GENERAL NOTES

A) The assessment made in this report is based on the site terrain and ground conditions revealed by the various field investigations undertaken and also any other relevant data for the site including previous site investigation reports (if available) and desk study data. There may be special conditions appertaining to the site, however, which have not been revealed by the investigation and which have not, therefore, been taken into account in the report. The assessment may be subject to amendment in the light of additional information becoming available. It must be recognised that many of the Environmental Searches obtained during the course of the desk study are often lengthy. Applied Geology have, where appropriate and in the interests of simplicity, only reproduced the summary of the searches within the report. A full copy of all the search data is held at the Applied Geology office and is available for inspection if required.

B) The services provided are defined within our proposal and are carried out in line with the terms of appointment between Applied Geology and the Client.

C) Where any data supplied by the Client or other external source, including that from previous site investigations, has been used it has been assumed that the information is correct. No responsibility can be accepted by Applied Geology for inaccuracies within this data.

D) Whilst the report may express an opinion on possible configurations of strata between or beyond the exploratory locations, or on the possible presence of features based on either visual, verbal or published evidence this is for guidance only and no liability can be accepted for the accuracy.

E) Comments on groundwater (and landfill gas) conditions are based on observations made during the course of the present and past investigations or with reference to published data unless otherwise stated. It should be noted, however, that groundwater (and landfill gas) levels vary due to seasonal (or atmospheric conditions) or other effects.

F) The copyright of this report and other plans (and documents prepared by Applied Geology) is owned by Applied Geology and no such report, plan or document may be reproduced, published or adapted without the written consent of Applied Geology. Complete copies of the report may, however, be made and distributed by the Client as an expedient in dealing with matters related to its submission.

G) This report is prepared and written in the context of the proposals stated in the introduction to the report and should not be used in a differing context. Furthermore, new information, improved practices and legislation may necessitate an alteration to the report in whole or in part after its submission. Therefore with any change in circumstances or after the expiry of one year from the date of the report, the report should be referred to Applied Geology for re-assessment and if necessary, re-appraisal.

H) The survey was conducted and this report was prepared for the sole internal use and reliance of the Client. This report shall not be relied upon or transferred to any other parties without the express written authorisation of Applied Geology. If an unauthorised third party comes into possession of this report they rely on it at their peril and Applied Geology owes them no duty of care and skill.

I) Ground conditions should be monitored during the construction of the works and the recommendations of the report re-evaluated in the light of this data by the supervising geotechnical or geo-environmental engineers.

J) Unless specifically stated, the investigation has not taken into account the possible effects of mineral extraction.

K) The works performed are not a comprehensive site characterisation and should not be construed as being such.

L) The findings of the geo-environmental risk assessment are based on information obtained from a variety of sources which Applied Geology believe to be correct. Applied Geology cannot and does not guarantee the authenticity or reliability of the information it has relied upon.

M) The report represents the findings and opinions of experienced geo-environmental consultants. Applied Geology does not provide legal advice and the advice of lawyers may be required.

N) Conditions at the site are subject to change from the time of the site inspection.

O) It is possible that researches carried out by Applied Geology, whilst fully appropriate for a phase 1 desk study, failed to indicate the existence of important information sources. Assuming such indicators actually exist, their information could not have been considered in the formulation of Applied Geology findings and opinions.

P) The economic viability of the proposals referred to in the report, or of the solutions put forward to any problems encountered, depends on very many factors in addition to geotechnical considerations and hence its evaluation is outside the scope of this report.

Q) Applied Geology operates as a Consultancy and does not operate it's own laboratory for soil testing, this work being sub contracted to known and respected, generally UKAS accredited, laboratories. Applied Geology can therefore not be held responsible for the testing carried out.

LIST OF REFERENCES COMMONLY USED BY APPLIED GEOLOGY IN REPORTS

SECTION/TITLE	AUTHOR/PUBLICATION
LABORATORY TESTING	
BS 1377-1:2016 Method of Test for Soils for Civil Engineering Purposes	BSI
SITE WORK	
Guidelines for Combined Geoenvironmental and Geotechnical Investigations. Issue 2. March 2006.	AGS
BS 5930:2015. Code of Practice for Ground Investigations	BSI
BS 10175:2011 & A1:2013 Code of Practice for the Investigation of Potentially Contaminated Sites	BSI
FOUNDATION DESIGN	
BS EN 1997-1 Eurocode 7 – Geotechnical Design, Part 1. 2004.	BSI
BS EN 1997-2 Eurocode 7 – Geotechnical Design, Part 2. 2007.	BSI
Paper by M. A. Stroud 'The Standard Penetration Test – its Application and Interpretation' within Thomas Telford/ICE book 'Penetration Testing in the UK'. 1989.	Stroud
BRE Special Digest 1: 2005 Third Edition. Concrete in Aggressive Ground	BRE
NHBC Standards, Chapter 4.2: Building Near Trees. 2017.	National House Building Council
Engineering in Chalk (C574). 2002.	CIRIA
Engineering in Mercia Mudstone (C570). 2001.	CIRIA
Engineering in Glacial Till (C504). 1999.	CIRIA
GROUND GAS	
BRE 211 Protecting New Buildings from Radon. 2015.	BRE
Indicative Atlas of Radon in Scotland (HPA – CRCE-023). 2011.	HPA
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Guidance on Evaluation of Development Proposals on Sites Where Methane and Carbon Dioxide are Present. 4th Ed, 2007	NHBC & RSK Group
Assessing Risks Posed by Hazardous Ground Gases to Buildings. C665. 2007.	CIRIA
Research Bulletin 17. 2012.	CLAIRE
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GROUNDWATER	
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CONTAMINATION ASPECTS (Soil & Groundwater)	
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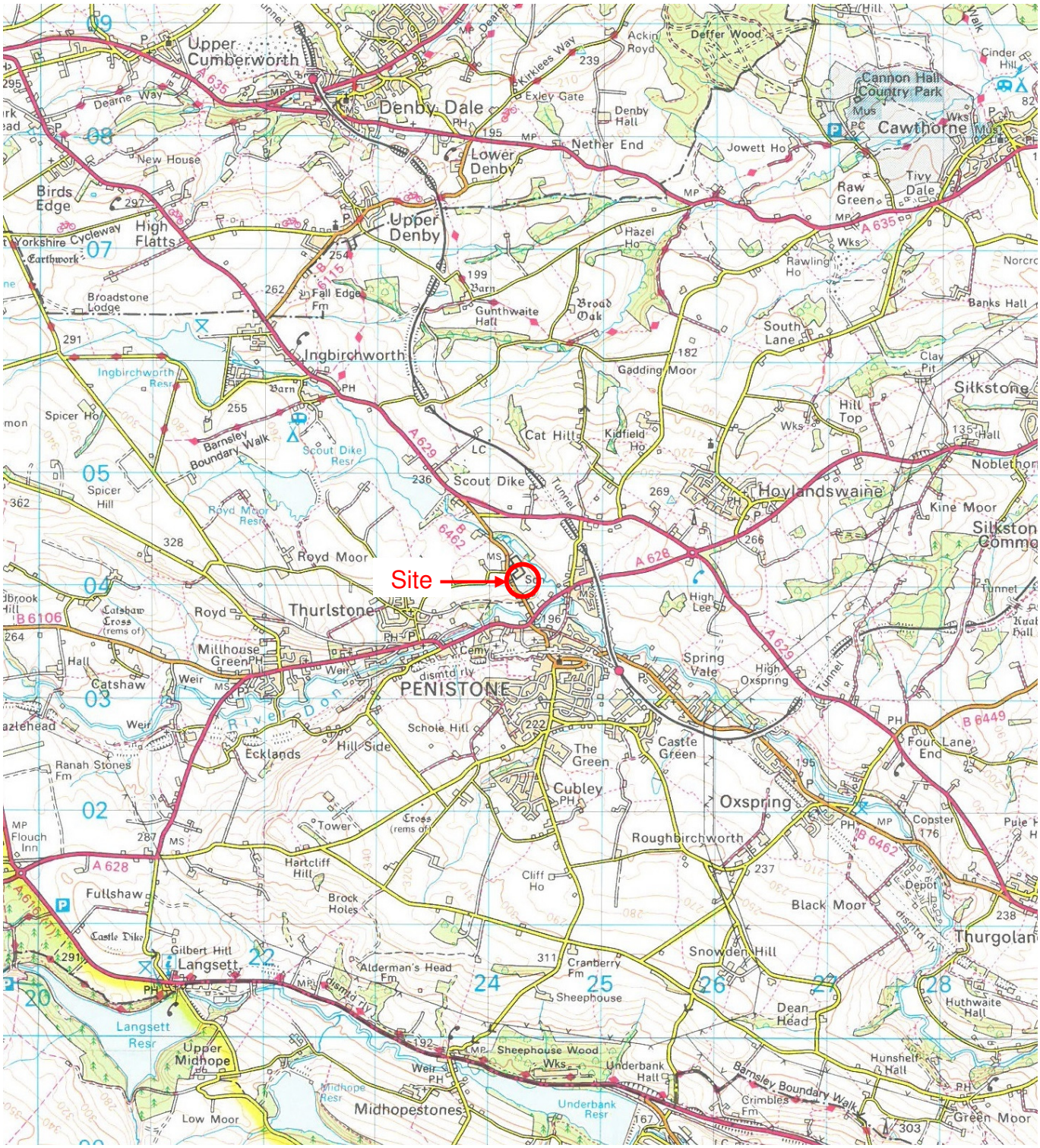
HPA Contaminated Land Information Sheet – Risk Assessment Approaches for Polycyclic Aromatic Hydrocarbons. Version 3. 2010.	HPA
Cover Systems for Land Regeneration. Thickness of Cover Systems for Contaminated Land. 2004. BR465.	AGS/BRE
Development of Generic Assessment Criteria for Assessing Vapour Risk to Human Health from Volatile Contaminants in Groundwater. Version 1.0. February 2017.	SOBRA
BS 3882:2015 Specification for Topsoil	BSI
The LQM/CIEH S4ULs for Human Health Risk Assessment, 2015. S4UL3159.	Chartered Institute of Environmental Health. Land Quality Management.
Generic Assessment Criteria for Human Health Risk Assessment. 2009.	Chartered Institute of Environmental Health. Land Quality Management.
Model Procedures for the Management of Contaminated Land. Contaminated Land Report. 11 September 2004.	DEFRA / Environment Agency
The UK Approach for Evaluating Human Health Risks from Petroleum Hydrocarbons in Soils. February 2005.	Environment Agency
Remedial Targets Methodology. Hydrogeological Risk Assessment for Land Contamination. 2006.	Environment Agency

An ecological risk assessment framework for contaminants in soil. Science Report SC070009/SR1 September 2008.	Environment Agency
Guidance on desk studies and conceptual site models in ecological risk assessment. Science Report SC070009/SR2a October 2008.	Environment Agency
Guidance on the use of soil screening values in ecological risk assessment. Science Report SC070009/SR2b October 2008.	Environment Agency
Guidance on the use of bioassays in ecological risk assessment. Science Report SC070009/SR2c October 2008.	Environment Agency
Guidance on the use of ecological surveys in ecological risk assessment. Science Report SC070009/SR2c October 2008.	Environment Agency
Guidance on the attribution of cave and effect in geological risk assessment. Science Report SC070009/SR2e October 2008.	Environment Agency
Guidance for the Safe Development of Housing on Land Affected by Contamination	NHBC
Sampling Strategies for Contaminated Land. Contaminated Land Research Report no.4. 1994.	DoE
NHBC Standards, Chapter 4.1: Land Quality – Managing Ground Conditions. 2017.	National House Building Council
ATRISK^{soil} Soil Screening Values	Atkins
CLEA Software (Version 1.071). 2015.	Environment Agency
The Water Supply (Water Quality) Regulations. 2016.	DWI
The Environment Agency's approach to groundwater protection. 2017.	Environment Agency
Prioritisation & Categorisation Procedure for Sites Which May Be Contaminated (CLR Report No6)	Department of the Environment, Contaminated Land Research Report
Code of Practice for the Investigation & Mitigation of Possible Petroleum-Based Land Contamination. 1993.	The Institute of Petroleum
Piling & Penetrative Ground Improvement Methods on Land Affected by Contamination: Guidance on Pollution Prevention. 2001.	Environment Agency
DISPOSAL OF SOIL	
Guidance on the Classification and Assessment of Waste. Technical Guidance WM3. 1st Ed. 2015.	SEPA, NIEA, Natural Resources Wales & Environment Agency
Waste Sampling and Testing for Disposal to Landfill. 2013.	Environment Agency
BURIED SERVICES	
Guidance for the Selection of Water Supply Pipes to be Used in Brownfield Sites. (10/WM/03/21). 2011.	UK Water Industries Research
PAVEMENT DESIGN	
Interim Advice Note 73/06 Rev 1, 2009. Design Guidance for Road Pavement Foundations (Draft HD25)	Highways Agency
PLANNING	
DCLG:2012 National Planning Policy Framework and Practice Guidance	Department for Communities and Local Government
HEALTH & SAFETY ASPECTS	
A Guide for Safe Working on Contaminated Sites (Report 132)	CIRIA
Protection of Workers and the General Public During the Development of Contaminated Land (HSG66)	Health & Safety Executive
Construction (Design & Management) Regulations 2015 (CDM)	Health & Safety Executive
Control of Substances Hazardous to Health Regulations 2002	Health & Safety Executive
Workplace Exposure Limits. EH40/2005	Health & Safety Executive
Trenching Practice. Guidance on Groundwater Control (Report 97)	CIRIA
Control of Groundwater for Temporary Works (Report 113)	CIRIA
Asbestos in Soil and Made Ground: A Guide to Understanding and Managing Risks. C733. 2014.	CIRIA

APPENDIX A



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email:admin@appliedgeology.co.uk

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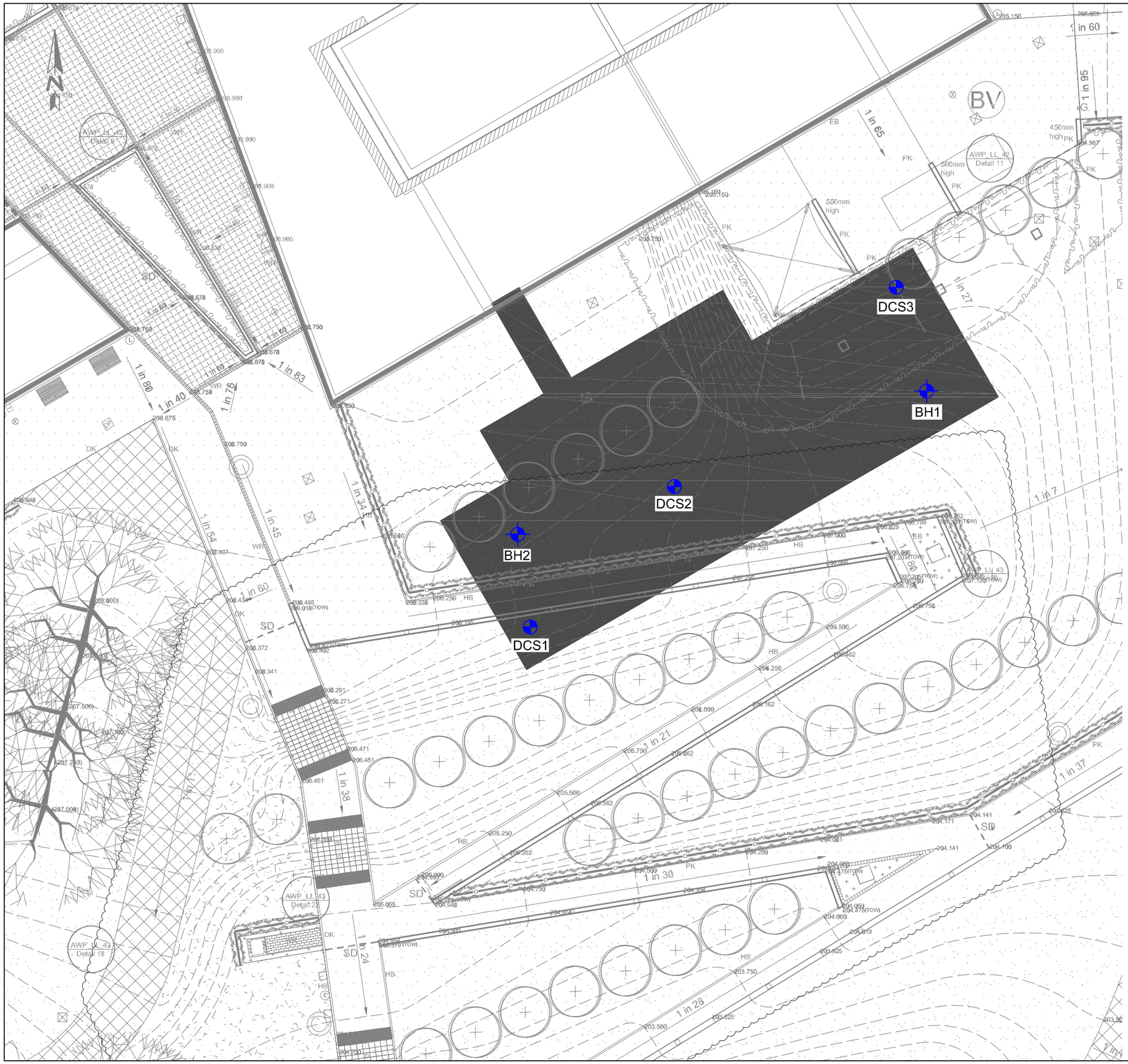
Project: PENISTONE GRAMMAR SCHOOL

Drawn By:	Checked By:	Paper Size:
JS	JMS	A4

Scale:	Date:	NGR:
1:50,000	05.06.2018	424341 403945

Drawing No:	Revision:
AG2882-18-01	0

Title: SITE LOCATION PLAN



KEY:

BH1 — Cable Percussion Borehole

DCS1 — Driven Continuous Sampling Borehole

Drawing based on Anthony Walker and Partners Limited, drawing No:BP4L_PEN_AWP_DR_94_BW_LL_25 Revision C10 sheet 5 OF 6 dated 19/07/2011.

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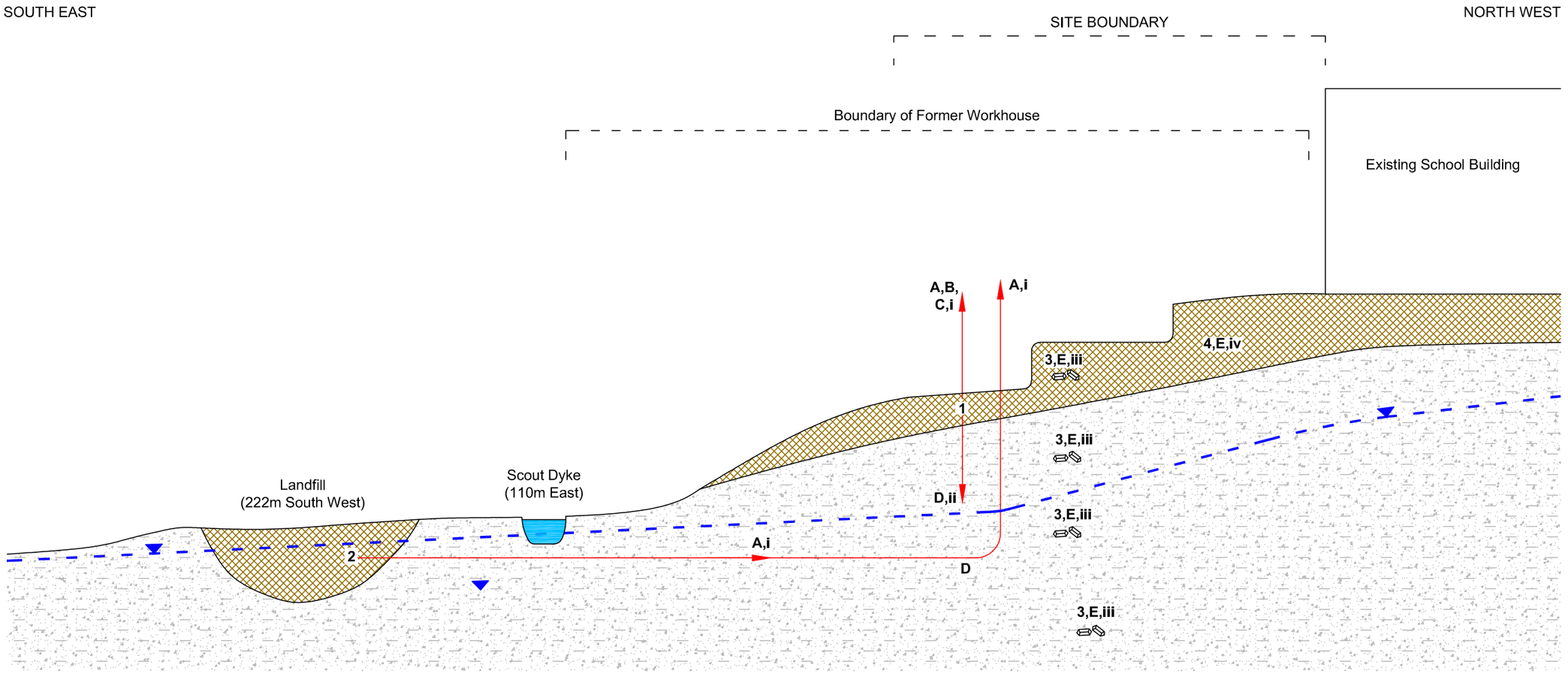
Project: PENISTONE GRAMMAR SCHOOL

Title: EXPLORATORY HOLE LOCATION PLAN

Drawn By:	Checked By:	Paper Size:
JS	JMS	A3

Scale:	Date:
NTS	05.07.2018

Drawing No:	Revision:
AG2882-18-02	0



SOURCES

1. Made Ground
2. Soil gas/landfill gas
3. Elevated sulphates
4. Hydrocarbons

PATHWAYS

A. Inhalation
B. Ingestion
C. Dermal contact
D. Leaching/migration
E. Direct contact

RECEPTORS

i. End users
ii. Aquifer
iii. Buried concrete
iv. Water pipes

Key:

- Made Ground
- Pennine Lower Coal Measures Formation (Secondary A Aquifer)
- Groundwater

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Client: BARNSLEY SPV1 LTD

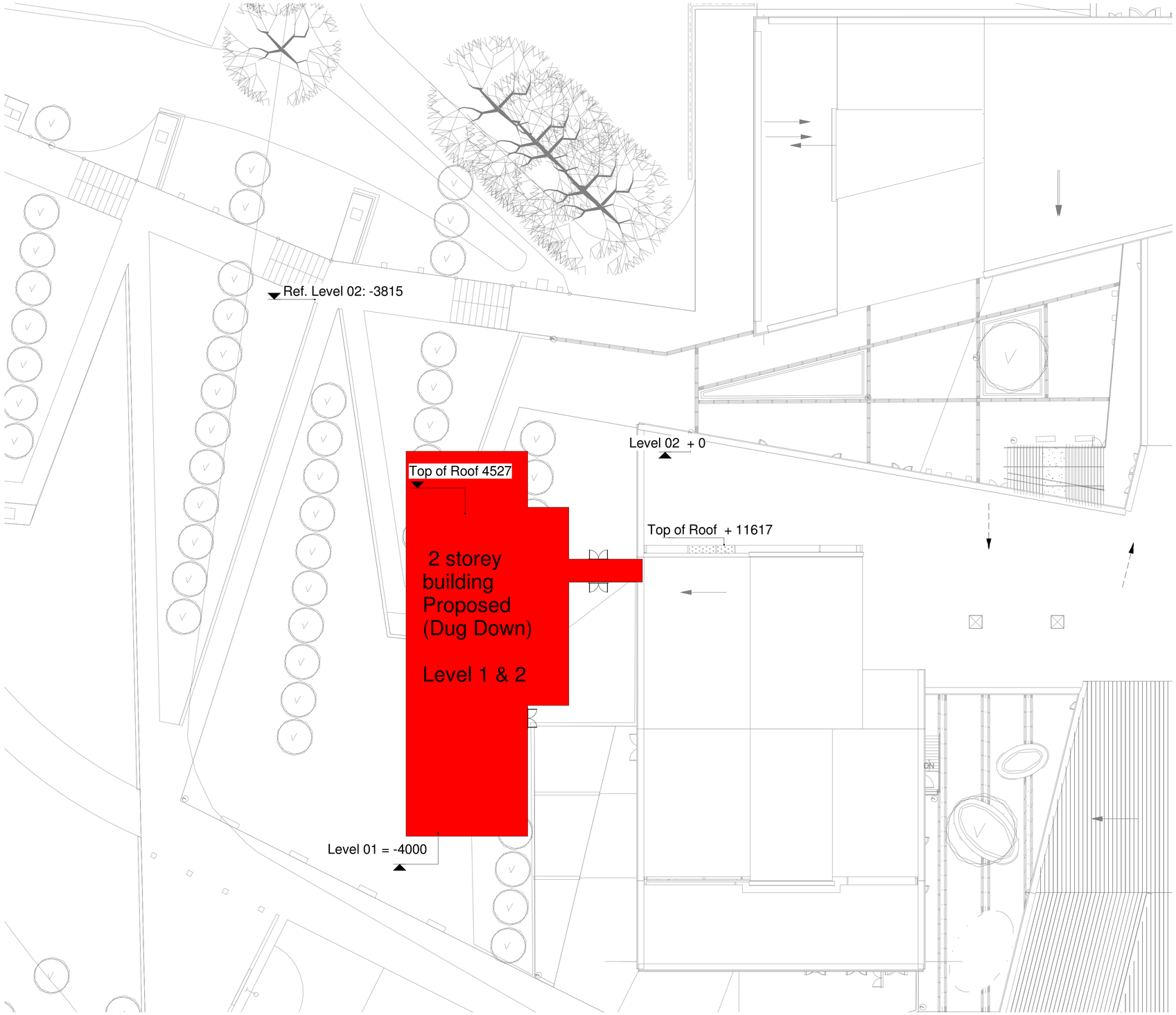
Project: PENISTONE GRAMMAR SCHOOL

Title: CONCEPTUAL SITE MODEL

Drawn By:	Checked By:	Paper Size:
JS	JMS	A3

Scale:	Date:
NTS	05.07.2018

Drawing No:	Revision:
AG2882-18-03	0



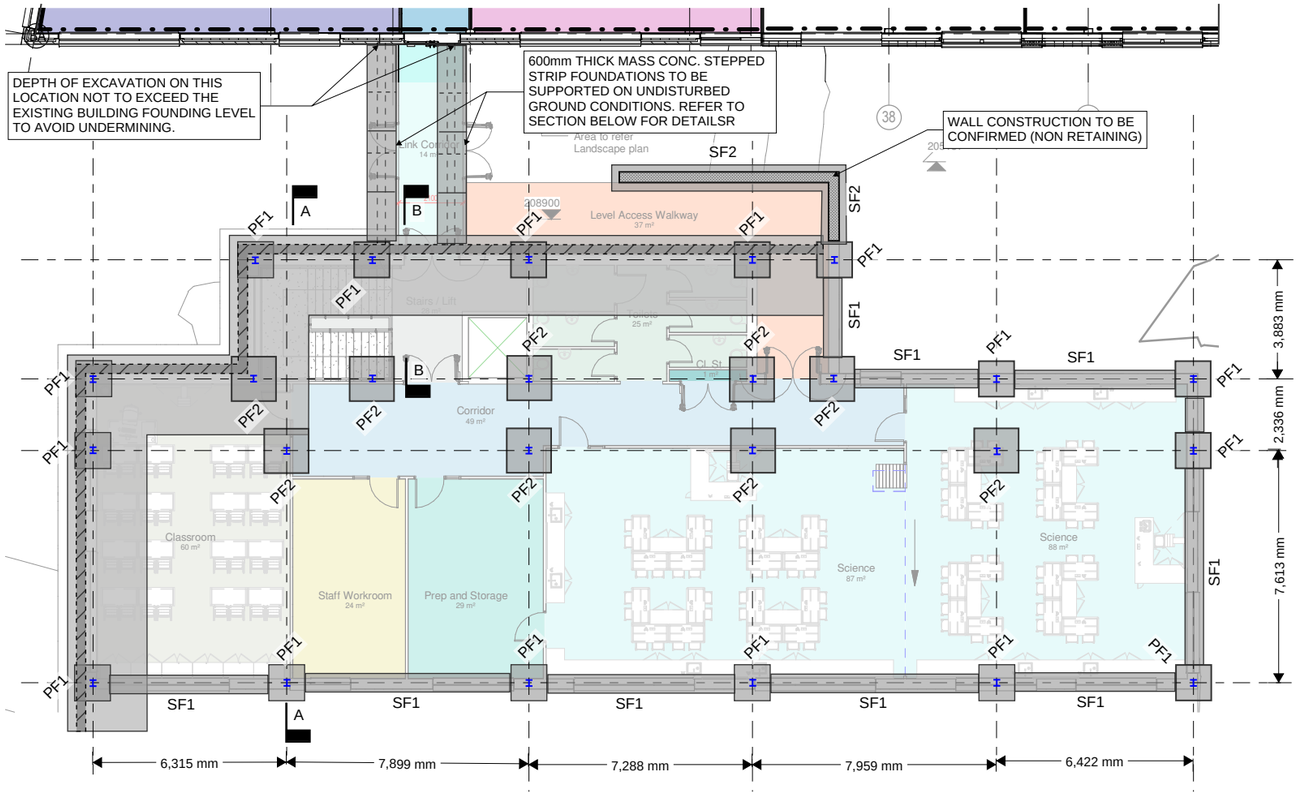
1 Site 10Architects Proposed
1 : 200

Client: Pennistone Grammar School
Project: Pennistone Phase 2
Job No.: 1080
Date : 04/30/18
BIM Model : PGEW-10A-M3-ZZ
QA: ACM Approver
Scale : As indicated@A1
Drawing: **Site 10Architects Proposed**
Rev notes: r102 - Proposed Building Extension

PGEW-10A- V0- XX-DR- A- **0102**-P1

10architect ltd. flint glass works, 64 jersey street, manchester, m4 6jw

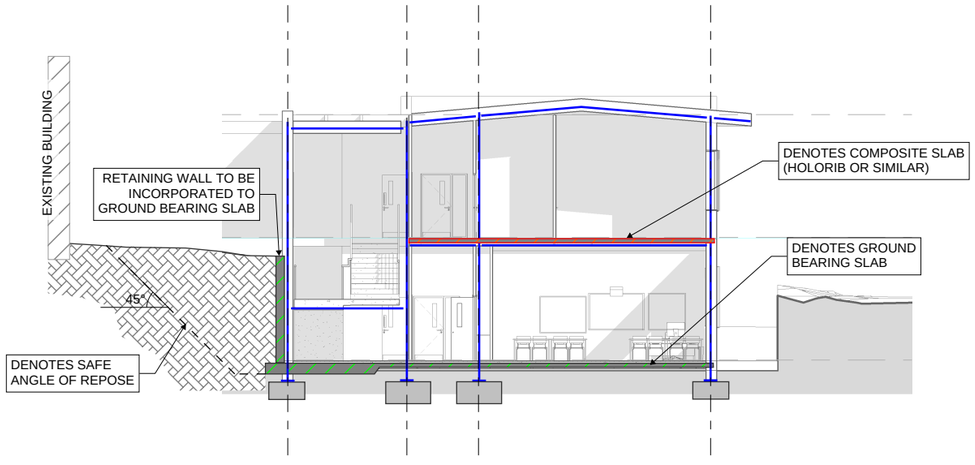
This drawing is copyright. Do not scale dimensions from this drawing "if in doubt ask". This drawing is to be read in conjunction with all other relevant drawings and specifications. All discrepancies on this drawing are to be reported to the architect. Do not modify any element of this drawing. Use drawing only for purpose(s) issued.



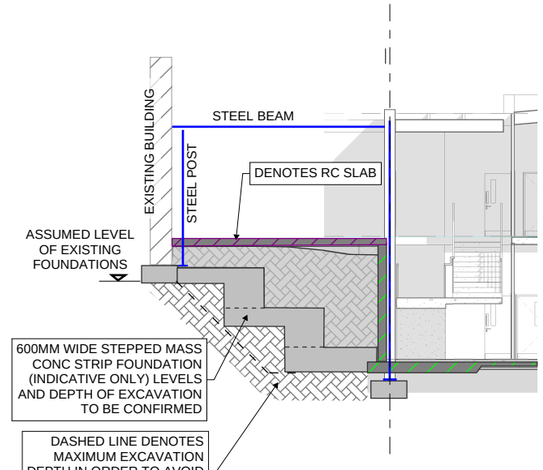
Foundation Plan

NOTE: ALL SIZES ARE PRELIMINARY FOR COSTING PURPOSES ONLY.

ALLOW FOR POSSIBLE EXCAVATIONS IN BEDROCK



Section A - A



Section B - B

CDM 2015: RESIDUAL RISKS (General)

Ground conditions may vary across the site as well as the stability of any excavations and betters. Contractor to seek advice from Geotechnical Engineer should ground conditions be different than expected.

Buried services to be investigated and positions confirmed by contractor

Contractor is responsible for the temporary stability of the frame until the whole structure is in place and complete.

All excavations are to be covered immediately to protect natural strata in line with D20 specification.

NOTES:

1. Drawings are to read in conjunction with all relevant specifications, Engineers, Architects and Services drawings, including approved builders work drawings. Contractor to notify the Engineer of discrepancies between structural drawings and specifications for other drawings.

2. Do not scale from this drawing, work to dimensions or co-ordinates provided, all levels are in metres and all dimensions are in millimetres unless noted otherwise. Any ambiguities, omissions and errors on drawings shall be brought to the Engineers attention immediately

STEELWORK NOTES:
- All steelwork to be design grade S355, sub-grade to steel fabricator specification
- All internal steelwork to be shot blasted clean to SA 2 1/2 and min. 80 micron 2 part zinc phosphate primer.
- All steelwork connections to fabricator design and detail
- All fire protection to Architects details

FOUNDATIONS NOTES:
- All Pads and Ground beams are to be founded on natural bearing strata (weathered MUDSTONE) as per site investigation of July 2018. Estimated bearing capacity: 300 kN/m2. Subject to final report from Applied Geology.
- If required, all ground bearing slabs to be founded on re-engineered topsoil down to natural bearing strata
- All masonry is assumed to be supported by foundations not by the steel frame.
- All designs and specifications are preliminary only and are to be confirmed following detailed design.
- Ground Conditions across the site may vary as well as the foundations depth.
- No allowance has been made for mass concrete trench filling to suitable bearing strata.

PF1	Denotes 1200x1200x600mm Dp Mass conc Pad Foundation
PF2	Denotes 1500x1500x750mm Dp Mass conc Pad Foundation
SF1	Denotes 600x300mm Dp Mass conc Strip Foundation
SF2	Denotes 750x300mm Dp Mass conc Strip Foundation

CONCRETE GRADES:
- All foundations concrete to be C28/C35, Class AC-1
- Ground Floor Slab to be grade C28/C35, Class AC-1

REINFORCEMENT ESTIMATES:
Ground Bearing Slab: 120 kg/m³
Slab Edge Thickening: 150 kg/m³
Retaining Wall: 120 kg/m³

No	DATE	DRAWN	REVD. ENG	AMENDMENT
P1	06.02.18	GV	GV	PRELIMINARY ISSUE

PRELIMINARY

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Reg No. 4899745

CLIENT: Penistone Grammar School

PROJECT: Penistone Grammar School (Phase 2)

GV | ENGINEER: GV

TITLE: Foundation Plan

SCALE	SHEET	DRAWING No.	ISSUE No.
NTS	A3	3317-SHD-00-ZZ-SK-S-0001	P1