13.1.5 This statement has been prepared to assist in the process of the proposed development, and it normally will require distribution to the following parties prior to implementation, although this list may not be exhaustive:

Table summarising parties likely to require information contained in this section of the report

Party	Reason
Client	For information / reference and cost planning
Developer / Contractor / project manager	To ensure procedures are implemented, programmed and costed
Planning department	Potentially to discharge planning conditions
Independent inspectors such as NHBC / Building control	To ensure procedures are implemented and compliance with building regulations
Project design team	To allow for remedial measures in the design
Project landscape consultant	To ensure compatibility of cover system proposed in this document with landscape requirements
Supplier of remediation materials	To ensure compliance with specification.

13.2 Summary of results of investigations leading to recommendations for remediation

13.2.1 Investigations and assessment of chemical contamination is described primarily in section 8. A summary of chemical contamination at the site is detailed below.

13.2.2 Evaluation of contamination - human receptors

13.2.2.1 Current site users

13.2.2.1.1 Providing the site is developed then the risk of harm being caused to current users from identified contamination is clearly a short-term issue and unlikely to require any remediation. If development does not proceed as planned, further consideration should be given to such risks and the requirement for remediation.

13.2.2.2 End users

13.2.2.2.1 Concentrations of chemical contaminants have been measured above guideline values within Made Ground deposits across the site. In such areas, we are of the opinion that the site represents a medium to high risk of causing harm to future end users of the developed site, based on current development proposals. Providing the remedial measures as outlined below are implemented, the risk of harm being caused to the health of end users is considered to be low.

13.2.2.2.2 We also consider that Topsoil/naturally deposited soils at the site are unlikely to cause significant harm to human health and can be reused within the proposed development where necessary.

13.2.2.3 *Construction operatives and other site investigators*

13.2.2.3.1 The risk of damage to health of construction operatives and other site investigators is, in our opinion, medium to high, primarily due to the presence of asbestos in Made Ground soils. Generally, risks would be minimised by taking adequate hygiene precautions on site. Such precautions would be: -

- Wearing protective clothing particularly gloves to minimise ingestion from soil contaminated hands.
- Avoiding dust by dampening the soils during the works.
- Wearing masks if processing produce dust.

13.2.2.3.2 Consideration will need to be given to the presence of asbestos in Made Ground soils onsite and the additional precautions that will need to be taken during groundworks to minimise contact/disturbance and potential release of fibres.

13.2.2.4 *Controlled waters*

13.2.2.4.1 Marginal elevated concentrations of leachable benzo(a)pyrene and copper have been identified in Made Ground soils, with very marginal concentrations of soluble copper identified in groundwater onsite and surface waters downstream of site. Given the marginal exceedances of soluble copper, and based on the conservatism factored into the EQS value for copper, we consider the risk of leachable copper adversely impacting the quality of groundwater and surface waters is low.

13.2.2.5 *Vegetation*

13.2.2.5.1 In our opinion, marginal contamination identified in Topsoil/natural soils across the site is unlikely to present a risk of causing significant harm to vegetation.

13.2.2.5.2 Concentrations of contaminants exceed relevant guidelines within Made Ground deposits across the site. In our opinion, such contamination is likely to present a risk of causing significant harm to vegetation. Providing the remedial measures as outlined below are implemented, the risk of harm being caused to the health of vegetation is considered to be low.

13.2.2.6 *Gaseous contamination*

13.2.2.6.1 In the area of Zone 2, the development will require gas protective measures which would achieve a '*gas protection score'* of 3.5. Lists of protective measures which each produce a score value are produced in Tables 5, 6 and 7 of BS8485:2015. Furthermore, with such areas of the site being classified as 'Amber 1', then following NHBC report No 10627-R01(04) table 14.2, the following 'low level' gas protection measures are required as minimum in Zone 2: -

a) Installation of a suitable gas resistant membrane

b) Ventilated subfloor to facilitate a minimum of one complete volume change per 24 hours.

c) Gas protective measures shall be as presented in Building Research Establishment Report 414

13.2.2.6.2 We recommend that this is verified by completion of further, more intensive ground gas monitoring to fully classify this area of the site, particularly in the south-western part of Zone 2 where significant deposits of Made Ground, consistent with landfill type material, are present. Additionally, perimeter monitoring between Zone 1 (where significant concentrations of gases have been measured), and Zones 2 and 3 should be undertaken to assess the potential for localised migration between such areas.

13.2.2.6.3 Based on monitoring observations to date, development categorisation (Section 9.6) and the site characteristic gas situation (Section 9.8) and with reference to Table 4 of BS8485:2015, the area of Zones 3 and 4 are unlikely to require any gas protective measures. However, as outlined in paragraph 9.8.4, we recommend that this is verified by completion of further, more intensive ground gas monitoring to fully classify these areas.

13.3 Remediation strategy

13.3.1 The provision of buildings and hardstanding areas across the site will sever the pathway to end-users by preventing human access to contaminated soils.

13.3.2 In proposed garden/landscaped areas where Made Ground is present in Zones 2 and 4, an imported capping layer (cover system) of chemically 'clean' soils will be introduced to sever the pathway between contaminants and end-users, thus minimising the risk of human contact with soils containing contaminants which have the potential to cause harm to human health. The capping layer will be a minimum of 600mm thick in any productive garden areas, and areas likely to be accessible to young children (considered the critical human receptor) on a regular (daily basis). In our opinion, this may be reduced to 300mm in landscaped areas.

13.3.3 Whilst the capping solution is widely accepted regulating Local Authorities (Environmental Health Departments) have differing views as to the minimum thickness required which range from 300mm to 600mm. The Building Research Establishment publication *'cover systems for land regeneration - thickness cover for systems for contaminated land'* indicates that 600mm of capping would be required at the site, though in our opinion this could be reduced to 300mm in non-productive garden and landscaped areas, however this needs to be checked with the Local Authority.

13.3.4 Following installation of the cover system described above, the capping thickness will require independent measurement to validate the correct thicknesses have been provided in landscaped/garden areas.

13.3.5 Furthermore, any gas protection measures which are installed within developments will also require independent validation.

13.4 Specification for imported capping materials

13.4.1 General

13.4.1.1 All imported capping materials (cover systems) shall be sampled and tested to demonstrate they are '*fit for purpose*' before being brought onto site.

13.4.2 Capping materials

13.4.2.1 Capping materials shall comprise topsoil to a minimum thickness of 150mm, over subsoil, alternatively the capping can comprise topsoil.

13.4.2.2 Topsoil shall comprise a material which will allow plants to grow healthily. Topsoil shall be general purpose grade in accordance with BS3882:2015 '*Specification for topsoil*' unless otherwise specified by the consultant landscape architect for the project. Testing shall be carried out to demonstrate compliance for general purpose topsoil (or other topsoil specified by others) with test criteria provided in table 2 of BS3882 with at least one sample tested per source. Topsoil shall be stored, handled and place following the recommendations of BS3882.

13.4.2.3 Subsoils shall be granular (sands / gravels) or clays / silts of natural origin, which shall be classified, placed and compacted in accordance with the current Specification for Highway works, Volume 1, 600 series, available on www.standardsforhighways.co.uk.

13.4.3 Rate of testing / sampling

13.4.3.1 If different sources are to be utilised for topsoil/capping, each source shall be investigated.

13.4.3.2 Capping materials shall be from a source where at least 3 representative soil samples have been taken, subject to a minimum rate of at least 1 sample per 250m^3.

13.4.3.3 With reference to Section 8, we can confirm that site won topsoil and naturally deposited soils can also be used as part of any cover system onsite.

13.4.4 Testing regime

13.4.4.1 Human receptors

13.4.4.1.1 The testing regime really is dependent upon the history of the site where the capping materials are sourced. Past historical uses (from a potential chemical contamination viewpoint) of the source site will dictate the required testing regime potentially requiring additional testing to target / investigate concentrations of contaminants used at the source site where they are harmful to human health. At this stage we cannot specify the scope and indeed the need for such site specific testing as the source of the imported fills is not known.

13.4.4.1.2 As a minimum testing shall be scheduled to measure the concentrations of commonly occurring inorganic and organic contaminants (listed in Table 13.4.7 below where guideline values are available).

13.4.4.2 Water receptors

13.4.4.2.1 The materials forming the cover system, may exhibit a degree of permeability, and thus the potential for any chemical contaminants contained in the soils to leach and thus migrate towards groundwater resources, although the risk of this occurring is dependent upon the location of the water table and indeed the permeability of the soils above the water table. Conversely, leachable contaminants could migrate laterally from cover system towards surface water resources. In order to minimise this risk, the soils forming the cover system shall be tested to determine leachable concentrations of potential contaminants. As with testing regimes associated with human health, the testing regime really is dependent upon the history of the site where the capping materials are sourced. At this stage we cannot specify the scope and indeed the need for such site specific testing as the source of the imported fills is not known.

13.4.4.2.2 As a minimum testing shall be scheduled to measure the leachable concentrations of commonly occurring inorganic and organic contaminants where they are considered a risk to harming water receptors (listed in Table 13.4.7 below where leachate guideline values are available).

13.4.5 Maximum concentrations (Human receptors)

13.4.5.1 The Land Quality Management (LQM) and the Chartered Institute of Environmental Health (CIEH) have derived Suitable for Use Levels (S4ULs) which are presented in *'The LQM/CIEH S4ULs for Human Health Risk Assessment'* (2015). S4ULs have been used as a screening tool to assess the risks posed to the health of humans from exposure to soil contamination in relation to appropriate land uses. Where published S4ULs are not available, we have adopted C4SLs (Category 4 Screening Levels) produced by DEFRA or SGVs (Soil Guideline Values) as appropriate. In the absence of any of these criteria we have adopted Soil Screening Values (SSV) derived by Soiltechnics and by Atkins (SSV^{ATK}). The CLEA model used to derive SSVs has been used with toxicology data presented by the EA, LQM/CIEH and Atkins (in that order of preference). SSVs produced by Atkins are presented on their $ATRISK^{SOIL}$ website.

13.4.5.2 S4ULs, C4SLs, SGVs, SSVs and SSV^{ATK}s represent 'intervention values'; indications to an assessor that soil concentrations above these levels might present an unacceptable risk to the health of site users. These guideline values have been produced using conceptual exposure models, which use assumptions and are applied to differing end uses of land. If the values are exceeded, it does not necessarily imply there is an actual risk to health and site-specific circumstances should be taken into account. Conversely, where a critical pathway or chemical form of the contaminant has not been evaluated, a risk may be present even if the adopted guideline value has not been exceeded.

13.4.5.3 For evaluation of test data in relation to polycyclic aromatic hydrocarbon (PAH) and phenol contamination, we have compared measured concentrations with corresponding S4ULs. The S4UL fractions are dependent on the Soil Organic Matter (SOM) content of the soils. We have adopted the lowest S4UL (1% SOM) as an initial screening value.

13.4.6 Maximum concentrations (water receptors)

13.4.6.1 For interpretation of test data in relation to water receptors measured concentrations of leachable contaminants shall be directly compared with the Environmental Quality Standards (EQS) as published by the Environment Agency. In the absence of EQS UK Drinking Water Standards shall be adopted.

13.4.7 Maximum concentrations (summary)

13.4.7.1 The following table summarises the maximum concentrations of chemical contaminants which shall not be exceeded in imported capping materials.

Table summarising maximum concentration of contaminants in soils used for capping

Contaminant	Maximum allowable concentration and test criteria (Human Receptors) (Total concentration)		Maximum concentration (µg/l) (leachate concentration)
	C4SL(u) (mg/kg)	S4UL (mg/kg)	
Inorganic contaminants			
Arsenic	-	37	50
Barium	-	-	700
Boron	-	290	2000
Beryllium	-	1.7	-
Cadmium (pH to 7.4)	-	11	0.25
Copper	-	2400	1
Chromium	-	910	32
Cyanide (total)	-	34	50
Lead	210	-	14
Mercury	-	1.2	0.07
Nickel		180	50
Nitrate	-	-	50000
Selenium	-	250	10
Sulfate	-	-	400000
Sulfide	-	-	0.25
Vanadium	-	410	60
Organic contaminants			
Acenaphthene	-	210	
Acenaphthylene	-	170	
Anthracene	-	2400	
Benzo(a)anthracene	-	7.2	
Benzo(a)pyrene	-	2.2	
Benzo(b)fluoranthene	-	2.6	
Benzo(g,h,i)perylene	-	320	
Benzo(k)fluoranthene	-	77	
Chrysene	-	15	
Dibenzo(a,h)anthracene	-	0.24	
Fluoranthene	-	280	
Fluorene	-	170	
Indeno(1,2,3-cd)pyrene	-	27	
Naphthalene	-	2.3	
Phenanthrene	-	95	
Phenols	-	280	
Pyrene	-	620	

Table 13.4.7

13.4.8 Information required

13.4.8.1 It is critically important that the imported capping material will minimise the risks of causing harm to human end users of the site. It is necessary to demonstrate the imported capping materials are 'fit for purpose', and relevant and current test result certificates are an important part of the necessary compliance documentation. Compliance documentation will be provided to other interested parties such as:-

- Local authority planning department to discharge planning permissions
- Checking bodies such a NHBC and Building Control (For compliance with building regulations)
- Potential purchasers of the buildings (and their legal advisors)
- Environment Agency (controlling body for ground / surface water resources)

Based on the above it is important to provide compliance documentation prior to importation to site, thus avoiding abortive works and delays to the construction programme with its potential financial penalties.

13.4.8.2 Compliance documentation shall include the following

- Copies of test result certificates signed by a MCERTS accredited laboratory which is signed and dated.
- Source and supplier of the capping material.
- Delivery notes confirming the material originates from the stated source (will form part of the subsequent validation reporting).

13.5 Verification report

13.5.1 The thickness of the completed cover system will require verification by an independent consultant. We can carry out such investigations on further instructions.

13.5.2 Following completion of remedial works detailed above, a closure report which provides details of all work undertaken as part of the remediation process will have to be prepared. The closure report will include details of imported materials to form the cover system, its thickness and thus verification of its fitness for purpose.

13.5.3 Similarly, any gas protection measures installed at the site will also require verification by an independent consultant.

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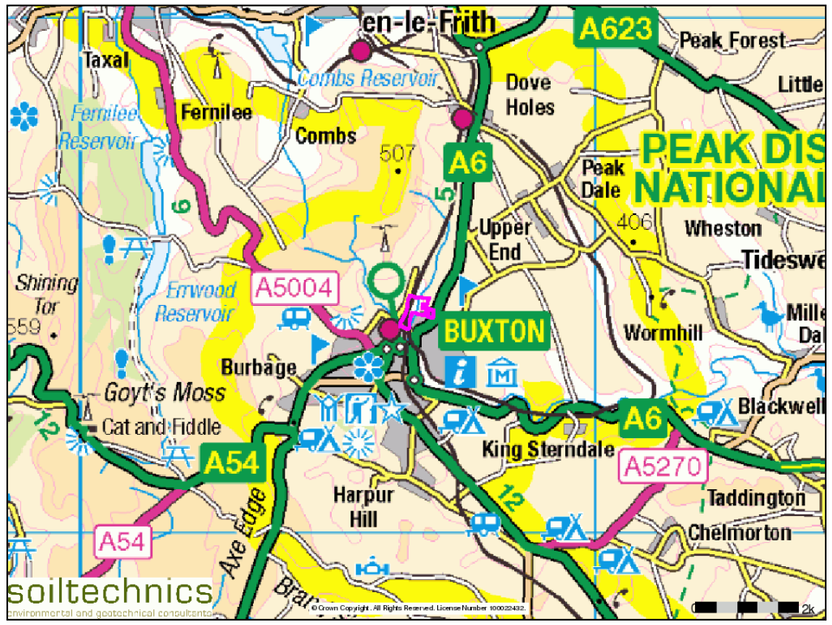
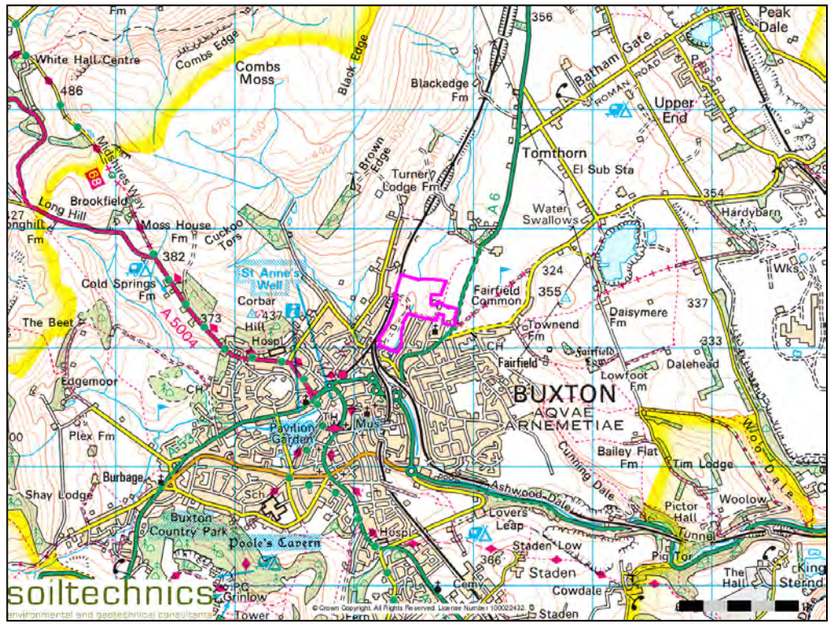
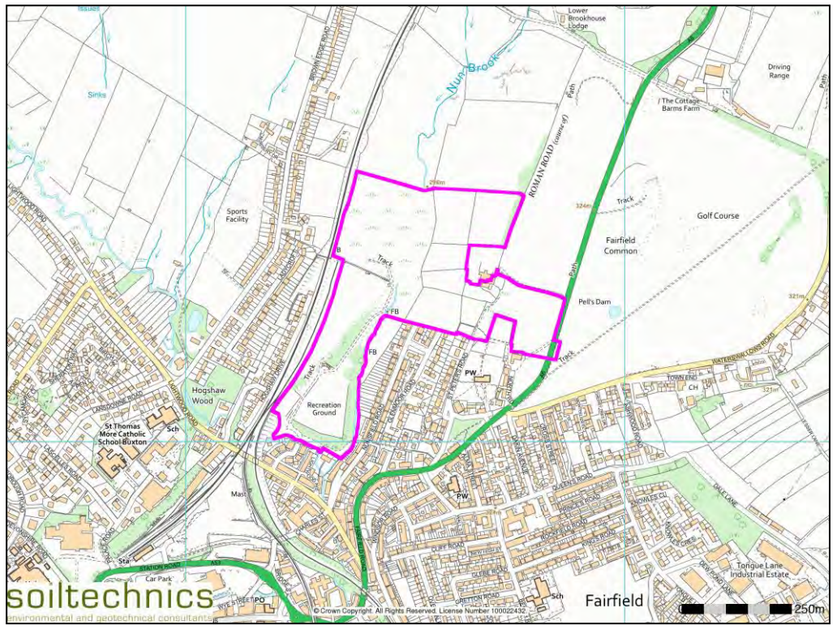


Neighbourhood extract from Ordnance Survey map



Town extract from Ordnance Survey map



Detail extract from Ordnance Survey map

Title	Scale	Drawing number
Site location plan	Not to scale	01

Proposed residential development
Nunsfield Road, Buxton

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Key

- TP — Approximate location of trial pit formed by machine excavation
- DTS — Approximate location of borehole formed by Driven Tube Sampling techniques
- DTS — Approximate location of borehole formed by Driven Tube Sampling techniques with standpipe installation
- Approximate site boundary
- Potential for ground dissolution stability hazards
- Nestle water pipe easement

Grassed fields
Grassed fields
Golf course
Residential housing
Agricultural supply yard
Agricultural sales building
Grass track
Nunsfield farm
House
Asphaltic concrete track
Disused ground
Dense vegetation
Semi-mature wood
Railway line
A6 Fairfield Road
Golf course
Allotment gardens
Former pub building
Golf course
Open public space
(surfaced in grass)
Residential housing
Residential housing
Residential housing
Residential housing
Residential housing
Residential housing
Play area
Garages
Residential housing

DTS01 DTS02 TP01 DTS03 DTS04 DTS27 TP02 TP03 DTS05 DTS06 TP05 DTS07 DTS12 TP18 DTS09 DTS08 DTS10 TP04 DTS29 DTS28 DTS11 TP06 TP09 DTS16 DTS17 DTS15 TP14 DTS19 TP11 TP10 TP15 TP08 DTS13 DTS18 TP17 DTS20 TP16 TP13 TP07 DTS21 TP19 DTS22 DTS23 TP20 DTS24 TP12 DTS25 DTS26

Title	Scale	Drawing number
Plan showing development proposals and location of exploratory points	1:1250 at A1	03

Report Ref: STG4642M-G01
Revision: 02

August 2019

Proposed residential development
Nunsfield Road, Buxton

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environmental and geotechnical consultants

Key

- TP — Approximate location of trial pit formed by machine excavation
- DTS — Approximate location of borehole formed by Driven Tube Sampling techniques
- DTS — Approximate location of borehole formed by Driven Tube Sampling techniques with standpipe installation
- Approximate site boundary
- Inaccessible at time of investigation due to rail construction site
- Access not available at time of investigation
- Zone 1
- Zone 2
- Zone 3
- Zone 4
- Nestle water pipe easement

Grassed fields
Grassed fields
Golf course
Residential housing
Agricultural supply yard
Grass track
Agricultural sales building
Nunsfield farm
House
Asphaltic concrete track
Golf course
A6 Fairfield Road
Dense vegetation
Disused ground
Semi mature wood
Railway line
Allotment gardens
Allotment Gardens
Former pub building
Golf course
Open public space
(surfaced in grass)
Residential housing
Residential housing
Residential housing
Residential housing
Residential housing
Residential housing
Play area
Garages
HOGSHAW

DTS01 DTS02 TP01 DTS03 DTS04 DTS27 TP02 TP03 DTS05 DTS06 TP05 DTS07 DTS12 TP18 DTS08 DTS09 DTS10 TP04 DTS29 DTS28 DTS11 TP06 TP09 DTS16 DTS17 DTS15 TP14 DTS19 TP15 TP11 TP10 TP08 DTS13 DTS18 TP17 DTS20 TP16 TP13 TP07 DTS21 TP19 DTS22 DTS23 TP20 DTS24 TP12 DTS25 DTS26

Title	Scale	Drawing number
Plan showing development proposals, location of exploratory points and zonal assessment	1:1250 at A1	04

Report Ref: ST04642M-G01
Revision: 02

August 2019

Proposed residential development
Nunsfield Road, Buxton

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STRATA				WATER STRIKES	IN SITU TESTING		SAMPLING		
DESCRIPTION	DEPTH (m)	REDUCED LVL (m OD)	LEGEND		TYPE / DEPTH (m)	RESULT	FROM (m)	TO (m)	TYPE
Grass over dark brown SAND with frequent rootlets. (TOPSOIL)									
	0.20	309.40					0.20		D
Medium dense brown slightly clayey silty very sandy GRAVEL with rare cobbles. Gravel and cobbles consist of medium to coarse angular mudstone. (WEATHERED EYAM LIMESTONE FORMATION)							0.50		D
	0.70	308.90							
Soft very low strength brown gravelly slightly sandy CLAY. Gravel consists of medium to coarse angular mudstone. (WEATHERED EYAM LIMESTONE FORMATION)					PP 0.80	PP=17	0.80		D
	1.00	308.60							
Soft light grey gravelly CLAY. Gravel consists of fine to medium angular limestone. (WEATHERED EYAM LIMESTONE FORMATION)									
	1.20	308.40					1.20		D
TRIAL PIT TERMINATED AT 1.20m									

Key

D Small Disturbed Sample
B Bulk Disturbed Sample
ES Environmental Sample
W Water Sample
C Core sample
UT Undisturbed Sample

S Standard Penetration Test
C Standard Penetration Test (solid cone)

PP Pocket Penetrometer test
SV Shear Vane test
PID Photo Ionisation Detector test

Notes
Trial pit terminated due to obstruction. Backfilled with arisings. Trial pit terminated due to competency of deposits (likely bedrock).

Groundwater observations
No groundwater encountered.

Title Trial pit record	**Dimensions (w x l)** 1.30m x 1.50m	
Method Tracked excavator	**Logged by** TO	**Date(s)** 24/01/2019
Level (m OD) 309.60	**Compiled by** SA	**Sheet number** Sheet 1 of 1
Co-ordinates 406640mE, 374562mN	**Checked by** SD	**TP01**

Report ref: STQ4642M-G01 **Revision:** 0

Proposed residential development
Nunsfield Road, Buxton

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STRATA				WATER STRIKES	IN SITU TESTING		SAMPLING		
DESCRIPTION	DEPTH (m)	REDUCED LVL (m OD)	LEGEND		TYPE / DEPTH (m)	RESULT	FROM (m)	TO (m)	TYPE
Grass onto dark brown SAND with frequent rootlets. (TOPSOIL - MADE GROUND)	0.20	300.39					0.20		D
Medium dense brown slightly gravelly slightly silty SAND. Gravel consists of fine angular limestone. (WEATHERED EYAM LIMESTONE FORMATION)							0.30		D
							0.50		D
							0.80		D
Stiff high strength very dark grey gravelly slightly sandy CLAY. Gravel consists of fine to medium angular mudstone. (WEATHERED EYAM LIMESTONE FORMATION)	1.10	299.49			PP 1.20	PP=100	1.20		D
					PP 1.50	PP=100			
							1.80		D
					PP 1.90	PP=100			
Dense very dark grey slightly sandy GRAVEL. Gravel consists of medium to coarse angular limestone. (WEATHERED EYAM LIMESTONE FORMATION)	2.20	298.39					2.50		D
TRIAL PIT TERMINATED AT 2.60m	2.60	297.99							

Key

D Small Disturbed Sample
B Bulk Disturbed Sample
ES Environmental Sample
W Water Sample
C Core sample
UT Undisturbed Sample

S Standard Penetration Test
C Standard Penetration Test (solid cone)

PP Pocket Penetrometer test
SV Shear Vane test
PID Photo Ionisation Detector test

Notes
Backfilled with arisings. Trial pit terminated due to competency of deposits (likely bedrock).

Groundwater observations
No groundwater encountered.

Title Trial pit record	**Dimensions (w x l)** 0.90m x 2.20m	
Method Tracked excavator	**Logged by** TO	**Date(s)** 24/01/2019
Level (m OD) 300.59	**Compiled by** SA	**Sheet number** Sheet 1 of 1
Co-ordinates 406582mE, 374502mN	**Checked by** SD	**TP02**

Report ref: STQ4642M-G01 **Revision:** 0

Proposed residential development
Nunsfield Road, Buxton

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STRATA				WATER STRIKES	IN SITU TESTING		SAMPLING		
DESCRIPTION	DEPTH (m)	REDUCED LVL (m OD)	LEGEND		TYPE / DEPTH (m)	RESULT	FROM (m)	TO (m)	TYPE
Grass over dark brown SAND with frequent rootlets. (TOPSOIL)									
	0.20	318.81					0.20		D
Loose brown very sandy GRAVEL. Gravel consists of medium to coarse angular limestone. (WEATHERED EYAM LIMESTONE FORMATION)							0.50		D
	0.70	318.31							
Soft very low to low strength gravelly slightly sandy CLAY. Gravel consists of medium to coarse angular limestone. (WEATHERED EYAM LIMESTONE FORMATION)					PP 0.80	PP=25	0.80		D
							1.20		D
					PP 1.30	PP=17			
					PP 1.40	PP=17			
TRIAL PIT TERMINATED AT 1.70m	1.70	317.31					1.70		D

Key

D Small Disturbed Sample
B Bulk Disturbed Sample
ES Environmental Sample
W Water Sample
C Core sample
UT Undisturbed Sample

S Standard Penetration Test
C Standard Penetration Test (solid cone)

PP Pocket Penetrometer test
SV Shear Vane test
PID Photo Ionisation Detector test

Notes
Backfilled with arisings. Trial pit terminated due competency of deposits (likely bedrock). Collapse of trial pit sides from 0.4m to 0.7m depth on eastern wall widening trial pit by 0.3m.

Groundwater observations
No groundwater encountered.

Title Trial pit record	**Dimensions (w x l)** 1.20m x 2.70m	
Method Tracked excavator	**Logged by** TO	**Date(s)** 24/01/2019
Level (m OD) 319.01	**Compiled by** SA	**Sheet number** Sheet 1 of 1
Co-ordinates 406722mE, 374495mN	**Checked by** SD	**TP03**

Report ref: STQ4642M-G01 **Revision:** 0

Proposed residential development
Nunsfield Road, Buxton

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STRATA				WATER STRIKES	IN SITU TESTING		SAMPLING		
DESCRIPTION	DEPTH (m)	REDUCED LVL (m OD)	LEGEND		TYPE / DEPTH (m)	RESULT	FROM (m)	TO (m)	TYPE
Grass onto dark brown SAND with frequent rootlets. (TOPSOIL)									
	0.20	311.06					0.20		D
Medium dense greyish brown slightly clayey silty sandy GRAVEL with occasional cobbles. Gravel and cobbles consist of coarse angular limestone. (WEATHERED EYAM LIMESTONE FORMATION)							0.50		D
	0.80	310.46					0.80		D
Very weak greyish brown LIMETSONE. (WEATHERED EYAM LIMESTONE FORMATION)									
	1.00	310.26							
TRIAL PIT TERMINATED AT 1.00m									

Key

D Small Disturbed Sample
B Bulk Disturbed Sample
ES Environmental Sample
W Water Sample
C Core sample
UT Undisturbed Sample

S Standard Penetration Test
C Standard Penetration Test (solid cone)

PP Pocket Penetrometer test
SV Shear Vane test
PID Photo Ionisation Detector test

Notes
Backfilled with arisings. Trial pit terminated due to competency of deposits.

Groundwater observations
No groundwater encountered.

Title Trial pit record	**Dimensions (w x l)** 1.00m x 2.10m	
Method Tracked excavator	**Logged by** TO	**Date(s)** 24/01/2019
Level (m OD) 311.26	**Compiled by** SA	**Sheet number** Sheet 1 of 1
Co-ordinates 406581mE, 374368mN	**Checked by** SD	**TP04**

Report ref: STQ4642M-G01 **Revision:** 0

Proposed residential development
Nunsfield Road, Buxton

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STRATA				WATER STRIKES	IN SITU TESTING		SAMPLING		
DESCRIPTION	DEPTH (m)	REDUCED LVL (m OD)	LEGEND		TYPE / DEPTH (m)	RESULT	FROM (m)	TO (m)	TYPE
Rough vegetation over loose dark brown very gravelly SAND. Gravel consists of glass, brick, concrete, plastic, plastic bottles, metal, wire, car parts, shoes, paper, timber, ceramic tiles and roof tiles. Hydrocarbon odour observed between 1.9m and 3.4m depth. (MADE GROUND)							0.30		D
							0.50		D
							0.80		D
							1.20		D
							1.80		D
							2.50		D
CONTINUED ON NEXT SHEET									

Key

D Small Disturbed Sample
B Bulk Disturbed Sample
ES Environmental Sample
W Water Sample
C Core sample
UT Undisturbed Sample

S Standard Penetration Test
C Standard Penetration Test (solid cone)

PP Pocket Penetrometer test
SV Shear Vane test
PID Photo Ionisation Detector test

Notes
Backfilled with arisings. Collapse of trial pit sides from surface to 1.9m depth on eastern wall widening trial pit by 0.25m.

Groundwater observations
No groundwater encountered.

Title Trial pit record	**Dimensions (w x l)** 1.30m x 3.10m	
Method Tracked excavator	**Logged by** TO	**Date(s)** 23/01/2019
Level (m OD) 301.00	**Compiled by** SA	**Sheet number** Sheet 1 of 2
Co-ordinates 406520mE, 374449mN	**Checked by** SD	**TP05**

Report ref: STQ4642M-G01 **Revision:** 0

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STRATA				WATER STRIKES	IN SITU TESTING		SAMPLING		
DESCRIPTION	DEPTH (m)	REDUCED LVL (m OD)	LEGEND		TYPE / DEPTH (m)	RESULT	FROM (m)	TO (m)	TYPE
Rough vegetation over loose dark brown very gravelly SAND. Gravel consists of glass, brick, concrete, plastic, plastic bottles, metal, wire, car parts, shoes, paper, timber, ceramic tiles and roof tiles. Hydrocarbon odour observed between 1.9m and 3.4m depth. (MADE GROUND)									
TRIAL PIT TERMINATED AT 3.40m	3.40	297.60					3.40		D

Key

D Small Disturbed Sample
B Bulk Disturbed Sample
ES Environmental Sample
W Water Sample
C Core sample
UT Undisturbed Sample

S Standard Penetration Test
C Standard Penetration Test (solid cone)

PP Pocket Penetrometer test
SV Shear Vane test
PID Photo Ionisation Detector test

Notes
Backfilled with arisings. Collapse of trial pit sides from surface to 1.9m depth on eastern wall widening trial pit by 0.25m.

Groundwater observations
No groundwater encountered.

Title Trial pit record	**Dimensions (w x l)** 1.30m x 3.10m	
Method Tracked excavator	**Logged by** TO	**Date(s)** 23/01/2019
Level (m OD) 301.00	**Compiled by** SA	**Sheet number** Sheet 2 of 2
Co-ordinates 406520mE, 374449mN	**Checked by** SD	**TP05**

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STRATA				WATER STRIKES	IN SITU TESTING		SAMPLING		
DESCRIPTION	DEPTH (m)	REDUCED LVL (m OD)	LEGEND		TYPE / DEPTH (m)	RESULT	FROM (m)	TO (m)	TYPE
Grass onto dark brown very clayey SAND. (TOPSOIL)							0.30		D
	0.40	304.29							
Stiff high strength brown sandy slightly silty CLAY. (WEATHERED BOWLAND SHALE FORMATION)							0.50		D
					PP 0.60	PP=142			
							0.80		D
					PP 0.90	PP=126			
							1.20		D
					PP 1.50	PP=117			
	1.70	302.99							
Medium dense dark brown to dark grey slightly clayey slightly sandy GRAVEL. Gravel consists of fine to coarse angular mudstone. (WEATHERED BOWLAND SHALE FORMATION)							1.80		D
							2.50		D
CONTINUED ON NEXT SHEET									

Key

D Small Disturbed Sample
B Bulk Disturbed Sample
ES Environmental Sample
W Water Sample
C Core sample
UT Undisturbed Sample

S Standard Penetration Test
C Standard Penetration Test (solid cone)

PP Pocket Penetrometer test
SV Shear Vane test
PID Photo Ionisation Detector test

Notes
Backfilled with arisings. Collapse of trial pit sides from 0.0m to 1.9m depth widening trial pit by 0.25m each side.

Groundwater observations
No groundwater encountered.

Title Trial pit record	**Dimensions (w x l)** 0.70m x 3.00m	
Method Tracked excavator	**Logged by** TO	**Date(s)** 21/01/2019
Level (m OD) 304.69	**Compiled by** SA	**Sheet number** Sheet 1 of 2
Co-ordinates 406574mE, 374318mN	**Checked by** SD	**TP06**

Report ref: STQ4642M-G01 **Revision:** 0

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STRATA				WATER STRIKES	IN SITU TESTING		SAMPLING		
DESCRIPTION	DEPTH (m)	REDUCED LVL (m OD)	LEGEND		TYPE / DEPTH (m)	RESULT	FROM (m)	TO (m)	TYPE
Medium dense dark brown to dark grey slightly clayey slightly sandy GRAVEL. Gravel consists of fine to coarse angular mudstone. (WEATHERED BOWLAND SHALE FORMATION)							3.50		D
TRIAL PIT TERMINATED AT 4.00m	4.00	300.69					4.00		D

Key

D Small Disturbed Sample
B Bulk Disturbed Sample
ES Environmental Sample
W Water Sample
C Core sample
UT Undisturbed Sample

S Standard Penetration Test
C Standard Penetration Test (solid cone)

PP Pocket Penetrometer test
SV Shear Vane test
PID Photo Ionisation Detector test

Notes
Backfilled with arisings. Collapse of trial pit sides from 0.0m to 1.9m depth widening trial pit by 0.25m each side.

Groundwater observations
No groundwater encountered.

Title Trial pit record	**Dimensions (w x l)** 0.70m x 3.00m	
Method Tracked excavator	**Logged by** TO	**Date(s)** 21/01/2019
Level (m OD) 304.69	**Compiled by** SA	**Sheet number** Sheet 2 of 2
Co-ordinates 406574mE, 374318mN	**Checked by** SD	**TP06**

Report ref: STQ4642M-G01 **Revision:** 0

Proposed residential development
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STRATA				WATER STRIKES	IN SITU TESTING		SAMPLING		
DESCRIPTION	DEPTH (m)	REDUCED LVL (m OD)	LEGEND		TYPE / DEPTH (m)	RESULT	FROM (m)	TO (m)	TYPE
Grass onto brown slightly clayey SAND. (TOPSOIL - MADE GROUND)	0.20	323.80					0.20		D
Medium dense dark brown mottled orangish and reddish brown very gravelly SAND. Gravel consists of fine to coarse glass, brick, plastic, metal pipe, timber, shoes, slag, coal, clinker, tiles, car parts, wire and porcelain. (MADE GROUND)							0.30		D
							0.50		D
							0.80		D
							1.20		D
Medium dense orangish brown clayey very silty very gravelly SAND. Gravel consists of fine to medium sub-angular limestone and mudstone. (WEATHERED BEE LOW LIMESTONE FORMATION)	1.60	322.40					1.80		D
...from 2.5m depth, becoming grey.							2.60		D
CONTINUED ON NEXT SHEET									

Key

D Small Disturbed Sample
B Bulk Disturbed Sample
ES Environmental Sample
W Water Sample
C Core sample
UT Undisturbed Sample

S Standard Penetration Test
C Standard Penetration Test (solid cone)

PP Pocket Penetrometer test
SV Shear Vane test
PID Photo Ionisation Detector test

Notes
Backfilled with arisings. Trial pit terminated due to competency of deposits (likely bedrock).

Groundwater observations
No groundwater encountered.

Title Trial pit record	**Dimensions (w x l)** 1.30m x 2.40m	
Method Tracked excavator	**Logged by** TO	**Date(s)** 24/01/2019
Level (m OD) 324.00	**Compiled by** SA	**Sheet number** Sheet 1 of 2
Co-ordinates 406756mE, 374261mN	**Checked by** SD	**TP08**

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STRATA				WATER STRIKES	IN SITU TESTING		SAMPLING		
DESCRIPTION	DEPTH (m)	REDUCED LVL (m OD)	LEGEND		TYPE / DEPTH (m)	RESULT	FROM (m)	TO (m)	TYPE
Medium dense orangish brown clayey very silty very gravelly SAND. Gravel consists of fine to medium sub-angular limestone and mudstone. (WEATHERED BEE LOW LIMESTONE FORMATION)									
	3.20	320.80					3.20		D
Medium dense grey GRAVEL. Gravel consists of medium to coarse angular limestone. (WEATHERED BEE LOW LIMESTONE FORMATION)	3.30	320.70							
TRIAL PIT TERMINATED AT 3.30m									

Key

D Small Disturbed Sample
B Bulk Disturbed Sample
ES Environmental Sample
W Water Sample
C Core sample
UT Undisturbed Sample

S Standard Penetration Test
C Standard Penetration Test (solid cone)

PP Pocket Penetrometer test
SV Shear Vane test
PID Photo Ionisation Detector test

Notes
Backfilled with arisings. Trial pit terminated due to competency of deposits (likely bedrock).

Groundwater observations
No groundwater encountered.

Title Trial pit record	**Dimensions (w x l)** 1.30m x 2.40m	
Method Tracked excavator	**Logged by** TO	**Date(s)** 24/01/2019
Level (m OD) 324.00	**Compiled by** SA	**Sheet number** Sheet 2 of 2
Co-ordinates 406756mE, 374261mN	**Checked by** SD	**TP08**

Report ref: STQ4642M-G01 **Revision:** 0

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STRATA				WATER STRIKES	IN SITU TESTING		SAMPLING		
DESCRIPTION	DEPTH (m)	REDUCED LVL (m OD)	LEGEND		TYPE / DEPTH (m)	RESULT	FROM (m)	TO (m)	TYPE
Grass onto dark brown very clayey SAND. (TOPSOIL)									
	0.30	308.18					0.30		D
Stiff high strength brown sandy slightly silty CLAY. (WEATHERED EYAM LIMESTONE FORMATION)					PP 0.40	PP=100			
							0.50		D
					PP 0.70	PP=104			
							0.80		D
Medium dense dark brown to dark grey clayey silty slightly sandy GRAVEL with some cobbles. Gravel and cobbles consist of fine to coarse angular limestone and mudstone. (WEATHERED EYAM LIMESTONE FORMATION)	1.00	307.48							
TRIAL PIT TERMINATED AT 1.20m	1.20	307.28					1.20		D

Key

D Small Disturbed Sample
B Bulk Disturbed Sample
ES Environmental Sample
W Water Sample
C Core sample
UT Undisturbed Sample

S Standard Penetration Test
C Standard Penetration Test (solid cone)

PP Pocket Penetrometer test
SV Shear Vane test
PID Photo Ionisation Detector test

Notes
Backfilled with arisings. Trial pit terminated due to competency of deposits (likely bedrock).

Groundwater observations
No groundwater encountered.

Title Trial pit record	**Dimensions (w x l)** 1.00m x 2.10m	
Method Tracked excavator	**Logged by** TO	**Date(s)** 23/01/2019
Level (m OD) 308.48	**Compiled by** SA	**Sheet number** Sheet 1 of 1
Co-ordinates 406563mE, 374267mN	**Checked by** SD	**TP11**

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STRATA				WATER STRIKES	IN SITU TESTING		SAMPLING		
DESCRIPTION	DEPTH (m)	REDUCED LVL (m OD)	LEGEND		TYPE / DEPTH (m)	RESULT	FROM (m)	TO (m)	TYPE
Grass onto brown slightly clayey SAND. (TOPSOIL)									
	0.30	322.67					0.30		D
Medium dense orangish brown slightly clayey SAND with frequent cobbles of grey limestone. (WEATHERED BEE LOW LIMESTONE FORMATION)							0.50		D
							0.80		D
TRIAL PIT TERMINATED AT 1.00m	1.00	321.97							

Key

D Small Disturbed Sample
B Bulk Disturbed Sample
ES Environmental Sample
W Water Sample
C Core sample
UT Undisturbed Sample

S Standard Penetration Test
C Standard Penetration Test (solid cone)

PP Pocket Penetrometer test
SV Shear Vane test
PID Photo Ionisation Detector test

Notes
Backfilled with arisings. Trial pit terminated due to competency of deposits (likely bedrock).

Groundwater observations
No groundwater encountered.

Title Trial pit record	**Dimensions (w x l)** 1.20m x 2.30m	
Method Tracked excavator	**Logged by** TO	**Date(s)** 24/01/2019
Level (m OD) 322.97	**Compiled by** SA	**Sheet number** Sheet 1 of 1
Co-ordinates 406811mE, 374196mN	**Checked by** SD	**TP13**

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STRATA				WATER STRIKES	IN SITU TESTING		SAMPLING		
DESCRIPTION	DEPTH (m)	REDUCED LVL (m OD)	LEGEND		TYPE / DEPTH (m)	RESULT	FROM (m)	TO (m)	TYPE
Rough vegetation over medium dense dark brown very gravelly SAND. Gravel consists of glass, brick, concrete, plastic, slag, plastic pieces, plastic bottles, metal, metal wire, shoes, paper, timber, ceramic tiles, roof tiles and coal. (MADE GROUND)							0.30		D
							0.50		D
							0.80		D
							1.20		D
							1.40		D
							1.60		D
TRIAL PIT TERMINATED AT 1.80m	1.80	299.90							

Key

D Small Disturbed Sample
B Bulk Disturbed Sample
ES Environmental Sample
W Water Sample
C Core sample
UT Undisturbed Sample

S Standard Penetration Test
C Standard Penetration Test (solid cone)

PP Pocket Penetrometer test
SV Shear Vane test
PID Photo Ionisation Detector test

Notes
Backfilled with arisings. Trial pit terminated due to potential asbestos contamination encountered.

Groundwater observations
No groundwater encountered.

Title Trial pit record	**Dimensions (w x l)** 0.70m x 2.10m	
Method Tracked excavator	**Logged by** TO	**Date(s)** 23/01/2019
Level (m OD) 301.70	**Compiled by** SA	**Sheet number** Sheet 1 of 1
Co-ordinates 406492mE, 374420mN	**Checked by** SD	**TP18**

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WELL	STRATA				WATER STRIKES	SPT TESTING				OTHER IN SITU TESTING		SAMPLING		
	DESCRIPTION	DEPTH (m)	REDUCED LVL (m OD)	LEGEND		TYPE / DEPTH (m)	RESULT	CASING DEPTH (m)	WATER LEVEL (m)	TYPE / DEPTH (m)	RESULT	FROM (m)	TO (m)	TYPE
	Grass over dark brown slightly clayey SAND. (TOPSOIL - MADE GROUND)													
	Stiff high strength brown mottled grey very gravelly very sandy CLAY. Gravel consists of fine to medium angular limestone and sandstone. (MADE GROUND)	0.30	302.47							PP 0.50	PP=125	0.30		D
	Soft very low strength dark brown very gravelly CLAY. Gravel consists of textile, plastic and brick. (MADE GROUND)	0.80	301.97							PP 0.90	PP=17	0.80		D
	Loose dark grey GRAVEL. Gravel consists of angular glass and bricks. (MADE GROUND)	1.00	301.77			C 1.00-1.45	(6) 4							
	...between 1m and 2m depth, no recovery.													
	...between 2m and 3m depth, 5% recovery and becoming very loose.					C 2.00-2.45	(0) 1							
												2.50		D
	CONTINUED ON NEXT SHEET													

Key

D Small Disturbed Sample
B Bulk Disturbed Sample
ES Environmental Sample
W Water Sample
C Core sample
UT Undisturbed Sample

S Standard Penetration Test
C Standard Penetration Test (solid cone)

PP Pocket Penetrometer test
SV Shear Vane test
PID Photo Ionisation Detector test

Notes

Borehole terminated due to obstruction, possibly timber at 3.5m depth. Backfilled with arisings.

Groundwater observations

No groundwater encountered.

Title

Driven tube sampler record

Recovery details	
Range (m)	Recovery (%)
0.00 - 1.00	70
1.00 - 2.00	0
2.00 - 3.00	5
3.00 - 3.50	0

Method Driven tube sampler	**Logged by** TO	**Date(s)** 06/02/2019
Level (m OD) 302.77	**Compiled by** SA	**Sheet number** Sheet 1 of 2
Co-ordinates 406498mE, 374563mN	**Checked by** SD	**DTS01**

Report ref: STQ4642M-G01 **Revision:** 0

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WELL	STRATA				WATER STRIKES	SPT TESTING				OTHER IN SITU TESTING		SAMPLING		
	DESCRIPTION	DEPTH (m)	REDUCED LVL (m OD)	LEGEND		TYPE / DEPTH (m)	RESULT	CASING DEPTH (m)	WATER LEVEL (m)	TYPE / DEPTH (m)	RESULT	FROM (m)	TO (m)	TYPE
	Loose dark grey GRAVEL. Gravel consists of angular glass and bricks. (MADE GROUND)					C 3.00-3.45	(4) 10							
	...between 3m and 3.5m depth, no recovery and becoming medium dense.													
	BOREHOLE TERMINATED AT 3.50m	3.50	299.27											

Key

D Small Disturbed Sample
B Bulk Disturbed Sample
ES Environmental Sample
W Water Sample
C Core sample
UT Undisturbed Sample

S Standard Penetration Test
C Standard Penetration Test (solid cone)

PP Pocket Penetrometer test
SV Shear Vane test
PID Photo Ionisation Detector test

Notes

Borehole terminated due to obstruction, possibly timber at 3.5m depth. Backfilled with arisings.

Groundwater observations

No groundwater encountered.

Title

Driven tube sampler record

Recovery details	
Range (m)	Recovery (%)
0.00 - 1.00	70
1.00 - 2.00	0
2.00 - 3.00	5
3.00 - 3.50	0

Method Driven tube sampler	**Logged by** TO	**Date(s)** 06/02/2019
Level (m OD) 302.77	**Compiled by** SA	**Sheet number** Sheet 2 of 2
Co-ordinates 406498mE, 374563mN	**Checked by** SD	**DTS01**

Report ref: STQ4642M-G01 **Revision:** 0

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WELL	STRATA				WATER STRIKES	SPT TESTING				OTHER IN SITU TESTING		SAMPLING		
	DESCRIPTION	DEPTH (m)	REDUCED LVL (m OD)	LEGEND		TYPE / DEPTH (m)	RESULT	CASING DEPTH (m)	WATER LEVEL (m)	TYPE / DEPTH (m)	RESULT	FROM (m)	TO (m)	TYPE
	Grass over dark brown slightly clayey SAND. (TOPSOIL)													
	Medium dense brown slightly clayey SAND. (WEATHERED EYAM LIMESTONE FORMATION)	0.30	301.69									0.30		D
												0.50		D
												0.80		D
						C 1.00-1.45	(4) 11							
												1.20		D
												1.80		D
	Medium dense brown GRAVEL. Gravel consists of medium angular sandstone. (WEATHERED EYAM LIMESTONE FORMATION)	1.90	300.09			C 2.00-2.45	(3) 12							
	Medium dense dark grey to dark brown GRAVEL. Gravel consists of angular shale. (WEATHERED EYAM LIMESTONE FORMATION)	2.30	299.69									2.50		D
	CONTINUED ON NEXT SHEET													

Key

D Small Disturbed Sample
B Bulk Disturbed Sample
ES Environmental Sample
W Water Sample
C Core sample
UT Undisturbed Sample

S Standard Penetration Test
C Standard Penetration Test (solid cone)

PP Pocket Penetrometer test
SV Shear Vane test
PID Photo Ionisation Detector test

Notes

Backfilled with arisings. Borehole terminated due to competency of deposits (likely bedrock).

Groundwater observations

Groundwater encountered at 1.9m depth, filling borehole to 1.3m in 10 minutes.

Title

Driven tube sampler record

Recovery details	
Range (m)	Recovery (%)
0.00 - 1.00	30
1.00 - 2.00	80
2.00 - 3.00	80
3.00 - 3.90	80

Method Driven tube sampler	**Logged by** TO	**Date(s)** 08/02/2019
Level (m OD) 301.99	**Compiled by** SA	**Sheet number** Sheet 1 of 2
Co-ordinates 406582mE, 374554mN	**Checked by** SD	**DTS02**

Report ref: STQ4642M-G01 **Revision:** 0

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WELL	STRATA				WATER STRIKES	SPT TESTING				OTHER IN SITU TESTING		SAMPLING		
	DESCRIPTION	DEPTH (m)	REDUCED LVL (m OD)	LEGEND		TYPE / DEPTH (m)	RESULT	CASING DEPTH (m)	WATER LEVEL (m)	TYPE / DEPTH (m)	RESULT	FROM (m)	TO (m)	TYPE
	Medium dense dark grey to dark brown GRAVEL. Gravel consists of angular shale. (WEATHERED EYAM LIMESTONE FORMATION) *...from 3m depth, becoming very dense.*					C 3.00-3.08	(25 blows for 40mm penetration) then 50 blows for 40mm penetration					3.50		D
	BOREHOLE TERMINATED AT 3.90m	3.90	298.09											

Key

D Small Disturbed Sample
B Bulk Disturbed Sample
ES Environmental Sample
W Water Sample
C Core sample
UT Undisturbed Sample

S Standard Penetration Test
C Standard Penetration Test (solid cone)

PP Pocket Penetrometer test
SV Shear Vane test
PID Photo Ionisation Detector test

Notes

Backfilled with arisings. Borehole terminated due to competency of deposits (likely bedrock).

Groundwater observations

Groundwater encountered at 1.9m depth, filling borehole to 1.3m in 10 minutes.

Title

Driven tube sampler record

Recovery details	
Range (m)	Recovery (%)
0.00 - 1.00	30
1.00 - 2.00	80
2.00 - 3.00	80
3.00 - 3.90	80

Method Driven tube sampler	**Logged by** TO	**Date(s)** 08/02/2019
Level (m OD) 301.99	**Compiled by** SA	**Sheet number** Sheet 2 of 2
Co-ordinates 406582mE, 374554mN	**Checked by** SD	**DTS02**

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WELL	STRATA				WATER STRIKES	SPT TESTING				OTHER IN SITU TESTING		SAMPLING		
	DESCRIPTION	DEPTH (m)	REDUCED LVL (m OD)	LEGEND		TYPE / DEPTH (m)	RESULT	CASING DEPTH (m)	WATER LEVEL (m)	TYPE / DEPTH (m)	RESULT	FROM (m)	TO (m)	TYPE
	Grass onto dark brown slightly clayey SAND with occasional gravel of fine angular bricks. (MADE GROUND)													
	Stiff medium strength brown slightly sandy CLAY. (WEATHERED EYAM LIMESTONE FORMATION)	0.30	320.45									0.30		D
										PP 0.50	PP=54	0.50		D
	Brown coarse SAND. (WEATHERED EYAM LIMESTONE FORMATION)	0.80	319.95									0.80		D
	Stiff medium strength brown gravelly sandy CLAY. Gravel of fine to medium angular limestone and sandstone. (WEATHERED EYAM LIMESTONE FORMATION)	1.00	319.75			C 1.00-1.45	(5) 14							
										PP 1.30	PP=58	1.20		D
										PP 1.70	PP=63	1.80		D
						C 2.00-2.21	(16) then 50 blows for 60mm penetration							
										PP 2.20	PP=58			
	BOREHOLE TERMINATED AT 2.30m	2.30	318.45									2.30		D

Key

D Small Disturbed Sample
B Bulk Disturbed Sample
ES Environmental Sample
W Water Sample
C Core sample
UT Undisturbed Sample

S Standard Penetration Test
C Standard Penetration Test (solid cone)

PP Pocket Penetrometer test
SV Shear Vane test
PID Photo Ionisation Detector test

Notes

Backfilled with arisings. Borehole terminated due to competency of deposits (likely bedrock).

Groundwater observations

Groundwater encountered at 2.3m depth, filling borehole to 2.0m in 10 minutes.

Title

Driven tube sampler record

Recovery details	
Range (m)	Recovery (%)
0.00 - 1.00	100
1.00 - 2.00	100
2.00 - 2.30	100

Method Driven tube sampler	**Logged by** TO	**Date(s)** 08/02/2019
Level (m OD) 320.75	**Compiled by** SA	**Sheet number** Sheet 1 of 1
Co-ordinates 406734mE, 374550mN	**Checked by** SD	**DTS03**

Report ref: STQ4642M-G01 **Revision:** 0

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WELL	STRATA DESCRIPTION	DEPTH (m)	REDUCED LVL (m OD)	LEGEND	WATER STRIKES	SPT TESTING TYPE / DEPTH (m)	SPT TESTING RESULT	SPT TESTING CASING DEPTH (m)	SPT TESTING WATER LEVEL (m)	OTHER IN SITU TESTING TYPE / DEPTH (m)	OTHER IN SITU TESTING RESULT	SAMPLING FROM (m)	SAMPLING TO (m)	SAMPLING TYPE
	Grass over dark brown slightly clayey SAND. (TOPSOIL - MADE GROUND)													
	Stiff very high strength brown mottled grey very gravelly very sandy CLAY. Gravel consists of fine to medium angular limestone and sandstone. (MADE GROUND)	0.30	301.36									0.30		D
										PP 0.50	PP=192	0.50		D
	Very loose to loose dark grey slightly clayey GRAVEL. Gravel consists of plastic, shale, slag, coal, timber, pottery and bricks. (MADE GROUND)	0.70	300.96									0.80		D
	...between 1m and 4m depth, 5% recovery.					C 1.00-1.45	(5) 2							
												1.80		D
						C 2.00-2.45	(3) 3							
												2.50		D
	CONTINUED ON NEXT SHEET													

Key

D Small Disturbed Sample
B Bulk Disturbed Sample
ES Environmental Sample
W Water Sample
C Core sample
UT Undisturbed Sample

S Standard Penetration Test
C Standard Penetration Test (solid cone)

PP Pocket Penetrometer test
SV Shear Vane test
PID Photo Ionisation Detector test

Notes

Backfilled with arisings. Combined gas and water monitoring standpipe installed.

Groundwater observations

Groundwater encountered at 3m depth. Water level remained constant.

Title

Driven tube sampler record

Recovery details	
Range (m)	Recovery (%)
0.00 - 1.00	90
1.00 - 2.00	5
2.00 - 3.00	5
3.00 - 4.00	5
4.00 - 5.00	30

Method Driven tube sampler	**Logged by** TO	**Date(s)** 06/02/2019
Level (m OD) 301.66	**Compiled by** SA	**Sheet number** Sheet 1 of 2
Co-ordinates 406539mE, 374528mN	**Checked by** SD	**DTS04**

Report ref: STQ4642M-G01 **Revision:** 0

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WELL	STRATA				WATER STRIKES	SPT TESTING				OTHER IN SITU TESTING		SAMPLING		
	DESCRIPTION	DEPTH (m)	REDUCED LVL (m OD)	LEGEND		TYPE / DEPTH (m)	RESULT	CASING DEPTH (m)	WATER LEVEL (m)	TYPE / DEPTH (m)	RESULT	FROM (m)	TO (m)	TYPE
	Very loose to loose dark grey slightly clayey GRAVEL. Gravel consists of plastic, shale, slag, coal, timber, pottery and bricks. (MADE GROUND)				▼	C 3.00-3.45	(1) 5					3.50		D
						C 4.00-4.45	(5) 6					4.50		D
	BOREHOLE TERMINATED AT 5.00m	5.00	296.66			C 5.00-5.45	(0) 5							

Key

D Small Disturbed Sample
B Bulk Disturbed Sample
ES Environmental Sample
W Water Sample
C Core sample
UT Undisturbed Sample

S Standard Penetration Test
C Standard Penetration Test (solid cone)

PP Pocket Penetrometer test
SV Shear Vane test
PID Photo Ionisation Detector test

Notes

Backfilled with arisings. Combined gas and water monitoring standpipe installed.

Groundwater observations

Groundwater encountered at 3m depth. Water level remained constant.

Recovery details

Range (m)	Recovery (%)
0.00 - 1.00	90
1.00 - 2.00	5
2.00 - 3.00	5
3.00 - 4.00	5
4.00 - 5.00	30

Title

Driven tube sampler record

Method
Driven tube sampler

Logged by
TO

Date(s)
06/02/2019

Level (m OD)
301.66

Compiled by
SA

Sheet number
Sheet 2 of 2

Co-ordinates
406539mE, 374528mN

Checked by
SD

DTS04

Report ref: STQ4642M-G01

Revision: 0

Proposed residential development
Nunsfield Road, Buxton

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WELL	STRATA				WATER STRIKES	SPT TESTING				OTHER IN SITU TESTING		SAMPLING		
	DESCRIPTION	DEPTH (m)	REDUCED LVL (m OD)	LEGEND		TYPE / DEPTH (m)	RESULT	CASING DEPTH (m)	WATER LEVEL (m)	TYPE / DEPTH (m)	RESULT	FROM (m)	TO (m)	TYPE
	Grass over dark brown slightly clayey SAND. (TOPSOIL - MADE GROUND)													
	Medium dense light brown sandy GRAVEL. Gravel consists of medium angular sandstone. (MADE GROUND)	0.30	302.47									0.30		D
												0.50		D
	Very loose dark brown very clayey sandy GRAVEL. Gravel consists of fine to medium angular glass, timber, plastic, slag, paper and textile. (MADE GROUND)	0.60	302.17											
												0.80		D
						C 1.00-1.45	(3) 3							
												1.20		D
												1.80		D
						C 2.00-2.45	(3) 6							
												2.50		D
	CONTINUED ON NEXT SHEET													

Key

D Small Disturbed Sample
B Bulk Disturbed Sample
ES Environmental Sample
W Water Sample
C Core sample
UT Undisturbed Sample

S Standard Penetration Test
C Standard Penetration Test (solid cone)

PP Pocket Penetrometer test
SV Shear Vane test
PID Photo Ionisation Detector test

Notes
Backfilled with arisings.

Groundwater observations
Groundwater encountered at 3m depth. Water level remained constant.

Title
Driven tube sampler record

Recovery details	
Range (m)	Recovery (%)
0.00 - 1.00	70
1.00 - 2.00	60
2.00 - 3.00	40
3.00 - 4.00	40
4.00 - 5.00	60

Method Driven tube sampler	**Logged by** TO	**Date(s)** 06/02/2019
Level (m OD) 302.77	**Compiled by** SA	**Sheet number** Sheet 1 of 2
Co-ordinates 406505mE, 374478mN	**Checked by** SD	**DTS05**

Report ref: STQ4642M-G01 **Revision:** 0

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WELL	STRATA				WATER STRIKES	SPT TESTING				OTHER IN SITU TESTING		SAMPLING		
	DESCRIPTION	DEPTH (m)	REDUCED LVL (m OD)	LEGEND		TYPE / DEPTH (m)	RESULT	CASING DEPTH (m)	WATER LEVEL (m)	TYPE / DEPTH (m)	RESULT	FROM (m)	TO (m)	TYPE
	Very loose dark brown very clayey sandy GRAVEL. Gravel consists of fine to medium angular glass, timber, plastic, slag, paper and textile. (MADE GROUND)				▼	C 3.00-3.45	(1) 7					3.50		D
						C 4.00-4.45	(3) 7					4.50		D
	BOREHOLE TERMINATED AT 5.00m	5.00	297.77			C 5.00-5.45	(3) 8							

Key

D Small Disturbed Sample
B Bulk Disturbed Sample
ES Environmental Sample
W Water Sample
C Core sample
UT Undisturbed Sample

S Standard Penetration Test
C Standard Penetration Test (solid cone)

PP Pocket Penetrometer test
SV Shear Vane test
PID Photo Ionisation Detector test

Notes

Backfilled with arisings.

Groundwater observations

Groundwater encountered at 3m depth. Water level remained constant.

Recovery details

Range (m)	Recovery (%)
0.00 - 1.00	70
1.00 - 2.00	60
2.00 - 3.00	40
3.00 - 4.00	40
4.00 - 5.00	60

Title

Driven tube sampler record

Method
Driven tube sampler

Logged by
TO

Date(s)
06/02/2019

Level (m OD)
302.77

Compiled by
SA

Sheet number
Sheet 2 of 2

Co-ordinates
406505mE, 374478mN

Checked by
SD

DTS05

Report ref: STQ4642M-G01

Revision: 0

Proposed residential development
Nunsfield Road, Buxton

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WELL	STRATA				WATER STRIKES	SPT TESTING				OTHER IN SITU TESTING		SAMPLING		
	DESCRIPTION	DEPTH (m)	REDUCED LVL (m OD)	LEGEND		TYPE / DEPTH (m)	RESULT	CASING DEPTH (m)	WATER LEVEL (m)	TYPE / DEPTH (m)	RESULT	FROM (m)	TO (m)	TYPE
	Grass over dark brown slightly clayey SAND. (TOPSOIL)													
	Firm medium strength brown gravelly CLAY. Gravel consists of medium to coarse angular limestone. (WEATHERED EYAM LIMESTONE FORMATION)	0.30	308.79									0.30		D
										PP 0.50	PP=50	0.50		D
												0.80		D
						C 1.00-1.45	(0) 0			PP 1.00	PP=54			
										PP 1.20	PP=0	1.20		D
										PP 1.40	PP=50			
										PP 1.80	PP=50	1.80		D
						C 2.00-2.45	(13) 27							
										PP 2.20	PP=63			
												2.50		D
										PP 2.70	PP=50			
	CONTINUED ON NEXT SHEET													

Key

D Small Disturbed Sample
B Bulk Disturbed Sample
ES Environmental Sample
W Water Sample
C Core sample
UT Undisturbed Sample

S Standard Penetration Test
C Standard Penetration Test (solid cone)

PP Pocket Penetrometer test
SV Shear Vane test
PID Photo Ionisation Detector test

Notes

Backfilled with arisings. Combined gas and water monitoring standpipe installed. Borehole terminated due to competency of deposits (likely bedrock).

Groundwater observations

No groundwater encountered.

Title

Driven tube sampler record

Recovery details	
Range (m)	Recovery (%)
0.00 - 1.00	100
1.00 - 2.00	30
2.00 - 3.20	60

Method Driven tube sampler	**Logged by** TO	**Date(s)** 08/02/2019
Level (m OD) 309.09	**Compiled by** SA	**Sheet number** Sheet 1 of 2
Co-ordinates 406639mE, 374479mN	**Checked by** SD	**DTS06**

Report ref: STQ4642M-G01 **Revision:** 0

Proposed residential development
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WELL	STRATA				WATER STRIKES	SPT TESTING				OTHER IN SITU TESTING		SAMPLING		
	DESCRIPTION	DEPTH (m)	REDUCED LVL (m OD)	LEGEND		TYPE / DEPTH (m)	RESULT	CASING DEPTH (m)	WATER LEVEL (m)	TYPE / DEPTH (m)	RESULT	FROM (m)	TO (m)	TYPE
	Firm medium strength brown gravelly CLAY. Gravel consists of medium to coarse angular limestone. (WEATHERED EYAM LIMESTONE FORMATION)					S 3.00-3.21	(25) then 50 blows for 60mm penetration							
	BOREHOLE TERMINATED AT 3.20m	3.20	305.89											

Key

D Small Disturbed Sample
B Bulk Disturbed Sample
ES Environmental Sample
W Water Sample
C Core sample
UT Undisturbed Sample

S Standard Penetration Test
C Standard Penetration Test (solid cone)

PP Pocket Penetrometer test
SV Shear Vane test
PID Photo Ionisation Detector test

Notes

Backfilled with arisings. Combined gas and water monitoring standpipe installed. Borehole terminated due to competency of deposits (likely bedrock).

Groundwater observations

No groundwater encountered.

Title

Driven tube sampler record

Recovery details	
Range (m)	Recovery (%)
0.00 - 1.00	100
1.00 - 2.00	30
2.00 - 3.20	60

Method Driven tube sampler	**Logged by** TO	**Date(s)** 08/02/2019
Level (m OD) 309.09	**Compiled by** SA	**Sheet number** Sheet 2 of 2
Co-ordinates 406639mE, 374479mN	**Checked by** SD	**DTS06**

Report ref: STQ4642M-G01 **Revision:** 0

Proposed residential development
Nunsfield Road, Buxton

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WELL	STRATA				WATER STRIKES	SPT TESTING				OTHER IN SITU TESTING		SAMPLING		
	DESCRIPTION	DEPTH (m)	REDUCED LVL (m OD)	LEGEND		TYPE / DEPTH (m)	RESULT	CASING DEPTH (m)	WATER LEVEL (m)	TYPE / DEPTH (m)	RESULT	FROM (m)	TO (m)	TYPE
	Grass over dark brown slightly clayey SAND. (TOPSOIL)													
	Stiff medium strength brown gravelly CLAY. Gravel consists of medium to coarse angular limestone. (WEATHERED EYAM LIMESTONE FORMATION)	0.30	301.69							PP 0.40	PP=50	0.30		D
										PP 0.60	PP=54	0.50		D
						C 0.80-0.88	(25 blows for 60mm penetration) then 50 blows for 20mm penetration					0.80		D
	BOREHOLE TERMINATED AT 0.88m	0.88	301.11											

Key

D Small Disturbed Sample
B Bulk Disturbed Sample
ES Environmental Sample
W Water Sample
C Core sample
UT Undisturbed Sample

S Standard Penetration Test
C Standard Penetration Test (solid cone)

PP Pocket Penetrometer test
SV Shear Vane test
PID Photo Ionisation Detector test

Notes
Backfilled with arisings. Borehole terminated due to competency of deposits (likely bedrock).

Groundwater observations
No groundwater encountered.

Title
Driven tube sampler record

Recovery details	
Range (m)	Recovery (%)
0.00 - 0.80	100

Method Driven tube sampler	**Logged by** TO	**Date(s)** 08/02/2019
Level (m OD) 301.99	**Compiled by** SA	**Sheet number** Sheet 1 of 1
Co-ordinates 406569mE, 374447mN	**Checked by** SD	**DTS07**

Report ref: STQ4642M-G01 **Revision:** 0

Proposed residential development
Nunsfield Road, Buxton

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WELL	STRATA				WATER STRIKES	SPT TESTING				OTHER IN SITU TESTING		SAMPLING		
	DESCRIPTION	DEPTH (m)	REDUCED LVL (m OD)	LEGEND		TYPE / DEPTH (m)	RESULT	CASING DEPTH (m)	WATER LEVEL (m)	TYPE / DEPTH (m)	RESULT	FROM (m)	TO (m)	TYPE
	Rough vegetation over loose dark brown to brown very clayey sandy GRAVEL. Gravel consists of fine to medium angular bricks, slag, coal, wood, glass, textile, sandstone and shale. (MADE GROUND)											0.30		D
												0.50		D
												0.80		D
						C 1.00-1.45	(3) 7							
												1.20		D
												1.80		D
						C 2.00-2.45	(1) 1							
												2.50		D
	CONTINUED ON NEXT SHEET													

Key

D Small Disturbed Sample
B Bulk Disturbed Sample
ES Environmental Sample
W Water Sample
C Core sample
UT Undisturbed Sample

S Standard Penetration Test
C Standard Penetration Test (solid cone)

PP Pocket Penetrometer test
SV Shear Vane test
PID Photo Ionisation Detector test

Notes

Backfilled with arisings. Borehole terminated due to obstruction.

Groundwater observations

No groundwater encountered.

Title

Driven tube sampler record

Recovery details	
Range (m)	Recovery (%)
0.00 - 1.00	40
1.00 - 2.00	40
2.00 - 3.00	60
3.00 - 4.00	60
4.00 - 5.00	70

Method
Driven tube sampler

Logged by
TO

Date(s)
29/01/2019

Level (m OD)
300.57

Compiled by
SA

Sheet number
Sheet 1 of 2

Co-ordinates
406513mE, 374408mN

Checked by
SD

DTS08

Report ref: STQ4642M-G01

Revision: 0

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WELL	STRATA				WATER STRIKES	SPT TESTING				OTHER IN SITU TESTING		SAMPLING		
	DESCRIPTION	DEPTH (m)	REDUCED LVL (m OD)	LEGEND		TYPE / DEPTH (m)	RESULT	CASING DEPTH (m)	WATER LEVEL (m)	TYPE / DEPTH (m)	RESULT	FROM (m)	TO (m)	TYPE
	Rough vegetation over loose dark brown to brown very clayey sandy GRAVEL. Gravel consists of fine to medium angular bricks, slag, coal, wood, glass, textile, sandstone and shale. (MADE GROUND)					C 3.00-3.45	(25) 36					3.50		D
	...between 3m and 4m depth, becoming dense.					C 4.00-4.45	(4) 15					4.50		D
	BOREHOLE TERMINATED AT 5.00m	5.00	295.57											

Key

D Small Disturbed Sample
B Bulk Disturbed Sample
ES Environmental Sample
W Water Sample
C Core sample
UT Undisturbed Sample

S Standard Penetration Test
C Standard Penetration Test (solid cone)

PP Pocket Penetrometer test
SV Shear Vane test
PID Photo Ionisation Detector test

Notes

Backfilled with arisings. Borehole terminated due to obstruction.

Groundwater observations

No groundwater encountered.

Title

Driven tube sampler record

Recovery details	
Range (m)	Recovery (%)
0.00 - 1.00	40
1.00 - 2.00	40
2.00 - 3.00	60
3.00 - 4.00	60
4.00 - 5.00	70

Method: Driven tube sampler
Logged by: TO
Date(s): 29/01/2019
Level (m OD): 300.57
Compiled by: SA
Sheet number: Sheet 2 of 2
Co-ordinates: 406513mE, 374408mN
Checked by: SD

DTS08

Report ref: STQ4642M-G01 **Revision:** 0

Proposed residential development
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WELL	STRATA				WATER STRIKES	SPT TESTING				OTHER IN SITU TESTING		SAMPLING		
	DESCRIPTION	DEPTH (m)	REDUCED LVL (m OD)	LEGEND		TYPE / DEPTH (m)	RESULT	CASING DEPTH (m)	WATER LEVEL (m)	TYPE / DEPTH (m)	RESULT	FROM (m)	TO (m)	TYPE
	Grass onto firm dark brown slightly CLAY. (TOPSOIL)											0.30		D
	Stiff dark grey CLAY. (WEATHERED EYAM LIMESTONE FORMATION)	0.50	313.33			S 0.50-0.52	(25 blows for 20mm penetration)					0.50		D
	BOREHOLE TERMINATED AT 0.60m	0.60	313.23									0.60		D

Key

D Small Disturbed Sample
B Bulk Disturbed Sample
ES Environmental Sample
W Water Sample
C Core sample
UT Undisturbed Sample

S Standard Penetration Test
C Standard Penetration Test (solid cone)

PP Pocket Penetrometer test
SV Shear Vane test
PID Photo Ionisation Detector test

Notes
Backfilled with arisings. Borehole terminated due to competency of deposits (likely bedrock).

Groundwater observations
No groundwater encountered.

Title
Driven tube sampler record

Recovery details	
Range (m)	Recovery (%)
0.00 - 0.60	100

Method
Driven tube sampler

Logged by
TO

Date(s)
08/02/2019

Level (m OD)
313.83

Compiled by
SA

Sheet number
Sheet 1 of 1

Co-ordinates
406629mE, 374422mN

Checked by
SD

DTS09

Report ref: STQ4642M-G01

Revision: 0

Proposed residential development
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WELL	STRATA DESCRIPTION	DEPTH (m)	REDUCED LVL (m OD)	LEGEND	WATER STRIKES	SPT TESTING TYPE / DEPTH (m)	SPT TESTING RESULT	SPT TESTING CASING DEPTH (m)	SPT TESTING WATER LEVEL (m)	OTHER IN SITU TESTING TYPE / DEPTH (m)	OTHER IN SITU TESTING RESULT	SAMPLING FROM (m)	SAMPLING TO (m)	SAMPLING TYPE
	Vegetation over dark brown very clayey SAND. (TOPSOIL)													
	Stiff medium strength brown very sandy CLAY. (WEATHERED BOWLAND SHALE FORMATION)	0.30	301.18									0.30		D
										PP 0.50	PP=71	0.50		D
	Medium dense dark grey GRAVEL. Gravel consists of fine angular mudstone. (WEATHERED BOWLAND SHALE FORMATION)	0.80	300.68		▼							0.80		D
						C 1.00-1.45	(6) 17							
												1.20		D
												1.80		D
	...below 2m depth, becoming dense.					C 2.00-2.45	(11) 33							
												2.50		D
	Very weak dark grey thickly laminated MUDSTONE.	2.80	298.68											
	CONTINUED ON NEXT SHEET													

Key

D Small Disturbed Sample
B Bulk Disturbed Sample
ES Environmental Sample
W Water Sample
C Core sample
UT Undisturbed Sample

S Standard Penetration Test
C Standard Penetration Test (solid cone)

PP Pocket Penetrometer test
SV Shear Vane test
PID Photo Ionisation Detector test

Notes

Backfilled with arisings. Borehole terminated due to competency of deposits (likely bedrock).

Groundwater observations

Groundwater encountered at 1m depth. Water level remained constant.

Recovery details

Range (m)	Recovery (%)
0.00 - 1.00	100
1.00 - 2.00	80
2.00 - 3.00	100

Title

Driven tube sampler record

Method Driven tube sampler	**Logged by** TO	**Date(s)** 06/02/2019
Level (m OD) 301.48	**Compiled by** SA	**Sheet number** Sheet 1 of 2
Co-ordinates 406524mE, 374385mN	**Checked by** SD	**DTS10**

Report ref: STQ4642M-G01 **Revision:** 0

Proposed residential development
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WELL	STRATA				WATER STRIKES	SPT TESTING				OTHER IN SITU TESTING		SAMPLING		
	DESCRIPTION	DEPTH (m)	REDUCED LVL (m OD)	LEGEND		TYPE / DEPTH (m)	RESULT	CASING DEPTH (m)	WATER LEVEL (m)	TYPE / DEPTH (m)	RESULT	FROM (m)	TO (m)	TYPE
	Very weak dark grey thickly laminated MUDSTONE. (WEATHERED BOWLAND SHALE FORMATION)	3.00	298.48			C 3.00-3.45	(15) 40					3.00		D
	BOREHOLE TERMINATED AT 3.00m													

Key

D Small Disturbed Sample
B Bulk Disturbed Sample
ES Environmental Sample
W Water Sample
C Core sample
UT Undisturbed Sample

S Standard Penetration Test
C Standard Penetration Test (solid cone)

PP Pocket Penetrometer test
SV Shear Vane test
PID Photo Ionisation Detector test

Notes

Backfilled with arisings. Borehole terminated due to competency of deposits (likely bedrock).

Groundwater observations

Groundwater encountered at 1m depth. Water level remained constant.

Title

Driven tube sampler record

Recovery details	
Range (m)	Recovery (%)
0.00 - 1.00	100
1.00 - 2.00	80
2.00 - 3.00	100

Method
Driven tube sampler

Logged by
TO

Date(s)
06/02/2019

Level (m OD)
301.48

Compiled by
SA

Sheet number
Sheet 2 of 2

Co-ordinates
406524mE, 374385mN

Checked by
SD

DTS10

Report ref: STQ4642M-G01

Revision: 0

Proposed residential development
Nunsfield Road, Buxton

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WELL	STRATA				WATER STRIKES	SPT TESTING				OTHER IN SITU TESTING		SAMPLING		
	DESCRIPTION	DEPTH (m)	REDUCED LVL (m OD)	LEGEND		TYPE / DEPTH (m)	RESULT	CASING DEPTH (m)	WATER LEVEL (m)	TYPE / DEPTH (m)	RESULT	FROM (m)	TO (m)	TYPE
	Grass over dark brown slightly sandy CLAY. (TOPSOIL)											0.30		D
	Stiff medium strength brown to grey very gravelly slightly sandy CLAY. Gravel consists of fine to coarse angular limestone. (WEATHERED EYAM LIMESTONE FORMATION)	0.50	316.51									0.50		D
										PP 0.80	PP=58	0.80		D
						S 1.00-1.45	(6) 19							
										PP 1.20	PP=63	1.20		D
						S 1.50-1.72	(17) then 50 blows for 75mm penetration							
	BOREHOLE TERMINATED AT 1.72m	1.72	315.29											

Key

D Small Disturbed Sample
B Bulk Disturbed Sample
ES Environmental Sample
W Water Sample
C Core sample
UT Undisturbed Sample

S Standard Penetration Test
C Standard Penetration Test (solid cone)

PP Pocket Penetrometer test
SV Shear Vane test
PID Photo Ionisation Detector test

Notes
Backfilled with arisings. Borehole terminated due to competency of deposits (likely bedrock).

Groundwater observations
No groundwater encountered.

Title
Driven tube sampler record

Recovery details	
Range (m)	Recovery (%)
0.00 - 1.00	100
1.00 - 1.50	100

Method
Driven tube sampler

Logged by
TO

Date(s)
08/02/2019

Level (m OD)
317.01

Compiled by
SA

Sheet number
Sheet 1 of 1

Co-ordinates
406660mE, 374339mN

Checked by
SD

DTS11

Report ref: STQ4642M-G01

Revision: 0

Proposed residential development
Nunsfield Road, Buxton

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WELL	STRATA				WATER STRIKES	SPT TESTING				OTHER IN SITU TESTING		SAMPLING		
	DESCRIPTION	DEPTH (m)	REDUCED LVL (m OD)	LEGEND		TYPE / DEPTH (m)	RESULT	CASING DEPTH (m)	WATER LEVEL (m)	TYPE / DEPTH (m)	RESULT	FROM (m)	TO (m)	TYPE
	Grass over dark brown slightly clayey SAND. (TOPSOIL)											0.30		D
	Stiff medium strength brown gravelly slightly sandy CLAY. Gravel consists of medium to coarse angular limestone. (WEATHERED EYAM LIMESTONE FORMATION)	0.40	317.61									0.50		D
						S 1.00-1.45	(6) 19			PP 1.00	PP=50	0.80		D
										PP 1.40	PP=54	1.20		D
										PP 1.80	PP=50	1.80		D
	Stiff brown gravelly slightly sandy CLAY. Gravel consists of medium to coarse angular limestone. (WEATHERED EYAM LIMESTONE FORMATION) *...between 1.9m and 2.2m depth, very weak light grey limestone cobble encountered.*	1.90	316.11			S 2.00-2.45	(17) then 50 blows for 446mm penetration							
	BOREHOLE TERMINATED AT 2.44m	2.45	315.56									2.40		D

Key

D Small Disturbed Sample
B Bulk Disturbed Sample
ES Environmental Sample
W Water Sample
C Core sample
UT Undisturbed Sample

S Standard Penetration Test
C Standard Penetration Test (solid cone)

PP Pocket Penetrometer test
SV Shear Vane test
PID Photo Ionisation Detector test

Notes

Backfilled with arisings. Borehole terminated due to competency of deposits (likely bedrock).

Groundwater observations

No groundwater encountered.

Title

Driven tube sampler record

Recovery details	
Range (m)	Recovery (%)
0.00 - 1.00	90
1.00 - 2.00	40
2.00 - 2.40	60

Method Driven tube sampler	**Logged by** TO	**Date(s)** 08/02/2019
Level (m OD) 318.01	**Compiled by** SA	**Sheet number** Sheet 1 of 1
Co-ordinates 406691mE, 374450mN	**Checked by** SD	**DTS12**

Report ref: STQ4642M-G01 **Revision:** 0

Proposed residential development
Nunsfield Road, Buxton

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WELL	STRATA DESCRIPTION	DEPTH (m)	REDUCED LVL (m OD)	LEGEND	WATER STRIKES	SPT TESTING TYPE / DEPTH (m)	SPT TESTING RESULT	SPT TESTING CASING DEPTH (m)	SPT TESTING WATER LEVEL (m)	OTHER IN SITU TESTING TYPE / DEPTH (m)	OTHER IN SITU TESTING RESULT	SAMPLING FROM (m)	SAMPLING TO (m)	SAMPLING TYPE
	Grass onto dark brown clayey SAND. (TOPSOIL - MADE GROUND)													
	Loose dark brown mottled orangish brown clayey very gravelly SAND. Gravel consists of fine angular slag, brick, coal and glass. (MADE GROUND)	0.30	322.96									0.30		D
												0.50		D
												0.80		D
						C 1.00-1.45	(3) 3							
												1.20		D
	Stiff high strength orangish brown sandy CLAY. (WEATHERED BEE LOW LIMESTONE FORMATION)	1.30	321.96											
										PP 1.50	PP=100			
												1.80		D
						S 2.00-2.45	(7) 16			PP 2.00	PP=104			
										PP 2.50	PP=117	2.50		D
	CONTINUED ON NEXT SHEET													

Key

D Small Disturbed Sample
B Bulk Disturbed Sample
ES Environmental Sample
W Water Sample
C Core sample
UT Undisturbed Sample

S Standard Penetration Test
C Standard Penetration Test (solid cone)

PP Pocket Penetrometer test
SV Shear Vane test
PID Photo Ionisation Detector test

Notes

Backfilled with arisings. Combined gas and water monitoring standpipe installed.

Groundwater observations

No groundwater encountered.

Recovery details

Range (m)	Recovery (%)
0.00 - 1.00	90
1.00 - 2.00	70
2.00 - 3.00	100
3.00 - 4.00	100
4.00 - 5.00	90

Title

Driven tube sampler record

Method Driven tube sampler	**Logged by** TO	**Date(s)** 31/01/2019
Level (m OD) 323.26	**Compiled by** SA	**Sheet number** Sheet 1 of 2
Co-ordinates 406827mE, 374235mN	**Checked by** SD	**DTS13**

Report ref: STQ4642M-G01 **Revision:** 0

Proposed residential development
Nunsfield Road, Buxton

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WELL	STRATA				WATER STRIKES	SPT TESTING				OTHER IN SITU TESTING		SAMPLING		
	DESCRIPTION	DEPTH (m)	REDUCED LVL (m OD)	LEGEND		TYPE / DEPTH (m)	RESULT	CASING DEPTH (m)	WATER LEVEL (m)	TYPE / DEPTH (m)	RESULT	FROM (m)	TO (m)	TYPE
	Stiff high strength orangish brown sandy CLAY. (WEATHERED BEE LOW LIMESTONE FORMATION)					S 3.00-3.45	(8) 15			PP 3.00	PP=85			
										PP 3.50	PP=92	3.50		D
						S 4.00-4.45	(10) 11			PP 4.00	PP=96			
										PP 4.50	PP=96	4.50		D
						S 5.00-5.45	(9) 16							
	BOREHOLE TERMINATED AT 5.45m	5.45	317.81											

Key

D Small Disturbed Sample
B Bulk Disturbed Sample
ES Environmental Sample
W Water Sample
C Core sample
UT Undisturbed Sample

S Standard Penetration Test
C Standard Penetration Test (solid cone)

PP Pocket Penetrometer test
SV Shear Vane test
PID Photo Ionisation Detector test

Notes

Backfilled with arisings. Combined gas and water monitoring standpipe installed.

Groundwater observations

No groundwater encountered.

Title

Driven tube sampler record

Recovery details	
Range (m)	Recovery (%)
0.00 - 1.00	90
1.00 - 2.00	70
2.00 - 3.00	100
3.00 - 4.00	100
4.00 - 5.00	90

Method Driven tube sampler	**Logged by** TO	**Date(s)** 31/01/2019
Level (m OD) 323.26	**Compiled by** SA	**Sheet number** Sheet 2 of 2
Co-ordinates 406827mE, 374235mN	**Checked by** SD	**DTS13**

Report ref: STQ4642M-G01 **Revision:** 0

Proposed residential development
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WELL	STRATA				WATER STRIKES	SPT TESTING				OTHER IN SITU TESTING		SAMPLING		
	DESCRIPTION	DEPTH (m)	REDUCED LVL (m OD)	LEGEND		TYPE / DEPTH (m)	RESULT	CASING DEPTH (m)	WATER LEVEL (m)	TYPE / DEPTH (m)	RESULT	FROM (m)	TO (m)	TYPE
	Grass over dark brown slightly clayey SAND. (TOPSOIL)											0.30		D
	Stiff medium strength brown gravelly CLAY. Gravel consists of medium to coarse angular limestone. (WEATHERED EYAM LIMESTONE FORMATION)	0.50	313.89									0.50		D
										PP 0.80	PP=50	0.80		D
						S 1.00-1.45	(1) 2							
										PP 1.20	PP=50	1.20		D
	BOREHOLE TERMINATED AT 1.50m	1.50	312.89			C 1.50-1.52	(25 blows for 10mm penetration) then 50 blows for 10mm penetration							

Key

D Small Disturbed Sample
B Bulk Disturbed Sample
ES Environmental Sample
W Water Sample
C Core sample
UT Undisturbed Sample

S Standard Penetration Test
C Standard Penetration Test (solid cone)

PP Pocket Penetrometer test
SV Shear Vane test
PID Photo Ionisation Detector test

Notes

Backfilled with arisings. Borehole terminated due to competency of deposits (likely bedrock).

Groundwater observations

No groundwater encountered.

Title

Driven tube sampler record

Recovery details	
Range (m)	Recovery (%)
0.00 - 1.00	100
1.00 - 1.52	100

Method
Driven tube sampler

Logged by
TO

Date(s)
08/02/2019

Level (m OD)
314.39

Compiled by
SA

Sheet number
Sheet 1 of 1

Co-ordinates
406643mE, 374289mN

Checked by
SD

DTS15

Report ref: STQ4642M-G01

Revision: 0

Proposed residential development
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WELL	STRATA				WATER STRIKES	SPT TESTING				OTHER IN SITU TESTING		SAMPLING		
	DESCRIPTION	DEPTH (m)	REDUCED LVL (m OD)	LEGEND		TYPE / DEPTH (m)	RESULT	CASING DEPTH (m)	WATER LEVEL (m)	TYPE / DEPTH (m)	RESULT	FROM (m)	TO (m)	TYPE
	Grass over medium dense dark brown to brown sandy GRAVEL with occasional gravel-sized pockets of soft clay. Gravel consists of fine to medium angular limestone, shale and timber. (MADE GROUND)											0.30		D
												0.50		D
												0.80		D
												1.20		D
	Soft dark grey slightly silty gravelly CLAY. Gravel consists of fine to medium angular to sub-angular shale and limestone. (WEATHERED BOWLAND SHALE FORMATION)	1.50	292.23									1.80		D
	BOREHOLE TERMINATED AT 2.60m	2.60	291.13									2.50		D

Key

D Small Disturbed Sample
B Bulk Disturbed Sample
ES Environmental Sample
W Water Sample
C Core sample
UT Undisturbed Sample

S Standard Penetration Test
C Standard Penetration Test (solid cone)

PP Pocket Penetrometer test
SV Shear Vane test
PID Photo Ionisation Detector test

Notes

Backfilled with arisings. Borehole terminated due to competency of deposits (likely bedrock).

Groundwater observations

Groundwater encountered at 1m depth, filling borehole to 0.5m depth in 10 minutes.

Title

Driven tube sampler record

Recovery details	
Range (m)	Recovery (%)
0.00 - 1.00	80
1.00 - 2.00	80
2.00 - 2.60	80

Method Driven tube sampler	**Logged by** TO	**Date(s)** 06/02/2019
Level (m OD) 293.73	**Compiled by** SA	**Sheet number** Sheet 1 of 1
Co-ordinates 406445mE, 374305mN	**Checked by** SD	**DTS16**

Report ref: STQ4642M-G01 **Revision:** 0

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WELL	STRATA DESCRIPTION	DEPTH (m)	REDUCED LVL (m OD)	LEGEND	WATER STRIKES	SPT TESTING TYPE / DEPTH (m)	SPT RESULT	SPT CASING DEPTH (m)	SPT WATER LEVEL (m)	OTHER IN SITU TESTING TYPE / DEPTH (m)	OTHER IN SITU RESULT	SAMPLING FROM (m)	SAMPLING TO (m)	SAMPLING TYPE
	Grass over dark brown slightly clayey SAND. (TOPSOIL)													
	Stiff high strength brown gravelly slightly sandy CLAY. Gravel consists of medium to coarse angular limestone. (WEATHERED EYAM LIMESTONE FORMATION)	0.30	296.87									0.30		D
												0.40		D
										PP 0.50	PP=96			
												0.80		D
						S 1.00-1.45	(1) 3			PP 1.00	PP=100			
												1.20		D
										PP 1.30	PP=88			
										PP 1.70	PP=100			
	Stiff high strength brown gravelly sandy CLAY. Gravel consists of medium to coarse angular limestone. (WEATHERED EYAM LIMESTONE FORMATION) *...between 1.8m and 1.9m depth, very weak grey limestone cobble encountered.*	1.80	295.37									1.80		D
						S 2.00-2.45	(25) 41							
										PP 2.10	PP=88			
										PP 2.30	PP=88			
												2.50		D
										PP 2.80	PP=88			
	CONTINUED ON NEXT SHEET													

Key

D Small Disturbed Sample
B Bulk Disturbed Sample
ES Environmental Sample
W Water Sample
C Core sample
UT Undisturbed Sample

S Standard Penetration Test
C Standard Penetration Test (solid cone)

PP Pocket Penetrometer test
SV Shear Vane test
PID Photo Ionisation Detector test

Notes

Backfilled with arisings. Borehole terminated due to competency of deposits (likely bedrock).

Groundwater observations

No groundwater encountered.

Title

Driven tube sampler record

Recovery details	
Range (m)	Recovery (%)
0.00 - 1.00	90
1.00 - 2.00	60
2.00 - 3.00	70
3.00 - 3.60	100

Method Driven tube sampler	**Logged by** TO	**Date(s)** 06/02/2019
Level (m OD) 297.17	**Compiled by** SA	**Sheet number** Sheet 1 of 2
Co-ordinates 406499mE, 374309mN	**Checked by** SD	**DTS17**

Report ref: STQ4642M-G01 **Revision:** 0

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WELL	STRATA				WATER STRIKES	SPT TESTING				OTHER IN SITU TESTING		SAMPLING		
	DESCRIPTION	DEPTH (m)	REDUCED LVL (m OD)	LEGEND		TYPE / DEPTH (m)	RESULT	CASING DEPTH (m)	WATER LEVEL (m)	TYPE / DEPTH (m)	RESULT	FROM (m)	TO (m)	TYPE
	Stiff high strength brown gravelly sandy CLAY. Gravel consists of medium to coarse angular limestone. (WEATHERED EYAM LIMESTONE FORMATION)					S 3.00-3.45	(4) 13			PP 3.10	PP=96			
										PP 3.40	PP=88	3.50		D
	BOREHOLE TERMINATED AT 3.60m	3.60	293.57			C 3.60-3.66	(25 blows for 20mm penetration) then 50 blows for 40mm penetration							

Key

D Small Disturbed Sample
B Bulk Disturbed Sample
ES Environmental Sample
W Water Sample
C Core sample
UT Undisturbed Sample

S Standard Penetration Test
C Standard Penetration Test (solid cone)

PP Pocket Penetrometer test
SV Shear Vane test
PID Photo Ionisation Detector test

Notes

Backfilled with arisings. Borehole terminated due to competency of deposits (likely bedrock).

Groundwater observations

No groundwater encountered.

Title

Driven tube sampler record

Recovery details	
Range (m)	Recovery (%)
0.00 - 1.00	90
1.00 - 2.00	60
2.00 - 3.00	70
3.00 - 3.60	100

Method Driven tube sampler	**Logged by** TO	**Date(s)** 06/02/2019
Level (m OD) 297.17	**Compiled by** SA	**Sheet number** Sheet 2 of 2
Co-ordinates 406499mE, 374309mN	**Checked by** SD	**DTS17**

Report ref: STQ4642M-G01 **Revision:** 0

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WELL	STRATA				WATER STRIKES	SPT TESTING				OTHER IN SITU TESTING		SAMPLING		
	DESCRIPTION	DEPTH (m)	REDUCED LVL (m OD)	LEGEND		TYPE / DEPTH (m)	RESULT	CASING DEPTH (m)	WATER LEVEL (m)	TYPE / DEPTH (m)	RESULT	FROM (m)	TO (m)	TYPE
	Grass over dark brown clayey SAND. (MADE GROUND - REWORKED TOPSOIL)													
	Loose to medium dense dark brown mottled orangish brown dark grey slightly sandy GRAVEL. Gravel consists of fine angular slag, brick, coal and glass. (MADE GROUND)	0.30	323.96									0.30		D
												0.50		D
												0.80		D
						S 1.00-1.45	(4) 13			PP 1.00	PP=96			
												1.20		D
										PP 1.50	PP=100			
												1.80		D
						S 2.00-2.45	(1) 5			PP 2.00	PP=100			
										PP 2.50	PP=92	2.50		D
	CONTINUED ON NEXT SHEET													

Key

D Small Disturbed Sample
B Bulk Disturbed Sample
ES Environmental Sample
W Water Sample
C Core sample
UT Undisturbed Sample

S Standard Penetration Test
C Standard Penetration Test (solid cone)

PP Pocket Penetrometer test
SV Shear Vane test
PID Photo Ionisation Detector test

Notes
Backfilled with arisings.

Groundwater observations
No groundwater encountered.

Recovery details

Range (m)	Recovery (%)
0.00 - 1.00	80
1.00 - 2.00	90
2.00 - 3.00	90
3.00 - 4.00	50
4.00 - 5.00	30

Title
Driven tube sampler record

Method
Driven tube sampler

Logged by
TO

Date(s)
31/01/2019

Level (m OD)
324.26

Compiled by
SA

Sheet number
Sheet 1 of 2

Co-ordinates
406749mE, 374220mN

Checked by
SD

DTS18

Report ref: STQ4642M-G01

Revision: 0

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WELL	STRATA				WATER STRIKES	SPT TESTING				OTHER IN SITU TESTING		SAMPLING		
	DESCRIPTION	DEPTH (m)	REDUCED LVL (m OD)	LEGEND		TYPE / DEPTH (m)	RESULT	CASING DEPTH (m)	WATER LEVEL (m)	TYPE / DEPTH (m)	RESULT	FROM (m)	TO (m)	TYPE
	Loose to medium dense dark brown mottled orangish brown dark grey slightly sandy GRAVEL. Gravel consists of fine angular slag, brick, coal and glass. (MADE GROUND)	3.00	321.26			S 3.00-3.45	(1) 2							
	Soft low strength orangish brown sandy CLAY. (POSSIBLE REWORKED WEATHERED BEE LOW LIMESTONE FORMATION)									PP 3.10	PP=0			
												3.50		D
										PP 3.60	PP=0			
						S 4.00-4.45	(0) 0							
										PP 4.10	PP=4			
												4.50		D
										PP 4.70	PP=4			
						S 5.00-5.45	(0) 0							
	BOREHOLE TERMINATED AT 5.45m	5.45	318.81											

Key

D Small Disturbed Sample
B Bulk Disturbed Sample
ES Environmental Sample
W Water Sample
C Core sample
UT Undisturbed Sample

S Standard Penetration Test
C Standard Penetration Test (solid cone)

PP Pocket Penetrometer test
SV Shear Vane test
PID Photo Ionisation Detector test

Notes
Backfilled with arisings.

Groundwater observations
No groundwater encountered.

Title
Driven tube sampler record

Recovery details	
Range (m)	Recovery (%)
0.00 - 1.00	80
1.00 - 2.00	90
2.00 - 3.00	90
3.00 - 4.00	50
4.00 - 5.00	30

Method
Driven tube sampler

Logged by
TO

Date(s)
31/01/2019

Level (m OD)
324.26

Compiled by
SA

Sheet number
Sheet 2 of 2

Co-ordinates
406749mE, 374220mN

Checked by
SD

DTS18

Report ref: STQ4642M-G01

Revision: 0

Proposed residential development
Nunsfield Road, Buxton

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WELL	STRATA				WATER STRIKES	SPT TESTING				OTHER IN SITU TESTING		SAMPLING		
	DESCRIPTION	DEPTH (m)	REDUCED LVL (m OD)	LEGEND		TYPE / DEPTH (m)	RESULT	CASING DEPTH (m)	WATER LEVEL (m)	TYPE / DEPTH (m)	RESULT	FROM (m)	TO (m)	TYPE
	Grass over medium dense dark brown to dark grey SAND. Gravel consists of medium angular shale, brick, sandstone and brick. (MADE GROUND)											0.30		D
												0.50		D
												0.80		D
	Loose to medium dense orangish brown slightly clayey GRAVEL. Gravel consists fine to coarse angular shale. (WEATHERED BOWLAND SHALE FORMATION)	1.00	300.79			C 1.00-1.45	(4) 12							
												1.20		D
												1.80		D
						C 2.00-2.45	(3) 9							
												2.50		D
	CONTINUED ON NEXT SHEET													

Key

D Small Disturbed Sample
B Bulk Disturbed Sample
ES Environmental Sample
W Water Sample
C Core sample
UT Undisturbed Sample

S Standard Penetration Test
C Standard Penetration Test (solid cone)

PP Pocket Penetrometer test
SV Shear Vane test
PID Photo Ionisation Detector test

Notes

Backfilled with arisings. Combined gas and water monitoring standpipe installed.

Groundwater observations

No groundwater encountered.

Title

Driven tube sampler record

Recovery details	
Range (m)	Recovery (%)
0.00 - 1.00	90
1.00 - 2.00	90
2.00 - 3.00	90
3.00 - 4.00	90
4.00 - 5.00	50

Method Driven tube sampler	**Logged by** TO	**Date(s)** 30/01/2019
Level (m OD) 301.79	**Compiled by** SA	**Sheet number** Sheet 1 of 2
Co-ordinates 406363mE, 374278mN	**Checked by** SD	**DTS19**

Report ref: STQ4642M-G01 **Revision:** 0

Proposed residential development
Nunsfield Road, Buxton

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WELL	STRATA				WATER STRIKES	SPT TESTING				OTHER IN SITU TESTING		SAMPLING		
	DESCRIPTION	DEPTH (m)	REDUCED LVL (m OD)	LEGEND		TYPE / DEPTH (m)	RESULT	CASING DEPTH (m)	WATER LEVEL (m)	TYPE / DEPTH (m)	RESULT	FROM (m)	TO (m)	TYPE
	Loose to medium dense orangish brown slightly clayey GRAVEL. Gravel consists fine to coarse angular shale. (WEATHERED BOWLAND SHALE FORMATION)					C 3.00-3.45	(2) 8					3.20	3.20	W
	Stiff high strength orangish brown mottled grey slightly silty CLAY. (WEATHERED BOWLAND SHALE FORMATION)	3.50	298.29							PP 3.60	PP=104	3.50 3.50	3.50	D D
						S 4.00-4.45	(8) 17							
										PP 4.20	PP=100			
												4.50		D
										PP 4.70	PP=104			
						S 5.00-5.39	(12) then 50 blows for 240mm penetration							
	BOREHOLE TERMINATED AT 5.39m	5.39	296.40											

Key

D Small Disturbed Sample
B Bulk Disturbed Sample
ES Environmental Sample
W Water Sample
C Core sample
UT Undisturbed Sample

S Standard Penetration Test
C Standard Penetration Test (solid cone)

PP Pocket Penetrometer test
SV Shear Vane test
PID Photo Ionisation Detector test

Notes

Backfilled with arisings. Combined gas and water monitoring standpipe installed.

Groundwater observations

No groundwater encountered.

Title

Driven tube sampler record

Recovery details	
Range (m)	Recovery (%)
0.00 - 1.00	90
1.00 - 2.00	90
2.00 - 3.00	90
3.00 - 4.00	90
4.00 - 5.00	50

Method Driven tube sampler	**Logged by** TO	**Date(s)** 30/01/2019
Level (m OD) 301.79	**Compiled by** SA	**Sheet number** Sheet 2 of 2
Co-ordinates 406363mE, 374278mN	**Checked by** SD	**DTS19**

Report ref: STQ4642M-G01 **Revision:** 0

Proposed residential development
Nunsfield Road, Buxton

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WELL	STRATA				WATER STRIKES	SPT TESTING				OTHER IN SITU TESTING		SAMPLING		
	DESCRIPTION	DEPTH (m)	REDUCED LVL (m OD)	LEGEND		TYPE / DEPTH (m)	RESULT	CASING DEPTH (m)	WATER LEVEL (m)	TYPE / DEPTH (m)	RESULT	FROM (m)	TO (m)	TYPE
	Grass over dark brown clayey SAND. (MADE GROUND)													
	Very loose brown to dark grey mottled brown very gravelly slightly clayey SAND. Gravel consists of fine to medium angular bricks, slag, coal and shale. (MADE GROUND)	0.30	297.10									0.30		D
												0.50		D
												0.80		D
						S 1.00-1.45	(1) 0							
												1.20		D
												1.80		D
						S 2.00-2.45	(1) 2							
												2.50		D
	CONTINUED ON NEXT SHEET													

Key

D Small Disturbed Sample
B Bulk Disturbed Sample
ES Environmental Sample
W Water Sample
C Core sample
UT Undisturbed Sample

S Standard Penetration Test
C Standard Penetration Test (solid cone)

PP Pocket Penetrometer test
SV Shear Vane test
PID Photo Ionisation Detector test

Notes
Backfilled with arisings.

Groundwater observations
No groundwater encountered.

Title
Driven tube sampler record

Recovery details	
Range (m)	Recovery (%)
0.00 - 1.00	90
1.00 - 2.00	50
2.00 - 3.00	90
3.00 - 4.00	50
4.00 - 5.00	70

Method
Driven tube sampler

Logged by
TO

Date(s)
30/01/2019

Level (m OD)
297.40

Compiled by
SA

Sheet number
Sheet 1 of 2

Co-ordinates
406378mE, 374209mN

Checked by
SD

DTS20

Report ref: STQ4642M-G01

Revision: 0

Proposed residential development
Nunsfield Road, Buxton

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WELL	STRATA				WATER STRIKES	SPT TESTING				OTHER IN SITU TESTING		SAMPLING		
	DESCRIPTION	DEPTH (m)	REDUCED LVL (m OD)	LEGEND		TYPE / DEPTH (m)	RESULT	CASING DEPTH (m)	WATER LEVEL (m)	TYPE / DEPTH (m)	RESULT	FROM (m)	TO (m)	TYPE
	Very loose brown to dark grey mottled brown very gravelly slightly clayey SAND. Gravel consists of fine to medium angular bricks, slag, coal and shale. (MADE GROUND)					S 3.00-3.45	(8) 14					3.50		D
	...below 3m depth, becoming loose and medium dense.					S 4.00-4.45	(8) 12					4.50		D
	BOREHOLE TERMINATED AT 5.00m	5.00	292.40			S 5.00-5.45	(5) 8							

Key

D Small Disturbed Sample
B Bulk Disturbed Sample
ES Environmental Sample
W Water Sample
C Core sample
UT Undisturbed Sample

S Standard Penetration Test
C Standard Penetration Test (solid cone)

PP Pocket Penetrometer test
SV Shear Vane test
PID Photo Ionisation Detector test

Notes
Backfilled with arisings.

Groundwater observations
No groundwater encountered.

Title
Driven tube sampler record

Recovery details	
Range (m)	Recovery (%)
0.00 - 1.00	90
1.00 - 2.00	50
2.00 - 3.00	90
3.00 - 4.00	50
4.00 - 5.00	70

Method
Driven tube sampler

Logged by
TO

Date(s)
30/01/2019

Level (m OD)
297.40

Compiled by
SA

Sheet number
Sheet 2 of 2

Co-ordinates
406378mE, 374209mN

Checked by
SD

DTS20

Report ref: STQ4642M-G01

Revision: 0

Proposed residential development
Nunsfield Road, Buxton

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WELL	STRATA				WATER STRIKES	SPT TESTING				OTHER IN SITU TESTING		SAMPLING		
	DESCRIPTION	DEPTH (m)	REDUCED LVL (m OD)	LEGEND		TYPE / DEPTH (m)	RESULT	CASING DEPTH (m)	WATER LEVEL (m)	TYPE / DEPTH (m)	RESULT	FROM (m)	TO (m)	TYPE
	Grass over loose dark brown to dark grey SAND. Gravel consists of medium angular shale, brick and sandstone. (MADE GROUND)											0.30		D
												0.50		D
												0.80		D
		0.90	301.47											
	Firm medium strength brown to grey gravelly slightly sandy CLAY. Gravel consists of fine to medium angular brick, shale, slag, coal, sandstone and timber. (MADE GROUND)					C 1.00-1.45	(2) 5			PP 1.00	PP=54			
												1.20		D
										PP 1.50	PP=50			
												1.80		D
						C 2.00-2.45	(2) 5			PP 2.00	PP=63			
		2.20	300.17											
	Stiff very high to high strength grey mottled greyish brown CLAY. (WEATHERED BOWLAND SHALE FORMATION)									PP 2.50	PP=150	2.50		D
	CONTINUED ON NEXT SHEET													

Key

D Small Disturbed Sample
B Bulk Disturbed Sample
ES Environmental Sample
W Water Sample
C Core sample
UT Undisturbed Sample

S Standard Penetration Test
C Standard Penetration Test (solid cone)

PP Pocket Penetrometer test
SV Shear Vane test
PID Photo Ionisation Detector test

Notes

Backfilled with arisings.

Groundwater observations

No groundwater encountered.

Recovery details

Range (m)	Recovery (%)
0.00 - 1.00	90
1.00 - 2.00	100
2.00 - 3.00	75
3.00 - 4.00	75
4.00 - 5.00	100

Title

Driven tube sampler record

Method
Driven tube sampler

Logged by
TO

Date(s)
30/01/2019

Level (m OD)
302.37

Compiled by
SA

Sheet number
Sheet 1 of 2

Co-ordinates
406261mE, 374158mN

Checked by
SD

DTS21

Report ref: STQ4642M-G01

Revision: 0

Proposed residential development
Nunsfield Road, Buxton

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WELL	STRATA				WATER STRIKES	SPT TESTING				OTHER IN SITU TESTING		SAMPLING		
	DESCRIPTION	DEPTH (m)	REDUCED LVL (m OD)	LEGEND		TYPE / DEPTH (m)	RESULT	CASING DEPTH (m)	WATER LEVEL (m)	TYPE / DEPTH (m)	RESULT	FROM (m)	TO (m)	TYPE
	Stiff very high to high strength grey mottled greyish brown CLAY. (WEATHERED BOWLAND SHALE FORMATION)					C 3.00-3.45	(2) 5			PP 3.00	PP=142			
										PP 3.50	PP=150	3.50		D
						S 4.00-4.45	(3) 13			PP 4.00	PP=150			
										PP 4.50	PP=146	4.50		D
						S 5.00-5.45	(9) 30							
	BOREHOLE TERMINATED AT 5.45m	5.45	296.92											

Key

D Small Disturbed Sample
B Bulk Disturbed Sample
ES Environmental Sample
W Water Sample
C Core sample
UT Undisturbed Sample

S Standard Penetration Test
C Standard Penetration Test (solid cone)

PP Pocket Penetrometer test
SV Shear Vane test
PID Photo Ionisation Detector test

Notes

Backfilled with arisings.

Groundwater observations

No groundwater encountered.

Title

Driven tube sampler record

Recovery details	
Range (m)	Recovery (%)
0.00 - 1.00	90
1.00 - 2.00	100
2.00 - 3.00	75
3.00 - 4.00	75
4.00 - 5.00	100

Method
Driven tube sampler

Logged by
TO

Date(s)
30/01/2019

Level (m OD)
302.37

Compiled by
SA

Sheet number
Sheet 2 of 2

Co-ordinates
406261mE, 374158mN

Checked by
SD

DTS21

Report ref: STQ4642M-G01

Revision: 0

Proposed residential development
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WELL	STRATA DESCRIPTION	DEPTH (m)	REDUCED LVL (m OD)	LEGEND	WATER STRIKES	SPT TESTING TYPE / DEPTH (m)	SPT TESTING RESULT	SPT TESTING CASING DEPTH (m)	SPT TESTING WATER LEVEL (m)	OTHER IN SITU TESTING TYPE / DEPTH (m)	OTHER IN SITU TESTING RESULT	SAMPLING FROM (m)	SAMPLING TO (m)	SAMPLING TYPE
	Grass over dark brown clayey SAND. (TOPSOIL - MADE GROUND)													
	Loose dark brown to dark grey mottled brown very gravelly slightly clayey SAND. Gravel consists of bricks, slag, shale and coal. (MADE GROUND)	0.30	295.40									0.30		D
												0.50		D
												0.80		D
						C 1.00-1.45	(1) 5							
												1.20		D
	Stiff medium strength light brown CLAY. (POSSIBLE REWORKED WEATHERED BOWLAND SHALE FORMATION)	1.50	294.20							PP 1.60	PP=50			
												1.80		D
						S 2.00-2.45	(0) 6			PP 2.00	PP=8			
	Stiff medium to high strength dark grey very gravelly CLAY. Gravel consists of fine to medium shale. (WEATHERED BOWLAND SHALE FORMATION)	2.40	293.30							PP 2.50	PP=54	2.50		D
										PP 2.80	PP=100			
	CONTINUED ON NEXT SHEET													

Key

D Small Disturbed Sample
B Bulk Disturbed Sample
ES Environmental Sample
W Water Sample
C Core sample
UT Undisturbed Sample

S Standard Penetration Test
C Standard Penetration Test (solid cone)

PP Pocket Penetrometer test
SV Shear Vane test
PID Photo Ionisation Detector test

Notes
Backfilled with arisings.

Groundwater observations
No groundwater encountered.

Title
Driven tube sampler record

Recovery details	
Range (m)	Recovery (%)
0.00 - 1.00	100
1.00 - 2.00	100
2.00 - 3.00	100
3.00 - 4.00	100
4.00 - 5.00	100

Method Driven tube sampler	**Logged by** TO	**Date(s)** 29/01/2019
Level (m OD) 295.70	**Compiled by** SA	**Sheet number** Sheet 1 of 2
Co-ordinates 406289mE, 374110mN	**Checked by** SD	**DTS22**

Report ref: STQ4642M-G01 **Revision:** 0

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WELL	STRATA				WATER STRIKES	SPT TESTING				OTHER IN SITU TESTING		SAMPLING		
	DESCRIPTION	DEPTH (m)	REDUCED LVL (m OD)	LEGEND		TYPE / DEPTH (m)	RESULT	CASING DEPTH (m)	WATER LEVEL (m)	TYPE / DEPTH (m)	RESULT	FROM (m)	TO (m)	TYPE
	Stiff medium to high strength dark grey very gravelly CLAY. Gravel consists of fine to medium shale. (WEATHERED BOWLAND SHALE FORMATION)					S 3.00-3.45	(6) 25							
										PP 3.50	PP=108	3.50		D
						S 4.00-4.45	(11) 35							
						S 5.00-5.42	(17) then 50 blows for 265mm penetration							
	BOREHOLE TERMINATED AT 5.42m	5.42	290.28											

Key

D Small Disturbed Sample
B Bulk Disturbed Sample
ES Environmental Sample
W Water Sample
C Core sample
UT Undisturbed Sample

S Standard Penetration Test
C Standard Penetration Test (solid cone)

PP Pocket Penetrometer test
SV Shear Vane test
PID Photo Ionisation Detector test

Notes

Backfilled with arisings.

Groundwater observations

No groundwater encountered.

Title

Driven tube sampler record

Recovery details	
Range (m)	Recovery (%)
0.00 - 1.00	100
1.00 - 2.00	100
2.00 - 3.00	100
3.00 - 4.00	100
4.00 - 5.00	100

Method
Driven tube sampler

Logged by
TO

Date(s)
29/01/2019

Level (m OD)
295.70

Compiled by
SA

Sheet number
Sheet 2 of 2

Co-ordinates
406289mE, 374110mN

Checked by
SD

DTS22

Proposed residential development
Nunsfield Road, Buxton

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WELL	STRATA				WATER STRIKES	SPT TESTING				OTHER IN SITU TESTING		SAMPLING		
	DESCRIPTION	DEPTH (m)	REDUCED LVL (m OD)	LEGEND		TYPE / DEPTH (m)	RESULT	CASING DEPTH (m)	WATER LEVEL (m)	TYPE / DEPTH (m)	RESULT	FROM (m)	TO (m)	TYPE
	Grass onto dark brown clayey SAND. (TOPSOIL - MADE GROUND)													
	Very loose dark brown dark grey mottled brown very gravelly slightly clayey SAND. Gravel consists of fine to medium angular brick, slag, shale and coal. (MADE GROUND)	0.30	294.90									0.30		D
												0.50		D
												0.80		D
						C 1.00-1.45	(1) 1							
												1.20		D
												1.80		D
						C 2.00-2.45	(0) 0							
	Stiff medium strength light brown CLAY. (WEATHERED BOWLAND SHALE FORMATION)	2.30	292.90							PP 2.50	PP=50	2.50		D
	CONTINUED ON NEXT SHEET	2.90	292.30											

Key

D Small Disturbed Sample
B Bulk Disturbed Sample
ES Environmental Sample
W Water Sample
C Core sample
UT Undisturbed Sample

S Standard Penetration Test
C Standard Penetration Test (solid cone)

PP Pocket Penetrometer test
SV Shear Vane test
PID Photo Ionisation Detector test

Notes
Backfilled with arisings.

Groundwater observations
No groundwater encountered.

Title
Driven tube sampler record

Recovery details	
Range (m)	Recovery (%)
0.00 - 1.00	100
1.00 - 2.00	75
2.00 - 3.00	60
3.00 - 4.00	60

Method Driven tube sampler	**Logged by** TO	**Date(s)** 29/01/2019
Level (m OD) 295.20	**Compiled by** SA	**Sheet number** Sheet 1 of 2
Co-ordinates 406350mE, 374092mN	**Checked by** SD	**DTS23**

Report ref: STQ4642M-G01 **Revision:** 0

Proposed residential development
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WELL	STRATA				WATER STRIKES	SPT TESTING				OTHER IN SITU TESTING		SAMPLING		
	DESCRIPTION	DEPTH (m)	REDUCED LVL (m OD)	LEGEND		TYPE / DEPTH (m)	RESULT	CASING DEPTH (m)	WATER LEVEL (m)	TYPE / DEPTH (m)	RESULT	FROM (m)	TO (m)	TYPE
	Stiff dark grey very gravelly CLAY. Gravel consists of fine to medium very thinly laminated shale. (WEATHERED BOWLAND SHALE FORMATION)					S 3.00-3.45	(1) 4					3.50		D
						S 4.00-4.45	(2) 19							
	BOREHOLE TERMINATED AT 4.45m	4.45	290.75											

Key

D Small Disturbed Sample
B Bulk Disturbed Sample
ES Environmental Sample
W Water Sample
C Core sample
UT Undisturbed Sample

S Standard Penetration Test
C Standard Penetration Test (solid cone)

PP Pocket Penetrometer test
SV Shear Vane test
PID Photo Ionisation Detector test

Notes
Backfilled with arisings.

Groundwater observations
No groundwater encountered.

Recovery details	
Range (m)	Recovery (%)
0.00 - 1.00	100
1.00 - 2.00	75
2.00 - 3.00	60
3.00 - 4.00	60

Title
Driven tube sampler record

Method Driven tube sampler	**Logged by** TO	**Date(s)** 29/01/2019
Level (m OD) 295.20	**Compiled by** SA	**Sheet number** Sheet 2 of 2
Co-ordinates 406350mE, 374092mN	**Checked by** SD	**DTS23**

Report ref: STQ4642M-G01 **Revision:** 0

Proposed residential development
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WELL	STRATA DESCRIPTION	DEPTH (m)	REDUCED LVL (m OD)	LEGEND	WATER STRIKES	SPT TESTING TYPE / DEPTH (m)	SPT TESTING RESULT	SPT TESTING CASING DEPTH (m)	SPT TESTING WATER LEVEL (m)	OTHER IN SITU TESTING TYPE / DEPTH (m)	OTHER IN SITU TESTING RESULT	SAMPLING FROM (m)	SAMPLING TO (m)	SAMPLING TYPE
	Grass over dark brown SAND. (TOPSOIL - MADE GROUND)													
	Very loose dark brown mottled orangish brown clayey gravelly SAND. Gravel consists of fine to medium angular bricks, sandstone and coal. (MADE GROUND)	0.30	294.45									0.30		D
												0.50		D
												0.80		D
	...from 1m depth, becoming dark grey.					C 1.00-1.45	(1) 0							
	Stiff high to very high strength dark grey very gravelly CLAY. Gravel consists of fine to medium angular shale. (WEATHERED BOWLAND SHALE FORMATION)	2.00	292.75			C 2.00-2.45	(1) 7			PP 2.00	PP=150			
										PP 2.50	PP=121	2.50		D
	CONTINUED ON NEXT SHEET													

Key

D Small Disturbed Sample
B Bulk Disturbed Sample
ES Environmental Sample
W Water Sample
C Core sample
UT Undisturbed Sample

S Standard Penetration Test
C Standard Penetration Test (solid cone)

PP Pocket Penetrometer test
SV Shear Vane test
PID Photo Ionisation Detector test

Notes

Backfilled with arisings. Combined gas and water monitoring standpipe installed.

Groundwater observations

Groundwater encountered at 3m depth. Water level remained constant upon completion.

Title

Driven tube sampler record

Recovery details	
Range (m)	Recovery (%)
0.00 - 1.00	100
1.00 - 2.00	40
2.00 - 3.00	70
3.00 - 4.00	100
4.00 - 5.00	100

Method Driven tube sampler	**Logged by** TO	**Date(s)** 29/01/2019
Level (m OD) 294.75	**Compiled by** SA	**Sheet number** Sheet 1 of 2
Co-ordinates 406261mE, 374067mN	**Checked by** SD	**DTS24**

Report ref: STQ4642M-G01 **Revision:** 0

Proposed residential development
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WELL	STRATA				WATER STRIKES	SPT TESTING				OTHER IN SITU TESTING		SAMPLING		
	DESCRIPTION	DEPTH (m)	REDUCED LVL (m OD)	LEGEND		TYPE / DEPTH (m)	RESULT	CASING DEPTH (m)	WATER LEVEL (m)	TYPE / DEPTH (m)	RESULT	FROM (m)	TO (m)	TYPE
	Stiff high to very high strength dark grey very gravelly CLAY. Gravel consists of fine to medium angular shale. (WEATHERED BOWLAND SHALE FORMATION)					C 3.00-3.45	(8) 23			PP 3.00	PP=113			
										PP 3.50	PP=138	3.50		D
						C 4.00-4.45	(16) 43			PP 4.00	PP=142			
										PP 4.50	PP=108	4.50		D
	BOREHOLE TERMINATED AT 5.00m	5.00	289.75			C 5.00-5.11	(24 blows for 75mm penetration) then 50 blows for 30mm penetration							

Key

D Small Disturbed Sample
B Bulk Disturbed Sample
ES Environmental Sample
W Water Sample
C Core sample
UT Undisturbed Sample

S Standard Penetration Test
C Standard Penetration Test (solid cone)

PP Pocket Penetrometer test
SV Shear Vane test
PID Photo Ionisation Detector test

Notes

Backfilled with arisings. Combined gas and water monitoring standpipe installed.

Groundwater observations

Groundwater encountered at 3m depth. Water level remained constant upon completion.

Title

Driven tube sampler record

Recovery details	
Range (m)	Recovery (%)
0.00 - 1.00	100
1.00 - 2.00	40
2.00 - 3.00	70
3.00 - 4.00	100
4.00 - 5.00	100

Method Driven tube sampler	**Logged by** TO	**Date(s)** 29/01/2019
Level (m OD) 294.75	**Compiled by** SA	**Sheet number** Sheet 2 of 2
Co-ordinates 406261mE, 374067mN	**Checked by** SD	**DTS24**

Report ref: STQ4642M-G01 **Revision:** 0

Proposed residential development
Nunsfield Road, Buxton

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WELL	STRATA				WATER STRIKES	SPT TESTING				OTHER IN SITU TESTING		SAMPLING		
	DESCRIPTION	DEPTH (m)	REDUCED LVL (m OD)	LEGEND		TYPE / DEPTH (m)	RESULT	CASING DEPTH (m)	WATER LEVEL (m)	TYPE / DEPTH (m)	RESULT	FROM (m)	TO (m)	TYPE
	Grass onto dark brown clayey SAND. (TOPSOIL - MADE GROUND)													
	Very loose to loose dark brown dark grey mottled orangish brown very gravelly clayey SAND. Gravel consists of fine to medium angular brick, slag and coal. (MADE GROUND)	0.30	293.62									0.30		D
												0.50		D
												0.80		D
						C 1.00-1.45	(3) 8							
												1.20		D
												1.80		D
						C 2.00-2.45	(0) 1							
												2.50		D
	CONTINUED ON NEXT SHEET													

Key

D Small Disturbed Sample
B Bulk Disturbed Sample
ES Environmental Sample
W Water Sample
C Core sample
UT Undisturbed Sample

S Standard Penetration Test
C Standard Penetration Test (solid cone)

PP Pocket Penetrometer test
SV Shear Vane test
PID Photo Ionisation Detector test

Notes
Backfilled with arisings.

Groundwater observations
No groundwater encountered.

Title
Driven tube sampler record

Recovery details	
Range (m)	Recovery (%)
0.00 - 1.00	100
1.00 - 2.00	80
2.00 - 3.00	50
3.00 - 4.00	40
4.00 - 5.44	100

Method
Driven tube sampler

Logged by
TO

Date(s)
29/01/2019

Level (m OD)
293.92

Compiled by
SA

Sheet number
Sheet 1 of 2

Co-ordinates
406325mE, 374016mN

Checked by
SD

DTS25

Report ref: STQ4642M-G01

Revision: 0

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WELL	STRATA				WATER STRIKES	SPT TESTING				OTHER IN SITU TESTING		SAMPLING		
	DESCRIPTION	DEPTH (m)	REDUCED LVL (m OD)	LEGEND		TYPE / DEPTH (m)	RESULT	CASING DEPTH (m)	WATER LEVEL (m)	TYPE / DEPTH (m)	RESULT	FROM (m)	TO (m)	TYPE
	Very loose to loose dark brown dark grey mottled orangish brown very gravelly clayey SAND. Gravel consists of fine to medium angular brick, slag and coal. (MADE GROUND)	3.00	290.92			S 3.00-3.45	(4) 12							
	Stiff high strength dark grey mottled light brown gravelly CLAY. Gravel consists of medium angular very thinly laminated shale. (WEATHERED BOWLAND SHALE FORMATION)									PP 3.50	PP=100	3.50		D
										PP 3.90	PP=104			
						S 4.00-4.45	(13) 42							
												4.50		D
										PP 4.90	PP=104			
						S 5.00-5.45	(22) then 50 blows for 296 penetration							
	BOREHOLE TERMINATED AT 5.44m	5.44	288.48											

Key

D Small Disturbed Sample
B Bulk Disturbed Sample
ES Environmental Sample
W Water Sample
C Core sample
UT Undisturbed Sample

S Standard Penetration Test
C Standard Penetration Test (solid cone)

PP Pocket Penetrometer test
SV Shear Vane test
PID Photo Ionisation Detector test

Notes

Backfilled with arisings.

Groundwater observations

No groundwater encountered.

Title

Driven tube sampler record

Recovery details	
Range (m)	Recovery (%)
0.00 - 1.00	100
1.00 - 2.00	80
2.00 - 3.00	50
3.00 - 4.00	40
4.00 - 5.44	100

Method
Driven tube sampler

Logged by
TO

Date(s)
29/01/2019

Level (m OD)
293.92

Compiled by
SA

Sheet number
Sheet 2 of 2

Co-ordinates
406325mE, 374016mN

Checked by
SD

DTS25

Report ref: STQ4642M-G01

Revision: 0

Proposed residential development
Nunsfield Road, Buxton

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WELL	STRATA				WATER STRIKES	SPT TESTING				OTHER IN SITU TESTING		SAMPLING		
	DESCRIPTION	DEPTH (m)	REDUCED LVL (m OD)	LEGEND		TYPE / DEPTH (m)	RESULT	CASING DEPTH (m)	WATER LEVEL (m)	TYPE / DEPTH (m)	RESULT	FROM (m)	TO (m)	TYPE
	Grass over dark brown clayey SAND. (TOPSOIL - MADE GROUND)													
	Dark brown to dark grey mottled brown very gravelly slightly clayey SAND. Gravel consists of fine to medium angular bricks, slag, shale and coal. (MADE GROUND)	0.30	288.75									0.30		D
												0.50		D
	Stiff high strength dark grey very gravelly CLAY. Gravel consists of fine to medium angular shale. (POSSIBLE REWORKED WEATHERED BOWLAND SHALE FORMATION)	0.60	288.45							PP 0.80	PP=113	0.80		D
						S 1.00-1.45	(0) 0							
										PP 1.30	PP=108	1.20		D
												1.80		D
	Medium dense to very dense dark grey GRAVEL. Gravel consists of fine to coarse angular shale. (WEATHERED BOWLAND SHALE FORMATION)	1.90	287.15			S 2.00-2.45	(9) 28							
												2.50		D
	CONTINUED ON NEXT SHEET													

Key

D Small Disturbed Sample
B Bulk Disturbed Sample
ES Environmental Sample
W Water Sample
C Core sample
UT Undisturbed Sample

S Standard Penetration Test
C Standard Penetration Test (solid cone)

PP Pocket Penetrometer test
SV Shear Vane test
PID Photo Ionisation Detector test

Notes

Backfilled with arisings. Borehole terminated due to competency of deposits (likely bedrock).

Groundwater observations

No groundwater encountered.

Title

Driven tube sampler record

Recovery details	
Range (m)	Recovery (%)
0.00 - 1.00	100
1.00 - 2.00	90
2.00 - 3.00	100

Method Driven tube sampler	**Logged by** TO	**Date(s)** 29/01/2019
Level (m OD) 289.05	**Compiled by** SA	**Sheet number** Sheet 1 of 2
Co-ordinates 406285mE, 374011mN	**Checked by** SD	**DTS26**

Report ref: STQ4642M-G01 **Revision:** 0

Proposed residential development
Nunsfield Road, Buxton

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WELL	STRATA				WATER STRIKES	SPT TESTING				OTHER IN SITU TESTING		SAMPLING		
	DESCRIPTION	DEPTH (m)	REDUCED LVL (m OD)	LEGEND		TYPE / DEPTH (m)	RESULT	CASING DEPTH (m)	WATER LEVEL (m)	TYPE / DEPTH (m)	RESULT	FROM (m)	TO (m)	TYPE
	Medium dense to very dense dark grey GRAVEL. Gravel consists of fine to coarse angular shale. (WEATHERED BOWLAND SHALE FORMATION)	3.00	286.05			C 3.00-3.36	(17) then 50 blows for 210mm penetration							
	BOREHOLE TERMINATED AT 3.00m													

Key

D Small Disturbed Sample
B Bulk Disturbed Sample
ES Environmental Sample
W Water Sample
C Core sample
UT Undisturbed Sample

S Standard Penetration Test
C Standard Penetration Test (solid cone)

PP Pocket Penetrometer test
SV Shear Vane test
PID Photo Ionisation Detector test

Notes

Backfilled with arisings. Borehole terminated due to competency of deposits (likely bedrock).

Groundwater observations

No groundwater encountered.

Title

Driven tube sampler record

Recovery details	
Range (m)	Recovery (%)
0.00 - 1.00	100
1.00 - 2.00	90
2.00 - 3.00	100

Method
Driven tube sampler

Logged by
TO

Date(s)
29/01/2019

Level (m OD)
289.05

Compiled by
SA

Sheet number
Sheet 2 of 2

Co-ordinates
406285mE, 374011mN

Checked by
SD

DTS26

Report ref: STQ4642M-G01

Revision: 0

Proposed residential development
Nunsfield Road, Buxton

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WELL	STRATA				WATER STRIKES	SPT TESTING				OTHER IN SITU TESTING		SAMPLING		
	DESCRIPTION	DEPTH (m)	REDUCED LVL (m OD)	LEGEND		TYPE / DEPTH (m)	RESULT	CASING DEPTH (m)	WATER LEVEL (m)	TYPE / DEPTH (m)	RESULT	FROM (m)	TO (m)	TYPE
	Grass over dark brown slightly clayey SAND. (TOPSOIL - MADE GROUND)													
	Stiff brown mottled grey very gravelly very sandy CLAY. Gravel consists of fine to medium angular limestone and sandstone. (MADE GROUND)	0.30	303.29									0.30		D
	Dark brown very clayey GRAVEL. Gravel consists of fine to medium angular shell, bricks, plastic, timber, slag and coal. (MADE GROUND)	0.50	303.09									0.50		D
												0.80		D
												1.20		D
												1.80		D
												2.50		D
	CONTINUED ON NEXT SHEET													

Key

D Small Disturbed Sample
B Bulk Disturbed Sample
ES Environmental Sample
W Water Sample
C Core sample
UT Undisturbed Sample

S Standard Penetration Test
C Standard Penetration Test (solid cone)

PP Pocket Penetrometer test
SV Shear Vane test
PID Photo Ionisation Detector test

Notes
Backfilled with arisings.

Groundwater observations
No groundwater encountered.

Title
Driven tube sampler record

Recovery details	
Range (m)	Recovery (%)
0.00 - 1.00	90
1.00 - 2.00	60
2.00 - 3.00	40
3.00 - 4.00	100

Method
Driven tube sampler

Logged by
TO

Date(s)
06/02/2019

Level (m OD)
303.59

Compiled by
SA

Sheet number
Sheet 1 of 2

Co-ordinates
406486mE, 374505mN

Checked by
SD

DTS27

Report ref: STQ4642M-G01

Revision: 0

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WELL	STRATA				WATER STRIKES	SPT TESTING				OTHER IN SITU TESTING		SAMPLING		
	DESCRIPTION	DEPTH (m)	REDUCED LVL (m OD)	LEGEND		TYPE / DEPTH (m)	RESULT	CASING DEPTH (m)	WATER LEVEL (m)	TYPE / DEPTH (m)	RESULT	FROM (m)	TO (m)	TYPE
	Dark brown very clayey GRAVEL. Gravel consists of fine to medium angular shell, bricks, plastic, timber, slag and coal. (MADE GROUND)											3.50		D
	BOREHOLE TERMINATED AT 4.00m	4.00	299.59											

Key

D Small Disturbed Sample
B Bulk Disturbed Sample
ES Environmental Sample
W Water Sample
C Core sample
UT Undisturbed Sample

S Standard Penetration Test
C Standard Penetration Test (solid cone)

PP Pocket Penetrometer test
SV Shear Vane test
PID Photo Ionisation Detector test

Notes
Backfilled with arisings.

Groundwater observations
No groundwater encountered.

Title
Driven tube sampler record

Recovery details	
Range (m)	Recovery (%)
0.00 - 1.00	90
1.00 - 2.00	60
2.00 - 3.00	40
3.00 - 4.00	100

Method
Driven tube sampler

Logged by
TO

Date(s)
06/02/2019

Level (m OD)
303.59

Compiled by
SA

Sheet number
Sheet 2 of 2

Co-ordinates
406486mE, 374505mN

Checked by
SD

DTS27

Proposed residential development
Nunsfield Road, Buxton

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WELL	STRATA				WATER STRIKES	SPT TESTING				OTHER IN SITU TESTING		SAMPLING		
	DESCRIPTION	DEPTH (m)	REDUCED LVL (m OD)	LEGEND		TYPE / DEPTH (m)	RESULT	CASING DEPTH (m)	WATER LEVEL (m)	TYPE / DEPTH (m)	RESULT	FROM (m)	TO (m)	TYPE
	Vegetation over dark brown very clayey SAND. (TOPSOIL)													
	Stiff medium strength brown very sandy CLAY. (WEATHERED BOWLAND SHALE FORMATION)	0.30	299.13									0.30		D
												0.50		D
	Dark grey GRAVEL. Gravel consists of fine angular shale. (WEATHERED BOWLAND SHALE FORMATION)	0.80	298.63									0.80		D
												1.20		D
												1.50		D
	BOREHOLE TERMINATED AT 2.80m	2.80	296.63											

Key

D Small Disturbed Sample
B Bulk Disturbed Sample
ES Environmental Sample
W Water Sample
C Core sample
UT Undisturbed Sample

S Standard Penetration Test
C Standard Penetration Test (solid cone)

PP Pocket Penetrometer test
SV Shear Vane test
PID Photo Ionisation Detector test

Notes

Backfilled with arisings. Borehole terminated due to competency of deposits (likely bedrock).

Groundwater observations

No groundwater encountered.

Title

Driven tube sampler record

Recovery details	
Range (m)	Recovery (%)
0.00 - 1.00	95
1.00 - 1.50	100

Method
Driven tube sampler

Logged by
TO

Date(s)
06/02/2019

Level (m OD)
299.43

Compiled by
SA

Sheet number
Sheet 1 of 1

Co-ordinates
406514mE, 374343mN

Checked by
SD

DTS28

Report ref: STQ4642M-G01

Revision: 0

Proposed residential development
Nunsfield Road, Buxton

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WELL	STRATA				WATER STRIKES	SPT TESTING				OTHER IN SITU TESTING		SAMPLING		
	DESCRIPTION	DEPTH (m)	REDUCED LVL (m OD)	LEGEND		TYPE / DEPTH (m)	RESULT	CASING DEPTH (m)	WATER LEVEL (m)	TYPE / DEPTH (m)	RESULT	FROM (m)	TO (m)	TYPE
	Grass onto dark brown SAND. (MADE GROUND)													
	Dark brown mottled orangish brown clayey gravelly SAND. Gravel consists of fine to medium angular brick, sandstone, slag and coal. (MADE GROUND)	0.30	294.29									0.30		D
												0.50		D
												0.80		D
												1.20		D
												1.80		D
	Stiff high to very high strength dark grey very gravelly CLAY. Gravel consists of fine to medium angular slag. (MADE GROUND)	2.00	292.59							PP 2.00	PP=150			
										PP 2.50	PP=121	2.50		D
	CONTINUED ON NEXT SHEET													

Key

D Small Disturbed Sample
B Bulk Disturbed Sample
ES Environmental Sample
W Water Sample
C Core sample
UT Undisturbed Sample

S Standard Penetration Test
C Standard Penetration Test (solid cone)

PP Pocket Penetrometer test
SV Shear Vane test
PID Photo Ionisation Detector test

Notes

Backfilled with arisings.

Groundwater observations

Groundwater encountered at 3m depth. Water level remained constant.

Title

Driven tube sampler record

Recovery details	
Range (m)	Recovery (%)
0.00 - 1.00	100
1.00 - 2.00	40
2.00 - 3.00	70
3.00 - 4.00	100
4.00 - 5.00	100

Method Driven tube sampler	**Logged by** TO	**Date(s)** 29/01/2019
Level (m OD) 294.59	**Compiled by** SA	**Sheet number** Sheet 1 of 2
Co-ordinates 406458mE, 374338mN	**Checked by** SD	**DTS29**

Report ref: STQ4642M-G01 **Revision:** 0

Proposed residential development
Nunsfield Road, Buxton

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WELL	STRATA				WATER STRIKES	SPT TESTING				OTHER IN SITU TESTING		SAMPLING		
	DESCRIPTION	DEPTH (m)	REDUCED LVL (m OD)	LEGEND		TYPE / DEPTH (m)	RESULT	CASING DEPTH (m)	WATER LEVEL (m)	TYPE / DEPTH (m)	RESULT	FROM (m)	TO (m)	TYPE
	Stiff high to very high strength dark grey very gravelly CLAY. Gravel consists of fine to medium angular slag. (MADE GROUND)									PP 3.00	PP=113			
										PP 3.50	PP=138	3.50		D
										PP 4.00	PP=142			
										PP 4.50	PP=125	4.50		D
	BOREHOLE TERMINATED AT 5.00m	5.00	289.59											

Key

D Small Disturbed Sample
B Bulk Disturbed Sample
ES Environmental Sample
W Water Sample
C Core sample
UT Undisturbed Sample

S Standard Penetration Test
C Standard Penetration Test (solid cone)

PP Pocket Penetrometer test
SV Shear Vane test
PID Photo Ionisation Detector test

Notes

Backfilled with arisings.

Groundwater observations

Groundwater encountered at 3m depth. Water level remained constant.

Recovery details

Range (m)	Recovery (%)
0.00 - 1.00	100
1.00 - 2.00	40
2.00 - 3.00	70
3.00 - 4.00	100
4.00 - 5.00	100

Title

Driven tube sampler record

Method
Driven tube sampler

Logged by
TO

Date(s)
29/01/2019

Level (m OD)
294.59

Compiled by
SA

Sheet number
Sheet 2 of 2

Co-ordinates
406458mE, 374338mN

Checked by
SD

DTS29

Report ref: STQ4642M-G01

Revision: 0