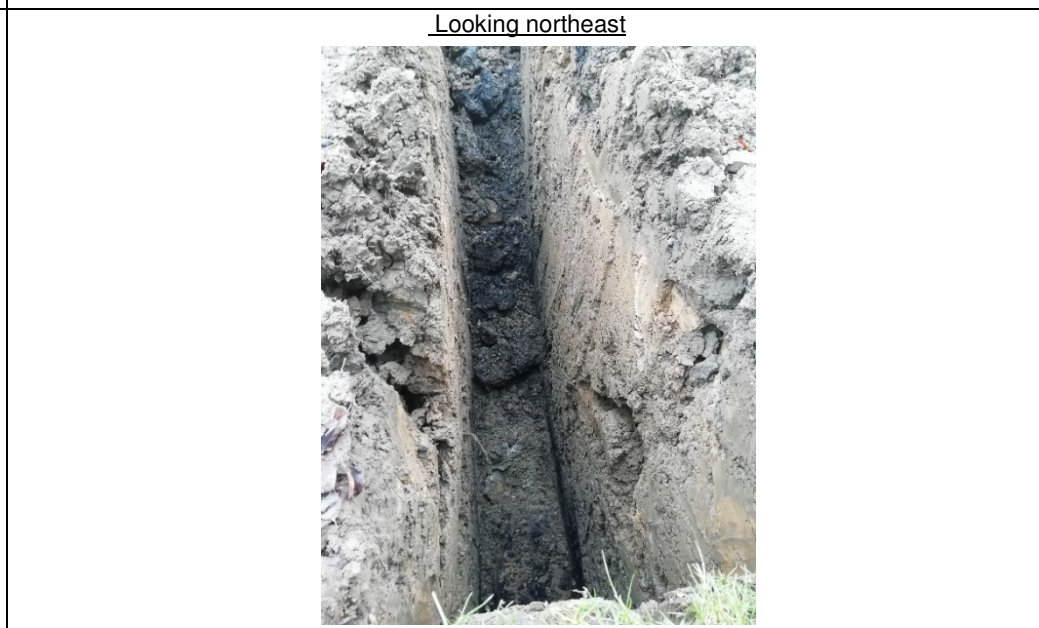
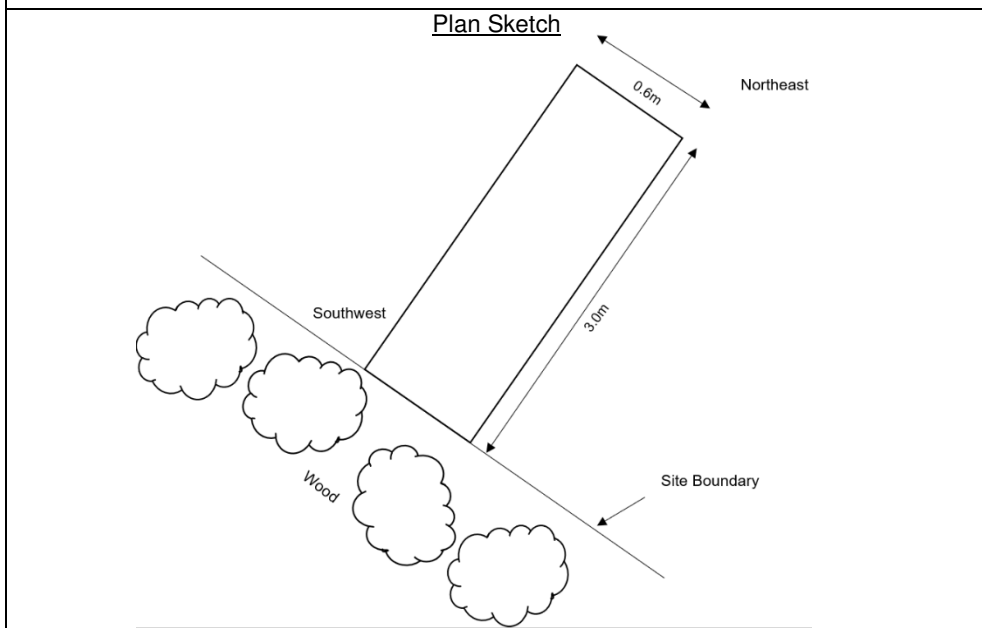
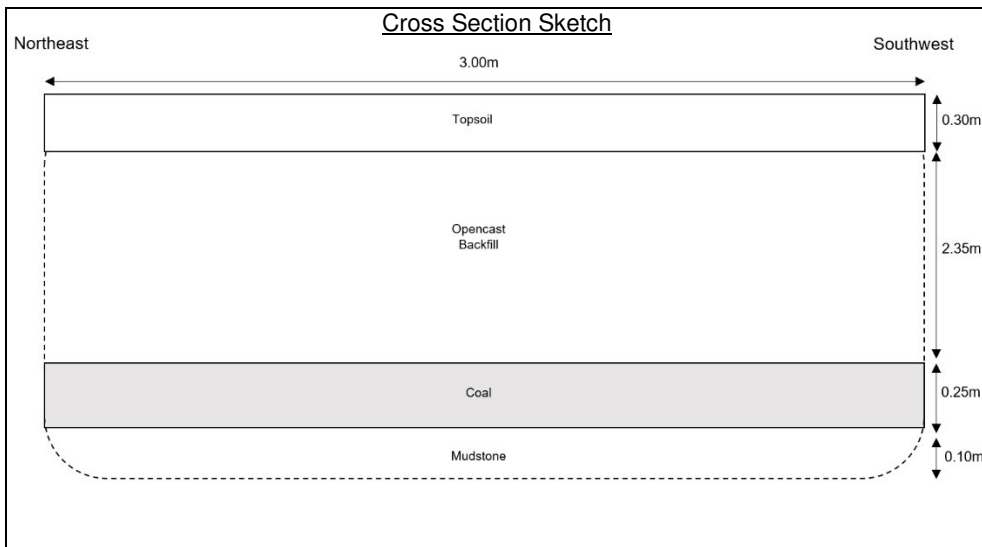




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Project:

Hoyland Common, Barnsley, M1 Junction 36

Title:

Trial Trench Record

TT2030

TRIAL PIT LOG

TT2031

Project Hoyland Common, Barnsley

Project No.

AG3080-19

Client Newlands Developments

Sheet

1 of 1

Date 17/01/2020

Scale

1:25

Ground Level 134.20m AOD

Coordinates

E 435827.06 N 399664.56

Total Depth

2.80m

Sample / Test Type	Depth (m)	Result	Level (mAoD)	Strata Depth (thickness) (m)	Ease of Dig	Description of Strata	Legend	GW
LB	2.00		133.80	(0.40)	E	Very soft dark brown silty CLAY with frequent rootlets. (TOPSOIL/MADE GROUND)		
				0.40		Soft to firm locally friable brownish grey silty gravelly CLAY with frequent cobbles. Gravel is fine to coarse angular to subangular mudstone and occasional siltstone. Cobbles are subangular siltstone, sandstone and mudstone. (MADE GROUND - OPENCASE BACKFILL)		
			131.40	(2.40)	E	End of Trial Pit at 2.80m		

Method: 20T Tracked excavator

Groundwater: Slight seepage at base of trench.

Stability: Stable.

Remarks: Trench backfilled with arisings on completion.

Length:	4.30m
Width:	0.60m
Logged:	FC
Checked:	SD

North 1.00m 4.30m South 0.90m 0.40m 2.80m 1.40m 3.30m Topsoil Natural Opencast Backfill Highwall Natural Description- 0.40-1.40m bgl- Firm becoming stiff light grey and light orangish brown silty CLAY with this band of strong sandstone at 0.60m bgl (Pennine Middle Coal Measures Formation). 1.40-2.80m bgl- Stiff grey very closely fissured grey locally orangish brown CLAY with occasional medium to coarse gravel sized ironstone nodules (Pennine Middle Coal Measures Formation).		Looking south 	
North 1.00m 3.30m South 0.60m Natural Opencast Backfill Highwall <td> North of pit  </td>		North of pit 	
APPLIED GEOLOGY Unit 23 Abbey Park Stareton Kenilworth CV8 2LY Tel: 02476 511 822 email: admin@appliedgeology.co.uk	Client: Newlands Developments Project: Hoyland Common, Barnsley, M1 Junction 36	Title: Trial Trench Record	TT2031

TRIAL PIT LOG

TT2032 NORTH

Project Hoyland Common, Barnsley

Project No. AG3080-19

Client Newlands Developments

Sheet 1 of 1

Date 22/01/2020

Scale 1:25

Ground Level 127.48m AOD

Coordinates E 435714.86 N 399423.65

Total Depth 2.40m

Sample / Test Type	Depth (m)	Result	Level (mAoD)	Strata Depth (thickness) (m)	Ease of Dig	Description of Strata	Legend	GW
D	1.20		127.08	(0.40)	E	Very soft to soft brown slightly gravelly silty CLAY with occasional rootlets. Gravel is fine to coarse angular to subangular sandstone, ceramic tile and siltstone. (TOPSOIL/MADE GROUND)		
				0.40	E	Firm orangish brown mottled greyish brown and grey slightly gravelly CLAY. Gravel is fine to coarse subangular to subrounded mudstone, ironstone and siltstone. (MADE GROUND - OPENCAST BACKFILL)		
				(0.50)	E	Firm light grey mottled orangish brown silty CLAY with rare fine to medium gravel sized mudstone lithorelicts. (PENNINE MIDDLE COAL MEASURES FORMATION)		
D	1.60		126.58	0.90	E	Firm light grey mottled orangish brown silty CLAY with rare fine to medium gravel sized mudstone lithorelicts. (PENNINE MIDDLE COAL MEASURES FORMATION)		
D	2.20		126.28	1.20	E	Very weak grey locally orangish brown MUDSTONE and SILTSTONE with locally ironstone nodules and thin bands of clay. (PENNINE MIDDLE COAL MEASURES FORMATION)		
				(1.20)	M			
			125.08	2.40		End of Trial Pit at 2.40m		

Method: 20T Tracked excavator

Groundwater: Groundwater not encountered

Stability: Stable.

Remarks: Trench backfilled with arisings on completion. See also log for TT2032 SOUTH.

Length:	4.40m
Width:	0.60m
Logged:	FC
Checked:	SD

TRIAL PIT LOG

TT2032 SOUTH

Project Hoyland Common, Barnsley

Project No. AG3080-19

Client Newlands Developments

Sheet 1 of 1

Date 22/01/2020

Scale 1:25

Ground Level 127.25m AOD

Coordinates E 435708.45 N 399417.20

Total Depth 2.20m

Sample / Test Type	Depth (m)	Result	Level (mAoD)	Strata Depth (thickness) (m)	Ease of Dig	Description of Strata	Legend	GW
D	2.00		126.85	(0.40)	E	Very soft to soft brown slightly gravelly silty CLAY with occasional rootlets. Gravel is fine to coarse angular to subangular sandstone, ceramic tile and siltstone. (TOPSOIL/MADE GROUND)		
				0.40				
			126.25	(0.60)	E	Firm orangish brown mottled greyish brown and grey slightly gravelly CLAY. Gravel is fine to coarse subangular to subrounded mudstone, ironstone and siltstone. (MADE GROUND - OPENCAST BACKFILL)		
				1.00				
			(1.20)	E	Firm locally stiff grey mottled orangish brown silty gravelly CLAY with frequent cobbles. Gravel is fine to coarse angular to subangular mudstone, ironstone and coal. Cobbles are subangular of sandstone, mudstone and siltstone. (MADE GROUND - OPENCAST BACKFILL)			
			125.05	2.20		End of Trial Pit at 2.20m		

Method: 20T Tracked excavator

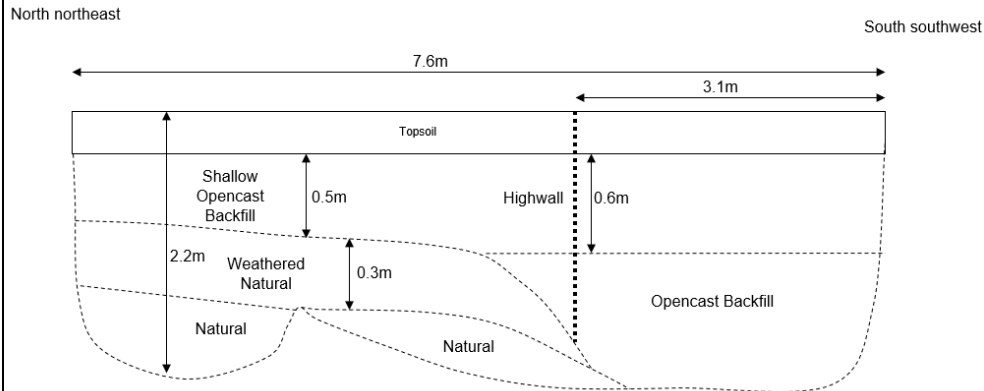
Groundwater: Groundwater not encountered.

Stability: Stable.

Remarks: Trench pit backfilled with arisings on completion. See also log for TT2032 NORTH.

Length:	3.10m
Width:	0.60m
Logged:	FC
Checked:	SD

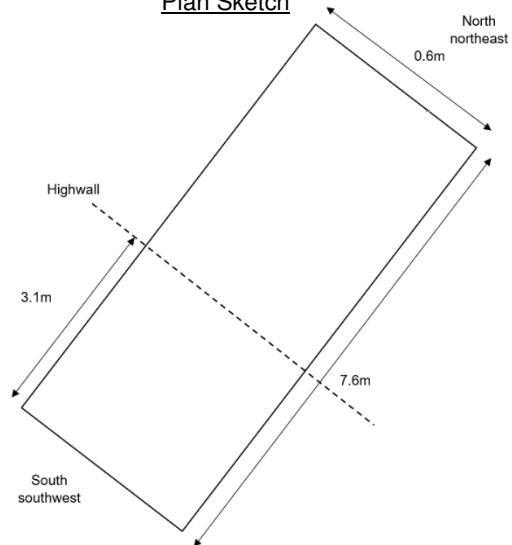
Cross Section Sketch



Looking southeast



Plan Sketch



Looking south southwest



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Trial Trench Record

TT2032

TRIAL PIT LOG

TT2033

Project Hoyland Common, Barnsley

Project No.

AG3080-19

Client Newlands Developments

Sheet

1 of 1

Date 13/02/2020

Scale

1:25

Ground Level 124.40m AOD

Coordinates

E 435738.30 N 399379.33

Total Depth

2.20m

Sample / Test Type	Depth (m)	Result	Level (mAoD)	Strata Depth (thickness) (m)	Ease of Dig	Description of Strata	Legend	GW
			124.30	(0.10)	E	Soft brown slightly sandy slightly gravelly CLAY with occasional rootlets. Gravel is fine to coarse subangular siltstone, mudstone and rare brick. (TOPSOIL/MADE GROUND)		
			124.10	(0.20)	E			
				0.30		Firm to stiff orangish brown mottled grey and occasionally brown slightly sandy slightly gravelly CLAY. Gravel is fine to coarse subangular siltstone and mudstone. (MADE GROUND - OPENCAST BACKFILL)		
				(0.30)	E			
			123.80	0.60		Firm greyish brown occasionally mottled orangish brown and grey slightly sandy slightly gravelly CLAY. Gravel is fine to coarse subangular siltstone, mudstone and rare coal with rare small cobbles of siltstone. (MADE GROUND - OPENCAST BACKFILL)		
						Stiff orangish brown mottled light grey slightly sandy slightly gravelly CLAY. Gravel is fine to coarse subangular siltstone and rare coal. (PENNINE MIDDLE COAL MEASURES FORMATION)		
				(1.60)	E			
			122.20	2.20		End of Trial Pit at 2.20m		

Method: 20T Tracked excavator

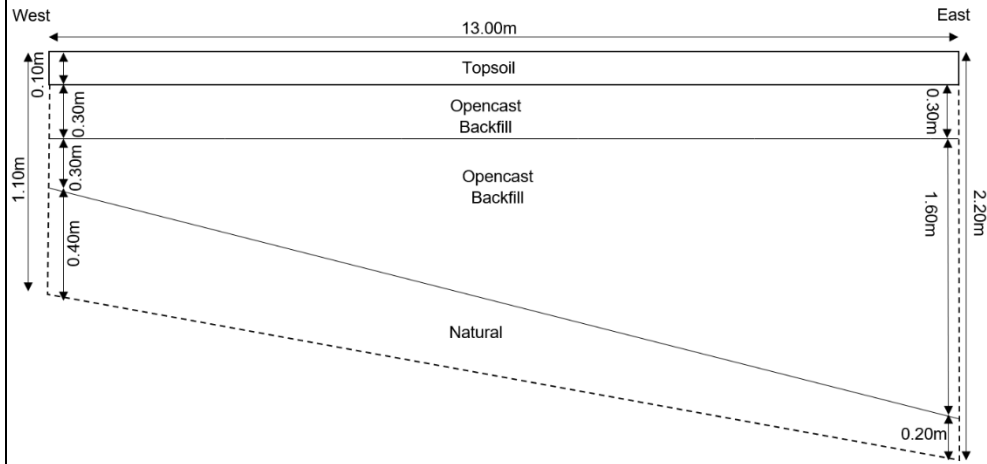
Groundwater: Groundwater not encountered.

Stability: Stable.

Remarks: Trench pit backfilled with arisings on completion.

Length:	13.00m
Width:	0.60m
Logged:	TWC
Checked:	SD

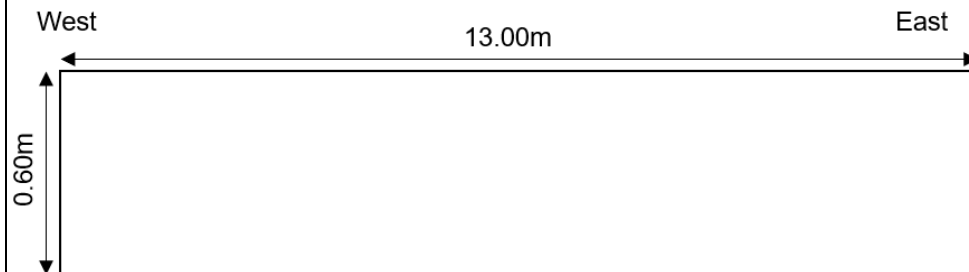
Cross Section Sketch



Looking north



Plan Sketch



Arisings



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Title:

Trial Trench Record

TT2033

TRIAL PIT LOG

TT2034

Project Hoyland Common, Barnsley

Project No.

AG3080-19

Client Newlands Developments

Sheet

1 of 1

Date 16/01/2020

Scale

1:25

Ground Level 128.44m AOD

Coordinates

E 435954.07 N 399599.09

Total Depth

2.80m

Sample / Test Type	Depth (m)	Result	Level (mAoD)	Strata Depth (thickness) (m)	Ease of Dig	Description of Strata	Legend	GW
			128.04	0.40	E	Very soft dark brown slightly gravelly silty CLAY with frequent rootlets. Gravel is fine to coarse angular to subangular mudstone and siltstone. (TOPSOIL/MADE GROUND)		
						Firm (locally with pockets of soft and stiff material) grey and brownish grey slightly gravelly silty CLAY with occasional cobbles and 1No. boulder. Gravel is fine to coarse subangular mudstone, siltstone and rare shale and coal. Cobbles are siltstone and sandstone. Boulder of siltstone (0.60 x 0.30 x 0.35m). (MADE GROUND - OPENCAST BACKFILL)		
				(2.40)	E			
			125.64	2.80		End of Trial Pit at 2.80m		

Method: 20T Tracked excavator

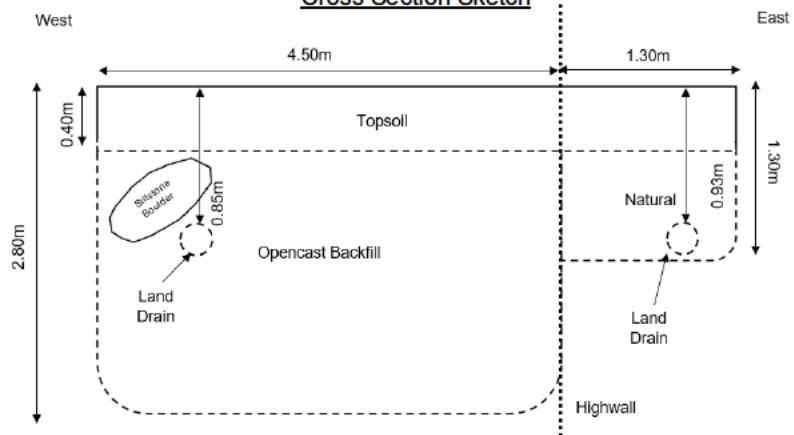
Groundwater: Seepage only from land drains.

Stability: Stable.

Remarks: 80mm diameter land drains encountered at 0.85m bgl (western end) and 0.93m bgl (eastern end) - both repaired. Trench backfilled with arisings on completion.

Length:	4.80m
Width:	0.60m
Logged:	FC
Checked:	SD

Cross Section Sketch



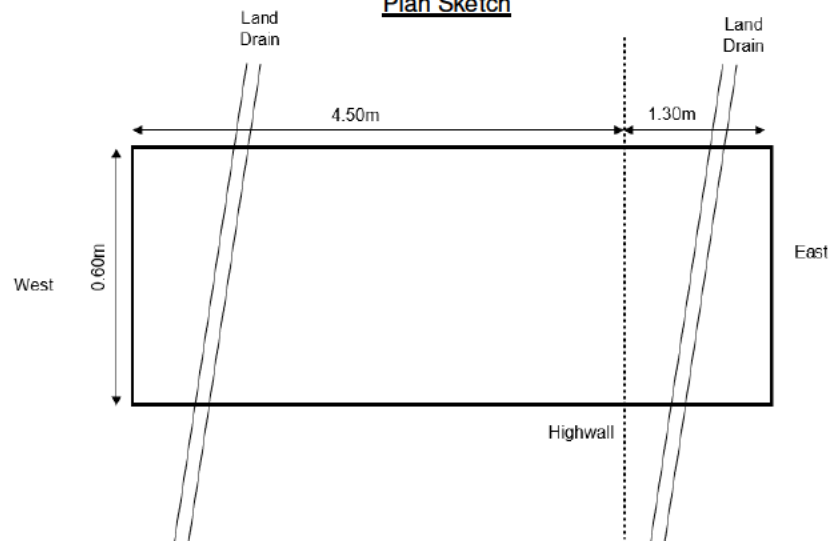
Natural Description-

0.40m-1.30m bgl- Firm to stiff yellowish brown mottled light grey locally silty CLAY (Pennine Middle Coal Measures Formation).

Looking south



Plan Sketch



Looking east



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Title:

Trial Trench Record

TT2034

BOREHOLE LOG - CABLE PERCUSSION

TT2035

Project Hoyland Common, Barnsley

Project No.

AG3080-19

Client Newlands Developments

Sheet

1 of 1

Start 07/02/2020

Coordinates E 435857.70 N 399365.77

Scale

1:50

End 07/02/2020

Ground Level 121.24m AOD

Total Depth

1.70m

Sample / Test Type	Depth (m)	Result	Casing Depth (m)	Level (mAoD)	Strata Depth (thickness) (m)	Description of Strata	Legend	GW	Install
				121.04	(0.20)	Soft brown slightly sandy slightly gravelly CLAY with occasional rootlets. Gravel is fine to coarse subangular siltstone and mudstone with rare brick. (TOPSOIL/MADE GROUND)		▼	
					(1.50)	Firm greyish brown locally occasionally orangish brown slightly sandy slightly gravelly CLAY with rare cobbles of siltstone. Gravel is fine to coarse subangular siltstone and mudstone. (MADE GROUND - OPENCAST BACKFILL)			
				119.54	1.70	End of Borehole at 1.70m			

Chiselling			Groundwater Strikes					Drilled:
From	To	Duration (hh:mm)	Depth Strike	Rose to	Remarks	Cased	Sealed	
			0.20	0 00	Seepage			Logged: TWC
								Checked: SD

Remarks: Highwall not located. Trench backfilled with arisings on completion.

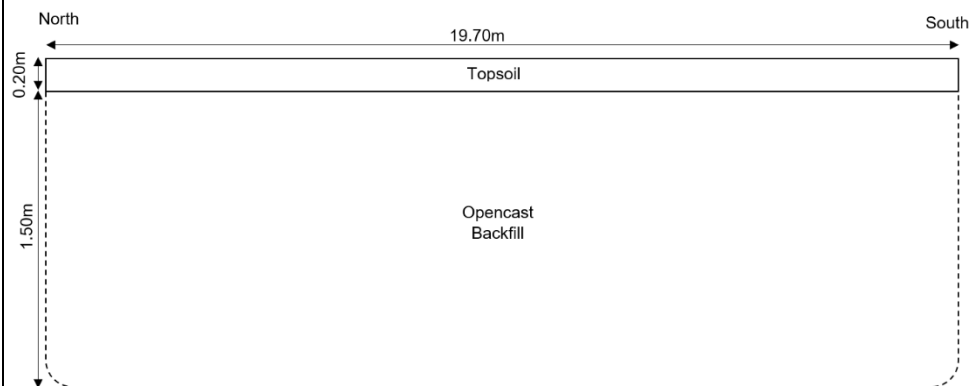
Installation:

Diameter:

Exploratory hole logs should be read in conjunction with key sheets

APPLIED GEOLOGY

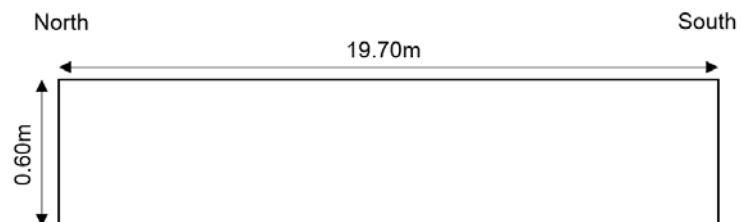
Cross Section Sketch



Looking north



Plan Sketch



Arisings



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Title:

Trial Trench Record

TT2035

Sample / Test Type	Depth (m)	Result	Level (mAoD)	Strata Depth (thickness) (m)	Ease of Dig	Description of Strata	Legend	GW
				(0.30)	E	Very soft dark brown silty CLAY with occasional rootlets. (TOPSOIL/MADE GROUND)		
			117.68	0.30		Firm locally soft grey mottled brown gravelly CLAY. Gravel is fine to coarse angular to subrounded mudstone, siltstone, rare brick and coal fragments. (MADE GROUND - OPENCAST BACKFILL)		
				(1.30)	E			
			116.38	1.60		Firm light grey mottled yellowish brown silty CLAY. (PENNINE MIDDLE COAL MEASURES FORMATION)		
				(0.90)	E-M			
			115.48	2.50		Between 2.20m and 2.50m bgl: becoming mottled grey, locally with rare cobble sized pockets of coal.		
						End of Trial Pit at 2.50m		

Method:

Groundwater:

Stability:

Remarks:

20T Tracked excavator

Groundwater not encountered.

Stable.

Trench pit backfilled with arisings on completion.

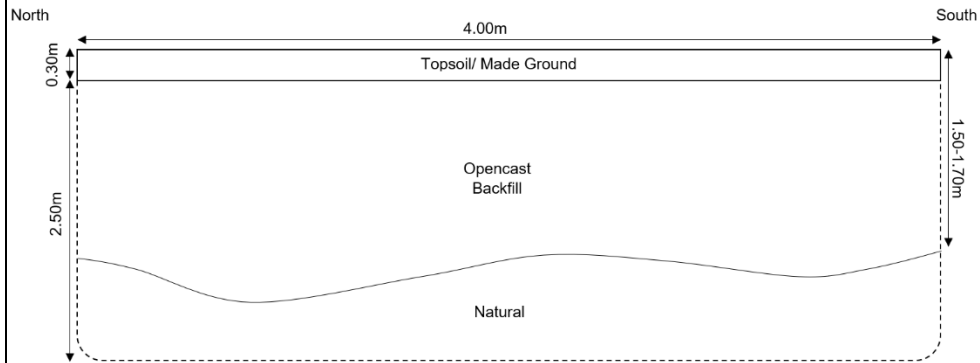
Length: 4.00m

Width: 4.00m

Logged: FC

Checked: SD

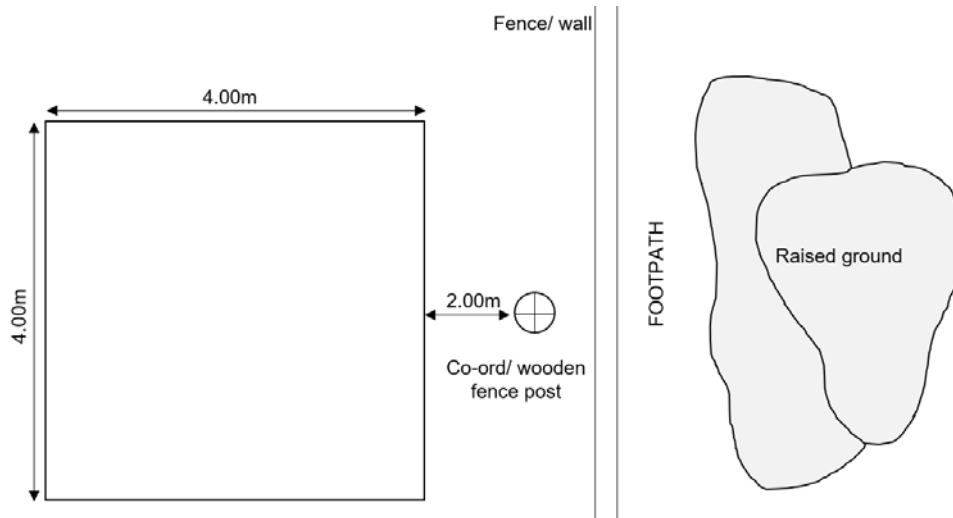
Cross Section Sketch



Looking north



Plan Sketch



Looking south



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Hoyland Common, Barnsley, M1 Junction 36

Title:

Trial Trench Record

TT2036

RS3001

AG3080-19

1 of 1

1:25

2.00m

Installation:
Remarks: Borehole backfilled with arisings on completion.

Exploratory hole logs to be read in conjunction with key sheet

BOREHOLE LOG - ROTARY SONIC

RS3002

Project Hoyland Common, Barnsley

Project No.

AG3080-19

Client Newlands Developments

Sheet

1 of 2

Start 21/02/2020

Coordinates E 435110.76 N 400280.91

Scale

1:25

End 24/02/2020

Ground Level 148.00m AOD

Total Depth

9.00m

Sample / Test Type	Depth (m)	Result	Dia./ Rec.	Level (mAoD)	Strata Depth (thickness) (m)	Description of Strata	Legend	GW	Install
D	0.90			147.70	(0.30)	Very soft dark brown slightly gravelly silty CLAY with rare organic matter. Gravel is fine to coarse angular to subrounded sandstone, brick and coal.			
					0.30	(TOPSOIL/MADE GROUND) Recovered as soft to very soft dark grey, brownish grey and black gravelly silty CLAY. Gravel is fine to coarse subangular predominantly coal, occasional mudstone and siltstone. (MADE GROUND - OPENCAST BACKFILL)			
D	2.90		170mm /33%			Between 2.60m and 3.00m bgl: locally recovered stiff.			
						Below 3.00m bgl: locally pockets of clayey gravel.			
B	4.00		170mm /72%						
D	4.00								
S	5.00	N = 9				Continued next sheet			

Installation: 50mm diameter standpipe installed to 5.00m bgl.

Remarks: Borehole cased to 6.00m bgl.

Groundwater Strikes					Drilled: TOR Drilling Ltd Logged: FC Checked: SD
Depth Strike	Rose to	Remarks	Cased	Sealed	

BOREHOLE LOG - ROTARY SONIC

RS3002

Project

Hoyland Common, Barnsley

Project No.

AG3080-19

Client

Newlands Developments

Sheet

2 of 2

Start

21/02/2020

Coordinates

E 435110.76 N 400280.91

Scale

1:25

End

24/02/2020

Ground Level

148.00m AOD

Total Depth

9.00m

Sample / Test Type	Depth (m)	Result	Dia./ Rec.	Level (mAoD)	Strata Depth (thickness) (m)	Description of Strata	Legend	GW	Install
S	6.50	N = 9	170mm /100%	142.50	5.50	Recovered as soft to very soft dark grey, brownish grey and black gravelly silty CLAY. Gravel is fine to coarse subangular predominantly coal, occasional mudstone and siltstone. (MADE GROUND - OPENCAST BACKFILL)			
					(1.55)	Firm grey mottled dark grey and brown slightly gravelly to gravelly silty CLAY. Gravel is fine to coarse subangular mudstone, siltstone, occasional coal and sandstone. (MADE GROUND - OPENCAST BACKFILL) <i>Between 5.80m and 6.00m bgl: locally stiff.</i> <i>Between 6.30m and 6.55m bgl: locally orangish brown.</i> <i>Between 6.85m and 7.05m bgl: locally black gravel including clarain coal.</i>			
D	7.00		146mm /100%	140.95	7.05	Extremely weak to very weak light grey and grey SILTSTONE recovered as fine to coarse subangular gravel. (PENNINE MIDDLE COAL MEASURES FORMATION)			
					(0.80)				
D	8.30		146mm /100%	140.15	7.85	Extremely weak light grey becoming grey MUDTONE. Bedding fractures subhorizontal closely spaced. (PENNINE MIDDLE COAL MEASURES FORMATION)			
					(1.15)				
				139.00	9.00	End of Borehole at 9.00m			

Installation: 50mm diameter standpipe installed to 5.00m bgl.
Remarks: Borehole cased to 6.00m bgl.

Groundwater Strikes					Drilled: TOR Drilling Ltd Logged: FC Checked: SD
Depth Strike	Rose to	Remarks	Cased	Sealed	

BOREHOLE LOG - ROTARY SONIC

RS3003

Project Hoyland Common, Barnsley

Project No.

AG3080-19

Client Newlands Developments

Sheet

1 of 2

Start 25/02/2020

Coordinates E 435119.29 N 400185.53

Scale

1:25

End 26/02/2020

Ground Level 146.77m AOD

Total Depth

9.70m

Sample / Test Type	Depth (m)	Result	Dia./ Rec.	Level (mAoD)	Strata Depth (thickness) (m)	Description of Strata	Legend	GW	Install
D	0.80		170mm /100%	145.87	(0.90)	Soft to firm orangish brown, brown and grey slightly gravelly slightly sandy CLAY with occasional cobbles. Gravel is fine to coarse subangular sandstone, mudstone, brick and coal. Cobbles are subangular siltstone and mudstone. (MADE GROUND - OPENCAST BACKFILL)			
S	1.50	N = 8			0.90	Stiff friable locally pockets of soft (possible drilling disturbance) grey, brownish grey and dark grey gravelly silty CLAY with occasional cobbles. Gravel is fine to coarse subangular mudstone, ironstone, coal and rare coal. Cobbles are subangular mudstone and siltstone. (MADE GROUND - OPENCAST BACKFILL)			
						At 1.50m bgl: cobble/boulder struck in core bit.			
D	2.00								
D	2.90								
S	3.00	N = 11							
			170mm /87%		(4.90)				
S	4.50	N = 6							
Continued next sheet									

Installation: 50mm diameter standpipe installed to 5.00m bgl.

Remarks: 300mm topsoil stripped prior to drilling rig set up. Borehole cased to 6.00m bgl.

Groundwater Strikes					Drilled: TOR Drilling Ltd
Depth Strike	Rose to	Remarks	Cased	Sealed	
					Logged: FC
					Checked: SD

RS3003

AG3080-19

2 of 2

1:25

9.70m

Installation: 50mm diameter standpipe installed to 5.00m bgl.
Remarks: 300mm topsoil stripped prior to drilling rig set up.
 Borehole cased to 6.00m bgl.

Exploratory hole logs to be read in conjunction with key sheet

BOREHOLE LOG - ROTARY SONIC

RS3004

Project Hoyland Common, Barnsley

Project No.

AG3080-19

Client Newlands Developments

Sheet

1 of 3

Start 26/02/2020

Coordinates E 435152.88 N 400039.67

Scale

1:25

End 27/02/2020

Ground Level 146.69m AOD

Total Depth

12.00m

Sample / Test Type	Depth (m)	Result	Dia./ Rec.	Level (mAOD)	Strata Depth (thickness) (m)	Description of Strata	Legend	GW	Install
D	0.70	N = 8	170mm /97%	145.69	(1.00)	Firm locally friable brownish grey, dark grey and brown slightly gravelly to gravelly CLAY with occasional cobbles (partial recovery). Gravel is fine to coarse subangular ironstone, coal, rare brick and (mudstone) siltstone. (MADE GROUND - OPENCASE BACKFILL) <i>Between 0.80m and 0.90m bgl: possible cobble of sandstone.</i>			
D	1.40				1.00	Firm grey locally brownish grey slightly gravelly to gravelly silty CLAY. Gravel is fine to coarse subangular predominantly mudstone and rare coal. (MADE GROUND - OPENCASE BACKFILL) <i>Between 1.50m and 1.70m bgl: recovered as very soft.</i> <i>From 1.70m and 2.50m bgl: soft.</i>			
S	1.50								
D	2.00	N = 7	170mm /97%	143.69	(2.00)				
D	2.30					<i>From 2.50m and 3.00m bgl: stiff, friable.</i>			
D	3.00	N = 7	170mm /83%	143.69	3.00	Predominantly firm greyish brown and grey locally dark grey slightly gravelly to gravelly silty CLAY. Gravel is fine to medium occasionally coarse mudstone, coal, brick and ironstone. (MADE GROUND - OPENCASE BACKFILL) <i>From 3.00m to 3.40m bgl: recovered very soft.</i>			
S	3.00								
S	4.50	N = 8			(2.80)	<i>From 4.50m to 5.00m bgl: recovered very soft.</i>			
Continued next sheet									

Installation: 50mm diameter standpipe installed to 4.00m bgl.

Remarks: 300mm topsoil stripped prior to drilling rig set up. Borehole cased to 7.50m bgl.

Groundwater Strikes					Drilled: TOR Drilling Ltd Logged: FC Checked: SD
Depth Strike	Rose to	Remarks	Cased	Sealed	

BOREHOLE LOG - ROTARY SONIC

RS3004

Project

Hoyland Common, Barnsley

Project No.

AG3080-19

Client

Newlands Developments

Sheet

2 of 3

Start

26/02/2020

Coordinates

E 435152.88 N 400039.67

Scale

1:25

End

27/02/2020

Ground Level

146.69m AOD

Total Depth

12.00m

Sample / Test Type	Depth (m)	Result	Dia./ Rec.	Level (mAoD)	Strata Depth (thickness) (m)	Description of Strata	Legend	GW	Install
S	6.00	N >50	170mm /90%	140.89	5.80	Predominantly firm greyish brown and grey locally dark grey slightly gravelly to gravelly silty CLAY. Gravel is fine to medium occasionally coarse mudstone, coal, brick and ironstone. (MADE GROUND - OPENCAST BACKFILL)			
				140.69	(0.20) 6.00	Reocvered as grey and light grey slightly gravelly COBBLES. Gravel is fine to coarse subangular extremely weak to very weak siltstone. Cobbles are extremely to very extremely light grey siltstone with thin laminae of carbonaceous material. (MADE GROUND - OPENCAST BACKFILL)			
D	6.50					Firm to stiff dark grey, brownish grey and black slightly gravelly to gravelly silty CLAY. Gravel is fine to coarse subangular siltstone, mudstone, ironstone and coal. (MADE GROUND - OPENCAST BACKFILL)			
S	7.50	N = 11			(3.80)				
D	9.00					From 8.50m to 9.00m bgl: predominantly grey.			
S	9.00	N = 20				From 9.00m to 9.80m bgl: dark grey locally black.			
			146mm /87%	136.89	9.80	Extremely weak light grey and grey SILTSTONE recovered as fine to coarse subangular gravel of siltstone and occasional mudstone.			
Continued next sheet									

Installation: 50mm diameter standpipe installed to 4.00m bgl.
Remarks: 300mm topsoil stripped prior to drilling rig set up. Borehole cased to 7.50m bgl.

Groundwater Strikes					Drilled: TOR Drilling Ltd Logged: FC Checked: SD
Depth Strike	Rose to	Remarks	Cased	Sealed	

RS3004

AG3080-19

3 of 3

1:25

12.00m

Installation: 50mm diameter standpipe installed to 4.00m bgl.
Remarks: 300mm topsoil stripped prior to drilling rig set up. Borehole cased to 7.50m bgl.

Exploratory hole logs to be read in conjunction with key sheet

BOREHOLE LOG - ROTARY SONIC

RS3005

Project Hoyland Common, Barnsley

Project No.

AG3080-19

Client Newlands Developments

Sheet

1 of 1

Start 05/02/2020

Coordinates E 435196.10 N 399838.35

Scale

1:25

End 06/02/2020

Ground Level 146.59m AOD

Total Depth

5.00m

Sample / Test Type	Depth (m)	Result	Dia./ Rec.	Level (mAoD)	Strata Depth (thickness) (m)	Description of Strata	Legend	GW	Install
D ES	0.15				(0.25)	Soft brown slightly gravelly CLAY with frequent rootlets. Gravel is fine to coarse subangular to subrounded sandstone and mudstone. (TOPSOIL)			
	0.15			146.34	0.25	Firm to stiff grey and orangish brown slightly gravelly CLAY. Gravel is fine to coarse subangular to subrounded sandstone, mudstone and coal. (PENNINE MIDDLE COAL MEASURES FORMATION)			
D	0.60		146mm /87%		(0.70)				
				145.64	0.95	Between 0.80m and 0.95m bgl: gravelly clay.			
					(0.80)	Very stiff brownish grey slightly gravelly CLAY. Gravel is fine to coarse angular to subrounded mudstone and coal. (PENNINE MIDDLE COAL MEASURES FORMATION)			
D UT	1.50	(62)		144.84	1.75	Stiff to very stiff brown and grey very gravelly CLAY. Gravel is fine to coarse angular to subangular mudstone and coal. (PENNINE MIDDLE COAL MEASURES FORMATION)			
B	2.00								
					(2.25)				
			146mm /100%						
D	3.80			142.59	4.00	Very weak interbedded light grey SILTSTONE and grey MUDSTONE. Distinctly weathered. Fractures dip <5 degrees extremely closely to very closely spaced undulating smooth. (PENNINE MIDDLE COAL MEASURES FORMATION)			
					(1.00)				
			146mm /100%						
C	4.84			141.59	5.00	End of Borehole at 5.00m			

Installation: 50mm diameter standpipe installed to 4.00m bgl.

Remarks:

Groundwater Strikes					Drilled: TOR Drilling Ltd
Depth Strike	Rose to	Remarks	Cased	Sealed	
					Logged: JW
					Checked: SD

BOREHOLE LOG - ROTARY SONIC

RS3007

Project

Hoyland Common, Barnsley

Project No.

AG3080-19

Client

Newlands Developments

Sheet

1 of 1

Start

05/02/2020

Coordinates

E 435328.50 N 399969.51

Scale

1:25

End

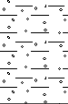
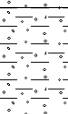
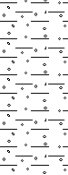
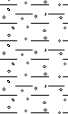
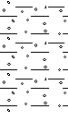
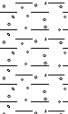
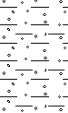
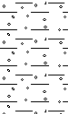
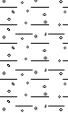
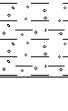
05/02/2020

Ground Level

146.99m AOD

Total Depth

4.50m

Sample / Test Type	Depth (m)	Result	Dia./ Rec.	Level (mAoD)	Strata Depth (thickness) (m)	Description of Strata	Legend	GW	Install
D	0.10	(48)	170mm /100%	146.84	(0.15)	Soft brown slightly gravelly CLAY with frequent rootlets. Gravel is fine to coarse subangular to subrounded mudstone and sandstone. (TOPSOIL)			
ES	0.10			0.15					
D	0.40			146.49	(0.35)	Firm light brown and orangish grey slightly gravelly CLAY. Gravel is fine to medium subangular to subrounded mudstone and sandstone. (PENNINE MIDDLE COAL MEASURES FORMATION)			
					0.50		Firm greyish brown gravelly CLAY. Gravel is fine to coarse subangular to subrounded mudstone and sandstone. (PENNINE MIDDLE COAL MEASURES FORMATION)		
				(0.60)					
D	1.00			145.89	1.10	Stiff to very stiff brownish grey slightly gravelly CLAY. Gravel is fine to coarse angular to subrounded mudstone and coal. (PENNINE MIDDLE COAL MEASURES FORMATION)			
UT	1.50			(0.95)					
									
									
D	2.50		170mm /100%	144.94	2.05	Very stiff grey slightly gravelly CLAY. Gravel is fine to coarse angular to subangular mudstone. (PENNINE MIDDLE COAL MEASURES FORMATION) From 2.05m to 2.25m bgl: recovered as gravel of fine to coarse angular to subangular mudstone. From 2.65m to 2.80m bgl: recovered as firm. From 3.00m to 4.05m bgl: recovered as firm.			
ES	2.50								
									
									
									
D	3.50	146mm /100%		(2.45)					
									
									
									
D	4.50		142.49	4.50	End of Borehole at 4.50m				

Installation:

Remarks: Borehole backfilled with bentonite grout on completion.

Groundwater Strikes				
Depth Strike	Rose to	Remarks	Cased	Sealed

Drilled: TOR Drilling Ltd

Logged: JW

Checked: SD

BOREHOLE LOG - ROTARY SONIC

RS3008

Project Hoyland Common, Barnsley

Project No.

AG3080-19

Client Newlands Developments

Sheet

1 of 2

Start 06/02/2020

Coordinates E 435255.81 N 399842.65

Scale

1:25

End 06/02/2020

Ground Level 146.54m AOD

Total Depth

5.00m

Sample / Test Type	Depth (m)	Result	Dia./ Rec.	Level (mAoD)	Strata Depth (thickness) (m)	Description of Strata	Legend	GW	Install
D	0.10				(0.20)	Soft brown slightly gravelly CLAY with frequent rootlets. Gravel is fine to coarse subangular to subrounded mudstone and sandstone.			
ES	0.10			146.34	0.20	(TOPSOIL)			
D	0.50					Firm to stiff grey and orangish brown slightly gravelly CLAY. Gravel is fine to coarse angular to subrounded mudstone and fusain coal. (PENNINE MIDDLE COAL MEASURES FORMATION)			
			170mm /100%		(1.50)				
D	1.50			144.84	1.70	Very stiff brown and grey gravelly CLAY. Gravel is fine to coarse angular to subangular mudstone and fusain coal. (PENNINE MIDDLE COAL MEASURES FORMATION)			
D	2.20				(0.80)				
				144.04	2.50	Black dull fusain COAL recovered as black sandy gravel. (PENNINE MIDDLE COAL MEASURES FORMATION)			
				143.74	2.80				
D	3.00					Very stiff grey slightly gravelly CLAY. Gravel is fine to coarse angular to subangular mudstone. (PENNINE MIDDLE COAL MEASURES FORMATION)			
			146mm /47%		(2.12)				
D	4.00								
				141.62	4.92				
				141.54	(0.08)				
						Continued next sheet			

Installation: 50mm diameter standpipe installed to 3.00m bgl.

Remarks: Borehole cased to 1.50m bgl.

Groundwater Strikes					Drilled: TOR Drilling Ltd
Depth Strike	Rose to	Remarks	Cased	Sealed	
					Logged: FD
					Checked: SD

RS3008

Project No. AG3080-19

Sheet 2 of 2

Scale 1:25

Total Depth 5.00m

Sample / Test Type	Depth (m)	Result	Dia./ Rec.	Level (mAoD)	Strata Depth (thickness) (m)	Description of Strata	Legend	GW	Install
					5.00	Very weak thinly bedded grey MUDSTONE. (PENNINE MIDDLE COAL MEASURES FORMATION) End of Borehole at 5.00m			

Groundwater Strikes					Drilled: TOR Drilling Ltd Logged: FD Checked: SD
Depth Strike	Rose to	Remarks	Cased	Sealed	

Sample / Test Type	Depth (m)	Result	Dia./ Rec.	Level (mAoD)	Strata Depth (thickness) (m)	Description of Strata	Legend	GW	Install
D ES	0.15	(73)	170mm /100%	145.69	(0.30)	Soft brown slightly gravelly CLAY with frequent rootlets. Gravel is fine to medium subangular to subrounded mudstone and sandstone. (TOPSOIL)			
D	0.55				0.30	Firm light brown slightly gravelly CLAY. Gravel is fine to coarse subangular to subrounded mudstone and coal. (PENNINE MIDDLE COAL MEASURES FORMATION)			
UT	1.00				0.65	Stiff light grey and orange slightly gravelly CLAY. Gravel is fine to coarse subangular to subrounded mudstone and coal. (PENNINE MIDDLE COAL MEASURES FORMATION)			
D	1.70	N >50	146mm /100%	143.49	(1.85)	Extremely weak thinly laminated grey MUDSTONE. Fractures dip <5 degrees very closely to closely spaced undulating smooth. (PENNINE MIDDLE COAL MEASURES FORMATION)			
D	2.85				2.50				
D	2.95								
S	2.95								
D ES	3.50				(2.45)				
D	4.50								
				141.04	4.95	End of Borehole at 4.95m			

Installation:
Remarks: Borehole backfilled with bentonite grout on completion.

Groundwater Strikes					Drilled: TOR Drilling Ltd Logged: JW Checked: SD
Depth Strike	Rose to	Remarks	Cased	Sealed	

BOREHOLE LOG - ROTARY SONIC

RS3010

Project Hoyland Common, Barnsley

Project No.

AG3080-19

Client Newlands Developments

Sheet

1 of 2

Start 31/01/2020

Coordinates E 435249.75 N 399744.68

Scale

1:25

End 31/01/2020

Ground Level 148.08m AOD

Total Depth

7.00m

Sample / Test Type	Depth (m)	Result	Dia./ Rec.	Level (mAoD)	Strata Depth (thickness) (m)	Description of Strata	Legend	GW	Install
D ES	0.10 0.10	N = 13	170mm /100%	147.88	(0.20) 0.20	Soft brown slightly gravelly CLAY with frequent rootlets. Gravel is fine to coarse subangular to subrounded sandstone, mudstone, coal and brick. (TOPSOIL/MADE GROUND)			
D	0.50			147.48	(0.40) 0.60	Firm dark brown and orange slightly gravelly CLAY. Gravel is fine to coarse subangular to subrounded sandstone, mudstone and coal. (PENNINE MIDDLE COAL MEASURES FORMATION)			
D	1.00			146.78	(0.70) 1.30	Stiff grey and orange slightly gravelly CLAY. Gravel is fine to coarse angular to subrounded mudstone. (PENNINE MIDDLE COAL MEASURES FORMATION)			
D S	1.50 1.50			170mm /100%	(1.70)	Stiff brownish grey slightly gravelly CLAY. Gravel is fine to coarse angular to subrounded mudstone. (PENNINE MIDDLE COAL MEASURES FORMATION) From 2.00m bgl: stiff to very stiff.			
D D S	3.00 3.00 3.00	N >50	146mm /100%	145.08	3.00	Extremely weak thinly bedded dark brownish grey MUDSTONE. Recovered as gravel of fine to coarse angular to subangular mudstone in a light grey clay matrix. Extremely weathered. No fractures observed. (PENNINE MIDDLE COAL MEASURES FORMATION)			
					(1.50)				
					</				

Installation: 50mm diameter standpipe installed to 5.00m bgl.

Remarks: Borehole cased to 3.00m bgl.

Groundwater Strikes					Drilled: TOR Drilling Ltd
Depth Strike	Rose to	Remarks	Cased	Sealed	
					Logged: JW
					Checked: SD

BOREHOLE LOG - ROTARY SONIC

RS3010

Project Hoyland Common, Barnsley

Project No.

AG3080-19

Client Newlands Developments

Sheet

2 of 2

Start 31/01/2020

Coordinates E 435249.75 N 399744.68

Scale

1:25

End 31/01/2020

Ground Level 148.08m AOD

Total Depth

7.00m

Sample / Test Type	Depth (m)	Result	Dia./ Rec.	Level (mAoD)	Strata Depth (thickness) (m)	Description of Strata	Legend	GW	Install
D	5.30					Extremely weak thinly bedded grey MUDSTONE. Extremely weathered. No fractures observed. (PENNINE MIDDLE COAL MEASURES FORMATION) <i>Between 4.80m and 5.40m bgl: recovered as very stiff grey slightly gravelly clay. Gravel is fine to coarse angular to subangular mudstone and coal.</i> <i>Between 5.40m and 6.00m bgl: recovered as grey gravel of fine to coarse angular to subangular mudstone and coal.</i>			
					(1.90)				
			146mm /82%			<i>Between 6.00m and 6.70m bgl: recovered as firm to stiff grey slightly gravelly clay. Gravel is fine to coarse angular to subangular mudstone.</i>			
D	6.30								
				141.38	6.70	Very weak light grey SILTSTONE. Distinctly weathered. Fractures dip <5 degrees very closely to closely spaced rough undulating. (PENNINE MIDDLE COAL MEASURES FORMATION)	xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx		
				141.08	7.00	End of Borehole at 7.00m			

Installation: 50mm diameter standpipe installed to 5.00m bgl.

Remarks: Borehole cased to 3.00m bgl.

Groundwater Strikes					Drilled: TOR Drilling Ltd Logged: JW Checked: SD
Depth Strike	Rose to	Remarks	Cased	Sealed	

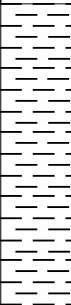
RS3011

Project No. AG3080-19

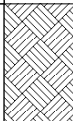
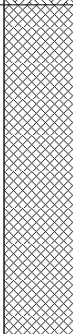
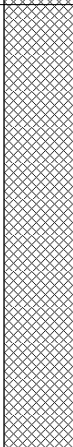
Sheet 2 of 2

Coordinates E 435359.34 N 399792.67

Ground Level 147.39m AOD

Sample / Test Type	Depth (m)	Result	Dia./ Rec.	Level (mAoD)	Strata Depth (thickness) (m)	Description of Strata	Legend	GW	Install
D	5.50					Extremely weak thinly bedded grey MUDSTONE. Recovered as very stiff grey gravelly clay. Gravel is fine to coarse angular to subangular mudstone. (PENNINE MIDDLE COAL MEASURES FORMATION)			
				141.39	6.00	End of Borehole at 6.00m			

Groundwater Strikes					Drilled: TOR Drilling Ltd Logged: JW Checked: SD
Depth Strike	Rose to	Remarks	Cased	Sealed	

Sample / Test Type	Depth (m)	Result	Dia./ Rec.	Level (mAoD)	Strata Depth (thickness) (m)	Description of Strata	Legend	GW	Install
D	0.90		170mm /27%	144.72	(0.40) 0.40	Soft dark brown slightly gravelly silty CLAY with rare rootlets. Gravel is fine to coarse subangular brick, quartzite, sandstone and rare coal. (TOPSOIL/MADE GROUND)			
					(1.10)	Firm to stiff orangish brown and grey slightly gravelly CLAY. Gravel is fine to coarse subangular mudstone, occasional ironstone, brick and siltstone. (MADE GROUND - OPENCAST BACKFILL)			
D	2.90		170mm /93%	143.62	1.50	Stiff locally firm friable gravelly to very gravelly silty CLAY. Gravel is fine to coarse subangular mudstone, occasional coal, sandstone and ironstone. (MADE GROUND - OPENCAST BACKFILL)			
						Between 3.00m and 3.75m bgl: locally soft.			
			170mm /48%		(4.95)				
Continued next sheet									

Installation:
Remarks: Borehole cased to 3.00m bgl. Borehole backfilled with bentonite grout on completion.

Groundwater Strikes					Drilled: TOR Drilling Ltd Logged: FC Checked: SD
Depth Strike	Rose to	Remarks	Cased	Sealed	

BOREHOLE LOG - ROTARY SONIC

RS3012

Project

Hoyland Common, Barnsley

Project No.

AG3080-19

Client

Newlands Developments

Sheet

2 of 2

Start

20/02/2020

Coordinates

E 435447.60 N 399870.71

Scale

1:25

End

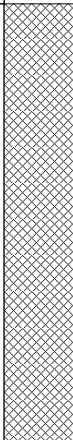
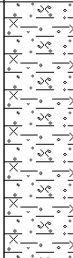
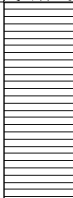
20/02/2020

Ground Level

145.12m AOD

Total Depth

8.50m

Sample / Test Type	Depth (m)	Result	Dia./ Rec.	Level (mAoD)	Strata Depth (thickness) (m)	Description of Strata	Legend	GW	Install	
D	8.20		170mm /100%	138.67	6.45	Stiff locally firm friable gravelly to very gravelly silty CLAY. Gravel is fine to coarse subangular mudstone, occasional coal, sandstone and ironstone. (MADE GROUND - OPENCASE BACKFILL) <i>Between 5.00m and 6.45m bgl: predominantly brown and orangish brown.</i>				
					(0.55)	Extremely weak to very weak light grey SILTSTONE. (PENNINE MIDDLE COAL MEASURES FORMATION) <i>Between 6.45m and 6.50m bgl: locally black, containing coal.</i>				
			146mm /100%	138.12	7.00	Firm thinly laminated grey slightly gravelly silty CLAY. Gravel is fine to coarse angular to subangular mudstone and siltstone. (PENNINE MIDDLE COAL MEASURES FORMATION) <i>Between 7.60m and 7.65m bgl: siltstone band.</i> <i>Between 7.70m and 7.74m bgl: siltstone band.</i>				
					137.27	7.85	Extremely weak to weak grey silty MUDSTONE. (PENNINE MIDDLE COAL MEASURES FORMATION) <i>Below 8.10m bgl: noted to be thinly laminated.</i>			
						(0.65)	<i>Between 8.40m and 8.45m bgl: firm grey gravelly silt. Gravel is fine to medium angular mudstone.</i>			
			136.62	8.50	End of Borehole at 8.50m					

Installation:
Remarks: Borehole cased to 3.00m bgl. Borehole backfilled with bentonite grout on completion.

Groundwater Strikes					Drilled: TOR Drilling Ltd Logged: FC Checked: SD
Depth Strike	Rose to	Remarks	Cased	Sealed	

BOREHOLE LOG - ROTARY SONIC

RS3013

Project Hoyland Common, Barnsley

Project No.

AG3080-19

Client Newlands Developments

Sheet

1 of 2

Start 04/02/2020

Coordinates E 435274.32 N 399625.02

Scale

1:25

End 04/02/2020

Ground Level 149.64m AOD

Total Depth

7.00m

Sample / Test Type	Depth (m)	Result	Dia./ Rec.	Level (mAoD)	Strata Depth (thickness) (m)	Description of Strata	Legend	GW	Install
D ES	0.20 0.20			149.34	(0.30) 0.30	Soft brown slightly gravelly CLAY with frequent rootlets. Gravel is fine to coarse subangular to subrounded mudstone and sandstone. (TOPSOIL/MADE GROUND)			
D	0.60				(0.85)	Firm to stiff greyish brown and orange slightly gravelly CLAY. Gravel is fine to coarse angular to subrounded mudstone and coal. (MADE GROUND - OPENCAST BACKFILL)			
B	1.15		170mm /38%	148.49	1.15	Firm brown and grey gravelly CLAY. Gravel is fine to coarse angular to subrounded mudstone and coal. (MADE GROUND - OPENCAST BACKFILL)			
					(3.35)				
			170mm /67%						
				145.14	4.50	Stiff light brown and grey slightly gravelly CLAY. Gravel is fine to coarse angular to subrounded mudstone and coal. (MADE GROUND - OPENCAST BACKFILL)			
				144.89	4.75	Black dull fusain COAL. Recovered as fine to coarse angular to subangular gravel of coal. (PENNINE MIDDLE COAL MEASURES FORMATION)			
				144.64	5.00				

Continued next sheet

Installation: 50mm diameter standpipe installed to 4.00m bgl.

Remarks: Borehole cased to 3.00m bgl.

Groundwater Strikes					Drilled: TOR Drilling Ltd Logged: FD Checked: SD
Depth Strike	Rose to	Remarks	Cased	Sealed	

RS3013

AG3080-19

2 of 2

1:25

7.00m

Installation: 50mm diameter standpipe installed to 4.00m bgl.
Remarks: Borehole cased to 3.00m bgl.

Exploratory hole logs to be read in conjunction with key sheet

BOREHOLE LOG - ROTARY SONIC

RS3014

Project

Hoyland Common, Barnsley

Project No.

AG3080-19

Client

Newlands Developments

Sheet

1 of 2

Start

03/02/2020

Coordinates

E 435333.00 N 399678.70

Scale

1:25

End

03/02/2020

Ground Level

150.34m AOD

Total Depth

9.00m

Sample / Test Type	Depth (m)	Result	Dia./ Rec.	Level (mAoD)	Strata Depth (thickness) (m)	Description of Strata	Legend	GW	Install		
D ES	0.15			150.09	(0.25)	Soft brown slightly gravelly CLAY with frequent rootlets. Gravel is fine to coarse subangular to subrounded mudstone and sandstone. (TOPSOIL/MADE GROUND)					
	0.15				0.25	Firm to stiff brown slightly gravelly CLAY. Gravel is fine to coarse angular to subangular mudstone and coal. (MADE GROUND - OPENCASET BACKFILL)					
D	0.80			149.39	(0.70)						
					0.95						Stiff to very stiff greyish brown and orange slightly gravelly CLAY. Gravel is fine to coarse angular to subangular mudstone and coal. (MADE GROUND - OPENCASET BACKFILL)
D	1.80										
B ES	3.00										
	3.00										
					170mm /50%						
			170mm /80%		(6.20)						
Continued next sheet											

Installation:

Remarks: Borehole cased to 3.00m bgl. Borehole backfilled with bentonite grout on completion.

Groundwater Strikes					Drilled: TOR Drilling Ltd Logged: JW Checked: SD
Depth Strike	Rose to	Remarks	Cased	Sealed	

Sample / Test Type	Depth (m)	Result	Dia./ Rec.	Level (mAoD)	Strata Depth (thickness) (m)	Description of Strata	Legend	GW	Install
B	6.00		170mm /87%			Stiff to very stiff greyish brown and orange slightly gravelly CLAY. Gravel is fine to coarse angular to subangular mudstone and coal. (MADE GROUND - OPENCAST BACKFILL)			
						Between 6.00m and 6.55m bgl: soft to firm.			
D ES	7.50 7.50		146mm /93%	143.19	7.15	Extremely weak thinly bedded grey MUDSTONE. Recovered as very stiff grey gravelly clay. Gravel is fine to coarse angular to subangular mudstone. (PENNINE MIDDLE COAL MEASURES FORMATION)			
					(1.85)				
				141.34	9.00	End of Borehole at 9.00m			

Installation:
Remarks: Borehole cased to 3.00m bgl. Borehole backfilled with bentonite grout on completion.

Groundwater Strikes					Drilled: TOR Drilling Ltd Logged: JW Checked: SD
Depth Strike	Rose to	Remarks	Cased	Sealed	

BOREHOLE LOG - ROTARY SONIC

RS3015

Project Hoyland Common, Barnsley

Project No.

AG3080-19

Client Newlands Developments

Sheet

1 of 3

Start 31/01/2020

Coordinates E 435420.87 N 399773.19

Scale

1:25

End **Ground Level** 147.92m AOD

Total Depth

11.00m

Sample / Test Type	Depth (m)	Result	Dia./ Rec.	Level (mAOD)	Strata Depth (thickness) (m)	Description of Strata	Legend	GW	Install
D ES	0.15			147.67	(0.25)	Soft to firm light brown slightly gravelly CLAY with frequent rootlets. Gravel is fine to medium subangular to subrounded mudstone and sandstone.			
	0.15				0.25	(TOPSOIL/MADE GROUND)			
D	0.60			147.22	(0.45)	Firm brown slightly gravelly CLAY. Gravel is fine to coarse subangular to subrounded mudstone and sandstone. (MADE GROUND - OPENCAST BACKFILL)			
B	1.00				0.70	Stiff to very stiff grey slightly gravelly CLAY. Gravel is fine to medium occasionally coarse subangular mudstone and siltstone. (MADE GROUND - OPENCAST BACKFILL)			
			170mm /45%		(2.30)				
				144.92	3.00	Stiff greyish brown and dark grey gravelly CLAY. Gravel is fine to coarse angular to subangular mudstone and sandstone. (MADE GROUND - OPENCAST BACKFILL)			
			170mm /33%		(2.40)				
D ES	4.50								
	4.50								
Continued next sheet									

Installation: 50mm diameter standpipe installed to 7.00m bgl.

Remarks: Borehole cased to 9.00m bgl.

Groundwater Strikes					Drilled: TOR Drilling Ltd
Depth Strike	Rose to	Remarks	Cased	Sealed	
					Logged: JW
					Checked: SD

BOREHOLE LOG - ROTARY SONIC

RS3015

Project Hoyland Common, Barnsley

Project No.

AG3080-19

Client Newlands Developments

Sheet

2 of 3

Start 31/01/2020

Coordinates E 435420.87 N 399773.19

Scale

1:25

End

Ground Level 147.92m AOD

Total Depth

11.00m

Sample / Test Type	Depth (m)	Result	Dia./ Rec.	Level (mAOD)	Strata Depth (thickness) (m)	Description of Strata	Legend	GW	Install
B	6.00			142.52	5.40	Stiff greyish brown and dark grey gravelly CLAY. Gravel is fine to coarse angular to subangular mudstone and sandstone. (MADE GROUND - OPENCAST BACKFILL)			
					(1.05)	Stiff to very stiff grey silty CLAY. (MADE GROUND - OPENCAST BACKFILL)			
						Between 6.00m and 6.40m bgl: light grey slightly gravelly to gravelly. Gravel is fine to coarse angular to subangular mudstone and coal.			
			170mm /90%	141.47	6.45	Stiff greyish brown and brown slightly gravelly to gravelly CLAY. Gravel is fine to coarse subangular mudstone. (MADE GROUND - OPENCAST BACKFILL)			
					(1.15)	From 7.20m bgl: gravel includes sandstone.			
D	8.00			140.32	7.60	Extremely weak thinly bedded grey MUDSTONE. (PENNINE MIDDLE COAL MEASURES FORMATION) Between 7.60m and 8.15m bgl: recovered as very stiff grey slightly gravelly clay. Gravel is fine to coarse angular to subangular coal.			
					(1.90)	Between 8.15m and 9.50m bgl: recovered as very stiff grey gravelly clay. Gravel is fine to coarse angular to subangular mudstone.			
D	10.00			138.42	9.50	Very weak light grey SILTSTONE. Recovered as light grey gravel of fine to coarse angular to subangular siltstone. (PENNINE MIDDLE COAL MEASURES FORMATION)			
				138.27	9.65	Extremely weak thinly bedded grey MUDSTONE. Recovered as stiff to very stiff grey gravelly clay. Gravel is fine to coarse angular to subangular mudstone.			

Continued next sheet

Installation: 50mm diameter standpipe installed to 7.00m bgl.

Remarks: Borehole cased to 9.00m bgl.

Groundwater Strikes					Drilled: TOR Drilling Ltd Logged: JW Checked: SD
Depth Strike	Rose to	Remarks	Cased	Sealed	

Sample / Test Type	Depth (m)	Result	Dia./ Rec.	Level (mAoD)	Strata Depth (thickness) (m)	Description of Strata	Legend	GW	Install
			146mm /100%		(1.35)	Extremely weak thinly bedded grey MUDSTONE. Recovered as stiff to very stiff grey gravelly clay. Gravel is fine to coarse angular to subangular mudstone. (PENNINE MIDDLE COAL MEASURES FORMATION)			
				136.92	11.00	End of Borehole at 11.00m			

Installation: 50mm diameter standpipe installed to 7.00m bgl.
Remarks: Borehole cased to 9.00m bgl.

Groundwater Strikes					Drilled: TOR Drilling Ltd Logged: JW Checked: SD
Depth Strike	Rose to	Remarks	Cased	Sealed	

BOREHOLE LOG - ROTARY SONIC

RS3017

Project Hoyland Common, Barnsley

Project No.

AG3080-19

Client Newlands Developments

Sheet

1 of 3

Start 18/02/2020

Coordinates E 435519.80 N 399863.76

Scale

1:25

End 19/02/2020

Ground Level 144.50m AOD

Total Depth

12.00m

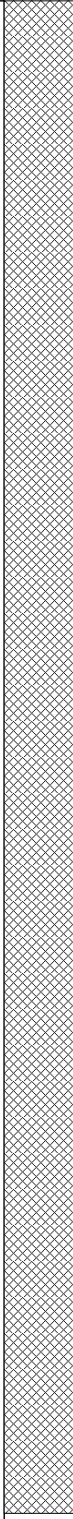
Sample / Test Type	Depth (m)	Result	Dia./ Rec.	Level (mAoD)	Strata Depth (thickness) (m)	Description of Strata	Legend	GW	Install
D	1.00		170mm /93%	144.20	(0.30)	Very soft dark brown slightly gravelly silty CLAY with occasional rootlets. Gravel is fine to medium subangular to subrounded quartzite, brick and occasional coal. (TOPSOIL/MADE GROUND)			
					0.30	Firm locally soft orangish brown mottled grey slightly gravelly silty CLAY. Gravel is fine to coarse subangular to subrounded predominantly mudstone, occasional sandstone, coal and fine brick. (MADE GROUND - OPENCASE BACKFILL)			
				143.40	(0.80)	Firm to stiff predominantly grey locally brownish grey and dark grey silty gravelly CLAY. Gravel is fine to medium subangular occasionally coarse of predominantly mudstone and occasional coal. (MADE GROUND - OPENCASE BACKFILL)			
B	2.00		170mm /80%	142.60	1.90	Very stiff locally stiff brownish grey and grey silty gravelly CLAY. Gravel is fine to medium subangular occasionally coarse predominantly mudstone, siltstone and rare coal. (MADE GROUND - OPENCASE BACKFILL)			
D	2.20								
			170mm /27%						
D	4.50								
D	5.00								

Continued next sheet

Installation: 50mm diameter standpipe installed to 5.00m bgl.

Remarks: Borehole cased to 3.00m bgl.

Groundwater Strikes					Drilled: TOR Drilling Ltd
Depth Strike	Rose to	Remarks	Cased	Sealed	
					Logged: FC
					Checked: SD

Sample / Test Type	Depth (m)	Result	Dia./ Rec.	Level (mAoD)	Strata Depth (thickness) (m)	Description of Strata	Legend	GW	Install
D	8.00		170mm /93%	(8.20)		Very stiff locally stiff brownish grey and grey silty gravelly CLAY. Gravel is fine to medium subangular occasionally coarse predominantly mudstone, siltstone and rare coal. (MADE GROUND - OPENCASE BACKFILL)			
						From 6.00m to 6.50m bgl: recovered very soft.			
			170mm /53%						
			170mm /83%						
			146mm /80%			From 9.00m to 10.10m bgl: recovered soft to firm.			
Continued next sheet									

Installation: 50mm diameter standpipe installed to 5.00m bgl.
Remarks: Borehole cased to 3.00m bgl.

Groundwater Strikes					Drilled: TOR Drilling Ltd Logged: FC Checked: SD
Depth Strike	Rose to	Remarks	Cased	Sealed	

RS3017

AG3080-19

3 of 3

1:25

12.00m

Installation: 50mm diameter standpipe installed to 5.00m bgl.
Remarks: Borehole cased to 3.00m bgl.

Exploratory hole logs to be read in conjunction with key sheet

RS3018

AG3080-19

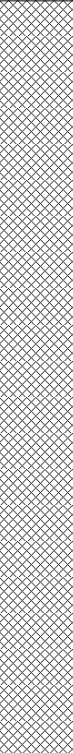
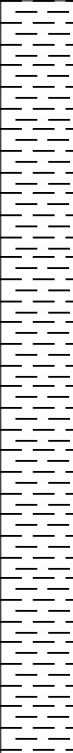
1 of 2

1:25

9.50m

Installation:
Remarks: Borehole cased to 3.00m bgl. Borehole backfilled with bentonite grout on completion.

Exploratory hole logs to be read in conjunction with key sheet

Sample / Test Type	Depth (m)	Result	Dia./ Rec.	Level (mAoD)	Strata Depth (thickness) (m)	Description of Strata	Legend	GW	Install
D ES	7.00 7.00		170mm /60%	141.30	7.50	Very stiff locally recovered very stiff, locally friable, brownish grey gravelly CLAY. Gravel is fine to coarse angular to subangular mudstone and fusain coal. (MADE GROUND - OPENCAST BACKFILL)			
D	8.00		146mm /80%	(2.00)		Extremely weak thinly bedded grey MUDSTONE recovered as very stiff brownish grey slightly gravelly clay. Gravel is fine to coarse angular to subangular mudstone and clarain coal. (PENNINE MIDDLE COAL MEASURES FORMATION) <i>Between 7.50m and 7.70m bgl: recovered as gravel of fine to coarse angular to subangular mudstone and clarain coal.</i>			
D	9.00								
			139.30	9.50		End of Borehole at 9.50m			

Installation:
Remarks: Borehole cased to 3.00m bgl. Borehole backfilled with bentonite grout on completion.

Groundwater Strikes					Drilled: TOR Drilling Ltd Logged: JW Checked: SD
Depth Strike	Rose to	Remarks	Cased	Sealed	

BOREHOLE LOG - ROTARY SONIC

RS3019

Project Hoyland Common, Barnsley

Project No.

AG3080-19

Client Newlands Developments

Sheet

1 of 3

Start 18/02/2020

Coordinates E 435510.06 N 399787.54

Scale

1:25

End 18/02/2020

Ground Level 145.17m AOD

Total Depth

12.00m

Sample / Test Type	Depth (m)	Result	Dia./ Rec.	Level (mAoD)	Strata Depth (thickness) (m)	Description of Strata	Legend	GW	Install
D	0.70			144.82	(0.35)	Very soft dark brown slightly gravelly silty CLAY with rare rootlets. Gravel is fine to coarse subangular mudstone, siltstone and rare brick. (TOPSOIL/MADE GROUND)			
					0.35	Firm locally soft orangish brown mottled brown silty slightly gravelly CLAY. Gravel is fine to coarse subangular siltstone, sandstone, brick and coal. (MADE GROUND - OPENCASE BACKFILL)			
					(1.15)				
				143.67	1.50	Firm locally stiff friable grey mottled locally brownish grey silty gravelly CLAY with occasional cobbles. Gravel is fine to coarse subangular mudstone, siltstone and rare coal. Cobbles are subangular siltstone. (MADE GROUND - OPENCASE BACKFILL) <i>Between 1.50m and 3.40m bgl: locally soft.</i>			
D	2.70								
D	3.00								
Continued next sheet									

Installation: 50mm diameter standpipe installed to 5.00m bgl.

Remarks: Borehole cased to 3.00m bgl.

Groundwater Strikes					Drilled: TOR Drilling Ltd Logged: FC Checked: SD
Depth Strike	Rose to	Remarks	Cased	Sealed	

Sample / Test Type	Depth (m)	Result	Dia./ Rec.	Level (mAoD)	Strata Depth (thickness) (m)	Description of Strata	Legend	GW	Install
D	6.50					Firm locally stiff friable grey mottled locally brownish grey silty gravelly CLAY with occasional cobbles. Gravel is fine to coarse subangular mudstone, siltstone and rare coal. Cobbles are subangular siltstone. (MADE GROUND - OPENCAST BACKFILL) <i>Between 5.00m and 6.50m bgl: locally soft.</i>			
	8.00				(9.00)				
			170mm /100%			From 9.70m and 10 00m bgl: very soft.			
Continued next sheet									

Installation: 50mm diameter standpipe installed to 5.00m bgl.
Remarks: Borehole cased to 3.00m bgl.

Groundwater Strikes					Drilled: TOR Drilling Ltd Logged: FC Checked: SD
Depth Strike	Rose to	Remarks	Cased	Sealed	

Sample / Test Type	Depth (m)	Result	Dia./ Rec.	Level (mAoD)	Strata Depth (thickness) (m)	Description of Strata	Legend	GW	Install
						Firm locally stiff friable grey mottled locally brownish grey silty gravelly CLAY with occasional cobbles. Gravel is fine to coarse subangular mudstone, siltstone and rare coal. Cobbles are subangular siltstone. (MADE GROUND - OPENCAST BACKFILL)			
				134.67	10.50	At 10.45m bgl: cobble of mudstone.			
						Grey clayey very silty GRAVEL. Gravel is fine to coarse angular to subangular mudstone and siltstone. (PENNINE MIDDLE COAL MEASURES FORMATION)			
					(1.00)	From 10.90m to 10.96m bgl: very stiff thinly laminated slightly gravelly silty clay. Gravel is fine to coarse angular mudstone.			
			146mm /100%	133.67	11.50	Weak indistinctly thinly laminated silty MUDSTONE recovered as fine to coarse gravel. (PENNINE MIDDLE COAL MEASURES FORMATION)			
				133.17	12.00	End of Borehole at 12 00m			

Installation: 50mm diameter standpipe installed to 5.00m bgl.
Remarks: Borehole cased to 3.00m bgl.

Groundwater Strikes					Drilled: TOR Drilling Ltd Logged: FC Checked: SD
Depth Strike	Rose to	Remarks	Cased	Sealed	

Sample / Test Type	Depth (m)	Result	Dia./ Rec.	Level (mAoD)	Strata Depth (thickness) (m)	Description of Strata	Legend	GW	Install
D	0.70		170mm /53%	143.18	(0.35)	Very soft dark brown slightly gravelly silty CLAY with rare rootlets. Gravel is fine to medium subangular brick, coal and mudstone. (TOPSOIL/MADE GROUND)			
					0.35	Firm locally stiff friable brown and greyish brown silty slightly gravelly CLAY. Gravel is fine to coarse subangular to subrounded mudstone, ironstone and rare coal. (MADE GROUND - OPENCAST BACKFILL) <i>Between 0.35m and 0.50m bgl: rare rootlets.</i>			
D	2.50		170mm /100%			<i>Between 1.70m and 1.90m bgl: possible cobble of mudstone.</i>			
						<i>From 3.00m to 3.50m bgl: firm.</i>			
D	4.00		170mm /37%			<i>From 3.50m to 6.00m bgl: stiff.</i>			
D	4.50								
Continued next sheet									

Installation:
Remarks: Borehole cased to 3.00m bgl. Borehole backfilled with bentonite grout on completion.

Groundwater Strikes					Drilled: TOR Drilling Ltd Logged: FC Checked: SD
Depth Strike	Rose to	Remarks	Cased	Sealed	

RS3020

Project No. AG3080-19

Sheet 2 of 3

Scale 1:25

Total Depth 12.00m

Installation:
Remarks: Borehole cased to 3.00m bgl. Borehole backfilled with bentonite grout on completion.

Exploratory hole logs to be read in conjunction with key sheet

Sample / Test Type	Depth (m)	Result	Dia./ Rec.	Level (mAoD)	Strata Depth (thickness) (m)	Description of Strata	Legend	GW	Install
				133.33	10.20	Firm locally stiff friable brown and greyish brown silty slightly gravelly CLAY. Gravel is fine to coarse subangular to subrounded mudstone, ironstone and rare coal. (MADE GROUND - OPENCAST BACKFILL)			
			146mm /100%		(1.80)	Extremely to very weak light grey and grey medium interlaminated SILTSTONE and MUDSTONE recovered as gravel and cobbles. (PENNINE MIDDLE COAL MEASURES FORMATION)			
				131.53	12.00	End of Borehole at 12 00m			

Installation:
Remarks: Borehole cased to 3.00m bgl. Borehole backfilled with bentonite grout on completion.

Groundwater Strikes					Drilled: TOR Drilling Ltd Logged: FC Checked: SD
Depth Strike	Rose to	Remarks	Cased	Sealed	

BOREHOLE LOG - ROTARY SONIC

RS3022

Project Hoyland Common, Barnsley

Project No.

AG3080-19

Client Newlands Developments

Sheet

1 of 2

Start 10/02/2020

Coordinates E 435395.15 N 399640.23

Scale

1:25

End 12/02/2020

Ground Level 149.57m AOD

Total Depth

7.50m

Sample / Test Type	Depth (m)	Result	Dia./ Rec.	Level (mAoD)	Strata Depth (thickness) (m)	Description of Strata	Legend	GW	Install
D ES	0.15 0.15			149.32	(0.25) 0.25	Soft brown slightly gravelly CLAY with frequent rootlets. Gravel is fine to coarse subangular to subrounded sandstone and mudstone. (TOPSOIL/MADE GROUND)			
D	0.60				(0.85)	Firm to stiff brownish grey and orange slightly gravelly CLAY. Gravel is fine to coarse subangular to subrounded sandstone, mudstone and fusain coal. (MADE GROUND - OPENCASE BACKFILL)			
B	1.20		170mm /100%	148.47	1.10	Very stiff brown and grey slightly gravelly CLAY. Gravel is fine to coarse angular to subrounded mudstone. (MADE GROUND - OPENCASE BACKFILL)			
D ES	3.00 3.00				(3.30)	Between 3.00m and 3.40m bgl: recovered as slightly clayey GRAVEL of fine to coarse angular to subangular mudstone.			
D ES	4.00 4.00		170mm /100%			Between 3.80m and 4.40m bgl: grey and brown clayey gravel of fine to coarse angular to subangular mudstone.			
S	4.50	N >50		145.17	4.40	Extremely weak thinly bedded grey MUDSTONE recovered as very stiff grey gravelly clay. Gravel is fine to coarse angular to subangular mudstone. (PENNINE MIDDLE COAL MEASURES FORMATION)			
D	5.00					Continued next sheet			

Installation: 50mm diameter standpipe installed to 5.00m bgl.

Remarks: Borehole cased to 3.00m bgl.

Groundwater Strikes					Drilled: TOR Drilling Ltd Logged: FC Checked: SD
Depth Strike	Rose to	Remarks	Cased	Sealed	

BOREHOLE LOG - ROTARY SONIC

RS3022

Project Hoyland Common, Barnsley

Project No.

AG3080-19

Client Newlands Developments

Sheet

2 of 2

Start 10/02/2020

Coordinates E 435395.15 N 399640.23

Scale

1:25

End 12/02/2020

Ground Level 149.57m AOD

Total Depth

7.50m

Sample / Test Type	Depth (m)	Result	Dia./ Rec.	Level (mAoD)	Strata Depth (thickness) (m)	Description of Strata	Legend	GW	Install
D	6.00		146mm /53%		(3.10)	Extremely weak thinly bedded grey MUDSTONE recovered as very stiff grey gravelly clay. Gravel is fine to coarse angular to subangular mudstone. (PENNINE MIDDLE COAL MEASURES FORMATION)			
D	7.00		146mm /100%						
				142.07	7.50	End of Borehole at 7.50m			

Installation: 50mm diameter standpipe installed to 5.00m bgl.

Remarks: Borehole cased to 3.00m bgl.

Groundwater Strikes					Drilled: TOR Drilling Ltd Logged: FC Checked: SD
Depth Strike	Rose to	Remarks	Cased	Sealed	

BOREHOLE LOG - ROTARY SONIC

RS3023

Project Hoyland Common, Barnsley

Project No.

AG3080-19

Client Newlands Developments

Sheet

1 of 1

Start 12/02/2020

Coordinates E 435444.30 N 399507.08

Scale

1:25

End 12/02/2020

Ground Level 141.31m AOD

Total Depth

5.00m

Sample / Test Type	Depth (m)	Result	Dia./ Rec.	Level (mAoD)	Strata Depth (thickness) (m)	Description of Strata	Legend	GW	Install
D ES	0.10 0.10			141.11	(0.20) 0.20	Soft brown slightly gravelly CLAY with frequent rootlets. Gravel is fine to coarse subangular to subrounded mudstone and sandstone. (TOPSOIL)			
D	0.50		170mm /100%	140.61	(0.50) 0.70	Firm greyish brown gravelly CLAY. Gravel is fine to coarse angular to subrounded sandstone, mudstone and coal. (PENNINE MIDDLE COAL MEASURES FORMATION)			
D	1.00			140.06	(0.55) 1.25	Stiff grey and orangish brown slightly gravelly CLAY. Gravel is fine to coarse subangular to subrounded mudstone and coal. (PENNINE MIDDLE COAL MEASURES FORMATION)			
D U	1.50 1.50	(34)		139.46	(0.60) 1.85	Black dull fusain COAL, recovered as fine to coarse angular to subrounded gravel. (PENNINE MIDDLE COAL MEASURES FORMATION)			
D	2.00			139.06	(0.40) 2.25	Stiff grey slightly gravelly CLAY. Gravel is fine to coarse angular to subangular mudstone. (PENNINE MIDDLE COAL MEASURES FORMATION)			
D	2.80		170mm /100%	138.16	(0.90) 3.15	Recovered as grey GRAVEL of fine to coarse angular to subangular mudstone. (PENNINE MIDDLE COAL MEASURES FORMATION)			
D S	3.45 3.50	N >50		137.01	(1.15) 4.30	Very stiff light brown slightly gravelly CLAY. Gravel is fine to coarse angular to subangular mudstone. (PENNINE MIDDLE COAL MEASURES FORMATION) From 3.50m to 4.30m bgl: recovered as firm.			
D	4.70		146mm /80%	136.31	(0.70) 5.00	Very stiff grey and brown slightly gravelly CLAY. Gravel is fine to coarse angular to subangular mudstone. (PENNINE MIDDLE COAL MEASURES FORMATION) From 4.30m to 4.55m bgl: recovered as firm.			
						End of Borehole at 5.00m			

Installation:

Remarks: Borehole cased to 1.50m bgl. Borehole backfilled with bentonite grout on completion.

Groundwater Strikes					Drilled: TOR Drilling Ltd Logged: JW Checked: SD
Depth Strike	Rose to	Remarks	Cased	Sealed	

BOREHOLE LOG - ROTARY SONIC

RS3024

Project

Hoyland Common, Barnsley

Project No.

AG3080-19

Client

Newlands Developments

Sheet

1 of 3

Start

14/02/2020

Coordinates

E 435684.39 N 399799.07

Scale

1:25

End

14/02/2020

Ground Level

139.90m AOD

Total Depth

13.50m

Sample / Test Type	Depth (m)	Result	Dia./ Rec.	Level (mAoD)	Strata Depth (thickness) (m)	Description of Strata	Legend	GW	Install
D ES	0.15			139.66	(0.25)	Soft brown slightly gravelly CLAY with frequent rootlets. Gravel is fine to coarse angular to subrounded sandstone, mudstone and brick. (TOPSOIL/MADE GROUND)			
	0.15				0.25	Soft to firm brown slightly gravelly CLAY. Gravel is fine to coarse subangular to subrounded sandstone and mudstone. (MADE GROUND - OPENCASE BACKFILL)			
D	0.60			139.21	(0.45)				
					0.70	Stiff to very stiff grey and orange slightly gravelly CLAY. Gravel is fine to coarse angular to subrounded mudstone. (MADE GROUND - OPENCASE BACKFILL)			
D ES	1.60		170mm /67%	138.00	(1.20)				
	1.60				1.90	Very stiff grey gravelly CLAY. Gravel is fine to coarse angular to subangular mudstone. (MADE GROUND - OPENCASE BACKFILL)			
B	2.50								
			170mm /43%						
					(4.90)				
D	5.00					Continued next sheet			

Installation:
Remarks: Borehole cased to 3.00m bgl. Borehole backfilled with bentonite grout on completion.

Groundwater Strikes					Drilled: TOR Drilling Ltd Logged: JW Checked: SD
Depth Strike	Rose to	Remarks	Cased	Sealed	

Sample / Test Type	Depth (m)	Result	Dia./ Rec.	Level (mAoD)	Strata Depth (thickness) (m)	Description of Strata	Legend	GW	Install
ES	5.00					Very stiff grey gravelly CLAY. Gravel is fine to coarse angular to subangular mudstone. (MADE GROUND - OPENCAST BACKFILL)			
B	6.30								
			170mm /100%	133.10	6.80	Stiff to very stiff brownish grey and orange slightly gravelly CLAY. Gravel is fine to coarse angular to subangular mudstone, siltstone, fusain and clarain coal. (MADE GROUND - OPENCAST BACKFILL)			
						Between 7.50m and 8.40m bgl: soft to firm.			
D	8.50								
ES	8.50								
B	9.00					Between 9.00m and 9.5m bgl: soft to firm.			
			146mm /53%		(5.80)				
						Continued next sheet			

Installation:
Remarks: Borehole cased to 3.00m bgl. Borehole backfilled with bentonite grout on completion.

Groundwater Strikes					Drilled: TOR Drilling Ltd Logged: JW Checked: SD
Depth Strike	Rose to	Remarks	Cased	Sealed	

Sample / Test Type	Depth (m)	Result	Dia./ Rec.	Level (mAoD)	Strata Depth (thickness) (m)	Description of Strata	Legend	GW	Install
D ES	11.65		146mm /100%			Stiff to very stiff brownish grey and orange slightly gravelly CLAY. Gravel is fine to coarse angular to subangular mudstone, siltstone, fusain and clarain coal. (MADE GROUND - OPENCAST BACKFILL)			
						Between 10.50m and 11.40m bgl: recovered as soft to firm.			
D	12.70		146mm /100%	127.30	12.60	Between 12.00m and 12.60m bgl: recovered as brownish grey clayey gravel of fine to coarse angular to subangular mudstone and siltstone.			
						Very weak grey SILTSTONE. No fractures observed. (PENNINE MIDDLE COAL MEASURES FORMATION) Between 12.60m and 13.33m bgl: recovered as very stiff grey gravelly clay. Gravel is fine to coarse angular to subangular siltstone.			
					(0.90)				
				126.40	13.50	End of Borehole at 13.50m			

Installation:

Remarks: Borehole cased to 3.00m bgl. Borehole backfilled with bentonite grout on completion.

Groundwater Strikes				
Depth Strike	Rose to	Remarks	Cased	Sealed

Drilled: TOR Drilling Ltd

Logged: JW

Checked: SD



SPT Calibration Report

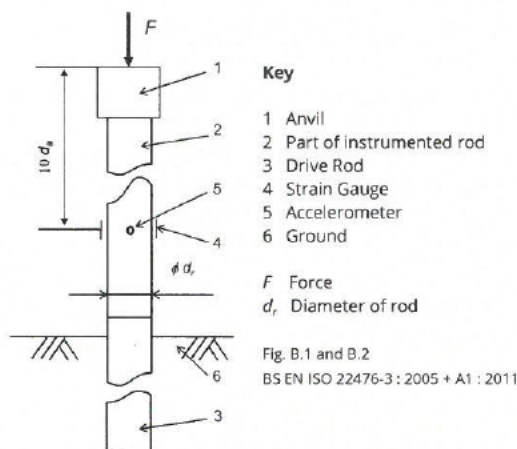
Hammer Energy Measurement Report

Type of Hammer AUTO HAMMER
 Test No EQU2365
 Client TOR

Test Depth (m) 5.30
 Mass of hammer $m = 63.5 \text{ kg}$
 Falling height $h = 0.76 \text{ m}$
 $E_{\text{theor}} = m \times g \times h = 473 \text{ J}$

Characteristics of the instrumented rod

Diameter $d_r = 0.052 \text{ m}$
 Length of instrumented rod 0.558 m
 Area $A = 11.61 \text{ cm}^2$
 Modulus $E_a = 206843 \text{ MPa}$



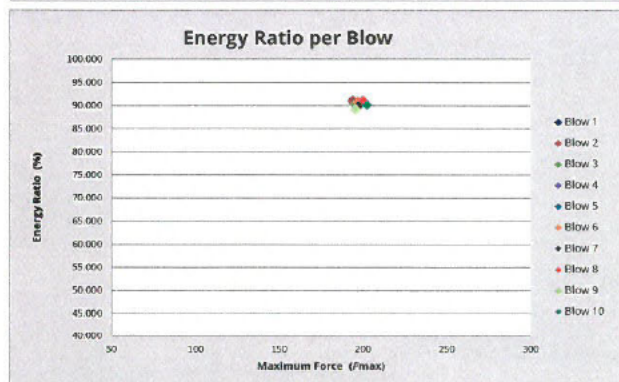
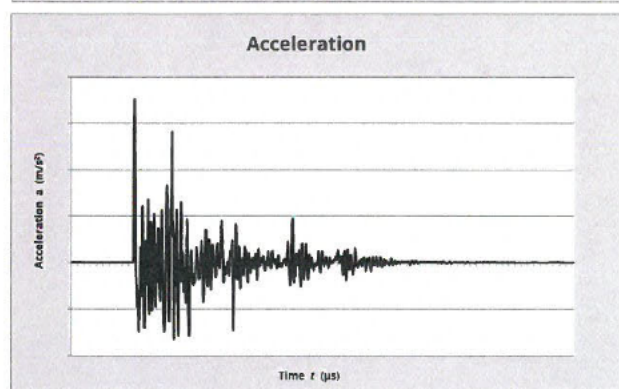
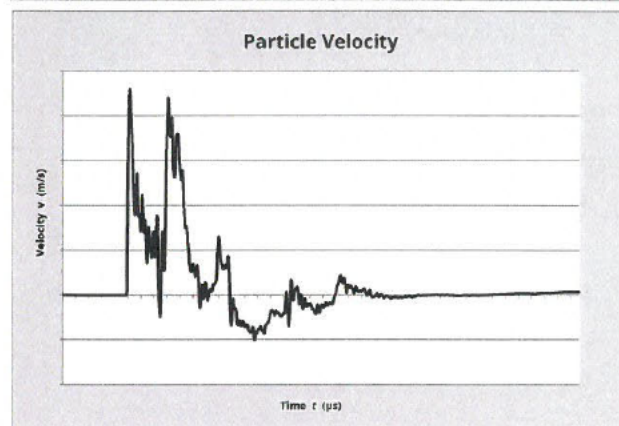
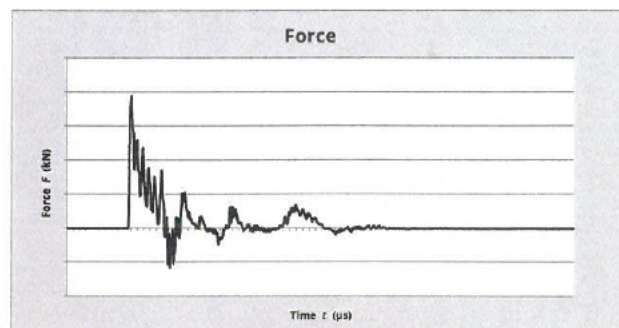
DATE OF TEST	VALID UNTIL	HAMMER ID
21/06/2019	20/06/2020	TD34

Observations:

1.

$E_{\text{meas}} = 0.427 \text{ kN-m}$

$E_{\text{theor}} = 0.473 \text{ kN-m}$



$$\text{Energy Ratio (Er)} = \frac{E_{\text{meas}}}{E_{\text{theor}}}$$

90.18%
 © COPYRIGHT 2019

Equipe SPT Analyzer Operator

AF

Certificate prepared by

Certificate checked by

Certificate date

03/07/2019

BOREHOLE LOG - DRIVEN CONTINUOUS SAMPLING

RS3025

Project Hoyland Common, Barnsley

Project No.

AG3080-19

Client Newlands Developments

Sheet

1 of 1

Start 18/02/2020

Coordinates E 436004.10 N 399617.46

Scale

1:25

End 18/02/2020

Ground Level 127.36m AOD

Total Depth

2.95m

Sample / Test Type	Depth (m)	Result	Dia./ Rec.	Level (mAOD)	Strata Depth (thickness) (m)	Description of Strata	Legend	GW	Install
D	0.70		101mm /80%	126.91	(0.45)	Very soft dark brown slightly gravelly silty CLAY with occasional to frequent rootlets. (TOPSOIL/MADE GROUND)			
					0.45	Firm to stiff brownish grey and brown slightly sandy slightly gravelly silty CLAY with occasional cobbles. Gravel is fine to coarse angular to subangular sandstone, brick and clinker. Cobbles are subangular sandstone. (POSSIBLE MADE GROUND)			
D	1.00	N = 11		126.36	1.00	Firm to stiff yellowish brown mottled light grey silty CLAY. (PENNINE MIDDLE COAL MEASURES FORMATION) <i>From 1.25m bgl: locally mottled black.</i>			
S	1.00								
D	1.50		92mm /100%		(1.00)	<i>From 1.60m bgl: stiff locally stained orangish brown with rare fine gravel sized ironstone nodule lithorelicts.</i>			
D	2.00	N = 16		125.36	2.00	<i>From 1.95m bgl: locally very closely fissured.</i>			
S	2.00					Black semi dull fusain COAL recovered as fine subangular gravelly sand. (PENNINE MIDDLE COAL MEASURES FORMATION)			
					(0.50)				
			79mm /100%	124.86	2.50	Very stiff to hard light grey mottled orangish brown SILT with occasional fine gravel sized mudstone and siltstone lithorelicts. (PENNINE MIDDLE COAL MEASURES FORMATION)			
D	2.80				(0.45)				
						<i>From 2.85m and 2.90m bgl: tending to siltstone.</i>			
S	3.00	N >50		124.41	2.95	End of Borehole at 2.95m			

Installation: 50mm diameter standpipe installed to 3.00m bgl.

Remarks:

Groundwater Strikes					Drilled: DH
Depth Strike	Rose to	Remarks	Cased	Sealed	
					Logged: FC
					Checked: SD

BOREHOLE LOG - ROTARY

RC4001

Project Hoyland Common, Barnsley

Project No.

AG3080-19

Client Newlands Developments

Sheet

1 of 2

Start 05/02/2020

Coordinates E 435163.46 N 399908.57

Scale

1:50

End 05/02/2020

Ground Level 145.34m AOD

Total Depth

16.10m

Depth (m)	TCR SCR RQD	If	Sample / Test Type	Depth (m)	Result	Level (mAoD)	Strata Depth (thickness) (m)	Description of Strata	Legend	GW	Install
0.00			D	0.00			(0.30)	Soft brown slightly gravelly CLAY with frequent rootlets. Gravel is fine to coarse angular to subrounded sandstone and mudstone.			
	100		D	0.20		145.04	0.30	(TOPSOIL)			
	0		ES								
	0										
			D	1.00			(1.35)	Firm to stiff orange and grey slightly gravelly CLAY. Gravel is fine to coarse subangular to subrounded sandstone, mudstone and coal.			
			D		N = 26			(PENNINE MIDDLE COAL MEASURES FORMATION)			
1.50			S	1.50							
			D			143.69	1.65	Very stiff grey and light brown gravelly CLAY. Gravel is fine to coarse angular to subangular mudstone.			
	100		ES	2.00			(1.35)	(PENNINE MIDDLE COAL MEASURES FORMATION)			
	0										
			D	2.50							
			S		N = 13						
3.00			D	3.00		142.34	3.00	Recovered as brown and dark grey clayey GRAVEL of fine to coarse angular to subangular mudstone.			
	100		D				(0.25)	(PENNINE MIDDLE COAL MEASURES FORMATION)			
3.35			D	3.20		142.09	3.25	Extremely weak thinly bedded grey MUDSTONE. Distinctly weathered. Fractures dip <5 degrees very closely to closely spaced undulating smooth.			
			S		N >50			(PENNINE MIDDLE COAL MEASURES FORMATION)			
							(2.00)	Between 3.35m and 3.45m bgl: recovered as fine to coarse angular to subangular gravel of mudstone in a clay matrix.			
	92							Between 3.65m and 3.72m bgl: recovered as fine to coarse angular to subangular gravel of mudstone in a clay matrix.			
	76							Between 3.85m and 3.95m bgl: fracture at 45 degrees undulating rough.			
	16							At 3.90m bgl: light brown mudstone nodule 20mm width.			
4.60								Between 4.60m and 4.85m bgl: recovered as fine to coarse angular to subangular gravel of mudstone.			
						140.09	5.25	Between 4.85m and 5.10m bgl: fracture at 90 degree dip undulating smooth.			
	100		C	5.39 - 5.46				Between 5.15m and 5.23m bgl: recovered as fine to coarse angular to subangular gravel of mudstone in a clay matrix.			
	74							Very weak interbedded light grey SILTSTONE and grey MUDSTONE. Distinctly weathered. Fractures dip <5 degrees very closely to closely spaced undulating smooth.			
	7						(1.95)	(PENNINE MIDDLE COAL MEASURES FORMATION)			
6.10								Between 5.77m and 5.81m bgl: recovered as fine to coarse angular to subangular gravel of mudstone in a clay matrix.			
		NI						Between 6.20m and 6.28m bgl: recovered as fine to coarse angular to subangular gravel of mudstone in a clay matrix.			
	100	60						At 6.40m bgl: fracture at 20 degree dip planar smooth.			
	83	170	C	7.02 - 7.11		138.14	7.20	Between 6.50m and 6.57m bgl: recovered as fine to coarse angular to subangular gravel of mudstone in a clay matrix.			
	20							Extremely weak thinly bedded MUDSTONE. Distinctly weathered. Fractures dip <5 degrees very closely to closely spaced undulating rough.			
7.60								(PENNINE MIDDLE COAL MEASURES FORMATION)			
								Between 7.95m and 8.03m bgl: recovered as fine to coarse angular to subangular gravel of mudstone and coal in a clay matrix.			
	100							Between 8.15m and 8.30m bgl: fracture at 75 degrees dip undulating smooth.			
	70							Between 8.45m and 8.65m bgl: recovered as fine to coarse angular to subangular gravel of mudstone and coal in a clay matrix.			
	0										
9.10							(3.75)	Between 9.10m and 10.10m bgl: assumed zone of core loss.			
	33										
	0										
	0										

Continued next sheet

Installation: 50mm diameter standpipe installed to 11.50m bgl.

Remarks: Dynamic sampling to 3.25m bgl, rotary cored from 3.25m to 16.10m bgl. Air mist flush used. Borehole cased to 1.50m bgl. Driller noted 100% flush returns throughout hole, however fluctuating pressure levels in flush between 9.10m and 12.10m, as well as evidence of bubbling in flush at surface of the borehole.

Groundwater Strikes					Drilled: Ace Drilling Services Ltd
Depth Strike	Rise	Remarks	Cased	Sealed	
					Logged: JW
					Checked: SD

Diameter: 140mm to 1.50m
123mm to 16.10m

BOREHOLE LOG - ROTARY

RC4001

Project Hoyland Common, Barnsley

Project No.

AG3080-19

Client Newlands Developments

Sheet

2 of 2

Start 05/02/2020

Coordinates E 435163.46 N 399908.57

Scale

1:50

End 05/02/2020

Ground Level 145.34m AOD

Total Depth

16.10m

Depth (m)	TCR SCR RQD	If	Sample / Test Type	Depth (m)	Result	Level (mAOD)	Strata Depth (thickness) (m)	Description of Strata	Legend	GW	Install
10.60			C	10.24 - 10.32	N = 24			Extremely weak thinly bedded MUDSTONE. Distinctly weathered. Fractures dip <5 degrees very closely to closely spaced undulating rough. (PENNINE MIDDLE COAL MEASURES FORMATION) <i>Between 10.60m and 10.90m bgl: assumed zone of core loss.</i>			
			C	10.58 - 10.66							
			D	10.60		134.39	10.95	<i>Between 10.85m and 10.95m bgl: recovered as fine to coarse angular to subangular gravel of mudstone and coal in a clay matrix.</i>			
	70 61 27		S			134.29	(0.10)	Black semi-bright clarain COAL. Distinctly weathered. (PENNINE MIDDLE COAL MEASURES FORMATION)			
			C	11.49 - 11.64			11.05	Very weak thinly bedded grey MUDSTONE. Slightly weathered. Fractures dip <5 degrees extremely closely to closely spaced undulating smooth. (PENNINE MIDDLE COAL MEASURES FORMATION) <i>At 11.65m bgl: light brown mudstone nodule 30mm width. At 11.75m bgl: light brown mudstone nodule 10mm width.</i>			
12.10			C	12.31 - 12.44		133.14	12.20	Weak interbedded grey MUDSTONE and light grey SILTSTONE. slightly weathered. Fractures dip <5 degrees very closely to closely spaced undulating smooth. (PENNINE MIDDLE COAL MEASURES FORMATION) <i>Between 12.65m and 12.75m bgl: fracture at 90 degrees dip undulating rough.</i>			
13.10			C	13.18 - 13.29		132.09	13.25	Thickly bedded light grey and black SILTSTONE. Slightly weathered. Fractures dip <5 degrees very closely to medium spaced undulating rough. (PENNINE MIDDLE COAL MEASURES FORMATION) <i>Between 13.85m and 13.95m bgl: interbedded with extremely weak grey mudstone.</i>			
	100 97 74										
		NI 105 290	C	13.59 - 13.82							
14.60			C	14.67 - 14.77			(2.85)				
	100 100 73		C	15.28 - 15.57				<i>Between 15.60m and 16.10m bgl: fracture at 90 degree dip undulating rough.</i>			
16.10						129.24	16.10	End of Borehole at 16.10m			

Installation: 50mm diameter standpipe installed to 11.50m bgl.

Remarks: Dynamic sampling to 3.25m bgl, rotary cored from 3.25m to 16.10m bgl. Air mist flush used. Borehole cased to 1.50m bgl. Driller noted 100% flush returns throughout hole, however fluctuating pressure levels in flush between 9.10m and 12.10m, as well as evidence of bubbling in flush at surface of the borehole.

Groundwater Strikes					Drilled: Ace Drilling Services Ltd Logged: JW Checked: SD
Depth Strike	Rise	Remarks	Cased	Sealed	

Diameter: 140mm to 1.50m
123mm to 16.10m

BOREHOLE LOG - ROTARY

RC4002

Project

Hoyland Common, Barnsley

Client

Newlands Developments

Start

11/02/2020

End

11/02/2020

Coordinates

E 435278.60 N 399955.26

Ground Level

146.72m AOD

Project No.

AG3080-19

Sheet

1 of 2

Scale

1:50

Total Depth

11.00m

Depth (m)	TCR SCR RQD	If	Sample / Test Type	Depth (m)	Result	Level (mAoD)	Strata Depth (thickness) (m)	Description of Strata	Legend	GW	Install
0.00	90 0 0	N/A	D ES	0.10	N = 26	146.52	(0.20) 0.20	Soft brown slightly gravelly CLAY with frequent rootlets. Gravel is fine to coarse subangular to subrounded sandstone and mudstone. (TOPSOIL)			
			D D S	0.80 1.00			(1.30)	Firm to stiff grey and orange slightly gravelly CLAY. Gravel is fine to coarse subangular to subrounded mudstone and sandstone. (PENNINE MIDDLE COAL MEASURES FORMATION)			
1.50	100 0 0		D	1.80		145.22	1.50 (1.00)	Very stiff grey CLAY with occasional to frequent fine to coarse angular to subangular mudstone lithorelicts. (PENNINE MIDDLE COAL MEASURES FORMATION)			
2.50	100 75 70	NI 90 290	D S	2.50	N >50	144.22 144.12	2.50 (0.10) 2.60	Black dull fusain COAL. (PENNINE MIDDLE COAL MEASURES FORMATION)			
3.50			C	3.32 - 3.50				Very weak interbedded grey MUDSTONE and light grey SILTSTONE. Distinctly weathered. Fractures dip <5 degrees very closely to closely spaced undulating smooth. (PENNINE MIDDLE COAL MEASURES FORMATION) <i>Between 2.60m and 3.00m bgl: recovered as stiff to very stiff grey slightly gravelly clay. Gravel is fine to coarse angular to subangular mudstone and coal.</i> <i>Between 3.00m and 3.30m bgl: extremely weak.</i> <i>Between 3.90m and 4.50m bgl: recovered as very stiff grey gravelly clay. Gravel is fine to coarse angular to subangular mudstone and coal.</i>			
5.00	100 61 34		C	4.56 - 4.70 4.71 - 5.00				<i>Between 5.40m and 5.50m bgl: fractures at 75 degrees dip, planar rough.</i>			
6.50	100 93 36	NI 120 510	C	6.09 - 6.26 6.38 - 6.50			(5.75)				
			C	7.50 - 7.67				<i>Between 7.80m and 7.88m bgl: fractures at 60 degrees dip, planar rough.</i>			
8.00	100 97 64		C	8.36 - 8.62		138.37	8.35 (0.55)	Weak to thickly bedded light grey SILTSTONE. Slightly weathered. Fractures dip <5 degrees closely spaced undulating rough. (PENNINE MIDDLE COAL MEASURES FORMATION)			
9.50	100 100 57		C			137.82	8.90 (2.10)	Very weak interbedded grey MUDSTONE and light grey SILTSTONE. Slightly weathered. Fractures dip <5 degrees very closely to medium spacing undulating rough. (PENNINE MIDDLE COAL MEASURES FORMATION) <i>Between 8.95m and 9.15m bgl: fractures at 80 degrees dip, planar rough.</i> <i>Between 9.68m and 9.82m bgl: fractures at 90 degrees dip, planar rough.</i>			
Continued next sheet											

Installation:
Remarks: Dynamic/drive sample to 2.50m bgl, rotary cored from 2.50m to 11.00m bgl. Air mist flush used. Borehole cased to 1.50m bgl. Borehole backfilled with bentonite grout on completion.

Groundwater Strikes				
Depth Strike	Rise	Remarks	Cased	Sealed

Drilled: Ace Drilling Services Ltd
Logged: JW
Checked: SD

Diameter: 140mm to 2.50m
123mm to 11.00m

APPLIED GEOLOGY

RC4002

Project	Hoyland Common, Barnsley			Project No.	AG3080-19
Client	Newlands Developments			Sheet	2 of 2
Start	11/02/2020	Coordinates	E 435278.60 N 399955.26	Scale	1:50
End	11/02/2020	Ground Level	146.72m AOD	Total Depth	11.00m

Depth (m)	TCR SCR RQD	If	Sample / Test Type	Depth (m)	Result	Level (mAoD)	Strata Depth (thickness) (m)	Description of Strata	Legend	GW	Install
11.00	97 92 65		C	10.05 - 10.31		135.72	11.00	Very weak interbedded grey MUDSTONE and light grey SILTSTONE. Slightly weathered. Fractures dip <5 degrees very closely to medium spacing undulating rough. (PENNINE MIDDLE COAL MEASURES FORMATION)			
			C	10.56 - 10.72				Between 10.72m and 10.89m bgl: fracture at 80 degree dip undulating rough.			
End of Borehole at 11 00m											

Installation:
Remarks: Dynamic/drive sample to 2.50m bgl, rotary cored from 2.50m to 11.00m bgl. Air mist flush used. Borehole cased to 1.50m bgl. Borehole backfilled with bentonite grout on completion.

Groundwater Strikes					Drilled: Ace Drilling Services Ltd Logged: JW Checked: SD
Depth Strike	Rise	Remarks	Cased	Sealed	

Diameter: 140mm to 2.50m
123mm to 11.00m

BOREHOLE LOG - ROTARY

RC4003

Project Hoyland Common, Barnsley

Project No.

AG3080-19

Client Newlands Developments

Sheet

1 of 2

Start 07/02/2020

Coordinates E 435238.94 N 399806.78

Scale

1:50

End Ground Level 146.50m AOD

Total Depth

16.50m

Depth (m)	TCR SCR RQD	If	Sample / Test Type	Depth (m)	Result	Level (mAOD)	Strata Depth (thickness) (m)	Description of Strata	Legend	GW	Install
0.00	90 0 0		D ES	0.20	N = 5	146.20	(0.30)	Soft brown slightly gravelly CLAY with frequent rootlets. Gravel is fine to coarse angular to subrounded mudstone and sandstone. (TOPSOIL)			
			D	0.75			0.30	Firm to stiff grey and orange slightly gravelly CLAY. Gravel is fine to coarse subangular to subrounded mudstone and sandstone. (PENNINE MIDDLE COAL MEASURES FORMATION)			
			D	1.00			(1.55)				
1.50			S								
	100 0 0		D	2.10	N = 50	144.65	1.85	Very stiff grey slightly gravelly CLAY. Gravel is fine to coarse angular to subrounded mudstone and fusain coal. (PENNINE MIDDLE COAL MEASURES FORMATION)			
			D	2.50		144.10	2.40	Black semi bright clarain COAL recovered as fine to coarse angular to subangular gravel. (PENNINE MIDDLE COAL MEASURES FORMATION)			
3.00			S			143.60	2.90	Very stiff grey slightly gravelly CLAY. Gravel is fine to medium angular to subangular mudstone an clarain coal. (PENNINE MIDDLE COAL MEASURES FORMATION)			
						143.45	(0.15)	Extremely weak thinly bedded grey MUDSTONE. Distinctly weathered. Fractures are extremely closely to closely spaced <5 degrees dip undulating rough. (PENNINE MIDDLE COAL MEASURES FORMATION)			
							3.05				
	100 65 21		C	4.09 - 4.28		142.50	4.00	Weak thickly bedded light grey SILTSTONE. Distinctly weathered. Fractures are closely spaced <5 degree dip undulating rough. (PENNINE MIDDLE COAL MEASURES FORMATION)			
4.50		NI 60 140				142.15	4.35	Very weak thinly bedded grey MUDSTONE. Distinctly weathered. Fractures dip <5 degrees very closely to closely spaced undulating smooth. (PENNINE MIDDLE COAL MEASURES FORMATION)			
							(0.95)	Between 3.15m and 3.40m bgl: recovered as gravel of fine to coarse angular to subangular mudstone.			
	100 83 23		C	5.50 - 5.64		141.20	5.30	Very weak interbedded light grey SILTSTONE and grey MUDSTONE. Distinctly weathered. Fractures dip <5 degrees very closely to closely spaced undulating rough. (PENNINE MIDDLE COAL MEASURES FORMATION)			
6.00							(2.95)	Between 4.95m and 5.05m bgl: recovered as gravel of fine to coarse angular to subangular mudstone in clay matrix.			
			C	6.26 - 6.39				Between 5.15m and 5.30m bgl: fracture at 90 degree dip undulating rough.			
	100 91 20		C	6.92 - 7.05				Between 5.75m and 5.90m bgl: fracture at 90 degrees dip undulating rough.			
7.50								Between 7.07m and 7.13m bgl: recovered as gravel of fine to coarse angular to subangular mudstone.			
								Between 7.20m and 7.35m bgl: fracture at 90 degree dip planar rough.			
	100 99 79	NI 85 210	C	8.05 - 8.14		138.25	8.25	Weak thickly bedded light grey SILTSTONE. Slightly weathered. Fractures dip <5 degrees closely spaced undulating rough. (PENNINE MIDDLE COAL MEASURES FORMATION)			
			C	8.50 - 8.70		137.75	(0.50)	Very weak interbedded grey MUDSTONE and light grey SILTSTONE. Slightly weathered. Fractures dip <5 degrees very closely to closely spaced undulating smooth. (PENNINE MIDDLE COAL MEASURES FORMATION)			
9.00							8.75	Between 8.85m and 8.95m bgl: fracture at 90 degrees dip planar rough.			
	100 93 45		C	9.45 - 9.56							

Continued next sheet

Installation:

Remarks: Dynamic sampling to 3.00m bgl, rotary cored from 3.00m to 16.50m bgl. Air mist flush used. Borehole cased to 1.50m bgl. Borehole backfilled with bentonite grout on completion.

Groundwater Strikes					Drilled: Ace Drilling Services Ltd Logged: JW Checked: SD
Depth Strike	Rise	Remarks	Cased	Sealed	

Diameter: 140mm to 3.05m
123mm to 16.50m

Depth (m)	TCR SCR RQD	If	Sample / Test Type	Depth (m)	Result	Level (mAoD)	Strata Depth (thickness) (m)	Description of Strata	Legend	GW	Install
10.50			C	10.30 - 10.50			(3.05)	Very weak interbedded grey MUDSTONE and light grey SILTSTONE. Slightly weathered. Fractures dip <5 degrees very closely to closely spaced undulating smooth. (PENNINE MIDDLE COAL MEASURES FORMATION) <i>Between 9.99m and 10.05m bgl: recovered as gravel of fine to coarse angular to subangular mudstone and siltstone.</i> <i>At 10.80m bgl: fracture at 40 degrees dip planar smooth.</i>			
	100 73 19		C	10.96 - 11.10				<i>Between 11.25m and 11.30m bgl: recovered as gravel of fine to coarse angular to subangular mudstone and siltstone in clay matrix.</i>			
12.00			C	11.84 - 11.94		134.70	11.80	<i>Between 11.70m and 11.80m bgl: fracture at 90 degrees dip planar rough.</i> Very weak thinly bedded grey MUDSTONE. Slightly weathered. Fractures dip <5 degrees very closely to closely spaced undulating smooth. (PENNINE MIDDLE COAL MEASURES FORMATION) <i>Between 12.40m and 12.45m bgl: recovered as gravel of fine to coarse angular to subangular mudstone in clay matrix.</i> <i>Between 12.80m and 12.85m bgl: recovered as gravel of fine to coarse angular to subangular mudstone in clay matrix.</i>			
	100 81 9		C	12.63 - 12.76			(2.45)				
13.50		NI 75 290						<i>Between 13.58m and 13.65m bgl: recovered as gravel of fine to coarse angular to subangular mudstone in clay matrix.</i> <i>Between 13.76m and 13.84m bgl: recovered as gravel of fine to coarse angular to subangular mudstone in clay matrix.</i> <i>Between 14.00m and 14.25m bgl: dark grey in colour.</i> <i>Between 14.12m and 14.34m bgl: fracture at 90 degrees dip planar smooth.</i>			
	100 85 26					132.25	14.25				
15.00							(0.85)	Black bright vitrain COAL. Traces of pyrite throughout. Cleats up to 20mm in width. (PENNINE MIDDLE COAL MEASURES FORMATION)			
						131.40	15.10				
						131.00	(0.40) 15.50	Extremely weak thinly bedded brownish grey MUDSTONE. Slightly weathered. Fractures dip <5 degrees very closely to closely spaced undulating smooth. Up to 3mm vitrain coal bands throughout. (PENNINE MIDDLE COAL MEASURES FORMATION) <i>Between 15.18m and 15.23m bgl: recovered as gravel of fine to coarse angular to subangular mudstone and vitrain coal in a clay matrix.</i>			
	97 87 80		C	15.77 - 15.99			(1.00)				
16.50			C	16.24 - 16.34		130.00	16.50	Very weak thinly bedded grey MUDSTONE. Slightly weathered. Fractures dip <5 degrees very closely to closely spaced undulating smooth. Light brown nodules throughout, some containing pyrite. Up to 30mm width. (PENNINE MIDDLE COAL MEASURES FORMATION) End of Borehole at 16.50m			

Installation:
Remarks: Dynamic sampling to 3.00m bgl, rotary cored from 3.00m to 16.50m bgl. Air mist flush used. Borehole cased to 1.50m bgl. Borehole backfilled with bentonite grout on completion.

Groundwater Strikes					Drilled: Ace Drilling Services Ltd Logged: JW Checked: SD
Depth Strike	Rise	Remarks	Cased	Sealed	

Diameter: 140mm to 3.05m
123mm to 16.50m

BOREHOLE LOG - ROTARY

RC4004

Project Hoyland Common, Barnsley

Project No.

AG3080-19

Client Newlands Developments

Sheet

1 of 3

Start 17/01/2020

Coordinates E 435354.53 N 399837.65

Scale

1:50

End 23/01/2020

Ground Level 146.10m AOD

Total Depth

30.00m

Depth (m)	TCR SCR RQD	If	Sample / Test Type	Depth (m)	Result	Level (mAOD)	Strata Depth (thickness) (m)	Description of Strata	Legend	GW	Install
0.00			D	0.15			(0.25)	Soft becoming firm greyish brown slightly gravelly CLAY with frequent rootlets. Gravel is fine to medium subangular to subrounded mudstone, sandstone and coal.			
	100		ES			145.85	0.25				
	0		D	0.45		145.55	(0.30)				
	0						0.55	(TOPSOIL)			
1.00			D	0.80		145.10	(0.45)	Firm becoming stiff greyish orange gravelly CLAY with frequent rootlets. Gravel is fine to coarse subangular to subrounded mudstone and coal.			
							1.00	(PENNINE MIDDLE COAL MEASURES FORMATION)			
	100		D	1.35		144.60	(0.50)	Black dull fusain COAL recovered as slightly sandy fine to coarse subangular gravel.			
	10						1.50	(PENNINE MIDDLE COAL MEASURES FORMATION)			
	0		D	1.75		144.20	(0.40)	Stiff light grey and orange slightly gravelly CLAY. Gravel is fine to medium subangular to subrounded coal and mudstone.			
2.00			C	2.05 - 2.12			1.90	(PENNINE MIDDLE COAL MEASURES FORMATION)			
	100							From 1.30m to 1.50m bgl: dark grey.			
	46							Black dull fusain COAL.			
	31							(PENNINE MIDDLE COAL MEASURES FORMATION)			
3.00								Between 1.75m and 1.80m bgl: black semi bright vitrain coal.			
							(2.30)	Extremely weak thinly laminated grey MUDSTONE.			
	88							Weathering effects have reduced strength. Distinctly weathered. Fractures dip <5 degrees extremely to closely spaced undulating smooth.			
	41							(PENNINE MIDDLE COAL MEASURES FORMATION)			
	16							Between 2.30m and 2.45m bgl: recovered as gravel sized fragments.			
4.20						141.90	4.20	Extremely weak thinly laminated dark grey MUDSTONE. Distinctly weathered. Fractures dip <5 degrees extremely closely to closely spaced undulating smooth.			
	85	NI						(PENNINE MIDDLE COAL MEASURES FORMATION)			
	38	35									
	8	70									
5.50											
	75							Between 5.74m and 5.87m bgl: planar smooth fractures at 45 degrees and 90 degrees dip.			
	10						(3.70)				
	0										
6.10											
	77							Between 6.45m and 6.83m bgl: Recovered as fine to coarse angular to subangular gravel of mudstone within clay matrix.			
	22										
	0		C	6.92 - 7.00							
7.30											
	98					138.20	7.90	Black bright vitrain COAL. Distinctly weathered. Cleats 1-15mm width.			
	62		C	7.97 - 8.06		138.13	(0.07)	(PENNINE MIDDLE COAL MEASURES FORMATION)			
	41						7.97	Extremely weak thinly bedded dark grey MUDSTONE. Slightly weathered. Fractures dip <5 degrees very closely to closely spaced undulating rough.			
8.60								(PENNINE MIDDLE COAL MEASURES FORMATION)			
			C	8.78 - 8.86			(2.28)	Between 8.35m and 8.60m bgl: recovered as fine to coarse angular to subangular gravel of mudstone within clay matrix.			
	93		C	8.99 - 9.20				Between 8.60m and 8.95m bgl: very weak light grey siltstone. Fractures dip <5 degrees very closely to closely spaced undulating rough.			
	73										
	41										

Continued next sheet

Installation: 19mm diameter standpipe installed to 20.00m bgl.

Remarks: Dynamic sampling to 2.00m bgl, rotary cored from 2.00m to 30.00m bgl. Air mist flush used. Borehole cased to 1.50m bgl.

Groundwater Strikes					Drilled: Ace Drilling Services Ltd Logged: JW Checked: SD
Depth Strike	Rise	Remarks	Cased	Sealed	
20.00	10.66	Medium seepage	1.50		
5.14	5.14	Start of shift	1.50		
11.24	11.24	End of shift	1.50		

Diameter: 140mm to 2.00m
123mm to 30.00m

BOREHOLE LOG - ROTARY

RC4004

Project Hoyland Common, Barnsley

Project No.

AG3080-19

Client Newlands Developments

Sheet

2 of 3

Start 17/01/2020

Coordinates E 435354.53 N 399837.65

Scale

1:50

End 23/01/2020

Ground Level 146.10m AOD

Total Depth

30.00m

Depth (m)	TCR SCR RQD	If	Sample / Test Type	Depth (m)	Result	Level (mAOD)	Strata Depth (thickness) (m)	Description of Strata	Legend	GW	Install
10.10			C	10.10 - 10.25		135.85	10.25	Extremely weak thinly bedded dark grey MUDSTONE. Slightly weathered. Fractures dip <5 degrees very closely to closely spaced undulating rough. (PENNINE MIDDLE COAL MEASURES FORMATION)			
	97 63 57		C	10.55 - 10.75				Very weak interbedded light grey SILTSTONE and dark grey MUDSTONE. Slightly weathered. Fractures dip <5 degree very closely to medium spaced undulating smooth. (PENNINE MIDDLE COAL MEASURES FORMATION)			
11.60			C	11.63 - 11.78							
	100 73 39	NI 110 400	C	12.03 - 12.40							
13.10			C	13.25 - 13.38			(5.95)	Between 12.82m and 13.15m bgl: undulating smooth fractures at 90 degree dip. Between 12.86m and 13.15m bgl: very weak light grey siltstone. Fractures dip <5 degree very closely to medium spaced undulating smooth.			
	89 79 45		C	14.28 - 14.44							
14.60			C	14.66 - 14.84							
	99 77 44	NI 115 200						Between 15.80m and 16.20m bgl: planar smooth fractures at 20 degree dip.			
16.20						129.90	16.20	Extremely weak thinly bedded dark grey MUDSTONE. Slightly weathered. Fractures dip <5 degrees very closely to closely spaced undulating smooth. (PENNINE MIDDLE COAL MEASURES FORMATION) Between 16.29m and 16.42m bgl: planar smooth fractures at 90 degrees.			
	65 47 20		C	17.00 - 17.09			(2.60)	At 17.65m bgl: undulating smooth fracture at 20 degree dip.			
17.00											
	84 46 17	NI 75 160	C	18.37 - 18.47				Between 18.60m and 18.80m bgl: becoming black in colour.			
18.00						127.30	18.80	Extremely weak black bright vitrain COAL. Slightly weathered. Cleats 1-20mm width. (PENNINE MIDDLE COAL MEASURES FORMATION)			
	81 55 11					127.00	19.10	Extremely weak thinly bedded dark grey MUDSTONE. Slightly weathered. Fractures dip <5 degrees very closely to closely spaced undulating smooth. (PENNINE MIDDLE COAL MEASURES FORMATION)			
19.50											

Continued next sheet

Installation: 19mm diameter standpipe installed to 20.00m bgl.

Remarks: Dynamic sampling to 2.00m bgl, rotary cored from 2.00m to 30.00m bgl. Air mist flush used. Borehole cased to 1.50m bgl.

Groundwater Strikes					Drilled: Ace Drilling Services Ltd Logged: JW Checked: SD
Depth Strike	Rise	Remarks	Cased	Sealed	
20.00	10.66	Medium seepage	1.50		
5.14	5.14	Start of shift	1.50		
11.24	11.24	End of shift	1.50		

Diameter: 140mm to 2.00m
123mm to 30.00m

RC4004

AG3080-19

3 of 3

1:50

30.00m

Installation: 19mm diameter standpipe installed to 20.00m bgl.
Remarks: Dynamic sampling to 2.00m bgl, rotary cored from 2.00m to 30.00m bgl. Air mist flush used. Borehole cased to 1.50m bgl.

Diameter: 140mm to 2.00m
123mm to 30.00m

BOREHOLE LOG - ROTARY

RC4005

Project Hoyland Common, Barnsley

Project No.

AG3080-19

Client Newlands Developments

Sheet

1 of 2

Start 24/01/2020

Coordinates E 435350.41 N 399721.84

Scale

1:50

End 27/01/2020

Ground Level 149.89m AOD

Total Depth

13.00m

Depth (m)	TCR SCR RQD	If	Sample / Test Type	Depth (m)	Result	Level (mAOD)	Strata Depth (thickness) (m)	Description of Strata	Legend	GW	Install
0.00			D	0.10		149.74	(0.15)	Soft to firm greyish brown slightly gravelly CLAY with frequent rootlets. Gravel is fine to medium subangular to subrounded mudstone and sandstone.			
	93 0 0		ES				0.15	(TOPSOIL/MADE GROUND)			
			D	0.60				Firm to stiff greyish brown and orange slightly gravelly CLAY.			
			ES					Gravel is fine to coarse subangular to subrounded mudstone and coal.			
			D	1.00			(1.47)	(MADE GROUND - OPENCAST BACKFILL)			
			S		N = 8						
1.50						148.27	1.62	Dark grey and brown GRAVEL of fine to coarse angular to subangular mudstone.			
	95 15 0		D	2.00			(0.73)	(MADE GROUND - OPENCAST BACKFILL)			
			ES								
2.50			D	2.50		147.54	2.35	Extremely weak thinly laminated dark grey and orange MUDSTONE. Extremely weathered. Fractures dip <5 degrees very closely to medium spaced undulating smooth.			
	100		S		N >50			(PENNINE MIDDLE COAL MEASURES FORMATION)			
2.90											
	91 80 68	NI 70 290	C	3.29 - 3.36			(1.90)	At 3.20m bgl: planar smooth fracture at 30 degrees dip. Between 3.26m and 3.31m bgl: recovered as fine to coarse angular to subangular gravel of mudstone.			
4.20						145.64	4.25	Extremely weak thinly bedded grey MUDSTONE. Distinctly weathered. Fractures dip <5 degrees very closely to closely spaced undulating smooth.			
	97 59 27						(1.44)	(PENNINE MIDDLE COAL MEASURES FORMATION) At 4.60m bgl: undulating rough fracture at 90 degree dip. At 4.65m bgl: planar smooth fracture at 45 degrees dip. Between 5.11m and 5.69m bgl: recovered as fine to coarse angular to subangular gravel of mudstone in clay matrix.			
5.50						144.20	5.69	Black bright vitrain COAL. Distinctly weathered. Cleats 1-25mm width.			
	100 12 0	NI				143.79	6.10	(PENNINE MIDDLE COAL MEASURES FORMATION)			
							(0.49)	Extremely weak thinly bedded dark grey MUDSTONE. Extremely weathered.			
						143.30	6.59	(PENNINE MIDDLE COAL MEASURES FORMATION)			
7.00						143.11	(0.19)	Black bright vitrain COAL. Distinctly weathered.			
						143.07	6.78	(PENNINE MIDDLE COAL MEASURES FORMATION)			
			C	7.13 - 7.24			(0.04)	Extremely weak thinly bedded dark grey MUDSTONE. Extremely weathered. Fractures not observed due to extreme weathering/alteration.			
			C	7.36 - 7.51			6.82	(PENNINE MIDDLE COAL MEASURES FORMATION)			
	100 93 43						(1.82)	Very weak interbedded light grey SILTSTONE and grey MUDSTONE. Slightly weathered. Fractures dip <5 degrees closely spaced undulating rough.			
								(PENNINE MIDDLE COAL MEASURES FORMATION)			
8.50						141.25	8.64	Extremely weak thinly bedded grey MUDSTONE locally recovered as clayey fine to coarse subangular gravel. Slightly weathered. Fractures dip <5 degrees very closely to closely spaced undulating rough.			
	97 82 34		C	8.97 - 9.74				(PENNINE MIDDLE COAL MEASURES FORMATION)			
			C	9.40 - 9.49				Between 9.08m and 9.12m bgl: recovered as fine to coarse angular to subangular gravel of mudstone.			
			C	9.84 - 9.95				At 9.38m bgl: planar smooth fracture at 90 degrees dip.			
10.00								Continued next sheet			

Installation:

Remarks: Dynamic/drive sample to 2.50m bgl, rotary cored from 2.50m to 13.00m bgl. Air mist flush used. Borehole cased to 1.50m bgl. Borehole backfilled with bentonite grout on completion.

Groundwater Strikes					Drilled: Ace Drilling Services Ltd
Depth Strike	Rise	Remarks	Cased	Sealed	
12.90	0 00	Slight seepage	1.50		Logged: JW
					Checked: SD

Diameter: 140mm to 2.50m
123mm to 13.00m

Depth (m)	TCR SCR RQD	If	Sample / Test Type	Depth (m)	Result	Level (mAoD)	Strata Depth (thickness) (m)	Description of Strata	Legend	GW	Install
11.50	97 65 19		C	10.40 - 10.54			(3.43)	Extremely weak thinly bedded grey MUDSTONE locally recovered as clayey fine to coarse subangular gravel. Slightly weathered. Fractures dip <5 degrees very closely to closely spaced undulating rough. (PENNINE MIDDLE COAL MEASURES FORMATION)			
13.00	100 75 19		C	12.32 - 12.39		137.82	12.07 (0.25)	At 11.95m bgl: undulating rough fracture at 90 degrees dip. Between 11.97m and 12.07m bgl: recovered as fine to coarse angular to subangular gravel of mudstone and coal in a clay matrix.			
			C	12.55 - 12.72		137.57	12.32 (0.18)	Black semi-bright clarain COAL. Slightly weathered. (PENNINE MIDDLE COAL MEASURES FORMATION)	XXXXXX		
						137.39	12.50 (0.50)	Extremely weak thinly bedded dark grey MUDSTONE. Slightly weathered. Fractures dip <5 degrees closely spaced undulating rough. (PENNINE MIDDLE COAL MEASURES FORMATION)	XXXXXX		
						136.89	13.00	Very weak thickly bedded grey SILTSTONE. Slightly weathered. Fractures dip <5 degrees closely spaced undulating rough. (PENNINE MIDDLE COAL MEASURES FORMATION)	XXXXXX		
End of Borehole at 13.00m											

Installation:

Remarks: Dynamic/drive sample to 2.50m bgl, rotary cored from 2.50m to 13.00m bgl. Air mist flush used. Borehole cased to 1.50m bgl. Borehole backfilled with bentonite grout on completion.

Groundwater Strikes				
Depth Strike	Rise	Remarks	Cased	Sealed
12.90	0 00	Slight seepage	1.50	

Drilled: Ace Drilling Services Ltd
Logged: JW
Checked: SD

Diameter: 140mm to 2.50m
123mm to 13.00m

BOREHOLE LOG - ROTARY

RC4006

Project Hoyland Common, Barnsley

Project No.

AG3080-19

Client Newlands Developments

Sheet

1 of 2

Start 04/02/2020

Coordinates E 435326.00 N 399649.45

Scale

1:50

End Ground Level 150.16m AOD

Total Depth

11.90m

Depth (m)	TCR SCR RQD	If	Sample / Test Type	Depth (m)	Result	Level (mAOD)	Strata Depth (thickness) (m)	Description of Strata	Legend	GW	Install
0.00			D	0.00		149.96	(0.20)	Soft brown slightly gravelly CLAY with frequent rootlets. Gravel is fine to coarse subangular to subrounded mudstone and sandstone.			
	75		D	0.10		149.71	0.20				
	0		ES				(0.25)				
	0		D	0.30			0.45	(TOPSOIL/MADE GROUND)			
			B	1.00				Firm brown and orange slightly gravelly CLAY. Gravel is fine to coarse subangular to subrounded mudstone, sandstone and coal.			
			D					(MADE GROUND - OPENCAST BACKFILL)			
1.50			S	1.50	N = 4		(2.00)	Brown and dark grey very clayey GRAVEL of fine to coarse angular to subangular mudstone.			
	100		D					(MADE GROUND - OPENCAST BACKFILL)			
	0										
	0		D	2.50		147.71	2.45	Firm brownish grey gravelly CLAY. Gravel is fine to coarse angular to subangular mudstone and dull fusain coal.			
3.00			S		N = 4			(MADE GROUND - OPENCAST BACKFILL)			
	100		B	3.00							
	0		D								
	0						(2.85)				
4.50			D	4.00	N = 7						
	100		S	4.50							
	0		D								
	0		D	5.00							
6.00			S	5.50	N = 8	144.86	5.30	Grey and brown clayey GRAVEL of fine to coarse angular to subangular mudstone.			
	100		B	5.80				(MADE GROUND - OPENCAST BACKFILL)			
	0		D	6.00			(1.70)				
	0		D	6.50							
7.00			ES								
	17		D	7.00	N >50	143.16	7.00	Very weak interbedded light grey SILTSTONE and grey MUDSTONE. Distinctly weathered. Fractures dip <5 degrees very closely to closely spaced undulating rough.			
7.40			S					(PENNINE MIDDLE COAL MEASURES FORMATION)			
	100						(1.90)				
	100							Between 8.20m and 8.40m bgl: fracture at 90 degree dip planar rough.			
	55										
8.90						141.26	8.90	Extremely weak thinly bedded grey MUDSTONE. Distinctly weathered. Fractures dip <5 degrees very closely to closely spaced undulating smooth.			
	89							(PENNINE MIDDLE COAL MEASURES FORMATION)			
	63							Between 9.20m and 9.40m bgl: recovered as gravel of fine to coarse angular to subangular mudstone in clay matrix.			
	8							Between 9.50m and 9.65m bgl: fracture at 90 degree dip planar smooth.			

Continued next sheet

Installation:

Remarks: Dynamic sampling to 7.00m bgl, rotary cored from 7.00m to 11.90m bgl. Air mist flush used. Borehole cased to 1.50m bgl. Borehole backfilled with bentonite grout on completion.

Groundwater Strikes					Drilled: Ace Drilling Services Ltd
Depth Strike	Rise	Remarks	Cased	Sealed	
					Logged: JW
					Checked: SD

Diameter: 140mm to 7.00m
123mm to 11.90m

RC4006

AG3080-19

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1:50

11.90m

APPLiED GEOLOGY