Strata — Sheet 1 of 1 — Samples — Tests

Depth (m)	Legend	Description	Strata Depth (Thickness) (m)	Reduced Level (mAOD)	Depth (m)	Type	U100 Blows	Depth (m)	SPT	Installation
		MADE GROUND (Same material as BH04A).	(3.00)							
3.00			3.00	72.48						
		MADE GROUND (Hard obstruction).	3.20	72.28						
		End of Borehole at 3.20 m								

1.00 2.00 4.00 5.00 6.00 7.00 8.00 9.00

Start Date: 20/08/2004
End Date: 20/08/2004
Method: DANDO 2000
Drilled By: J.B. Site Investigations.
Logged By: SD
Ground Level: 75.5 mAOD
Coordinates: 432825E - 409630N

Chiselling:
2.00m to 2.30m : 0.25 hr
3.00m to 3.20m : 0.75 hr

Water Strikes:
1.80m.

Legend:
D Small Disturbed Sample
B Large Disturbed Sample
U Undisturbed U100 Sample
W Water Sample
S Standard Penetration Test (Split Spoon)
C Standard Penetration Test (Cone)

Remarks:
Obstruction encountered moved to BHO4C

Borehole: BH04B

BOREHOLE RECORD

North Gawber Site

Revision: Final

Project No. 04014

SCOTT DOHERTY associates

Strata — Sheet 1 of 1 — Samples — Tests

Depth (m)	Legend	Description	Strata Depth (Thickness) (m)	Reduced Level (mAOD)	Depth (m)	Type	U100 Blows	Depth (m)	SPT	Installation
		MADE GROUND (Soft and firm brown and black sandy gravelly clay. Gravel is fine to coarse, angular to subrounded and consists of mudstone, coal, pottery and brick).	(3.60)		2.00	B D				
			3.60	71.88						
		Highly weathered thinly bedded orange brown fine grained SANDSTONE/SILTSTONE.	(0.80)		4.00	B D				
			4.40	71.08						
		End of Borehole at 4.40 m								

1.00 2.00 3.00 4.00 5.00 6.00 7.00 8.00 9.00

Start Date: 20/08/2004
End Date: 20/08/2004
Method: DANDO 2000
Drilled By: J.B. Site Investigations.
Logged By: SD
Ground Level: 75.5 mAOD
Coordinates: 432826E - 409630N

Chiselling:
3.10m to 3.30m : 0.5 hr
4.00m to 4.40m : 0.75 hr

Water Strikes:
1.80m.

Legend:
D Small Disturbed Sample
B Large Disturbed Sample
U Undisturbed U100 Sample
W Water Sample
S Standard Penetration Test (Split Spoon)
C Standard Penetration Test (Cone)

Remarks:

Borehole: BH04C

BOREHOLE RECORD

North Gawber Site

Revision: Final

Project No. 04014

SCOTT DOHERTY associates

Strata					Sheet 1 of 1	Samples			Tests		
Depth (m)	Legend	Description	Strata Depth (Thickness) (m)	Reduced Level (mAOD)		Depth (m)	Type	U100 Blows	Depth (m)	SPT	Installation
		MADE GROUND (Firm and soft grey, brown *and black sandy gravelly* clay. Gravel is fine to coarse angular to subrounded and consists of sandstone, coal, mudstone, occasional burnt shale and brick. Contains boulders of mudstone and sandstone).									
1.00											
2.00			(4.50)			2.00	B D				
3.00											
4.00						4.00	B D				
			4.50	68.15		4.50	B D				
5.00		Firm and stiff light brown dark brown and grey sandy gravelly CLAY. Gravel is fine to coarse, subangular to subrounded and consists of sandstone, mudstone and rare coal.	(0.50) 5.00	67.65							
		Moderately weathered very weak orange *brown fine grained* SANDSTONE/SILTSTONE.	(0.40) 5.40	67.25							
		End of Borehole at 5.40 m									
6.00											
7.00											
8.00											
9.00											

Start Date: 23/08/2004
End Date: *23/08/2004*
Method: DANDO 2000
Drilled By: J.B. Site Investigations.
Logged By: SD
Ground Level: 72.6 mAOD
Coordinates: 433094E - 409509N

Chiselling:
2.30m to 2.60m : 0.75 hr
5.00m to 5.40m : 0.5 hr

Water Strikes:
2.55m. Rose to 2.30m after 20 mins

Legend:
- D Small Disturbed Sample
- B Large Disturbed Sample
- U Undisturbed U100 Sample
- W Water Sample
- S Standard Penetration Test (Split Spoon)
- C Standard Penetration Test (Cone)

Remarks:

Borehole: BH05

BOREHOLE RECORD

North Gawber Site

Revision: Final

Project No. 04014

SCOTT DOHERTY associates

Strata					Samples			Tests		
Depth (m)	Legend	Description	Strata Depth (Thickness) (m)	Reduced Level (mAOD)	Depth (m)	Type	U100 Blows	Depth (m)	SPT	Installation
		MADE GROUND (Dark grey and black very clayey sandy gravel. Gravel is fine to coarse, angular to subrounded and consists of sandstone, mudstone, hard siltstone and coal. Occasional cobbles of mudstone).	(3.60)		2.00	B D				
			3.60	73.65	3.50	B D				
		Firm and stiff light brown and grey sandy gravelly CLAY. Gravel is fine to medium and consists of sandstone, coal and mudstone.	(0.70)							
			4.30	72.95						
		Moderately weathered thinly bedded orange brown fine grained SANDSTONE.	(0.40)							
			4.70	72.55						
		End of Borehole at 4.70 m								

1.00 2.00 3.00 4.00 5.00 6.00 7.00 8.00 9.00

Start Date: 23/08/2004
End Date: 23/08/2004
Method: *DANDO 2000*
Drilled By: J.B. Site Investigations.
Logged By: SD
Ground Level: 77.2 mAOD
Coordinates: 432987E - 409603N

Chiselling:
4.40m to 4.70m : 0.75 hr

Water Strikes:
No Groundwater Encountered

Legend:
D Small Disturbed Sample
B Large Disturbed Sample
U Undisturbed U100 Sample
W Water Sample
S Standard Penetration Test (Split Spoon)
C Standard Penetration Test (Cone)

Remarks:

Borehole: BH06

BOREHOLE RECORD

North Gawber Site

Revision: Final

Project No. 04014

SCOTT DOHERTY associates

Strata — Sheet 1 of 1 — Samples — Tests

Depth (m)	Legend	Description	Strata Depth (Thickness) (m)	Reduced Level (mAOD)	Sample Depth (m)	Type	U100 Blows	Test Depth (m)	SPT	Installation
		MADE GROUND (Red angular to subangular sand and gravel of burnt shale).	(0.30) 0.30	83.33						
1.00		MADE GROUND (Stiff black grey and yellowish brown sandy *gravelly clay*. Gravel is fine to coarse angular to subangular and consists of mudstone, coal and sandstone).								
2.00			(3.60)		2.00	B D				
3.00										
			3.90	79.73						
4.00		Stiff, firm in places, light brown and grey sandy gravelly CLAY. Gravel is fine to medium, subangular to subrounded and consists of sandstone and mudstone.			4.00	B D				
5.00			(2.50)							
6.00					6.00	B				
			6.40	77.23						
		Highly weathered very weak thinly bedded brown and grey, SILTSTONE.								
7.00			(1.60)		7.50	D				
			8.00	75.63						
8.00		End of Borehole at 8.00 m								
9.00										

Start Date: 25/08/2004
End Date: 25/08/2004
Method: DANDO 2000
Drilled By: J.B. Site Investigations.
Logged By: SD
Ground Level: 83.6 mAOD
Coordinates: 432920E - 409697N

Chiselling:
1.40m to 1.80m : 0.5 hr
2.30m to 2.50m : 0.75 hr
7.60m to 8.00m : 0.75 hr

Water Strikes:
No Groundwater Encountered

Legend:
D Small Disturbed Sample
B Large Disturbed Sample
U Undisturbed U100 Sample
W Water Sample
S Standard Penetration Test (Split Spoon)
C Standard Penetration Test (Cone)

Remarks:

Borehole: BH07

BOREHOLE RECORD

North Gawber Site

Revision: Final

Project No. 04014

SCOTT DOHERTY associates

Strata — Sheet 1 of 1 — Samples — Tests

Depth (m)	Legend	Description	Strata Depth (Thickness) (m)	Reduced Level (mAOD)	Depth (m)	Type	U100 Blows	Depth (m)	SPT	Installation
		MADE GROUND (Firm and stiff brown and black, mottled red sandy gravelly clay. Gravel is fine to coarse, angular to subangular and consists of coal, burnt shale, mudstone and sandstone.	(3.90)		2.00	B D				
			3.90	80.53	3.90	D				
		Soft brown and grey slightly sandy SILT/CLAY.	4.00	80.43	4.00	B D				
		Firm and stiff light brown and grey sandy gravelly CLAY. Gravel is fine to coarse, subangular to subrounded and consists of sandstone, mudstone and rare coal.	(0.40)							
			4.40	80.03						
		Highly weathered very weak orange brown SILTSTONE becoming moderately weathered from 5.6m.	(1.60)		5.00	D				
			6.00	78.43						
		End of Borehole at 6.00 m								

1.00 2.00 3.00 4.00 5.00 6.00 7.00 8.00 9.00

Start Date: 25/08/2004
End Date: 25/08/2004
Method: DANDO 2000
Drilled By: J.B. Site Investigations.
Logged By: SD
Ground Level: 84.4 mAOD
Coordinates: 432814E - 409742N

Chiselling:
5.60m to 6.00m : 0.75 hr

Water Strikes:
No Groundwater Encountered

Legend:
D Small Disturbed Sample
B Large Disturbed Sample
U Undisturbed U100 Sample
W Water Sample
S Standard Penetration Test (Split Spoon)
C Standard Penetration Test (Cone)

Remarks:

Borehole: BH08

BOREHOLE RECORD

North Gawber Site

Revision: Final

Project No. 04014

SCOTT DOHERTY associates

Strata					Samples			Tests		
Depth (m)	Legend	Description	Strata Depth (Thickness) (m)	Reduced Level (mAOD)	Depth (m)	Type	U100 Blows	Depth (m)	SPT	Installation
		MADE GROUND (Rough grass over firm brown red and black mottled sandy gravelly clay. Gravel is fine to coarse angular to subangular and consists of coal, mudstone, burnt shale and brick).	(1.30)							
1.00			1.30	78.05						
		MADE GROUND (Red orange and brown fine to coarse angular to subangular and elongated sand and gravel of burnt shale).			2.00	B D				
2.00			(2.50)							
3.00			3.80	75.55						
		Firm light brown and grey sandy gravelly CLAY. Gravel is fine to coarse subangular to subrounded and consists of sandstone, mudstone and rare coal. Occasional subrounded cobbles of sandstone.	(0.90)		4.00	B D				
4.00			4.70	74.65						
		Highly weathered weak thinly bedded orange brown SILTSTONE.	(1.30)		5.50	B D				
5.00										
6.00			6.00	73.35						
		End of Borehole at 6.00 m								
7.00										
8.00										
9.00										

Start Date: 27/08/2004
End Date: 27/08/2004
Method: DANDO 2000
Drilled By: J.B. Site Investigations.
Logged By: SD
Ground Level: 79.3 mAOD
Coordinates: 433115E - 409609N

Chiselling:
1.50m to 1.80m : 0.5 hr
2.40m to 2.80m : 0.75 hr
5.60m to 6.00m : 0.75 hr

Water Strikes:
3.60m.

Legend:
D Small Disturbed Sample
B Large Disturbed Sample
U Undisturbed U100 Sample
W Water Sample
S Standard Penetration Test (Split Spoon)
C Standard Penetration Test (Cone)

Remarks:

Borehole: BH09

BOREHOLE RECORD

North Gawber Site

Revision: Final

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SCOTT DOHERTY associates

Strata — Sheet 1 of 2 — Samples — Tests

Depth (m)	Legend	Description	Strata Depth (Thickness) (m)	Reduced Level (mAOD)	Sample Depth (m)	Type	U100 Blows	Test Depth (m)	SPT	Installation
		MADE GROUND (Firm aand soft brown, black and grey mottled orange yellow sandy gravelly clay. Gravel is fine to coarse, angular to subangular and consists of coal, mudstone and sandstone).								
1.00			(2.80)							
2.00					2.00	B D				
			2.80	82.88						
		MADE GROUND (Black fine to medium angular to subangular sand and gravel of coal and burnt shale with mudstone fragments).								
3.00										
4.00					4.00	B D				
5.00										
			(5.80)							
6.00					6.00	B D				
7.00										
8.00					8.00	B				
			8.60	77.08	8.50	D				
		Stiff light brown and grey sandy slightly gravelly CLAY. Gravel is fine to coarse subangular to subrounded and consists of sandstone, coal and mudstone.	(0.50)							
9.00			9.10	76.58						
		Highly weathered very weak brown and grey MUDSTONE.	(0.90)							
		Continued next sheet	10.00	75.68						

Start Date: 25/08/2004
End Date: 25/08/2004
Method: DANDO 2000
Drilled By: J.B. Site Investigations.
Logged By: SD
Ground Level: 85.7 mAOD
Coordinates: 433040E - 409703N

Chiselling:
1.60m to 1.80m : 0.5 hr
10.40m to 10.80m : 0.75 hr

Water Strikes:
No Groundwater Encountered

Legend:
- D Small Disturbed Sample
- B Large Disturbed Sample
- U Undisturbed U100 Sample
- W Water Sample
- S Standard Penetration Test (Split Spoon)
- C Standard Penetration Test (Cone)

Remarks:

Borehole: BH10

BOREHOLE RECORD

North Gawber Site

Revision: Final

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SCOTT DOHERTY associates

Strata					Samples			Tests		
Depth (m)	Legend	Description	Strata Depth (Thickness) (m)	Reduced Level (mAOD)	Depth (m)	Type	U100 Blows	Depth (m)	SPT	Installation
		End of Borehole at 10.80 m			10.00	B				
11.00										
12.00										
13.00										
14.00										
15.00										
16.00										
17.00										
18.00										
19.00										

Start Date: 25/08/2004
End Date: 25/08/2004
Method: DANDO 2000
Drilled By: J.B. Site Investigations.
Logged By: SD
Ground Level: 85.7 mAOD
Coordinates: 433040E - 409703N

Chiselling:
1.60m to 1.80m : 0.5 hr
10.40m to 10.80m : 0.75 hr

Water Strikes:
No Groundwater Encountered

Legend:
- D Small Disturbed Sample
- B Large Disturbed Sample
- U Undisturbed U100 Sample
- W Water Sample
- S Standard Penetration Test (Split Spoon)
- C Standard Penetration Test (Cone)

Remarks:

Borehole: BH10

BOREHOLE RECORD

North Gawber Site

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SCOTT DOHERTY associates

Strata					Sheet 1 of 1	Samples			Tests		
Depth (m)	Legend	Description	Strata Depth (Thickness) (m)	Reduced Level (mAOD)		Depth (m)	Type	U100 Blows	Depth (m)	SPT	Installation
		MADE GROUND (Compacted light yellow brown limestone hardcore).	(0.30) 0.30	87.05							
		MADE GROUND (Firm brown and grey sandy gravelly clay. Gravel is fine to coarse angular to subangular and consists of mudstone and rare fine coal. Contains subangular cobbles of mudstone).	(3.20)			2.00	B D				
			3.50	83.85							
		Stiff light brown and grey sandy gravelly CLAY. Gravel is fine to coarse subangular to rounded and consists of sandstone mudstone and coal.	(0.40) 3.90	83.45		3.80	B				
		Highly to moderately weathered very weak brown and grey MUDSTONE.	(1.10)			4.00	D				
5.00			5.00	82.35							
		End of Borehole at 5.00 m									

Start Date: 24/08/2004 End Date: 24/08/2004 Method: DANDO 2000 Drilled By: J.B. Site Investigations. Logged By: SD Ground Level: 87.4 mAOD Coordinates: 432958E - 409763N	Chiselling: 2.60m to 2.90m : 0.5 hr 4.60m to 5.00m : 0.75 hr	Water Strikes: No Groundwater Encountered	Legend: D Small Disturbed Sample B Large Disturbed Sample U Undisturbed U100 Sample W Water Sample S Standard Penetration Test (Split Spoon) C Standard Penetration Test (Cone)

Remarks:

Borehole: BH11	BOREHOLE RECORD North Gawber Site	Revision: Final Project No. 04014

SCOTT DOHERTY associates

Strata — Sheet 1 of 2 — Samples — Tests

Depth (m)	Legend	Description	Strata Depth (Thickness) (m)	Reduced Level (mAOD)	Sample Depth (m)	Sample Type	U100 Blows	Test Depth (m)	SPT	Installation
0.00		MADE GROUND (Firm black, brown grey and red sandy very gravelly clay to clayey gravel. Gravel is fine to coarse, angular to subangular and consists of sandstone, coal, brick and mudstone with pockets of burnt shale).	(3.30)		2.00	B D				
3.30			3.30	91.16						
3.30		MADE GROUND (Firm and stiff grey brown and black sandy gravelly clay. Gravel is fine to coarse, angular to subangular and consists of coal, sandstone, mudstone and burnt shale. Occasional subangular cobbles and boulders of mudstone).	(10.50)		4.00	B				
					6.00	B D				
					8.00	B				
		Continued next sheet								

Start Date: 23/08/2004
End Date: 23/08/2004
Method: DANDO 2000
Drilled By: J.B. Site Investigations.
Logged By: SD
Ground Level: 94.5 mAOD
Coordinates: 432889E - 409818N

Chiselling:
4.20m to 4.20m : 0.25 hr
5.60m to 5.80m : 0.5 hr
13.80m to 14.10m : 0.5 hr

Water Strikes:
No Groundwater Encountered

Legend:
D Small Disturbed Sample
B Large Disturbed Sample
U Undisturbed U100 Sample
W Water Sample
S Standard Penetration Test (Split Spoon)
C Standard Penetration Test (Cone)

Remarks:

Borehole: BH12

BOREHOLE RECORD

North Gawber Site

Revision: Final

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SCOTT DOHERTY associates

Strata — Sheet 2 of 2 — Samples — Tests

Depth (m)	Legend	Description	Strata Depth (Thickness) (m)	Reduced Level (mAOD)	Depth (m)	Type	U100 Blows	Depth (m)	SPT	Installation
		MADE GROUND (Firm and stiff grey brown and black sandy gravelly clay. Gravel is fine to coarse, angular to subangular and consists of coal, sandstone, mudstone and burnt shale. Occasional subangular cobbles and boulders of mudstone).			10.00	B D				
11.00										
12.00										
13.00			13.80	80.66						
		Moderatly weathered weak brown and grey MUDSTONE.	(0.30) 14.10	80.36	14.00	D				
14.00		End of Borehole at 14.10 m								
15.00										
16.00										
17.00										
18.00										
19.00										

Start Date: 23/08/2004
End Date: 23/08/2004
Method: DANDO 2000
Drilled By: J.B. Site Investigations.
Logged By: SD
Ground Level: 94.5 mAOD
Coordinates: 432869E - 409618N

Chiselling:
4.20m to 4.20m : 0.25 hr
5.80m to 5.80m : 0.5 hr
13.80m to 14.10m : 0.5 hr

Water Strikes:
No Groundwater Encountered

Legend:
D Small Disturbed Sample
B Large Disturbed Sample
U Undisturbed U100 Sample
W Water Sample
S Standard Penetration Test (Split Spoon)
C Standard Penetration Test (Cone)

Remarks:

Borehole: BH12

BOREHOLE RECORD

North Gawber Site

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SCOTT DOHERTY associates

Strata				Sheet 1 of 1	Samples			Tests		
Depth (m)	Legend	Description	Strata Depth (Thickness) (m)	Reduced Level (mAOD)	Depth (m)	Type	U100 Blows	Depth (m)	SPT	Installation
		MADE GROUND (Firm grey red and black sandy gravelly clay. Gravel is fine to coarse angular to subrounded and consists of coal, mudstone and burnt shale).	(1.40)							
1.00			1.40	77.65						
		MADE GROUND (Black red and brown slightly clayey sand and gravel of coal, burnt shale and silver coloured coke works slag).			2.00	B D				
2.00			(2.20)							
3.00			3.60	75.45	3.60	D				
		Stiff light brown and grey sandy gravelly CLAY. Gravel is fine to coarse, subangular to rounded and consists of sandstone and mudstone. Occasional subrounded mudstone and sandstone cobbles.			4.00	B				
4.00			(1.10)							
			4.70	74.35						
		Highly weathered very weak orange brown SILTSTONE.	(0.60)							
5.00			5.30	73.75						
		End of Borehole at 5.30 m								
6.00										
7.00										
8.00										
9.00										

Start Date: 27/08/2004
End Date: 27/08/2004
Method: *DANDO 2000*
Drilled By: J.B. Site Investigations.
Logged By: SD
Ground Level: 79.1 mAOD
Coordinates: 433190E - 409594N

Chiselling:
5.00m to 5.30m : 0.75 hr

Water Strikes:
3.60m.

Legend:
- D Small Disturbed Sample
- B Large Disturbed Sample
- U Undisturbed U100 Sample
- W Water Sample
- S Standard Penetration Test (Split Spoon)
- C Standard Penetration Test (Cone)

Remarks:
Moist at the base of the made ground.

Borehole: BH13

BOREHOLE RECORD

North Gawber Site

Revision: Final

Project No. 04014

SCOTT DOHERTY associates

Strata					Samples			Tests		
Depth (m)	Legend	Description	Strata Depth (Thickness) (m)	Reduced Level (mAOD)	Depth (m)	Type	U100 Blows	Depth (m)	SPT	Installation
		MADE GROUND (Black angular to subangular sand and gravel of coal, burnt shale and mudstone).	(1.80)							
1.00			1.80	81.75						
		MADE GROUND (Red and black sand and gravel of burnt shale).	2.00	81.55	2.00	B D				
2.00		MADE GROUND (Black fine ash of coal and burnt shale with much silver coloured coke works slag).	(1.50)							
3.00			3.50	80.05	3.40	B D				
		MADE GROUND (Obstruction, probably reinforced concrete - no returns).	3.60	79.95						
		End of Borehole at 3.60 m								
4.00										
5.00										
6.00										
7.00										
8.00										
9.00										

Start Date: 26/08/2004
End Date: 26/08/2004
Method: DANDO 2000
Drilled By: J.B. Site Investigations.
Logged By: SD
Ground Level: 83.6 mAOD
Coordinates: 433173E - 409645N

Chiselling:
3.50m to 3.60m : 0.75 hr

Water Strikes:
No Groundwater Encountered

Legend:
- D Small Disturbed Sample
- B Large Disturbed Sample
- U Undisturbed U100 Sample
- W Water Sample
- S Standard Penetration Test (Split Spoon)
- C Standard Penetration Test (Cone)

Remarks:

Borehole: BH14

BOREHOLE RECORD

North Gawber Site

Revision: Final

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SCOTT DOHERTY associates

Strata				Sheet 1 of 1	Samples			Tests		
Depth (m)	Legend	Description	Strata Depth (Thickness) (m)	Reduced Level (mAOD)	Depth (m)	Type	U100 Blows	Depth (m)	SPT	Installation
		MADE GROUND (Firm grey colliery fill) (Driller's description).	0.20							
		End of Borehole at 0.20 m								
1.00										
2.00										
3.00										
4.00										
5.00										
6.00										
7.00										
8.00										
9.00										

Start Date: 26/08/2004
End Date: 26/08/2004
Method: DANDO 2000
Drilled By: J.B. Site Investigations.
Logged By: SD
Ground Level: -
Coordinates: -

Chiselling:

Water Strikes:
No Groundwater Encountered

Legend:
- D Small Disturbed Sample
- B Large Disturbed Sample
- U Undisturbed U100 Sample
- W Water Sample
- S Standard Penetration Test (Split Spoon)
- C Standard Penetration Test (Cone)

Remarks:
Concrete obstruction.

Borehole: BH15

BOREHOLE RECORD

North Gawber Site

Revision: Final

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SCOTT DOHERTY associates

Strata					Samples			Tests		
Depth (m)	Legend	Description	Strata Depth (Thickness) (m)	Reduced Level (mAOD)	Depth (m)	Type	U100 Blows	Depth (m)	SPT	Installation
		MADE GROUND (Firm colliery fill) (Drillers description).	0.20							
		End of Borehole at 0.20 m								
1.00										
2.00										
3.00										
4.00										
5.00										
6.00										
7.00										
8.00										
9.00										

Start Date: 26/08/2004
End Date: 26/08/2004
Method: DANDO 2000
Drilled By: J.B. Site Investigations.
Logged By: SD
Ground Level: -
Coordinates: -

Chiselling:

Water Strikes:
No Groundwater Encountered

Legend:
- D Small Disturbed Sample
- B Large Disturbed Sample
- U Undisturbed U100 Sample
- W Water Sample
- S Standard Penetration Test (Split Spoon)
- C Standard Penetration Test (Cone)

Remarks:
Concrete obstruction.

Borehole: BH15A

BOREHOLE RECORD

North Gawber Site

Revision: Final

Project No. 04014

SCOTT DOHERTY associates

Strata				Sheet 1 of 1	Samples			Tests		
Depth (m)	Legend	Description	Strata Depth (Thickness) (m)	Reduced Level (mAOD)	Depth (m)	Type	U100 Blows	Depth (m)	SPT	Installation
		MADE GROUND (Firm grey colliery fill) (Driller's description).	(0.25) 0.25							
		End of Borehole at 0.25 m								
1.00										
2.00										
3.00										
4.00										
5.00										
6.00										
7.00										
8.00										
9.00										

Start Date: 26/08/2004
End Date: 26/08/2004
Method: DANDO 2000
Drilled By: J.B. Site Investigations.
Logged By: SD
Ground Level: -
Coordinates: -

Chiselling:

Water Strikes:
No Groundwater Encountered

Legend:
- D Small Disturbed Sample
- B Large Disturbed Sample
- U Undisturbed U100 Sample
- W Water Sample
- S Standard Penetration Test (Split Spoon)
- C Standard Penetration Test (Cone)

Remarks:
Concrete obstruction.

Borehole: BH15B

BOREHOLE RECORD

North Gawber Site

Revision: Final

Project No. 04014

SCOTT DOHERTY associates

Strata — Sheet 1 of 1 — Samples — Tests

Depth (m)	Legend	Description	Strata Depth (Thickness) (m)	Reduced Level (mAOD)	Depth (m)	Type	U100 Blows	Depth (m)	SPT	Installation
		MADE GROUND (Firm grey colliery fill) (Drillers description).	(0.40) 0.40							
		End of Borehole at 0.40 m								

1.00
2.00
3.00
4.00
5.00
6.00
7.00
8.00
9.00

Start Date: 26/08/2004
End Date: 26/08/2004
Method: DANDO 2000
Drilled By: J.B. Site Investigations.
Logged By: SD
Ground Level: -
Coordinates: -

Chiselling:

Water Strikes:
No Groundwater Encountered

Legend:
- D Small Disturbed Sample
- B Large Disturbed Sample
- U Undisturbed U100 Sample
- W Water Sample
- S Standard Penetration Test (Split Spoon)
- C Standard Penetration Test (Cone)

Remarks:
Concrete obstruction.

Borehole: BH15C

BOREHOLE RECORD

North Gawber Site

Revision: Final

Project No. 04014

SCOTT DOHERTY associates

Strata					Samples			Tests		
Depth (m)	Legend	Description	Strata Depth (Thickness) (m)	Reduced Level (mAOD)	Depth (m)	Type	U100 Blows	Depth (m)	SPT	Installation
		MADE GROUND (Black fine angular to subangular sand and gravel of coal and mudstone).	(2.00)							
2.00			2.00	85.55	2.00	D				
		MADE GROUND (Obstruction -probably reinforced concrete).	2.10	85.45		B				
		End of Borehole at 2.10 m								

Sheet 1 of 1

Start Date:	26/08/2004
End Date:	26/08/2004
Method:	DANDO 2000
Drilled By:	J.B. Site Investigations.
Logged By:	SD
Ground Level:	87.5 mAOD
Coordinates:	433139E - 409683N

Chiselling:
2.00m to 2.10m : 0.75 hr

Water Strikes:
No Groundwater Encountered

Legend:
- D Small Disturbed Sample
- B Large Disturbed Sample
- U Undisturbed U100 Sample
- W Water Sample
- S Standard Penetration Test (Split Spoon)
- C Standard Penetration Test (Cone)

Remarks:
Following completion of the borehole a 0.7m thick concrete foundation was observed partially exposed approximately 2m down slope.

Borehole: BH15D

BOREHOLE RECORD

North Gawber Site

Revision: Final

Project No. 04014

SCOTT DOHERTY associates

Strata				Sheet 1 of 1	Samples			Tests		
Depth (m)	Legend	Description	Strata Depth (Thickness) (m)	Reduced Level (mAOD)	Depth (m)	Type	U100 Blows	Depth (m)	SPT	Installation
		MADE GROUND (Black brown mottled red and orange very clayey sand and gravel. Gravel is fine to coarse, angular to subangular and consists of coal, mudstone and burnt shale. From 3.6m becoming fine sand and gravel of coal ash).	(4.20)		2.00	B D				
			4.20	82.17	4.00	B D				
		Firm and stiff light brown and grey sandy gravelly CLAY. Gravel is fine to coarse, subangular to subrounded and consists of sandstone, mudstone and coal.	(1.20)		5.00	B				
			5.40	80.97	5.40	D				
		Moderately weathered weak orange brown thinly bedded SILTSTONE.	(1.00)							
			6.40	79.97						
		End of Borehole at 6.40 m								

1.00
2.00
3.00
4.00
5.00
6.00
7.00
8.00
9.00

Start Date: 25/08/2004
End Date: 25/08/2004
Method:
Drilled By: J.B. Site Investigations.
Logged By:
Ground Level: 86.4 mAOD
Coordinates: 433089E - 409734N

Chiselling:
6.00m to 6.40m : 0.75 hr

Water Strikes:
No Groundwater Encountered

Legend:
- D Small Disturbed Sample
- B Large Disturbed Sample
- U Undisturbed U100 Sample
- W Water Sample
- S Standard Penetration Test (Split Spoon)
- C Standard Penetration Test (Cone)

Remarks:

Borehole: BH16

BOREHOLE RECORD

North Gawber Site

Revision: Final

Project No. 04014

SCOTT DOHERTY associates

Strata				Sheet 1 of 1	Samples			Tests		
Depth (m)	Legend	Description	Strata Depth (Thickness) (m)	Reduced Level (mAOD)	Depth (m)	Type	U100 Blows	Depth (m)	SPT	Installation
		MADE GROUND (Stiff black brown and grey sandy gravelly clay. Gravel is fine to coarse angular to subangular and consists of coal, mudstone and sandstone).	(1.50)							
1.00			1.50	82.57						
		MADE GROUND (Red fine to coarse, angular to subangular and elongate sand and gravel of burnt shale and coal).			1.60	D				
2.00					2.00	B				
			(2.30)							
3.00			3.80	80.27						
		MADE GROUND (Soft and firm, moist light brown and grey sandy clay with pockets of black and brown mudstone and coal).			4.00	B D				
4.00			(0.60)							
			4.40	79.67						
		Firm and stiff light brown and grey sandy gravelly CLAY. Gravel is fine to medium subangular to subrounded and consists of sandstone and mudstone.	(0.60)		4.50	D				
5.00			5.00	79.07						
		Highly weathered very weak thinly bedded orange and brown SILTSTONE/SANDSTONE.	(1.40)							
6.00					6.00	B				
			6.40	77.67						
		End of Borehole at 6.40 m								
7.00										
8.00										
9.00										

Start Date: 26/08/2004
End Date: 26/08/2004
Method: *DANDO 2000*
Drilled By: J.B. Site Investigations.
Logged By: SD
Ground Level: 84.1 mAOD
Coordinates: 433235E - 409654N

Chiselling:
1.70m to 2.10m : 0.75 hr
6.00m to 6.40m : 0.75 hr

Water Strikes:
4.40m.

Legend:
D Small Disturbed Sample
B Large Disturbed Sample
U Undisturbed U100 Sample
W Water Sample
S Standard Penetration Test (Split Spoon)
C Standard Penetration Test (Cone)

Remarks:
Moist at the base of the made ground.

Borehole: BH17

BOREHOLE RECORD

North Gawber Site

Revision: Final

Project No. 04014

SCOTT DOHERTY Associates

Strata					Samples			Tests		
Depth (m)	Legend	Description	Strata Depth (Thickness) (m)	Reduced Level (mAOD)	Depth (m)	Type	U100 Blows	Depth (m)	SPT	Installation
		MADE GROUND (Firm brown and black sandy gravelly clay becoming clayey sand and gravel. Gravel is fine to coarse, angular to subangular and consists of coal, brick, concrete, mudstone, burnt shale and sandstone. Contains angular to subangular cobbles and boulders of sandstone, concrete and brick).	(2.80)		2.00	B D				
			2.80	87.60						
		MADE GROUND (Firm brown black yellow and red sandy gravelly clay to clayey sand and gravel. Gravel is fine to coarse, angular to subangular and consists of coal, brick, concrete, sandstone and burnt shale).	(4.60)		4.00	B D				
			7.40	83.00	6.00	B				
		Stiff light brown and grey sandy slightly gravelly CLAY. Gravel is fine to coarse, subangular to subrounded and consists of sandstone and mudstone. Occasional subangular cobbles of sandstone.	(0.40)		7.40	D				
			7.80	82.60	7.80	D				
		Highly weathered weak fine grained orange brown SANDSTONE/SILTSTONE	(0.70)		8.00	B				
			8.50	81.90						
		End of Borehole at 8.50 m								

Start Date:	24/08/2004
End Date:	24/08/2004
Method:	DANDO 2000
Drilled By:	J.B. Site Investigations.
Logged By:	SD
Ground Level:	90.4 mAOD
Coordinates:	433210E - 409738N

Chiselling:
1.10m to 1.50m : 0.5 hr
8.10m to 8.50m : 0.75 hr

Water Strikes:
7.20m.

Legend:
- D Small Disturbed Sample
- B Large Disturbed Sample
- U Undisturbed U100 Sample
- W Water Sample
- S Standard Penetration Test (Split Spoon)
- C Standard Penetration Test (Cone)

Remarks:

Borehole: BH18

BOREHOLE RECORD

North Gawber Site

Revision: Final

Project No. 04014

SCOTT DOHERTY associates

Strata					Sheet 1 of 1	Samples			Tests		
Depth (m)	Legend	Description	Strata Depth (Thickness) (m)	Reduced Level (mAOD)	Depth (m)	Type	U100 Blows	Depth (m)	SPT	Installation
		MADE GROUND (Firm dark brown red and black sandy gravelly clay. Gravel is fine to coarse, angular to subrounded and consists of brick, mudstone, coal, sandstone and concrete fragments).								
1.00										
2.00					2.00	B D				
			(5.40)							
3.00										
4.00					4.00	B				
5.00										
			5.40	85.27	5.40	D				
		Stiff light brown and grey sandy gravelly CLAY. Gravel is fine to coarse, subangular to subrounded and consists of sandstone and mudstone.								
6.00			(1.30)		6.00	B				
			6.70	83.97						
		Moderately weathered brown and grey MUDSTONE becoming weathered brown SILTSTONE with depth.								
7.00			(1.10)							
			7.80	82.87	7.80	D				
8.00		End of Borehole at 7.80 m								
9.00										

Start Date: 24/08/2004
End Date: 24/08/2004
Method: DANDO
Drilled By: J.B. Site Investigations.
Logged By: SD
Ground Level: 90.7 mAOD
Coordinates: 433143E - 409753N

Chiselling:
6.60m to 7.00m : 0.5 hr
7.40m to 7.80m : 0.5 hr

Water Strikes:
No Groundwater Encountered

Legend:
- D Small Disturbed Sample
- B Large Disturbed Sample
- U Undisturbed U100 Sample
- W Water Sample
- S Standard Penetration Test (Split Spoon)
- C Standard Penetration Test (Cone)

Remarks:

Borehole: BH19

BOREHOLE RECORD

North Gawber Site

Revision: Final

Project No. 04014

SCOTT DOHERTY associates

Strata — Sheet 1 of 1 — Samples — Tests

Depth (m)	Legend	Description	Strata Depth (Thickness) (m)	Reduced Level (mAOD)	Depth (m)	Type	U100 Blows	Depth (m)	SPT	Installation
		MADE GROUND (Dark brown black and grey sandy gravelly clay. Gravel is fine to coarse angular to subangular and consists of coal, sandstone and mudstone. Occasional subangular cobbles of grey mudstone).								
1.00										
2.00					2.00	B D				
3.00			(6.30)							
4.00					4.00	B D				
5.00										
6.00					6.00	B				
			6.30	84.86	6.30	D				
		Stiff light brown sandy gravelly CLAY.Gravel is fine to coarse, subangular to subrounded and consists of sandstone and mudstone.								
7.00			(1.90)							
8.00					8.00	B				
			8.20	82.96						
		Moderately weathered weak brown and grey MUDSTONE.	(0.60)							
			8.80	82.36						
		End of Borehole at 8.80 m								
9.00										

Start Date: 24/08/2004
End Date: 24/08/2004
Method: DANDO 2000
Drilled By: J.B. Site Investigations.
Logged By: SD
Ground Level: 91.2 mAOD
Coordinates: 433047E - 409818N

Chiselling:
2.10m to 2.40m : 0.5 hr
8.50m to 8.80m : 0.75 hr

Water Strikes:
No Groundwater Encountered

Legend:
D Small Disturbed Sample
B Large Disturbed Sample
U Undisturbed U100 Sample
W Water Sample
S Standard Penetration Test (Split Spoon)
C Standard Penetration Test (Cone)

Remarks:

Borehole: BH20

BOREHOLE RECORD

North Gawber Site

Revision: Final

Project No. 04014

SCOTT DOHERTY associates

APPENDIX G

LABORATORY TEST CERTIFICATES

dets
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UKAS TESTING 2139

CERTIFICATE OF ANALYSIS

Certificate Number : 14002

Client Reference :	04014	16 September 2004
Our Reference :	14002	
Clients Name :	Scott Doherty Associates	
Clients Address:	Derwentside Business Centre Consett Business Park Consett Co Durham DH8 6BP	
Contract Title :	North Gawber Surface Mining Scheme	
Description :	Twenty seven soil samples	
Date Received :	31 August 2004	
Test Procedures :	Identified by Prefix DETSn , Details available upon request.	
Notes :	TP20 @2.20m contains coal and has a high TEM value * Denotes test not included in laboratory scope of accreditation Observations and Interpretations are Outside the UKAS Accreditation Scope	

Approved By:

Authorised Signatories	R Bennett Director	R Brown Laboratory/Technical Manager	S Wilson Quality Manager

This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material received by the laboratory. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

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NORTH GAWBER SURFACE MINING SCHEME

Summary of Chemical Analyses on Soil Samples

Borehole or Trial Pit	Depth (m)	Sample Number	Sample Type	Laboratory Reference Number	Total Arsenic (mg/kg As) DETS 042	Total Cadmium (mg/kg Cd) DETS 042	Total Chromium (mg/kg Cr) DETS 042	Total Lead (mg/kg Pb) DETS 042	Total Mercury (mg/kg Hg) DETS 015	Total Selenium (mg/kg Se) DETS 042	Total Copper (mg/kg Cu) DETS 042	Total Nickel (mg/kg Ni) DETS 042	Total Zinc (mg/kg Zn) DETS 042	Water Soluble Boron (B) (mg/kg) DETS 020
TP 1	0.40			14002/1	5	0.7	14	21	<0.3	2.3	25	22	78	0.6
TP 1	2.90			14002/2	9	1.4	15	25	<0.3	1.5	28	30	97	0.4
TP 2	1.90			14002/3	22	0.4	11	26	<0.3	1.8	34	22	74	0.8
TP 2	2.80			14002/4	8	1.2	16	27	<0.3	1.6	14	9	74	0.8
TP 3	1.80			14002/5	4	0.3	9	22	<0.3	1.6	36	21	77	1.3
TP 3	3.20			14002/6	37	0.6	7	50	<0.3	2.4	43	19	79	0.8
TP 4	0.90			14002/7	16	0.7	13	25	<0.3	1.8	32	28	90	0.7
TP 5	1.70			14002/8	9	1.3	14	30	<0.3	1.2	20	21	110	1.4
TP 6	1.50			14002/9	74	1.1	9	27	<0.3	0.7	10	2	30	1.2
TP 7	1.40			14002/10	4	0.2	5	17	<0.3	1.0	10	8	42	0.6
TP 11	2.20			14002/11	16	0.3	8	23	<0.3	1.5	40	16	74	1.1
TP 12	0.50			14002/12	11	<0.2	11	13	<0.3	1.1	46	11	27	1.2
TP 12	2.50			14002/13	11	1.0	13	24	<0.3	1.5	22	26	92	0.7
TP 18	0.80			14002/14	6	0.7	26	25	<0.3	2.5	18	8	54	1.1
TP 18	2.50			14002/15	7	0.8	26	26	<0.3	2.3	18	9	51	1.6
TP 19	0.60			14002/16	24	0.9	10	25	<0.3	1.4	45	19	370	1.1
TP 19	3.20			14002/17	17	0.5	10	12	<0.3	3.0	20	10	32	0.9
TP 20	1.00			14002/18	26	1.3	12	24	<0.3	1.9	110	34	360	0.9
TP 20	2.20			14002/19	51	2.4	20	23	<0.3	0.7	150	51	130	1.2
TP 21	1.00			14002/20	6	0.8	91	34	<0.3	3.2	200	20	63	1.4
TP 21	2.70			14002/21	11	0.9	8	8	<0.3	1.2	22	22	83	1.1

Client Reference: 04014

Laboratory Reference: 14002

Summary of Chemical Analyses on Soil Samples

Borehole or Trial Pit	Depth (m)	Sample Number	Sample Type	Laboratory Reference Number	Total Cyanide (mg/kg CN) DETS 021	Sulphide (mg/kg S^{2-}) DETS 024	Sulphate content (% SO_3) DETS 004	Sulphate content (% SO_4) DETS 004	pH Value DETS 008	Total Phenols (mg/kg) DETS 023	Toluene Extractable Matter (mg/kg) DETS 029	Total PAH (mg/kg) DETS 050
TP 1	0.40			14002/1	<1	16	0.05	0.06	7.1	0.4	<40	<5
TP 1	2.90			14002/2	<1	<10	0.04	0.05	6.8	<0.2	<40	<5
TP 2	1.90			14002/3	<1	49	0.31	0.37	7.2	<0.2	86	<5
TP 2	2.80			14002/4	<1	<10	0.04	0.05	7.0	0.3	<40	<5
TP 3	1.80			14002/5	<1	24	0.17	0.20	7.1	<0.2	81	<5
TP 3	3.20			14002/6	<1	20	0.43	0.52	7.4	<0.2	79	<5
TP 4	0.90			14002/7	<1	16	0.21	0.25	5.9	1.1	52	<5
TP 5	1.70			14002/8	<1	<10	0.04	0.05	5.9	1.2	<40	<5
TP 6	1.50			14002/9	<1	<10	5.01	6.01	3.9	<0.2	<40	<5
TP 7	1.40			14002/10	<1	<10	0.15	0.18	4.2	<0.2	<40	<5
TP 11	2.20			14002/11	<1	16	0.60	0.72	3.9	0.3	580	38
TP 12	0.50			14002/12	<1	<10	0.18	0.22	6.8	<0.2	<40	<5
TP 12	2.50			14002/13	<1	<10	0.07	0.08	7.1	<0.2	60	<5
TP 18	0.80			14002/14	<1	550	0.17	0.20	9.3	<0.2	11000	<5
TP 18	2.50			14002/15	<1	510	0.12	0.14	9.1	<0.2	3300	120
TP 19	0.60			14002/16	<1	81	0.35	0.42	10.5	<0.2	1000	<5
TP 19	3.20			14002/17	<1	<10	0.03	0.04	9.2	<0.2	<40	32
TP 20	1.00			14002/18	<1	41	0.35	0.42	8.9	<0.2	4800	37
TP 20	2.20			14002/19	<1	41	0.72	0.86	8.4	0.8	3100 (Coal)	170
TP 21	1.00			14002/20	<1	550	0.17	0.20	10.0	0.6	8600	30
TP 21	2.70			14002/21	<1	29	0.14	0.17	8.0	<0.2	69	<5

Client Reference: 04014

Laboratory Reference: 14002

NORTH GAWBER SURFACE MINING SCHEME

Summary of Chemical Analyses on Soil Samples

Borehole or Trial Pit	Depth (m)	Sample Number	Sample Type	Laboratory Reference Number	Total Arsenic (mg/kg As) DETS 042	Total Cadmium (mg/kg Cd) DETS 042	Total Chromium (mg/kg Cr) DETS 042	Total Lead (mg/kg Pb) DETS 042	Total Mercury (mg/kg Hg) DETS 015	Total Selenium (mg/kg Se) DETS 042	Total Copper (mg/kg Cu) DETS 042	Total Nickel (mg/kg Ni) DETS 042	Total Zinc (mg/kg Zn) DETS 042	Water Soluble Boron (B) (mg/kg) DETS 020
TP 24	2.70			14002/22	57	0.7	4	13	<0.3	1.4	21	11	45	0.4
TP 26	3.10			14002/23	66	0.6	<1	11	<0.3	2.0	17	5	23	0.7
TP 27	1.60			14002/24	15	1.0	11	13	<0.3	1.1	32	31	170	0.8
TP 27	1.80			14002/25	6	0.8	8	6	<0.3	1.0	21	23	140	0.7
TP 29	1.00			14002/26	11	1.6	9	51	0.4	1.1	47	26	61	0.5
TP 29	2.30			14002/27	13	0.3	18	9	<0.3	1.9	32	35	83	1.7

Client Reference: 04014

Laboratory Reference: 14002

Summary of Chemical Analyses on Soil Samples

Borehole or Trial Pit	Depth (m)	Sample Number	Sample Type	Laboratory Reference Number	Total Cyanide (mg/kg CN) DETS 021	Sulphide (mg/kg S^{2-}) DETS 024	Sulphate content ($\%$ SO_3) DETS 004	Sulphate content ($\%$ SO_4) DETS 004	pH Value DETS 008	Total Phenols (mg/kg) DETS 023	Toluene Extractable Matter (mg/kg) DETS 029	Total PAH (mg/kg) DETS 050
TP 24	2.70			14002/22	<1	45	1.51	1.81	6.0	0.4	68	<5
TP 26	3.10			14002/23	<1	37	1.33	1.60	3.3	<0.2	62	5
TP 27	1.60			14002/24	<1	<10	0.09	0.11	6.0	<0.2	82	<5
TP 27	1.80			14002/25	<1	<10	0.03	0.04	5.5	0.3	54	23
TP 29	1.00			14002/26	<1	20	0.02	0.02	7.0	<0.2	91	30
TP 29	2.30			14002/27	<1	<10	0.93	1.12	5.0	0.2	<40	46

Client Reference: 04014

Laboratory Reference: 14002

NORTH GAWBER SURFACE MINING SCHEME

Summary of Chemical Analyses on Soil Samples

	Total Arsenic (mg/kg As) DETS 042	Total Cadmium (mg/kg Cd) DETS 042	Total Chromium (mg/kg Cr) DETS 042	Total Lead (mg/kg Pb) DETS 042	Total Mercury (mg/kg Hg) DETS 015	Total Selenium (mg/kg Se) DETS 042	Total Copper (mg/kg Cu) DETS 042	Total Nickel (mg/kg Ni) DETS 042	Total Zinc (mg/kg Zn) DETS 042	Water Soluble Boron (B) (mg/kg) DETS 020
Date Analysed	14/09/2004	14/09/2004	14/09/2004	14/09/2004	14/09/2004	14/09/2004	14/09/2004	14/09/2004	14/09/2004	16/09/2004

	Total Cyanide (mg/kg CN) DETS 021	Sulphide (mg/kg S^{2-}) DETS 024	Sulphate content ($\%$ SO_3) DETS 004	Sulphate content ($\%$ SO_4) DETS 004	pH Value DETS 008	Total Phenols (mg/kg) DETS 023	Toluene Extractable Matter (mg/kg) DETS 029	Total PAH (mg/kg) DETS 050
Date Analysed	14/09/2004	10/09/2004	14/09/2004		13/09/2004	14/09/2004	10-13/09/2004	14/09/2004

Client Reference: 04014

Laboratory Reference: 14002

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UKAS TESTING
2139

CERTIFICATE OF ANALYSIS

Certificate Number : 13991

Client Reference :	04014	16 September 2004
Our Reference :	13991	
Clients Name :	Scott Doherty Associates	
Clients Address:	Derwentside Business Centre Consett Business Park Consett Co Durham DH8 6BP	
Contract Title :	North Gawber	
Description :	Eighteen soil samples	
Date Received :	*03 September 2004*	
Test Procedures :	Identified by Prefix DETSn , Details available upon request.	

Notes :

* Denotes test not included in laboratory scope of accreditation

Observations and Interpretations are Outside the UKAS Accreditation Scope

Approved By:

Authorised Signatories	R Bennett Director	R Brown Laboratory/Technical Manager	S Wilson Quality Manager

This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material received by the laboratory. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

Derwentside Environmental Testing Services Limited.
Unit 2a/2b, Park Road Industrial Estate South, Consett, Co Durham. DH8 5PY
Tel: 01207 582333 • Fax: 01207 582444 • Email: info@dets.co.uk • www.dets.co.uk
Registered in England No. 370 5645 • VAT No. 708 978 678

NORTH GAWBER

Summary of Chemical Analyses on Soil Samples

Borehole or Trial Pit	Depth (m)	Sample Number	Sample Type	Laboratory Reference Number	Total Arsenic (mg/kg As) DETS 042	Total Cadmium (mg/kg Cd) DETS 042	Total Chromium (mg/kg Cr) DETS 042	Total Lead (mg/kg Pb) DETS 042	Total Mercury (mg/kg Hg) DETS 015	Total Selenium (mg/kg Se) DETS 042	Total Copper (mg/kg Cu) DETS 042	Total Nickel (mg/kg Ni) DETS 042	Total Zinc (mg/kg Zn) DETS 042	Water Soluble Boron (B) (mg/kg) DETS 020
TP 04	2.40			13991/1	14	0.7	10	10	<0.3	0.9	19	18	71	1.3
TP 06	0.80			13991/2	38	0.6	3	5	<0.3	0.8	16	5	28	1.1
TP 08	1.00			13991/3	18	0.6	9	13	<0.3	0.7	14	19	56	1.3
TP 08	2.00			13991/4	6	2.0	7	11	<0.3	<0.3	19	35	140	1.4
TP 09	1.30			13991/5	8	0.5	14	7	<0.3	0.7	25	20	73	1.1
TP 09	3.00			13991/6	8	0.4	13	8	<0.3	<0.3	23	22	90	0.8
TP 10	0.60			13991/7	14	0.5	7	13	<0.3	0.6	30	26	79	1.2
TP 10	2.50			13991/8	14	0.4	8	13	<0.3	0.6	30	26	80	1.1
TP 13	2.80			13991/9	32	0.4	3	10	<0.3	0.3	27	9	44	0.9
TP 14	2.00			13991/10	55	0.5	4	19	<0.3	0.6	29	6	57	1.5
TP 14	3.00			13991/11	30	1.1	74	52	<0.3	0.7	74	24	91	1.4
TP 17	2.10			13991/12	20	1.4	29	33	<0.3	<0.3	80	52	240	1.4
TP 22	0.80			13991/13	3	0.4	4	6	<0.3	<0.3	10	23	82	1.2
TP 22	1.45			13991/14	7	<0.2	4	7	<0.3	0.4	23	4	49	2.1
TP 25	1.00			13991/15	12	0.6	6	35	<0.3	0.4	40	21	100	1.2
TP 28	1.80			13991/16	10	<0.2	<1	<1	<0.3	0.7	21	2	18	0.9
TP 28	2.50			13991/17	120	0.8	13	41	<0.3	<0.3	14	15	90	1.2
TP 28	2.50 2.60			13991/18	22	0.4	2	3	<0.3	1.0	58	34	46	1.1

Client Reference: 04014

Laboratory Reference: 13991

Summary of Chemical Analyses on Soil Samples

Borehole or Trial Pit	Depth (m)	Sample Number	Sample Type	Laboratory Reference Number	Total Cyanide (mg/kg CN) DETS 021	Sulphide (mg/kg S^{2-}) DETS 024	Sulphate content ($\%$ SO_3) DETS 004	Sulphate content ($\%$ SO_4) DETS 004	pH Value DETS 008	Total Phenols (mg/kg) DETS 023	Toluene Extractable Matter (mg/kg) DETS 029	Total PAH (mg/kg) DETS 050
TP 04	2.40			13991/1	<1	37	0.14	0.17	6.2	<0.2	120	<5
TP 06	0.80			13991/2	<1	24	1.58	1.90	3.6	1.3	<40	<5
TP 08	1.00			13991/3	<1	<10	1.49	1.79	4.4	<0.2	<40	<5
TP 08	2.00			13991/4	<1	24	0.52	0.62	4.8	<0.2	<40	<5
TP 09	1.30			13991/5	<1	<10	0.05	0.06	5.0	<0.2	<40	<5
TP 09	3.00			13991/6	<1	<10	0.04	0.05	5.7	<0.2	<40	<5
TP 10	0.60			13991/7	<1	12	0.08	0.10	7.0	<0.2	<40	<5
TP 10	2.50			13991/8	<1	<10	0.06	0.07	7.9	<0.2	<40	<5
TP 13	2.80			13991/9	<1	<10	1.70	2.04	3.5	<0.2	71	<5
TP 14	2.00			13991/10	<1	20	1.29	1.55	4.0	<0.2	<40	<5
TP 14	3.00			13991/11	<1	24	0.17	0.20	7.8	<0.2	2300	54
TP 17	2.10			13991/12	<1	24	0.25	0.30	8.3	<0.2	390	18
TP 22	0.80			13991/13	<1	<10	0.08	0.10	5.3	0.2	45	<5
TP 22	1.45			13991/14	<1	<10	0.55	0.66	6.0	<0.2	<40	<5
TP 25	1.00			13991/15	<1	28	0.24	0.29	8.0	<0.2	160	<5
TP 28	1.80			13991/16	<1	89	1.16	1.39	5.2	0.3	<40	<5
TP 28	2.50			13991/17	<1	57	0.05	0.06	4.4	<0.2	<40	<5
TP 28	2.50	2.60?		13991/18	<1	16	0.98	1.18	4.2	1.1	<40	<5

Client Reference: 04014

Laboratory Reference: 13991

NORTH GAWBER

Summary of Chemical Analyses on Soil Samples

	Total Arsenic (mg/kg As) DETS 042	Total Cadmium (mg/kg Cd) DETS 042	Total Chromium (mg/kg Cr) DETS 042	Total Lead (mg/kg Pb) DETS 042	Total Mercury (mg/kg Hg) DETS 015	Total Selenium (mg/kg Se) DETS 042	Total Copper (mg/kg Cu) DETS 042	Total Nickel (mg/kg Ni) DETS 042	Total Zinc (mg/kg Zn) DETS 042	Water Soluble Boron (B) (mg/kg) DETS 020
Date Analysed	10/09/2004	10/09/2004	10/09/2004	10/09/2004	10/09/2004	10/09/2004	10/09/2004	10/09/2004	10/09/2004	16/09/2004

	Total Cyanide (mg/kg CN) DETS 021	Sulphide (mg/kg S^{2-}) DETS 024	Sulphate content ($\%$ SO_3) DETS 004	Sulphate content ($\%$ SO_4) DETS 004	pH Value DETS 008	Total Phenols (mg/kg) DETS 023	Toluene Extractable Matter (mg/kg) DETS 029	Total PAH (mg/kg) DETS 050
Date Analysed	14/09/2004	15/09/2004	15/09/2004		15/09/2004	14-15/09/2004	08/09/2004	09/09/2004

Client Reference: 04014

Laboratory Reference: 13991

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Derwentside Environmental Testing Services

UKAS TESTING 2139

CERTIFICATE OF ANALYSIS

Certificate Number : 14122

Client Reference : 04014

29 September 2004

Our Reference : 14122

RECEIVED 30 SEP 2004

Clients Name : Scott Doherty Associates
Clients Address: Derwentside Business Centre
Consett Business Park
Consett
Co Durham
DH8 6BP

Contract Title : North Gawber Site

Description : Five soil samples

Date Received : 16 September 2004

Test Procedures : Identified by Prefix DETSn , Details available upon request.

Notes :

* Denotes test not included in laboratory scope of accreditation

Observations and Interpretations are Outside the UKAS Accreditation Scope

Approved By:

Authorised Signatories R Bennett Director; R Brown Laboratory/Technical Manager; S Wilson Quality Manager

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NORTH GAWBER SITE

Summary of Chemical Analyses on Soil Samples

Borehole or Trial Pit	Depth (m)	Sample Number	Sample Type	Laboratory Reference Number	Total Arsenic (mg/kg As) DETS 042	Total Cadmium (mg/kg Cd) DETS 042	Total Chromium (mg/kg Cr) DETS 042	Total Lead (mg/kg Pb) DETS 042	Total Mercury (mg/kg Hg) DETS 015	Total Selenium (mg/kg Se) DETS 042	Total Copper (mg/kg Cu) DETS 042	Total Nickel (mg/kg Ni) DETS 042	Total Zinc (mg/kg Zn) DETS 042	Water Soluble Boron (B) (mg/kg) DETS 020
TP 15	0.50			14122/1	24	0.4	4	40	<0.3	0.6	45	16	83	1.6
TP 15	2.00			14122/2	31	0.5	7	37	<0.3	0.4	63	15	29	1.6
TP 16	1.50			14122/3	11	0.5	13	14	<0.3	<0.3	31	24	68	1.7
TP 16	2.70			14122/4	8	0.7	15	17	<0.3	0.5	25	18	81	1.8
BH 17	4.50		D	14122/5	8	0.4	15	15	<0.3	<0.3	33	26	78	1.6

Client Reference: 04014

Laboratory Reference: 14122

NORTH GAWBER SITE

Summary of Chemical Analyses on Soil Samples

Borehole or Trial Pit	Depth (m)	Sample Number	Sample Type	Laboratory Reference Number	Total Cyanide (mg/kg CN) DETS 021	Sulphide (mg/kg S^{2-}) DETS 024	Sulphate content ($\%$ SO_3) DETS 004	Sulphate content ($\%$ SO_4) DETS 004	pH Value DETS 008	Total Phenols (mg/kg) DETS 023	Toluene Extractable Matter (mg/kg) DETS 029	Total PAH (mg/kg) DETS 050
TP 15	0.50			14122/1	<1	12	0.12	0.14	7.0	1.2	53	17
TP 15	2.00			14122/2	<1	<10	0.69	0.83	7.0	1.4	<40	<5
TP 16	1.50			14122/3	<1	<10	0.29	0.35	4.6	<0.2	<40	<5
TP 16	2.70			14122/4	<1	<10	0.14	0.17	4.2	<0.2	<40	<5
BH 17	4.50		D	14122/5	<1	<10	0.12	0.14	5.5	<0.2	67	<5

Client Reference: 04014

Laboratory Reference: 14122

NORTH GAWBER SITE

Summary of Chemical Analyses on Soil Samples

	Total Arsenic (mg/kg As) DETS 042	Total Cadmium (mg/kg Cd) DETS 042	Total Chromium (mg/kg Cr) DETS 042	Total Lead (mg/kg Pb) DETS 042	Total Mercury (mg/kg Hg) DETS 015	Total Selenium (mg/kg Se) DETS 042	Total Copper (mg/kg Cu) DETS 042	Total Nickel (mg/kg Ni) DETS 042	Total Zinc (mg/kg Zn) DETS 042	Water Soluble Boron (B) (mg/kg) DETS 020
Date Analysed	22/09/2004	22/09/2004	22/09/2004	22/09/2004	23/09/2004	22/09/2004	22/09/2004	22/09/2004	22/09/2004	27/09/2004

	Total Cyanide (mg/kg CN) DETS 021	Sulphide (mg/kg S^{2-}) DETS 024	Sulphate content ($\%$ SO_3) DETS 004	($\%$ SO_4) DETS 004	pH Value DETS 008	Total Phenols (mg/kg) DETS 023	Toluene Extractable Matter (mg/kg) DETS 029	Total PAH (mg/kg) DETS 050
Date Analysed	27/09/2004	24/09/2004	24/09/2004		24/09/2004	24/09/2004	28/09/2004	23/09/2004

Client Reference: 04014

Laboratory Reference: 14122

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Derwentside Environmental Testing Services

UKAS TESTING
2139

CERTIFICATE OF ANALYSIS

Certificate Number : 14054-1

Client Reference :	04014
Our Reference :	14054-1
Clients Name :	Scott Doherty Associates
Clients Address:	Derwentside Business Centre Consett Business Park Consett Co Durham DH8 6BP
Contract Title :	North Gawber Site
Description :	Forty nine soil samples and eight leachate samples prepared from soils
Date Received :	09 September 2004
Test Procedures :	Identified by Prefix DETSn , Details available upon request.
Notes :	This report supersedes 14054 * Denotes test not included in laboratory scope of accreditation Observations and Interpretations are Outside the UKAS Accreditation Scope

14 October 2004

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15 OCT 2004

Approved By:

Authorised Signatories

R Bennett	R Brown	S Wilson
Director	Laboratory/Technical Manager	Quality Manager

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NORTH GAWBER SITE

Summary of Chemical Analyses on Soil Samples

Borehole or Trial Pit	Depth (m)	Sample Number	Sample Type	Laboratory Reference Number	Total Arsenic (mg/kg As) DETS 042	Total Cadmium (mg/kg Cd) DETS 042	Total Chromium (mg/kg Cr) DETS 042	Total Lead (mg/kg Pb) DETS 042	Total Mercury (mg/kg Hg) DETS 015	Total Selenium (mg/kg Se) DETS 042	Total Copper (mg/kg Cu) DETS 042	Total Nickel (mg/kg Ni) DETS 042	Total Zinc (mg/kg Zn) DETS 042	Water Soluble Boron (B) (mg/kg) DETS 020
BH 01	2.00		D	14054/1	42	0.8	9	48	<0.3	1.0	35	22	72	2.4
BH 01	4.00		D	14054/2	58	0.7	9	40	<0.3	1.2	38	25	61	2.4
BH 02	2.00		D	14054/3	32	0.6	8	34	<0.3	1.1	31	19	53	2.3
BH 02	6.00		D	14054/4	30	0.6	9	43	<0.3	1.5	32	25	79	1.9
BH 02	8.50		D	14054/5	18	0.9	14	16	<0.3	<0.3	24	23	69	2.0
BH 03	2.00		D	14054/6	39	0.7	10	26	<0.3	0.6	30	21	62	1.4
BH 03	4.00		D	14054/7	16	1.0	9	25	<0.3	0.3	30	18	61	1.6
BH 04A	2.00		D	14054/8	19	0.5	8	23	<0.3	1.0	30	25	60	1.2
BH 04C	2.00		D	14054/9	15	0.6	9	27	<0.3	1.1	34	25	71	1.1
BH 05	2.00		D	14054/10	28	0.5	6	23	<0.3	1.0	29	21	48	1.2
BH 05	4.50	4.00	D	14054/11	45	0.8	6	25	<0.3	1.0	28	20	50	1.4
BH 05	4.00	4.50	D	14054/12	8	0.8	13	22	<0.3	0.7	26	28	78	1.3
BH 06	2.00		D	14054/13	110	0.8	9	27	<0.3	1.6	30	30	65	1.9
BH 06	3.00		D	14054/14	3	0.5	14	17	<0.3	0.6	21	20	68	2.0
BH 07	2.00		D	14054/15	12	0.3	7	12	<0.3	0.8	28	22	57	1.5
BH 07	4.00		D	14054/16	6	0.6	13	15	<0.3	<0.3	22	14	63	1.6
BH 08	2.00		D	14054/17	18	0.5	8	19	<0.3	<0.3	36	17	66	1.3
BH 08	3.90		D	14054/18	9	0.9	12	18	<0.3	0.5	13	9	59	1.2
BH 08	4.00		D	14054/19	9	1.3	12	18	<0.3	<0.3	17	19	67	1.6
BH 09	2.00		D	14054/20	10	<0.2	<1	5	<0.3	<0.3	15	5	16	1.5

Client Reference: 04014

Laboratory Reference: 14054-1

NORTH GAWBER SITE

Summary of Chemical Analyses on Soil Samples

Borehole or Trial Pit	Depth (m)	Sample Number	Sample Type	Laboratory Reference Number	Total Cyanide (mg/kg CN) DETS 021	Sulphide (mg/kg S^{2-}) DETS 024	Sulphate content ($\%$ SO_3) DETS 004	Sulphate content ($\%$ SO_4) DETS 004	pH Value DETS 008	Total Phenols (mg/kg) DETS 023	Toluene Extractable Matter (mg/kg) DETS 029	Gasoline Range Organics * (mg/kg) DETS 062	Diesel Range Organics (mg/kg) DETS 052	Mineral Range Organics (mg/kg) DETS 052	Total Petroleum Hydrocarbons (mg/kg) DETS 052
BH 01	2.00		D	14054/1	<1	56	0.92	1.10	7.8	1.8	100				
BH 01	4.00		D	14054/2	<1	32	0.60	0.72	7.5	1.5	53				
BH 02	2.00		D	14054/3	<1	44	0.89	1.07	7.0	1.2	120				
BH 02	6.00		D	14054/4	<1	48	0.60	0.72	6.9	0.6	61				
BH 02	8.50		D	14054/5	<1	<10	0.16	0.19	7.2	0.5	72				
BH 03	2.00		D	14054/6	<1	24	1.36	1.63	4.7	0.8	52				
BH 03	4.00		D	14054/7	<1	12	0.86	1.03	4.6	<0.2	<40				
BH 04A	2.00		D	14054/8	<1	24	0.04	0.05	6.4	<0.2	<40				
BH 04C	2.00		D	14054/9	<1	12	0.08	0.10	7.9	0.4	110				
BH 05	2.00		D	14054/10	<1	28	0.66	0.79	6.5	<0.2	100				
BH 05	4.50 4.00		D	14054/11	<1	44	0.64	0.77	6.4	3.4	64				
BH 05	4.00 4.50		D	14054/12	<1	16	0.19	0.23	6.9	<0.2	85				
BH 06	2.00		D	14054/13	<1	76	0.93	1.12	6.4	<0.2	120				
BH 06	3.00		D	14054/14	<1	12	0.06	0.07	6.0	<0.2	77				
BH 07	2.00		D	14054/15	<1	12	0.35	0.42	5.4	<0.2	140				
BH 07	4.00		D	14054/16	<1	28	0.05	0.06	6.3	<0.2	50				
BH 08	2.00		D	14054/17	<1	<10	0.73	0.88	4.7	0.7	58				
BH 08	3.90		D	14054/18	<1	20	0.03	0.04	6.4	1.6	<40				
BH 08	4.00		D	14054/19	<1	<10	0.02	0.02	6.9	0.3	100				
BH 09	2.00		D	14054/20	<1	180	0.94	1.13	5.9	0.9	82				

Client Reference: 04014

Laboratory Reference: 14054-1

NORTH GAWBER SITE

Summary of Chemical Analyses on Soil Samples

Borehole or Trial Pit	Depth (m)	Sample Number	Sample Type	Laboratory Reference Number	Total Arsenic (mg/kg As) DETS 042	Total Cadmium (mg/kg Cd) DETS 042	Total Chromium (mg/kg Cr) DETS 042	Total Lead (mg/kg Pb) DETS 042	Total Mercury (mg/kg Hg) DETS 015	Total Selenium (mg/kg Se) DETS 042	Total Copper (mg/kg Cu) DETS 042	Total Nickel (mg/kg Ni) DETS 042	Total Zinc (mg/kg Zn) DETS 042	Water Soluble Boron (B) (mg/kg) DETS 020
BH 09	4.00		D	14054/21	6	0.6	11	9	<0.3	<0.3	18	26	63	1.7
BH 10	2.00		D	14054/22	7	0.3	8	10	<0.3	<0.3	26	8	37	1.6
BH 10	4.00		D	14054/23	26	0.5	6	15	<0.3	1.0	49	26	76	1.3
BH 10	6.00		D	14054/24	23	0.6	6	17	<0.3	0.6	51	24	32	1.4
BH 10	8.60		D	14054/25	6	0.5	12	12	<0.3	<0.3	21	15	53	1.3
BH 11	2.00		D	14054/26	10	0.8	15	12	<0.3	<0.3	30	31	82	1.2
BH 11	4.00		D	14054/27	7	0.8	15	12	<0.3	<0.3	28	29	76	1.1
BH 12	2.00		D	14054/28	16	0.4	9	16	<0.3	<0.3	35	16	71	0.9
BH 12	6.00		D	14054/29	12	0.7	10	18	<0.3	<0.3	29	23	68	0.9
BH 12	10.00		D	14054/30	11	0.7	14	14	<0.3	<0.3	29	29	69	1.2
BH 13	2.00		D	14054/31	31	0.6	7	9	<0.3	1.6	75	20	28	2.1
BH 13	3.60		D	14054/32	7	0.3	9	13	<0.3	0.4	13	14	46	2.1
BH 14	2.00		D	14054/33	58	0.9	12	11	<0.3	0.7	85	22	32	1.8
BH 14	3.40		D	14054/34	38	0.8	6	13	<0.3	1.0	78	38	50	1.4
BH 15D	2.00		D	14054/35	10	0.3	6	39	<0.3	1.0	32	22	53	1.2
BH 16	2.00		D	14054/36	27	0.4	5	17	<0.3	1.0	31	13	20	1.6
BH 16	5.50		D	14054/37	19	0.7	7	22	<0.3	0.4	43	21	59	1.9
BH 16	4.00		D	14054/38	5	0.3	8	7	<0.3	<0.3	12	16	48	1.7
BH 17	1.60		D	14054/39	11	0.4	11	10	<0.3	2.0	24	16	34	1.6
BH 17	4.50		D	14054/40	7	0.8	10	35	<0.3	1.9	26	68	54	1.5

Client Reference: 04014

Laboratory Reference: 14054-1

NORTH GAWBER SITE

Summary of Chemical Analyses on Soil Samples

Borehole or Trial Pit	Depth (m)	Sample Number	Sample Type	Laboratory Reference Number	Total Cyanide (mg/kg CN) DETS 021	Sulphide (mg/kg S^{2-}) DETS 024	Sulphate content ($\%$ SO_3) DETS 004	Sulphate content ($\%$ SO_4) DETS 004	pH Value DETS 008	Total Phenols (mg/kg) DETS 023	Toluene Extractable Matter (mg/kg) DETS 029	Gasoline Range Organics * (mg/kg) DETS 062	Diesel Range Organics (mg/kg) DETS 052	Mineral Range Organics (mg/kg) DETS 052	Total Petroleum Hydrocarbons (mg/kg) DETS 052
BH 09	*4.00*		*D*	*14054/21*	*<1*	*<10*	*0.23*	*0.28*	*6.5*	*<0.2*	*<40*				
BH 10	2.00		D	14054/22	<1	32	0.41	0.49	4.0	0.7	<40				
BH 10	4.00		D	14054/23	<1	40	1.94	2.33	5.5	4.6	58				
BH 10	6.00		D	14054/24	<1	60	1.32	1.58	5.2	3.1	49				
BH 10	8.60		D	14054/25	<1	28	0.04	0.05	5.7	<0.2	<40				
BH 11	2.00		D	14054/26	<1	<10	0.11	0.13	7.8	<0.2	<40				
BH 11	4.00		D	14054/27	<1	<10	0.08	0.10	6.0	<0.2	54				
BH 12	2.00		D	14054/28	<1	36	0.61	0.73	4.8	2.5	<40				
BH 12	6.00		D	14054/29	<1	36	0.31	0.37	6.4	1.6	100				
BH 12	10.00		D	14054/30	<1	16	0.10	0.12	7.1	0.5	<40				
BH 13	2.00		D	14054/31	<1	28	2.95	3.54	4.6	<0.2	<40				
BH 13	3.60		D	14054/32	<1	28	0.03	0.04	6.6	<0.2	71				
BH 14	2.00		D	14054/33	<1	44	2.39	2.87	3.9	<0.2	<40				
BH 14	3.40		D	14054/34	<1	20	2.78	3.34	4.2	1.6	40				
BH 15D	2.00		D	14054/35	<1	28	0.06	0.07	7.8	0.3	49				
BH 16	2.00		D	14054/36	<1	12	1.19	1.43	5.6	3.3	<40				
BH 16	5.50		D	14054/37	<1	36	0.34	0.41	6.3	2.3	130				
BH 16	4.00		D	14054/38	<1	<10	0.04	0.05	5.0	<0.2	46				
BH 17	1.60		D	14054/39	<1	12	0.43	0.52	5.8	<0.2	65				
BH 17	4.50		D	14054/40	<1	<10	0.55	0.66	5.1	1.4	<40				

Client Reference: 04014

Laboratory Reference: 14054-1

NORTH GAWBER SITE

Summary of Chemical Analyses on Soil Samples

Borehole or Trial Pit	Depth (m)	Sample Number	Sample Type	Laboratory Reference Number	Total Arsenic (mg/kg As) DETS 042	Total Cadmium (mg/kg Cd) DETS 042	Total Chromium (mg/kg Cr) DETS 042	Total Lead (mg/kg Pb) DETS 042	Total Mercury (mg/kg Hg) DETS 015	Total Selenium (mg/kg Se) DETS 042	Total Copper (mg/kg Cu) DETS 042	Total Nickel (mg/kg Ni) DETS 042	Total Zinc (mg/kg Zn) DETS 042	Water Soluble Boron (B) (mg/kg) DETS 020
BH 18	2.00		D	14054/41	6	0.9	76	24	<0.3	2.3	21	7	57	1.3
BH 18	4.00		D	14054/42	4	0.8	52	22	<0.3	1.6	17	9	55	1.0
BH 18	7.40		D	14054/43	9	0.3	9	10	<0.3	0.9	20	5	40	0.8
BH 18	7.80		D	14054/44	8	0.3	8	5	<0.3	0.6	16	9	37	0.8
BH 19	2.00		D	14054/45	8	0.6	8	23	<0.3	0.9	25	8	61	0.9
BH 19	5.40		D	14054/46	6	1.5	11	15	<0.3	1.0	18	16	81	2.1
BH 20	2.00		D	14054/47	14	0.5	12	14	<0.3	0.8	43	9	56	1.9
BH 20	4.00		D	14054/48	11	0.5	12	12	<0.3	0.7	39	11	58	1.6
BH 20	6.30		D	14054/49	7	0.6	12	10	<0.3	0.7	24	13	57	1.4

Client Reference: 04014

Laboratory Reference: 14054-1

NORTH GAWBER SITE

Summary of Chemical Analyses on Soil Samples

Borehole or Trial Pit	Depth (m)	Sample Number	Sample Type	Laboratory Reference Number	Total Cyanide (mg/kg CN) DETS 021	Sulphide (mg/kg S^{2-}) DETS 024	Sulphate content ($\%$ SO_3) DETS 004	Sulphate content ($\%$ SO_4) DETS 004	pH Value DETS 008	Total Phenols (mg/kg) DETS 023	Toluene Extractable Matter (mg/kg) DETS 029	Gasoline Range Organics * (mg/kg) DETS 062	Diesel Range Organics (mg/kg) DETS 052	Mineral Range Organics (mg/kg) DETS 052	Total Petroleum Hydrocarbons (mg/kg) DETS 052
BH 18	*2.00*		*D*	*14054/41*	*<1*	*350*	*0.21*	*0.25*	*10.5*	*1.3*	*6000*	*<20*	*3000*	*10000*	*13000*
BH 18	4.00		D	14054/42	<1	60	0.12	0.14	11.0	0.2	12000	<20	2000	9700	11700
BH 18	7.40		D	14054/43	<1	20	0.03	0.04	5.9	<0.2	<40				
BH 18	7.80		D	14054/44	<1	<10	0.02	0.02	6.1	<0.2	<40				
BH 19	2.00		D	14054/45	<1	110	0.10	0.12	9.7	1.3	360				
BH 19	5.40		D	14054/46	<1	<10	0.02	0.02	7.3	0.6	100				
BH 20	2.00		D	14054/47	<1	20	0.49	0.59	4.4	0.6	69				
BH 20	4.00		D	14054/48	<1	20	0.38	0.46	4.4	0.5	<40				
BH 20	6.30		D	14054/49	<1	<10	0.02	0.02	6.4	<0.2	<40				

Client Reference: 04014

Laboratory Reference: 14054-1

NORTH GAWBER SITE

Speciated Polyaromatic Hydrocarbon Analysis on Soils Samples

Borehole or Trial Pit	Depth (m)	Sample Number	Sample Type	Laboratory Reference Number	Naphthalene (!)	Acenaphthene (!)	Acenaphthylene (!)	Fluorene (!)	Phenanthrene (!)	Anthracene (!)	Fluoranthene (!)	Pyrene (!)	Benz (a) anthracene (!)
					Milligrams per Kilogram (mg/kg)								
BH 18	2.00		D	14054/41	<0.1	<0.1	<0.1	<0.1	<0.1	7.6	12	10	<0.1

Speciated Polyaromatic Hydrocarbon Analysis on Soils Samples

Borehole or Trial Pit	Depth (m)	Sample Number	Sample Type	Laboratory Reference Number	Chrysene (!)	Benz (b) fluoranthene (!)	Benz (k) fluoranthene (!)	Benz (a) pyrene (!)	Dibenz (ah) anthracene (!)	Indeno (123cd) pyrene (!)	Benzo (ghl) perylene (!)	Total PAH (!)
					Milligrams per Kilogram (mg/kg)							
BH 18	2.00		D	14054/41	5.0	<0.1	2.3	2.0	<0.1	1.7	<0.1	42

NORTH GAWBER SITE

Summary of Chemical Analyses on Soil Samples

	Total Arsenic (mg/kg As) DETS 042	Total Cadmium (mg/kg Cd) DETS 042	Total Chromium (mg/kg Cr) DETS 042	Total Lead (mg/kg Pb) DETS 042	Total Mercury (mg/kg Hg) DETS 015	Total Selenium (mg/kg Se) DETS 042	Total Copper (mg/kg Cu) DETS 042	Total Nickel (mg/kg Ni) DETS 042	Total Zinc (mg/kg Zn) DETS 042	Water Soluble Boron (B) (mg/kg) DETS 020
Date Analysed	21-22/09/2004	21-22/09/2004	21-22/09/2004	21-22/09/2004	21-22/09/2004	21-22/09/2004	21-22/09/2004	21-22/09/2004	21-22/09/2004	27/09/2004

	Total Cyanide (mg/kg CN) DETS 021	Sulphide (mg/kg S^{2-}) DETS 024	Sulphate content ($\%$ SO_3) DETS 004	Sulphate content ($\%$ SO_4) DETS 004	pH Value DETS 008	Total Phenols (mg/kg) DETS 023	Toluene Extractable Matter (mg/kg) DETS 029	Total/Speciated PAH (mg/kg) DETS 050	Gasoline Range Organics * (mg/kg) DETS 062	Diesel Range Organics (mg/kg) DETS 052
Date Analysed	24/09/2004	20/09/2004	21/09/2004		21/09/2004	23/09/2004	21-22/09/2004	20-21/09/2004	13/10/2004	14/10/2004

	Mineral Range Organics (mg/kg) DETS 052	Total Petroleum Hydrocarbons (mg/kg) DETS 052
Date Analysed	14/10/2004	14/10/2004

Client Reference: 04014

Laboratory Reference: 14054-1

Summary of Chemical Analyses on Leachate Samples Prepared from Soils

Borehole or Trial Pit	Depth (m)	Sample Number	Sample Type	Laboratory Reference Number	Arsenic (µg/l As) DETS 042	Nickel (µg/l Ni) DETS 042
BH 01	4.00		D	14054/2	<1	
BH 04A	2.00		D	14054/8	<1	
BH 06	2.00		D	14054/13	<1	
BH 11	2.00		D	14054/26		<10
BH 12	2.00		D	14054/28	<1	
BH 14	2.00		D	14054/33	<1	
BH 14	3.40		D	14054/34		170
BH 17	4.50		D	14054/40		10

Client Reference: 04014

Laboratory Reference: 14054-1

NORTH GAWBER SITE

Summary of Chemical Analyses on Leachates Prepared from Soil Samples

	Arsenic	Nickel
	(µg/l As)	(µg/l Ni)
	DETS 042	*DETS 042*
Date Analysed	11/10/2004	11/10/2004

Client Reference: 04014

Laboratory Reference: 14054-1

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CERTIFICATE OF ANALYSIS

Certificate Number : 14284

Client Reference :	04014	18 October 2004
Our Reference :	14284	
Clients Name :	Scott Doherty Associates	
Clients Address:	Derwentside Business Centre Consett Business Park Consett Co Durham DH8 6BP	
Contract Title :	North Gawber Site	
Description :	Four soil samples and five leachate samples prepared from soils	
Date Received :	28 September 2004	
Test Procedures :	Identified by Prefix DETSn , Details available upon request.	

Notes :

* Denotes test not included in laboratory scope of accreditation

Observations and Interpretations are Outside the UKAS Accreditation Scope

Approved By:

Authorised Signatories	R Bennett	R Brown	S Wilson	
	Director	Laboratory/Technical Manager	Quality Manager	Page 1 of 7 Pages

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NORTH GAWBER SITE

Summary of Chemical Analyses on Soil Samples

Borehole or Trial Pit	Depth (m)	Sample Number	Sample Type	Laboratory Reference Number	Total PAH (mg/kg) DETS 050	Gasoline Range Organics * (mg/kg) DETS 062	Diesel Range Organics (mg/kg) DETS 062	Mineral Range Organics (mg/kg) DETS 062	Total Petroleum Hydrocarbons (mg/kg) DETS 062
TP 20	2.20		D	14284/4	57				
TP 21	1.00		D	14284/5		<20	230	1570	1800
TP 18	0.80		D	14284/6		<20	<20	7800	7800
TP 18	2.50		D	14284/7	90				

Client Reference: 04014

Laboratory Reference: 14284

Speciated Polyaromatic Hydrocarbon Analysis on Soils Samples

Borehole or Trial Pit	Depth (m)	Sample Number	Sample Type	Laboratory Reference Number	Naphthalene (!)	Acenaphthene (!)	Acenaphthylene (!)	Fluorene (!)	Phenanthrene (!)	Anthracene (!)	Fluoranthene (!)	Pyrene (!)	Benz (a) anthracene (!)
					Milligrams per Kilogram (mg/kg)								
TP 20	2.20		D	14284/4	5.60	3.94	2.65	4.14	3.60	2.08	15.10	5.21	<0.1
TP 18	2.50		D	14284/7	2.36	1.09	1.10	1.51	6.45	2.13	2.49	13.28	9.28

NORTH GAWBER SITE

Speciated Polyaromatic Hydrocarbon Analysis on Soils Samples

Borehole or Trial Pit	Depth (m)	Sample Number	Sample Type	Laboratory Reference Number	Chrysene (!)	Benz (b) fluoranthene (!)	Benz (k) fluoranthene (!)	Benz (a) pyrene (!)	Dibenz (ah) anthracene (!)	Indeno (123cd) pyrene (!)	Benzo (ghi) perylene (!)	Total PAH (!)
					Milligrams per Kilogram (mg/kg)							
TP 20	2.20		D	14284/4	2.23	2.80	<0.1	2.78	<0.1	<0.1	6.41	57
TP 18	2.50		D	14284/7	8.62	13.55	<0.1	8.96	6.44	3.82	8.88	90

NORTH GAWBER SITE

Summary of Chemical Analyses on Soil Samples

	Speciated PAH (mg/kg) DETS 050	Gasoline Range Organics * (mg/kg) DETS 062	Diesel Range Organics (mg/kg) DETS 062	Mineral Range Organics (mg/kg) DETS 062	Total Petroleum Hydrocarbons (mg/kg) DETS 062
Date Analysed	07/10/2004	13/10/2004	18/10/2004	18/10/2004	18/10/2004

Client Reference: 04014

***Laboratory Reference:* 14284**

NORTH GAWBER SITE

Summary of Chemical Analyses on Leachate Samples Prepared from Soils

Borehole or Trial Pit	*Depth* (m)	*Sample* Number	*Sample* Type	*Laboratory* Reference Number	*Arsenic* (µg/l As) DETS 042	*Copper* (µg/l Cu) DETS 042	*Nickel* (µg/l Ni) DETS 042
TP 06	1.50		D	14284/1	<1		
TP 17	2.10		D	14284/2			<10
TP 28	2.50		D	14284/3	<1		
TP 20	2.20		D	14284/4			<10
TP 21	1.00		D	14284/5		150	

Client Reference: 04014

Laboratory Reference: 14284

NORTH GAWBER SITE

Summary of Chemical Analyses on Leachates Prepared from Soil Samples

	Arsenic	Copper	Nickel
	(µg/l As)	(µg/l Cu)	(µg/l Ni)
	DETS 042	DETS 042	DETS 042
Date Analysed	14/10/2004	14/10/2004	14/10/2004

Client Reference: 04014

Laboratory Reference: 14284

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CERTIFICATE OF ANALYSIS

Certificate Number : 14334

Client Reference : 04014

18 October 2004

Our Reference : 14334

Clients Name : Scott Doherty Associates
Clients Address: Derwentside Business Centre
Consett Business Park
Consett
Co Durham
DH8 6BP

Contract Title : North Gawber Site

Description : Four water samples

Date Received : 1 October 2004

Test Procedures : Identified by Prefix DETSn , Details available upon request.

Notes :

* Denotes test not included in laboratory scope of accreditation

Observations and Interpretations are Outside the UKAS Accreditation Scope

Approved By:

Authorised Signatories R Bennett Director; R Brown Laboratory/Technical Manager; S Wilson Quality Manager

This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material received by the laboratory. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

Derwentside Environmental Testing Services Limited.
Unit 2a/2b, Park Road Industrial Estate South, Consett, Co Durham, DH8 5PY
Tel: 01207 582333 • Fax: 01207 582444 • Email: info@dets.co.uk • www.dets.co.uk
Registered in England No. 370 5045 • VAT No. 708 978 678

NORTH GAWBER SITE

Summary of Chemical Analyses on Water Samples

Borehole or Trial Pit	Depth (m)	Sample Number	Sample Type	Laboratory Reference Number	Arsenic (µg/l As) DETS 042	Cadmium (µg/l Cd) DETS 042	Chromium (µg/l Cr) DETS 042	Lead (µg/l Pb) DETS 042	Mercury (µg/l Hg) DETS 015	Selenium (µg/l Se) DETS 017	Copper (µg/l Cu) DETS 042	Nickel (µg/l Ni) DETS 042	Zinc (µg/l Zn) DETS 042	Boron (µg/l B) DETS 020
BH 04			W	14334/1	<1	<2	<10	<10	<0.2	<3	7	<10	90	530
BH 05			W	14334/2	<1	<2	<10	20	<0.2	<3	5	80	210	440
BH 17			W	14334/3	<1	<2	10	10	<0.2	<3	11	70	480	340
BH 18			W	14334/4	<1	<2	<10	<10	<0.2	<3	10	<10	320	530

Client Reference: 04014

Laboratory Reference: 14334

NORTH GAWBER SITE

Summary of Chemical Analyses on Water Samples

Borehole or Trial Pit	Depth (m)	Sample Number	Sample Type	Laboratory Reference Number	Total Cyanide (µg/l CN) DETS 021	Sulphide (µg/l S^{2-}) DETS 024	Sulphate content (mg/l SO_3) DETS 004	Sulphate content (mg/l SO_4) DETS 004	pH Value DETS 008	Total Phenols * (µg/l) DETS 054	Total PAH # (µg/l)	Total Petroleum Hydrocarbons (µg/l) DETS 052
BH 04			W	14334/1	<20	810	210	252	7.7	<0.5	0.4	1200
BH 05			W	14334/2	<20	810	4400	5280	5.9	<0.5	4.9	6600
BH 17			W	14334/3	<20	<500	1900	2280	6.2	<0.5	0.98	1100
BH 18			W	14334/4	<20	810	720	864	6.5	<0.5	7.3	1100

Client Reference: 04014

Laboratory Reference: 14334

NORTH GAWBER SITE

Summary of Chemical Analyses on Water Samples

	Arsenic	Cadmium	Chromium	Lead	Mercury	Selenium	Copper	Nickel	Zinc	Boron
	(µg/l As)	(µg/l Cd)	(µg/l Cr)	(µg/l Pb)	(µg/l Hg)	(µg/l Se)	(µg/l Cu)	(µg/l Ni)	(µg/l Zn)	(µg/l B)
	DETS 042	DETS 042	DETS 042	DETS 042	DETS 015	DETS 017	DETS 042	DETS 042	DETS 042	DETS 020
Date Analysed	15/10/2004	11/10/2004	11/10/2004	11/10/2004	11/10/2004	08/10/2004	11/10/2004	11/10/2004	11/10/2004	18/10/2004

	Total Cyanide	Sulphide	Sulphate content		pH Value	Total Phenols *	Total PAH #	Total Petroleum Hydrocarbons
	(µg/l CN)	(µg/l S^{2-})	(mg/l SO_3)	(mg/l SO_4)		(µg/l)	(µg/l)	(µg/l)
	DETS 021	DETS 024	DETS 004	DETS 004	DETS 008	DETS 054		DETS 052
Date Analysed	15/10/2004	15/10/2004	09/10/2004		15/10/2004	18/10/2004	14/10/2004	18/10/2004

Client Reference: 04014

Laboratory Reference: 14334