

AGRICULTURAL LAND CLASSIFICATION AND PHYSICAL CHARACTERISTICS REPORT FOR COALMOOR NORTH

Following the request for detailed information on the physical characteristics of soil at Coalmoor North an Agricultural Land Classification survey was undertaken in March 1991. Soils were augured to 100 cm and soil pits dug to 120 cm.

Location, Altitude and Relief

The site lies west of Horsehay near Telford between the A5223 and the minor road to the west. It is adjacent to an existing opencast coal mine. The land lies at an altitude of about 190 metres and is level or gently sloping. Altitude and relief are non limiting in the classification of the site.

Climate and Rainfall

The main parameters used in the assessment of the climatic limitations are average annual rainfall (AAR) and accumulated temperature (ATO). For this site these figures are 809 mm and 1271°C respectively, indicating a climatic limitation preventing the land being classified higher than grade 2. The field capacity days (FCD) figure for the site is 186 days. The mean last frost occurs in early May.

Geology and Soils

The whole site consists of disturbed soils. Typically sandy clay loam overlies clay with occasional pockets of loamy sand. The topsoil depths are variable, 9 to 37 cm. A small area of clay or clay overlain by 20 cm of heavy clay loam or sandy clay loam occurs in the south east corner of the site.

Land Use

The whole site has been put down to grass which has been grazed.

AGRICULTURAL LAND CLASSIFICATION

The site is of moderate to poor quality agricultural land.

Subgrade 3b

This accounts for 10.20 hectares and 77.3% of the site. Soils are typically sandy clay loam overlying sandy clay loam over clay, with pockets of loamy sand. Soil wetness is the main limitation to the agricultural use of this land, along with the fact that the soils are very mixed and of different depths, due to disturbance, which may cause significant management problems in years to come.

Grade 4

This accounts for 1.10 hectares and 8.3% of the site. Soils are typically clay to depth or heavy clay loam or sandy clay loam topsoils to a depth of 20 cm overlying clay. Soil wetness is the main limitation to the agricultural use of this land.

Non Agricultural Land

This accounts for 1.89 hectares and 14.4% of the site. It consists of land under restoration or land that has been opencasted.

Summary

| Grade | Hectares | % |
|-----------------------|-------------|-------------|
| 3b | 10.20 | 77.3 |
| 4 | 1.10 | 8.3 |
| Non Agricultural land | <u>1.89</u> | <u>14.4</u> |
| | 13.19 | 100 |

SOIL UNITS

The site consists of four soil units. Unit 1 is the largest and is variable. Unit 2 is smaller and more uniform. Unit 3 is an area of land under restoration and Unit 4 covers the opencast area where there are no soil reserves.

Unit 1

Unit 1 is mapped over the majority of the site and coincides with the Agricultural Land Classification of Subgrade 3b. It accounts for 10.20 hectares and 77.3% of the area. The unit is very mixed both in terms of textures and depths of horizons. Sandy clay loam or medium clay loam topsoils extend to 20 cms, overlying sandy clay loam with pockets of loamy sand or clay subsoils to 45 cms with clay usually forming the lower subsoil.

The structure is weakly to moderately developed, coarse or very coarse sub angular blocky, with poor porosity. A few large blocks of sandstone (diameter up to 15 cm) occur in the lower subsoil.

It is recommended that the topsoil is stripped to a depth of 20 cm, to avoid the inclusion of the clay subsoil where it occurs.

Unit 2

Unit 2 covers the south east corner of the site, and coincides with the Agricultural Land Classification Grade 4, accounting for 1.10 hectares and 8.3% of the area. It is more uniform, typically consisting of clay to depth, or of heavy clay loam or sandy clay loam to a depth of 20 cm, overlying clay.

The structure is weakly developed, very coarse subangular or angular blocky with some stones occurring in the clay subsoil. The porosity is poor.

It is recommended that this unit is stripped separately from Unit 1 due to its higher clay content.

Unit 3 is currently under restoration and therefore was not surveyed.

Unit 4 consists of the Opencast workings and therefore has no soil resources available.

Summary

The whole of the site is disturbed producing a mixture of soil textures and horizon depths. The land is of moderate to poor quality agricultural land. Two soil units with soil resources have been identified, Units 1 and 2. It is recommended that they are treated separately due to their different clay content.

Roy Fussell
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