

Countryside Survey: Ash Trees
Ash tree distribution in linear features (2007)
Dataset Documentation

Countryside Survey: Ash tree distribution in woody linear features 2007

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‘CS07_Ashtree_Linears’ file details:

- *File contains estimates of ash trees for Great Britain, within woody linear features. The estimates are based on Countryside Survey 2007 data.*

Associated datasets:

- ITE Land Classification (2007) <http://dx.doi.org/10.5285/5f0605e4-aa2a-48ab-b47c-bf5510823e8f>
- Countryside Survey (www.countrysidesurvey.org.uk)

Columns in dataset:

- LC2007	Land Class (numeric)
- LC2007_COD	Land Class (text)
- LC_2007	As above but with no code for LCs where no hedges occur
- Size_of_LC	Area of Land Class (m2, from original land classification file. May differ slightly to default ‘Area’ column)
- WNS_km	Woody linear feature, Natural shape, length of ash in km (in land class)
- WUS_km	Woody linear feature, Unnatural shape, length of ash in km (in land class)
- Belt_km	Belt of trees, length of ash in km (in land class)
- All_WLF_km	Total of above 3 columns (in land class)
- Mean_km_km	Mean length of all linear features in km per km square.

Resolution	1km
Coordinate system	British National Grid
Projection	Transverse Mercator
Extent	Great Britain
Projection	British National Grid OSGB1936

Countryside Survey: Ash tree distribution estimates in woody linear features (WLFs)

The Countryside Survey samples 1km squares across GB using a stratified random sampling system (based on land classes which are comprised of the major national ecological gradients e.g. soils, geology and climate) (Bunce *et al.* 1996, Carey *et al.* 2008). This enables scaling up from samples to produce national estimates using the land classes.

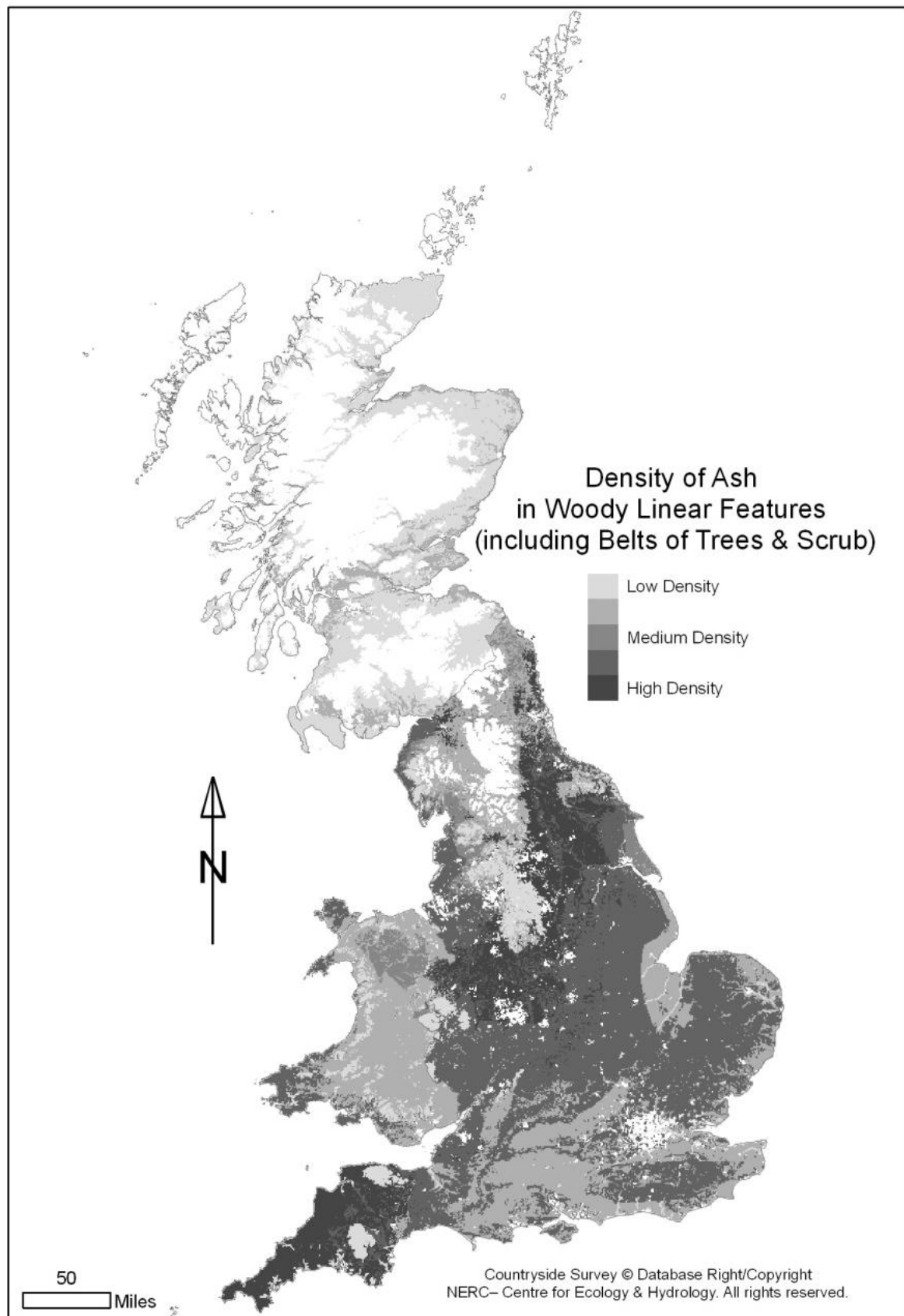
Linear features are landscape elements less than 5m wide that form lines in the landscape. Countryside Survey reports on the length and condition (and changes in these over time) of a range of linear features including woody linear features (hedgerows), walls and fences. Linear features have a minimum length of 20m and may include gaps of up to 20m. Two types of Woody Linear feature were recorded; those with Natural Shape (e.g. lines of trees, belts of trees) and those of Unnatural shape (hedgerows). In those with a Natural Shape, a proportion is recorded against each species present (recorded as: <10%, 10-25%, 25-50%, 50-75%, 75-95%, 95-100%, 'Individual Tree').

In order to calculate national estimates of ash within lines of trees, the length of ash recorded in each proportion band was calculated per 1km square (using the midpoint of the band i.e. 5%, 17.5%, 37.5%, 62.5%, 85%, 97.5%, 100%). A 1km mean length of ash in lines of trees was obtained per sampling strata (Bunce *et al.* 1996). To obtain the final length estimate per country, the mean was multiplied by the area of each Land Class and totalled per country.

To calculate the amount of ash contained in belts of trees (recorded as linear features in Countryside Survey) the same methodology was followed as per the lines of trees, the difference being that features recorded as 'Belts of trees' or 'Belts of scrub' were included in the analysis. In WLFs with an unnatural shape, species composition is surveyed in a slightly different way to lines of trees in that individual species are not recorded against the length of the linear feature, instead they are recorded as 'mixed species', '>50% hawthorn' and '>50% other'. This meant that slightly different methods were used to estimate the proportion of hedgerow length depending upon the Woody feature type. In order to estimate the proportion of ash in hedges, it was necessary to analyse data from 'D plots' (vegetation diversity plots recorded in hedgerows, up to 10 per 1km square). A total percentage cover of each species present in the plot is recorded. To obtain a mean length of ash, the mean percentage cover from 'D' plots next to hedges was calculated per sampling strata (Land class, as above) and multiplied by the total amount of hedge measured in all sampled 1km squares in each strata (Land Class). The 1km means of these totals were multiplied by the area of the Land Class strata and then totalled per country.

More information about methods can be found at www.countrysidesurvey.org.uk

Map showing the Ash Tree distribution as estimated by Countryside Survey 2007



Further reading:

- **Distribution of Ash trees (*Fraxinus excelsior*) in Countryside Survey data** (2013). Maskell, L.C., Henrys, P.A., Norton, L.R., Smart, S.M. and Wood, C.M. *January 2013*, NERC/Centre for Ecology & Hydrology, Lancaster.
http://www.countrysidesurvey.org.uk/sites/default/files/pdfs/Distribution%20of%20Ash%20trees%20in%20CS_9thJan2013.pdf
- Barr, C.J. (1998) **The Sampling Strategy for Countryside Survey** DETR CONTRACT No. CR0212. *Revised by Wood, C.M. (2011) as The Sampling Strategy for Countryside Survey (up to 2007)*
- http://nora.nerc.ac.uk/19487/1/CS_Sampling_Strategy_Revised.pdf
- Bunce, R.G.H., Barr, C.J., Clarke, R.T., Howard, D.C. & Lane, A.M.J. (1996) **ITE Merlewood Land Classification of Great Britain**. *Journal of Biogeography*, 23, 625-634.
- Carey, P.D.; Wallis, S.; Chamberlain, P.M.; Cooper, A.; Emmett, B.A.; Maskell, L.C.; McCann, T.; Murphy, J.; Norton, L.R.; Reynolds, B.; Scott, W.A.; Simpson, I.C.; Smart, S.M.; Ulliyett, J.M.. (2008) **Countryside Survey: UK Results from 2007**. NERC/Centre for Ecology & Hydrology, 105pp. (CEH Project Number: C03259) <http://www.countrysidesurvey.org.uk/outputs/uk-results-2007>
- R.D. Morton, C. Rowland, C. Wood, L. Meek, C. Marston, G. Smith, R. Wadsworth, I. Simpson. July 2011 CS Technical Report No 11/07: **Final Report for LCM2007 - the new UK land cover map**. NERC/Centre for Ecology & Hydrology (CEH Project Number NEC03259). http://nora.nerc.ac.uk/14854/1/LCM2007_Final_Report_-_vCS_Web.pdf