AGRICULTURAL LAND CLASSIFICATION

STANNINGTON, NORTHUMBERLAND

Proposed Village Development

ADAS
Leeds Regional Office

October 1990

Lds.AL2.Stann.ton

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AGRICULTURAL LAND CLASSIFICATION REPORT
LAND AT STANNINGTON, NORTHUMBERLAND

1. INTRODUCTION AND GENERAL SITE CHARACTERISTICS

The site is located around National Grid Reference NZ 182817, about 4 km south of Morpeth.

It covers 196.5 hectares, of which 138.8 hectares is in agricultural production.

Survey work was carried out in October 1990 when soils were examined by hand auger borings at 100 metre intervals at points pre-determined by the National Grid.

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

1.1 Land Use

Agricultural land on the site is either under permanent pasture or used for cereal cropping. Urban areas consist of hospital buildings, mixed with parkland.

1.2 Climate

Average Annual Rainfall (AAR) in the area is approximately 748 mm, Accumulated Temperature (ATO) above 0°C between January and June is 1253 days °C and the land is at field capacity for 191 days a year. The temperature and rainfall figures indicate that there is a climatic restriction on ALC grade, the best grade possible being 2.

Soil moisture deficits are 82 mm for winter wheat and 66 mm for potatoes. These figures suggest that soil wetness and workability will be the main restriction on ALC grade.

1.3 Relief

Altitude varies between 75 and 110 metres above ordnance datum. Slopes do not exceed 7° and they are not a limitation on ALC grade.

1.4 Geology and Soils and Drainage

The area is underlain by Boulder Clay derived from Upper Carboniferous Coal Measures.

The typical soils formed on this material consist of medium clay loam over slowly permeable heavy clay loam to clay subsoil. These soils fall in to wetness class IV. Where there is a deeper upper subsoil with a slowly permeable layer at 50 cm or below, then this material falls into wetness class III. However, where there is a heavy clay loam topsoil over a heavy clay loam to clay subsoil then these soils will fall into wetness class IV.

2. AGRICULTURAL LAND CLASSIFICATION

The ALC grades occurring on the site are as follows.

Grade	Hectare	Percentage of total agricultural land
3a	14.0	7.1
3b	99.7	50.7
4	25.1	12.8
Urban	28.5	14.5
Non Agricultural	25.5	13.0
Agricultural Buildings	3.7	1.9
Total	196.5	100

2.1 Subgrade 3a

Land in this grade occurs in two locations, they are adjacent to the disused Stannington Children's Hospital on the south facing slope and in the south eastern section of the site, either side of Green Lane. Top soils consist of medium clay loams with a slowly permeable layer at 50 cm or more above a heavy clay loam to clay subsoil. Soil wetness and workability is the limiting factor on ALC grade.

2.2 Subgrade 2b

Land in this grade dominates the site. It consists of medium clay loam topsoil over a slowly permeable layer of heavy clay loam to clay at less than 50 cm. Land in this grade is in wetness class IV and soil wetness and workability are again the limiting factor on ALC grade.

2.3 Grade 4

Land in this grade occupies both the highest and lowest elevations within the site. Topsoils are usually heavy clay loam over heavy clay loam to clay subsoils. Land in this grade is in wetness class IV and soil wetness and workability problems prevent it being graded any higher.

2.4 Urban areas consist of the built up hospital grounds.

2.5 Non Agricultural

Land in this grade consists of both a parkland type landscape with scattered housing and in some locations sports grounds or woodland.

2.6 Agricultural Buildings

Agricultural buildings are located in three areas on the site.

MAPS

APPENDIX I

GLOSSARY OF TERMS

Textures

s	sand
fs	Fine sand
ms	Medium sand
cs	Coarse sand
ls	Loamy sand
lfs	Loamy fine sand
sl	Sandy loam
fsl	Fine sandy loam
msl	Medium sandy loam
csl	Coarse sandy loam
scl	Sandy clay loam
fscl	Fine sandy clay loam
cl/m	Medium clay loam
cl/h	Heavy clay loam
sc	Sandy clay
zc	Silty clay
zcl	Silty clay loam
zl	Silty loam
szl	Sandy silt loam
O	Organic
Pty	Peaty

Cancel

Do cancelled

. do alcprint

AUGER BORINGS FOR STANNINGTON N'UMBERLAND 099/90 29/10/90 program:alcpr

BORING	WET CLASS	TEXTURE	TOPSOIL STONES >2	TOPSOIL STONES >6	DEPTH		COLOUR	CaCO3	MOTTLES
001	4	hcl			0	20	10YR42		
		hcl			20	40	10YR53		many prominent OG
		hcl			40	100	75YR44		many distinct OGM
002	4	hcl			0	15	10YR42		
		hcl			15	35	10YR52		many prominent OG
		c			35	100	75YR54		many prominent OG
003	4	hcl			0	20	10YR42		
		c			20	40	75YR52		many prominent OG
		c			40	100	75YR54		many prominent OG
004	4	hcl			0	20	10YR42		
		hcl			20	60	10YR53		many prominent OGM
		hcl			60	100	75YR44		many distinct OGM
005	4	mcl			0	30	10YR32		
		hcl			30	40	10YR53		many prominent OGM
		hcl			40	100	75YR44		many distinct OG
006	4	hcl			0	30	10YR32		
		hcl			30	50	10YR53		many prominent OG
		hcl			50	100	10YR43		many prominent OGM
007	4	mcl			0	30	10YR32		
		mcl			30	40	10YR43		few faint O
		hcl			40	100	75YR54		many prominent OGM
008	4	mcl			0	30	10YR32		
		hcl			30	55	10YR53		many prominent OG
		hcl			55	100	10YR43		many distinct OGM
009	4	mcl			0	35	10YR32		
		hcl			35	50	10YR53		many prominent OG
		hcl			50	100	75YR44		many distinct OG
010	4	hcl			0	20	10YR42		common distinct O
		hcl			20	40	10YR53		common faint O
		c			40	100	75YR42		many prominent OG

AUGER BORINGS FOR STANNINGTON N'UMBERLAND 099/90 29/10/90 program:al

BORING	WET CLASS	TEXTURE	TOPSOIL STONES >2	>6	DEPTH		COLOUR	CaCO3	MOTTLES
011	4	mcl			0	30	10YR32		
		mcl			30	45	10YR43		few distinct O
		hcl			45	100	10YR44		many distinct OG
012	4	mcl			0	25	10YR33		
		hcl			25	35	10YR53		many distinct OG
		hcl			35	70	10YR53		many prominent OG
		hcl			70	100	10YR44		many distinct OG
013	4	mcl			0	30	10YR32		
		hcl			30	50	10YR53		many prominent OG
		hcl			50	100	10YR44		many distinct OG
014	4	mcl			0	25	10YR32		
		hcl			25	50	10YR53		many prominent OG
		hcl			50	100	75YR32		many prominent OG
015	4	mcl			0	35	10YR42		
		hcl			35	100	10YR68		many prominent OG
016	4	mcl			0	30	10YR42		
		hcl			30	100	10YR68		many prominent OG
017	4	mcl			0	30	10YR43		
		hcl			30	100	10YR62		many distinct OG
018	4	mcl			0	20	10YR21		
		mcl			20	50	10YR44		
		hcl			50	100	10YR53		many distinct NG
019	4	mcl			0	20	10YR43		
		mcl			20	40	10YR44		common distinct O
		hcl			40	100	10YR62		many prominent OG
020	3	mcl			0	20	10YR32		
		mcl			20	50	10YR43		
		mcl			50	70	10YR43		common distinct OG
		hcl			70	100	5Y51		common distinct OG
021	0	hos.grd			0	0	0		0

AUGER BORINGS FOR STANNINGTON N'UMBERLAND 099/90 29/10/90 program:a

BORING	WET CLASS	TEXTURE	TOPSOIL STONES >2	TOPSOIL STONES >6	DEPTH		COLOUR	CaCO3	MOTTLES
022	4	mcl			0	30	10YR42		
		hcl			30	100	10YR61		many prominent O
023	3	mcl			0	30	10YR32		
		scl			30	50	10YR64		many prominent OGM
		scl			50	70	10YR73		many prominent OG
		hcl			70	100	10YR61		many prominent OG
024	2	mcl			0	30	10YR42		
		hcl			30	80	10YR53		P prominent OG
		c			80	100	10YR51		many prominent OG
025	4	wz			0	25	10YR42		
		hcl			25	100	10YR52		many prominent OG
026	4	mcl			0	30	10YR42		
		hcl			30	100	10YR51		many prominent OG
027	4	mcl			0	30	10		
		hcl			30	100	10YR41		many prominent OG
028	2	mcl			0	30	10YR32		
		mcl			30	50	10YR43		common distinct OG
		hcl			50	100	10YR42		common distinct O
029	3	mcl			0	30	10YR32		
		mcl			30	60	10YR43		common distinct OG
		hcl			60	100	10YR42		common distinct OG
030	3	mcl			0	20	10YR32		
		mcl			20	60	10YR44		common distinct OG
		hcl			60	100	10YR41		many prominent OG
031	0	mcl			0	30	10YR32		
		mcl			30	60	10YR53		common distinct OG
		hcl			60	100	10YR51		many prominent O
032	3	mcl			0	30	10YR32		
		mcl			30	65	10YR63		common distinct OG
		hcl			65	100	10YR52		many prominent OG

AUGER BORINGS FOR STANNINGTON N'UMBERLAND 099/90 29/10/90 program:al

BORING	WET CLASS	TEXTURE	TOPSOIL STONES >2	>6	DEPTH		COLOUR	CaCO3	MOTTLES
033	0	hos.grd			0	0	0		
034	0	hos.grd			0	0	0		
035		parkland			0	0			
036	4	mcl			0	30	10YR43		
		hcl			30	100	10YR62		many prominent OG
037	4	mcl			0	35	10YR42		
		hcl			35	100	10YR53		many prominent OG
038	2	mcl			0	50	10YR43		
		mcl			50	70	10YR53		common prominent OG
		hcl			70	100	10YR62		common distinct OG
039	4	mcl			0	30	10YR42		
		hcl			30	40	10YR54		common distinct OG
		hcl			40	100	10YR63		common distinct OG
040	4	mcl			0	30	10YR42		
		mcl			30	60	10YR54		common distinct OG
		hcl			60	100	10YR53		common distinct OG
041	4	mcl			0	30	10YR42		
		hcl			30	100	10YR52		many prominent OG
042	4	mcl			0	35	10YR42		
		hcl			35	100	10YR52		many prominent OG
043	3	mcl			0	25	10YR32		
		mcl			25	65	10YR43		common distinct OG
		hcl			65	100	10YR41		common prominent OG
044	3	mcl			0	30	10YR32		
		mcl			30	50	10YR43		
		hcl			50	60	10YR53		common distinct OG
		hcl			60	100	10YR41		many prominent OG

AUGER BORINGS FOR STANNINGTON N'UMBERLAND 099/90 - 29/10/90 program:al

BORING	WET CLASS	TEXTURE	TOPSOIL STONES >2	TOPSOIL STONES >6	DEPTH		COLOUR	CaCO3	MOTTLES
045	3	mcl			0	30	10YR32		
		mcl			30	45	10YR43		
		mcl			45	55	10YR43		common distinct OG
		hcl			55	100	10YR41		many prominent OG
046	3	mcl			0	25	10YR32		
		mcl			25	55	10YR43		common distinct OG
		hcl			55	100	10YR52		many prominent OG
047	4	mcl			0	30	10YR32		
		mcl			30	50	10YR43		common distinct OG
		hcl			50	100	10YR41		many prominent OG
048	3	mcl			0	25	10YR32		
		mcl			25	40	10YR43		
		hcl			40	55	10YR52		common distinct OG
		hcl			55	100	10YR41		common prominent OG
049	0	hos.grd			0	0	0		
050	0	hos.grd			0	0	0		
051	0	hos.grd			0	0	0		
052	0	hos.grd			0	0	0		
053	4	hcl			0	25	10YR42		
		hcl			25	100	10YR53		many prominent OG
054	4	mcl			0	35	10YR42		
		hcl			35	100	10YR56		common distinct OG
055	4	mcl			0	35	10YR42		
		hcl			35	100	10YR72		many prominent OG
056	4	mcl			0	30	10YRYY		
		mcl			30	50	10YR46		few distinct OG
		hcl			50	100	10YR53		many prominent OG

AUGER BORINGS FOR STANNINGTON N'UMBERLAND 099/90 29/10/90 program:alc

BORING	WET CLASS	TEXTURE	TOPSOIL STONES >2	>6	DEPTH		COLOUR	CaCO3	MOTTLES
057	4	mcl			0	25	10YR42		
		mc			25	35	10YR53		common faint OG
		hcl			35	100	10YR53		many distinct OGM
058	4	mcl			0	30	10YR32		
		mcl			30	50	10YR43		many FF
		hcl			0	100	10YR53		S SOGM
059	3	mcl			0	30	10YR32		
		mcl			30	65	10YR53		common faint O
		hcl			65	100	75YR54		common distinct OGM
060	4	mcl			0	30	10YR32		
		mcl			30	40	10YR53		few faint O
		hcl.c			40	40	5Y41		common distinct O
		scl			40	100	10YR53		many distinct OGM
061	4	mcl			0	30	10YR32		
		hcl			30	45	10YR52		many distinct OGM
		hcl			45	100	10YR53		common distinct OGM
062	4	mcl			0	30	10YR32		
		mcl			30	50	10YR43		few faint OG
		hcl			50	100	10YR44		many distinct OGM
063	4	mcl			0	30	10YR32		
		mcl			30	50	10YR53		many prominent OG
		hcl			50	100	10YR44		common distinct OG
064	4	mcl			0	20	10YR42		common distinct O
		mcl			20	40	10YR52		many prominent OG
		hcl			40	100	10YR44		common distinct OG
065	0	hos.grd			0	0	0		
066	0	hos.grd			0	0	0		
067	4	mcl			0	30	10YR32		
		hcl			30	50	10YR53		many prominent OG
		hcl			50	100	75YR44		many distinct OGM

AUGER BORINGS FOR STANNINGTON N'UMBERLAND 099/90 29/10/90 program:al

BORING	WET CLASS	TEXTURE	TOPSOIL STONES >2	>6	DEPTH		COLOUR	CaCO3	MOTTLES
068	0	hos.grd			0	0	0		
069	0	hos.grd			0	0	0		
070	0	hos.grd			0	0	0		
071	0	hos.grd			0	0	0		
072	4	mcl			0	30	10YR42		
		mcl			30	50	10YR54		common distinct OG
		hcl			50	100	10YR56		many prominent OG
073	4	mcl			0	30	10		
		hcl			30	55	10YR53		many prominent OG
		hcl.c			55	100	75YR44		common distinct OGM
074	3	mcl			0	25	10YR32		
		mcl			25	55	10YR43		few faint O
		mcl			55	100	10YR44		common distinct OGM
075	4	mcl			0	25	10YR32		
		hcl			25	45	10YR52		many prominent OG
		hcl			45	100	10YR43		many distinct OG
076	4	mcl			0	25	10YR32		
		mcl			25	45	10YR53		common distinct O
		hcl			45	100	75YR42		common distinct OGM
077	4	mcl			0	30	10YR32		
		hcl			30	50	10YR52		many distinct OG
		hcl			50	100	10YR33		common distinct OG
078	4	mcl			0	35	10YR32		
		mcl			35	45	10YR53		few faint O
		hcl.c			45	100	10YR33		common distinct OGM
079	4	mcl			0	30	10YR32		
		hcl			30	50	10YR42		few faint O
		hcl.c			50	100	10YR33		common distinct OGM

AUGER BORINGS FOR STANNINGTON N'UMBERLAND 099/90 29/10/90 program:al

BORING	WET CLASS	TEXTURE	TOPSOIL STONES >2	>6	DEPTH		COLOUR	CaCO3	MOTTLES
080	0	hos.grd			0	0	0		
081	4	mcl			0	30	10YR42		
		mcl			30	45	10YR54		few faint G
		hcl			45	100	10YR64		many prominent OG
082	4	mcl			0	30	10YR43		
		hcl			30	100	10YR53		many prominent OG
083	4	mcl			0	30	10YR42		
		hcl			30	100	10YR63		many prominent OG
084	4	hcl			0	30	10YR42		
		hcl.c			30	100	10YR52		common OG
085	4	mcl			0	30	10YR32		
		mcl			30	50	10YR44		common distinct O
		hcl.c			50	100	5GY51		common prominent O
086	4	mcl			0	45	10YR32		
		hcl.c			45	100	10YR41		common prominent OG
087	4	mcl			0	25	10YR32		
		mcl			25	45	10YR43		
		hcl.c			45	100	10YR42		common prominent OG
088	4	mcl			0	25	10YR32		
		mcl			25	40	10YR43		
		hcl.c			40	100	10YR52		common prominent OG
089	4	mcl			0	30	10YR32		
		mcl			30	40	10YR53		common faint O
		hcl.c			40	100	10YR42		many distinct OG
090	4	mcl			0	35	10YR32		
		hcl			35	55	10YR53		many distinct OG
		hcl.c			55	100	10YR33		common distinct OG
091	4	mcl			0	50	10YR42		
		hcl			50	100	10YR52		common distinct OG

AUGER BORINGS FOR STANNINGTON N'UMBERLAND 099/90 29/10/90 program:al

BORING	WET CLASS	TEXTURE	TOPSOIL STONES >2	>6	DEPTH		COLOUR	CaCO3	MOTTLES
092	4	mcl			0	25	10YR31		
		mcl			25	40	10YR32		
		c			40	100	75YR30		common prominent O
093	4	mcl			0	30	10YR32		
		mcl			30	50	10YR43		
		hcl			50	100	10YR54		many prominent OG
094	0	mcl			0	40	10YR32		
		hcl.c			40	100	10YR41		common prominent OG
095	0	woodland			0	0	0		
096	4	mcl			0	40	10YR32		
		hcl.c			40	100	10YR52		common prominent OG
097	4	mcl			0	20	10YR32		
		hcl			20	40	10YR44		common distinct OG
		hcl.c			40	100	10YR52		common prominent O
098	0	woodland			0	0	0		
099	4	mcl			0	30	10YR32		few faint O
		hcl			30	50	10YR52		common distinct OG
		hcl			50	100	10YR33		common distinct OGM
100	4	mcl			0	30	10YR32		
		hcl			30	50	10YR44		few faint O
		hcl			50	100	10YR41		common prominent O
101	3	mcl			0	30	10YR32		
		msl			30	40	10YR54		few distinct O
		mscl			40	55	10YR53		common distinct O
		hcl.c			55	100	10YR42		common prominent OG
102	4	mcl			0	30	10YR32		
		hcl.c			30	100	10YR53		many prominent OG
103	0	woodland			0	0	0		

AUGER BORINGS FOR STANNINGTON N'UMBERLAND 099/90 29/10/90 program:

BORING	WET CLASS	TEXTURE	TOPSOIL STONES >2	>6	DEPTH		COLOUR	CaCO3	MOTTLES
104	0	woodland			0	0	0		
105	0	hos.grd			0	0	0		
106	0	hos.grd			0	0	0		
107	0	hos.grd			0	0	0		
108	4	hcl			0	30	10YR42		
		hcl.c			30	100	10YR41		many prominent OG
109	4	hcl			0	20	10YR32		
		hcl			20	40	10YR42		few faint O
		c			40	100	10YR41		many prominent OG
110	0	woodland			0	0	0		
111	0	parkland			0	0	0		
112	0	hos.grd			0	0	0		
113	0	hos.grd			0	0	0		
114	0	urban			0	0	0		
115	0	urban			0	0	0		
116	4	hcl			0	30	10YR42		
		hcl.c			30	100	10YR54		P prominent OG
117	0	woodland			0	0	0		
118	4	hcl			0	30	10YR32		
		hcl			30	100	10YR36		common distinct OG

AUGER BORINGS FOR STANNINGTON N'UMBERLAND 099/90 29/10/90 program:a

BORING	WET CLASS	TEXTURE	TOPSOIL STONES >2	>6	DEPTH		COLOUR	CaCO3	MOTTLES
119	0	parkland			0	0	0		
120	0	hos.grd			0	0	0		
121	0	hos.grd			0	0	0		
122	0	urban			0	0	0		
123	0	urban			0	0	0		
124	0	woodland			0	0	0		
125	4	hcl			0	40	10YR32		
		hcl			40	100	10YR71		many prominent OGM
126	0	hos.grd			0	0	0		
127	0	hos.grd			0	0	0		
128	0	woodland			0	0	0		
129	0	woodland			0	0	0		
130	0	urban			0	0	0		
131	0	woodland			0	0	0		
132	4	hcl			0	30	10YR32		
		hcl			30	100	10YR53		many prominent OG
133	0	sport.gd			0	0	0		
134	0	sport.gd			0	0	0		

AUGER BORINGS FOR STANNINGTON N'UMBERLAND 099/90 29/10/90 program:al

BORING	WET CLASS	TEXTURE	TOPSOIL STONES >2	TOPSOIL STONES >6	DEPTH		COLOUR	CaCO3	MOTTLES
135	4	mcl			0	35	10YR33		
		hcl			35	80	10YR53		common distinct OG
		hcl.c			80	100	10YR33		common distinct OG
136	4	mcl			0	30	10YR33		
		mcl			30	40	10YR53		many distinct OG
		hcl			40	100	10YR33		common distinct OG
137	4	mcl			0	30	10YR32		
		mcl			30	40	10YR53		common distinct O
		hcl			40	100	10YR33		common distinct G
138	0	woodland			0	0	0		
139	4	mcl			0	30	10YR32		few distinct O
		hcl			30	100	10YR43		many prominent OG
140	4	mcl			0	30	10YR32		
		mcl.scl			30	100	10YR53		*many prominent OG*
141	2	mcl			0	30	10YR32		
		mcl			30	50	10YR53		common distinct OG
		mscl			50	100	10YR56		common distinct OG
142	0	woodland			0	0	0		
143	4	mcl			0	35	10YR42		
		hcl			35	100	10YR63		common distinct O
144	0	sport.gd			0	0	0		
145	0	sport.gd			0	0	0		
146	4	hcl			0	25	10YR42		common distinct O
		hcl			25	40	5Y41		many distinct O
		c			40	100	10YR33		many distinct OG
147	4	mcl			0	30	10YR32		
		mcl			30	40	10YR53		common distinct O
		hcl			40	100	10YR33		common distinct OG

AUGER BORINGS FOR STANNINGTON N'UMBERLAND 099/90 29/10/90 program:

BORING	WET CLASS	TEXTURE	TOPSOIL STONES >2	>6	DEPTH		COLOUR	CaCO3	MOTTLES
148	0	woodland			0	0	0		
149	0	woodland			0	0	0		
150	4	mcl			0	30	10YR32		few distinct O
		hcl.c			30	100	10YR33		many prominent OG
151	4	mcl			0	30	10YR32		
		hcl			30	100	10YR43		many prominent OG
152	3	mcl			0	30	10YR32		
		mcl			30	50	10YR33		
		scl			50	80	10YR43		common distinct OG
		c			80	100	10YR42		common prominent O
153	0	woodland			0	0	0		
154	4	mcl			0	35	10YR42		
		hcl			35	100	10YR53		many prominent OG
155	0	woodland			0	0	0		
156	0	woodland			0	0	0		
157	4	hcl			0	20	10YR32		
		hcl.c			20	100	10YR33		many distinct OG
158	4	mcl			0	25	10YR32		
		hcl.c			25	100	10YR33		common distinct OG
159	4	mcl			0	30	10YR32		
		hcl			30	100	10YR33		common distinct OG
160	4	mcl			0	30	10YR32		
		scl			30	40	10YR53		many distinct OG
		hcl.c			40	100	10YR33		common distinct OG

AUGER BORINGS FOR STANNINGTON N'UMBERLAND 099/90 29/10/90 program:al

BORING	WET CLASS	TEXTURE	TOPSOIL STONES >2	>6	DEPTH		COLOUR	CaCO3	MOTTLES
161	3	hcl			0	25	10YR42		
		hcl.scl			25	55	10YR54		many distinct O
		hcl.c			55	100	10YR33		common distinct G
162	4	mcl			0	30	10YR32		
		mcl.hcl			30	50	10YR53		common distinct OG
		c			50	100	10YR33		many prominent OG
163	4	hcl			0	25	10YR32		
		hcl			25	100	10YR43		many prominent OG
164	4	mcl			0	40	10YR42		
		hcl			40	100	10YR71		many prominent O
165	4	mcl			0	35	10YR42		
		hcl			35	100	10YR62		many distinct OG
166	4	mcl			0	45	10YR42		
		hcl			45	100	10YR51		many prominent O
167	4	hcl			0	35	10YR42		
		hcl			35	100	10YR61		many OG
168	4	mcl			0	25	10YR32		
		hcl			25	50	10YR43		D distinct OG
		c			50	100	75YR44		many prominent OG
169	4	mcl			0	30	10YR32		D distinct
		hcl			30	40	10YR42		common distinct O
		hcl			40	80	10YR53		common distinct OG
		hcl.c			80	100	10YR33		common distinct G
170	4	mcl			0	25	10YR33		
		hcl			25	35	10YR53		common distinct O
		hcl.c			35	100	10YR33		common distinct OG
171	4	hcl			0	30	10YR32		
		hcl			30	100	10YR43		common distinct OG

AUGER BORINGS FOR STANNINGTON N'UMBERLAND 099/90 29/10/90 program:a

BORING	WET CLASS	TEXTURE	TOPSOIL STONES >2	TOPSOIL STONES >6	DEPTH		COLOUR	CaCO3	MOTTLES
172	4	hcl			0	30	10YR32		
		hcl			30	100	10YR52		many prominent OG
173	4	hcl			0	30	10YR32		
		hcl			30	100	10YR53		many prominent OG
174	4	hcl			0	30	10YR42		
		hcl			30	100	10YR53		many prominent OG
175	4	hcl			0	30	10YR42		
		hcl			30	100	10YR52		many prominent OG
176	4	hcl			0	30	10YR42		
		hcl			30	100	10YR61		many prominent O
177	4	mcl			0	30	10YR42		
		hcl			30	100	10YR51		many prominent O
178	4	mcl			0	20	10YR32		few faint O
		hcl.c			20	35	10YR53		many distinct OG
		hcl.c			35	100	10YR33		common distinct OG
179	4	mcl			0	25	10YR33		
		hscl			25	40	10YR53		many distinct OG
		hcl			40	100	10YR33		common distinct OG
180	4	hcl			0	25	10YR32		
		hcl.c			25	50	25Y42		common distinct OG
		hcl.c			50	100	10YR33		common distinct OG
181	4	hcl			0	30	10YR32		
		hcl			30	100	10YR52		many prominent OG
182	4	hcl			0	30	10YR42		
		hcl.c			30	100	75YR44		many prominent OG

AUGER BORINGS FOR STANNINGTON N'UMBERLAND 099/90 29/10/90 program:a

BORING	WET CLASS	TEXTURE	TOPSOIL STONES >2	>6	DEPTH		COLOUR	CaCO3	MOTTLES
183	4	hcl			0	25	10YR43		
		hcl			25	100	10YR54		many prominent OG
184	4	mcl			0	30	10YR42		
		hcl			30	100	10YR62		many prominent O
185	4	mcl			0	45	10YR42		
		hcl			45	100	10YR53		many distinct OG
186	4	mcl			0	35	10YR32		
		hcl.c			35	100	10YR33		common distinct OG
187	3	mcl			0	30	10YR32		
		scl.mcl			30	80	10YR43		common distinct OG
		c			80	100	10YR42		many prominent O
188	3	mcl			0	30	10YR32		
		scl.mcl			30	100	10YR43		common distinct OG