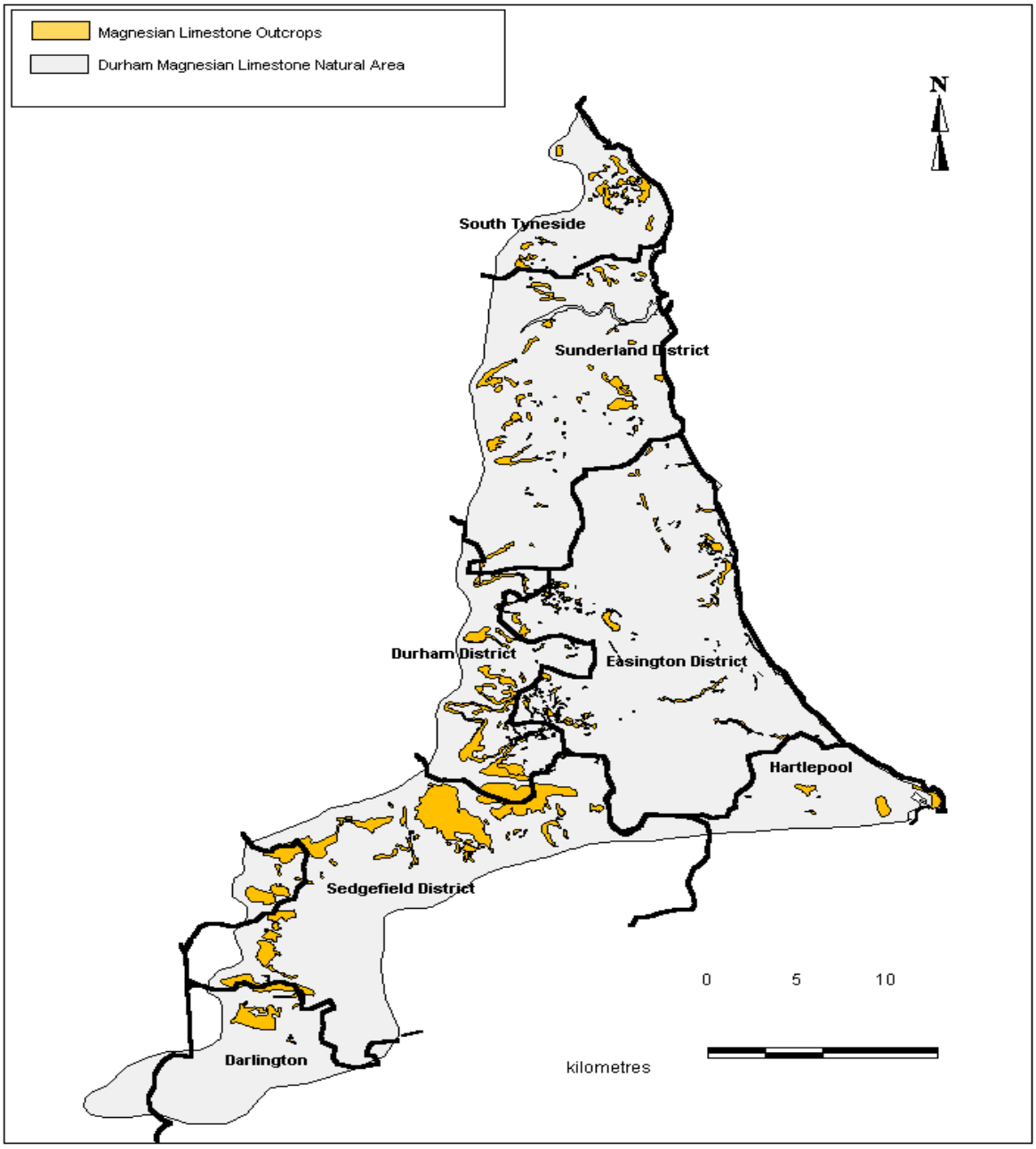
What Sites Are Suitable For Magnesian Limestone Grass-land?

“True” magnesian limestone grassland is only found growing on thin immature soils on outcrops of the rock magnesian limestone. Outcrops of Magnesian Limestone in Durham and Tyne and Wear are mainly found in the districts of South Tyneside, Sunderland, Easington, City of Durham and Sedgefield. Magnesian Limestone also outcrops in areas of Hartlepool and Darlington.



The soils associated with the Magnesian Limestone outcrops are known as rendzinas. "Rendzina soils develop where a limestone or chalk is the parent material and where grasses form the surface vegetation"[1]. "These soils are defined as shallow (>30cm) calcareous soils with only a topsoil and are derived directly from the weathering of the limestone/chalk, or they may incorporate other materials such as glacial drift or wind blown material"[2]. "Rendzinas may also consist of mainly unconsolidated calcareous material"[3].

In Durham and Tyne & Wear rendzina soils are found in scattered localities, typically on the "higher summits of the Magnesian Limestone escarpment and steep slopes where Magnesian Limestone is exposed at the surface and where glacial drift deposits are thin"[4]. "The soils are very alkaline often with a pH above 7 and are typically free-draining and shallow"[4]. "Rendzina soils are directly associated with most of the remaining areas of limestone grassland"[4].

To determine the suitability of a site for magnesian limestone grassland consider the following:

Seeking advice from Durham Biodiversity Partnership, Durham Wildlife Trust or the Environment/Countryside Department of your Local Authority as to whether the proposed site is located on a Magnesian Limestone outcrop.

- Conducting a thorough biological survey of the proposed site and adjoining land to establish if areas of wildlife importance exist and whether there is a nearby source of seed[5]. Surveys provide important baseline information which can help determine the management programme for the site and act as an indicator of the success[5].
- "Conducting a survey of the physical characteristics of the site. It is important to determine the soil pH, soil structure, soil-water relations and soil fertility"[5]. Landform information is important too, such as, the presence of steep slopes, what direction the slope faces, changes in level and any installations (e.g. drainage lines)[5].
- Determining any archaeological importance of the site.
- Investigating the current and past management of the site[5].
- The position of the site in relation to existing magnesian limestone grasslands[5].

Please seek professional advice wherever possible.

Information and Advice

- Crofts, A. & Jefferson R. G. 1999. The Lowland Grassland Management Handbook. 2nd edition. English Nature/ The Wildlife Trusts. Pp3:1 – 3:10 & 11:1 – 11:20.

References

[1] **www.pupilvision.com/uppersixth/soiltypes.htm. (03/03/2005).**

[2] **www.royalcol.ac.uk/soils/book/soilscapes1.htm. (03/03/2005).**

[3] **www.silsoe.cranfield.ac.uk/nsri/services/cf/gateway/pdf/the_soil_map_and_soil_classification.pdf (03/03/2005).**

[4] **Hedley, S., Clifton, S. & Mullinger, S. 1997. Natural Area Profile. The Durham Magnesian Limestone. English Nature, Northumbria Team**

[5] **Crofts, A. & Jefferson R. G. 1999. The Lowland Grassland Management Handbook. 2nd edition. English Nature/ The Wildlife Trusts. Pp11:1 – 11:20.**

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