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**KENT MINERALS LOCAL PLAN REVIEW
RECONNAISSANCE SURVEY
Land at Ham Marshes Faversham**

**Agricultural Land Classification
ALC Map and Report**

January 1999

**Resource Planning Team
Eastern Region
FRCA Reading**

**RPT Job Number 2011/095/98
MAFF Reference EL 20/01847**

**AGRICULTURAL LAND CLASSIFICATION REPORT
RECONNAISSANCE SURVEY**

**KENT MINERALS LOCAL PLAN REVIEW
LAND AT HAM MARSHES FAVERSHAM**

- 1 This report presents the findings of a reconnaissance Agricultural Land Classification (ALC) survey of 111 ha of land at Ham Marshes Faversham in Kent. The survey was carried out during January 1999.
- 2 The survey was undertaken by the Farming and Rural Conservation Agency (FRCA)¹ on behalf of the Ministry of Agriculture Fisheries and Food (MAFF) in connection with its statutory input to the Kent Minerals Local Plan Review. This survey supersedes any previous ALC information for this land.
- 3 The work was conducted by members of the Resource Planning Team in the Eastern Region of FRCA. The land has been graded in accordance with the published MAFF ALC guidelines and criteria (MAFF 1988). A description of the ALC grades and subgrades is given in Appendix I.
- 4 At the time of survey the land use on the site was predominantly permanent grassland with a small area in the south west sown with oil seed rape. The areas mapped as Other land include a road and areas of open water.

SUMMARY

- 5 The findings of the survey are shown on the enclosed ALC map. The map has been drawn at a scale of 1:10 000. It is accurate at this scale but any enlargement would be misleading.
- 6 The area and proportions of the ALC grades and subgrades on the surveyed land are summarised overleaf in Table 1.
- 7 Over the north western part of the site the fieldwork was conducted at an average density of 1 boring per hectare. The scale of survey was amended over the remainder of the site to an average density of 1 boring per 4 hectares. This was due to the low quality of the land. Where any better quality land was encountered the survey scale was reinstated to 1 boring per hectare. In total 70 borings and three soil pits were described giving an overall average sampling density for the site as approximately one boring per 1.5 hectares.
- 8 The agricultural land at this site has mainly been classified as Grade 4 (poor quality agricultural land) with limited areas of Grade 2 (very good) Subgrade 3a (good quality) and Subgrade 3b (moderate quality). The principal limitation is soil wetness.
- 9 Grade 2 has been mapped as a small area along the south western boundary of the site. The soils comprise silty topsoils and upper subsoils overlying clay loam and clay subsoils. There

¹ FRCA is an executive agency of MAFF and the Welsh Office

is evidence of soil wetness in the profile to the extent that in the dry local climate Grade 2 is appropriate

- 10 The land classified as Subgrade 3a is located in the south west of the site near to Ham Farm. Soils in this area comprise silty topsoils overlying clay loam subsoils becoming more clayey with depth. The soils are very slightly stony. These soils exhibit a greater degree of soil wetness than those in Grade 2 to the extent that in the dry local climate Subgrade 3a is appropriate.
- 11 Subgrade 3b is mapped adjacent to the small area of Subgrade 3a and comprises soils similar in profile to those in the Subgrade 3a unit. However the topsoils are typically heavier textured which is sufficient to make the soils less workable. In the local dry climate Subgrade 3b is appropriate.
- 12 Grade 4 is mapped over the greater part of the site. The soils comprise heavy loam or clay topsoils often highly organic over deep clay subsoils. The profiles exhibit indications of severe soil wetness and groundwater was sometimes encountered. In addition there were significant areas of surface water so that Grade 4 is considered appropriate.
- 13 Soil wetness reduces the versatility of the land in terms of access by machinery (e.g. for cultivations or harvesting) and grazing by livestock if damage to the soil is to be avoided. Soil wetness will also adversely affect seed germination and root growth and will therefore reduce the level and consistency of yields.

Table 1 Area of grades and other land

| Grade/Other land | Area (hectares) | % surveyed area | % site area |
|---------------------|-----------------|-----------------|-------------|
| 2 | 0.6 | 0.5 | 0.5 |
| 3a | 1.6 | 1.5 | 1.4 |
| 3b | 0.7 | 0.6 | 0.6 |
| 4 | 106.4 | 97.4 | 95.6 |
| Other Land | 2.1 | | 1.9 |
| Total surveyed area | 109.3 | 100.0 | 98.1 |
| Total site area | 111.4 | | 100.0 |

FACTORS INFLUENCING ALC GRADE

Climate

- 14 Climate affects the grading of land through the assessment of an overall climatic limitation and also through interactions with soil characteristics.
- 15 The key climatic variables used for grading this site are given in Table 2 and were obtained from the published 5 km grid datasets using the standard interpolation procedures (Met Office 1989).

- 16 The climatic criteria are considered first when classifying land as climate can be overriding in the sense that severe limitations will restrict land to low grades irrespective of favourable site or soil conditions
- 17 The main parameters used in the assessment of an overall climatic limitation are average annual rainfall (AAR) as a measure of overall wetness and accumulated temperature (AT0 January to June) as a measure of the relative warmth of a locality

Table 2 Climatic and altitude data

| Factor | Units | Values | |
|---------------------------|------------------|------------|------------|
| Grid reference | N/A | TR 018 633 | TR 025 625 |
| Altitude | m AOD | 1 | 2 |
| Accumulated Temperature | day C (Jan June) | 1497 | 1496 |
| Average Annual Rainfall | mm | 604 | 618 |
| Field Capacity Days | days | 119 | 123 |
| Moisture Deficit Wheat | mm | 127 | 126 |
| Moisture Deficit Potatoes | mm | 125 | 125 |
| Overall climatic grade | N/A | Grade 1 | Grade 1 |

- 18 The combination of rainfall and temperature within this survey area means that there is no overall climatic limitation. However climatic factors do interact with soil properties to influence soil wetness and soil droughtiness. Unpublished meteorological data (Met Office 1980) indicates that a small section of the site along the north western fringe is believed to be exposed. None of the site however is frost prone. This site is climatically Grade 1 and is located in an area which is amongst the driest both in a regional and national context

Site

- 19 The survey area is situated on the North Kent Marshes and is bordered on two sides by the Faversham Creek. The site lies between approximately 1 m and 2 m AOD and is level to gently sloping. Nowhere on the site does gradient adversely affect agricultural land quality
- 20 The lowlying nature of the site hampers drainage improvements due to insufficient freeboard and limited opportunity for outfalls. The groundwater is high and improvements are considered limited in the absence of a pumped system. The alluvial land may also be at occasional risk of flooding
- 21 In parts of the site particularly in the north west the presence of creeks and old creek lines limit the use of agricultural machinery. In the south west corner there is an earth bund which may have been a former flood defence enclosing an area of uneven land. Together these features provide a microrelief limitation sufficient to limit parts of the site to Grade 4

Geology and soils

- 22 The published geological information for this area (BGS 1974) shows the majority of the site to be underlain by Alluvium over Woolwich Beds with a small area of Head Brickearth over Thanet Beds occurring in the south west of the site
- 23 The most recent published soils information at 1:250 000 scale covering the area (SSEW 1983) shows two soil associations on the site the Wallasea 1 and the Hamble 1. The Wallasea 1 association occurs on non calcareous clayey marine alluvium and covers the majority of the site. It is described as Deep stoneless non calcareous and calcareous clayey soils. Soils locally have humose or peaty surface horizons. Groundwater controlled by ditches and pumps. Flat land. Slight risk of flooding (SSEW 1983). The Hamble 1 Association occurs over the Brickearth deposits in the south west of the site. It is described as Deep well drained often stoneless fine silty soils. Some similar soils affected by groundwater and some fine loamy soils with slowly permeable subsoils and slight seasonal waterlogging (SSEW 1983). Field examination found the distribution and description of the soils on site to accord with that outlined above although on the alluvial soils groundwater is not controlled using pumps

AGRICULTURAL LAND CLASSIFICATION

- 24 The details of the classification of the site are shown on the attached ALC map and the area statistics of each grade are given in Table 1 page 2
- 25 The location of the auger borings and pits is shown on the attached sample location map and the details of the soils data are presented in Appendix II

Grade 2

- 26 Land classified as Grade 2 (very good quality) occurs as slightly elevated land over the Brickearth deposits in the south west of the site and has minor soil droughtiness and wetness limitations. The profiles typically comprise silt loam topsoils. Subsoils are of similar texture becoming heavier with depth (heavy silty clay loam and clay) and the profiles are stoneless or very slightly stony containing up to 5% total stones by volume. Some profiles were impenetrable to an auger due to gravelly layers at between 70 and 90 cm. Given the dry local climate the reserves of soil available water are not fully sufficient and there is a slight soil droughtiness limitation which may adversely affect crop growth as water supply may not match demand especially in drier years. In addition the soils exhibit signs of soil wetness either due to high groundwater or a slowly permeable layer occurring in the lower subsoil. This leads to Wetness Class II being applied given the local climatic parameters. When combined with the silt loam topsoils Grade 2 is appropriate. The soil wetness limitation may restrict the number of days when either cultivations or grazing should occur without damaging the soil and may reduce flexibility of use. Nevertheless such land is suitable for a wide range of agricultural and horticultural crops. This slight soil wetness limitation acts equally with the soil droughtiness limitation to restrict this land to Grade 2

Subgrade 3a

- 27 The land classified as Subgrade 3a (good quality) again occurs in the south west of the site on slightly elevated land and is limited by soil wetness. Pit 2 (see Appendix II) is representative of the soils in this subgrade. The soils typically comprise medium silty clay loam textured topsoil over medium silty clay loam upper subsoil and heavy silty clay loam lower subsoil. The subsoils are poorly structured. Evidence of soil wetness in the form of gleying and a slowly permeable layer occurs in the upper subsoil. This leads to Wetness Class III being applied given the local climatic parameters. When combined with the medium silty clay loam textured topsoil this places these soils in Subgrade 3a being slightly less well drained and workable than those in Grade 2.

Subgrade 3b

- 28 The land classified as Subgrade 3b (moderate quality) occurs adjacent to the area of Subgrade 3a and again is limited by soil wetness. The profiles in this unit are very similar to those in the Subgrade 3a unit although topsoils tend to be slightly heavier therefore making them less workable. In common with the land classified as Grade 2 and Subgrade 3a the land benefits from being at slightly higher elevation surrounded by deep ditches which facilitates underdrainage. The area classified as Subgrade 3b forms a transitional zone between the better quality brickearth soils and those of lower quality overlying the alluvium.

Grade 4

- 29 The land classified as Grade 4 (poor quality) is subject to significant soil wetness and workability limitations. Across much of this mapping unit very poorly drained profiles arise from slowly permeable subsoils which occur directly below the topsoil. Topsoils typically comprise heavy silty clay loam texture often with a thin organic silty clay loam surface horizon. These pass into clay subsoils which are poorly structured and slowly permeable. The surface water movement through these layers will be significantly reduced. This results in poor soil drainage as indicated by gleying either from the surface or below the topsoil. Such profiles are typified by Pits 1 and 3 (see Appendix II).
- 30 The land is also subject to fluctuating groundwater levels and therefore the soil wetness limitation will arise from both groundwater and surface water problems. The flat and low lying nature of this land aggravated by uneven microrelief at some locations means that artificial drainage measures are likely to prove inadequate due to lack of fall and freeboard. Therefore groundwater levels would remain high for much of the year. At the time of survey (January 1999) the profiles were very moist from the surface and often saturated in the subsoil. In addition there were significant areas of surface water and the level of water in the creeks was at or just below the level of the fields. Consequently this land was assessed as being very poorly drained (Wetness Class V) and hence classified as Grade 4.

- 31 Soil wetness of this degree adversely affects seed germination and survival and inhibits the development of a good root system. Soil wetness also imposes restrictions on cultivations, trafficking by machinery or grazing by livestock. In this case the land is likely to be limited to seasonal grazing use only.

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SOURCES OF REFERENCE

British Geological Survey (1974) *Sheet No 273 1 50 000 Faversham (solid and drift edition)*
BGS London

Ministry of Agriculture Fisheries and Food (1988) *Agricultural Land Classification of England and Wales Revised guidelines and criteria for grading the quality of agricultural land*
MAFF London

Met Office (1980) *Suggested frost prone and exposed areas for south east England Sheet 171*
Unpublished meteorological data

Met Office (1989) *Climatological Data for Agricultural Land Classification*
Met Office Bracknell

Soil Survey of England and Wales (1983) *Sheet 6 Soils of South East England 1 250 000*
SSEW Harpenden.

| SAMPLE | DEPTH | TEXTURE | COLOUR | ----MOTTLES---- | | | PED COL | -----STONES----- | | | | STRUCT/ CONSIST | SUBS | | |
|--------|--------|---------|----------|-----------------|------|------|------------|------------------|---|------|-----|--------------------|------|-----|-----|
| | | | | COL | ABUN | CONT | | GLEY >2 | 6 | LITH | TOT | | STR | POR | IMP |
| 1 | 0-10 | MZCL | 10YR31 | 10YR46 | F | F | | N | 0 | 0 | 0 | | | | |
| | 10-120 | ZC | 10YR52 | 10YR4651 | C | D | | Y | 0 | 0 | 0 | | P | | Y |
| 2 | 0-10 | MZCL | 10YR31 | | | | | | 0 | 0 | 0 | | | | |
| | 10-120 | C | 10YR52 | 10YR4651 | C | D | | Y | 0 | 0 | 0 | | P | | Y |
| 3 | 0-8 | MZCL | 10YR31 | | | | | | 0 | 0 | 0 | | | | |
| | 8-120 | C | 10YR52 | 10YR4651 | C | D | | Y | 0 | 0 | 0 | | P | | Y |
| 4 | 0-12 | MZCL | 10YR32 | | | | | | 0 | 0 | 0 | | | | |
| | 12-80 | C | 10YR52 | 10YR46 | C | D | | Y | 0 | 0 | 0 | | P | | Y |
| 5 | 0-10 | MZCL | 10YR31 | | | | | | 0 | 0 | 0 | | | | |
| | 10-40 | ZC | 10YR52 | 10YR4651 | C | D | | Y | 0 | 0 | 0 | | P | | Y |
| | 40-120 | C | 25Y 61 | 10YR46 | M | D | | Y | 0 | 0 | 0 | | P | | Y |
| 6 | 0-10 | MZCL | 10YR31 | | | | | | 0 | 0 | 0 | | | | |
| | 10-70 | ZC | 10YR52 | 10YR4651 | C | D | | Y | 0 | 0 | 0 | | P | | Y |
| | 70-120 | C | 25Y 61 | 10YR46 | M | D | | Y | 0 | 0 | 0 | | P | | Y |
| 7 | 0-10 | MZCL | 10YR31 | | | | | | 0 | 0 | 0 | | | | |
| | 10-70 | C | 10YR52 | 10YR4651 | C | D | | Y | 0 | 0 | 0 | | P | | Y |
| | 70-120 | C | 25Y 61 | 75YR56 | M | D | | Y | 0 | 0 | 0 | | P | | Y |
| 8 | 0-10 | MZCL | 10YR31 | | | | | | 0 | 0 | 0 | | | | |
| | 10-55 | C | 10YR52 | 10YR4651 | C | D | | Y | 0 | 0 | 0 | | P | | Y |
| | 55-120 | C | 10YR52 | 10YR4651 | M | D | | Y | 0 | 0 | 0 | | P | | Y |
| 9 | 0-10 | MCL | 10YR31 | | | | | | 0 | 0 | 0 | | | | |
| | 10-60 | C | 25Y 52 | 10YR56 | M | D | | Y | 0 | 0 | 0 | | P | | Y |
| | 60-120 | C | 10YR52 | 75YR66 | C | D | | Y | 0 | 0 | 0 | | P | | Y |
| 10 | 0-5 | MCL | 10YR32 | | | | | | 0 | 0 | 0 | | | | |
| | 5-120 | C | 10YR52 | 10YR58 | C | D | | Y | 0 | 0 | 0 | | P | | Y |
| 11 | 0-17 | MZCL | 10YR31 | | | | | | 0 | 0 | 0 | | | | |
| | 17-120 | C | 25Y 52 | 10YR56 | M | D | | Y | 0 | 0 | 0 | | P | | Y |
| 13 | 0-10 | MZCL | 10YR31 | 10YR46 | F | F | | | 0 | 0 | 0 | | | | |
| | 10-120 | C | 25Y52 51 | 10YR56 | M | D | | Y | 0 | 0 | 0 | | P | | Y |
| 14 | 0-10 | MZCL | 10YR31 | | | | | | 0 | 0 | 0 | | | | |
| | 10-55 | ZC | 10YR52 | 10YR5651 | C | D | | Y | 0 | 0 | 0 | | P | | Y |
| | 55-78 | ZC | 10YR56 | 75YR4651 | M | D | | Y | 0 | 0 | 0 | | P | | Y |
| | 78-120 | ZC | 25Y 61 | 75YR46 | M | D | | Y | 0 | 0 | 0 | | P | | Y |
| 15 | 0-6 | MZCL | 10YR31 | | | | | | 0 | 0 | 0 | | | | |
| | 6-70 | C | 10YR52 | 10YR4651 | C | D | | Y | 0 | 0 | 0 | | P | | Y |
| | 70-120 | ZC | 10YR52 | 10YR5146 | M | D | | Y | 0 | 0 | 0 | | P | | Y |

| SAMPLE | DEPTH | TEXTURE | COLOUR | ----MOTTLES---- | | | PED COL | ---STONES--- | | | STRUCT/ CONSIST | SUBS | | | | | |
|--------|--------|---------|--------|-----------------|------|------|------------|--------------|----|----|--------------------|------|-----|-----|-----|-----|-----|
| | | | | COL | ABUN | CONT | | GLEY | >2 | >6 | | LITH | TOT | STR | POR | IMP | SPL |
| 16 | 0-20 | HZCL | 10YR32 | 10YR58 | C | D | | Y | 0 | 0 | 0 | | | | | | |
| | 20-50 | ZC | 05Y 61 | 10YR58 | M | D | | Y | 0 | 0 | 0 | | P | | | | Y |
| | 50-120 | ZC | 05Y 61 | 75YR44 | M | D | | Y | 0 | 0 | 0 | | P | | | | Y |
| 17 | 0-5 | MZCL | 10YR31 | | | | | | 0 | 0 | 0 | | | M | | | |
| | 5-100 | C | 10YR52 | 10YR4651 | M | D | | Y | 0 | 0 | 0 | | P | | | | Y |
| 18 | 0-10 | MZCL | 10YR31 | | | | | | 0 | 0 | 0 | | | | | | |
| | 10-120 | C | 10YR52 | 10YR4651 | C | D | | Y | 0 | 0 | 0 | | P | | | | Y |
| 19 | 0-12 | MZCL | 10YR32 | | | | | | 0 | 0 | 0 | | | M | | | |
| | 12-120 | C | 10YR52 | 75YR5651 | C | D | | Y | 0 | 0 | 0 | | P | | | | Y |
| 20 | 0-12 | MZCL | 10YR31 | | | | | | 0 | 0 | 0 | | | | | | |
| | 12-120 | C | 10YR52 | 10YR4651 | C | D | | Y | 0 | 0 | 0 | | P | | | | Y |
| 21 | 0-15 | HZCL | 10YR32 | | | | | | 0 | 0 | 0 | | | | | | |
| | 15-120 | C | 10YR52 | 10YR5646 | C | D | | Y | 0 | 0 | 0 | | P | | | | Y |
| 22 | 0-6 | MCL | 10YR31 | | | | | | 0 | 0 | 0 | | | | | | |
| | 6-120 | C | 10YR52 | | | | | Y | 0 | 0 | 0 | | P | | | | Y |
| 23 | 0-12 | MCL | 10YR31 | 10YR46 | F | F | | | 0 | 0 | 0 | | | | | | |
| | 12-120 | C | 10YR52 | 10YR46 | M | D | | Y | 0 | 0 | 0 | | P | | | | Y |
| 24 | 0-12 | MZCL | 10YR31 | 10YR56 | F | D | | N | 0 | 0 | 0 | | | | | | |
| | 12-120 | C | 25Y 52 | 10YR56 | M | D | | Y | 0 | 0 | 0 | | P | | | | Y |
| 25 | 0-16 | MZCL | 10YR31 | 10YR46 | F | D | | | 0 | 0 | 0 | | | | | | |
| | 16-120 | C | 25Y 52 | 10YR56 | M | D | | Y | 0 | 0 | 0 | | P | | | | Y |
| 26 | 0-6 | MZCL | 10YR31 | | | | | | 0 | 0 | 0 | | | | | | |
| | 6-80 | C | 10YR52 | 10YR4651 | C | D | | Y | 0 | 0 | 0 | | P | | | | Y |
| | 80-120 | ZC | 25Y 52 | 10YR56 | C | D | | Y | 0 | 0 | 0 | | P | | | | Y |
| 27 | 0-20 | MCL | 10YR32 | | | | | | 0 | 0 | 0 | | | | | | |
| | 20-120 | C | 25Y 71 | 75YR46 | M | D | | Y | 0 | 0 | 0 | | P | | | | Y |
| 28 | 0-12 | MCL | 10YR32 | 10YR46 | C | D | | S | 0 | 0 | 0 | | | | | | |
| | 12-80 | ZC | 10YR52 | 10YR46 | C | D | | Y | 0 | 0 | 0 | | P | | | | Y |
| 29 | 0-5 | MZCL | 10YR31 | | | | | | 0 | 0 | 0 | | | | | | |
| | 5-120 | C | 10YR53 | 10YR5156 | M | D | | Y | 0 | 0 | 0 | | P | | | | Y |
| 30 | 0-5 | MZCL | 10YR31 | | | | | | 0 | 0 | 0 | | | | | | |
| | 5-100 | C | 25Y 52 | 10YR56 | M | D | | Y | 0 | 0 | 0 | | P | | | | Y |
| 31 | 0-10 | MZCL | 10YR32 | | | | | | 0 | 0 | 0 | | | | | | |
| | 10-120 | C | 10YR52 | 10YR4651 | M | D | | Y | 0 | 0 | 0 | | P | | | | Y |

| SAMPLE | DEPTH | TEXTURE | COLOUR | ----MOTTLES---- | | | PED | | ----STONES---- | | | STRUCT/ CONSIST | SUBS | | | |
|--------|--------|---------|--------|-----------------|------|------|-----|------|----------------|----|------|--------------------|------|-----|-----|-----|
| | | | | COL | ABUN | CONT | COL | GLEY | 2 | >6 | LITH | | TOT | STR | POR | IMP |
| 32 | 0-10 | MZCL | 10YR31 | | | | | | 0 | 0 | 0 | | | | | |
| | 10-80 | C | 10YR52 | 10YR4651 | C | D | | Y | 0 | 0 | 0 | | P | | Y | |
| | 80-120 | C | 10YR52 | 10YR5146 | M | D | | Y | 0 | 0 | 0 | | P | | Y | |
| 33 | 0-15 | MZCL | 10YR31 | | | | | | 0 | 0 | 0 | | | | | |
| | 15-120 | C | 10YR52 | 10YR4651 | M | D | | Y | 0 | 0 | 0 | | P | | Y | |
| 34 | 0-15 | MZCL | 10YR31 | | | | | | 0 | 0 | 0 | | | | | |
| | 15-120 | C | 25Y 61 | 10YR56 | M | D | | Y | 0 | 0 | 0 | | P | | Y | |
| 35 | 0-12 | MZCL | 10YR31 | | | | | | 0 | 0 | 0 | | | | | |
| | 12-55 | C | 10YR52 | 10YR4651 | C | D | | Y | 0 | 0 | 0 | | P | | Y | |
| | 55-120 | C | 25Y 61 | 10YR46 | M | D | | Y | 0 | 0 | 0 | | P | | Y | |
| 36 | 0-5 | MZCL | 10YR31 | | | | | | 0 | 0 | 0 | | | | | |
| | 5-70 | C | 10YR52 | 10YR5651 | C | D | | Y | 0 | 0 | 0 | | P | | Y | |
| | 70-120 | C | 25Y 61 | 75YR46 | M | D | | Y | 0 | 0 | 0 | | P | | Y | |
| 37 | 0-5 | MZCL | 10YR31 | | | | | | 0 | 0 | 0 | | | | | |
| | 5-55 | C | 10YR52 | 10YR4651 | C | D | | Y | 0 | 0 | 0 | | P | | Y | |
| | 55-120 | C | 25Y 52 | 10YR5146 | M | D | | Y | 0 | 0 | 0 | | P | | Y | |
| 38 | 0-5 | MZCL | 10YR31 | 10YR46 | F | F | | N | 0 | 0 | 0 | | | | | |
| | 5-120 | ZC | 10YR52 | 10YR5146 | C | D | | Y | 0 | 0 | 0 | | P | | Y | |
| 39 | 0-18 | MZCL | 10YR32 | 10YR56 | C | D | | S | 0 | 0 | 0 | | | | | |
| | 18 70 | ZC | 10YR52 | 10YR5661 | M | D | | Y | 0 | 0 | 0 | | P | | Y | |
| 40 | 0 10 | MCL | 10YR32 | | | | | | 0 | 0 | 0 | | | | | |
| | 10 80 | ZC | 10YR52 | 10YR46 | M | D | | Y | 0 | 0 | 0 | | P | | Y | |
| | 80-120 | C | 10YR52 | 10YR46 | C | D | | Y | 0 | 0 | 0 | | P | | Y | |
| 41 | 0 10 | MZCL | 25Y 42 | | | | | | 0 | 0 | 0 | | | | | |
| | 10-120 | C | 10YR52 | 10YR5156 | M | D | | Y | 0 | 0 | 0 | | P | | Y | |
| 42 | 0-8 | MZCL | 25Y 42 | | | | | | 0 | 0 | 0 | | | | | |
| | 8 120 | C | 10YR52 | 10YR5156 | M | D | | Y | 0 | 0 | 0 | | P | | Y | |
| 43 | 0 10 | MZCL | 10YR31 | | | | | | 0 | 0 | 0 | | | | | |
| | 10 55 | C | 10YR52 | 10YR4651 | C | D | | Y | 0 | 0 | 0 | | P | | Y | |
| | 55-120 | C | 25Y 61 | 10YR56 | M | D | | Y | 0 | 0 | 0 | | P | | Y | |
| 44 | 0-10 | MZCL | 10YR31 | | | | | | 0 | 0 | 0 | | | | | |
| | 10-120 | C | 10YR52 | | | | | | 0 | 0 | 0 | | M | | | |
| 45 | 0 10 | MZCL | 10YR31 | | | | | | 0 | 0 | 0 | | | | | |
| | 10 70 | C | 25Y 61 | 10YR66 | C | D | | Y | 0 | 0 | 0 | | P | | Y | |

| SAMPLE | DEPTH | TEXTURE | COLOUR | ----MOTTLES---- | | | PED COL | ----STONES--- | | | STRUCT/ CONSIST | SUBS | | | | | |
|--------|--------|---------|--------|-----------------|------|------|------------|---------------|----|----|--------------------|------|-----|-----|-----|-----|-----|
| | | | | COL | ABUN | CONT | | GLEY | >2 | >6 | | LITH | TOT | STR | POR | IMP | SPL |
| 46 | 0-15 | MZCL | 10YR31 | | | | | | | 0 | 0 | 0 | | | | | |
| | 15-70 | ZC | 25Y 53 | 25Y61 | M | D | | Y | 0 | 0 | 0 | | P | | | | Y |
| 47 | 0-10 | MZCL | 10YR31 | | | | | | | 0 | 0 | 0 | | | | | |
| | 10-70 | ZC | 10YR52 | 10YR6156 | M | D | | Y | 0 | 0 | 0 | | P | | | | Y |
| 48 | 0-10 | MZCL | 10YR31 | | | | | | | 0 | 0 | 0 | | | | | |
| | 10-18 | HZCL | 25Y 41 | | | | | | | 0 | 0 | 0 | | M | | | |
| | 18-70 | ZC | 25Y 53 | 10YR5661 | M | D | | Y | 0 | 0 | 0 | | P | | | | Y |
| 49 | 0-20 | HZCL | 10YR32 | 10YR56 | C | D | | Y | 0 | 0 | 0 | | | | | | |
| | 20-40 | ZC | 05Y 51 | 10YR56 | C | D | | Y | 0 | 0 | 0 | | P | | | | Y |
| | 40-60 | ZC | 05Y 51 | 10YR58 | M | D | | Y | 0 | 0 | 0 | | P | | | | Y |
| 50 | 0-20 | HZCL | 10YR32 | 10YR | C | D | | Y | 0 | 0 | 0 | | | | | | |
| | 20-60 | ZC | 05Y 61 | 10YR58 | M | D | | Y | 0 | 0 | 0 | | P | | | | Y |
| 51 | 0-10 | MZCL | 10YR31 | | | | | | | 0 | 0 | 0 | | | | | |
| | 10-35 | ZC | 10YR52 | 75YR5651 | M | D | | Y | 0 | 0 | 0 | | P | | | | |
| | 35-65 | FSZL | 10YR53 | 10YR56 | M | D | | Y | 0 | 0 | 0 | | M | | | | |
| | 65-120 | FSZL | 25Y 62 | 10YR56 | F | F | | Y | 0 | 0 | 0 | | M | | | | |
| 52 | 0-25 | HZCL | 10YR32 | 10YR56 | C | D | | Y | 0 | 0 | 0 | | | | | | |
| | 25-120 | ZC | 05Y 61 | 10YR58 | M | D | | Y | 0 | 0 | 0 | | P | | | | Y |
| 53 | 0-20 | HZCL | 10YR42 | 10YR56 | C | D | | Y | 0 | 0 | 0 | | | | | | |
| | 20-70 | C | 05Y 51 | 10YR58 | M | D | | Y | 0 | 0 | 0 | | P | | | | Y |
| 54 | 0-20 | HZCL | 10YR32 | 10YR56 | C | D | | Y | 0 | 0 | 0 | | | | | | |
| | 20-55 | ZC | 05Y 51 | 61 10YR58 | M | D | | Y | 0 | 0 | 0 | | P | | | | Y |
| | 55-70 | HCL | 05Y 61 | 10YR58 | M | D | | Y | 0 | 0 | 0 | | P | | | | Y |
| 55 | 0-20 | HZCL | 10YR32 | 10YR58 | C | D | | Y | 0 | 0 | 0 | | | | | | |
| | 20-70 | ZC | 05Z 61 | 10YR58 | M | D | | Y | 0 | 0 | 0 | | P | | | | Y |
| 56 | 0-20 | HZCL | 10YR32 | 10YR58 | C | D | | Y | 0 | 0 | 0 | | | | | | |
| | 20-45 | ZC | 05Y 51 | 10YR58 | C | D | | Y | 0 | 0 | 0 | | P | | | | Y |
| | 45-60 | ZC | 05Y 61 | 10YR58 | M | D | | Y | 0 | 0 | 0 | | P | | | | Y |
| 57 | 0-28 | MZCL | 10YR42 | | | | | | | 0 | 0 | 0 | | | | | |
| | 28 55 | MZCL | 25Y 61 | 10YR56 | M | D | | Y | 0 | 0 | 0 | | M | | | | Y |
| | 55-120 | ZC | 25Y 52 | 10YR56 | M | D | | Y | 0 | 0 | 0 | | P | | | | Y |
| 58 | 0-30 | HZCL | 25Y 53 | | | | | | | 0 | 0 | 0 | | | | | |
| | 30-120 | ZC | 10YR53 | 10YR66 | M | D | | Y | 0 | 0 | 0 | | M | | | | Y |
| 59 | 0-28 | ZL | 10YR42 | | | | | | | 0 | 0 | 0 | | | | | |
| | 28-65 | ZL | 25Y 62 | 10YR66 | C | D | | Y | 0 | 0 | 0 | | M | | | | |
| | 65-90 | HZCL | 25Y 63 | 10YR56 | M | D | | Y | 0 | 0 | 0 | | M | | | | Y |
| | 90-120 | ZC | 25Y 61 | 75YR68 | M | D | | Y | 0 | 0 | 0 | | M | | | | Y |

| SAMPLE | DEPTH | TEXTURE | COLOUR | ---MOTTLES--- | | | PED | | ---STONES--- | | | STRUCT/ | SUBS | | | SPL | CALC |
|--------|--------|---------|--------|---------------|------|------|--------|-----|--------------|----|------|---------|-------|---------|-----|-----|-----------------|
| | | | | COL | ABUN | CONT | COL | GLE | 2 | >6 | LITH | | TOT | CONSIST | STR | | |
| 60 | 0-20 | C | 10YR51 | 10YR58 | C | D | | | Y | 0 | 0 | 0 | | | | | |
| | 20-80 | C | 05Y 51 | 10YR58 | M | D | | | Y | 0 | 0 | 0 | | P | | | Y |
| 61 | 0-15 | HZCL | 25Y 42 | | | | | | | 0 | 0 | 0 | | | | | |
| | 15-70 | C | 25Y 53 | 25Y61 | M | D | | | Y | 0 | 0 | 0 | | P | | | Y |
| 62 | 0-25 | ZL | 10YR52 | 10YR56 | C | D | | | Y | 0 | 0 | 0 | | | | | |
| | 25-55 | ZL | 10YR63 | 10YR58 | C | D | | | Y | 0 | 0 | 0 | | M | | | |
| | 55-80 | MZCL | 10YR62 | 10YR58 | C | D | | | Y | 0 | 0 | 0 | | M | | | Q SPL SEE 2P |
| 63 | 0-25 | ZL | 10YR32 | | | | | | | 0 | 0 | 0 | | | | | |
| | 25-48 | ZL | 10YR52 | 10YR56 | C | D | | | Y | 0 | 0 | 0 | | M | | | |
| | 48-60 | ZL | 25Y 52 | 10YR56 | C | D | | | Y | 0 | 0 | 0 | | M | | | |
| 64 | 0-23 | ZL | 10YR42 | | | | | | | 0 | 0 | 0 | | | | | |
| | 23-50 | ZL | 10YR52 | 10YR56 | M | D | | | Y | 0 | 0 | 0 | | M | | | |
| | 50-70 | FSZL | 10YR52 | 75YR58 | M | D | | | Y | 0 | 0 | 0 | | M | | | |
| | 70-90 | C | 10YR51 | 10YR58 | C | D | | | Y | 0 | 0 | 0 | | P | | | Y |
| 65 | 0-25 | C | 05Y 41 | 75YR46 | C | D | | | Y | 0 | 0 | 0 | | | | | |
| | 25-60 | C | 05Y 51 | 75YR46 | M | D | | | Y | 0 | 0 | 0 | | P | | | Y |
| 66 | 0-10 | C | 10YR42 | 10YR46 | C | F | | | Y | 0 | 0 | 0 | | | | | |
| | 10-60 | C | 10YR61 | 10YR56 | C | D | | | Y | 0 | 0 | 0 | | | | | Y |
| 67 | 0-15 | PL | 10YR31 | 10YR56 | C | D | | | Y | 0 | 0 | 0 | | | | | |
| | 15-70 | C | 05Y 51 | 75YR46 | M | D | | | Y | 0 | 0 | 0 | | P | | | Y |
| 68 | 0-10 | C | 25Y 41 | 75YR46 | C | D | | | Y | 0 | 0 | 0 | | | | | |
| | 10-60 | C | 25Y 41 | 75YR46 | M | D | | | Y | 0 | 0 | 0 | | P | | | Y |
| 69 | 0-15 | C | 10YR31 | | | | | | | 0 | 0 | 0 | | | | | |
| | 15-60 | C | 05Y 41 | 75YR56 | M | D | | | Y | 0 | 0 | 0 | | P | | | Y |
| 70 | 0-20 | HZCL | 10YR41 | 10YR58 | C | D | | | Y | 0 | 0 | 0 | | | | | |
| | 20-40 | HCL | 05Y 61 | 10YR58 | M | D | | | Y | 0 | 0 | 0 | | P | | | Y |
| | 40-70 | C | 05Y 61 | 75YR46 | M | D | | | Y | 0 | 0 | 0 | | P | | | Y |
| 1P | 0-20 | OZC | 10YR32 | 75YR46 | C | D | | | Y | 0 | 0 | 0 | | | | | PSD BORDER PL |
| | 20-90 | C | 05Y 51 | 10YR58 | M | D | 05Y 51 | | Y | 0 | 0 | 0 | STCPR | VM P | Y | | Y |
| | 90-120 | C | 05G 5 | 75YR58 | M | D | | | Y | 0 | 0 | 0 | | P | | | Y |
| 2P | 0-30 | MZCL | 10YR41 | | | | | | | 0 | 0 | 0 | | | | | PSD |
| | 30-52 | MZCL | 25Y 51 | 10YR56 | M | D | | | Y | 0 | 0 | 0 | MDMP | FM P | | | PSD |
| | 52-80 | HZCL | 10YR52 | 75YR56 | M | D | | | Y | 0 | 0 | 0 | MDCP | FM P | | | PSD BORDER MZCL |
| 3P | 0-20 | ZC | 10YR42 | 10YR58 | C | D | | | Y | 0 | 0 | 0 | | | | | PSD |
| | 20-120 | C | 25Y 52 | 10YR56 | M | D | | | Y | 0 | 0 | 0 | MDCAB | FM P | Y | | Y |

APPENDIX I

DESCRIPTIONS OF THE GRADES AND SUBGRADES

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 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 or horticultural crops can usually be grown but on some land of this 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 land.

Grade 3 Good to Moderate Quality Land

Land with moderate limitations which affect the choice of crops, the timing and type of cultivation, harvesting or the level of yield. When 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 the level of yields. It is mainly suited to grass with occasional arable crops (e.g. 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 severe limitations which restrict use to permanent pasture or rough grazing, except for occasional pioneer forage crops.

APPENDIX II

SOIL DATA

Contents

Sample location map

Soil abbreviations explanatory note

Soil pit and soil boring descriptions (boring and horizon levels)

SOIL PROFILE DESCRIPTIONS EXPLANATORY NOTE

Soil pit and auger boring information collected during ALC fieldwork is held on a computer database. This uses notations and abbreviations as set out below.

Boring Header Information

1 **GRID REF** national 100 km grid square and 8 figure grid reference

2 **USE** Land use at the time of survey. The following abbreviations are used

| | | | | | |
|------------|--------------------|------------|---------------------|------------|---------------|
| ARA | Arable | WHT | Wheat | BAR | Barley |
| CER | Cereals | OAT | Oats | MZE | Maize |
| OSR | Oilseed rape | BEN | Field beans | BRA | Brassicae |
| POT | Potatoes | SBT | Sugar beet | FCD | Fodder crops |
| LIN | Linseed | FRT | Soft and top fruit | FLW | Fallow |
| PGR | Permanent pasture | LEY | Ley grass | RGR | Rough grazing |
| SCR | Scrub | CFW | Coniferous woodland | OTH | Other |
| DCW | Deciduous woodland | BOG | Bog or marsh | SAS | Set Aside |
| HTH | Heathland | HRT | Horticultural crops | PLO | Ploughed |

3 **GRDNT** Gradient as estimated or measured by a hand held optical clinometer

4 **GLEYSPL** Depth in centimetres (cm) to gleying and/or slowly permeable layers

5 **AP (WHEAT/POTS)** Crop adjusted available water capacity

6 **MB (WHEAT/POTS)** Moisture Balance (Crop adjusted AP - crop adjusted MD)

7 **DRT** Best grade according to soil droughtiness

8 If any of the following factors are considered significant 'Y' will be entered in the relevant column

| | | | | | |
|-------------|------------------------|--------------|-------------|--------------|-------------------|
| MREL | Microrelief limitation | FLOOD | Flood risk | EROSN | Soil erosion risk |
| EXP | Exposure limitation | FROST | Frost prone | DIST | Disturbed land |
| CHEM | Chemical limitation | | | | |

9 **LIMIT** The main limitation to land quality. The following abbreviations are used

| | | | | | |
|-----------|-----------------|-----------|-----------------|-----------|---------------------------|
| OC | Overall Climate | AE | Aspect | ST | Topsoil Stoniness |
| FR | Frost Risk | GR | Gradient | MR | Microrelief |
| FL | Flood Risk | TX | Topsoil Texture | DP | Soil Depth |
| CH | Chemical | WE | Wetness | WK | Workability |
| DR | Drought | ER | Erosion Risk | WD | Soil Wetness/Droughtiness |
| EX | Exposure | | | | |

Soil Pits and Auger Borings

1 **TEXTURE** soil texture classes are denoted by the following abbreviations

| | | | | | |
|-----------|-----------------|------------|-----------------|------------|--------------------|
| S | Sand | LS | Loamy Sand | SL | Sandy Loam |
| ZL | Sandy Silt Loam | CL | Clay Loam | ZCL | Silty Clay Loam |
| ZL | Silt Loam | SCL | Sandy Clay Loam | C | Clay |
| SC | Sandy Clay | ZC | Silty Clay | OL | Organic Loam |
| P | Peat | SP | Sandy Peat | LP | Loamy Peat |
| PL | Peaty Loam | PS | Peaty Sand | MZ | Marine Light Silts |

For the sand, loamy sand, sandy loam and sandy silt loam classes, the predominant size of sand fraction will be indicated by the use of the following prefixes:

| | |
|----------|--|
| F | Fine (more than 66% of the sand less than 0.2mm) |
| M | Medium (less than 66% fine sand and less than 33% coarse sand) |
| C | Coarse (more than 33% of the sand larger than 0.6mm) |

The clay loam and silty clay loam classes will be subdivided according to the clay content:

M Medium (<27% clay) **H** Heavy (27-35% clay)

2 **MOTTLE COL** Mottle colour using Munsell notation

3 **MOTTLE ABUN** Mottle abundance expressed as a percentage of the matrix or surface described

F few (<2%) **C** common (2-20%) **M** many (20-40%) **VM** very many (40%+)

4 **MOTTLE CONT** Mottle contrast

- F faint indistinct mottles evident only on close inspection
- D distinct mottles are readily seen
- P prominent mottling is conspicuous and one of the outstanding features of the horizon

5 **PED COL** Ped face colour using Munsell notation

6 **GLEYS** If the soil horizon is gleyed a Y will appear in this column If slightly gleyed an S will appear

7 **STONE LITH** Stone Lithology one of the following is used

| | | | |
|-------------|---|-------------|--------------------------------------|
| HR | all hard rocks and stones | FSST | soft fine grained sandstone |
| ZR | soft argillaceous or silty rocks | CH | chalk |
| MSST | soft medium grained sandstone | GS | gravel with porous (soft) stones |
| SI | soft weathered igneous/metamorphic rock | GH | gravel with non porous (hard) stones |

Stone contents (>2cm >6cm and total) are given in percentages (by volume)

8 **STRUCT** the degree of development size and shape of soil peds are described using the following notation

| | | | | |
|-----------------------|------------|--------------------|-----------|----------------------|
| Degree of development | WK | weakly developed | MD | moderately developed |
| | ST | strongly developed | | |
| Ped size | F | fine | M | medium |
| | C | coarse | | |
| Ped shape | S | single grain | M | massive |
| | GR | granular | AB | angular blocky |
| | SAB | sub angular blocky | PR | prismatic |
| | PL | platy | | |

9 **CONSIST** Soil consistence is described using the following notation

| | | |
|------------------------|--------------------------|--------------------------|
| L loose | FM firm | EH extremely hard |
| VF very friable | VM very firm | |
| FR friable | EM extremely firm | |

10 **SUBS STR** Subsoil structural condition recorded for the purpose of calculating profile droughtiness
G good M moderate P poor

11 **POR** Soil porosity If a soil horizon has less than 0.5% biopores >0.5 mm a Y will appear in this column

12 **IMP** If the profile is impenetrable to rooting a Y will appear in this column at the appropriate horizon

13 **SPL** Slowly permeable layer If the soil horizon is slowly permeable a Y will appear in this column

14 **CALC** If the soil horizon is calcareous a Y will appear in this column

15 Other notations

| | |
|------------|--|
| APW | available water capacity (in mm) adjusted for wheat |
| APP | available water capacity (in mm) adjusted for potatoes |
| MBW | moisture balance wheat |
| MBP | moisture balance potatoes |

| SAMPLE NO | GRID REF | ASPECT USE | --WETNESS-- | | --HEAT-- | | --POTS-- | | M REL | | EROSN EXP | FROST DIST | CHEM LIMIT | ALC | COMMENTS |
|-----------|------------|------------|-------------|---------|----------|-------|----------|-----|-------|-----|-----------|------------|------------|-----|----------------|
| | | | GRDNT | GLEYSPL | CLASS | GRADE | AP | MB | AP | MB | | | | | |
| 1 | TR01706350 | PGR | 10 | 10 | 5 | 38 | 116 | -11 | 91 | 34 | | | WE | 4 | |
| 2 | TR01806350 | PGR | 10 | 10 | 5 | 38 | 120 | -7 | 97 | 28 | | | WE | 4 | WATER 100 |
| 3 | TR02306350 | PGR | 8 | 8 | 5 | 38 | 119 | -8 | 96 | -29 | | | WE | 4 | NEAR OLD CREEK |
| 4 | TR02406350 | PGR | 12 | 12 | 5 | 38 | 93 | 34 | 98 | -27 | | | WE | 4 | |
| 5 | TR01606340 | PGR | 10 | 10 | 5 | 38 | 117 | 10 | 94 | -31 | | | WE | 4 | |
| 6 | TR01706340 | PGR | 10 | 10 | 5 | 38 | 116 | -11 | 91 | -34 | | | WE | 4 | |
| 7 | TR01806340 | PGR | 10 | 10 | 5 | 38 | 120 | -7 | 97 | 28 | | | WE | 4 | |
| 8 | TR01906340 | PGR | 10 | 10 | 5 | 38 | 120 | -7 | 97 | 28 | | | WE | 4 | |
| 9 | TR02006340 | NAG | 10 | 10 | 5 | 38 | 115 | -12 | 91 | 34 | | | WE | 4 | FOOT SEA WALL |
| 10 | TR02106340 | PGR | 5 | 5 | 5 | 38 | 117 | -10 | 94 | -31 | | | WE | 4 | |
| 11 | TR02206340 | PGR | 17 | 17 | 5 | 38 | 124 | -3 | 101 | -24 | | | WE | 4 | |
| 12 | TR02306340 | PGR | 19 | 19 | 5 | 38 | 73 | -54 | 78 | -47 | | | WE | 4 | WATER AT 20 |
| 13 | TR02406340 | PGR | 10 | 10 | 5 | 38 | 120 | -7 | 97 | 28 | | | WE | 4 | |
| 14 | TR02506340 | PGR | 10 | 10 | 5 | 38 | 116 | -11 | 91 | -34 | | | WE | 4 | |
| 15 | TR02606340 | PGR | 6 | 6 | 5 | 38 | 118 | -9 | 95 | 30 | | | WE | 4 | WATER 70 |
| 16 | TR02806340 | PGR | 000 | 20 | 5 | 38 | 123 | -4 | 98 | 27 | | | WE | 3B | PLASTIC S/SOIL |
| 17 | TR01606330 | PGR | 5 | 5 | 5 | 38 | 102 | -25 | 93 | -32 | | | WE | 4 | WATER 100 |
| 18 | TR01706330 | PGR | 10 | 10 | 5 | 38 | 120 | -7 | 97 | -28 | | | WE | 4 | |
| 19 | TR01806330 | PGR | 12 | 12 | 5 | 38 | 119 | -8 | 96 | -29 | | | WE | 4 | |
| 20 | TR01906330 | PGR | 12 | 12 | 5 | 38 | 121 | -6 | 98 | -27 | | | WE | 4 | |
| 21 | TR02006330 | PGR | 15 | 15 | 5 | 38 | 123 | 4 | 100 | -25 | | | WE | 4 | |
| 22 | TR02106330 | PGR | 6 | 6 | 5 | 38 | 117 | -10 | 94 | 31 | | | WE | 4 | |
| 23 | TR02206330 | PGR | 12 | 12 | 5 | 38 | 120 | -7 | 97 | -28 | | | WE | 4 | SURFACE WATER |
| 24 | TR02306330 | PGR | 12 | 12 | 5 | 38 | 121 | -6 | 98 | -27 | | | WE | 4 | |
| 25 | TR02406330 | PGR | 16 | 16 | 5 | 38 | 124 | -3 | 101 | -24 | | | WE | 4 | WATER AT 20 |
| 26 | TR02606330 | PGR | 6 | 6 | 5 | 38 | 118 | 9 | 95 | 30 | | | WE | 4 | |
| 27 | TR02706330 | PGR | 20 | 20 | 5 | 38 | 124 | 3 | 101 | -24 | | | WE | 4 | WATER 20 |
| 28 | TR02806330 | PGR | 12 | 12 | 5 | 38 | 88 | -39 | 91 | -34 | | | WE | 4 | WATER 80 |
| 29 | TR01606320 | PGR | 5 | 5 | 5 | 38 | 117 | 10 | 94 | -31 | | | WE | 4 | |
| 30 | TR01706320 | PGR | 5 | 5 | 5 | 38 | 103 | 24 | 94 | -31 | | | WE | 4 | |
| 31 | TR01806320 | PGR | 10 | 10 | 5 | 38 | 120 | 7 | 97 | 28 | | | WE | 4 | |
| 32 | TR01906320 | PGR | 10 | 10 | 5 | 38 | 120 | 7 | 97 | -28 | | | WE | 4 | |
| 33 | TR02006320 | PGR | 15 | 15 | 5 | 38 | 76 | -51 | 79 | -46 | | | WE | 4 | |
| 34 | TR02106320 | PGR | 15 | 15 | 5 | 38 | 123 | -4 | 100 | -25 | | | WE | 4 | |
| 35 | TR02206320 | PGR | 12 | 12 | 5 | 38 | 121 | -6 | 98 | -27 | | | WE | 4 | WATER 50 |
| 36 | TR02306320 | PGR | 5 | 5 | 5 | 38 | 117 | 10 | 94 | -31 | | | WE | 4 | |
| 37 | TR02406320 | PGR | 5 | 5 | 5 | 38 | 117 | 10 | 94 | -31 | | | WE | 4 | |
| 38 | TR02506320 | PGR | 5 | 5 | 5 | 38 | 113 | -14 | 88 | 37 | | | WE | 4 | WATER 50 |
| 39 | TR02606320 | PGR | 18 | 18 | 5 | 38 | 87 | 40 | 97 | 28 | | | WE | 4 | SURFACE WATER |
| 40 | TR02806320 | PGR | 10 | 10 | 5 | 38 | 115 | 12 | 90 | -35 | | | WE | 4 | WATER 80 |
| 41 | TR01706310 | PGR | 10 | 10 | 5 | 38 | 120 | -7 | 97 | -28 | | | WE | 4 | |
| 42 | TR01806310 | PGR | 8 | 8 | 5 | 38 | 119 | -8 | 96 | -29 | | | WE | 4 | WATER 20 |

| SAMPLE NO | GRID REF | ASPECT USE | -WETNESS | | | | -WHEAT- | | -POTS- | | M REL | | EROSN EXP | FROST DIST | CHEM LIMIT | ALC | COMMENTS |
|-----------|------------|------------|----------|-------|-----|-------|---------|-----|--------|-----|-------|-----|-----------|------------|------------|---------------|----------|
| | | | GRDNT | GLEYS | SPL | CLASS | GRADE | AP | MB | AP | MB | DRT | | | | | |
| 43 | TR01706300 | PGR | 10 | 10 | 5 | 3B | 120 | -7 | 97 | -28 | | | | WE | 4 | | |
| 44 | TR01806300 | PGR | 10 | 10 | 5 | 3B | 139 | 12 | 115 | -10 | | | | WE | 4 | | |
| 45 | TR01906300 | PGR | 10 | 10 | 5 | 3B | 85 | -42 | 97 | -28 | | | | WE | 4 | WET 70 | |
| 46 | TR02206300 | PGR | 15 | 15 | 5 | 3B | 85 | -42 | 95 | -30 | | | | WE | 4 | SURFACE WATER | |
| 47 | TR02406300 | PGR | 10 | 10 | 5 | 3B | 81 | -46 | 91 | -34 | | | | WE | 4 | | |
| 48 | TR02606300 | PGR | 18 | 18 | 5 | 3B | 85 | -42 | 95 | -30 | | | | WE | 4 | | |
| 49 | TR02806300 | PGR | 20 | 20 | 5 | 3B | 81 | -46 | 86 | -39 | | | | WE | 4 | PLASTIC | |
| 50 | TR03006300 | PGR | 20 | 20 | 5 | 3B | 81 | -46 | 86 | 39 | | | | WE | 4 | PLASTIC | |
| 51 | TR01806290 | PGR | 10 | | 5 | 3A | 186 | 59 | 123 | -2 | | | | WE | 4 | SURFACE WATER | |
| 52 | TR03006290 | PGR | 25 | 25 | 5 | 3B | 127 | 0 | 102 | -23 | | | | WE | 4 | | |
| 53 | TR02206280 | PGR | 20 | 20 | 5 | 3B | 91 | -36 | 103 | -22 | | | | WE | 4 | WC3 AUGD70 | |
| 54 | TR02406280 | PGR | 20 | 20 | 5 | 3B | 88 | -39 | 98 | 27 | | | | WE | 4 | H3 WITH FS | |
| 55 | TR02606280 | PGR | 20 | 20 | 5 | 3B | 88 | -39 | 98 | 27 | | | | WE | 4 | SURFACE WATER | |
| 56 | TR02806280 | PGR | 20 | 20 | 5 | 3B | 81 | -46 | 86 | -39 | | | | WE | 4 | PLASTIC | |
| 57 | TR02506270 | OSR | 28 | 55 | 3 | 3A | 165 | 38 | 142 | 17 | | | | WE | 3A | SEE 2P | |
| 58 | TR02406270 | OSR | 30 | 30 | 3 | 3B | 143 | 16 | 117 | -8 | | | | WE | 3B | | |
| 59 | TR02406260 | OSR | 28 | 65 | 2 | 2 | 183 | 56 | 154 | 29 | | Y | | WE | 2 | | |
| 60 | TR02606260 | PGR | 20 | 20 | 5 | 3B | 94 | -33 | 99 | 26 | | | | WE | 4 | SURFACE WATER | |
| 61 | TR02406250 | PGR | 15 | 15 | 5 | 3B | 88 | -39 | 100 | -25 | | | | WE | 4 | | |
| 62 | TR02366248 | PGR S | 1 | 25 | | 2 | 2 | 145 | 18 | 149 | 24 | | | WD | 2 | IMP80 GRAVEL | |
| 63 | TR02306240 | PGR | 25 | | 2 | 2 | 127 | 0 | 135 | 10 | | | | DR | 3A | IMP60 | |
| 64 | TR02326243 | PGR | 23 | 70 | 2 | 2 | 156 | 29 | 154 | 29 | | | | WE | 2 | IMP90 GRAVEL | |
| 65 | TR02406240 | PGR | 25 | 25 | 5 | 4 | 82 | -45 | 88 | -37 | | | | WE | 4 | ORGWET | |
| 66 | TR02376236 | PGR | 10 | 10 | 5 | 4 | | 0 | 0 | | Y | | | WE | 4 | ORG TS | |
| 67 | TR02606240 | PGR | 15 | 15 | 5 | 4 | 100 | 27 | 112 | -13 | | | | WE | 4 | SURFACE WATER | |
| 68 | TR02206230 | PGR | 10 | 10 | 5 | 4 | 76 | -51 | 82 | 43 | Y | | | WE | 4 | | |
| 69 | TR02406230 | PGR | 15 | 15 | 5 | 4 | 78 | -49 | 84 | -41 | | | | WE | 4 | | |
| 70 | TR02106210 | PGR | 20 | 20 | 5 | 3B | 89 | -38 | 101 | -24 | | | Y | WE | 4 | ANAEROBIC | |
| 1P | TR02606280 | PGR | 20 | 20 | 5 | 4 | 126 | -1 | 103 | 22 | | | | WE | 4 | NO UNDERDRAIN | |
| 2P | TR02506270 | OSR | 30 | 30 | 3 | 3A | 111 | -16 | 117 | 8 | | | | WE | 3A | | |
| 3P | TR020 6330 | PGR | 20 | 20 | 5 | 3B | 122 | -5 | 99 | 26 | | | | WE | 4 | NO UNDERDRAIN | |