FCS 3688 2/90

PROPOSED A35 TOLPUDDLE/PUDDLETOWN BYPASS, DORSET AGRICULTURAL LAND CLASSIFICATION

REPORT OF SURVEY

1. INTRODUCTION

In April and May 1990 the Resource Planning Group (South West Region) carried out a detailed agricultural land classification survey of the proposed route of the Tolpuddle/ Puddletown bypass in Dorset. The survey was carried out under commercial contract to the Department of Transport, Exeter.

The survey area for the most part consists of a 200 metre wide strip along the proposed bypass route, and is 9 km long. The total area surveyed was 209.5 ha. Observations were made by hand auger at 189 sites on a 100 metre grid, and nine soil pits were dug and described. The classification follows MAFFs revised guidelines and criteria for grading the quality of agricultural land (1988).

The accompanying ALC maps show the distribution of the various grades, and the location of the representative soil pits. The soil pit descriptions are given as an appendix.

2. CLIMATE

Estimates of the relevant climatic variables were obtained by interpolation from a five kilometre grid database. This was done at five points along the route, and the variables are given below:

Grid Reference (SY -)	750945	770950	790950	810948	830952
Altitude (m)	65	72	95	93	53
Accumulated Temperature (°days)	1506	1497	1471	1473	1518
Average Annual Rainfall (mm)	1005	984	946	937	887
Field Capacity Days (days)	201	198	192	191	183
Moisture Deficit, Wheat (mm)	95	95	93	94	103
Moisture Deficit, Potatoes (mm)	85	85	83	84	95

The main parameters used in the assessment of an overall climatic limitation are accumulated temperature and average annual rainfall. The accumulated temperature is a measure of the relative warmth of a locality and the average annual rainfall is a measure of the overall wetness. The values for the survey area show that overall climate is not a limiting factor. No evidence of any limiting local climatic factor, such as exposure, was found along the route.

The field capacity days determine the influence of climate on soil wetness and workability. The moisture deficits are used in the calculation of the droughtiness limitation.

3. AGRICULTURAL LAND CLASSIFICATION

For ease of reference, the ALC grades are described separately for the areas covered by the three ALC maps. The first area discussed is the western part, extending from the A35 west of Puddletown to Burleston. The central area extends past Tolpuddle to Creech Holding, and third area is the eastern zone flanking the A35.

The overall results of the survey are given below:

Grade	Area (ha)	% of Survey Area	% of Agricultural land
1	12	6	7
2	60	29	33
3a	56	27	30
3b	55	26	30
4	1.5	< 1	< 1
Urban	10	5	-
Non Agricultural	14	7	-
Farm Buildings	1	< 1	-
Total	209.5		

Puddletown Area (West of Home Farm) - Map 1

Grade 2

The grade 2 land lying to the west of Puddletown consists of stony calcareous medium clay loam overlying chalk. The soil is of variable thickness, with the chalk most commonly occurring at 45-50 cm depth. The most limiting factor is soil workability due to the interaction of the number of field capacity days (210 FCD) and the medium clay loam topsoil texture. Locally soil depth is also a limiting factor. Pit 1 is typical of the soils in the mapping unit.

The zones of 3b land occuring within this area are downgraded due to slopes of between 8° and 10°.

Sub Grade 3a

The land stretching from North brook eastwards past Puddletown to Burleston is classified as sub grade 3a. The soils are developed from plateau gravel, and consist of stony medium clay loam extending to a depth of more than 80 cm. There is no wetness limitation. The topsoil stone content was measured as 15%, placing the unit in sub grade 3a due to moderate limitations on cultivations and harvesting imposed by the stone content of the top 25 cm of soil. Pit 3 is typical for this mapping unit.

Sub Grade 3b

The sub grade 3b land adjacent to the River Puddle is derived from river alluvium. It consists of sandy silt loam of varying depth, either to chalk or peat. Below 20 cm extensive river gravel occurs. A water table was encountered at 55 cm, and the soil is gleyed from the surface. No SPL was encountered, but it is estimated that this site is wet within 40 cm depth for 91-210 days in most years, so wetness class III is appropriate. Pit 2 was described in the mapping unit, but the soils are variable in depth, some with organic lower subsoils.

The higher land between Northbrook and the sewage works is classified as 3b because of stoniness. Examination of a gravel pit embankment confirmed a topsoil stone content of 30-35%, increasing to 50% below 18 cm.

Burleston to Tolpuddle Area - Map 2

Grade 1

Two areas of grade 1 land lie immediately north of Tolpuddle. These are characterised by a sandy loam texture throughout most of the profile. The soils are deep, freely draining, and slightly stony. There are no limiting factors. Pit 5 is typical of this mapping unit.

Grade 2

The grade 2 land has a medium sandy clay loam topsoil, over a medium clay loam subsoil, sometimes becoming heavier in texture at depth. The soils are deep, freely draining and slightly stony. The grade 2 soils are similar to the grade 1 soils, but are slightly heavier textured. With the mean duration of field capacity of 192 field capacity days, the sandy clay loam topsoil leads to a classification as grade 2 due to minor wetness limitations, which affect the workability of the land. Pit 4 is typical of the grade 2 soils.

Sub Grade 3a

The two areas of 3a land east of Burleston Plantation consist of stony, moderately shallow, medium sandy clay loam soils over chalk. The limiting factor is soil depth, typically being 35 cm.

Sub Grade 3b

A small area of 3b land lies adjacent to the Devil's Brook at Burleston. This area consists of an alluvial flood plain with an organic silty loam topsoil over clay. There is gleying from 10 cm, and a slowly permeable layer occurs at 30 cm. This leads to a wetness class of IV leading to sub grade 3b due to wetness limitations.

The rest of the 3b land is down-graded due to slopes ranging from 8° to 11°. The soils on the steep slopes tend to be shallower than the adjacent higher grade land.

Grade 4

One small area was mapped as grade 4 due to slopes of up to 15°.

Area east of Creech Holding - Map 3

Grade 2

The grade 2 land in the east of the survey area is a medium clay loam, freely draining soil over chalk. The depth varies from 65 cm to more than 80 cm. Below about 25 cm the soil has a stone content of 20%. The main limitation is soil workability due to the medium clay loam topsoil texture with 183 field capacity days. The shallower sites are also limited due to droughtiness. Pits 7, 8 and 9 are representative of this mapping unit.

Sub Grade 3a

The 3a land in this area is a shallower phase of the grade 2 land. The topsoil has a texture of medium sandy clay loam, and is slightly stony. The soil is generally 30-35 cm deep. The main limiting factors are droughtiness and depth. Pit 6 is representative of the mapping unit.

Sub Grade 3b

The 3b land in this area is down-graded due to slopes of 9°.

[RPG-0053]/CC

APPENDIX

Soil Pit Descriptions

SOIL PROFILE DESCRIPTIONS: EXPLANATORY NOTE

(i) TEXTURE:-

Soil texture classes are denoted by the following abbreviations (all Upper case*):

S	Sand
LS	Loamy Sand
SL	Sandy Loam
SZL	Sand Silt Loam
ZL	Silt Loam
MZCL	Medium Silty Clay Loam
MCL	Medium Clay Loam
SCL	Sandy Clay Loam
HZCL	Heavy Silty Clay Loam
HCL	Heavy Clay Loam
SC	Sandy Clay
ZC	Silty Clay
C	Clay

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

F	fine (more than $\frac{2}{3}$ of sand less than 0.2 mm)
C	coarse (more than $\frac{1}{3}$ of sand greater than 0.6 mm)
M	medium (less than $\frac{2}{3}$ fine sand and less than $\frac{1}{3}$ coarse sand)

The sub-divisions of clay loam and silty clay loam classes according to clay content are indicated as follows:-

M	medium (less than 27% clay):
H	heavy (27-35% clay)

Other possible texture classes include:

P	Peat
SP	Sandy Peat
LP	Loamy Peat
PL	Peaty Loam
PS	Peaty Sand
MZ	Marine Light Silts

* There are two exceptions to the Upper Case rule:-

- The prefix "Calc" is used to identify naturally calcareous soils containing more than 1% Calcium Carbonate
- For organic mineral soils, the texture of the mineral fraction is prefixed by "Org".

(ii) STRUCTURE:-

Nature and size of structural units are denoted by the following abbreviations:

SAB	Subangular Blocky
AB	Angular Blocky
P	Prismatic

(single grain, granular and platy are not abbreviated)

F	Fine
M	Medium
C	Coarse
VC	Very Coarse

eg Weak **MSAB** = Weakly developed medium subangular blocky

(iii) OTHER

f	= few	=	less than 2% of the matrix or surface described
c	= *common*	=	2-20% *of the matrix or surface described*
m	= many	=	20-40% of the matrix or surface described
vm	= very many	=	+40% of the matrix or surface described

f	= faint	=	indistinct mottles, evident only on close examination
d	= disinct	=	although not striking, the mottles are readily seen
p	= prominent	=	the mottles are conspicuous, and the mottling is one of the outstanding features of the horizon
gm	= grey mottling		
om	= ochreous mottling		

eg **cdom** = common distinct ochreous mottles

rrc =	rusty root channels
ppf =	pale ped faces
mn =	manganese

st =	stones 6 cm
sst =	stones 2-6 cm
vsst=	stones 2 cm

WC =	Wetness Class (use Roman numerals, eg WC IV)
SPL =	Slowly Permeable Layer
WT =	Water Table
I =	Impenetrable if used in Depth Column
IMP =	Impenetrable if used in soil profile notes

(IMP 2 x 40 cm = 2 additional borings, both impenetrable at 40 cm)

ASP = Auger Sample Point

DESCRIPTION OF THE GRADES AND SUBGRADES

The ALC grades and subgrades are described below in terms of the types of limitation 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 and 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 national 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 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 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.

Woodland

Includes commercial and non-commercial woodland. A distinction may be made as necessary between farm and non-farm woodland.

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.

SITE NAME	PROFILE NUMBER	SLOPE AND ASPECT	LAND USE		PARENT MATERIAL
Puddletown/ Tolpuddle Bypass	1	6°SE	Winter Wheat	Av Rainfall :- 1005 ATO :- 1506 FC Days :- 201 Climatic grade:- 1	Chalk
	DATE 24.4.90	GRID REFERENCE SY 746941			

Horizon Number	Lowest Av Depth	Matrix and Ped Face Colours	Texture	Stoniness: Size, Shape, Type, and Field Method	Mottling Abundance, Contrast Size and Colour	Structure: Development Size and Shape	Pores and Fissures	Structural Condition	Consistence	Roots Abundance Size and Nature	Calcium Carbonate Content	Mangan Concs etc	Horizon Boundary: Distinctness and Form
1	20 cm	10YR4/4	MCL	<1% sst	-	Wk Med Gran	> .5	-	-	Many	Yes	-	Clear smooth
2	35 cm	10YR4/6	MCL	1% st + sst by sieving	-	Mod crs sab	> .5	moderate	Friable	Common	Yes	-	Clear smooth
3	45 cm	10YR4/6	HCL	2% st 3% sst by sieving	-	mod crs sab	> .5	moderate	Friable	Common	Yes	-	Abrupt smooth
4	-	White	Chalk	-	-	-	Few	-	-	-	-	-	-

Depth to Slowly Permeable Horizon :- -

Wetness Class :- 1

Wetness Grade :- 2

RPG0023/WJC

Available Water Wheat :- 129 (assuming 70 cm chalk)
101 (assuming 30 cm chalk)
Potatoes :- 100

Moisture Deficit Wheat :- 95
Potatoes :- 85

Moisture Balance Wheat :- 34 (assuming 70 cm chalk) (grade 1)
6 (assuming 30 cm chalk) (grade 2)
Potatoes :- 15 (grade 1)

Droughtiness Grade :- 2

Final ALC Grade :- 2

Main Limiting Factor(s) :- Wetness (Workability)
Droughtiness

Remarks :- Chalk not cracked .˙. cannot assume rooting to 120 cm .˙. grade 2

SITE NAME	PROFILE NUMBER	SLOPE AND ASPECT	LAND USE		PARENT MATERIAL
Tolpuddle/ Puddletown Bypass	2	Flat.	Grass (Water Meadow)	Av Rainfall :- 1005 ATO :- 1506 FC Days :- 201 Climatic grade:- 1	Alluvium + Colluvium from chalk uplands
	DATE 25.4.90	GRID REFERENCE SY 753948			

Horizon Number	Lowest Av Depth	Matrix and Ped Face Colours	Texture	Stoniness: Size, Shape, Type, and Field Method	Mottling Abundance, Contrast Size and Colour	Structure: Development Size and Shape	Pores and Fissures	Structural Condition	Consistence	Roots Abundance Size and Nature	Calcium Carbonate Content	Mangan Concs etc	Horizon Boundary: Distinctness and Form
1	21 cm	10YR2/2	SZL org	-	common rrc	Mod Med Gran	> .5	Good	Friable	many	-	-	smooth abrupt
2	55+ cm Water at 45cm	-	chalk + Flint gravel	20% st 70% sst sieving	-	-	-	-	-	v few fine	-	-	-

Depth to Slowly Permeable Horizon :- N/A

Wetness Class :- IV

Wetness Grade :- 3b

RPG0023/WJC

Available Water Wheat :- N/A
Potatoes :-

Moisture Deficit Wheat :- 95
Potatoes :- 85

Moisture Balance Wheat :- N/A
Potatoes :-

Droughtiness Grade :- 1

Final ALC Grade :- 3b

Main Limiting Factor(s) :- Wetness

Remarks :-

SITE NAME	PROFILE NUMBER	SLOPE AND ASPECT	LAND USE		PARENT MATERIAL
Tolpuddle/ Puddletown Bypass	3	1°S	Cereals	Av Rainfall :- 984 ATO :-1495 FC Days :- 198 Climatic grade:- 1	Plateau Gravel
	DATE 26.4.90	GRID REFERENCE SY 768950			

Horizon Number	Lowest Av Depth	Matrix and Ped Face Colours	Texture	Stoniness: Size, Shape, Type, and Field Method	Mottling Abundance, Contrast Size and Colour	Structure: Development Size and Shape	Pores and Fissures	Structural Condition	Consistence	Roots Abundance Size and Nature	Calcium Carbonate Content	Mangan Concs etc	Horizon Boundary: Distinctness and Form
1	30 cm	10YR4/3	MCL	2-6cm 10% < 2cm 4% > 6cm 1%	-	N/A	> .5	-	Friable	many	-	-	clear smooth
2	50 cm	YR4/6	MCL	2-6cm 15% < 2cm 7% > 6cm 1%	-	Wk Fn/med sab	> .5	good	Friable	common	-	-	clear smooth
3	80+ cm	10YR4/6	MCL	" sieving	-	"	> .5	good	Friable	Few	-	-	-

Depth to Slowly Permeable Horizon :- N/A

Wetness Class :- I

Wetness Grade :- 2

RPG0023/WJC

Available Water Wheat :-

Potatoes :-

Moisture Deficit Wheat :- 95

Potatoes :- 85

Moisture Balance Wheat :-

Potatoes :-

Droughtiness Grade :-

Final ALC Grade :- 3a

Main Limiting Factor(s) :- Topsoil stoniness

Remarks :- Map unit has patches of 20% surface stones (3b) but is dominantly 3a due to topsoil stoniness.

SITE NAME	PROFILE NUMBER	SLOPE AND ASPECT	LAND USE		PARENT MATERIAL
Tolpuddle/ Puddletown Bypass	4	1°S	Arable	Av Rainfall :- 946 ATO :- 1471 FC Days :- 192 Climatic grade:- 1	Chalk
	DATE 27.4.90	GRID REFERENCE SY 787950			

Horizon Number	Lowest Av Depth	Matrix and Ped Face Colours	Texture	Stoniness: Size, Shape, Type, and Field Method	Mottling Abundance, Contrast Size and Colour	Structure: Development Size and Shape	Pores and Fissures	Structural Condition	Consistence	Roots Abundance Size and Nature	Calcium Carbonate Content	Mangan Concs etc	Horizon Boundary: Distinctness and Form
1	27 cm	10YR4/4	MSCL	2% sst	-	NA	NA	NA	Friable	Common	-	-	clear smooth
2	56 cm	10YR4/6	MCL	2% sst	-	mod med sab	> .5	good	Friable	Few	-	-	"
3	71 cm	10YR4/4	HSCL	1% sst	-	mod med sab	> .5	good	Friable	Few	-	-	"
4	90+ cm	7.5YR4/6	SC	1% sst visual estimate	cdom	mod med sab	> .5	good	Friable	Few	-	-	-

Depth to Slowly Permeable Horizon :- N/A

Wetness Class :- 1

Wetness Grade :- 2

RPG0023/WJC

Available Water Wheat :-

Potatoes :-

Moisture Deficit Wheat :- 93

Potatoes :- 83

Moisture Balance Wheat :-

Potatoes :-

Droughtiness Grade :- 1

Final ALC Grade :- 2

Main Limiting Factor(s) :- Workability

Remarks :-

SITE NAME	PROFILE NUMBER	SLOPE AND ASPECT	LAND USE		PARENT MATERIAL
Tolpuddle/ Puddletown Bypass	5	2°	Ley	Av Rainfall :- 946 ATO :- 1471 FC Days :- 192 Climatic grade:- 1	Chalk
	DATE 27.4.90	GRID REFERENCE SY 787949			

Horizon Number	Lowest Av Depth	Matrix and Ped Face Colours	Texture	Stoniness: Size, Shape, Type, and Field Method	Mottling Abundance, Contrast Size and Colour	Structure: Development Size and Shape	Pores and Fissures	Structural Condition	Consistence	Roots Abundance Size and Nature	Calcium Carbonate Content	Mangan Concs etc	Horizon Boundary: Distinctness and Form
1	27 cm	10YR4/4	SL	1% sst	-	wk med gran	> .5	good	Friable	many	-	-	clear smooth
2	53 cm	10YR4/6	SL	1% sst	-	wk massive	> .5	moderate	Friable	common	-	-	smooth clear
3	65 cm	10YR5/6	LS	-	-	wk massive	> .5	moderate	Friable	Few	-	-	smooth clear
4	100+ cm	10YR5/6	SCL	-	fdom	wk mod sab	> .5	good	Friable	Few		-	-

Depth to Slowly Permeable Horizon :- N/A

Wetness Class :- I

Wetness Grade :- 1

RPG0023/WJC

Available Water	Wheat	:- 168
	Potatoes	:- 105
Moisture Deficit	Wheat	:- 93
	Potatoes	:- 83
Moisture Balance	Wheat	:- 75
	Potatoes	:- 22
Droughtiness Grade		:- 1

Final ALC Grade :- 1

Main Limiting Factor(s) :- -

Remarks :-

SITE NAME	PROFILE NUMBER	SLOPE AND ASPECT	LAND USE		PARENT MATERIAL
Tolpuddle/ Puddletown Bypass	6	3°	Grassland	Av Rainfall :- 937 ATO :- 1473 FC Days :- 191 Climatic grade:- 1	Chalk
	DATE 22.5.90	GRID REFERENCE SY 815948			

Horizon Number	Lowest Av Depth	Matrix and Ped Face Colours	Texture	Stoniness: Size, Shape, Type, and Field Method	Mottling Abundance, Contrast Size and Colour	Structure: Development Size and Shape	Pores and Fissures	Structural Condition	Consistence	Roots Abundance Size and Nature	Calcium Carbonate Content	Mangan Concs etc	Horizon Boundary: Distinctness and Form
1	0-28 cm	10YR4/3	SCL	1% 6-2cm estimated	-	moderate medium granular	> 0.5%	good	Friable	many	Yes	-	clear abrupt
2	-	White	Chalk	-	-	-	-	-	-	-	-	-	-

Depth to Slowly Permeable Horizon :- N/A

Wetness Class :- 1

Wetness Grade :- 2

RPG0023/WJC

Available Water Wheat :- 52

Potatoes :- 52

Moisture Deficit Wheat :- 94

Potatoes :- 84

Moisture Balance Wheat :- - 42

Potatoes :- - 32

Droughtiness Grade :- 3b

Final ALC Grade :- 3b

Main Limiting Factor(s) :- Droughtiness and slope

Remarks :- 3a on depth assuming a few centimetres penetration of the soft chalk.

SITE NAME	PROFILE NUMBER	SLOPE AND ASPECT	LAND USE		PARENT MATERIAL
Tolpuddle/ Puddletown Bypass	7	2°	Spring Barley	Av Rainfall :- 887 ATO :- 1518 FC Days :- 183 Climatic grade:- 1	Chalk
	DATE 23.5.90	GRID REFERENCE SY 812948			

Horizon Number	Lowest Av Depth	Matrix and Ped Face Colours	Texture	Stoniness: Size, Shape, Type, and Field Method	Mottling Abundance, Contrast Size and Colour	Structure: Development Size and Shape	Pores and Fissures	Structural Condition	Consistence	Roots Abundance Size and Nature	Calcium Carbonate Content	Mangan Concs etc	Horizon Boundary: Distinctness and Form
1	30 cm	10YR4/3	SCL	5% 6-2cm sieved 1% < 2cm estimated	-	Moderate Medium Granual	> 0.5%	good	Friable	many	-	-	smooth clear
2	80+ cm	10YR4/4	SCL	10% 6-2cm sieved 10% < 2cm estimated	-	Weak, Fine subangular blocky	> 0.5%	good	Friable	common	-	-	-

Depth to Slowly Permeable Horizon :- N/A

Wetness Class :- I

Wetness Grade :- 2

RPG0023/WJC

Available Water Wheat :- N/A
Potatoes :-

Moisture Deficit Wheat :- 103
Potatoes :- 95

Moisture Balance Wheat :- N/A
Potatoes :-

Droughtiness Grade :- 1

Final ALC Grade :- 2

Main Limiting Factor(s) :- Workability

Remarks :-

SITE NAME	PROFILE NUMBER	SLOPE AND ASPECT	LAND USE		PARENT MATERIAL
Tolpuddle/ Puddletown Bypass	8	2°	Grassland	Av Rainfall :- 887 ATO :- 1518 FC Days :- 183 Climatic grade:- 1	Chalk
	DATE 23.5.90	GRID REFERENCE SY 820948			

Horizon Number	Lowest Av Depth	Matrix and Ped Face Colours	Texture	Stoniness: Size, Shape, Type, and Field Method	Mottling Abundance, Contrast Size and Colour	Structure: Development Size and Shape	Pores and Fissures	Structural Condition	Consistence	Roots Abundance Size and Nature	Calcium Carbonate Content	Mangan Concs etc	Horizon Boundary: Distinctness and Form
1	22 cm	10YR4/4	MSCL	1% 6-2cm 1% < 2cm	-	N/A	-	-	-	many	-	-	smooth clear
2	45 cm	10YR4/4	MSCL	10% 6-2cm 10% < 2cm sieved	-	weak fine and medium subangular blocky	> 0.5%	good	friable	common	-	-	smooth clear
3	65 cm	10YR4/4	MSCL	1% 6-2cm 1% < 2cm	-	moderate medium subangular blocky	> 0.5%	good	friable	few	yes	-	smooth abrupt
4	-	White	chalk	-	-	-	-	-	-	-	-	-	-

Depth to Slowly Permeable Horizon :- N/A

Wetness Class :- 1

Wetness Grade :- 2

RPG0023/WJC

Available Water Wheat :- 94

Potatoes :- 101

Moisture Deficit Wheat :- 103

Potatoes :- 95

Moisture Balance Wheat :- 9

Potatoes :- 6

Droughtiness Grade :- 2

Final ALC Grade :- 2

Main Limiting Factor(s) :- droughtiness

Remarks :-

SITE NAME	PROFILE NUMBER	SLOPE AND ASPECT	LAND USE		PARENT MATERIAL
Tolpuddle/ Puddletown Bypass	9	2°	Spring Barley	Av Rainfall :- 887 ATO :- 1518 FC Days :- 183 Climatic grade:- 1	Chalk?
	DATE 24.5.90	GRID REFERENCE SY 823949			

Horizon Number	Lowest Av Depth	Matrix and Ped Face Colours	Texture	Stoniness: Size, Shape, Type, and Field Method	Mottling Abundance, Contrast Size and Colour	Structure: Development Size and Shape	Pores and Fissures	Structural Condition	Consistence	Roots Abundance Size and Nature	Calcium Carbonate Content	Mangan Concs etc	Horizon Boundary: Distinctness and Form
1	22 cm	10YR4/3	SL	1% 6-2cm	-	gran/sab mod med	many	good	Friable	many	-	-	smooth clear
2	55 cm	10YR5/4	SL	10% 6-2cm* 10% < 2cm	-	sab wk fine med	many	good	Friable	common	-	-	smooth clear
3	80+ cm	10YR5/4	SL	5% 6-2cm* 5% < 2cm	-	"	"	"	Friable	"	-	-	-
				*sieving									

Depth to Slowly Permeable Horizon :- N/A

Wetness Class :- 1

Wetness Grade :- 1

RPG0023/WJC

Available Water Wheat :- 111) assuming 80cm to chalk,

Potatoes :- 103) whereas probably much deeper

Moisture Deficit Wheat :- 103

Potatoes :- 95

Moisture Balance Wheat :- 8

Potatoes :- 8

Droughtiness Grade :- 2 at worst - could be 1

Final ALC Grade :- 2

Main Limiting Factor(s) :- droughtiness

Remarks :-