

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

**SITE OF SPECIAL SCIENTIFIC INTEREST CITATION**

**NEWPORT**

**GWLYPTIROEDD CASNEWYDD/  
NEWPORT WETLANDS**

**Date of Notification:**

26 March 2010

**National Grid Reference:**

ST 350 830

**O.S. Maps:**

1:50,000 Sheet number: 171

1:10,000 Sheet number: ST38

**Site Area:**

374.2 ha

**Description:**

This site is of special interest for its breeding and over-wintering birds, invertebrates, and aquatic and marginal flora. Also of special interest are the ditch habitat and reedbeds.

The site lies within the Gwent Levels, part of an area of low lying lands between Cardiff and Chepstow which is drained by an ordered network of drainage ditches. The Levels are an example of one of the most extensive areas of reclaimed wet pasture in Great Britain, which also includes the Somerset Levels, Romney Marsh and the Pevensy Levels, and is the largest area of its kind in Wales. Together these levels systems constitute a national series of sites, each with its own special features. Newport Wetlands lies to the south of the city of Newport, adjacent to the Severn Estuary and close to the mouth of the River Usk. It is part of the larger Newport Wetlands Reserve constructed to meet the commitment by the UK Government to create “a substantial area of wetland habitat on the shores of the Severn Estuary” as part of the compensation for the loss of the Taf/Ely Estuary SSSI following the construction of the Cardiff Bay Barrage.

The site overlies a sequence of Holocene deposits, including estuarine clay and peat. The majority of the site lies below mean high water level, with the sea being excluded by extensive flood defences. Within the central wet grassland area, the traditional drainage system of the Gwent Levels has been amended by the creation of hydrologically discrete field blocks that can be individually flooded in winter. At the eastern end of the site, three shallow saline lagoons, linked by ditches, have been created. There is an inlet/outlet to the Severn Estuary which allows both water and salinity levels to be controlled throughout the year. At the western part of the site, 43ha of reedbed have been created on the pulverised fuel ash (PFA) reservoirs that used to be part of Uskmouth power station. As a result of the large embankments and filling of the reservoirs with PFA, most of this area lies above mean high water level. Water from the nearby Nash Sewage Treatment works is passed through a ‘tertiary treatment reedbed’ and then through the reedbed lagoons before being discharged to the Severn Estuary.

In winter, Newport Wetlands support nationally (UK) important numbers of shoveler *Anas clypeata* and black-tailed godwit *Limosa limosa*. Other over-wintering species that use the site include gadwall *A. strepera*, wigeon *A. penelope*, shelduck *Tadorna tadorna*, dunlin *Calidris alpina*, redshank *Tringa totanus*, whimbrel *Numenius phaeopus* and curlew *N. arquata*.

During the summer, the wet grasslands, saline lagoons and reedbeds on the site support an

exceptional variety of breeding birds, including nationally (UK) important breeding populations of avocet *Recurvirostra avosetta*, redshank, lapwing *Vanellus vanellus*, water rail *Rallus aquaticus*, Cetti's warbler *Cettia cetti* and bearded tit *Panurus biarmicus*. In addition, breeding populations of ringed plover *Charadrius hiaticula* and little ringed plover *C. dubius* are also present.

The aquatic invertebrate assemblage is very diverse and compares well with other similar areas in Britain. Many nationally rare and scarce species are present, including the great silver water beetle *Hydrophilus piceus*, the water beetle *Hydaticus transversalis* and the ornate brigadier soldierfly *Odontomyia ornate*. The nationally scarce spider *Tetragnatha striata* has a strong population in the reedbeds and the nationally scarce shrill carder bee *Bombus sylvarum* is found throughout the site. Overall, some 400 invertebrate species have been recorded at the site, several of which are confined to the Gwent Levels in Wales.

The watercourses are rich in plant species and communities, many of which are rare or absent in other levels systems. This is due to the variety of ditch types, the different management regimes and timing of the management; all of which results in a mosaic of ditch habitats across the site. This provides opportunities for a range of aquatic plants. In the ditches themselves, submerged species such as curly pondweed *Potamogeton crispus*, rigid hornwort *Ceratophyllum demersum* and, occasionally, stoneworts *Chara* spp. grow. Amongst the more notable species is hairlike pondweed *Potamogeton trichoides* which, in Wales, is almost entirely confined to the Gwent Levels area. There is a high diversity of floating plants, with all five British native duckweed species and frog-bit *Hydrocharis morsus-ranae* frequently abundant. Newport Wetlands is one of the few places on the Levels where nationally scarce least duckweed *Wolffia arrhiza*, the world's smallest flowering plant, is found at the north-western extent of its British range. Along the banks, fool's watercress *Apium nodiflorum*, lesser water-parsnip *Berula erecta*, tubular water dropwort *Oenanthe fistulosa* and water plantain *Alisma plantago-aquatica* occur.

The reedbeds at Newport Wetlands are the largest within the south-east Wales area. In wetter areas with standing water, the vegetation is almost entirely composed of common reed *Phragmites australis*. However, in drier areas, it is joined by marsh bedstraw *Galium palustre*, hemp agrimony *Eupatorium cannabinum* and great willowherb *Epilobium hirsutum*.

In addition, the site has a number of other habitats that add to its overall wildlife value. These include hedgerows, scrub, woodland and grassland.

### **Remarks:**

The northern and eastern boundaries of Gwlyptiroedd Casnewydd/ Newport Wetlands SSSI are contiguous with part of the boundaries of Gwent Levels: Nash and Goldcliff SSSI and Gwent Levels: Whitson SSSI respectively.

The southern boundary of the Gwlyptiroedd Casnewydd/ Newport Wetlands SSSI is contiguous with part of the northern boundaries of the Severn Estuary SSSI, SPA, SAC and Ramsar site (which share a common boundary at this location).

The Gwlyptiroedd Casnewydd/ Newport Wetlands SSSI is one of a series of SSSIs within the area between Chepstow and Cardiff known as the Gwent Levels.

The Gwent Levels as a whole constitutes a valuable historic landscape that had been recognised as being of national importance and has accordingly been placed on the Register of Landscapes

of Outstanding Historic Interest in Wales.

The Gwlyptiroedd Casnewydd/ Newport Wetlands SSSI is owned and managed by CCW and is part of the larger Newport Wetlands National Nature Reserve.

The wintering birds for which the site is considered of special interest (namely the wintering populations of shoveler and black-tailed godwit) and those that are found in significant numbers (namely the wintering populations of dunlin, redshank, shelduck, gadwall, wigeon, whimbrel, curlew) form part of the internationally important populations of birds recognised by the classification under the 1979 EC Birds Directive of the Severn Estuary Special Protection Area (SPA). Wintering dunlin, redshank, shelduck and gadwall are individually qualifying species of the SPA. Wintering wigeon, whimbrel, curlew, shoveler and black-tailed godwit are part of the SPA's internationally important assemblage of wintering waterbirds.

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