

**MILL LANE TRADING ESTATE  
PONTEFRACT ROAD  
BARNSELY**

for

**Parkin International  
Technical Services Ltd**

Report Number 2296

September 2002

*Michael D Joyce Associates*

Consulting Geotechnical Engineers and Environmental Scientists  
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# Mill Lane Trading Estate, Pontefract Road, Barnsley

## Contents

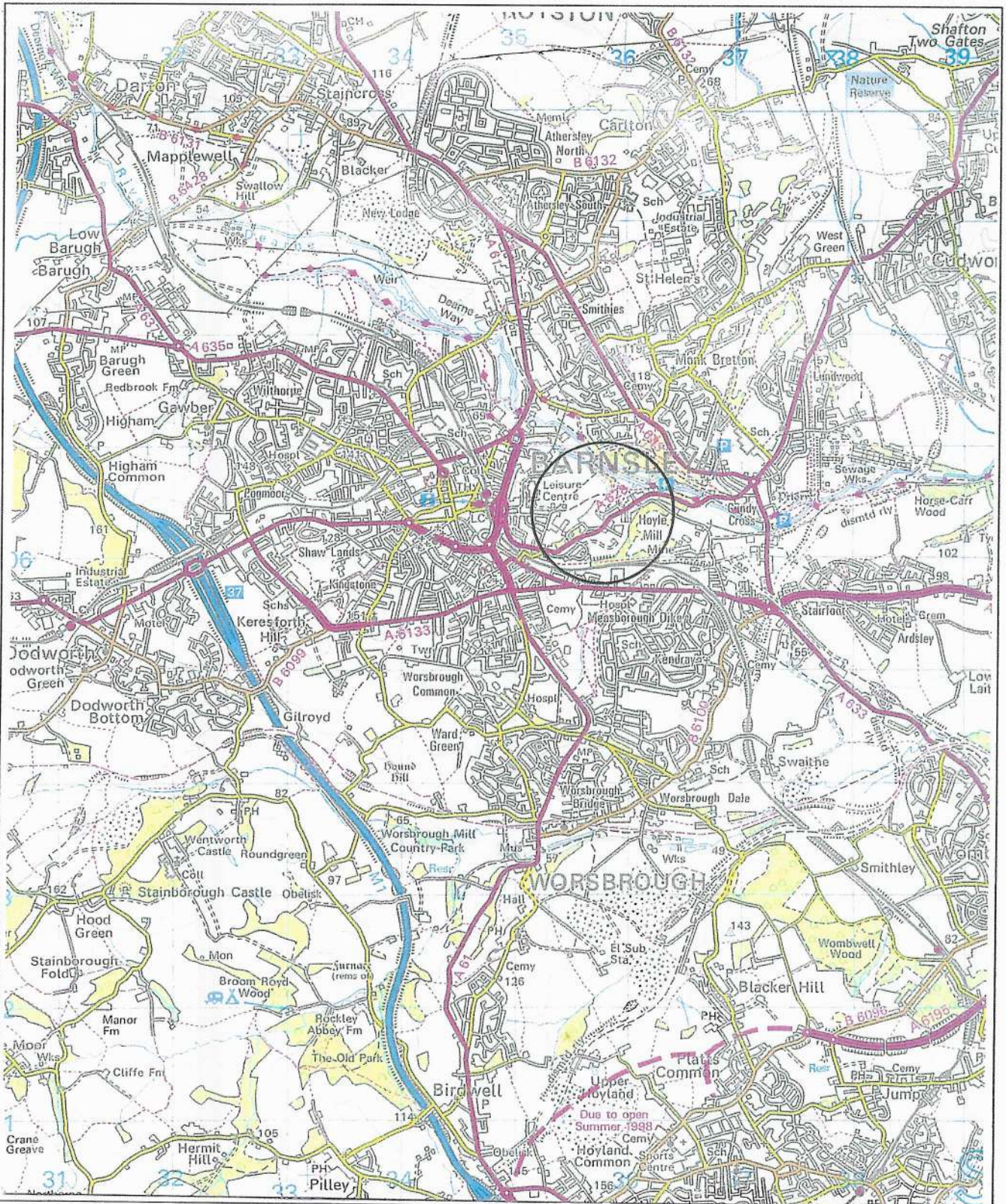
1. Introduction
2. The Site
3. Geology and Mining
4. Hydrogeology
5. Hazard Substances and Sensitive Land Issues
6. Landfilling
7. Archival Research
8. Existing Ground Investigation Data
9. The Investigation
10. Strata Profile
11. Results of In-Situ and Laboratory Testing
12. Recommendations

## Figures

Figures            1 and 2

## Appendices

- Appendix A    Cable Percussion Borehole Record
  - Appendix B    Rotary Borehole Records
  - Appendix C    Laboratory Test Results
  - Appendix D    Landmark Envirocheck Report
  - Appendix E    Existing Ground Investigation Data
  - Appendix F    Coal Authority Mining Report
  - Appendix G    Archival Maps
- Standard Appendices



**Mill Lane Trading Estate, Pontefract Road, Barnsley**

N

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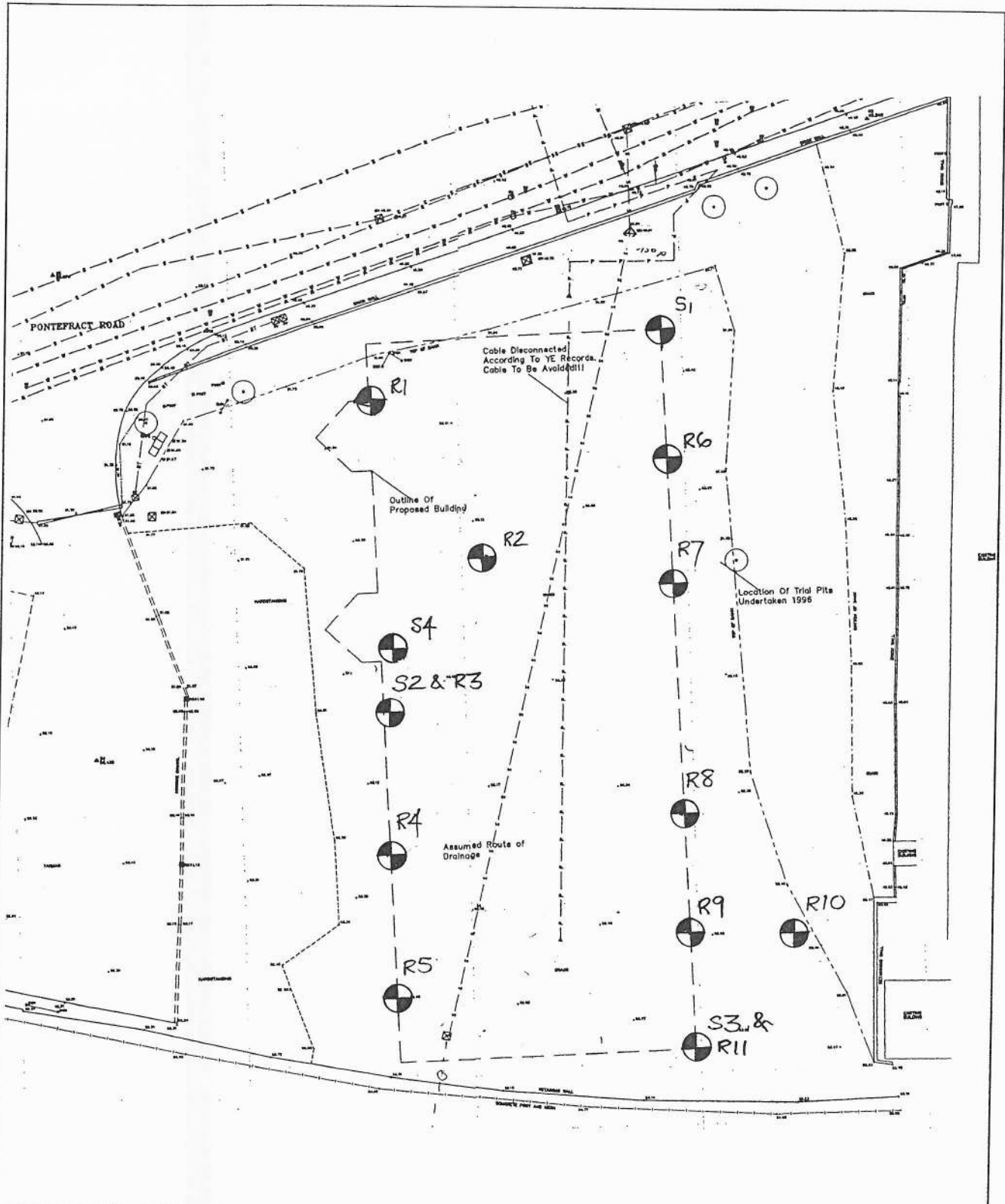
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Scale: 1:50,000

Figure 1



**Mill Lane Trading Estate, Pontefract Road, Barnsley**

N

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Scale: 1:500

Figure 2

**Appendix A**

Cable Percussion Records

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Site  
Pontefract Road, Barnsley

Borehole  
Number  
S1

Boring Method Cable Percussion	Diameter 150mm Cased to m	Ground Level (MOD)	Client Parkin International	Job Number 2296
	Location	Dates 15/08/02	Engineer D J Goodwin and Associates	Sheet 1/1

Depth m	Samples / Tests	Casing Depth m	Water Depth m	Field Records	Level (MOD)	Depth m (Thickness)	Description	Legend
1.00-1.45	SPT N=10			7,4/4,3,1,2		(3.10)	MADE GROUND. Dark brown sandy clay with some brick and stone.	
2.50-2.95	SPT N=15			4,4/3,4,4,4		3.10	MADE GROUND. Brown and dark brown very sandy clay with gravel sized pieces of sandstone.	
4.20-4.65	SPT N=19			2,3/3,4,5,7		4.10	MADE GROUND? Brown very sandy clay with sandstone, cobbles and possible boulders.	
6.00-6.45	SPT N=39			6,8/7,8,10,14		5.50	Light brown moderately weathered medium grained SANDSTONE.	
8.20-8.65	SPT N=55			6,7/10,15,15,15		8.20 (0.30)	Black clayey weathered COAL.	
						8.50 (0.30)	Dark grey moderately weathered MUDSTONE, with coal bands.	
						8.80 9.00	Light grey slightly weathered MUDSTONE.	
							Unable to progress further. Borehole completed at 9.00m	

Remarks

Scale (approx)	Logged By
1:50	ADJ
Figure No.	
2296.S1	

See key sheet for symbols and abbreviations

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Site  
Pontefract Road, Barnsley  
Borehole Number  
S2

Boring Method Cable Percussion	Diameter 150mm Cased to m	Ground Level (mOD)	Client Parkin International	Job Number 2296
	Location	Dates 15/08/02	Engineer D J Goodwin and Associates	Sheet 1/1

Depth m	Samples / Tests	Casing Depth m	Water Depth m	Field Records	Level (mOD)	Depth m (Thickness)	Description	Legend
						(0.20) 0.20	MADE GROUND. Brown sand, stone and brick.	
						(1.10)	MADE GROUND. Very compact brick and concrete fill.	
						1.30	VOID.	
						(0.60) 1.90	MADE GROUND. In-situ brick. (driller's description of possible structure)	
						2.50	Borehole completed at 2.50m	

Remarks  
Borehole abandoned since further progress impracticable.

Scale (approx)	Logged By
1:50	ADJ
Figure No.	
2296.S2	

See key sheet for symbols and abbreviations

# Michael D Joyce Associates

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Site  
Pontefract Road, Barnsley

Borehole  
Number  
S3

Boring Method Cable Percussion	Diameter 150mm Cased to m	Ground Level (mOD)	Client Parkin International	Job Number 2296
	Location	Dates 14/08/02	Engineer D J Goodwin and Associates	Sheet 1/2

Depth m	Samples /Tests	Casing Depth m	Water Depth m	Field Records	Level (mOD)	Depth m (Thickness)	Description	Legend
0.50-0.95	SPT N=6			1,1/1,1,2,2		(1.00)	MADE GROUND. Brown and black very sandy gravelly clay, with occasional pieces of stone mixed with brown slightly clayey sand.	
1.50-1.95	SPT N=10			1,2/2,2,3,3		1.00 (0.50) 1.50	MADE GROUND. Brown clayey sand with sandstone fragments.	
2.50-2.95	SPT N=9			1,2/2,2,2,3		(1.90)	MADE GROUND? Brown sandy clay with small sandstone pieces.	
3.35-3.80	SPT N=28			2,3/5,5,7,11		3.40 (0.30) 3.70	Brown ironstained moderately weathered shaly MUDSTONE.	
						(0.40) 4.10	Intact COAL.	
5.00-5.31	SPT 50/160			11,14/17,24,9			Light grey and dark grey silty MUDSTONE, ironstained in places and with thin bands of siltstone.	
7.00-7.18	SPT 50/30			9,16/50		(6.00)		
8.50-8.63	SPT 9*/130			6,3/12,13,50				

Remarks	Scale (approx)	Logged By
	1:50	ADJ
	Figure No.	2296.S3

See key sheet for symbols and abbreviations

# Michael D Joyce Associates

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Site  
Pontefract Road, Barnsley  
Borehole Number  
S3

Boring Method Cable Percussion	Diameter 150mm Cased to m	Ground Level (mOD)	Client Parkin International	Job Number 2296
	Location	Dates 14/08/02	Engineer D J Goodwin and Associates	Sheet 2/2

Depth m	Samples / Tests	Casing Depth m	Water Depth m	Field Records	Level (mOD)	Depth m (Thickness)	Description	Legend
						10.10	Borehole completed at 10.10m	

Remarks

Scale (approx)	Logged By
1:50	ADJ
Figure No.	
2296.S3	

See key sheet for symbols and abbreviations


# Michael D Joyce Associates

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Site  
Pontefract Road, Barnsley

Borehole  
Number  
S4

Boring Method Cable Percussion	Diameter	Ground Level (mOD)	Client Parkin International	Job Number 2296
	Location	Dates 15/08/02	Engineer D J Goodwin and Associates	Sheet 1/1

Depth m	Samples / Tests	Casing Depth m	Water Depth m	Field Records	Level (mOD)	Depth m (Thickness)	Description	Legend
						(1.20)	MADE GROUND. Brick sand and concrete comprising demolition rubble. Concrete upto boulder size. Some of the bricks comprising refractory bricks. Possible old foundation down the side of the excavation.	
						1.20	Borehole completed at 1.20m	

Remarks  
Inspection pit hand dug to 1.20m.  
Borehole abandoned due to metal plate in bottom of inspection pit.

Scale (approx)  
1:50  
Logged By  
ADJ  
Figure No.  
2296.S4

See key sheet for symbols and abbreviations

**Appendix B**

Rotary Borehole Records

NOTE: Logging provided by Norwest Holst

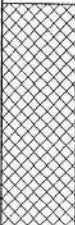
# Michael D Joyce Associates

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Site  
Pontefract Road, Barnsley

Borehole Number  
R1

Machine :	Diameter	Ground Level (mOD)	Client	Job Number
Flush : Water			Parkin International	2296
Bit Size : 100.00mm	Location	Dates	Engineer	Sheet
Method :		19/08/02	D J Goodwin and Associates	1/1

Depth m	TCR	SCR	RQD	FI	Field Records	Level (mOD)	Depth m (Thickness)	Description	Legend
							(1.50)	MADE GROUND. Concrete and brick fill. Borehole abandoned.	
							1.50	Borehole completed at 1.50m	

Remarks ALL DESCRIPTIONS AND LOGGING BY NORWEST HOLST.	Scale (approx)	Logged By
	1:50	NHSEL
	Figure No. 2296.R1	

See key sheet for symbols and abbreviations






# Michael D Joyce Associates

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Site  
Pontefract Road, Barnsley

Borehole Number  
R2

Machine :	Diameter	Ground Level (mOD)	Client	Job Number
Flush : Water			Parkin International	2296
Bit Size : 100.00mm	Location	Dates	Engineer	Sheet
Method :		19/08/02	D J Goodwin and Associates	1/2

Depth m	TCR	SCR	RQD	FI	Field Records	Level (mOD)	Depth m (Thickness)	Description	Legend
							(1.50)	MADE GROUND. Silty sand with concrete and bricks.	
							1.50	MADE GROUND. Orange very gravelly clayey sand.	
							(7.00)		
							8.50	Dark grey MUDSTONE.	
							(0.90)		
							9.40	Intact COAL	
							(0.40)		
							9.80	Light grey MUDSTONE	

Remarks  
ALL DESCRIPTIONS AND LOGGING BY NORWEST HOLST.

Scale (approx)	Logged By
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Figure No.	
2296.R2	

See key sheet for symbols and abbreviations

# Michael D Joyce Associates

Consulting Geotechnical Engineers and Environmental Scientists

Site  
Pontefract Road, Barnsley  
Borehole Number  
R2

Machine : Flush : Water Bit Size : 100.00mm Method :	Diameter	Ground Level (mOD)	Client Parkin International	Job Number 2296
	Location	Date 19/08/02	Engineer D J Goodwin and Associates	Sheet 2/2

Depth m	TCR	SCR	RQD	FI	Field Records	Level (mOD)	Depth m (Thickness)	Description	Legend
							(1.90)		
							11.70	Borehole completed at 11.70m	

Remarks  
ALL DESCRIPTIONS AND LOGGING BY NORWEST HOLST.

Scale (approx)	Logged By
1:50	NHSEL
Figure No.	
2296.R2	






See key sheet for symbols and abbreviations

# Michael D Joyce Associates

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Site  
Pontefract Road, Barnsley  
Borehole Number  
R3

Machine :	Diameter	Ground Level (mOD)	Client	Job Number
Flush : Water			Parkin International	2296
Bit Size : 100.00mm	Location	Dates	Engineer	Sheet
Method :		16/08/02	D J Goodwin and Associates	1/2

Depth m	TCR	SCR	RQD	FI	Field Records	Level (mOD)	Depth m (thickness)	Description	Legend
								MADE GROUND. Clayey sandy gravel of bricks and concrete.	
							(5.00)		
							5.00	MADE GROUND. Orange-brown slightly clayey gravelly SAND.	
							(3.80)		
							8.80	Grey weathered MUDSTONE.	
							(0.50)		
							9.30	Dark grey SHALE.	
							(0.30)		
							9.60	Intact COAL.	

Remarks  
ALL DESCRIPTIONS AND LOGGING BY NORWEST HOLST.

Scale (approx)	Logged By
1:50	NHSEL
Figure No.	
2296.R3	

See key sheet for symbols and abbreviations

# Michael D Joyce Associates

Consulting Geotechnical Engineers and Environmental Scientists

Site  
Pontefract Road, Barnsley

Borehole  
Number  
R3

Machine :  
Flush : Water  
Bit Size : 100.00mm  
Method :

Diameter

Ground Level (mOD)

Client  
Parkin International

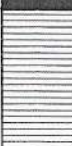
Job  
Number  
2296

Location

Dates  
16/08/02

Engineer  
D J Goodwin and Associates

Sheet  
2/2

Depth m	TCR	SCR	RQD	FI	Field Records	Level (mOD)	Depth m (Thickness)	Description	Legend
							(1.10)		
							10.70	Grey MUDSTONE.	
							(1.00)		
							11.70	Borehole completed at 11.70m	

Remarks  
ALL DESCRIPTIONS AND LOGGING BY NORWEST HOLST.

Scale  
(approx)  
1:50

Logged  
By  
NHSEL

Figure No.  
2296.R3

See key sheet for symbols and abbreviations







# Michael D Joyce Associates

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Site  
Pontefract Road, Barnsley

Borehole  
Number  
R4

Machine :	Diameter	Ground Level (MOD)	Client	Job Number
Flush : Water			Parkin International	2296
Bit Size : 100.00mm	Location	Dates	Engineer	Sheet
Method :		16/08/02	D J Goodwin and Associates	1/3

Depth m	TCR	SCR	RQD	FI	Field Records	Level (MOD)	Depth m (Thickness)	Description	Legend
							(4.20)	MADE GROUND. Slightly clayey slightly sandy gravel of concrete and bricks.	
							4.20	MADE GROUND. Brown slightly gravelly clayey sand with concrete and bricks.	
							(3.30)		
							7.50	Brown slightly gravelly CLAY. (Weathered Mudstone).	
							(0.50)		
							8.00	Grey MUDSTONE.	
							(1.40)		
							9.40	Dark grey SHALE.	
							9.60	Intact COAL.	

Remarks	Scale (approx)	Logged By
ALL DESCRIPTIONS AND LOGGING BY NORWEST HOLST.	1:50	NHSEL
See key sheet for symbols and abbreviations	Figure No.	
	2296.R4	

# Michael D Joyce Associates

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Site  
Pontefract Road, Barnsley

Borehole  
Number  
R4

Machine :	Diameter	Ground Level (mOD)	Client	Job Number
Flush : Water			Parkin International	2296
Bit Size : 100.00mm	Location	Dates	Engineer	Sheet
Method :		16/08/02	D J Goodwin and Associates	2/3

Depth m	TCR	SCR	RQD	FI	Field Records	Level (mOD)	Depth m (Thickness)	Description	Legend
							(1.10)		
							10.70	Grey MUDSTONE.	
							(11.30)		

Remarks  
ALL DESCRIPTIONS AND LOGGING BY NORWEST HOLST.

Scale  
(approx)  
1:50

Logged  
By  
NHSEL

Figure No.  
2296.R4

See key sheet for symbols and abbreviations

# Michael D Joyce Associates

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Site  
Pontefract Road, Barnsley  
Borehole Number  
R4

Machine :	Diameter	Ground Level (mOD)	Client	Job Number
Flush : Water			Parkin International	2296
Bit Size : 100.00mm	Location	Dates	Engineer	Sheet
Method :		16/08/02	D J Goodwin and Associates	3/3

Depth m	TCR	SCR	RQD	FI	Field Records	Level (mOD)	Depth m (Thickness)	Description	Legend
							22.00	Borehole completed at 22.00m	

Remarks  
ALL DESCRIPTIONS AND LOGGING BY NORWEST HOLST.

Scale (approx) 1:50  
Logged By NHSEL  
Figure No. 2296.R4

See key sheet for symbols and abbreviations

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Site  
Pontefract Road, Barnsley

Borehole  
Number  
R5

Machine :  
Flush : Water  
Bit Size : 100.00mm  
Method :

Diameter

Ground Level (mOD)

Client  
Parkin International



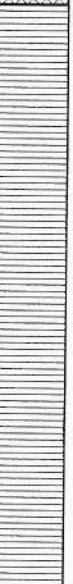

Job  
Number  
2296

Location

Dates  
16/08/02

Engineer  
D J Goodwin and Associates

Sheet  
1/2

Depth m	TCR	SCR	RQD	FI	Field Records	Level (mOD)	Depth m (Thickness)	Description	Legend
								MADE GROUND. Sandy gravelly brick, concrete and sandstone.	
							(4.50)		
							4.50	MADE GROUND. Clayey gravelly sand.	
							(1.00)		
							5.50	Grey weathered MUDSTONE.	
							(4.00)		
							9.50	Dark grey SHALE/MUDSTONE.	
							(0.50)		
							10.00		

Remarks  
ALL DESCRIPTIONS AND LOGGING BY NORWEST HOLST.

Scale  
(approx)  
1:50

Logged  
By  
NHSEL

Figure No.  
2296.R5



See key sheet for symbols and abbreviations

# Michael D Joyce Associates

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Site  
Pontefract Road, Barnsley  
Borehole Number  
R5

Machine :	Diameter	Ground Level (mOD)	Client	Job Number
Flush : Water			Parkin International	2296
Bit Size : 100.00mm	Location	Dates	Engineer	Sheet
Method :		16/08/02	D J Goodwin and Associates	2/2

Depth m	TCR	SCR	RQD	FI	Field Records	Level (mOD)	Depth m (Thickness)	Description	Legend
							(0.70)	Intact COAL.	
							10.70 (1.00)	Grey MUDSTONE.	
							11.70	Borehole completed at 11.70m	

Remarks  
ALL DESCRIPTIONS AND LOGGING BY NORWEST HOLST.

Scale (approx)  
1:50  
Logged By  
NHSEL

Figure No.  
2296.R5

See key sheet for symbols and abbreviations

# Michael D Joyce Associates

Consulting Geotechnical Engineers and Environmental Scientists

Site  
Pontefract Road, Barnsley  
Borehole Number  
R6

Machine : Flush : Water Bit Size : 100.00mm Method :	Diameter	Ground Level (mOD)	Client Parkin International	Job Number 2296
	Location	Dates 15/08/02	Engineer D J Goodwin and Associates	Sheet 1/2

Depth m	TCR	SCR	RQD	FI	Field Records	Level (mOD)	Depth m (Thickness)	Description	Legend
							(1.00)	MADE GROUND. Silty clayey sand and gravel, with bricks and concrete.	
							1.00	MADE GROUND. Clayey gravelly sandy fill.	
							(2.00)		
							3.00	MADE GROUND. Sandy gravelly clay with gravels of mudstone and sandstone.	
							(3.20)		
							6.20	Grey SANDSTONE, hard with mudstone bands.	
							(3.80)		
							10.00		

Remarks  
ALL DESCRIPTIONS AND LOGGING BY NORWEST HOLST.

Scale (approx) 1:50  
Logged By NHSEL  
Figure No. 2296.R6

See key sheet for symbols and abbreviations

# Michael D Joyce Associates

Consulting Geotechnical Engineers and Environmental Scientists

Site  
Pontefract Road, Barnsley

Borehole Number  
R6

Machine :	Diameter	Ground Level (mOD)	Client	Job Number
Flush : Water			Parkin International	2296
Bit Size : 100.00mm	Location	Dates	Engineer	Sheet
Method :		15/08/02	D J Goodwin and Associates	2/2

Depth m	TCR	SCR	RQD	FI	Field Records	Level (mOD)	Depth m (Thickness)	Description	Legend
							(0.50)	Grey weathered MUDSTONE.	
							10.50		
							(0.50)	Intact COAL.	
							11.00		
							(0.70)	Grey MUDSTONE.	
							11.70		
								Borehole completed at 11.70m	

Remarks  
ALL DESCRIPTIONS AND LOGGING BY NORWEST HOLST.

Scale (approx)  
1:50

Logged By  
NHSEL

Figure No.

2296.R6

See key sheet for symbols and abbreviations

# Michael D Joyce Associates

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Site  
Pontefract Road, Barnsley

Borehole Number  
R7

Machine :	Diameter	Ground Level (mOD)	Client	Job Number
Flush : Water			Parkin International	2296
Bit Size : 100.00mm	Location	Dates	Engineer	Sheet
Method :		16/08/02	D J Goodwin and Associates	1/2

Depth m	TCR	SCR	RQD	FI	Field Records	Level (mOD)	Depth m (Thickness)	Description	Legend
							(1.00)	MADE GROUND. Silty sandy gravel fill with bricks and concrete.	
							1.00	MADE GROUND. Orange-brown slightly clayey gravelly sand.	
							(2.00)		
							3.00		
							(0.20)	MADE GROUND. Brick, concrete, limestone and sandstone.	
							3.20	Brown gravelly sandy CLAY. (Possible Fill).	
							(6.30)		
							9.50		
							(0.20)	Grey weathered MUDSTONE.	
							9.70		
							9.80	Very dark grey MUDSTONE.	
							10.00	Intact COAL.	

Remarks ALL DESCRIPTIONS AND LOGGING BY NORWEST HOLST.	Scale (approx)	Logged By
	1:50	NHSEL
	Figure No.	2296.R7

See key sheet for symbols and abbreviations

# Michael D Joyce Associates

Consulting Geotechnical Engineers and Environmental Scientists

Site  
Pontefract Road, Barnsley  
Borehole Number  
**R7**

Machine :	Diameter	Ground Level (mOD)	Client	Job Number
Flush : Water			Parkin International	2296
Bit Size : 100.00mm	Location	Dates	Engineer	Sheet
Method :		16/08/02	D J Goodwin and Associates	2/2

Depth m	TCR	SCR	RQD	FI	Field Records	Level (mOD)	Depth m (Thickness)	Description	Legend
							(0.20)		
							10.20	Dark grey to black MUDSTONE interbedded with coal.	
							(0.50)		
							10.70	Grey weathered MUDSTONE.	
								Borehole completed at 10.70m	

Remarks ALL DESCRIPTIONS AND LOGGING BY NORWEST HOLST.  See key sheet for symbols and abbreviations	Scale (approx)	Logged By
	1:50	NHSEL
	Figure No.	2296.R7

# Michael D Joyce Associates

Consulting Geotechnical Engineers and Environmental Scientists

Site  
Pontefract Road, Barnsley

Borehole  
Number  
R8

Machine :  
Flush : Water  
Bit Size : 100.00mm  
Method :

Diameter

Ground Level (mOD)

Client  
Parkin International






Job  
Number  
2296

Location

Dates  
14/08/02

Engineer  
D J Goodwin and Associates

Sheet  
1/3

Depth m	TCR	SCR	RQD	FI	Field Records	Level (mOD)	Depth m (Thickness)	Description	Legend
								MADE GROUND. Clay sandy fill.	
							(1.00)		
							1.00	MADE GROUND. Sandy clay.	
							(1.50)		
							2.50	MADE GROUND. Poor returns of sandy clay with a little weathered mudstone.	
							(2.70)		
							5.20	Brown weathered MUDSTONE with clay bands.	
							(3.00)		
							8.20	Grey weathered MUDSTONE.	
							(2.30)		

Remarks  
ALL DESCRIPTIONS AND LOGGING BY NORWEST HOLST.

Scale  
(approx)

Logged  
By

1:50

NHSEL

Figure No.

2296.R8

See key sheet for symbols and abbreviations

# Michael D Joyce Associates

Consulting Geotechnical Engineers and Environmental Scientists

Site  
Pontefract Road, Barnsley

Borehole Number  
**R8**

Machine :	Diameter	Ground Level (mOD)	Client	Job Number
Flush : Water			Parkin International	2296
Bit Size : 100.00mm	Location	Dates	Engineer	Sheet
Method :		14/08/02	D J Goodwin and Associates	2/3

Depth m	TCR	SCR	RQD	FI	Field Records	Level (mOD)	Depth m (Thickness)	Description	Legend
							10.50 (0.25)	No returns.	
							10.75 (0.25)	Intact COAL.	
							11.00	Grey weathered MUDSTONE.	
							(1.00)		
							12.00	Dark grey MUDSTONE and bands of shaly mudstone.	
							(2.70)		
							14.70	Grey MUDSTONE, weak.	
							14.80	Dark grey MUDSTONE and shale bands, hard.	
							(4.00)		
							18.80	Grey fine grained SANDSTONE.	

Remarks  
ALL DESCRIPTIONS AND LOGGING BY NORWEST HOLST.

Scale (approx)	Logged By
1:50	NHSEL
Figure No.	
2296.R8	

See key sheet for symbols and abbreviations

# Michael D Joyce Associates

Consulting Geotechnical Engineers and Environmental Scientists

Site  
Pontefract Road, Barnsley

Borehole  
Number  
R8

Machine :	Diameter	Ground Level (mOD)	Client	Job Number
Flush : Water			Parkin International	2296
Bit Size : 100.00mm	Location	Dates	Engineer	Sheet
Method :		14/08/02	D J Goodwin and Associates	3/3

Depth m	TCR	SCR	RQD	FI	Field Records	Level (mOD)	Depth m (Thickness)	Description	Legend
							(6.20)		
							25.00	Borehole completed at 25.00m	

Remarks  
ALL DESCRIPTIONS AND LOGGING BY NORWEST HOLST.

Scale  
(approx)

1:50

Figure No.

2296.R8

See key sheet for symbols and abbreviations

# Michael D Joyce Associates

Consulting Geotechnical Engineers and Environmental Scientists

Site  
Pontefract Road, Barnsley  
Borehole Number  
**R9**

Machine : Flush : Water Bit Size : 100.00mm Method :	Diameter	Ground Level (mOD)	Client Parkin International	Job Number 2296
	Location	Dates 15/08/02	Engineer D J Goodwin and Associates	Sheet 1/2

Depth m	TCR	SCR	RQD	FI	Field Records	Level (mOD)	Depth m (Thickness)	Description	Legend
							(1.00)	MADE GROUND. Orange clayey sand with concrete and brick.	
							1.00	MADE GROUND. Brown clayey gravelly sand.	
							(2.00)		
							3.00	Brown gravelly sandy clay, gravel comprising mudstone, sandstone and occasional coal.	
							(3.10)		
							6.10	Orange brown slightly sandy gravelly CLAY, gravel comprising mudstone and sandstone.	
							(1.40)		
							7.50	Brown weathered MUDSTONE.	
							(1.70)		
							9.20	Dark grey MUDSTONE.	

Remarks  
ALL DESCRIPTIONS AND LOGGING BY NORWEST HOLST.

Scale (approx)	Logged By
1:50	NHSEL
Figure No.	
2296.R9	

See key sheet for symbols and abbreviations

# Michael D Joyce Associates

Consulting Geotechnical Engineers and Environmental Scientists

Site  
Pontefract Road, Barnsley  
Borehole Number  
R9

Machine : Flush : Water Bit Size : 100.00mm Method :	Diameter	Ground Level (MOD)	Client Parkin International	Job Number 2296
	Location	Dates 15/08/02	Engineer D J Goodwin and Associates	Sheet 2/2

Depth m	TCR	SCR	RQD	FI	Field Records	Level (MOD)	Depth m (Thickness)	Description	Legend
							(5.30)		
						14.50 (0.50)		Intact COAL.	
						15.00 (0.70)		Grey MUDSTONE.	
						15.70		Borehole completed at 15.70m	





Remarks ALL DESCRIPTIONS AND LOGGING BY NORWEST HOLST.	Scale (approx)	Logged By
	1:50	NHSEL
See key sheet for symbols and abbreviations	Figure No.	
	2296.R9	

# Michael D Joyce Associates

Consulting Geotechnical Engineers and Environmental Scientists

Site  
Pontefract Road, Barnsley  
Borehole Number  
**R10**

Machine :	Diameter	Ground Level (mOD)	Client	Job Number
Flush : Water			Parkin International	2296
Bit Size : 100.00mm	Location	Dates	Engineer	Sheet
Method :		15/08/02	D J Goodwin and Associates	1/2

Depth m	TCR	SCR	RQD	FI	Field Records	Level (mOD)	Depth m (Thickness)	Description	Legend
							(2.00)	MADE GROUND. Brown sandy gravelly clay, including brick and concrete.	
							2.00	MADE GROUND. Brown slightly sandy gravelly clay with gravel of mudstone.	
							(2.80)		
							4.80	Brown mottled grey weathered MUDSTONE.	
							(4.70)		
							9.50	Dark grey MUDSTONE.	

Remarks  
ALL DESCRIPTIONS AND LOGGING BY NORWEST HOLST.

Scale (approx)  
1:50  
Logged By  
NHSEL

Figure No.  
2296.R10

See key sheet for symbols and abbreviations

# Michael D Joyce Associates

Consulting Geotechnical Engineers and Environmental Scientists

Site  
Pontefract Road, Barnsley  
Borehole Number  
R10

Machine : Flush : Water Bit Size : 100.00mm Method :	Diameter	Ground Level (mOD)	Client Parkin International	Job Number 2296
	Location	Dates 15/08/02	Engineer D J Goodwin and Associates	Sheet 2/2

Depth m	TCR	SCR	RQD	FI	Field Records	Level (mOD)	Depth m (Thickness)	Description	Legend
							(2.20)		
						11.70 (0.30) 12.00		Very dark grey SHALE.	
						(0.30) 12.30		Intact COAL.	
								Grey MUDSTONE.	
							(2.50)		
							14.80	Borehole completed at 14.80m	

Remarks ALL DESCRIPTIONS AND LOGGING BY NORWEST HOLST.	Scale (approx) 1:50	Logged By NHSEL
	Figure No. 2296.R10	

See key sheet for symbols and abbreviations

# Michael D Joyce Associates

Consulting Geotechnical Engineers and Environmental Scientists

Site  
Pontefract Road, Barnsley

Borehole Number  
R11

Machine :	Diameter	Ground Level (mOD)	Client	Job Number
Flush : Water			Parkin International	2296
Bit Size : 100.00mm	Location	Dates	Engineer	Sheet
Method :		15/08/02	D J Goodwin and Associates	1/2

Depth m	TCR	SCR	RQD	FI	Field Records	Level (mOD)	Depth m (Thickness)	Description	Legend
							(1.00)	MADE GROUND. Sandy clay with bricks and concrete.	
							1.00		
							(1.40)	MADE GROUND. Gravelly clayey sand, including brick and concrete.	
							2.40		
							(1.50)	Brown weathered MUDSTONE, recovered as a clay.	
							3.90		
							(0.30)	Intact COAL.	
							4.20		
							(1.20)	Brown weathered MUDSTONE.	
							5.40		
							(4.10)	Grey MUDSTONE.	
							9.50		
								Very dark grey MUDSTONE.	

Remarks	Scale (approx)	Logged By
ALL DESCRIPTIONS AND LOGGING BY NORWEST HOLST.	1:50	NHSEL
See key sheet for symbols and abbreviations	Figure No.	
	2296.R11	




# Michael D Joyce Associates

Consulting Geotechnical Engineers and Environmental Scientists

Site  
Pontefract Road, Barnsley

Borehole  
Number  
R11

Machine :	Diameter	Ground Level (mOD)	Client	Job Number
Flush : Water			Parkin International	2296
Bit Size : 100.00mm	Location	Dates	Engineer	Sheet
Method :		15/08/02	D J Goodwin and Associates	2/2

Depth m	TCR	SCR	RQD	FI	Field Records	Level (mOD)	Depth m (Thickness)	Description	Legend
							(1.20)		
							10.70	Intact COAL.	
							(0.60)		
							11.30	Grey MUDSTONE.	
							(0.40)		
							11.70	Borehole completed at 11.70m	

Remarks  
ALL DESCRIPTIONS AND LOGGING BY NORWEST HOLST.

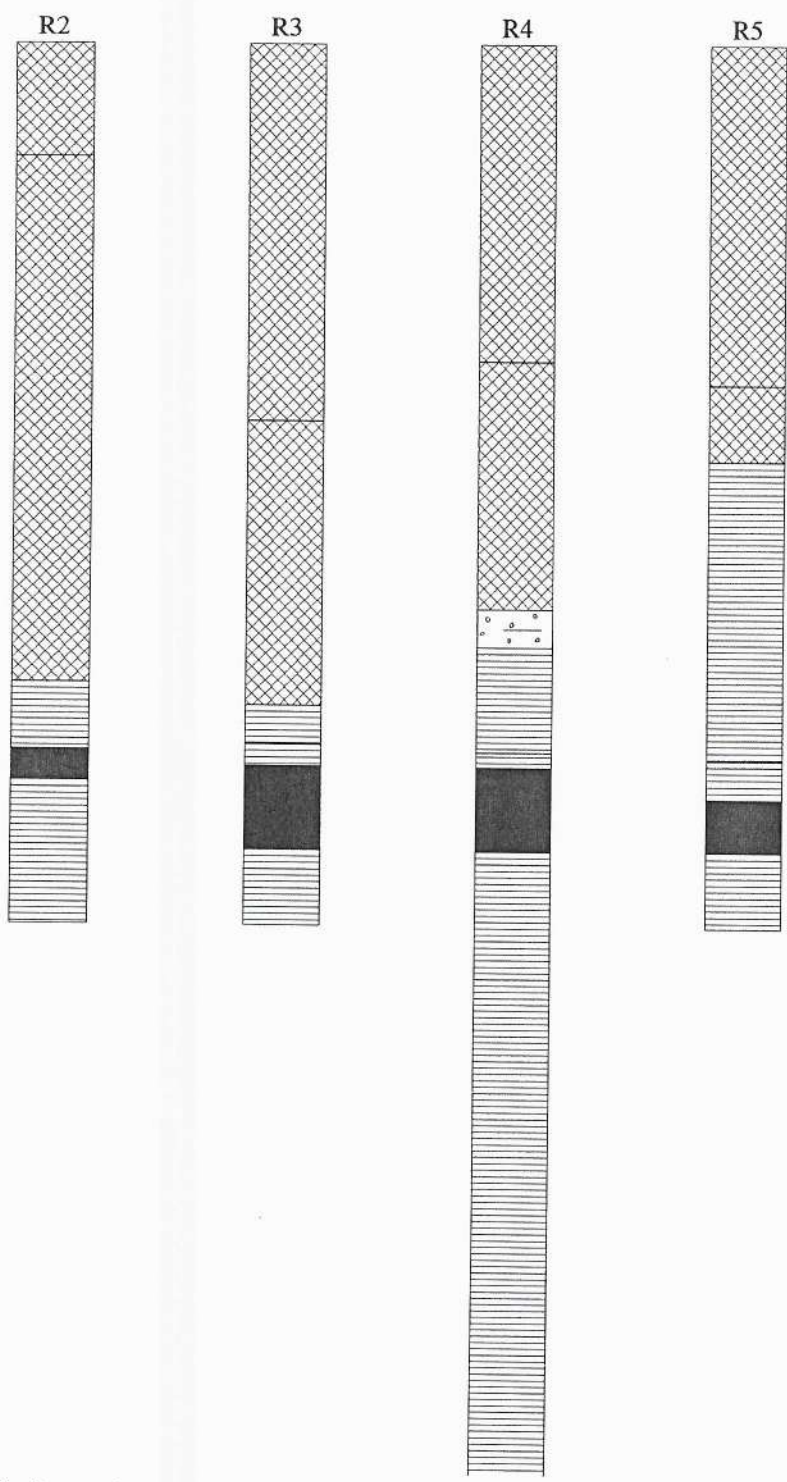
Scale  
(approx)  
1:50

Logged  
By  
NHSEL







Figure No.  
2296.R11

See key sheet for symbols and abbreviations

Elevation (mOD)



**Key To Legends**

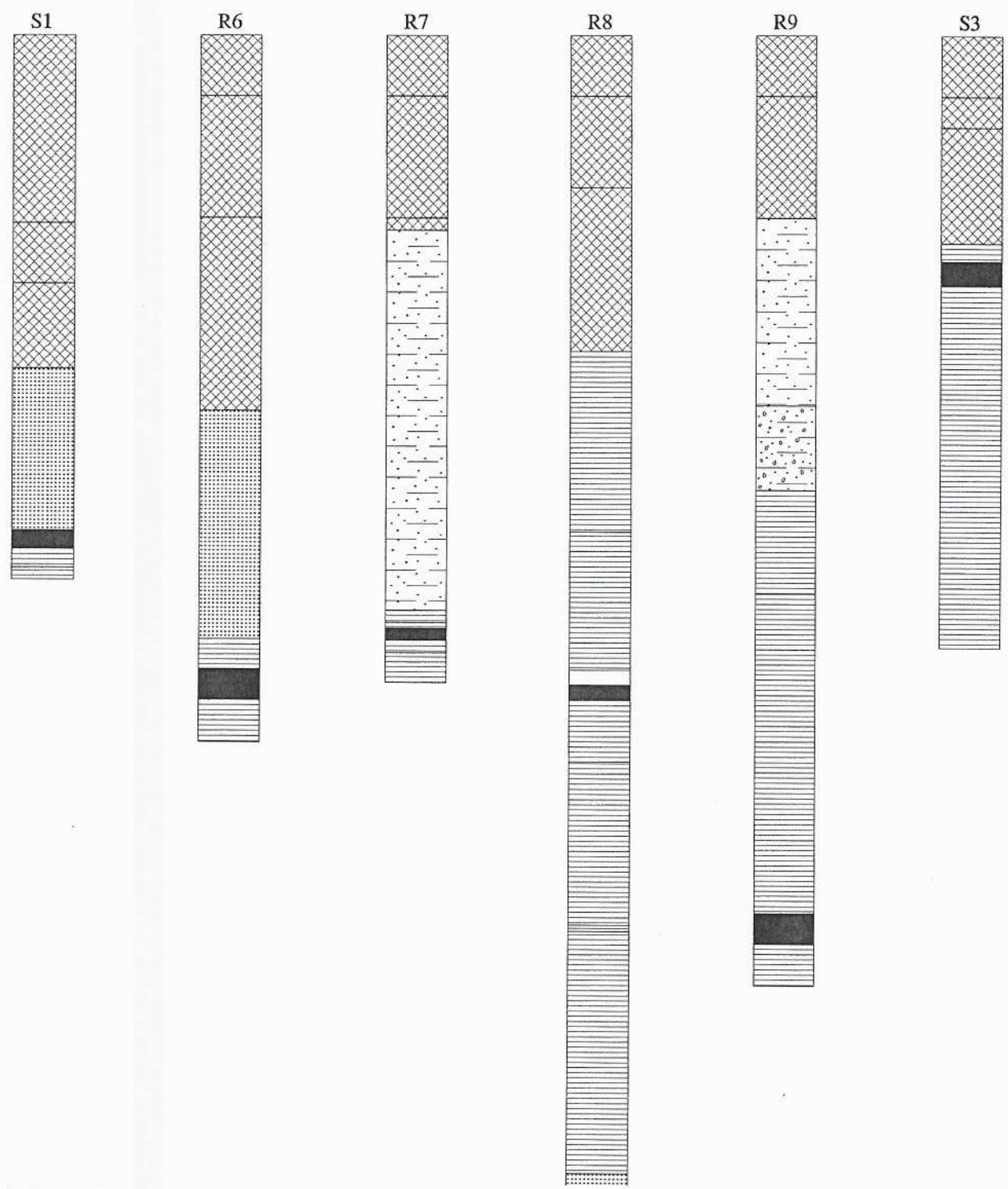
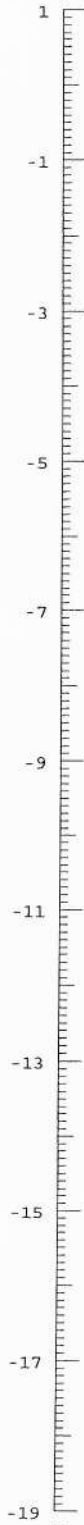
-  MADE GROUND
-  Gravelly CLAY
-  MUDSTONE
-  COAL
-  Groundwater Strike
-  Strike Rise Level

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





**Nominal Section**

Site Pontefract Road, Barnsley	Date Drawn 29/Aug/02	Date Checked	Sheet 1/1	Job Number 2296
Client Parkin International	Drawn By	Checked By	Scale 1:100 [V]	Figure No.

Elevation (mOD)



**Key To Legends**

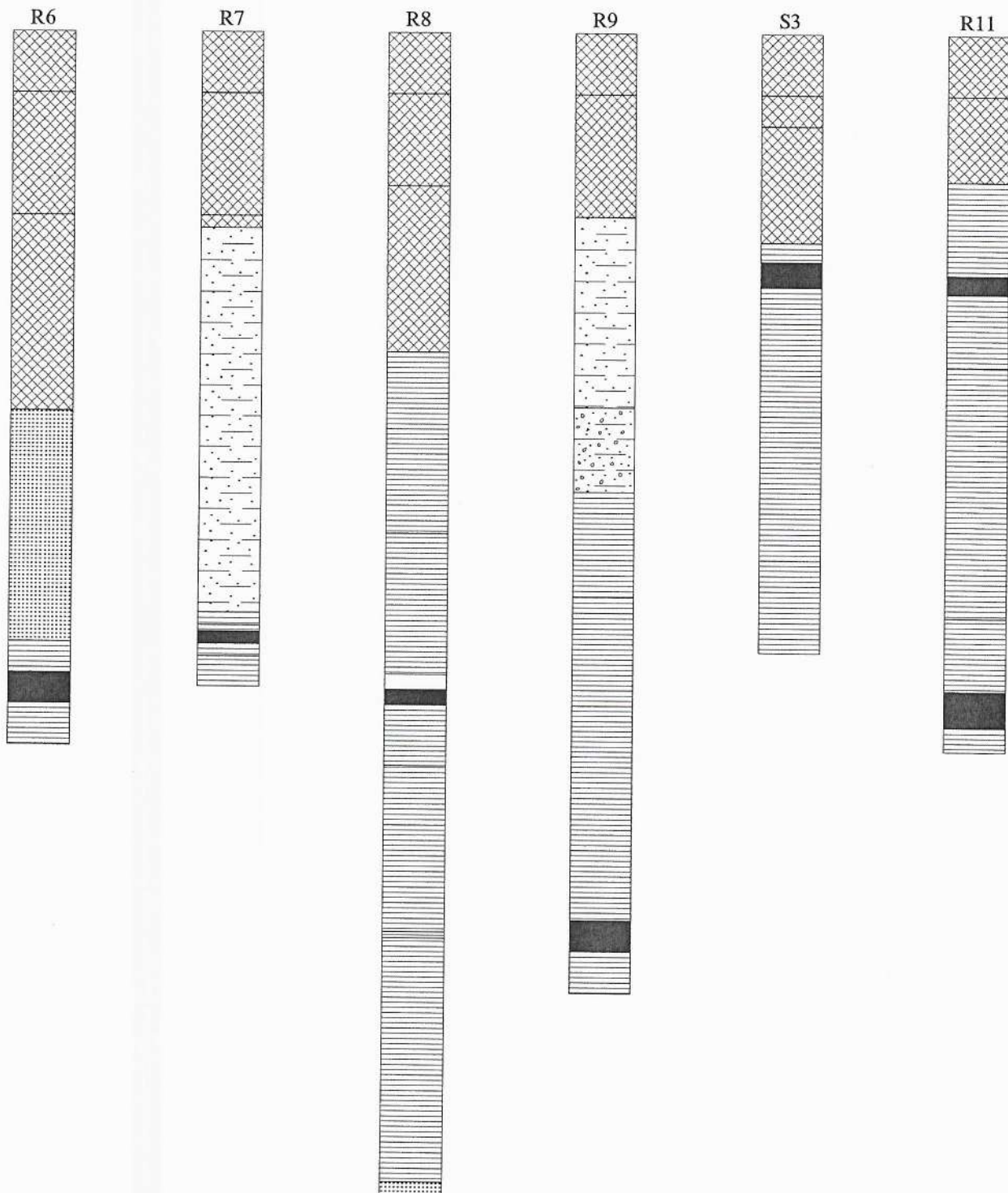
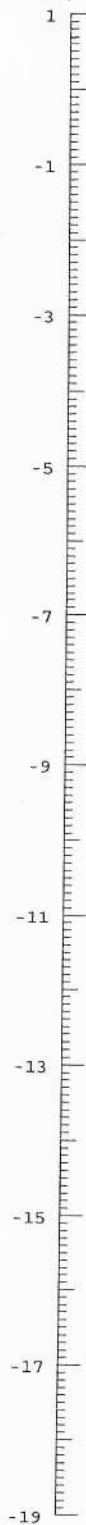
-  MADE GROUND
-  SANDY CLAY
-  SANDY GRAVELLY CLAY
-  MUDSTONE
-  SANDSTONE
-  COAL
-  Groundwater Strike
-  Strike Rise Level

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





**Nominal Section**

Site Pontefract Road, Barnsley	Date Drawn 29/Aug/02	Date Checked	Sheet 1/1	Job Number 2296
Client Parkin International	Drawn By	Checked By	Scale 1:100 [V]	Figure No.

Elevation (mOD)



**Key To Legends**

-  MADE GROUND
-  SANDSTONE
-  Sandy CLAY
-  SANDY GRAVELLY CLAY
-  MUDSTONE
-  COAL
-  Groundwater Strike
-  Strike Rise Level

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**Nominal Section**

Site Pontefract Road, Barnsley	Date Drawn 29/Aug/02	Date Checked	Sheet 1/1	Job Number 2296
Client Parkin International	Drawn By	Checked By	Scale 1:100 [V]	Figure No.