Cambs 2/90

[redacted]

MAFF Ministry of Agriculture Fisheries and Food

A45 New Settlements Inquiry

Bourn Airfield: Additional Survey Area
Supplement to Proof of Evidence (P13)

Agricultural Land Classification

BOURN AIRFIELD

AGRICULTURAL LAND CLASSIFICATION

SUPPLEMENT TO MAFF PROOF NO.P13

1.0 BACKGROUND

1.1 This 59.8 ha site comprises two areas of land; the first located east of and adjacent to Broadway Road; the second to the south of Bucket Hill Plantation. These areas lie adjacent to the southern boundary of the original application area and form an extension to existing proposals to develop a new residential settlement with supporting amenities.

1.2 The site was inspected in January 1990 and at the time of survey the majority of the land was in arable use, principally winter cereals. Much of the land to the north of New Barns Plantation was under grass.

2.0 PHYSICAL CHARACTERISTICS AFFECTING LAND QUALITY

Climate

2.1 Climate data for the site was obtained by interpolating information contained in the published agricultural climatic dataset (Met Office, 1989). This indicates that for a median altitude of 60m AOD, the annual average rainfall is 561mm (22.1"). Soils are likely to be at field capacity for a relatively short period of 96 days and soil moisture deficits are estimated as 114mm for wheat and 108mm for potatoes. These climatic characteristics do not constitute a limitation to the ALC grade.

Altitude and Relief

2.2 Both areas of land are gently sloping and altitudes range from 55m to 60m AOD. The western area has an overall southeasterly aspect, with the land falling from both west and east towards the drain located south of New Barns Plantation. The highest point of the eastern site lies adjacent to Bucket Hill Plantation where land falls to the south and west. Gradient and altitude do not impose a limitation on ALC grade.

Geology and Soils

2.3.1 The published geology and soils information for the Bourn Airfield area, described in the main ALC Proof No.P13 (paragraghs 3.3 and 3.4), applies also to this additional area.

2.3.2 The detailed soils description given in paragraph 3.4.1 a) of MAFF's Proof of Evidence (P13) applies to this extension area, with profiles being typically calcareous throughout. A small area of soils like those described in paragraph 3.4.1 b) of MAFF Proof P13 also occurs.

3. AGRICULTURAL LAND CLASSIFICATION

3.1 The definitions of the Agricultural Land Classification (ALC) grades are included in Appendix I of MAFF Proof P13.

3.2 The tables of agricultural land quality which follow are based on accurate planimeter measurements of the additional survey area. It supersedes the table presented at paragraph 4.2 of the MAFF main proof P13 which relied on a more approximate figure of land take within the additional survey area.

3.3 The table overleaf shows the breakdown of ALC grades for the additional survey area.

AGRICULTURAL LAND CLASSIFICATION

Grade	ha	%
2	10.8	18.1
3a	44.9	75.1
3b	0.9	1.5
Non-Agricultural	2.5	4.2
Agricultural Buildings	0.2	0.3
Urban	0.5	0.8
TOTAL	59.8	100.0

3.4 The table below shows the breakdown of ALC grades for the original and additional survey areas together.

AGRICULTURAL LAND CLASSIFICATION

Grade	ha	%
2	26.0	9.4
3a	100.6	36.4
3b	90.4	32.7
Non-Agricultural	46.3	16.8
Agricultural Buildings	0.7	0.3
Urban	12.2	4.4
TOTAL	276.2	100.0

4. GRADE 2

Land graded two occurs in three locations.

4.1 Land graded 2 is associated with better drained, calcareous variants of soils described in paragraph 3.4.1a) of MAFF Proof P13. These

soils typically comprise calcareous clay or occasionally heavy clay loam topsoils over calcareous clay upper subsoils with chalky boulder clay occurring at depth. Soil profile pit observations indicate that these soils have slowly permeable horizons present at depth within the profile (45/50 cms + : ie. Wetness Class II). The land is thus limited by minor wetness and workability imperfections resulting from the combination of reduced subsoil permeability and heavy topsoil textures. This, together with the slight risk of drought in this low rainfall area, excludes the land from grade 1.

5. SUBGRADE 3a

The majority of both areas has been graded 3a.

5.1 Land graded 3a is associated with the less well-drained variants of soils described in paragraph 3.4.1a) of MAFF Proof P13 and in paragraph 4.1 above. Soil profile pit observations show that slowly permeable horizons are present at shallower depths within the profile (35 cms:ie. Wetness Class III). This moderate drainage imperfection combined with heavy topsoil textures results in moderate wetness and workability constraints, and limits the land to subgrade 3a.

5.2 East of the camp site (disused) profiles as described in paragraph 3.4.1 b) of MAFF Proof P13, occur. These clayey soils have a mixed appearance and occur where soils have been affected by aerodrome building removal. As disturbance in these profiles is only minor, the moderate wetness and workability limitations remain the overriding constraint to agricultural land quality. Thus the land is limited to subgrade 3a.

6. SUBGRADE 3b

Land graded 3b is found in three locations southeast of The Grange.

6.1 Decalcified soil variants of the soils described in MAFF Proof P13, paragraph 3.4.1 a) have been graded 3b. Wetness constraints (ie Wetness Class III) combine with decalcified heavy topsoils and upper subsoils to impose a significant wetness and workability limitation on the agricultural potential of this land. Thus the land is restricted to subgrade 3b.

7. NON-AGRICULTURAL

Areas of woodland, land associated with The Grange and runways have been mapped as non-agricultural.

8. URBAN

The Grange and associated buildings have been mapped as urban.

MINISTRY OF AGRICULTURE, FISHERIES AND FOOD
RESOURCE PLANNING GROUP
CAMBRIDGE REGIONAL OFFICE

March 1990