AGRICULTURAL LAND CLASSIFICATION

Walshford to Dishforth, North Yorkshire

Proposed A1(M) Motorway

Report prepared for the

DEPARTMENT OF TRANSPORT

Yorkshire and Humberside

Regional Office

MAFF

Leeds Regional Office

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a13a1(m).mtw

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AGRICULTURAL LAND CLASSIFICATION REPORT

A1(M) WALSHFORD-DISHFORTH MOTORWAY

1. Introduction and Site Characteristics

1.1 Location

The proposed conversion of the A1 to a motorway requires small amounts of agricultural land to accommodate improved alignments and new access roads. This land consists of a strip varying in width from about 50 m to 100 m adjoining and running parallel to the present road, mainly on its western side. The route runs from Walshford (NGR SE 418538) in the south to the A168 junction near Dishforth (NGR SE 370730) in the north, a distance of approximately 20 km.

1.2 Survey Methods

To determine the quality of the land an Agricultural Land Classification survey was carried out in December 1990. Soils were examined in a corridor at least 100 m wide using hand auger borings to a depth of 1 m at intervals of 100 mm along the route in parallel traverses 50 m apart. During the survey the results of previous work along the A1 were checked and included within the final maps.

All assessments were made using the methods described in "Agricultural Land Classification of England and Wales: Revised Guidelines and Criteria for Grading the Quality of Agricultural Land" (MAFF 1988).

Climate and Relief

To take account of variations in climate in the 20 km between Walshford and Dishforth and their possible effect on ALC grade, climatic data was compiled at 4 points along the route. The salient parameters are tabulated below:-

	Average Annual Rainfall (mm)	Accumulated Temperature above 0°C (Jan-June day °C)	Field Capacity Days	Moisture (mm) wheat	Deficit (mm) potatoes
Walshford (SE411530)	679	1373	163	101	90
Allerton (SE411570)	674	1360	160	100	90
Minskip (SE399640)	667	1334	154	99	88
Dishforth (SE380710)	648	1354	150	103	94

The above combination of rainfall and accumulated temperature indicate that there is no overall climatic limitation on ALC grade at any point along the route. The relatively low rainfall coupled with the indicated soil moisture deficits is, however, likely to make droughtiness a limiting factor on the lighter soils which are widespread in the area.

Topography along the route is gently to moderately undulating with altitude ranging from about 30 m aod around Walshford and Boroughbridge to about 65 m aod near Arkendale.

1.2 Land Use

Most of the land is in an arable rotation, the principal crops being cereals, sugar beet and potatoes. Permanent and ley grassland is of relatively minor importance. Non agricultural and urban land consists of a few small areas of woodland, farm access tracks and existing surfaced roads.

1.3 Geology and Soils

Between Walshford and Dishforth the route runs entirely through drift deposits which form a thick cover over the underlying solid strata which consists of red Triassic sandstone. From Walshford to Boroughbridge the drift is variable and the road passes through boulder clay, alluvium and glacial sands and gravels. North of Boroughbridge, however, the route is mainly through sand and gravel deposits.

Soils show similar variations with the lightest freely drained (Wetness Class I) somewhat droughty land being most widespread between Dishforth and Boroughbridge. In the more variable country south of Boroughbridge well and moderately well drained (Wetness Classes I and II) soils still predominate as much of the boulder clay is relatively coarse textured, often with sandy loam topsoils over sandy clay loam subsoils. Imperfectly drained soils (Wetness Class III), along with a few small patches of poorly drained (Wetness Class IV) land, are restricted mainly to lower lying areas of heavier fine loamy boulder clay and localised areas of clayey alluvium.

2. AGRICULTURAL LAND CLASSIFICATION

The ALC grades occurring on the land to be taken by the proposed motorway are as shown below. (The 1/10000 scale maps produced with this report show land grades along the entire 100 m+ survey corridor which covers a larger area). Maps showing these land grades imposed onto the consulting engineers drawings have been produced at a scale of 1/2500 and supplied separately to the Department of Transport's agricultural consultants. The statistics produced below relate to these 1/2500 maps only.

Table 1 ALC Grades of land requires for A1(M) and associated roadworks

Grade	Hectares	Percentage of Total Roadworks	
1	2.64	1.7%	
2	57.95	36.6%	
3a	27.86	17.5%	
3b	9.34	5.9%	
4	0.38	0.2%	
Non Agricultural	1.21	0.8%)	1.5%
Farm Woodland	1.14	0.7%)	
Agricultural Buildings	0.43	0.3%	
Urban	57.37	36.2%	
Open Water	0.20	0.1%	
Total	158.52	100	

Grade 1

Land of this grade is restricted to small areas of deep well drained sandy loam, near Boroughbridge. Moisture reserves in soils of this type are adequate except in very dry years when slight droughtiness may be a problem on farms without irrigation facilities.

Grade 2

Grade 2 land is widespread along the whole route between Walshford and Dishforth. Most soils in the grade have sandy loam or medium clay loam

topsoils over similar or lighter subsoils. Loamy sand subsoils are very common in the large area of sand and gravel country north of Boroughbridge.

The soils are predominantly well drained or moderately well drained (Wetness Classes I and II), but are limited to Grade 2 by slight droughtiness which, without irrigation, is likely to restrict crop yields in most years.

Subgrade 3a

This subgrade is common, but widespread in only a few localities. These are north of the A59 junction, north and south of the York-Harrogate railway and opposite the northern end of Dishforth airfield. Profiles consist of either sandy loam or medium clay loam topsoil over similar or heavier slowly permeable subsoils which are restricted to Subgrade 3a by imperfect drainage (Wetness Class III), or sandy loams over loamy sands restricted to this subgrade by droughtiness, especially in areas where stone content is significant.

Subgrade 3b

Land in this subgrade is widespread only in the area east of Arkendale. Elsewhere it is restricted to small localised patches. In most places soils in this subgrade consist of medium or heavy clay loam topsoils over strongly mottled slowly permeable heavy clay loam or clay subsoils. Soils of this type, which are common around Arkendale, are poorly drained (Wetness Class IV) and limited to subgrade 3b by wetness and workability problems. In a few localities soils consist of strong coarse textured materials which are limited to subgrade 3b by droughtiness.

Grade 4

The two small areas of grade 4 land just south of Boroughbridge are restricted to the grade by slopes of around 14°, or by ground irregularity.

Non Agricultural

Land in this category includes woodland, a caravan park and other small derelict areas.

Farm Buildings

Buildings used for agricultural purposes fall within this category.

Urban

This category consists of roads associated with the route along with buildings and other areas of urbanised land.

Open Water

The open water category consists of the Rivers Ure and Tutt near Boroughbridge.

Resource Planning Group
Leeds Regional Office
January 1991

3. SCHEDULE OF SOIL AUGER BORINGS

Glossary

s	Sand
fs	fine sand
lfs	loamy fine sand
ls	loamy sand
lms	loamy medium sand
fsl	fine sandy loam
mmsl	medium clay loam
sl	sandy loam
fszl	fine sandy site loam
scl	sandy clay loam
mcl	medium clay loam
hcl	heavy clay loam
mzcl	medium silty clay loam
hzcl	heavy silty clay loam
c	clay
zl	silty clay

All soil colours are from 'Munsell Soil Color Charts'

NB Some borings falling on the site boundary, on very steep slopes, or on farm buildings have been omitted from the following list. Other borings not in the first list have been taken from other recent work in the same areas. Details of these are given separately.

program:alc034 AUGER BORINGS LIST 24/01/91 A1 WALSHFORD-DISHFORTH

BORING	WET CLASS	TEXTURE	DEPTH COLOUR	MOTTLES
1	4	msl	0-40 10YR32 00	
		mcl	40-10010YR43 00	common 10YR52 00
		msl	100-35 10YR32 00	
		mcl	35-10010YR52 00	many 10YR46 00
2	4	mcl	0-40 10YR32 00	
		hcl	40-10075YR44 00	common 10YR52 00
3	3	mcl	0-30 10YR32 00	
		scl	30-50 10YR44 00	common 10YR53 00
		hcl	50-10010YR43 00	common 10YR52 46
4	4	msl	0-40 10YR32 00	
		mcl	40-10010YR34 00	
5	1	msl	0-30 10YR33 00	
		msl	30-50 10YR46 00	few 10YR53 00
		lms	50-10010YR46 00	few 10YR53 00
6	3	msl	0-30 10YR32 00	
		lms	30-70 10YR44 00	few 10YR46 00
		hcl	70-10075YR44 00	common 10YR52 00
7	1	msl	0-30 10YR32 00	
		msl	30-70 10YR54 00	common 10YR46 00
		lms	70-10010YR54 00	
8	1	msl	0-30 10YR32 00	
		msl	30-50 10YR44 00	common 10YR46 00
		lms	50-80 10YR44 00	many 10YR46 00
		hcl	80-10010YR44 00	many 10YR46 52
10	1	msl	0-30 10YR32 00	
		scl	30-10010YR44 00	many 10YR46 00
11	3	mcl	0-30 10YR32 00	
		msl	30-50 10YR44 00	common 10YR46 52
		hcl	50-10010YR44 00	many 10YR52 46
12	3	fsl	0-30 10YR32 00	
		scl	30-50 10YR44 00	common 10YR52 46
		hcl	50-10010YR44 00	many 10YR52 46
13	4	msl	0-35 10YR32 00	
		mcl	35-10010YR46 00	common 10YR52 00
14	1	msl	0-30 10YR32 00	
		scl	30-65 10YR44 00	common 10YR53 46
		scl	65-10010YR43 00	many 10YR52 46

BORING	WET CLASS	TEXTURE	DEPTH COLOUR	MOTTLES
15	3	fsl	0-30 10YR32 00	
		msl	30-65 10YR44 00	common 10YR52 46
		scl	65-10010YR44 00	many 10YR52 46
16	4	msl	0-35 10YR32 00	
		mcl	35-10010YR52 00	many 10YR46 00
17	0	msl	0-45 10YR32 00	
		msl	45-35510YR32 00	
18	0	msl	0-35 10YR32 00	
		msl	35-80 10YR43 00	common 10YR56 00
19	1	msl	0-55 10YR32 00	common 10YR56 00
		msl	55-10010YR56 00	common 10YR66 00
20	1	msl	0-40 10YR32 00	common 10YR44 00
		scl	40-10010YR44 00	common 10YR56 00
21	3	mcl	0-35 10YR32 00	
		hcl	35-10010YR33 00	common 10YR56 00
22	3	mcl	0-30 10YR32 00	
		hcl	30-60 10YR56 00	common 10YR56 00
		c	60-10010YR54 00	common 10YR65 00
23	2	scl	0-30 10YR32 00	
		scl	30-75 10YR46 00	common 10YR62 00
		hcl	75-10010YR56 00	many 10YR71 00
24	4	mcl	0-30 10YR33 00	
		hcl	30-10010YR53 00	many 10YR56 71
25	0	msl	0-30 10YR42 00	
		lms	30-70 10YR68 00	
		ms	70-10010YR76 00	
26	1	msl	0-30 10YR32 00	
		scl	30-60 10YR56 00	
		lms	60-10010YR66 00	few 10YR52 00
28	1	msl	0-30 10YR33 00	
		msl	30-80 10YR68 00	
		lms	80-10010YR52 00	
29	4	msl	0-30 10YR33 00	
		hcl	30-10010YR66 00	many 10YR71 00

program:alc034 AUGER BORINGS LIST 24/01/91 A1 WALSHFORD-DISHFORTH

BORING	WET CLASS	TEXTURE	DEPTH COLOUR	MOTTLES
30	1	msl	0-30 10YR33 00	
		scl	30-60 10YR68 00	few 10YR53 00
		lms	60-10010YR68 00	common 10YR51 00
31	3	mcl	0-30 10YR42 00	
		hcl	30-65 10YR53 00	common 10YR51 00
		c	65-10010YR62 00	many 10YR71 00
36	3	mcl	0-30 10YR32 00	
		hcl	30-50 10YR44 00	few 10YR46 00
		c	50-10010YR33 00	common 75YR44 00
37	1	msl	0-35 10YR32 00	
		msl	35-50 10YR43 00	
		lms	50-10010YR53 00	common 10YR46 00
38	1	msl	0-35 10YR32 00	
		mcl	35-10010YR43 00	
39	3	mcl	0-30 10YR32 00	
		mcl	30-65 10YR43 00	
		hcl	65-10010YR43 00	common 10YR53 00
40	1	mcl	0-30 10YR33 00	
		msl	30-10010YR43 00	common 10YR53 00
41	4	mcl	0-25 10YR33 00	
		hcl	25-10010YR56 00	common 10YR52 00
42	4	mcl	0-30 10YR33 00	
		hcl	30-10010YR54 00	common 10YR56 00
43	4	mcl	0-30 10YR33 00	
		hcl	30-10010YR54 00	common 10YR52 46
44	4	mcl	0-30 10YR33 00	
		hcl	30-10010YR54 00	common 10YR52 46
45	4	mcl	0-30 10YR33 00	
		hcl	30-10010YR54 00	common 10YR52 46
46	4	mcl	0-30 10YR33 00	
		hcl	30-10010YR53 00	common 10YR52 46
47	4	mcl	0-30 10YR33 00	
		hcl	30-10010YR43 00	common 10YR53 46
48	2	hcl	0-45 10YR33 00	
		cl	45-10010YR56 00	common 10YR56 00

program:alc034 AUGER BORINGS LIST 24/01/91 A1 WALSHFORD-DISHFORTH

BORING	WET CLASS	TEXTURE	DEPTH COLOUR	MOTTLES
49	4	mcl	0-35 10YR32 00	
		hcl	35-10010YR44 00	common 10YR56 00
50	1	mcl	0-30 10YR33 00	
51	0	mcl	0-30 10YR32 00	
		hcl	30-10010YR44 00	common 10YR56 00
53	1	scl	0-30 10YR43 00	
		msl	30-70 10YR54 00	
		hcl	70-10010YR66 00	common 10YR52 00
54	1	msl	0-30 10YR43 00	
		msl	30-10010YR54 00	
55	1	scl	0-30 10YR42 00	
		hcl	30-10010YR54 00	
56	3	scl	0-30 10YR42 00	
		msl	30-70 10YR54 00	
		hcl	70-10010YR54 00	common 10YR66 00
57	2	msl	0-30 10YR42 00	
		scl	30-80 10YR54 00	
		hcl	80-10010YR54 00	common 10YR68 00
58	1	msl	0-30 10YR33 00	
		msl	30-70 10YR54 00	
		lfs	70-10010YR53 00	
59	3	fsl	0-30 10YR42 00	
		scl	30-70 10YR54 00	
		hcl	70-10010YR56 00	10YR68 00
60	1	msl	0-30 10YR33 00	
		scl	30-65 10YR54 00	common 10YR68 00
		hcl	65-10010YR56 00	10YR68 00
61	1	msl	0-35 10YR42 00	
		msl	35-80 10YR53 00	
		lms	80-10010YR52 00	
73	1	fsl	0-35 10YR32 00	
		lfs	35-85 10YR52 00	few 10YR46 00
		scl	85-10010YR56 00	common 10YR68 00
75	1	scl	0-30 10YR32 00	
		scl	30-70 10YR53 00	common 10YR66 00
		hcl	70-10010YR54 00	common 10YR68 00

program:alc034 AUGER BORINGS LIST 24/01/91 A1 WALSHFORD-DISHFORTH

BORING	WET CLASS	TEXTURE	DEPTH COLOUR	MOTTLES
77	3	mcl	0-25 10YR42 00	
		hcl	25-60 1YR54 000	
		hcl	60-10010YR66 00	common 10YR52 00
79	1	msl	0-30 10YR42 00	
		msl	30-10010YR54 00	
80	1	mcl	0-35 10YR32 00	
		mcl	35-75 10YR33 00	common 10YR44 00
		scl	75-10010YR54 00	common 10YR56 00
81	1	mcl	0-30 10YR33 00	
		scl	30-10010YR43 00	common 10YR56 00
83	1	scl	0-45 10YR33 00	
		scl	45-10010YR54 00	common 10YR56 00
86	4	mcl	0-30 10YR32 00	
		hcl	30-10010YR34 00	common 10YR46 00
87	4	mcl	0-35 10YR32 00	
		hcl	35-10010YR44 00	common 10YR46 00
102	3	msl	0-40 10YR42 00	
		fsl	40-60 10YR44 00	
		hcl	60-10010YR56 00	many 10YR71 00
103	1	fsl	0-30 10YR42 00	
		fsl	30-80 10YR56 00	
		hcl	80-10010YR52 00	many 10YR61 00
104	4	scl	0-30 10YR33 00	
		hcl	30-10010YR66 00	many 10YR61 00
105	4	scl	0-30 10YR33 00	
		hcl	30-10010YR41 00	many 10YR68 00
106	1	fsl	0-30 10YR42 00	
		fsl	30-10010YR54 00	
107	3	fsl	0-30 10YR42 00	
		fsl	30-70 10YR54 00	
		hcl	70-10010YR53 00	many 10YR51 66
108	3	fsl	0-30 10YR42 00	
		fsl	30-55 10YR54 00	
		c	55-10010YR76 00	many 10YR72 00

program:alc034 AUGER BORINGS LIST 24/01/91 A1 WALSHFORD-DISHFORTH

BORING	WET CLASS	TEXTURE	DEPTH COLOUR	MOTTLES
109	4	fsl	0-20 10YR32 00	
		hcl	20-10010YR62 00	many 10YR56 00
110	1	fsl	0-30 10YR32 00	
		fsl	30-10010YR54 00	
111	3	scl	0-45 10YR32 00	
		hcl	45-10075YR46 00	many 10YR72 00
112	0	fsl	0-30 10YR32 00	
		fsl	30-65 10YR54 00	
		hcl	65-10010YR56 00	many 10YR68 00
113	1	msl	0-25 10YR33 00	
		msl	25-60 75YR46 00	
		scl	60-10075YR46 00	common 10YR56 00
114	1	msl	0-30 10YR33 00	
		msl	30-10010YR44 00	few 10YR52 00
114A	1	msl	0-30 10YR33 00	
		msl	30-50 10YR44 00	
		mcl	50-10075YR44 00	few 75YR56 00
115	2	msl	0-30 10YR33 00	
		msl	30-60 75YR46 00	
		hcl	60-10075YR54 00	common 75YR58 00
115A	1	msl	0-30 10YR33 00	
		msl	30-10010YR54 00	common 05YR46 00
117	0	msl	0-30 10YR33 00	
		msl	30-55 10YR53 00	common
		sclsl	55-10010YR53 00	common 75YR56 00
117A	1	msl	0-30 10YR32 00	
		msl	30-10010YR43 00	
118	3	msl	0-30 10YR33 00	
		mcl	30-50 10YR52 00	common 75YR56 00
		hcl	50-10010YR52 00	common 75YR56 00
119	1	msl	0-30 10YR33 00	
		msl	30-10010YR43 00	
119A	1	lms	0-30 10YR33 00	
		lms	30-10010YR43 00	
123	3	mzcl	0-30 10YR32 00	
		hcl	30-50 10YR53 00	many 10YR61 56
		zc	50-10010YR62 00	common 10YR68 00

program:alc034 AUGER BORINGS LIST 24/01/91 A1 WALSHFORD-DISHFORTH

BORING	WET CLASS	TEXTURE	DEPTH COLOUR	MOTTLES
124	3	mcl	0-30 10YR32 00	
		mcl	30-65 10YR54 00	
		hcl	65-10010YR63 00	many 10YR71 00
124A	0	msl	0-30 10YR32 00	
		msl	30-65 10YR44 00	
		ms	65-10010YR53 00	
124B	2	msl	0-30 10YR32 00	
		scl	30-70 10YR44 00	
		c	70-10010YR62 00	common 10YR71 00
125	3	mcl	0-30 10YR32 00	
		mcl	30-60 10YR44 00	
		zc	60-10010YR72 00	common 10YR68 00
126	0	msl	0-40 10YR32 00	
		msl	40-10010YR44 00	
127	4	msl	0-30 10YR32 00	
		scl	30-45 10YR44 00	few 10YR56 00
		c	45-10010YR76 00	many 10YR72 00
129	4	mzcl	0-35 10YR32 00	
		zc	35-10075YR42 00	
130	1	msl	0-30 10YR33 00	
		msl	30-10075YR44 00	
131	0	msl	0-30 10YR32 00	
		msl	30-45 10YR54 00	
		hcl	45-10010YR53 00	common 75YR56 00
132	3	mcl	0-30 10YR32 00	
		msl	30-30 10YR32 00	
		mcl	30-45 10YR54 00	
		scl	45-60 10YR44 00	
		hcl c	60-10075YU54 00	common 75YR52 00
		hcl	100-10010YR54 00	
133	3	mcl	0-25 10YR32 00	
		mcl	25-45 10YR54 00	
		mcl	45-10010YR53 00	common 75YR56 00
133A	0	msl	0-30 10YR32 00	
		msl	30-65 10YR44 00	
		lms	65-10010YR56 00	
133B	3	mcl	0-30 10YR32 00	
		hcl	30-50 10YR54 00	common 10YR66 00
		hcl	50-10010YR68 00	many 10YR62 00

program:alc034 AUGER BORINGS LIST 24/01/91 A1 WALSHFORD-DISHFORTH

BORING	WET CLASS	TEXTURE	DEPTH COLOUR	MOTTLES
133C	4	mcl	0-30 10YR32 00	
		c	30-10010YR68 00	many 10YR72 00
134	1	msl	0-30 10YR32 00	
		msl	30-10010YR44 00	
135	3	mcl	0-25 10YR33 00	
		mcl	25-45 10YR54 00	few 05YR46 00
		c	45-10075YR42 00	
136	1	msl	0-25 10YR33 00	
		msl	25-60 75YR44 00	
		scl	60-10075YR44 00	
137		msl	0-30 10YR33 00	
		msl	30-10075YR44 00	
138	1	msl	0-25 10YR33 00	
		msl	25-10010YR44 00	
139	1	msl	0-25 10YR33 00	
		msl	25-55 10YR44 00	
		scl	55-10010YR44 00	
140	1	fsl	0-30 10YR32 00	
		fszl	30-45 10YR33 00	
		fszl	45-10010YR53 00	common 05YR46 00
142	1	msl	0-30 10YR32 00	
		mcl	30-75 10YR44 00	few 10YR53 00
		scl	75-10010YR44 00	few 10YR53 00
143	1	msl	0-30 10YR33 00	
		msl	30-10010YR44 00	few 10YR53 00
144	1	fsl	0-30 10YR33 00	
		fsl	30-10010YR46 00	
145	1	msl	0-30 10YR32 00	
		fsl	30-10010YR44 00	common 10YR53 46
146A	0	msl	0-30 10YR32 00	
		msl	30-10010YR54 00	
146B	0	msl	0-30 10YR32 00	
		msl	30-10010YR54 00	
147	1	mcl	0-30 10YR33 00	
		zcl	30-10010YR44 00	few 10YR53 00

program:alc034 AUGER BORINGS LIST 24/01/91 A1 WALSHFORD-DISHFORTH

BORING	WET CLASS	TEXTURE	DEPTH COLOUR	MOTTLES
148	3	msl	0-30 10YR32 00	
		msl	30-60 10YR43 00	few 10YR53 00
		mcl	60-10010YR43 00	few 10YR53 00
149	1	msl	0-30 10YR32 00	
		msl	30-10010YR43 00	few 10YR53 00
150	1	msl	0-30 10YR32 00	
		lms	30-10010YR43 00	few 10YR53 00
151	1	msl	0-30 10YR32 00	
		msl	30-10010YR53 00	few 10YR46 00
152	1	msl	0-30 10YR32 00	
		msl	30-10010YR43 00	few 10YR46 00
153	0	lfs	0-30 10YR33 00	
		scl	30-10010YR46 00	
154	0	lfs	0-33 10YR33 00	
		lfs	33-10010YR56 00	
155	0	lfs	0-30 10YR33 00	
		fsl	30-10010YR56 00	
156	0	lfs	0-35 10YR33 00	
		scl	35-10010YR56 00	
157	0	lfs	0-30 10YR33 00	
		s	30-0 R56 00100	
158	0	lfs	0-40 10YR33 00	
		lfs	40-10010YR54 00	
159	0	lfs	0-40 10YR32 00	
		lfs	40-10010YR44 00	
160	0	lfs	0-35 10YR33 00	
		lfs	35-10010YR54 00	
161	0	lfs	0-40 10YR32 00	
		lfs	40-10010YR54 00	
162	0	msl	0-35 10YR33 00	
		scl	35-10010YR56 00	
163	1	fsl	0-30 10YR32 00	
		fsl	30-10010YR46 00	
164	0	fsl	0-45 10YR33 00	

program:alc034 AUGER BORINGS LIST 24/01/91 A1 WALSHFORD-DISHFORTH

BORING	WET CLASS	TEXTURE	DEPTH COLOUR	MOTTLES
165		msl	0-30 10YR32 00	
		msl	30-80 10YR56 00	
		scl	80-10010YR66 00	
166	0	msl	0-30 10YR33 00	
		lms	30-10010YR54 00	
179	0	lfs	0-30 10YR32 00	
		lfs	30-60 10YR54 00	
		fs	60-10010YR66 00	
180	0	lfs	0-30 10YR32 00	
		scl	30-10010YR54 00	
181	0	fls	0-30 10YR32 00	
		lfs	30-10010YR56 00	
182	0	lfs	0-30 10YR42 00	
		lfs	30-10010YR53 00	
183	0	lfs	0-30 10YR42 00	
		lfs	30-10010YR44 00	
184	0	lfs	0-30 10YR42 00	
		lfs	30-10010YR56 00	
185	0	lfs	0-35 10YR42 00	
		lfs	35-10010YR54 00	
186	0	lfs	0-40 10YR42 00	
		lfs	40-10010YR54 00	
187	0	lfs	0-30 10YR42 00	
		scl	30-70 10YR46 00	
188	0	lfs	0-30 10YR42 00	
		lfs	30-10010YR54 00	
189	0	lfs	0-35 10YR42 00	
		fsl	35-10010YR44 00	
190	0	lfs	0-30 10YR42 00	
		lfs	30-10010YR44 00	
191	0	lfs	0-30 10YR42 00	
		lfs	30-10010YR54 00	
192	1	msl	0-25 10YR32 00	
		msl	25-60 10YR44 00	few 10YR53 00
		scl	60-10010YR44 00	common 10YR53 00

program:alc034 AUGER BORINGS LIST 24/01/91 A1 WALSHFORD-DISHFORTH

BORING	WET CLASS	TEXTURE	DEPTH COLOUR	MOTTLES
193	1	msl	0-25 10YR32 00	
		msl	25-10010YR53 00	few 10YR44 00
194	1	msl	0-25 10YR32 00	
		scl	25-80 10YR44 00	
		lms	80-10010YR53 00	
195	1	msl	0-25 10YR32 00	
		mcl 1	25-0 0YR44 001	YR53 00F
196	1	msl	0-25 10YR32 00	
		mcl	25-10010YR44 00	
197	1	msl	0-25 10YR32 00	
		msl	25-10010YR44 00	
198	1	msl	0-25 10YR32 00	
		lms	25-10010YR53 00	
199	1	msl	0-25 10YR32 00	
		lms	25-10010YR46 00	
200	1	msl	0-25 10YR32 00	
		lms	25-55 10YR53 00	
		scl	55-10010YR44 00	
201	2	msl	0-25 10YR32 00	
		lms	25-80 10YR46 00	
		c	80-10010YR43 00	
202	1	msl	0-25 10YR32 00	
		lms	25-65 10YR53 00	
		msl	65-10010YR46 00	
203	1	msl	0-25 10YR32 00	
		lms	25-10010YR46 00	
204	1	msl	0-25 10YR32 00	
		scl	25-10010YR44 00	
205	0	lms	0-30 10YR33 00	
		msl	30-10010YR54 00	
206	0	msl	0-30 10YR33 00	
		scl	30-10010YR56 00	
207	0	msl	0-30 10YR33 00	
		lms	30-10010YR53 00	
208	0	msl	0-30 10YR33 00	
		msl	30-60 10YR44 00	
		lms	60-10010YR74 00	

program:alc034 AUGER BORINGS LIST 24/01/91 A1 WALSHFORD-DISHFORTH

BORING	WET CLASS	TEXTURE	DEPTH COLOUR	MOTTLES
209	0	msl	0-30 10YR32 00	
		scl	30-10010YR54 00	
210	0	msl	0-30 10YR33 00	
		msl	30-10010YR53 00	
211	0	msl	0-30 10YR32 00	
		msl	30-55 10YR54 00	
		ms	55-10010YR64 00	
217	0	msl	0-40 10YR33 00	
		lms	40-10010YR46 00	
219	0	msl	0-30 10YR33 00	
		msl	30-10010YR44 00	

A1 WALSHFORD-DISHFORTH

Auger Borings from other surveys

Boring	Texture	Depth (cm)	Colour	Mottles
34a	fsl	0-35	10YR4/3	
		35-100	10YR5/6	
34b	msl	0-30	10YR3/3	
	msl	30-50	10YR5/6	Common faint ochreous
	ms	50-70	75YR6/4	
	scl	70-85	10YR5/6	Common faint ochreous
	fsl	85-100	10YR4/4	
34c	scl	0-30	10YR3/3	
	msl	30-55	10YR4/3	Common distinct grey
	msl	55-100	10YR4/2	
34d	scl	0-30	10YR3/3	
	msl	30-50	10YR4/7	Few faint ochreous
34e	fsl	0-30	10YR3/3	
	mls	30-60	10YR4/4	Common distinct grey
34f	msl	0-30	10YR4/2	
	msl	30-45	10YR5/4	
	scl	45-65	10YR5/1	Common distinct ochreous and grey
34g	mcl	0-30	10YR4/2	Few faint ochreous
	c	30-100	10YR4/3	Many distinct grey
34h	fsl	0-30	10YR4/2	
	msl	30-40	10YR4/4	
34i	fsl	0-30	10YR4/2	
34j	fsl	0-35	10YR4/3	
	fsl	35-50	10YR4/4	Few faint ochreous
	lms	50-65	10YR5/8	Few faint ochreous
34k	fsl	0-30	10YR4/2	
	fsl	30-36	10YR4/4	
34l	fsl	0-30	10YR4/2	
	msl	30-50	10YR4/4	Few ochreous
	c	50-80	10YR5/2	Many distinct
34m	fsl	0-37	10YR4/3	
	scl	37-80	10YR5/4	Many distinct ochreous and grey

Boring	Texture	Depth (cm)	Colour	Mottles
34n	fsl	0-30	10YR4/2	
	fsl	30-65	10YR4/4	Common faint grey
	scl	65-90	10YR5/8	
	c	90-100	10YR5/2	
34o	msl	0-30	10YR4/2	
	msl	30-65	10YR4/4	
	msl	65-85	10YR5/8	
	c	85-100	10YR5/2	Many distinct
34p	fsl	0-35	10YR3/3	
	msl	35-60	10YR5/6	Common distinct ochreous
34q	msl	0-30	10YR4/3	
	msl	30-45	10YR4/4	
34r	msl	0-30	10YR4/3	
	msl	30-45	10YR4/4	
34s	fsl	0-30	10YR3/3	Few faint ochreous
	fsl	30-50	10YR4/3	
34t	fsl	0-30	10YR3/3	
	fsl	30-45	10YR4/3	
34u	fsl	0-35	10YR3/3	
	msl	35-55	75YR4/4	
34v	msl	0-35	10YR3/3	
	msl	35-55	10YR4/4	
34w	fsl	0-35	10YR3/3	
	mcl	35-60	75YR4/4	
34x	msl	0-35	10YR4/4	
	msl	35-60	10YR4/3	
34y	scl	0-30	10YR4/3	
	scl	30-45	10YR4/3	
	msl	45-80	10YR4/4	
	cs	80-100	10YR4/6	
34z	msl	0-30	10YR3/3	
	msl	30-60	10YR4/3	
	scl	60-100	10YR4/3	

Boring	Texture	Depth (cm)	Mottles
35	scl	0-35	
	cl	35-50	
	cl	50-80	Few faint grey and ochreous
52	fszl	0-20	
	sl	20-37	
62	sl	0-27	
	sl	27-45	
	scl	45-80	
63	sl	0-40	
	sl	40-80	
64	sl/ls	0-35	
	lfs	35-80	
65	sl	0-50	
	sl	50-80	Few distinct ochreous and grey
66	sl	0-35	
	fsl	35-55	
	fsl	55-80	Common, distinct, ochreous and grey
67	sl	0-35	
	scl	35-80	
68	sl	0-15	
	scl	15-30	
	sl	30-45	
	sl	45-80	
69	sl	0-30	
	scl	30-55	Common distinct ochreous and grey
	ls	55-80	Overall grey
70	sl	0-31	
	scl	31-45	Few faint ochreous
	scl	45-80	Common distinct ochreous
71	sl	0-31	
	scl	31-80	Common distinct ochreous and grey
72	fsl	0-40	
	scl	40-60	Common distinct ochreous
	scl	60-80	Many distinct ochreous
74	scl	0-25	
	scl	25-30	Few distinct ochreous
	cl	30-60	Common distinct ochreous
76	sl	0-35	
	sl	35-55	
	sl	55-80	

Boring	Texture	Depth (cm)	Mottles
78	sl	0-30	
	sl	30-80	
82	scl	0-30	
	scl	30-80	Few distinct ochreous
84	fsl	0-40	
	fsl	40-50	Common distinct ochreous and grey
	sl	50-80	Many distinct ochreous and grey
85	fsl	0-28	
	fsl	0-45	Common distinct ochreous and grey
	fsl	45-80	Many distinct ochreous and grey
88	sl	0-30	
	sl	30-60	
	scl	60-65	
	s	65-70	
	sl	70-88	
89	sl	0-26	
	sl	26-70	
	ls	70-100	
90	sl	0-26	
	sl	26-55	
91	sl	0-30	
	sl	30-85	
	ls	85-100	
92	sl	0-25	
	s	25-100	
93	scl	0-25	
	scl	25-75	Many distinct ochreous and grey
	sl	75-100	Many distinct ochreous and grey
94	sl	0-40	
	sl	40-60	
	scl	60-100	Many distinct ochreous
95	sl	0-35	
	sl	35-50	Many distinct ochreous and grey
	scl	50-100	Many distinct ochreous and grey
96	sl	0-38	
	sl	38-60	
	scl	60-100	Many faint ochreous and grey

Boring	Texture	Depth (cm)	Mottles
97	fszl	0-35	
	scl	35-50	
	scl	50-70	Few distinct ochreous
98	sl	0-30	
	sl	30-50	
	sl	50-60	Few distinct ochreous and grey
	sl	60-70	Common distinct ochreous and grey
99	scl	0-30	
	hcl	30-45	Common distinct ochreous and grey
	hcl	45-70	Common distinct ochreous and grey
100	sl	0-35	
	sl	35-50	
	sl	50-80	Few distinct ochreous
101	sl	0-29	
	sl	29-50	
	cl	50-70	Common distinct ochreous and grey
128	scl	0-24	
	scl	24-32	
	scl	32-80	
167	ls	0-21	
	ls	21-42	
	s	42-100	
168	sl	0-22	Surface stone 10% in places
	ls/s	22-100	
169	sl	0-22	
	ls	22-47	
	lfs/fs	47-66	
170	sl	0-44	
	ls	44-62	
	s	62-100	
171	sl	0-32	
	ls	32-48	
	s	48-100	
172	sl	0-33	
	scl	32-80	
173	sl	0-40	
	ls	40-70	

Boring	Texture	Depth (cm)	Mottles
174	sl	0-45	
	ls	45-70	
	ls/s	70-100	
175	sl	0-44	
	ls	44-70	
	s	70-100	+ hcl lenses
177	sl	0-32	
	ls	32-60	
	s	60-100	
178	sl	0-30	
	ls/sl	30-50	