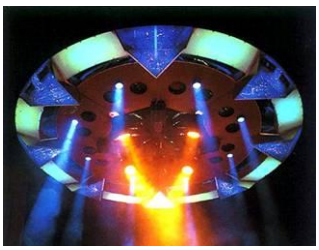


williamsaunders

architecture : engineering : building consultancy







BARNSLEY BUSINESS AND INNOVATION CENTRE (REF: 10717/12)

DRAINAGE STATEMENT

JOB NO: 10717/12

DATE: MARCH 2013

Barnsley Business and Innovation Centre (Ref: 10717/12)

Drainage Statement

Introduction

The Barnsley Business and Innovation Centre consists of several commercial/industrial buildings and parking/service areas located off Innovation Way in Barnsley, South Yorkshire. The A635 trunk road runs adjacent to the North.

The proposed development will be sited to the North-East of the Centre. It will comprise a building with a footprint approximately 560m^2 as well as new parking spaces around the building and elsewhere within the business centre.

A site investigation by Solmek in January 2013 found ground conditions to comprise shallow depths of made ground overlying weathered sandstone.

Foul Water Drainage

Yorkshire Water Services has confirmed that foul drainage may be connected into the 300mm diameter combined sewer running adjacent to the proposed building.

Surface Water Drainage

Surface water disposal will be by means of soakaways. Trench soakaways will be constructed in the open space to the North, one on either side of the sewer easement in order to avoid drainage construction across the easement.

The larger trench soakaway will cater for roof runoff and the existing and proposed parking areas to the North, West and South-West, a total of approximately 2260m^2 of impermeable areas. The smaller trench soakaway will dispose of runoff from approximately 1170m^2 of impermeable areas to the East and North-East of the proposed building.

Preliminary calculations indicate the following:-

- Trench soakaway 43m x 1.5m wide x 2.4m deep, and
- Trench soakaway 22m x 1.5m wide and 2m deep.

A soakaway infiltration rate of 4.0 x 10^{-4} m/s has been used for preliminary design, based on the findings of the ground investigation which determined percolation rates of 4.40 x 10^{-4} m/s and 2.05 x 10^{-3} m/s.

Included with this statement are:-

- Drawing showing proposed soakaway locations and the surface areas to be drained;
- An extract from the Site Investigation report, and
- Relevant correspondence from Yorkshire Water Services.

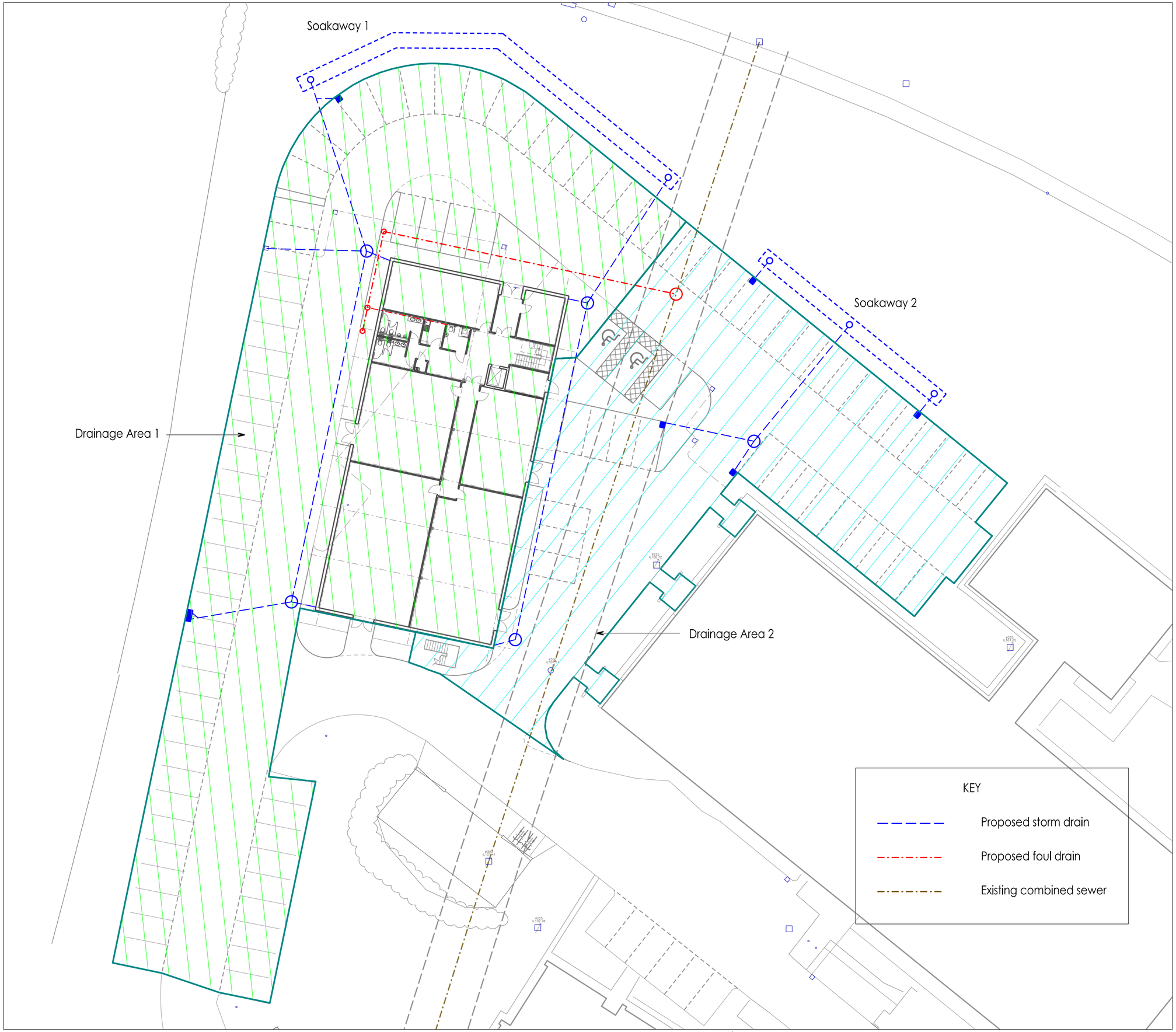
Prepared by: D. Mutepfa

Verified by: A.C.Gibson BEng CEng MICE MCIHT

William Saunders
Sheppard Lockton House
Cafferata Way
Newark
Nottinghamshire, NG24 2TN

Date: 20 March 2013

Ref: 10717/12



Rev	Description	Drn	Vf'd	Date

In accordance with CDM Regulations 7, 11 and 18, any significant risks (as defined in the Approved Code of Practice paragraph 133) relating to the design features shown on this drawing have been identified and are annotated thus: !

[X] No significant risks have been identified.

[ ] Significant risks have been identified - refer to notes on drawing for information on residual risks and any control measures to be employed.

Refer to the current Designer's Risk Assessment sheets for further details.

Designer's Signature DM Date 03/2013

Drawing Status
Information

williamsaunders
architecture: engineering: building consultancy
Sheppard Lockton House
Cafferata Way
Newark-on-Trent
Nottinghamshire. NG24 2TN
Tel: 01636 704361
Fax: 01636 702809
W: wm-saunders.co.uk

Also at Leeds, Cardiff, Wirksworth

Project
Proposed Industrial Unit
Barnsley Business & Innovation Centre, Innovation Way
Barnsley

Client
Benell Investments Ltd

Title
Drainage Strategy

Drawn	Date	Scale	
DM	Mar 2013	1:250	@ A2
Discipline	**Project Number**	**Drawing Number**	**Revision**
Civils	10717	(D)100	-

Fieldwork

Four small percussive boreholes (BH1 to BH4) were drilled to depths of between 0.85 and 1.9m below ground level (bgl) on 2nd January 2013. The boreholes were positioned generally within the footprint of the proposed structure. Samples and insitu standard penetration tests (SPT) were undertaken at various depths within the boreholes. Samples were taken for logging, geotechnical and contamination analysis. Gas standpipes were installed within boreholes 1, 2 and 4 and gas monitoring is currently underway.

In addition four machine excavated trial pits (TP1 to TP4) were undertaken on 2nd January 2013. These were excavated to depths of between 1.00 and 1.30mbgl and were located within proposed car parking areas. Percolation trials were carried out in TP2 and TP3.

Descriptions of the strata encountered in the boreholes and trial pits together with details of testing, sampling and groundwater are presented in Appendix B of this report. A plan showing the location of the boreholes and trial pits can be found in Appendix A (Figure 1).

3 GROUND CONDITIONS

Made ground was proven between depths of 0.4mgl in BH2 and 0.6mbgl in BH3 within the boreholes.The made ground comprised a 0.1m thick layer of tarmac overlying dolomite sub-base. Within the trial pits the made ground comprised topsoil to depths of between 0.25 and 0.4mbgl over a granular fill in TP1 and TP4 of sandstone and brick gravel. In TP's 2 and 3 the topsoil directly overlay natural gravel comprising weathered sandstone. The underlying natural deposits consisted of weathered sandstone within which drilling progressed to refusal at depths of between 0.85 and 1.90mbgl. .

Groundwater

Groundwater was not recorded within the boreholes or trial pits. It should be noted that groundwater levels can fluctuate with seasonal and climatic variations as well as in proximity to local dewatering and abstraction schemes. The fast progression of drilling may also sometimes mask groundwater strikes.

4 CONTAMINATION ANALYSIS AND RESULTS

The proposals are to include the development of a business centre. It is also assumed that the development will comprise car parking as well as areas of peripheral soft landscaping.

To provide information upon the possibility of ground contamination five samples of material were subject to chemical contamination analysis. The samples were selected from the trial pits.

Given the nature of the proposed development, the test results have been compared to a series of Solmek Generic Assessment Criteria (GAC) thresholds based on a commercial land use. Solmek GAC were derived using the EA CLEA Software Version 1.06 (May 2011) which produce Model Output Reports to compare the

The levels of potential contaminants detected have been compared to thresholds supplied in the Water Regulations Advisory Scheme Guidance Note 9-04-03 *"The Selection of materials for Water Supply Pipes to be laid in Contaminated Land"*. Arsenic and pH were raised and consultation with the relevant providers is necessary as services should be placed within clean service trenches as a minimum.

Ground Gas

Gas standpipes were installed within boreholes 1, 2 and 4 and gas monitoring is currently underway

Percolation Trials

The testing was undertaken within TP's 2 and 3 and carried out in accordance with BRE Digest 365: Soakaway Design.

The trial pits were excavated, logged and then water was poured into the trial pits from a water bowser and depth measurements were taken at regular time intervals (see results within Appendix B). Following completion of the percolation trials the trial pits were backfilled with arisings.

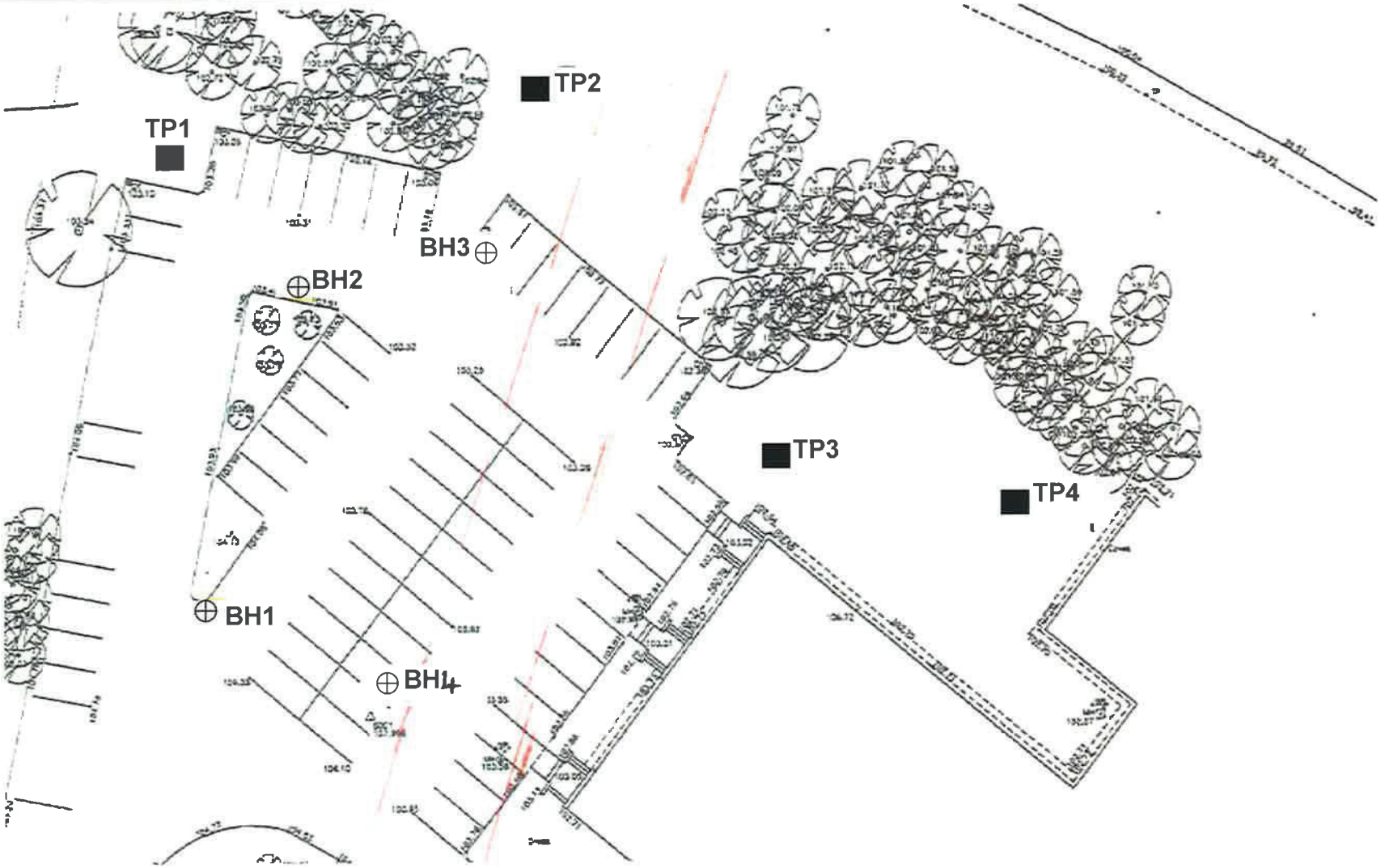
Below gives a summary of the related infiltration rate, where an advisory classification has been given.

SA	Infiltration Rate (m/sec^{*10-6})	Description of base stratum	Suitability
TP2	2050	Weathered sandstone	Very Good
2TP3	440	Weathered sandstone	Good

CBR testing

In-situ CBR tests were undertaken within the trial pits at depths of between 0.3 and 0.7mbgl. The results ranged from 3 to 7% within the shallow tests and between 4 and 10% in the lower tests.

SOLMEK



CLIENT: **William Saunders**	
PROJECT: **Barnsley Business and Innovation Centre**	
DRG NO: **FIGURE 1**	
TITLE: **Borehole and Trial Pit Layout**	SCALE: **NTS**
SOLMEK	

Solmek
12 Yarm Road
TS18 3NA

Tel 01642607083
Fax 01642612355

BOREHOLE LOG

Project				BOREHOLE No
Barnsley Business and Innovation Centre				**BH1**
Job No	Date	Ground Level (m)	Co-Ordinates ()	
S121222	02-01-13			
Contractor				Sheet 1 of 1

SAMPLES & TESTS			Water	STRATA				Geology	Instrument/ Backfill
Depth	Type No	Test Result		Reduced Level	Legend	Depth (Thick-ness)	DESCRIPTION		
						(0.10) 0.10	MADE GROUND: Tarmacadam.		
0.30	B					(0.45)	MADE GROUND: Dolomite.		
0.50	B					0.55			
0.60	SPT	N=50+					Very dense orangish yellow SANDSTONE.		
0.60-0.95	J					(0.40)			
						0.95			
							Borehole complete.		

Boring Progress and Water Observations						Chiselling			Water Added		GENERAL REMARKS
Date	Time	Depth	Casing Depth	Casing Dia. mm	Water Dpt	From	To	Hours	From	To	No groundwater encountered.

All dimensions in metres Scale 1:12.5	Client William Saunders	Method/ Plant Used Mini rig	Logged By PF

GRD_BOREHOLE_LOG TEST S121222 GPJ AGS3_ALL GDT 7/2/13

Solmek
12 Yarm Road
TS18 3NA

Tel 01642607083
Fax 01642612355

BOREHOLE LOG

Project				BOREHOLE No
Barnsley Business and Innovation Centre				**BH2**
Job No	Date	Ground Level (m)	Co-Ordinates ()	
S121222	02-01-13			
Contractor				Sheet
				1 of 1

SAMPLES & TESTS			Water	STRATA				Geology	Instrument/ Backfill
Depth	Type No	Test Result		Reduced Level	Legend	Depth (Thick-ness)	DESCRIPTION		
						(0.10) 0.10	MADE GROUND: Tarmacadam.		
0.30	B					(0.30) 0.40	MADE GROUND: Dolomite.		
0.50 0.50-0.90	SPT J	N=50+				(0.45) 0.85	Very dense orangey yellow SANDSTONE.		
							Borehole complete.		

Boring Progress and Water Observations						Chiselling			Water Added		GENERAL REMARKS
Date	Time	Depth	Casing Depth	Casing Dia. mm	Water Dpt	From	To	Hours	From	To	No groundwater encountered.

All dimensions in metres Scale 1:12.5	Client William Saunders	Method/ Plant Used Mini rig	Logged By PF

GRD_BOREHOLE_LOG TEST S121222.GPJ AGS3_ALL.GDT 7/2/13

Solmek
12 Yarm Road
TS18 3NA

Tel 01642607083
Fax 01642612355

BOREHOLE LOG

Project				BOREHOLE No
Barnsley Business and Innovation Centre				**BH3**
Job No	Date	Ground Level (m)	Co-Ordinates ()	
S121222	02-01-13			
Contractor				Sheet 1 of 1

SAMPLES & TESTS			Water	STRATA				Geology	Instrument/ Backfill
Depth	Type No	Test Result		Reduced Level	Legend	Depth (Thick-ness)	DESCRIPTION		
						(0.10) 0.10	MADE GROUND: Tarmacadam.		
0.30	B					(0.50) 0.60	MADE GROUND: Dolomite.		
0.70	B					(1.30) 1.90	Very dense orangey yellow SANDSTONE.		
0.80	SPT	N=50+							
0.80	B								
0.80	J								
1.60	SPT	N=50+							
1.60-1.90	B								
1.60	J								
							Borehole complete.		

Boring Progress and Water Observations						Chiselling			Water Added		GENERAL REMARKS
Date	Time	Depth	Casing Depth	Casing Dia. mm	Water Dpt	From	To	Hours	From	To	No groundwater encountered.

All dimensions in metres Scale 1:12.5	Client William Saunders	Method/ Plant Used Mini rig	Logged By PF

GRD_BOREHOLE_LOG TEST S121222 GPJ AGS3_ALL GDT 7/2/13

Solmek
12 Yarm Road
TS18 3NA

Tel 01642607083
Fax 01642612355

BOREHOLE LOG

Project				BOREHOLE No
Barnsley Business and Innovation Centre				**BH4**
Job No	Date	Ground Level (m)	Co-Ordinates ()	
S121222	02-01-13			
Contractor				Sheet
				1 of 1

SAMPLES & TESTS			Water	STRATA				Geology	Instrument/ Backfill
Depth	Type No	Test Result		Reduced Level	Legend	Depth (Thick-ness)	DESCRIPTION		
						(0.10) 0.10	MADE GROUND: Tarmacadam.		
0.30	B					(0.40) 0.50	MADE GROUND: Dolomite.		
0.40	B								
0.50	SPT	N=50+				(0.35) 0.85	Very dense orangish yellow SANDSTONE.		
0.50	J								
							Borehole complete.		

Boring Progress and Water Observations						Chiselling			Water Added		GENERAL REMARKS
Date	Time	Depth	Casing Depth	Casing Dia. mm	Water Dpt	From	To	Hours	From	To	No groundwater encountered.

All dimensions in metres Scale 1:12.5	Client William Saunders	Method/ Plant Used Mini rig	Logged By PF

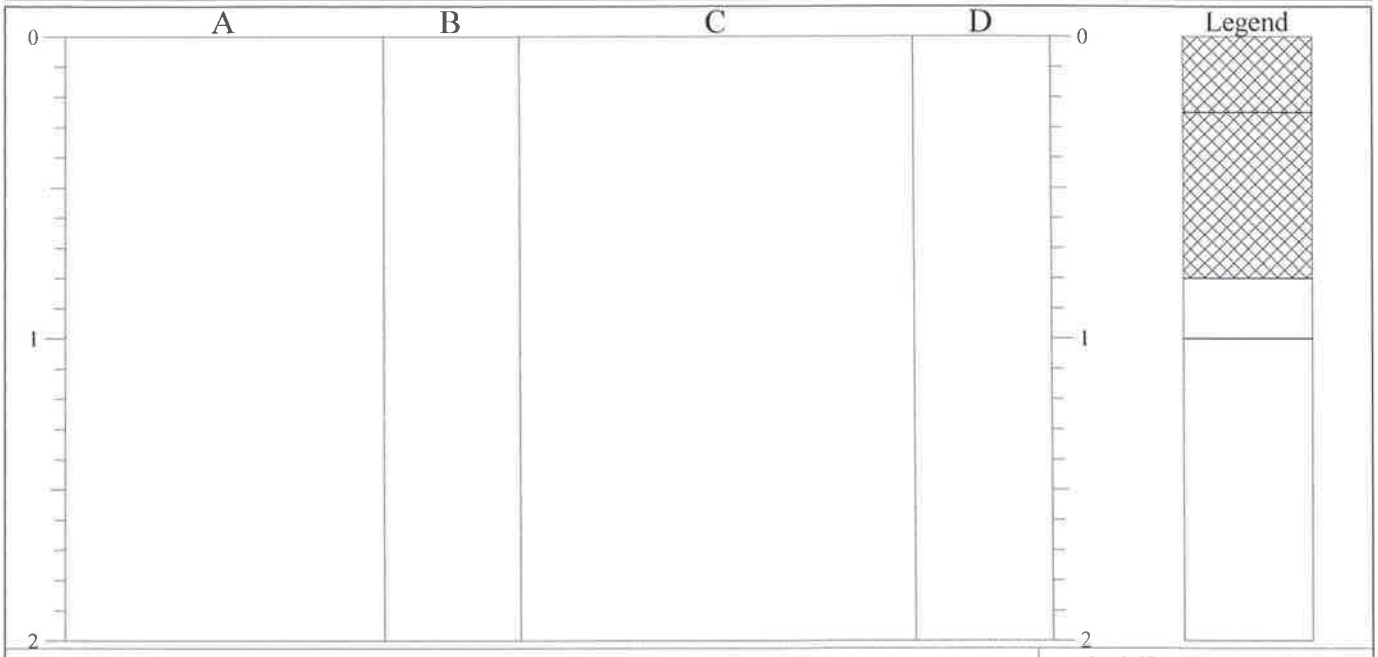
GRD_BOREHOLE_LOG TEST S121222 GPJ AGS3_ALL GDT 7/2/13

Solmek
12 Yarm Road
TS18 3NA

Tel 01642607083
Fax

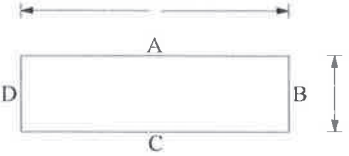
TRIAL PIT LOG

Project				TRIAL PIT No
Barnsley Business and Innovation Centre				**TP1**
Job No	Date	Ground Level (m)	Co-Ordinates ()	
S121222	02-01-13			
Contractor				Sheet
				1 of 1



STRATA			SAMPLES & TESTS		
Depth	No	DESCRIPTION	Depth	Type	Remarks/Tests
0.00-0.25		MADE GROUND: Brown topsoil.			
0.25-0.80		MADE GROUND: Light brown sandy angular to sub rounded fine to coarse gravel fill of angular to sub rounded sandstone and brick.	0.20	B	
			0.40	B	
			0.40	CBR	=3%
			0.60	CBR	=4%
0.80-1.00		Light brown SANDSTONE.			

Shoring/Support:
Stability:



GENERAL REMARKS

No groundwater encountered.

All dimensions in metres Scale 1:25	Client William Saunders	Method/ Plant Used Mini digger	Logged By PF

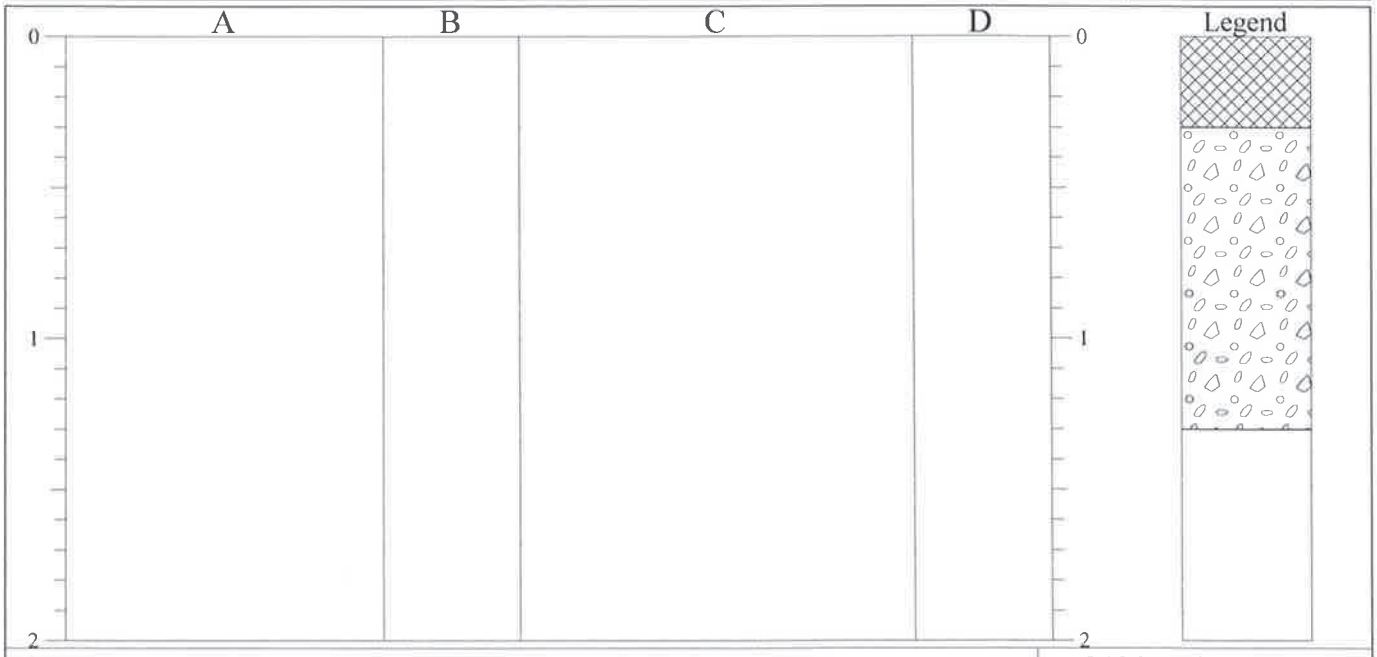
GRD_TRIAL_PIT_LOG S121222.GPJ AGS3_ALL.GDT 22/1/13

Solmek
12 Yarm Road
TS18 3NA

Tel 01642607083
Fax

TRIAL PIT LOG

Project				TRIAL PIT No
Barnsley Business and Innovation Centre				**TP2**
Job No	Date	Ground Level (m)	Co-Ordinates ()	
S121222	02-01-13			
Contractor				Sheet
				1 of 1



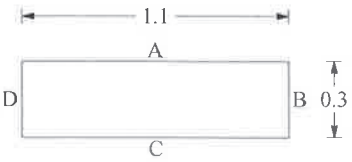
STRATA

Depth	No	DESCRIPTION
0.00-0.30		MADE GROUND: Brown topsoil.
0.30-1.30		Light brown sandy fine to coarse GRAVEL of sub angular to sub rounded sandstone. (Weathered Rockhead).
1.30		SANDSTONE.

SAMPLES & TESTS

Depth	Type	Remarks/Tests
0.40	CBR	=7%
0.60	CBR	=10%
0.80	B	

Shoring/Support:
Stability:



GENERAL REMARKS

No groundwater encountered.

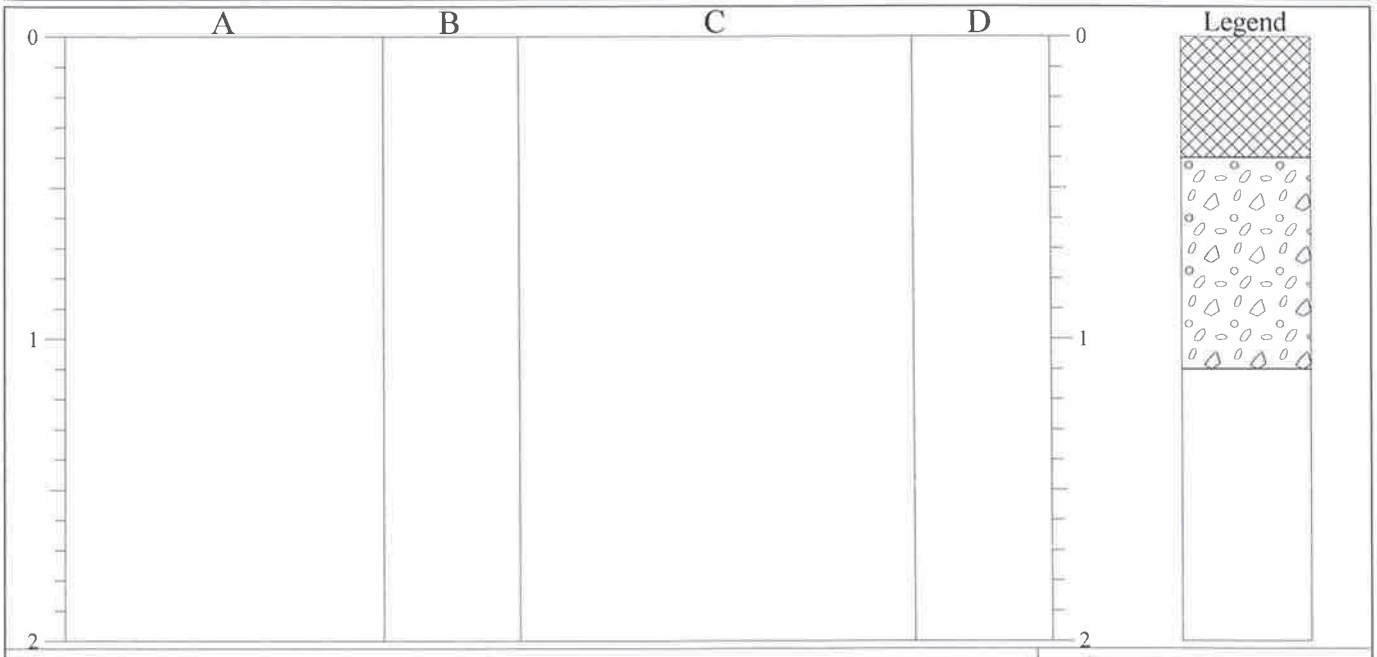
All dimensions in metres Scale 1:25	Client William Saunders	Method/ Plant Used Mini digger	Logged By PF

Solmek
12 Yarm Road
TS18 3NA

Tel 01642607083
Fax

TRIAL PIT LOG

Project				TRIAL PIT No
Barnsley Business and Innovation Centre				**TP3**
Job No	Date	Ground Level (m)	Co-Ordinates ()	
S121222	02-01-13			
Contractor				Sheet
				1 of 1



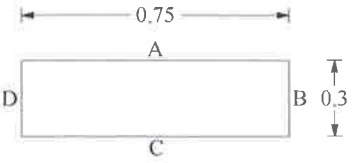
STRATA

Depth	No	DESCRIPTION
0.00-0.40		MADE GROUND: Brown topsoil.
0.40-1.10		Light brown sandy fine to coarse GRAVEL of sub angular to sub rounded sandstone. (Weathered Rockhead).
1.10		SANDSTONE

SAMPLES & TESTS

Depth	Type	Remarks/Tests
0.20	B	
0.50	CBR	=7%
0.70	CBR	=10%
0.90	B	

Shoring/Support:
Stability:



GENERAL REMARKS

No groundwater encountered.

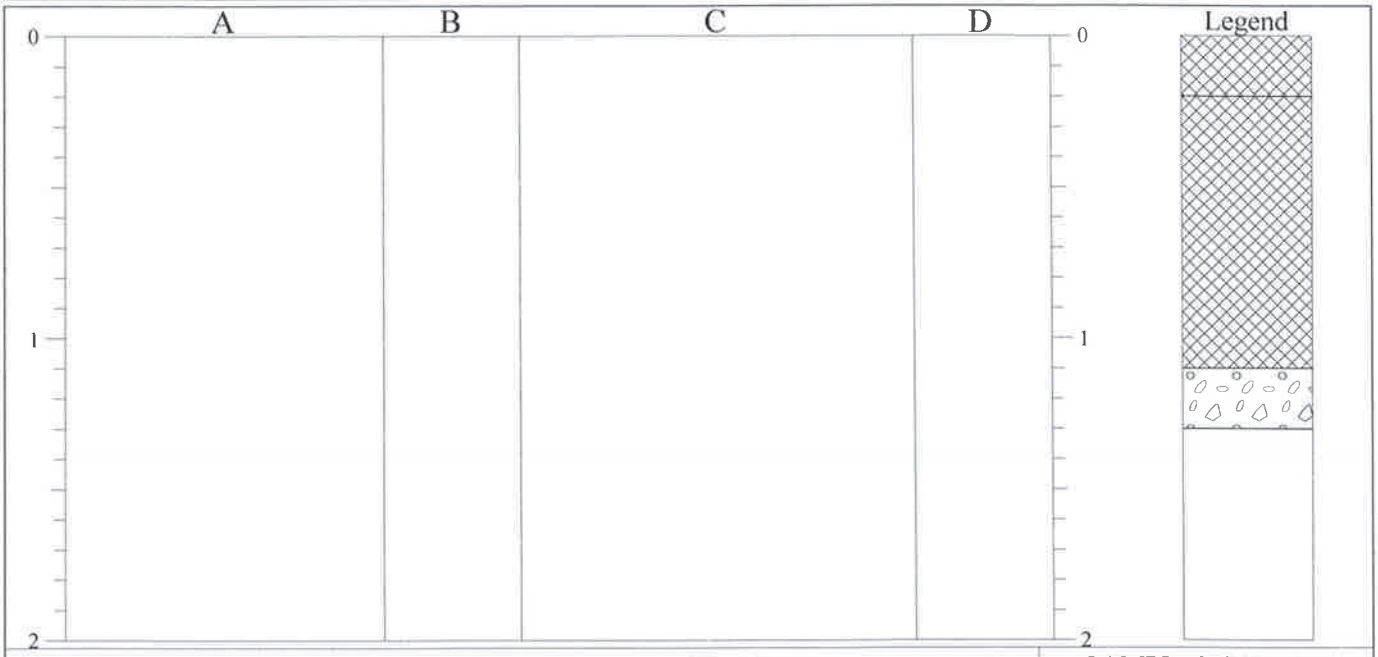
All dimensions in metres Scale 1:25	Client William Saunders	Method/ Plant Used Mini digger	Logged By PF

Solmek
12 Yarm Road
TS18 3NA

Tel 01642607083
Fax

TRIAL PIT LOG

Project				TRIAL PIT No
Barnsley Business and Innovation Centre				**TP4**
Job No	Date	Ground Level (m)	Co-Ordinates ()	
S121222	02-01-13			
Contractor				Sheet
				1 of 1



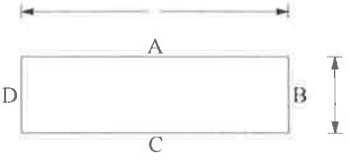
STRATA

Depth	No	DESCRIPTION
0.00-0.20		MADE GROUND: Brown topsoil with rare brick.
0.20-1.10		MADE GROUND: Brown to light brown clayey fine to coarse gravel fill of angular to sub rounded sandstone and brick.
1.10-1.30		Light brown sandy fine to coarse GRAVEL of angular to sub rounded sandstone. (Weathered Rockhead).
1.30		SANDSTONE.

SAMPLES & TESTS

Depth	Type	Remarks/Tests
0.15	B	
0.30	CBR	=6%
0.60	B	
0.60	CBR	=8%
1.20	B	

Shoring/Support:
Stability:



GENERAL REMARKS

No groundwater encountered.

All dimensions in metres Scale 1:25	Client William Saunders	Method/ Plant Used Mini digger	Logged By PF

SOAKAWAY DESIGN IN ACCORDANCE WITH BRE DIGEST 365: 1991
BRE Digest 365, Figure 2, Page 5

Client:	**WSP**				
Site:	**BARNSLEY BIC**				
Job No:	**S121222**				
Pit No:	**TP2**		**Test No:**	**1**	

CALCULATION OF SOIL INFILTRATION RATE

Time (min)	Depth (m)
0	0.8
0.5	0.9
1	1
1.5	1.3
3	
4	
5	
6	
7	
8	
9	
10	
15	
20	
25	
30	
40	
47	
60	
90	
120	
180	

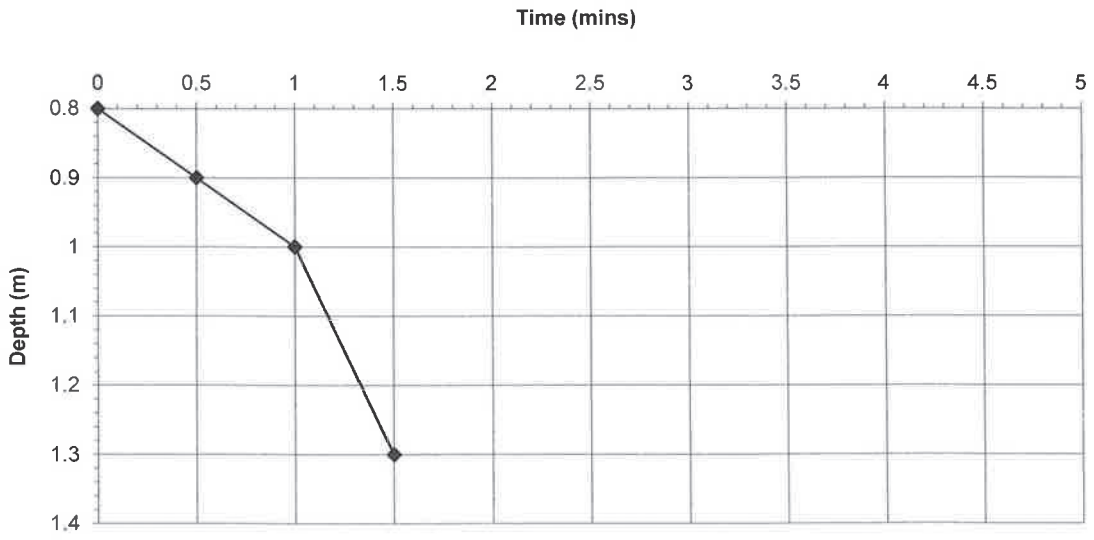
Pit Dimensions	Length (m) =	1.10
	Width (m) =	0.30
	Depth (m) =	1.30

Depth at start of test (m) =	0.800
Depth at end of test (m)=	1.300
75% level (m)=	0.925
50% Effective Depth	0.250
25% level (m)=	1.175
Base area of pit (m^2) =	0.330
Vp_{75-25} (m^3) =	0.083
a_{p50} (m^2) =	1.030

From the graph:	
tp 75 (min) =	0.65
tp 25 (min) =	1.3

Soil infiltration rate, f, (m/s) =	**2.05E-03**	**normal test**

Input by:	**DS**	**Date:**	**28/01/2013**
Checked by:	**RW**	**Date:**	**28/01/2013**



= 2050 m/s x 10^{-6}

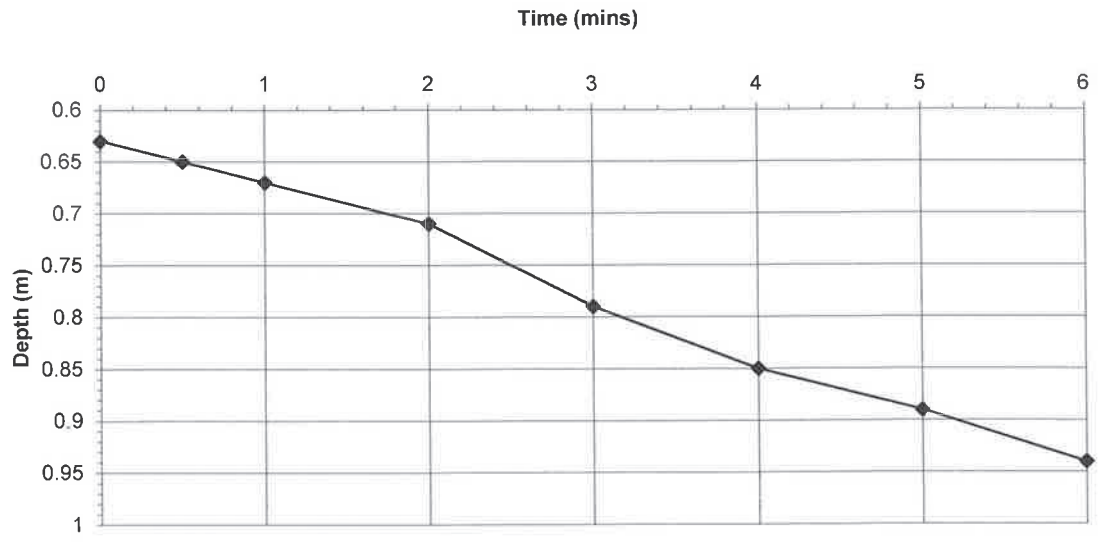
SOAKAWAY DESIGN IN ACCORDANCE WITH BRE DIGEST 365: 1991
BRE Digest 365, Figure 2, Page 5

Client:	**WSP**				
Site:	**BARNSLEY BIC**				
Job No:	**S121222**				
Pit No:	**TP3**		**Test No:**	**1**	

CALCULATION OF SOIL INFILTRATION RATE

Time (min)	Depth (m)
0	0.63
0.5	0.65
1	0.67
2	0.71
3	0.79
4	0.85
5	0.89
6	0.94
7	
8	
9	
10	
15	
20	
25	
30	
40	
47	
60	
90	
120	
180	

Pit Dimensions	Length (m) =	0.75	
	Width (m) =	0.30	
	Depth (m) =	1.10	
Depth at start of test (m) =		0.630	
Depth at end of test (m)=		0.940	
75% level (m)=		0.708	
50% Effective Depth		0.155	
25% level (m)=		0.863	
Base area of pit (m^2) =		0.225	
Vp_{75-25} (m^3) =		0.035	
a_{50} (m^2) =		0.551	
From the graph:			
tp 75 (min) =		1.8	
tp 25 (min) =		4.2	
Soil infiltration rate, f, (m/s) =		**4.40E-04**	**normal test**
Input by:	**DS**	**Date:**	**28/01/2013**
Checked by:	**RW**	**Date:**	**28/01/2013**



$= 440 \text{ m/s } 10^{-6}$

YorkshireWater

13 DEC 2012
Job No: 10717
File: 4.5
SS DM

Yorkshire Water Services
Developer Services
Sewerage Technical Team
PO BOX 52
Bradford
BD3 7AY

Tel: 0845 120 8482
Fax: (01274) 372 834

Email:
Technical.Sewerage@yorkshirewater.co.uk

For telephone enquiries ring:

Kashif Khan on (0845)120 8482

7th December 2012

William Saunders
Sheppard Lockton House
Cafferata Way
Newark
Notts
NG24 2TN

FAO D Mutepfa

Your Ref: DM/KAN/10717/4.5
Our Ref: N016790

Dear Sirs,

Barnsley Business and Innovation Centre,Wilthorpe Road, - Pre-Planning Sewerage Enquiry Industrial - K317856

Thank you for your letter received 23rd November 2012 and remittance. Our official VAT receipt has been sent to you under separate cover. Please find enclosed a complimentary extract from the Statutory Sewer Map, this indicates the recorded position of the public sewers.

The following comments reflect our view, with regard to the public sewer network only, based on a 'desk top' study of the site:

There is a 300 mm diameter public combined sewer recorded crossing the site. No buildings are to be erected within 3 (three) metres, nor trees planted within 5 (five) metres of this public sewer. It may not be acceptable to raise or lower ground levels over the sewer, nor to restrict access to the manholes on the sewer. If you wish to have this sewer diverted under Section 185 of the Water Industry Act 1991 an application should be made in writing. To discuss this matter, please telephone 0845 120 84 82.

The local Waste Water Treatment Works (WWTW) is Darton. It is understood that this WWTW may only have limited spare capacity, if any, available. We have contacted the respective treatment team for more information regarding the impact of proposed development and will contact you when an assessment has been made.

Development of the site should take place with separate systems for foul and surface water drainage. The separate system should preferably extend to the public sewer.

Foul water domestic waste should discharge to the 300 mm diameter public combined sewer recorded crossing/within the site.

The developer's attention is drawn to Requirement H3 of the Building Regulations 2000. This establishes a preferred hierarchy for surface water disposal. Consideration should firstly be given to discharge to soakaway, infiltration system and watercourse in that priority order.

Sustainable Drainage Systems (SUDS), for example the use of soakaways and/or permeable hardstanding etc, may be a suitable solution for surface water disposal appropriate in this situation. You are advised to seek comments on the suitability of SUDS in this instance from the appropriate authorities.

Where appropriate, soakaways, swales and infiltration trenches (SUDS) may be adopted as part of the

public sewer network. Further information may be seen in the DEFRA publication 'Interim Code of Practice for Sustainable Drainage Systems' (ISBN 0-86017-904-4). If the developer is considering adoption of SUDS they should contact our Developer Services Team on 0845 120 84 82.

The local public sewer network does not have capacity to accept any additional discharge of surface water from the proposal site. The developer is advised to contact the Environment Agency/local Land Drainage Authority with a view to establishing a suitable watercourse (if any nearby) for discharge.

As a last resort and subject to providing satisfactory evidence as to why the other methods of surface water disposal have been discounted, curtilage surface water discharges to the public sewer will be restricted to the level of run-off - i.e. same rate of discharge - to that from the existing use of the site minus a 30% reduction in the existing discharge. To maintain the "status quo" in the public sewer network, any discharge of surface water from the site should take place with similar rates of flow and/or measured areas discharging to similar points of connection to that of the existing use of the site. You will need to demonstrate positive drainage, based on a 1 in 1 year storm, to the public sewer to Yorkshire Water by means of investigation and calculation carried out at your expense.

To do this, Yorkshire Water requires to see existing and proposed drainage layouts with pipe sizes, gradients and connection points, measured impermeable areas of the present and proposed use of the site, along with the calculations that show the existing and proposed discharge rate from the site to the public sewer.

Please note further restrictions on surface water disposal from the site may be imposed by other parties. You are strongly advised to seek advice/comments from the Environment Agency/Land Drainage Authority, with regard to surface water disposal from the site.

Surface water run-off from communal parking (greater than 800 sq metres or more than 50 car parking spaces) and hardstanding must pass through an oil, petrol and grit interceptor/separator of adequate design before any discharge to the public sewer network. Roof water should not pass through the traditional 'stage' or full retention type of interceptor/separator. It is good drainage practice for any interceptor/separator to be located upstream of any on-site balancing, storage or other means of flow attenuation that may be required.

Prospectively adoptable sewers and pumping stations must be designed and constructed in accordance with the WRc publication "Sewers for Adoption - a design and construction guide for developers" 6th Edition as supplemented by Yorkshire Water's requirements, pursuant to an agreement under Section 104 of the Water Industry Act 1991. An application to enter into a Section 104 agreement must be made in writing prior to any works commencing on site. Please contact our Developer Services Team (telephone 0845 120 84 82) for further information.

The public sewer network is for domestic sewage purposes. This generally means foul water for domestic purposes and, where a suitable surface water or combined sewer is available, surface water from the roofs of buildings together with surface water from paved areas of land appurtenant to those buildings. Land and highway drainage have no right of connection to the public sewer network. No land drainage to be connected/discharged to public sewer.

As a last resort, highway drainage may be accepted under certain circumstances. If it can be demonstrated, through satisfactory evidence, that SUDS are not a viable option, there are no watercourses or highway drains available and if capacity is available within the public sewer network, highway drainage discharges to the public sewer network may be permitted. In this event, the developer may be required to enter into a formal agreement with Yorkshire Water Services under Section 115 Water Industry Act 1991 to discharge non-domestic flows into the public sewer network.

Any new connection to an existing public sewer will require the prior approval of Yorkshire Water. You may obtain an application form from our website (www.yorkshirewater.com) or by telephoning 0845 120 84 82.

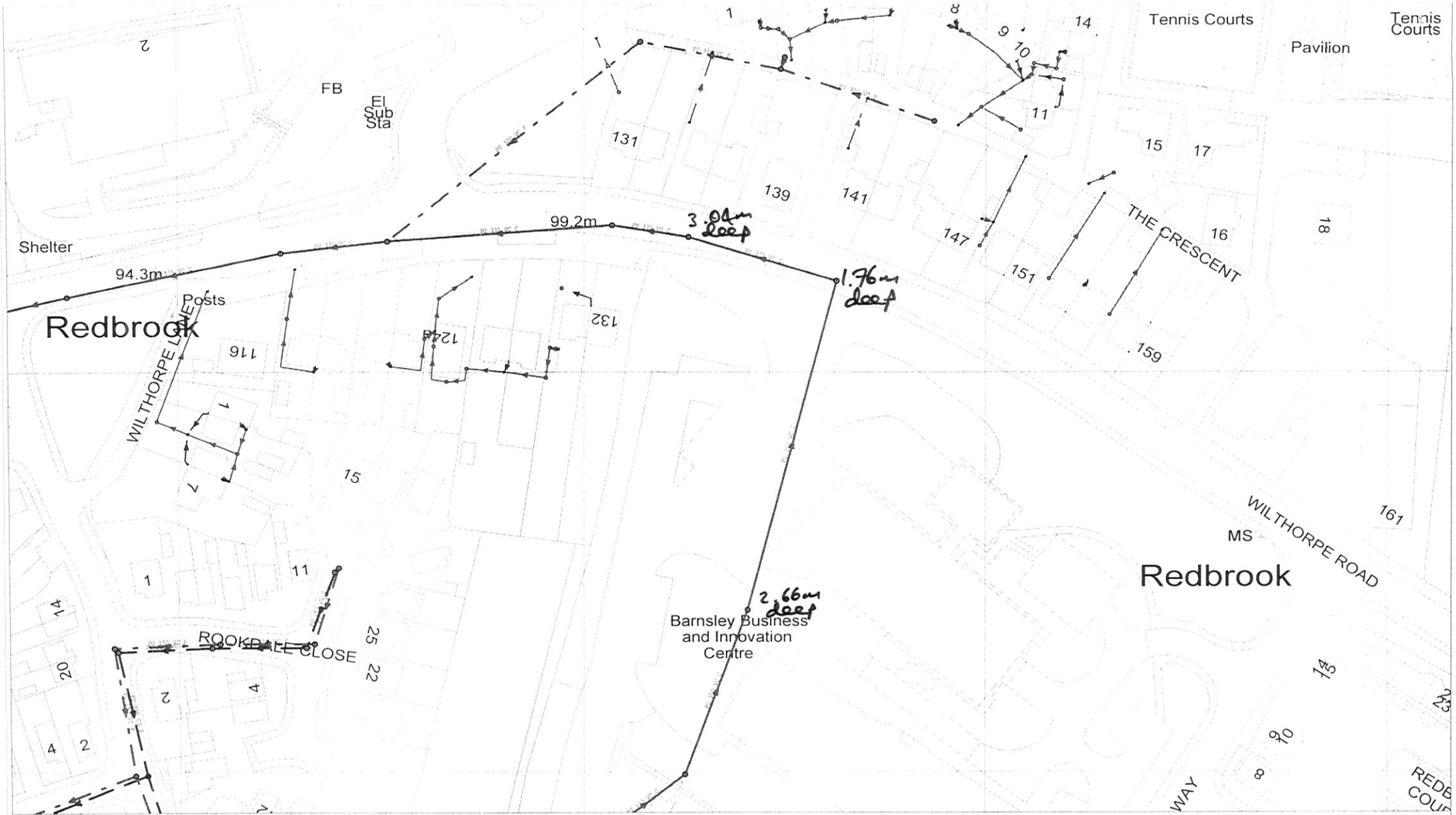
Yorkshire Water's Industrial Waste Manager must be consulted in respect of any proposed trade effluent discharge to the public sewer.

All the above comments are based upon the information and records available at the present time.

The information contained in this letter together with that shown on any extract from the Statutory Sewer Map that may be enclosed is believed to be correct and is supplied in good faith. Please note that capacity in the public sewer network is not reserved for specific future development. It is used up on a 'first come, first served' basis. You should visit the site and establish the line and level of any public sewers affecting your proposals before the commencement of any design work.

Yours faithfully

Developer Services Team



432762 : 407691	Map Name : SE3207NE	Title	Partial Key
			Foul Sewer = F Combined Sewer = C Surface Water Sewer = SW Trade Sewer = TD Partially Separate = PS
YorkshireWater	Yorkshire Water, PO Box 500, Halifax Road, Bradford BD6 2LZ Contact Name : K KHAN Contact Tel :	Notes	This plan is furnished as a general guide only and no warranty as to its correctness is given or implied. This plan must not be relied upon in the event of excavations or other works made in the vicinity of public sewers. No house or property connection
		(Ody) COPYRIGHT STATEMENTS: Reproduced by permission of Ordnance Survey on behalf of HMSO © Crown copyright and database 2004. All rights reserved Ordnance Survey Licence number 100019559	Date Req : 07/12/2012, 10:44:55 Source : Sewer Network Enquiry
			Date Gen : 07/12/2012, 10:44:56

UPN: Undefined Originator: K KHAN, New Development - Waste Water,

----- Forwarded by Kashif Khan/Waste Water/YWS/Yorkshire Water on 06/03/2013 10:04 -----

Yorkshire Water Services
Developer Services
Sewerage Technical Team
PO BOX 52
Bradford
BD3 7AY

daniel.mutepfa@wm-saunders.co.uk

Your Ref: DM/KAN/10717/4.5
Our Ref: N016790

Tel: 0845 120 8482
Fax: (01274) 372 834

Email:
Technical.Sewerage@yorkshirewater
.co.uk

For telephone enquiries ring:

Kashif Khan on (0845)120 8482

6th March 2013

Dear Sir,

Barnsley Business and Innovation Centre,Wilthorpe Road, - Pre-Planning Sewerage Enquiry Industrial - K317856

Further to my letter dated 7th December 2012:

We have received comments from our treatment team and it is understood that Darton STW does have sufficient capacity to accept foul only flows from this proposed development.

Yours faithfully

Developer Services Team

williamsaunders

architecture : engineering : building consultancy

Sheppard Lockton House
Cafferata Way
Newark-on-Trent
Nottinghamshire NG24 2TN

Tel: 01636 704361
Fax: 01636 702809
W: wm-saunders.co.uk

Also at: Leeds : Cardiff : Wirksworth