Oxfordshire Structure Plan
Land to the west of Didcot
Agricultural Land Classification
ALC Map and Report
January 1996

Resource Planning Team
Guildford Statutory Group
ADAS Reading

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AGRICULTURAL LAND CLASSIFICATION REPORT

OXFORDSHIRE STRUCTURE PLAN
LAND TO THE WEST OF DIDCOT

Introduction

1. This report presents the findings of a reconnaissance Agricultural Land Classification (ALC) survey of approximately 323 ha of land to the west of Didcot, Oxfordshire. The field survey was carried out during January 1996.

2. The survey was commissioned by the Ministry of Agriculture, Fisheries and Food (MAFF) from its Land Use Planning Unit in Reading in connection with the Oxfordshire Structure Plan. This survey includes the findings from three recently completed detailed surveys by ADAS of small areas of land included within the overall area of this study. These areas comprise Land at Wantage Road, Didcot, (ADAS Ref: 3303/149/94, December 1994); Land West of the Oval, Didcot, (ADAS Ref: 3303/148/94, December 1994) and Milton Local Plan, Milton, (ADAS Ref: 3304/030/91, January 1992). This current survey supercedes any other previous ALC information including that carried out during 1982 (ADAS Ref: 3303/034/82).

3. The work was conducted by members of the Resource Planning Team in the Guildford Statutory Group in ADAS. 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 majority of the land was under arable cropping comprising mainly winter cereals with a small area of field beans and some recently cultivated but uncropped land. An area of permanent grass occurs on the lower lying land at the northern central part of the site.

Summary

5. The findings of the survey are shown on the enclosed ALC map. The map has been drawn at a scale of 1:20,000; it is accurate at this scale, but any enlargement may be misleading.

6. The area and proportions of the ALC grades and subgrades on the surveyed land are summarised in Table 1, overleaf.

Table 1: Area of grades and other land

Grade/Other land	Area (hectares)	% surveyed area
2	44.1	16.5
3a	125.2	46.7
3b	98.6	36.8
Not surveyed	38.9	N/A
Other land	16.3	N/A
Total survey area	267.9	100.0
Total site area	323.1	N/A

7. The fieldwork was conducted at an average density of 1 boring per 4 hectares. A total of 63 auger borings and 2 soil pits were described.

8. The site includes a small area of Grade 2, very good quality land, which is restricted to this grade due to a minor droughtiness limitation caused by the presence of fine grained sandstone bedrock limiting potential rooting depth. Areas of Subgrade 3a, good quality agricultural land, have been mapped where soil wetness and topsoil workability are the principal limitations. Soils in these areas generally have slowly permeable clayey subsoil horizons at varying depths causing drainage impedance, which results in this classification given the local climatic regime. The area of Subgrade 3a on the lower lying land is generally heavier textured having a clay topsoil over a clay subsoil, but the presence of large amounts of naturally occurring calcium carbonate within the soil mean that the soil will be more easily managed and less susceptible to structural damage and hence is included within Subgrade 3a. The remaining agricultural land has been classified as Subgrade 3b, moderate quality agricultural land. These areas comprise non calcareous clayey soils which have a moderately severe wetness and topsoil workability limitation which leads to restrictions on cultivation and stocking, if structural damage to the soil is to be avoided. An area of land toward the western end of the site was not surveyed due to the inability to gain access at the time of survey.

Factors Influencing ALC Grade

Climate

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

10. 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 505905
Altitude	m, AOD	70
Accumulated Temperature	day°C	1440
Average Annual Rainfall	mm	579
Field Capacity Days	days	123
Moisture Deficit, Wheat	mm	115
Moisture Deficit, Potatoes	mm	110

11. 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.

12. 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.

13. The combination of rainfall and temperature at this site mean that the area is relatively dry and warm. The site is not considered to be exposed or subject to any particular frost risk and as such no climatic limitation exists on this site.

Site

14. The site falls gently from south to north from an altitude of 80 m AOD in the south eastern corner to 60 m AOD on the flat land at the centre and northern edge of the site. A small stream crosses the site from south to north and localised flooding may occasionally occur on the low lying land during periods of prolonged and heavy rainfall. Gradients are generally relatively gentle and nowhere on the site does relief or gradient affect agricultural land quality.

Geology and Soils

15. The published geological information (BGS, 1971), shows the higher land at the southern and eastern parts of the site to be underlain by Cretaceous Upper Greensand, whilst the lower lying land is shown as Head and younger Coombe deposits overlying the Upper Greensand.

16. The most detailed published soil information comprises the 1:63,360 scale map for the Abingdon area (SSEW, 1971), with further information available on the reconnaissance soil survey map for the area (SSEW, 1983). The higher land to the south and east of the site is shown to comprise soils of the Harwell series, which are briefly described as 'loamy brown earths, overlying grey fine grained sandstone, siltstone or silty marl' (SSEW, 1971). On the lower slopes to the north and west of the site, Hendred series soils are mapped. These are

briefly described as 'surface water gley soils, fine silty or clayey over silty clays' (SSEW, 1971). On the flat land of the northern and central part of the site, the area is principally mapped as Thames series,which are briefly described as 'clayey, ground water gley soils in calcareous clayey alluvium' (SSEW 1971). The soil memoir accompanying the 1 inch map (SSEW 1973) and also Bulletin 15 (SSEW 1984) which accompanies the 1:250,000 scale map, both emphasise the difficulties of relating soil wetness to profile morphology in the soils developed on or derived from the Upper Greensand parent material. These soils have olive or grey subsoil horizons with little evidence of ochreous mottling due to the small iron content and high silica/sesquioxide ratio. Soil colour and mottle patterns in these soils therefore need careful interpretation when relating soil wetness to profile morphology.

Agricultural Land Classification

17. 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.

18. 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 III.

Grade 2

19. A relatively small area of Grade 2 has been mapped on the higher land at the southern end of the site. The soils of this area correlate with the Harwell series and typically comprise a greyish brown medium clay loam topsoil over a greyish brown or olive grey heavy clay loam subsoil. The underlying greyish fine grained sandstone is generally encountered at approximately 1m, although shallower profiles may occur locally. Although some rusty colourations can be seen in some profiles these are generally associated with weathered stone and despite the grey subsoil colours, the soils are considered to be free draining, Wetness Class I (see Appendix II). The presence of the underlying sandstone within rooting depth reduces the available water capacity and under the relatively dry prevailing climatic conditions these soils will be slightly droughty for both wheat and potatoes. This limitation therefore restricts the land quality to Grade 2.

Subgrade 3a

20. Subgrade 3a has been mapped on the the higher land to the east of the site, on some of the lower slopes and also on part of the lower lying flat land in the central area of the site. The soils on the higher land and on the lower slopes correlate with the Hendred series, where the soils typically have a medium or heavy clay loam topsoil over an olive grey heavy clay loam upper subsoil becoming clay with depth. Some ochreous mottling is evident in these soils, but is typically faint. However the presence of a clay subsoil with coarse angular blocky structure indicates slowly permeable subsoils and the soils have been assessed as Wetness Class II or III depending on the depth to the slowly permeable clay. These soils therefore have a moderate wetness limitation which associated with the topsoil texture will result in a moderate topsoil workability limitation. The impact of this wetness/workability limitation will be to reduce the flexibility of the land due to a reduction in the number of days when the soil is in a suitable condition for cultivation, trafficking by machinery or grazing by livestock.

21. On the low lying flat land in the central northern part of the site, the soils are clayey throughout, having a dark grey brown clay topsoil over an olive grey clay subsoil with common faint ochreous mottles. These soils are typically calcareous throughout and often at depth contain a high proportion of fine chalky stones (Coombe deposits) with more distinct ochreous mottling associated with the chalky fragments. These soils have been assessed as Wetness Class III and with the clay topsoil textures have a moderate workability limitation, although this is somewhat modified by the calcareous nature of the soil, making them slightly easier to cultivate. These soils under the prevailing climatic conditions are therefore restricted to Subgrade 3a.

Subgrade 3b

22. The areas of non calcareous heavy textured soils on the site have been classified as Subgrade 3b. These soils typically have a clay or heavy clay loam topsoil over an olive grey clay subsoil with faint or distinct ochreous mottles. The subsoil structure is typically coarse angular blocky becoming prismatic or platy with depth and the soils have been assessed as Wetness Class III. On the lowest land in the central northern part of the site, surface water was evident at the time of survey. The major limitation associated with these areas is wetness due to impeded drainage. Due to the heavy textured topsoils and associated workability limitations, a classification of Subgrade 3b is appropriate. These wetness and workability factors lead to severe restrictions on the versatility of the land, principally in terms of timing of cultivations and stocking, if structural damage of the soils is to be avoided.

Other Land

23. Five areas of 'Other Land' have been delineated. The largest area at the western end of the site comprises an area which has been partly developed for a Service Station, with the remaining area being grossly disturbed from road construction activities and also the dismantling of a sewage works, and consequently not used for agriculture. At the eastern end of the site is a small area of woodland, whilst the three areas along the southern boundary comprise residential, farm buildings and a small sewage works.

SOURCES OF REFERENCE

British Geological Survey (1971) *Sheet No. 253, Abingdon. 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 (1989) *Climatological Data for Agricultural Land Classification.* Met. Office: Bracknell.

Soil Survey of England and Wales (1971) *Soils of the Wantage and Abingdon District* SSEW: Harpenden

Soil Survey of England and Wales (1983) *Sheet 6, South East England* SSEW: Harpenden.

Soil Survey of England and Wales (1984) *Soils and their Use in South East England* SSEW: Harpenden

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 WETNESS CLASSIFICATION

Definitions of Soil Wetness Classes

Soil wetness is classified according to the depth and duration of waterlogging in the soil profile. Six soil wetness classes are identified and are defined in the table below.

Wetness Class	Duration of waterlogging[i]
I	The soil profile is not wet within 70 cm depth for more than 30 days in most years.[ii]
II	The soil profile is wet within 70 cm depth for 31-90 days in most years **or**, if there is no slowly permeable layer within 80 cm depth, it is wet within 70 cm for more than 90 days, but only wet within 40 cm depth for 30 days in most years.
III	The soil profile is wet within 70 cm depth for 91-180 days in most years **or**, if there is no slowly permeable layer present within 80 cm depth, it is wet within 70 cm for more than 180 days, but only wet within 40 cm depth for between 31-90 days in most years.
IV	The soil profile is wet within 70 cm depth for more than 180 days but not wet within 40 cm depth for more than 210 days in most years **or**, if there is no slowly permeable layer present within 80 cm depth, it is wet within 40 cm depth for 91-210 days in most years.
V	The soil profile is wet within 40 cm depth for 211-335 days in most years.
VI	The soil profile is wet within 40 cm depth for more than 335 days in most years.

Assessment of Wetness Class

Soils have been allocated to wetness classes by the interpretation of soil profile characteristics and climatic factors using the methodology described in *Agricultural Land Classification of England and Wales: Revised guidelines and criteria for grading the quality of agricultural land* (MAFF, 1988).

[i] The number of days is not necessarily a continuous period.
[ii] 'In most years' is defined as more than 10 out of 20 years.

APPENDIX III

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	**DCW**:	Deciduous Wood
HTH:	Heathland	**BOG**:	Bog or Marsh	**FLW**:	Fallow
PLO:	Ploughed	**SAS**:	Set aside	**OTH**:	Other
HRT:	Horticultural Crops				

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	**EX**:	Exposure
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
ST:	Topsoil Stoniness				

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	**SLST**:	soft oolitic or dolimitic limestone
CH:	chalk	**FSST**:	soft, fine grained sandstone
ZR:	soft, argillaceous, or silty rocks	**GH**:	gravel with non-porous (hard) stones

MSST: soft, medium grained sandstone **GS**: gravel with porous (soft) stones
SI: soft weathered igneous/metamorphic rock

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	**VC**: very 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 **VF**: very friable **FR**: friable **FM**: firm **VM**: very firm
EM: extremely firm **EH**: extremely hard

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 appropiate 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 : OXON SP-WEST OF DIDCOT Pit Number : 1P

Grid Reference: SU50509000 Average Annual Rainfall : 575 mm
Accumulated Temperature : 1452 degree days
Field Capacity Level : 122 days
Land Use : Wheat
Slope and Aspect : 01 degrees S

HORIZON	TEXTURE	COLOUR	STONES >2	TOT.STONE	LITH	MOTTLES	STRUCTURE	CONSIST	SUBSTRUCTURE	CALC
0- 28	MCL	10YR42 00	2	4	FSST					
28- 65	HCL	25Y 53 00	0	20	FSST		MDCSAB	FR	M	
65-100	HCL	25Y 63 00	0	5	FSST	C	MDCSAB	FR	M	
100-120	FSST		0	0					P	

Wetness Grade : 1 Wetness Class : I
Gleying :065 cm
SPL : No SPL

Drought Grade : 2 APW : 132mm MBW : 15 mm
APP : 108mm MBP : -4 mm

FINAL ALC GRADE : 2
MAIN LIMITATION : Droughtiness

SOIL PIT DESCRIPTION

Site Name : OXON SP-WEST OF DIDCOT Pit Number : 2P

Grid Reference: SU49509070 Average Annual Rainfall : 575 mm
Accumulated Temperature : 1452 degree days
Field Capacity Level : 122 days
Land Use : Permanent Grass
Slope and Aspect : degrees

HORIZON	TEXTURE	COLOUR	STONES >2	TOT.STONE	LITH	MOTTLES	STRUCTURE	CONSIST	SUBSTRUCTURE	CALC
0- 28	HCL	10YR32 00	0	2	FSST					
28- 60	C	25Y 52 00	0	0		C	MDCOAB	FM	P	
60- 77	C	05Y 53 00	0	10	FSST	C	MDCOAB	FM	P	
77-120	C	75Y 41 00	0	0			MDCOPL	FM	P	Y

Wetness Grade : 3B Wetness Class : III
Gleying :028 cm
SPL :028 cm

Drought Grade : 2 APW : 127mm MBW : 10 mm
APP : 103mm MBP : -9 mm

FINAL ALC GRADE : 3B
MAIN LIMITATION : Wetness

SAMPLE NO.	GRID REF	USE	ASPECT		GRDNT	--WETNESS-- GLEY	SPL	CLASS	GRADE	-WHEAT- AP	MB	-POTS- AP	MB	M.REL DRT	FLOOD	EROSN EXP	FROST DIST	CHEM LIMIT	ALC	COMMENTS
1	SU50308970	CER				035	035	3	3A	130	13	107	-5	2				WE	3A	
1P	SU50509000	WHT	S		01	065		1	1	132	15	108	-4	2				DR	2	
2	SU50308990	CER				056	056	2	2	140	23	110	-2	2				WD	2	
2P	SU49509070	PGR				028	028	3	3B	127	10	103	-9	2				WE	3B	
3	SU50309010	CER	N		02	027	035	3	3A	96	-21	103	-9	3B				WE	3A	
4	SU50309030	CER	W		03			1	1	139	22	115	3	2				DR	2	
5	SU50309050	CER	W		03			1	1	140	23	116	4	2				DR	2	
6	SU50309070	BEN				075	075	2	3A	137	20	117	5	2				WE	3A	
7	SU50309090	BEN				025	035	3	3B	91	-26	102	-10	3B				WE	3B	
8	SU50109060	CER				050	050	3	2	112	-5	110	-2	2				WD	2	CALC TOPSOIL
9	SU50109000	CER				030	070	2	3A	126	9	117	5	2				WE	3A	
10	SU50108980	CER	W		02	024		2	2	90	-27	98	-14	3B				DR	3B	IMP 65 SST
11	SU50108960	CER				030		2	2	93	-24	98	-14	3B				DR	3B	IMP ,60 SST
12	SU50508980	WHT	S		01			1	1	148	31	113	1	2				DR	2	
13	SU50509000	WHT	S		01			1	1	119	2	106	-6	3A				DR	2	SEE 1P
14	SU50509020	WHT	SW		01	050	050	2	2	130	13	105	-7	2				WD	2	
15	SU50509040	WHT	N		01	060	060	2	2	106	-11	112	0	3A				WD	2	SEE 1P
16	SU50509080	PLO	N		01	028	028	3	3B	123	6	101	-11	3A				WE	3B	
17	SU50509100	PLO				030	030	3	3A	126	9	103	-9	2				WE	3A	CALC TOPSOIL
18	SU50309110	PLO				055	030	3	3A	130	13	103	-9	2				WE	3A	
19	SU50709110	FLW				045	030	3	3B	129	12	103	-9	2				WE	3B	
20	SU50709090	PLO	N		02		030	3	3B	125	8	103	-9	2				WE	3B	
21	SU50709010	WHT	S		01	055		1	1	115	-2	114	2	3A				DR	2	SEE 1P
22	SU50708990	WHT	S		01	057	057	2	2	122	5	104	-8	2				WD	2	
23	SU49978988	WHT	SE		03		075	2	3A	136	19	116	4	2				WE	3A	
24	SU49909010	WHT	E		02	045	065	2	3A	107	-10	105	-7	3A				WD	3A	
25	SU50109020	WHT	E		03	045	045	2	3A	130	13	107	-5	2				WE	3A	
26	SU49909030	WHT	N		02	027	027	3	3B	124	7	101	-11	3A				WE	3B	
27	SU50109040	WHT	NE		02	055	055	2	2	135	18	113	1	2				WD	2	
28	SU49909050	WHT	N		01	060	030	3	3B	125	8	102	-10	2				WE	3B	
29	SU49909070	WHT				030	030	3	3A	125	8	102	-10	2				WE	3A	CALC TOPSOIL
30	SU49709060	WHT				030	030	3	3A	137	20	102	-10	2				WE	3A	CALC TOPSOIL
31	SU49709080	CER				024	024	3	3A	105	-12	103	-9	3A				WE	3A	CALC TOPSOIL
32	SU49709020	SAS				039	039	3	3B	96	-21	108	-4	3B				WE	3B	NON-CALC TOP
33	SU49709040	SAS	N		02	040	040	3	3A	99	-18	104	-8	3A				WE	3A	CALC TOPSOIL
34	SU49509050	PGR				024	024	3	3B	104	-13	101	-11	3A				WE	3B	
35	SU49509070	PGR				025	025	3	3B	112	-5	103	-9	3A				WE	3B	
36	SU49309060	PGR				010	010	3	3A	89	-28	94	-18	3B				WE	3A	
37	SU49509090	CER				035	035	3	3A	96	-21	108	-4	3B				WE	3A	CALC TOPSOIL
38	SU49509110	CER				030	030	3	3B	97	-20	102	-10	3A				WE	3B	
39	SU49509130	CER				035	035	3	3B	95	-22	107	-5	3B				WE	3B	
40	SU50908980	CER				026	026	3	3A	91	-26	103	-9	3B				WE	3A	

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
41	SU50909000	CER			029		2	2	103	-14	114	2	3A				DR	3A	IMP 70 SST
42	SU50909020	CER			030	030	3	3B	93	-24	105	-7	3B				WE	3B	
43	SU50709030	CER			024	024	3	3A	93	-24	104	-8	3B				DR	3B	IMP, PROB 3A
44	SU50509060	CER			028		2	2	151	34	115	3	2				WD	2	
45	SU50909060	BEN	W	01	055	055	2	3A	118	1	110	-2	3A				WD	3A	
46	SU51109070	BEN	N	02	055	055	2	3A	107	-10	109	-3	3A				WD	3A	
47	SU51109090	BEN	N	03	028	028	3	3B	125	8	102	-10	2				WE	3B	
48	SU50909100	PGR	N	04	043	043	2	3A	128	11	104	-8	2				WE	3A	
49	SU50909080	BEN	N	03	027	027	3	3B	101	-16	105	-7	3A				WE	3B	
50	SU51109030	WHT	E	01	032	040	3	3A	124	7	109	-3	2				WE	3A	
51	SU50909040	WHT			050	050	2	3A	122	5	111	-1	2				WE	3A	
52	SU50709050	WHT	W	01	050	050	2	3A	122	5	112	0	2				WE	3A	
53	SU50709070	WHT	W	03	030	030	3	3B	114	-3	102	-10	3A				WE	3B	
54	SU49909090	PGR			030	030	3	3B	126	9	103	-9	2				WE	3B	
55	SU49909110	PGR			025	025	3	3B	124	7	101	-11	3A				WE	3B	
56	SU50109120	PGR			025	025	4	3B	124	7	101	-11	3A				WE	3B	PONDED
57	SU50309127	PGR			025	025	3	3B	124	7	101	-11	3A				WE	3B	
58	SU50509120	PGR			025	025	3	3B	124	7	100	-12	3A				WD	3A	
59	SU50109100	PGR			020	020	4	3B	126	9	101	-11	3A				WE	3B	VERY WET
60	SU50109080	PGR			025	025	3	3A	124	7	101	-11	3A				WD	3A	CALC TOPSOIL
61	SU49709100	PGR			030	030	3	3B	93	-24	64	-48	3B				WD	3B	
62	SU49709120	PGR			030	030	3	3B	126	9	103	-9	2				WE	3B	GROUNDWATER
63	SU48879141	PGR			027	027	3	3B	125	8	102	-10	2				WE	3B	

COMPLETE LIST OF PROFILES 08/02/96 OXON SP-WEST OF DIDCOT

SAMPLE	DEPTH	TEXTURE	COLOUR	----MOTTLES----- COL	ABUN	CONT	PED COL.	GLEY	----STONES---- >2	>6	LITH	TOT	STRUCT/ CONSIST	SUBS STR	POR	IMP	SPL	CALC	
1	0-26	mcl	10YR42 00						0	0		0							
	26-35	hcl	25Y 42 00	10YR56 00	F				0	0		0		M					
	35-120	c	25Y 6200	10YR56 61	C			Y	0	0		0		P			Y		
1P	0-28	mcl	10YR42 00						2	0	FSST	4							
	28-65	hcl	25Y 53 00						0	0	FSST	20	MDCSAB	FR M					
	65-100	hcl	25Y 63 00	10YR56 00	C			Y	0	0	FSST	5	MDCSAB	FR M					
	100-120	fsst							0	0		0		P					
2	0-28	mcl	10YR42 00						0	0	FSST	2							
	28-56	scl	25Y 52 00						0	0		0		M					
	56-120	sc	10YR52 00	10YR68 62	C			Y	0	0		0		P			Y		
2P	0-28	hcl	10YR32 00						0	0	FSST	2							
	28-60	c	25Y 52 00	10YR56 00	C			Y	0	0		0	MDCOAB	FM P	Y		Y		
	60-77	c	05Y 53 00	10YR68 00	C			Y	0	0	FSST	10	MDCOAB	FM P	Y		Y		
	77-120	c	75Y 41 00						0	0		0	MDCOPL	FM P	Y		Y	Y	
3	0-27	mcl	10YR42 00						10	0	FSST	15							
	27-35	hcl	10YR61 00	10YR58 00	C			Y	0	0		0		M					
	35-65	c	10YR61 00	10YR68 00	C			Y	0	0		0		P			Y		
	65-75	scl	10YR52 61	10YR68 00	C			Y	0	0		0		M					IMP 75, FSST
4	0-25	mcl	10YR42 00						3	0	FSST	6							
	25-120	c	05Y 71 63						0	0		0		M					
5	0-28	mcl	10YR42 00						2	0	FSST	4							
	28-45	hcl	25Y 53 00	10YR56 00	F				0	0		0		M					
	45-120	c	25Y 63 00						0	0		0		M					
6	0-30	hcl	10YR42 43						0	0	FSST	2							
	30-50	hcl	05Y 53 00						0	0		0		M					
	50-75	c	05Y 62 00						0	0		0		M				Y	
	75-120	c	05GY51 00	10YR68 00	M			Y	0	0		0		P			Y	Y	
7	0-25	hcl	10YR42 43						0	0	FSST	4							
	25-35	hcl	25Y 53 00	10YR58 00	C			Y	0	0		0		M					
	35-70	c	25Y 51 00	10YR68 00	M			Y	0	0	FSST	10		P			Y		IMP 70, FSST
8	0-27	hcl	10YR42 00						0	0	FSST	4						Y	
	27-50	c	25Y 53 00						0	0		0		M					
	50-90	c	25Y 71 00	10YR68 00	M			Y	0	0		0		P			Y		
9	0-30	hcl	10YR42 00						0	0	FSST	2							
	30-70	hcl	25Y 53 00	10YR58 61	C			Y	0	0		0		M					
	70-100	c	25Y 62 00	10YR68 00	M			Y	0	0		0		P			Y		
10	0-24	mcl	10YR42 00						8	0	FSST	12							
	24-55	hcl	25Y 53 00	10YR56 00	C			Y	0	0	FSST	20		M					
	55-65	hcl	25Y 53 00	10YR56 00	C			Y	0	0		0		M					IMP 65, FSST

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	
11	0-30	mcl	10YR42 00						0	0	FSST	4							
	30-40	mcl	25Y 42 00	10YR56 00	C			Y	0	0		0		M					
	40-60	hcl	25Y 53 00	10YR56 00	C			Y	0	0	FSST	10		M					IMP 60, FSST
12	0-30	mcl	10YR42 00						2	0	FSST	4							
	30-100	hcl	10YR53 00						0	0	FSST	7		M					
	100-120	scl	25Y 63 00	25Y 66 00	F				0	0	FSST	20		M					
13	0-30	mcl	10YR42 00						2	0	FSST	4							
	30-65	scl	25Y 53 00						0	0	FSST	20		M					
	65-90	hzcl	05 Y63 00						0	0		0		M					
	90-100	fsst	05 Y63 00						0	0		0		P					IMP 100, FSST
14	0-30	mcl	10YR42 00						2	0	FSST	4							
	30-50	hcl	25Y 63 00	10YR68 00	F				0	0	FSST	15		M					
	50-120	hcl	25Y 63 00	10YR68 00	C			Y	0	0		0		P		Y			BORDER CLAY
15	0-30	mcl	10YR42 00						2	0	FSST	4							
	30-60	hcl	05Y 63 00						0	0	FSST	5		M					
	60-75	c	05Y 63 00	10YR66 00	C			Y	0	0		0		P		Y			
	75-85	fsst	05Y 63 00						0	0		0		P					IMP 85, FSST
16	0-28	c	10YR42 00						0	0		0							
	28-75	c	05Y 52 00	10YR56 00	C			Y	0	0	FSST	3		P		Y			
	75-120	c	05Y 52 00	10YR56 00	C			Y	0	0	FSST	6		P		Y			
17	0-30	c	10YR42 00						0	0		0						Y	
	30-65	c	25Y 62 00	10YR56 00	C			Y	0	0		0		P		Y		Y	
	65-120	c	05Y 72 00	10YR68 00	C			Y	0	0	CH	2		P		Y		Y	
18	0-30	c	10YR42 00						0	0		0						Y	
	30-55	c	25Y 62 00	10YR66 00	F				0	0		0		P		Y		Y	
	55-75	c	25Y 62 00	10YR66 00	C			Y	0	0		0		P		Y		Y	
	75-120	scl	05Y 72 00	10YR68 00	M			Y	0	0	CH	20		P		Y		Y	
19	0-30	c	10YR32 00						0	0		0							
	30-45	c	25Y 52 00	25Y 66 00	F				0	0		0		P		Y			
	45-90	c	05Y 62 00	25Y 66 00	C			Y	0	0		0		P		Y		Y	
	90-120	scl	05Y 72 00	10YR68 00	C			Y	0	0	CH	7		P		Y		Y	
20	0-30	c	10YR42 00						0	0	FSST	1							
	30-80	c	25Y 52 00	10YR56 00	F				0	0		0		P		Y			
	80-120	c	05Y 62 00	10YR56 00	F				0	0	FSST	4		P		Y			
21	0-30	mcl	10YR42 00						2	0	FSST	3							
	30-55	hcl	25Y 52 00						0	0	FSST	9		M					
	55-80	hcl	25Y 62 00	25Y 66 00	C			Y	0	0	FSST	4		M					
	80-90	fsst	25Y 62 00						0	0		0		P					IMP 90, FSST

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	
22	0-28	mcl	10YR42 00						2	0	FSST	4							
	28-57	hcl	25Y 54 00						0	0	FSST	25		M					
	57-105	c	05Y 62 00	25Y 58 00	C			Y	0	0	FSST	1		P		Y			
	105-120	fsst	05Y 62 00						0	0		0		P					
23	0-27	hcl	10YR32 00						2	0	FSST	3							
	27-75	c	25Y 52 00						0	0		0		M					
	75-120	hcl	05Y 72 00	25Y 66 00	F				0	0		0		P		Y	Y		BORDER CLAY
24	0-30	hcl	10YR42 00						3	0	FSST	5							
	30-45	hcl	25Y 62 00						0	0	FSST	25		M					
	45-65	hcl	25Y 62 00	10YR66 00	C			Y	0	0	FSST	25		M					
	65-80	c	05Y 72 00	10YR66 00	C			Y	0	0		0		P		Y			
	80-100	fsst	05Y 72 00						0	0		0		P					IMP 100, FSST
25	0-30	c	10YR32 00						1	0	FSST	2							
	30-45	c	10YR42 00						0	0		0		M					
	45-120	c	05Y 62 00	25Y 66 00	C			Y	0	0		0		P		Y	Y		
26	0-27	c	10YR42 00						2	0	FSST	3							
	27-45	c	05Y 53 00	25Y 66 00	C			Y	0	0		0		P		Y			
	45-70	c	05Y 62 00	25Y 66 00	C			Y	0	0		0		P		Y	Y		
	70-120	c	05Y 62 00	25Y 68 00	C			Y	0	0		0		P		Y	Y		
27	0-30	c	10YR42 00						0	0	FSST	1						Y	
	30-55	hzcl	10YR62 00						0	0		0		M				Y	
	55-120	c	05Y 62 00	25Y 66 00	C			Y	0	0		0		P		Y	Y		
28	0-30	c	10YR42 00						1	0	FSST	2							
	30-60	c	25Y 52 00	25Y 66 00	F				0	0		0		P		Y	Y		
	60-80	c	25Y 62 00	25Y 66 00	C			Y	0	0		0		P		Y	Y		
	80-120	hcl	05Y 72 00	25Y 66 00	C			Y	0	0	CH	5		P		Y	Y		
29	0-30	c	10YR42 00						2	0	FSST	3						Y	
	30-60	c	10YR53 00					Y	0	0		0		P		Y	Y		
	60-70	c	25Y 53 00	25Y 68 00	C			Y	0	0	CH	2		P		Y	Y		
	70-120	hcl	05Y 62 00	25Y 68 00	M			Y	0	0	CH	5		P		Y	Y		
30	0-30	c	10YR42 00						0	0		0						Y	
	30-60	c	25Y 62 00	25Y 66 00	C			Y	0	0		0		P		Y	Y		
	60-80	hcl	05Y 72 00	25Y 68 00	C			Y	0	0		0		P		Y			
	80-120	scl	05Y 72 00	25Y 68 00	C			Y	0	0	FSST	3		M				Y	
31	0-24	hcl	10YR42 00						0	0		0						Y	
	24-55	c	05Y 62 00	10YR56 00	C			Y	0	0		0		P		Y			
	55-90	c	05Y 72 00	10YR68 62	C			Y	0	0		0		P		Y			
32	0-30	hcl	10YR41 42						0	0	FSST	2							
	30-39	hcl	10YR41 42	10YR56 00	F				0	0		0		M					
	39-70	c	25Y 62 00	10YR68 71	M			Y	0	0		0		P		Y			

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	
33	0-26	c	10YR41 42						0	0	FSST	2						Y	
	26-40	c	25Y 53 00						0	0		0		M					
	40-80	c	25Y 62 00	10YR58 00	C			Y	0	0	FSST	5		P		Y			
34	0-24	hcl	10YR42 00						0	0		0							
	24-57	c	10YR61 00	10YR56 00	C			Y	0	0		0		P		Y			
	57-90	hcl	25Y 62 00	10YR68 71	M			Y	0	0	FSST	10		P		Y			
35	0-25	hcl	10YR42 32						0	0	FSST	2							
	25-60	c	25Y 52 00	10YR56 00	C			Y	0	0		0		P		Y			
	60-75	c	05Y 62 00	10YR58 00	C			Y	0	0		0		P		Y	Y		
	75-100	c	05GY61 00	10YR56 00	C			Y	0	0		0		P		Y	Y		
36	0-10	hcl	10YR42 00						0	0	FSST	2						Y	
	10-30	c	05Y 62 00	10YR58 00	C			Y	0	0		0		P		Y	Y		
	30-80	c	05Y 62 00	10YR68 71	C			Y	0	0	FSST	5		P		Y			
37	0-30	hcl	10YR42 00						0	0		0						Y	
	30-35	hcl	10YR42 00	10YR56 00	F				0	0		0		M					
	35-70	c	05Y 62 00	10YR68 72	M			Y	0	0		0		P		Y			
38	0-30	c	10YR42 00	10YR56 00	F				0	0	FSST	2							
	30-52	c	05Y 62 00	10YR56 62	C			Y	0	0		0		P		Y			
	52-80	c	05Y 62 72	10YR68 71	M			Y	0	0	FSST	5		P		Y			
39	0-25	hcl	10YR42 00						0	0		0							
	25-35	c	05Y 62 00						0	0		0		M					
	35-70	c	05Y 62 00	10YR56 00	C			Y	0	0		0		P		Y			
40	0-26	mcl	10YR42 00						0	0	FSST	2							
	26-70	c	25Y 62 00	10YR58 00	C			Y	0	0		0		P		Y			
41	0-29	mcl	10YR42 00						0	0	FSST	4							
	29-55	hcl	25Y 52 00	10YR56 00	C			Y	0	0		0		M					
	55-70	hcl	05Y 62 63	10YR58 61	C			Y	0	0	FSST	15		M					IMP 70, FSST
42	0-30	hcl	10YR42 00						0	0	FSST	2							
	30-70	c	25Y 52 00	10YR58 00	C			Y	0	0		0		P		Y			WATERTABLE 45
43	0-24	mcl	10YR42 00						0	0	FSST	2							
	24-55	c	25Y 52 00	10YR68 00	C			Y	0	0	FSST	5		P		Y			
	55-70	hcl	25Y 62 00	10YR68 00	C			Y	0	0	FSST	10		M		Y			IMP 70, FSST
44	0-28	mcl	10YR42 00						0	0	FSST	2							
	28-75	hcl	25Y 52 00	10YR56 00	C			Y	0	0	FSST	5		M					
	75-120	mcl	25Y 62 00	10YR58 00	C			Y	0	0	FSST	5		M					
45	0-27	hcl	25Y 42 00						1	0	FSST	2							
	27-55	hcl	05Y 62 00	25Y 66 00	F				0	0		0		M					
	55-95	hzcl	05Y 72 00	25Y 66 00	C			Y	0	0	FSST	3		P		Y			
	95-110	fsst	05Y 72 00						0	0		0		P					IMP 110, FSST

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	
46	0-30	hzcl	25Y 42 00						2	0	FSST	3							
	30-55	hcl	25Y 63 00						0	0	FSST	20		M					
	55-70	c	05Y 62 00	25Y 66 00	C			Y	0	0	FSST	4		P		Y			
	70-100	fsst	05Y 72 00						0	0		0		P					IMP 100, FSST
47	0-28	zc	25Y 42 00						0	0	FSST	2							
	28-65	c	05Y 52 00	25Y 66 00	C			Y	0	0		0		P		Y			
	65-120	c	05Y 62 00	25Y 66 00	C			Y	0	0		0		P		Y			
48	0-27	c	10YR32 00						0	0		0							
	27-43	c	25Y 53 00						0	0		0		M					
	43-80	c	25Y 53 00	10YR66 00	C			Y	0	0	FSST	10		P		Y			
	80-120	c	05Y 62 00	25Y 62 00	C			Y	0	0		0		P		Y	Y		
49	0-27	hzcl	25Y 42 00						2	0	FSST	4							
	27-60	c	25Y 63 00	25Y 66 00	C			Y	0	0		0		P		Y			
	60-80	zc	05Y 72 00	75YR56 00	C			Y	0	0		0		P		Y	Y		
50	0-32	mcl	10YR42 00						0	0	FSST	2							
	32-40	hcl	25Y 52 00	25Y 56 00	C			Y	0	0		0		M					
	40-70	c	25Y 62 00	25Y 68 00	C			Y	0	0		0		P		Y			
	70-95	scl	05Y 72 00	25Y 68 00	C			Y	0	0	FSST	5		M		Y			
	95-105	fsst	05Y 72 00						0	0		0		P					IMP 105, FSST
51	0-30	hcl	10YR42 00						2	0	FSST	3							
	30-50	hcl	25Y 53 00						0	0		0		M					
	50-75	c	05Y 62 00	25Y 66 00	C			Y	0	0		0		P		Y			
	75-90	scl	05Y 72 00	25Y 66 00	C			Y	0	0		0		M		Y			
	90-105	fsst	05Y 72 00						0	0		0		P					IMP 105, FSST
52	0-35	hcl	10YR42 00						0	0	FSST	3							
	35-50	hcl	25Y 62 00	25Y 66 00	F				0	0		0		M					
	50-90	c	05Y 62 00	25Y 66 00	C			Y	0	0		0		P		Y			
	90-100	hzcl	05Y 72 00	25Y 68 00	C			Y	0	0	FSST	5		P		Y			
	100-110	fsst	05Y 72 00						0	0		0		P					IMP 110, FSST
53	0-30	c	25Y 42 00						2	0	FSST	4							
	30-100	c	05Y 72 00	25Y 56 00	C			Y	0	0		0		P		Y	Y		
	100-110	fsst	05Y 72 00						0	0		0		P					IMP 110, FSST
54	0-30	c	25Y 42 00						0	0		0							
	30-60	c	25Y 62 00	25Y 66 00	C			Y	0	0		0		P		Y	Y		
	60-90	c	25Y 62 00	25Y 66 00	C			Y	0	0		0		P		Y	Y		
	90-120	c	25Y 62 00	25Y 66 00	C			Y	0	0	CH	3		P		Y	Y		
55	0-25	c	10YR32 00						0	0		0							
	25-50	c	25Y 52 00	25Y 56 00	C			Y	0	0		0		P		Y			
	50-120	c	05Y 62 00	25Y 66 00	C			Y	0	0		0		P		Y			

SAMPLE	DEPTH	TEXTURE	COLOUR	----MOTTLES----- COL	ABUN	CONT	PED COL.	GLEY	----STONES---- >2	>6	LITH	TOT	STRUCT/ CONSIST	SUBS STR	POR	IMP	SPL	CALC
56	0-25	c	25Y 31 00						0	0		0						Y
	25-80	c	05Y 62 00	10YR56 00	C			Y	0	0		0		P			Y	Y
	80-120	c	05Y 62 00	25Y 68 00	C			Y	0	0	CH	7		P			Y	Y
57	0-25	c	25Y 31 00						0	0		0						
	25-60	c	25Y 52 00	25Y 66 00	C			Y	0	0		0		P			Y	Y
	60-80	c	25Y 62 00	25Y 68 00	C			Y	0	0	CH	5		P			Y	Y
	80-120	c	25Y 72 00	25Y 68 00	C			Y	0	0	CH	15		P			Y	Y
58	0-25	c	25Y 32 00						0	0		0						Y
	25-60	c	25Y 52 00	25Y 56 00	C			Y	0	0		0		P			Y	Y
	60-80	hcl	05Y 62 00	25Y 58 00	C			Y	0	0	CH	15		P			Y	Y
	80-120	c	05Y 72 00	25Y 66 00	C			Y	0	0		0		P			Y	Y
59	0-20	hzcl	25Y 31 00						0	0		0						Y
	20-50	c	25Y 52 00	25Y 66 00	C			Y	0	0		0		P			Y	Y
	50-120	hcl	05Y 62 00	10YR68 00	C			Y	0	0	CH	8		P			Y	Y
60	0-25	c	25Y 32 00						0	0		0						Y
	25-60	c	25Y 62 00	25Y 66 00	C			Y	0	0		0		P			Y	Y
	60-120	c	05Y 72 00	25Y 68 00	C			Y	0	0	CH	5		P			Y	Y
61	0-30	c	10YR42 00						0	0		0						
	30-60	hc	25Y 52 00	10YR66 00	C			Y	0	0		0		P			Y	
	60-90	c	05Y 62 00	25Y 66 00	C			Y	0	0	CH	3		P			Y	Y
	90-120	c	05Y 72 00	25Y 66 00	C			Y	0	0	CH	10		P			Y	Y
62	0-30	c	10YR42 00						0	0		0						
	30-60	c	25Y 53 00	25Y 66 00	C			Y	0	0		0		P			Y	
	60-80	c	05Y 53 00	25Y 56 00	C			Y	0	0		0		P			Y	
	80-120	hcl	05Y 72 00	25Y 56 00	C			Y	0	0	CH	5		P			Y	Y
63	0-27	c	25Y 42 00						0	0		0						
	27-60	c	25Y 53 00	25Y 56 00	C			Y	0	0		0		P			Y	
	60-120	c	25Y 63 00	25Y 68 00	C			Y	0	0	CH	5		P			Y	Y