13/93

AGRICULTURAL LAND CLASSIFICATION REPORT FOR LEYLANDII HOUSE, NORTON, NR EVESHAM

1. SITE

The site was visited by the Resource Planning Team in March and April 1993. An Agricultural Land Classification survey was undertaken according to the guidelines laid down in the "Agricultural Land Classification of England and Wales - Revised Guidelines and Criteria for Grading the Quality of the Land" (MAFF 1988).

2. LOCATION

The site is situated to the North East of Norton at NGR SP 057481. It is bounded to A439 (T) and to the East by Harvington Brook. Land surrounding the site is predominantly in agricultural use.

3. CLIMATE

Average Annual Rainfall (AAR) - 637 mm.

Accumulated Temperature above 0°C January to June (ATO) - 1461 day °C.

Field Capacity Days (FCD) - 136 days.

Moisture Deficit Wheat - 108 mm.

Moisture Deficit Potatoes - 100 mm.

There is no overall climatic limitation to the agricultural use of this land.

4. SITE

The site rises to the North West from an altitude of 30 m in the South near Harvington Brook to a high of 45 metres.

5. GEOLOGY AND SOILS

The soil geology in this area comprises of lower Lias clays, Keuper Marl and Arden Sandstone, but this is overlain by fluvio glacial drift deposits in places. These have given rise to sandy soils with occasional clay rich subsoils and profiles which are clay rich to depth.

6. LAND USE

At the time of the survey the site was under cereals or fallow.

7. AGRICULTURAL LAND CLASSIFICATION

7.1 Grade 2 - This has been mapped in the Southern half of the site and occupies 16.9 ha (50%) of the land surveyed.

Soils are mainly of a sandy clay loam/sandy loam over sandy clay loam to depth or sandy loam, loamy sand and sand to depth. Occasionally subsoils are of a heavier nature with clay being encountered at depth. Subsoil stones vary and may become many and medium in quantity and size.

Droughtiness is the main limiting factor upon this unit. However, in places topsoil stones may also impose a limitation equal to this grade.

7.2 Grade 3a - This has been mapped to the North and West of the site and occupies 10.3 ha (30%) of the land surveyed.

Soils within this grade are of two distinct types. Firstly there are the heavier soils in the West which are of calcareous heavy clay loam over clay to depth with few or no stones. This soil type is limited by wetness.

Secondly there are the relatively lighter soils in the North. These soils are typified by medium sandy loam over sandy loam and sandy clay loam to depth. Topsoil stones are common in occurrence and subsoil stones become abundant. This soil unit is limited both by topsoil stones and droughtiness.

7.3 Subgrade 3b - this has been mapped as a band located in the centre of the site and occupies 6.7 ha (20%) of the land.

The soil within this grade is typified by a heavy clay loam topsoil with common stones over a slowly permeable lay subsoil with few or no stones. Wetness is the main limiting factor on these soils. However, the lobe of this grade adjacent to Harvington Brook in the East, which is in an elongated steep sided hallow is limited by micro relief.

7.4 Summary of land in each grade

Grade	Hectares	% of Total Area	% of Agricultural Land
2	16.9	50	50
3a	10.3	30	30
3b	6.7	20	20
Total	33.9	100	100

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84 to 95 cm 75YR33 loamy coarse sand, weakly developed fine granular structure, very friable, porous, common stones.

95 to 120 cm 75YR59 coarse sand, weakly developed fine granular structure, very friable, porous, common stones.

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SOIL UNIT REPORT FOR LEYLANDII HOUSE, NORTON, NR EVESHAM

1) SITE

The site was visited by the Resource Planning Team in March and April 1993. The soils were examined using a Dutch soil auger, with borings on a 100m x 100m OS based grid. Borings were to a depth of 100 cm + unless prevented by stony layers. Soil pits were dug to obtain further details on factors such as subsoil structure, porosity and stone volume.

2) LOCATION

The site is situated to the North East of Norton at NGR SP 057481. It is bounded to A439 (T) and to the East by Harvington Brook. Land surrounding the site is predominantly in agricultural use.

3) SITE

The site rises to the North West from an altitude of 30 m in the South near Harvington Brook to a high of 45 metres.

4) SOIL UNITS

4.1 Type 1 - This soil unit covers 12.1 ha (36%) of the site. It is found in the centre of the land surveyed.

Typical profiles have 30 cm of well bodied sandy loam or sandy clay loam over sandy clay loam to depth. Occasionally the subsoil may become heavier in nature with clay below 70 cm. Topsoils have few stones, but subsoil stone content varies from few to many stones. A typical profile for this soil is described below.

> 0 to 30 cm 10YR 43/44 sandy clay loam weakly developed medium subangular blocky structure, friable, porous, few stones.
>
> 30 to 45 cm 10YR42/43 sandy clay loam, moderately developed medium subangular blocky structure, firm, porous, few stones.
>
> 45 to 120 cm 10YR42/43 sandy clay loam, moderately developed medium subangular blocky structure, firm, porous, many stones.

4.2 Type 2 - This soil unit covers 7.6 ha (22%) and it is located in the Northern part of the site.

Typical profiles have 30 cm of sandy loam topsoil over sandy loam to 45 cm and sandy clay loam to depth. Occasionally topsoil texture may be a sandy clay loam. These profiles have a common occurrence of topsoil stones greater than 2 cm, with subsoil stones becoming abundant in quantity.

A typical profile is given below

Pit 1

0 to 30 cm 10YR32/33 medium sandy loam, moderately well developed medium subangular blocky structure, porous, common stones greater than 2 cm.

30 to 45 cm 75YR42/43 common Manganese concretions, medium sandy loam, moderately well developed medium subangular blocky structure, firm, porous, abundant stones.

45 to 120 cm 75YR58 common Manganese concretions, sandy clay loam, moderately well developed, medium subangular blocky structure, firm, porous, abundant stones.

4.3 Type 3 - this soil unit covers 8.1 ha (24%) of the site and is located between units 1 and 2.

Profiles have 32 cm of heavy clay loam topsoil with few/common stones over a slowly permeable horizon of clay to depth. There are few or no subsoil stones. It should be stated that the soil in the South West corner of the site has a calcareous topsoil.

A typical profile is given below.

Pit 2

0 to 32 cm 75YR42/43 common Manganese concretions, heavy clay loam, weakly developed course subangular blocky structure, porous, common stones.

32 to 120 cm 5YR44 clay, moderately well developed, very coarse platy structure, firm, non-porous, no stones.

4.4 Type 4 - This soil unit covers 6.1 ha (18%) of the site. It is located in the South East corner of the area surveyed.

Profiles have 35 cm of medium sandy loam/sandy clay loam topsoil with common stones over sandy loam to 80 cm with common stones over loamy coarse sand and sand to depth. The lower subsoils have many stones.

A typical profile is described below.

Pit 3

0 to 38 cm 10YR32 medium sandy loam/sandy clay loam, moderately developed, medium subangular blocky structure, porous, common stones.

38 to 84 cm 75YR44 medium sandy loam, weekly developed fine subangular blocky structure, very friable, porous, common stones.