

Site Visit Assessment Form Cae'r Ddôl, Gwynedd. Wales



Site Name Cae'r Ddôl	Grid Ref SH 5860	County Gwynedd	
River Lake Padarn margin	Ownership Gwynedd County Council	Designation Adjacent to SSSI/ Country park	Size (ha) 2.01
Date 22 June 2018	Meeting with Robert Blackhall- Miles	Managed by Friends of Cae'r Ddol in Partnership with Parc Padarn and Gwynedd County Council	
Management and History. Formerly grazed by sheep and horses			
Agri environment agreement.			
None			
Current management.			
Hay cutting (annually since 2016) Patchwork cutting with areas left uncut on a rotation.			
Restoration.			

Technique used/Dates	
<p>Reversion from pasture to hay meadow. The meadow has had two autumn cuts, one in 2017 and one in 2016. Some signage has been created and some public events have been run. The meadow forms part of the main route by foot from the busy tourist village of Llanberis through to the rest of Padarn country park (who own the meadow as part of Gwynedd CC) and the National Slate Museum and in summer can become a busy place for families with children and picnickers let alone the dog walkers and trail runners who use it year-round. Due to the tourist footfall through the meadow, management cannot take place between Easter and the end of the school summer holidays in early September.</p>	
Hydrology	<p>The site sits at the edge of Lake Padarn and the margin is subject to regular inundation. With the whole meadow being subject to inundation twice to three times annually. There is a back drain that may have been deepened in the past.</p>
<p>Flooding regime Water management Soil-water levels (indicated by auger hole/any other data)</p>	
Historical information	
<p>Little information is available regarding the meadows past. The name Caer Ddôl probably relates to its association with Dolbadarn Castle which can be seen from the meadow (Caer means Fort in Welsh and Ddôl means Meadow). The name of the castle itself probably also relates to the meadow, with Dôl meaning meadow and badarn [Padarn] the name of a welsh saint. Local people have taken to calling the meadow 'Dol's meadow' after the owner of a local farm called Dolly and the name spelt Cae'r dol (or Cae'r Ddôl) would mean just that (Cae = field, yr = of, Cae yr Dol).</p>	
Current site interest	<p>Attach excel spreadsheet for botanical data. CaerDdol_speciesdata.xls</p>
<p>Four vegetation communities were recorded across the studied area. Along the lake margin (quadrats 1, 2, 5, 11, 12, 13) the vegetation was best placed into the drier <i>Anthoxanthum odoratum-Trifolium repens</i> subcommunity of <i>Carex nigra-Agrostis stolonifera-Senecio aquaticus</i> grassland (MG14b). In general, this band of MG14b is only 3-5m wide, but it is thought that up to 3 - 4 m has probably been lost through erosion.</p> <p>Soils here tended to be sand or gravels but maintained moist by the proximity to the lake margin, the level of which fluctuates throughout the year. Currently there is some concern that this marginal vegetation is being eroded away. The stands vary from the published table in their lack of cuckoo flower <i>Cardamine pratensis</i>, amphibious bistort <i>Polygonum amphibium</i> and crested dog's-tail <i>Cynosurus cristatus</i> and the over-representation of ribwort plantain <i>Plantago lanceolata</i>, Autumn hawkbit <i>Leontodon autumnalis</i>, ragged Robin <i>Lychnis flos-cuculi</i>, marsh bedstraw <i>Galium palustre</i> and marsh marigold <i>Caltha palustris</i> and the presence of sleder rush <i>Juncus tenuis</i> and pink water-speedwell <i>Veronica catenata</i>. Despite MG8c scoring second for the constancy table of the 6 samples, the lack of carnation sedge <i>Carex panicea</i> in addition to lack of crested dog's-tail <i>Cynosurus cristatus</i> tended to favour the MG14 allocation. The Ellenberg scores are well within the expected range for the</p>	

MG14b subcommunity (mean values in Wallace and Prosser of F=7.11, N=4.99).

A small area to the west, adjacent to the MG14, was best placed within MG6, *Lolium-Cynosurus cristatus* grassland; and this may account for a larger part of the grassland that is not invaded by rushes (quadrats 3,4, 6). Soils are silty clays with gravels at between 40 and 60cm. The Ellenberg scores from the 3 samples conform well with those in the Calthion review for MG6d (Wallace and Prosser F=6.2, N=5.2).

The larger area towards the back of the meadow where rushes are prominent is best placed into the *Juncus acutiflorus* subcommunity of the *Juncus effusus/acutiflorus-Galium palustre* rush-pasture (M23a). These areas are less species rich but generally quite a good fit to the unit; only lacking marsh bedstraw *Galium palustre*, marsh thistle *Cirsium palustre* and lesser spearwort *Ranunculus flammula* whilst having higher than expected frequencies of sweet vernal grass *Anthoxanthum odoratum*, creeping bent grass *Agrostis stolonifera*, rough-stalked meadow-grass *Poa trivialis*, common sedge *Carex nigra*, ribwort plantain *Plantago lanceolata*, devils'-bit scabious *Succisa pratensis* and smooth-stailed meadow-grass *Poa pratensis*; species that indicate a possible reversion to a grassland community were rushes to be better controlled.

Finally, an area around quadrat 9 appears to be intermediate between the upland expression of MG5 and the acid grassland U4a.; but not being a good fit to either.

Phosphorus levels

Not known

Soil profiles. None taken. In general soils along the lake side margin are sandy/gravels and freely draining. With increasing distance from the lake margin the soils grade from brown loam overlaying sand at c40cm, to loams overlying clays with the sands at >50cm depth. There is little evidence of mottling suggesting generally free drainage.

Site manager aspirations/objectives

More species rich meadow.

Management recommendations

Cut earlier (end June/early July) or more frequently and ensure all arisings are removed. Some of the 'back' areas in the vicinity of Q8 are species poor and grass dominated and would benefit from the sward opening through earlier cutting or grazing.

Ellenberg scores for the three principal communities noted at Cae'r Ddol.

	MG14b area	MG6 area	M23a area
Ellenberg F (moisture)	7.3	6.5	6.9

tolerance)			
Ellenberg N (fertility)	4.99	5.1	4.3
Ellenberg R (Reaction)	5.2	5.7	4.5
Species/quadrat (mean and range /1 m x 1 m)	21.7	12.0	14.4
NVC (top 2 MAVIS subcommunities)	MG14b MG8c	Only 3 quadrats	M23a M23b