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# Hart District Replacement Local Plan
# Objector Site 0483/20,
# Land East of Moulsham Lane,
# Yateley, Hampshire.

## Agricultural Land Classification
## ALC Map and Report
## April 1997

Resource Planning Team
Eastern Region
FRCA Reading

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# AGRICULTURAL LAND CLASSIFICATION REPORT

## HART DISTRICT REPLACEMENT LOCAL PLAN.
## OBJECTOR SITE 0483/20,
## LAND EAST OF MOULSHAM LANE, YATELEY, HAMPSHIRE.

### Introduction

1. This report presents the findings of a detailed Agricultural Land Classification (ALC) survey of 10.7 hectares of land to the east of Moulsham Lane and north of Vicarage Road and Chandlers Lane, to the immediate north of Yateley in Hampshire. The survey was carried out during April 1997.

2. The survey was undertaken by the Farming and Rural Conservation Agency (FRCA) on behalf of the Ministry of Agriculture, Fisheries and Food (MAFF), in connection with its statutory input to the Hart District Replacement Local Plan. 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 agricultural land on this site was under permanent grass. The area mapped as 'Other Land' comprises a farm yard area with agricultural buildings, areas used for storage of machinery and rubble on hard standing, a track and some scrubby woodland.

### 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 in Table 1 below.

**Table 1: Area of grades and other land**

| Grade/Other land | Area (hectares) | % surveyed area | % site area |
|---|---|---|---|
| 2 | 1.3 | 12.9 | 12.1 |
| 3a | 7.8 | 77.2 | 72.9 |
| 4 | 1.0 | 9.9 | 9.4 |
| Other land | 0.6 | N/A | 5.6 |
| Total surveyed area | 10.1 | 100 | 94.9 |
| Total site area | 10.7 | - | 100 |

7. The fieldwork was conducted at an average density of 1 boring per hectare of agricultural land. A total of 13 borings and 2 soil pits were described.

8. The agricultural land at this site has been classified as Grade 2 (very good quality) to Grade 4 (poor quality) with the majority of the site classified as Subgrade 3a (good quality). The principal limitation is soil droughtiness.

9. Land of Grade 2 and Subgrade 3a quality has been mapped over the majority of the agricultural land at this site. The soils in these areas comprise either slightly stony light loamy topsoils and upper subsoils overlying slightly to moderately stony medium loamy lower subsoils; or as in the case of some Subgrade 3a profiles, slightly to moderately stony light loamy topsoils and upper subsoils overlying moderately to very stony sandy lower subsoils. In combination with these soil properties, the local relatively dry climate, means that this land is limited by soil droughtiness. This can lead to a reduction in plant growth and yield, especially in drier years. Occasional observations are also limited to Subgrade 3a by the size and volume of stones in the topsoil, which cause production costs to be increased and can affect crop yield.

10. Towards the west of the site, an area of Grade 4 land was identified. This area was dug for gravel in the 1920's and has been restored to a lower level than the surrounding land. Soils in this area commonly comprise very stony sands. This soil type does not retain water well and as such is appropriate classified as Grade 4 given the local climate. It is likely that plant growth and yield will be affected by severe soil droughtiness in most years.

## FACTORS INFLUENCING ALC GRADE

### Climate

11. Climate affects the grading of land through the assessment of an overall climatic limitation and also through interactions with soil characteristics.

12. The key climatic variables used for grading this site are given in Table 2 and were obtained from the published 5km grid datasets using the standard interpolation procedures (Met. Office, 1989).

**Table 2: Climatic and altitude data**

| Factor | Units | Values |
|---|---|---|
| Grid reference | N/A | SU 811 614 |
| Altitude | m, AOD | 60 |
| Accumulated Temperature | day°C (Jan-June) | 1458 |
| Average Annual Rainfall | mm | 668 |
| Field Capacity Days | days | 141 |
| Moisture Deficit, Wheat | mm | 113 |
| Moisture Deficit, Potatoes | mm | 107 |
| Overall climatic grade | N/A | Grade 1 |

13. 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.

14. 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 (ATO, January to June), as a measure of the relative warmth of a locality.

15. The combination of rainfall and temperature at this site mean that there is no overall climatic limitation, ie, the site is climatically Grade 1. However, although exposure, as a local climatic factor, is believed not to affect the site, the area has been mapped, along with much of the Blackwater river valley as being 'rather frost prone' according to unpublished Met Office data (1971). This could affect the agricultural land quality by reducing the grade of excellent quality land. The field survey indicates that frost risk is not likely to be significant on this site

**Site**

16. The site lies at an altitude of approximately 60m AOD. The majority of the site is flat, except where a slight slope exists to the north. This is not of a sufficient gradient to affect land quality. Towards the west of the site a disturbed area has been identified. This is currently approximately 2m below the natural level of the surrounding land.

**Geology and soils**

17. The published geological information for the site (BGS, 1971 and 1981) shows the whole area to be underlain by low level terrace deposits, which are also referred to as valley gravels.

18. The most detailed published soils information for the site (SSEW, 1983 and 1984) shows this site as containing soils from the Hurst association. These are described as, 'coarse and fine loamy permeable soils mainly over gravel variably affected by groundwater,' (SSEW, 1983). Soils of this general description were found at this site.

## AGRICULTURAL LAND CLASSIFICATION

19. 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.

20. 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**

21. Land of very good quality has been mapped to the north of the site on the lowest lying land. In this area the principal limitation is minor soil droughtiness.

22. Soils here commonly comprise a slightly stony (up to 10% total flints, including 2%>2cm diameter) fine sandy loam topsoil passing to similar or medium sandy loam upper subsoil horizons. The lower subsoil horizons comprise a combination of sandy, medium and

heavy clay loams, which commonly contain up to approximately 10% v/v total flints by volume. The profiles are commonly gleyed from the topsoil or upper subsoil horizon and are appropriately placed in Wetness Class II, due to the influence of groundwater at this location. In the relatively dry local climate these profiles are slightly limited by soil droughtiness due to the combination of sandy textures and stone contents. Soil droughtiness may affect plant growth and yield, as the supply of available water may be insufficient, especially in drier years.

**Subgrade 3a**

23. Land of good quality has been mapped over the majority of the agricultural land at this site. The principal limitation is soil droughtiness. Soils in this area are represented by the soil pits 1P and 2P (see Appendix II).

24. Soils here commonly comprise a slightly to moderately stony (up to 27% total flints, by volume, including up to 12% > 2cm) fine to medium sandy loam topsoil. This overlies a similarly stony medium sandy loam or loamy medium sand upper subsoil horizon(s). Within this subgrade the lower subsoils are more variable. They commonly fall into two groups. The most common comprise moderately and well structured horizons of medium sandy loam, loamy medium sand and occasionally medium sand to depth (120cm). These are all slightly to moderately, occasionally very stony, to a maximum of approximately 50% flints by volume. Some of these profiles were impenetrable to the soil auger between 50 and 70cm and may be of slightly lower quality. However their distribution is not sufficient for them to be mapped as a separate unit. The second, less common subsoil type encountered comprises a combination of moderately structured permeable sandy, medium and heavy clay loam textures containing up to approximately 40% flints by volume. These were commonly penetrable to depth (120cm) and were found to be very wet from approximately 90cm at the time of the survey. As a result of this relatively shallow and fluctuating water table depth, the majority of the profiles were gleyed from shallow depths and limited to Wetness Class II. However as the profiles were found to be permeable and the topsoils workable, this factor does not affect the final classification on this land.

25. Soil droughtiness is the overriding limiting factor for all the soils in this subgrade at this site as the sandy, stony soils restrict the water holding capacity. Such droughtiness is likely to affect plant growth and yield, to some extent, especially in drier years. In addition at some observation points, the volume of large stones (greater than 2cm diameter) is sufficient (more than 10% by volume) to restrict land quality to Subgrade 3a. In these cases crop production costs are increased and the possibility of poor establishment and subsequent poor yield is increased.

**Grade 4**

26. Land of poor quality has been mapped towards the west of the site. The land in this area has been disturbed by gravel workings, probably in the 1920's. It has now been 'restored' to a level 1-2m below the surrounding land. The principal limitation is soil droughtiness.

27. Soils in this area commonly comprise a very stony (40% total flints by volume, including up to 17% > 2cm diameter) shallow medium sand topsoil overlying a similar upper subsoil which was gleyed towards the south of the mapping unit. Soils could only be penetrated to a maximum of 50cm at the time of survey due to the dry conditions. The non-moisture retentive nature of these soils and the volume of stones in the topsoil lead them, given the local climate, to be appropriately classified as Grade 4. Soil droughtiness of such degree is likely to inhibit plant growth and significantly affect crop yield in most years. The volume of large stones (up to 17%>2cm diameter) in the topsoil is also significant in the grading of this area. Although they are not the principal limitation, the volume is such that production costs of a crop would be significantly increased as would the probability of poor crop establishment and subsequently the yield would be affected.

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## SOURCES OF REFERENCE


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## 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:

# 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. **GLEY/SPL**: 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 |
| **SZL**: | 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 sub-divided 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. **GLEY**: 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 |

SOIL PIT DESCRIPTION

Site Name : HART DLP OBJ SITE 483 Pit Number : 1P

Grid Reference: SU81106150 Average Annual Rainfall : 668 mm
Accumulated Temperature : 1458 degree days
Field Capacity Level : 141 days
Land Use : Permanent Grass
Slope and Aspect : degrees

| HORIZON | TEXTURE | COLOUR | STONES >2 | TOT.STONE | LITH | MOTTLES | STRUCTURE | CONSIST | SUBSTRUCTURE | CALC |
|---|---|---|---|---|---|---|---|---|---|---|
| 0- 22 | FSL | 10YR42 00 | 5 | 12 | HR | | | | | |
| 22- 35 | MSL | 10YR52 00 | 0 | 15 | HR | C | MDCSAB | FR | M | |
| 35- 51 | MSL | 25Y 62 63 | 0 | 10 | HR | M | MDCAB | FR | M | |
| 51- 73 | MCL | 25Y 62 63 | 0 | 15 | HR | C | MDCSAB | FR | M | |
| 73-120 | LMS | 05Y 63 00 | 0 | 38 | HR | M | WKCAB | FR | M | |

Wetness Grade : 1 Wetness Class : II
Gleying : 22 cm
SPL : cm

Drought Grade : 3A APW : 106mm MBW : -7 mm
APP : 99mm MBP : -8 mm

FINAL ALC GRADE : 3A
MAIN LIMITATION : Droughtiness

SOIL PIT DESCRIPTION

Site Name : HART DLP OBJ SITE 483 Pit Number : 2P

Grid Reference: SU81206150 Average Annual Rainfall : 668 mm
Accumulated Temperature : 1458 degree days
Field Capacity Level : 141 days
Land Use : Permanent Grass
Slope and Aspect : degrees

| HORIZON | TEXTURE | COLOUR | STONES >2 | TOT.STONE | LITH | MOTTLES | STRUCTURE | CONSIST | SUBSTRUCTURE | CALC |
|---|---|---|---|---|---|---|---|---|---|---|
| 0- 33 | MSL | 10YR41 00 | 2 | 10 | HR | C | | | | |
| 33- 61 | LMS | 25Y 63 00 | 0 | 10 | HR | C | MDCSAB | FR | G | |
| 61- 80 | HCL | 05Y 52 00 | 0 | 38 | HR | M | | | M | |

Wetness Grade : 1 Wetness Class : II
Gleying : 0 cm
SPL : cm

Drought Grade : 3B APW : 85mm MBW : -28 mm
APP : 85mm MBP : -22 mm

FINAL ALC GRADE : 3A
MAIN LIMITATION : Droughtiness

| SAMPLE NO. | GRID REF | USE | ASPECT | GRDNT | GLEY | SPL | --WETNESS-- CLASS | GRADE | -WHEAT- AP | MB | -POTS- AP | MB | M.REL DRT | FLOOD | EROSN EXP | FROST DIST | CHEM LIMIT | ALC | COMMENTS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | SU81006160 | PGR | | | 30 | | 2 | 1 | 151 | 38 | 112 | 5 | 2 | | | | DR | 2 | |
| 1P | SU81106150 | PGR | | | 22 | | 2 | 1 | 106 | -7 | 99 | -8 | 3A | | | | DR | 3A | PIT90 AUG120 |
| 2 | SU81106160 | PGR | | | 0 | | 2 | 1 | 145 | 32 | 108 | 1 | 2 | | | | DR | 2 | |
| 2P | SU81206150 | PGR | | | 0 | | 2 | 1 | 85 | -28 | 85 | -22 | 3B | | | | DR | 3A | IMP 80 3AT0120 |
| 3 | SU80906150 | PGR | N | 1 | 60 | | 1 | 1 | 112 | -1 | 85 | -22 | 3A | | | | DR | 3A | |
| 4 | SU81006150 | PGR | | | 75 | | 1 | 1 | 87 | -26 | 87 | -20 | 3B | | | | DR | 3A | IMP80 3ADR120 |
| 5 | SU81106150 | PGR | | | 30 | | 2 | 1 | 112 | -1 | 102 | -5 | 3A | | | | DR | 3A | IMP95 SEE 1P |
| 6 | SU81206150 | PGR | | | 45 | | 1 | 1 | 86 | -27 | 91 | -16 | 3B | | | | DR | 3A | IMP70SEE2P |
| 7 | SU81006140 | RGR | | | | | 1 | 1 | 25 | -88 | 25 | -82 | 4 | | | Y | DR | 4 | IMP50 4DR120 |
| 8 | SU81106140 | PGR | | | 30 | | 2 | 1 | 65 | -48 | 67 | -40 | 3B | | | | DR | 3B | IMP60 3BDR120 |
| 9 | SU81206140 | PGR | NE | 1 | 28 | | 2 | 1 | 131 | 18 | 103 | -4 | 2 | | | | DR | 2 | |
| 10 | SU81106130 | PGR | | | 35 | | 2 | 1 | 116 | 3 | 93 | -14 | 3A | | | | DR | 3A | |
| 11 | SU81206130 | PGR | | | 25 | | 2 | 1 | 71 | -42 | 71 | -36 | 3B | | | | DR | 3A | IMP50 3ADR120 |
| 12 | SU81016132 | PLO | | | | | 1 | 1 | 105 | -8 | 90 | -17 | 3A | | | | DR | 3A | |
| 13 | SU81026138 | RGR | | | 10 | | 2 | 1 | 13 | -100 | 13 | -94 | 4 | | | Y | DR | 4 | IMP25 4DR120 |

| SAMPLE | DEPTH | TEXTURE | COLOUR | MOTTLES COL | MOTTLES ABUN | MOTTLES CONT | PED COL. | GLEY | STONES >2 | STONES >6 | STONES LITH | STONES TOT | STRUCT/ CONSIST | SUBS STR | SUBS POR | SUBS IMP | SUBS SPL | SUBS CALC | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0-30 | fsl | 10YR41 00 | | | | | | 2 | 0 | HR | 10 | | | | | | | |
| | 30-50 | fsl | 10YR43 53 | 10YR56 00 | C | | | Y | 0 | 0 | HR | 5 | | M | | | | | |
| | 50-75 | msl | 10YR52 00 | 10YR56 66 | C | | | Y | 0 | 0 | HR | 5 | | M | | | | | |
| | 75-100 | mcl | 25Y 63 00 | 10YR68 00 | M | | | Y | 0 | 0 | HR | 5 | | M | | | | | SANDY |
| | 100-120 | hcl | 05Y 62 00 | 10YR68 00 | M | | | Y | 0 | 0 | HR | 10 | | M | | | | | SANDY |
| 1P | 0-22 | fsl | 10YR42 00 | | | | | | 5 | 2 | HR | 12 | | | | | | | STONES SIEVED |
| | 22-35 | msl | 10YR52 00 | 10YR56 00 | C | | | Y | 0 | 0 | HR | 15 | MDCSAB | FR | M | | | | |
| | 35-51 | msl | 25Y 62 63 | 10YR58 00 | M | | | Y | 0 | 0 | HR | 10 | MDCAB | FR | M | | | | |
| | 51-73 | mcl | 25Y 62 63 | 10YR58 00 | C | | | Y | 0 | 0 | HR | 15 | MDCSAB | FR | M | | | | SANDY |
| | 73-120 | lms | 05Y 63 00 | 10YR58 00 | M | | | Y | 0 | 0 | HR | 38 | WKCAB | FR | M | | | | STONES SIEVED |
| 2 | 0-30 | fsl | 10YR41 42 | 10YR46 00 | C | | | Y | 2 | 0 | HR | 8 | | | | | | | |
| | 30-42 | msl | 10YR52 62 | 10YR68 00 | C | | | Y | 0 | 0 | HR | 5 | | M | | | | | |
| | 42-65 | scl | 25Y 63 00 | 10YR68 00 | M | | | Y | 0 | 0 | HR | 5 | | M | | | | | |
| | 65-120 | hcl | 05Y 62 00 | 10YR58 68 | M | | | Y | 0 | 0 | HR | 5 | | M | | | | | SANDY |
| 2P | 0-33 | msl | 10YR41 00 | 10YR46 00 | C | | | Y | 2 | 0 | HR | 10 | | | | | | | PIT IMP 80 |
| | 33-61 | lms | 25Y 63 00 | 10YR58 00 | C | | | Y | 0 | 0 | HR | 10 | MDCSAB | FR | G | | | | |
| | 61-80 | hcl | 05Y 52 00 | 10YR58 00 | M | | | Y | 0 | 0 | HR | 38 | | M | | | | | STONES SIEVED/SANDY |
| 3 | 0-30 | msl | 10YR31 41 | | | | | | 3 | 1 | HR | 14 | | | | | | | STONES SIEVED |
| | 30-50 | msl | 10YR44 00 | | | | | | 0 | 0 | HR | 20 | | M | | | | | |
| | 50-60 | lms | 10YR42 00 | | | | | | 0 | 0 | HR | 20 | | G | | | | | |
| | 60-120 | lms | 10YR51 71 | 10YR56 00 | C | | | Y | 0 | 0 | HR | 15 | | G | | | | | |
| 4 | 0-28 | fsl | 10YR42 00 | | | | | | 3 | 1 | HR | 18 | | | | | | | STONES SIEVED |
| | 28-50 | msl | 10YR44 00 | | | | | | 0 | 0 | HR | 10 | | M | | | | | |
| | 50-75 | lms | 10YR44 54 | 10YR66 00 | F | | | | 0 | 0 | HR | 25 | | G | | | | | |
| | 75-80 | lms | 10YR64 00 | 10YR66 00 | C | | | Y | 0 | 0 | HR | 30 | | M | | | | | IMP FLINTS 80 |
| 5 | 0-30 | msl | 10YR42 00 | | | | | | 2 | 5 | HR | 15 | | | | | | | STONES SIEVED |
| | 30-40 | scl | 10YR53 00 | 10YR56 00 | C | | | Y | 0 | 0 | HR | 25 | | M | | | | | SEE 1P |
| | 40-65 | mcl | 10YR52 00 | 10YR58 00 | M | | | Y | 0 | 0 | HR | 5 | | M | | | | | SANDY |
| | 65-85 | hcl | 25Y 52 00 | 10YR58 00 | M | | | Y | 0 | 0 | HR | 10 | | M | | | | | SANDY |
| | 85-95 | scl | 25Y 51 00 | 10YR58 00 | M | | | Y | 0 | 0 | HR | 30 | | M | | | | | |
| 6 | 0-20 | fsl | 10YR41 42 | | | | | | 2 | 0 | HR | 10 | | | | | | | SEE 2P |
| | 20-45 | msl | 10YR42 00 | 10YR46 00 | F | | | | 0 | 0 | HR | 10 | | M | | | | | |
| | 45-60 | msl | 10YR53 52 | 10YR58 00 | C | | | Y | 0 | 0 | HR | 10 | | M | | | | | |
| | 60-70 | lms | 75YR56 00 | | | | | Y | 0 | 0 | HR | 50 | | M | | | | | IMP FLINTS 70 |
| 7 | 0-16 | lms | 10YR41 00 | | | | | | 16 | 5 | HR | 40 | | | | | | | STONES SIEVED |
| | 16-50 | ms | 75YR54 56 | | | | | | 0 | 0 | HR | 45 | | M | | | | | IMP FLINTS 50 |
| 8 | 0-30 | msl | 10YR42 00 | | | | | | 12 | 3 | HR | 27 | | | | | | | STONES SIEVED |
| | 30-55 | msl | 10YR52 00 | 75YR56 00 | C | | | Y | 0 | 0 | HR | 30 | | M | | | | | |
| | 55-60 | lms | 75YR56 00 | | | | | Y | 0 | 0 | HR | 40 | | M | | | | | IMP FLINTS 60 |

| SAMPLE | DEPTH | TEXTURE | COLOUR | MOTTLES COL | MOTTLES ABUN | MOTTLES CONT | PED COL. | GLEY | STONES >2 | STONES >6 | STONES LITH | STONES TOT | STRUCT/ CONSIST | SUBS STR | POR | IMP | SPL | CALC | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 9 | 0-28 | fsl | 10YR42 00 | | | | | | 3 | 0 | HR | 9 | | | | | | | |
| | 28-40 | msl | 25Y 63 00 | 75YR56 00 | C | | | Y | 0 | 0 | HR | 10 | | M | | | | | |
| | 40-62 | msl | 10YR54 00 | 75YR56 00 | C | | | Y | 0 | 0 | HR | 10 | | M | | | | | |
| | 62-80 | msl | 05Y 71 00 | 10YR56 00 | M | | | Y | 0 | 0 | HR | 10 | | M | | | | | |
| | 80-105 | msl | 10YR56 00 | | | | | Y | 0 | 0 | HR | 10 | | M | | | | | |
| 10 | 0-35 | msl | 10YR42 00 | | | | | | 4 | 1 | HR | 14 | | | | | | | STONES SIEVED |
| | 35-57 | msl | 10YR53 00 | 75YR56 00 | C | | | Y | 0 | 0 | HR | 10 | | M | | | | | |
| | 57-105 | lms | 25Y 63 00 | 75YR56 00 | C | | | Y | 0 | 0 | HR | 10 | | G | | | | | |
| | 105-120 | lms | 10YR46 68 | | | | | Y | 0 | 0 | HR | 25 | | M | | | | | |
| 11 | 0-25 | msl | 10YR31 00 | | | | | | 4 | 0 | HR | 10 | | | | | | | |
| | 25-42 | msl | 10YR31 00 | 10YR46 00 | C | | | Y | 0 | 0 | HR | 10 | | M | | | | | |
| | 42-50 | msl | 10YR32 62 | | | | | Y | 0 | 0 | HR | 25 | | M | | | | | IMP FLINTS 50 |
| 12 | 0-35 | msl | 10YR42 00 | | | | | | 5 | 1 | HR | 12 | | | | | | | |
| | 35-50 | msl | 10YR42 54 | | | | | | 0 | 0 | HR | 15 | | M | | | | | |
| | 50-75 | lms | 10YR46 00 | | | | | | 0 | 0 | HR | 10 | | G | | | | | |
| | 75-120 | ms | 10YR46 68 | | | | | | 0 | 0 | HR | 10 | | G | | | | | |
| 13 | 0-10 | ms | 10YR21 31 | | | | | | 17 | 5 | HR | 40 | | | | | | | |
| | 10-25 | ms | 25Y 61 00 | 10YR68 00 | M | | | Y | 0 | 0 | HR | 45 | | M | | | | | IMP FLINTS 25 |