

PROPOSED POWER STATION SITE AT SUTTON BRIDGE:

AGRICULTURAL LAND CLASSIFICATION REPORT

1. INTRODUCTION

- 1.1 This 17.1 ha site consists of a single block of land lying to the north west of the junction between the River Nene and the South Holland main drain (Grid Reference TF 473 202, approximately half a mile south of Sutton Bridge village). All land on the site was in agricultural use at the time of the survey (March 1990).
- 1.2 Soils on the site were examined by a grid network of soil auger borings and in addition, a soil pit was dug near the centre of the site. The land has been graded in accordance with the Revised Guidelines and Criteria for Agricultural Land Classification published in October 1988 * (1). A summary of the Classification and description of the grades is presented in the Appendix to this report.

2.0 CLIMATE AND RELIEF

- 2.1 Climatic data for the site were obtained from the Meteorological Office Agroclimatic Dataset developed for use in Agricultural Land Classification * (2). This data indicates that mean annual rainfall for the site area is 604 mm (23.8 inches). Mean accumulated Temperature above 0°Celsius (January/June) is estimated at 1433°C. These climatic conditions do not impose any limitation on the grading of the site although the relatively low rainfall increases the importance of good soil moisture reserves in reducing droughtiness risk. It is understood from information supplied by the site owner's representative that irrigation is not practised on the site.
- 2.2 The land is generally level with gentle undulations in the south western part of the site. These gentle gradients do not impose any significant limitation on the use of agricultural machinery and therefore do not affect ALC grading.

3.0 GEOLOGY AND SOILS

- 3.1 Soils on the site are formed from marine alluvium (Terrington, Beds) which overlies Jurassic clay at depth *(3). There is no detailed published soil map of the area. The national soil map (1:250,000 scale) *(4) maps the survey site as Wisbech Association characterised predominantly by deep, stoneless silty soils. This accords with soil characteristics observed during the more detailed survey carried out for the purposes of this report.
- 3.2 Topsoils are predominantly silt loam/medium silty clay loam, although heavier silty clay loam topsoils were observed in the north eastern part of the site. Medium textured silty soils generally extend to depth although lighter textured loamy fine sand was encountered in some profiles.
- 3.3 Topsoils were assessed as stoneless (less than 1% stone by volume) or

at most very slightly stony (1-5% volume)), for example along the line of the disused railway which transects the western part of the site. Subsoils were generally stoneless.

- 3.4 Although subsoils were assessed as permeable, mottling was commonly observed in subsoils. It is considered that this is indicative of conditions in the past, prior to arterial drainage improvements, rather than any current significant wetness problem. Soils were therefore assessed as well drained (Wetness Class 1) and soil drainage is not considered to be a limitation to ALC grade.

4. AGRICULTURAL LAND CLASSIFICATION

Grade 1 (14.9 hectares)

- 4.1 As indicated above, there is no climatic or relief limitation on this site and the deep silty/fine sandy soils observed on the grade 1 land are both well drained and have high available water reserves to counteract drought risk in dry periods.

- 4.2 This grade 1 land is assessed as very flexible in cropping potential and capable of achieving high yields.

Grade 2 (2.2 hectares)

- 4.3 A small area in the north eastern part of the site is classified as grade 2. This land is similar to the grade 1 except that the topsoil is generally heavier (heavy silty clay loam rather than silt loam/medium silty clay loam). This will slightly inhibit workability and traffickability and in consequence could reduce flexibility of cropping.

RESOURCE PLANNING GROUP
CAMBRIDGE RO
May 1990

REFERENCES

- * (1) MAFF (1988) Agricultural Land Classification of England and Wales. Revised guidelines and criteria for grading the quality of agricultural land.
- * (2) Meteorological Office (1989) Climatological data for Agricultural Land Classification.
- * (3) Geological Survey of Great Britain. Solid and Drift Geology map (1:50,000 scale) Sheet 145.
- * (4) Soil Survey of England and Wales (1983), 1:250,000 scale soil map, Sheet 4, Eastern England.

AGRICULTURAL LAND CLASSIFICATION

DESCRIPTION OF THE GRADES AND SUBGRADES

The ALC grades and subgrades are described below in terms of the types of limitations which can occur, typical cropping range and the expected level and consistency of yield. In practice, the grades are defined by reference to physical characteristics and the grading guidance and cut-offs for limitation factors in Section 3 enable land to be ranked in accordance with these general descriptions. The most productive and flexible land falls into Grades 1 and 2, and Subgrade 3a land collectively comprises about one-third of the agricultural land in England and Wales. About half the land is of moderate quality in Subgrade 3b or poor quality in Grade 4. Although less significant on a natural scale such land can be locally valuable to agriculture and the rural economy where poorer farmland predominates. The remainder is very poor quality land in Grade 5, which mostly occurs in the uplands.

Descriptions are also given of other land categories which may be used on ALC maps.

Grade 1 - excellent quality of agricultural land

Land with no or very minor limitations to agricultural use. A very wide range of agricultural and horticultural crops can be grown and commonly includes top fruit, soft fruit, salad crops and winter harvested vegetables. Yields are high and less variable than on land of lower quality.

Grade 2 - very good quality agricultural land

Land with minor limitations which affect crop yield, cultivations or harvesting. A wide range of agricultural and horticultural crops can usually be grown but on some land in the grade there may be reduced flexibility due to difficulties with the production of the more demanding crops such as winter harvested vegetables and arable root crops. The level of yield is generally high but may be lower or more variable than Grade 1.

Grade 3 - good to moderate quality agricultural land

Land with moderate limitations which affect the choice of crops, timing and type of cultivation, harvesting or the level of yield. Where more demanding crops are grown yields are generally lower or more variable than on land in Grades 1 and 2.

Subgrade 3a - good quality agricultural land

Land capable of consistently producing moderate to high yields of a narrow range of arable crops, especially cereals, or moderate yields of a wide range of crops including cereals, grass, oilseed rape, potatoes, sugar beet and the less demanding horticultural crops.

Subgrade 3b - moderate quality agricultural land

Land capable of producing moderate yields of a narrow range of crops, principally cereals and grass or lower yields of a wider range of crops or high yields of grass which can be grazed or harvested over most of the year.

Grade 4 - poor quality agricultural land

Land with severe limitations which significantly restrict the range of crops and/or level of yields. It is mainly suited to grass with occasional arable crops (eg cereals and forage crops) the yields of which are variable. In moist climates, yields of grass may be moderate to high but there may be difficulties in utilisation. The grade also includes very droughtly arable land.

Grade 5 - very poor quality agricultural land

Land with very severe limitations which restrict use to permanent pasture or rough grazing, except for occasional pioneer forage crops.