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**PENWITH DISTRICT LOCAL PLAN• ST IVES AND LELANT  
AGRICULTURAL LAND CLASSIFICATION  
REPORT OF SURVEY**

This report should be read in conjunction with the report describing the findings of ALC surveys carried out in St Ives and Lelant in December 1991

**1 INTRODUCTION**

Two additional areas were graded under the Agricultural Land Classification (ALC) System in April 1992. The surveys were carried out for MAFF as part of its statutory role in response to the revision of the Penwith District Local Plan

The fieldwork was carried out by ADAS's Resource Planning Team (Wessex Region) at a scale of 1:10,000 (approximately one sample point every hectare). The information is correct at the scale shown but any enlargement would be misleading. This survey supercedes the previous survey of this area at 1" being at a more detailed level and carried out under the Revised Guidelines and Criteria for grading the quality of agricultural land (MAFF 1989)

The ALC provides a framework for classifying land according to the extent to which its physical or chemical characteristics impose long-term limitations on agricultural use. The grading takes account of the top 120cm of the soil profile. A description of the grades used in the ALC System can be found in the appendix

The two survey areas are treated separately. The distribution of the ALC grades identified in the survey areas are detailed below and illustrated on the accompanying ALC maps

Table 1 Distribution of ALC grades St Ives

Grade	Area (ha)	% of Survey Area	% of Agricultural Land
2	5.8	61.7	61.7
3A	3.6	38.3	38.3
TOTAL	9.4	100%	100%

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Table 2 Distribution of ALC grades Lelant

Grade	Area (ha)	% of Survey Area	% of Agricultural Land
2	2 9	53 7	67 4
3A	1 4	25 9	<u>32 6</u>
Non Agric	0 4	7 4	100% (4 3ha)
Urban	<u>0 7</u>	<u>13 0</u>	
TOTAL	5 4	100%	

All the land surveyed has been classified as best and most versatile land. The majority in these additional areas is grade 2. Across the areas surveyed in December 1991 and April 1992 the majority is Grade 3A.

## 2 CLIMATE

Details of the climatic condition in both survey areas can be found in the main report describing fieldwork carried out in December 1991. The conditions are the same for the current sites both being adjacent to 1991 areas.

## 3 RELIEF AND GEOLOGY

The St Ives site slopes gently to the north east, from 115m to 100m. The Lelant site is flat on a slight spur at 40m.

The St Ives site is underlain by Biotite granite whilst the Lelant area is underlain by the Gramscatho beds (sandstone and slate interbedded).

## 4 AGRICULTURAL LAND CLASSIFICATION

The distribution of ALC grades identified in the survey areas are detailed in Section 1 and shown on the accompanying ALC map. The information is correct at the scale shown but any enlargement would be misleading.

### St Ives

Grade 2. These soils have been grade thus because there is a workability limitation. This affects the acceptable timing of cultivations and grazing when damage to the soil structure will not occur. Structurally damaged soils will be more susceptible to poor drainage. Typical profiles have medium clay loam topsoils with heavier subsoils usually heavy clay loams. Occasionally the subsoils may have small stones up to 10%. These soils are not droughty and show no signs of wetness. There is an area near to Polwithen Drive which has higher surface stone contents but these do not exceed 10% in the top 25cm.

Sub Grade 3A The remaining part of the survey area has similar soils to those described above but here the land is more exposed to winds from the sea Salt laden winds can damage sensitive horticultural crops, winter vegetables and top fruits The versatility of the land is thus reduced and downgraded to 3A

#### Lelant

Grade 2 These soils have no drainage or droughtiness problems They can be assigned to wetness class I However with a medium clay loam topsoil and the Field Capacity Day value for the area they can be graded no higher than grade 2 This limitation is described as a workability limitation which restricts the timing of non damaging cultivations and grazings During field capacity conditions the soil structure can be damaged if access is made onto the land

Sub-Grade 3A The remainder of the survey area has been classified as sub-grade 3A because there is evidence of exposure Here salt-laden winds from the sea could damage sensitive crops and cause stress to livestock With the risks attached to these enterprises the versatility of the

land is reduced and so it is downgraded to 3A

## DESCRIPTION OF THE GRADES AND SUB-GRADES

### Grade 1 - excellent quality 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 include 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 droughty 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.

## Descriptions of other land categories used on ALC maps

### Urban

Built-up or 'hard' uses with relatively little potential for a return to agriculture including housing, industry, commerce, education, transport, religious buildings, cemeteries Also, hard-surfaced sports facilities, permanent caravan sites and vacant land, all types of derelict land, including mineral workings which are only likely to be reclaimed using derelict land grants

### Non-agricultural

'Soft' uses where most of the land could be returned relatively easily to agriculture, including golf courses, private parkland, public open spaces, sports fields, allotments and soft-surfaced areas on airports/airfields Also active mineral workings and refuse tips where restoration conditions to 'soft' after-uses may apply

### Agricultural buildings

Includes the normal range of agricultural buildings as well as other relatively permanent structures such as glasshouses Temporary structures (eg polythene tunnels erected for lambing) may be ignored

### Open water

Includes lakes, ponds and rivers as map scale permits

### Land not surveyed

Agricultural land which has not been surveyed

Where the land use includes more than one of the above land cover types, eg buildings in large grounds, and where map scale permits, the cover types may be shown separately Otherwise, the most extensive cover type will usually be shown