

*English Nature Research Reports, No. 669*

### **Validation Network Project: Lowland heathland monitoring covering: dry and wet heaths**

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Keywords: Validation Network; lowland heathlands; dry and wet heath

### **Introduction**

The overall objective of the Validation Network project is to ensure that data on the condition of individual features on Sites of Special Scientific Interest (SSSIs) is accurate, consistent and scientifically robust. The means to achieve this outcome is through a sample of sites on which quantitative monitoring is undertaken on a regular basis in parallel with the cycles of condition assessment for SSSIs. The aims of the project are to: validate the condition assessment methodology in England through testing the suitability of attributes and associated targets in assessing quality and trend in condition; establish a set of control sites to ensure that individual site assessments match regional or national changes in feature condition over time; and to contribute to a wider network of monitoring sites that will allow a better understanding of the drivers of change. This document reports on part of Validation Network monitoring on key lowland habitats. These are: lowland wet and dry heaths within the lowland heathland Priority Habitat. The heathland habitats were represented by NVC types H1, H2, H3, H4, H6, H7, H8, M14, M16, M25 and U-type communities.

### **What was done**

- English Nature carried out a validation exercise at nine lowland heathland sites (Cannock Chase SSSI, Staffordshire; Cavenham Heath NNR, Suffolk; Roydon Common NNR, Norfolk; Aylesbeare Heath SSSI (part of East Devon Pebble Bed Heaths SSSI), Devon; The Lizard NNR, Cornwall; Thursley NNR, Surrey; Lazonby Fell SSSI, Cumbria; New Forest SSSI, Hampshire; Hartland Moor NNR & Wytch Heath SSSI, Dorset).
- Comparisons were made between condition assessments and quantitative data (botanical and environmental), on favourable and unfavourable plots.
- A variety of methods were used to make statistical comparisons between the favourable and unfavourable plots including: C-S-R strategies, Suited Species scores and Multivariate Analysis. This provided the basis for comparing condition using the more qualitative Condition Assessment methodology.

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## Results and conclusions

The comparison of qualitative and quantitative methodologies indicated that in general the rapid (qualitative) assessment approach yielded similar results to the detailed quadrat-based (quantitative) approach. Many of the variables could be relatively accurately assessed using the rapid assessment approach, making this type of assessment a cost-effective and relatively robust way to assess vegetation condition. However, the rapid assessments tended to under-estimate the number and abundance of negative indicator species and over-record the abundance of desirable grass species. The low failure threshold of *Molinia caerulea* appeared to cause failure in the graminoid attribute across all (both 'favourable' and 'unfavourable') wet heath plots.

Further (multivariate), analysis showed that Favourable plots tended to have greater cover of building and mature heather, along with more flowering heather. The bryophyte cover was higher while the acrocarpous moss cover was lower than for unfavourable plots. This suggests that regular monitoring of the dwarf shrub and moss components of a heathland should give a good indication of changes in terms of vegetation condition. Between sites, the dwarf shrub variables gave consistently useful differences between dry heath sites, along with the degree of rabbit grazing. However, the variation between wet heath sites was not great and the majority of sites were clustered together.

## English Nature's viewpoint

This is the latest of a series of reports from the Validation Network. It shows that the condition assessment methodology tested on lowland heathland vegetation generally appears to be robust and applicable in the field, although some adjustments to mandatory targets are needed. Further training of officers undertaking field assessments in both species identification and consistency of recording should result in more accurate assessments of condition on both wet and dry lowland heathland habitats.

## Selected references

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### **Further information**

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