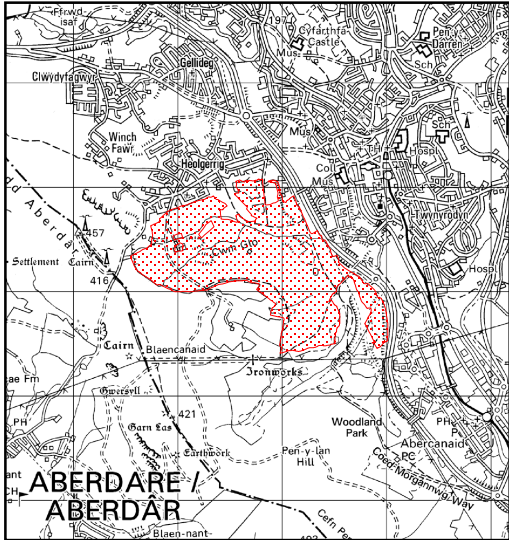
08/04/09

Cadarnhad
Confirmation

1597

Rhif y safle
Site id

Casglwyd y data ar raddfa a 1:2500, a'i argraffu ar raddfa o 1:10,000. Fe gewh fapiau mwy manwl os gwnewch gais amdant.
Data captured at 1:2500 scale and printed at 1:10000. More detailed maps are available on request.



Atgynhyrchwyd o fap Ordnance Survey gyda chaniatid Rheolwr Swyddfa ei Mawrhydi. Cedwir hawlfraint y Goron. Rhif drwydded Cyngor Cefn Gwlad Cymru 100018813 2009.

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APPENDIX 2

CWM GLO A GLYNDYRYS SITE OF SPECIAL SCIENTIFIC INTEREST



Waxcap fungi at Cwm Glo a Glyndyrys © Scott Hand, CCW

YOUR SPECIAL SITE AND ITS FUTURE

'Your Special Site and its Future' is part of our commitment to improve the way we work with Site of Special Scientific Interest (SSSI) owners and occupiers. In it, we explain what is special about the wildlife on your site, and what care is needed to look after it into the future.

All SSSIs are considered to be of national importance and we recognise the crucial role that owners and occupiers play in their management and protection. We need you to share your views and knowledge of this site with us, to help safeguard it.

We hope that you will find 'Your Special Site and its Future' interesting and helpful. Please contact us if there is anything about the site and its management that you would like to discuss.



Cwm Glo a Glyndyrys SSSI from the opposite side of the Valley © Scott Hand, CCW

What is ‘special’ about the wildlife at Cwm Glo a Glyndyrys SSSI?

Cwm Glo a Glyndyrys SSSI has four special features.

Species-rich neutral grassland is now very rare. In the past, much of the grassland in Britain on free draining soils would have been like this. However, between the 1930s and 1980s, it has been estimated that 97% of this habitat was lost, mainly to intensive agricultural improvement. Cwm Glo a Glyndyrys SSSI is one of the largest remaining fragments in the Mid Glamorgan area.

Species rich neutral grassland is very rich in plant life, and can support as many as 30 species of plant per square metre. These in turn provide food for large numbers of insects, birds and mammals. By comparison, modern agricultural grassland may have as few as one or two species of plant and supports few insects and birds.

Marshy grassland is also of particular interest on this site. This is a very rare habitat, found on more waterlogged ground. Much of the remaining lowland marshy grassland in Britain is found in Wales and we have a special responsibility for its conservation. Like species rich neutral grassland, most has been lost in the 20th century. It is rich in plant species, and is particularly important for a number of rare butterflies, such as the marsh fritillary. Cwm Glo a Glyndyrys SSSI is one of the largest remaining examples of lowland marshy grassland in the Mid Glamorgan area.

Lowland acid grassland is also a rare habitat in Wales, found where the pH of the soil is between 4 and 5. Like species-rich neutral grassland, much of this habitat has been lost to agricultural intensification, and in some areas, afforestation. Acid grasslands tends to be managed as pasture. At Cwm Glo a Glyndyrys this habitat has developed on former mining spoil heaps.

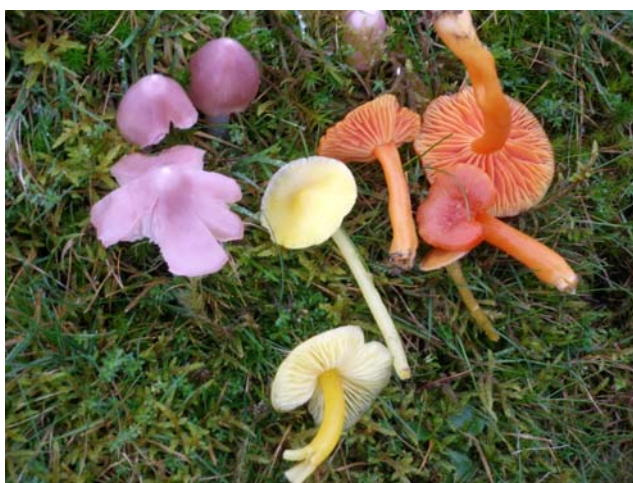


Unimproved grassland at Cwm Glo a Glyndyrys SSSI © Scott Hand, CCW

Finally, Cwm Glo a Glyndyrys is also important for its assemblage of **grassland fungi**. The mushrooms and toadstools that can be seen on the site, particularly in the autumn, are the fruiting body of the fungi, most of which is hidden below ground. These species rely on grassland that has been not been disturbed by ploughing or subject to applications of fertiliser or other agro-chemicals.

As these habitats have become increasingly scarce in modern Wales, the fungi that rely on them have become increasingly rare. Nearly 40 species of fungus have been recorded at Cwm Glo a Glyndyrys making it one of the best sites in Britain.

Cwm Glo a Glyndyrys is a large area of semi-natural habitat, and as a result there are a number of other habitats and species present on site that add to the overall wildlife interest of the SSSI. Additional habitats include a substantial area of woodland, some of which has been shown to date back to at least 1800 and probably has links back to woodland present in the area in pre-industrial times. Wet heath and dry heath are also present, together with smaller areas of swamp and small ponds. Amongst the wide range of species recorded on site are a number of breeding birds, rare plants and over 100 species of moth. More species would undoubtedly be found if the area was subject to prolonged, systematic survey.



Waxcap fungi at Cwm Glo a Glyndyrys SSSI © Scott Hand, CCW

What do we want Cwm Glo a Glyndyrys SSSI to look like?

The following is a description of how we would like to see Cwm Glo a Glyndyrys SSSI:

A visit to Cwm Glo a Glyndyrys SSSI during the summer months reveals the wide range of habitats that can be found across the site. Different grassland types are mixed with areas of heathland and woodland, which create an attractive mosaic of habitats rich in wildlife. These habitats exist not only on undisturbed land, but have also developed on the numerous mine spoil heaps that are scattered across the hillside.

The species-rich neutral grassland is an attractive mix of herbs such as black knapweed, bird's foot trefoil, autumn hawkbit, cat's ear and red clover, together with grasses such as crested dog's-tail, red fescue and common bent. Where the soils become slightly acidic, species such as tormentil, devil's bit scabious and heath grass can also be seen.

From a distance, the marshy grassland can look a slightly 'browner' green than any agriculturally improved fields in the surrounding area.

This grassland can range from a mix of grasses and sedges such as purple moor-grass and glaucous sedge, dotted with flowers such as devil's bit scabious and meadow thistle. In places, rushes such as soft rush and sharp-flowered rush predominate, with herbs such as greater bird's-foot trefoil, ragged-robin and water mint. In places the marshy grassland has quite a 'heathy' character, with heather and cross-leaved heath both present, together with lousewort and a range of sedges.

Where the soils is still acid, but drier, lowland acid grassland can be found. The main grasses here are sheep's fescue, mat-grass and common bent, with a range of herbs. Some areas of acid grassland can have relatively few herb species, such as heath bedstraw, but in places these can be joined by heather, and bilberry. Very locally, the acid grassland can be quite species rich, with betony, devil's bit scabious and bird's-foot trefoil all present. On the sides of spoil heaps, the acid grassland can be very freely draining. Here, species capable of withstanding long periods of drought, such as mouse-ear hawkweed and sheep's sorrel, are found.

All the grasslands range from around 5cm in height up to about 30cm, and are usually easy to walk though. Species that might indicate agricultural improvement or the application of fertilisers, such as rye grass, docks or nettles are comparatively rare. Bracken is present on parts of the site, but its range is not increasing.

In autumn, the grasslands are studded with a wide range of mushrooms, toadstools and other fungi. Particularly noticeable are the colourful waxcap species, so named because their waxy appearance.

What management is needed on Cwm Glo a Glyndyrys SSSI, and why?

Although Cwm Glo a Glyndyrys is an excellent place for wildlife, it is not 'natural'. In fact it is the product of decades, or even centuries of management, which includes both agricultural use and the legacy of coal mining and other industries around the Merthyr Tydfil area. It will be essential to maintain this agricultural management in order to protect the special features at Cwm Glo a Glyndyrys.

What does this mean in practice?

There is some management that is essential to conserve the special features. Other management actions could damage the features within a very short time. These are the ones we regard as the most important

Grazing is very important. It allows lots of different plants to grow together, and prevents one or two species of plant from taking over the grassland, or even the grassland turning into scrub and woodland. Light grazing, preferably by cattle alone, or by a combination of horses and cattle, is the best to maintain both types of grassland. If possible, grazing should mostly be limited to between about May and September.

The aim of the grazing will be to produce a sward that is about 5 – 20cm (2 – 10 inches) high at the end of the summer.

The **use of modern fertilisers and other chemicals** at Cwm Glo a Glyndyrys can be very harmful to the species rich and marshy grasslands. This is because they stimulate the growth of one or two grass species at the expense of the many different plants we are trying to encourage. The grassland fungi also rely on ground that has been managed in a 'traditional' manner, with few inputs of fertiliser. Once these fertilisers have been used on land, it is very hard to get rid of them, and it may not be possible to restore the grasslands for years, if ever.

Any areas of supplementary feeding for livestock should be sited away from areas of species-rich, acid or marshy grassland as these too can lead to enrichment of the soil.

Marshy grassland and areas of flush and spring rely on a high water level to maintain the mosses and other species that are dependant on it. **No new drains should be dug** on this habitat, as this could result in the grassland drying out, losing its typical wet grassland species in the process.

Most of the grassland fungi are actually present in the soil, with only the fruiting bodies, which we recognize as mushrooms or toadstools, being seen above ground. **Ploughing or other disturbance of the soil** could seriously damage the fungi, by breaking the tiny filaments, or 'hyphae', through which the fungi draw nutrients from the soil.

Finally

Our knowledge of wildlife is constantly improving. It is possible that new issues may arise in the future, whilst other issues may disappear. This statement is written with the best information we have now, but may have to change in the future as our understanding improves. Any information you can provide on the wildlife of your site and its conservation would be much appreciated.

If you would like to discuss any aspect of your SSSI, or have any concerns about your SSSI, please contact your local CCW office.

**Your local office is:
CCW (Vale and Valleys Team)
Unit 7
Castleton Court
Fortran Road
St Mellons
Cardiff
CF3 0LT**

**Telephone 02920 772400
Fax 02920 772412**

APPENDIX 3

**CYNGOR CEFN GWLAD CYMRU
COUNTRYSIDE COUNCIL FOR WALES**

**SITE OF SPECIAL SCIENTIFIC INTEREST: OPERATIONS REQUIRING
CONSULTATION WITH THE COUNTRYSIDE COUNCIL FOR WALES (CCW)**

SITE NAME: GLYNDYRYS AND CWM GLO

UNITARY AUTHORITY: MERTHYR TYDFIL COUNTY BOROUGH COUNCIL

DATE OF NOTIFICATION: 2008

The operations listed below may damage the features of interest of [name of SSSI] SSSI. Before any of these operations are undertaken you must consult CCW, and may require our consent. **The list of operations is not a prohibited list.**

It is usually possible to carry out some of these operations in certain ways, or at specific times of year, or on certain parts of the SSSI, without damaging the features of interest. If you wish to carry out any of these activities please contact the local office of CCW, a Conservation Officer will give you advice and where appropriate issue a consent. Please help us by using the enclosed form to ask us for consent to carry out these operations.

In certain circumstances it will not be possible to consent these operations, because they would damage the features of interest. Where possible the Conservation Officer will suggest alternative ways in which you may proceed, which would enable a consent to be issued. To proceed without CCW's consent may constitute an offence. **If consent is refused, or conditions attached to it, which are not acceptable to you, you will be provided with details of how you may appeal to the National Assembly of Wales.**

Ref No Type of operation

1. Cultivation, including ploughing, rotovating, harrowing and re-seeding.
2. Grazing
3. Stock feeding
4. Mowing or cutting vegetation
5. Application of manure, slurry, silage liquor, fertilisers and lime.
6. Application of pesticides terrestrial and aquatic herbicides (weedkillers).
7. Dumping, spreading or discharging of any materials.
8. Burning.
9. Release into the site of any wild, feral, captive-bred or domestic animal, plant, seed or micro-organism and any genetically modified organism.
11. Destruction, displacement, removal or cutting of any plant or plant remains, including tree, shrub, herb, hedge, dead or decaying wood, moss, lichen, fungus, leaf-mould, turf or peat.
12. Woodland management including planting, felling, pruning and tree surgery, thinning, coppicing, changes in species composition and removal of fallen timber.

- 13a. Drainage including moor-gripping, the use of mole, tile, tunnel or other artificial drains.
- 13b. Modification to the structure of water courses including rivers, streams, springs, ditches, dykes, drains, including their banks and beds, as by re-alignment, regrading, damming or dredging.
- 14. Alterations to water levels and tables and water utilisation including irrigation, storage and abstraction from existing water bodies and through boreholes. Also the modification of current drainage regime, (eg through the installation of new pumps).
- 15. Infilling or digging of ditches, dykes, drains, ponds, pools, marshes, quarries or pits.
- 20. Extraction of minerals including peat, shingle, hard rock, sand and gravel, topsoil, subsoil, chalk, lime, limestone pavement, shells and spoil.
- 21. Destruction, construction, removal, rerouting, or regrading of roads, tracks, walls, fences, hardstands, banks, ditches or other earthworks, including soil and rock exposures.
- 22. Storage of materials.
- 23. Erection of permanent or temporary structures or the undertaking of engineering works, including drilling or the laying, maintenance or removal of pipelines and cables, above or below ground.
- 26. Use of vehicles, or craft likely to damage the qualifying features.
- 27. Recreational activities likely to damage the qualifying features.

Notes:

- i. This is a list of operations appearing to the CCW to be likely to damage the special features of this SSSI, as required under section 28(4)(b) of the Wildlife and Countryside Act 1981 as substituted by Schedule 9 to the Countryside and Rights of Way Act 2000.
- ii. Where an operation has been granted a consent, licence or permission from another authority separate consent will not normally be required from CCW, however you should always give notice to CCW prior to exercising such consent, licence or permission.
- iii. Any reference to animal in this list shall be taken to include any mammal, reptile, amphibian, bird, fish or invertebrate (including honey bees).

This document is **NOT** a definitive legal version and has been formatted, updated and partially edited for use on the CCW Web site. This document should not be used in any legal proceedings, public enquiry or any other hearing or appeal. If you require a full legal copy of the document please contact CCW in writing.

APPENDIX 4

Maint y Safle (Ha) / Site Size (Ha): 127.1

Site Name: CWM GLO

Grid Ref(s): SO 034055

SO 025053 (W); 039062 (N); 046051 (E);
031049 (S)

Site No.: SO 00NW/7

Status:

July 2002: Provisional site; boundary identified from
available desk-top sources only; requires confirmation by
survey.

Dec 2005: Site surveyed and assessed for designation;
designation boundary identified.

Candidate

✓

Date: July 2002

Proposed

✓

Date: 30 October 2008

Confirmed

Date:

Summary - Reasons for Selection/Interest of Site:

The SINC contains the Cwm-glo SSSI.

Extensive mosaic of 'ffridd' (valleyside) habitats supporting a complex of semi-upland and lowland vegetation, in large part developed on old spoil heaps and colliery tips. Mainly unimproved acid grasslands but with extensive areas of wet and dry heathland. Also contains areas of grass-heath, marshy grassland and acid flush, semi-improved neutral grasslands, semi-improved acid grasslands, bracken slopes, small ponds and streams, the latter typically lined by semi-natural broadleaved woodlands mostly of oak (*Quercus* spp) or alder (*Alnus glutinosa*). The habitats intergrade to form a complex mosaic.

Great crested newt occurs in small ponds, especially to the north-west, together with a range of other common amphibians and reptiles. Otter is believed to occur along the watercourses, and water vole has been recorded in the past. The site contains at least one known bat roost, and there are probably others. There is a good nesting bird fauna which includes at least four UK BAP Priority Species, comprising bullfinch, reed bunting, linnet and song thrush, as well as other species of interest such as redstart and wood warbler. Marsh fritillary (*Eurodryas aurinia*) occurs in the SSSI and is very likely to use other suitable habitats in the adjacent cSINC. Up to 11 species of Nationally Scarce invertebrates have been recorded in the area, mainly associated with wetlands, and other local species such as grayling (*Hipparchia semele*) and dingy skipper (*Erynnis tages*) butterflies are also present.

Plant species of interest include regionally scarce species such as fen bedstraw (*Galium uliginosum*), soft-leaved sedge (*Carex montana*), intermediate lady's-mantle (*Alchemilla xanthochlora*), alternate-leaved water milfoil (*Myriophyllum alternifolium*), moonwort (*Botrychium lunaria*) and dwarf elder (*Sambucus ebulus*), as well as local species such as devil's-bit scabious (*Succisa pratensis*), meadow thistle (*Cirsium dissectum*), wavy hair-grass (*Deschampsia flexuosa*), whorled caraway (*Carum verticillatum*), saw-wort (*Serratula tinctoria*), petty whin (*Genista anglica*), greater burnet (*Sanguisorba officinalis*), marsh arrow-grass (*Triglochin palustris*) and southern marsh-orchid (*Dactylorhiza praetermissa*). The nationally scarce moss *Ephemerum serratum* var *serratum* also occurs. The species of interest are distributed throughout the site.

The Cwm Glo/Rhydycar West area, including the Cwm-glo SSSI, is of international significance for waxcap fungi and is collectively the joint 13th most significant waxcap grassland site in the British Isles. The Cwm Glo cSINC itself contains 13 known waxcap grasslands which collectively support at least 24 species of waxcap (*Hygrocybe* spp) as well as many other associated species. These include one site for pink meadow waxcap (*Hygrocybe clayptiformis*) and 7 sites for live earthtongue (*Microglossum olivaceum*), both of which are UK BAP Priority Species. The waxcap grasslands within the cSINC itself are collectively of at least national significance.

Meets SINC Selection Criteria No.s:

H1, H4, H6, H7, (H9?), H10, H11, H16, H18, H20, H22, (S1?), S2, S4, S6, S8

Criteria in use: SWWS (2004) county SINC selection guidelines

UK BAP	Priority Habitats: Wet woodland Lowland dry acid grassland Lowland & Upland Heathlands Purple moor-grass & rush pastures	Priority Species: Great crested newt Pipistrelle bats Bullfinch Linnet Reed bunting Song thrush Water vole (if present) Otter (if present) Marsh fritillary (probably present – occurs in SSSI) Pink meadow waxcap Olive earthongue (brown long-eared, noctule & Daubenton's bats are all SoCC)		
LBAP	Key Habitats: Ffridd/Bracken slopes Acid grasslands Neutral grasslands Purple moor-grass & rhos pastures Heathland Drystone walls & other boundary features Standing open water Former coal spoil areas	Key Species: Great crested newt Marsh fritillary Otter (if present) Water vole (if present)		
Protected Species: great crested newt, bats (all species), water vole (if present); otter (if present); marsh fritillary				
Previously identified areas of interest contained within SINC: Landscape Survey Site No. 2500 ('Strategic Importance') CCW Phase 2 Survey Site Nos. 030-034, 035, 047 Key Site identified in LBAP				
See continuation sheet:			See Confidential File:	Yes No
Other statutory/non-statutory wildlife sites contained by/adjacent to SINC: Cwm Glo SSSI is contained within site Rhydycar West cSINC in adjacent and continuous to the south Gethin Woodland Park adjacent to south				

Main sources of data: CCW Phase 1 survey (1991-93); Landscape Strategy (TACP 1996); CCW Phase 2 surveys (1993-94) (2003); Merthyr Tydfil LBAP (2001); Wildlife Trust records (2002); Humphries Rowell Associates (2002); Wildlife Trust records (2002); Woods & Hand (2005)		
Validation survey(s):	Surveyor	Date
	Paul Hudson	September 2005
Remarks: One of the most significant example of 'ffridd' and coal spoil habitats in the county borough, of major importance to the biodiversity resource. Readily exceeds guidance criteria for designation as a SINC at the county (Glamorgan) level. Contains 'waxcap grasslands' which are of national significance, and forms part of a larger site which is of international significance for this group.		

Cynllun Datblygu Lleol Merthyr Tudful 2016-2031

Merthyr Tydfil Local Development Plan 2016-2031

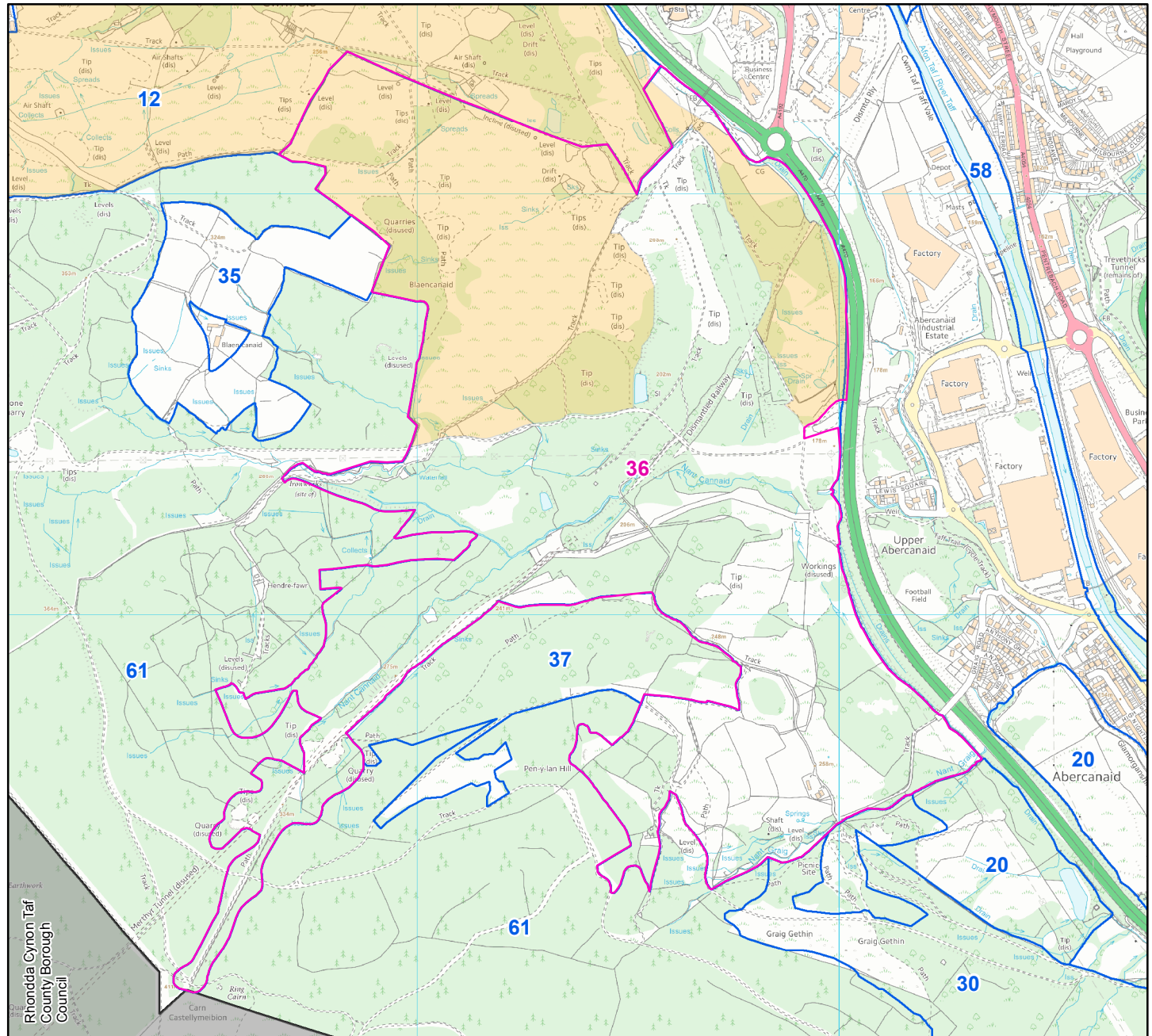
Safle o Bwysigrwydd i Gadwraeth Natur (SBN) /
Site of Importance for Nature Conservation (SINC) Number: 36

Enw'r Safle / Site name: Rhydycaer West

Ward / Ward: Plymouth

Dwyreiniad / Easting: 304524 **Gogleddiad / Northing:** 205336

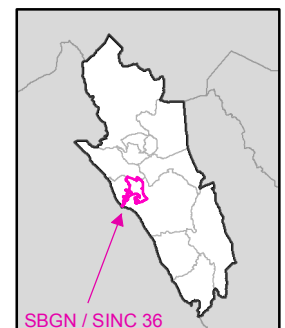
Maint y Safle (Ha) / Site Size (Ha): 177.6



0 100 200 300 400 500
Metrau / Metres



- Ffin SBN presennol / Existing SINC boundary
- Ffin SBN cyfagos / Neighbouring SINC boundary
- Safle o Ddiddordeb Gwyddonol Arbennig (SoDdGA) / Sites of Special Scientific Interest (SSSI)
- Ffin Cyngor Bwrdeistref Sirol Merthyr Tudful / Merthyr Tydfil County Borough Council boundary



Site Name: RHYDYCAR WEST

Grid Ref(s): SO 045047

SO 033050 (W); 038053 (N); 053036 (E); 034031 (S)

Site No.: SO 00SW/2

Status:

July 2002: Provisional site; boundary identified from available desk-top sources only; requires confirmation by survey.
Dec 2005: Site surveyed and assessed for designation; designation boundary identified.

Candidate

✓

Date: July 2002

Proposed

✓

Date: 30 October 2008

Confirmed

Date:

Summary - Reasons for Selection/Interest of Site:

Very extensive mosaic of 'ffridd' (valleyside) enclosures supporting complex of semi-upland and lowland habitats, partly contained within conifer plantation. Main components are ancient semi-natural woodland fragments, other semi-natural woodlands (mainly oak, *Quercus* sp) together with wet woodlands of alder (*Alnus glutinosa*), wet heathland, dry heathland, marshy grassland and semi-improved neutral grasslands. Also there are some bracken slopes, scrub, small ponds, streams and sections of dismantled railway. There are areas of semi-improved acid grasslands to the south especially. The habitats intergrade to form a complex mosaic, and may therefore also include some small areas of improved or low diversity semi-improved grassland, but any such areas are a very minor component.

Great crested newt occurs in small pools within the SINC, and noctule and pipstrelle bats have both been recorded. Water vole may occur and a small badger sett is present. Marsh fritillary (*Eurodryas aurinia*) is likely to occur in marshy grassland areas in the SINC, since it occurs in similar habitats in nearby areas. Other nationally rare and scarce invertebrates include the wetland weevil *Gymnetron beccabungae* (Nationally Scarce: Na), the wetland weevils *Bagous lutulentus* and *Gymnetron veronicae*, the waterbeetles *Chaetarthria seminulum* and *Helochares punctatus*, the weevil *Magdalis carbonaria*, the beetles *Eledona agricola* and *Gabrus keysianus*, the crane fly *Molophilus propinquus*, the opomyzid fly *Opomyza lineatopunctata* and the snail-killing fly *Psacadina verbeckei* (all Nationally Scarce: Nb). Local butterflies include dark green fritillary (*Argynnis aglaja*), small pearl-bordered fritillary (*Boloria selene*) and grayling (*Hipparchia semele*).

Plant species of interest include fen bedstraw (*Galium uliginosum*), moonwort (*Botrychium lunaria*), bladder sedge (*Carex vesicaria*), soft-leaved sedge (*Carex montana*), saw-wort (*Serratula tinctoria*), deer-grass (*Trichophorum cespitosum*), petty whin (*Genista anglica*), intermediate lady's-mantle (*Alchemilla xanthochlora*), devil's-bit scabious (*Succisa pratensis*), meadow thistle (*Cirsium dissectum*), whorled caraway (*Carum verticillatum*) and the lower plant *Ephemerum serratum* var *serratum*.

Nesting birds include redstart, garden warbler, blackcap, wood warbler, pied flycatcher, marsh tit and reed bunting. The species of interest are distributed throughout the site.

Meets SINC Selection Criteria No.s: (provisional) H1;H4; H6; H9; H10; H12; H15; H16; H18; H20 S1 S4 S6 S7				
<i>Criteria in use: Clements & Pryce (2000)</i>				
UK BAP	Priority Habitats: Upland oak woodland Wet woodland Upland heathland Purple moor-grass & rush pastures	Priority Species: Great crested newt Pipistrelle bat Song thrush Water vole possible Marsh fritillary possible (Noctule, badger and most of the other birds and butterflies mentioned are SoCC)		
LBAP	Key Habitats: Upland oak woodland Wet woodland Ffridd/Bracken slopes Acid grasslands Neutral grasslands Purple moor-grass & rhos pastures Heathlands Drystone walls & other boundary features Standing open water River, streams & floodplain	Key Species: Great crested newt Marsh fritillary, if present		
Protected Species: great crested newt; bats (all species), badger; water vole (if present), marsh fritillary (if present)				
Previously identified areas of interest contained within SINC: Landscape Strategy Site No. 2900 ('Strategic Importance') (part) CCW Phase 2 Survey site No.s 025-027, 029-031 Key Site identified in LBAP Cwm Pit & Cwm Woodlands SINC (MT Local plan 1999)				
See continuation sheet:		See Confidential File:	Yes	No
Other statutory/non-statutory wildlife sites contained by/adjacent to SINC: Cwm Glo cSINC adjacent and continuous to north Blaen-canaid cSINC adjacent to west Cwm Woods cSINC adjacent and continuous to south Abercanaid Fields cSINC adjacent and continuous to south-east Graig Gethin cSINC adjacent and continuous to south Adjacent to and partly within the Gethin Woodland Park TRANSBOUNDARY SITE: narrowly continuous in RCTCBC with RCT pSINC 34, Cwmbach Slopes				

Main sources of data: CCW Phase 1 survey (1991-93); Landscape Strategy (TACP 1996); Ancient Woodland Inventory (Southern 1986); CCW Phase 2 survey (1993-94), (2003); Humphries Rowell (1997); Wildlife Trust records (2002)		
Validation survey(s):	Surveyor	Date
	Paul Hudson	September 2005
Remarks: One of the most significant example of 'ffridd' habitats in the county borough, of major importance to the biodiversity resource.		



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www.bioscanuk.com

APPENDIX 5

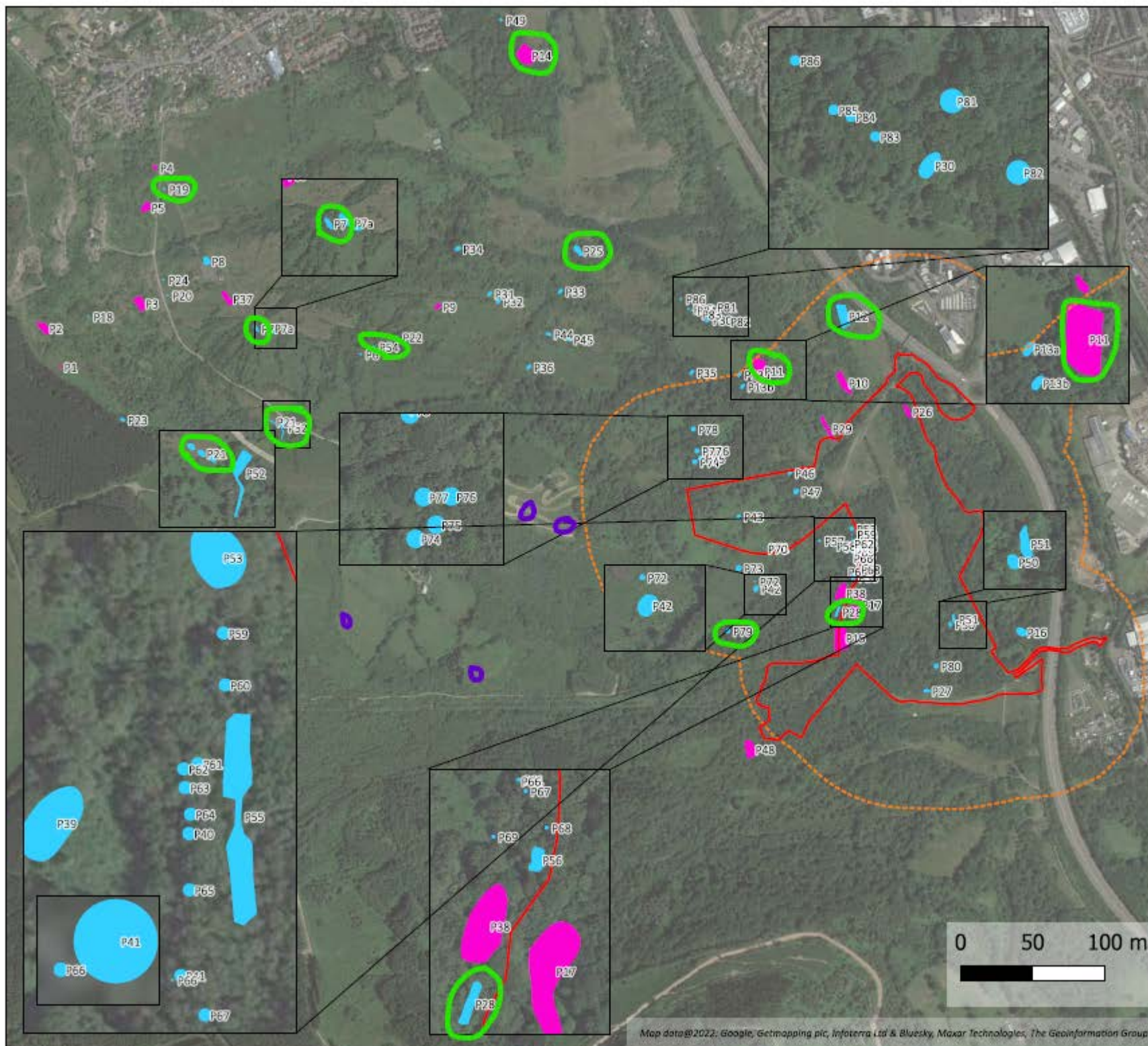
Appendix: Ponds suitable for restoration/enhancement (see plan for locations)

Pond Ref:	P7	
Approx size:	7x3m	
Description & enhancement potential:	Heavily shaded pond proximal to westernmost population locus on site. Could help create stepping stone connection to Blaencanaid. Easily accessible for works.	
Pond Ref:	P19	
Approx size:	2x2m	
Description & enhancement potential:	Small seasonally wet depression in open grassland close to known GCN ponds. Easily accessible and could be enlarged without impacting on high value habitats.	
Pond Ref:	P11	
Approx size:	c.600m2	
Description & enhancement potential:	A silted-up former reservoir seemingly holding standing water for only limited periods after rain. Heavily overshadowed by dense sallow. Reducing shade and dredging will enhance for GCN (relict population present).	

Pond Ref:	P12	
Approx size:	c.750m2	
Description & enhancement potential:	A former reservoir associated with mining works which has become heavily silted, shallow and overgrown with vegetation. It is heavily shaded by surrounding trees and poached along western edge. Aquatic vegetation is limited to floating sweetgrass, water plantain and willowherb <i>Epilobium</i> sp. Reducing shade and dredging will enhance for GCN.	
Pond Ref:	P14	
Approx size:	c600-700m2	
Description & enhancement potential:	Former reservoir now heavily silted, shallow and increasingly shaded, albeit with good surviving macrophyte vegetation and relict population of GCN. Some cutting back of overshadowing vegetation and some dredging to deepen the water column, in line with GCN Conservation Handbook, would enhance conditions for GCN.	

Pond Ref:	P21	
Approx size:	30x2m	
Description & enhancement potential:	Heavily shaded narrow pond proximal to westernmost population locus. Could help create stepping stone connection to Blaencanaid. Easily accessible for works which would include deepening, widening and removal of overshadowing willow.	
Pond Ref:	P25	
Approx size:	c100-200m2	
Description & enhancement potential:	Heavily (90%) overshadowed pond in central part of wider site. Enhancement (via reducing overshadowing and dredging) would provide a stepping stone between western and eastern GCN population nuclei.	
Pond Ref:	P28	
Approx size:	c.10m2	
Description & enhancement potential:	Long shallow ditch that is potentially an overflow from P15. No aquatic vegetation noted. Works to reduce shading, expand size and increase permanence would assist in providing refuge and compensation whilst	

	restoration of adjoining P15 underway.	
Pond Ref:	P54	
Approx size:	c.10m2	
Description & enhancement potential:	Small and shallow bell-pit type pond in stepping stone location. Dredging, expansion and clearance of overshading vegetation would enhance GCN potential.	
Pond Ref:	P79	
Approx size:	c.30m2	
Description & enhancement potential:	Shallow ditch/woodland depression formed around the base of several trees. Heavily shaded by surrounding woodland, no aquatic vegetation noted only leaf litter. Likely highly ephemeral and would benefit from de-shading and deepening. Stepping stone location.	



Key

- Application site
- 250m buffer
- Ponds with GCN present (identified via eDNA, torching, egg search or bottle trapping surveys between 2015 and 2021)
- Ponds where no GCN have been identified despite having either been targeted by appropriate surveys or scoped out as deemed appropriate for each individual waterbody

Title
Great crested newt survey results
(2015-2021)

Project	Client
Cwm Glo	Marvel Ltd

Drawing No.	Revision	Project No.
Figure 2	-	E1835

Drawn	Checked	Date
CD	DW	November 2023

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