

DAVID CLEMENTS ECOLOGY LTD

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

SO 00SE/15: CWMFELIN SLOPES

SURVEY & ASSESSMENT FOR SINC DESIGNATION

April 2008

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Site Name: CWMFELIN SLOPES

Grid Ref(s): SO 097014 (N); SO 098005 (S)	Site No.: SO 00SE/15		
Status: July 2002: Provisional site; boundary identified from available desk-top sources only; requires confirmation by survey. Sept 2007-Apr 2008: 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:

Two parcels of land, comprising 'ffridd' habitats on valley slopes above the Afon Bargoed Taf. Mainly acid grasslands and mature broadleaved woodlands, with smaller areas of marshy grassland, dry heathland, grass-heath, acid flush and bracken (*Pteridium aquilinum*).

The woodlands comprise semi-natural sessile oak (*Quercus petraea*) and alder (*Alnus glutinosa*) woods, the latter including some wet woodland and an area of ancient woodland. The marshy grasslands and acid flushes support species of interest including ivy-leaved bellflower (*Wahlenbergia hederacea*), bog pimpernel (*Anagallis tenella*), marsh St John's-wort (*Hypericum elodes*), lesser skullcap (*Scutellaria minor*) and marsh pennywort (*Hydrocotyle vulgaris*). Some of the acid grasslands are unimproved in character and dominated by wavy hair-grass (*Deschampsia flexuosa*), while the heathlands support devil's-bit scabious (*Succisa pratensis*) and sheep's bit (*Jasione montana*).

Meets SINC Selection Criteria No.s:

H1, H6, H7, H9, H10, H12, H15, H20, H22

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

UK BAP	Priority Habitats: Wet woodland Lowland acid grassland Lowland heathland Purple moor-grass & rush pastures	Priority Species: Song thrush
LBAP	Key Habitats: Wet woodland Acid grassland Heathland Purple moor-grass & rush pastures Ffridd/bracken slopes Rivers, streams and floodplains	Key Species: Song thrush

Protected Species: none recorded to date

Previously identified areas of interest contained within SINC:

Landscape Strategy Site No. 3600 ('Borough Importance')

Key Site identified in LBAP

See continuation sheet: [] []

See Confidential File: [Yes] [No]

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

Gelligaer Common adjacent to south-east

Includes a small area of Gelligaer Common to south

Main sources of data:

CCW Phase 1 survey (1991-93); Landscape Strategy (TACP 1996); Ancient Woodland Inventory (Sothorn 1986); Merthyr Tydfil LBAP (2001)

Validation survey(s):

Surveyor

Date

George Tordoff

September 2007

Remarks:

Area of fringed habitats including ancient woodland and acid grassland.

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 'Cwmfelin Slopes' 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 comprises two parcels of valleyside 'ffridd' situated to the south of Bedlinog, which lie between about 190m AOD in the south-west, rising to approximately 290m in the north-east. The site has a predominantly semi-upland character and comprises mainly acid grassland and broadleaved woodland. There are also smaller areas of marshy grassland, dry heathland, grass-heath and acid flush. A wooded stream is also present.
- 1.3 The site overlies Carboniferous shales and sandstones of the Upper 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 elsewhere.
- 1.4 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 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; BRIG 2007; WAG 2007; GlamBAG 1999; MTBP 2002).
- 1.5 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 18th and 21st September 2007, 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)
- South-East Wales Biological Records Centre (SEWBRc)

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.

Broadleaved Woodland

- 3.1.2 Several areas of semi-natural broadleaved woodland are present on the site, being most extensive in the east. These comprise mainly sessile oak (*Quercus petraea*) woods, although a small area of wet woodland dominated by alder (*Alnus glutinosa*) is also present.
- 3.1.3 The oakwoods of the site are generally mature, although the block of woodland in the north-east is younger and composed of densely-growing, medium-aged trees. The canopy of the oakwoods comprises mainly sessile oak, together with some downy birch (*Betula pubescens*), ash (*Fraxinus excelsior*) and alder locally. The understorey layer is usually poorly defined, although hawthorn (*Crataegus monogyna*) occurs occasionally and in one area hazel (*Corylus avellana*) is abundant.
- 3.1.4 The ground flora of the oakwoods is often grassy, with common bent (*Agrostis capillaris*) and creeping soft-grass (*Holcus mollis*) the most commonly-occurring species. Associated broad-leaved herbs include wood sorrel (*Oxalis acetosella*), yellow pimpernel (*Lysimachia nemorum*) and wood sage (*Teucrium scorodonia*). Locally the ground flora contains more acidophilic plants, with frequent wavy hair-grass (*Deschampsia flexuosa*) and occasional bilberry (*Vaccinium myrtillus*) and hard-fern (*Blechnum spicant*). In addition, enchanter's nightshade (*Circaea lutetiana*), lady-fern (*Athyrium filix-femina*) and scaly male fern (*Dryopteris affinis*) are present close to the stream in the southernmost woodland area.
- 3.1.5 An area of mature alder woodland is present in the east of the site. Several other species are present in the canopy of this woodland at a low frequency, including hawthorn, sessile oak and downy birch. The woodland is used for stock grazing, this having prevented any regeneration of the canopy trees, creating an open woodland lacking an understorey. The ground flora of the alder woodland is dominated by Yorkshire fog (*Holcus lanatus*) and tufted hair-grass (*Deschampsia caespitosa*), together with floating sweet-grass (*Glyceria fluitans*), star sedge (*Carex echinata*) and patches of bog-moss (*Sphagnum* sp) in flushed areas.
- 3.1.6 The dampest areas of alder woodland on the site can be classified as 'Wet Woodland', a Priority Habitat as defined by the UK Biodiversity Action Plan (UK BAP: UKSG 1995; UKBG 1998-1999; BRIG 2007). The alder woodland is also identified in the *Provisional Ancient Woodland Inventory* for Glamorgan (Sothern 1986; See Appendix 2). It is likely that other woodland remnants too small to be recorded by the inventory persist alongside watercourses and locally elsewhere on undisturbed soils.

- 3.1.7 The woodlands of the site collectively support at least 9 of the species which are listed as being indicative of ancient woodlands in the *Guidelines for the Selection of Wildlife Sites in South Wales* (SWWSP 2004).

Acid Grassland

- 3.1.8 Several acid grasslands are present on the site, occurring most widely in the western parcel of land. Two NVC communities are represented, comprising U2 *Deschampsia flexuosa* grassland and U4 *Festuca ovina* – *Agrostis capillaris* – *Galium saxatile* grassland.
- 3.1.9 The U2 community occupies a fairly large area of land in the west of the site, which appears to have been ungrazed for several years. This grassland is unimproved in character and has a tussocky turf dominated by wavy hair-grass. Other grasses are scarce, with the exception of heath-grass (*Danthonia decumbens*) which is frequent. There are also some localised patches dominated by common bent and red fescue (*Festuca rubra*). The associated broad-leaved herbs are of limited diversity, although heath bedstraw (*Galium saxatile*) is abundant and tormentil (*Potentilla erecta*) frequent. Scattered plants of ling heather (*Calluna vulgaris*) are also a feature of the vegetation. Large anthills occur abundantly throughout the U2 grassland; these support brown bent (*Agrostis vinealis*) and early hair-grass (*Aira praecox*).
- 3.1.10 The U4 community occurs more widely on the site, in areas which are grazed by sheep and horses. These grasslands are semi-improved in character and are generally co-dominated by common bent and red fescue, although sheep's fescue (*Festuca ovina*) is also abundant locally. Heath bedstraw is the most commonly-occurring broad-leaved herb, with tormentil and mouse-ear hawkweed (*Pilosella officinarum*) present at a lower frequency. Anthills are sometimes abundant in these grasslands and support heath speedwell (*Veronica officinalis*) and sheep's sorrel (*Rumex acetosella*).
- 3.1.11 The dry acid grasslands of the site collectively support at least 21 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). Several of these species were recorded from the grass-heath habitat (see below).

Dry Heathland and Grass-Heath

- 3.1.12 A small area of dry heathland is present at the woodland margin in the north of the site. The heathland comprises a tall, dense stand of ling heather with a few grassy patches supporting wavy hair-grass, heath-grass, common bent, sweet vernal-grass (*Anthoxanthum odoratum*) and sprigs of bilberry. Other associates in the heathland include heath bedstraw, tormentil, devil's-bit scabious (*Succisa pratensis*), sheep's bit (*Jasione montana*), slender St John's-wort (*Hypericum pulchrum*), goldenrod (*Solidago virgaurea*) and pill sedge (*Carex pilulifera*).
- 3.1.13 A sloping bank in the west of the site supports an area of grass-heath. This vegetation comprises a mosaic of U2 acid grassland and mature bushes of ling heather. Bilberry is also abundant in this community, along with associates

including hard-fern, lemon-scented fern (*Oreopteris limbosperma*) and heath wood-rush (*Luzula multiflora*).

Marshy Grassland & Acid Flush

- 3.1.14 Small areas of M23 *Juncus effusus/acutiflorus* – *Galium palustre* rush-pasture are present at the margins of the alder woodland in the east of the site. These rush-pastures are mostly dominated by soft rush (*Juncus effusus*), although sharp-flowered rush (*J. acutiflorus*) replaces this species locally. Velvet bent (*Agrostis canina*) forms a conspicuous ‘carpet’ beneath the rush tussocks. The rush-pastures appear somewhat degraded, in general supporting a limited range of plant species including common nettle (*Urtica dioica*) and foxglove (*Digitalis purpurea*). However, some more diverse areas are also present; these support frequent greater bird’s-foot-trefoil (*Lotus pedunculatus*) and ivy-leaved bellflower (*Wahlenbergia hederacea*) as well as a scattering of mat-grass (*Nardus stricta*), purple moor-grass (*Molinia caerulea*), marsh violet (*Viola palustris*), marsh bedstraw (*Galium palustre*), tormentil, cuckooflower (*Cardamine pratensis*), bog stitchwort (*Stellaria uliginosa*) and marsh thistle (*Cirsium palustre*).
- 3.1.15 A field in the far south of the site supports a mosaic of marshy grassland, acid flush, acid grassland and bracken (*Pteridium aquilinum*) communities. The grasslands in this area are heavily grazed by livestock. The marshy grassland vegetation has a short sward dominated by bulbous rush (*Juncus bulbosus*) and a range of sedges, mainly yellow sedge (*Carex viridula* ssp *oedocarpa*) with smaller quantities of carnation sedge (*C. panicea*), common sedge (*C. nigra*), star sedge (*C. echinata*) and oval sedge (*C. ovalis*). There is also a scattering of soft rush, sharp-flowered rush, jointed rush (*Juncus articulatus*), toad rush (*J. bufonius*) and small tussocks of purple moor-grass. Broad-leaved herbs are prominent in the vegetation, particularly bog pimpernel (*Anagallis tenella*), marsh pennywort (*Hydrocotyle vulgaris*) and tormentil. Species present at a lower frequency include ivy-leaved bellflower, lesser skullcap (*Scutellaria minor*) and marsh St John’s-wort (*Hypericum elodes*).
- 3.1.16 The acid flush in the south of the site has a similar botanical composition to the nearby marshy grassland community (see above). The main difference between the two communities is the abundance of bog-moss (*Sphagnum* sp) in the flush vegetation, together with an increased frequency of star sedge. Other species present in the flush include round-leaved crowfoot (*Ranunculus omiophyllus*) and common spike-rush (*Eleocharis palustris*).
- 3.1.17 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). An additional 3 marshy grassland indicator species were recorded from the wet woodland and acid grassland habitats of the site.

Streams

- 3.1.18 A section of the Nant Wen, a fast-flowing stream, passes through the oak woodland in the south of the site. The stream has a rocky bed and marginal vegetation comprising mainly large fern species, particularly lady-fern and scaly male-fern.

Bracken Community

- 3.1.19 Stands of bracken occur on sloping ground in the western parcel of land. The bracken is generally quite dense, having a relatively undifferentiated 'ground flora' comprising sparse acid grassland similar in character to that occurring elsewhere on the site.

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), have been recorded from the site to date. However, several of the plant species recorded from the site can be regarded as being local or uncommon in the Glamorgan regional context, including bog pimpernel, marsh St John's-wort, ivy-leaved bellflower, marsh violet, lesser skullcap and lemon-scented fern.

3.2 Fauna

Mammals

- 3.2.1 There was no evidence of any protected mammal species recorded during the present survey of the site, although several species could potentially occur. Otter may range along the Nant Wen stream, a section of which flows through the south of the site. Otter is well established on the Afon Bargod Taf (MTCBC miscellaneous records), which the Nant Wen empties into.
- 3.2.2 The site is considered potentially suitable for dormouse, with hazel, a favoured food source, abundant in some of the woodlands. In addition, many of the mature trees within the woodlands of the site appear suitable for supporting roosting bats, although no evidence of this has been found to date.

Birds

- 3.2.3 Thirteen species of bird have been recorded from the site to date. These include song thrush (*Turdus philomelos*), a Priority Species in the UK BAP and Merthyr Tydfil LBAP, and a range of other common woodland species. Many of the woodland birds recorded are likely to breed on the site.

Reptiles

- 3.2.4 No reptiles were noted during the present survey of the site, although the site appears potentially suitable for all four of the common native reptile species. All reptiles are afforded legal protection against direct harm under current legislation.

Amphibians

- 3.2.5 No amphibians have been recorded from the site to date, and the site lacks any water bodies in which these species would usually breed. However, amphibians may use the site for foraging and/or overwintering outside the breeding season, although the presence of the rare and protected great crested newt (*Triturus cristatus*) is considered unlikely.

Invertebrates

- 3.2.6 Detailed invertebrate surveys of the site have not been carried out to date. The species recorded during the current survey are listed in Appendix 1.
- 3.2.7 Yellow meadow-ant (*Lasius flavus*) nest-mounds are abundant in many of the acid grasslands of the site.

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 Cwmfelin Slopes 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 2007) 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. The revised cSINC boundary includes many changes from the draft proposed boundary (Clements 2002), the most significant of which are: (1) the exclusion of some fields to the east of the railway line, which formerly supported acid grassland but have been subject to agricultural improvement in recent years and are now of little ecological interest; (2) the exclusion of an area of former acid grassland to the west of the railway line which has been lost to housing development; and (3) the inclusion of some additional land to the east of the railway line, which supports mature sessile oak woodland, ancient alder woodland, dry heathland, acid grassland and bracken stands. 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.

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
Wet Woodlands	Yes	Yes		Yes HAP 3
Acid Grasslands	Yes	a Yes	Yes a	Yes HAP 8
Heathland	Yes	b Yes	Yes b	Yes HAP 12
Marshy Grasslands	Yes	c Yes	Yes d	Yes HAP 11
Rivers, Streams and Floodplains	Yes	e Yes		Yes HAP 16
Friable/Bracken Slopes				Yes HAP 7

- a Lowland dry acid grasslands only b Upland and lowland examples
c Purple moor-grass & rush pastures d Lowland examples only
e Rivers 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 Cwmfelin Slopes 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 H1: Woodlands

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

All ancient woodlands as recorded in the Ancient Woodland Inventories, apart from those felled and replanted with non-native species and which have also entirely lost their ancient features such as characteristic ground flora

Area of ancient woodland present in the eastern part of the site. There may be other fragments of ancient woodland within the site which are not recorded in the Inventory due to their small size

Semi-natural woodlands, of whatever size, which support as assemblage of ancient woodland indicator species [referred to in Table 1 of the Guidelines: no threshold is set, but the number should be 'significant']

Almost all of the site woodlands are semi-natural, and support at least 9 indicator species, which is considered 'significant'

All semi-natural beech and yew woodlands

None present

All semi-natural upland woodlands

None present

All semi-natural wet woodlands

Small area of wet alder woodland present

Planted/re-planted wet woodland with semi-natural ground flora or other areas of interest such as ditches, pools and marshy areas

None present

Site qualifies under this guideline?

Yes

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

Area of unimproved acid grassland present in the west of the site

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 21 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 H9: Bracken Communities

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

Stands of bracken with a species-rich ground flora

The site contains several stands of bracken; these generally have a species-poor ground flora

Site qualifies under this guideline?

Yes (See 4.6.2)

- 4.6.2 The draft Merthyr Tydfil County Borough SINC guidelines also specify that ‘ffridd’ habitats (ie semi-upland valleyside habitats containing complex mosaics of heathland, bracken, woodland, wet flushes, acid grasslands and scree) should also be considered for selection. The majority of the site can be considered to comprise ‘ffridd’ vegetation, with the bracken stands occurring in a mosaic with habitats of greater ecological interest.

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

None present

All examples of unmodified dry heathland

Small area of unmodified dry heathland present in the north 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

An area of grass-heath mixture is present; dwarf shrub cover greater than 10%

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 an acid flush which has 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 a short section of the Nant Wen, which is flanked by mature oak woodland. The course of the stream appears to be ‘natural’

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

None recorded

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)

None present

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

None present

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

None present

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]

Significant populations of yellow meadow-ant hills occur in the acid grasslands of the site

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 recorded 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 recorded 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 recorded 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

None recorded to date, although it is likely that some of the mature trees on the site support roosting bats

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

None recorded to date

Site qualifies under this guideline?

No

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]

Insufficient data

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 2004 indicates the number 8-10]

One such species are recorded to date: song thrush

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

Insufficient data

Site qualifies under this guideline?

No

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

None recorded to date. However, further survey would be considered likely to reveal the presence of common reptile species

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

Insufficient data

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

Insufficient data

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

Insufficient data

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

Insufficient data

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]

Insufficient data

Site qualifies under this guideline?

No

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 42' list (WAG 2007)

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 Table 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

Insufficient data

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

None 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

None recorded to date

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?

No

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]

None recorded to date

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

None recorded to date

Any site that supports a species listed in either the Red Data Books (NCC 1987) [ie in the 'threatened' categories] or on the 'Section 42' list (WAG 2007), 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?

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.

Guideline	Subject	Compliance
H1	Woodlands	Yes
H6	Acid Grasslands	Yes
H7	Marshy Grasslands	Yes
H9	Bracken Communities	Yes
H10	Heath & Grass-Heath Habitats	Yes
H12	Bog Habitats & Flushes	Yes
H15	Watercourses	Yes
H20	Mosaic Habitats	Yes
H22	Other Features	Yes
S1	Mammals	No
S2	Birds	No
S3	Reptiles	No
S4	Amphibians	No
S6	Invertebrates	No
S7	Vascular Plants	No

5.0 REFERENCES

Biodiversity Reporting & Information Group (BRIG 2007) *Report on the Habitats & Species Review: A Report to the UK Biodiversity Partnership*. Joint Nature Conservation Committee, Peterborough.

David Clements Ecology (DCE 2002) *Merthyr Tydfil County Borough: Sites of Importance for Nature Conservation (SINCs): Criteria for Selection and Draft Schedules for Candidate Sites* (two vols). Unpublished report to Merthyr Tydfil County Borough Council.

Glamorgan Biodiversity Action Group (GlamBAG 1999) *Draft Habitat Action Plans for Glamorgan*.

Merthyr Tydfil Biodiversity Partnership (MTBP 2004) *Guidelines for the Selection of SINCs in Merthyr Tydfil*. Merthyr Tydfil County Borough Council.

Merthyr Tydfil Biodiversity Partnership (MTBP 2002) *Action Plan for Wildlife in Merthyr Tydfil: The Merthyr Tydfil Biodiversity Action Plan 2002-2007 (Adopted Version)*. Merthyr Tydfil County Borough Council.

Nature Conservancy Council (NCC 1989) *Guidelines for the Selection of Biological SSSIs*. NCC Peterborough.

Nature Conservancy Council (NCC 1990) *Handbook for Phase 1 Habitat Survey: a Technique for Environmental Audit*. NCC Peterborough.

Rodwell, J (Ed) (1991 - 2000) *British Plant Communities*. Vols 1-5. Cambridge University Press.

Sothorn E (1986) *Glamorgan Inventory of Ancient Woodlands (Provisional)*. Nature Conservancy Council.

South Wales Wildlife Sites Partnership (SWWSP 2004) *Guidelines for the Selection of Wildlife Sites in South Wales*. Gwent Wildlife Trust.

TACP (1996) *Landscapes Working for Wales: A Landscape Strategy for the Borough of Merthyr Tydfil*. 4. Technical Annex. Welsh Development Agency, Mid Glamorgan County Council, Merthyr Tydfil Borough Council.

United Kingdom Steering Group (UKSG 1995) *Biodiversity: The UK Steering Group Report*. Vols 1-2. HMSO, London.

United Kingdom Biodiversity Group (UKBG 1998-1999) *Tranche 2 Action Plans*. Vols 1-6. English Nature.

Welsh Assembly Government (WAG 2007) *List of Species and Habitats of Principal Importance for the Conservation of Biological Diversity*. WAG, Cardiff.

APPENDIX 1: SPECIES RECORDED

All species recorded by DCE 2007

Group/Species	Common Name	Status	Indicator Species					
			W	NG	CG	AG	MG	PIL
Trees and Shrubs								
<i>Alnus glutinosa</i>	alder							
<i>Betula pendula</i>	silver birch							
<i>Betula pubescens</i>	downy birch							
<i>Corylus avellana</i>	hazel							
<i>Crataegus monogyna</i>	hawthorn							
<i>Fagus sylvatica</i>	beech							
<i>Fraxinus excelsior</i>	ash							
<i>Malus domestica</i>	garden apple							
<i>Prunus spinosa</i>	blackthorn							
<i>Quercus petraea</i>	sessile oak		W					
<i>Rubus fruticosus</i> agg	bramble							
<i>Ulex europaeus</i>	common gorse							
Herbs								
<i>Achillea millefolium</i>	yarrow							
<i>Agrostis canina</i>	velvet bent						MG	
<i>Agrostis capillaris</i>	common bent							
<i>Agrostis vinealis</i>	brown bent					AG		PIL
<i>Aira praecox</i>	early hair-grass	Local				AG		PIL
<i>Anagallis tenella</i>	bog pimpernel	Local					MG	
<i>Anthoxanthum odoratum</i>	sweet vernal-grass							
<i>Athyrium filix-femina</i>	lady-fern							
<i>Blechnum spicant</i>	hard-fern		W					
<i>Calluna vulgaris</i>	ling heather		W			AG		PIL
<i>Cardamine flexuosa</i>	wavy bitter-cress							
<i>Cardamine pratensis</i>	cuckooflower			NG			MG	
<i>Carex echinata</i>	star sedge	Local					MG	
<i>Carex nigra</i>	common sedge			NG			MG	
<i>Carex ovalis</i>	oval sedge							
<i>Carex panicea</i>	carnation sedge			NG			MG	
<i>Carex pilulifera</i>	pill sedge					AG		PIL
<i>Carex viridula</i> ssp <i>oedocarpa</i>	yellow sedge	Local					MG	
<i>Cerastium fontanum</i>	common mouse-ear							
<i>Circaea lutetiana</i>	enchanter's nightshade							
<i>Cirsium arvense</i>	creeping thistle							
<i>Cirsium palustre</i>	marsh thistle							
<i>Cirsium vulgare</i>	spear thistle							
<i>Dactylis glomerata</i>	cock's-foot							
<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>Digitalis purpurea</i>	foxglove							
<i>Dryopteris affinis</i>	scaly male fern		W					
<i>Dryopteris filix-mas</i>	male fern							
<i>Eleocharis palustris</i>	common spike-rush						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 declinata</i>	small sweet-grass	Local						MG	
<i>Glyceria fluitans</i>	floating sweet-grass							MG	
<i>Gnaphalium uliginosum</i>	marsh cudweed								PIL
<i>Hedera helix</i>	ivy								
<i>Hieracium</i> sp	hawkweed						AG		
<i>Holcus lanatus</i>	yorkshire fog								
<i>Holcus mollis</i>	creeping soft-grass								
<i>Hydrocotyle vulgaris</i>	marsh pennywort	Local						MG	
<i>Hypericum elodes</i>	marsh St John's-wort	Local						MG	
<i>Hypericum humifusum</i>	trailing St John's-wort						AG		
<i>Hypericum pulchrum</i>	slender St John's-wort						AG		
<i>Jasione montana</i>	sheep's bit						AG		
<i>Juncus acutiflorus</i>	sharp-flowered rush							MG	
<i>Juncus articulatus</i>	jointed rush							MG	
<i>Juncus bufonius</i>	toad rush								
<i>Juncus bulbosus</i>	bulbous rush								
<i>Juncus effusus</i>	soft rush								
<i>Leontodon autumnalis</i>	autumn hawkbit								
<i>Lotus pedunculatus</i>	greater bird's-foot-trefoil							MG	
<i>Luzula multiflora</i>	heath wood-rush						AG	MG	
<i>Lysimachia nemorum</i>	yellow pimpernel		W					MG	
<i>Molinia caerulea</i>	purple moor-grass							MG	
<i>Nardus stricta</i>	mat-grass						AG		
<i>Oreopteris limbosperma</i>	lemon-scented fern	Local							
<i>Oxalis acetosella</i>	wood sorrel		W						
<i>Pilosella officinarum</i>	mouse-ear hawkweed			NG	CG	AG			PIL
<i>Plantago lanceolata</i>	ribwort plantain								
<i>Potentilla erecta</i>	tormentil			NG		AG		MG	
<i>Potentilla sterilis</i>	barren strawberry		W		CG				
<i>Pteridium aquilinum</i>	bracken								
<i>Ranunculus flammula</i>	lesser spearwort							MG	
<i>Ranunculus omiophyllus</i>	round-leaved crowfoot								
<i>Ranunculus repens</i>	creeping buttercup								
<i>Rumex acetosa</i>	common sorrel								PIL
<i>Rumex acetosella</i>	sheep's sorrel					AG			
<i>Sagina procumbens</i>	procumbent pearlwort								
<i>Scutellaria minor</i>	lesser skullcap	Local						MG	
<i>Solidago virgaurea</i>	goldenrod					AG			
<i>Stellaria uliginosa</i>	bog stitchwort							MG	
<i>Succisa pratensis</i>	devil's-bit scabious	Local		NG		AG		MG	
<i>Teucrium scorodonia</i>	wood sage								PIL
<i>Trifolium dubium</i>	lesser trefoil								
<i>Trifolium repens</i>	white clover								
<i>Urtica dioica</i>	common nettle								
<i>Vaccinium myrtillus</i>	bilberry	Local	W			AG			PIL
<i>Veronica chamaedrys</i>	germander speedwell								
<i>Veronica officinalis</i>	heath speedwell	Local		NG		AG			
<i>Veronica serpyllifolia</i>	thyme-leaved speedwell								
<i>Viola palustris</i>	marsh violet	Local						MG	
<i>Viola riviniana</i>	common dog-violet			NG	CG				
<i>Wahlenbergia hederacea</i>	ivy-leaved bellflower	Local						MG	

Bryophytes

<i>Sphagnum</i> sp	bog-moss
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SWWSP 2004 'Indicator Species' Totals

9 9 4 21 26 11

Key

Status

RDB – Red Data Book

BAP – UK Biodiversity Action Plan Priority Species (UKSG 1995; UKBG 1998; BRIG 2007)

WBAP – List of Species & Habitats of Principle Importance for the Conservation of Biological Diversity (2007)

WCA – Wildlife and Countryside Act (1991): 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

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									
Buteo buteo	Buzzard	G							
Phylloscopus collybita	Chiffchaff	G							
Corvus corone	Crow, carrion	V							
Corvus monedula	Jackdaw	V							
Garrulus glandarius	Jay	V							
Delichon urbica	Martin, house	G			A				
Columba palumbus	Pigeon, wood	V							
Anthus pratensis	Pipit, meadow	G			A				
Erithacus rubecula	Robin	G							
Turdus philomelos	Thrush, song	G	P	W	R	A	B	B	MT
Aegithalos caedatus	Tit, long-tailed	G							
Dendrocopus major	Woodpecker, great spotted	G							
Troglodytes troglodytes	Wren	G							

Key

EU Birds Directive 1979:

1 : Annex 1 species: special conservation measures apply

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

UK BAP (Biodiversity Action Plan, 1995; 1998)

P : Priority Species

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

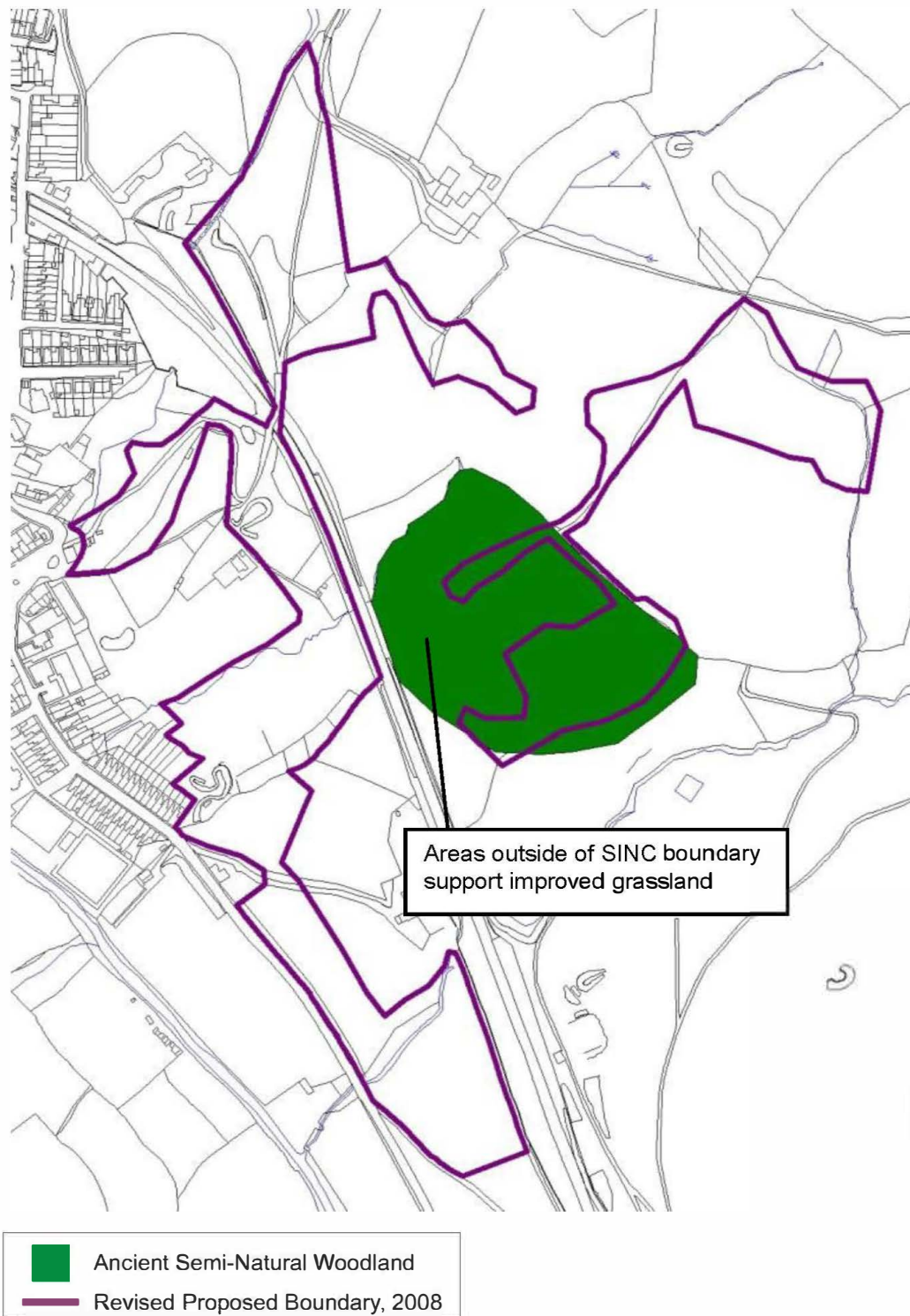
LBAP

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

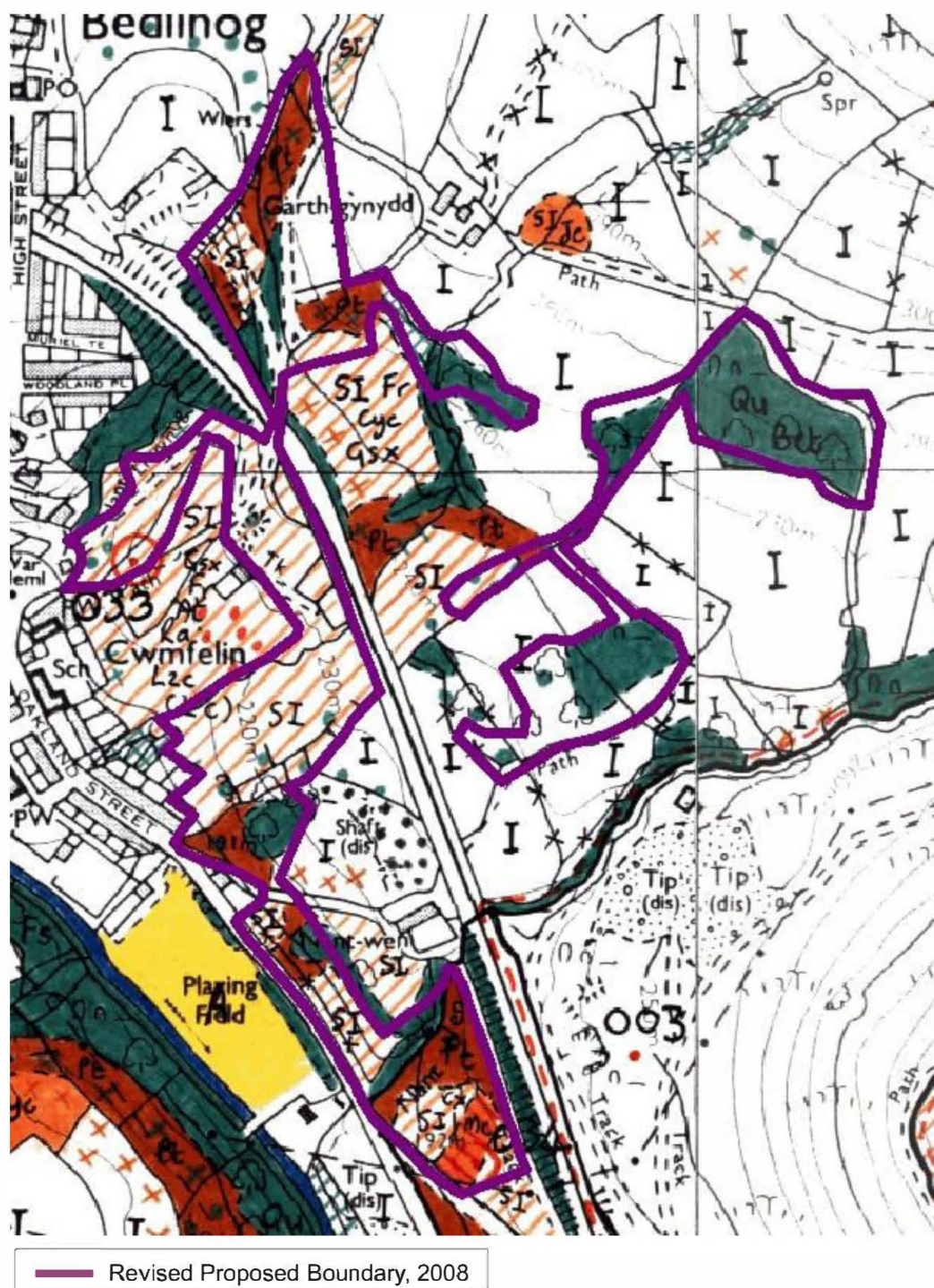
Invertebrates

Group/Species	Common Name	Status / Notes
Hymenoptera	Bees, Wasps & Ants	
Lasius flavus	Yellow meadow-ant	Anthills

APPENDIX 2: EXTRACT FROM ANCIENT WOODLAND INVENTORY (REDRAWN AFTER SOTHERN 1986)



APPENDIX 3: EXTRACT OF NCC PHASE ONE SURVEY DATA



APPENDIX 4: AERIAL PHOTOGRAPH OF SITE



APPENDIX 5: SITE PHOTOGRAPHS (Captured September 2007)



Rush pasture in south-east



Sessile oak woodland



Semi-improved acid grassland in north with large anthills



Ling heather



Unimproved acid grassland with abundant anthills



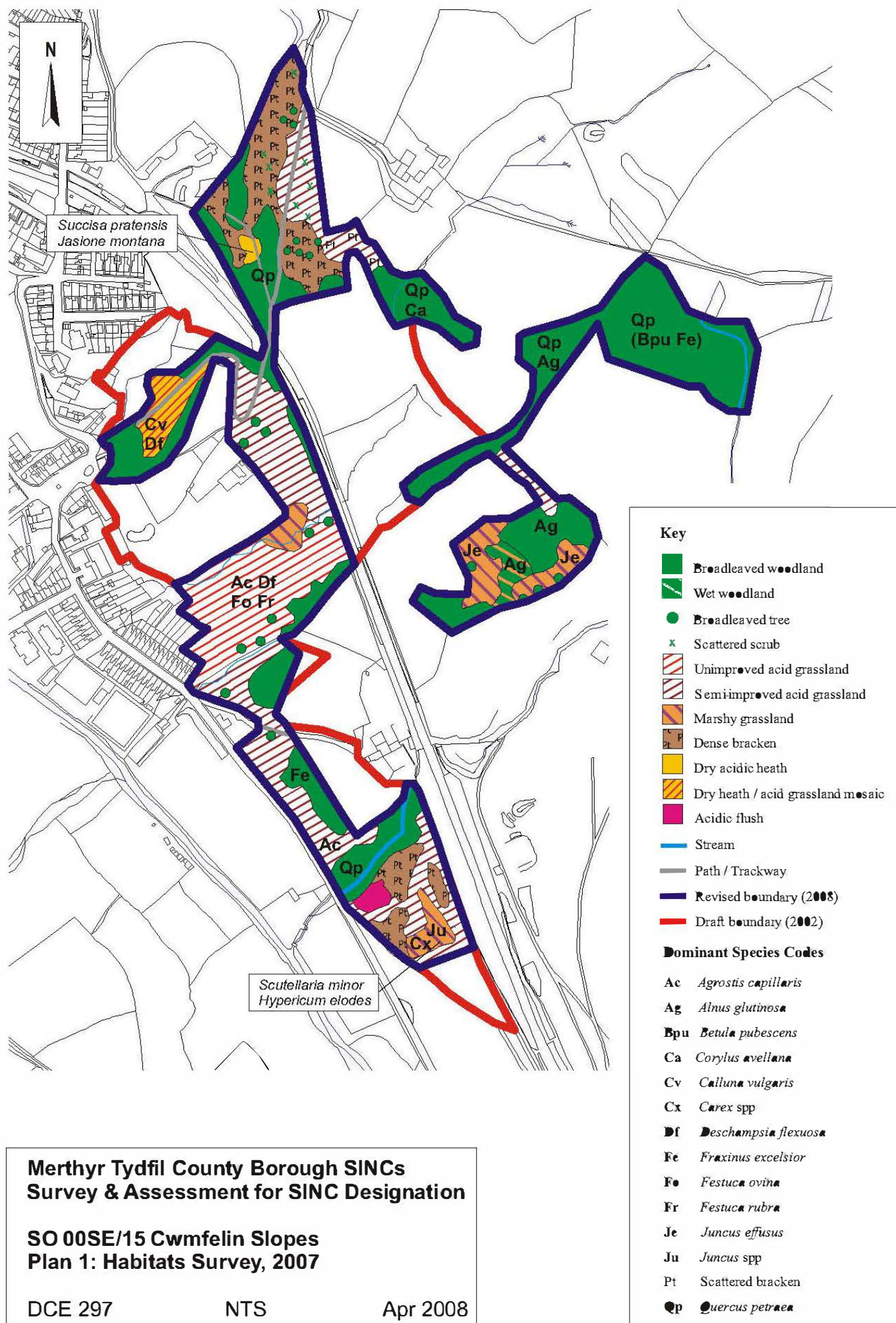
Slope in west with grass-heath

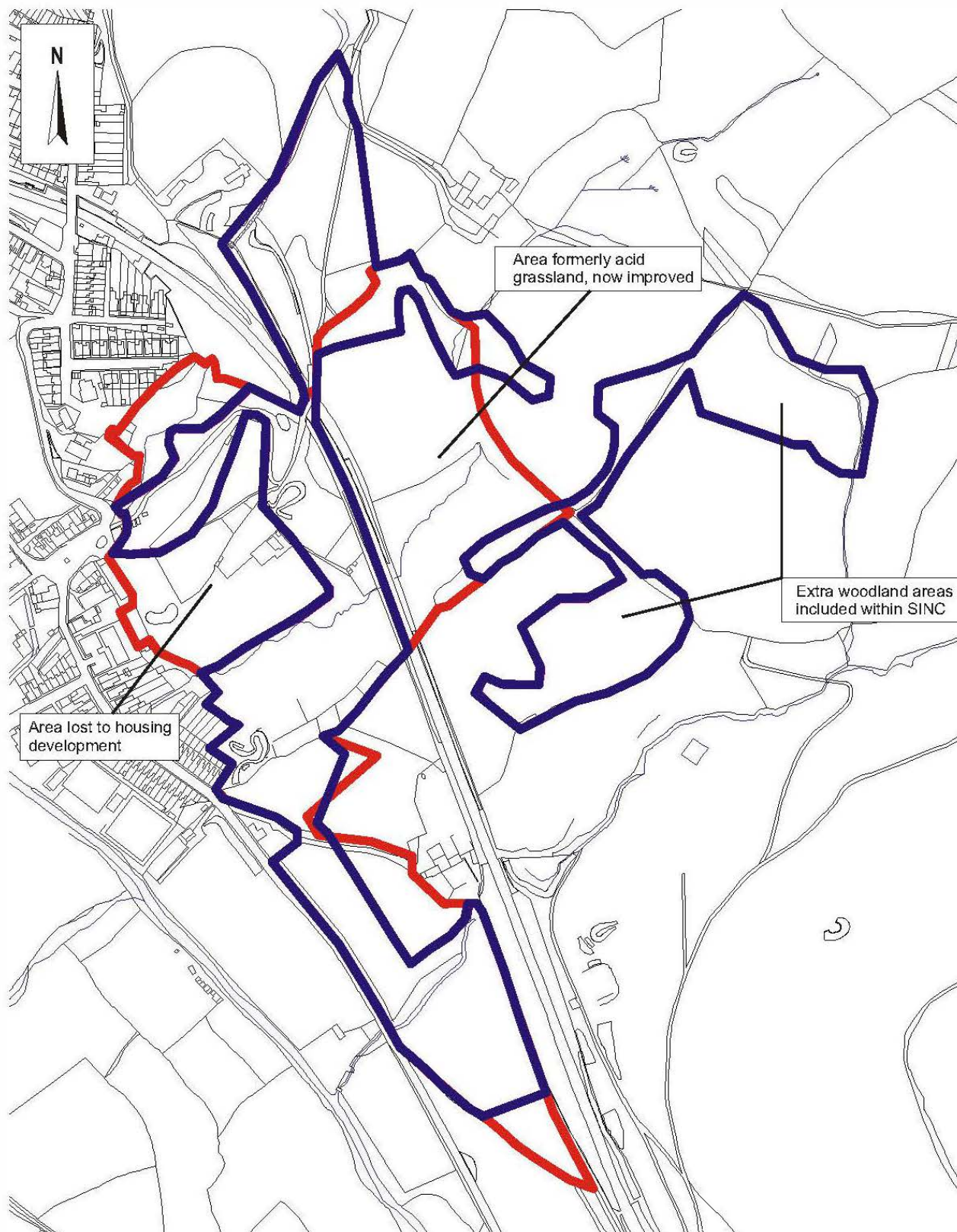


Wooded stream in south (Nant Wen)



Flush in south





- Draft Proposed Boundary, 2002
- Revised Proposed Boundary, 2008

**Merthyr Tydfil County Borough SINC
Survey & Assessment for SINC Designation**

**SO 00SE/15 Cwmfelin Slopes
Plan 2: Proposed SINC Boundary**

DCE 297

NTS

Apr 2008