

# Wales Enclosed Farmland Ecosystem Group Priority Action

## Glamorgan Arable Priority Area

The Vale of Glamorgan is the stronghold for Shepherd's-needle, a S42 species, that has been targeted for control in the past due to its resistance to general purpose herbicides and the problems caused by its seedpods blocking machinery during harvest. The only remaining site in Wales for another S42 species, Corn Buttercup, is also present in the Vale, as well as one of three Welsh sites for the S42 Cornflower and the only Welsh site for Corn Chamomile, which is regarded as Endangered. The farms where the notable species occur are widespread south of the M4 between Bridgend and Cardiff.

Arable plants are one of the biggest declining and most threatened groups of plants in Wales (Dines, 2005). Their decline is related to a) the increase in pasture and maize production coupled with a decline in cereal crops, b) the increased use of herbicides, c) the increased use of fertilizers, d) an improvement in seed-cleaning technology, e) the use of high density cropping with modern cereal crop varieties. Although figures do not exist for the Vale of Glamorgan, the decline in arable farming and consequent increase in pasture for Ceredigion is well documented, where 15% of farmland was arable at the start of 20th century, but this fell to 3% by end of century; in the same period, sheep numbers increased by 275% and cattle by 182% (Chater, 2010). Despite being home to 4600ha of arable habitat (8% of the resource in Wales and the highest density of arable in Wales at 13.5 ha/km<sup>2</sup>, Jones *et al.* 2003).

Today, arable cultivation in Glamorganshire is scattered throughout the southern part of the county, especially south of the M4. Crops are principally winter and spring barley and wheat, rape, maize and small-scale production of root crops including potatoes. Due to the mainstream use of herbicides and fertilizers, the better arable plant communities are generally restricted to field entrances and headlands. Tir Gofal has, however, encouraged farmers to undertake more sympathetic management, such as growing unsprayed root and cereal crops and leaving winter stubbles. Uptake of these options is not high in Glamorganshire, however, with just 689 ha of land under prescriptions beneficial to arable plants (7% of the land in Tir Gofal in Glamorganshire, Morris *et al.* 2008). Of this area, though, just 29 ha of land is under the most beneficial prescription for arable plants, fallow field margins. Some "arable" options, such as undersown cereals, establishment of grass headlands and wildlife cover crops can be damaging to arable plant populations, and these account for 270 ha of land in Glamorganshire (2.8% of Tir Gofal land in the county, Morris *et al.* 2008).

Despite the challenges of the modern, intensively farmed landscape, some farms and fields in the Vale of Glamorgan retain rich arable plant communities. The most notable fields are in and around Flemingston, where a large number of specialist arable species have been recorded, including Shepherd's-needle and Corn Buttercup. This diversity gives the fields an Important Arable Plant Area score of over 35 (Byfield & Wilson, 2005), making them of national significance. While these fields are being managed through Tir Gofal agri-environment agreements, the main challenges remain the intensity of high-input arable cultivation in the county and the high proportion of permanent pasture still in place in the surrounding landscape.

Action required includes:

1. Agree targets for proportion of unsprayed and fallow arable in the project area (15% is suggested).
2. Publicise the importance of the farms that fall within or near to Important Plant Areas (even if arable plants are not part of the criteria for designating the IPA) and status of the notable species present and the benefits of increased low-input arable for plants and other wildlife to the local public and landowners.

3. Liaise with private landholders to increase the amount of low-input arable on their land through entry into Glastir. Encourage the production of detailed management plans.
4. Lobby WAG for mandatory arable prescriptions and a higher weighting for Arable Special Project Areas. This should increase the number of agreements in the areas and ensure they all include appropriate arable prescriptions.
5. Collate survey records of S42 and other notable arable plants on the holdings. Improve species and arable community monitoring on the specified farms and increase the surveys to the surrounding land.

Whilst action may be focused on the priority arable habitat, it is important to maintain the full range of semi-natural habitats at a landscape level. Coastal sand dune habitat of varying quality is present near some holdings, including Merthyr Mawr and Kenfig Burrows. It may be necessary to manage these habitats appropriately, particularly if they are notified SSSIs, as these are important in their own right they should be maintained at the landscape scale. A long-term framework is therefore needed for whole farm management in a landscape context which includes a mosaic of arable habitat, low-input grazed pasture and coastal sand dunes and grassland, and to encourage farm diversification where appropriate based on the network models developed to link and optimize species and habitats.

### **Species Interest**

#### ***Key Section 42 species***

Cornflower	<i>Centaurea cyanus</i>
Corn buttercup	<i>Ranunculus arvensis</i>
Shepherd's needle	<i>Scandix pecten-veneris</i>

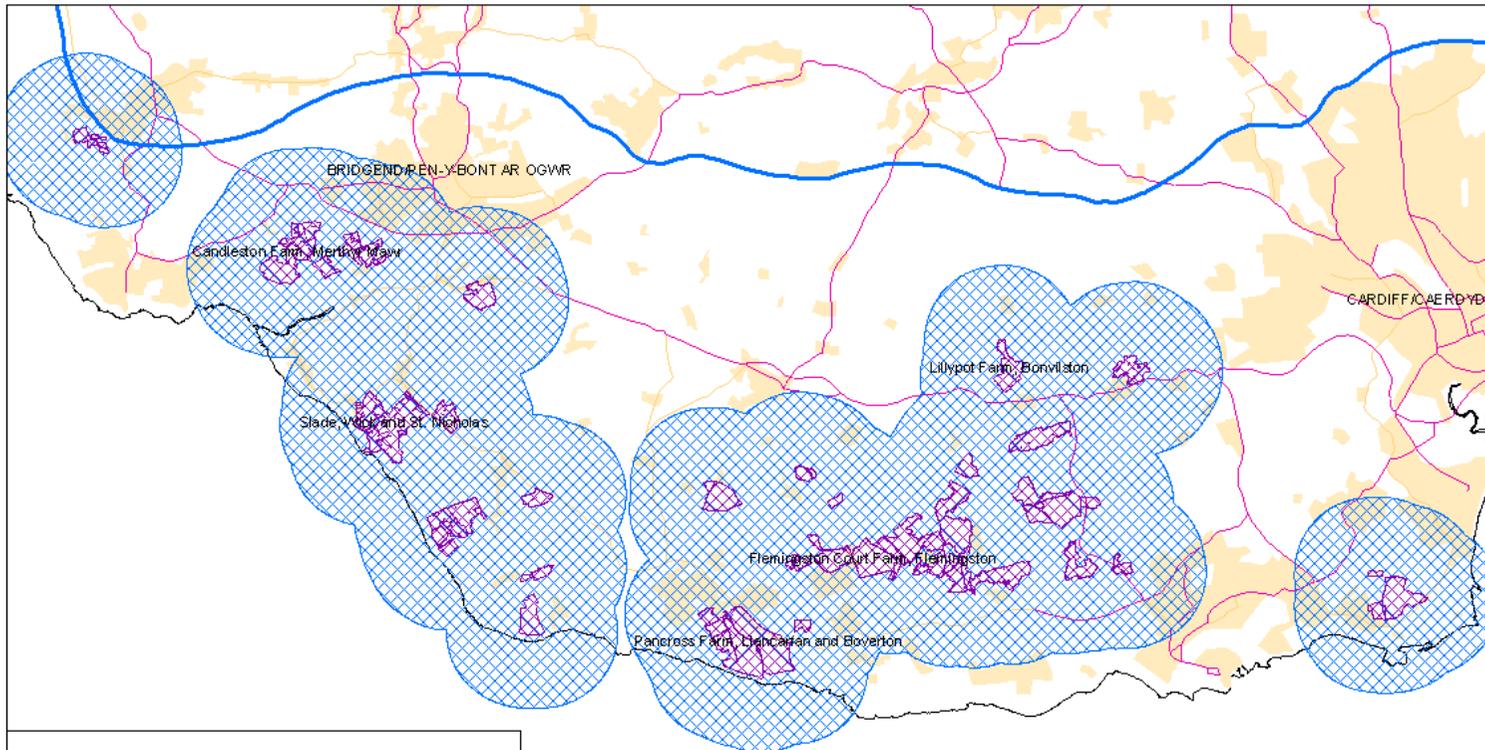
#### ***Other notable arable plants recorded from the site***

Corn Chamomile	<i>Anthemis arvensis</i>
Black Mustard	<i>Brassica nigra</i>
Small Toadflax	<i>Chaenorhinum minus</i>
Fig-leaved Goosefoot	<i>Chenopodium ficifolium</i>
Many-seeded Goosefoot	<i>Chenopodium polyspermum</i>
Corn Marigold	<i>Chrysanthemum segetum</i>
Swine-cress	<i>Coronopus squamatus</i>
Dwarf Spurge	<i>Euphorbia exigua</i>
Sharp-leaved Fluellen	<i>Kickxia elatine</i>
Round-leaved Fluellen	<i>Kickxia spuria</i>
Henbit Dead-nettle	<i>Lamium amplexicaule</i>
Cut-leaved Dead-nettle	<i>Lamium hybridum</i>
Corn Mint	<i>Mentha arvensis</i>
Common Poppy	<i>Papaver rhoeas</i>
Corn Parsley	<i>Petroselinum segetum</i>
Cornfield Knotgrass	<i>Polygonum rurivagum</i>
Wild Radish	<i>Raphanus raphanistrum subsp. raphanistrum</i>
Charlock	<i>Sinapis arvensis</i>
Corn Spurrey	<i>Spergula arvensis</i>
Black Nightshade	<i>Solanum nigrum</i>
Field Woundwort	<i>Stachys arvensis</i>
Field Penny-cress	<i>Thlaspi arvense</i>
Smooth Tare	<i>Vicia tetrasperma</i>

### **References**

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- Morris, A.J., Smart, J., Lamacraft, D., Bialynicki-Birula, N., Luxton, K-J., Haysom, K., Rasey, A., Williams, C., Hobson, R., Dines, T.D, Parry, R.J., Wilberforce, E.M., Chapman, C. (2008). *Potential for Biodiversity Delivery by Welsh Agri-environment Schemes*. RSPB: Cardiff.



### Vale of Glamorgan Arable Project

-  Vale of Glamorgan Arable Farms
-  Glam Arable Farms 2km Buffer Dissolve



**Plantlife**



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