

= Whitton Bridge Pasture =

Whitton Bridge Pasture is a Site of Special Scientific Interest (SSSI) in the unitary authority of Stockton @-@ on @-@ Tees , England . At 3 @. @ 18 hectares (7 @. @ 9 acres) it lies to the south of Whitton village and north west of Stockton @-@ on @-@ Tees . SSSIs are chosen by Natural England , and Whitton Bridge Pasture was designated in 2004 because of its biological interest . It is one of 18 SSSIs in the Cleveland area of search .

The biological interest is focused on the species @-@ rich mesotrophic grassland found across the site , which is actively maintained by grazing . The species present are predominantly grasses , although herbs and orchids are also found . The area has been classified as MG5 under the British National Vegetation Classification because of the species composition . The site is small and isolated , and therefore requires careful management to avoid damage caused by activity on neighbouring land .

= Reason for notification =

SSSIs are designated by Natural England , previously English Nature , which uses the 1974 ? 1996 county system . This means there is no grouping of SSSIs by Stockton @-@ on @-@ Tees unitary authority , or County Durham which is the relevant ceremonial county . As such Whitton Bridge Pasture is one of 18 SSSIs in the Cleveland area of search .

Whitton Bridge Pasture is nationally important for its species @-@ rich grassland which is unimproved by fertilisers . This type of grassland ? once common in the Tees lowland ? is becoming increasingly rare with its associated species also becoming scarce . Whitton Bridge Pasture is one of only two remaining examples of this habitat in the Tees lowland area . The other example is Briarcroft Pasture , an SSSI about 3 kilometres (1 @. @ 9 mi) to the south , which was designated at the same time but is significantly smaller .

Under the British National Vegetation Classification (NVC) Whitton Bridge Pasture is considered as mesotrophic grassland because it represents well @-@ drained and permanent pasture . In particular it is considered to be an MG5 community because of the species present . MG5 is widespread in many lowland areas in England , Wales , and Scotland , particularly in the Midlands . Whitton Bridge Pasture is predominantly subcommunity MG5c (*Danthonia decumbens*) , however subcommunity MG5a (*Lathyrus pratensis*) is present with a substantially different species composition .

= Site description =

= = Abiotic = =

Located north @-@ west of Stockton @-@ on @-@ Tees and 500 metres (550 yd) south of the village of Whitton , it is a small site of 3 @. @ 18 hectares (7 @. @ 9 acres) between a sewage works and Whitton Beck . Topographically the site slopes north towards the stream from a height of 40 metres (130 ft) to less than 30 metres (98 ft) . The underlying geology of Whitton Bridge Pasture is responsible for shaping the species @-@ rich community found on the surface . Glacial tills and sands are the prominent geological features resulting in a relatively base @-@ poor soil , characteristic of glacial drift geology . The soils of MG5c (*Danthonia decumbens*) subcommunity are typically acidic .

Because Whitton Bridge Pasture is located in North East England it experiences a climate that is different from the UK average . The North East receives on average 370 millimetres (15 in) less rainfall than the UK over a year . Similarly the North East has roughly 129 days each year with more than 1 millimetre (0 @. @ 039 in) of rainfall , more than 25 days fewer than UK average . Despite these differences the temperature is similar for both the North East and the UK , although the North East does have fewer days with air frost and more hours of sunshine per year .

== Biotic ==

The majority of the site is made up of species @-@ rich grassland (subcommunity MG5c) , which comprises three dominant species of grass and several other grass species at lower abundances . The dominant species are Red Fescue (*Festuca rubra*) , Common Bent (*Agrostis capillaris*) and Yorkshire Fog (*Holcus lanatus*) . The less abundant species of grass include , Crested Dog 's @-@ tail (*Cynosurus cristatus*) , Heath @-@ grass (*Danthonia decumbens*) and Cocksfoot (*Dactylis glomerata*) . The subcommunity also has many broad @-@ leaved herbs including Common Knapweed (*Centaurea nigra*) , Tormentil (*Potentilla erecta*) , Devils @-@ bit scabious (*Succisa pratensis*) and Betony (*Stachys officinalis*) .

A second subcommunity (MG5a) is present and is characterised by the legume Meadow vetchling (*Lathyrus pratensis*) . Other species present in this subcommunity include Salad burnet (*Sanguisorba minor*) , Quaking grass (*Briza media*) , Pignut (*Conopodium majus*) and the Orchid species : Common Twayblade (*Neottia ovata*) and Early Purple Orchid (*Orchis mascula*) . The subcommunity also contains Meadow barley (*Hordeum secalinum*) , a perennial grass , which is a characteristic species of the Tees Lowland .

The two subcommunities of MG5 , characterised by species rich grassland form a belt across the site , but they do not cover the whole site . Towards the north there is a community dominated by False oat @-@ grass (*Arrhenatherum elatius*) , a constant species in the MG1 and MG2 communities of the British NVC and therefore not typical of an MG5 community . At Whitton Bridge Pasture it is growing on alluvial soils located at the northern edge of the site , which have most likely been formed by Whitton Beck just to the north . A number of springs at the site are associated with flushes of the Pale sedge (*Carex pallescens*) , which form small populations .

== Management ==

Natural England 's role is to advise and help the owners manage Whitton Bridge Pasture effectively . To achieve this Natural England provides guidelines for each SSSI . Species @-@ rich grassland , such as that found at Whitton Bridge , requires careful management for it to retain its high species diversity . This means many activities are not allowed at the site including : ploughing , drainage and the use of fertilisers , pesticides or herbicides .

Management of the site requires moderate grazing during the summer and autumn to help maintain the species diversity . This is because grazing removes each year 's new growth which helps stop the site becoming dominated by vigorously growing grasses . Such grasses would allow a buildup of dead organic matter , which together with the increased growth , would reduce the growth of less vigorous species . The overall effect would be a reduction in species diversity , which was one of the reasons for the SSSI designation . Trampling can be of benefit because it breaks up accumulated dead organic matter .

The small and isolated nature of the site makes it susceptible to damage from the surrounding area . For example , herbicides , thought to be generally damaging for the species richness , could get onto the site from the drift of spray from surrounding fields . To help combat this the maintenance of mature hedgerows around the perimeter is encouraged . As of 2006 the condition of Whitton Bridge Pasture is described as favourable , which means that the land is being adequately conserved and any conservation objectives are being met , but that there is scope for enhancement of the site . The condition of the site was also described as favourable in 2004 and 2005 assessments . In the future it is hoped that the grazing regime will become more regularised and will be of high priority .