

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

**SITE OF SPECIAL SCIENTIFIC INTEREST CITATION**

**BRIDGEND**

**MERTHYR MAWR**

<b><u>Date of Notification:</u></b>	1950, 1983, 2002
<b><u>National Grid Reference:</u></b>	SS861768
<b><u>O.S. Maps:</u></b>	1:50,000 Sheet number: 170 1:10,000 Sheet number: SS 87 NW
<b><u>Site Area:</u></b>	478.5 ha

**Description:**

Merthyr Mawr is of special interest for its saltmarsh, sand dune habitats and for its associated coastal habitats including calcareous grassland, swamp and intertidal habitats. In addition, the site is also of special interest for the assemblages of higher plants, fungi and invertebrates associated with the sand dunes. The rare weevil *Glocianus pilosellus*, a rare Gasteromycete fungus *Tulostoma melanocyclum* and a rare liverwort *Petalophyllum ralfsii* are also features of interest.

Merthyr Mawr is situated to the southeast of the town of Porthcawl and lies on the northern shore of the estuary of the Ogmore River. It is bounded to the north and east by agricultural land.

The beach is composed of periglacial material most of which is derived from the Pennant Sandstone of the Upper Coal Measures. A Carboniferous Limestone plateau, which is largely obscured by sand, runs east to west on the leeward side of the dunes. There is a discontinuous distribution of clay and silt beneath the dune sand, with shingle and beach cobble occurring in many places.

The hydrology of the site is influenced by two karstic springs which discharge groundwater from underlying Carboniferous Limestone sources. A freshwater water table underlies the whole of the southern or lower dunes, and its annual range is controlled by the seasonal pattern of rainfall. The site ranges from low tide up to about 80 m on the top of the limestone plateau.

The extensive sand dune system of Merthyr Mawr displays a range of dune habitats. These include successional stages from bare sand to stabilised dunes and slacks, and dune woodland and scrub.

In the sandy beach area, there is a typical foreshore community of prickly saltwort *Salsola kali*, babington's orache *Atriplex glabriuscula* and sea sandwort *Honkenya peploides*. Further inland, species such as marram grass *Ammophila arenaria*, sand-couch *Elytrigia juncea* and sea-holly *Eryngium maritimum* form a typical fore-dune community. The succession from these fore-dunes to tall, white dunes of marram grass is evident along the sandy area of the beach. Grassland species colonise these white dunes inland, forming a marram grass/red fescue *Festuca rubra* semi-fixed dune grassland community. Merthyr Mawr contains extensive areas of semi-

fixed and fixed species-rich dune grassland types. Many areas are relatively open, reflecting heavy grazing by rabbits particularly at the southern end of the site; this leaves areas of very short, open swards dominated by lichens, bryophytes, lady's bedstraw *Galium verum*, wild pansy *Viola tricolor* and thyme *Thymus praecox*. Rank, fixed dunes with yorkshire-fog *Holcus lanatus*, false oat-grass *Arrhenatherum elatius*, dewberry *Rubus caesius* and burnet rose *Rosa pimpinellifolia* occur elsewhere.

Dune slack vegetation at Merthyr Mawr is also very species-rich. Creeping willow *Salix repens* is locally common on the slack floors, along with other typical slack species such as marsh pennywort *Hydrocotyle vulgaris*, marsh helleborine *Epipactis palustris*, southern marsh-orchid *Dactylorhiza praetermissa* and early marsh-orchid *D. incarnata*. The rare petalwort *Petalophyllum ralfsii* occurs in the patches of damp, bare sand between the creeping willow.

The hollows of the smaller more inland dunes are often colonized by trees and scrub, completing the successional sequence of sand dune habitats from strandline to woodland. Merthyr Mawr has the largest area of semi-natural woodland of all Welsh sand dune systems, consisting of species such as birches *Betula spp.*, willows *Salix spp.*, sycamore *Acer pseudoplatanus*, hazel *Corylus avellana*, ash *Fraxinus excelsior* and oak *Quercus robur*.

The saltmarsh at Merthyr Mawr flanks the western bank of the Ogmore River, and consists of three bays separated by sandbars. The strandline flora of these sandbars is diverse, with vegetation including sea sandwort *Honkenya peploides*, hard-grass *Parapholis strigosa*, fern-grasses *Desmazeria maritima* and *D. rigida*, and sea rocket *Cakile maritima*. The transition from lower to upper saltmarsh is well developed in these bays.

The lower saltmarsh is generally a patchwork of vegetation dominated by common saltmarsh-grass *Puccinellia maritima*. Sea-purslane *Atriplex portulacoides* is locally abundant, and the river fringe is dominated by glasswort *Salicornia spp.* and annual sea-blite *Suaeda maritima*. Higher areas include an abundance of sea arrowgrass *Triglochin maritima* and common saltmarsh-grass. Upper saltmarsh is characterised by common saltmarsh-grass, creeping bent *Agrostis stolonifera* and red fescue *Festuca rubra*. The saltmarsh/sand dune interface is characterised by rock sea-lavender *Limonium procerum* and sand-couch *Elytrigia juncea*.

Merthyr Mawr is one of only three Welsh sand dune systems with calcareous grassland. These grasslands are extremely species-rich, and occur on the south-facing slopes of the limestone plateau where the bedrock is often very close to the surface. Species present in this habitat include autumn gentian *Gentianella amarella*, autumn lady's tresses *Spiranthes spiralis*, wild thyme *Thymus praecox* and hairy violet *Viola hirta*. An area of swamp fed by karstic springs is characterised by species indicative of moving groundwater such as yellow flag *Iris pseudacorus*, meadowsweet *Filipendula ulmaria* and wild angelica *Angelica sylvestris*. Birthwort *Aristolochia clematitis* flanks a water channel influenced by one of these springs.

Intertidal habitat at Merthyr Mawr is characterised by a large sandy beach with rocks to the north. The beach, which forms the coastal frontage of the site, is believed to be eroding at the present time.

Merthyr Mawr supports a significant population of petalwort *Petalophyllum ralfsii*, which is rare and generally declining. The UK is now considered to be a stronghold for this species. The site is also important for its assemblage of nationally scarce species such as variegated horsetail *Equisetum variegatum*, sea spurge *Euphorbia paralias*, hutchinsia *Hornungia petraea*, rock sea-

lavender *Limonium procerum*, curved hard-grass *Parapholis incurva*, round-leaved wintergreen *Pyrola rotundifolia*, and dune fescue *Vulpia fasciculata*. Shore horsetail *E. x littorale* and great brome *Anisantha diandra* are two locally rare plants that occur on the site.

The sand dunes of Merthyr Mawr are one of the most important sites in Britain for rare macrofungi. Important species include *Tulostoma melanocyclum*, the agaric *Russula cessans*, a bolete *Suillus fluryi*, the netted rhodotus *Rhodotus palmatus*, morels and helvellas.

Merthyr Mawr is of importance for its invertebrate fauna. The sand dunes represent a stronghold for many restricted invertebrates, including the notable carabid beetle *Nebria complanata*, the stiletto fly *Thereva fulva*, the dune tiger beetle *Cicindela maritima* and many species of bees and wasps such as the cuckoo bee *Coelioxys mandibularis*, the solitary wasp *Psen bicolor* and the mining bee *Colletes marginatus*. The rare weevil *Glocianus pilosellus* is also a feature of this site.

### **Remarks:**

1. The majority of the site lies within the Merthyr Mawr Warren National Nature Reserve (NNR), which was declared in July 2002 and is managed by CCW.
2. Merthyr Mawr SSSI is part of Kenfig/Cynffig Special Area of Conservation, being host to the following habitats listed in Annex I of the EC Habitats Directive (Directive 92/43/EEC on the Conservation of Natural habitats and of Wild Flora and Fauna): 'Fixed dunes with herbaceous vegetation ('grey dunes')', 'Dunes with *Salix repens* ssp. *argentea* (*salicion arenariae*)' and 'humid dune slacks'. The site is also host to petalwort *Petalophyllum ralfsii*, which is listed in Annex II of the Directive.
3. The Merthyr Mawr Warren Scheduled Ancient Monument covers a large part of the site, and most of the site lies within the Glamorgan Heritage Coast.
4. This site is host to petalwort *Petalophyllum ralfsii* which is protected under Schedule 8 of the Wildlife and Countryside Act (as amended).

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