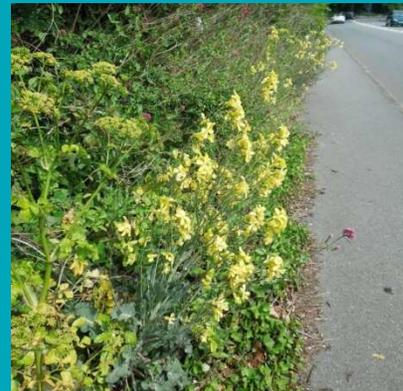


The flora of roadside verges in Wales



**How important are Wales' road verges
for plants?**

Stuart Smith, Grassland Ecologist, Natural Resources Wales

What is the area of road verge in Wales?

- No figure for total road verge area in Wales
- WG statistic for total road length = 34,437 km*
- SNH report 551: average 0.3296 ha of verge per km of road#
- This would give an estimate of **11,350 ha** of verge in Wales
- Probably slight over-estimate as Wales has smaller proportion of dual carriageways

Compared to (for example):

- Lowland semi-natural grassland **110,800 ha@**
- Lowland heathland **12,500 ha@**
- Lowland semi-natural woodland & scrub **93,700 ha@**
- Approx size of Cardiff + Swansea **11,500 ha**

* Statistics for Wales 2013

The Management of Roadside verges for Biodiversity – Hambrey Consulting 2013

@ Habitat survey of Wales 1979-1997 (Blackstock et al. 2010. *Habitats of Wales*. University of Wales Press)

Infoterra 2009

Decline of Welsh habitats

- 97 % loss of dry unimproved grasslands in Wales between 1930s and 1980s-90s*
- 95% loss of wet heath on Lleyrn between 1920s and 1980s-90s#
- Just 1600 ha of Lowland Meadow (unimproved neutral grassland) remain*
- Some 50% of the total land area of Wales is improved grassland#

* Lowland Grassland Survey of Wales 1987-2004.
(Stevens et al. 2010. *Grasslands of Wales*.
University of Wales Press)

Habitat survey of Wales 1979-1997



What is the 11,350 ha?



Verge habitats

Eleven Habitat Action Plans listed in Trunk Road Estate Biodiversity Action Plan (TREBAP)*:

- Calcareous Grassland
- Lowland Dry Acid Grassland
- Lowland Meadows
- Purple Moor Grass and Rush Pastures
- Heathlands
- Water Bodies
- Rivers and Streams
- Woodlands + Planted Native Trees & Shrubs
- Coastal and Estuarine Habitats
- Rock Faces and Screes
- Boundary Features



* Trunk Road Estate BAP 2004-14. Welsh Government 2004.

Includes all 'soft estate':
land within highway
boundary excluding hard
surfaces

What proportion of our verges are botanically rich?

- No comprehensive survey of verges across Wales
- Most road verge surveys focus on identifying or surveying the richest sites

Northern England road verge surveys 2001-3:

Area	Coverage (km)	High quality (km)	% high quality
Derwent Valley	40	1.7	4.3
Teesdale	70	1.33	1.9
Weardale	100	5.45	5.5

Botanically very rich verges in Wales are probably less than 5% of all verges

Uncommon species: Section 42 vascular plants*

Occurrence on road verges	Number of species	% of all S42 species
Some populations at least partly on verges	7	9
Not known, but could potentially occur	14	18
Not known and never likely to occur	56	73



- Spreading bellflower *Campanula patula*
- Chamomile *Chamaemelum nobile*
- Depford pink *Dianthus armeria*
- Purple ramping-fumitory *Fumaria purpurea*
- Bastard balm *Melittis melissophyllum*
- Small-white orchid *Pseudorchis albida*
- Wood bitter-vetch *Vicia orobus*



*NERC Act 2006: Section 42 list of species of principal importance for conservation of biological diversity in Wales

Spreading bellflower *Campanula patula*

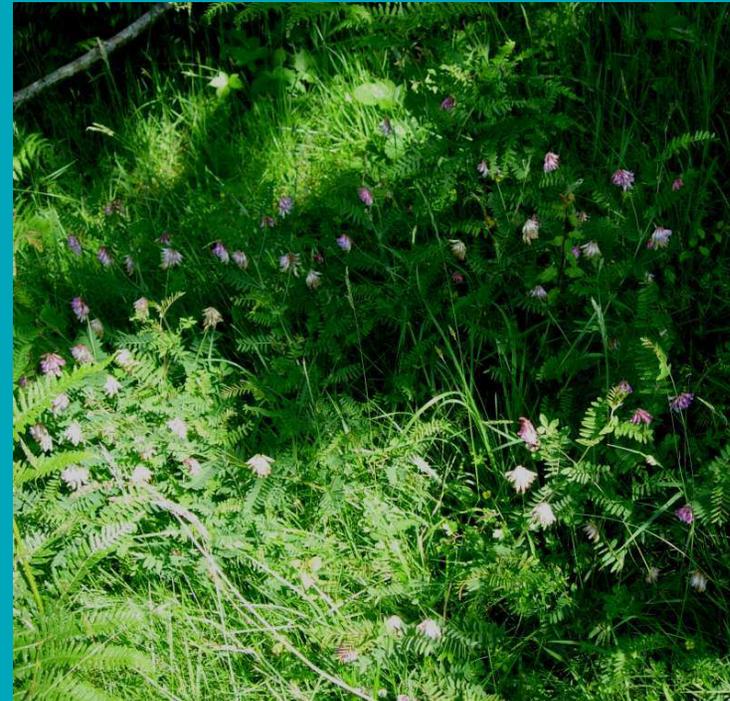


- Endangered on GB Red List (estimate of only 330 individuals remaining)
- Handful of Welsh populations close to English border in mid & south Wales
- On roadsides, lane-sides, shaded banks and woodland fringe
- Road and lane-side populations a key part of the resource



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Wood bitter-vetch *Vicia orobus*



- Near Threatened species with an estimated 62% of its GB population in Wales
- Open habitat species mainly in ancient meadows and pastures in hill country
- Several roadside populations, one or two sizable
- Can persist under partial shade for a period (but long term?)



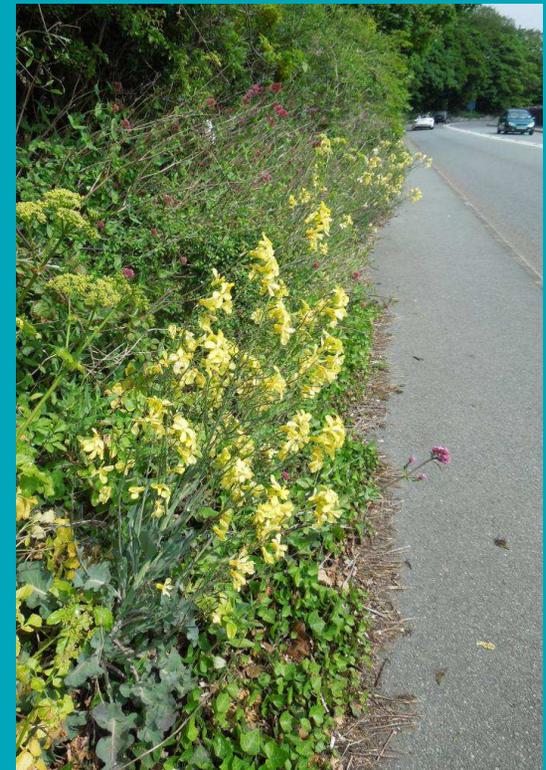
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Other uncommon plants on roadsides



Welsh groundsel *Senecio cambrensis*

Bithynian vetch *Vicia bithynica*



Wild cabbage *Brassica oleracea*



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Botanically very rich verges in Wales

- **Are probably less than 5% of all verges (i.e. no more than 568 ha)**
- **Are mainly older verges on minor roads**
- **Are probably often close to existing areas of habitat :**

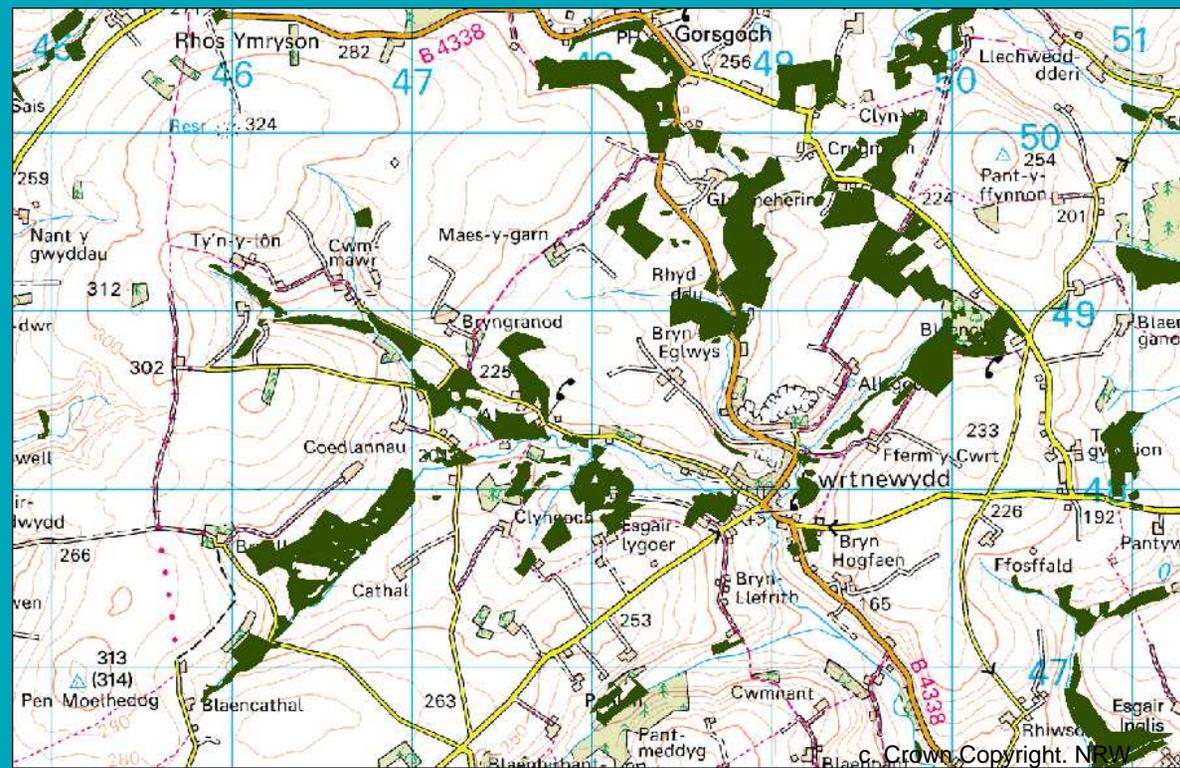
“The adjacent land use was also significant – a number of (more botanically rich) sites adjoined hay meadows” (Teesdale Roadside Flora Project 2002)





So what about the other verges?

- Even botanically poor verges are likely to have some value for pollinators
- And they can help to connect otherwise fragmented habitat patches in the wider countryside





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And they could be better

1. More sensitive cutting regimes
2. Use of low fertility substrates in verge construction
3. Removal of cut material
4. Limit planting of non-natives
5. Restoration projects





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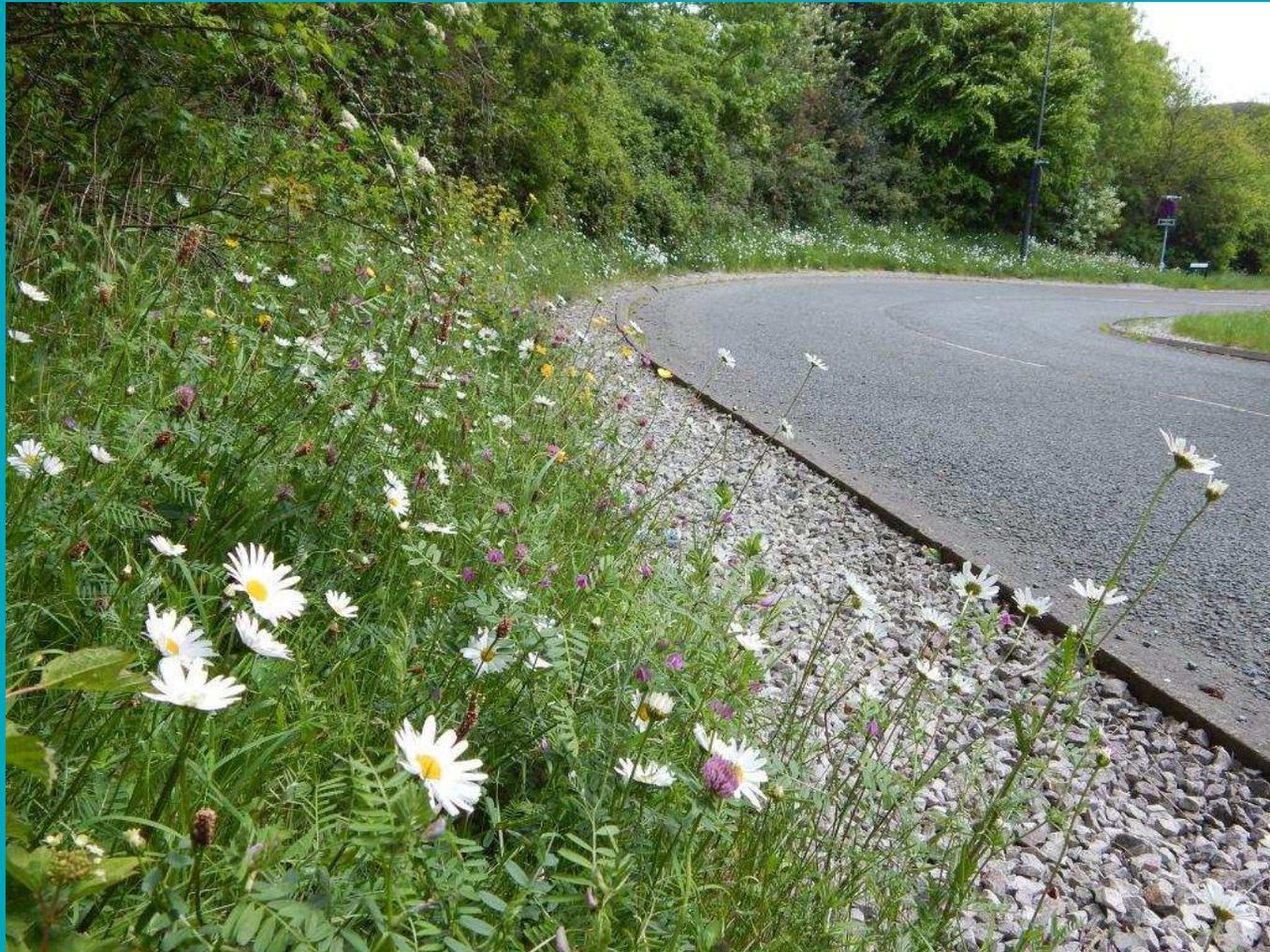
In summary:

- Wales' road verges are an additional habitat resource supplementing the significantly larger but much reduced semi-natural habitats of the wider countryside
- Wales' verges support a number of important populations of uncommon and declining plant species
- Wales' verges are potential corridors for movement of plant species across the region
- The botanical value of many verges could be increased with better management
- Verges adjacent to areas of habitat probably merit particular attention for survey and better management



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Thank you



stuart.smith@cyfoethnaturiolcymru.gov.uk