



THE MANAGEMENT OF ROADSIDE VERGES FOR BIODIVERSITY: *AN OVERVIEW*

IS THERE AN OPTIMAL REGIME?



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Small research study for SNH

- “The Management of Roadside Verges for Biodiversity”
- Desk based study:
 - how road verge management can be geared to optimise the biodiversity value of road verges as refuges and corridors for wildlife.
 - how road verges can contribute to Scotland’s National Ecological Network
 - Emphasis on understanding the costs as well as benefits of alternative regimes

http://www.snh.org.uk/pdfs/publications/commissioned_reports/551.pdf

An optimal regime?

- Many dimensions:
 - *Balance with other functions and values*
 - *Best outcome for biodiversity*
 - complex
 - will vary from place to place
 - *Minimum or acceptable cost*
 - Taking full account of practical constraints

Primary functions and values

- They are not designed for biodiversity
- The primary objectives of management are access, safety and appearance
 - Maintaining sightlines
 - Access to services
 - Emergency stops
 - Drainage
 - Buffers – sound, pollution, separation of stock
 - Aesthetics/landscape



Landscape

- The only opportunity that most people get to engage with biodiversity
 - But you don't want them to stop!
- Vital component of landscape to most people and can be spectacular
 - But this may require different management regime to that for biodiversity
- Tidy and flowery
- Open or screened (depends on perspective)



Biodiversity values

- Habitats: rare (nationally, locally) , aesthetically pleasing, biodiverse
 - E.g. neutral grassland/pasture/haymeadow (management mimics traditional management)
 - ditches, scrub, hedrows, trees
 - LBAP priority habitats
- Habitat mosaics:
 - short grass long grass, scrub, shrubs, trees



Biodiversity values

- Species: rare or important
 - plants, invertebrates, birds, mammals etc
- Ecological functions
 - buffer; corridor; stepping stone; refugia
 - Limited by width, obstructions, and traffic impacts (noise, pollution, impacts)
- Negative values and limitations
 - attraction to the danger zone – eg deer
 - Salt
 - fumes

Complex habitats – varied opportunities



Current standard practice

- Cut grass sufficiently often to maintain sightlines
 - Too many cuts will be expensive;
 - Too few cuts will be expensive
 - herbage and scrub becomes “unmanageable” with standard flails/cutting machines
- In Scotland and many other parts of the UK 2-3 cuts between April and October is the norm
- Additional cuts as demanded by public – especially near residential areas

Current standard practice

- Clear drains as often as necessary to maintain function
 - Highly varied, and if anything in decline on non-trunk routes
- Increasingly allow longer growth and scrub further from road (>1.2m)
- Cut hedgerows on a needs basis.....
- *Biodiversity has been a result not an objective of management*
- *Varied practice = varied biodiversity – a good thing?*

Ideal regime for biodiversity?

- Depends what you want:
 - Specific habitats/sub-types
 - Rare or iconic species (plants? Invertebrates? birds? mammals?)
 - Mosaics, corridors
 - HAP or LBAP – national and local priorities
 - Eg trees can be an asset in one place and a hazard in another

Ideal regime for biodiversity?

- Values and opportunities constrained by other factors :
 - Width/extent
 - Adjacent habitats
 - Soils
 - Aspect
 - Exposure
 - Run-off
 - Management history
 - Grazing

A broad consensus amongst biodiversity specialists and agents?

- **Operational objectives:**

- Allow flowering herbs to flower and set
- Prevent smothering of delicate herbs by rank opportunists or cut grass
- Maintain or create habitat gradients and mosaics
- Maximise connectivity
- Maintain cover for small animals and invertebrates
- Safeguard special biodiversity values

Management implications (mowing)

- 2-3 cuts a year, one early; one late
 - post flowering/set, esp eg yellow rattle
- 10-15cm minimum
- Leave some grass longer; cut only once a year or less?
- Remove cuttings
- Rotational cutting to maintain a reservoir of different plants?
 - But...consistency of management to allow specific assemblages to develop

Management implications (other)

- Special management for special features/values (eg orchids)
- Hedgerows – cut periodically and not at nesting time
- Patches of trees where possible
- Ditches cleared lightly and regularly
 - One side only?
- Minimal chemical use
- Reduce obstructions to movement?

Costs and practical constraints

- Quite varied and locally specific
- Men, machines and routes
 - Cutting and ditches
- Costs of collecting cuttings and removal of ditch waste
- Disposal of waste off site?
- H&S constraints on volunteer management



Optimal regime?

- No generic prescriptions for optimal regimes
- Values, objectives highly varied (location, stakeholder)
- Costs/constraints highly varied
- Science limited

- Current regimes not bad!

Opportunities?

- The basic two cut regime with less intensively managed hinterland
- Cannot optimise mowing everywhere; therefore identify areas with greatest potential :
 - soils, size/configuration; location
 - assistance from local wildlife NGOs etc
- Prioritize for cutting timing, length, and removal of cuttings
- Consistency of management?
- LBAPs, IHN, RDP



Opportunities

- Pro-active initiative:
 - Native species planting
- Very simple *guidance and training* on biodiversity value and relationship with management
- Contractors GIS/GPS



dangers

- Micromanagement and focus on special interest protection becomes a frustrating additional constraint/cost on contractors
- Attract wildlife to dangerous places....



Positive policy context (Scotland)

- Policy environment favourable
- Attitudes of managers positive/ responsive (but cost constrained)
- New/upgraded roadside verges take account of biodiversity



Conclusion

- Current regime broadly favourable
- Decide what you want at local level
- Encourage *consistency* and *diversity* of management
- Discuss and tweak – don't dictate
- Enhance rather than protect?
 - encourage a management regime under which biodiversity can flourish
 - implemented by interested, knowledgeable contractors



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Thankyou

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