Woodland ecological condition in Britain

The National Forest Inventory (NFI) for Great Britain provides information concerning the size, distribution and composition of forests and woodlands including woodland ecological condition (WEC). Data enabling the calculation of 15 ecological condition indicators were measured as part of the NFI survey cycle 2010-2015 and compared to a benchmark of a stand of ancient semi-natural woodland (ASNW) in good condition. This enabled woodland stands to be classified as favourable, intermediate or unfavourable in terms of their ecological condition.

Key findings:

- The total area of native woodland in Britain is estimated at around 1.51 million hectares.
- 109 thousand hectares or 7% of native woodland area is in favourable condition[1].
- 1.4 million hectares or 92% of native woodland area is in intermediate condition.
- 16 thousand hectares or 1% of native woodland area is in unfavourable condition.
- The principal reason for woods falling into unfavourable or intermediate condition is the deeper historic management of woodlands.
- Other more recent factors such as herbivore damage have added to the number of stands in unfavourable or intermediate condition:
  - Herbivore damage is found in many stands, with 40% of woodland habitat in unfavourable conditon for this factor.
  - Deadwood levels are unfavourable for 80% of native woodland habitat.
  - 9% of native woodland area has unfavourable status for invasive species.
  - 3% of native woodland area has unfavourable status for pests and diseases.
- The regeneration of young trees in native woods is positive with 85% of stands as intermediate for regeneration and 15% as favourable for regeneration.
- 96% of native stands are in favourable or intermediate condition for native canopy occupancy.
- 52% of native stands are in favourable condition for vertical canopy structure.
- 84% of native stands are in favourable conditon for 'nativeness' of canopy.

Ten reports have been published in relation to woodland ecological condition; executive summary, methodology, statistics and classification results, per country and GB. These reports and WEC data can be found on the NFI website www.forestresearch.gov.uk/inventory.

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[1] *NFI Woodland ecological condition in Great Britain: Methodology,* summarises the WEC indicators and thresholds used to classify woodland habitat as favourable, unfavourable or intermediate in condition.

Area of native woodland types

Area of woodland by native woodland type.

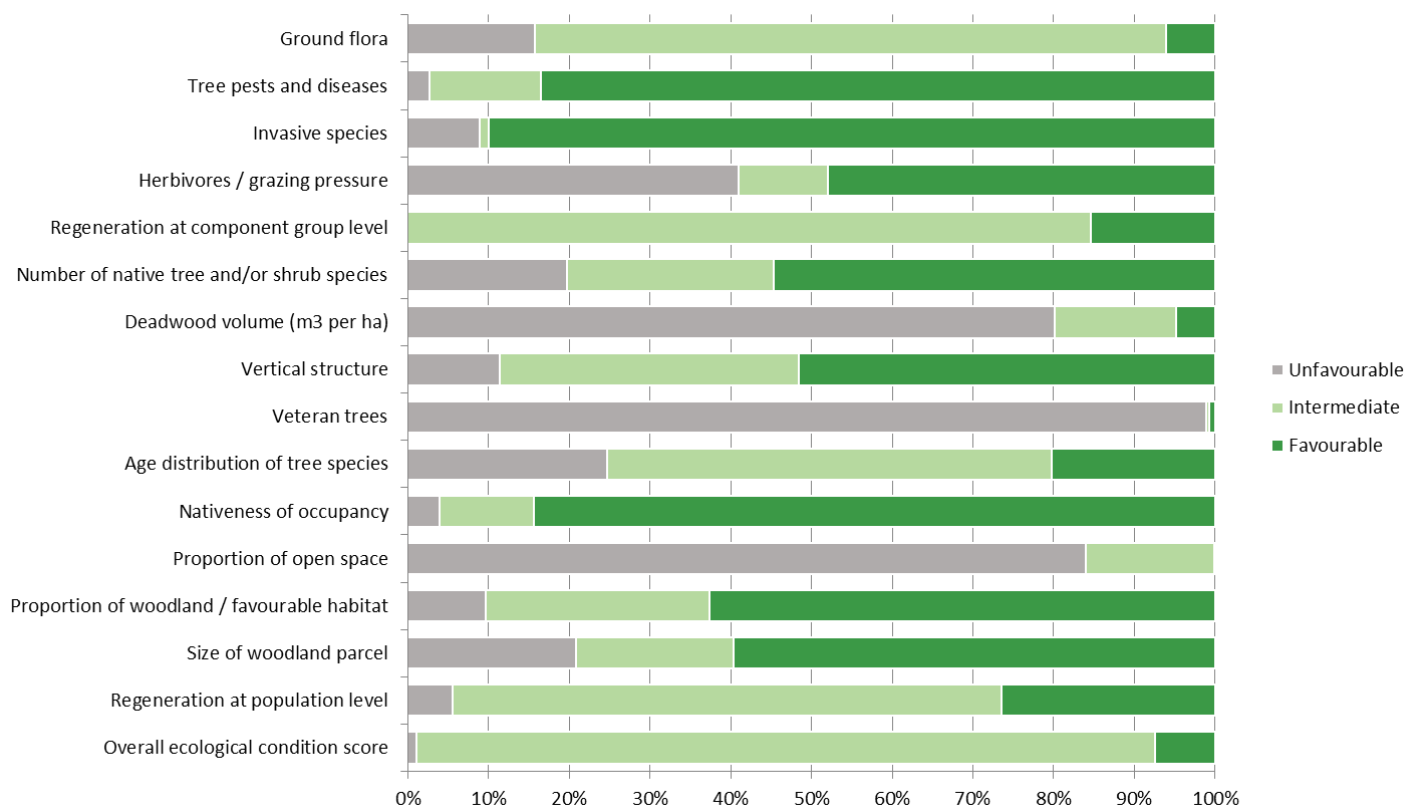| Region	Native	Near native & fragments	Non native	Not determinable	Total
	Area (ha)	Area (ha)	Area (ha)	Area (ha)	Area (ha)
GB	**1,507,105**	**56,776**	**1,461,267**	**19,629**	**3,044,777**
ENGLAND	**914,095**	**29,459**	**398,186**	**1,706**	**1,343,446**
North West England	73,932	2,329	45,152	421	**121,834**
North East England	36,201	3,005	77,982	149	**117,338**
Yorkshire and the Humber	68,954	3,783	46,837	271	**119,845**
East Midlands	73,964	2,305	26,272	37	**102,577**
East England	107,595	3,323	43,206	181	**154,306**
South East England	280,796	6,494	57,302	308	**344,901**
South West England	186,732	4,654	70,192	205	**261,782**
West Midlands	85,920	3,566	31,243	134	**120,863**
SCOTLAND	**442,611**	**20,313**	**908,259**	**17,205**	**1,388,388**
North Scotland	94,541	3,303	119,908	5,751	**223,503**
North East Scotland	111,260	3,781	115,197	2,248	**232,485**
East Scotland	48,860	2,647	80,049	2,171	**133,728**
South Scotland	78,739	7,026	336,526	2,709	**425,000**
West Scotland	109,211	3,556	256,579	4,327	**373,672**
WALES	**150,399**	**7,004**	**154,822**	**718**	**312,943**

Notes:
1. Woodland types are defined in *NFI Woodland ecological condition in Great Britain: Methodology.*
2. The above area includes a revision to underlying total woodland area (this will be revised in Forestry Facts and Figures Sept 2020). Comparisons with woodland area should not be made as woodland area is defined differently to woodland habitat (with woodland area being greater than habitat area due to the treatment of land uses like open space and clear-fell).
3. Clear-fell and transition land are included in the estimates. Some clear-fell and transition cannot be determined and fall into the not determinable category.

This is the first assessment of the extent of native woodland and priority habitat type, across the whole of Great Britain, based on a balanced stratified random sample of woodlands.

Native woodland habitat condition

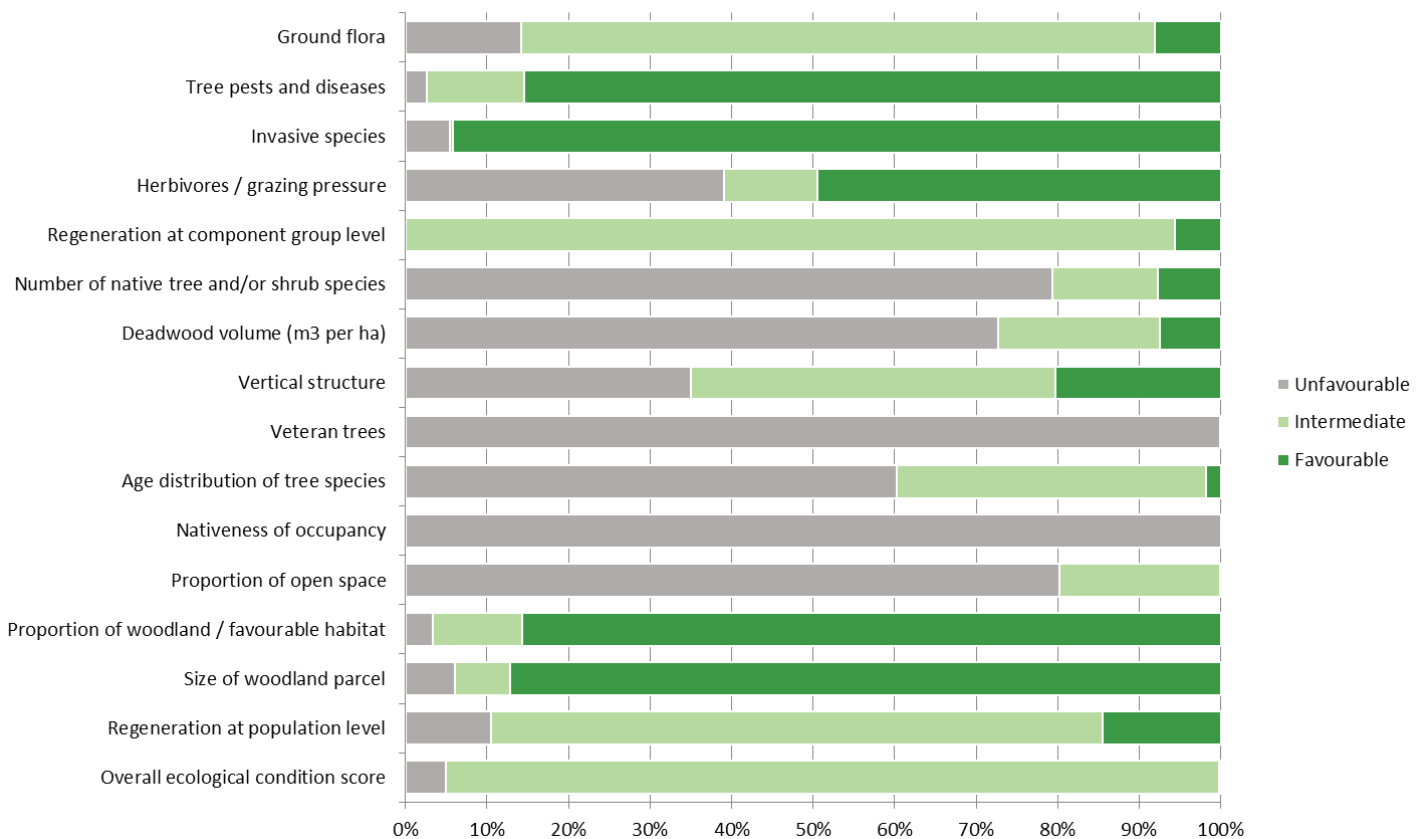The proportion of each woodland ecological condition class, for each WEC indicator in native woodland stands

Notes:
1. 'Native' is defined in methodology report.
2. Woodland ecological condition classification categories and indicators are defined in the methodology.
3. For more information refer to the methodology report.
4. Classification thresholds for ground flora; favourable, unfavourable and intermediate are adjusted for different woodland NVC types, with 'more' being expected of nutrient rich types than nutrient poor types.

Non native woodland habitat condition

The proportion of each woodland ecological condition class, for each WEC indicator type in non-native woodland stands in Great Britain
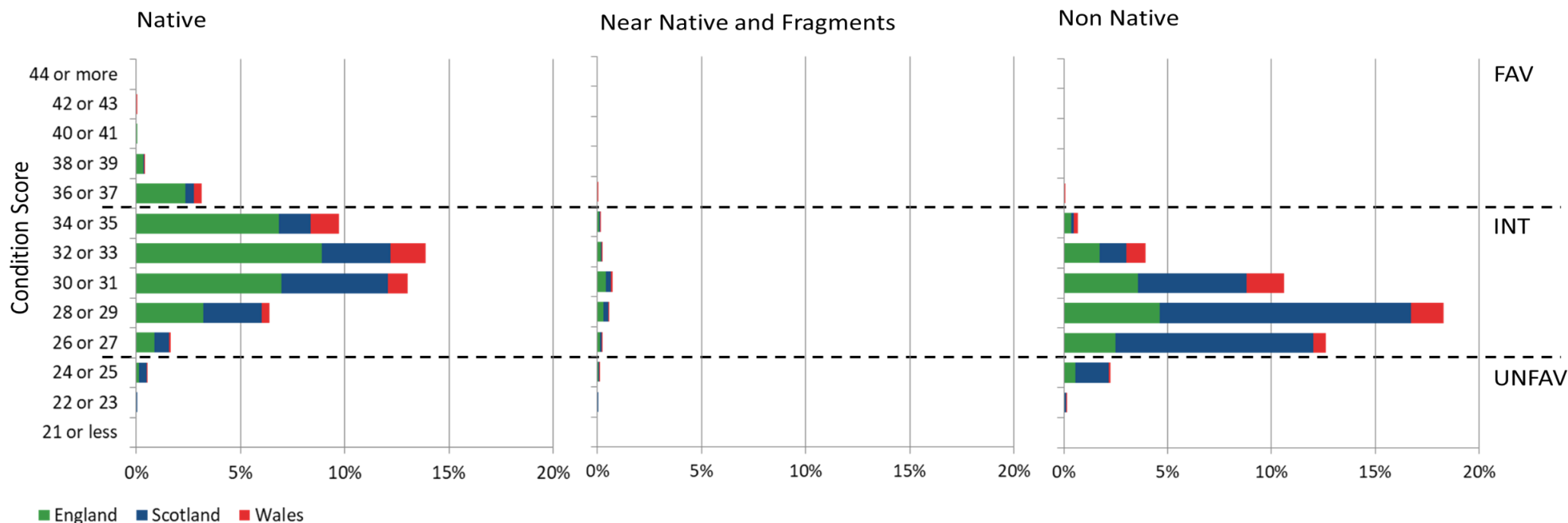

Notes:

1. 'Non-native' is defined in methodology report.
2. Woodland ecological condition classification categories and indicators are defined in the methodology report.
3. Classification thresholds for ground flora; favourable, unfavourable and intermediate are adjusted for different woodland NVC types, with 'more' being expected of nutrient rich types than nutrient poor types.
4. For more information refer to the methodology report.

Condition scoring distributions

The overall distribution of ecological condition class by native woodland type in Great Britain

Notes: 1. Native = native woodland area, Near native and fragments = Near native woodland area and fragments, non-native = non-native woodland area. Woodland types are defined further in the methodology report 2. The NFI calculator is used to score each of the 15 ecological condition indicators that can then be combined and used to give an over-all score, and classification as favourable (fav) score 36-45, intermediate (int) score 26-35 or unfavourable (unfav) score 16-25 by woodland type. 3. Dashed line = threshold of each condition classification. To inform where to set the thresholds for each of the three classification categories published evidence and NFI data was used.

NFI woodland ecological condition executive summary

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