

PHASE 1 - FACTUAL REPORT BERSHAM COLLIERY, RHOSTYLLLEN

Carried out for: BERSHAM (GLENSIDE) LIMITED

PHASE 1 - FACTUAL REPORT BERSHAM COLLIERY, RHOSTYLLLEN

Carried out for: BERSHAM (GLENSIDE) LIMITED

Discovery CE Limited

The Granary
Broadwell House Farm
Broadwell, Rugby
CV23 8HF

Tel 01926 813909
Fax 01926 814909
Email enquiries@dce-services.co.uk
Web www.dce-services.co.uk

**PHASE 1 - FACTUAL REPORT
BERSHAM COLLIERY, RHOSTYLLLEN**

C O N T E N T S

1	INTRODUCTION	3
1.1	ENGAGEMENT AND TERMS OF REFERENCE OF DISCOVERY GE	3
2	SCOPE OF WORK, GROUND CONDITIONS AND GEOLOGY	4
3	REFERENCES	5
	BRITISH STANDARDS AND CODES OF PRACTICE	5
	GEOLOGICAL AND ORDNANCE SURVEY MAPS	5
	FIGURES AND DRAWINGS	6
	FIGURE 1 – KEY PLAN	6
	DWG 09001J-001 – PROPOSED PHASE 1 TP INVESTIGATION LOCATION PLAN	6
	DWG 09001J-002 – ACTUAL PHASE 1 TP INVESTIGATION LOCATION PLAN	6
	APPENDIX A – TRIAL PIT LOGS.....	7

PHASE 1 - FACTUAL REPORT BERSHAM COLLIERY, RHOSTYLLLEN

1 INTRODUCTION

1.1 Engagement and Terms of Reference of Discovery GE

Discovery CE (DCE) was instructed by BERSHAM (GLENSIDE) LIMITED to carry out a trial pit investigation at the former Bersham Colliery 'bank', in Rhostyllen, north Wales, as shown on Key Plan, Figure 1.

The offer to carry out the work is contained in DCE proposal email of 3 November 2010, though the instruction to proceed was given verbally on 15 October 2010.

Over the course of the next eight years or so it is intended that the site is completely cleared of the colliery spoil. The site itself is some 13 Ha in plan and is 50m in height.

The intended site clearance comprises the excavation of materials to a depth consistent with practical and boundary constraints and consistent with the information gained by each Phase investigation; typically to a depth of 4m.

The initial intention of the present phase investigation was to establish the nature of the materials present in the southeast quadrant of the site, called the Phase 1 area. The Phase 1 area is about 1.5 Ha and has a general elevation of between 120 and 123m AOD.

The planned investigation comprised a series of 20 No. trial pits at 25m centres excavated to about 4m depth using a 20 tonne tracked excavator. The initial scope of Phase 1A is shown on Drawing 09001J-001. During the course of the first day of investigation the ground conditions identified within the upper 4m of the Phase 1A were generally consistent.

It was decided as a consequence to extend the investigation to the northwest into higher elevated ground and elsewhere around the whole site to identify the presence of any variations. The actual trial pits carried out are shown on Drawing 09001J-002, with the coordinates determined from a hand held Etrex GPS and elevations ultimately approximated on the logs from the topographical survey supplied by the client.

2 SCOPE OF WORK, GROUND CONDITIONS AND GEOLOGY

The investigation comprised 32 No. trial pits to a maximum depth of 5.5m and was supervised by an experienced geotechnical engineer.

The ground conditions comprised Made Ground of colliery spoil, predominantly un-burnt shale and coal, though some burnt shale and construction demolition debris were also identified.

The ground conditions identified are presented in Appendix A.

The fieldwork was carried out in general accordance with BS5930 (1999).

The logs refer to the presence of 'silt' content and in most instances for the purposes of the present site of interest such reference represents 'coal' at this particle size. Coal is present also from silt size to gravel size and where it is suspected to be present in the matrix, which is largely for this investigation dominated by the presence of shale, it is noted on each log.

Burnt shale is also identified and in most instances for this investigation is in a friable, desiccated form. Trial pit sides were mainly unstable where burnt shale was identified but stable where unburnt shale was identified.

No groundwater or seepages were noted in any trial pit.

No chemical or geotechnical testing has been undertaken so far but a total of 58 No. bulk samples have been retrieved during the fieldwork.

For **Discovery GE**



Peter Smith
BSc(Hons) MSc CEng MICE
Principal Engineer



Cathal Gillespie
BSc(Hons) MSc (Eng)
Principal Engineer

3 REFERENCES

BRITISH STANDARDS AND CODES OF PRACTICE

BS 10175: 2001: 2001: Investigation of potentially contaminated sites - code of practice. British Standards Institution.

BS 5930 : 1981: Code of Practice for Site Investigations. British Standards Institution.

FIGURES AND DRAWINGS

FIGURE 1 – KEY PLAN

DWG 09001J-001 – PROPOSED PHASE 1 TP INVESTIGATION LOCATION PLAN

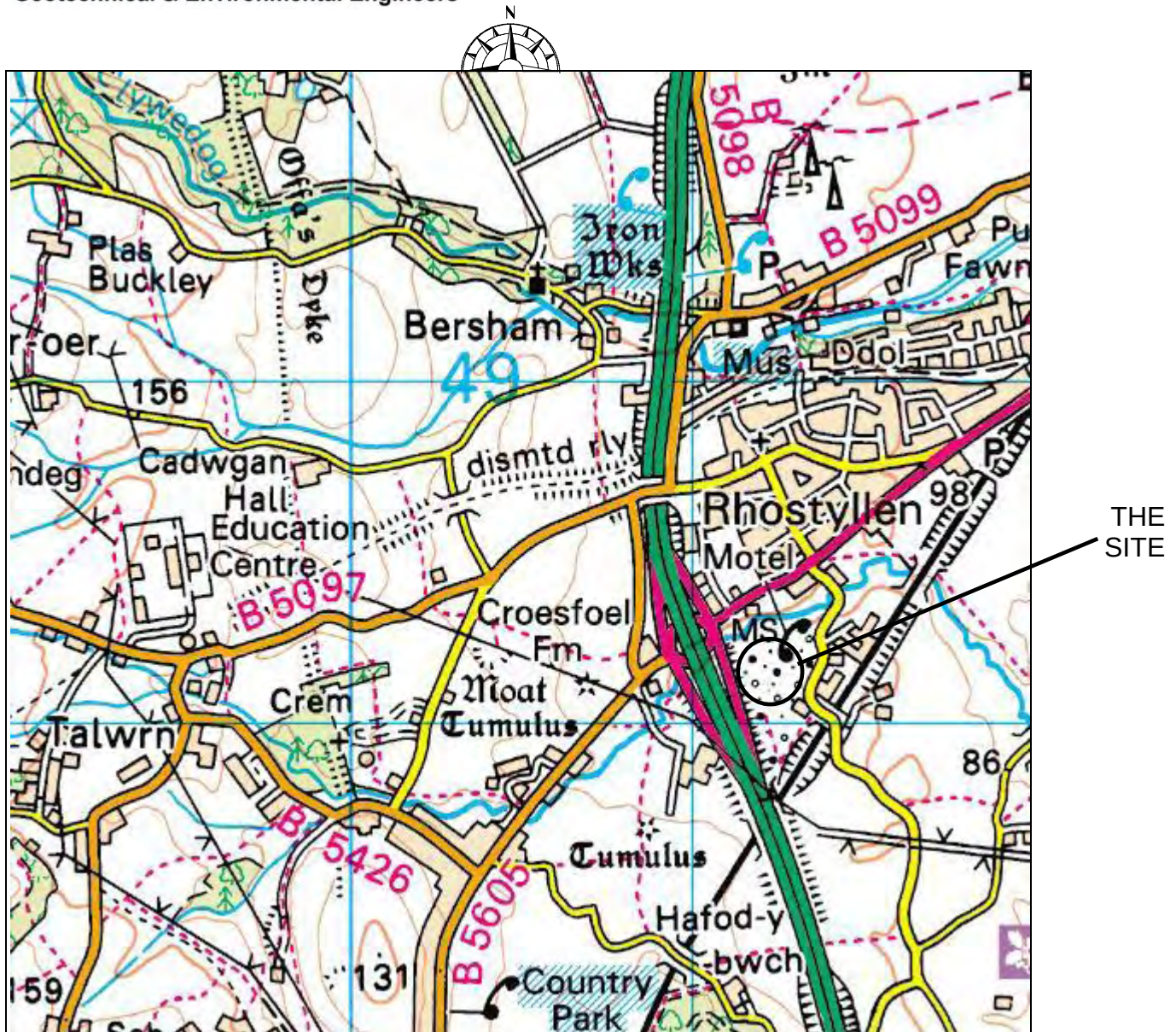
DWG 09001J-002 – ACTUAL PHASE 1 TP INVESTIGATION LOCATION PLAN

10 November 2010

**Report Number: 09001J-
Phase 1**

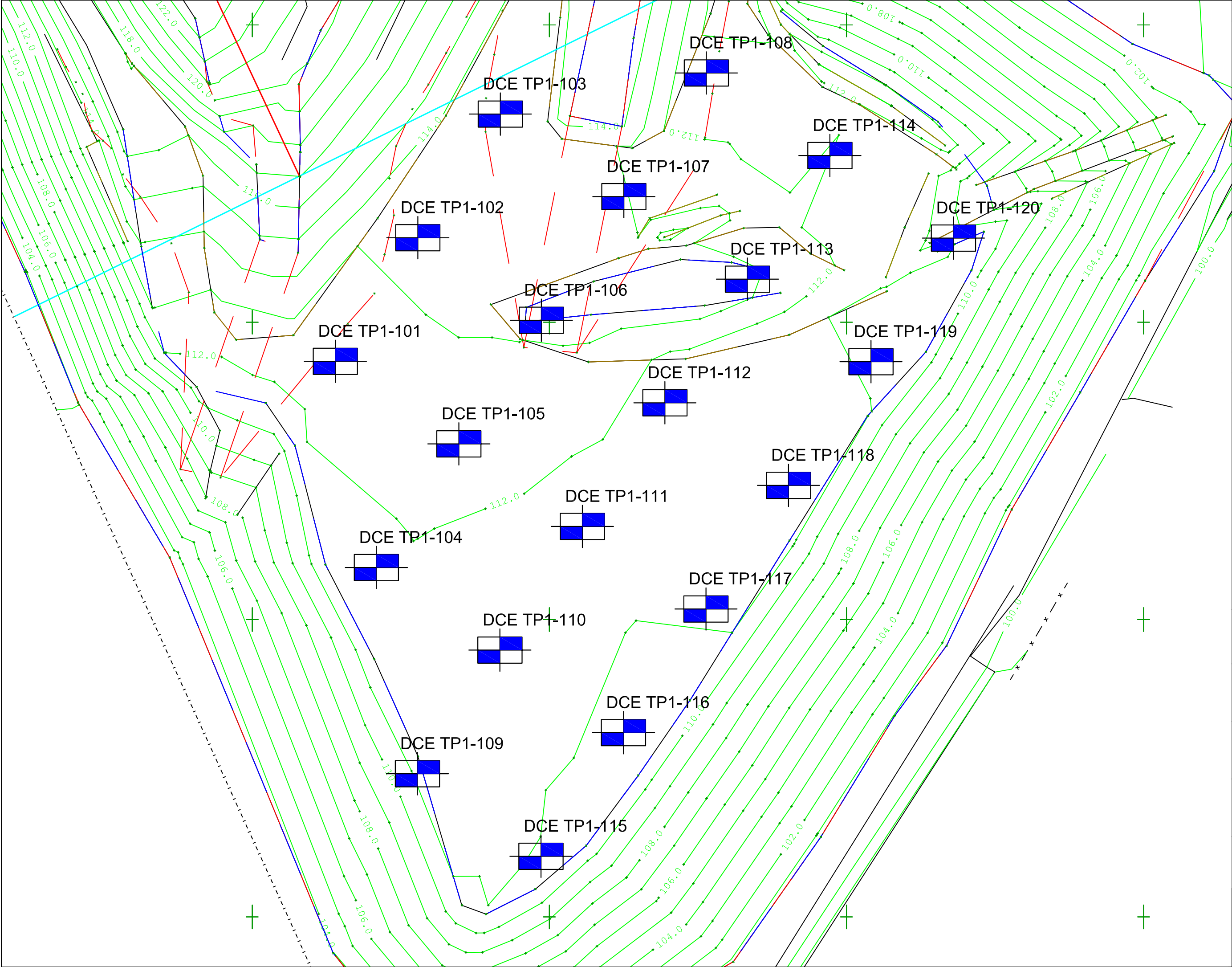
Issue Number: 0

F:\09001T BERSHAM BANK\REPORTS\FINAL REPORTS\09001 PHASE 1 INVESTIGATION FACTUAL REPORT_INTRO
AMENDED.DOC



Reproduced from the Ordnance Survey 1:50,000 scale Landranger with the permission of Ordnance Survey on behalf of The Controller of Her Majesty's Stationery Office,
© Crown Copyright, Discovery CE Limited, Licence No. 100044548.

Figure 1
Key Plan
Bersham Colliery, Rhostyllen
Client: Bersham (Glenside) Limited
Report No 09001J



General notes

1. Trial Pit positions are provisional only and subject to ground conditions found during fieldwork.

2. Trial Pits nominally at 25m centres.

3. Additional Trial Pits may be required should conditions change between individual locations

Legend to symbols

DCE TP1-101

TP101 - PHASE 1 INVESTIGATION

Revision	Description

Title

EXPLORATORY HOLE
PROPOSED LOCATION PLAN

Project

PHASE 1 - BERSHAM BANK

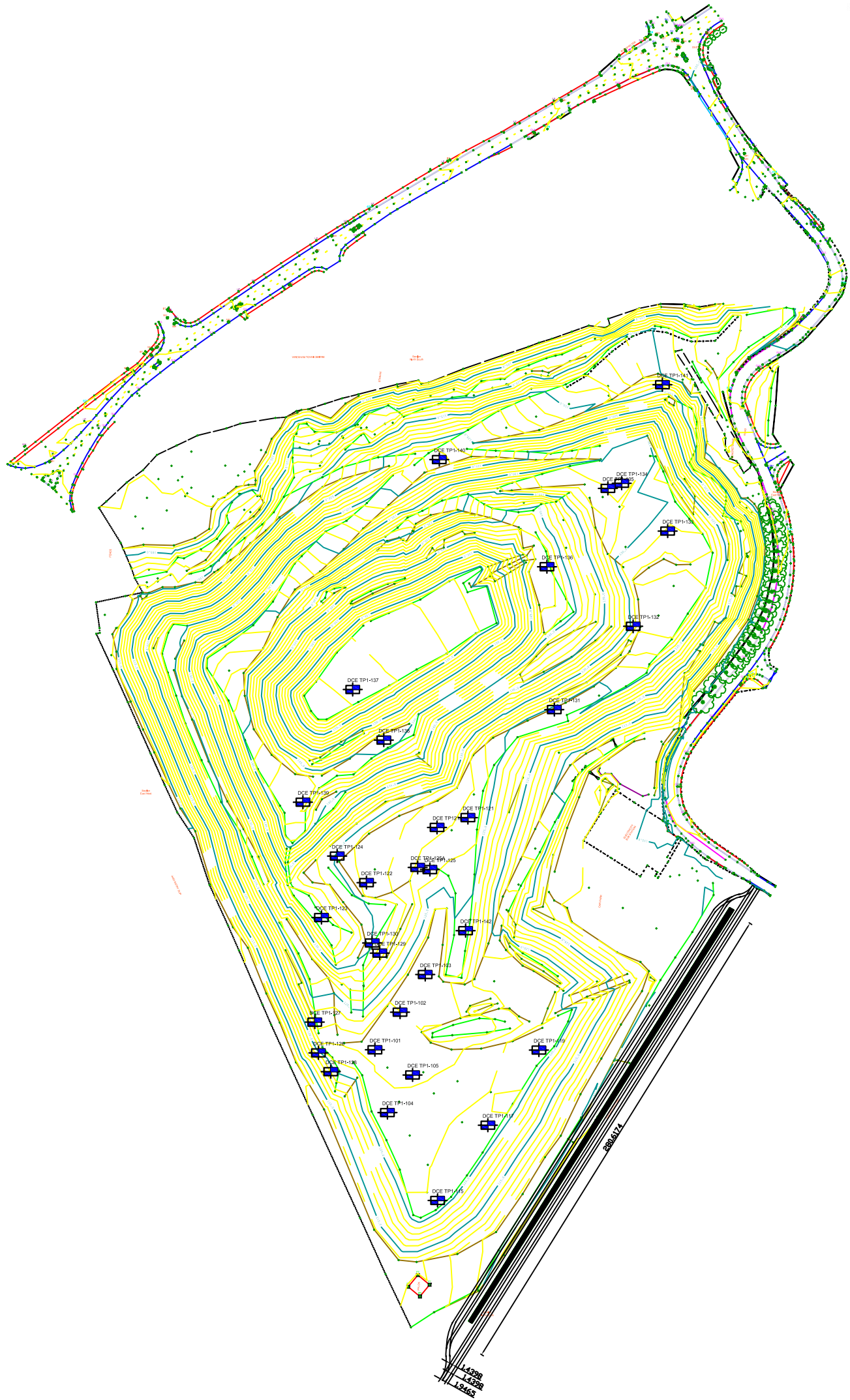
Client

BERSHAM (GLENESIDE) LIMITED

Discovery

Geotechnical & Environmental Engineers

Date	Drawing No.	Scale
3/11/2010	09001J-001	NTS
Drawn By	Checked by	Sheet Size
PDS	TH	A3



TP	Position X	Position Y	Approx GL
DCE TP1-101	331199.3126	347923.5484	122.0
DCE TP1-102	331213.1896	347944.3324	123.0
DCE TP1-103	331227.0956	347965.1174	123.5
DCE TP1-104	331206.2256	347888.8594	121.5
DCE TP1-105	331220.1096	347909.6434	122.5
DCE TP1-115	331233.9326	347840.3124	120.8
DCE TP1-117	331261.6986	347881.8804	121.0
DCE TP1-119	331289.8940	347923.3970	120.5
DCE TP1-121	331250.6836	348051.8084	126.5
DCE TP121a	331233.6196	348046.3924	127.2
DCE TP1-122	331194.6706	348015.8864	128.8
DCE TP1-123	331169.7882	347996.6168	134.0
DCE TP1-124	331178.4456	348030.5554	130.0
DCE TP1-125	331229.6696	348023.1054	126.0
DCE TP1-125A	331222.9407	348024.3005	127.0
DCE TP1-126	331168.1186	347921.8234	120.0
DCE TP1-127	331166.0966	347938.8254	123.0
DCE TP1-128	331174.9266	347911.4754	119.0
DCE TP1-129	331201.9676	347976.9574	128.5
DCE TP1-130	331197.7686	347982.5384	130.0
DCE TP1-131	331298.4106	348111.4804	124.5
DCE TP1-132	331341.9546	348157.4964	129.0
DCE TP1-133	331361.0196	348210.0914	129.0
DCE TP1-134	331335.6236	348236.4844	130.0
DCE TP1-135	331327.9986	348233.6754	131.0
DCE TP1-136	331294.3450	348190.4002	142.0
DCE TP1-137	331187.0526	348122.5714	159.0
DCE TP1-138	331204.2286	348094.6084	145.5
DCE TP1-139	331159.5346	348060.3244	143.0
DCE TP1-140	331234.8676	348249.6034	122.5
DCE TP1-141	331358.1116	348290.9244	113.0
DCE TP1-142	331249.4116	347989.3614	124.5

General notes

1. Trial Pit positions have been determined during fieldwork in consultation with the client.

2.To reconcile with the original numbering system of trial pits, refer to Proposed Phase 1 Trial Pit Locations 09001T-001.

3. The trial pits listed on this drawing comprise a complete set for the Phase 1 investigation

Legend to symbols

DCE TP1-101



TP101 -
PHASE 1
INVESTIGATION

Revision

Description

Title

EXPLORATORY HOLE
ACTUAL TRIAL PIT LOCATION PLAN

Project

PHASE 1 - BERSHAM BANK

Client

BERSHAM <GLENSIDE> LIMITED

Discovery

Geotechnical & Environmental Engineers

Date

03/11/2010

Drawing No.

09001J-002

Scale

NTS

Drawn By

PDS

Checked by

TH

Sheet Size

A3

APPENDIX A – TRIAL PIT LOGS

4 November 2010

Issue Number: 0

**Report Number: 09001J-
Phase 1**

Project Name BERSHAM COLIERY TIP	Project No. 09001J	Co-ords: 331199E - 347924N Level: 122.00 m AOD	Date 20/10/2010
Location: Rhostyllen	Dimensions: 5.00m Depth 5.50m 1.50m 		Scale 1:25
Client: BERSHAM (GLENSIDE) LIMITED			Logged By PDS

Samples & In Situ Testing			Depth (m)	Level (m AOD)	Legend	Stratum Description	
Depth (m)	Type	Results					
0.20			0.20	121.80		TOPSOIL.	
1.00	B					MADE GROUND: Black slightly silty slightly sandy fine to coarse GRAVEL of elongated angular shale and coal with occasional cobble sized pockets of silt/clay. Between 3 and 4 m bgl becoming black slightly silty slightly sandy GRAVEL of shale with occasional boulders of shale. Below 4 m bgl becoming black slightly silty slightly sandy GRAVEL of fine and medium angular shale and fine angular coal.	1
3.00	B						2
4.00	B						3
							4
							5

Continued next sheet

Remarks: Machine excavated trial pit completed to 5.5 m bgl using a 21 tonne tracked excavator. All sides stable and strata similar on all faces. Trial pit backfilled with arisings.

Groundwater: None encountered.



Samples & In Situ Testing			Depth (m)	Level (m AOD)	Legend	Stratum Description
Depth (m)	Type	Results				
			5.50	116.50	  	MADE GROUND: Black slightly silty slightly sandy fine to coarse GRAVEL of elongated angular shale and coal with occasional cobble sized pockets of silt/clay. Between 3 and 4 m bgl becoming black slightly silty slightly sandy GRAVEL of shale with occasional boulders of shale. Below 4 m bgl becoming black slightly silty slightly sandy GRAVEL of fine and medium angular shale and fine angular coal. Trialpit Complete at 5.50 m



Project Name
PHASE 1 TRIAL PIT INVESTIGATION

Project No.
09001J

Co-ords: Refer to log
Level: Refer to log

Date

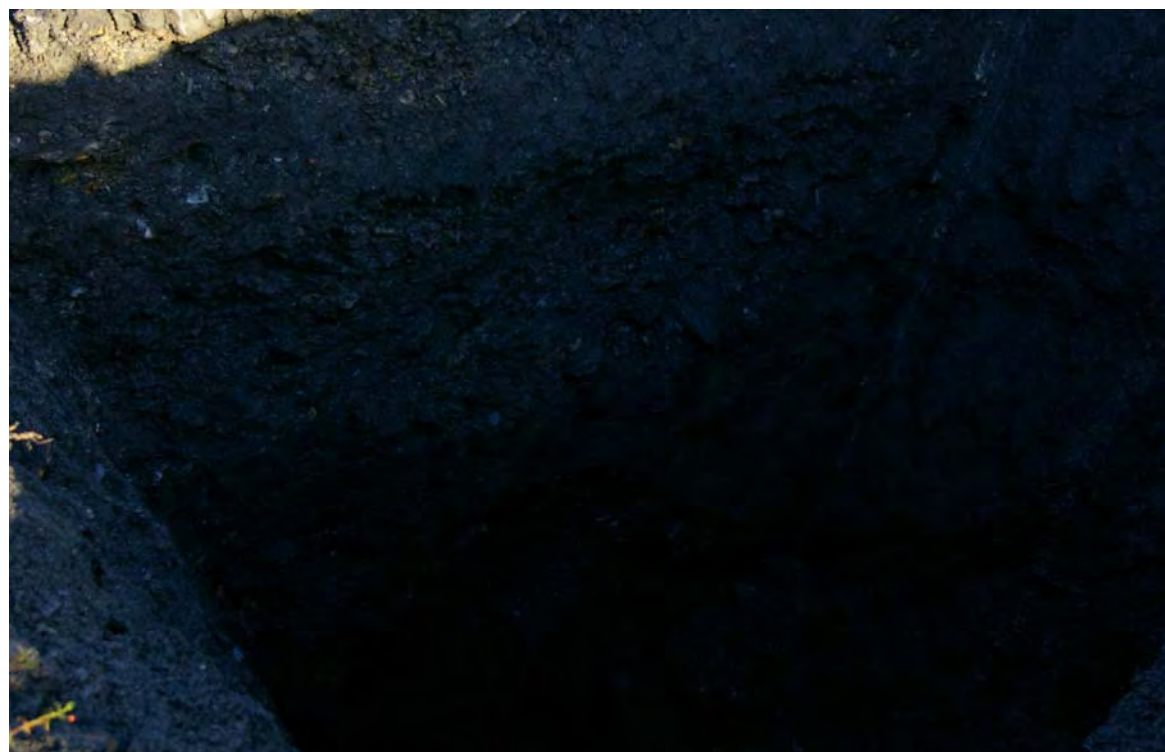
Location:
BERSHAM COLLIERY, RHOSTYLLLEN

Dimensions:
Refer to log

20/10/2010

Client: BERSHAM (GLENSIDE) LIMITED

Logged By
PDS



General Notes

Project Name BERSHAM COLIERY TIP	Project No. 09001J	Co-ords: 331213E - 347944N Level: 123.00 m AOD	Date 20/10/2010
Location: Rhostyllen	Dimensions: 5.00m Depth 5.50m		Scale 1:25
Client: BERSHAM (GLENSIDE) LIMITED			Logged By PDS

Samples & In Situ Testing			Depth (m)	Level (m AOD)	Legend	Stratum Description	
Depth (m)	Type	Results					
			0.20	122.80		TOPSOIL.	
2.00-2.50	B					MADE GROUND: Black and red slightly silty sandy GRAVEL of fine and medium angular and elongated shale with occasional coarse gravel of red and black shale.	1
3.50-4.00	B		3.50	119.50		MADE GROUND: Black slightly silty slightly gravelly SAND of fine to coarse coal. Rare wood and steel noted. Between 5 and 5.5 m bgl becoming black locally red slightly silty slightly sandy GRAVEL of shale. Rare wood and steel with occasional angular cobbles of red burnt shale.	4
							5

Continued next sheet

Remarks: Machine excavated trial pit completed to 5.5 m bgl using a 21 tonne tracked excavator. All sides stable and strata similar on all faces. Trial pit backfilled with arisings.

Groundwater: None encountered.



Project Name
PHASE 1 TRIAL PIT INVESTIGATION

Project No.
09001J

Co-ords: Refer to log
Level: Refer to log

Date

Location:
BERSHAM COLLIERY, RHOSTYLLLEN

Dimensions:
Refer to log

20/10/2010

Client: BERSHAM (GLENSIDE) LIMITED

Logged By
PDS



General Notes

Project Name BERSHAM COLIERY TIP	Project No. 09001J	Co-ords: 331227E - 347965N Level: 123.50 m AOD	Date 20/10/2010
Location: Rhostyllen	Dimensions: 5.00m Depth 5.50m 1.50m 		Scale 1:25
Client: BERSHAM (GLENSIDE) LIMITED			Logged By PDS

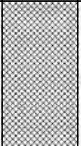
Samples & In Situ Testing			Depth (m)	Level (m AOD)	Legend	Stratum Description	
Depth (m)	Type	Results					
			0.20	123.30		TOPSOIL.	
1.80-2.20	B					MADE GROUND: Red and black mottled brown slightly silty slightly sandy GRAVEL of fine to coarse angular shale.	1
			2.20	121.30		MADE GROUND: Black slightly silty slightly sandy GRAVEL of fine and medium shale and coal. Rare boulder of reinforced concrete.	2
3.00	B					MADE GROUND: Brown and black slightly silty slightly sandy GRAVEL of	3
			4.80	118.70			4
							5

Continued next sheet

Remarks:	Machine excavated trial pit completed to 5.5 m bgl using a 21 tonne tracked excavator. All sides stable and strata similar on all faces. Trial pit backfilled with arisings.
Groundwater:	None encountered



Project Name BERSHAM COLIERY TIP	Project No. 09001J	Co-ords: 331227E - 347965N Level: 123.50 m AOD	Date 20/10/2010
Location: Rhostyllen	Dimensions: 5.00m Depth 5.50m 1.50m 		Scale 1:25
Client: BERSHAM (GLENSIDE) LIMITED			Logged By PDS

Samples & In Situ Testing			Depth (m)	Level (m AOD)	Legend	Stratum Description	
Depth (m)	Type	Results					
5.00	B					fine and medium angular shale and coal.	
			5.50	118.00		Trialpit Complete at 5.50 m	
							6
							7
							8
							9
							10

Remarks: Machine excavated trial pit completed to 5.5 m bgl using a 21 tonne tracked excavator. All sides stable and strata similar on all faces. Trial pit backfilled with arisings.

Groundwater: None encountered



Project Name
PHASE 1 TRIAL PIT INVESTIGATION

Project No.
09001J

Co-ords: Refer to log
Level: Refer to log

Date

Location:
BERSHAM COLLIERY, RHOSTYLLLEN

Dimensions:
Refer to log

20/10/2010

Client: BERSHAM (GLENSIDE) LIMITED

Logged By
PDS



General Notes

Project Name BERSHAM COLIERY TIP	Project No. 09001J	Co-ords: 331206E - 347889N Level: 121.50 m AOD	Date 20/10/2010
Location: Rhostyllen	Dimensions: 5.00m Depth 5.50m		Scale 1:25
Client: BERSHAM (GLENSIDE) LIMITED			Logged By PDS

Samples & In Situ Testing			Depth (m)	Level (m AOD)	Legend	Stratum Description	
Depth (m)	Type	Results					
			0.20	121.30		TOPSOIL.	
1.00	B		1.00	120.50		MADE GROUND: Black very silty locally cemented slightly sandy fine to coarse GRAVEL of angular shale and coal with occasional cobbles of shale. Rare hardboard wood noted. NB: Gravel locally weakly cemented.	1
						MADE GROUND: Black slightly silty slightly sandy GRAVEL of angular fine to coarse shale and coal. At 4.5 m bgl locally black slightly silty sandy GRAVEL of angular fine to coarse shale and coal with occasional cobbles and coarse gravel sized pieces of red burnt shale.	2
3.50	B						3
							4
4.50	B						5

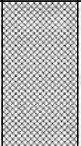
Continued next sheet

Remarks: Machine excavated trial pit completed to 5.5 m bgl using a 21 tonne tracked excavator. All sides stable and strata similar on all faces. Trial pit backfilled with arisings.

Groundwater: None encountered



Project Name BERSHAM COLIERY TIP	Project No. 09001J	Co-ords: 331206E - 347889N Level: 121.50 m AOD	Date 20/10/2010
Location: Rhostyllen	Dimensions: 5.00m Depth 5.50m 1.50m 		Scale 1:25
Client: BERSHAM (GLENSIDE) LIMITED			Logged By PDS

Samples & In Situ Testing			Depth (m)	Level (m AOD)	Legend	Stratum Description	
Depth (m)	Type	Results					
			5.50	116.00		MADE GROUND: Black slightly silty slightly sandy GRAVEL of angular fine to coarse shale and coal. At 4.5 m bgl locally black slightly silty sandy GRAVEL of angular fine to coarse shale and coal with occasional cobbles and coarse gravel sized pieces of red burnt shale.	
Trialpit Complete at 5.50 m							
							6
							7
							8
							9
							10

Remarks: Machine excavated trial pit completed to 5.5 m bgl using a 21 tonne tracked excavator. All sides stable and strata similar on all faces. Trial pit backfilled with arisings.

Groundwater: None encountered



Project Name PHASE 1 TRIAL PIT INVESTIGATION	Project No. 09001J	Co-ords: Refer to log Level: Refer to log	Date
Location: BERSHAM COLLIERY, RHOSTYLLLEN		Dimensions: Refer to log	20/10/2010
Client: BERSHAM (GLENSIDE) LIMITED			Logged By PDS



General Notes

Project Name BERSHAM COLIERY TIP	Project No. 09001J	Co-ords: 331220E - 347910N Level: 122.50 m AOD	Date 20/10/2010
Location: Rhostyllen	Dimensions: 5.00m Depth 5.00m		Scale 1:25
Client: BERSHAM (GLENSIDE) LIMITED			Logged By PDS

Samples & In Situ Testing			Depth (m)	Level (m AOD)	Legend	Stratum Description	
Depth (m)	Type	Results					
0.20			0.20	122.30		TOPSOIL.	
1.50	B					MADE GROUND: Black slightly silty slightly sandy GRAVEL of angular fine to coarse shale and coal and occasional red shale with occasional cobbles of shale. At 3.5 m bgl locally balck slightly silty slightly sandy GRAVEL of angular fine to coarse shale and coal and occasional angular cobbles of shale.	1
3.50	B						2
							3
							4
							5

Trialpit Complete at 5.00 m

Remarks: Machine excavated trial pit completed to 5 m bgl using a 21 tonne tracked excavator. All sides stable and strata similar on all faces. Trial pit backfilled with arisings.

Groundwater: None encountered



Project Name
PHASE 1 TRIAL PIT INVESTIGATION

Project No.
09001J

Co-ords: Refer to log
Level: Refer to log

Date

Location:
BERSHAM COLLIERY, RHOSTYLLLEN

Dimensions:
Refer to log

20/10/2010

Client: BERSHAM (GLENSIDE) LIMITED

Logged By
PDS



General Notes

Project Name BERSHAM COLIERY TIP	Project No. 09001J	Co-ords: 331234E - 347840N Level: 120.75 m AOD	Date 20/10/2010
Location: Rhostyllen	Dimensions: 5.00m Depth 5.50m 1.50m 		Scale 1:25
Client: BERSHAM (GLENSIDE) LIMITED			Logged By PDS

Samples & In Situ Testing			Depth (m)	Level (m AOD)	Legend	Stratum Description	
Depth (m)	Type	Results					
			0.20	120.55		TOPSOIL.	
2.00	B					MADE GROUND: Black slightly silty sandy GRAVEL of angular fine to coarse shale and coal. Occasional angular cobbles of shale and rare inclusions of red burnt angular gravel of shale. At 3.5 m bgl occasional boulders of shale.	1
3.50	B						2
							3
							4
							5

Continued next sheet

Remarks: Machine excavated trial pit completed to 5.5 m bgl using a 21 tonne tracked excavator. All sides stable and strata similar on all faces. Trial pit backfilled with arisings.

Groundwater: None encountered



Project Name
PHASE 1 TRIAL PIT INVESTIGATION

Project No.
09001J

Co-ords: Refer to log
Level: Refer to log

Date

Location:
BERSHAM COLLIERY, RHOSTYLLLEN

Dimensions:
Refer to log

20/10/2010

Client: BERSHAM (GLENSIDE) LIMITED

Logged By
PDS



General Notes

Project Name BERSHAM COLIERY TIP	Project No. 09001J	Co-ords: 331262E - 347882N Level: 121.00 m AOD	Date 20/10/2010
Location: Rhostyllen	Dimensions: 5.00m Depth 5.00m 1.50m 		Scale 1:25
Client: BERSHAM (GLENSIDE) LIMITED			Logged By PDS

Samples & In Situ Testing			Depth (m)	Level (m AOD)	Legend	Stratum Description	
Depth (m)	Type	Results					
1.00-1.20	B					MADE GROUND: Black slightly silty slightly sandy locally sandy GRAVEL of angular fine to coarse shale and coal with occasional angular cobbles of shale. Between 1 and 1.2 m bgl locally black weakly cemented silty sandy GRAVEL of angular and elongated shale and coal. Sand is fine of coal.	1
2.50-2.80	B						2
							3
							4
4.80-5.00	B						5

Trialpit Complete at 5.00 m

Remarks: Machine excavated trial pit completed to 5 m bgl using a 21 tonne tracked excavator. All sides stable and strata similar on all faces. Trial pit backfilled with arisings.

Groundwater: None encountered



Project Name PHASE 1 TRIAL PIT INVESTIGATION	Project No. 09001J	Co-ords: Refer to log Level: Refer to log	Date
Location: BERSHAM COLLIERY, RHOSTYLLEN		Dimensions: Refer to log	20/10/2010
Client: BERSHAM (GLENSIDE) LIMITED			Logged By PDS



General Notes

Direction of sun prevented worthwhile photograph being presented

Project Name BERSHAM COLIERY TIP	Project No. 09001J	Co-ords: 331290E - 347923N Level: 120.50 m AOD	Date 20/10/2010
Location: Rhostyllen	Dimensions: 5.00m Depth 5.00m		Scale 1:25
Client: BERSHAM (GLENSIDE) LIMITED			Logged By PDS

Samples & In Situ Testing			Depth (m)	Level (m AOD)	Legend	Stratum Description	
Depth (m)	Type	Results					
1.20	B		1.50	119.00		MADE GROUND: Black and buff brown slightly silty sandy GRAVEL of angular fine to coarse shale and coal.	1
2.50	B		2.50	118.00		MADE GROUND: Black and brown slightly silty sandy GRAVEL of angular fine to coarse shale and coal with occasional cobbles of shale, occasional Hauser cable, plastic and demolition rubble in north and east corners.	2
4.50-5.00	B					MADE GROUND: Black slightly silty slightly sandy GRAVEL of angular and elongated fine to coarse shale and coal and occasional angular cobbles of shale.	3
							4
							5

Trialpit Complete at 5.00 m

Remarks: Machine excavated trial pit completed to 5 m bgl using a 21 tonne tracked excavator. All sides stable. Trial pit backfilled with arisings.

Groundwater: None encountered



Project Name PHASE 1 TRIAL PIT INVESTIGATION	Project No. 09001J	Co-ords: Refer to log Level: Refer to log	Date
Location: BERSHAM COLLIERY, RHOSTYLLLEN		Dimensions: Refer to log	20/10/2010
Client: BERSHAM (GLENSIDE) LIMITED			Logged By PDS



General Notes

Project Name BERSHAM COLIERY TIP	Project No. 09001J	Co-ords: 331251E - 348052N Level: 126.50 m AOD	Date 20/10/2010
Location: Rhostyllen	Dimensions: 5.00m Depth 3.00m 1.50m 		Scale 1:25
Client: BERSHAM (GLENSIDE) LIMITED			Logged By PDS

Samples & In Situ Testing			Depth (m)	Level (m AOD)	Legend	Stratum Description	
Depth (m)	Type	Results					
1.00	B		0.40	126.10		MADE GROUND: Black and orangish yellow and brown slightly sandy GRAVEL of angular and elongated fine to coarse shale.	
			0.80	125.70		MADE GROUND: Red slightly silty sandy angular and elongated fine to coarse GRAVEL of burnt shale.	
			1.20	125.30		MADE GROUND: Black and yellowish brown slightly sandy GRAVEL of angular and elongated fine to coarse shale.	1
2.50-2.70	B					MADE GROUND: Light brown, yellowish brown and red slightly silty sandy GRAVEL of angular fine and medium occasionally coarse shale and black angular fine and medium coal.	
			3.00	123.50		Trialpit Complete at 3.00 m	3
							4
							5

Remarks: Machine excavated trial pit completed to 3 m bgl using a 21 tonne tracked excavator. Locally unstable on all sides. Strata similar on all faces. Trial pit backfilled with arisings.

Groundwater: None encountered



Project Name
PHASE 1 TRIAL PIT INVESTIGATION

Project No.
09001J

Co-ords: Refer to log
Level: Refer to log

Date

Location:
BERSHAM COLLIERY, RHOSTYLLLEN

Dimensions:
Refer to log

20/10/2010

Client: BERSHAM (GLENSIDE) LIMITED

Logged By
PDS



General Notes

Project Name BERSHAM COLIERY TIP	Project No. 09001J	Co-ords: 331234E - 348046N Level: 127.20 m AOD	Date 20/10/2010
Location: Rhostyllen	Dimensions: 5.00m Depth 3.80m		Scale 1:25
Client: BERSHAM (GLENSIDE) LIMITED			Logged By PDS

Samples & In Situ Testing			Depth (m)	Level (m AOD)	Legend	Stratum Description	
Depth (m)	Type	Results					
0.40			0.40	126.80		MADE GROUND: Black slightly silty sandy GRAVEL of angular fine to coarse shale and coal.	1
2.70			2.70	124.50		MADE GROUND: Light brown and red silty sandy GRAVEL of angular fine and medium burnt shale and occasional cobbles of angular burnt shale.	2
3.50	B		3.50				3
3.80	B		3.80	123.40		MADE GROUND: Black and reddish brown silty sandy GRAVEL of angular fine to coarse shale and coal.	4
Trialpit Complete at 3.80 m							5

Remarks: Machine excavated trial pit completed to 3.8 m bgl using a 21 tonne tracked excavator. All sides stable and strata similar on all faces. Trial pit backfilled with arisings.

Groundwater: None encountered



Project Name PHASE 1 TRIAL PIT INVESTIGATION	Project No. 09001J	Co-ords: Refer to log Level: Refer to log	Date
Location: BERSHAM COLLIERY, RHOSTYLLLEN		Dimensions: Refer to log	20/10/2010
Client: BERSHAM (GLENSIDE) LIMITED			Logged By PDS



General Notes

Project Name BERSHAM COLIERY TIP	Project No. 09001J	Co-ords: 331195E - 348016N Level: 128.80 m AOD	Date 21/10/2010
Location: Rhostyllen	Dimensions: 5.00m Depth 3.30m		Scale 1:25
Client: BERSHAM (GLENSIDE) LIMITED			Logged By PDS

Samples & In Situ Testing			Depth (m)	Level (m AOD)	Legend	Stratum Description	
Depth (m)	Type	Results					
			0.10	128.70		TOPSOIL.	
						MADE GROUND: Black slightly silty GRAVEL of shale with cobbles and boulders of concrete, brickwall fragments, concrete slabs and occasional steel.	
			2.30	126.50		MADE GROUND: Dark grey gravelly SILT/CLAY. Gravel is angular fine and medium of shale.	
3.20	B		3.20	125.60		MADE GROUND: Black slightly silty sandy GRAVEL of angular fine and medium shale.	
			3.30	125.50		Trialpit Complete at 3.30 m	

Remarks: Machine excavated trial pit completed to 3.3 m bgl using a 21 tonne tracked excavator. Unstable to 2.3 m bgl on all sides. Strata similar on all faces. Trial pit backfilled with arisings.

Groundwater: None encountered



Project Name PHASE 1 TRIAL PIT INVESTIGATION	Project No. 09001J	Co-ords: Refer to log Level: Refer to log	Date
Location: BERSHAM COLLIERY, RHOSTYLLEN		Dimensions: Refer to log	21/10/2010
Client: BERSHAM (GLENSIDE) LIMITED			Logged By PDS



NO PHOTO

General Notes

Project Name BERSHAM COLIERY TIP	Project No. 09001J	Co-ords: 331170E - 347997N Level: 134.00 m AOD	Date 21/10/2010
Location: Rhostyllen		Dimensions: 5.00m Depth 1.50m	Scale 1:25
Client: BERSHAM (GLENSIDE) LIMITED			Logged By PDS

Samples & In Situ Testing			Depth (m)	Level (m AOD)	Legend	Stratum Description	
Depth (m)	Type	Results					
1.00	B		0.50	133.50		MADE GROUND: Grey slightly silty slightly clayey sandy GRAVEL of angular fine to coarse shale.	
						MADE GROUND: Black and red slightly silty sandy GRAVEL of angular fine to coarse shale with occasional angular cobbles of shale. Sand is fine and medium of coal.	
						Between 0.3 and 1.5 m bgl in eastern end of trial pit boulder sized pocket of light brown and reddish brown slightly silty sandy GRAVEL of angular fine to coarse burnt shale.	
						Trial pit terminated at 1.5 m bgl.	1
			1.50	132.50		Trialpit Complete at 1.50 m	2
							3
							4
							5

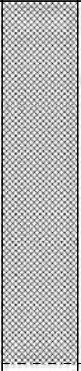
Remarks:	Machine excavated trial pit completed to 1.5 m bgl using a 21 tonne tracked excavator. All sides stable. Trial pit backfilled with arisings.
Groundwater:	None encountered



Project Name PHASE 1 TRIAL PIT INVESTIGATION	Project No. 09001J	Co-ords: Refer to log Level: Refer to log	Date
Location: BERSHAM COLLIERY, RHOSTYLLLEN		Dimensions: Refer to log	21/10/2010
Client: BERSHAM (GLENSIDE) LIMITED			Logged By PDS



Project Name BERSHAM COLIERY TIP	Project No. 09001J	Co-ords: 331178E - 348031N Level: 130.00 m AOD	Date 21/10/2010
Location: Rhostyllen	Dimensions: 5.00m Depth 1.20m 1.50m 		Scale 1:25
Client: BERSHAM (GLENSIDE) LIMITED			Logged By PDS

Samples & In Situ Testing			Depth (m)	Level (m AOD)	Legend	Stratum Description	
Depth (m)	Type	Results					
1.00	B		1.20	128.80		MADE GROUND: Black and locally brown slightly silty sandy GRAVEL of angular fine and medium shale with localised pockets of thinly laminated CLAY and frequent boulders and cobbles of concrete, brick, steel, plastic and wood. Trial pit terminated at 1.2 m bgl.	1
Trialpit Complete at 1.20 m							2
							3
							4
							5

Remarks: Machine excavated trial pit completed to 1.2 m bgl using a 21 tonne tracked excavator. All sides stable and strata similar on all faces. Trial pit backfilled with arisings.

Groundwater: None encountered



Project Name
PHASE 1 TRIAL PIT INVESTIGATION

Project No.
09001J

Co-ords: Refer to log
Level: Refer to log

Date

Location:
BERSHAM COLLIERY, RHOSTYLLLEN

Dimensions:
Refer to log

21/10/2010

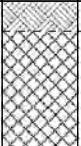
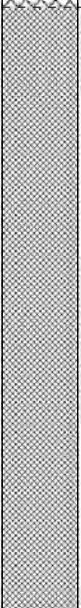
Client: BERSHAM (GLENSIDE) LIMITED

Logged By
PDS



General Notes

Project Name BERSHAM COLIERY TIP	Project No. 09001J	Co-ords: 331230E - 348023N Level: 126.00 m AOD	Date 21/10/2010
Location: Rhostyllen	Dimensions: 5.00m Depth 2.50m 1.50m 		Scale 1:25
Client: BERSHAM (GLENSIDE) LIMITED			Logged By PDS

Samples & In Situ Testing			Depth (m)	Level (m AOD)	Legend	Stratum Description	
Depth (m)	Type	Results					
0.10			0.10	125.90		TOPSOIL.	
0.50			0.50	125.50		MADE GROUND: Dark grey and brown gravelly CLAY. Gravel is angular fine to coarse of shale.	
2.50			2.50	123.50		MADE GROUND: Grey and red slightly sandy slightly clayey GRAVEL of angular fine to coarse shale and occasional cobbles of shale. Trial pit terminated at 2.5 m bgl.	
1.50-2.00	B						
						Trialpit Complete at 2.50 m	

Remarks: Machine excavated trial pit completed to 2.5 m bgl using a 21 tonne tracked excavator. All sides stable and strata similar on all faces. Trial pit backfilled with arisings.

Groundwater: None encountered



Project Name PHASE 1 TRIAL PIT INVESTIGATION	Project No. 09001J	Co-ords: Refer to log Level: Refer to log	Date
Location: BERSHAM COLLIERY, RHOSTYLLLEN		Dimensions: Refer to log	21/10/2010
Client: BERSHAM (GLENSIDE) LIMITED			Logged By PDS



NO PHOTO

General Notes

Project Name BERSHAM COLIERY TIP	Project No. 09001J	Co-ords: 331223E - 348024N Level: 127.00 m AOD	Date 21/10/2010
Location: Rhostyllen	Dimensions: 5.00m Depth 2.20m		Scale 1:25
Client: BERSHAM (GLENSIDE) LIMITED			Logged By PDS

Samples & In Situ Testing			Depth (m)	Level (m AOD)	Legend	Stratum Description	
Depth (m)	Type	Results					
			1.20	125.80		MADE GROUND: Red slightly silty sandy GRAVEL of angular fine to coarse burnt shale.	1
			2.20	124.80		MADE GROUND: Blackish grey slightly silty slightly sandy GRAVEL of angular and elongated shale.	2
						Trialpit Complete at 2.20 m	3
							4
							5

Remarks: Machine excavated trial pit completed to 2.2 m bgl using a 21 tonne tracked excavator. All sides stable and strata similar on all faces. Trial pit backfilled with arisings.

Groundwater: None encountered



Project Name PHASE 1 TRIAL PIT INVESTIGATION	Project No. 09001J	Co-ords: Refer to log Level: Refer to log	Date
Location: BERSHAM COLLIERY, RHOSTYLLLEN		Dimensions: Refer to log	21/10/2010
Client: BERSHAM (GLENSIDE) LIMITED			Logged By PDS



NO PHOTO

General Notes

Project Name BERSHAM COLIERY TIP	Project No. 09001J	Co-ords: 331168E - 347922N Level: 120.00 m AOD	Date 21/10/2010
Location: Rhostyllen	Dimensions: 5.00m Depth 1.00m 		Scale 1:25
Client: BERSHAM (GLENSIDE) LIMITED			Logged By PDS

Samples & In Situ Testing			Depth (m)	Level (m AOD)	Legend	Stratum Description	
Depth (m)	Type	Results					
			1.00	119.00		Western Side - MADE GROUND: Red slightly silty sandy GRAVEL of angular and elongated fine to coarse burnt shale. Eastern Side - MADE GROUND: Black slightly silty sandy GRAVEL of angular fine to coarse shale with occasional angular cobbles of shale. Trial pit terminated at 1 m bgl.	1
						Trialpit Complete at 1.00 m	2
							3
							4
							5

Remarks: Machine excavated trial pit completed to 5.5 m bgl using a 21 tonne tracked excavator. Poor stability on western face. Trial pit backfilled with arisings.

Groundwater: None encountered



Project Name PHASE 1 TRIAL PIT INVESTIGATION	Project No. 09001J	Co-ords: Refer to log Level: Refer to log	Date
Location: BERSHAM COLLIERY, RHOSTYLLLEN		Dimensions: Refer to log	21/10/2010
Client: BERSHAM (GLENSIDE) LIMITED			Logged By PDS



General Notes

Project Name BERSHAM COLIERY TIP	Project No. 09001J	Co-ords: 331166E - 347939N Level: 123.00 m AOD	Date 21/10/2010
Location: Rhostyllen	Dimensions: 5.00m Depth 4.00m 1.50m 		Scale 1:25
Client: BERSHAM (GLENSIDE) LIMITED			Logged By PDS

Samples & In Situ Testing			Depth (m)	Level (m AOD)	Legend	Stratum Description	
Depth (m)	Type	Results					
0.10			0.10	122.90		TOPSOIL.	
						MADE GROUND: Black locally red slightly silty slightly sandy fine and medium GRAVEL of angular shale and coal. Sand is fine and medium of coal dust.	
3.50-4.00	B		4.00	119.00			
						Trialpit Complete at 4.00 m	

Remarks: Machine excavated trial pit completed to 4 m bgl using a 21 tonne tracked excavator. Moderately stable but sloughing at shallow depth. Strata similar on all faces. Trial pit backfilled with arisings.

Groundwater: None encountered



Project Name
PHASE 1 TRIAL PIT INVESTIGATION

Project No.
09001J

Co-ords: Refer to log
Level: Refer to log

Date

Location:
BERSHAM COLLIERY, RHOSTYLLLEN

Dimensions:
Refer to log

21/10/2010

Client: BERSHAM (GLENSIDE) LIMITED

Logged By
PDS



General Notes

Project Name BERSHAM COLIERY TIP	Project No. 09001J	Co-ords: 331175E - 347911N Level: 119.00 m AOD	Date 21/10/2010
Location: Rhostyllen	Dimensions: 5.00m Depth 3.50m 1.50m 		Scale 1:25
Client: BERSHAM (GLENSIDE) LIMITED			Logged By PDS

Samples & In Situ Testing			Depth (m)	Level (m AOD)	Legend	Stratum Description	
Depth (m)	Type	Results					
			0.20	118.80		TOPSOIL.	
						Western End - MADE GROUND: Red slightly silty sandy GRAVEL of angular fine and medium shale.	
						Middle - MADE GROUND: Black silty slightly sandy GRAVEL of angular and elongated fine to coarse shale and coal.	
						Eastern End - MADE GROUND: Soft reddish brown slightly sandy slightly gravelly CLAY/SILT. Gravel is angular fine to coarse of weathered shale.	
2.00	B						1
							2
							3
3.50	B		3.50	115.50		Trialpit Complete at 3.50 m	4
							5

Remarks: Machine excavated trial pit completed to 3.5 m bgl using a 21 tonne tracked excavator. All sides stable. Trial pit backfilled with arisings.

Groundwater: None encountered



Project Name PHASE 1 TRIAL PIT INVESTIGATION	Project No. 09001J	Co-ords: Refer to log Level: Refer to log	Date
Location: BERSHAM COLLIERY, RHOSTYLLLEN		Dimensions: Refer to log	21/10/2010
Client: BERSHAM (GLENSIDE) LIMITED			Logged By PDS



General Notes

Project Name BERSHAM COLIERY TIP	Project No. 09001J	Co-ords: 331202E - 347977N Level: 128.50 m AOD	Date 21/10/2010
Location: Rhosyllen	Dimensions: 5.00m Depth 5.00m 1.50m 		Scale 1:25
Client: BERSHAM (GLENSIDE) LIMITED			Logged By PDS

Samples & In Situ Testing			Depth (m)	Level (m AOD)	Legend	Stratum Description	
Depth (m)	Type	Results					
1.30	B					MADE GROUND: Black and grey slightly silty sandy GRAVEL of angular fine to coarse shale and coal and occasional boulders of shale. Below 2.8 m bgl becoming black slightly silty sandy GRAVEL of angular fine and medium shale and coal. Sand is fine.	1
2.80	B						2
							3
			3.80	124.70		MADE GROUND: Black slightly silty sandy GRAVEL of angular fine to coarse shale and coal with occasional cobbles and boulders of angular shale.	4
							5

Trialpit Complete at 5.00 m

Remarks: Machine excavated trial pit completed to 5 m bgl using a 21 tonne tracked excavator. All sides stable and strata similar on all faces. Trial pit backfilled with arisings.

Groundwater: None encountered



Project Name PHASE 1 TRIAL PIT INVESTIGATION	Project No. 09001J	Co-ords: Refer to log Level: Refer to log	Date
Location: BERSHAM COLLIERY, RHOSTYLLLEN		Dimensions: Refer to log	21/10/2010
Client: BERSHAM (GLENSIDE) LIMITED			Logged By PDS



General Notes

Project Name BERSHAM COLIERY TIP	Project No. 09001J	Co-ords: 331198E - 347983N Level: 130.00 m AOD	Date 21/10/2010
Location: Rhostyllen	Dimensions: 5.00m Depth 4.00m 1.50m 		Scale 1:25
Client: BERSHAM (GLENSIDE) LIMITED			Logged By PDS

Samples & In Situ Testing			Depth (m)	Level (m AOD)	Legend	Stratum Description	
Depth (m)	Type	Results					
1.20 1.25	B B					Southern End - MADE GROUND: Red slightly silty slightly sandy GRAVEL of angular fine to coarse shale. Northern End - Black slightly silty sandy GRAVEL of angular fine and medium shale and coal.	1
3.50	B		3.50	126.50		MADE GROUND: Black and red slightly silty slightly sandy GRAVEL of angular fine to coarse shale, partly burnt coal (coke) and burnt shale.	3
			4.00	126.00		Trialpit Complete at 4.00 m	4
							5

Remarks: Machine excavated trial pit completed to 4 m bgl using a 21 tonne tracked excavator. All sides stable. Trial pit backfilled with arisings.

Groundwater: None encountered



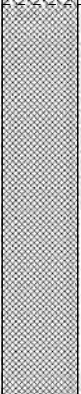
Project Name PHASE 1 TRIAL PIT INVESTIGATION	Project No. 09001J	Co-ords: Refer to log Level: Refer to log	Date
Location: BERSHAM COLLIERY, RHOSTYLLEN		Dimensions: Refer to log	21/10/2010
Client: BERSHAM (GLENSIDE) LIMITED			Logged By PDS



NO PHOTO

General Notes

Project Name BERSHAM COLIERY TIP	Project No. 09001J	Co-ords: 331298E - 348111N Level: 124.50 m AOD	Date 21/10/2010
Location: Rhostyllen	Dimensions: 5.00m Depth 2.50m 1.50m 		Scale 1:25
Client: BERSHAM (GLENSIDE) LIMITED			Logged By PDS

Samples & In Situ Testing			Depth (m)	Level (m AOD)	Legend	Stratum Description	
Depth (m)	Type	Results					
2.00	B		1.20	123.30		MADE GROUND: Grey slightly gravelly SILT with occasional angular cobbles of siltstone/shale.	1
						MADE GROUND: Grey very silty slightly sandy GRAVEL of angular fine to coarse shale.	2
			2.50	122.00		Trialpit Complete at 2.50 m	3
							4
							5

Remarks: Machine excavated trial pit completed to 2.5 m bgl using a 21 tonne tracked excavator. All sides stable and strata similar on all faces. Trial pit backfilled with arisings.

Groundwater: None encountered



Project Name PHASE 1 TRIAL PIT INVESTIGATION	Project No. 09001J	Co-ords: Refer to log Level: Refer to log	Date
Location: BERSHAM COLLIERY, RHOSTYLLLEN		Dimensions: Refer to log	21/10/2010
Client: BERSHAM (GLENSIDE) LIMITED			Logged By PDS



General Notes

Project Name BERSHAM COLIERY TIP	Project No. 09001J	Co-ords: 331342E - 348158N Level: 129.00 m AOD	Date 21/10/2010
Location: Rhostyllen	Dimensions: 5.00m Depth 3.50m		Scale 1:25
Client: BERSHAM (GLENSIDE) LIMITED			Logged By PDS

Samples & In Situ Testing			Depth (m)	Level (m AOD)	Legend	Stratum Description	
Depth (m)	Type	Results					
			0.20	128.80		TOPSOIL.	
2.00	B					MADE GROUND: Black silty slightly sandy GRAVEL of angular fine to coarse of shale and coal and occasional angular cobbles of shale and coal.	1
							2
							3
3.50	B		3.50	125.50		Trialpit Complete at 3.50 m	4
							5

Remarks: Machine excavated trial pit completed to 3.5 m bgl using a 21 tonne tracked excavator. All sides stable and strata similar on all faces. Trial pit backfilled with arisings.

Groundwater: None encountered



Project Name PHASE 1 TRIAL PIT INVESTIGATION	Project No. 09001J	Co-ords: Refer to log Level: Refer to log	Date
Location: BERSHAM COLLIERY, RHOSTYLLLEN		Dimensions: Refer to log	21/10/2010
Client: BERSHAM (GLENSIDE) LIMITED			Logged By PDS



General Notes

Project Name BERSHAM COLIERY TIP	Project No. 09001J	Co-ords: 331361E - 348210N Level: 129.00 m AOD	Date 22/10/2010
Location: Rhostyllen	Dimensions: 5.00m Depth 4.00m 1.50m 		Scale 1:25
Client: BERSHAM (GLENSIDE) LIMITED			Logged By PDS

Samples & In Situ Testing			Depth (m)	Level (m AOD)	Legend	Stratum Description	
Depth (m)	Type	Results					
			0.30	128.70		Brown and black slightly gravelly SAND with frequent rootlets. (TOPSOIL)	
2.30-2.45	B					MADE GROUND: Light brown slightly silty sandy GRAVEL of angular fine to coarse shale. Between 0.3 and 2.5 m bgl in northeast face locally black silty sandy GRAVEL of fine to coarse shale and coal (ash) with cobbles and boulders of shale. Between 2.5 and 3 m bgl in northwest face locally black slightly silty sandy GRAVEL of angular fine to coarse shale and coal.	1
3.00	B		3.00	126.00		MADE GROUND: Light brown and grey very sandy GRAVEL of angular fine to coarse burnt shale.	3
3.20	B						
			3.50	125.50		MADE GROUND: Black and grey slightly silty sandy GRAVEL of angular fine to coarse shale and coal with occasional cobbles and boulders of shale.	
4.00	B		4.00	125.00		Trialpit Complete at 4.00 m	4
							5

Remarks: Machine excavated trial pit completed to 4 m bgl using a 21 tonne tracked excavator. All sides stable. Trial pit backfilled with arisings.

Groundwater: None encountered



Project Name PHASE 1 TRIAL PIT INVESTIGATION	Project No. 09001J	Co-ords: Refer to log Level: Refer to log	Date
Location: BERSHAM COLLIERY, RHOSTYLLEN		Dimensions: Refer to log	22/10/2010
Client: BERSHAM (GLENSIDE) LIMITED			Logged By PDS



General Notes

Project Name BERSHAM COLIERY TIP	Project No. 09001J	Co-ords: 331336E - 348236N Level: 130.00 m AOD	Date 22/10/2010
Location: Rhostyllen	Dimensions: 5.00m Depth 2.90m		Scale 1:25
Client: BERSHAM (GLENSIDE) LIMITED			Logged By PDS

Samples & In Situ Testing			Depth (m)	Level (m AOD)	Legend	Stratum Description	
Depth (m)	Type	Results					
			0.25	129.75		TOPSOIL.	
						Eastern End - MADE GROUND: Light brown sandy GRAVEL of angular fine to coarse shale. Western End: Black and grey GRAVEL of angular fine to coarse shale and coal.	
			1.00	129.00		MADE GROUND: Light grey and light brown slightly sandy GRAVEL of angular fine to coarse shale with occasional cobbles of angular shale. Between 1.6 and 1.8 m bgl in northeast face localised sulphur staining. At 1.8 m bgl in north east corner locally COBBLES and BOULDERS of sandstone and siltstone.	1
			2.00	128.00		MADE GROUND: Light brown sandy BOULDERS and COBBLES of shale.	2
			2.90	127.10		Trialpit Complete at 2.90 m	3
							4
							5

Remarks: Machine excavated trial pit completed to 2.9 m bgl using a 21 tonne tracked excavator. Poor stability on southern face. Trial pit backfilled with arisings.

Groundwater: None encountered



Project Name
PHASE 1 TRIAL PIT INVESTIGATION

Project No.
09001J

Co-ords: Refer to log
Level: Refer to log

Date

Location:
BERSHAM COLLIERY, RHOSTYLLLEN

Dimensions:
Refer to log

22/10/2010

Client: BERSHAM (GLENSIDE) LIMITED

Logged By
PDS



General Notes

Project Name BERSHAM COLIERY TIP	Project No. 09001J	Co-ords: 331328E - 348234N Level: 131.00 m AOD	Date 22/10/2010
Location: Rhostyllen	Dimensions: 5.00m Depth 4.00m 1.50m 		Scale 1:25
Client: BERSHAM (GLENSIDE) LIMITED			Logged By PDS

Samples & In Situ Testing			Depth (m)	Level (m AOD)	Legend	Stratum Description	
Depth (m)	Type	Results					
						MADE GROUND: Grey silty SAND and GRAVEL of fine and medium shale.	1
			1.80	129.20		MADE GROUND: Black and grey silty slightly sandy GRAVEL of fine to coarse angular and elongated shale and coal with occasional angular cobbles of shale and siltstone.	2
3.50	B						3
4.00	B		4.00	127.00		Trialpit Complete at 4.00 m	4
							5

Remarks: Machine excavated trial pit completed to 4 m bgl using a 21 tonne tracked excavator. All sides stable and strata similar on all faces. Trial pit backfilled with arisings.

Groundwater: None encountered

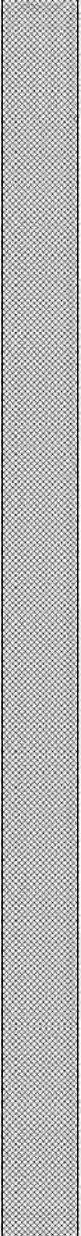


Project Name PHASE 1 TRIAL PIT INVESTIGATION	Project No. 09001J	Co-ords: Refer to log Level: Refer to log	Date
Location: BERSHAM COLLIERY, RHOSTYLLLEN		Dimensions: Refer to log	22/10/2010
Client: BERSHAM (GLENSIDE) LIMITED			Logged By PDS



General Notes

Project Name BERSHAM COLIERY TIP	Project No. 09001J	Co-ords: 331294E - 348190N Level: 142.00 m AOD	Date 20/10/2010
Location: Rhostyllen	Dimensions: 5.00m Depth 4.50m 1.50m 		Scale 1:25
Client: BERSHAM (GLENSIDE) LIMITED			Logged By PDS

Samples & In Situ Testing			Depth (m)	Level (m AOD)	Legend	Stratum Description	
Depth (m)	Type	Results					
			0.40	141.60		Brown slightly sandy slightly gravelly CLAY with frequent rootlets and occasional cobbles of brick. (TOPSOIL)	
2.40	B					MADE GROUND: Black very silty slightly sandy GRAVEL of angular fine and medium coal and occasional cobbles of shale. Between 0.4 and 0.8 on eastern, northeastern and southeastern face locally soft light orangish brown slightly gravelly CLAY.	1 2 3 4 5
4.50	B		4.50	137.50		Trialpit Complete at 4.50 m	

Remarks: Machine excavated trial pit completed to 4.5 m bgl using a 21 tonne tracked excavator. All sides stable. Trial pit backfilled with arisings.

Groundwater: None encountered

Project Name PHASE 1 TRIAL PIT INVESTIGATION	Project No. 09001J	Co-ords: Refer to log Level: Refer to log	Date
Location: BERSHAM COLLIERY, RHOSTYLLLEN		Dimensions: Refer to log	22/10/2010
Client: BERSHAM (GLENSIDE) LIMITED			Logged By PDS



General Notes

Project Name BERSHAM COLIERY TIP	Project No. 09001J	Co-ords: 331187E - 348123N Level: 159.00 m AOD	Date 22/10/2010
Location: Rhostyllen	Dimensions: 5.00m Depth 3.70m		Scale 1:25
Client: BERSHAM (GLENSIDE) LIMITED			Logged By PDS

Samples & In Situ Testing			Depth (m)	Level (m AOD)	Legend	Stratum Description	
Depth (m)	Type	Results					
0.00-0.40	B		0.10	158.90		MADE GROUND: Fabric material in steel ring. MADE GROUND: Very stiff black and grey silty sandy gravelly CLAY with angular cobbles of shale. Gravel is angular fine to coarse of shale. Between 0.1 and 2.4 m bgl in western portion of pit locally black silty slightly sandy GRAVEL of coal with occasional angular cobbles of shale.	1
							2
							3
			3.70	155.30		Trialpit Complete at 3.70 m	4
							5

Remarks: Machine excavated trial pit completed to 3.7 m bgl using a 21 tonne tracked excavator. All sides stable. Trial pit backfilled with arisings.

Groundwater: None encountered



Project Name
PHASE 1 TRIAL PIT INVESTIGATION

Project No.
09001J

Co-ords: Refer to log
Level: Refer to log

Date

Location:
BERSHAM COLLIERY, RHOSTYLLLEN

Dimensions:
Refer to log

22/10/2010

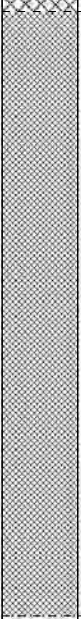
Client: BERSHAM (GLENSIDE) LIMITED

Logged By
PDS



General Notes

Project Name BERSHAM COLIERY TIP	Project No. 09001J	Co-ords: 331204E - 348095N Level: 145.50 m AOD	Date 22/10/2010
Location: Rhostyllen	Dimensions: 5.00m Depth 4.00m 1.50m 		Scale 1:25
Client: BERSHAM (GLENSIDE) LIMITED			Logged By PDS

Samples & In Situ Testing			Depth (m)	Level (m AOD)	Legend	Stratum Description	
Depth (m)	Type	Results					
2.00	B		2.00	143.50		MADE GROUND: Dark grey gravelly CLAY/SILT with occasional angular cobbles and boulders of brick.	1
4.00	B		4.00	141.50		MADE GROUND: Dark grey silty sandy GRAVEL of fine to coarse shale and coal. Locally at 2 m bgl frequent angular boulders and cobbles of shale/siltstone.	2
						Trialpit Complete at 4.00 m	4
							5

Remarks: Machine excavated trial pit completed to 4 m bgl using a 21 tonne tracked excavator. All sides stable and strata similar on all faces. Trial pit backfilled with arisings.

Groundwater: None encountered

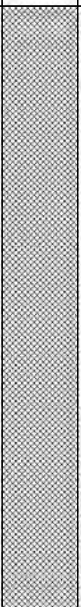


Project Name PHASE 1 TRIAL PIT INVESTIGATION	Project No. 09001J	Co-ords: Refer to log Level: Refer to log	Date
Location: BERSHAM COLLIERY, RHOSTYLLLEN		Dimensions: Refer to log	22/10/2010
Client: BERSHAM (GLENSIDE) LIMITED			Logged By PDS



General Notes

Project Name BERSHAM COLIERY TIP	Project No. 09001J	Co-ords: 331160E - 348060N Level: 143.00 m AOD	Date 22/10/2010
Location: Rhostyllen	Dimensions: 5.00m Depth 2.00m 1.50m 		Scale 1:25
Client: BERSHAM (GLENSIDE) LIMITED			Logged By PDS

Samples & In Situ Testing			Depth (m)	Level (m AOD)	Legend	Stratum Description	
Depth (m)	Type	Results					
			2.00	141.00		MADE GROUND: Brown locally grey slightly silty sandy GRAVEL of angular fine to coarse shale and siltstone with frequent cobbles and boulders of angular shale and siltstone.	1
							2
							3
							4
							5

Remarks: Machine excavated trial pit completed to 2 m bgl using a 21 tonne tracked excavator. All sides stable and strata similar on all faces. Trial pit backfilled with arisings.

Groundwater: None encountered



Project Name
PHASE 1 TRIAL PIT INVESTIGATION

Project No.
09001J

Co-ords: Refer to log
Level: Refer to log

Date

Location:
BERSHAM COLLIERY, RHOSTYLLLEN

Dimensions:
Refer to log

22/10/2010

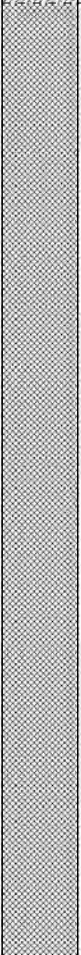
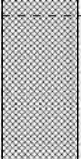
Client: BERSHAM (GLENSIDE) LIMITED

Logged By
PDS



General Notes

Project Name BERSHAM COLIERY TIP	Project No. 09001J	Co-ords: 331235E - 348250N Level: 122.50 m AOD	Date 22/10/2010
Location: Rhostyllen	Dimensions: 5.00m Depth 4.00m 		Scale 1:25
Client: BERSHAM (GLENSIDE) LIMITED			Logged By PDS

Samples & In Situ Testing			Depth (m)	Level (m AOD)	Legend	Stratum Description	
Depth (m)	Type	Results					
0.30			0.30	122.20		TOPSOIL.	
1.00-2.00	B					MADE GROUND: Light brown slightly silty sandy GRAVEL of angular fine to coarse burnt shale with occasional cobbles and boulders of shale and sandstone.	1
							2
							3
3.50			3.50	119.00		MADE GROUND: Black and grey slightly silty sandy GRAVEL of fine and medium coal and shale with occasional cobbles of angular shale.	
4.00	B		4.00	118.50		Trialpit Complete at 4.00 m	4
							5

Remarks: Machine excavated trial pit completed to 4 m bgl using a 21 tonne tracked excavator. All sides stable and strata similar on all faces. Trial pit backfilled with arisings.

Groundwater: None encountered



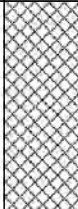
Project Name PHASE 1 TRIAL PIT INVESTIGATION	Project No. 09001J	Co-ords: Refer to log Level: Refer to log	Date
Location: BERSHAM COLLIERY, RHOSTYLLLEN		Dimensions: Refer to log	22/10/2010
Client: BERSHAM (GLENSIDE) LIMITED			Logged By PDS



NO PHOTO

General Notes

Project Name BERSHAM COLIERY TIP	Project No. 09001J	Co-ords: 331358E - 348291N Level: 113.00 m AOD	Date 22/10/2010
Location: Rhostyllen	Dimensions: 5.00m Depth 3.90m		Scale 1:25
Client: BERSHAM (GLENSIDE) LIMITED			Logged By PDS

Samples & In Situ Testing			Depth (m)	Level (m AOD)	Legend	Stratum Description		
Depth (m)	Type	Results						
1.50	B		0.70	112.30		MADE GROUND: Soft grey silty sandy slightly gravelly CLAY/SILT with sulphur staining on surface.		
						MADE GROUND: Red brown silty sandy GRAVEL of angular fine and medium shale.	1	
			1.80	111.20		MADE GROUND: Black and grey slightly silty sandy GRAVEL of angular fine to coarse shale.	2	
			2.30	110.70		MADE GROUND: Reddish brown silty sandy GRAVEL of angular fine and medium shale.	3	
			3.30	109.70		MADE GROUND: Grey silty slightly sandy GRAVEL of shale and coal with occasional angular cobbles of shale.		
			3.90	109.10		Trialpit Complete at 3.90 m	4	
							5	

Remarks: Machine excavated trial pit completed to 3.9 m bgl using a 21 tonne tracked excavator. All sides stable. Trial pit backfilled with arisings.

Groundwater: None encountered



Project Name
PHASE 1 TRIAL PIT INVESTIGATION

Project No.
09001J

Co-ords: Refer to log
Level: Refer to log

Date

Location:
BERSHAM COLLIERY, RHOSTYLLLEN

Dimensions:
Refer to log

22/10/2010

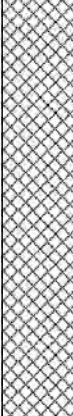
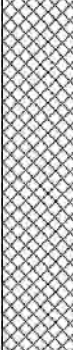
Client: BERSHAM (GLENSIDE) LIMITED

Logged By
PDS



General Notes

Project Name BERSHAM COLIERY TIP	Project No. 09001J	Co-ords: 331249E - 347989N Level: 124.50 m AOD	Date 22/10/2010
Location: Rhostyllen	Dimensions: 5.00m Depth 3.00m 1.50m 		Scale 1:25
Client: BERSHAM (GLENSIDE) LIMITED			Logged By PDS

Samples & In Situ Testing			Depth (m)	Level (m AOD)	Legend	Stratum Description	
Depth (m)	Type	Results					
			0.40	124.10		Brown slightly silty sandy slightly gravelly CLAY. (TOPSOIL)	
			1.80	122.70		MADE GROUND: Soft black slightly sandy slightly gravelly CLAY/SILT. Gravel is angular fine to coarse of shale.	1
			3.00	121.50		MADE GROUND: Soft brown slightly sandy gravelly CLAY with occasional angular cobbles of brick and siltstone.	2
						Trialpit Complete at 3.00 m	3
							4
							5

Remarks: Machine excavated trial pit completed to 3 m bgl using a 21 tonne tracked excavator. All sides stable and strata similar on all faces. Trial pit backfilled with arisings.

Groundwater: None encountered



Project Name
PHASE 1 TRIAL PIT INVESTIGATION

Project No.
09001J

Co-ords: Refer to log
Level: Refer to log

Date

Location:
BERSHAM COLLIERY, RHOSTYLLLEN

Dimensions:
Refer to log

22/10/2010

Client: BERSHAM (GLENSIDE) LIMITED

Logged By
PDS



General Notes

Discovery

Geotechnical & Environmental Engineers

The Granary
Broadwell House Farm
Broadwell
Rugby
Warwickshire
CV23 8HF

Tel 01926 813909
Fax 01926 814909
Email p.smith@dce-services.co.uk
Web www.dce-services.co.uk

APPENDIX A – TRIAL PIT LOGS

10 November 2010

**Report Number: 09001J-
Phase 1**

Issue Number: 0

F:\09001T BERSHAM BANK\REPORTS\FINAL REPORTS\09001 PHASE 1 INVESTIGATION FACTUAL REPORT_INTRO
AMENDED.DOC

10 November 2010

**Report Number: 09001J-
Phase 1**

Issue Number: 0

F:\09001T BERSHAM BANK\REPORTS\FINAL REPORTS\09001 PHASE 1 INVESTIGATION FACTUAL REPORT_INTRO
AMENDED.DOC