

**DAVID CLEMENTS ECOLOGY LTD**

**MERTHYR TYDFIL COUNTY BOROUGH  
SITES OF IMPORTANCE FOR NATURE CONSERVATION**

**SO 00NE/4: MERTHYR COMMON CENTRAL  
SURVEY & ASSESSMENT FOR SINC DESIGNATION**

**January 2007**

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**Site Name: MERTHYR COMMON CENTRAL**

<b>Grid Ref(s): SO 075065</b> SO 067065 (W); 074072 (N); 089061 (E) ; 059075 (S)	<b>Site No.: SO OONE/4</b>		
<b>Status:</b> July 2002: Provisional site; boundary identified from available desk-top sources only; requires confirmation by survey. Oct 2006-Jan 2007: 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:**

Large area of upland common land comprising a range of habitats, mainly marshy grassland, acid grassland and wet heath. There are also areas of dry dwarf shrub heath, acid flush, and western gorse scrub. The westernmost area (Dowlais) comprises revegetated former colliery tips which are developing mainly unimproved acid grassland. Also includes numerous large and small ponds, one of which (Isaac Morgan's Pond) supports a diverse range of aquatic plant species and a good dragonfly fauna. Numerous streams and drainage ditches run through the wetter areas.

Great crested newt (*Triturus cristatus*) occurs in at least one of the ponds. Other species of interest include floating bur-reed (*Sparganium angustifolium*), shoreweed (*Littorella uniflora*), grayling butterfly (*Hipparchia semele*), scarce blue-tailed damselfly (*Ischnura pumilio*), and a range of breeding birds including snipe (*Gallinago gallinago*) and curlew (*Neminius arquata*).

**Meets SINC Selection Criteria No.s:** (provisional)

H3, H6, H7, H10, H12, H15, H16, H18, H20, H22, S1, S2, S4, S6, S7

*Criteria in use : SWWSP (2004) county SINC selection guidelines*

<b>UK BAP</b>	<b>Priority Habitats:</b> Upland heathlands Purple moor-grass & rush pastures	<b>Priority Species:</b> Great crested newt Reed bunting Linnet Skylark Song thrush Pipistrelle bat
<b>LBAP</b>	<b>Key Habitats:</b> Acid grasslands Heathlands Purple moor-grass & rhes pastures Standing open waters Streams & ditches Mineral spoil areas	<b>Key Species:</b> Great crested newt Reed bunting Linnet Skylark Song thrush Sand martin Barn owl

**Protected Species:** great crested newt, common lizard, pipistrelle bat, a myotis bat

**Previously identified areas of interest contained within SINC:**

Landscape Strategy Site No. 2400 ('Borough Importance')

Key Site identified in LBAP (as part of Merthyr Common)

See continuation sheet:

See Confidential File:

Yes

No

**Other statutory/non-statutory wildlife sites contained by/adjacent to SINC:**

Merthyr Common (South) cSINC is adjacent and continuous to south  
Forms part of Gelligaer & Merthyr Commons  
TRANSBOUNDARY SITE: Continues in Caerphilly CBC as Site of Importance for Nature Conservation C10(3),  
Tair Carreg Moor, NW of Fochriw

**Main sources of data:**

CCW Phase 1 survey (1991-93); Landscape Strategy (TACP 1996); Common Land Survey (Heppinstall *et al* 1991);  
Merthyr Tydfil LBAP (2001); Ffos-y-Fran Restoration Strategy (RPS 2005); Merthyr Tydfil Pond Survey 1999-2000  
(White *et al* 2001)

Validation survey(s):	Surveyor	Date
	George Tordoff	October 2006

**Remarks:**

A large area of upland common supporting a mosaic of habitats including extensive wet  
heathlands and acid grasslands.

## 1.0 INTRODUCTION

- 1.1 This report has been prepared by David Clements Ecology Ltd (DCE) on the instructions of Merthyr Tydfil County Borough Council (MTCBC). It sets out the results of an ecological survey and assessment of an area of land known as 'Merthyr Common Central' in the Merthyr Tydfil county borough of Glamorgan, in South Wales. This area was proposed as a *Site of Importance for Nature Conservation* (SINC) by an earlier desk study based on existing records (Clements 2002). The main purpose of this report is to establish the validity (or otherwise) of the proposed SINC designation and to identify a defensible boundary.
- 1.2 The site consists of a large area of common land situated to the east of Merthyr Tydfil, which lies between about 350m AoD along the western margin, rising to approximately 420m in the north-east. The site has an upland character and comprises a range of habitats, including large areas of marshy grassland, acid grassland and wet heath. There are also areas of dry dwarf shrub heath, acid flush, and dense and scattered gorse scrub. Several large and small ponds are present, and numerous streams and drainage ditches run through the wetter areas. Colliery spoil-heaps form a significant component of the site, particularly to the west. These have mainly revegetated with acid grassland.
- 1.3 The site overlies Carboniferous shales and sandstones of the Lower Coal Measures. The soils that have developed over these rocks are acidic in nature, being wet and with a peaty surface where drainage is impeded, and freely draining and loamy on more steeply sloping ground.
- 1.4 The site is a transboundary site, continuing in Caerphilly County Borough Council (CCBC) as SINC C10(3), Tair Carreg Moor, North West of Fochriw. The SINC is described as follows (CCBC 1999):

***Tair Carreg Moor, North West of Fochriw SINC***

*'The majority of this site supports wet heath comprising of species such as purple moor grass, mat grass, sheep's fescue, heath grass, heath rush, cross leaved heath, heather and bilberry. On drier ground patches of acid grassland occur in the north and to a lesser extent in the south of the site. Typical species include mat grass, heath grass, common bent, green ribbed sedge, heath bedstraw and occasional wavy hair grass, field wood-rush and tormentil. There are a number of wetter areas associated with drainage ditches or larger low lying areas that are characterised by soft rush and abundant sphagnum species. There are 4 ponds, some being valuable for dragonflies including the common hawker and large red damselfly. One pond supports floating bur-reed a species rare in South Wales. Snipe and curlew breed on the site.'*

- 1.5 Much of the site falls within the footprint of the proposed Ffos-y-Fran opencast mining scheme (see plans 1 and 2). At the time of the compilation of the current document the mining scheme has been given the go ahead by the Court of Appeal, following a legal challenge after the Welsh Assembly Government first granted planning permission in February 2005. The scheme may, however, be subject to further appeal, and therefore the area of the Merthyr Common Central site that would be affected has been included within the current assessment. If the mining scheme

proceeds then the affected area should be removed from the cSINC boundary, as the habitats within this area would be lost.

- 1.6 The remainder of this report sets out the results of the ecological survey, together with an assessment of the biodiversity value of the habitats, features and species recorded against the published guidelines for the designation of SINC's in South Wales (SWWSP 2004) and the draft guidelines for Merthyr Tydfil County Borough (MTBP 2004). These attributes are also assessed against the Biodiversity conservation priorities set at the UK, Wales, County and County Borough level (UKSG 1995; UKBG 1998-99; WAG 2003; GlamBAG 1999; MTBP 2002).
- 1.7 Following this assessment, any revisions to the draft boundary proposed by Clements 2002 are indicated, and a revised SINC boundary is proposed to enclose all of the land areas which are judged to meet one or other of the SINC designation guidelines.

## 2.0 METHODS AND APPROACH

- 2.1 The study area was surveyed on 26<sup>th</sup> October 2006, and was subject to an Extended Phase 1 survey as recommended by the Institute of Environmental Assessment. (IEA 1995). This is based on the Phase 1 vegetation classification methodology developed by the former Nature Conservancy Council (NCC 1990), a nationally-accepted and standard method for the rapid survey and appraisal of ecological habitats which is based primarily on the recording of vegetation and its classification into defined habitat categories. Dominant and conspicuous flora species are recorded and 'target notes' are prepared for any features of particular interest.
- 2.2 The methodology also requires the recording of conspicuous fauna species such as birds, herptiles (i.e. amphibians and reptiles), mammals and invertebrates such as butterflies and dragonflies, paying particular attention to the presence (or possible presence) of any rare or protected species.
- 2.3 Where appropriate, the habitats of the site were also characterised against the descriptions provided by the National Vegetation Classification (NVC) as set out by Rodwell (1991 *et seq*).
- 2.4 The methodology for the assessment of the site is give at Section 4.0.

### ***Data Trawl***

- 2.5 This report and its conclusions are based primarily on original survey. However, DCE has also had access to the large database of existing data for the County Borough assembled for the preliminary SINC identification project which was carried out on behalf of MTCBC in 2002. This database includes information compiled from a wide range of data-holding bodies in the region, including *inter alia*:

- Merthyr Tydfil County Borough Council (MTCBC)
- Countryside Council for Wales (CCW)
- Environment Agency Wales (EAW)
- Wildlife Trust for South & West Wales (WTSWW)

Information from these sources has been evaluated and included within the following account where appropriate.

### 3.0 SURVEY RESULTS

#### 3.1 Vegetation and Habitats

- 3.1.1 The results of the vegetation and habitats survey are shown on Plan 1 of this report, and are described briefly below. Lists of the species recorded are given at Appendix 1. As far as possible, the species lists give only those species which have been reliably recorded from the site itself.

##### *Scrub Communities*

- 3.1.2 Western gorse (*Ulex gallii*) scrub occurs locally in the acid grassland areas of the western part of the site. Some of these gorse patches are dense with few associated species, whereas in other areas western gorse occurs in a mosaic with acid grassland and smaller amounts of ling heather (*Calluna vulgaris*).

##### *Acid Grassland*

- 3.1.3 Large areas of unimproved acid grassland have developed on the colliery spoil tips, mainly in the western part of the site but also to a lesser extent in the eastern part of the site. These grasslands generally have a dense sward dominated by mat-grass (*Nardus stricta*), with other frequently-occurring grasses including sheep's-fescue (*Festuca ovina*), common bent (*Agrostis capillaris*), heath-grass (*Danthonia decumbens*), sweet vernal-grass (*Anthoxanthum odoratum*) and wavy hair-grass (*Deschampsia flexuosa*), along with field wood-rush (*Luzula campestris*) and occasional heath rush (*Juncus squarrosus*). Among the broad-leaved herbs, heath bedstraw (*Galium saxatile*) occurs abundantly, with less frequent sheep's sorrel (*Rumex acetosella*) and mouse-ear hawkweed (*Pilosella officinalis*). Bilberry (*Vaccinium myrtillus*) occurs as scattered sprigs.
- 3.1.4 These communities conform to the **U5 *Nardus stricta* - *Galium saxatile* grassland** of the NVC, which is typical of infertile and acidic mineral upland soils. On the current site the majority of this grassland conforms to the **U5a species-poor sub-community**, which is common and widespread over higher ground.
- 3.1.5 On the free-draining steep slopes of the colliery spoil-heaps the U5 grades into areas with a more open sward of small, tussocky grasses, with abundant *Cladonia* lichens and bryophytes. Sheep's fescue is the dominant grass, with common bent and heath-grass also frequent. These communities conform to the **U1 *Festuca ovina* – *Agrostis capillaris* – *Rumex acetosella* grassland** of the NVC, which occurs on well-drained soils including artificial substrates such as spoil heaps. The majority of the U1 grassland within the site conforms to the **U1b typical sub-community**, which characteristically has an open sward with an abundance of mosses and lichens.
- 3.1.6 Small areas of semi-improved acid grassland also occur across the site, mainly along track sides and in areas where livestock congregate. These communities conform to the **U4b *Festuca ovina* – *Agrostis capillaris* – *Galium saxatile* grassland, *Holcus lanatus* – *Trifolium repens* sub-community** of the NVC. This sub-community is characterised by many of the acid grassland species listed above, but also an increased frequency of more mesotrophic species such as crested dog's-tail

(*Cynosurus cristatus*) and white clover (*Trifolium repens*). Carline Thistle (*Carlina vulgaris*) and Fairy Flax (*Linum catharticum*) occur locally in these areas.

- 3.1.7 The dry acid grasslands of the site collectively support at least 11 of the species which are listed as being indicative of species-rich acid grasslands in the *Guidelines for the Selection of Wildlife Sites in South Wales* (SWWSP 2004).
- 3.1.8 The acid grasslands of the site have not been surveyed for the presence of ‘waxcap’ and related fungi of the families Clavariaceae, Hygrophoraceae, Entolmataceae and Geoglossaceae. Research in recent years has shown that this group can be an important indicator of unimproved grassland soil conditions, and includes many species which are rare and declining both in Britain and mainland Europe. The UK appears to be an internationally significant location for ‘waxcap grasslands’ in a European context, with important examples occurring relatively close to the current site (see Woods & Hand 2005). A specialist waxcap survey of this site would therefore be worthwhile.

### ***Dry Heathland***

- 3.1.9 A small area of dry heathland occurs along the steep-sided railway embankments in the south of the site. The vegetation is dominated by ling heather, with bilberry, wavy hair-grass and heath bedstraw present throughout, along with occasional mat-grass and *Cladonia* lichens. A luxuriant bryophyte carpet occurs on the north-facing slope, but bryophytes are much less frequent on the south-facing slope. The dry heathland broadly conforms to the **H12 *Calluna vulgaris* – *Vaccinium myrtillus* heath** community of the NVC.
- 3.1.10 A mosaic of dry heathland and acid grassland occurs in a small area on the eastern boundary of the site. These communities are dominated by bilberry and mat-grass, with tormentil (*Potentilla erecta*) and heath bedstraw present throughout. Other frequent associates include purple moor-grass (*Molinia caerulea*), wavy hair-grass, heath-grass, heath rush, common bent and sheep’s fescue. These communities can be best described as **H18 *Vaccinium myrtillus* – *Deschampsia flexuosa* heath** grading into **U5 *Nardus stricta* - *Galium saxatile* grassland**.

### ***Marshy Grassland, Wet Dwarf Shrub Heath and Acid Flush***

- 3.1.11 Marshy grassland and wet dwarf shrub heath occupy most of the eastern and central areas of the site, and frequently grade into each other. These habitats are generally dominated by purple moor-grass, which is relatively short and not rank and tussocky, with variable proportions of the ericoid dwarf shrubs cross-leaved heath (*Erica tetralix*) and ling heather. Other frequently-occurring plants in these habitats include tormentil, bilberry, heath rush, common sedge (*Carex nigra*) and soft rush (*Juncus effusus*). Sphagnum mosses occur as scattered patches and other bryophytes are also present. Grasses other than purple moor-grass are fairly scarce, with only occasional heath-grass and mat-grass in drier areas.
- 3.1.12 Where ericoid shrubs are relatively scarce, these habitats conform to the **M25a *Molinia caerulea* - *Potentilla erecta* mire, *Erica tetralix* sub-community** of the NVC. This is a community of moist peaty soils in lowland and submontane areas.



- 3.1.13 In many parts of the site cross-leaved heath and ling heather typically occupy around 15% ground cover, but are locally dominant in patches, with cross-leaved heath in particular occurring at up to 75% cover. The proportion of these ericoid dwarf shrubs increases towards the south and west of the site, with both cross-leaved heath and ling heather being co-dominant with purple moor-grass in many areas. Where the proportion of these ericoids is high the communities conform to the **M15d *Scirpus cespitosus* – *Erica tetralix* wet heath, *Vaccinium myrtillus* sub-community** of the NVC, which occurs on moist acid oligotrophic soils.
- 3.1.14 Smaller areas of rush-dominated marshy grassland also occur on the site, particularly in wetter hollows on the revegetated tips. These are generally dominated by soft rush and are species poor, with the only frequent associates being purple moor-grass, tormentil and tufted hair-grass (*Deschampsia caespitosa*). These communities represent the **M23 *Juncus effusus/acutiflorus* – *Galium palustre* rush-pasture** of the NVC, which occurs on moist, moderately acid to neutral, peaty and mineral soils.
- 3.1.15 Acid flushes occur throughout the wetter parts of the site, particularly alongside drainage ditches and streams. These flushes support soft rush and sharp-flowered rush (*Juncus acutiflorus*) with abundant sphagnum mosses and other bryophytes. Other associated species include purple moor-grass, jointed rush (*Juncus articulatus*) and velvet bent (*Agrostis canina*). Richer examples are dominated by common cotton-grass (*Eriophorum angustifolium*) and support heath rush, star sedge (*Carex echinata*), lesser spearwort (*Ranunculus flammula*) and marsh bedstraw (*Galium palustre*).
- 3.1.16 The marshy grassland habitats of the site collectively support at least 23 of the species which are listed as being indicative of species-rich examples in the *Guidelines for the Selection of Wildlife Sites in South Wales* (SWWSP 2004).

### ***Streams & Ditches***

- 3.1.17 Numerous small streams and drainage ditches cross the wetter parts of the site; these are often flanked by acidic flush vegetation (see above). A larger stream flows out from Pond 4; this has a stony bed and steep banks, some of which have areas of soft cliff formed through erosion.

### ***Ponds***

- 3.1.18 A number of ponds are present within the study area; these are individually described below. Many of the ponds were included in the Merthyr Tydfil Pond Survey (MTPS) of 1999-2000 (White *et al* 2001); relevant information from the survey is included in the pond descriptions.
- **Pond 1** is a medium-sized pond in a flooded hollow. Little aquatic vegetation is evident except sparse floating sweet-grass (*Glyceria fluitans*).
  - **Pond 2** is a small, probably seasonal, pond close to Pond 1. The pond is well vegetated with floating sweet-grass. Several other very small ponds occur nearby; these are almost certainly seasonal.

- **Pond 3 (Pond 51 in MTPS, drained at time of that survey)** is a rectangular pond with steep banks and no obvious aquatic vegetation.
- **Pond 4 (Isaac Morgan Pond; Pond 64 in MTPS)** is a large elongated pond alongside the Bogey Road, with an embankment along the southern side and marginal soft rush and sharp-flowered rush elsewhere. The pond is well vegetated with abundant broad-leaved pondweed (*Potamogeton natans*) and floating sweet-grass on its surface, and large stands of emergent common spike-rush (*Eleocharis palustris*). The MTPS describes the pond as having high conservation value, supporting 18 species including shoreweed (*Littorella uniflora*), unbranched bur-reed (*Sparganium emersum*), marsh speedwell (*Veronica scutellata*) and lesser skullcap (*Scutellaria minor*). In addition, a large population of floating bur-reed (*Sparganium angustifolium*) was recorded from the pond during surveys for the proposed Ffos-y-Fran mining scheme (RPS 2005).
- **Pond 5 (Pond 56 in MTPS)** is a large pond abutting a railway embankment on the southern margin of the site. The pond is well vegetated with broad-leaved pondweed on its surface, along with emergent common spike-rush, common water-plantain (*Alisma plantago-aquatica*) and water horsetail (*Equisetum fluviatile*). Stands of bulrush (*Typha latifolia*) and yellow flag-iris (*Iris pseudacorus*) are also present. The MTPS describes the pond as having high conservation value, supporting 28 plant species including shoreweed, unbranched bur-reed, curled pondweed (*Potamogeton crispus*) and lesser skullcap. In addition, floating bur-reed was recorded from the pond during surveys for the proposed Ffos-y-Fran mining scheme (RPS 2005).
- **Pond 6** is a small pond similar in character to Pond 7 (see below).
- **Pond 7 (Pond 59 in MTPS)** is a well-vegetated small pond with marginal soft rush, its surface being virtually covered with bog pondweed (*Potamogeton polygonifolius*), and to a lesser extent floating sweet-grass. Round-leaved crowfoot (*Ranunculus omiophyllus*) and a water starwort (*Callitriche* sp) were also present. The MTPS describes the pond as having high conservation value and supporting 14 plant species including bog stitchwort (*Stellaria uliginosa*) and marsh speedwell.
- **Pond 8 (Pond 60 in MTPS)** is a large upland pond flanked by soft rush, heath rush and purple moor-grass to the north, with an embankment along the south side. No submerged or floating aquatic plants were evident at the time of survey. At the time of the MTPS (1999-2000) the pond had been drained, but was nevertheless assessed as having high conservation value due to the presence of unbranched bur-reed.
- **Pond 9** is a small, probably seasonal pond supporting floating sweet-grass and a water starwort.
- **Ponds 10 and 11 (Pond 60 in MTPS)** are small ponds fringed by soft rush, with floating sweet-grass, common duckweed (*Lemna minor*) and water horsetail also present.

***Bare Ground***

- 3.1.19 The spoil tips in the west of the site are used informally as off-road tracks for scramble and quad bikes, and have areas of bare spoil where the use of these vehicles has prevented revegetation. In addition, some former ponds have been drained relatively recently, and their muddy beds now support sparse grasses and rushes.

***Notable Plant Species***

- 3.1.20 No regionally rare or scarce plants, listed as primary or contributory species in the *Guidelines for the Selection of Wildlife Sites in South Wales* (SWWSP 2004), were recorded during the current survey. The Merthyr Tydfil Pond Survey (MTPS) of 1999-2000 recorded two contributory species, shoreweed and unbranched bur-reed, from the ponds of the site, and floating bur-reed, a primary species, was recorded from several ponds during surveys for the Ffos-y-Fran mining scheme (RPS 2005).

***Historic Records***

- 3.1.21 Data from the Phase 1 habitat survey of the County undertaken by the former Nature Conservancy Council during the period 1991-93 was consulted. The site appears to have changed relatively little since the time of this earlier survey. Changes that have taken place include the development of acid grassland in areas that were formerly bare ground, the loss of some acid grassland to soft rush pasture, and the drainage of several ponds.

**3.2 Fauna*****Mammals***

- 3.2.1 During surveys for the proposed Ffos-y-Fran mining scheme pipistrelle (*Pipistrellus pipistrellus*) bats were recorded foraging over the site (RPS 2005). In addition, the Bogey Road bridge on the western boundary of the site was found to support roosting myotis bats (*Myotis* sp); this bridge is to be retained as bat roost under the Ffos-y-Fran mining proposals.
- 3.2.2 There was no evidence of any other protected mammal species recorded during the present survey of the site.

***Birds***

- 3.2.3 Thirty two species of bird have been recorded from the site. These include reed bunting (*Emberiza schoeniclus*), linnet (*Carduelis cannabina*), skylark (*Alauda arvensis*) and song thrush (*Turdus philomelos*), all of which are Priority Species under the UK BAP. Seventeen of the other species recorded are listed as Species of Conservation Concern (SoCC) in the UK BAP. Fifteen species were assessed as likely to be breeding on the site during surveys for the proposed Ffos-y-Fran mining scheme (RPS 2005), including reed bunting, curlew (*Neminius arquata*), linnet, skylark, snipe (*Gallinago gallinago*) and wheatear (*Oenanthe oenanthe*). Snipe was recorded from Ponds 4, 5 and 8 during the current survey.

***Reptiles***

- 3.2.4 Common lizard (*Lacerta vivipara*) has been recorded (RPS 2005), and the site appears potentially suitable for other common native reptile species. All reptile species are afforded legal protection against direct harm under current legislation.

***Amphibians***

- 3.2.5 The rare and protected great crested newt (*Triturus cristatus*) has been recorded from Pond 5 (RPS 2005); palmate newt (*T. helveticus*) and common frog (*Rana temporaria*) have also been recorded from Pond 5 and surrounding areas.

***Fish***

- 3.2.6 It is likely that fish are present in some the ponds and other water features within the site. However, no fish records are available for the site at this time.

***Invertebrates***

- 3.2.7 Detailed invertebrate surveys of the site have been carried out (RPS 2005). Several species of interest were recorded (see Appendix 1), although none of these are afforded any specific legal protection. In addition, a good assemblage of dragonfly species has been recorded from Ponds 4 and 5 (Appendix 1).

## **4.0 ASSESSMENT OF THE SITE**

- 4.1 There is currently no nationally accepted system for the categorising of sites or features of biodiversity significance below the level of national value, criteria for which are set out by the former Nature Conservancy Council (1989, as amended). However, guidelines for the identification of non-statutory sites of county significance (i.e. SINC)s are available for South Wales (SWWSP 2004), and there is also emerging guidance for the identification of SINC)s in the Merthyr Tydfil county borough context which is based closely on the South Wales guidance (MTBP 2004).
- 4.2 The following assessment of the biodiversity significance of the habitats and species of the Merthyr Common Central site is therefore based on comparison against the county and county borough SINC guidelines (SWWSP 2004; MTBP 2004), and also makes reference to the conservation priorities listed in the Biodiversity Action Plans which have been produced for the UK (UKSG 1995; UKBG 1998-99), Wales (WAG 2003) and at the local level. The latter comprise published action plan priorities for both Merthyr Tydfil County Borough (MTBP 2002) and the former Glamorgan county area (GlamBAG 1999), within which the majority of Merthyr Tydfil County Borough falls.
- 4.3 The assessment results are summarised in the following section and refer to the site as a whole. During the assessment process, however, all parts of the site were individually assessed, and where included within the revised cSINC boundary were judged to meet at least one of the qualifying guidelines.
- 4.4 The revised cSINC is shown at Plan 2. Changes from the draft proposed boundary (Clements 2002) consist of: (1) the exclusion of a small area of industrial land in the south-eastern corner of the site; (2) the exclusion of a small conifer plantation of little ecological interest on the southern margin of the site; and (3) the exclusion of an area of bare spoil, which is showing little signs of revegetation, on the north-western margin of the site. The revised boundary is considered to represent the definitive minimum boundary for any SINC designation in accordance with the survey data which is currently available. It should be noted that a portion of the site may eventually be lost to the Ffos-y-Fran mining scheme (see Section 1.4).

## 4.5 Habitats

- 4.5.1 The habitats identified to date on the site are assessed against the UK, Welsh and local Biodiversity Action Plan priorities, and any qualifying habitats are indicated together with any qualifications or notes. Where a Habitat Action Plan (HAP) is given for the habitat concerned in the Merthyr Tydfil Local Biodiversity Action Plan (LBAP), the reference number of this is also given.
- 4.5.2 The habitats are then assessed for qualification against the relevant habitat designation guidelines for SINC's in South Wales and Merthyr Tydfil County Borough.

**Table 1: Assessment Against BAP Priorities**

Habitats Represented on the Site	UK BAP Priority Habitat		Wales BAP Priority habitat		Glamorgan BAP Priority		Merthyr Tydfil LBAP Habitat Action Plan	
Scrub Communities							No	
Acid Grasslands	Yes	a	Yes	a	Yes	a	Yes	HAP 8
Heathland	Yes	b	Yes	b	Yes	d	Yes	HAP 12
Marshy Grasslands/Flushes	Yes	c	Yes	c	Yes	d	Yes	HAP 11
Ponds					Yes	e	Yes	HAP 15
Streams and Ditches							Yes	HAP 16
Mineral Spoil Areas							Yes	HAP 17

- a Lowland dry acid grasslands only  
 c Purple moor-grass & rush pastures  
 e Small eutrophic ponds

- b Upland and lowland examples  
 d Lowland examples only

## 4.6 Assessment Against SINC Designation Guidelines

- 4.6.1 The following section sets out the relevant SINC selection guidelines for each of the habitats identified at the Merthyr Common Central site, together with an assessment of the degree of qualification by the site. The guidelines are assumed to be the same for both South Wales and Merthyr Tydfil County Borough unless otherwise indicated. Where the latter are different, the additional, modified guidelines are set out separately below the South Wales guidelines.

### ***Guideline H3: Scrub Communities***

The SINC designation guidelines for South Wales state that the following should be considered for SINC selection:

***Structurally-diverse and species-rich mixed scrub sites*** [a minimum of six scrub species is suggested]

None present

***Significant stands of gorse***

Areas of gorse scrub are present in the west of the site, often forming a mosaic with acid grassland

**Site qualifies under this guideline?    Borderline/Yes?**

- 4.6.2 The main interest in scrub communities tends to lie in the ability to support fauna species, particularly breeding birds and mammals such as dormouse. They may also support other specialised species groups such as invertebrates. In the absence of such species, however, the inclusion of large tracts of scrub in a SINC on habitat grounds alone would normally be difficult to justify. Some scrub could be included in a SINC, however, where it forms part of an intimate mosaic with other habitats of greater interest, or for the purpose of obtaining a coherent boundary (see Guideline H20: Mosaic Habitats), as is the case with the present site.

### ***Guideline H6: Acid Grasslands***

The SINC designation guidelines for South Wales state that the following should be considered for SINC selection:

***All examples of unimproved acid grasslands***

Most of the acid grasslands of the site are unimproved.

***All examples of semi-improved acid grasslands which retain a relatively high diversity of indicator species*** [the presence of at least 7 indicator species is suggested as a threshold, from Table 4 of the Guidelines]

The acid grasslands of the site collectively support at least 11 of the listed indicator species

**Site qualifies under this guideline?**

**Yes**

### ***Guideline H7: Marshy Grasslands***

The SINC designation guidelines for South Wales state that the following should be considered for SINC selection:

*All examples of M22, M24 and M27 grasslands*

None present

*All species-rich examples of other marsh and marshy grassland communities, including M23 rush pasture and M25 mire* [the presence of at least 12 indicator species is suggested as a threshold, from Table 5 of the Guidelines]

The marshy grasslands of the site collectively support at least 23 of the listed indicator species

**Site qualifies under this guideline?**

**Yes**

### ***Guideline H10: Heathlands & Grass-Heath Communities***

The SINC designation guidelines for South Wales state that the following should be considered for SINC selection:

*All examples of unmodified wet heathland and wet grass-heath, and where cross-leaved heath is still present even though reduced in its cover due to grazing pressure*

Large areas of wet heathland are present in the south of the site

*All examples of unmodified dry heathland*

Areas of dry heathland are present on railway embankments in the south of the site

*Examples of degraded heathland, secondary heathland and grass-heath mixtures which either meet the guidelines for designation as acid grassland (and are thus designated as such) or which have at least 10% dwarf shrub heath cover*

A small area of grass-heath mixture is present

**Site qualifies under this guideline?**

**Yes**



### **Guideline H12: Bog Habitats & Flushes**

The SINC designation guidelines for South Wales state that the following should be considered for SINC selection:

*All examples of undegraded bog habitats, and degraded bog habitats which still show some remaining distinctive features of the habitat type*

None present

*Individual neutral, basic or acid flushes of any size, provided they are not grossly modified by agricultural improvement*

The site contains numerous acid flushes which have not been grossly modified

**Site qualifies under this guideline?**

**Yes**

### **Guideline H15: Watercourses**

The SINC designation guidelines for South Wales state that the following should be considered for SINC selection:

*All examples of stretches of main river where the river bed and banks remain comparatively unmodified and the water is not grossly polluted by long term sources*

None present

*All examples of stretches of smaller watercourses (ie streams, canals, brooks etc) which are comparatively unmodified, which support good aquatic, emergent or bankside plant communities, and the water is not grossly polluted by long term sources* ['good' plant communities are defined in the Guidelines]

Site contains several small streams which are flanked by acid flush vegetation

*All examples of sections of watercourse (regardless of scale) with exposed sediment and/or erosion features such as soft cliffs*

Streams have some areas with exposed sediment and soft cliffs

*All examples of systems of reens and/or ditches with a diverse aquatic flora and/or fauna (including the associated habitat, eg field system on coastal levels or river floodplains)*

Drainage ditches have associated acid flush plant communities

**Site qualifies under this guideline?**

**Yes**

### ***Guideline H16: Standing Open Water***

The SINC designation guidelines for South Wales state that the following should be considered for SINC selection:

*All examples of lakes and ponds which have largely unmodified, semi-natural beds and banks, good water quality and/or which support good aquatic, emergent or bankside communities* ['good' plant communities are defined in the Guidelines]

Site contains numerous ponds, including several large ponds which have a diverse range of associated plant species, including some which are rare in the regional context

*All examples of ponds which score 'High' or 'Very High' when assessed using the methodology set out in the National Pond Survey (Pond Action 1998)*

Not assessed

**Site qualifies under this guideline?**

**Yes**

### ***Guideline H18: Post-Industrial land***

The SINC designation guidelines for South Wales state that the following should be considered for SINC selection:

*All examples of post-industrial land that has revegetated with a diverse range of native and archaeophyte non-woody plant species* [the presence of at least 20 indicator species is suggested as a threshold, from Tables 2-6 of the Guidelines]

The site contains several revegetated colliery spoil tips which support unimproved acid grassland

**Site qualifies under this guideline?**

**Yes**

### ***Guideline H20: Mosaic Habitats***

The SINC designation guidelines for South Wales state that the following should be considered for SINC selection:

*Any coherent site which has represented at least three distinct habitats where at least one is approaching SINC selection status in its own right, providing that improved species-poor or degraded elements of low or negligible conservation interest do not form a significant proportion (ie >25%) of the total site area*

The whole site readily qualifies under this guideline. Non-qualifying habitats collectively comprise less than 25% of the site

*'block designations' of extensive areas of open countryside where semi-natural upland features predominate*

Site is upland in character

**Site qualifies under this guideline?**

**Yes**

**Guideline H22: Other Features**

The SINC designation guidelines for South Wales state that the following should be considered for SINC selection:

*Continuous sections of disused railway lines supporting semi-natural vegetation*

A section of disused railway line supports dry acid heathland

*Continuous sections of green lanes and other linear features which have either more-or-less continuous semi-natural woody boundaries on both sides, or wide flowery verges and/or unsurfaced trackways*

None present

*All examples of areas where there are significant populations of ant hills and/or where several are estimated to be in excess of 50 years old*  
[estimated by volume at 1litre of soil/year]

None present

**Site qualifies under this guideline?**

**Yes**

## 4.7 Species

**Guideline S1: Mammals**

The SINC designation guidelines for South Wales state that the following should be considered for SINC selection:

*Any sites supporting breeding (or probable breeding) species (other than bats) which are listed as fully or partially protected on Schedule 5 of the Wildlife & Countryside Act 1981 (WCA), together with any areas which are critical for nesting, foraging, roosting (laying up), territorial or other significant use, where this has been determined by survey. These species currently comprise water vole, otter, pine marten, dormouse and red squirrel*

None found to date.

*Any sites supporting established breeding of the following species which are nationally declining, regionally important or UK/Local BAP Priority Species, together with any areas which are critical for nesting, foraging, territorial or other significant use, where this has been determined by survey and providing they are not the result of recent deliberate introductions which do not form part of a recognised species recovery programme. These species comprise brown hare, harvest mouse, water shrew and yellow-necked mouse*

None found to date

*The presence of breeding badgers is not, in itself, considered a valid reason for site selection. However, the presence of badger setts should be considered to be an additional supporting reason for the selection of sites which also qualify under other guidelines, ie on habitat grounds or for species other than badger.*

None found to date

*Any significant roosting sites [for bats] including vital flight and commuting routes and priority feeding areas attached to roosts. Also included should be any structures such as tunnels, icehouses, basements, gunnery emplacements, pill boxes etc which are used as roosts*

The road bridge on the western boundary of the site is used as a roost by myotis bats. Pipistrelle bats forage over the site

*Also for consideration are any significant winter roosts (hibernation roosts) of any of the species listed in Table 8 [of the Guidelines]*

None found to date

**Site qualifies under this guideline?**

**Yes**

### **Guideline S2: Birds**

The SINC designation guidelines for South Wales state that the following should be considered for SINC selection:

*Sites supporting breeding populations, of any size, of species marked with an 'A' in Table 9* [of the Guidelines]

Breeding snipe and curlew were recorded during the Ffos-y-Fran surveys

*Sites supporting wintering or passage refuelling populations, of any size, of species marked with an 'A' in Table 10* [of the Guidelines]

Insufficient data

*Sites supporting a predetermined number (to be agreed by the LBAP partnerships) of those species marked 'B' in Tables 9 & 10* [of the Guidelines], *or identified as additions to the tables by the LBAP partnership, that collectively designate a site and/or contribute towards its designation* [MTBP 2005 indicates the number 8-10]

11 such species are recorded to date

*Any site with 100 or more bird species recorded in the previous five years*

Insufficient data

**Site qualifies under this guideline?**

**Yes**

### **Guideline S3: Reptiles**

The SINC designation guidelines for South Wales state that the following should be considered for SINC selection:

*Sites supporting three or more reptile species*

Only one species found to date.

*Sites supporting good populations of any reptile species* ['good' populations are defined in the Guidelines]

Insufficient data available at present: probably not qualifying

**Site qualifies under this guideline?**

**No**

#### ***Guideline S4: Amphibians***

The SINC designation guidelines for South Wales state that the following should be considered for SINC selection:

***Sites supporting four or more species of amphibian***

Three species recorded to date. Further survey may reveal the presence of other common amphibian species

***Sites supporting good populations [as defined in the Guidelines] of three or more species of amphibian***

Three species recorded to date; population sizes unknown

***Sites supporting exceptional populations [as defined in the Guidelines] of any single species of amphibian***

Insufficient data available at present

***Sites supporting good populations [as defined by the Guidelines] of great crested newt, defined as 10 or more individuals counted by torchlight*** [The Guidelines go on to state that the occurrence of great crested newt in any numbers should be considered a supporting reason for a site which also qualifies under other criteria]

Great crested newt has been recorded from Pond 4 during surveys, but fewer than 10 individuals were counted. However, the pond qualifies under habitat criteria, and the presence of great crested newt can be considered as a supporting reason for designation as a SINC

**Site qualifies under this guideline?    Borderline/Yes?**

#### ***Guideline S6: Invertebrates***

The SINC designation guidelines for South Wales state that the following should be considered for SINC selection:

***Any site which supports a species which is listed in the UK Red Data Book [ie in the 'threatened' categories] or on the 'Section 74' list (WAG 2003)***

None recorded to date

***Any site which supports an important assemblage or population(s) of 'Nationally Scarce' species.***

None recorded to date

***Any site which supports a species recorded from 10 or fewer 10km grid squares in Wales (where the distribution is well known)***

Insufficient data

***Any site which supports a species that breeds in four or fewer sites within a vice-county***

Insufficient data

***Any site which supports a significant population or assemblage of Local Priority Species listed in a Local Biodiversity Action Plan***

Insufficient data

***Any site which supports a butterfly or moth species which fulfils the criteria for a 'High Priority Species' (in Britain or Wales) in Butterfly Conservation's National Action Plan for Wales (1998) [Listed in Tables 12a of the Guidelines]***

Insufficient data

***Sites which support significant populations or assemblages of butterfly species which fulfil the criteria for a 'Medium Priority Species' (in Britain or Wales) in Butterfly Conservation's National Action Plan for Wales (1998) [Listed in Table 12b of the Guidelines]. Their presence should also contribute towards the designation of sites that qualify under other Guidelines***

Grayling butterfly has been recorded from the vicinity of Pond 4; the population size of this species at the site is unknown, but its presence contributes to the designation of the site

***Sites which support significant populations or assemblages of moth species which fulfil the criteria for a 'Medium Priority Species' (in Britain or Wales) in Butterfly Conservation's National Action Plan for Wales (1998), or are considered to be of conservation importance in SE Wales. [Listed in the Guidelines]. Their presence should also contribute towards the designation of sites that qualify under other Guidelines***

Insufficient data

***Any site which supports a dragonfly species which is 'Nationally Scarce'***

None recorded to date

***Any site which supports an assemblage of 9 or more dragonfly species***

At least 12 species have been recorded to date

***Any site which supports any dragonfly species which in list 'A' of Table 13 [of the Guidelines]***

None recorded to date

***Sites which support significant populations or assemblages of dragonfly species in list 'B' of Table 13 [of the Guidelines]. Their presence should also contribute towards the designation of sites that qualify under other Guidelines***

At least 4 species from list 'B' of Table 13 have been recorded from the vicinity of Ponds 4 and 5: golden-ringed dragonfly, black darter, emerald damselfly and scarce blue-tailed damselfly

***Any site which supports an orthopteran species which is 'Nationally Scarce'***

None recorded to date

***Any site which supports an assemblage of 7 or more orthopteran species***

Insufficient data

***Any site which supports any orthopteran species which in list 'A' of Table 14 [of the Guidelines]***

Insufficient data

*Sites which support significant populations or assemblages of orthopteran species in list 'B' of Table 14 [of the Guidelines]. Their presence should also contribute towards the designation of sites that qualify under other Guidelines*

None recorded to date

**Site qualifies under this guideline?**

**Yes**

### ***Guideline S7: Vascular Plants***

The SINC designation guidelines for South Wales state that the following should be considered for SINC selection:

*Any site with one or more 'primary' species present* [Listed in Table 15 of the Guidelines]

Floating bur-reed is present in Ponds 4 and 5

*Any site with 5 or more contributory species present* [listed in Table 16 of the Guidelines]

Two species recorded to date; shoreweed and unbranched bur-reed

*Any site that supports a species listed in either the Red Data Books (NCC 1987) [ie in the 'threatened' categories] or on the 'Section 74' list (WAG 2003), or is recorded as Nationally Scarce*

None recorded to date

*Any site with a population of a contributory species (or other species not yet included on the list) that further research shows has suffered a significant decline nationally in subsequent years*

None recorded to date

**Site qualifies under this guideline?**

**Yes**



### ***Guideline S8: Fungi***

The SINC designation guidelines for South Wales state that the following should be considered for SINC selection:

***Any site supporting 8 or more species of waxcap (Hygrocybe spp)***

The site has not been surveyed for waxcaps. However, the acid grasslands of the site are likely to support a range of waxcap species

***Any site which supports a species which is listed in the UK Red Data Book or in the 'Section 74' list (WAG 2003)***

None recorded to date

***Any site which supports a species recorded from 10 or fewer 10km grid squares in Wales (where the distribution is well known)***

Insufficient data available

***Any site which supports a species which is recorded from 3 or fewer sites within a Watsonian vice-county (where the distribution is well known)***

Insufficient data available

***Any site which supports a significant population of a National or Local Priority Species as listed in a Local Biodiversity Action Plan***

None recorded to date

**Site qualifies under this guideline?**

**No**

### ***Guideline S9: Mosses & Liverworts***

The SINC designation guidelines for South Wales state that the following should be considered for SINC selection:

***Any site which supports a species which is listed in the UK Red Data Book for Mosses & Liverworts (Church et al 2001) [ie in the 'threatened' categories] or on the 'Section 74' list (WAG 2003)***

None recorded to date

***Any site which supports a species which is recorded from three or fewer sites within a Watsonian vice-county (where the distribution is well known)***

Insufficient data

***Any site which supports a significant population of a National or Local Priority Species listed in a Local Biodiversity Action Plan***

Insufficient data

**Site qualifies under this guideline?**

**No**

## 4.8 Summary of Compliance with Guidelines

4.8.1 The following table summarises the compliance of the habitats and features of the site with the Guidelines for South Wales against which they have been tested.

<b>Guideline</b>	<b>Subject</b>	<b>Compliance</b>
H3	Scrub Communities	Borderline/Yes
H6	Acid Grasslands	Yes
H7	Marshy Grasslands	Yes
H10	Heath & Grass-Heath Habitats	Yes
H12	Bog Habitats & Flushes	Yes
H15	Watercourses	Yes
H16	Standing Open Water	Yes
H18	Post-Industrial Land	Yes
H20	Mosaic Habitats	Yes
H22	Other Features	Yes
S1	Mammals	Yes
S2	Birds	Yes
S3	Reptiles	No
S4	Amphibians	Borderline/Yes
S6	Invertebrates	Yes
S7	Vascular Plants	Yes
S8	Fungi	No
S9	Mosses & Liverworts	No

## 5.0 REFERENCES

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**Welsh Assembly Government (WAG 2003)** *List of Species and Habitats of Principal Importance for the Conservation of Biological Diversity*. WAG, Cardiff.

**White, R, Rich, MDB, Wright, Y, Davies, C & Rich, TCG (2001)** *Merthyr Tydfil Pond Survey 1999-2000*. National Museums & Galleries of Wales, Cardiff.

**Woods, R & Hand, S (2005)** *Survey of waxcap fungi on the proposed Merthyr Village development site* (unpublished survey data). Countryside Council for Wales, Cardiff.

# APPENDIX 1: SPECIES RECORDED

All species recorded by DCE 2006 unless otherwise indicated:

MTPS: recorded by Merthyr Tydfil Pond Survey 1999-2000 (White *et al.* 2001)

RPS: recorded in Ffos-y-Fran Restoration Strategy (RPS 2005)

Group/Species	Common Name	Source	Status	Indicator Species					
				W	NG	CG	AG	MG	PIL
Trees and Shrubs									
<i>Betula pubescens</i>	downy birch								
<i>Salix cinerea</i>	grey willow								
<i>Ulex europaeus</i>	common gorse								
<i>Ulex gallii</i>	western gorse		Local						
Herbs									
<i>Achillea millefolium</i>	yarrow								
<i>Agrostis canina</i>	velvet bent							MG	
<i>Agrostis capillaris</i>	common bent								
<i>Agrostis stolonifera</i>	creeping bent								
<i>Alisma plantago-aquatica</i>	common water-plantain								
<i>Alopecurus geniculatus</i>	marsh foxtail	MTPS							
<i>Anthoxanthum odoratum</i>	sweet vernal-grass								
<i>Athyrium filix-femina</i>	lady-fern	MTPS							
<i>Bellis perennis</i>	daisy								
<i>Callitriche</i> sp	water starwort								
<i>Calluna vulgaris</i>	ling heather			W			AG		PIL
<i>Cardamine pratensis</i>	cuckooflower	MTPS			NG			MG	
<i>Carduus nutans</i>	musk thistle		Local						
<i>Carex echinata</i>	star sedge		Local					MG	
<i>Carex nigra</i>	common sedge				NG			MG	
<i>Carex ovalis</i>	oval sedge	MTPS							
<i>Carex panicea</i>	carnation sedge				NG			MG	
<i>Carex viridula</i> ssp <i>oedocarpa</i>	yellow sedge		Local					MG	
<i>Carlina vulgaris</i>	carline thistle		Local			CG			
<i>Catapodium rigidum</i>	fern-grass								PIL
<i>Cerastium fontanum</i>	common mouse-ear								
<i>Chamerion angustifolium</i>	rosebay willowherb								
<i>Cirsium arvense</i>	creeping thistle								
<i>Cirsium palustre</i>	marsh thistle								
<i>Cirsium vulgare</i>	spear thistle								
<i>Cynosurus cristatus</i>	crested dog's-tail								
<i>Danthonia decumbens</i>	heath-grass		Local		NG		AG		
<i>Deschampsia caespitosa</i>	tufted hair grass								
<i>Deschampsia flexuosa</i>	wavy hair grass			W			AG		PIL
<i>Dryopteris affinis</i>	scaly male-fern			W					
<i>Dryopteris dilatata</i>	broad buckler fern								
<i>Eleocharis palustris</i>	common spike-rush							MG	
<i>Epilobium palustre</i>	marsh willowherb	MTPS							
<i>Equisetum fluviatile</i>	water horsetail								
<i>Erica tetralix</i>	cross-leaved heath							MG	
<i>Eriophorum angustifolium</i>	common cotton-grass		Local					MG	
<i>Festuca ovina</i>	sheep's-fescue					CG	AG		PIL
<i>Festuca rubra</i>	red fescue								
<i>Galium palustre</i>	marsh bedstraw							MG	
<i>Galium saxatile</i>	heath bedstraw						AG		

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<i>Glyceria fluitans</i>	floating sweet-grass								MG
<i>Holcus lanatus</i>	yorkshire fog								
<i>Iris pseudacorus</i>	yellow flag-iris								MG
<i>Juncus acutiflorus</i>	sharp-flowered rush								MG
<i>Juncus articulatus</i>	jointed rush								MG
<i>Juncus bulbosus</i>	bulbous rush	MTPS							
<i>Juncus effusus</i>	soft rush								
<i>Juncus inflexus</i>	hard rush								
<i>Juncus squarrosus</i>	heath rush							AG	MG
<i>Lemna minor</i>	common duckweed								
<i>Leontodon autumnalis</i>	autumn hawkbit								
<i>Linum catharticum</i>	fairy flax					NG	CG		
<i>Littorella uniflora</i>	shoreweed	MTPS	CS						
<i>Lolium perenne</i>	perennial rye grass								
<i>Luzula campestris</i>	field wood-rush					NG			
<i>Lythrum portula</i>	water purslane	MTPS							MG
<i>Molinia caerulea</i>	purple moor-grass								MG
<i>Myosotis laxa</i>	tufted forget-me-not	MTPS							MG
<i>Myosotis secunda</i>	creeping forget-me-not	MTPS							
<i>Nardus stricta</i>	mat-grass							AG	
<i>Pilosella officinalis</i>	mouse-ear hawkweed					NG	CG	AG	PIL
<i>Plantago lanceolata</i>	ribwort plantain								
<i>Plantago major</i>	greater plantain								
<i>Poa annua</i>	annual meadow grass								
<i>Potamogeton crispus</i>	curled pondweed	MTPS	Local						
<i>Potamogeton natans</i>	broad-leaved pondweed								
<i>Potamogeton polygonifolius</i>	bog pondweed		Local						
<i>Potentilla erecta</i>	tormentil					NG		AG	MG
<i>Potentilla sterilis</i>	barren strawberry				W		CG		
<i>Prunella vulgaris</i>	self heal								
<i>Ranunculus flammula</i>	lesser spearwort								MG
<i>Ranunculus omiophyllus</i>	round-leaved crowfoot								
<i>Ranunculus repens</i>	creeping buttercup								
<i>Rorippa nasturtium-aquaticum</i>	water-cress								
<i>Rumex acetosa</i>	common sorrel								PIL
<i>Rumex acetosella</i>	sheep's sorrel							AG	
<i>Rumex sanguineus</i>	wood dock	MTPS							
<i>Sagina procumbens</i>	procumbent pearlwort	MTPS							
<i>Scutellaria minor</i>	lesser skullcap	MTPS							MG
<i>Sparganium angustifolium</i>	floating bur-reed	RPS	PS						
<i>Sparganium emersum</i>	unbranched bur-reed	MTPS	CS						
<i>Sparganium erectum</i>	branched bur-reed	MTPS							
<i>Stellaria uliginosa</i>	bog stitchwort	MTPS							MG
<i>Taraxacum officinalis</i> agg	dandelion								
<i>Trifolium dubium</i>	lesser trefoil								
<i>Trifolium repens</i>	white clover								
<i>Typha latifolia</i>	bulrush								
<i>Urtica dioica</i>	common nettle								
<i>Vaccinium myrtillus</i>	bilberry		Local		W			AG	PIL
<i>Veronica scutellata</i>	marsh speedwell	MTPS	Local						MG

# **Bryophytes & Lichens**

*Polytrichum* sp

*Sphagnum* sp bog-moss  
*Cladonia* sp

#### Fungi

*Hygrocybe conica* blackening wax-cap

#### SWWSP 2004 'Indicator Species' Totals

5 8 5 11 23 7

#### Key

##### Status

RDB - Red Data Book

BAP – UK Biodiversity Action Plan Priority Species (UKSG 1995; UKBG 1998)

NS - Nationally Scarce

W&CA 1991 – Wildlife and Countryside Act: confers protection in UK context

PS - Primary Species in SWWSP (2004)

CS - Regionally Uncommon - Contributory Species in SWWSP (2004)

IA - Invasive Alien

Local – Local in Glamorgan

##### Indicator Species (SWWSP 2004)

W - Woodland, NG - Neutral Grassland, CG - Calcareous Grassland, AG – Acid Grassland, PIL – Post Industrial Land

##### SINC Selection

Sites which support 1 primary species, 5 contributory species or 8 neutral grassland, 8 calcareous grassland, 7 acid grassland or 12 marshy grassland indicator species should be considered for selection as a SINC. Post Industrial sites should be considered for selection as SINC's if they support 20 or more indicator species from the combined post industrial land and acid, neutral, calcareous and marshy grassland lists.

Birds		EU Birds Directive	Wildlife & Countryside Act	UK BAP	Wales BAP	UK BOCC	Wales BOCC	SINC Status (Breeding)	SINC Status (Wintering)	LBAP Species	Status on site	Status in Glamorgan
<i>Turdus merula</i>	Blackbird		G								B (RPS)	Common resident breeder
<i>Emberiza schoeniclus</i>	Bunting, reed		G	P	W	R	A	B	B	MT	B (RPS)	Common resident breeder, passage migrant and winter visitor
<i>Buteo buteo</i>	Buzzard		G	C								Common resident breeder
<i>Fringilla coelebs</i>	Chaffinch		G								B (RPS)	Common resident breeder, winter visitor and passage migrant
<i>Fulica atra</i>	Coot		S								B (RPS)	Common resident breeder; influx in autumn and winter
<i>Corvus corone</i>	Crow, carrion		V									Common resident breeder
<i>Nemenius arquata</i>	Curlew		G	C	W	A	R	A	B		B (RPS)	Common winter visitor and passage migrant; scarce breeder in upland areas
<i>Carduelis carduelis</i>	Goldfinch		G	C								Common resident breeder, passage migrant and winter visitor
<i>Larus argentatus</i>	Gull, herring		V	C		A	A	B			NB (RPS)	Common resident breeder, passage migrant and winter visitor.
<i>Larus fuscus</i>	Gull, lesser black-backed		V	C		A	A	B			NB (RPS)	Common resident breeder, passage migrant and winter visitor.
<i>Ardea cinerea</i>	Heron		G								NB (RPS)	Common resident breeder.
<i>Corvus monedula</i>	Jackdaw		V								B (RPS)	Common resident breeder, especially in the upland valleys
<i>Falco tinnunculus</i>	Kestrel		G	C		A	A	B	B		NB (RPS)	Common resident breeder
<i>Carduelis cannabina</i>	Linnet		G	P	W	R	A	B	B	MT	B (RPS)	Common resident breeder, passage migrant and winter visitor
<i>Pica pica</i>	Magpie		V								NB (RPS)	Common resident breeder
<i>Anas platyrhynchos</i>	Mallard		S	C			A				B (RPS)	Common resident breeder whose population is augmented by local hand reared releases
<i>Riparia riparia</i>	Martin, sand		G	C		A	A	B		MT	NB (RPS)	Common summer visitor and passage migrant; breeds in small numbers
<i>Tyto alba</i>	Owl, barn		I	C		A	A	B	B	MT	NB (RPS)	Uncommon resident breeder
<i>Anthus pratensis</i>	Pipit, meadow		G	C		A					B (RPS)	Common resident breeder, winter visitor and passage migrant
<i>Corvus corax</i>	Raven		G									Locally common resident breeder, especially in the uplands
<i>Actitis hypoleucos</i>	Sandpiper, common		G	C							B (RPS)	Common spring and autumn passage migrant, breeding on upland rivers and reservoirs
<i>Alauda arvensis</i>	Skylark		G	P	W	R	A	B	B	MT	B (RPS)	Common resident breeder, winter visitor and passage migrant
<i>Gallinago gallinago</i>	Snipe		S	C		A	A	A	B		B (RPS)	Common winter visitor and passage migrant; occasionally in summer at suitable breeding sites
<i>Sturnus vulgaris</i>	Starling		V			R	R	B	B			Common but declining resident breeder and winter visitor
<i>Saxicola torquata</i>	Stonechat		G	C		A	A	B	B		B (RPS)	Locally common resident breeder, passage migrant and winter visitor
<i>Hirundo rustica</i>	Swallow		G	C		A	A				NB (RPS)	Common breeding summer visitor and passage migrant
<i>Apus apus</i>	Swift		G								NB (RPS)	Common breeding summer visitor and passage migrant
<i>Turdus philomelos</i>	Thrush, song		G	P	W	R	A	B	B	MT	NB (RPS)	Common resident breeder
<i>Motacilla alba</i>	Wagtail, pied		G	C							B (RPS)	Common resident breeder and passage migrant.
<i>Oenanthe oenanthe</i>	Wheatear		G	C							B (RPS)	Common breeding summer visitor and passage migrant
<i>Picus viridis</i>	Woodpecker, green		G	C		A	A	B	B			Common resident breeder
<i>Troglodytes troglodytes</i>	Wren		G									Common resident breeder

**Key**

**EU Birds Directive 1979:**

- 1 : Annex 1 species: special conservation measures apply  
 1<sup>1</sup> : Selected subspecies only

**Wildlife & Countryside Act 1981:** confers protection in UK context

- G : Species protected under general provisions of WCA against killing, injury, capture and disturbance while nesting: protection extends to nests, eggs and young  
 S : Special cases: identified 'game' species which may be killed under licence in certain circumstances  
 V : 'Pest' species: may be killed or taken under licence in special circumstances  
 1 : Schedule 1: additionally protected by special penalties

**UK BAP (Biodiversity Action Plan, 1995; 1998)**

- P : Priority Species  
 C : Species of Conservation Concern

**Wales BAP**

- W : List of Species & Habitats of Principle Importance for the Conservation of Biological Diversity (2003)

**UK Birds of Conservation Concern:** lists compiled by the bird conservation agencies (2002)

- R : Red List: species of greatest concern  
 A : Amber List: birds of moderate concern

**Wales Birds of Conservation Concern:** lists compiled by the bird conservation agencies (2002)

- R : Red List: species of greatest concern  
 A : Amber List: birds of moderate concern

**SINC Status:** lists compiled in *Guidelines for the Selection of Wildlife Sites in South Wales* (2004)

- A : Qualifying species  
 B : Contributory species

**LBAP**

- MT : Species listed in the Merthyr Tydfil Local Biodiversity Action Plan

**Status in Glamorgan**

Glamorgan County List compiled from Glamorgan Bird Club Website (2002)

**Status on site**

- B - Breeder (RPS 2005)  
 NB – Non-breeder (RPS 2005)

Mammals		European Protected Species	1981 Wildlife & Countryside Act	UK BAP	Welsh BAP Priority	Status on Site/Notes
<i>Myotis</i> sp	Bat, myotis	Yes	5	SoCC		RPS (2005) roosting
<i>Pipistrellus pipistrellus</i>	Bat, pipistrelle	Yes	5	Prio	*	RPS (2005) foraging

**Key**

**European Protected Species: Habitats Regulations 1994:** highest level of protection

**Wildlife & Countryside Act 1981:** confers protection in UK context

- 5 : Schedule 5: full protection which includes places used for shelter and protection  
 5(pt) : Protection of places used for shelter and against disturbance whilst in such a place  
 6 : Schedule 6: may not be killed or captured without a licence

All other mammals are protected against killing by certain specified means

- PBA : *Protection of Badgers Act 1992*: full protection which includes places used for shelter and protection  
 DA : *Deer Acts (various)*: generally protected against killing or capture, except under specified conditions

**UK BAP (Biodiversity Action Plan)**

- Prio : Priority Species  
 SoCC : Species of Conservation Concern

**Welsh BAP Priority**

- \* : List of Species & Habitats of Principle Importance for Conservation of Biological Diversity (2003).



Reptiles & Amphibians		European Protected Species	1981 Wildlife & Countryside Act	UK Red Data Book/Nationally Scarce	UK BAP	Welsh BAP Priority	Staus on Site/Notes
<i>Triturus cristatus</i>	Newt, great crested	Yes	5	LV/R	Prio	*	RPS (2005)
<i>Triturus helveticus</i>	Newt, palmate			LV	SoCC		RPS (2005)
<i>Rana temporaria</i>	Frog, common				SoCC		RPS (2005)
<i>Lacerta vivipara</i>	Lizard, common		5 (pt)		SoCC		RPS (2005)

### Key

**European Protected Species:** *Habitats Regulations 1997*: highest level of protection

**Wildlife & Countryside Act 1981:** confers protection in UK context

5 : Schedule 5: full protection which includes places used for shelter and protection

5(pt) : Protection against killing, injury and sale

**UK Red Data Book/Nationally Scarce:** various sources - requires revision

R : Rare (Red Data Book)

V : Vulnerable (Red Data Book)

L : Locally (status varies depending on geographical location)

**UK BAP (Biodiversity Action Plan)**

Prio : Priority Species

SoCC : Species of Conservation Concern

**Welsh BAP Priority**

\* : List of Species & Habitats of Principle Importance for Conservation of Biological Diversity in Wales (2003).

### Invertebrates

All species recorded by DCE 2006 unless otherwise indicated:

ORS: recorded by Odonata Recording Scheme (data obtained from NBN Gateway)

RPS: recorded in Ffos-y-Fran Restoration Strategy (RPS 2005)

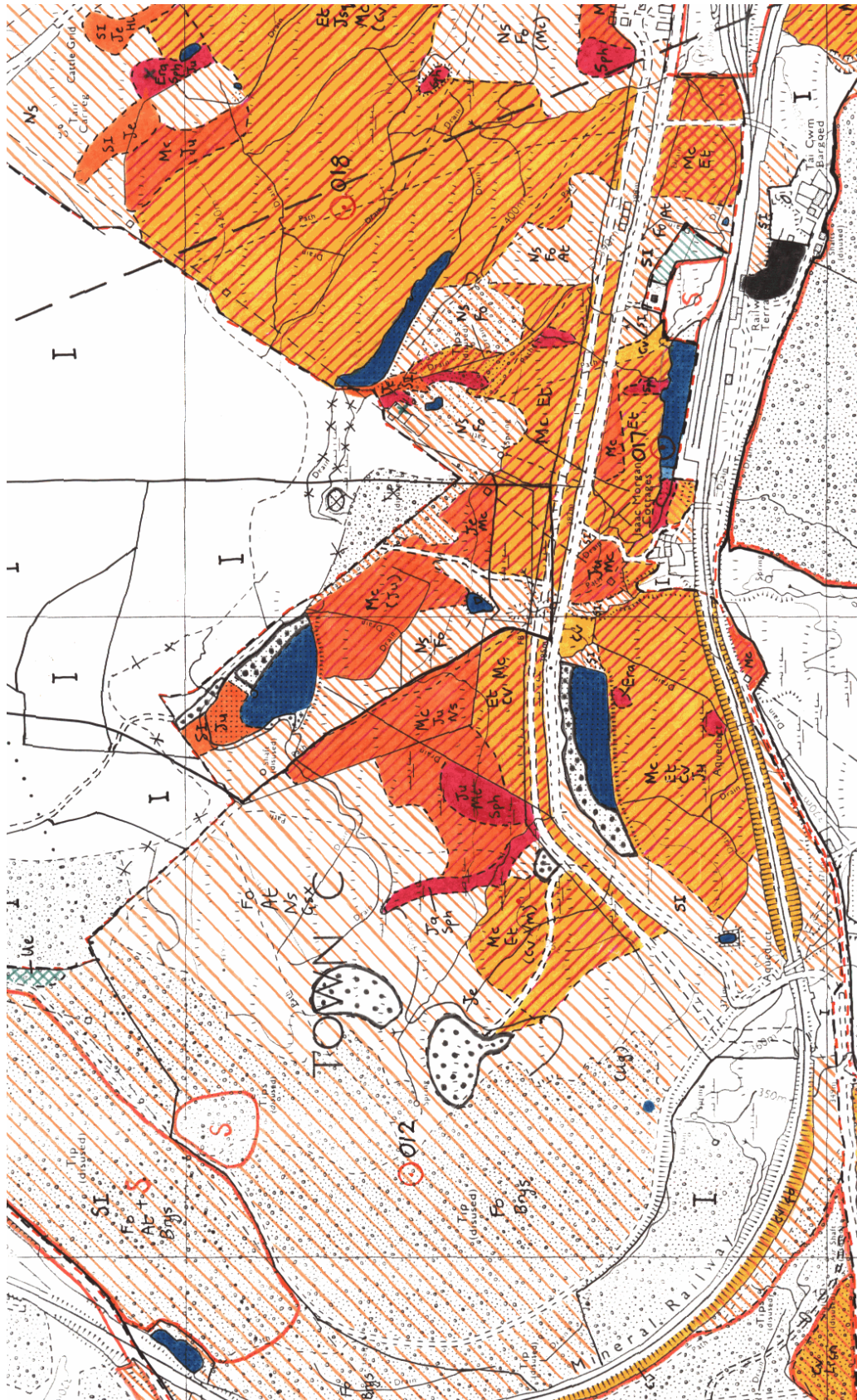
Group/Species	Common Name	Status / Notes
<b>Lepidoptera</b>	<b>Butterflies</b>	
<i>Hipparchia semele</i>	Grayling	C; RPS
	<b>Moths</b>	
<i>Euthrix potatoria</i>	Drinker	Larval
<i>Macrothylaci rubi</i>	Fox moth	Larval
<i>Bymphula stagnata</i>	Beautiful china-mark	Pond 4, RPS
<i>Elophila nymphaeata</i>	Brown china-mark	Pond 4, RPS
<i>Catoptria margaritella</i>	Pearl-band grass veneer	RPS
<b>Hymenoptera</b>	<b>Bees, Wasps &amp; Ants</b>	
<i>Bombus monticola</i>	Mountain Bumblebee	Local. RPS.
<b>Odonata</b>	<b>Dragonflies &amp; Damselflies</b>	
<i>Aeshna cyanea</i>	Southern hawker	ORS
<i>Aeshna juncea</i>	Common hawker	ORS
<i>Coenagrion puella</i>	Azure damselfly	ORS
<i>Cordulegaster boltonii</i>	Golden-ringed dragonfly	C; ORS
<i>Enallagma cyathigerum</i>	Common blue damselfly	ORS
<i>Ischnura elegans</i>	Blue-tailed damselfly	ORS
<i>Ischnura pumilio</i>	Scarce blue-tailed damselfly	C; Nationally scarce; ORS, RPS
<i>Lestes sponsa</i>	Emerald damselfly	C; ORS, RPS
<i>Libellula quadrimaculata</i>	Four-spotted chaser	ORS
<i>Pyrrhosoma nymphula</i>	Large red damselfly	ORS
<i>Sympetrum danae</i>	Black darter	C; RPS
<i>Sympetrum striolatum</i>	Common darter	ORS

**Key**

***Local Status***

- P : Primary Species. Sites supporting these species should be considered for selection as SINC's.
- C : Contributory Species. Their presence should contribute towards the designation of sites that qualify as SINC's under other guidelines.

APPENDIX 2: EXTRACT OF NCC PHASE ONE SURVEY DATA





APPENDIX 3: AERIAL PHOTOGRAPH OF SITE





**APPENDIX 4: SITE PHOTOGRAPHS (CAPTURED OCTOBER 2006)**



Revegetated spoil tip



Western gorse scrub



Looking east across wet heath areas



Wet heath



Acid flush



Pond 4



Pond 5



Pond 8



