



Gatwick Airport Northern Runway Project

Environmental Statement
Appendix 19.6.2: Soil Survey Results

Book 5

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1 Introduction

1.1 General

- 1.1.1 This document forms Appendix 19.6.2 of the Environmental Statement (ES) prepared on behalf of Gatwick Airport Limited (GAL) for the proposal to make best use of Gatwick Airport's existing runways and infrastructure (referred to within this report as 'the Project').
- 1.1.2 This document presents the results of the soils surveys undertaken to inform **ES Chapter 19: Agricultural Land Use and Recreation** (Doc Ref. 5.3). The soil surveys comprised Augur Boring at 22 locations within the Project site.

2 Soil Survey Results

2.1 Colours

2.1.1 The following abbreviations are used to describe the colour of soils collected during the soil surveys for the Project:

- dgb: Dark grey brown
- gb: grey brown
- yb: yellowish brown

2.2 Others

2.2.1 The following abbreviations are used to describe other features of soils collected during the soil surveys for the Project:

- c: clay
- hcl: heavy clay loam
- fdom: few distinct ochreous mottles
- cdom: common distinct ochreous mottles
- mn: manganese concretions
- SPL: Slowly Permeable Layer

Table 2.2.1: Auger Boring Descriptions

	Depth	Colour	Texture	Description	Wetness Class	Grade
1						
	0 - 22	dgb	c	cdom	IV	3b
	22- 30	gb	c	cdom, mn		
	30 - 70+	gb	c	cdom, SPL		
2						
	0 - 24	dgb	c	cdom	IV	3b
	24 - 35	gb	c	cdom, mn		
	35 - 70+	gb	c	cdom, SPL		
3						

	Depth	Colour	Texture	Description	Wetness Class	Grade
	0 - 23	dgb	c	cdom	IV	3b
	23 - 37	gb	c	cdom, mn (lots)		
	37 - 70+	gb	c	cdom, SPL		
4						
	0 - 23	dgb	c	cdom	IV	3b
	23 - 34	gb	c	cdom, mn (lots)		
	34 - 70+	gb	c	cdom, SPL		
5						
	0 - 24	dgb	c	cdom	IV	3b
	23 - 35	gb	c	cdom, mn (lots)		
	35 - 70+	gb	c	cdom, SPL		
6						
	0 - 22	dgb	c	cdom	IV	3b
	22 - 30	gb	c	cdom mm		
	30 - 60+	gb	c	thick cdom		
7						
	0 - 24	dgb	c	cdom	IV	3b
	23 - 35	gb	c	cdom, mn (lots)		
	35 - 70+	gb	c	cdom, SPL		
8						
	0 - 23	dgb	c	cdom	IV	3b
	23 - 35	gb	c	cdom, mn (lots)		
	35 - 70+	gb	c	cdom, SPL		
9						
	0 - 24	dgb	c	cdom	IV	3b
	23 - 36	gb	c	cdom, mn (lots)		
	36 - 70+	gb	c	cdom, SPL		
10						
	0 - 24	dgb	hcl			
	24 - 30	yb	hcl	cdom		
	30 - 60+	gb	c	cdom SPL	IV	3b
11						
	0 - 24	dgb	hcl			
	24 - 30	yb	hcl	cdom		

	Depth	Colour	Texture	Description	Wetness Class	Grade
	30 - 60+	gb	c	cdom, SPL	IV	3b
12						
	0 - 25	dgb	hcl			
	25 - 34	yb	hcl	cdom		
	34 - 60+	gb	c	cdom, few mn, SPL	IV	3b
13						
	0 - 25	dgb	hcl	fdom		
	25 - 32	yb	hcl	cdom		
	32 - 60+	gb	c	cdom, SPL	IV	3b
14						
	0 - 25	dgb	hcl	fdom		
	25 - 32	yb	hcl	cdom		
	32- 60+	gb	c	cdom SPL	IV	3b
15						
	0 - 2 4	dgb	hcl			
	24 - 33	yb	hcl	cdom		
	33 -60+	gb	c	cdom, few mn, SPL	IV	3b
16						
	0 - 25	dgb	hcl			
	25 - 32	yb	hcl	cdom		
	32 - 60+	gb	c	cdom, few mn, SPL	IV	3b
17						
	0 - 24	dgb	hcl			
	24 - 30	yb	hcl	cdom		
	30 - 60+	gb	c	cdom, SPL	IV	3b
18						
	0 - 24	dgb	hcl			
	24 - 33	yb	hcl	cdom		
	33 - 60+	gb	c	cdom, few mn, SPL	IV	3b
19						
	0 - 27	Db	hzcl			
	27 - 38	Gb	Hzcl	cdom		
	38 - 75	Gb	C	Cdom, SPL	IV	3b

	Depth	Colour	Texture	Description	Wetness Class	Grade
	75 - 90+	G	C	Cdom, abundant mn		
20						
	0 - 22	Db	mzcl			
	22 - 27	Gb	Hycl	Cdom	IV	3b
	27 - 37	(gb)	Hycl	Cdom		
	37 - 70	(g)	C	Cdom		
	70+			Ditto with abundant mn		
21						
	0 - 27	dgb	Hycl	Cdom	IV	3b
	27 - 35	Gb	Hycl	Mn and abundant mn		
	35 - 70+	G	C	Cdom and abundant mn		
22						
	0 - 25	Db	Hcl	Cdom – alluvial here	IV	3b
	25 - 60+	G	C	Cdom SPL mn		

3 Soil Pit Descriptions

3.1.1 The following observations were made within areas of archaeological excavations, including spade excavation within them:

- Close to Auger Boring 6:
 - 0 to 23,cm dark greyish brown (2,5YR 4/2) clay; common distinct ochreous mottles; abundant grass roots.
 - 23 to 30cm greyish brown (2.5YR 5/2) clay; medium to coarse angular blocky structure; common distinct ochreous mottles; common mn concretions; moist; grass roots.
 - 30 to 50cm+ greyish brown to grey (2.5YR 5/2) clay; coarse prismatic structure; common distinct ochreous mottles; abundant mn concretions; slowly permeable layer; moist.
- Close to Auger Boring 21:
 - 0 to 26cm dark greyish brown (2,5YR 4/2) heavy silt clay loam; common distinct ochreous mottles; abundant grass roots.
 - 26 to 35cm greyish brown (2.5YR 5/2) heavy silty clay loam; coarse angular blocky structure; common distinct ochreous mottles; abundant mn concretions; moist; grass roots.
 - 35 to 60 cm+ grey (10YR 5/1) clay; coarse prismatic structure; common distinct ochreous mottles; abundant mn concretions; slowly permeable layer; moist.

Term	Description
fdom	Few distinct ochreous mottles
GAL	Gatwick Airport Limited
gb	Grey brown
hcl	Heavy clay loam
mn	Manganese concretions
SPL	Slowly permeable layer
yb	Yellowish brown

4 Glossary

4.1 Glossary

Table 4.1.1: Glossary of Terms

Term	Description
c	Clay
cdom	Common distinct ochreous mottles
dgb	Dark grey brown
EIA	Environmental Impact Assessment
ES	Environmental Statement