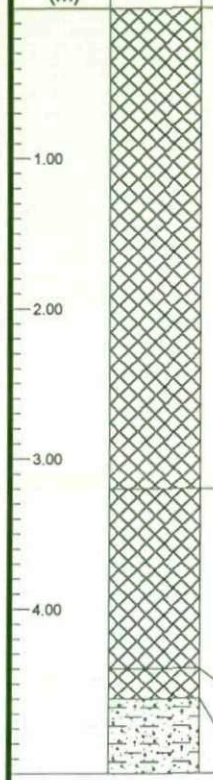
Photograph:



Strata					Samples		Tests		
Depth (m)	Legend	Description	Strata Depth (Thickness) (m)	Reduced Level (mAOD)	Depth (m)	Type	Depth (m)	MEXE	Shear Vane (Peak/Res)
		MADE GROUND (Colliery discard consisting of grey and brown claybound gravel of fine to coarse angular and subangular mudstone and coal).			0.40	ES			
1.00									
			(3.20)		1.60	ES			
2.00									
					2.50	ES			
3.00			3.20	82.20					
		MADE GROUND (Colliery discard consisting of red fine to coarse sandy gravel of angular and subangular burnt shale with some coal and mudstone. Pockets of claybound fine to coarse gravel of mudstone present below 3.7m. Rare sandstone boulders present also).	(1.20)		3.60	ES			
4.00			4.40	81.00					
			4.60	80.80					
		MADE GROUND (Firm brown sandy slightly gravelly possibly	(0.50)		4.80	ES	4.80		127 / 22 kPa
		Continued next sheet	5.10	80.30					

Date of Excavation: 15/04/2009
Equipment: Komatsu PC290 IC
Logged By: B Johnson
Ground Level: 85.4
Coordinates: 433177E - 409666N

Groundwater:
Groundwater not encountered.

Legend:
- D Small Disturbed Sample
- B Bulk Disturbed Sample
- EW Water Sample for Environmental Testing
- ES Soil Sample for Environmental Testing
- U Undisturbed Sample - Open Drive

Remarks:
Trial pit sides stable.

Trial Pit: TP131

TRIAL PIT RECORD

North Gawber Colliery

Revision: Final

Project No. 09002

SCOTT DOHERTY associates

Photograph:

Strata					Samples		Tests		
Depth (m)	Legend	Description	Strata Depth (Thickness) (m)	Reduced Level (mAOD)	Depth (m)	Type	Depth (m)	MEXE	Shear Vane (Peak/Res)
		4.40m - 4.60m : reworked clay. Gravel is fine and medium angular to subrounded coal and mudstone). 4.60m - 5.10m : Stiff grey and orangish brown sandy gravelly CLAY. Gravel is fine to coarse angular and subangular coal and sandstone.Some cobbles of sandstone present also. End of Trial Pit at 5.10 m							
6.00									
7.00									
8.00									
9.00									

Date of Excavation: 15/04/2009
Equipment: Komatsu PC290 IC
Logged By: B Johnson
Ground Level: 85.4
Coordinates: 433177E - 409666N

Groundwater:
Groundwater not encountered.

Legend:
- D Small Disturbed Sample
- B Bulk Disturbed Sample
- EW Water Sample for Environmental Testing
- ES Soil Sample for Environmental Testing
- U Undisturbed Sample - Open Drive

Remarks:
Trial pit sides stable.

Trial Pit: TP131

TRIAL PIT RECORD

North Gawber Colliery

Revision: Final

Project No. 09002

SCOTT DOHERTY associates

Photograph:

Strata					Samples		Tests		
Depth (m)	Legend	Description	Strata Depth (Thickness) (m)	Reduced Level (mAOD)	Depth (m)	Type	Depth (m)	MEXE	Shear Vane (Peak/Res)
		MADE GROUND (Colliery discard consisting of grey claybound fine to coarse gravel of angular and subangular mudstone, coal and some burnt shale. Pieces of fabric, machine belts, rubber hoses and occasional pieces of timber present also).	(1.20)		0.60	B ES			
1.00			1.20	81.60					
		MADE GROUND (Colliery discard consisting of grey fine to coarse gravel of angular to subrounded mudstone, coal and some sandstone. Occasional cobbles of brick present also).	(1.40)		1.50	B ES			
2.00			2.60	80.20					
		Stiff grey and orangeish brown sandy gravelly CLAY. Sand is fine to coarse. Gravel is fine to coarse subangular coal and sandstone. Rare cobbles of sandstone present also.	(0.80)		2.80	B ES			
3.00			3.40	79.40					
		End of Trial Pit at 3.40 m							
4.00									

Date of Excavation: 15/04/2009
Equipment: Komatsu PC290 IC
Logged By: B Johnson
Ground Level: 82.8
Coordinates: 433199E - 409657N

Groundwater:
Slight seepage at 3.3m bgl.

Legend:
- D Small Disturbed Sample
- B Bulk Disturbed Sample
- EW Water Sample for Environmental Testing
- ES Soil Sample for Environmental Testing
- U Undisturbed Sample - Open Drive

Remarks:
Trial pit sides stable.

Trial Pit: TP132

TRIAL PIT RECORD

North Gawber Colliery

Revision: Final

Project No. 09002

SCOTT DOHERTY associates

Photograph:



Strata					Samples		Tests		
Depth (m)	Legend	Description	Strata Depth (Thickness) (m)	Reduced Level (mAOD)	Depth (m)	Type	Depth (m)	MEXE	Shear Vane (Peak/Res)
		MADE GROUND (Colliery discard consisting of dark grey clayey fine to coarse gravel of subangular mudstone).	(1.30)		0.40	ES			
1.00			1.30	81.70					
		MADE GROUND (Colliery discard consisting of red fine to coarse gravel of angular and subangular burnt shale).	(0.50)		1.50	ES			
			1.80	81.20					
2.00		MADE GROUND (Colliery discard consisting of grey fine to coarse gravel of subangular mudstone with lenses of fine and medium gravel of angular coal, clinker and coal dust).	(1.00)		2.20	ES			
			2.80	80.20					
3.00		MADE GROUND (Stiff blueish grey mottled black sandy gravelly reworked clay. Sand is fine. Gravel is fine angular coal).	(0.60)		3.00	ES	3.00		87 / 47 kPa
			3.40	79.60					
		Stiff grey and orangeish brown, with grey veining, sandy gravelly CLAY. Sand is fine to coarse. Gravel is fine to coarse angular and subangular sandstone, mudstone and coal.	(0.70)						
4.00			4.10	78.90	4.10	ES	4.10		123 / 38 kPa
		End of Trial Pit at 4.10 m							

Date of Excavation: 15/04/2009
Equipment: Komatsu PC290 IC
Logged By: B Johnson
Ground Level: 83.0
Coordinates: 433247E - 409632N

Groundwater:
Groundwater not encountered.

Legend:
- D Small Disturbed Sample
- B Bulk Disturbed Sample
- EW Water Sample for Environmental Testing
- ES Soil Sample for Environmental Testing
- U Undisturbed Sample - Open Drive

Remarks:
Trial pit sides stable.

Trial Pit: TP133

TRIAL PIT RECORD

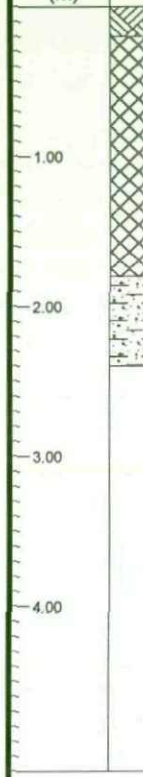
North Gawber Colliery

Revision: Final

Project No. 09002

SCOTT DOHERTY associates

Photograph:



Strata					Samples		Tests		
Depth (m)	Legend	Description	Strata Depth (Thickness) (m)	Reduced Level (mAOD)	Depth (m)	Type	Depth (m)	MEXE	Shear Vane (Peak/Res)
		TOPSOIL (Poor quality).	0.20	81.60					
		MADE GROUND (Colliery discard consisting of very dark grey fine to coarse gravel of angular and subangular clinker with some coal and mudstone).	(1.60)		0.40	B			
1.00			1.80	80.00					
		Stiff grey and brown mottled orangish brown sandy to very sandy gravelly CLAY. Gravel is fine to coarse subangular sandstone with occasional cobbles of sandstone.	(0.60)				2.00		97 / 30 kPa
2.00			2.40	79.40					
		End of Trial Pit at 2.40 m							
3.00									
4.00									

Date of Excavation: 20/04/2009
Equipment: Komatsu PC290 IC
Logged By: B Johnson
Ground Level: 81.8
Coordinates: 432798E - 409736N

Groundwater:
Groundwater not encountered.

Legend:
- D Small Disturbed Sample
- B Bulk Disturbed Sample
- EW Water Sample for Environmental Testing
- ES Soil Sample for Environmental Testing
- U Undisturbed Sample - Open Drive

Remarks:
Trial pit sides stable.

Trial Pit: TP134

TRIAL PIT RECORD

North Gawber Colliery

Revision: Final

Project No. 09002

SCOTT DOHERTY associates

Photograph:

Strata					Samples		Tests		
Depth (m)	Legend	Description	Strata Depth (Thickness) (m)	Reduced Level (mAOD)	Depth (m)	Type	Depth (m)	MEXE	Shear Vane (Peak/Res)
		MADE GROUND (Colliery discard consisting of dark grey claybound gravel of fine to coarse angular and subangular coal and mudstone).	(0.60) 0.60	81.50	0.40	ES			
		MADE GROUND (Colliery discard consisting of fine to coarse reddish brown gravel of angular and subangular burnt shale and mudstone).	0.80	81.30	0.70	ES			
1.00		MADE GROUND (Colliery discard consisting of very dark grey sandy gravelly silt. Sand is fine to coarse. Gravel is fine to coarse angular coal and rare brick. Pieces of metal present also).	(1.30) 2.10	80.00	1.20	ES B			
2.00		MADE GROUND (Colliery discard consisting of firm yellow, grey and reddish orange burnt clay).	(0.60) 2.70	79.40	2.50	ES B			
3.00		MADE GROUND (Colliery discard consisting of soft very dark grey sandy silt with pockets of firm brownish grey very sandy very gravelly clay).	(1.00) 3.70	78.40	3.00	ES B			
4.00		Stiff greyish brown sandy gravelly CLAY. Gravel is fine to coarse angular and subangular coal and sandstone.	(0.50) 4.20	77.90	3.80	B ES			
		End of Trial Pit at 4.20 m							

Date of Excavation: 22/04/2009
Equipment: CAT 432D
Logged By: B Johnson
Ground Level: 82.1
Coordinates: 432845E - 409703N

Groundwater:
Groundwater not encountered.

Legend:
- D Small Disturbed Sample
- B Bulk Disturbed Sample
- EW Water Sample for Environmental Testing
- ES Soil Sample for Environmental Testing
- U Undisturbed Sample - Open Drive

Remarks:
Trial pit sides stable.

Trial Pit: TP135

TRIAL PIT RECORD

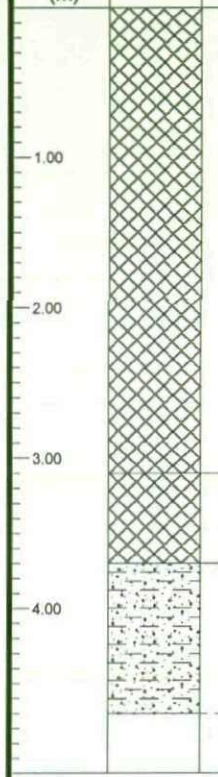
North Gawber Colliery

Revision: Final

Project No. 09002

SCOTT DOHERTY associates

Photograph:



Strata					Samples		Tests		
Depth (m)	Legend	Description	Strata Depth (Thickness) (m)	Reduced Level (mAOD)	Depth (m)	Type	Depth (m)	MEXE	Shear Vane (Peak/Res)
		MADE GROUND (Colliery discard consisting of red fine to coarse gravel of subangular burnt shale with many cobbles of burnt shale and rare boulders of sandstone also).			0.80	ES			
1.00			(3.10)						
					2.00	ES			
2.00									
3.00			3.10	76.20					
		MADE GROUND (Colliery discard consisting of damp, black fine and medium gravel of angular ash and clinker).	(0.60)		3.40	ES			
			3.70	75.60					
4.00		Stiff blueish grey and brown slightly sandy slightly gravelly CLAY. Sand is fine to coarse. Gravel is fine angular and subangular mudstone and coal .	(1.00)		4.00	ES			
			4.70	74.60					
		End of Trial Pit at 4.70 m							

Date of Excavation: 20/04/2009
Equipment: Komatsu PC290 IC
Logged By: B Johnson
Ground Level: 79.3
Coordinates: 433082E - 409632N

Groundwater:
Groundwater not encountered.

Legend:
- D Small Disturbed Sample
- B Bulk Disturbed Sample
- EW Water Sample for Environmental Testing
- ES Soil Sample for Environmental Testing
- U Undisturbed Sample - Open Drive

Remarks:
Trial pit sides stable.

Trial Pit: TP136

TRIAL PIT RECORD

North Gawber Colliery

Revision: Final

Project No. 09002

SCOTT DOHERTY associates

Photograph:

Strata					Samples		Tests		
Depth (m)	Legend	Description	Strata Depth (Thickness) (m)	Reduced Level (mAOD)	Depth (m)	Type	Depth (m)	MEXE	Shear Vane (Peak/Res)
		MADE GROUND (Stiff friable grey and brown sandy to very sandy gravelly to very gravelly clay. Sand is fine to coarse. Gravel is fine to coarse angular to subrounded mudstone, sandstone, coal and some burnt shale).	(1.60)		0.50	ES			
1.00			1.60	78.80	1.60	ES			
		MADE GROUND (Colliery discard consisting of black and red fine to coarse gravel of angular clinker and burnt shale. Some cobbles of burnt shale present also).			1.80	ES			
2.00									
			(2.60)		3.00	ES			
3.00									
4.00			4.20	76.20					
		Stiff grey and orangish brown sandy gravelly CLAY. Gravel is fine and medium angular and subangular coal and mudstone.	(0.50)		4.50	ES	4.50		131 / 29 kPa
			4.70	75.70					
		End of Trial Pit at 4.70 m							

Date of Excavation: 20/04/2009
Equipment: Komatsu PC290 IC
Logged By: B Johnson
Ground Level: 80.4
Coordinates: 433146E - 409614N

Groundwater:
Groundwater not encountered.

Legend:
- D Small Disturbed Sample
- B Bulk Disturbed Sample
- EW Water Sample for Environmental Testing
- ES Soil Sample for Environmental Testing
- U Undisturbed Sample - Open Drive

Remarks:
Trial pit sides stable.

Trial Pit: TP137

TRIAL PIT RECORD

North Gawber Colliery

Revision: Final

Project No. 09002

SCOTT DOHERTY associates

Photograph:

Strata					Samples		Tests		
Depth (m)	Legend	Description	Strata Depth (Thickness) (m)	Reduced Level (mAOD)	Depth (m)	Type	Depth (m)	MEXE	Shear Vane (Peak/Res)
		TOPSOIL (Poor quality).	0.20	79.80	0.10	ES			
		MADE GROUND (Colliery discard consisting of red fine to coarse gravel of angular and subangular burnt shale. Some cobbles of burnt shale present also).	(0.60) 0.80	79.20	0.60	ES			
1.00		MADE GROUND (Colliery discard consisting of grey fine to coarse gravel of subangular mudstone. Some cobbles and occasional boulders of mudstone present also. Pockets of clinker present below 2.5m).	(2.00)		1.00	ES			
2.00					2.40	ES			
			2.80	77.20					
3.00		Firm brown and orangish brown sandy gravelly CLAY. Gravel is fine to coarse subangular mudstone with flecks of coal.	(0.60)		3.00	ES	3.00		64 / 17 kPa
			3.40	76.60					
4.00		End of Trial Pit at 3.40 m							

Date of Excavation: 20/04/2009
Equipment: CAT 432D
Logged By: B Johnson
Ground Level: 80.0
Coordinates: 433209E - 409614N

Groundwater:
Groundwater not encountered.

Legend:
- D Small Disturbed Sample
- B Bulk Disturbed Sample
- EW Water Sample for Environmental Testing
- ES Soil Sample for Environmental Testing
- U Undisturbed Sample - Open Drive

Remarks:
Trial pit sides stable.

Trial Pit: TP138

TRIAL PIT RECORD

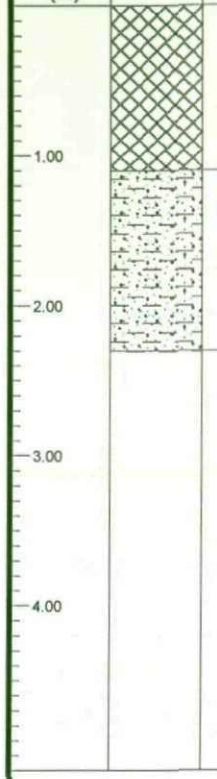
North Gawber Colliery

Revision: Final

Project No. 09002

SCOTT DOHERTY associates

Photograph:



Strata					Samples		Tests		
Depth (m)	Legend	Description	Strata Depth (Thickness) (m)	Reduced Level (mAOD)	Depth (m)	Type	Depth (m)	MEXE	Shear Vane (Peak/Res)
		MADE GROUND (Colliery discard consisting of dark grey and reddish brown fine to coarse gravel of angular clinker and burnt shale with some coal).	(1.10)		0.60	ES			
1.00			1.10	79.00					
		Stiff friable grey and brown sandy to very sandy gravelly CLAY. Gravel is fine and medium subangular mudstone.	(1.20)		1.30	ES			
2.00					2.00	ES			
			2.30	77.80					
		End of Trial Pit at 2.40 m							
3.00									
4.00									

Date of Excavation: 22/04/2009
Equipment: CAT 432D
Logged By: B Johnson
Ground Level: 80.1
Coordinates: 432795E - 409705N

Groundwater:
Groundwater not encountered.

Legend:
- D Small Disturbed Sample
- B Bulk Disturbed Sample
- EW Water Sample for Environmental Testing
- ES Soil Sample for Environmental Testing
- U Undisturbed Sample - Open Drive

Remarks:
Trial pit sides stable.

Trial Pit:
TP139

TRIAL PIT RECORD

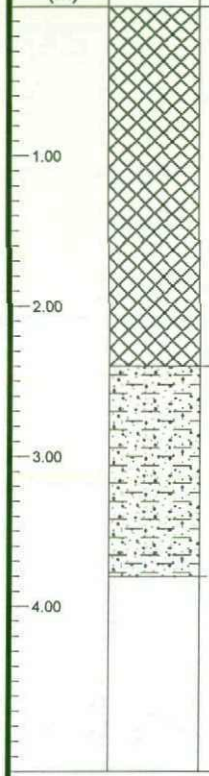
North Gawber Colliery

Revision: Final

Project No. 09002

SCOTT DOHERTY associates

Photograph:



Strata					Samples		Tests		
Depth (m)	Legend	Description	Strata Depth (Thickness) (m)	Reduced Level (mAOD)	Depth (m)	Type	Depth (m)	MEXE	Shear Vane (Peak/Res)
		MADE GROUND (Colliery discard consisting of red and dark grey fine to coarse gravel of burnt shale and some clinker. Occasional cobbles of burnt shale present also).	(2.40)		0.50	ES			
1.00					1.70	ES			
2.00			2.40	76.50					
		Stiff blueish grey mottled brown sandy gravelly CLAY. Gravel is fine subangular mudstone.	(1.40)		3.50	ES			
3.00			3.80	75.10					
		End of Trial Pit at 3.80 m							
4.00									

Date of Excavation: 22/04/2009
Equipment: CAT 432D
Logged By: B Johnson
Ground Level: 78.9
Coordinates: 432877E - 409665N

Groundwater:
Slight seepage at 2.05m bgl.

Legend:
- D Small Disturbed Sample
- B Bulk Disturbed Sample
- EW Water Sample for Environmental Testing
- ES Soil Sample for Environmental Testing
- U Undisturbed Sample - Open Drive

Remarks:
Trial pit sides stable.

Trial Pit: TP140

TRIAL PIT RECORD

North Gawber Colliery

Revision: Final

Project No. 09002

SCOTT DOHERTY associates

Photograph:

Strata					Samples		Tests		
Depth (m)	Legend	Description	Strata Depth (Thickness) (m)	Reduced Level (mAOD)	Depth (m)	Type	Depth (m)	MEXE	Shear Vane (Peak/Res)
		MADE GROUND (Colliery discard consisting of dark grey and reddish brown very clayey fine to coarse gravel of angular and subangular coal, clinker, ash and burnt shale. Gravel is claybound in places. Some cobbles and occasional boulders of mudstone and some cobbles of burnt shale present also).			0.50	ES			
1.00					1.00	B			
2.00			(3.90)		2.00	ES			
3.00									
					3.40	ES			
			3.90	76.10	3.70	B			
4.00		Stiff blueish grey and brown sandy slightly gravelly CLAY. Gravel is fine angular and subangular coal and mudstone.	(1.10)		4.30	B ES	4.30		140 / 61 kPa
			5.00	75.00	5.00	ES			
		End of Trial Pit at 5.00 m							

Date of Excavation: 20/04/2009
Equipment: Komatsu PC290 IC
Logged By: B Johnson
Ground Level: 80.0
Coordinates: 432930E - 409650N

Groundwater:
Groundwater not encountered.

Legend:
- D Small Disturbed Sample
- B Bulk Disturbed Sample
- EW Water Sample for Environmental Testing
- ES Soil Sample for Environmental Testing
- U Undisturbed Sample - Open Drive

Remarks:
Trial pit sides stable.

Trial Pit: TP141

TRIAL PIT RECORD

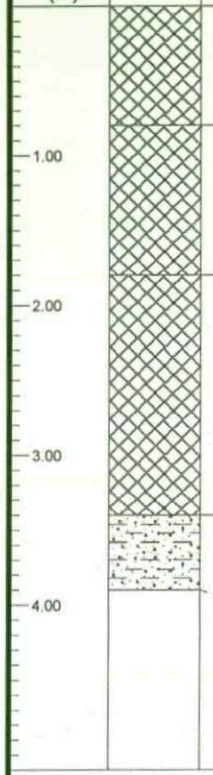
North Gawber Colliery

Revision: Final

Project No. 09002

SCOTT DOHERTY associates

Photograph:



Strata					Samples		Tests		
Depth (m)	Legend	Description	Strata Depth (Thickness) (m)	Reduced Level (mAOD)	Depth (m)	Type	Depth (m)	MEXE	Shear Vane (Peak/Res)
		MADE GROUND (Colliery discard consisting of dark grey fine to coarse gravel of subangular mudstone and some coal).	(0.80)		0.30	ES			
			0.80	76.80					
1.00		MADE GROUND (Colliery discard consisting of red fine to coarse gravel of angular burnt shale).	(1.00)		1.00	ES			
			1.80	75.80					
2.00		MADE GROUND (Colliery discard consisting of grey, mostly claybound, fine to coarse gravel of angular and subangular mudstone, burnt shale and occasional coal and clinker. Rare cobbles of burnt shale present also).	(1.60)		2.20	B ES			
3.00					3.00	B ES			
			3.40	74.20					
		Stiff greyish brown sandy gravelly CLAY. Gravel is fine angular and subangular mudstone and coal.	(0.50)		3.50	B ES	3.50		113 / 40 kPa
			3.90	73.70					
4.00		End of Trial Pit at 3.90 m							

Date of Excavation: 20/04/2009
Equipment: Komatsu PC290 IC
Logged By: Ben Johnson
Ground Level: 77.6
Coordinates: 432970E - 409622N

Groundwater:
Groundwater not encountered.

Legend:
- D Small Disturbed Sample
- B Bulk Disturbed Sample
- EW Water Sample for Environmental Testing
- ES Soil Sample for Environmental Testing
- U Undisturbed Sample - Open Drive

Remarks:
Trial pit sides stable.

Trial Pit: TP142

TRIAL PIT RECORD

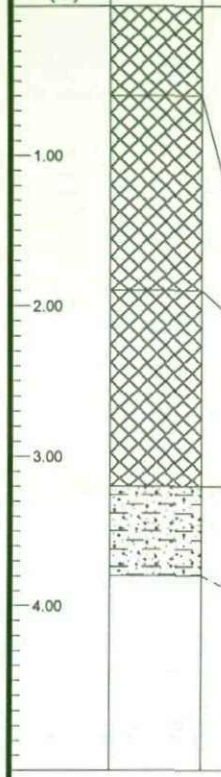
North Gawber Colliery

Revision: Final

Project No. 09002

SCOTT DOHERTY associates

Photograph:



Strata					Samples		Tests		
Depth (m)	Legend	Description	Strata Depth (Thickness) (m)	Reduced Level (mAOD)	Depth (m)	Type	Depth (m)	MEXE	Shear Vane (Peak/Res)
		MADE GROUND (Stiff friable grey and brown sandy gravelly to very gravelly reworked clay. Gravel is fine to coarse angular and subangular coal, mudstone, some burnt shale and rare sandstone. Some cobbles of mudstone present also).	(0.60) 0.60	74.90	0.40	ES			
1.00		MADE GROUND (Colliery discard consisting of dark grey and brown claybound fine to coarse gravel of angular and subangular mudstone, ash and some burnt shale).	(1.30) 1.90	73.60	1.00	ES			
2.00		MADE GROUND (Colliery discard consisting of soft wet dark grey silt with organic debris).	(1.30) 3.20	72.30	2.10	ES			
3.00		Stiff grey mottled orangish brown sandy gravelly CLAY. Gravel is fine angular to subrounded coal and mudstone.	(0.60) 3.80	71.70	3.40	ES			
4.00		End of Trial Pit at 3.80 m							

Date of Excavation: 21/04/2009
Equipment: CAT 432D
Logged By: B Johnson
Ground Level: 75.5
Coordinates: 433013E - 409587N

Groundwater:
Heavy seepage at 1.9m bgl.

Legend:
- D Small Disturbed Sample
- B Bulk Disturbed Sample
- EW Water Sample for Environmental Testing
- ES Soil Sample for Environmental Testing
- U Undisturbed Sample - Open Drive

Remarks:
Trial pit sides stable.

Trial Pit: TP143

TRIAL PIT RECORD

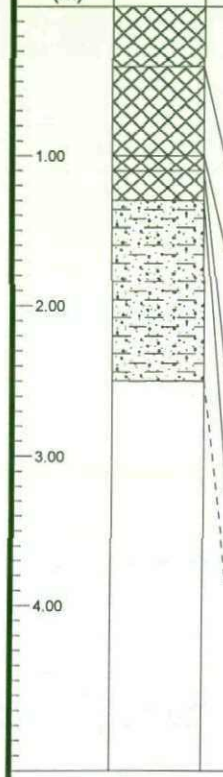
North Gawber Colliery

Revision: Final

Project No. 09002

SCOTT DOHERTY associates

Photograph:



Strata					Samples		Tests		
Depth (m)	Legend	Description	Strata Depth (Thickness) (m)	Reduced Level (mAOD)	Depth (m)	Type	Depth (m)	MEXE	Shear Vane (Peak/Res)
		MADE GROUND (Colliery discard consisting of dark grey *claybound fine to coarse gravel* of angular to subrounded mudstone, coal and sandstone. Pockets of sandy gravelly clay and some cobbles of brick present also).	(0.40)		0.20	ES			
			0.40	*75.20*					
		MADE GROUND (Yellowish brown fine to coarse gravel and cobbles of subangular dolomite).	(0.60)		0.90	ES			
1.00			1.00	74.60					
			1.10	74.50					
		MADE GROUND (Colliery discard consisting of brown and reddish brown fine to coarse gravel of angular and subangular burnt shale, clinker and ash).	1.30	74.30	1.20	ES			
					1.60	ES	1.60		140 / 57 kPa
2.00			(1.20)						
		MADE GROUND (Stiff grey and brown sandy gravelly reworked clay with narrow lenses of black silt. Gravel is fine subangular mudstone).	2.50	73.10					
3.00		Stiff grey and orangish brown sandy slightly gravelly CLAY. Gravel is fine subangular mudstone.							
4.00		End of Trial Pit at 2.50 m							

Date of Excavation: 20/04/2009
Equipment: CAT 432D
Logged By: B Johnson
Ground Level: 75.6
Coordinates: 433055E - 409592N

Groundwater:
Groundwater not encountered.

Legend:
- D Small Disturbed Sample
- B *Bulk Disturbed Sample*
- EW Water Sample for Environmental Testing
- ES Soil Sample for Environmental Testing
- U Undisturbed Sample - Open Drive

Remarks:
Trial pit sides stable.

Trial Pit: TP144

TRIAL PIT RECORD

North Gawber Colliery

Revision: Final

Project No. 09002

SCOTT DOHERTY associates

Photograph:

Strata					Samples		Tests		
Depth (m)	Legend	Description	Strata Depth (Thickness) (m)	Reduced Level (mAOD)	Depth (m)	Type	Depth (m)	MEXE	Shear Vane (Peak/Res)
		MADE GROUND (Colliery discard consisting of red and brown fine to coarse, but predominantly coarse, gravel of angular and subangular burnt shale *and mudstone*. Occasional cobbles of burnt shale and brick present also).	(1.00)		0.40	ES			
1.00			1.00	77.70					
		MADE GROUND (Colliery discard consisting of dark brown and grey fine to coarse gravel of angular clinker and ash with some burnt shale, coal and brick).			1.50	ES			
2.00									
			(3.20)		2.80	ES			
3.00									
					3.80	ES			
4.00			4.20	74.50					
		End of Trial Pit at 4.20 m							

Date of Excavation: 20/04/2009
Equipment: CAT 432D
Logged By: B Johnson
Ground Level: 78.7
Coordinates: 433119E - 409592N

Groundwater:
Groundwater not encountered.

Legend:
- D Small Disturbed Sample
- B Bulk Disturbed Sample
- EW Water Sample for Environmental Testing
- ES Soil Sample for Environmental Testing
- U Undisturbed Sample - Open Drive

Remarks:
Trial pit sides stable.

Trial Pit: TP145

TRIAL PIT RECORD

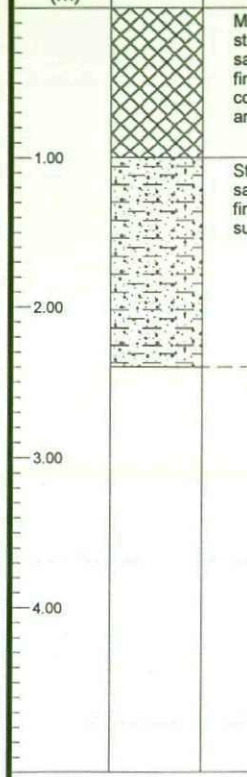
North Gawber Colliery

Revision: Final

Project No. 09002

SCOTT DOHERTY associates

Photograph:



Strata					Samples		Tests		
Depth (m)	Legend	Description	Strata Depth (Thickness) (m)	Reduced Level (mAOD)	Depth (m)	Type	Depth (m)	MEXE	Shear Vane (Peak/Res)
		MADE GROUND (Predominantly stiff, but firm in places, grey sandy gravelly clay. Sand is fine to coarse. Gravel is fine to coarse subangular mudstone and occasional sandstone).	(1.00)		0.50	B ES			
1.00			1.00	77.00					
		Stiff grey and orangish brown sandy gravelly CLAY. Gravel is fine subangular and subrounded mudstone.					1.40		131 / 31 kPa
			(1.40)		1.60	B ES			
2.00			2.40	75.60					
		End of Trial Pit at 2.40 m							
3.00									
4.00									

Date of Excavation: 22/04/2009
Equipment: CAT 432D
Logged By: B Johnson
Ground Level: 78.0
Coordinates: 432784E - 409680N

Groundwater:
Groundwater not encountered.

Legend:
- D Small Disturbed Sample
- B Bulk Disturbed Sample
- EW Water Sample for Environmental Testing
- ES Soil Sample for Environmental Testing
- U Undisturbed Sample - Open Drive

Remarks:
Trial pit sides stable.
Concrete foundations present from 0.2 to 0.6m bgl adjacent to trial pit.

Trial Pit: TP146

TRIAL PIT RECORD

North Gawber Colliery

Revision: Final

Project No. 09002

SCOTT DOHERTY associates

Photograph:



Strata					Samples		Tests		
Depth (m)	Legend	Description	Strata Depth (Thickness) (m)	Reduced Level (mAOD)	Depth (m)	Type	Depth (m)	MEXE	Shear Vane (Peak/Res)
		TOPSOIL (Poor quality).	0.20	73.40	0.10	ES			
		MADE GROUND (Colliery discard consisting of dark grey claybound fine to coarse gravel of angular and subangular mudstone, burnt shale and coal. Pockets of sandy very gravelly clay noted. Rubber hose present at 2.6m bgl).			0.40	ES			
1.00					1.00	B			
			(2.60)						
					1.80	ES			
2.00									
			2.80	70.80					
		Stiff grey and brown mottled orangish brown sandy to very sandy gravelly CLAY. Gravel is fine to coarse angular to subrounded mudstone and coal.	(0.70)		3.00	ES	3.00		140 / 49 kPa
3.00			3.50	70.10					
		End of Trial Pit at 3.50 m							
4.00									

Date of Excavation: 21/04/2009
Equipment: CAT 432D
Logged By: B Johnson
Ground Level: 73.6
Coordinates: 432955E - 409562N

Groundwater:
Groundwater not encountered.

Legend:
- D Small Disturbed Sample
- B Bulk Disturbed Sample
- EW Water Sample for Environmental Testing
- ES Soil Sample for Environmental Testing
- U Undisturbed Sample - Open Drive

Remarks:
Trial pit sides stable.

Trial Pit: TP147

TRIAL PIT RECORD

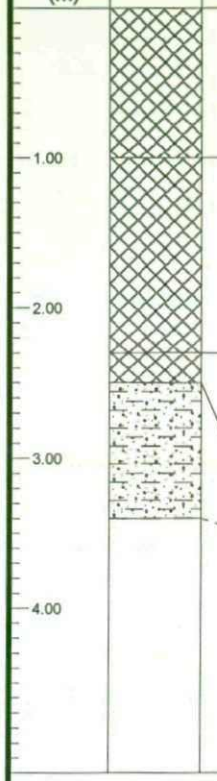
North Gawber Colliery

Revision: Final

Project No. 09002

SCOTT DOHERTY associates

Photograph:



Strata					Samples		Tests		
Depth (m)	Legend	Description	Strata Depth (Thickness) (m)	Reduced Level (mAOD)	Depth (m)	Type	Depth (m)	MEXE	Shear Vane (Peak/Res)
		MADE GROUND (Firm friable sandy gravelly to very gravelly reworked clay. Sand is fine to coarse. Gravel is fine to coarse angular and subangular mudstone, coal and sandstone).	(1.00)		0.50	ES			
1.00			1.00	71.70					
		MADE GROUND (Colliery discard consisting of soft wet dark grey sandy silt with ash and pockets of clay).	(1.30)		1.60	ES B			
2.00			2.30	70.40					
		MADE GROUND (Demolition arisings consisting of fine to coarse gravel and cobbles of concrete and brick).	2.50	70.20					
		Stiff grey and brown sandy gravelly CLAY. Gravel is fine to coarse angular and subangular coal and mudstone.	(0.90)		2.80	ES	2.80		140 / 39 kPa
3.00			3.40	69.30					
		End of Trial Pit at 3.40 m							
4.00									

Date of Excavation: 21/04/2009
Equipment: CAT 432D
Logged By: B Johnson
Ground Level: 72.7
Coordinates: 433031E - 409536N

Groundwater:
Moderate seepage at 2.3m bgl.

Legend:
- D Small Disturbed Sample
- B Bulk Disturbed Sample
- EW Water Sample for Environmental Testing
- ES Soil Sample for Environmental Testing
- U Undisturbed Sample - Open Drive

Remarks:
Trial pit sides stable.

Trial Pit: TP148

TRIAL PIT RECORD

North Gawber Colliery

Revision: Final

Project No. 09002

SCOTT DOHERTY associates

Photograph:



Strata					Samples		Tests		
Depth (m)	Legend	Description	Strata Depth (Thickness) (m)	Reduced Level (mAOD)	Depth (m)	Type	Depth (m)	MEXE	Shear Vane (Peak/Res)
		MADE GROUND (Colliery discard consisting of grey claybound fine to coarse gravel of subangular mudstone with some brick, coal and rare sandstone. Pockets of reddish brown burnt shale present after 2.5m bgl. Occasional cobbles of sandstone present also).			0.50	ES			
1.00									
			(3.60)		1.70	ES			
2.00									
3.00									
			3.60	68.80	3.40	ES			
		Stiff grey and brown mottled orange slightly sandy gravelly CLAY. Gravel is fine angular and subangular coal and mudstone.	(0.80)				3.90		110 / 28 kPa
4.00			4.40	68.00					
		End of Trial Pit at 4.40 m							

Date of Excavation: 15/04/2009
Equipment: Komatsu PC290 IC
Logged By: B Johnson
Ground Level: 72.4
Coordinates: 433130E - 409493N

Groundwater:
Slight seepage at 1.5m bgl.

Legend:
- D Small Disturbed Sample
- B Bulk Disturbed Sample
- EW Water Sample for Environmental Testing
- ES Soil Sample for Environmental Testing
- U Undisturbed Sample - Open Drive

Remarks:
Repeated collapse after 1.0m bgl.

Trial Pit: TP149

TRIAL PIT RECORD

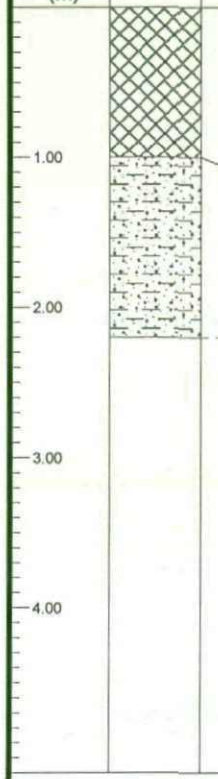
North Gawber Colliery

Revision: Final

Project No. 09002

SCOTT DOHERTY associates

Photograph:



Strata					Samples		Tests		
Depth (m)	Legend	Description	Strata Depth (Thickness) (m)	Reduced Level (mAOD)	Depth (m)	Type	Depth (m)	MEXE	Shear Vane (Peak/Res)
		MADE GROUND (Stiff grey and brown sandy gravelly reworked clay. Gravel is fine and medium subangular and subrounded mudstone and sandstone. Pockets of red fine to coarse gravel of burnt shale present also).	(1.00)		0.50	ES B			
			1.00	73.20					
		Stiff grey mottled orangish brown sandy gravelly CLAY. Gravel is fine and medium angular and subangular coal and mudstone.	(1.20)		1.50	ES B	1.40		127 / 45 kPa
			2.20	72.00					
		End of Trial Pit at 2.20 m							

Date of Excavation: 20/04/2009
Equipment: CAT 432D
Logged By: B Johnson
Ground Level: 74.2
Coordinates: 433160E - 409530N

Groundwater:
Groundwater not encountered.

Legend:
- D Small Disturbed Sample
- B Bulk Disturbed Sample
- EW Water Sample for Environmental Testing
- ES Soil Sample for Environmental Testing
- U Undisturbed Sample - Open Drive

Remarks:
Trial pit sides stable.

Trial Pit: TP150

TRIAL PIT RECORD

North Gawber Colliery

Revision: Final

Project No. 09002

SCOTT DOHERTY associates

Photograph:

Strata					Samples		Tests		
Depth (m)	Legend	Description	Strata Depth (Thickness) (m)	Reduced Level (mAOD)	Depth (m)	Type	Depth (m)	MEXE	Shear Vane (Peak/Res)
		MADE GROUND (Stiff friable grey sandy gravelly clay. Gravel is fine and medium subangular mudstone. Occasional iron bars present also).			0.20	ES			
1.00			(1.60)		0.80	B ES	0.80		87 / 23 kPa
			1.60	73.80					
		Stiff brown, grey and orange sandy gravelly CLAY. Gravel is fine to coarse subangular and subrounded sandstone and mudstone.	(0.60)		2.00	B ES	2.00		140 / 66 kPa
2.00			2.20	73.20					
		End of Trial Pit at 2.20 m							
3.00									
4.00									

Date of Excavation: 22/04/2009
Equipment: CAT 432D
Logged By: B Johnson
Ground Level: 75.4
Coordinates: 432751E - 409630N

Groundwater:
Moderate seepage at 1.6m bgl.

Legend:
- D Small Disturbed Sample
- B Bulk Disturbed Sample
- EW Water Sample for Environmental Testing
- ES Soil Sample for Environmental Testing
- U Undisturbed Sample - Open Drive

Remarks:
Trial pit sides stable.

Trial Pit: TP151

TRIAL PIT RECORD

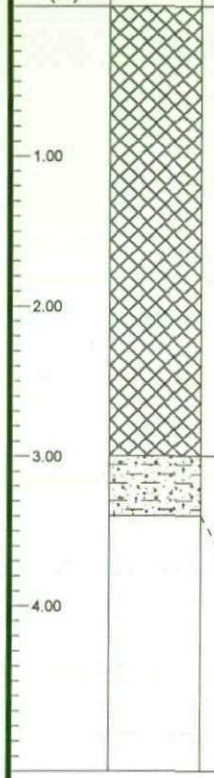
North Gawber Colliery

Revision: Final

Project No. 09002

SCOTT DOHERTY associates

Photograph:



Strata					Samples		Tests		
Depth (m)	Legend	Description	Strata Depth (Thickness) (m)	Reduced Level (mAOD)	Depth (m)	Type	Depth (m)	MEXE	Shear Vane (Peak/Res)
		MADE GROUND (Colliery discard consisting of very dark grey, with brown pockets, sandy silt. Some organic debris present also).			0.50	ES			
1.00					1.50	ES			
			(3.00)		2.00	B			
2.00					2.40	ES			
			3.00	72.40					
3.00		Stiff grey and orangish brown sandy gravelly CLAY. Gravel is fine to coarse angular to subrounded coal, mudstone and sandstone.	(0.40)		3.20	ES B	3.20		140 / 88 kPa
			3.40	72.00					
4.00		End of Trial Pit at 3.40 m							

Date of Excavation: 20/04/2009
Equipment: Komatsu PC290 IC
Logged By: B Johnson
Ground Level: 75.4
Coordinates: 432866E - 409567N

Groundwater:
Groundwater not encountered.

Legend:
- D Small Disturbed Sample
- B Bulk Disturbed Sample
- EW Water Sample for Environmental Testing
- ES Soil Sample for Environmental Testing
- U Undisturbed Sample - Open Drive

Remarks:
Trial pit sides stable.

Trial Pit: TP152

TRIAL PIT RECORD

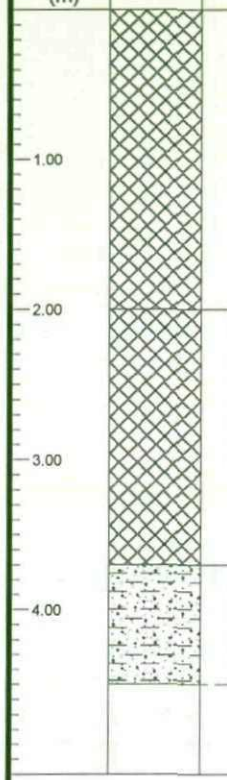
North Gawber Colliery

Revision: Final

Project No. 09002

SCOTT DOHERTY associates

Photograph:



Strata					Samples		Tests		
Depth (m)	Legend	Description	Strata Depth (Thickness) (m)	Reduced Level (mAOD)	Depth (m)	Type	Depth (m)	MEXE	Shear Vane (Peak/Res)
		MADE GROUND (Colliery discard consisting of grey and greyish brown claybound fine to coarse gravel of angular and subangular mudstone, coal and brick).	(2.00)		0.50	ES			
1.00					1.70	ES			
			2.00	72.00					
2.00		MADE GROUND (Firm grey sandy gravelly to very gravelly reworked clay. Sand is fine to coarse. Gravel is fine to coarse angular and subangular mudstone, coal, brick and some sandstone. Iron bar present at 3.5m bgl).	(1.70)		2.50	ES			
3.00									
			3.70	70.30					
4.00		Stiff friable grey and orangish brown sandy slightly gravelly CLAY. Gravel is fine and medium angular to subrounded coal and sandstone.	(0.80)		4.00	ES	4.00		93 / 36 kPa
			4.50	69.50					
		End of Trial Pit at 4.50 m							

Date of Excavation: 15/04/2009
Equipment: Komatsu PC290 IC
Logged By: B Johnson
Ground Level: 74.0
Coordinates: 432956E - 409531N

Groundwater:
Groundwater not encountered.

Legend:
- D Small Disturbed Sample
- B Bulk Disturbed Sample
- EW Water Sample for Environmental Testing
- ES Soil Sample for Environmental Testing
- U Undisturbed Sample - Open Drive

Remarks:
Trial pit sides stable.

Trial Pit: TP153

TRIAL PIT RECORD

North Gawber Colliery

Revision: Final

Project No. 09002

SCOTT DOHERTY associates

Photograph:

Strata

Depth (m)	Legend	Description	Strata Depth (Thickness) (m)	Reduced Level (mAOD)
		MADE GROUND (Colliery discard consisting of grey claybound fine to coarse gravel of subangular mudstone with some coal, brick and sandstone. Cobbles of brick and rare cobbles of sandstone present also. Narrow partings of very dark grey sandy silt present after 2.5m bgl. Narrow rubber pipe present at 2.0m bgl discharging water. Pieces of fabric, timber and glass bottles present also).	(3.50)	
1.00				
2.00				
3.00				
			3.50	71.90
		MADE GROUND (Colliery discard consisting of very soft very dark grey very sandy very gravelly silt. Gravel is fine to coarse subangular mudstone, brick and sandstone. Pieces of timber, fabric and bricks present also).	(1.50)	
4.00				
			5.00	70.40
		End of Trial Pit at 5.00 m		

Samples

Depth (m)	Type
0.50	ES
1.50	B
2.00	ES
3.00	B
3.50	ES
4.00	B ES

Tests

Depth (m)	MEXE	Shear Vane (Peak/Res)
4.00		8 / 0 kPa

Date of Excavation: 15/04/2009
Equipment: Komatsu PC290 IC
Logged By: B Johnson
Ground Level: 75.4
Coordinates: 432936E - 409501N

Groundwater:
Groundwater not encountered.

Legend:
- D Small Disturbed Sample
- B Bulk Disturbed Sample
- EW Water Sample for Environmental Testing
- ES Soil Sample for Environmental Testing
- U Undisturbed Sample - Open Drive

Remarks:
Repeated collapse after 2.0m bgl. Trial pit terminated at 5.0m bgl due to excavator sinking.

Trial Pit: TP154

TRIAL PIT RECORD

North Gawber Colliery

Revision: Final

Project No. 09002

SCOTT DOHERTY associates

Photograph:



Strata

Depth (m)	Legend	Description	Strata Depth (Thickness) (m)	Reduced Level (mAOD)
		MADE GROUND (Colliery discard consisting of grey claybound fine to coarse sandy gravel of angular and subangular mudstone, coal and brick).	(1.60)	
1.00			1.60	71.00
		MADE GROUND (Colliery discard consisting of soft very dark grey sandy silt. Metal pipes and pieces of rubber present also below 2.8m).	(2.20)	
3.00			3.80	68.80
		Stiff grey and orangish brown sandy gravelly CLAY. Gravel is fine to coarse coal and mudstone.	(0.60)	
4.00			4.40	68.20
		End of Trial Pit at 4.40 m		

Samples

Depth (m)	Type
0.50	ES
1.80	ES
3.00	ES

Tests

Depth (m)	MEXE	Shear Vane (Peak/Res)
4.00		140 / 56 kPa

Date of Excavation: 15/04/2009
Equipment: Komatsu PC290 IC
Logged By: B Johnson
Ground Level: 72.6
Coordinates: 433048E - 409444N

Groundwater:
Groundwater not encountered.

Legend:
- D Small Disturbed Sample
- B Bulk Disturbed Sample
- EW Water Sample for Environmental Testing
- ES Soil Sample for Environmental Testing
- U Undisturbed Sample - Open Drive

Remarks:
Repeated collapse after 1.2m bgl.

Trial Pit: TP155

TRIAL PIT RECORD

North Gawber Colliery

Revision: Final

Project No. 09002

SCOTT DOHERTY associates

Photograph:

Strata					Samples		Tests		
Depth (m)	Legend	Description	Strata Depth (Thickness) (m)	Reduced Level (mAOD)	Depth (m)	Type	Depth (m)	MEXE	Shear Vane (Peak/Res)
		MADE GROUND (Colliery discard consisting of dark grey claybound fine to coarse gravel of angular and subangular mudstone and coal).	(2.10)		0.60	ES			
1.00									
2.00			2.10	69.90					
		MADE GROUND (Colliery discard consisting of dark grey and reddish brown claybound fine to coarse gravel of angular and subangular mudstone and burnt shale).	2.30	69.70	2.20	ES			
					2.60	ES			
3.00		MADE GROUND (Colliery discard consisting of dark grey claybound fine to coarse gravel of angular and subangular mudstone and coal. Occasional cobbles of sandstone, coal and brick present after 2.5m bgl.).	(2.40)		3.50	ES			
4.00									
		End of Trial Pit at 4.70 m	4.70	67.30					

Date of Excavation: 21/04/2009
Equipment: CAT 432D
Logged By: B Johnson
Ground Level: 72.0
Coordinates: 433093E - 409412N

Groundwater:
Groundwater not encountered.

Legend:
- D Small Disturbed Sample
- B Bulk Disturbed Sample
- EW Water Sample for Environmental Testing
- ES Soil Sample for Environmental Testing
- U Undisturbed Sample - Open Drive

Remarks:
Trial pit sides stable.

Trial Pit: TP156

TRIAL PIT RECORD

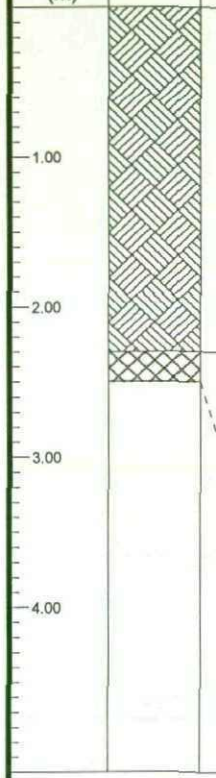
North Gawber Colliery

Revision: Final

Project No. 09002

SCOTT DOHERTY associates

Photograph:



Strata					Samples		Tests		
Depth (m)	Legend	Description	Strata Depth (Thickness) (m)	Reduced Level (mAOD)	Depth (m)	Type	Depth (m)	MEXE	Shear Vane (Peak/Res)
		TOPSOIL.	(2.30)		0.50	ES			
			2.30	72.60	2.00	ES			
		MADE GROUND (Colliery discard consisting of dark grey claybound fine to coarse gravel of subangular mudstone and coal with rare burnt shale).	2.50	72.40	2.40	ES			
		End of Trial Pit at 2.50 m							

Date of Excavation: 15/07/2009
Equipment: JCB 4CX
Logged By: B Johnson
Ground Level: 74.9
Coordinates: 433058E - 409534N

Groundwater:
Groundwater not encountered.

Legend:
- D Small Disturbed Sample
- B Bulk Disturbed Sample
- EW Water Sample for Environmental Testing
- ES Soil Sample for Environmental Testing
- U Undisturbed Sample - Open Drive

Remarks:
Trial pit sides stable.
Trial pit excavated within surface stockpile.

Trial Pit: TP157

TRIAL PIT RECORD

North Gawber Colliery

Revision: Final

Project No. 09002

SCOTT DOHERTY associates

Photograph:

Strata					Samples		Tests		
Depth (m)	Legend	Description	Strata Depth (Thickness) (m)	Reduced Level (mAOD)	Depth (m)	Type	Depth (m)	MEXE	Shear Vane (Peak/Res)
		TOPSOIL.	(1.00) 1.00	73.60	0.60	ES			
1.00		MADE GROUND (Firm very friable brown sandy slightly *gravelly reworked clay*. Sand is fine to coarse. Gravel is fine to coarse angular to subrounded coal, sandstone and mudstone).	(1.00) 2.00	72.60	1.50	ES B			
2.00		MADE GROUND (Colliery discard consisting of dark grey claybound fine to coarse gravel of subangular mudstone and coal).	(0.40) 2.40	72.20	2.30	ES			
		End of Trial Pit at 2.40 m							
3.00									
4.00									

Date of Excavation: 15/07/2009
Equipment: JCB 4CX
Logged By: B Johnson
Ground Level: 74.6
Coordinates: 433079E - 409520N

Groundwater:
Groundwater not encountered.

Legend:
- D *Small Disturbed Sample*
- B Bulk Disturbed Sample
- EW Water Sample for Environmental Testing
- ES Soil Sample for Environmental Testing
- U Undisturbed Sample - Open Drive

Remarks:
Trial pit sides stable.
Trial pit excavated within surface stockpile.

Trial Pit: TP158

TRIAL PIT RECORD

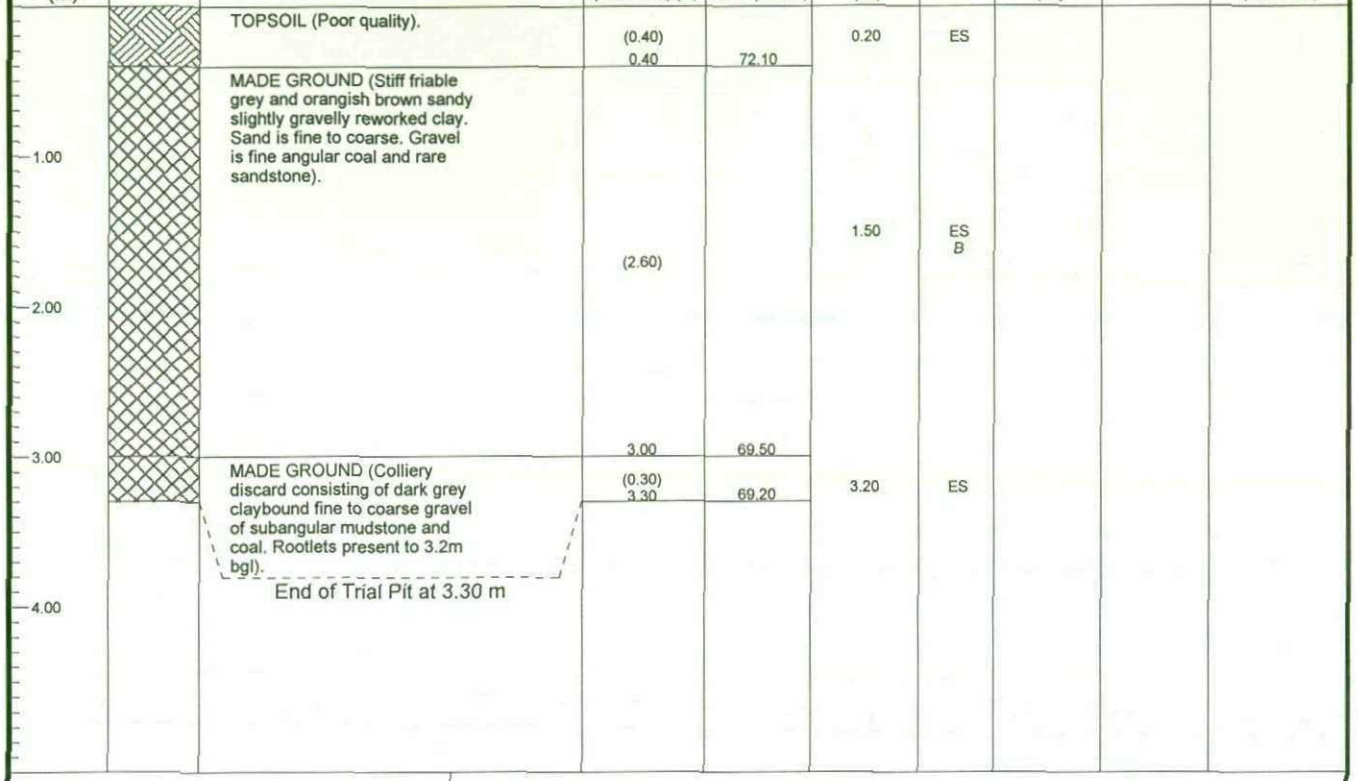
North Gawber Colliery

Revision: Final

Project No. 09002

SCOTT DOHERTY associates

Photograph:



Strata					Samples		Tests		
Depth (m)	Legend	Description	Strata Depth (Thickness) (m)	Reduced Level (mAOD)	Depth (m)	Type	Depth (m)	MEXE	Shear Vane (Peak/Res)
		TOPSOIL (Poor quality).	(0.40) 0.40	72.10	0.20	ES			
1.00		MADE GROUND (Stiff friable grey and orangish brown sandy slightly gravelly reworked clay. Sand is fine to coarse. Gravel is fine angular coal and rare sandstone).	(2.60)		1.50	ES B			
2.00									
3.00			3.00	69.50					
		MADE GROUND (Colliery discard consisting of dark grey claybound fine to coarse gravel of subangular mudstone and coal. Rootlets present to 3.2m bgl).	(0.30) 3.30	69.20	3.20	ES			
4.00		End of Trial Pit at 3.30 m							

Date of Excavation: 15/07/2009
Equipment: JCB 4CX
Logged By: B Johnson
Ground Level: 72.5
Coordinates: 433017E - 409534N

Groundwater:
Groundwater not encountered.

Legend:
- D Small Disturbed Sample
- B Bulk Disturbed Sample
- EW Water Sample for Environmental Testing
- ES Soil Sample for Environmental Testing
- U Undisturbed Sample - Open Drive

Remarks:
Trial pit sides stable.
Trial pit excavated within surface stockpile.

Trial Pit: TP159

TRIAL PIT RECORD

North Gawber Colliery

Revision: Final

Project No. 09002

SCOTT DOHERTY associates

Photograph:

Strata					Samples		Tests		
Depth (m)	Legend	Description	Strata Depth (Thickness) (m)	Reduced Level (mAOD)	Depth (m)	Type	Depth (m)	MEXE	Shear Vane (Peak/Res)
		MADE GROUND (Stiff grey and orangish brown sandy gravelly reworked clay. Sand is fine to coarse. Gravel is fine to coarse angular to subrounded sandstone and coal).	(1.50)		1.00	ES			
1.00			1.50	73.50					
		MADE GROUND (Firm dark grey sandy gravelly clay. Sand is fine to coarse. Gravel is angular and subangular burnt shale, coal and mudstone with pockets of ash).	(0.50)		1.70	ES			
2.00		End of Trial Pit at 2.00 m	2.00	73.00					
3.00									
4.00									

Date of Excavation: 15/07/2009
Equipment: JCB 4CX
Logged By: B Johnson
Ground Level: 75.0
Coordinates: 432997E - 409559N

Groundwater:
Groundwater not encountered.

Legend:
- D Small Disturbed Sample
- B Bulk Disturbed Sample
- EW Water Sample for Environmental Testing
- ES Soil Sample for Environmental Testing
- U Undisturbed Sample - Open Drive

Remarks:
Trial pit sides stable.
Trial pit excavated within surface stockpile.

Trial Pit: TP160

TRIAL PIT RECORD

North Gawber Colliery

Revision: Final

Project No. 09002

SCOTT DOHERTY associates

APPENDIX B
Geotechnical Laboratory Test Certificates

PSL
Professional Soils Laboratory

LABORATORY REPORT

UKAS TESTING
4043

Contract Number: PSL09/0681

Client's Reference: Report Date: 11 June 2009

Client Name: Scott Doherty
Derwentside Business Centre
Consett Business Park
Consett
Co Durham
DH8 6BP

For the attention of: Mark Doherty

Contract Title: North Gawber

Date Received: 22-May-09
Date Commenced: 22-May-09
Date Completed: 11-Jun-09

Notes: Observations and Interpretations are outside the UKAS Accreditation

A copy of the Laboratory Schedule of accredited tests as issued by UKAS is attached to this report. 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 supplied to the laboratory. This certificate shall not be reproduced in full, without the prior written approval of the laboratory.

Approved Signatories:

R Gunson (Director)

A Watkins (Director)

D Lambe (Senior Technician)

5 – 7 Hexthorpe Road, Hexthorpe,
Doncaster DN4 0AR
tel: +44 (0)844 815 6641
fax: +44 (0)844 815 6642
e-mail: rgunson@prosoils.co.uk
awatkins@prosoils.co.uk

SUMMARY OF LABORATORY SOIL DESCRIPTIONS

Hole Number	Sample Number	Sample Type	Depth m	Description of Sample
TP102		B	4.00	Brown gravelly sandy very silty CLAY.
TP113		B	1.20	MADE GROUND dark grey very sandy clayey gravel.
TP115		B	3.60	Brown gravelly slightly sandy CLAY.
TP118		B	1.50	MADE GROUND dark grey very gravelly silty sand of ash & clinker.
TP118		B	3.00	Brown mottled grey slightly gravelly slightly sandy very silty CLAY.
TP151		B	0.80	Dark brown slightly gravelly slightly sandy organic CLAY.
TP151		B	1.50	Brown slightly gravelly slightly sandy CLAY.
TP151		B	2.00	Brown slightly gravelly slightly sandy CLAY.
TP154		B	4.00	Grey gravelly sandy CLAY.

PSL
Professional Soils Laboratory

Compiled by	Date	Checked by	Date	Approved by	Date
	11/6/09		11/6/09		11/6/09

NORTH GAWBER.

Contract No: PSL09/0681

Client Ref: 7053

SUMMARY OF SOIL CLASSIFICATION TESTS

(B.S. 1377 : PART 2 : 1990)

Hole Number	Sample Number	Sample Type	Depth m	Moisture Content % Clause 3.2	Bulk Density Mg/m^3 Clause 7.2	Dry Density Mg/m^3 Clause 7.2	Particle Density Mg/m^3 Clause 8.2	Liquid Limit % Clause 4.3/4.4	Plastic Limit % Clause 5.3	Plasticity Index % Clause 5.4	% Passing .425mm	Remarks
TP102		B	4.00	20				49	20	29	86	Intermediate plasticity CI.
TP113		B	1.20	19								
TP115		B	3.60	17								
TP118		B	1.50	20								
TP118		B	3.00	23				54	26	28	92	High plasticity CH.
TP151		B	0.80	43				83	32	51	98	Very high plasticity CV.
TP151		B	1.50	21								
TP151		B	2.00	24								
TP154		B	4.00	20				48	22	26	78	Intermediate plasticity CI.

SYMBOLS : NP : Non Plastic

* : Liquid Limit and Plastic Limit Wet Sieved.

PSL
Professional Soils Laboratory

Compiled by	Date	Checked by	Date	Approved by	Date
	11/6/09		11/6/09		11/6/09

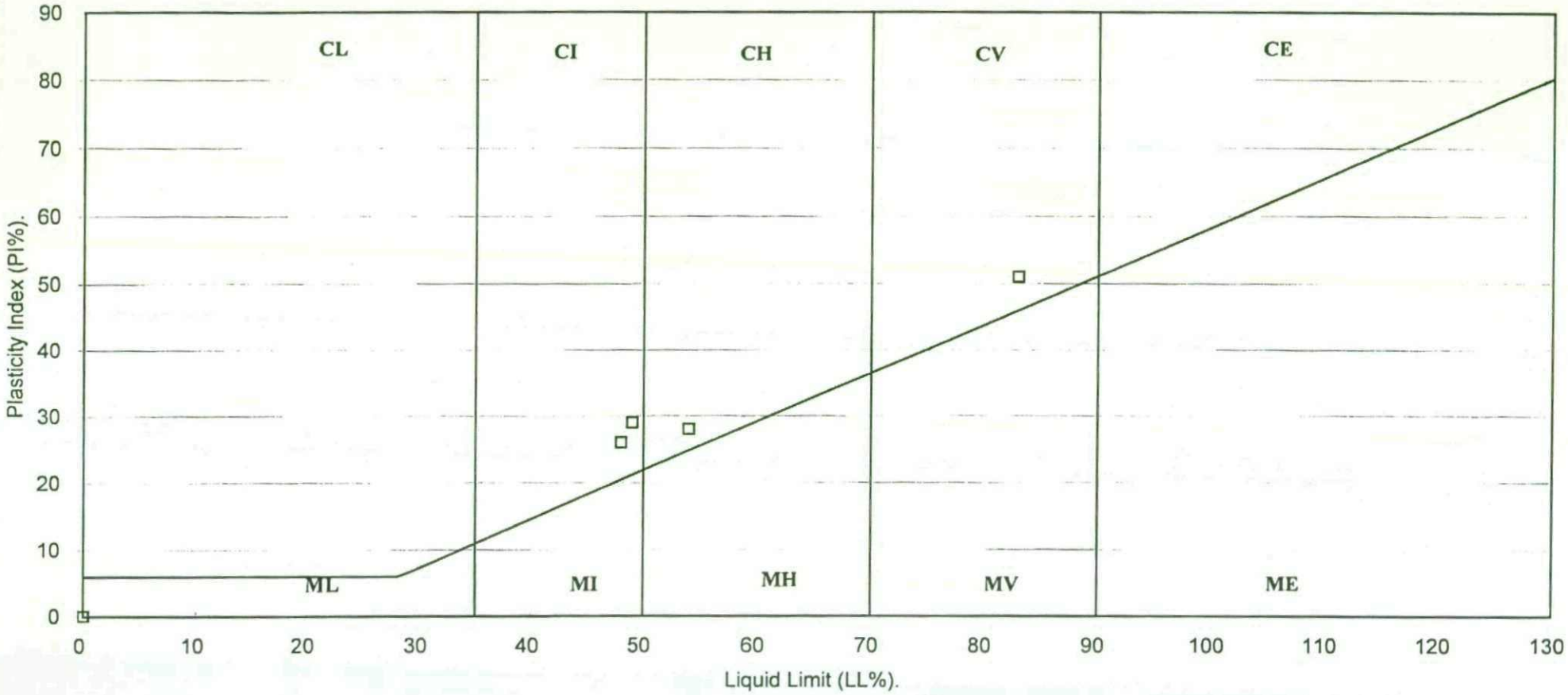
NORTH GAWBER.

Contract No: PSL09/0028

Client Ref: 08-336

PLASTICITY CHART FOR CASAGRANDE CLASSIFICATION.

(B.S.5930 : 1999)



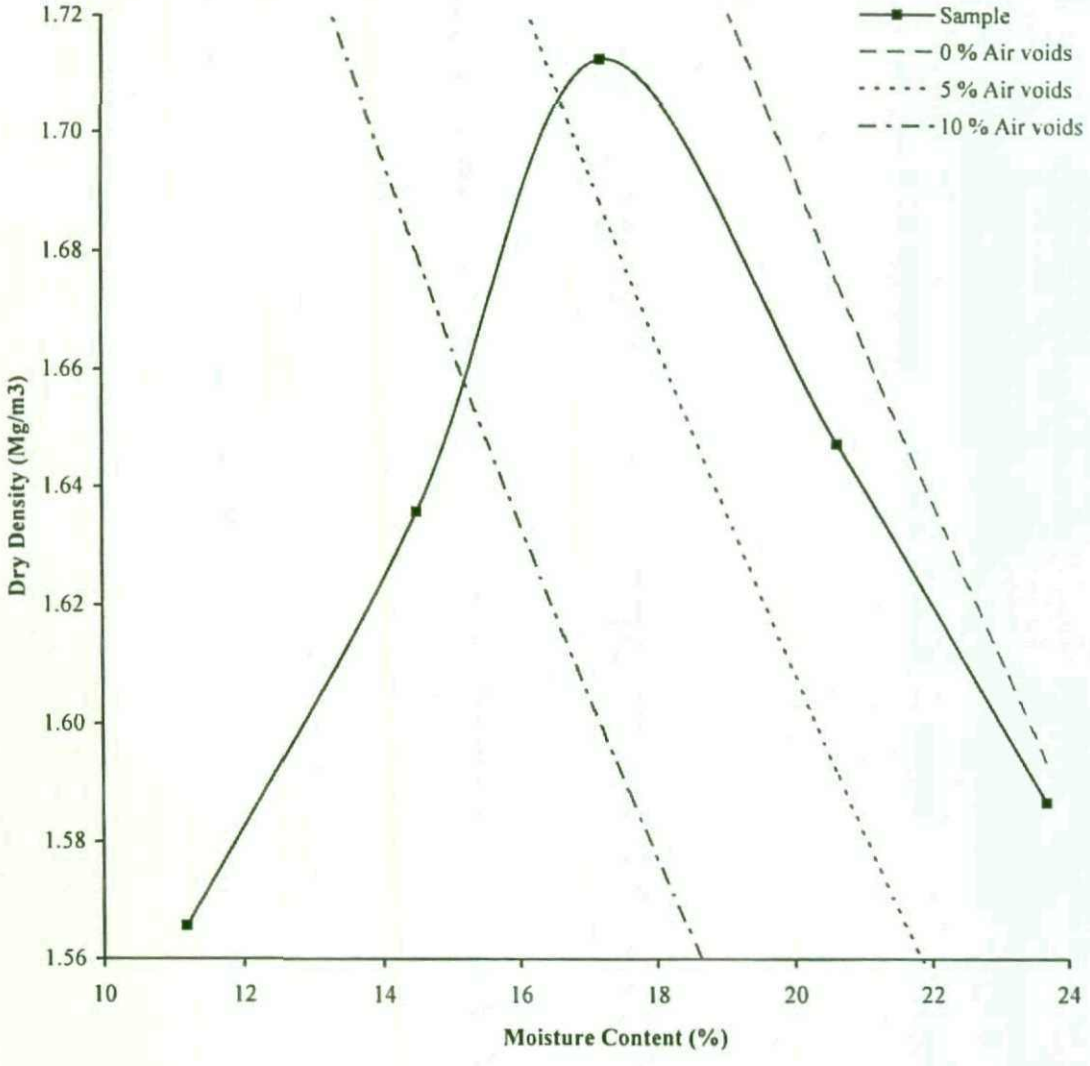
PSL Professional Soils Laboratory	Compiled by	Date	Checked by	Date	Approved by	Date
		11/6/09		11/6/09		11/6/09
	NORTH GAWBER.				Contract No:	PSL09/0028
					Client Ref:	08-336

Dry Density/Moisture Content Relationship Test

BS 1377 : Part 4 : 1990

Hole Number: TP151 **Depth (m) :** 1.50

Sample Number: **Sample Type:** B



Initial Moisture Content:	21	Method of Compaction	2.5kg / Separate Sample	
Particle Density (Mg/m3):	2.56	Assumed	Material Retained on 37.5 mm Test Sieve (%):	0
Maximum Dry Density (mg/m3):		1.71	Material Retained on 20.0 mm Test Sieve (%):	0
Optimum Moisture Content (%):		17		
Remarks	See Summary of Soil Descriptions.			

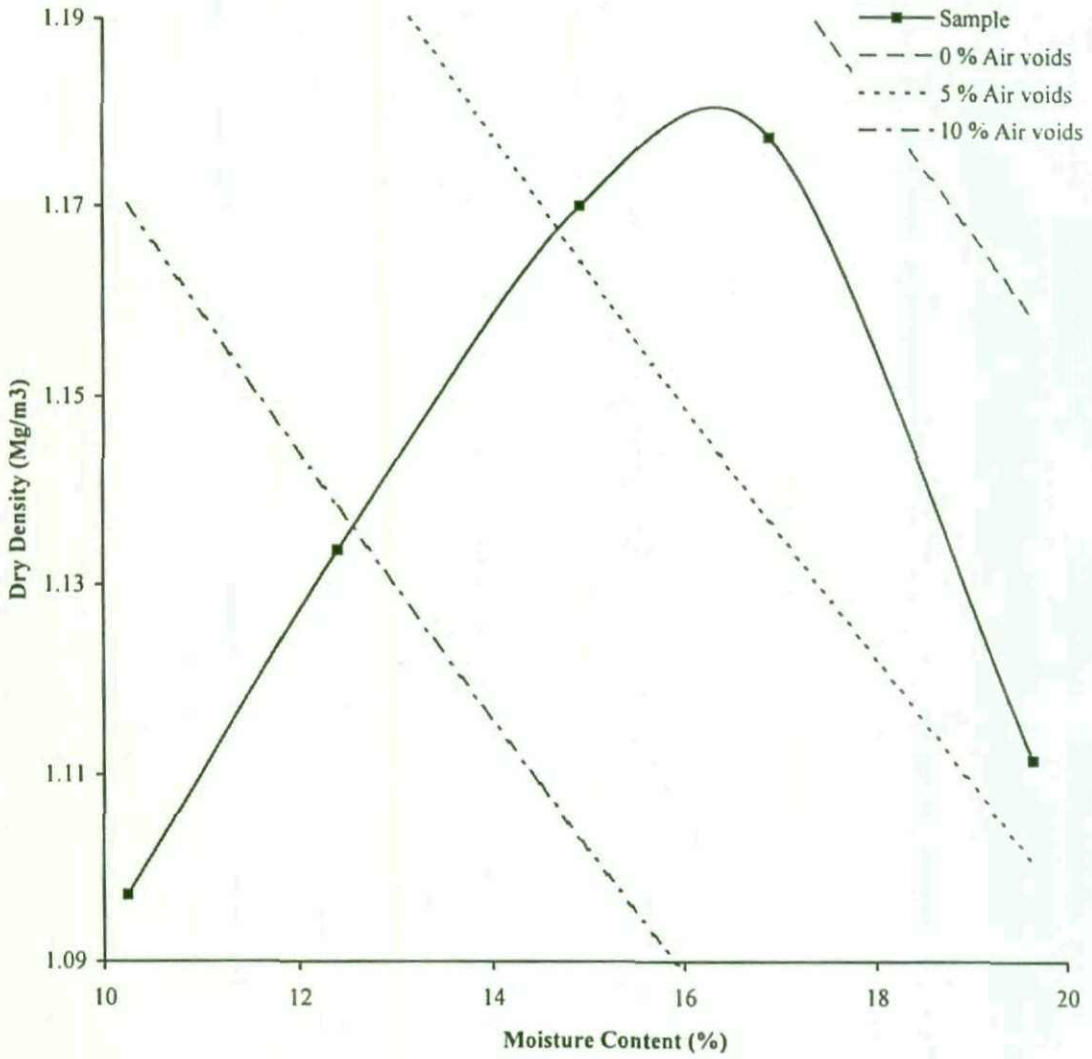
Checked By	Date	Approved By	Date
	11/6/06		11/6/06

PSL Professional Soils Laboratory	NORTH GAWBER.	Contract No. PSL09/0681

Dry Density/Moisture Content Relationship Test

BS 1377 : Part 4 : 1990

Hole Number:	**TP118**	**Depth (m) :**	**1.50**
Sample Number:		**Sample Type:**	**B**



Initial Moisture Content:	20	Method of Compaction	2.5kg / Separate Sample	
Particle Density (Mg/m3):	1.5	Assumed	Material Retained on 37.5 mm Test Sieve (%):	3
Maximum Dry Density (mg/m3):		1.18	Material Retained on 20.0 mm Test Sieve (%):	9
Optimum Moisture Content (%):		16		
Remarks	See Summary of Soil Descriptions.			

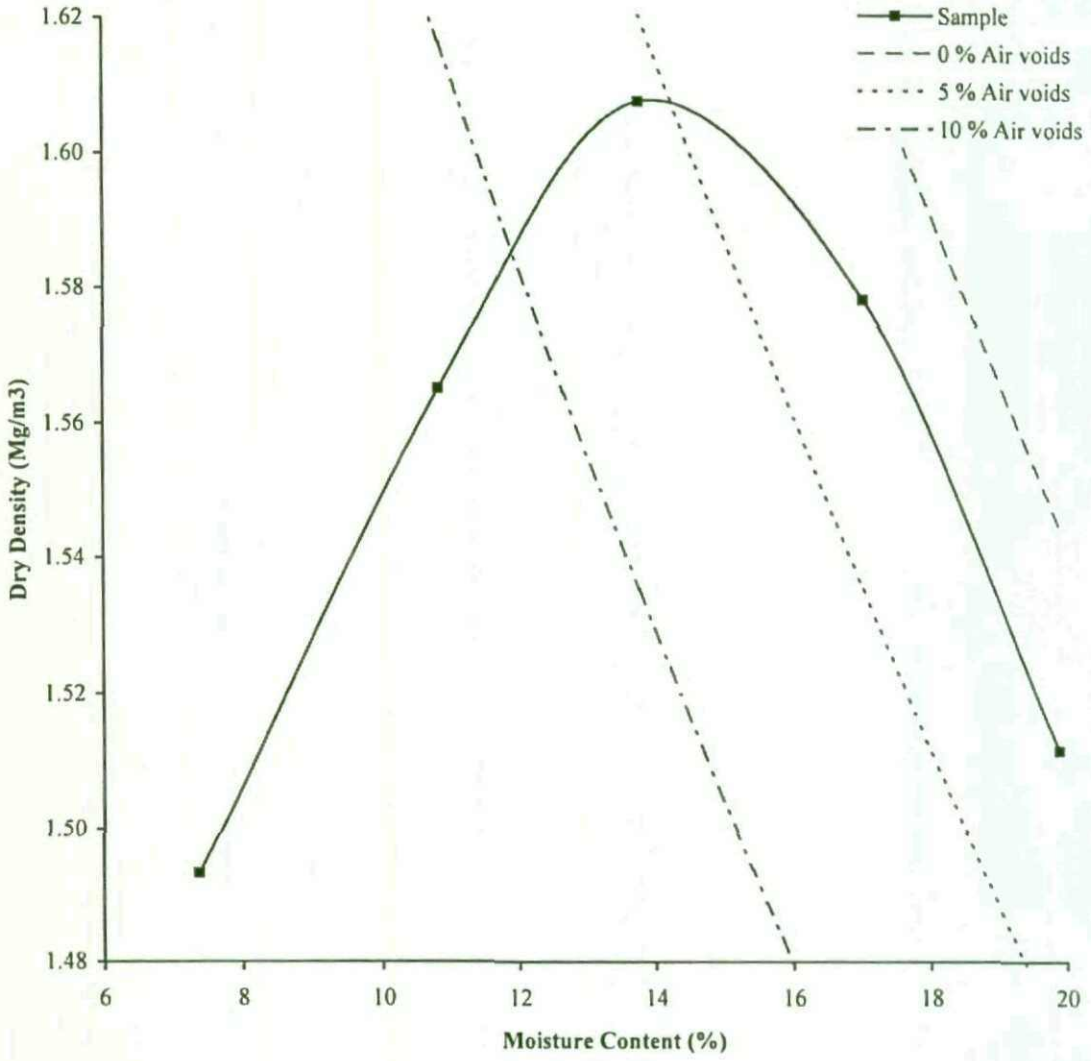
Checked By	Date	Approved By	Date
	11/6/09		11/6/09

PSL Professional Soils Laboratory	**NORTH GAWBER.**	**Contract No. PSL09/0681**

Dry Density/Moisture Content Relationship Test

BS 1377 : Part 4 : 1990

Hole Number:	**TP154**	**Depth (m) :**	**4.00**
Sample Number:		**Sample Type:**	**B**



Initial Moisture Content:	20	Method of Compaction	2.5kg / Separate Sample	
Particle Density (Mg/m3):	2.23	Assumed	Material Retained on 37.5 mm Test Sieve (%):	0
Maximum Dry Density (mg/m3):		1.61	Material Retained on 20.0 mm Test Sieve (%):	7
Optimum Moisture Content (%):		14		
Remarks	See Summary of Soil Descriptions.			

Checked By	Date	Approved By	Date
	11/6/05		11/6/05

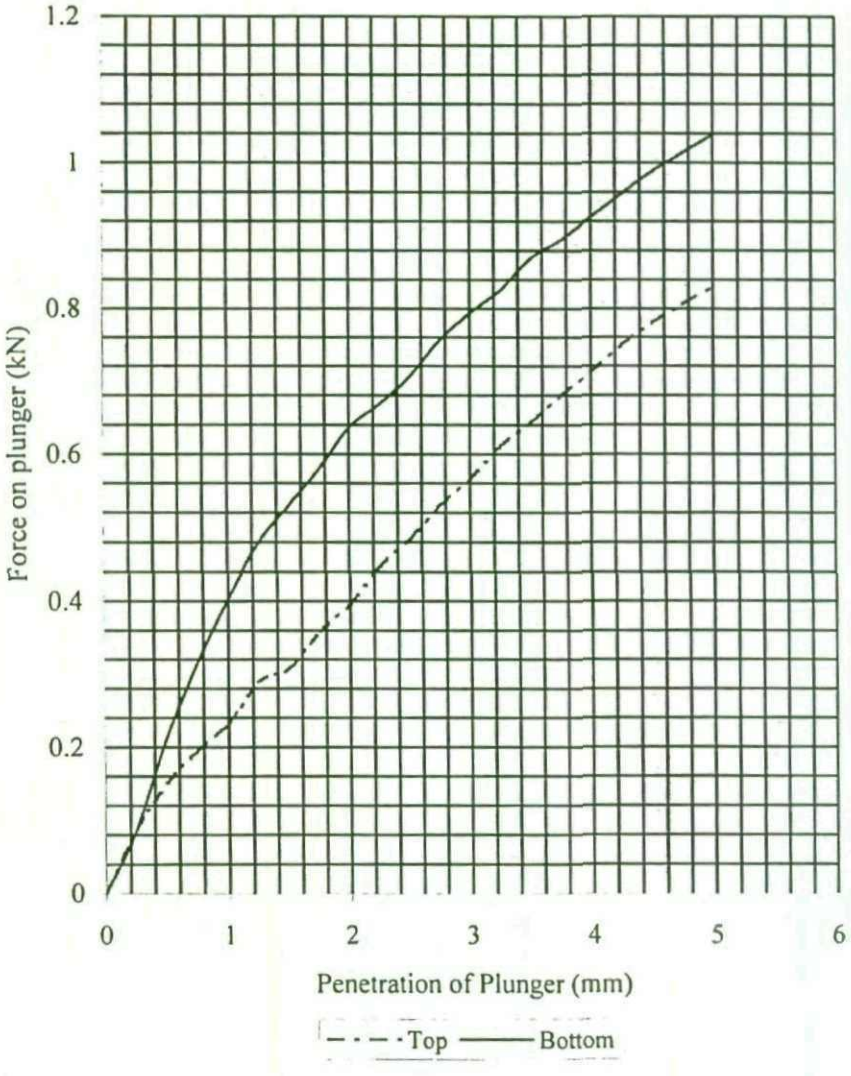
PSL Professional Soils Laboratory	**NORTH GAWBER.**	**Contract No. PSL09/0681**

California Bearing Ratio Test.

BS 1377 : Part 4 : 1990

Hole Number: TP151 **Depth (m):** 1.50

Sample Number: **Sample Type:** B



Initial Sample Conditions		Test Conditions		Method of compaction		2.5Kg Rammer	
Moisture Content:	20.6	Surcharge Kg:	4.20	Final Moisture Content %		C.B.R. Value %	
Bulk Density Mg/m3:	2.00	Soaking Time hrs	0	Sample Top	21.2	Sample Top	4.2
Dry Density Mg/m3:	1.65	Swelling mm:	0	Sample Bottom	20.4	Sample Bottom	5.3
Percentage retained on 20mm BS test sieve:	0	Remarks:	See Summary of Soil Description.				

Checked by	Date	Approved By	Date
	11/6/09		11/6/09

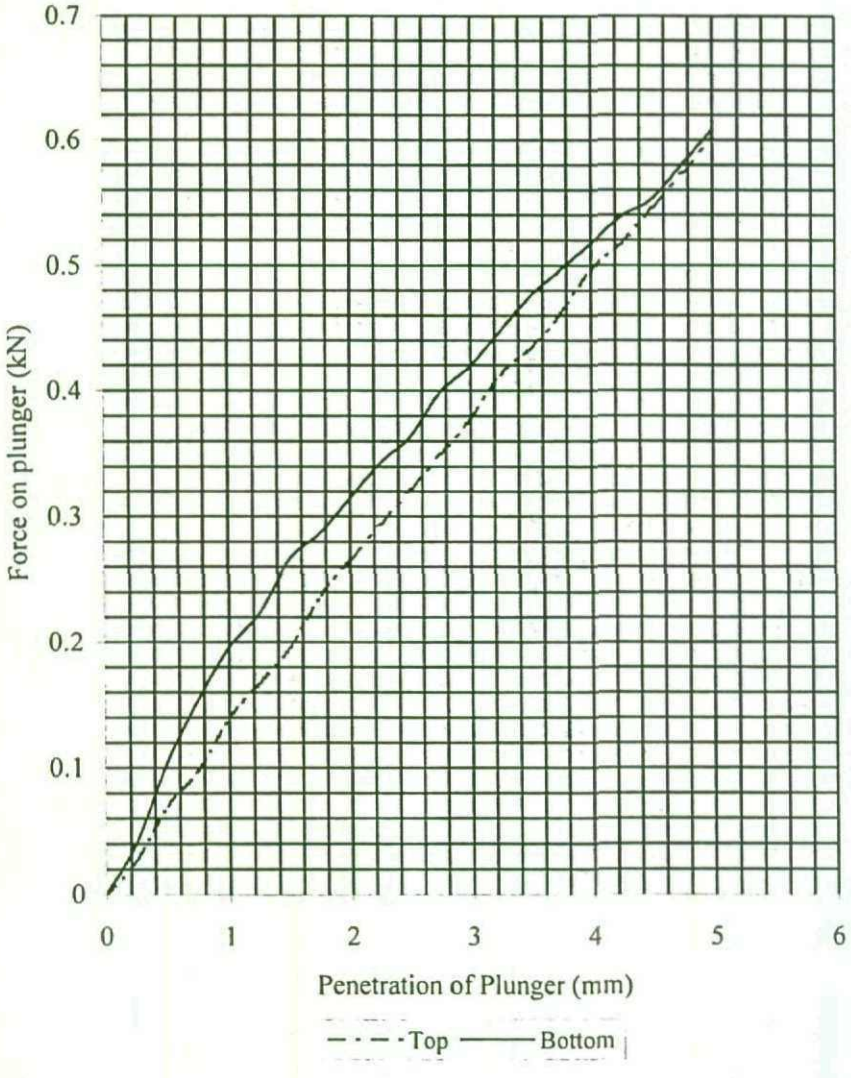
PSL Professional Soils Laboratory	NORTH GAWBER.	Contract No. PSL09/0681

California Bearing Ratio Test.

BS 1377 : Part 4 : 1990

Hole Number: TP151 **Depth (m):** 2.00

Sample Number: **Sample Type:** B



Initial Sample Conditions		Test Conditions		Method of compaction		2.5Kg Rammer	
Moisture Content:	23.9	Surcharge Kg:	4.20	Final Moisture Content %		C.B.R. Value %	
Bulk Density Mg/m3:	2.00	Soaking Time hrs	0	Sample Top	24.3	Sample Top	3.0
Dry Density Mg/m3:	1.61	Swelling mm:	0	Sample Bottom	23.6	Sample Bottom	3.0
Percentage retained on 20mm BS test sieve:	0	Remarks:	See Summary of Soil Description.				

Checked by	Date	Approved By	Date
	11/09		11/09

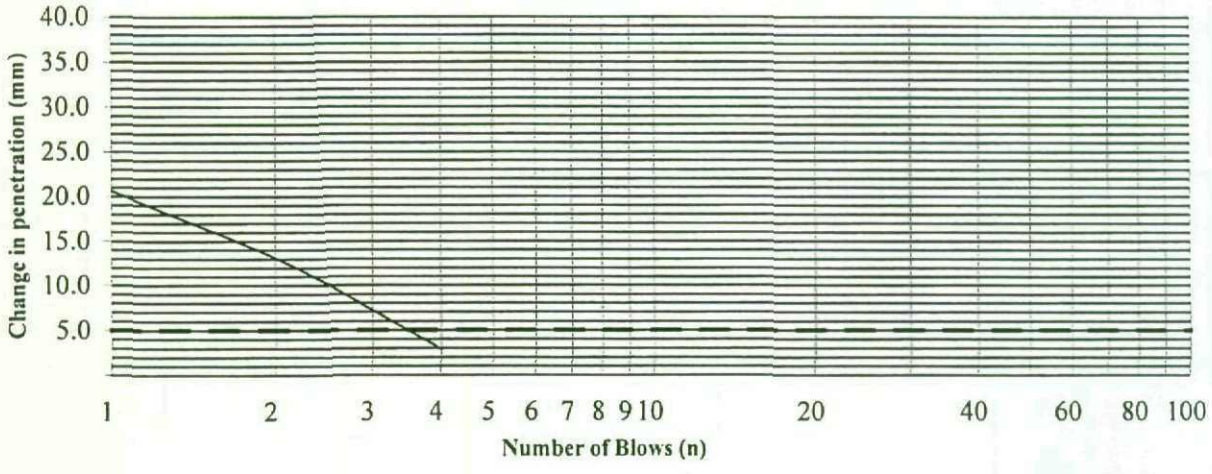
PSL Professional Soils Laboratory	NORTH GAWBER.	Contract No. PSL09/0681

MOISTURE CONDITION VALUE
BS1377 : Part 4 : 1990.

Hole Number:	**TP102**	**Depth (m):**	**4.00**
Sample Number:		**Sample Type:**	**B**

Material Retained on the 20mm BS Test Sieve (%):	0

MCV Determination



Blows (N)	Penetration (mm)	n to 4 n (mm)
1	71.5	20.6
2	61.3	13.1
3	55.3	7.2
4	50.9	2.9
6	48.3	
8	48.2	
12	48.1	
16	48.0	
24		
32		
48		
64		
96		
128		
192		
256		

Test Results.

Moisture Content (%).	20.2
MCV	5.5

Checked	Date	Approved	Date
	11/6/09		11/6/09

PSL Professional Soils Laboratory	**NORTH GAWBER.**	**Contract No: PSL09/0681**

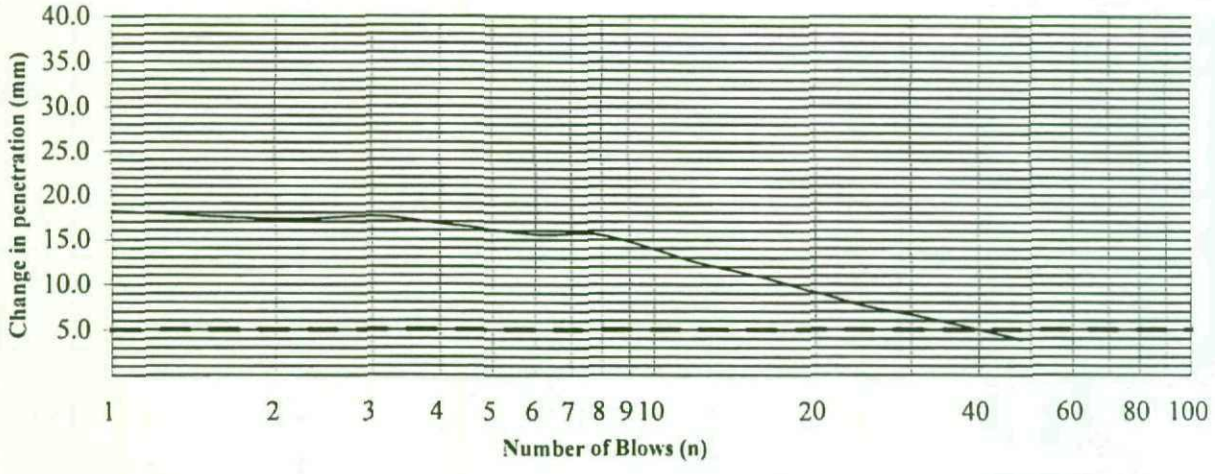
MOISTURE CONDITION VALUE
BS1377 : Part 4 : 1990.

Hole Number: TP113 **Depth (m):** 1.20

Sample Number: **Sample Type:** B

Material Retained on the 20mm BS Test Sieve (%):	0

MCV Determination



Blows (N)	Penetration (mm)	n to 4 n (mm)
1	107.9	18.2
2	99.3	17.3
3	93.8	17.6
4	89.7	16.8
6	84.3	15.6
8	82.0	15.5
12	76.2	12.5
16	72.9	10.8
24	68.7	7.8
32	66.5	6.3
48	63.7	3.9
64	62.1	
96	60.9	
128	60.2	
192	59.8	
256		

Test Results.

Moisture Content (%).	18.7
MCV	16.1

Checked	Date	Approved	Date
	11/6/09		11/6/09

PSL Professional Soils Laboratory	NORTH GAWBER.	Contract No: PSL09/0681

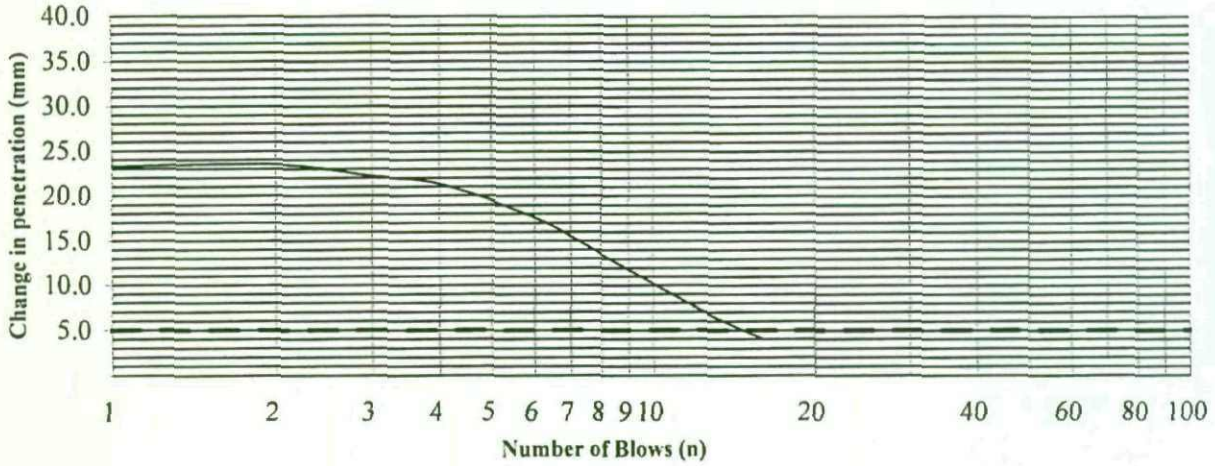
MOISTURE CONDITION VALUE
BS1377 : Part 4 : 1990.

Hole Number: TP115 **Depth (m):** 3.60

Sample Number: **Sample Type:** B

Material Retained on the 20mm BS Test Sieve (%):	0

MCV Determination



Blows (N)	Penetration (mm)	n to 4 n (mm)
1	95.0	23.3
2	83.9	23.5
3	76.2	22.2
4	71.7	21.3
6	65.4	17.6
8	60.4	13.5
12	54.0	7.5
16	50.4	4.0
24	47.8	
32	46.9	
48	48.5	
64	46.4	
96		
128		
192		
256		

Test Results.

Moisture Content (%).	16.6
MCV	11.8

Checked	Date	Approved	Date
	11/6/09		11/6/09

PSL Professional Soils Laboratory	NORTH GAWBER.	Contract No: PSL09/0681

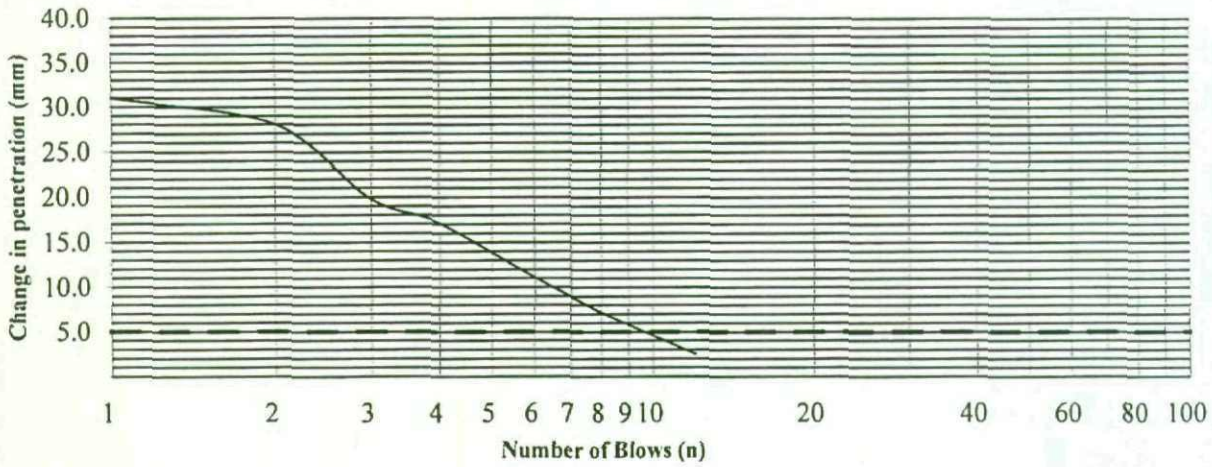
MOISTURE CONDITION VALUE
BS1377 : Part 4 : 1990.

Hole Number: TP118 **Depth (m):** 3.00

Sample Number: **Sample Type:** B

Material Retained on the 20mm BS Test Sieve (%):	0

MCV Determination



Blows (N)	Penetration (mm)	n to 4 n (mm)
1	97.2	31.0
2	84.1	28.0
3	71.1	19.8
4	66.2	17.1
6	60.1	11.1
8	56.1	7.2
12	51.3	2.5
16	49.1	
24	49.0	
32	48.9	
48	48.8	
64		
96		
128		
192		
256		

Test Results.

Moisture Content (%).	22.6
MCV	9.9

Checked	Date	Approved	Date
	11/6/09		11/6/09

PSL Professional Soils Laboratory	NORTH GAWBER.	Contract No: PSL09/0681

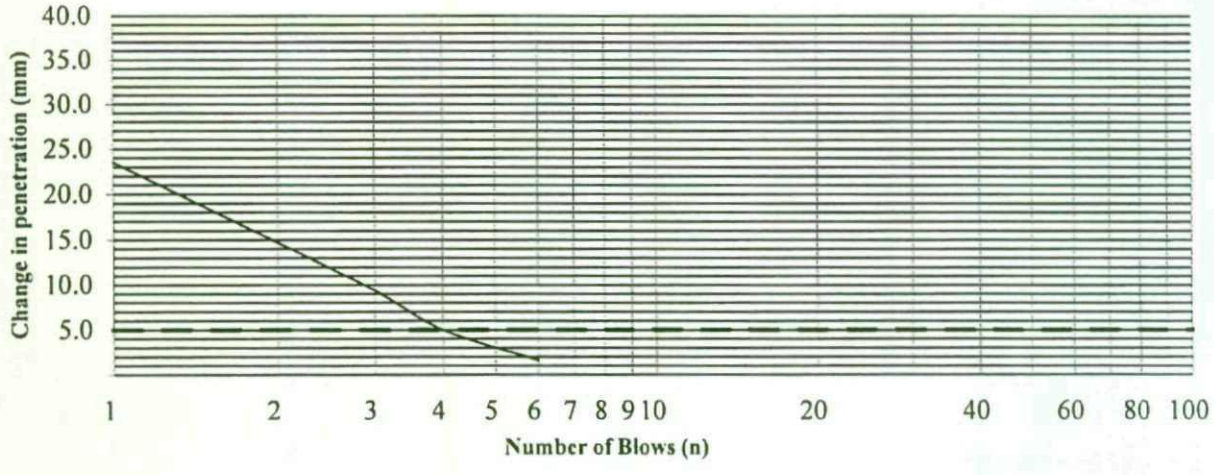
MOISTURE CONDITION VALUE
BS1377 : Part 4 : 1990.

Hole Number: TP151 **Depth (m):** 0.80

Sample Number: **Sample Type:** B

Material Retained on the 20mm BS Test Sieve (%):	0

MCV Determination



Blows (N)	Penetration (mm)	n to 4 n (mm)
1	95.0	23.5
2	81.8	14.7
3	76.0	9.4
4	71.5	5.0
6	68.0	1.6
8	67.1	
12	66.6	
16	66.5	
24	66.4	
32		
48		
64		
96		
128		
192		
256		

Test Results.

Moisture Content (%).	42.8
MCV	6.0

Checked	Date	Approved	Date
	11/6/05		11/6/05

PSL Professional Soils Laboratory	NORTH GAWBER.	Contract No: PSL09/0681

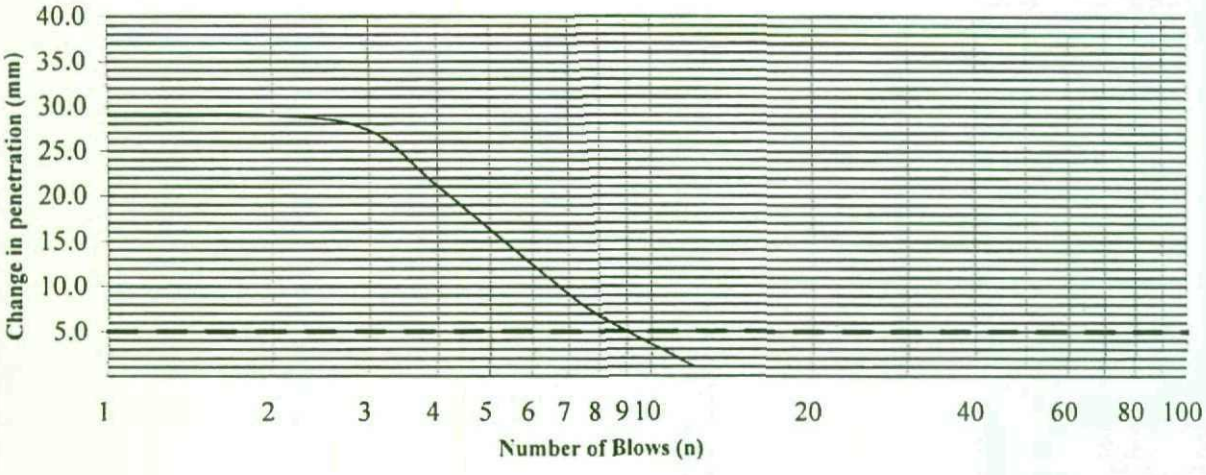
MOISTURE CONDITION VALUE
BS1377 : Part 4 : 1990.

Hole Number: TP151 **Depth (m):** 2.00

Sample Number: **Sample Type:** B

Material Retained on the 20mm BS Test Sieve (%):	0

MCV Determination



Blows (N)	Penetration (mm)	n to 4 n (mm)
1	102.4	29.1
2	87.6	29.0
3	80.2	27.3
4	73.3	21.1
6	64.4	12.4
8	58.6	6.7
12	52.9	1.1
16	52.2	
24	52.0	
32	51.9	
48	51.8	
64		
96		
128		
192		
256		

Test Results.

Moisture Content (%).	24.1
MCV	9.5

Checked	Date	Approved	Date
	11/6/09		11/6/09

PSL Professional Soils Laboratory	NORTH GAWBER.	Contract No: PSL09/0681

APPENDIX C
Chemical Laboratory Analytical Test Certificates

UKAS TESTING
2531

RECEIVED
29 JUN 2009

chemtech environmental

ANALYTICAL TEST REPORT

Contract no: SDA/39205

Contract name: North Gawber

Client reference: -

Clients name: Scott Doherty Associates

Clients address: Consett Business Park
Consett
Co Durham
DH8 6BP

Date received: 10 June 2009

Date started: 16 June 2009

Date of issue: 23 June 2009

Notes:
Opinions and interpretations expressed herein are outside the UKAS accreditation scope.
Unless otherwise stated, Chemtech Environmental Ltd were not responsible for sampling.
Methods, procedures and performance data are available on request.
Results reported herein relate only to the material supplied to the laboratory.
All results are reported on a dry basis. Samples dried at no more than 30°C in a drying cabinet.
Analytical results are exclusive of stones.
This report shall not be reproduced except in full, withour prior written approval.
Samples will be disposed of 8 weeks from initial receipt unless otherwise instructed.

Key:
U UKAS accredited test
M MCERTS & UKAS accredited test
$ Test carried out by an approved subcontractor
NAF Non asbestos fibres

Approved by: J. Campbell

Karan Campbell
Director

John Campbell
Director

Unit 25a - 25b, Number One Industrial Estate, Medomsley Road, Consett, Co. Durham DH8 6TJ
Tel: 01207 581260 Fax: 01207 581582 Email: info@chemtech-env.co.uk www.chemtech-env.co.uk

Vat Reg. No. 772 5703 18 Registered in England Number 4284013

Chemtech Environmental Limited

WATERS

Lab number Sample id Depth (m)			39205-1 BH 105 -	39205-2 BH 109 -	39205-3 BH 115 -	39205-4 Sample A -	39205-5 Sample C -	39205-6 Sample D -
Test	**Method**	**Units**						
Arsenic	CE055	mg/l	0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Boron	CE063	mg/l	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Cadmium	CE055 U	mg/l	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Chromium	CE055 U	mg/l	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
Copper	CE055 U	mg/l	0.005	<0.004	0.015	0.007	<0.004	0.008
Lead	CE055 U	mg/l	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009
Mercury	CE055	mg/l	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Nickel	CE055 U	mg/l	<0.003	0.010	0.066	0.008	<0.003	0.017
Selenium	CE055	mg/l	0.002	0.002	0.007	0.001	<0.001	0.002
Zinc	CE055 U	mg/l	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
pH	CE004	units	7.6	8.0	6.9	7.6	7.7	7.7
Sulphate	CE049 U	mg/l	26	124	3585	1488	84	31
Sulphide	CE079	mg/l	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Cyanide (total)	CE077	mg/l	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Phenols (total)	CE073	mg/l	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
PAHs								
PAH (total)	CE087	mg/l	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
TPH								
TPH (C10-C40)	CE052	mg/l	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01

Chemtech Environmental Limited

WATERS

Lab number Sample id Depth (m)			39205-7 Sample E -
Test	**Method**	**Units**	
Arsenic	CE055	mg/l	0.002
Boron	CE063	mg/l	<0.03
Cadmium	CE055 U	mg/l	<0.001
Chromium	CE055 U	mg/l	<0.003
Copper	CE055 U	mg/l	0.005
Lead	CE055 U	mg/l	<0.009
Mercury	CE055	mg/l	<0.001
Nickel	CE055 U	mg/l	<0.003
Selenium	CE055	mg/l	0.003
Zinc	CE055 U	mg/l	<0.020
pH	CE004	units	7.1
Sulphate	CE049 U	mg/l	27
Sulphide	CE079	mg/l	<0.1
Cyanide (total)	CE077	mg/l	<0.02
Phenols (total)	CE073	mg/l	<0.0005
PAHs			
PAH (total)	CE087	mg/l	<0.0001
TPH			
TPH (C10-C40)	CE052	mg/l	<0.01

Chemtech Environmental Limited

METHOD DETAILS

METHOD	WATERS	METHOD SUMMARY	STATUS	LOD	UNITS
CE055	Arsenic	ICP-OES	U	0.001	mg/l
CE063	Boron	ICP-OES	U	0.03	mg/l
CE055	Cadmium	ICP-OES	U	0.001	mg/l
CE055	Chromium	ICP-OES	U	0.003	mg/l
CE055	Copper	ICP-OES	U	0.004	mg/l
CE055	Lead	ICP-OES	U	0.009	mg/l
CE055	Mercury	ICP-OES		0.001	mg/l
CE055	Nickel	ICP-OES	U	0.003	mg/l
CE055	Selenium	ICP-OES	U	0.001	mg/l
CE055	Zinc	ICP-OES	U	0.02	mg/l
CE004	pH	BS 1377, pH Meter	U	0.1	units
CE049	Sulphate	Ion Chromatography	U	10	mg/l
CE079	Sulphide	Continuous Flow Colorimetry		0.1	mg/l
CE077	Cyanide (total)	Continuous Flow Colorimetry		0.02	mg/l
CE073	Phenols (total)	HPLC		0.0005	mg/l
CE087	PAH (total)	Solvent extraction, GC-MS		0.0001	mg/l
CE052	TPH (C10-C40)	Solvent extraction, GC-FID		0.01	mg/l

chemtech environmental

UKAS TESTING 2531

mCERTS THE ENVIRONMENT AGENCY'S MONITORING CERTIFICATION SCHEME

ANALYTICAL TEST REPORT

Contract no: SDA/39022(1)

Contract name: North Gawber Colliery Site - Area 1

Client reference: -

Clients name: Scott Doherty Associates

Clients address: Consett Business Park
Consett
Co Durham
DH8 6BP

Date received: 23 April 2009

Date started: 07 May 2009

Date of issue: 16 June 2009

This is a supplementary report to report number SDA/39022 issued 18 May 2009.

Notes:
Opinions and interpretations expressed herein are outside the UKAS accreditation scope.
Unless otherwise stated, Chemtech Environmental Ltd were not responsible for sampling.
Methods, procedures and performance data are available on request.
Results reported herein relate only to the material supplied to the laboratory.
All results are reported on a dry basis. Samples dried at no more than 30°C in a drying cabinet.
Analytical results are exclusive of stones.
This report shall not be reproduced except in full, withour prior written approval.
Samples will be disposed of 8 weeks from initial receipt unless otherwise instructed.

Key:
U UKAS accredited test
M MCERTS & UKAS accredited test
$ Test carried out by an approved subcontractor
NAF Non asbestos fibres

Approved by: KCampbell

Karan Campbell, Director
John Campbell, Director

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