

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

SITE OF SPECIAL SCIENTIFIC INTEREST: CITATION

RHONDDA CYNON TAF

RHOS TONYREFAIL

<u>Date of Notification:</u>	3 October 2007
<u>National Grid Reference:</u>	ST005895, ST020875 and ST020890
<u>OS Maps:</u>	1:50,000 Sheet number: Landranger 170 1:10,000 Sheet number: ST08NW; ST09SW; SS98NE
<u>Site Area:</u>	244.7 ha

Description:

Rhos Tonyrefail is a large lowland site of special interest for its marshy grassland, acid flush, species-rich neutral grassland, acid grassland, wet heath and blanket mire. These habitats are associated with areas of woodland. The site is also of special interest for its population of marsh fritillary butterfly.

The site consists of a network of seven groups of fields around Tonyrefail, 6km west of Pontypridd, and extends from Trebanog and Penrhiwfer in the north, to Coedely in the south, Hendreforgan in the west and Castellau ganol in the east. It includes gentle slopes and low-lying land in the catchment of Mynydd Dinas, Mynydd y Glyn, Mynydd Maendy and Mynydd Pen-y-graig. Numerous springs and streams cross the site, flowing eventually into the River Ely. Altitudes vary from 125m along the Nant Muchudd and Nant Erin, up to 230m at Penrhiwfer and 240m above Glyn Farm. Most of the area is overlain with glacial boulder clay, but there is some exposed sandstone of the upper Pennant measures and a substantial area of peat. Soils are loamy brown podzols over the sandstone, or strongly gleyed (often waterlogged) stony loams with peaty or humose topsoil, on the boulder clay or peat. Aspects vary, but are mostly westerly.

Marshy grassland is the most widespread habitat at Rhos Tonyrefail. Generally dominated by purple moor-grass *Molinia caerulea*, with other grasses such as brown bent *Agrostis canina* and sweet vernal grass *Anthoxanthum odoratum*, together with tormentil *Potentilla erecta*, carnation sedge *Carex panicea* and, often, devil's-bit scabious *Succisa pratensis*. In places, the vegetation is more heathy, with frequent cross-leaved heath *Erica tetralix*, together with mosses such as *Polytrichum commune*, whilst in wetter areas, herbs such as angelica *Angelica sylvestris*, water mint *Mentha aquatica* and marsh violet *Viola palustris* can be found. In more waterlogged areas, sharp-flowered rush *Juncus acutiflorus* is prominent, with a range of associates such as ragged robin *Lychnis flos-cuculi*, greater bird's-foot trefoil *Lotus uliginosus* and marsh bedstraw *Galium palustre*.

In localised areas where soils are mildly base-rich, a particularly species-rich, uncommon form of marshy grassland can be found.

Here, purple moor-grass is joined by meadow thistle *Cirsium dissectum*, flea sedge *Carex pulicaris*, tawny sedge *C. hostiana* and, locally, quaking grass *Briza media* and bird's-foot trefoil *Lotus corniculatus*, together with bog asphodel *Narthecium ossifragum* and saw-wort *Serratula tinctoria*.

Comment [S1]: Not prominent at this site

Where water flows slowly through the ground, and where springs emerge, marshy grassland grades into flush vegetation. Purple moor-grass and *Sphagnum* mosses are common, with rushes, star sedge *Carex echinata*, marsh violet and marsh bedstraw. These flushes can be found in numerous small patches across Rhos Tonyrefail, becoming more extensive where conditions allow, in an intimate mosaic with other habitats, such as marshy grassland, and blanket mire.

Species-rich neutral grassland can be found throughout, but is particularly prevalent in the north around Cae'r-Ysgol, Penrhiwfer and Collenna Farm, where there are large stands. Here, common knapweed *Centaurea nigra* and bird's-foot trefoil occur, together with grasses such as common bent *Agrostis capillaris* and red fescue *Festuca rubra*. Accompanying herbs include common cat's-ear *Hypochoeris radicata*, self-heal *Prunella vulgaris*, red clover *Trifolium pratense* and, locally, rough hawkbit *Leontodon hispidus*. Where there is a slightly acid or nutrient-poor nature to the soil, heath grass *Danthonia decumbens*, devil's-bit scabious, tormentil and occasionally burnet saxifrage *Pimpinella saxifraga* and betony *Stachys officinalis* can be found.

Comment [S2]: Not very "interesting" species, found in other situations

There are several stands of lowland acid grassland at Rhos Tonyrefail. Those at Tre-boeth North are particularly species-rich and include bird's-foot trefoil, devil's-bit scabious and common knapweed, as well as heath bedstraw *Galium saxatile* and tormentil. This unusual form of lowland acid grassland is related to the neutral grassland on site.

Wet heath at Rhos Tonyrefail is concentrated in two large stands, at Rhiw-garn-fawr and Pant-y-ddraenen and is characterised by purple moor-grass, deer-grass *Scirpus cespitosus*, cross-leaved heath and heather *Calluna vulgaris*. Devil's-bit scabious is often present; drier stands include bilberry *Vaccinium myrtillus* and wetter areas, bog asphodel and common cotton-grass *Eriophorum angustifolium*. There are also some very small areas with a carpet of the moss *Sphagnum compactum*, representing a different type of heath. In places, hare's-tail cotton-grass *Eriophorum vaginatum* also grows, suggesting a link between the wet heath and blanket mire.

Blanket mire itself is found at two locations at Rhos Tonyrefail: Cae'r Ysgol, where there is a block of more than 10ha, and Rhiw-garn-fawr. Examples of blanket mire in lowland situations are rare in Wales, and Rhos Tonyrefail is the most southerly known example of this habitat. The depth of peat can be up to two metres, and is dominated by purple moor-grass, deer-grass, heather, cross-leaved heath, hare's tail cotton-grass and common cotton-grass, together with bog asphodel, all in a deep carpet of *Sphagnum* mosses. As well as supporting characteristic plants, the peat can also form a historical record of vegetation in this part of south Wales, since the end of the last glaciation.

Rhos Tonyrefail is also of special interest for its population of marsh fritillary butterflies. This butterfly is endangered in Europe, and Wales is one of its remaining strongholds. Here it is mainly found on marshy grassland and wet heath, where its food plant, devil's bit scabious often grows in profusion. The population at Rhos Tonyrefail is thought to be one of the most important remaining in Wales, in terms of density and area of suitable habitat.

Rhos Tonyrefail is host to a number of uncommon plants, including petty whin *Genista anglica*, ivy-leaved bellflower *Wahlenbergia hederacea*, moonwort *Botrychium lunaria*, soft-leaved sedge *Carex montana* (nationally scarce), eyebright *Euphrasia rostkoviana s.l.* (nationally scarce) and great yellowcress *Rorippa islandica* (nationally scarce). Notable mosses and liverworts include *Scapania paludicola* (nationally rare and near threatened), *Sphagnum compactum*, *Leucobryum glaucum*, *Campylopus paradoxus*, *Odontoschisma sphagni* and *Calypogeia arguta*. Many of these species are declining and are restricted to western Europe.. Watercourses and areas of woodland and scrub, including many tall old wooded hedgerows, add to the ecological diversity of the site.

Remarks:

1. The marsh fritillary is included on Annex IIa of the EC Habitats Directive and Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) and is a Biodiversity Action Plan species.
2. Rhos Tonyrefail includes the following UK Biodiversity Action Plan Priority Habitats: Purple moor-grass and rush pasture; Lowland dry acid grassland; Lowland meadow; Lowland heathland and Blanket bog.
3. The site supports vegetation assignable to the *Molinia* meadows on calcareous, peaty or clayey-silt-laden soils *Molinion caeruleon*; Northern Atlantic wet heaths with *Erica tetralix* and Blanket bog (a UK Priority feature). These are habitats listed on Annex I of the EC Habitats Directive (Directive 92/43/EEC on the Conservation of Natural Habitats and Wild Flora and Fauna).

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