

Special Resourced
Provision Building
William Hulme's Grammar
School

DRAINAGE STRATEGY
REPORT

SPECIAL RESOURCED PROVISION BUILDING

WILLIAM HULME'S GRAMMMAR SCHOOL

DRAINAGE STRATEGY REPORT

For

United Learning

DATE: 1st October 2025

REV: P04

P22-639

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Executive Summary

Client	United Learning
Planning Authority	Manchester City Council
Lead Local Flood Authority (LLFA)	Manchester City Council
Local Sewerage Undertaker	United Utilities (UU)
Location	National GR: SJ 836942 Located off, Spring Bridge Rd in Old Trafford, Manchester. Postcode: M16 8PR
Site area	Circa 0.56ha split over 3 areas
Current land use	William Hulme's Grammar School – Existing buildings, hardstanding and grassed playing fields
Development proposal	Erection of new Specialist Resource Provision (SRP) building, removal of 2 No. existing and construction of 4 No. new MUGA's
Existing surface water drainage	Existing private surface water sewers present within the school grounds. United Utilities Combined water sewer present in Spring Bridge Rd
Existing foul water drainage	Existing private surface water sewers present within the school grounds. United Utilities Combined water sewer present in Spring Bridge Rd
Greenfield runoff rates	QBar calculated using IH124 method at: 1.40l/s for the SRP Building and Parking Area 0.90l/s North MUGA, 1.1l/s South MUGA
Climate change allowance	45% Climate Change allowance for 100 year event.
Proposed surface water strategy	A gravity drainage system is proposed to collect the rainwater from building roofs, and from external paved areas, and to discharge to an existing private SW sewer within the wider Grammar school development before ultimately out falling to the existing combined UU sewer within Spring Bridge Rd. Using permeable paving and traditional pipework.

	Proposed drainage network designed for storms up to and including 1:100 year plus 45% climate change events.
Proposed foul water strategy	A gravity drainage system is proposed to drain the SRP building of anticipated foul flows. The outfall will connect into the existing private FW sewer within the wider Grammar school development before ultimately out falling to the existing combined UU sewer within Spring Bridge Road.

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1 Introduction

1.1 Terms of Reference

- 1.1.1 Rodgers Leask Ltd has been commissioned by United Learning to undertake a Drainage Strategy in support of the construction of a Special Resourced Provision Building (SRP), and 2 Multi-Use Games Areas (MUGAs) at William Hulme's Grammar School (WHGS), Manchester.
- 1.1.2 The new facilities will allow for the expansion of the teaching and care capabilities at the school, which will fall within the school's site boundary. A plan of the new facilities has been attached in **Appendix A**.
- 1.1.3 This report has been produced on behalf of the client and no responsibility is accepted to any third party for all or any part. This report should not be relied upon or transferred to any other parties without the express written authorisation of Rodgers Leask Ltd.

1.2 Documents Reviewed

- 1.2.1 Topographical Survey undertaken by Cryfield Survey Ltd, dated Oct 2022.
- 1.2.2 British Geological Survey, accessed 27th March 2024.
- 1.2.3 Environment Agency website, accessed 31th March 2025.
- 1.2.4 Phase 1 Geo-Environmental Desk Study undertaken by Rodgers Leask, dated July 2024
- 1.2.5 Desk Study & Phase 1 Risk Assessment undertaken by Geo-Historic Ground Investigations Ltd, dated April 2015.
- 1.2.6 Local Flood Risk Management Strategy – Manchester City Council, dated March 2014.

1.3 Document Purpose

- 1.3.1 This report was originally produced to support the planning application for the development described within **Section 2.1**. However, this report has now been updated, using latest information to discharge Planning Condition 19 of the approved application (application number 140594/FO/2024). The wording of Condition 19 is as follows:

'Prior to the commencement of the development hereby approved, a surface water drainage scheme for the development site, based on sustainable drainage principles, shall be submitted for approval in writing by the City Council, as Local Planning Authority.

The development shall be constructed and completed in accordance with the approved details prior to the first occupation/use of the development.
Reason - To promote sustainable development, secure proper drainage and to manage the risk of flooding and pollution. This condition is imposed in light of national policies within the NPPF and NPPG and Policies EN08 and EN14 in the Manchester Core Strategy.'

2 Background Information

2.1 Site Location, Description and Details

2.1.1 Figure 2.1 below indicates the location of the site.

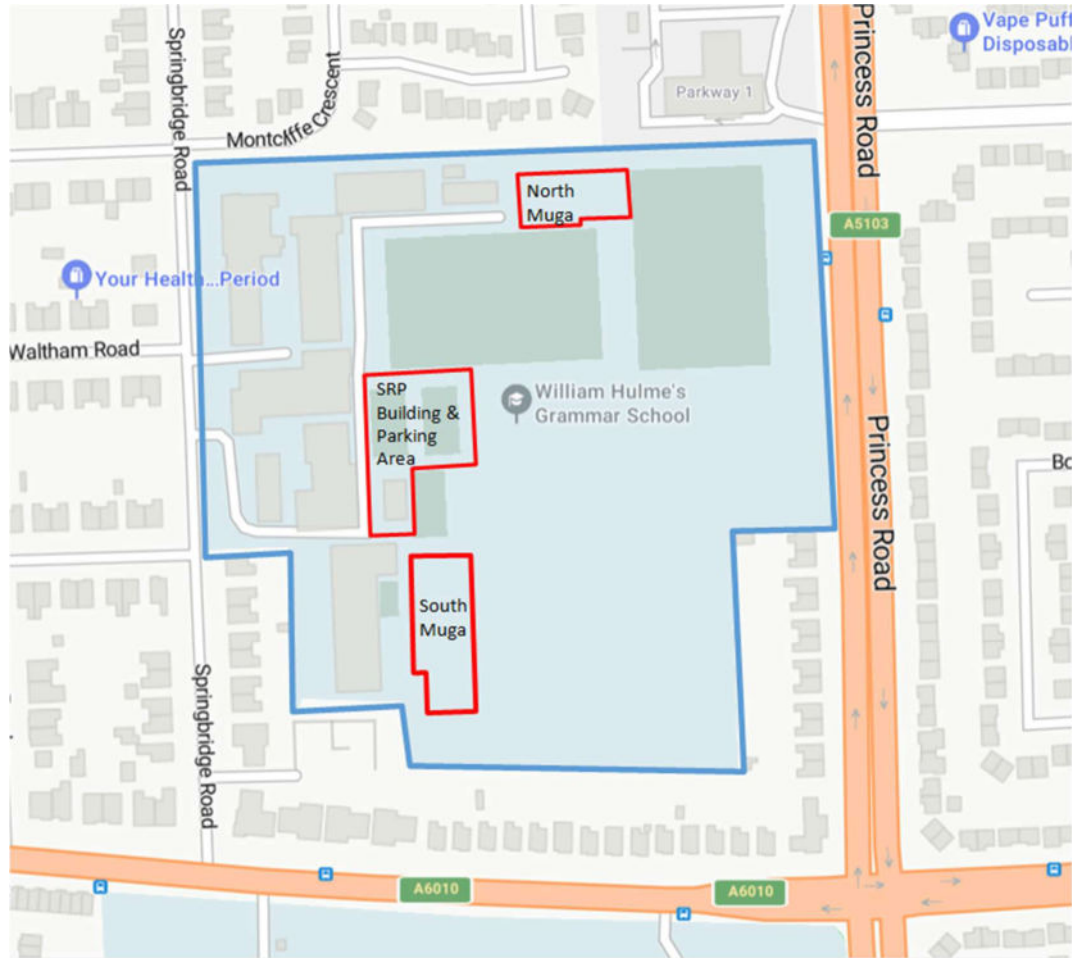


Figure 2.1 -William Hulme Grammar School - Site Layout

- 2.1.2 WHGS is located off Princess Road (A5103) to the south of Old Trafford, Manchester; centred at OS: 383665 Easting 394281 Northing and with the postcode of M16 8PR.
- 2.1.3 The redevelopment of the site consists of: A new single story Special Resourced Provision Building (SRP) centrally in the grounds is built consisting of:

-
- Secondary Group Rooms
 - 2 Primary Group Rooms
 - A Life Skills Room
 - A Therapy Room
 - A Sensory Room
 - A Quiet Room
 - Associated spaces such as toilets and storage.
- 2.1.4 As part of the development proposals, there will be a 17-space car park, including 2 disabled spaces. The existing Resourced Provision temporary building will be removed, and the car park will be provided in its place.
- 2.1.5 The 2 No. new Multi-Use Games Areas [MUGAs] are located to north and to south of the proposed SRP building. These are referred to as MUGA North and MUGA South. 2 existing MUGA courts will be lost due to the construction of the SRP building.
- 2.1.6 WHGS is bounded by residential properties to the north, by Princess Road (A5103) and residential properties to the east, by residential properties to the south and Spring Bridge Road to the west.
- 2.1.7 The site is currently occupied by the existing school buildings, car parking, all weather pitches, multi-use games areas and grass playing fields.
- 2.1.8 Access to the site is taken from Spring Bridge Road to the west and Montcliffe Crescent to the north via existing site entrances.
- 2.1.9 A topographical survey of the site is included in **Appendix B**. The site is generally flat, with a high point of 32.19mAOD in the west and a low point of 31.64mAOD to the north.

2.2 Ground Conditions

- 2.2.1 A phase 2 ground investigation report has been provided by Rodgers Leask Environmental, dated 22.08.2025. Finding ground conditions in general agreement with the published geology and generally comprised topsoil and/or made ground (associated with school development) overlying Glacial Till (soft-stiff sandy gravelly clay) which, in turn, overlay weathered Wilmslow Sandstone Formation (medium dense to dense/very dense sand). Borehole refusals were generally met at approximately 2m bgl.
- 2.2.2 The Glacial Till soils are considered unlikely to support the use of soakaway drainage as a stormwater drainage solution given the cohesive (low permeability) nature of the stratum. The underlying granular sand stratum associated with the Wilmslow Sandstone Formation is however considered more likely to support soakaway pits. However, infiltration testing was not carried out as part of RL's investigation works.

- 2.2.3 However, infiltration testing has been completed by others, JPP Geotechnical & Environmental. A copy of their infiltration testing report has been included within **Appendix J**. The testing was carried out in general accordance with BRE 365 with all 3 undertake tests failing, concluding that the Wilmslow Sandstone Formation is considered to provide insufficient permeability to support soakaways

2.3 Existing Surface Water Drainage

- 2.3.1 The site is located within the catchment area of the River Irwell / Manchester Shipping Canal which is located approximately 3.10km north-west of the site.
- 2.3.2 The nearest watercourse (Platt Booke) is located approximately 460m South of the site.
- 2.3.3 Existing private surface water sewers are identified within the school grounds. Theses sewers appear to discharge into the existing United Utilities combined water sewer within Spring Bridge Road.
- 2.3.4 The existing all weather sport pitch appears to have a perimeter land drain that disposes of surface water through the use of a soakaway chamber within the grass pitches. At the time of survey this chamber was recorded as flooded indicating its poor operational effectiveness.
- 2.3.5 As such, it is proposed that the proposed surface water is discharged to the existing surface water networks at a restricted greenfield rate.

2.4 Existing Foul Water Drainage

- 2.4.1 Similarly, there are several existing private foul and combined water sewers running through the school grounds, discharging to the United Utilities sewer within Spring Bridge Road.
- 2.4.2 As such it is intended that the SRP building connects on to the existing network at a suitable location.

2.5 Flood Risk

- 2.5.1 The school is located within Flood Zone 1 where flooding from rivers and sea is very unlikely. Whereby there is a less than 0.1 percent (1 in 1000) chance of flooding occurring from a fluvial source. **Appendix C** contains a copy of the Environment Agencies' Flood Map for Planning.

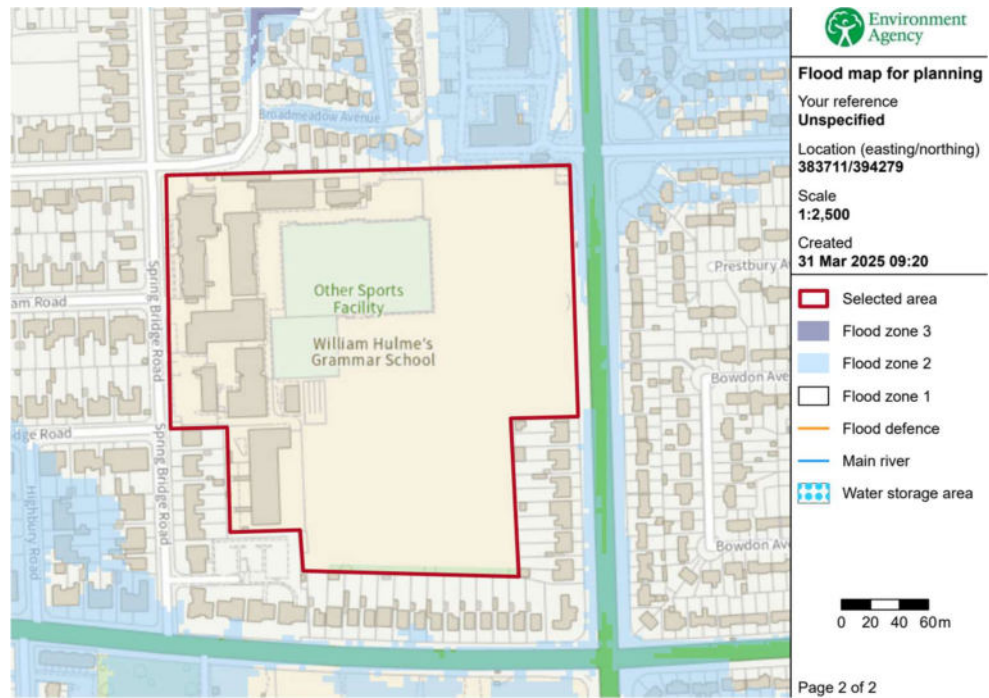


Figure 4.1 – EA Flood Map for Planning (accessed 31st March 2025)

- 2.5.2 As the application area is less than 1 HA and the school grounds are located within flood zone 1 it has been determined that a full site-specific flood risk assessment is not required.

3 Surface Water Drainage Strategy

3.1 Hierarchy of Drainage

- 3.1.1 As stated in the National Planning Practice Guidance (NPPG), the aim should be to discharge surface water runoff as high up the drainage hierarchy as reasonably practicable, to that effect the hierarchy has been considered in order:
- To penetrate into the ground via infiltration
 - To discharge into a surface water body
 - To a surface water, highway drain or another drainage system
 - To a combined surface water sewer system
- 3.1.2 As discussed in section 2.2, it has been proven that the sandstone strata that may be suitable for infiltration but, has insufficient permeability to act as the primary means of disposal of surface water runoff.
- 3.1.3 The nearest watercourse (Platt Brook) is located approximately 460m south of the site. A direct connection would require crossing an existing highway and likely 3rd party land. It is considered not to be a reasonably practical method of surface water disposal.
- 3.1.4 A review of United Utilities (UU) sewer records indicate no surface water, highway drains or other drainage systems within the nearby vicinity. A copy of UU sewer record is contained within **Appendix D**.
- 3.1.5 A review of United Utilities (UU) sewer records indicates an existing 225mm public combined sewer (CWS) within Spring Bridge Road flowing north-south along the western site boundary.
- 3.1.6 A topographical survey carried out by Cryfield Survey Ltd identified existing private SW sewers within the wider school site. It is assumed that the sewers discharge to the UU public 225mm CW sewer within Spring Bridge Road.
- 3.1.7 It is proposed to discharge surface water flows generated from the development into the existing on-site network which is assumed to connect to the UU combined sewer within Spring Bridge Road. A copy of the drainage strategy drawing has been included within **Appendix E**.

3.2 Pre-development Surface Water Runoff Rates

- 3.2.1 As the majority of the SRP building and parking area and 2 No. MUGAs proposed will be built over grassed playing fields. As to comply with Manchester City Council Core Strategy policy EN14, the proposed surface water drainage strategy has been developed on the basis of Greenfield runoff rates being utilised.

The rate was calculated using the UK SuDS website ran by HR Wallingford, using the IH124 method. The calculations have been undertaken for the respective proposed developable areas, Special Resource Provision (SRP) Building, parking area, Northern MUGA and Southern MUGA. A full copy of calculations can be found within **Appendix F** and a summary can be seen in **Table 4.1** below.

	Measured Area (ha)		QBar*	1 in 1 Year	1 in 30 Year	1 in 100 Year	
SRP Building	0.1903	Discharge Rate (l/s)	1.1 (1.16)	1.01	1.97	2.74	
Parking Area	0.0430	Discharge Rate (l/s)	0.3 (0.26)	0.23	0.44	0.54	
North MUGA	0.1419	Discharge Rate (l/s)	0.9 (0.86)	0.75	1.47	1.80	
South MUGA	0.1923	Discharge Rate (l/s)	1.1 (1.17)	1.02	1.99	2.43	
Total	1.5334		3.1 (3.19)	2.78	5.43	6.97	

Table 4.1 – Greenfield Runoff Rates *Note QBar figures have been rounded to 1 decimal place for use in modelling software

3.3 Design Considerations

- 3.3.1 Given the educational use of the SRP building a greater than 50-year design life is considered applicable. As such the Upper end allowance of 45% climate change allowance has been applied to the 100-year storm event.

3.4 Description of Proposed SuDS

- 3.4.1 It is proposed to drain the SRP building and parking area drainage catchments via tanked permeable paving, lined filter drain, below ground attenuation tank and below ground pipe network before discharging into existing private surface water sewers. Vortex flow control devices will attenuate flows to a combined restricted rate of 1.4l/s (1.1l/s + 0.3l/s) prior to discharging into the existing (on site) surface water sewer.
- 3.4.2 It is proposed to drain the North MUGA via permeable paving with a preparatory cellular sub-base system and below ground gravity pipe network before discharging into existing private SWS. Vortex flow control devices will restrict flows to 0.9l/s prior to discharging into an existing (on site) sewer.
- 3.4.3 It is proposed to drain the South MUGA via permeable paving with a preparatory system and below ground gravity pipe network before discharging into existing private SWS. The Geo-cellular sub-base system has been designed to a 95% voids ratio. Vortex flow control devices will restrict flows to 1.1l/s prior to discharging into an existing (on site) surface water sewer.

3.5 Water Quantity

- 3.5.1 The proposed surface water system has been designed to incorporate sufficient attenuation storage to ensure that there is no flooding for return periods up to and including the 1 in 100 year +45% climate change storm event whilst restricting flows to Greenfield runoff rates.
- 3.5.2 Surface water modelling has been undertaken to determine the quantity of required attenuation for the proposed development. A copy of the drainage strategy drawings has been included within **Appendix E** and supporting calculations in **Appendix G**.

3.6 Pollution Hazard and SuDS Mitigation Indices

- 3.6.1 As a means of analysing whether the SuDS measures proposed for the site will provide an adequate amount of water treatment to the surface water runoff the Cira SuDS manual specifies a simple index approach. This approach gives different land uses certain pollution hazard indices (Table 26.2 Cira Manual), while SuDS features are given mitigation indices (Table 26.3 Cira Manual). Whereby if the SuDS mitigation indices are greater than or equal to the pollution hazard indices, the water treatment within the system is deemed to be adequate.
- 3.6.2 The **roof structure and parking area**, of the Special Resource Provision (SRP) building is a low-risk area, with a worst-case pollution hazard indices of:
- 0.5 for total suspended solids (TSS)
 - 0.4 for metals, and
 - 0.4 for hydrocarbons
- 3.6.3 The roof structure, surrounding area and parking area will drain to a filter drain and tanked permeable paving system as such the mitigation indices are set out in **Table 4.3** below:

Types of SuDS component	Mitigation Indices		
	TSS	Metals	Hydrocarbons
Filter Drain	0.4	0.4	0.5
Permeable Paving	0.7	0.6	0.7
Required mitigation indices	0.5	0.4	0.4
Pass / Fail	PASS	PASS	PASS

Table 4.3 – SuDS Mitigation Index for the SRP building

- 3.6.4 Similarly, the **MUGA's** are considered to be a low-risk area, with a pollution hazard indices of:

- 0.3 for total suspended solids (TSS)
- 0.2 for metals, and
- 0.05 for hydrocarbons

3.6.5 The north & south MUGAs are proposed to drain by permeable paving as such the mitigation indices are set out in **Table 4.4** below:

Types of SuDS component	Mitigation Indices		
	TSS	Metals	Hydrocarbons
Permeable Paving	0.7	0.6	0.7
Required mitigation indices	0.3	0.2	0.05
Pass / Fail	PASS	PASS	PASS

Table 4.4 – SuDS Mitigation Index for the SRP building

3.6.6 As all the treatment combinations provide mitigation indices greater than the hazard indices, it is proposed that by adhering to the SuDS strategy as outlined above, the necessary treatment would be provided to allow compliance with the Cira C753 guidance.

3.7 Exceedance Flows

3.7.1 The SRP building FFL will be set to a minimum of 150 mm above proposed ground levels to provide resilience to surface water flooding. Similarly, the MUGA's have been set to levels as to fall away from the schools main buildings towards soft landscape areas.

3.7.2 The effects of flooding caused by extreme rainfall events beyond those that have been reasonably allowed for, or caused by a blockage, will be mitigated by creating falls away from the build as to direct surface water away.

3.8 Pre-Development Enquiry

3.8.1 A predevelopment enquiry has been submitted to United Utilities, a summary of the application and response from UU confirming no objection is attached within **Appendix I**

4 Surface Water Drainage Maintenance

4.1 Adoption and Responsibilities

- 4.1.1 It is proposed for onsite surface water drainage to remain private, unless otherwise agreed between UU, the LLFA and the client.
- 4.1.2 The proposed surface water drainage area will remain private and maintained by the school.

4.2 Maintenance and Requirements

- 4.2.1 Proposed SuDS features will be managed in accordance with a detailed management plan overarching the operation and regular maintenance of SuDS features based upon the Cira C753 – Part D Guidance. General requirements for management of SuDS features are outlined below:

Operation and Maintenance Requirements for Permeable Pavements		
Maintenance Schedule	Required Action	Typical Frequency
Regular Maintenance	Brushing and vacuuming (standard cosmetic sweep over whole surface).	Once a year, after autumn leaf fall, or reduce frequency as required, based on site-specific observations of clogging or manufacture's recommendations – pay particular attention to areas where water runs onto pervious surface from adjacent impermeable areas as this area is the most likely to collect the most sediment.
Occasional maintenance	Stabilise and mow contributing and adjacent areas.	As required.
	Removal of weeds or management using appropriate weed killer applied directly into the weeds by an applicator rather than a spray.	As required – once per a year on less frequently used pavements.
Remedial Actions	Remediate any landscaping which, through vegetation maintenance or soil slip, has been raised to within 50 mm of the level of the paving.	As required.
	Remedial work to any depressions, rutting and cracked or broken blocks considered detrimental to the structural performance or a hazard to users, and replace lost jointing materials.	As required.
	Rehabilitation of surface and upper substructure by remedial sweeping.	Every 10 to 15 years or as required (if infiltration performance is reduced due to significant clogging)
Monitoring	Initial inspection.	Monthly for three months after instillation.
	Inspect for evidence of poor operation and/or weed growth – if required, take remedial action.	Three-monthly, 48 hours after large storms in first six months.
	Inspect silt accumulation rates and establish appropriate brushing frequencies.	Annually.
	Monitor inspection chambers.	Annually.

Operation and Maintenance Requirements Filter Drain		
Maintenance Schedule	Required Action	Typical Frequency
Regular Inspections	Remove litter and debris from filter drain surface, access chamber and pre-treatment devices	Monthly (as required)
	Inspect filter drain surface, inlet/outlet pipework and control systems for blockages, clogging, standing water and structural design	Monthly
	Inspect pre-treatment systems, inlets and perforated pipework for silt accumulation and establish appropriate silt removal frequencies	Six monthly
	Remove sediment from pre-treatment devices	Six monthly or as required
Occasional maintenance	Remove or control tree roots where they are encroaching the sides of the filter drain, using recommended methods (eg NJUG, 2007 or BS 3998:2010)	As required
	At locations with high pollution loads, remove surface geotextile and replace, and wash or replace overlying filter medium	Five yearly or as required
	Clear perforated pipework of blockages	As required

Operation and Maintenance Requirements for Inlets, Outlets, Controls and Inspection Chambers		
Maintenance Schedule	Required Action	Typical Frequency
Regular Inspections	Inspect surface structures, removing obstructions and silt as necessary. Check there is no physical damage.	Monthly and after severe storms
	Remove cover and inspect, ensuring that water is flowing freely and that the exit route for water is unobstructed. Remove debris and silt.	Annually after leaf fall in autumn.
Occasional maintenance	Check topsoil levels are 20 mm above edges of baskets and chambers to avoid mower damage.	As necessary
Remedial Actions	Repair physical damage if necessary	As Required

Operation and Maintenance Requirements for Below Ground Attenuation Storage Tanks		
Maintenance Schedule	Required Action	Typical Frequency
Regular Inspections	Inspect and identify areas that are not operating correctly. If required, take remedial action.	Monthly for 3 months, then annually
	Remove debris from the catchment surface (where it may cause risks to performance)	Monthly
	For systems where rainfall infiltrates into the tank from above, check surface or filter for blockage by sediment, algae or other matter, remove and replace surface infiltration medium as necessary	Annually
	Remove sediment from pre-treatment structures and/or internal forebays	Annually, or as required
Remedial Actions	Repair/rehabilitate inlets, outlets, overflows and vents	As required
Monitoring	Inspect/check all inlets, outlets, vents and overflows to sense that they are in good condition and operating as designed.	Annually
	Survey inside of tank for sediment build-up and remove if necessary	Every 5 year or as required

5 Foul Water Drainage Strategy

5.1 Pre-Development Foul Water Regime

- 5.1.1 The wider site is currently occupied by existing school buildings and outbuildings and as such there is existing foul water sewers on site.

5.2 Proposed Developed Site Foul Water Strategy

- 5.2.1 Only the new SRP building requires Foul Water drainage.
- 5.2.2 A review of the topographical survey indicates existing private foul water sewers (FWS) within the wider Grammar School site. It is assumed existing FW flows generated in the Grammar School development discharge to the UU public 225mm CW sewer within Spring Bridge Road whereby the downstream pipe route and connection are to be proven by additional survey.
- 5.2.3 It is proposed that the SRP building site will drain via gravity to existing private foul water sewer within the school boundary before discharging to the UU public CW sewer along Spring Bridge Road via gravity.
- 5.2.4 A copy of the drainage strategy drawings (Drawing No. 22639-RLL-24-XX-DR-C-2100, 22639-RLL-24-XX-DR-C-2101) has been included within **Appendix E**.

5.3 Adoption and Responsibilities

- 5.3.1 The onsite foul drainage will remain private and maintained by the school.

5.4 Pre-Development Enquiry

- 5.4.1 A predevelopment enquiry has been submitted to United Utilities, a summary of the application and response from UU confirming no objection is attached within **Appendix I**.

6 Conclusion

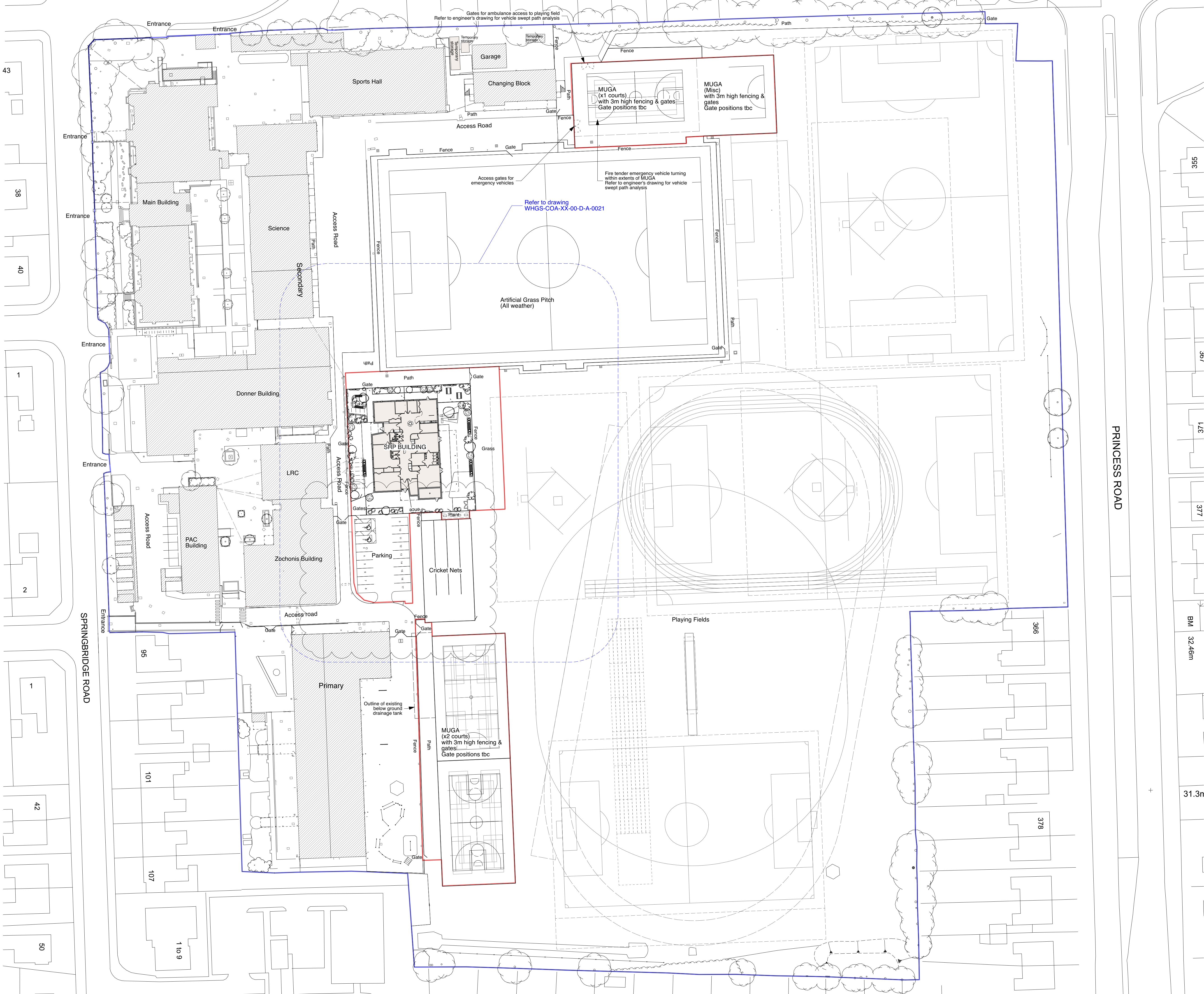
- 6.1.1 The proposed surface water drainage system has been designed in accordance with drainage hierarchy and the Manchester City Council Developer Design Guidance.
- 6.1.2 Surface water run-off from the proposed development will be restricted to greenfield run-off rates through the use of attenuation storage and vortex flow control devices. Surface water flows generated from the proposed development will connect to the existing on-site private network, before discharging to the United Utilities Combined Water sewer within Spring Bridge Road.
- 6.1.3 The foul water flows generated from the proposed development will drain through a private network, before discharging to the United Utilities Combined Water sewer within Spring Bridge Road.
- 6.1.4 This drainage strategy report confirms that the proposed development will deal with drainage in a sustainable manner, without increasing the flood risk to the development site or the wider downstream catchment.

Disclaimer

We would like to note that all comments made in this report are based on the sources stated in section 1.2. This report and its recommendations are intended for the use by United Learning for the above site only.

Appendices

Appendix A – Proposed Site Layout



NOTES

P07 19/02/2025 Updated to show new parking area.
P06 11/07/2024 Planning issue.
revisions

CoARC
COLLABORATIVE ARCHITECTURE

coarc.co.uk 0121 769 2414 studio@coarc.co.uk

project title
SPECIALLY RESOURCED PROVISION (SRP) BUILDING

31.3m client
UNITED LEARNING

project address
WILLIAM HULME'S GRAMMAR SCHOOL

drawing title
PROPOSED SITE PLAN

PLANNING

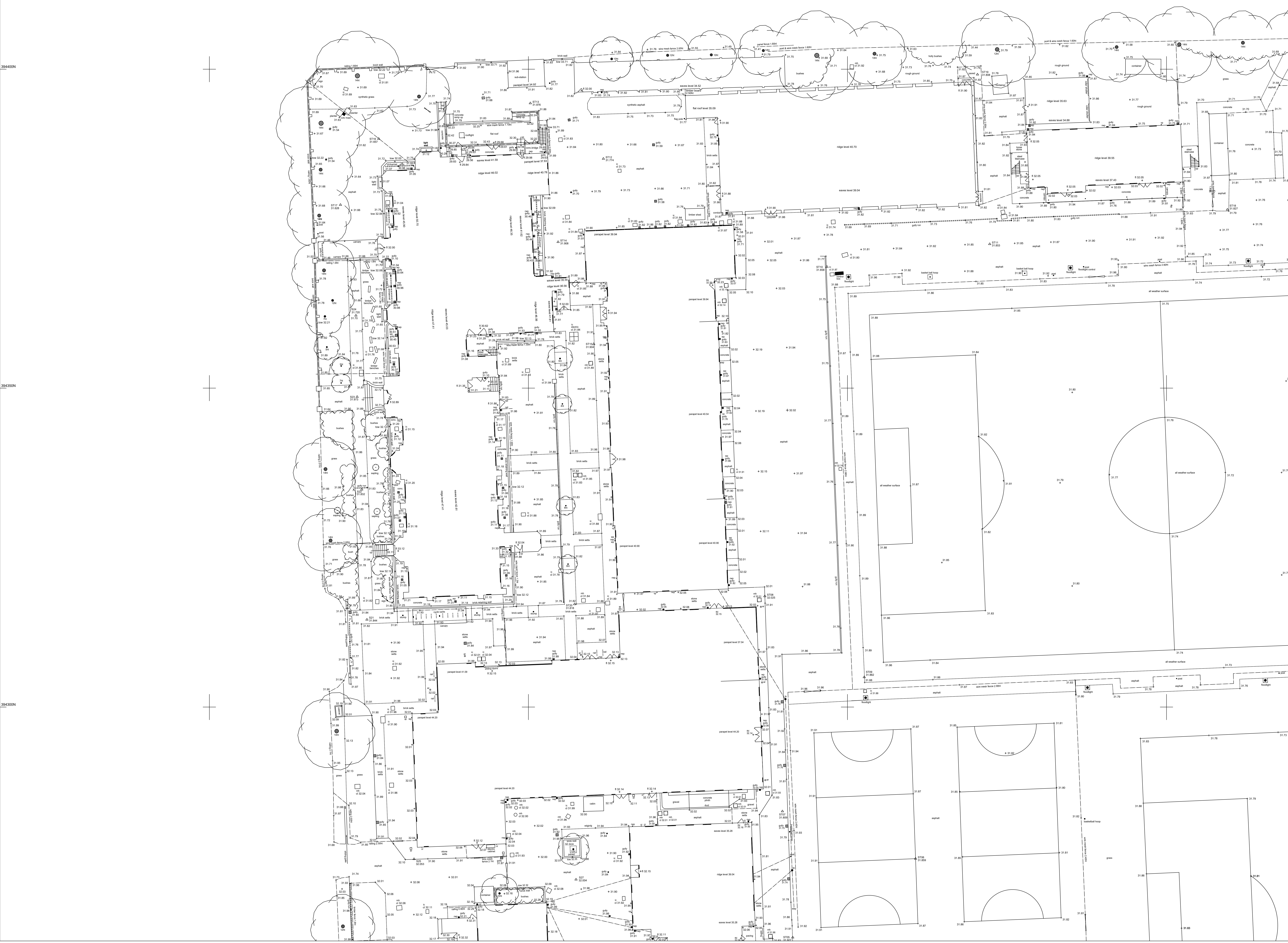
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19/02/2024

drawing no.
WHGS-COA-XX-00-D-A-0020 revision
P07

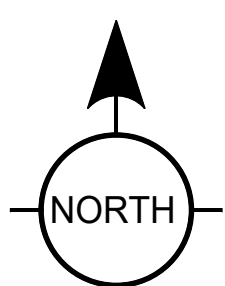
drawing no. BIM legend
PROJECT ORIGINATOR-FUNCTIONAL BREAKDOWN-SPATIAL BREAKDOWN-FORM-DISCIPLINE-NUMBER
All dimensions to be checked & verified on site. Dimensions structural unless noted otherwise. Drawings to be read in conjunction with specification. Any bracketed dimensions are for checking and not for setting out purposes. Any discrepancies with other project information, existing building or site features are to be reported to the Architect before commencement. Do not scale from printed drawings without checking with the architect. © CoARC Ltd. The contents of this drawing may not be reproduced in whole or in part without express permission of CoARC Ltd.

Appendix B – Topographical Survey



ALL LEVELS ARE IN METRES DERIVED FROM GPS TRANSFORMATION.
GRID COORDINATES ARE ORDNANCE SURVEY OSG36 GRID DERIVED FROM GPS TRANSFORMATION. (NO SCALE FACTOR APPLIED)
PLOT SCALE ACCURACY OF 1:200.
SERVICE COVERS UNDER STRUCTURES/VEHICLES OR ONES THAT ARE BURIED MAY BE OMITTED FROM THE SURVEY. PIPE DETAILS SURVEYED FROM SURFACE ONLY.
BROKEN COVERS AND COVERS WITHIN BUSY HIGHWAYS WILL NOT BE LIFTED.
OVERHEAD CABLE POSITIONS/HEIGHTS SHOULD BE TREATED AS APPROXIMATE AND ARE LIABLE TO SEASONABLE CHANGE.
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- TEXT KEY -
- | | |
|-------------------------------|-------------------------------|
| av - air valve | p - fence - post & rail fence |
| bt - telecom | re - rodding eye |
| cbv - cable television | rs - road sign |
| cb fence - closeboard fence | rwp - rain water pipe |
| cbox - control box | sl - spot light |
| cl - cover level | sv - stop valve |
| cr - cable riser | swp - soil vent pipe |
| dp - depth | tem - temporary bench mark |
| ep - electric pole | thl - threshold level |
| er - earthing rod | tl - traffic light |
| fl - fire hydrant | loc - top of cap |
| f - floor level | top - top of pipe |
| fs - fire switch | tot - top of tank |
| g - gully | tp - telecom pole |
| gv - gas valve | us - underside |
| ht - height | ut - unable to lift |
| ic - inspection cover | vp - vent pipe |
| il - invert level | wfc - water filled chamber |
| ill bol - illuminated bollard | wm - water meter |
| lp - lamp post | wo - wash out |
| mh - manhole | wp - waste pipe |
| mk - marker | |



STATION SCHEDULE			
ID	EASTINGS	NORTHINGS	LEVEL
ST01	383659.738	394197.863	31.795
ST02	383657.384	394228.114	31.899
ST03	383616.792	394228.965	31.981
ST04	383642.381	394236.645	31.738
ST05	383641.425	394233.078	31.927
ST06	383650.672	394276.231	31.859
ST07	383539.809	394283.650	31.809
ST08	383637.046	394317.375	32.025
ST09	383652.628	394304.688	31.862
ST10	383646.793	394359.018	31.858
ST11	383672.293	394372.588	31.853
ST12	383611.749	394385.960	31.774
ST13	383600.298	394394.662	31.876
ST14	383604.649	394372.913	31.908
ST15	383610.359	394356.965	31.904
ST16	383575.536	394359.050	31.657
ST17	383570.541	394378.741	31.628
ST18	383570.540	394377.595	31.827
ST19	383670.377	394399.173	31.808
ST20	383657.243	394316.128	31.818
ST21	383574.692	394313.708	31.844
ST22	383573.844	394354.104	31.852
ST23	383573.156	394348.634	31.973
ST24	383572.865	394361.381	31.720
ST25	383562.074	394276.171	32.053
ST26	383579.460	394252.159	32.000
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ST28	383593.341	394257.991	31.982
ST29	383618.751	394195.608	31.838
ST30	383619.064	394178.203	31.922
ST31	383620.010	394159.407	31.922

REV B - EXTRA AREA ADDED MAY 2024

PROJECT
WILLIAM HULME GRAMMAR SCHOOL
SPRING BRIDGE ROAD, MANCHESTER, M16 8PR

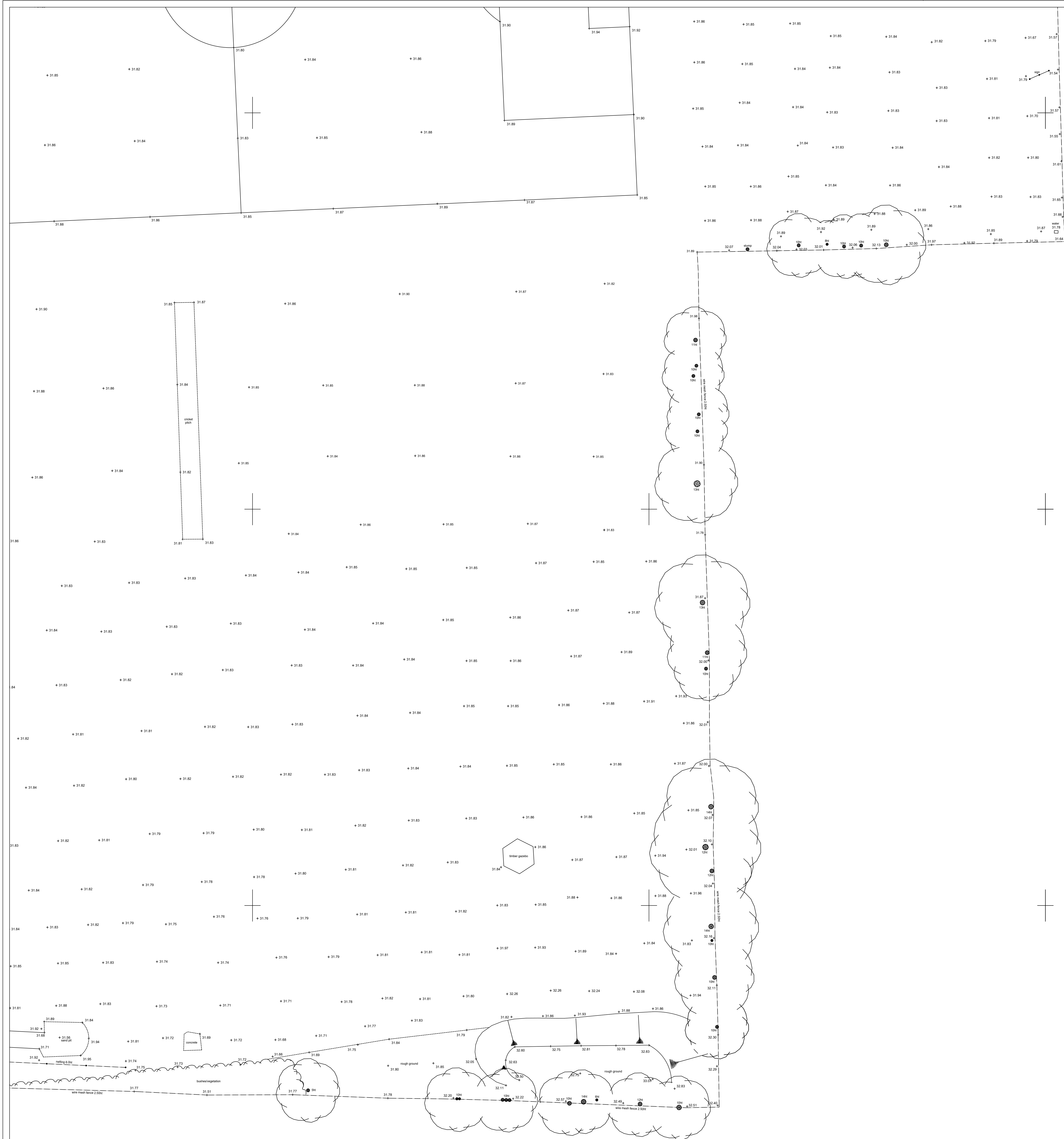
DRAWING TITLE
TOPOGRAPHICAL SURVEY

CLIENT
COARC

SURVEY DATE	SHEET SIZE	SURVEYOR	CHECKED
APRIL 2024	A0	JH	VCB

DRAWING NUMBER	SCALE
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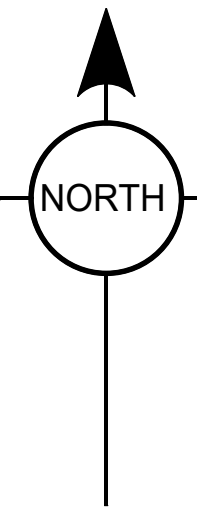




ALL LEVELS ARE IN METRES DERIVED FROM GPS TRANSFORMATION.
GRID COORDINATES ARE ORDNANCE SURVEY OSG36 GRID DERIVED FROM GPS
TRANSFORMATION. (NO SCALE FACTOR APPLIED)
PLOT SCALE ACCURACY OF 1:200.
TREE SPECIES TO BE CONFIRMED BY AN SPECIALIST IF ESSENTIAL TO THE SURVEY.
SERVICE COVERS UNDER STRUCTURES/VEHICLES OR ONES THAT ARE BURIED MAY BE
OMITTED FROM THE SURVEY. PIPE DETAILS SURVEYED FROM SURFACE ONLY.
BROKEN COVERS AND COVERS WITHIN BUSY HIGHWAYS WILL NOT BE LIFTED.
OVERHEAD CABLE POSITIONS/HEIGHTS SHOULD BE TREATED AS APPROXIMATE AND
ARE LIABLE TO SEASONABLE CHANGE.
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TEXT KEY -

av - air valve	p & r fence - post & rail fence
bt - telecom	re - rodding eye
cbt - cable television	rs - road sign
cb fence - closeboard fence	rwp - rain water pipe
cbox - control box	sl - spot light
cl - cover level	sv - stop valve
cr - cable riser	swp - soil vent pipe
dp - depth	tbrn - temporary bench mark
ep - electric pole	thl - threshold level
er - earthing rod	tl - traffic light
fh - fire hydrant	toc - top of cap
fl - floor level	top - top of pipe
fs - fire switch	tot - top of tank
g - gully	tp - telecom pole
gv - gas valve	us - underside
ht - height	us - unable to lift
ic - inspection cover	vp - vent pipe
il - invert level	wlc - water filled chamber
ill bol - illuminated bollard	wm - water meter
lp - lamp post	wo - wash out
mh - manhole	wp - waste pipe
mkr - marker	



STATION SCHEDULE				
ID	EASTINGS	NORTHINGS	LEVEL	TYPE
ST01	383659.738	394197.863	31.795	PK Nail
ST02	383657.364	394228.114	31.899	PK Nail
ST03	383616.762	394228.865	31.981	PK Nail
ST04	383642.381	394236.645	31.738	PK Nail
ST05	383641.425	394263.978	31.927	PK Nail
ST06	383660.672	394276.231	31.859	PK Nail
ST07	383539.808	394283.650	31.808	PK Nail
ST08	383637.046	394317.375	32.025	PK Nail
ST09	383652.628	394304.688	31.862	PK Nail
ST10	383646.793	394359.018	31.858	PK Nail
ST11	383672.293	394372.588	31.853	PK Nail
ST12	383611.749	394385.966	31.774	PK Nail
ST13	383600.288	394394.662	31.876	PK Nail
ST14	383604.649	394372.913	31.908	PK Nail
ST15	383610.359	394356.965	31.904	PK Nail
ST16	383575.536	394350.050	31.657	PK Nail
ST17	383570.541	394378.741	31.628	PK Nail
ST18	383570.540	394377.595	31.827	PK Nail
ST19	383670.377	394399.173	31.808	PK Nail
ST20	383607.243	394316.128	31.818	PK Nail
ST21	383574.692	394313.708	31.844	PK Nail
ST22	383573.844	394354.104	31.852	PK Nail
ST23	383573.156	394348.634	31.973	PK Nail
ST24	383572.865	394361.381	31.700	PK Nail
ST25	383582.074	394276.171	32.053	PK Nail
ST26	383579.460	394251.351	32.000	PK Nail
ST27	383607.459	394272.962	32.004	PK Nail
ST28	383509.341	394257.991	31.962	PK Nail
ST29	383618.751	394195.608	31.858	PK Nail
ST30	383619.064	394178.203	31.922	PK Nail
ST31	383620.010	394159.407	31.922	PK Nail

REV B - EXTRA AREA ADDED MAY 2024

PROJECT
WILLIAM HULME GRAMMAR SCHOOL
SPRING BRIDGE ROAD, MANCHESTER, M16 8PR

DRAWING TITLE
TOPOGRAPHICAL SURVEY

CLIENT

COARC

SURVEY DATE	SHEET SIZE	SURVEYOR	CHECKED
APRIL 2024	A0	JH	VCB

DRAWING NUMBER	SCALE
1157-4 REV B	1:200



Email: admin@cryfieldsurveys.co.uk
6 Rural Innovation Centre, Stoneleigh Park, Kenilworth, CV8 2LG.

Tel: 01926 935144

Appendix C – Environment Agency Flood Map for Planning

Flood map for planning

Your reference
Unspecified

Location (easting/northing)
383711/394279

Created
31 March 2025 09:20

Your selected location is in flood zone 2, an area with a medium probability of flooding.

This means:

- you must complete a flood risk assessment for development in this area
- you should follow the Environment Agency's standing advice for carrying out a flood risk assessment (see <https://www.gov.uk/guidance/flood-risk-assessment-standing-advice>)

Notes

The flood map for planning shows river and sea flooding data only. It doesn't include other sources of flooding. It is for use in development planning and flood risk assessments.

This information relates to the selected location and is not specific to any property within it. The map is updated regularly and is correct at the time of printing.

Flood risk data is covered by the Open Government Licence which sets out the terms and conditions for using government data. <https://www.nationalarchives.gov.uk/doc/open-government-licence/version/3>

Use of the address and mapping data is subject to Ordnance Survey public viewing terms under Crown copyright and database rights 2025 AC0000807064. <https://flood-map-for-planning.service.gov.uk/os-terms>



Flood map for planning

Your reference

Unspecified

Location (easting/northing)

383711/394279

Scale

1:2,500

Created

31 Mar 2025 09:20

-  Selected area
-  Flood zone 3
-  Flood zone 2
-  Flood zone 1
-  Flood defence
-  Main river
-  Water storage area



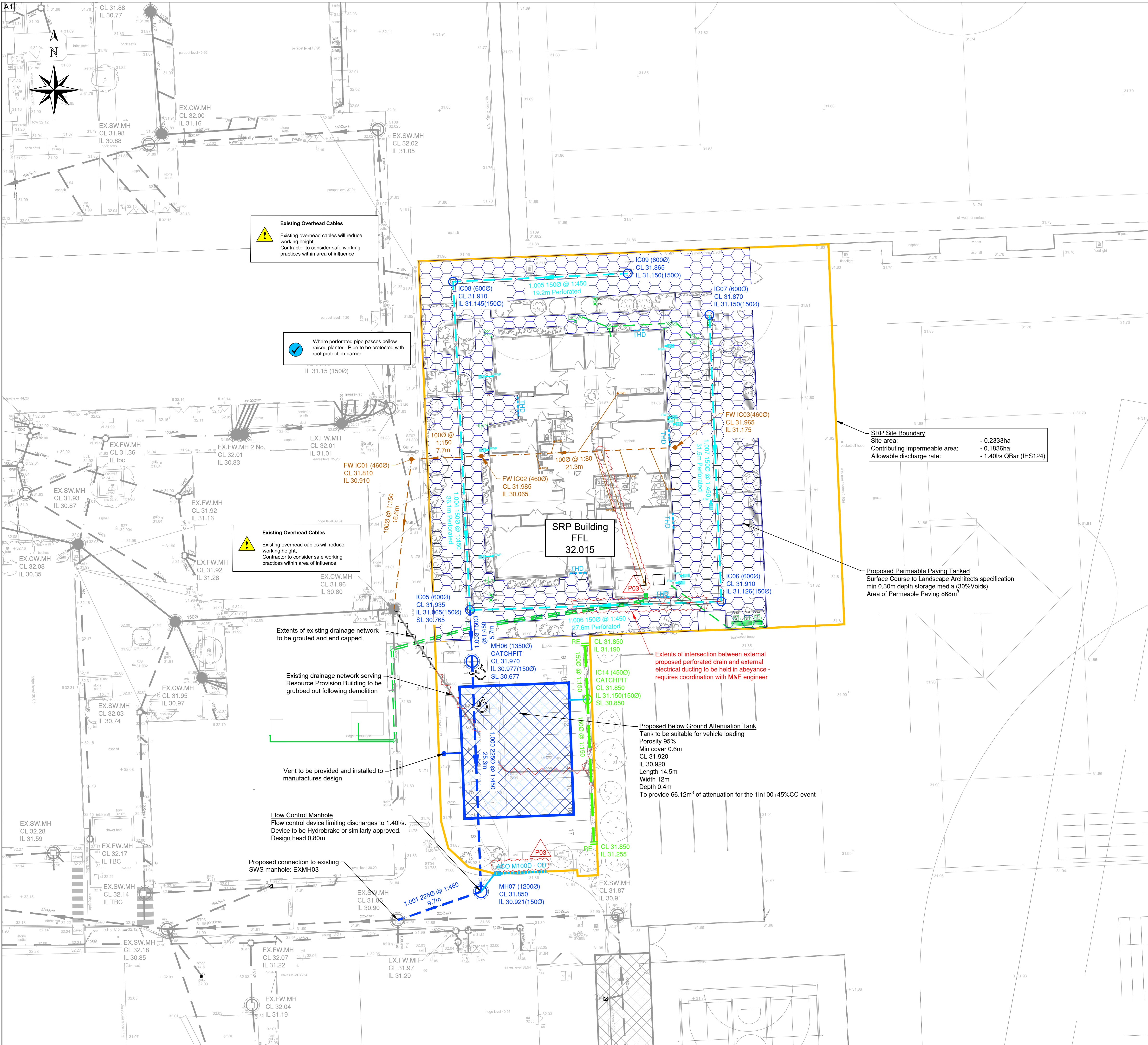
0 20 40 60m

Appendix D – United Utilities Sewer Record Map



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Appendix E – Proposed Drainage Strategy



GENERAL NOTES

- DO NOT SCALE.
- This drawing is to be read in conjunction with all other relevant drawings and details.
- Should there be any conflict between the details indicated on this drawing and those on other drawings the Engineer should be informed PRIOR to construction on site.
- Until technical approval has been obtained from the relevant Authority, it should be understood that all drawings issued are Preliminary and NOT for construction. Should the Contractor commence site works prior to such approval being provided it is entirely at their own risk.
- Sketch proposals are for illustrative purposes only and as such are subject to detailed site investigation including ground conditions, contaminants, drainage, design and planning / density negotiations.
- All dimensions are in metres unless otherwise stated.
- The Rodgers Leask Designer's Risk Assessment(s) for this project must be reviewed PRIOR to the commencement of any works on site.
- Site layout shown based on CoARC Site Plan drawing ref WHGS-COA-XX-00-D-A-0120 Rev P05, dated 30/06/25.
- Topographical survey shown based on Cryfield Survey Ltd drawing ref 1157-13, dated October 2022.

SPECIFICATION NOTES

- The following types of pipe may be used unless noted or agreed otherwise:
 - Pipes up to 600mm diameter to be Structured Wall to BS EN 13476, Polypropylene to BS EN 1852 or PVC-U to BS EN 1401.
 - Pipes over 600mm diameter to be Concrete to BS 5911.
- Both Clay and Concrete pipes shall be strength class 120 (100/150mm min crushing strength 28kN/m). Thermoplastic pipes shall have a minimum ring stiffness of SN4.
- Pipes which run adjacent to buildings shall be installed in strict accordance with Part H, Clauses 2.23 to 2.25. Diagrams 7 and 8 are of particular relevance and shall be complied with.
- All pipes, chambers and fittings shall be installed, bedded and backfilled in accordance with the manufacturer's instructions subject to the following minimum requirements:

Pipe Location	Cover to Crown*	Clay / Concrete Pipe Bedding	Plastic Pipe Bedding	Backfill
Roadways / Car Parking	> 0.9m	Class S (S1 or S2)	Class S (S1 or S2)	Type 1 Granular
Hard & Soft Landscaping	< 0.9m	Class Z (Concrete)	Class Z (Concrete)	Suitable as dug material

*The above depths are based on a private drainage network. Adoptable drainage should be installed in accordance with the requirements of the relevant statutory sewerage undertaker.

- All pipes beneath structures to have concrete bed and surround. Where cover is less than 300mm the concrete is to be cast integrally with the floor slab.
- The first flexible joint in pipes adjoining a manhole shall be a maximum length of 600mm from the inside face of the manhole, connecting to a rocker pipe. The length of the rocker pipe shall be as follows:

Pipe Diameter	Length of Rocker Pipe
Ø150 - Ø600mm	600mm
Ø675 - Ø750mm	1,000mm
over Ø750mm	1,250mm

- Pipes Penetrating Walls:

An opening is to be formed through walls to give pipes at least 50mm clearance all round. Brickwork over shall be supported by a lintel. Opening to be masked each side with rigid sheet material. Pipes embedded in walls shall have joints formed within 150mm of either wall face. Adjacent rocker pipes of max 600mm length with flexible joints shall continue the pipework.
- All manholes and inspection chambers situated in areas subject to vehicular loading to have class D400 covers and frames to BS EN124. Those not subject to vehicular loading to have class B125 covers and frames.
- Drainage frames must be tied to manhole risers by use of manufacturer's ties (eg. Polypipe ref FRK500 fixing kit and FRK501 black ties). The ground works contractor will be held fully responsible for any accidents due to incorrect fitting or failure to use the correct manufacturer's fitting equipment.
- All drains in the vicinity of existing or proposed trees to be constructed in accordance with the requirements of NHBC Practice Note 3.
- All drainage MH covers and frames to be orientated so that they are square and perpendicular to the block paving patterns where applicable. MH cover locations also to avoid building door opening locations where possible.
- All surface water connections to be Ø150mm and foul connections to be Ø100mm unless noted otherwise.
- All foul laterals to be min 1:80 gradient; surface water laterals to be min 1:100.
- Foul pipes are to be wrapped in a suitable impermeable geotextile where they pass over surface water pipes in order to prevent any cross contamination.
- All pipelines shall be tested both before and after backfilling, using either air test or water test, in accordance with BS EN 1610.
- Where reinstatement of existing tarmac surfaces is required this should be completed to Specification for the Reinstatement of Openings in Highways Fourth edition
- All channel drains to use proprietary end caps, sump outlet units and grating hold down bolts.

KEY:

- SRP Building & Parking Drainage Area
- Proposed Surface Water Drainage
- THD
- Channel Drain
- RWP
- Proposed Perforated Pipe wrapped in geotextile
- Proposed Lined Filter Drain
- Proposed Foul Water Drainage
- Internal foul water gully - trapped and roddable
- Existing Surface Water Drainage
- Existing Foul Water Drainage
- Existing Combined Public UU Sewer
- Existing Drainage Infrastructure to be Grubbed Out
- Existing Drainage Infrastructure to be Abandoned, Grouted and End Capped
- Proposed Permeable Paving with min 300mm deep subbase with 30% voids ratio. Tanked
- Proposed Below Ground Attenuation Tank
- Existing Below Ground Attenuation Tank
- External Electrical Services - Refer to RWA drawing ref W2252-RWA-00-XX-DR-E-9001 Rev T1 for details

Health & Safety Information Key

- Used to provide design specific safety information that may not be obvious to a competent contractor but may be useful
- Used to restrict/prevent a possible action, e.g. stop construction traffic from entering an area
- Used to warn of significant design hazards, adding recommendations
- Used to encourage a positive action, e.g. use of robust protection for inspection chambers

SRP Site Boundary
Site area: - 0.2333ha
Contributing impermeable area: - 0.1836ha
Allowable discharge rate: - 1.40/s QBar (IHS124)

SRP Building FFL 32.015

Proposed Permeable Paving Tanked
Surface Course to Landscape Architects specification
min 0.30m depth storage media (30%Voids)
Area of Permeable Paving 868m²

Proposed Below Ground Attenuation Tank
Tank to be suitable for vehicle loading
Porosity 95%
Min cover 0.6m
CL 31.920
IL 30.920
Length 14.5m
Width 12m
Depth 0.4m
To provide 66.12m³ of attenuation for the 1in100+45%CC event

Existing Overhead Cables
Existing overhead cables will reduce working height.
Contractor to consider safe working practices within area of influence

Existing Overhead Cables
Existing overhead cables will reduce working height.
Contractor to consider safe working practices within area of influence

Where perforated pipe passes below raised planter - Pipe to be protected with root protection barrier

Extents of existing drainage network to be grouted and end capped.

Existing drainage network serving Resource Provision Building to be grubbed out following demolition

Vent to be provided and installed to manufactures design

Flow Control Manhole
Flow control device limiting discharges to 1.40/s.
Device to be Hydrobrake or similarly approved.
Design head 0.80m

Proposed connection to existing SWS manhole: EXMH03

Extents of intersection between external proposed perforated drain and external electrical ducting to be held in abeyance - requires coordination with M&E engineer

Rev	Date	Amendments	By	Chk
P03	18.08.25	Updated to include gully in plant room, channel drain specification added	EG	PJC
P02	09.07.25	Updated to latest CoARC site layout - 0120 Rev P05, new raised planters added, Canopy RWP added, M&E external electrical services shown	EG	PJC
P01	06.06.25	FIRST ISSUE	EG	PJC

Health and safety symbols refer to reference numbers indicated on Designers Risk Assessment number: 22639-RL-25-XX-HS-C-0001

Client
UNITED LEARNING

Project
SRP, WILLIAM HULME'S GRAMMAR SCHOOL MANCHESTER

Drawing Title
SRP BUILDING DRAINAGE STRATEGY

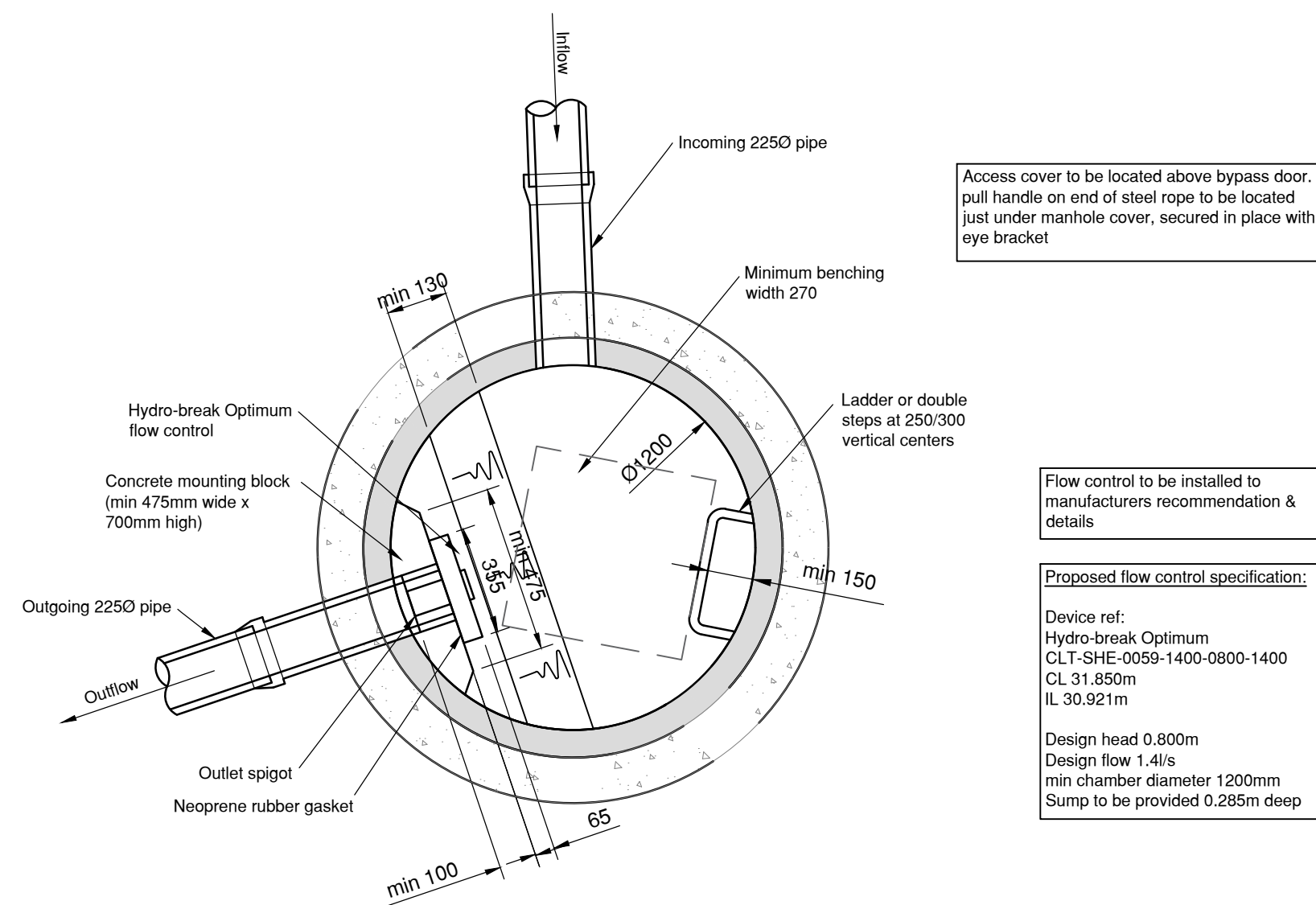
Status
INFORMATION

Scale	Drawn	Checked	Date
1:200 @ A1	EG	PJC	06.06.25

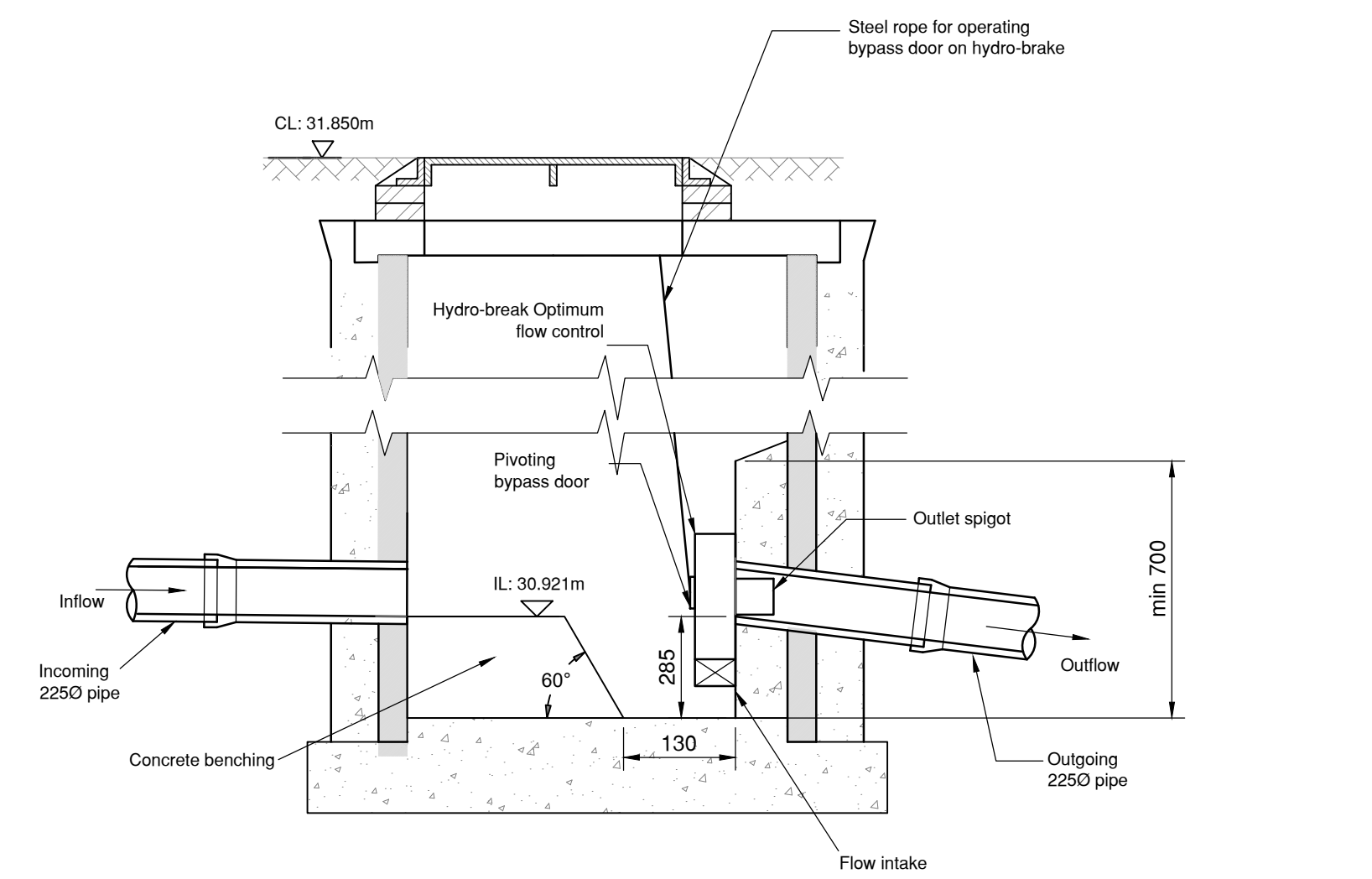
Drawing Number	Revision
22639-RL-25-XX-DR-C-2210	P03

BIM Drawing Reference

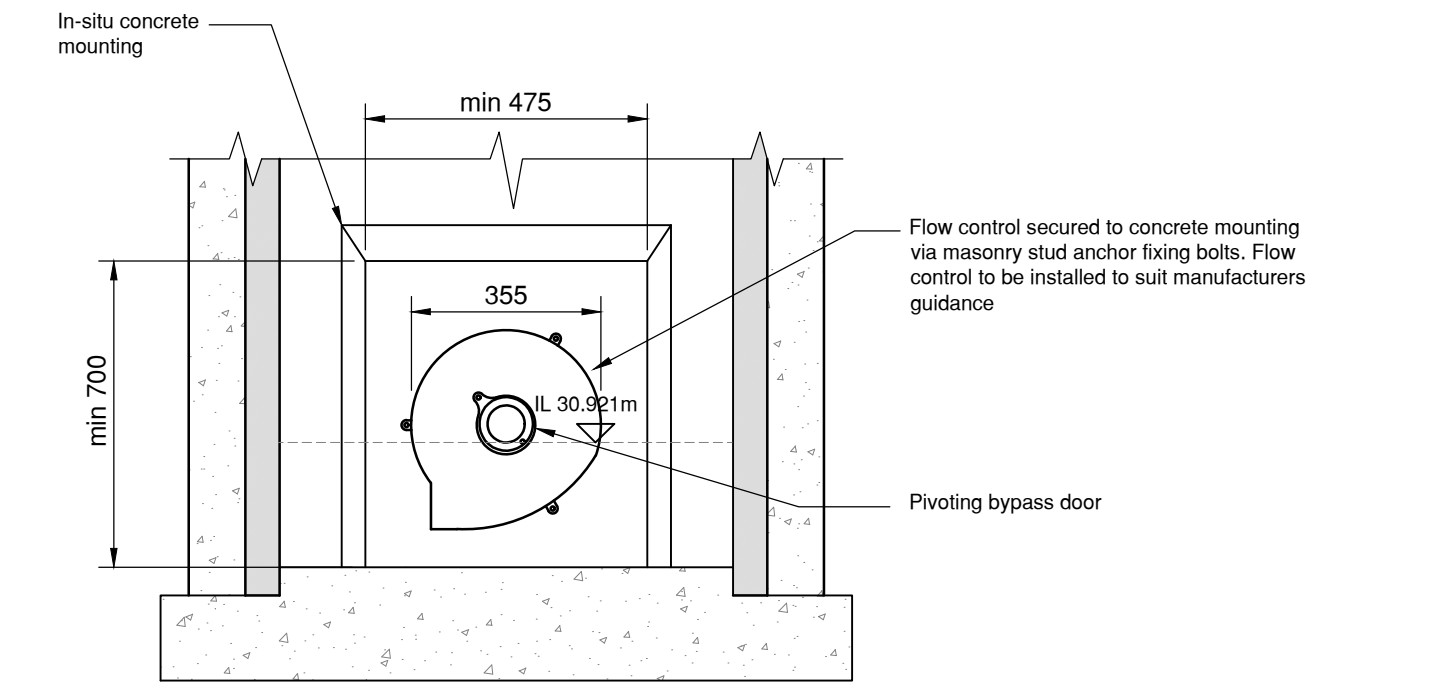
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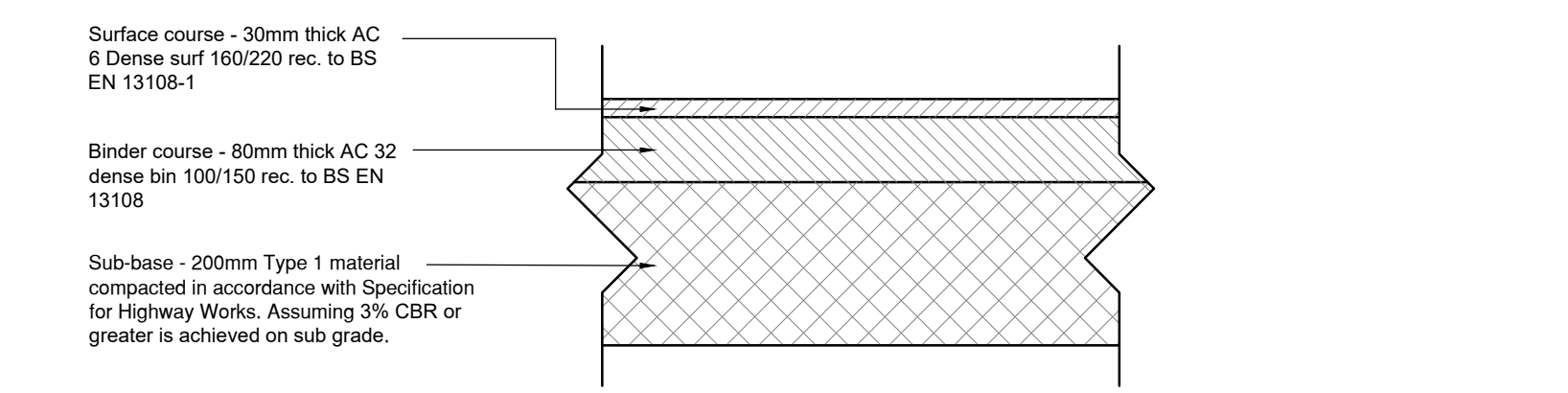
PLAN ON FLOW CONTROL MANHOLE (MH07)
Scale 1:20



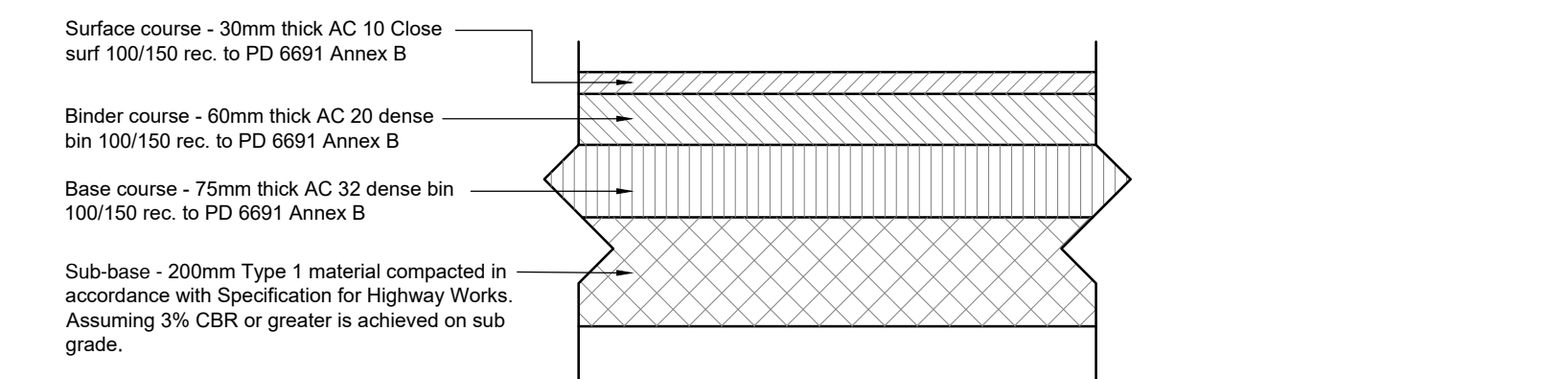
SECTION THROUGH FLOW CONTROL MANHOLE
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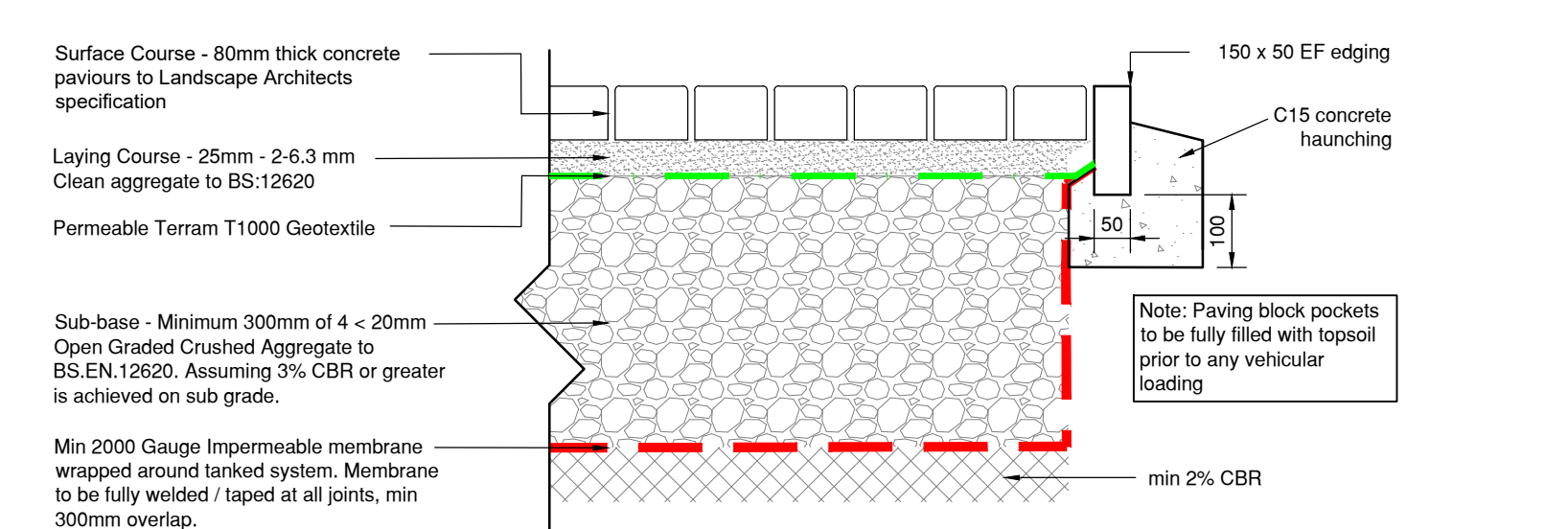
ELEVATION ON FLOW CONTROL
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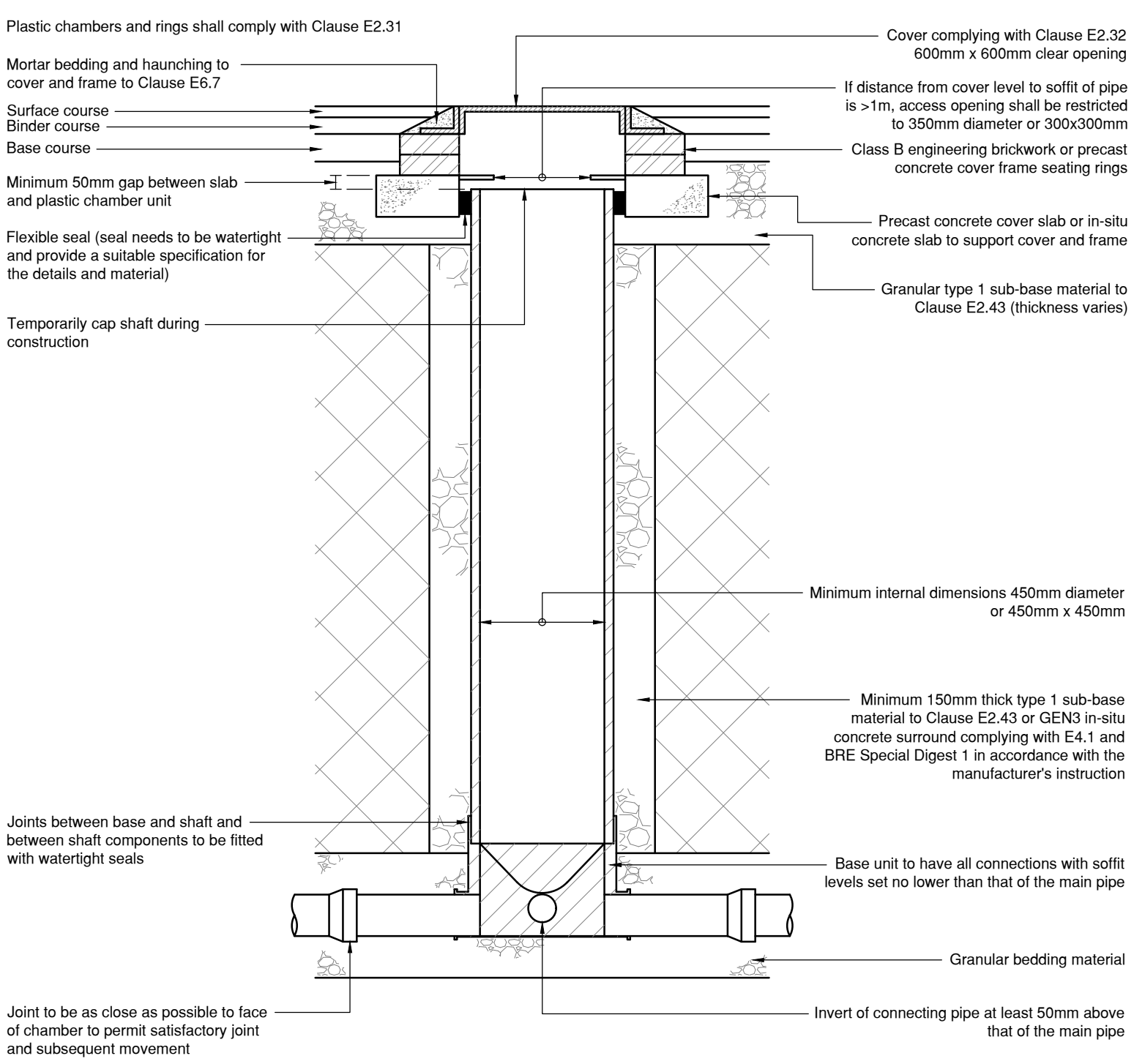
FOOTWAY DETAIL
(Pedestrian & Occasional Maintenance Access Loading Only)
Scale 1:10



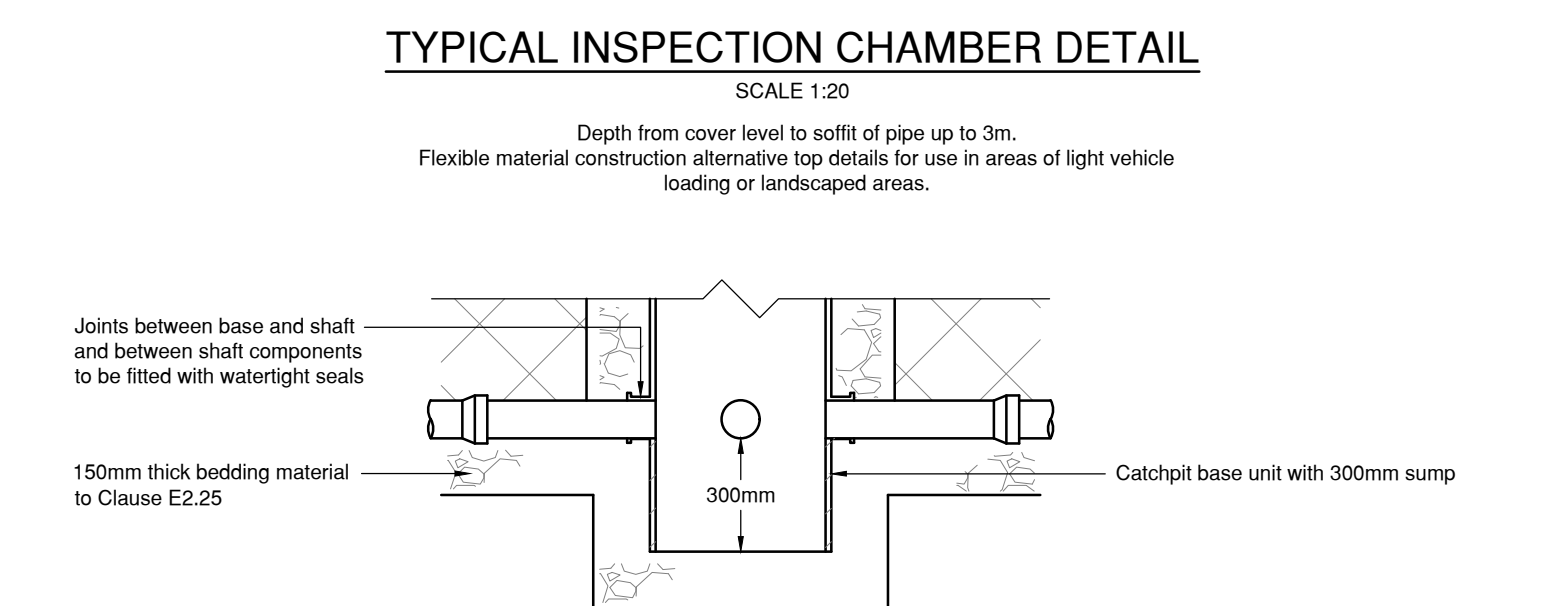
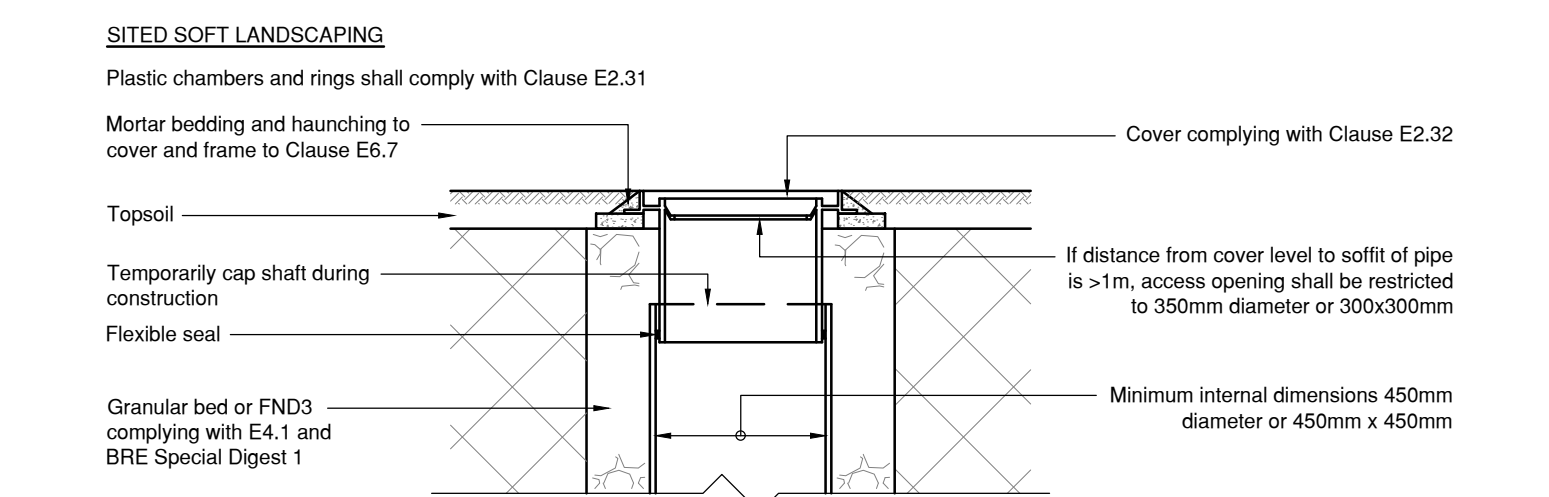
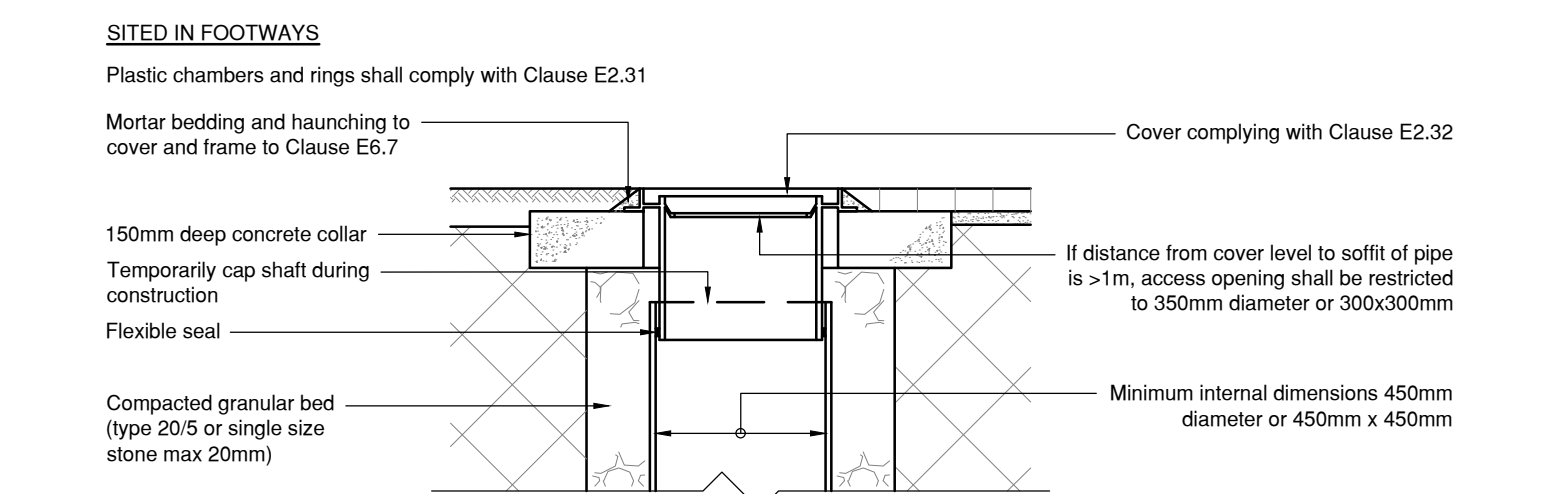
CAR PARK DETAIL
(Vehicular Loading up to 7.5 Tonnes)
Scale 1:10



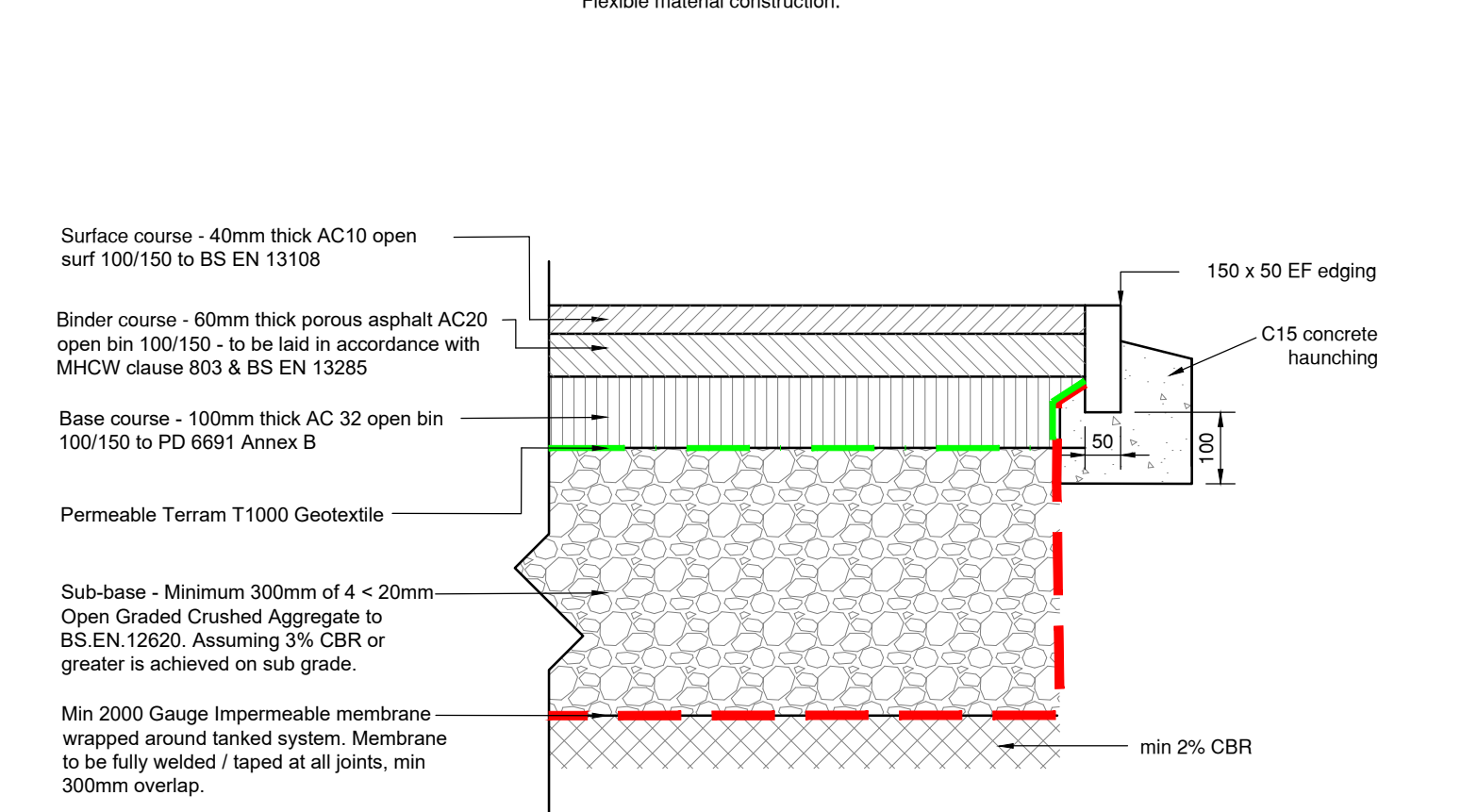
PERMEABLE BLOCK PAVED FOOTWAY CONSTRUCTION DETAIL
(Pedestrian Loading Only)
Scale 1:10



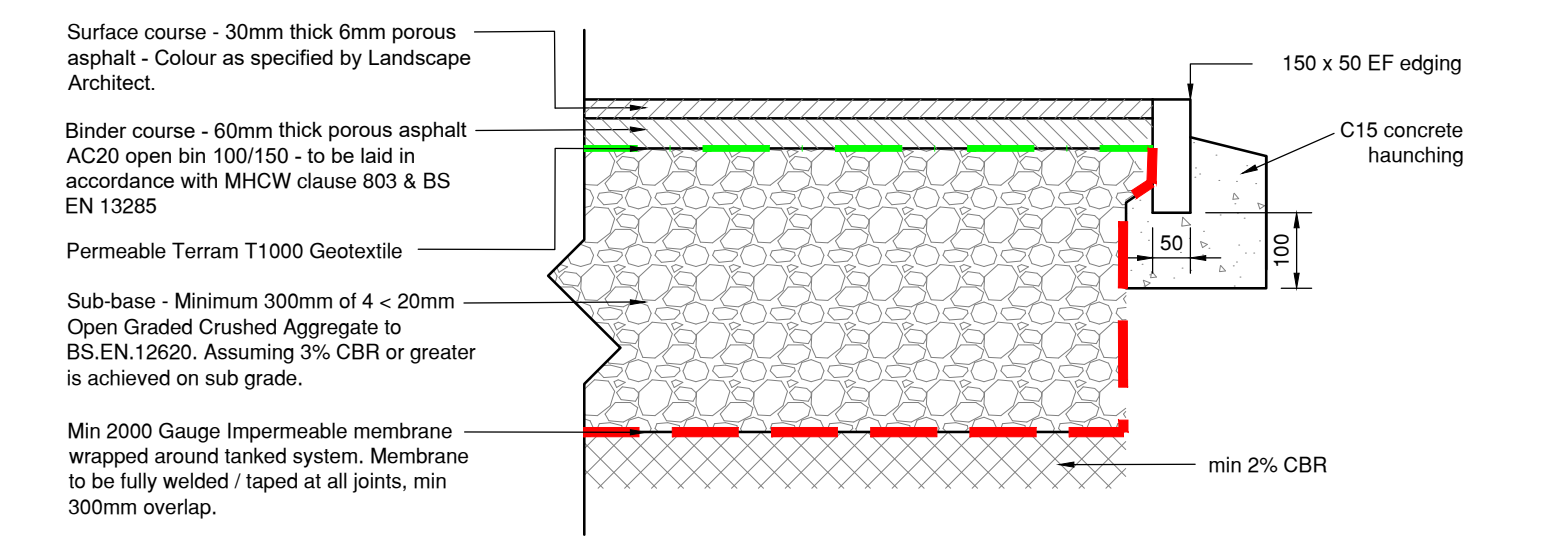
TYPICAL INSPECTION CHAMBER DETAIL - TYPE D
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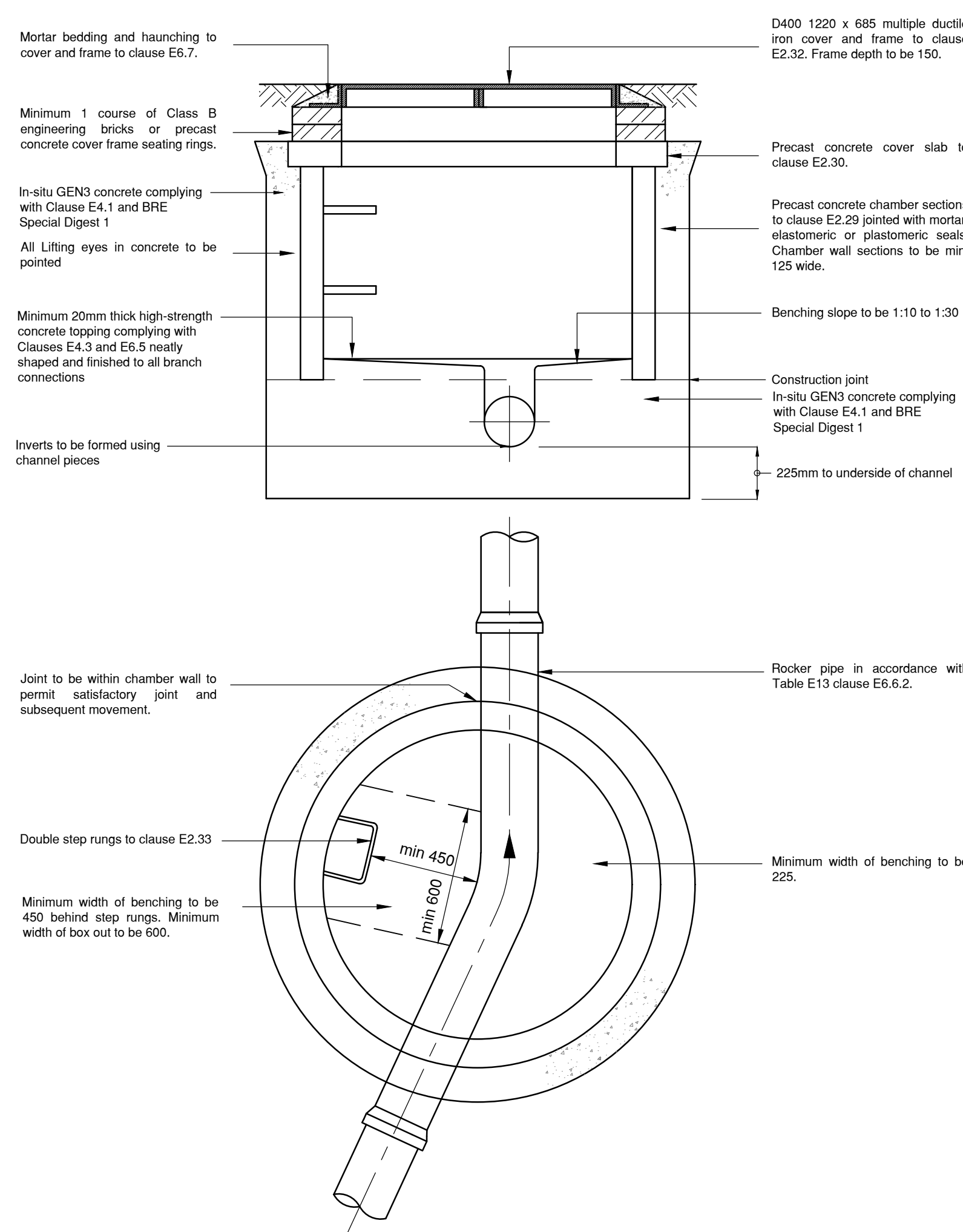
INSPECTION CHAMBER CATCHPIT DETAIL
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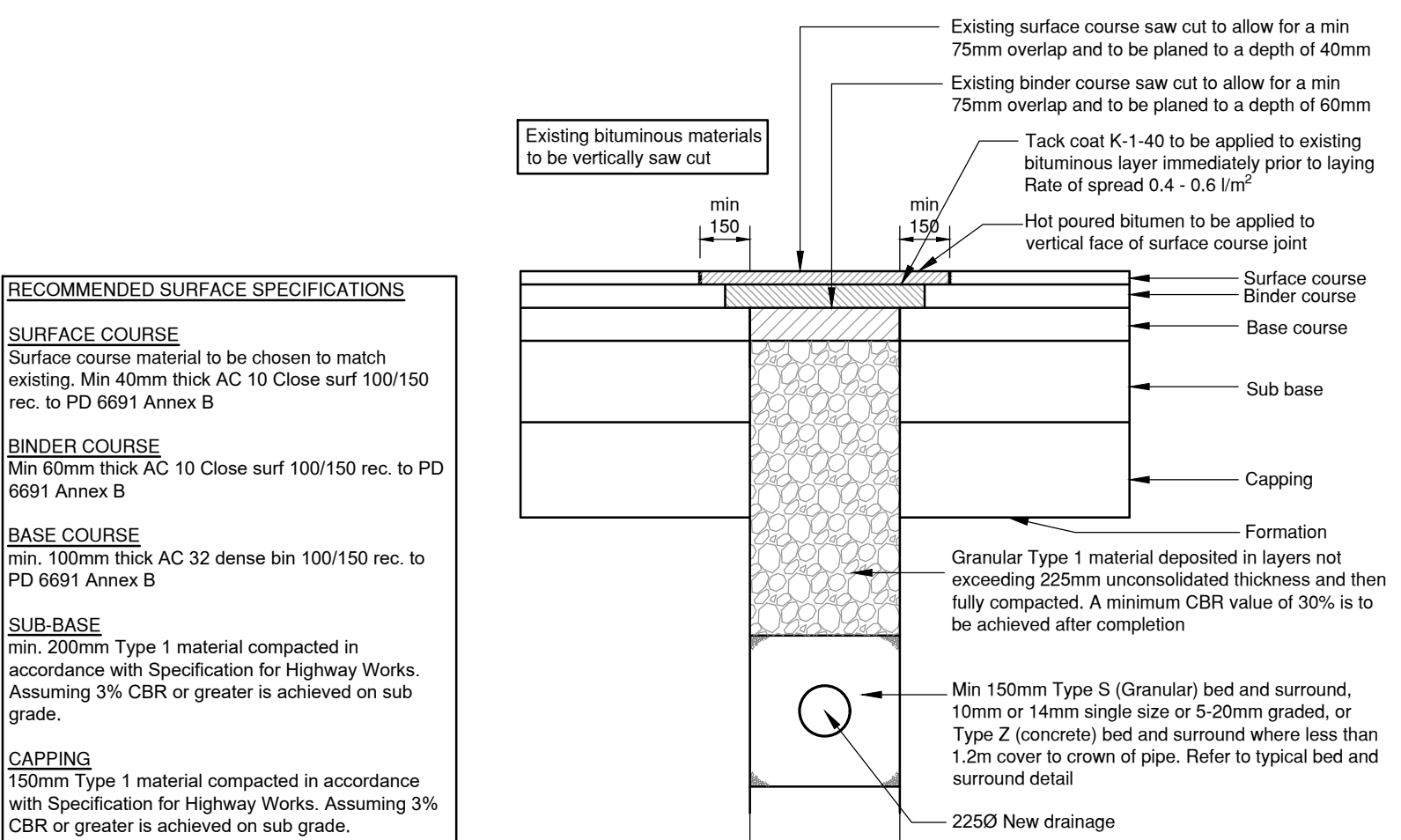
PERMEABLE ASPHALT FOOTWAY CONSTRUCTION DETAIL
(Occasional Fire Tender Loading & Maintenance Access Loading)
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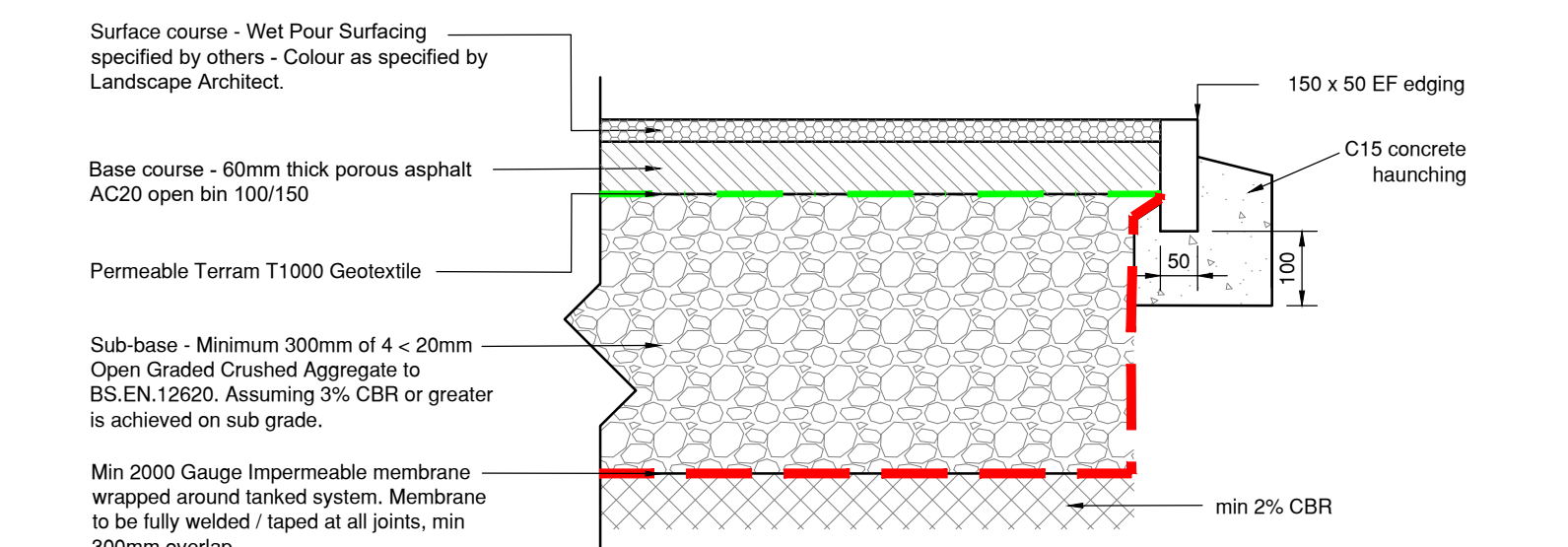
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(Pedestrian Loading Only)
Scale 1:10



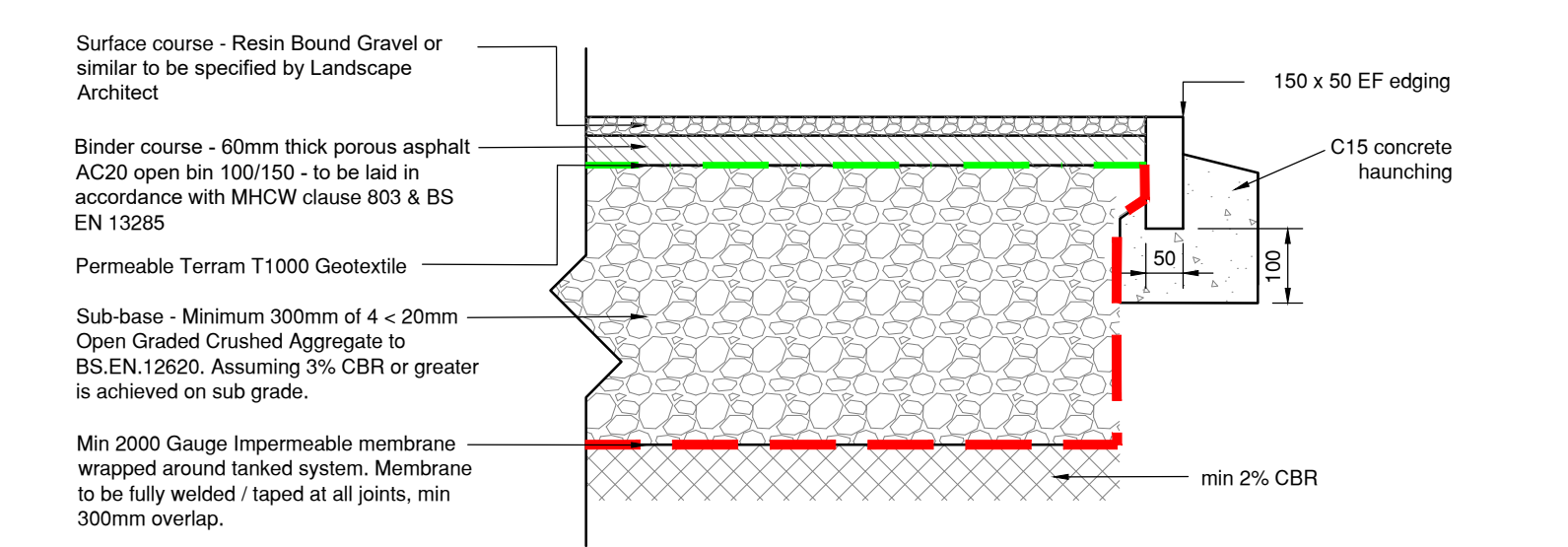
TYPICAL MANHOLE DETAIL
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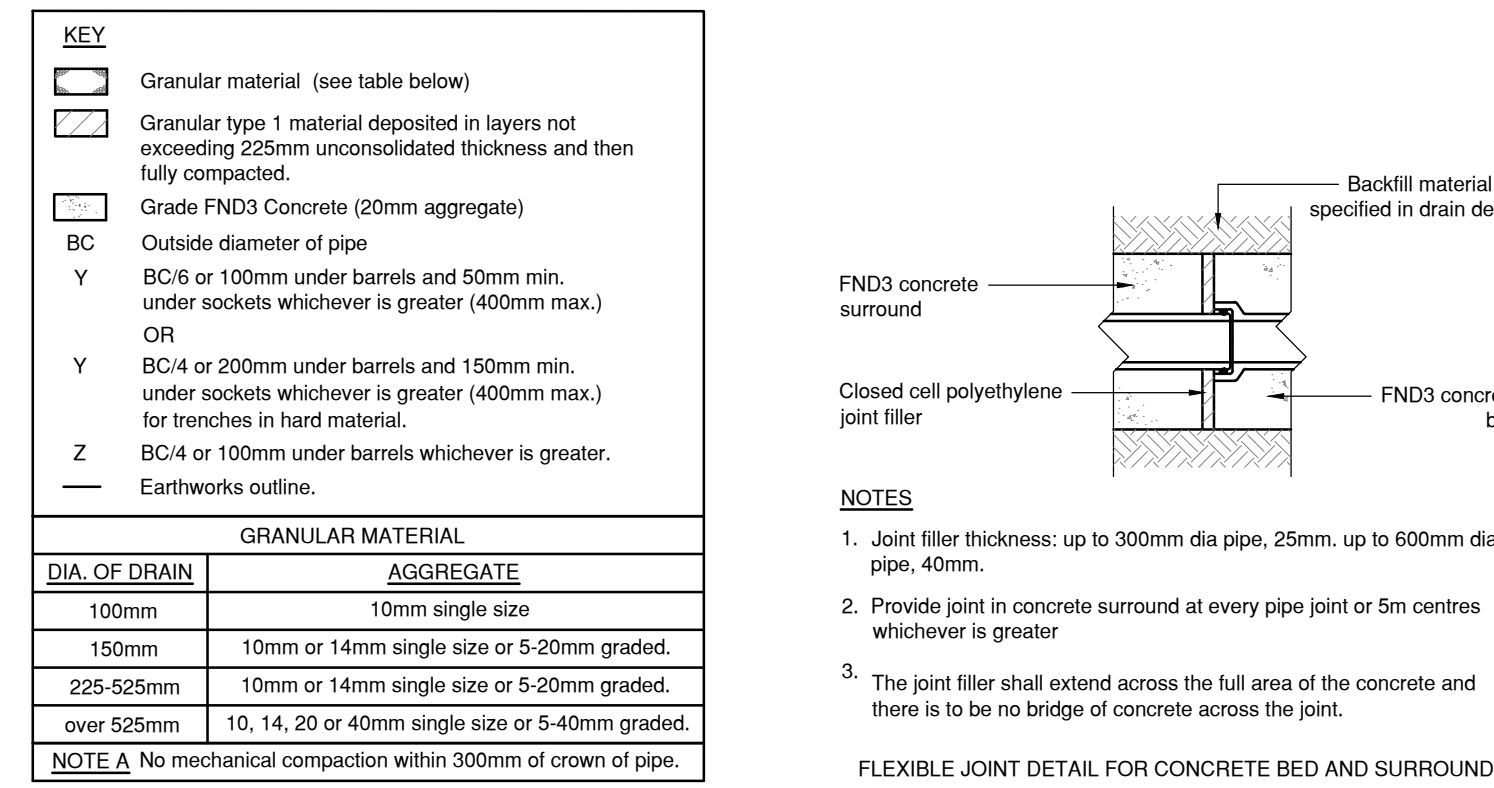
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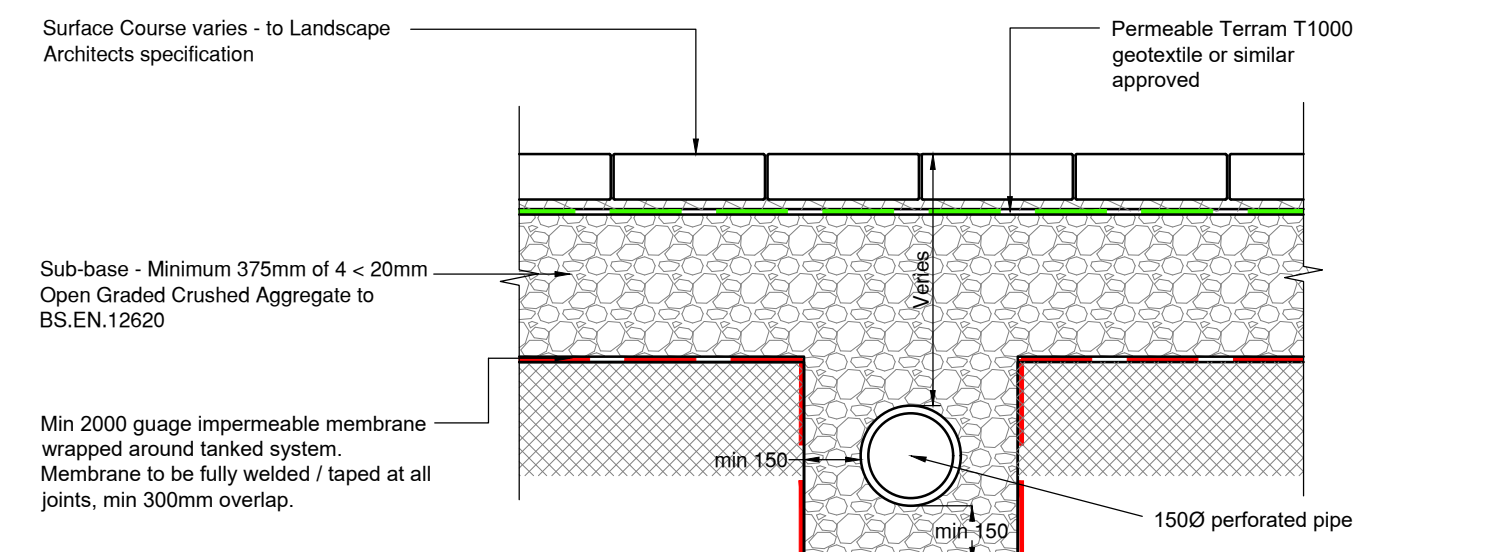
WET POUR PLAY SURFACE CONSTRUCTION DETAIL
(Pedestrian Loading Only)
Scale 1:10



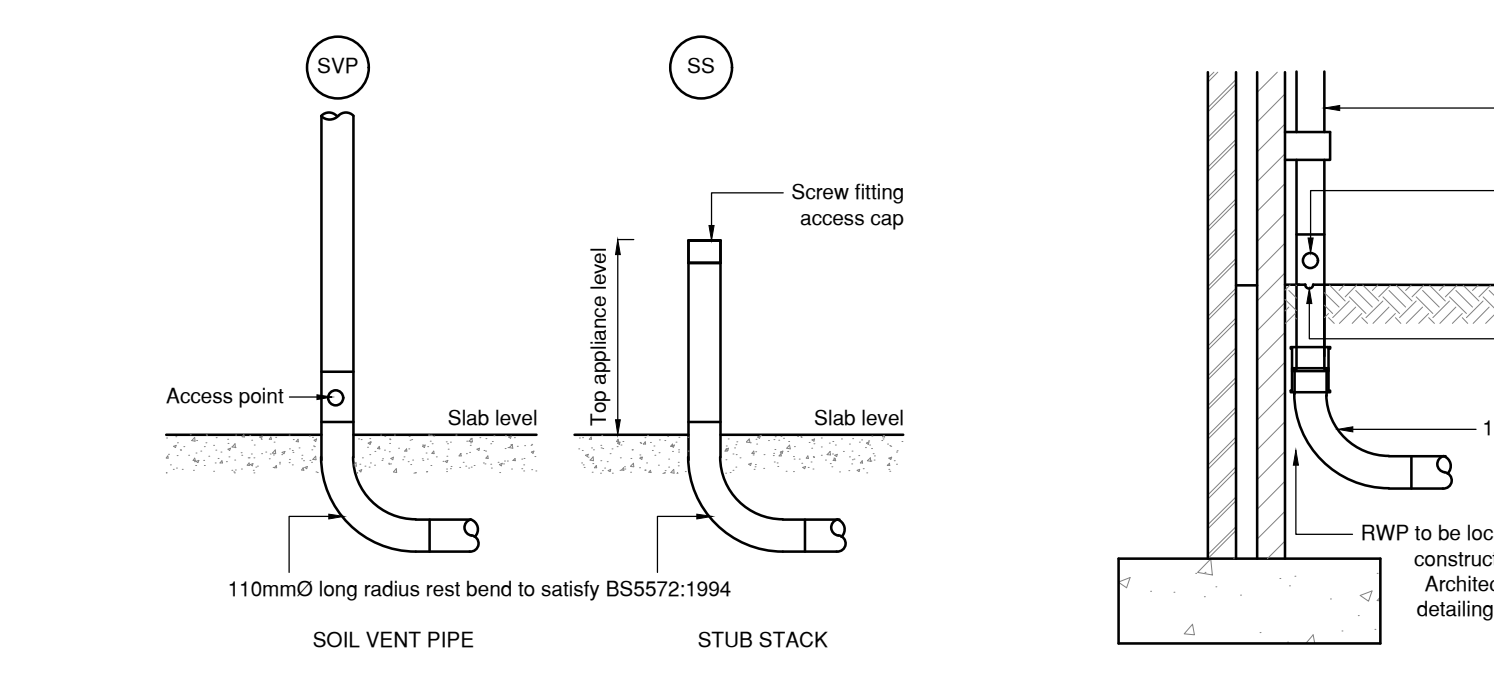
RESIN BOUND GRAVEL PLAY SURFACE CONSTRUCTION DETAIL
(Pedestrian Loading Only)
Scale 1:10



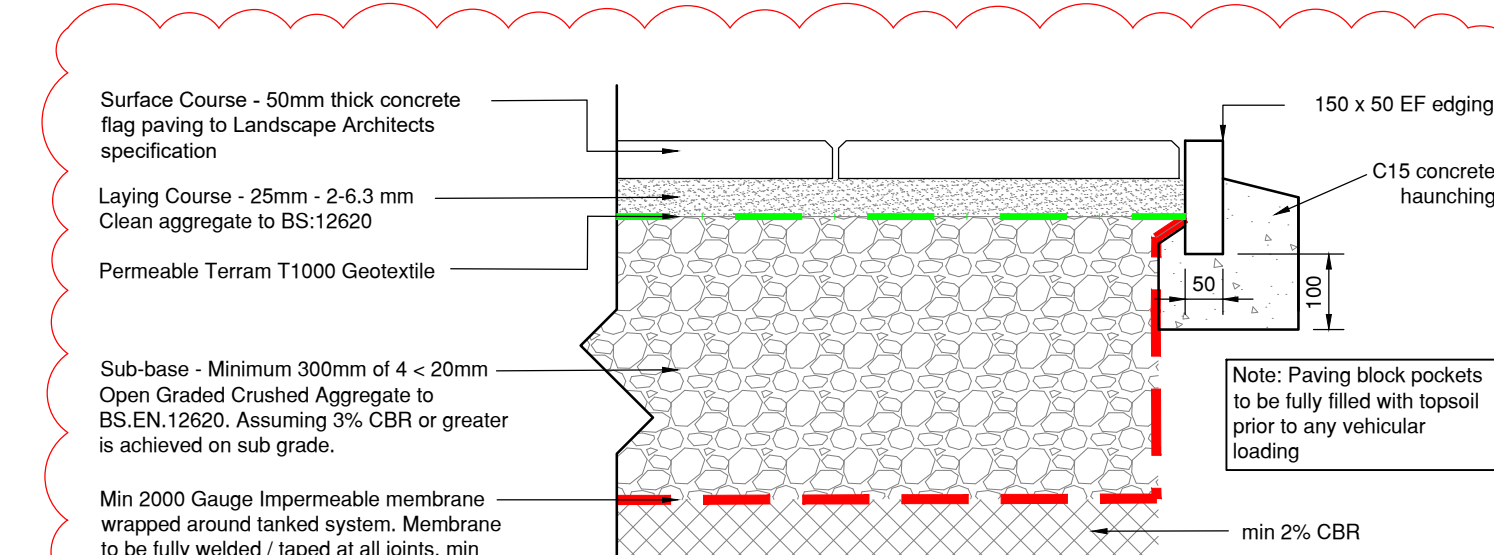
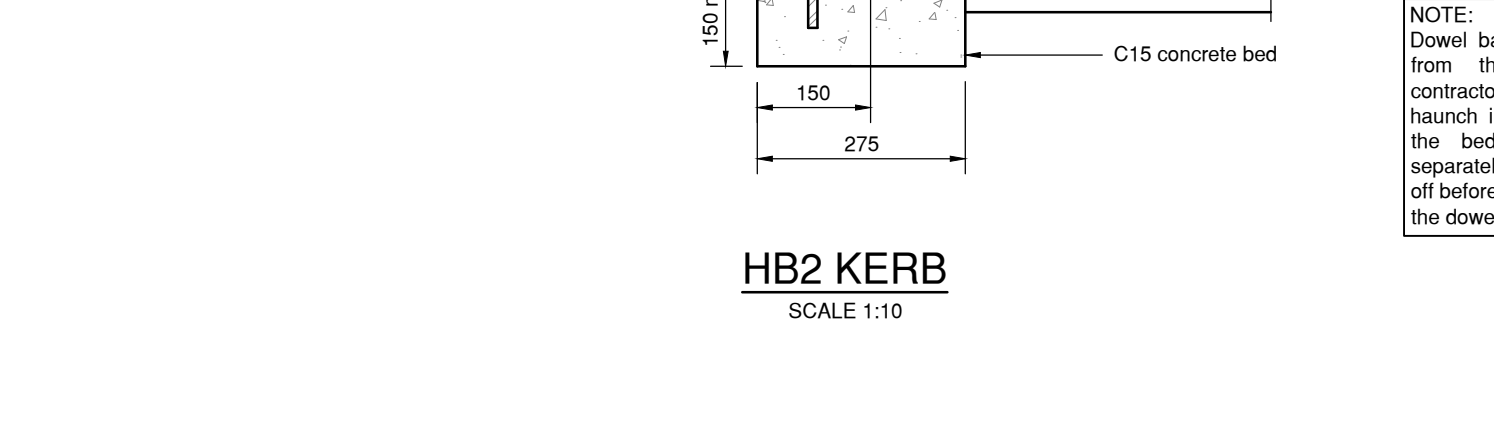
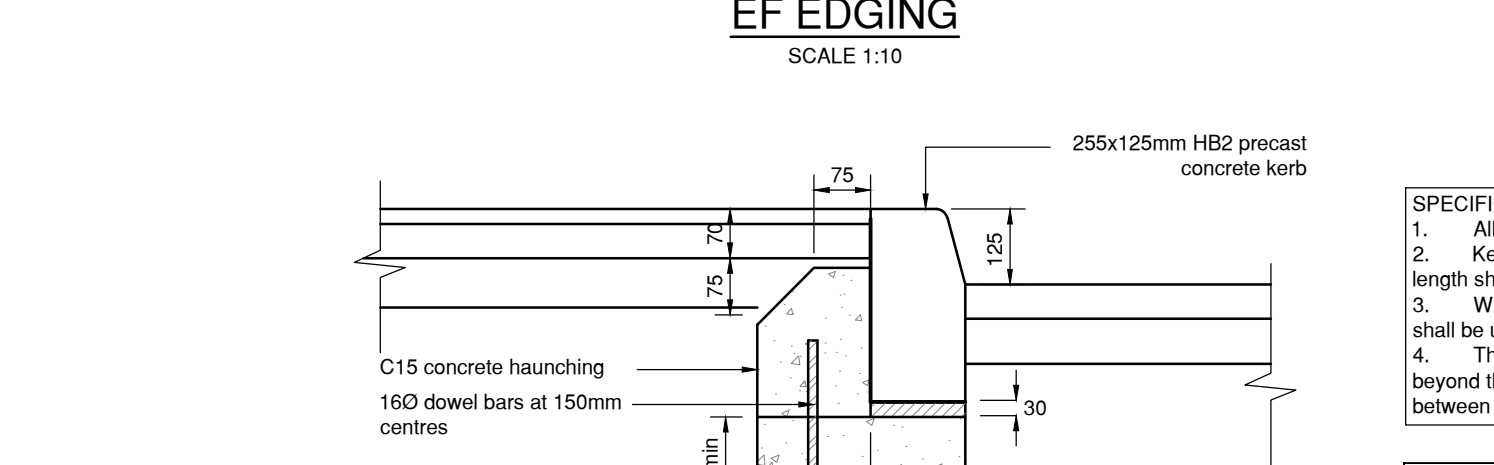
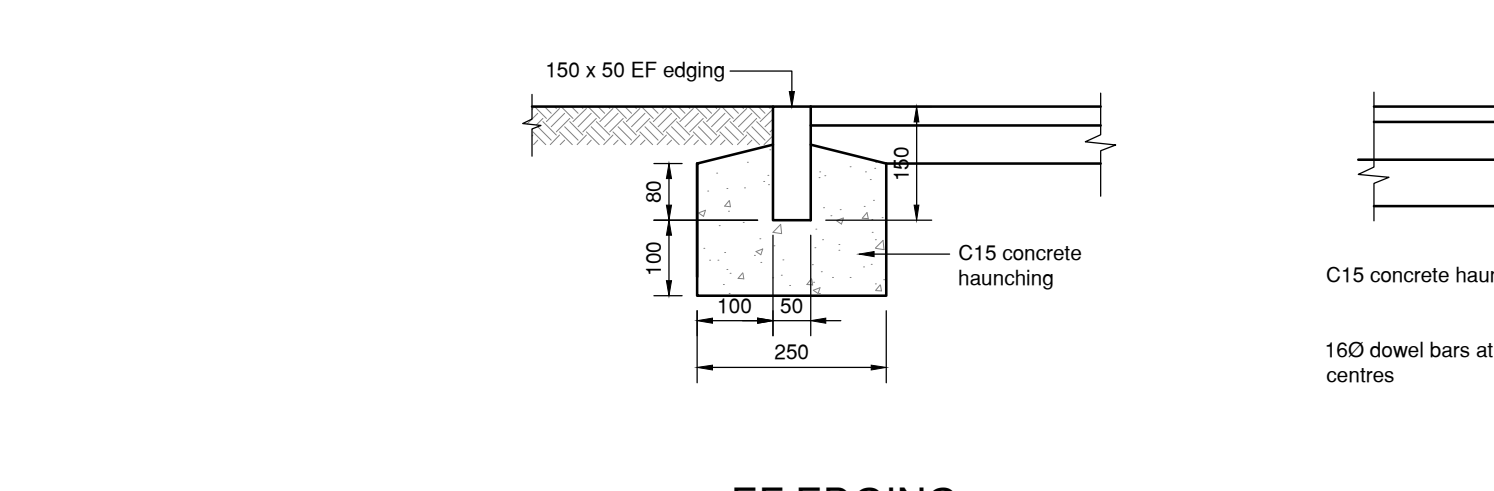
TYPICAL PIPE BED AND SURROUND DETAILS
Scale 1:20



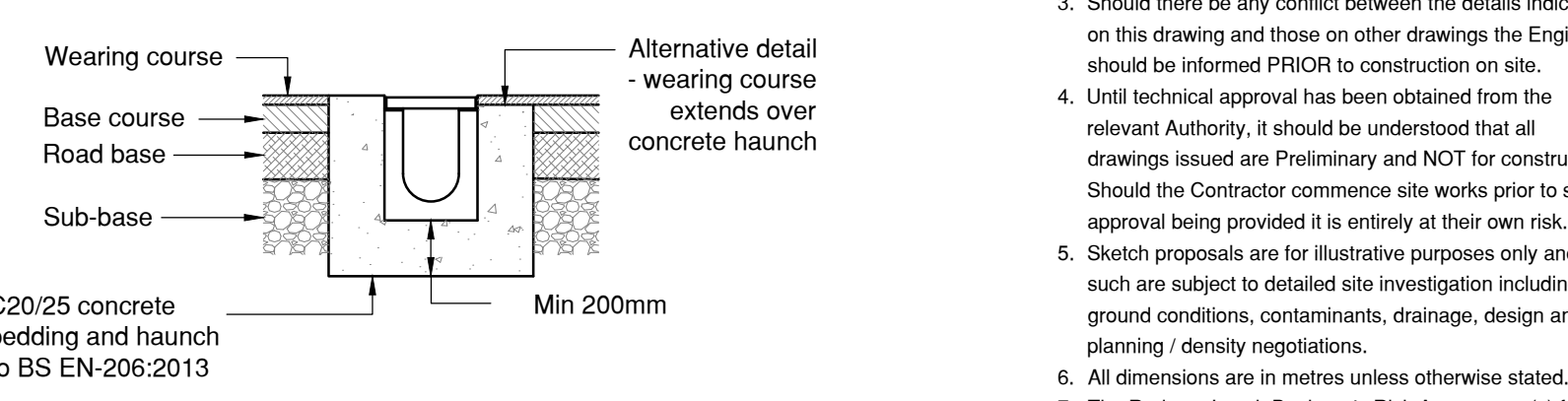
FILTER DRAIN UNDER PERMEABLE PAVING
Scale 1:20



TYPICAL RODDABLE ACCESS POINT DETAILS
Scale 1:20

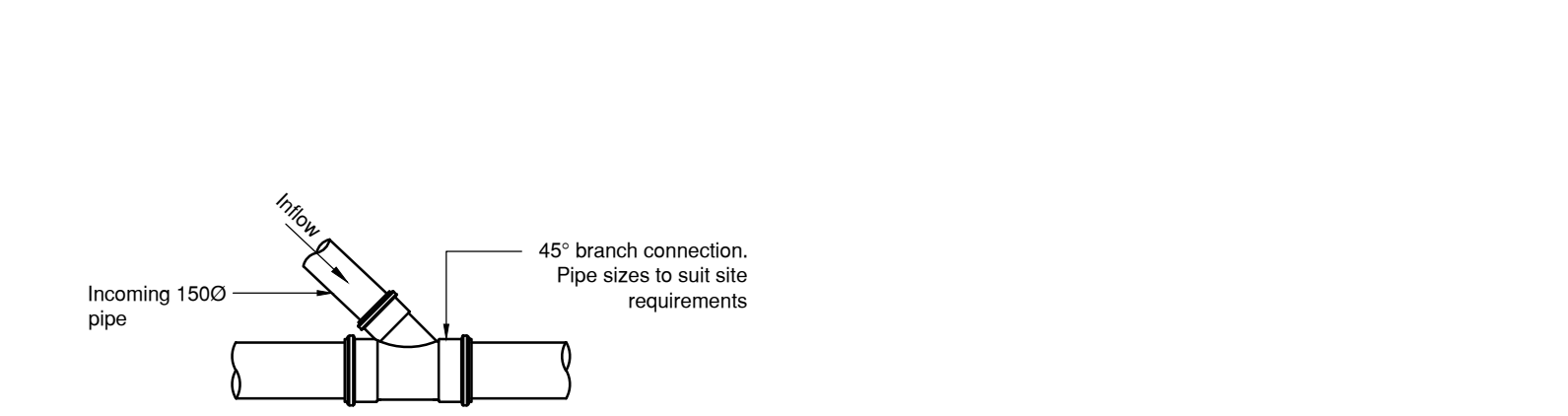


PERMEABLE FLAG PAVING ASHP CONSTRUCTION DETAIL
(Pedestrian Loading Only)
Scale 1:10

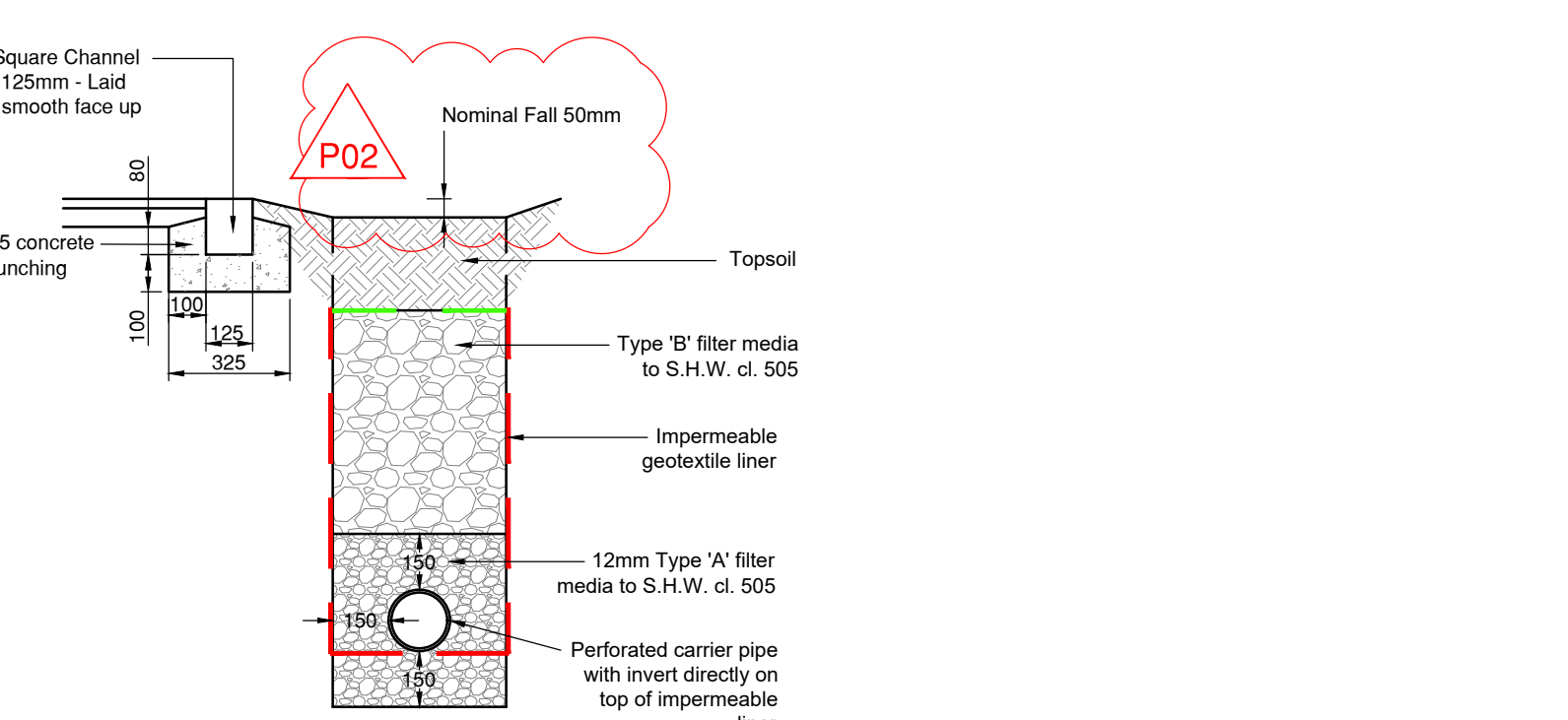


TYPICAL CHANNEL DRAINAGE IN ASPHALT AREA
Scale 1:20

NOTE: Channel to be sized by manufacturer to suit area drained. Concrete surround details to be in accordance with manufacturer's details.



TYPICAL JUNCTION CONNECTION DETAIL
Scale 1:20



LINED FILTER DRAIN AT BACK OF CAR PARKING
Scale 1:20

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Health & Safety Information Key			
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	Used to indicate a possible action, e.g. stop construction traffic from entering an area.		
	Used to warn of significant design hazards, adding recommendations.		
	Used to encourage a positive action, e.g. use of robust protection for inspection chambers.		

ASHP Compound build-up	EG	PJC
P02 09.07.25 added, nominal fall added to filter drain		
P01 06.06.25 FIRST ISSUE	EG	PJC
Rev. Date	By	Chk

Client
UNITED LEARNING

Project
SRP, WILLIAM HULME'S GRAMMAR SCHOOL MANCHESTER

Drawing Title
SRP BUILDING - STANDARD CONSTRUCTION DETAILS

Status
INFORMATION

Scale
As shown @ A0

Drawn
EG

Checked
PJC

Date
06.06.25

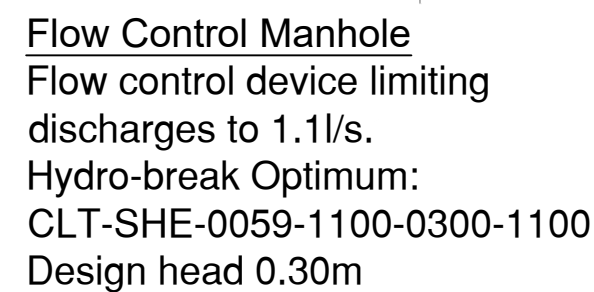
Drawing Number
22639-RL-25-XX-DR-C-2230

Revision
P02

BIM Drawing Reference

Scale Bar
1:20 0.2 0.4 0.6 0.8 1.0 1.2 1.4 1.6 1.8 2.0

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Existing below ground attenuation tank

Unlikely that the tank will be suitable for vehicle loading. Vehicles in permanent and temporary case should be prevented from accessing the area.

SOUTH MUGA	
Site area:	- 0.1923ha
Contributing impermeable area:	- 0.1923ha
Allowable discharge rate:	- 1.10l/s QBar (IHS124)

Geo-cellular System
Geo-cellular sub-base system to provide surface water attenuation laid flat. Permavoid or equivalent approved
Volume 222.44m³ (95% voids ratio)
Plan Area 1,561m²
Depth 150mm

- ## GENERAL NOTES
1. **NOT SCALE.**
 2. This drawing is to be read in conjunction with all other relevant drawings and details.
 3. All work shall be in accordance with the details indicated on this drawing and those on other drawings the Engineer should be informed **PRIOR** to construction on site.
 4. Until technical approval has been obtained from the relevant Authority, it should be understood that all drawings are Preliminary and **NOT** for construction. Should the Contractor commence site works prior to such approval being provided it is entirely at their own risk.
 5. Sketch proposals are for illustrative purposes only and are not to be used for any Preliminary or final investigation including ground conditions, contaminants, drainage, design and planning / design negotiations.
 6. All dimensions are in metres unless otherwise stated.
 7. The Rodgers Leasak Designing (Risk Assessment) of the proposed works is not to be used for the commencement of any works on site.
 8. Site layout shown based on CoARC Collaborative Architecture proposed site plan drawing ref: 1906/25-26.
 9. Topographical survey shown based on Croyfield Survey Ltd drawing ref: 1157-13, dated October 2022.

[illegible]

Pipe Diameter	Length of Rocker Pipe
Ø150 - Ø500mm	600mm
Ø675 - Ø750mm	1,000mm
over Ø750mm	1,250mm

- Pipes Penetrating Walls:**
- All penetrations are to be formed through walls to give pipes a minimum 100 mm clearance around. Thiswork shall be supported by a lined opening. Upon completion the wall shall be finished to match the existing wall. The wall shall have joints formed within 150mm of either wall face. Adjacent corner pipes must have a minimum wall thickness of 100 mm.
- All manholes and inspection chambers situated in areas subject to vehicular loading to have class D400 covers and frames. All other manholes and inspection chambers to have class B125 covers and frames.
- Drainage frames must be made to match the manhole cover. The frames must be made to match the manhole cover (FR5001 class B125). The ground works contractor will be the responsible person for ensuring that the frames are fitted using the correct manufacturer's fixing procedure.
- All drains in the vicinity of existing or proposed trees to be installed in accordance with the requirements of NRS Practice Note 10.
- All drainage MHI covers and frames to be orientated so that the cover is facing the road. All covers and frames to be installed in accordance with the requirements of NRS Practice Note 10.
- Wherever possible, all manholes and inspection chambers to be installed in areas where possible. All manholes and inspection chambers to be installed in areas where possible. All manholes and inspection chambers to be installed in areas where possible.
- All pipes shall be tested both before and after backfilling. All pipes shall be tested both before and after backfilling. All pipes shall be tested both before and after backfilling.
- Where reinstatement of existing manholes, surfaces is required, the reinstatement shall be in accordance with the requirements of NRS Practice Note 10.
- Reinstatement of Existing: In highways Traffic surface

	Used to provide design specific safety information that may not be obvious to a competent contractor but may be useful
	Used to restrict/prevent a possible action, e.g. stop construction traffic from entering an area
	Used to warn of significant design hazards, add recommendations
	Used to encourage a positive action, e.g. use of robust protection for inspection chambers

P02	13.05.25	Updated to revised site layout - CoARC drawing no. 0120 Rev P02, Channel drain included within footway	EG	PJC
P01	23.04.25	FIRST ISSUE	EG	PJC
Rev	Date	Amendments	By	Chk

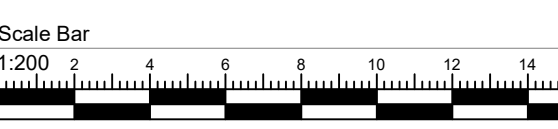


Client
UNITED LEARNING

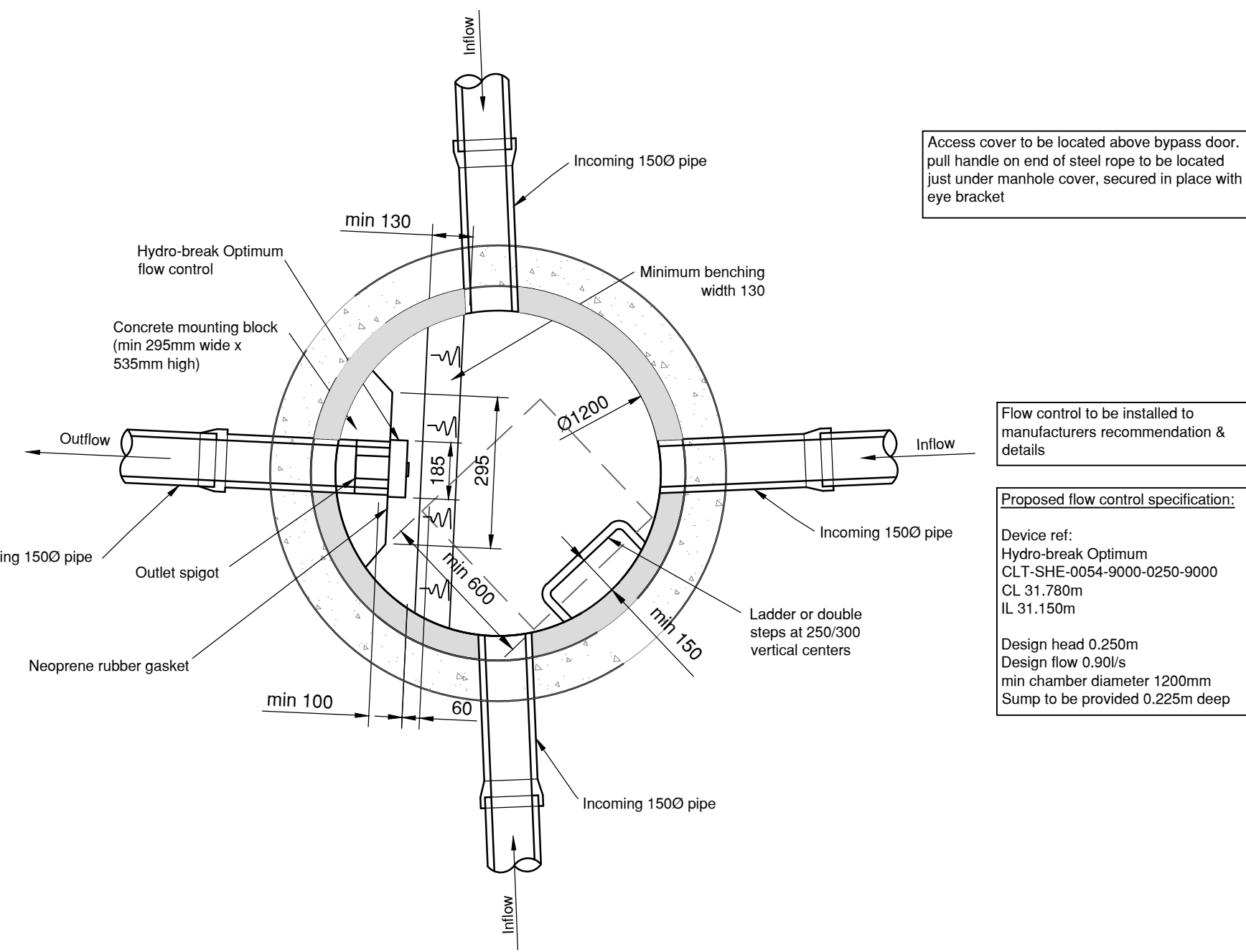
Project
SRP, WILLIAM HULME'S
GRAMMAR SCHOOL
MANCHESTER
Drawing Title
NORTH & SOUTH MUGA
- DRAINAGE STRATEGY

Scale	Drawn	Checked	Date
1:200 @ A0	EG	PJC	23.04.25
Drawing Number	Revision		
22639-RLL-25-XX-DR-C-2300	P02		

BIM Drawing Reference

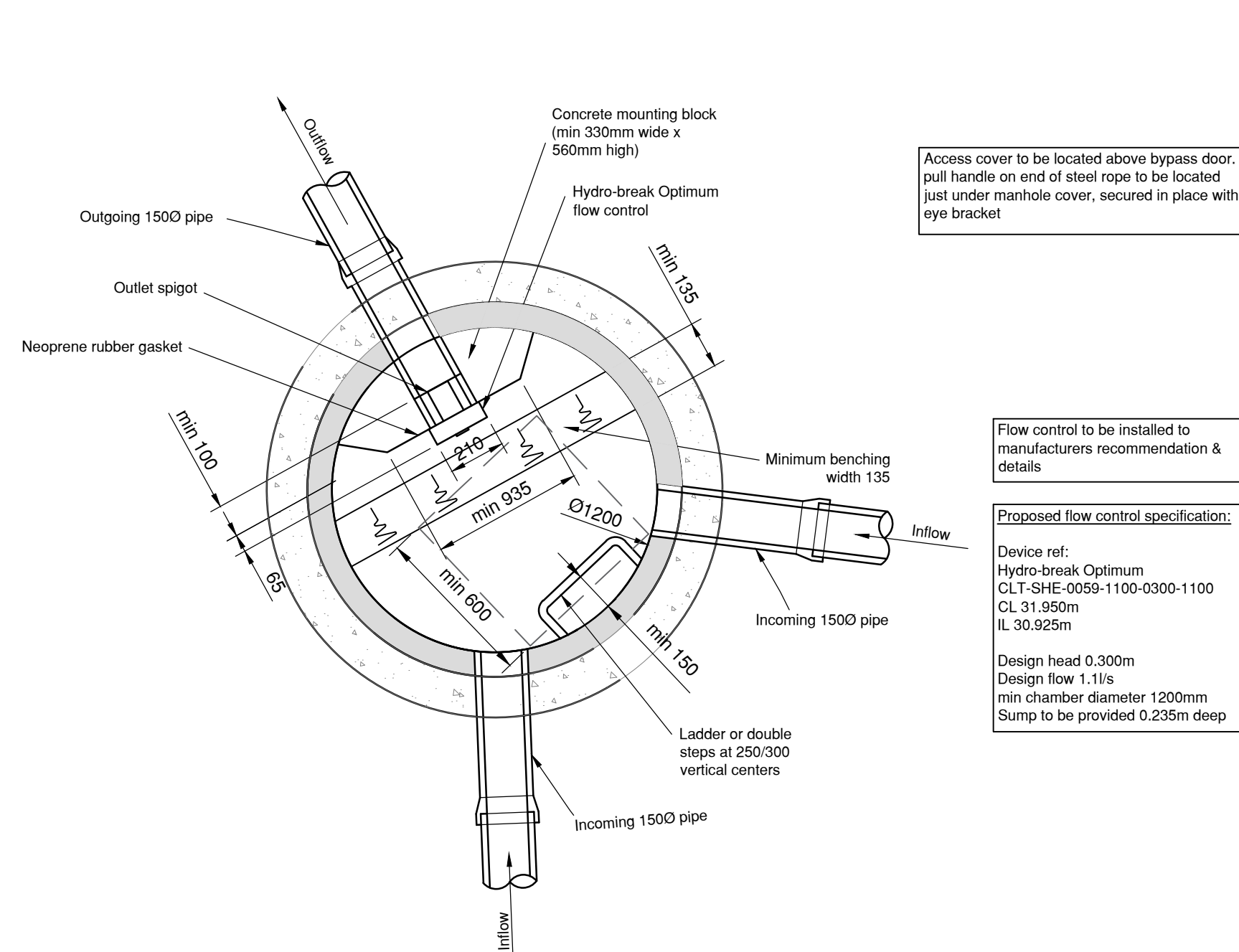


- DO NOT SCALE.
- This drawing is to be read in conjunction with all other relevant drawings and details.
- Should there be any conflict between the details indicated on this drawing and those on other drawings the Engineer should be informed PRIOR to construction on site.
- Until technical approval has been obtained from the relevant Authority, it should be understood that all drawings issued are Preliminary and NOT for construction. Should the Contractor commence site works prior to such approval being provided it is entirely at their own risk.
- Sketch proposals are for illustrative purposes only and as such are subject to detailed site investigation including ground conditions, contaminants, drainage, design and planning / density negotiations.
- All dimensions are in metres unless otherwise stated.
- The Rodgers Leask Designer's Risk Assessment(s) for this project must be reviewed PRIOR to the commencement of any works on site.



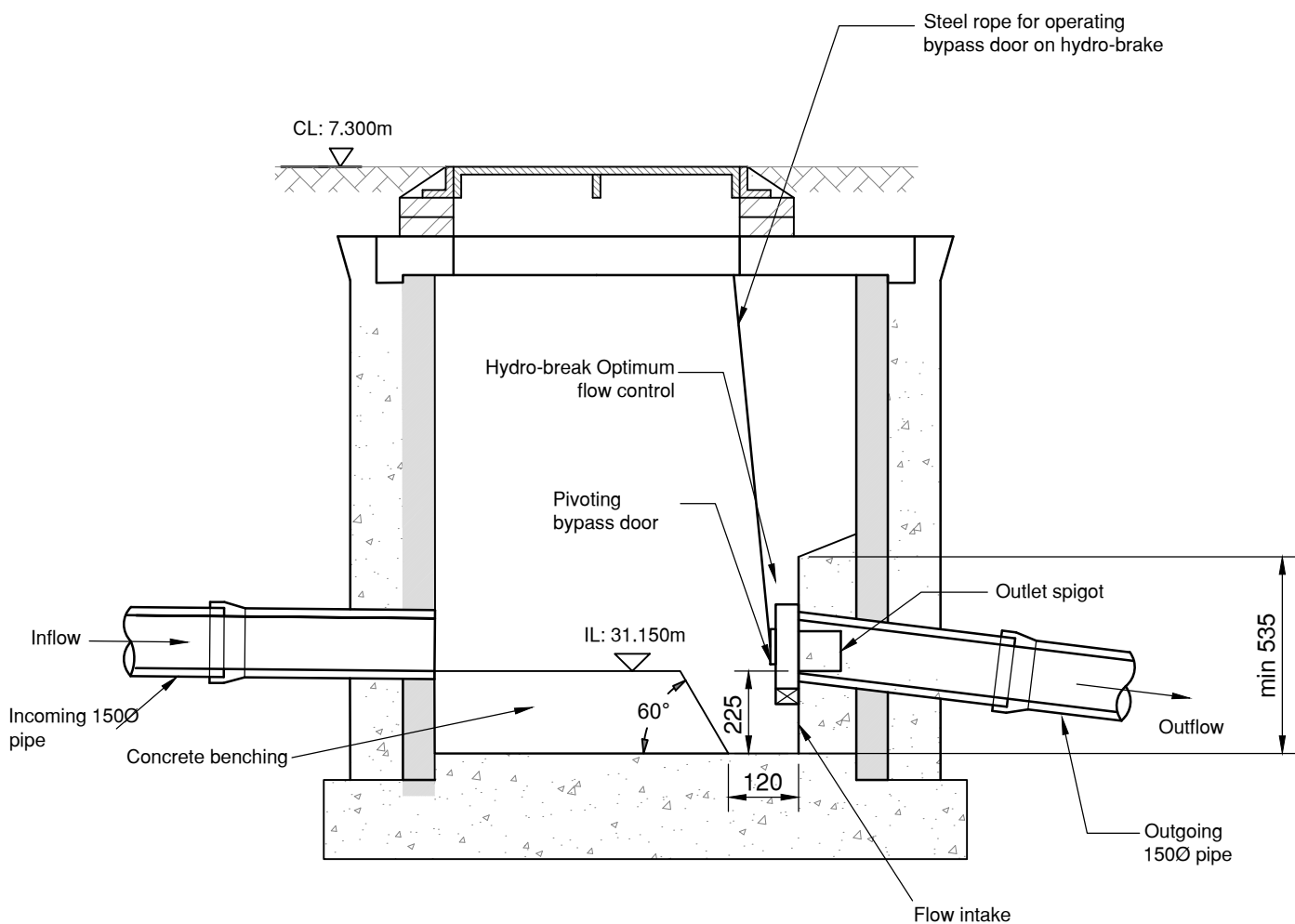
PLAN ON FLOW CONTROL MANHOLE (MH01)

Scale 1:20



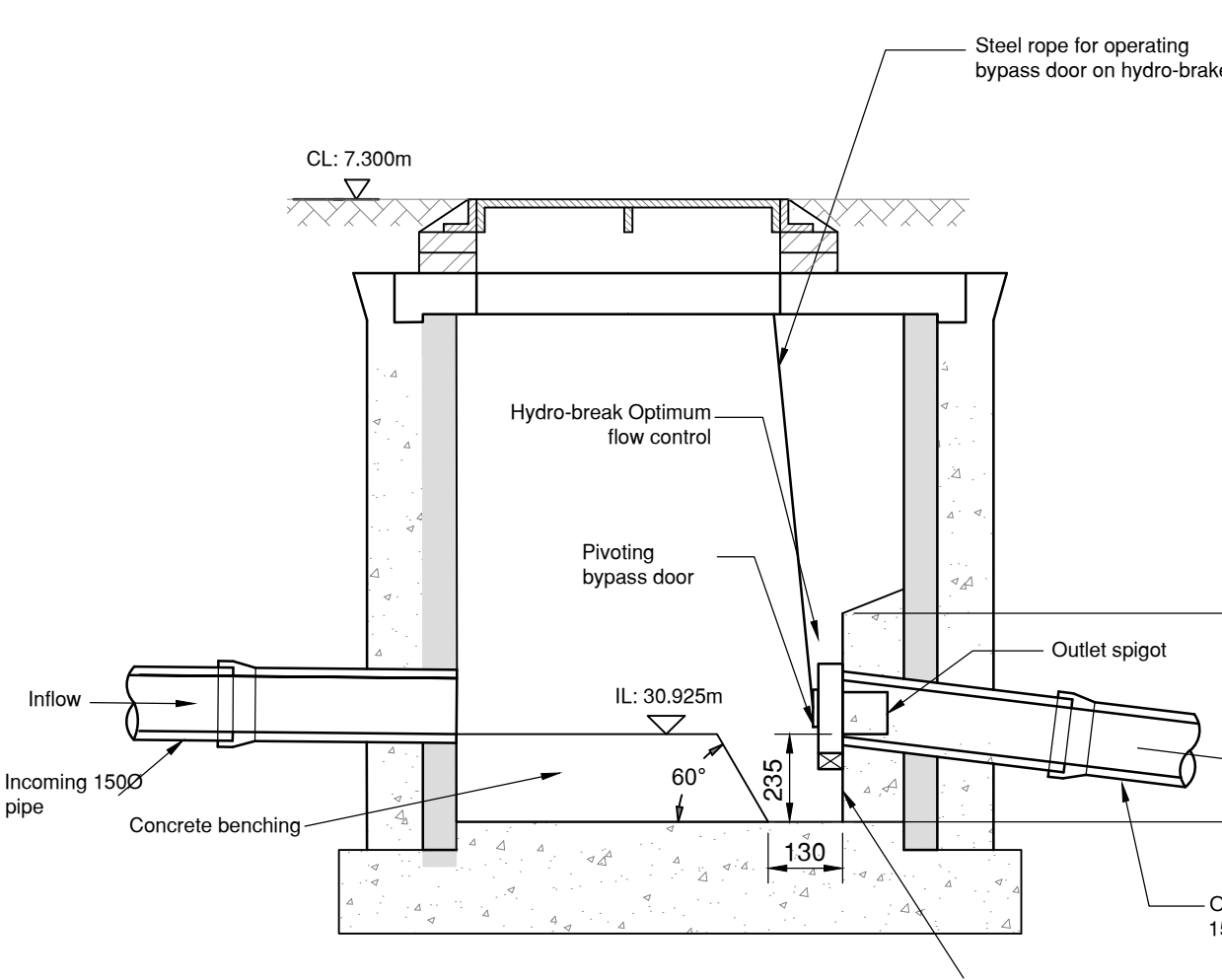
PLAN ON FLOW CONTROL MANHOLE (MH08)

Scale 1:20



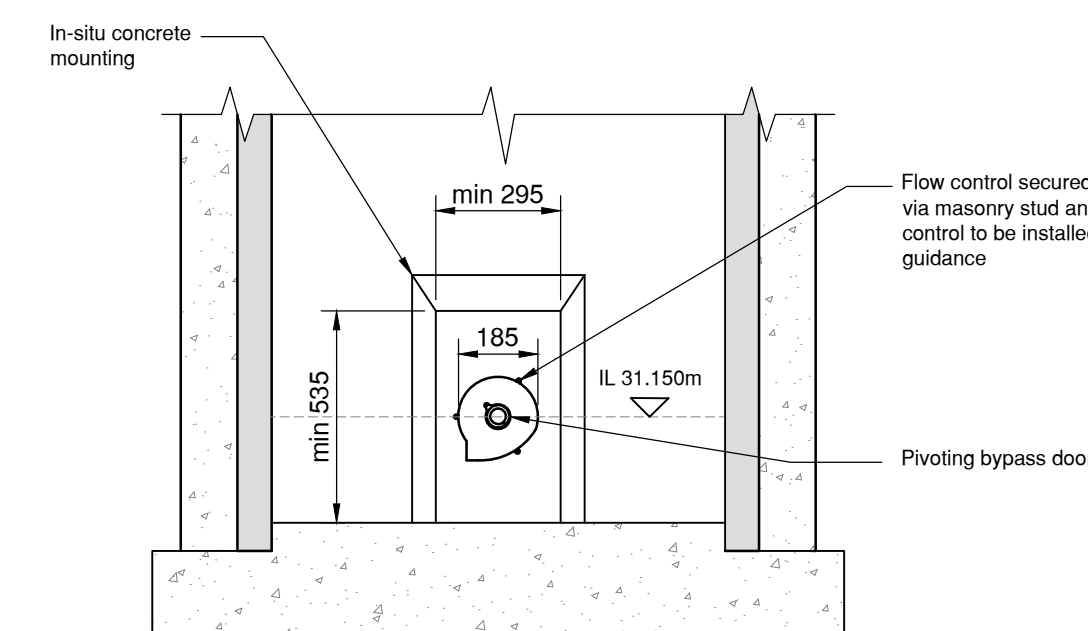
SECTION THROUGH FLOW CONTROL MANHOLE

Scale 1:20



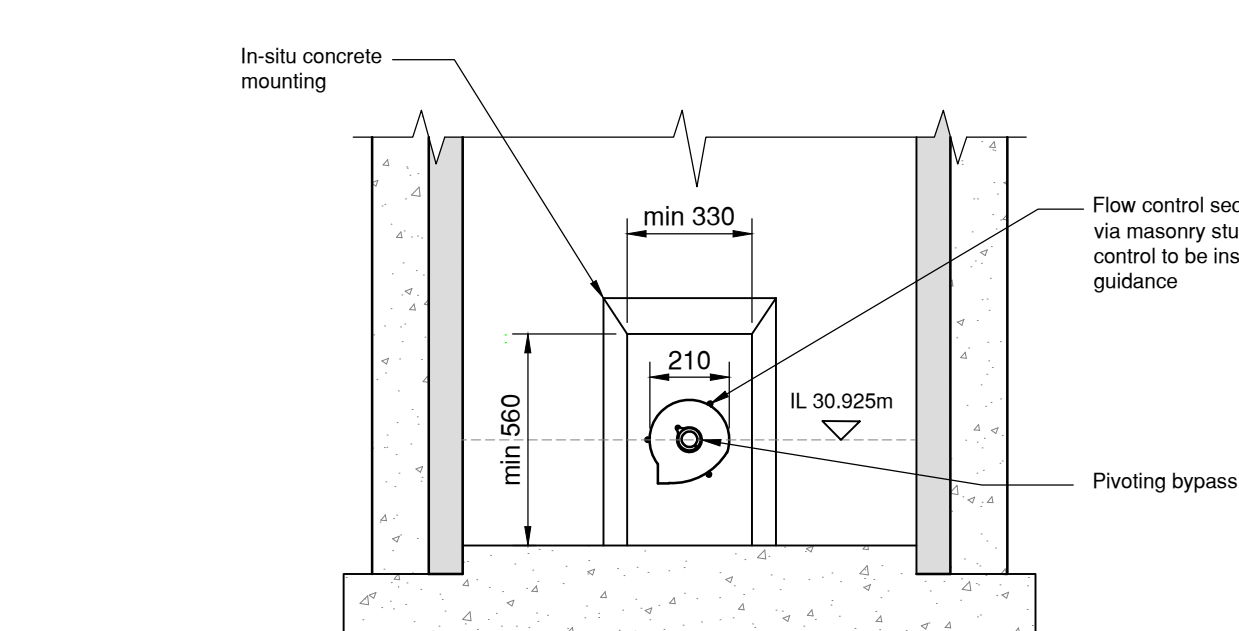
SECTION THROUGH FLOW CONTROL MANHOLE

Scale 1:20



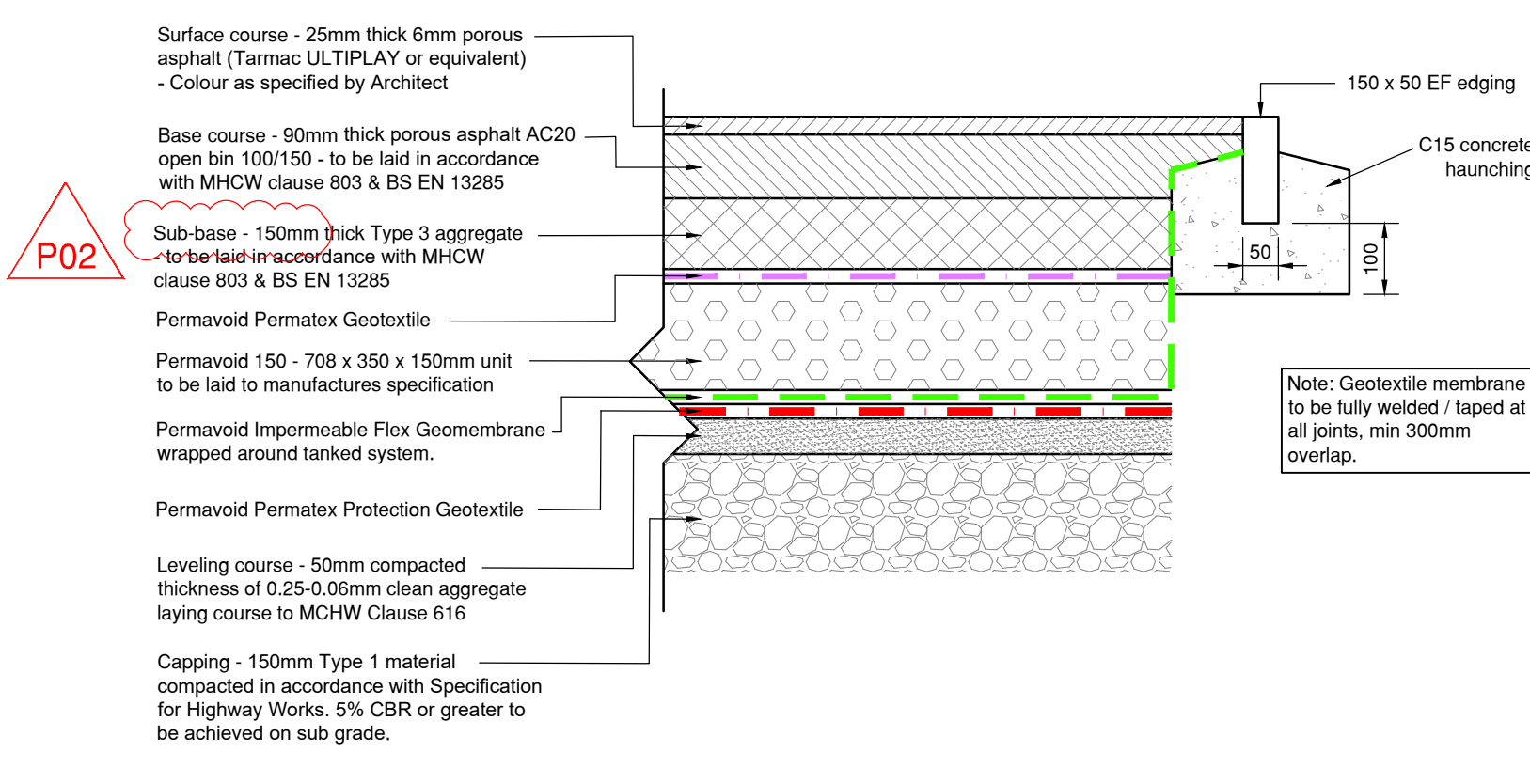
ELEVATION ON FLOW CONTROL

Scale 1:20



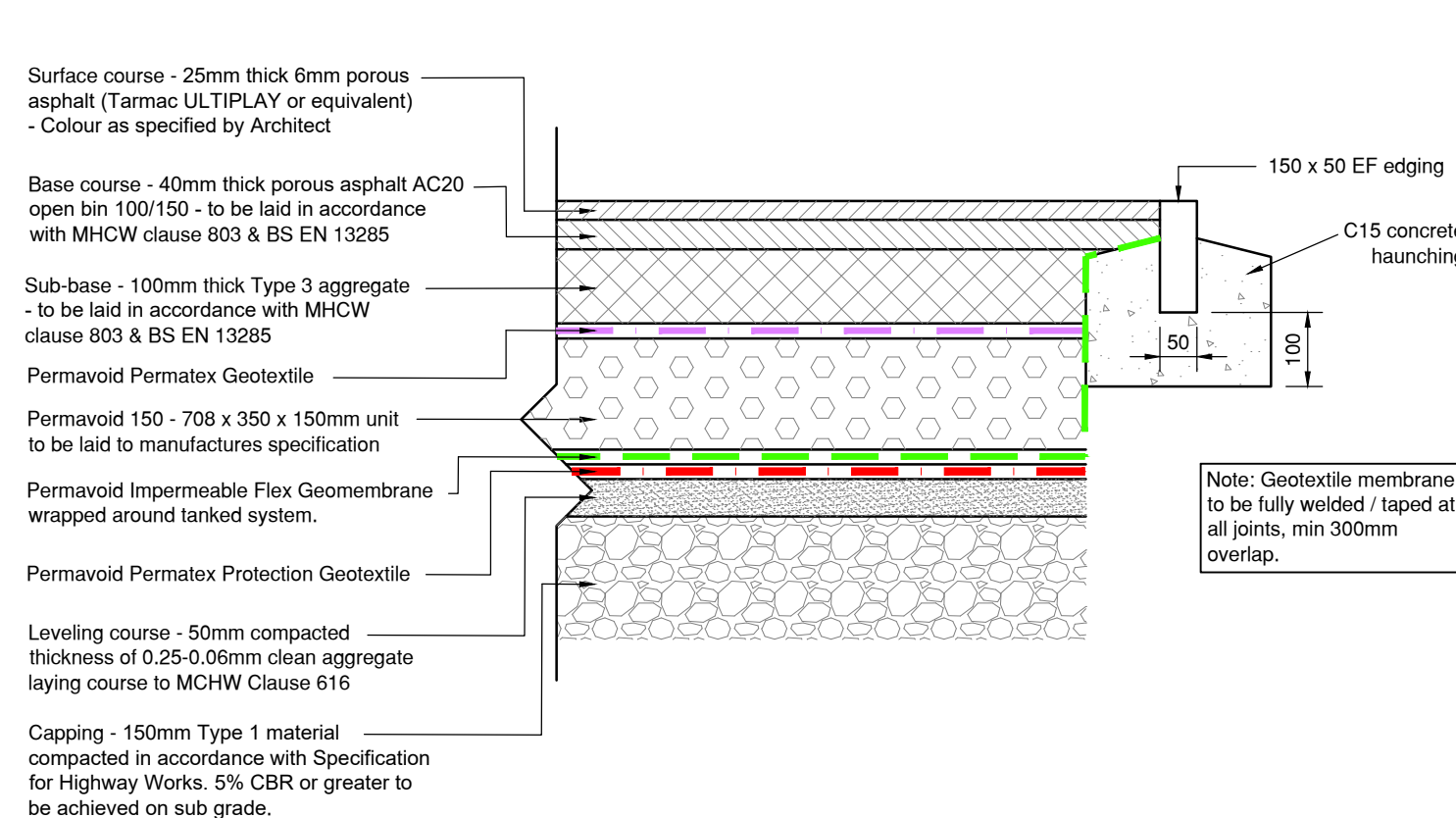
ELEVATION ON FLOW CONTROL

Scale 1:20



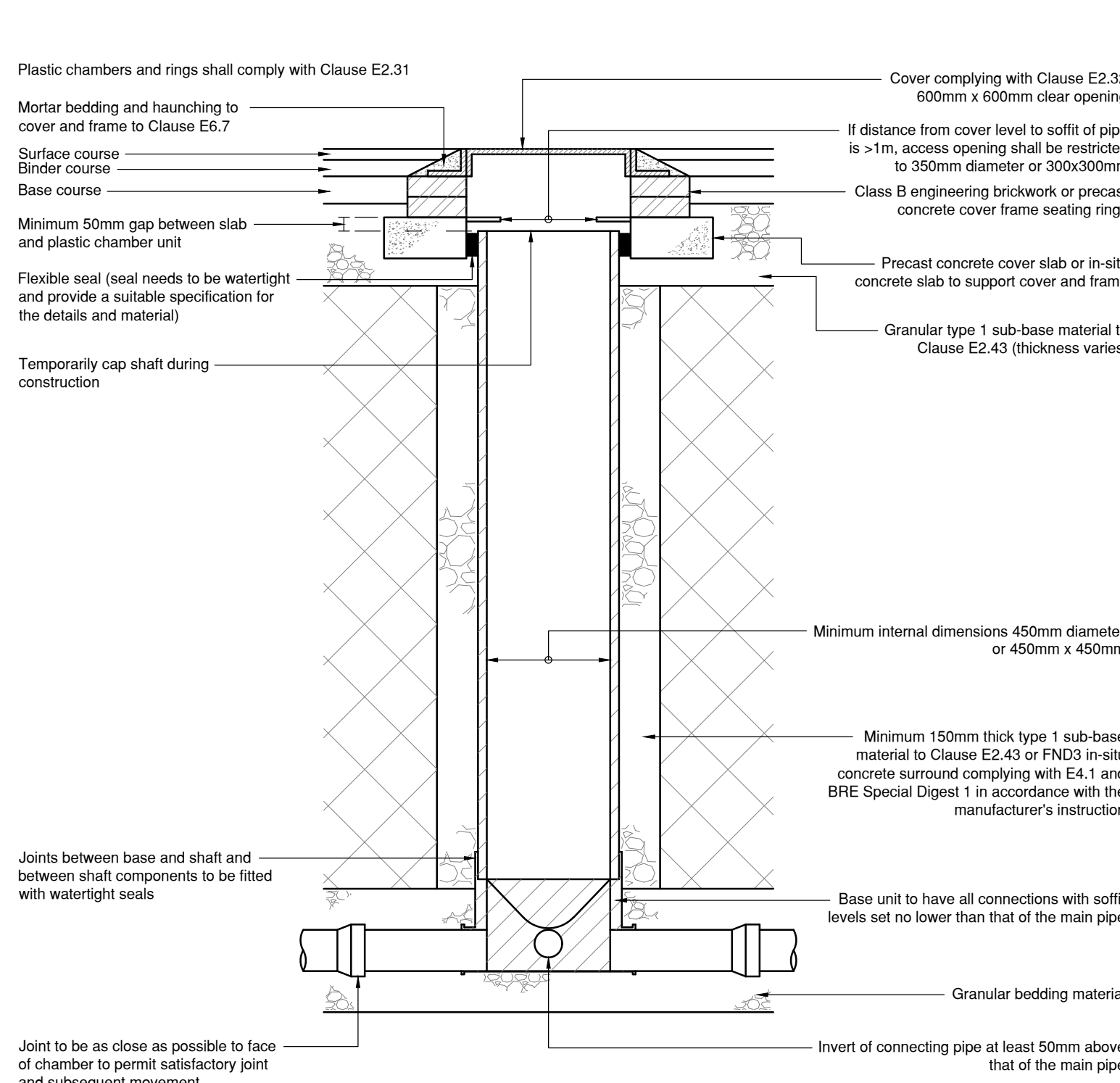
TANKED PERMEABLE PERMAVOID 150MM GEO-CELLULAR SYSTEM CONSTRUCTION DETAIL (Occasional Fire Tender Loading)

Scale 1:10



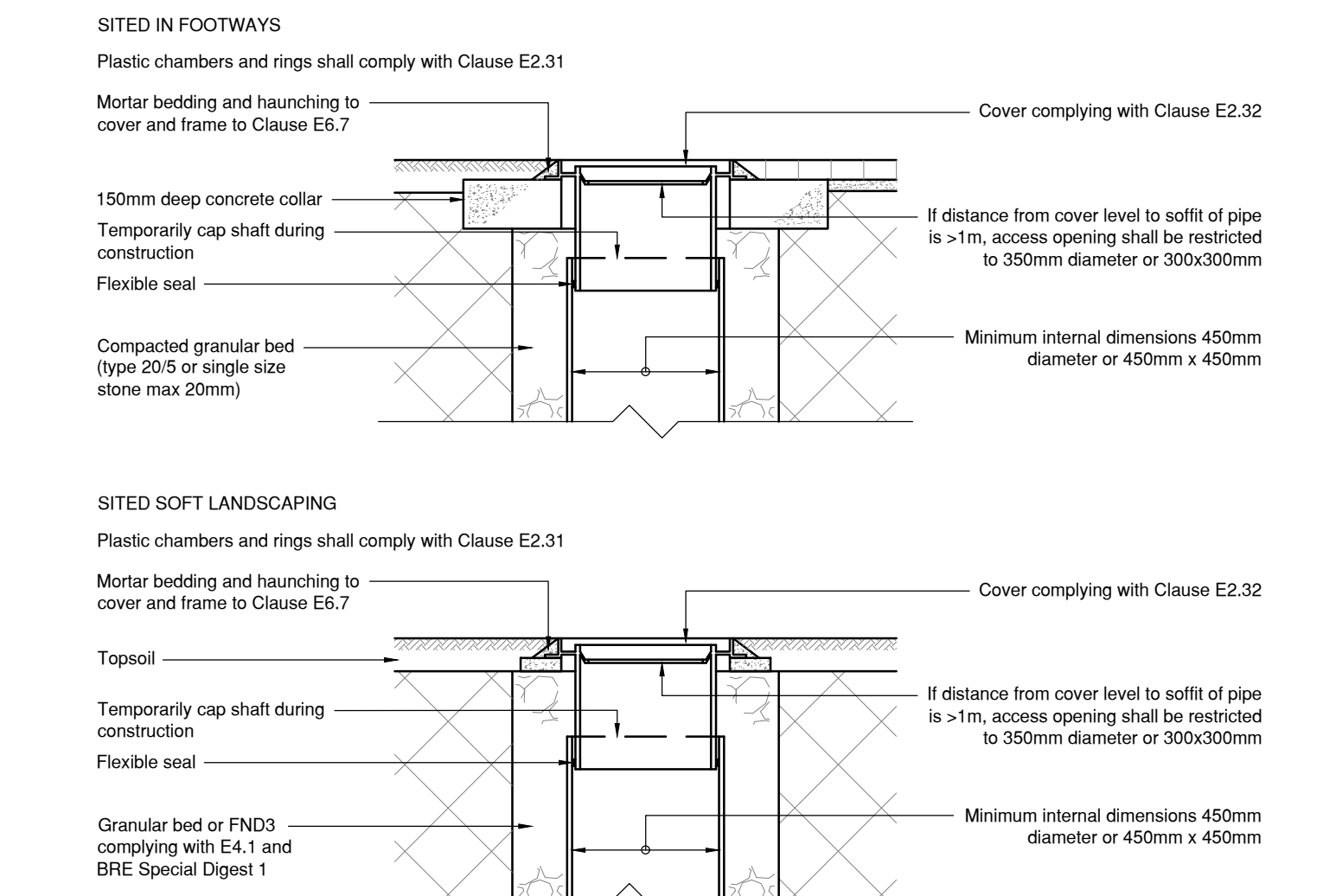
TANKED PERMEABLE PERMAVOID 150MM GEO-CELLULAR SYSTEM CONSTRUCTION DETAIL (Pedestrian Loading Only)

Scale 1:10



TYPICAL INSPECTION CHAMBER DETAIL

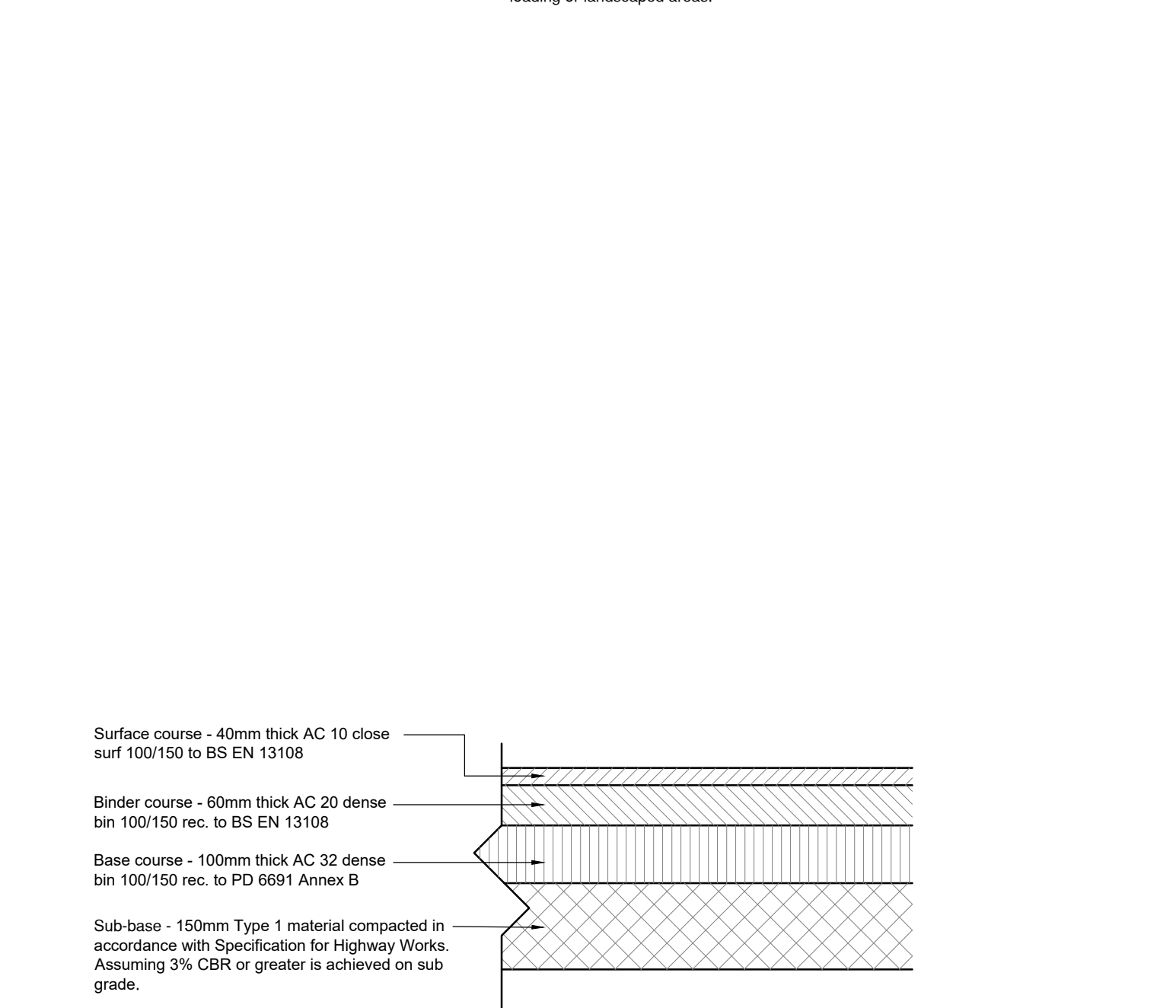
Scale 1:20



TYPICAL INSPECTION CHAMBER DETAIL

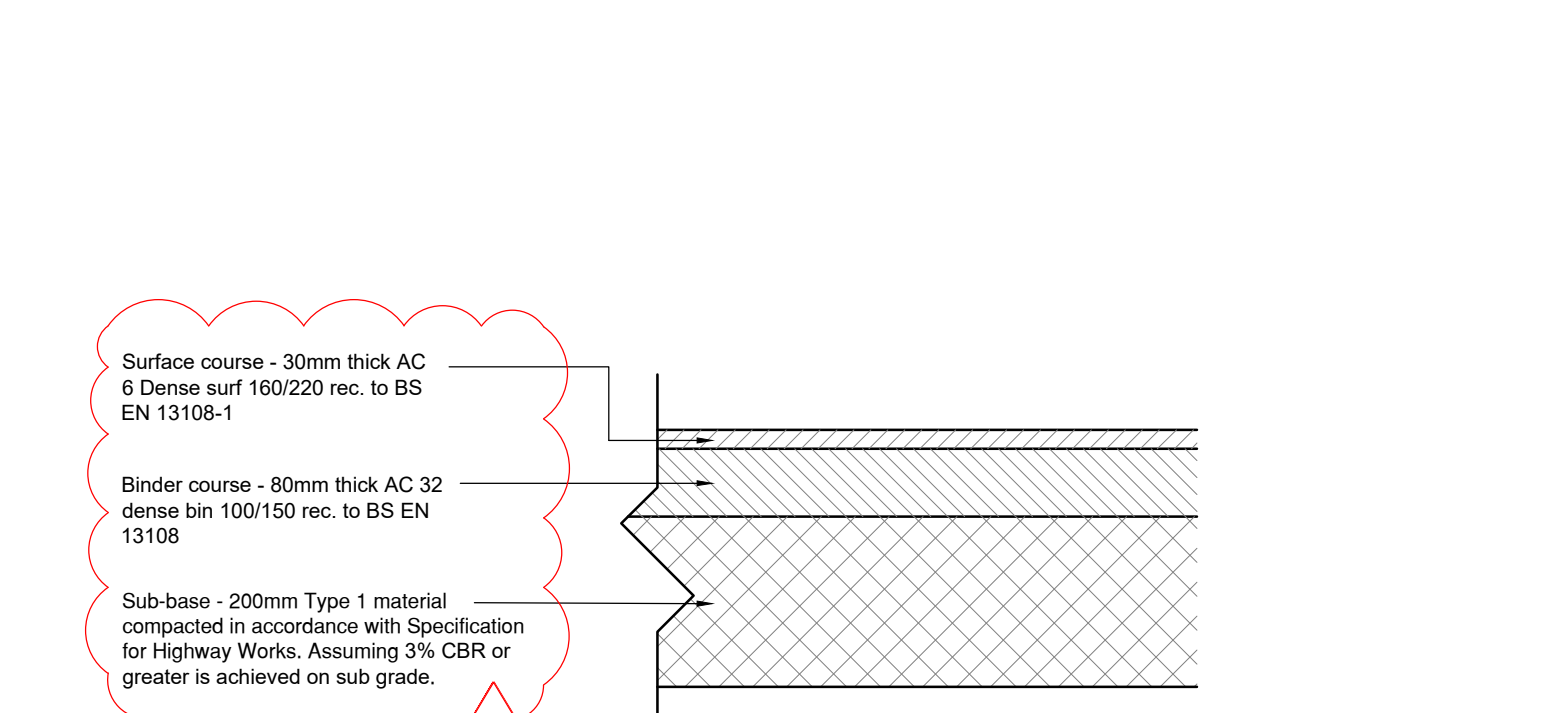
Scale 1:20

Depth from cover level to soffit of pipe up to 3m.
Flexible material construction for use in areas of light vehicle loading or landscaped areas.



FOOTWAY DETAIL (Occasional Fire Tender Loading)

Scale 1:10

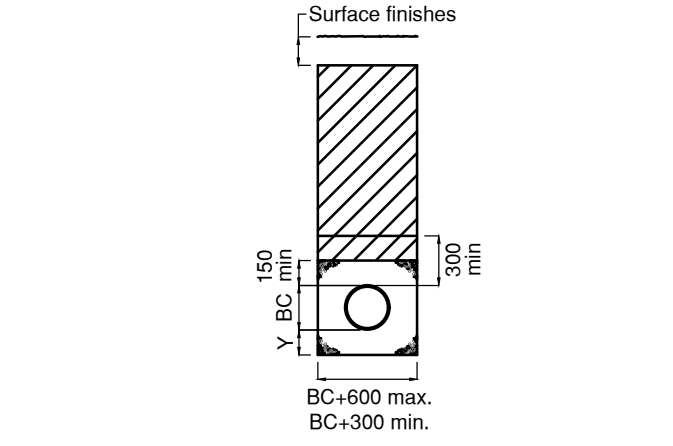


FOOTWAY DETAIL (Pedestrian & Occasional Maintenance Access Loading Only)

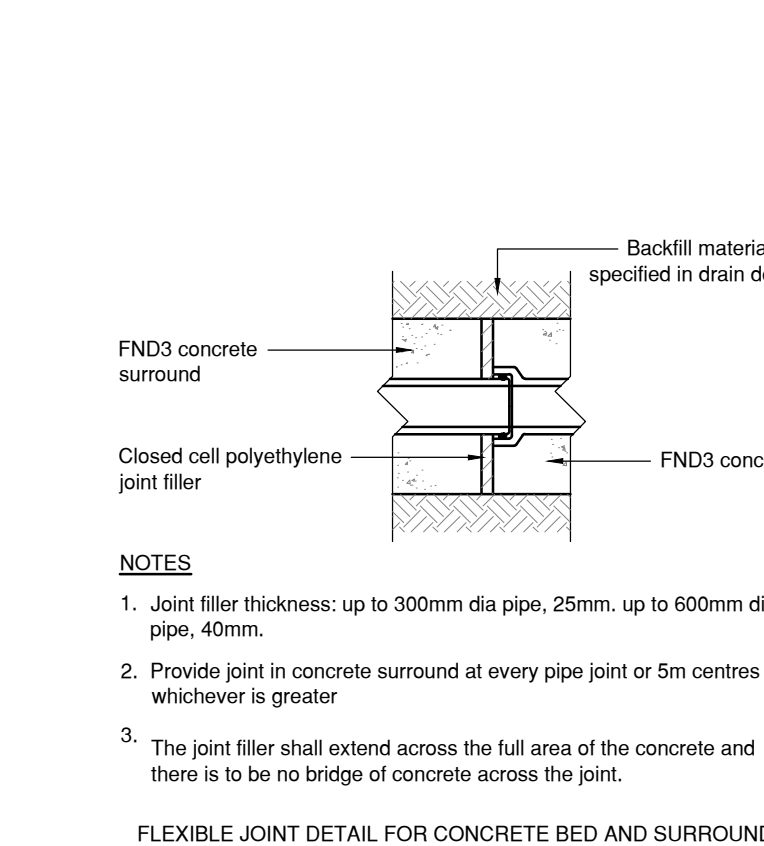
Scale 1:10

GRANULAR MATERIAL	
DIA. OF DRAIN	AGGREGATE
100mm	10mm single size
150mm	10mm or 14mm single size or 5-20mm graded.
225-525mm	10mm or 14mm single size or 5-20mm graded.
over 525mm	10, 14, 20 or 40mm single size or 5-40mm graded.

NOTE: A. No mechanical compaction within 300mm of crown of pipe.

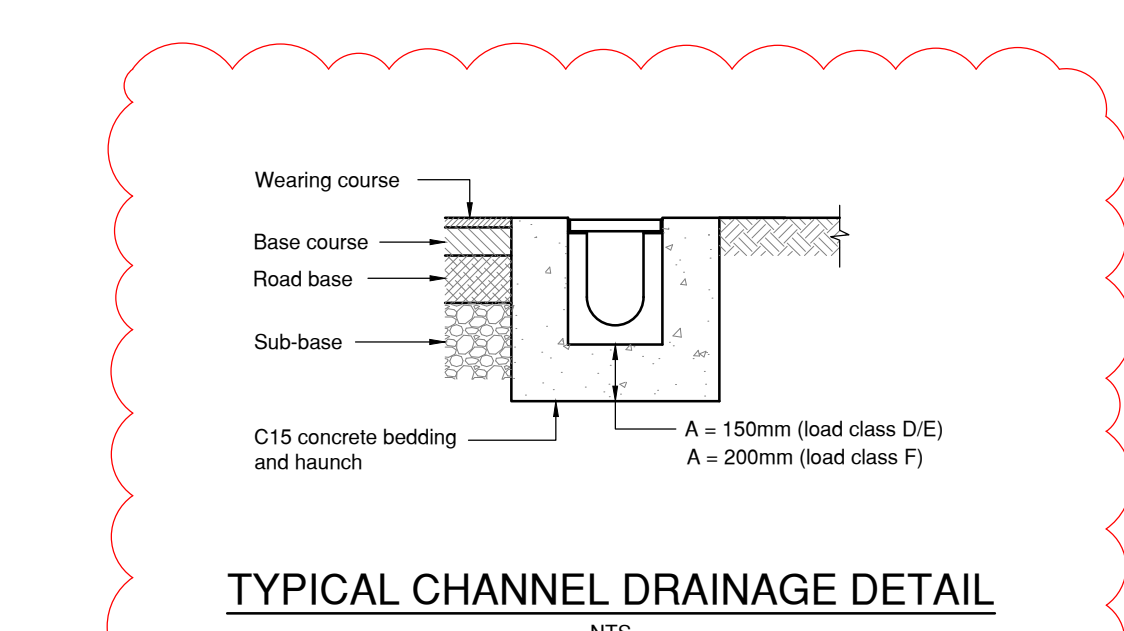


TYPICAL PIPE BED AND SURROUND DETAILS



TYPICAL TRENCH REINSTATEMENT DETAIL

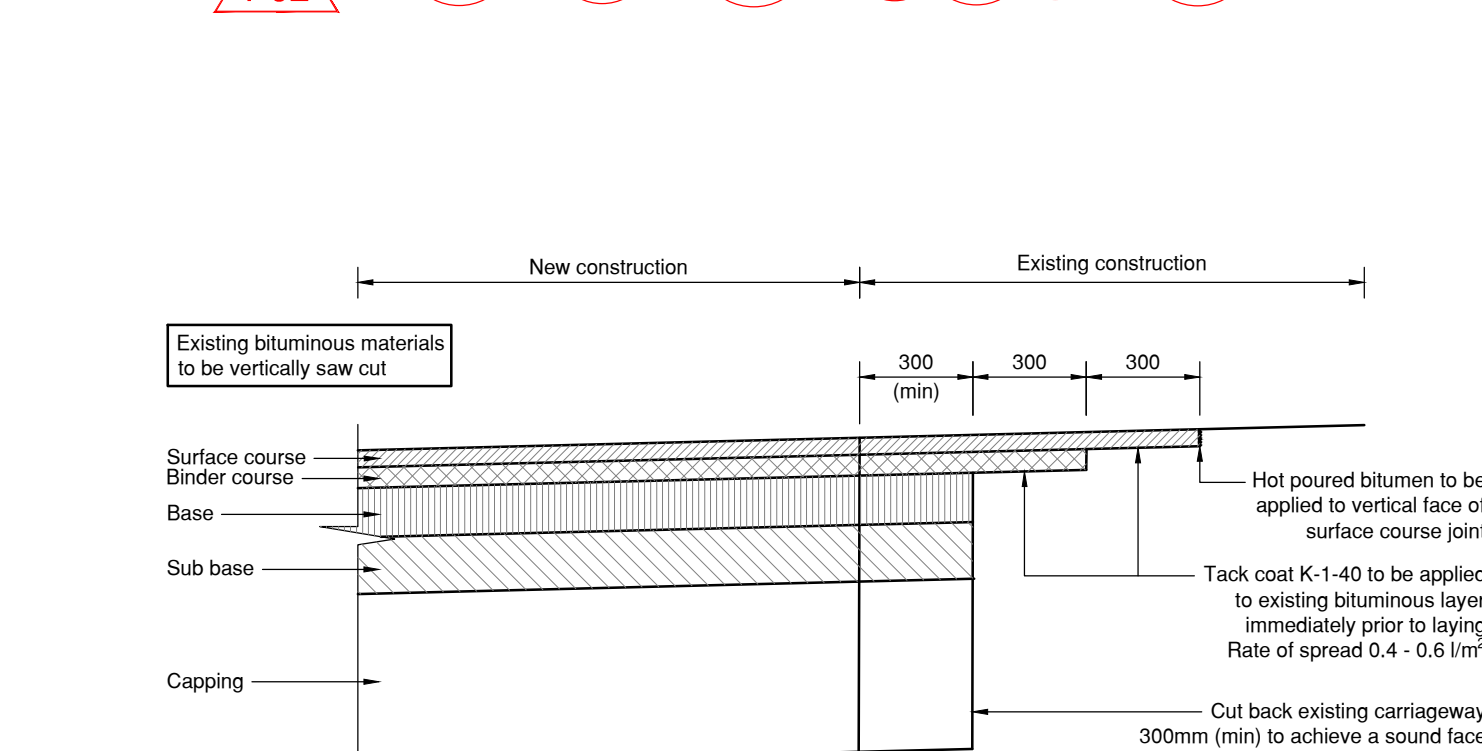
Scale 1:20



TYPICAL CHANNEL DRAINAGE DETAIL

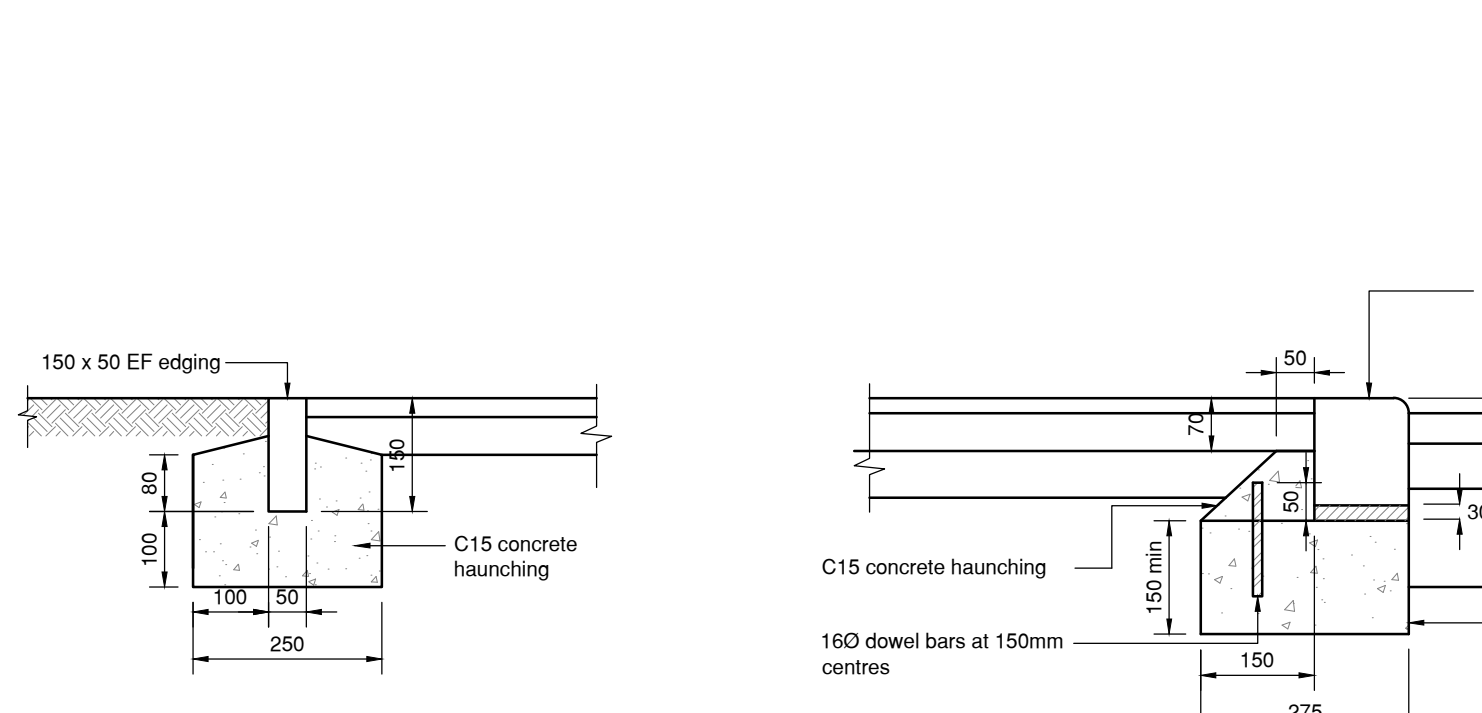
Scale 1:20

NOTE: Channels to be sized to suit area drained. Concrete surround details to be in accordance with manufacturer's details.



CARRIAGEWAY TIE-IN DETAIL

Scale 1:20



EF EDGING

Scale 1:10



BN3 KERB

Scale 1:10

NOTE: Dowel bars can be omitted from the detail if the contractor lays the bed and haunch in one operation. If the bed is to be laid separately and allowed to go off before the haunch is cast, the dowel bars are required.

NOTE: Dowel bars shall comply with BS EN 1340. Kerbs are to be cast using appropriate disc cutter with dust suppression. No herb length shall be less than 450mm. Where 90 degree corners are present preparatory angle and quadrant kerbs shall be used. The sub-base specified for the new carrieway shall be extended 300mm beyond the back of kerb haunch. Allowance shall be made to back fill the difference between footpath formation using type 1.

Health & Safety Information Key	
⚠	Used to provide design specific safety information that may not be obvious to a competent contractor but may be useful.
🚫	Used to restrict/prevent a possible action, e.g. stop construction traffic from entering an area.
⚠	Used to warn of significant design hazards, adding recommendations.
✅	Used to encourage a positive action, e.g. use of robust protection for inspection chambers.

P02	13.05.25	Updated to coordinate with hard works plan. Channel drain detail included, revised footway buildup, revised sub-base thickness for Northern MUGA pitch	EG	PJC	
P01	23.04.25	FIRST ISSUE	EG	PJC	
Rev	Date	Amendments	By	Chk	

Updated to coordinate with hard works plan, Channel drain detail included, revised Footway building, revised sub-base thickness for Northern MUGA

Client: UNITED LEARNING

Project: SRP, WILLIAM HULME'S GRAMMAR SCHOOL MANCHESTER

Drawing Title: NORTH & SOUTH MUGA - STANDARD CONSTRUCTION DETAILS

Information: Scale, Drawn, Checked, Date

As shown @ A0 EG PJC 23.04.25

Drawing Number: 23639-RL-25-XX-DR-C-2330 P02

BIM Drawing Reference

Scale Bar: 1:20 0.2 0.4 0.6 0.8 1.0 1.2 1.4 1.6 1.8 2.0

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Appendix F – Greenfield Runoff Rate Calculations

Calculated by:	Peter Collier
Site name:	SRP Building
Site location:	William Hulme Grammar School

This is an estimation of the greenfield runoff rates that are used to meet normal best practice criteria in line with Environment Agency guidance "Rainfall runoff management for developments", SC030219 (2013), the SuDS Manual C753 (Ciria, 2015) and the non-statutory standards for SuDS (Defra, 2015). This information on greenfield runoff rates may be the basis for setting consents for the drainage of surface water runoff from sites.

Site Details

Latitude:	53.44472° N
Longitude:	2.2474° W
Reference:	1514707987
Date:	Jul 10 2024 17:50

Runoff estimation approach

IH124

Site characteristics

Total site area (ha):	0.1903
-----------------------	--------

Methodology

Q _{BAR} estimation method:	Calculate from SPR and SAAR
SPR estimation method:	Calculate from SOIL type

Notes

(1) Is Q_{BAR} < 2.0 l/s/ha?

When Q_{BAR} is < 2.0 l/s/ha then limiting discharge rates are set at 2.0 l/s/ha.

Soil characteristics

	Default	Edited
SOIL type:	4	4
HOST class:	N/A	N/A
SPR/SPRHOST:	0.47	0.47

(2) Are flow rates < 5.0 l/s?

Where flow rates are less than 5.0 l/s consent for discharge is usually set at 5.0 l/s if blockage from vegetation and other materials is possible. Lower consent flow rates may be set where the blockage risk is addressed by using appropriate drainage elements.

Hydrological characteristics

	Default	Edited
SAAR (mm):	853	853
Hydrological region:	10	10
Growth curve factor 1 year:	0.87	0.87
Growth curve factor 30 years:	1.7	1.7
Growth curve factor 100 years:	2.08	2.08
Growth curve factor 200 years:	2.37	2.37

(3) Is SPR/SPRHOST ≤ 0.3?

Where groundwater levels are low enough the use of soakaways to avoid discharge offsite would normally be preferred for disposal of surface water runoff.

Greenfield runoff rates

Default

Edited

Q_{BAR} (l/s):	1.16	1.16
1 in 1 year (l/s):	1.01	1.01
1 in 30 years (l/s):	1.97	1.97
1 in 100 year (l/s):	2.41	2.41
1 in 200 years (l/s):	2.74	2.74

This report was produced using the greenfield runoff tool developed by HR Wallingford and available at www.uksuds.com. The use of this tool is subject to the UK SuDS terms and conditions and licence agreement , which can both be found at www.uksuds.com/terms-and-conditions.htm. The outputs from this tool are estimates of greenfield runoff rates. The use of these results is the responsibility of the users of this tool. No liability will be accepted by HR Wallingford, the Environment Agency, CEH, Hydrosolutions or any other organisation for the use of this data in the design or operational characteristics of any drainage scheme.

Calculated by:	Peter Collier
Site name:	North MUGAs
Site location:	William Hulme Grammar School

This is an estimation of the greenfield runoff rates that are used to meet normal best practice criteria in line with Environment Agency guidance "Rainfall runoff management for developments", SC030219 (2013), the SuDS Manual C753 (Ciria, 2015) and the non-statutory standards for SuDS (Defra, 2015). This information on greenfield runoff rates may be the basis for setting consents for the drainage of surface water runoff from sites.

Site Details

Latitude:	53.44597° N
Longitude:	2.24663° W
Reference:	1035485264
Date:	Jul 10 2024 17:52

Runoff estimation approach

IH124

Site characteristics

Total site area (ha):	0.1419
-----------------------	--------

Methodology

Q _{BAR} estimation method:	Calculate from SPR and SAAR
SPR estimation method:	Calculate from SOIL type

Notes

(1) Is $Q_{BAR} < 2.0$ l/s/ha?

When Q_{BAR} is < 2.0 l/s/ha then limiting discharge rates are set at 2.0 l/s/ha.

Soil characteristics

	Default	Edited
SOIL type:	4	4
HOST class:	N/A	N/A
SPR/SPRHOST:	0.47	0.47

(2) Are flow rates < 5.0 l/s?

Where flow rates are less than 5.0 l/s consent for discharge is usually set at 5.0 l/s if blockage from vegetation and other materials is possible. Lower consent flow rates may be set where the blockage risk is addressed by using appropriate drainage elements.

Hydrological characteristics

	Default	Edited
SAAR (mm):	853	853
Hydrological region:	10	10
Growth curve factor 1 year:	0.87	0.87
Growth curve factor 30 years:	1.7	1.7
Growth curve factor 100 years:	2.08	2.08
Growth curve factor 200 years:	2.37	2.37

(3) Is $SPR/SPRHOST \leq 0.3$?

Where groundwater levels are low enough the use of soakaways to avoid discharge offsite would normally be preferred for disposal of surface water runoff.

Greenfield runoff rates

Default

Edited

Q_{BAR} (l/s):	0.86	0.86
1 in 1 year (l/s):	0.75	0.75
1 in 30 years (l/s):	1.47	1.47
1 in 100 year (l/s):	1.8	1.8
1 in 200 years (l/s):	2.05	2.05

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Calculated by:	Peter Collier
Site name:	South MUGAs
Site location:	William Hulme Grammar School

This is an estimation of the greenfield runoff rates that are used to meet normal best practice criteria in line with Environment Agency guidance "Rainfall runoff management for developments", SC030219 (2013), the SuDS Manual C753 (Ciria, 2015) and the non-statutory standards for SuDS (Defra, 2015). This information on greenfield runoff rates may be the basis for setting consents for the drainage of surface water runoff from sites.

Site Details

Latitude:	53.44426° N
Longitude:	2.24725° W
Reference:	2346750175
Date:	Jul 10 2024 17:52

Runoff estimation approach

IH124

Site characteristics

Total site area (ha):	0.1923
-----------------------	--------

Methodology

Q _{BAR} estimation method:	Calculate from SPR and SAAR
SPR estimation method:	Calculate from SOIL type

Notes

(1) Is Q_{BAR} < 2.0 l/s/ha?

When Q_{BAR} is < 2.0 l/s/ha then limiting discharge rates are set at 2.0 l/s/ha.

Soil characteristics

	Default	Edited
SOIL type:	4	4
HOST class:	N/A	N/A
SPR/SPRHOST:	0.47	0.47

(2) Are flow rates < 5.0 l/s?

Where flow rates are less than 5.0 l/s consent for discharge is usually set at 5.0 l/s if blockage from vegetation and other materials is possible. Lower consent flow rates may be set where the blockage risk is addressed by using appropriate drainage elements.

Hydrological characteristics

	Default	Edited
SAAR (mm):	853	853
Hydrological region:	10	10
Growth curve factor 1 year:	0.87	0.87
Growth curve factor 30 years:	1.7	1.7
Growth curve factor 100 years:	2.08	2.08
Growth curve factor 200 years:	2.37	2.37

(3) Is SPR/SPRHOST ≤ 0.3?

Where groundwater levels are low enough the use of soakaways to avoid discharge offsite would normally be preferred for disposal of surface water runoff.

Greenfield runoff rates

Default

Edited

Q_{BAR} (l/s):	1.17	1.17
1 in 1 year (l/s):	1.02	1.02
1 in 30 years (l/s):	1.99	1.99
1 in 100 year (l/s):	2.43	2.43
1 in 200 years (l/s):	2.77	2.77

This report was produced using the greenfield runoff tool developed by HR Wallingford and available at www.uksuds.com. The use of this tool is subject to the UK SuDS terms and conditions and licence agreement , which can both be found at www.uksuds.com/terms-and-conditions.htm. The outputs from this tool are estimates of greenfield runoff rates. The use of these results is the responsibility of the users of this tool. No liability will be accepted by HR Wallingford, the Environment Agency, CEH, Hydrosolutions or any other organisation for the use of this data in the design or operational characteristics of any drainage scheme.

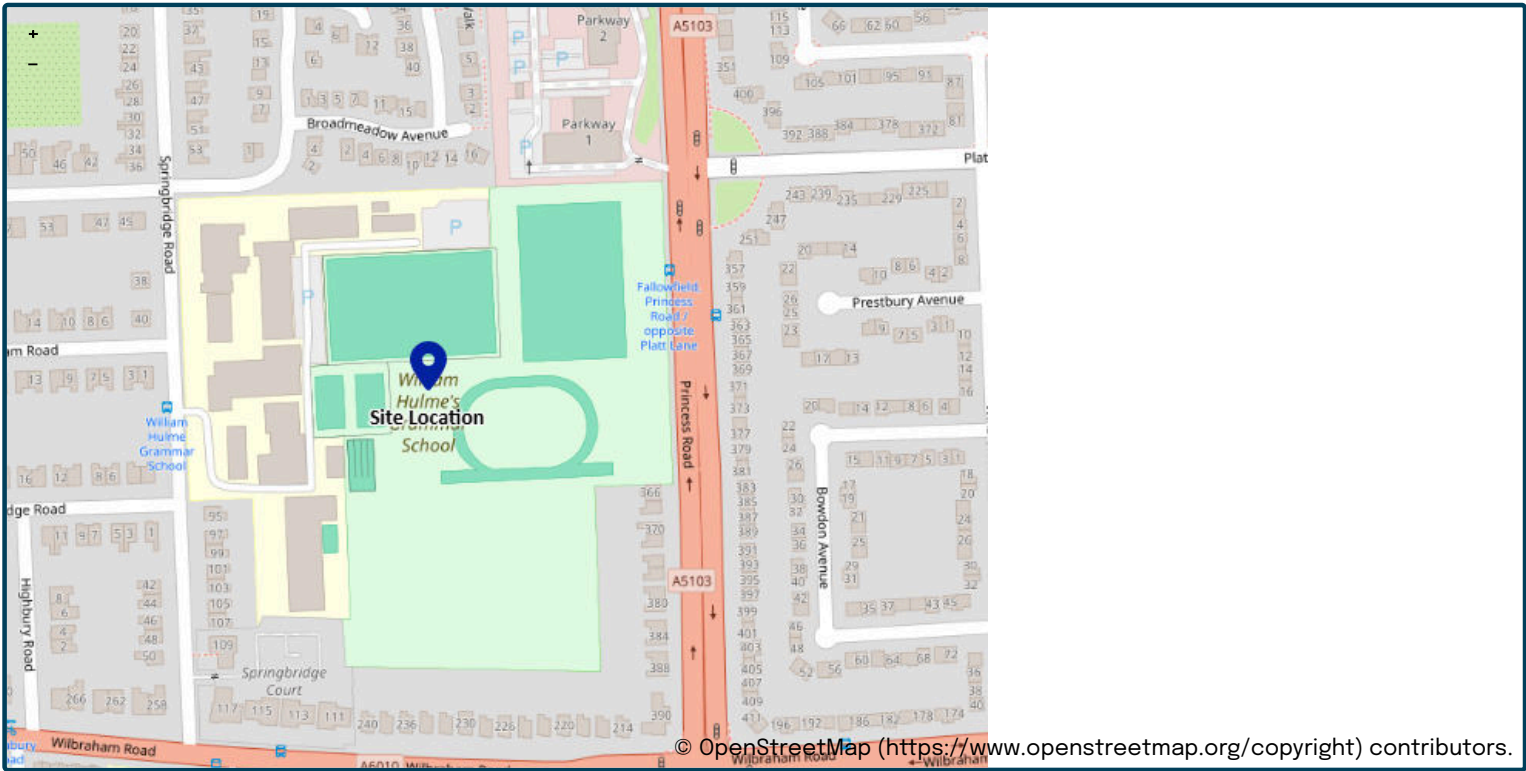
This is an estimation of the greenfield runoff rates that are used to meet normal best practice criteria in line with Environment Agency guidance “Rainfall runoff management for developments”, SC030219 (2013), the SuDS Manual C753 (CIRIA, 2015) and the non-statutory standards for SuDS (Defra, 2015). This information on greenfield runoff rates may be the basis for setting consents for the drainage of surface water runoff from sites.

Project details

Date	01/04/2025
Calculated by	Elliot Goodey
Reference	
Model version	0.6.5

Location

Site name	Parking Area
Site location	William Hulme Grammar School



Site easting	383710
Site northing	394277

Site details

Total site area (ha)	0.0430	ha
----------------------	--------	----

Greenfield runoff

Method

Method	IH124
--------	-------

IH124

	<u>My value</u>		<u>Map value</u>
SAAR (mm)	853 mm		853
How should SPR be derived?	WRAP soil type		
WRAP soil type	4		4
SPR	0.47		0.47
QBar (IH124) (l/s)	0.26 l/s		

Growth curve factors

	<u>My value</u>		<u>Map value</u>
Hydrological region	10		10
1 year growth factor	0.87		
2 year growth factor	0.93		
10 year growth factor	1.38		
30 year growth factor	1.7		
100 year growth factor	2.08		
200 year growth factor	2.37		

Results

Method	IH124	
Flow rate 1 year (l/s)	0.23 l/s	
Flow rate 2 year (l/s)	0.24 l/s	
Flow rate 10 years (l/s)	0.36 l/s	
Flow rate 30 years (l/s)	0.44 l/s	
Flow rate 100 years (l/s)	0.54 l/s	
Flow rate 200 years (l/s)	0.62 l/s	

Disclaimer

This report was produced using the Greenfield runoff rate estimation tool (0.6.5) developed by HR Wallingford and available at uksuds.com (<https://www.uksuds.com/>).

The use of this tool is subject to the UK SuDS terms and conditions and licence agreement, which can both be found at [uksuds.com/terms-conditions](https://www.uksuds.com/terms-conditions) (<https://www.uksuds.com/terms-conditions>). The outputs from this tool have been used to estimate Greenfield runoff rates. The use of these results is the responsibility of the users of this tool. No liability will be accepted by HR Wallingford, the Environment Agency, Centre for Ecology and Hydrology, Wallingford Hydrosolutions or any other organisation for the use of these data in the design or operational characteristics of any drainage scheme.

Appendix G - Drainage Calculations

Design Settings

Rainfall Methodology	FEH-22	Minimum Velocity (m/s)	1.00
Return Period (years)	100	Connection Type	Level Soffits
Additional Flow (%)	0	Minimum Backdrop Height (m)	0.900
CV	1.000	Preferred Cover Depth (m)	1.200
Time of Entry (mins)	5.00	Include Intermediate Ground	✓
Maximum Time of Concentration (mins)	30.00	Enforce best practice design rules	x
Maximum Rainfall (mm/hr)	50.0		

Nodes

Name	Area (ha)	T of E (mins)	Cover Level (m)	Diameter (mm)	Easting (m)	Northing (m)	Depth (m)
MH01	0.142	5.00	31.740	1200	383725.912	394372.626	0.590
EX.CW.MH			31.840	1200	383642.665	394370.499	0.875
MH06	0.043	5.00	31.970	1350	383646.546	394258.334	0.993
MH07			31.850	1500	383647.524	394233.035	0.929
EX.SW.MH 03			31.850	1200	383638.367	394229.923	0.950
MH08	0.192	5.00	31.950	1200	383667.616	394227.823	1.027
EX.SW.MH			31.870	1200	383662.550	394230.458	0.955
IC09		5.00	31.850	600	383663.647	394300.980	0.662
IC08	0.019	5.00	31.905	600	383644.446	394300.081	0.760
IC05	0.062	5.00	31.815	600	383646.302	394263.985	0.750
IC06	0.062	5.00	31.790	600	383673.935	394264.940	0.664
IC07		5.00	31.850	600	383672.617	394296.432	0.654

Links

Name	US Node	DS Node	Length (m)	ks (mm) / n	US IL (m)	DS IL (m)	Fall (m)	Slope (1:X)	Dia (mm)	T of C (mins)	Rain (mm/hr)
1.007	IC07	IC06	31.520	0.600	31.196	31.126	0.070	450.0	150	6.12	50.0
1.006	IC06	IC05	27.649	0.600	31.126	31.065	0.061	450.0	150	7.11	50.0
1.005	IC09	IC08	19.222	0.600	31.188	31.145	0.043	450.0	150	5.69	50.0
1.004	IC08	IC05	36.144	0.600	31.145	31.065	0.080	450.0	150	6.97	50.0
1.003	IC05	MH06	5.656	0.600	31.065	31.052	0.013	450.0	150	7.31	50.0
1.000-	MH06	MH07	25.318	0.600	30.977	30.921	0.056	450.0	225	8.00	50.0
1.001-	MH07	EX.SW.MH 03	9.671	0.600	30.921	30.900	0.021	460.5	225	8.27	50.0
2.000-	MH01	EX.CW.MH	83.276	0.600	31.150	30.965	0.185	450.0	150	7.97	50.0
3.000	MH08	EX.SW.MH	3.540	0.600	30.923	30.915	0.008	450.0	150	5.13	50.0

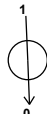
Name	Vel (m/s)	Cap (l/s)	Flow (l/s)	US Depth (m)	DS Depth (m)	Σ Area (ha)	Σ Add Inflow (l/s)	Pro Depth (mm)	Pro Velocity (m/s)
1.007	0.467	8.3	0.0	0.504	0.514	0.000	0.0	0	0.000
1.006	0.467	8.3	11.2	0.514	0.600	0.062	0.0	150	0.476
1.005	0.467	8.3	0.0	0.512	0.610	0.000	0.0	0	0.000
1.004	0.467	8.3	3.4	0.610	0.600	0.019	0.0	68	0.447
1.003	0.467	8.3	25.8	0.600	0.768	0.143	0.0	150	0.476
1.000-	0.610	24.2	33.6	0.768	0.704	0.186	0.0	225	0.621
1.001-	0.603	24.0	33.6	0.704	0.725	0.186	0.0	225	0.614
2.000-	0.467	8.3	25.7	0.440	0.725	0.142	0.0	150	0.476
3.000	0.467	8.3	34.7	0.877	0.805	0.192	0.0	150	0.476

Pipeline Schedule

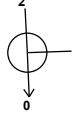
Link	Length (m)	Slope (1:X)	Dia (mm)	Link Type	US CL (m)	US IL (m)	US Depth (m)	DS CL (m)	DS IL (m)	DS Depth (m)
1.007	31.520	450.0	150	Circular	31.850	31.196	0.504	31.790	31.126	0.514
1.006	27.649	450.0	150	Circular	31.790	31.126	0.514	31.815	31.065	0.600
1.005	19.222	450.0	150	Circular	31.850	31.188	0.512	31.905	31.145	0.610
1.004	36.144	450.0	150	Circular	31.905	31.145	0.610	31.815	31.065	0.600
1.003	5.656	450.0	150	Circular	31.815	31.065	0.600	31.970	31.052	0.768
1.000-	25.318	450.0	225	Circular	31.970	30.977	0.768	31.850	30.921	0.704
1.001-	9.671	460.5	225	Circular	31.850	30.921	0.704	31.850	30.900	0.725
2.000-	83.276	450.0	150	Circular	31.740	31.150	0.440	31.840	30.965	0.725
3.000	3.540	450.0	150	Circular	31.950	30.923	0.877	31.870	30.915	0.805

Link	US Node	Dia (mm)	DS Node	Dia (mm)
1.007	IC07	600	IC06	600
1.006	IC06	600	IC05	600
1.005	IC09	600	IC08	600
1.004	IC08	600	IC05	600
1.003	IC05	600	MH06	1350
1.000-	MH06	1350	MH07	1500
1.001-	MH07	1500	EX.SW.MH 03	1200
2.000-	MH01	1200	EX.CW.MH	1200
3.000	MH08	1200	EX.SW.MH	1200

Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)
MH01	383725.912	394372.626	31.740	0.590	1200				
EX.CW.MH	383642.665	394370.499	31.840	0.875	1200		0 2.000- 1 2.000-	31.150 30.965	150 150
MH06	383646.546	394258.334	31.970	0.993	1350		1 1.003 0 1.000-	31.052 30.977	150 225
MH07	383647.524	394233.035	31.850	0.929	1500		1 1.000- 0 1.001-	30.921 30.921	225 225
EX.SW.MH 03	383638.367	394229.923	31.850	0.950	1200		1 1.001- 0 3.000	30.900 30.923	225 150
MH08	383667.616	394227.823	31.950	1.027	1200				

Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)	
EX.SW.MH	383662.550	394230.458	31.870	0.955	1200		1	3.000	30.915	150
IC09	383663.647	394300.980	31.850	0.662	600		0	1.005	31.188	150
IC08	383644.446	394300.081	31.905	0.760	600		1	1.005	31.145	150
IC05	383646.302	394263.985	31.815	0.750	600		0	1.004	31.145	150
						1	1.006	31.065	150	
						2	1.004	31.065	150	
IC06	383673.935	394264.940	31.790	0.664	600		0	1.003	31.065	150
IC06	383673.935	394264.940	31.790	0.664	600		1	1.007	31.126	150
						0	1.006	31.126	150	
IC07	383672.617	394296.432	31.850	0.654	600		0	1.007	31.196	150

Simulation Settings

Rainfall Methodology	FEH-22	Analysis Speed	Detailed	Additional Storage (m³/ha)	0.0
Summer CV	1.000	Skip Steady State	x	Check Discharge Rate(s)	x
Winter CV	1.000	Drain Down Time (mins)	240	Check Discharge Volume	x

Storm Durations

15 | 30 | 60 | 120 | 180 | 240 | 360 | 480 | 600 | 720 | 960 | 1440

Return Period (years)	Climate Change (CC %)	Additional Area (A %)	Additional Flow (Q %)
2	0	0	0
30	0	0	0
100	45	0	0

Node MH07 Online Hydro-Brake® Control

Flap Valve	x	Objective	(HE) Minimise upstream storage
Replaces Downstream Link	✓	Sump Available	✓
Invert Level (m)	30.921	Product Number	CTL-SHE-0059-1400-0800-1400
Design Depth (m)	0.800	Min Outlet Diameter (m)	0.075
Design Flow (l/s)	1.4	Min Node Diameter (mm)	1200

Node MH01 Online Hydro-Brake® Control

Flap Valve	x	Objective	(HE) Minimise upstream storage
Replaces Downstream Link	✓	Sump Available	✓
Invert Level (m)	31.150	Product Number	CTL-SHE-0054-9000-0250-9000
Design Depth (m)	0.250	Min Outlet Diameter (m)	0.075
Design Flow (l/s)	0.9	Min Node Diameter (mm)	1200

Node MH08 Online Hydro-Brake® Control

Flap Valve	x	Objective	(HE) Minimise upstream storage
Replaces Downstream Link	✓	Sump Available	✓
Invert Level (m)	30.923	Product Number	CTL-SHE-0059-1100-0300-1100
Design Depth (m)	0.300	Min Outlet Diameter (m)	0.075
Design Flow (l/s)	1.1	Min Node Diameter (mm)	1200

Node MH01 Carpark Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Invert Level (m)	31.150	Slope (1:X)	9999.9
Side Inf Coefficient (m/hr)	0.00000	Time to half empty (mins)		Depth (m)	0.150
Safety Factor	2.0	Width (m)	24.070	Inf Depth (m)	
Porosity	0.95	Length (m)	59.000		

Node MH08 Carpark Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Invert Level (m)	30.923	Slope (1:X)	9999.9
Side Inf Coefficient (m/hr)	0.00000	Time to half empty (mins)		Depth (m)	0.150
Safety Factor	2.0	Width (m)	25.700	Inf Depth (m)	
Porosity	0.95	Length (m)	73.200		

Node MH07 Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Safety Factor	2.0	Invert Level (m)	30.921
Side Inf Coefficient (m/hr)	0.00000	Porosity	1.00	Time to half empty (mins)	

Depth (m)	Area (m²)	Inf Area (m²)	Depth (m)	Area (m²)	Inf Area (m²)	Depth (m)	Area (m²)	Inf Area (m²)
0.000	174.0	0.0	0.400	174.0	0.0	0.401	0.0	0.0

Node IC08 Carpark Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Invert Level (m)	31.145	Slope (1:X)	9999.9
Side Inf Coefficient (m/hr)	0.00000	Time to half empty (mins)		Depth (m)	0.300
Safety Factor	2.0	Width (m)	10.000	Inf Depth (m)	
Porosity	0.30	Length (m)	19.303		

Node IC06 Carpark Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Invert Level (m)	31.126	Slope (1:X)	9999.9
Side Inf Coefficient (m/hr)	0.00000	Time to half empty (mins)		Depth (m)	0.300
Safety Factor	2.0	Width (m)	10.000	Inf Depth (m)	
Porosity	0.30	Length (m)	34.344		

Node IC05 Carpark Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Invert Level (m)	31.065	Slope (1:X)	9999.9
Side Inf Coefficient (m/hr)	0.00000	Time to half empty (mins)		Depth (m)	0.300
Safety Factor	2.0	Width (m)	10.000	Inf Depth (m)	
Porosity	0.30	Length (m)	36.188		

Other (defaults)

Entry Loss (manhole)	0.250	Entry Loss (junction)	0.000	Apply Recommended Losses	x
Exit Loss (manhole)	0.250	Exit Loss (junction)	0.000	Flood Risk (m)	0.300

Results for 2 year Critical Storm Duration. Lowest mass balance: 99.90%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
1440 minute winter	MH01	1110	31.181	0.031	1.4	37.3471	0.0000	OK
15 minute summer	EX.CW.MH	1	30.965	0.000	0.0	0.0000	0.0000	OK
15 minute summer	MH06	10	31.135	0.158	7.3	0.2265	0.0000	OK
600 minute summer	MH07	450	31.063	0.142	4.1	24.8880	0.0000	OK
15 minute summer	EX.SW.MH 03	1	30.900	0.000	0.5	0.0000	0.0000	OK
1440 minute winter	MH08	1200	30.957	0.034	2.0	51.7544	0.0000	OK
15 minute summer	EX.SW.MH	1	30.915	0.000	0.1	0.0000	0.0000	OK
15 minute summer	IC09	1	31.188	0.000	0.0	0.0000	0.0000	OK
120 minute summer	IC08	74	31.174	0.029	1.5	1.6020	0.0000	OK
180 minute summer	IC05	116	31.140	0.075	6.3	7.9242	0.0000	OK
120 minute summer	IC06	74	31.181	0.055	5.0	4.9307	0.0000	OK
15 minute summer	IC07	1	31.196	0.000	0.0	0.0000	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
1440 minute winter	MH01	Hydro-Brake®	EX.CW.MH	0.3				18.0
15 minute summer	MH06	1.000-	MH07	8.5	1.007	0.352	0.3795	
600 minute summer	MH07	Hydro-Brake®	EX.SW.MH 03	1.3				41.2
1440 minute winter	MH08	Hydro-Brake®	EX.SW.MH	0.4				22.4
15 minute summer	IC09	1.005	IC08	0.0	0.000	0.000	0.0147	
120 minute summer	IC08	1.004	IC05	0.7	0.137	0.080	0.1919	
180 minute summer	IC05	1.003	MH06	4.3	0.565	0.524	0.0433	
120 minute summer	IC06	1.006	IC05	2.4	0.365	0.296	0.1943	
15 minute summer	IC07	1.007	IC06	0.0	0.000	0.000	0.0651	

Results for 30 year Critical Storm Duration. Lowest mass balance: 99.90%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
1440 minute summer	MH01	1020	31.204	0.054	4.2	69.4734	0.0000	OK
15 minute summer	EX.CW.MH	1	30.965	0.000	0.2	0.0000	0.0000	OK
600 minute summer	MH06	465	31.188	0.211	8.6	0.3013	0.0000	OK
600 minute summer	MH07	465	31.187	0.266	8.5	46.8119	0.0000	SURCHARGED
15 minute summer	EX.SW.MH 03	1	30.900	0.000	1.3	0.0000	0.0000	OK
1440 minute summer	MH08	1050	30.982	0.059	5.6	96.0678	0.0000	OK
15 minute summer	EX.SW.MH	1	30.915	0.000	0.2	0.0000	0.0000	OK
60 minute summer	IC09	45	31.204	0.016	0.1	0.0045	0.0000	OK
60 minute summer	IC08	45	31.203	0.058	5.5	3.3451	0.0000	OK
60 minute summer	IC05	43	31.202	0.137	24.7	14.6827	0.0000	OK
60 minute summer	IC06	40	31.239	0.113	17.9	10.2962	0.0000	OK
60 minute summer	IC07	39	31.239	0.043	0.5	0.0122	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
1440 minute summer	MH01	Hydro-Brake®	EX.CW.MH	0.7				40.3
600 minute summer	MH06	1.000-	MH07	8.5	0.419	0.350	0.9928	
600 minute summer	MH07	Hydro-Brake®	EX.SW.MH 03	1.4				51.5
1440 minute summer	MH08	Hydro-Brake®	EX.SW.MH	0.9				50.3
60 minute summer	IC09	1.005	IC08	-0.1	-0.051	-0.014	0.0706	
60 minute summer	IC08	1.004	IC05	2.2	0.212	0.271	0.4187	
60 minute summer	IC05	1.003	MH06	11.6	0.778	1.405	0.0829	
60 minute summer	IC06	1.006	IC05	6.7	0.473	0.816	0.4280	
60 minute summer	IC07	1.007	IC06	-0.5	-0.090	-0.064	0.2890	

Results for 100 year +45% CC Critical Storm Duration. Lowest mass balance: 99.90%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
1440 minute winter	MH01	1350	31.254	0.104	5.3	135.9310	0.0000	OK
15 minute summer	EX.CW.MH	1	30.965	0.000	0.5	0.0000	0.0000	OK
960 minute winter	MH06	915	31.549	0.572	6.3	0.8190	0.0000	SURCHARGED
960 minute winter	MH07	915	31.549	0.628	6.2	70.7968	0.0000	SURCHARGED
15 minute summer	EX.SW.MH 03	1	30.900	0.000	1.4	0.0000	0.0000	OK
1440 minute summer	MH08	1290	31.035	0.112	10.6	189.0064	0.0000	OK
15 minute summer	EX.SW.MH	1	30.915	0.000	0.6	0.0000	0.0000	OK
960 minute winter	IC09	915	31.550	0.362	0.1	0.1023	0.0000	SURCHARGED
960 minute winter	IC08	915	31.550	0.405	1.2	17.4583	0.0000	SURCHARGED
960 minute winter	IC05	915	31.550	0.485	6.0	32.5437	0.0000	FLOOD RISK
960 minute winter	IC06	915	31.550	0.424	3.1	28.9735	0.0000	FLOOD RISK
960 minute winter	IC07	915	31.550	0.354	0.1	0.1001	0.0000	SURCHARGED

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
1440 minute winter	MH01	Hydro-Brake®	EX.CW.MH	0.9				59.6
960 minute winter	MH06	1.000-	MH07	6.2	0.441	0.256	1.0069	
960 minute winter	MH07	Hydro-Brake®	EX.SW.MH 03	1.4				75.6
1440 minute summer	MH08	Hydro-Brake®	EX.SW.MH	1.1				71.8
960 minute winter	IC09	1.005	IC08	-0.1	-0.014	-0.017	0.3384	
960 minute winter	IC08	1.004	IC05	1.1	0.116	0.128	0.6363	
960 minute winter	IC05	1.003	MH06	4.6	0.568	0.556	0.0996	
960 minute winter	IC06	1.006	IC05	2.5	0.293	0.303	0.4868	
960 minute winter	IC07	1.007	IC06	0.1	-0.013	0.008	0.5549	

Appendix H – Northwest SuDS Proforma

NORTH WEST SuDS PRO-FORMA TEMPLATE

Document Change Log		
Version	Date Agreed	Changes made
Version 1	April 2020	Initial version issued
Version 2	July 2020	- Page 1 – ‘Guidance to support you’ section – word ‘approved’ changed to ‘appropriate’ - Section 5 – Box 4 ‘Evidence Required’ - word ‘approved’ changed to ‘appropriate’ - Section 5 – Box 9 ‘Summarise how storage will be provided for 1 in 100 year (plus climate change) event on site’ - word ‘approved’ changed to ‘appropriate’
Version 3	August 2020	- Front sheet and Document Change Log added - Page 1 – Para 1 Footnote – words ‘of 0.5 hectares’ removed
Version 4	July 2021	- Front page amended and branding removed. - Section 1 - Previously Developed/ Brownfield Site – words ‘then one of the approaches outlined in Section 24.5 of The SuDS Manual (C753) should be adopted’ removed. - Section 7b – Hierarchy Level 2 – Note wording amended from ‘Where third party land is cited as a barrier, you should provide visibility of discussions held to date with the riparian landowner of the waterbody’ to ‘Where discharge of any element in the hierarchy is discounted, an applicant should provide justification. If the reasoning for discounting a discharge of surface water to watercourse relates to issues associated with third party land or the securing of any other required consent, it may be necessary for the applicant to provide evidence to the local planning authority to support their proposed approach’
Version 5	May 2022	Pro-forma guidance updated to take account of the new climate change allowances published on 10 May 2022. There is no change to the pro-forma itself.

Website: [The Flood Hub](#)

This website is an online resource which has been funded by the North West Regional Flood and Coastal Committee as a one stop shop for flood advice and information across the North West.

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[PLEASE ADD LOCAL AUTHORITY LOGO TO THIS PAGE]

[*LOCAL AUTHORITY*] SuDS PRO-FORMA

This Pro-forma is endorsed by the North West Regional Flood and Coastal Committee, including representatives from Lead Local Flood Authorities, Highway Authorities, United Utilities and the Environment Agency

[Amend as appropriate]

NORTH WEST SuDS PRO-FORMA

This pro-forma is a requirement for any planning application for major development¹.

It supports applicants in summarising and confirming how surface water from a development will be managed sustainably under current and future conditions.

Your sustainable drainage system should be designed in accordance with [CIRIA The SuDS Manual C753](#) and any necessary adoption standards.

HOW TO COMPLETE

Blue Box	Instruction/ Question
Orange Box	Evidence Required
White Box	To be completed by Developer / Consultant

1. Complete ALL white boxes
2. Submit this pro-forma to the Local Planning Authority, along with:
 - Sustainable Drainage Strategy
 - Site Specific Flood Risk Assessment (if required)
 - Minimum supporting evidence, as indicated in orange boxes of this pro-forma.

GUIDANCE TO SUPPORT YOU

The pro-forma should be completed in conjunction with ‘Completing your SuDS Pro Forma Guide.’

The pro-forma can be completed using freely available tools such as [Tools for Sustainable Drainage Systems](#) or appropriate industry standard surface water management design software.

¹ as defined in Section 2 of [Statutory Instrument 2015 No. 595](#) or on sites in Critical Drainage Areas.

SECTION 1. APPLICATION & DEVELOPMENT DETAILS

Planning Application Reference <i>(if available)</i>		
State type of planning application <i>i.e. Pre-application, Outline, Full, Hybrid, Reserved Matters*</i> <i>*Information only required if drainage is to be considered as part of reserved matters application</i>	Full	
Developer(s) Name:	United Learning	
Consultant(s) Name:	Rodgers Leask	
Development Address <i>(including postcode)</i>	Spring Bridge Rd, Manchester M16 8PR	
Development Grid Reference <i>(Eastings/Northings)</i>	383665 Easting 394281 Northing	
Total Development Site Area (Ha)		
Drained Area (Ha)* of Development	1.5334	
Please indicate the flood zone that your development is in. Tick all that apply. <i>Based on the Environment Agency Flood Map for Planning and the relevant Local Authority Strategic Flood Risk Assessment (to identify Flood Zones 3a/3b).</i>	Flood Zone 1 ☒ Flood Zone 2 ☐ Flood Zone 3a ☐ Flood Zone 3b ☐	
What is the surface water risk of the site? Tick all that apply. <i>Based on the Environment Agency Surface Water Flood Map.</i>	High ☐ Medium ☐ Low ☒	
Have you submitted a Site Specific Flood Risk Assessment (FRA)? <i>See separate guidance notes for clarification on when a FRA is required</i>	Yes ☐ No ☒	
Have you submitted a Sustainable Drainage Strategy?	Yes ☒ No ☐	
Does your drainage proposal provide multi-functional benefits via SuDS?	Yes ☒ No ☐	
Expected Lifetime of Development <i>(years)</i> <i>Refer to Planning Practice Guidance "Flood Risk and Coastal Change" Paragraph 026</i>	50 years	
Development Type:		State Proposed Number of Units
Greenfield Site Site is wholly undeveloped, and a new drainage system will be installed	☐	
Previously Developed/ Brownfield Site - Site is already developed, and the <u>entirety</u> of the existing surface water drainage system will be used to serve the new development (evidence must be provided to prove existing surface water drainage system is reusable); OR - Where records of the previously developed system are not available so that the hydraulic characteristics of the system cannot be determined or where the drainage system is not in reasonable working order i.e. broken, blocked or no longer operational for other reasons.	☒	Site is previously developed however strategy has been derived as greenfield to ensure suitable rates

		for conection to CW sewer
Please list any relevant document and or drawing numbers (including revision reference) to support your answers to Section 1.	Refer to report text	

SECTION 2: IMPERMEABLE AREA AND EXISTING DRAINAGE

	Existing (E)	Proposed (P)	Change (P – E)
State Impermeable Area (Ha)		1.5334	1.5334 No existing impermeable area has been accounted for as none of the area of use are positively drained
Evidence Required: Plans showing development layout of site with existing and proposed impermeable areas.			☒

Are there existing sewers, watercourses, water bodies, highway drains, soakaways or filter drains on the site?	Yes ☒ No ☐ Don't Know ☐
Evidence Required: Plan(s) showing existing layout to include all: • Watercourses, open and culverted • Water bodies – ponds, swales etc. • Sewers, including manholes • Highway drains, include manholes, gullies etc. • Infiltration features - soakaways, filter drains etc.	☒

Drainage Design <u>Outline planning applications</u> should be able to demonstrate that a suitable drainage system is achievable. <u>All other type of planning application</u> should provide full details or reference to previous planning application where drainage details have been submitted or approved.	
Select which design approach you are taking to manage water quantity (refer to Section 3.3 SuDS Manual)	
Approach 1 – Volume control / Long Term Storage (Technical Standards S2/3, S4/5) - The attenuated runoff volume for the 1 in 100 year 6 hour event (plus climate change allowance) is limited to the greenfield runoff volume for the 1 in 100 year 6 hour event, with any additional runoff volume utilising long term storage and either infiltrated or released at 2 l/s/ha - The discharge rate for the critical duration 1 in 1 year event is restricted to the 1 in 1 year greenfield runoff rate - The discharge rate for the critical duration 1 in 100 year event (plus climate change allowance) is restricted to the 1 in 100 year greenfield runoff rate	☐
Approach 2 – Qbar (Technical Standards S6) Justification has been provided that the provision of volume control/long term storage is not appropriate and an attenuation only approach is proposed. All events up to the critical duration 1 in 100 year event (plus climate change allowance) are limited to Qbar (1 in 2 year greenfield rate) or 2 l/s/ha, whichever is greater.	☒
Evidence Required: Plans showing: Existing flow routes and flood risks	☒

- Modified flow routes
- Contributing and impermeable areas
- Current (if any) and proposed 'source control' and 'management train' locations of sustainable drainage components (C753 Chapter 7)
- Details of drainage ownership
- Details of exceedance routes (Technical Standards S9)
- Topographic survey
- Locations and number of existing and proposed discharge points

Note consideration should be given to manage surface water from both impermeable and permeable surfaces (including gardens and verges) likely to enter the drainage system.

Please list any relevant document and or drawing numbers (including revision reference) to support your answers to Section 2.

SECTION 3: PEAK RUNOFF RATES – TECHNICAL STANDARDS S2, S3 AND S6 (UNLESS S1 APPLIES)

Rainfall Event	Existing Rate (l/s)	Greenfield Rate (l/s)	Proposed Rate (l/s) <i>Previously developed sites - In line with S3 should be equivalent to Greenfield runoff rates – discuss with LLFA if this is not achievable pre-application</i>
Qbar (Approach 2)		3.45	3.45 Split into the 3 areas of the site
1 in 1 Year Event (Approach 1)		3.01	
1 in 30 Year Event		5.87	
1 in 100 Year Event* (Approach 1)		7.51	

** Total discharge at the 1 in 100 year rate should be restricted to the greenfield runoff volume for the 1 in 100 Year 6 hour event with additional volumes (long-term storage volume) released at a rate no greater than 2 l/s/ha where infiltration is not possible. The climate change allowance should only be applied to the proposed rate and not the existing or greenfield rate.*

Evidence Required:

Methodology used to calculate peak runoff rate clearly stated and justified.



Impermeable areas plan, supported by topographical survey confirming positive drainage.



Hydraulic calculations and details of software used.



State the hydraulic method used in your calculations
(Refer to Table 24.1 of The SuDS Manual)

IH124

Please list any relevant document and or drawing numbers (including revision reference) to support your answers to Section 3.

See Appendix F

SECTION 4: DISCHARGE VOLUME – TECHNICAL STANDARDS S4, S5 AND S6 (UNLESS S1 APPLIES)

Rainfall Event	Existing Volume (m ³)	Greenfield Volume (m ³)	Proposed Volume (m ³)
1 in 100 Year 6 Hour Event <i>(Approach 1)</i>			
Does the below statement apply to your development proposal? Long term storage is not achievable on this site and, in accordance with S6 of the Non Statutory Technical Standards for SuDS, the surface water discharge rates for events up to and including the 1 in 100 year critical event are limited to Qbar (Approach 2)			Yes ☒ No ☐
Evidence Required: Approach to managing the quantity of surface water leaving the site clearly stated and justified Methodology used to calculate discharge volume clearly stated and justified. Hydraulic calculations and details of software used.			☒ ☒ ☒

Please list any relevant document and or drawing numbers (including revision reference) to support your answers to Section 4.	See report text
--	-----------------

SECTION 5: STORAGE – TECHNICAL STANDARDS S7 AND S8

State climate change allowance used (%)	45%
State housing density (houses per ha)	N/A
State urban creep allowance used (%)	N/A
Evidence Required: State / used in appropriate industry standard surface water management design software.	☒

State storage volume required (m³) (excluding non-void spaces) <i>Must include an allowance for climate change and urban creep</i>	Refer to Drawings in appendix E
Have you incorporated interception into your design? <i>(Refer to Chapter 24 of The SuDS Manual C753)</i> <i>Where possible, infiltration or other techniques are to be used to try and achieve zero discharge to receiving waters for rainfall depths up to 5mm.</i>	Yes ☐ No ☒
Evidence Required: Drainage plans showing location of attenuation and all flow control devices and supporting calculations.	☒

Summarise how storage will be provided for 1 in 30 year event on site. <i>Storage must be designed to ensure that at no flooding occurs onsite in a 1 in 30 year event except in designed areas and no flooding occurs offsite in a 1 in 100 year (plus climate change allowance) event.</i>	
Summarise how storage will be provided for 1 in 100 year (plus climate change) event on site. <i>Where storage above the 1 in 30 year rainfall event is provided in designated areas designed to accommodate excess surface water volumes, plans showing storage locations and surface water depths and supported by calculations used in appropriate industry standard surface water management design software. It is important to run a range of duration events to ensure the worst case condition is found for each drainage element on the site</i>	
Evidence Required: Plans showing size and location of storage and supporting calculations. Where there is controlled flooding, extents and depths must be indicated.	☒

Please list any relevant document and or drawing numbers (including revision reference) to support your answers to Section 5.	
--	--

SECTION 6: WATER QUALITY PROTECTION

Contaminated surface water run-off can have negative impacts on the quality of receiving water bodies. The potential level of contamination will influence final the design of an appropriate treatment train as part of your sustainable drainage system.

Is the proposal site known to be or potentially contaminated?	Yes ☐	No ☒
If the site is contaminated, it should be demonstrated that the sustainable drainage system will not increase the risk of pollution to controlled waters through the mobilisation of contaminants and/or creation of new pollution pathways.		

Confirm the <i>Pollution Hazard Level</i> of the proposed development - Tick <u>ALL</u> that apply Refer to Pollution Hazard Indices for different Land Use Classifications in Table 26.2 of The SuDS Manual C753 for further guidance.		
Pollution Hazard Level Tick <u>ALL</u> that apply	Surface water run-off from the proposed development will drain from:	
VERY LOW	☐	Residential roofs
LOW	☒	- Other roofs (typically commercial/industrial roofs) - Individual property driveways, residential car parks, low traffic roads (e.g. cul de sacs, home-zones and general access roads) - Non-residential car parking with infrequent change (e.g. schools, offices) i.e. < 300 traffic movements/day
MEDIUM	☐	- Commercial yard and delivery areas - Non-residential car parking with frequent change (e.g. hospitals, retail) - All roads except low traffic roads and trunk roads/motorways²
HIGH	☐	- Sites with heavy pollution (e.g. haulage yards, lorry parks, highly frequented lorry approaches to industrial estates, waste sites) - Sites where chemicals and fuels (other than domestic fuel oil) are to be delivered, handled, stored, used or manufactured - Industrial sites - Trunk roads and motorways¹

If the development's Pollution Hazard Level is 'Very Low' or 'Low', has the sustainable drainage design been risk assessed and appropriate mitigation measures included?	Yes ☒	No ☐
If the proposed development has a very low or low polluting potential, you should design your sustainable drainage system to include an appropriate treatment train in accordance with The SuDS Manual (C753).		

If the development's Pollution Hazard Level is 'Medium' or 'High', is the application supported by a detailed water quality risk assessment?	Yes ☐	No ☐
- If the proposed development has a high polluting potential, a detailed risk assessment <u>will</u> be required to identify an appropriate SuDS treatment train and ensure compliance with Paragraph 170 of the National Planning Policy Framework. - If the proposed development has a medium polluting potential, a detailed risk assessment <u>may</u> be required depending on the nature, scale and location of the development.		

Has pre-application advice on water quality been obtained from the Environment Agency?	Yes ☐	No ☒
If YES, provide details:		

² Motorways and trunk roads should follow the guidance and risk assessment process set out in Highways Agency (2009).

Please list any relevant document and or drawing numbers (including revision reference) to support your answers to Section 6.

See section 4.7 of the report

SECTION 7: DETAILS OF YOUR SUSTAINABLE DRAINAGE SYSTEM

a) Function of your Sustainable Drainage System

Do your proposals store rainwater for later use (as a resource)?	Yes ☐ No ☒
Evidence Required: Please provide a brief sentence in the adjacent white box to describe how this function has been achieved.	

Do your proposals promote source control to manage rainfall close to where it falls? (e.g. promoting natural losses through soakage, infiltration and evapotranspiration)	Yes ☒ No ☐
Evidence Required: Please provide a brief sentence in the adjacent white box to describe how this function has been achieved.	Porus paving is being used across the proposed areas, which will act as source control.

Please list any relevant document and or drawing numbers (including revision reference) to support your answers to Section 7a.

See section 4.5 of report

b) Hierarchy of Drainage Options – Planning Practice Guidance

The proposed method of discharge are set out within order of priority. Generally, the aim should be to discharge surface run off as high up the following hierarchy of drainage options as reasonably practicable.

Proposed method of surface water discharge		Is this proposed?	
Hierarchy Level 1: Into the ground (via infiltration)		Yes ☐ No ☒	
If YES - Evidence Required		If NO – Evidence Required Tick ALL that apply	
☐	A. Completed Infiltration Checklist from The SuDS Manual (C753) Appendix B <i>An editable version of this form is available on SusDrain website.</i>	☐	A. Site investigation to demonstrate that the ground is not free draining. Test results to be provided in accordance with: - The methodology within BRE 365 (2016), OR - Falling head permeability tests BS EN ISO 22282-2: 2012
☐	B. British Geological Survey (BGS) Infiltration SuDS Map	☐	B. NOTE: where an applicant is unable to access a site to undertake testing, e.g. where unable to access a site for an outline application, they can submit a SuDS GeoReport or similar.
☒	C. Infiltration testing to BRE 365 (2016) or falling head permeability tests to BS EN ISO 2228-2: 2012 (optional for outline)	☐	C. Evidence to confirm that infiltration to ground would result in a risk of deterioration to ground water quality.
☒	'Plan B' sustainable drainage plan and statement of approach with an alternative discharge method, in case infiltration	☒	D. Geotechnical advice from a competent person* which determines that infiltration of water to ground would pose an unacceptable risk of geohazards to the site and/or local area.

	proposals are proven not feasible upon further site specific ground investigation e.g. to consider seasonal variations to groundwater.		<i>*Note: Competent person may include a Chartered Engineer, Chartered Geologists, Registered Ground Engineering Professionals (RoGEP).</i>
--	--	--	---

Proposed method of surface water discharge		Is this proposed?	
Hierarchy Level 2: To a surface water body <i>(select type)</i> NOTE: Consent from LLFA or Permit from Environment Agency may be required – refer to guidance		Yes ☐ No ☒ N/A ☐	
		☐ Main river ☐ Canal ☐ Ordinary watercourse ☐ Other water body	
If YES - Evidence Required		If NO – Evidence Required Tick ALL that apply	
☐	Surface water body / watercourse survey and report	☐	Plan showing nearby watercourses and waterbodies
		☐	Statement providing justification in your Sustainable Drainage Strategy
		Note: Where discharge of any element in the hierarchy is discounted, an applicant should provide justification. If the reasoning for discounting a discharge of surface water to watercourse relates to issues associated with third party land or the securing of any other required consent, it may be necessary for the applicant to provide evidence to the local planning authority to support their proposed approach.	

Proposed method of surface water discharge		Is this proposed?	
Hierarchy Level 3: To a surface water sewer or highway drain <i>(select type)</i>		Yes ☐ No ☒ N/A ☐	
		☐ Surface water sewer ☐ Highway drain	
If YES - Evidence Required		If NO – Evidence Required Tick ALL that apply	
☐	Written correspondence from Water and Sewerage Company/ Highway Authority regarding proposed connection.	☒	Plan showing nearby sewers and highway drains
		☒	Statement providing justification in your Sustainable Drainage Strategy

Proposed method of surface water discharge		Is this proposed?	
Hierarchy Level 4: To combined sewer		Yes ☒ No ☐ N/A ☐	
If YES - Evidence Required		If NO – Evidence Required	
☒	Written correspondence from Water and Sewerage Company	N/A	

No response received to date

Please list any relevant document and or drawing numbers (including revision reference) to support your answers to Section 7b.	See appendix I for UU PDE response
--	------------------------------------

c) Proposed SuDS Component Types

	Tick ALL that apply				
Within property boundary	☐ Rainwater harvesting	☐ Green/ blue roofs	☒ Pervious pavements [Type: A ☐ B ☐ C ☒]	☐ Soakaway	☐ Bio retention systems

	Tick ALL that apply				
Within development site boundary (not property)	☐ Infiltration system [Type: ☐ Surface level ☐ Below ground]		☐ Filter strips	☒ Filter drains	☐ Swales
	☐ Bio retention system	☐ Detention basins	☐ Ponds and wetlands	☐ Attenuation tanks/ Oversized pipes	☒ Other (state below)
	If 'Other' please state: Pervious pavements Type C				

Off site (not within the boundary of the proposed development)	Please state:
--	----------------------

I confirm that the above selected components have been designed in accordance with The SuDS Manual (C753).	I confirm ☒
I confirm that the management of flows resulting from rainfall in excess of a 1 in 100 year plus climate change rainfall event, and their exceedance route(s), has been fully considered in order to minimise the risks to people, property (new and existing) and infrastructure.	I confirm ☒

Please list any relevant document and or drawing numbers (including revision reference) to support your answers to Section 7c.	See RLL Drainage Strategy Report 22639-RLL-24-XX-RP-C-2060
--	--

The applicant is responsible to ensure that ALL components selected in Section 7 can be maintained for the design life of the development. This information is required so the Local Planning Authority can ensure the maintenance and management of the sustainable drainage system. The Local Planning Authority will discuss how this will be secured (e.g. via planning condition or planning obligation).

	Information Provided?
Management Plan	Yes ☐ No ☒
Evidence Required: Plan/ drawing provided to show the position of the different SuDS components with: - Key included to identify any of the adopting bodies that you will be offering your sustainable drainage components for adoption (<i>relates to maintenance and management arrangements below</i>). - Plan/ drawing to identify any areas where certain activities are prohibited, detailing reasons why.	☐
Action plan for accidental pollutant spillages.	☐

		Information Provided?
Maintenance Schedule		Yes ☒ No ☐
Evidence Required: A copy of the maintenance schedule including: Proactive and preventative maintenance Detailing regular, occasional and remedial maintenance activities including recommendations for inspection and monitoring. This should include recommended frequencies, advice on plant/ machinery required and an explanation of the objectives for the maintenance proposed and potential implications of not meeting them. Reactive and corrective maintenance (e.g. product repair and replacement). Including advice on excavations, or similar works, in locations that could affect the SuDS components/ adjacent structures.		☒

		Information Provided?
Maintenance and Management Arrangements		Yes ☒ No ☐
Evidence Required: Evidence of formal agreement with the party responsible for undertaking maintenance. Please select any of the adopting bodies that you will be offering your sustainable drainage components for adoption. Tick all that apply. ☐ Water and Sewerage Company <i>Section 104 agreement (Water Industry Act 1991)</i> ☐ Highway Authority <i>Section 278/38 agreement (Highways Act 1980)</i> ☐ Local Authority Public Open Space <i>[Refer to Local Authority Policy]</i> Please select the arrangement(s) for all non-adopted sustainable drainage components. Tick all that apply. ☐ Management Company ☒ Property Owner <i>(for SuDS components within property boundary only)</i> ☐ Other (please state)		☒

See section 5.1 of report

The information submitted in the Sustainable Drainage Strategy and site-specific Flood Risk Assessment (FRA), where submitted, is proportionate to the site conditions, flood risks and magnitude of development and I agree that this information can be used as evidence to this sustainable drainage approach.

[illegible]United Learning

Appendix I – UU Pre-Development Enquiry

ALERT: External email. Check the address. Think before you click links and attachments.

Good Morning Elliot,

As these 2 connections will be made to your existing private network, a PDE is not required for this.

United Utilities have no objection to your proposal

Kind Regards



Lewis Barr

Assistant Developer Engineer
Developer Services & Metering
Customer Services
01925 429064
unitedutilities.com

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----- Original Message -----

Good Morning

PRE DEVELOPMENT APPLICATION AT: William Hulmes Grammar School– UU Ref 05961399

Please accept this email as receipt of your application received on 1 July 2024 for the above development. This has now been logged on our system and the job reference is 05961399 we would ask that you quote this reference in all future correspondence.

I have reviewed your application (and attachments) and can confirm this is suitable to be passed to our assistant

engineer Lewis Barr for technical assessment. You will receive their response on or before 15 July 2024.

Kind regards

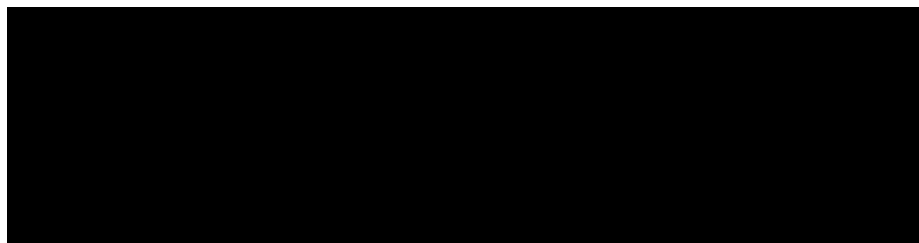


Jayne Guest
Customer Advisor Advanced
Developer Services & Metering
Customer Services
T: 0345 072 6067 option 4
unitedutilities.com

If you feel you have received a good service from myself, please can you take two minutes to fill in the survey below. This will be much appreciated



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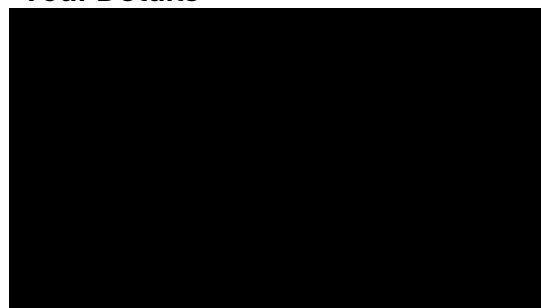


Question

Answer

Section 1 - Your Details

Developer/Consultant/Land owner/Other
Name
Company Name
Address
Contact Number
Email Address



street

Section 2 - Development Details

Do you intend to offer any of the sewers for adoption by United Utilities under S104?

No

Site Address

William Hulme's Grammar School Spring Bridge
Road Manchester M16 8PR

Question	Answer
Site Postcode	#Development postcode#
Site Name	William Hulme Grammar School
Grid Reference Number	SJ 836942
Development Type	Commercial
Approx. Number Units	1
Total Site Area (hectares)	0.5388
Does this site have planning permission?	No
Planning Reference Number	
Council Area	Manchester District Council
Have you approached us about this site previously?	No
If yes, please provide reference number	
Is the development part of a larger site that will be developed in phases?	No
Location Plan	22639-RLL-24-XX-SK-C-2050(P01).pdf

Section 3: Previous Land Use

Please confirm what the land was previously used for: Greenfield

Brownfield evidence of positive drainage to the public sewer

Section 4 - Drainage Strategy

Foul connection: How are you proposing to drain foul flows from the site? Via an existing connection to the public sewer

Via an existing connection to the public sewer? No

Surface water connection: How are you proposing to drain your site, following the surface water hierarchy, as outlined in National Planning Policy Guidance? Combined sewer

SuDS: Have SuDS features been considered in the surface water drainage strategy? Yes



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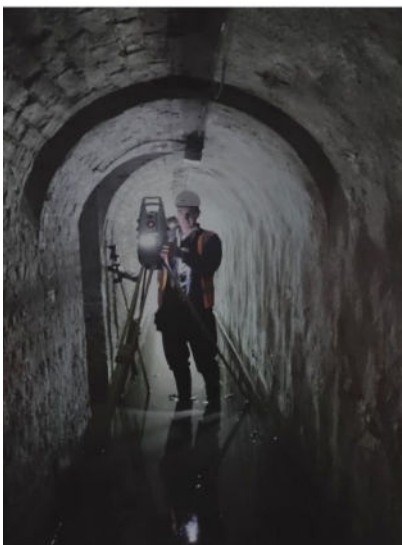
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Appendix J – JPP Geotechnical & Environmental, Infiltration Testing Report

- Structural Engineering
- Professional Advice
- Geotechnical & Environmental
- Infrastructure Design
- Development Planning
- Surveying



Proposed Drainage for Artificial Grass Pitch Refurbishment William Hulme's Grammar School Spring Bridge Road Manchester M16 8PR



Infiltration Testing Report

Revision 00: July 2025
R-SI-29708-01-00

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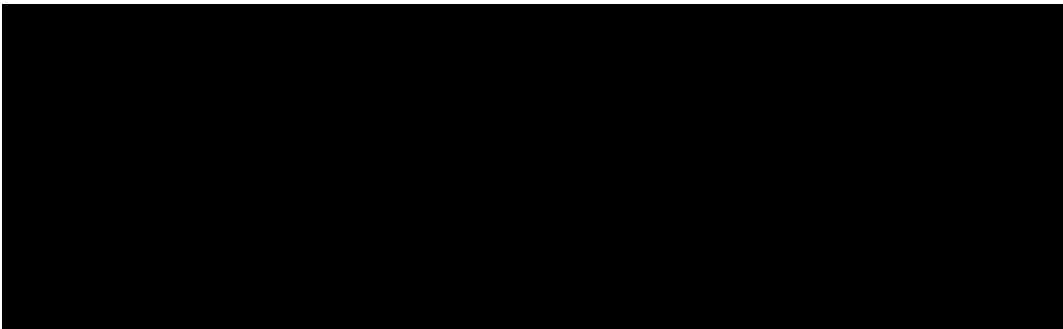
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Proposed Drainage for Artificial Grass Pitch Refurbishment
William Hulme's Grammar School
Spring Bridge Road
Manchester
M16 8PR

Infiltration Testing Report

JPP Geotechnical & Environmental, Grand Union Works, Whilton Locks, Northampton, NN11 2NH		
T: 01604 781811		E: mail@jppuk.net
W: jppuk.net		
Report Reference	R-SI-29708-01-00	
Revision	00	
Date	July 2025	
Report Originators		



Revision	Date	Description	Prepared	Reviewed

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1.0 Introduction

1.1 Client instructions, objectives and reliance

- 1.1.1 JPP were appointed by S&C Slatter on behalf of William Hulme's Grammar School to carry out infiltration testing in machine excavated trial pits following *BRE 365 Soakaway Design* guidance to inform the drainage strategy/design to improve the drainage of the pitch which is to be refurbished.
- 1.1.2 We understand that the existing artificial pitch regularly becomes waterlogged following rainfall events and that the current outfall is to a small soakaway located adjacent to the south east corner of the pitch, which does not appear to be sufficiently draining away, requiring regular pumping out. The purpose of these investigations is to inform an alternative drainage solution and suitable attenuation/storage to prevent future flooding of the pitch, with a separate drainage strategy report also being produced by JPP.
- 1.1.3 This report has been produced for the benefit of S&C Slatter and William Hulme's Grammar School. JPP do not accept liability for the third-party use of the information herein without prior reliance agreed. This report is valid for 6 years from the date of issue.
- 1.1.4 Investigations have been carried out using reasonable care and judgement based on the development proposals and brief. There is a potential for ground conditions to vary from those encountered during our investigations and differ where not exposed by our investigations.

2.0 Desk Study Overview

2.1 Site location and description

- 2.1.1 The investigation area is within the playing fields of William Hulme's Grammar School, the associated school buildings, playgrounds/MUGAs and car parks are in the west of the site with grassed sports fields in the east. In the northern central area of the site is the subject pitch which is a full size, fenced and floodlit sand-dressed artificial pitch and adjacent to the southeast corner of this is a small soakaway chamber, which is understood to require pumping out frequently and backs up into the pitch following rainfall events. Our investigation positions were targeted within the grass adjacent to the east end of the existing pitch and to the north of the existing soakaway chamber within the playing fields.
- 2.1.2 There are markings for football and cricket across the playing fields and in the southeast corner there is a small pavilion structure. The site is bounded by metal security fences with mature/semi-mature trees as along the boundaries in the south and north of the site. The grid reference for the approximate centre of the subject pitch is 383700, 394340.
- 2.1.3 The topographical survey carried out by Cryfield Surveys Ltd dated April 2024 (Ref: 1157-21) show levels across where the investigations machine excavations were carried out ranging from 31.68 to 31.77m AOD and a general fall across the site to the east, towards Princess Road which following the eastern boundary of the playing fields.
- 2.1.4 The buried services survey carried out in May 2024 by Cryfield Surveys Ltd (Ref: 1157-21) identified the current surface water outfall from the pitch to a small soakaway chamber located to the southeast of the pitch. They noted that the chamber was full/flooded at the time of the survey and further notes '*in need of attention to alleviate sports pitch surface*'. During our investigation, we lifted the cover to the soakaway chamber which was noted to contain water in the base (refer to image 2.2.4), with a diameter of approximately 1.30m bgl, base depth of 1.50m bgl and water levels at approximately 0.85m bgl, with sand and gravel in the base. The depth we measured on site is shallower than the depth indicated by the survey drawing (1.95m) however we understand that gravel may be entering the chamber from the pitch resulting in infilling of the chamber.
- 2.1.5 The surrounding area predominantly comprises residential housing with Princess Road adjacent to the east of the site and further dwellings beyond. There is another school and sports centre further south of the site and an office complex to the northeast.

2.2 Site photographs



Photograph 2.2.1 Outside of the eastern end of the pitch, facing north, and the location of where the machine pits were carried out.



Photograph 2.2.2 Looking across the existing pitch from the south east corner facing north west.



Photograph 2.2.3 Outside of the southern side of the pitch from the south east corner facing west.



Photograph 2.2.4 Inside the existing presumed soakaway chamber adjacent to the south east corner of the pitch, showing standing water within.

2.3 Geology

- 2.3.1 Geological mapping records superficial Devensian Till (Diamicton)/Glacial Til (typically gravelly clay) and possible Glaciofluvial Deposits (sands and gravels) above bedrock geology of Wilmslow Sandstone Formation (Sandstone).

2.4 Unexploded Ordnance

- 2.4.1 Based on the available data online, hazard risk mapping indicates that the site is located within an area recorded to be at moderate risk of encountering buried Unexploded Ordnance. A preliminary site specific UXO risk review has been obtained for the site and is included within Appendix D. This review states that the surrounding area suffered significant enemy bombing during WWII with at least one HE bomb strike recorded within the east of the site boundary and a further strike located approximately 90m east. In addition, incendiary bombs fell on the school gymnasium and science block adjacent to the west of the site footprint. Records indicate a wartime military presence in the area, including a 'Z' battery located approximately 100m north of the site however, no records confirmed any presence within the school site. There is therefore considered to be a credible likelihood of encountering buried UXO and the risk confirmed to be medium. The report should be referred to for more detail.
- 2.4.2 Due to the medium risk, all site personnel should be provided with a UXO Safety Awareness Talk before intrusive works commence, and any intrusive work (both site investigation and future construction) should be supported by specialist EOD services to clear working areas and excavations. A detailed UXO risk assessment could be carried out to refine the risk which may reduce the risk and thus requirements for the construction phase.

3.0 Fieldwork

3.1.1 Fieldwork was carried out on the 4th July 2025 and comprised the following:

- 3 machine excavated trial pits (TP01 to TP03) to depths of between 3.20m and 3.40m bgl
- Infiltration testing within each of the trial pits, in general accordance with *BRE 365 'Soakaway Design'* guidance.

Due to the medium risk of encountering buried UXO within the site, an EOD specialist engineer was present during our works, clearing each position prior and during the excavation process.

3.1.2 Each position was scanned using a cable avoidance tool with the use of a signal generator prior to positioning and proceeding. In addition to Statutory undertaker's service records (included within Appendix E), a utility survey carried out in 2024 has also been provided to us and was referred to for positioning the machine excavations.

3.1.3 The positions were targeted in the area adjacent to the east end of the pitch, to the north of the existing soakaway chamber, which currently takes surface water from the pitch being down gradient/slope, although regularly fills up and water backs up in the pitch. The machine pit positions were located between the fence line of the pitch and adjacent grassed pitch markings.

3.1.4 The approximate location of each exploratory hole position is shown on the plan (Drawing 01) and included within Appendix A. Trial pit logs, photographic records and infiltration test records are presented in Appendix B.

4.0 Ground Conditions

4.1 Soils

Topsoil

- 4.1.1 A covering of Topsoil was encountered from the surface to between 0.35 to 0.40m bgl depth within each trial pit. This was generally described as a brown, slightly silty, gravelly, sandy Topsoil with abundant rootlets and gravels comprising fine to medium brick, ceramic, flint and clinker. TP03, located most northerly, did not encounter any gravels within the Topsoil.

Made Ground

- 4.1.2 Beneath the Topsoil were fairly consistent Made Ground deposits to depths of between 0.70 to 0.85m bgl, generally encountered as a dark brown, mottled, slightly silty, gravelly, fine to medium Sand with gravels typically comprising fine to coarse, glass, ceramic and brick. TP01 also encountered gravels comprising fragments of old clay pipe, TP02 also encountered pottery fragments and occasional rootlets, and TP03 encountered blacktop, clinker and sandstone gravels and a low cobble content comprising subangular to angular brick.

Devensian/Glacial Till

- 4.1.3 Underlying the Made Ground deposits were variable Glacial/Devensian Till deposits, initially encountered as a firm, grey and/or orange brown, mottled orange, slightly silty, sandy Clay with rare to frequent, grey and/or orange, fine to coarse sand lenses to depths of between 1.60m and 1.90m bgl. These initial deposits within TP02 were encountered as slightly gravelly, with fine to coarse siltstone and coal gravels. Within TP01, from 1.60m to 2.00m bgl was a firm, grey brown mottled orange, slightly silty, slightly sandy, slightly gravelly Clay, with rare grey and yellowish brown, fine to medium sand pockets and gravels comprising fine to coarse siltstone.

- 4.1.4 From 1.70m depth in TP03, 1.7m in TP02 and 2.0m in TP01 was a firm to stiff, purplish brown, slightly silty, sandy, gravelly to very gravelly, friable Clay with low cobble content to depths of between 2.40 to 2.70m bgl. Gravels and cobbles across the deposits comprised fine to coarse siltstone.

Wilmslow Sandstone Formation

- 4.1.5 Deposits believed to potentially be representative of the bedrock Wilmslow Sandstone Formation were encountered beneath the Glacial Till deposits from depths of between 2.40 to 2.70m to the base of the excavations of between 3.20 to 3.40m bgl. Within TP01 and TP03 such deposits were encountered as a damp, red, slightly clayey, silty, fine to medium Sand, whilst the deposits within TP02 were encountered as a yellowish brown and grey, silty, fine to coarse Sand. From approximately 3.00m depth bgl in each position, the sands became cemented and recovered as sandstone gravels.

4.2 Groundwater

- 4.2.1 Groundwater was encountered within TP02 only at 3.20m bgl and rising from the base of the pit to 2.95m bgl after 90 minutes of monitoring, with the base depth silting up/infilling up to 3.00m depth. This was the deepest of the 3 excavations at 3.40m depth. Groundwater inflows were not encountered within the other two positions at similar depths however damp soils were recovered from 2.40m in TP01 and 2.70m in TP03.
- 4.2.2 Some instability and collapse of the trial pit walls was observed within TP03 during the infiltration testing.

5.0 Laboratory Testing

5.1 Chemical testing

5.1.1 Chemical testing was completed on a composite sample of the Made Ground to allow classification for removal and disposal of the soils off site, with the testing scheduled as follows:

- Metals, metalloids, inorganics & PAHs
- Asbestos screening
- Waste Acceptance Criteria (WAC)

5.1.2 The laboratory testing was carried out by i2Analytical who are UKAS and MCERTS accredited. The full results of the laboratory testing are located in Appendix C.

6.0 Surface Water Drainage Strategy

6.1 Infiltration Testing Results

6.1.1 Infiltration testing was carried out in general accordance with BRE 365 'Soakaway Design', with the observations summarised in the following table. As the rates were slow, it was not possible to complete a cycle within any of the test positions.

Trial pit reference	Cycle	Base depth of trial pit	Test result /observations
TP01	1	3.20m bgl	Water level fell by 0.05m over 240 minutes of monitoring – remaining >75% full and insufficient infiltration to derive rate
TP02	1	3.40m bgl (silted up to 3.00m by the start of the test)	Groundwater present at 2.95m bgl at the start of the test. Water level fell by 0.04m over 120 minutes of monitoring – remaining >75% full and insufficient infiltration to derive rate
TP03	1	3.30m bgl	Water level rose by 0.05m after 5 minutes of monitoring due to partial collapse of the pit walls. After 180 minutes of monitoring water level had fallen by 0.01m – remaining >75% full and insufficient infiltration to derive rate.

Table 6.1

6.1.2 Some instability and collapse of the trial pit walls was observed within trial pit TP03 during the infiltration testing which likely resulted in the increase in water level during the testing. Groundwater was encountered within TP02 only at 3.20m bgl and rising from the base of the pit to 2.95m bgl after 90 minutes of monitoring, with the base depth silting up/infilling up to 3.00m depth. This was the deepest of the 3 excavations at 3.40m depth. Groundwater inflows were not encountered within the other two positions at similar depths however damp soils were recovered from 2.40m in TP01 and 2.70m in TP03.

6.2 Discussion and Summary

6.2.1 Based on the results of the infiltration testing and ground conditions encountered, the overlying Glacial/Devensian Till deposits comprise effectively impermeable clays and the underlying weathered deposits of the Wilmslow Sandstone Formation are considered to provide insufficient permeability to support soakaways. With very little or no infiltration observed during the testing. Groundwater was also encountered within one position and damp soils in the other two positions. As the investigations were carried out during seasonally dry weather conditions and a particularly dry period, the groundwater level could be shallower during wetter conditions. The presence of such shallow groundwater, although could be perched, also restricts the use of soakaways into these deposits.

- 6.2.2 The existing soakaway chamber to the south east of the pitch appears to be at a base depth of 1.50m bgl at the time of our investigations, with water in the base. The buried services survey measured this to be deeper at 1.95m depth bgl and it is understood that gravels may be entering the chamber from the pitch resulting in the shallowing of the chamber. At a base depth of 1.50m or 1.95m the soakaway would be located within the Devensian/Glacial Till Clay soils which are not considered to provide any infiltration.
- 6.2.3 Based on the ground conditions encountered and our investigation findings in the locations and depths targeted, we do not consider shallow soakaways to be a solution for surface water from the existing pitch, and it is recommended that an alternative positive drainage outfall is pursued.
- 6.2.4 There are no obvious nearby watercourses, or drainage ditches within close proximity of the site. United Utilities records show a combined sewers along Princess Road to the east of the playing fields, which is down slope/gradient of the pitch, however this is some 100m to the east of the pitch and would require a new piped connection across the playing fields and permissions sought from United Utilities for the connection.
- 6.2.5 The most viable solution is considered likely to be connecting into the school surface water drainage to the south west of the pitch, as identified by the buried services survey. The shallow gradients to reach the closest connection point is likely to require a pumped system. This will be subject to a drainage strategy (being separately produced by JPP), determining sufficient attenuation/storage to take the pitch surface water.

7.0 Waste classification

7.1 Hazardous or Non-Hazardous Classification

7.1.1 Following WM3, we have carried out analysis of our laboratory test data of the composite sample of Made Ground using HazWasteOnline™. A copy of the generated report is provided in Appendix C. No Asbestos Containing Material or Asbestos fibres were identified within the sample. This analysis determines the samples to be **non-hazardous**.

7.1.2 Please note that we have not carried out a contamination assessment of the soils to assess the concentrations of chemical contaminants and risk to site users including construction operatives. It is recommended however that adequate hygiene precautions including appropriate PPE should be adopted by construction workers and site users during the construction phase where they may come into contact with soils.

7.2 Waste Acceptance Criteria

7.2.1 The Made Ground sample was also submitted for laboratory testing under the waste acceptance criteria WAC. The testing determines that the Made Ground soils are classified as **Non-Hazardous Waste** but not inert due to elevated Total PAH at 920mg/kg exceeding the inert threshold of 100mg/kg and marginally elevated Total Organic Carbon (TOC) measured at 3.4%, exceeding the inert threshold of 3%. We suggest that copies of the laboratory certificates are provided to the landfill operator to confirm they can accept the soils.

7.2.2 Arisings that are naturally occurring deposits and where not affected by artificial contamination can also be classified as non-hazardous for offsite disposal to landfill. Testing may determine such deposits can be disposed of as inert.



Appendix A

Drawing



Appendix B
Fieldwork records

Key to Exploratory Hole Logs

General

Descriptions for soils and rocks generally following:

BS 5930:2015+A1:2020

BS EN ISO 14688-2:2004

BS EN ISO 14689-1:2003

Sampling

ES	Environmental Sample (taken in appropriate sampling container)
D	Disturbed Sample
B	Bulk Sample
C	Core Sample
U	Undisturbed Sample (number of blows indicated in results column)
UT	Thinwalled Undisturbed (number of blows indicated in results column)
W	Water Sample

Insitu Tests

SPT	Standard Penetration Test
SPT (C)	Cone Penetration Test
PID	Photo Ionisation Detector Results (ppm)
PP	Pocket Penetrometer reading converted to shear strength kPa
HV	Converted Shear Vane measurement kPa

Drilling Records

▼	Depth to standing water level
▽	Depth to water strike
TCR	Total Core Recovery (%)
SCR	Solid Core Recovery (%)
RQD	Rock Quality Designation (%)

Backfill Symbols

Arisings	
Concrete	
Blacktop	
Bentonite Seal	
Gravel Filter	
Sand Filter	

Pipe Symbols

Plain Pipe	
Slotted Pipe	
Filter Tip	

Principal Soil Types

Topsoil	
Made Ground	
Clay	
Silt	
Sand	
Gravel	
Peat	

Principal Rock Types

Mudstone	
Siltstone	
Sandstone	
Limestone	
Chalk	

Northampton
T: 01604 781811

Poole
T: 01202 540888

Milton Keynes
T: 01908 889433

- Infrastructure Design
- Structural Engineering
- Planning Services
- Geotechnical & Environmental
- Surveying
- Professional Advice

Key to Exploratory Hole Logs





Trial Pit Log

Project Name: William Hulme's Grammar School		Client: S&C Slatter		Date: 04/07/2025	
Location: Manchester		Contractor:			
Project No. : 29708		Crew Name:		Equipment: JCB 3CX	
Location Number TP01	Location Type TP	Level	Logged By MC	Scale 1:20	Page Number Sheet 1 of 1

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
		0.10	ES					Grass over brown slightly silty slightly gravelly sandy TOPSOIL with abundant rootlets. Gravel consists of fine to medium brick clinker and flint.	
					0.35				
		0.60	ES					Orange brown and brown mottled slightly silty gravelly fine to medium SAND. Gravel consists of fine to coarse subrounded to angular glass ceramic brick and clay pipe. (MADE GROUND) <i>Becoming dark brown from 0.60m bgl.</i>	
					0.85				
		1.10	D					Firm grey and orange brown mottled orange silty sandy CLAY with frequent grey fine to coarse sand lenses. (DEVENSIAN TILL)	1
					1.60				
					2.00				
		2.40 - 3.20	B		2.40			Firm grey brown mottled orange slightly silty slightly sandy slightly gravelly CLAY with rare grey and yellowish brown fine to medium sand pockets. Gravel consists of fine to coarse subrounded to subangular siltstone. (DEVENSIAN TILL)	2
		2.80	D					Soft to firm light purplish grey slightly sandy gravelly CLAY with low cobble content. Gravel consists of fine to coarse subrounded to angular siltstone. Cobbles are subangular to angular siltstone. (DEVENSIAN TILL)	
								Damp red slightly clayey silty fine to medium SAND. (WILMSLOW SANDSTONE FORMATION) <i>Extremely weakly cemented gravels recovered from 3.00m bgl.</i>	3
					3.20			End of Trial Pit at 3.200m	
									4

Dimensions		Trench Support and Comment			Pumping Data		
Pit Length	Pit Width	Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks
2.10	0.50	Stable.	None.				

Remarks	
No groundwater encountered. BRE 365 Soakage Testing completed at base.	



Trial Pit Log

Project Name: William Hulme's Grammar School

Client: S&C Slatter

Date: 04/07/2025

Location: Manchester

Contractor:

Project No. : 29708

Crew Name:

Equipment: JCB 3CX

Location Number
TP02

Location Type
TP

Level

Logged By
MC

Scale
1:20

Page Number
Sheet 1 of 1

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
		0.60	ES		0.40			Grass over brown slightly silty gravelly sandy TOPSOIL with abundant rootlets. Gravel consists of fine to medium brick and ceramic.	1
					0.75			Dark brown mottled slightly silty gravelly fine to medium SAND with occasional rootlets. Gravel consists of fine to coarse subrounded to angular brick glass and pottery. (MADE GROUND)	
					1.90			Firm orange brown mottled grey and orange slightly silty slightly sandy slightly gravelly CLAY with rare grey and orange fine to medium sand lenses. Gravel consists of fine to coarse subrounded to subangular siltstone and coal. (DEVENSIAN TILL)	
		2.20	D		2.60			Firm purplish brown slightly silty sandy very gravelly friable CLAY with low cobble content. Gravel consists of fine to coarse subangular to angular siltstone and coal. Cobbles are subangular to angular siltstone. (DEVENSIAN TILL)	2
		2.60 - 3.40	B		3.00			Yellowish brown and grey silty fine to coarse SAND. (WILMSLOW SANDSTONE FORMATION)	3
			D		3.40			<u>Extremely weakly cemented gravels recovered from 3.00m bgl.</u>	
								End of Trial Pit at 3.400m	4

Dimensions		Trench Support and Comment			Pumping Data		
Pit Length	Pit Width	Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks
2.40	0.50	Stable.	None.				

Remarks	
Groundwater encountered at 3.20m bgl and rising from the base to 2.95m bgl after 90 minutes of monitoring. Base depth had silted to 3.00m bgl. BRE 365 Soakage Testing completed at base.	



Trial Pit Log

Project Name: William Hulme's Grammar School		Client: S&C Slatter		Date: 04/07/2025						
Location: Manchester		Contractor:								
Project No. : 29708		Crew Name:		Equipment: JCB 3CX						
Location Number TP03	Location Type TP	Level	Logged By MC	Scale 1:20	Page Number Sheet 1 of 1					
Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description		
		Depth (m)	Type	Results						
		0.40	ES		0.35			Grass over brown slightly silty sandy TOPSOIL with abundant rootlets.	1	
					0.70			Dark brown mottled slightly clayey slightly silty gravelly fine to medium SAND with low cobble content. Gravel consists of fine to coarse subrounded to angular blacktop clinker sandstone and brick. Cobbles are subangular to angular brick. (MADE GROUND)		
		0.90	D					Firm orange brown and grey slightly silty sandy CLAY with frequent orange and grey fine to coarse sand lenses. (DEVENSIAN TILL)	2	
		1.90	D		1.70			Firm to stiff purplish brown mottled orange slightly silty sandy gravelly CLAY with low cobble content. Gravel consist of fine to coarse subrounded to angular siltstone. Cobbles are angular siltstone. (DEVENSIAN TILL)		
					2.70			Damp red slightly clayey silty fine to medium SAND. (WILMSLOW SANDSTONE FORMATION)		3
		2.90	D					Extremely weakly cemented gravels recovered from 3.00m bgl.		
			3.30				End of Trial Pit at 3.300m	4		
Dimensions		Trench Support and Comment				Pumping Data				
Pit Length	Pit Width	Pit Stability	Shoring Used	Remarks		Date	Rate	Remarks		
2.70	0.50	Partially unstable.	None.							
Remarks										
No groundwater encountered. BRE 365 Soakage Testing completed at base. Partial collapse of pit walls encountered during BRE 365 Testing.										

Photographic Records – Trial Pits

Project: William Hulme's Grammar School

Project Ref: 29708

Date: 4th July 2025

Revision: 0



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W: www.jppuk.net

TP01 – Excavation and view of arisings



TP02 – Excavation and view of arisings



Photographic Records – Trial Pits

Project: William Hulme's Grammar School

Project Ref: 29708

Date: 4th July 2025

Revision: 0



T: 01604 781811

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TP03 – View of arisings



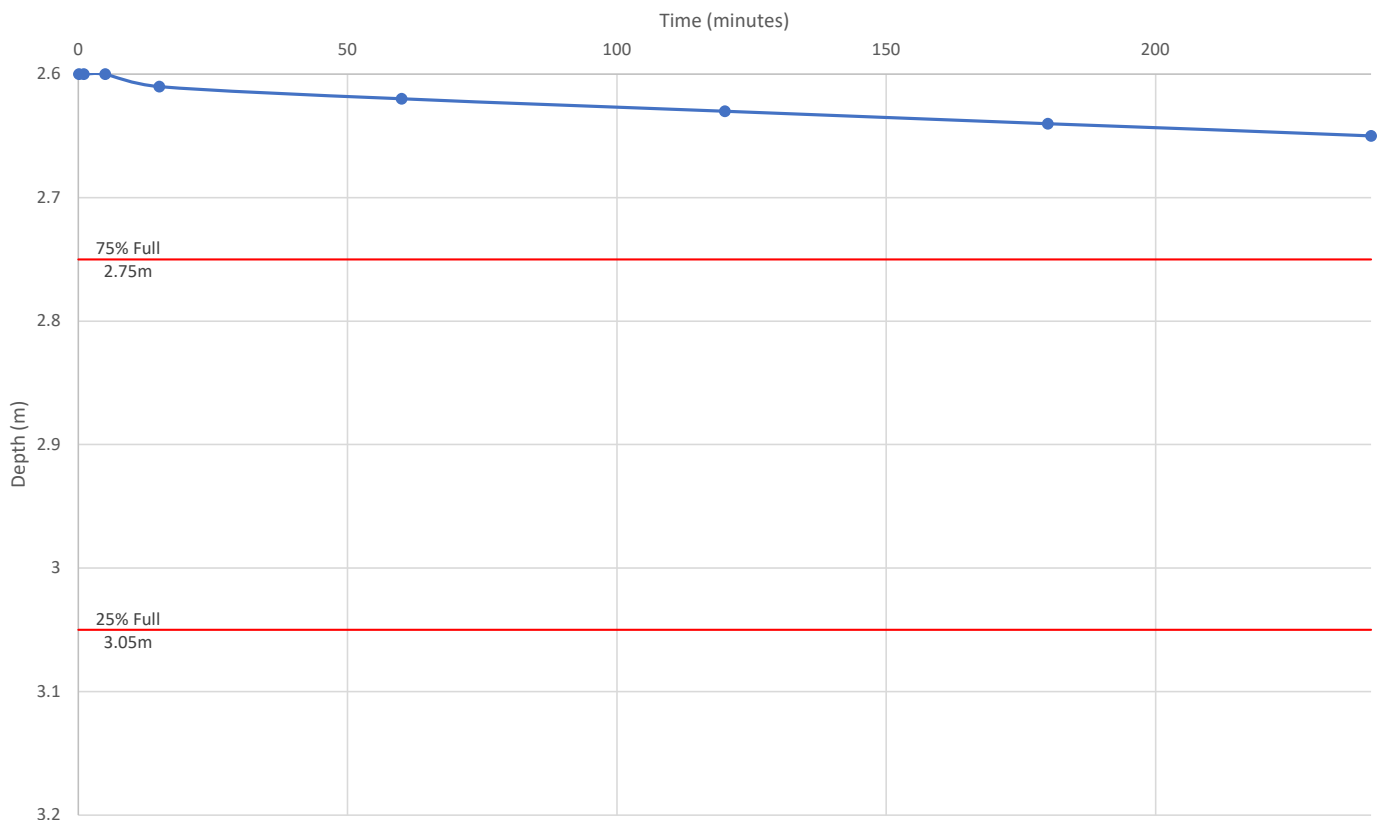
BRE 365 Soakage Test Results

Project Name:	William Hulme's Grammar School
Project No.	29708
Client	S & C Slatter
Date:	04 July 2025
Revision:	0



T: 01604 781811
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TP01 - Cycle 3



Trial pit width = 0.5m

Trial pit length = 2.1m

Trial pit depth = 3.2m

$$\text{Soil infiltration rate } f = \frac{V_{p75-25}}{a_{s50} \times t_{p75-25}}$$

Insufficient infiltration to derive a rate

V_{p75-25} : the effective storage volume of water in the soakage trial pit between 75% and 25% effective storage depth

a_{s50} : the internal surface area of the soakage trial pit up to 50% effective storage depth and including base area

t_{p75-25} : the time for the water level to fall from 75% to 25% effective storage depth

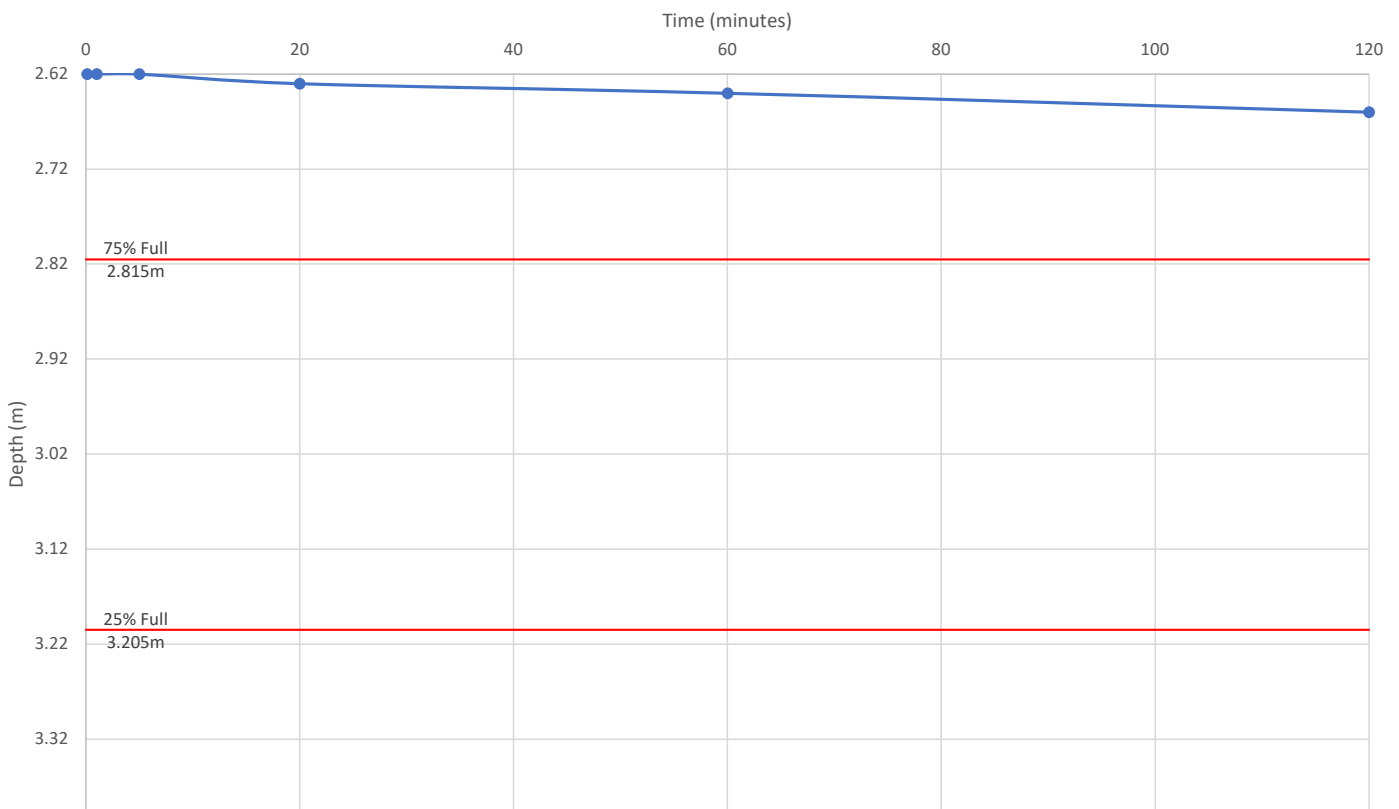
BRE 365 Soakage Test Results

Project Name:	William Hulme's Grammar School
Project No.	29708
Client	S & C Slatter
Date:	04 July 2025
Revision:	0



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E: mail@jppuk.net
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TP02 - Cycle 3



Trial pit width = 0.5m

Trial pit length = 2.4m

Trial pit depth = 3.4m

$$\text{Soil infiltration rate } f = \frac{V_{p75-25}}{a_{s50} \times t_{p75-25}}$$

Insufficient infiltration to derive a rate

V_{p75-25} : the effective storage volume of water in the soakage trial pit between 75% and 25% effective storage depth

a_{s50} : the internal surface area of the soakage trial pit up to 50% effective storage depth and including base area

t_{p75-25} : the time for the water level to fall from 75% to 25% effective storage depth

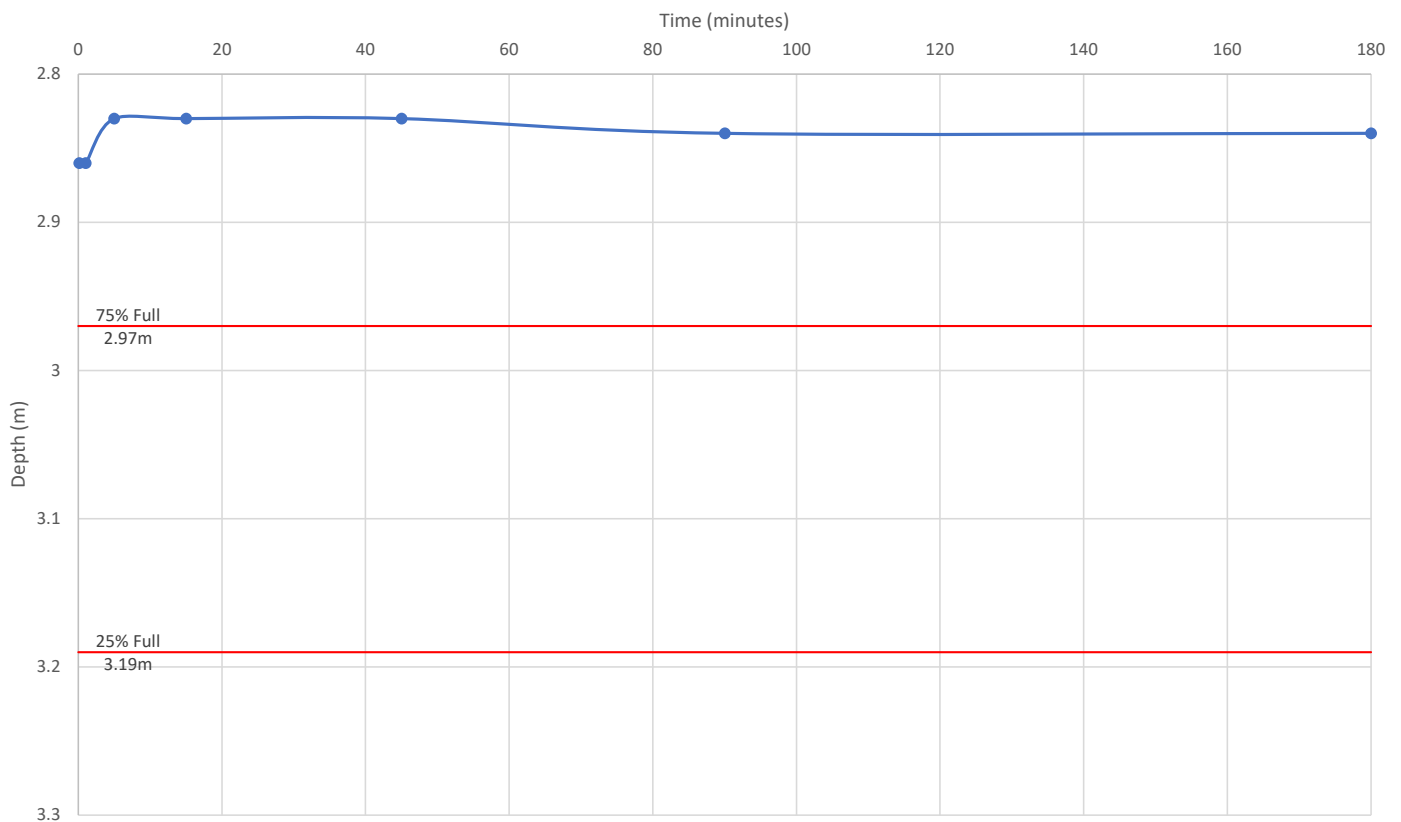
BRE 365 Soakage Test Results

Project Name:	William Hulme's Grammar School
Project No.	29708
Client	S & C Slatter
Date:	04 July 2025
Revision:	0



T: 01604 781811
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TP03 - Cycle 3



Trial pit width = 0.5m

Trial pit length = 2.7m

Trial pit depth = 3.3m

$$\text{Soil infiltration rate } f = \frac{V_{p75-25}}{a_{s50} \times t_{p75-25}}$$

Insufficient infiltration to derive a rate

V_{p75-25} : the effective storage volume of water in the soakage trial pit between 75% and 25% effective storage depth

a_{s50} : the internal surface area of the soakage trial pit up to 50% effective storage depth and including base area

t_{p75-25} : the time for the water level to fall from 75% to 25% effective storage depth

Appendix C

Laboratory testing and analysis

JPP
Grand Union Works
Whilton Locks
Daventry
NN11 2NH

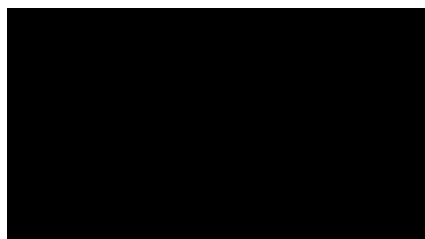
i2 Analytical Ltd.
7 Woodshots Meadow,
Croxley Green
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WD18 8YS

t: 01923 225404
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e: reception@i2analytical.com

e: mitch.coldwell@jppuk.net
geotech@jppuk.net

Analytical Report Number : 25-037664

Project / Site name:	William Hulme's Grammar School	Samples received on:	16/07/2025
Your job number:	29708	Samples instructed on/ Analysis started on:	16/07/2025
Your order number:		Analysis completed by:	24/07/2025
Report Issue Number:	1	Report issued on:	24/07/2025
Samples Analysed:	1 10:1 WAC sample		



Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41-711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils - 4 weeks from reporting
leachates - 2 weeks from reporting
waters - 2 weeks from reporting
asbestos - 6 months from reporting
air - once the analysis is complete

Excel copies of reports are only valid when accompanied by this PDF certificate.

Retention period for records and reports is minimum 6 years from the date of issue of the final report.
Some records may be kept for longer according to other legal/best practice requirements.

Any assessments of compliance with specifications are based on actual analytical results with no contribution from uncertainty of measurement.
Application of uncertainty of measurement would provide a range within which the true result lies.
An estimate of measurement uncertainty can be provided on request.

Analytical Report Number: 25-037664
Project / Site name: William Hulme's Grammar School

Lab Sample Number				616141
Sample Reference				MG Composite 01
Sample Number				None Supplied
Water Matrix				N/A
Depth (m)				0.40-0.60
Date Sampled				04/07/2025
Time Taken				None Supplied
Analytical Parameter (Soil Analysis)	Units	Test Limit of detection	Test Accreditation Status	

Stone Content	%	0.1	NONE	11.2
Moisture Content	%	0.01	NONE	8.8
Total mass of sample received	kg	0.1	NONE	0.6

Asbestos

Asbestos in Soil Detected/Not Detected	Type	N/A	ISO 17025	Not-detected
Asbestos Analyst ID	N/A	N/A	N/A	MMI
Analysis completed	N/A	N/A	N/A	22/07/2025

General Inorganics

pH (L005B)	pH Units	N/A	MCERTS	7.5
pH (L099)	pH Units	N/A	MCERTS	8.1
Total Cyanide	mg/kg	1	MCERTS	< 1.0
Total Sulphate as SO ₄	mg/kg	50	MCERTS	430
Water Soluble Sulphate as SO ₄ 16hr extraction (2:1)	mg/kg	2.5	MCERTS	48
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	24
Organic Matter (automated)	%	0.1	MCERTS	5.9
Total Organic Carbon (TOC) - Automated	%	0.1	MCERTS	3.4
Loss on Ignition @ 450°C	%	0.2	MCERTS	6.9
Acid Neutralisation Capacity	mmol/kg	-9999	NONE	2.5

Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	13
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	20
Fluorene	mg/kg	0.05	MCERTS	16
Phenanthrene	mg/kg	0.05	MCERTS	150
Anthracene	mg/kg	0.05	MCERTS	41
Fluoranthene	mg/kg	0.05	MCERTS	160
Pyrene	mg/kg	0.05	MCERTS	150
Benzo(a)anthracene	mg/kg	0.05	MCERTS	72
Chrysene	mg/kg	0.05	MCERTS	66
Benzo(b)fluoranthene	mg/kg	0.05	ISO 17025	69
Benzo(k)fluoranthene	mg/kg	0.05	ISO 17025	26
Benzo(a)pyrene	mg/kg	0.05	MCERTS	62
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	29
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	6.3
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	33
Coronene	mg/kg	0.05	NONE	6.3

Total PAH

Speciated Total EPA-16 PAHs	mg/kg	0.8	ISO 17025	914
Total WAC-17 PAHs	mg/kg	0.85	NONE	920

Analytical Report Number: 25-037664
Project / Site name: William Hulme's Grammar School

Lab Sample Number				616141
Sample Reference				MG Composite 01
Sample Number				None Supplied
Water Matrix				N/A
Depth (m)				0.40-0.60
Date Sampled				04/07/2025
Time Taken				None Supplied
Analytical Parameter (Soil Analysis)	Units	Test Limit of detection	Test Accreditation Status	

Heavy Metals / Metalloids

Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	29
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	0.3
Chromium (hexavalent)	mg/kg	1.8	MCERTS	< 1.8
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	16
Copper (aqua regia extractable)	mg/kg	1	MCERTS	120
Lead (aqua regia extractable)	mg/kg	1	MCERTS	460
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	1.1
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	31
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	1.4
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	120

Petroleum Hydrocarbons

Mineral Oil (EC10 - EC40) EH_CU_ID_AL	mg/kg	10	NONE	14
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VOCs

Benzene	µg/kg	5	MCERTS	< 5.0
Toluene	µg/kg	5	MCERTS	< 5.0
Ethylbenzene	µg/kg	5	MCERTS	< 5.0
p & m-Xylene	µg/kg	8	MCERTS	< 8.0
o-Xylene	µg/kg	5	MCERTS	< 5.0

Total BTEX	µg/kg	10	MCERTS	< 10
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PCBs by GC-MS

PCB Congener 28	mg/kg	0.001	MCERTS	< 0.001
PCB Congener 52	mg/kg	0.001	MCERTS	< 0.001
PCB Congener 101	mg/kg	0.001	MCERTS	< 0.001
PCB Congener 118	mg/kg	0.001	MCERTS	< 0.001
PCB Congener 138	mg/kg	0.001	MCERTS	< 0.001
PCB Congener 153	mg/kg	0.001	MCERTS	< 0.001
PCB Congener 180	mg/kg	0.001	MCERTS	< 0.001

Total PCBs	mg/kg	0.007	MCERTS	< 0.007
------------	-------	-------	--------	---------

U/S = Unsuitable Sample I/S = Insufficient Sample ND = Not detected



4041



Environmental Science

i2 Analytical

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Waste Acceptance Criteria Analytical Results

Report No:	25-037664					
				Client: JPP		
Location	William Hulme's Grammar School					
Lab Reference (Sample Number)	616141			Landfill Waste Acceptance Criteria		
Sampling Date	04/07/2025			Limits		
Sample ID	MG Composite 01			Inert Waste Landfill	Stable Non-reactive HAZARDOUS waste in non-hazardous Landfill	Hazardous Waste Landfill
Depth (m)	0.40-0.60					
Solid Waste Analysis						
TOC (%)**	3.4			3%	5%	6%
Loss on Ignition (%) **	6.9			--	--	10%
BTEX (µg/kg) **	< 10			6000	--	--
Sum of PCBs (mg/kg) **	< 0.007			1	--	--
Mineral Oil (mg/kg) EH_ID_CU_AL	14			500	--	--
Total PAH (WAC-17) (mg/kg)	920			100	--	--
pH (units)**	7.5			--	>6	--
Acid Neutralisation Capacity (mmol / kg)	2.5			--	To be evaluated	To be evaluated
Eluate Analysis						
(BS EN 12457 - 2 preparation utilising end over end leaching procedure)	10:1		10:1	Limit values for compliance leaching test		
	mg/l		mg/kg	using BS EN 12457-2 at L/S 10 l/kg (mg/kg)		
Arsenic *	0.00266		0.0266	0.5	2	25
Barium *	0.0527		0.527	20	100	300
Cadmium *	< 0.000100		< 0.00100	0.04	1	5
Chromium *	0.0011		0.011	0.5	10	70
Copper *	0.023		0.23	2	50	100
Mercury *	< 0.000500		< 0.00500	0.01	0.2	2
Molybdenum *	0.006		0.06	0.5	10	30
Nickel *	< 0.00030		< 0.0030	0.4	10	40
Lead *	0.0069		0.069	0.5	10	50
Antimony *	< 0.0017		< 0.017	0.06	0.7	5
Selenium *	< 0.0040		< 0.040	0.1	0.5	7
Zinc *	0.008		0.08	4	50	200
Chloride *	1		10	800	15000	25000
Fluoride*	0.4		4	10	150	500
Sulphate *	4.9		49	1000	20000	50000
TDS*	79		790	4000	60000	100000
Phenol Index (Monohydric Phenols) *	< 0.010		< 0.10	1	-	-
DOC	6.6		66	500	800	1000
Leach Test Information						
Stone Content (%)	11.2					
Sample Mass (kg)	0.6					
Dry Matter (%)	91					
Moisture (%)	8.8					
Results are expressed on a dry weight basis, after correction for moisture content where applicable.						
Stated limits are for guidance only and i2 cannot be held responsible for any discrepancies with current legislation						
* = UKAS accredited (liquid eluate analysis only)						
** = MCERTS accredited						

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes as defined by the Waste (England and Wales) Regulations 2011 (as amended) and EA Guidance WM3.
This analysis is only applicable for landfill acceptance criteria (The Environmental Permitting (England and Wales) Regulations) and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Analytical Report Number : 25-037664

Project / Site name: William Hulme's Grammar School

* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and loam (MCERTS) soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
616141	MG Composite 01	None Supplied	0.40-0.60	Brown loam with gravel and stones

Analytical Report Number : 25-037664

Project / Site name: William Hulme's Grammar School

Water matrix abbreviations:

Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters Heating/Cooling (PrW) DI Process Water (DI PrW)

Final Sewage Effluent (FSE) Landfill Leachate (LL)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Asbestos identification in Soil	Asbestos Identification with the use of polarised light microscopy in conjunction with dispersion staining techniques	In-house method based on HSG 248, 2021	A001B	D	ISO 17025
pH at 20°C in soil	Determination of pH in soil by addition of water followed by electrometric measurement	In-house method	L005B	W	MCERTS
Organic matter (Automated) in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate (Walkley Black Method)	In-house method	L009B	D	MCERTS
Total organic carbon (Automated) in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate (Walkley Black Method)	In-house method	L009B	D	MCERTS
Moisture Content	Moisture content, determined gravimetrically (up to 30°C)	In-house method	L019B	W	NONE
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight	In-house method based on British Standard Methods and MCERTS requirements.	L019B	D	NONE
PCB's By GC-MS in soil	Determination of PCB by extraction with hexane followed by GC-MS	In-house method based on USEPA 8082	L027B	D	MCERTS
Total dissolved solids 10:1 WAC	Determination of total dissolved solids in water by electrometric measurement	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L031B	W	ISO 17025
Fluoride 10:1 WAC	Determination of fluoride in leachate by 1:1ratio with a buffer solution followed by Ion Selective Electrode	In-house method based on Use of Total Ionic Strength Adjustment Buffer for Electrode Determination	L033B	W	ISO 17025
Dissolved organic carbon 10:1 WAC	Determination of dissolved organic carbon in leachate by TOC/DOC NDIR Analyser	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L037B	W	NONE
Metals in soil by ICP-OES	Determination of metals in soil by aqua-regia digestion followed by ICP-OES	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil	L038B	D	MCERTS
Total sulphate (as SO ₄ in soil)	Determination of total sulphate in soil by extraction with 10% HCl followed by ICP-OES	In-house method	L038B	D	MCERTS
Sulphate, water soluble, in soil (16hr extraction)	Sulphate, water soluble, in soil (16hr extraction)	In-house method	L038B	D	MCERTS
Metals in leachate by ICP-OES	Determination of metals in leachate by acidification followed by ICP-OES	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil	L039B	W	ISO 17025
One stage WAC 10:1 leachate preparation	One stage batch test at a liquid to solid ratio of 10 L/kg	BS EN 12457-2:2002	L043B	W	ISO 17025
Acid neutralisation capacity of soil	Determination of acid neutralisation capacity by addition of acid or alkali followed by electronic probe	In-house method based on Guidance on Sampling and Testing of Wastes to Meet Landfill Waste Acceptance	L046B	W	NONE

Analytical Report Number : 25-037664

Project / Site name: William Hulme's Grammar School

Water matrix abbreviations:

Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters Heating/Cooling (PrW) DI Process Water (DI PrW)

Final Sewage Effluent (FSE) Landfill Leachate (LL)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Loss on ignition of soil @ 450°C	Determination of loss on ignition in soil by gravimetrically with the sample being ignited in a muffle furnace	In-house method	L047-PL	D	MCERTS
Speciated PAHs and/or Semi-volatile organic compounds in soil	Determination of semi-volatile organic compounds (including PAH) in soil by extraction in dichloromethane and hexane followed by GC-MS	In-house method based on USEPA 8270	L064B	D	MCERTS
BTEX and/or Volatile organic compounds in soil	Determination of volatile organic compounds in soil by headspace GC-MS	In-house method based on USEPA 8260	L073B	W	MCERTS
Total petroleum hydrocarbons by GC-FID in soil	Determination of total petroleum hydrocarbons in soil by GC-FID	In-house method	L076B	D	NONE
Hexavalent chromium in soil	Determination of hexavalent chromium in soil by extraction in NaOH and addition of 1,5 diphenylcarbazide followed by colorimetry	In-house method	L080-PL	W	MCERTS
Monohydric phenols 10:1 WAC	Determination of phenols in leachate by distillation followed by colorimetry	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L080-PL	W	ISO 17025
Total cyanide in soil	Determination of total cyanide by distillation followed by colorimetry	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L080-PL	W	MCERTS
Chloride 10:1 WAC	Determination of Chloride colorimetrically by discrete analyser	In-house based on MEWAM Method ISBN 0117516260	L082B	W	ISO 17025
pH in soil (automated)	Determination of pH in soil by addition of water followed by automated electrometric measurement	In-house method	L099-PL	D	MCERTS
Soil Descriptions	Textural classification	In-house method	L019B	W	NONE

For method numbers ending in 'UK' or 'A' analysis have been carried out in our laboratory in the United Kingdom (Watford).

For method numbers ending in 'F' analysis have been carried out in our laboratory in the United Kingdom (East Kilbride).

For method numbers ending in 'PL' or 'B' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30°C.

Unless otherwise indicated, site information, order number, project number, sampling date, time, sample reference and depth are provided by the client. The instructed on date indicates the date on which this information was provided to the laboratory.

Quality control parameter failure associated with individual result applies to calculated sum of individuals.

The result for sum should be interpreted with caution

Analytical Report Number : 25-037664

Project / Site name: William Hulme's Grammar School

This deviation report indicates the sample and test deviations that apply to the samples submitted for analysis. Please note that the associated result(s) may be unreliable and should be interpreted with care.

Key: a - No sampling date b - Incorrect container/Insufficient material provided c - Holding time d - Headspace e - Temperature

Sample ID	Other ID	Sample Type	Lab Sample Number	Sample Deviation	Test Name	Test Ref	Test Deviation
MG Composite 01	N/A	L	616141	bc	One stage WAC 10:1 leachate preparation	L043B	b
MG Composite 01	N/A	S	616141	bc	Asbestos identification in Soil	A001B	b
MG Composite 01	N/A	S	616141	bc	BTEX and/or Volatile organic compounds in soil	L073B	bc
MG Composite 01	N/A	S	616141	bc	Speciated PAHs and/or Semi-volatile organic compounds in soil	L064B	c
MG Composite 01	N/A	S	616141	bc	Total cyanide in soil	L080-PL	c



Waste Classification Report

HazWasteOnline™ classifies waste as either **hazardous** or **non-hazardous** based on its chemical composition, related legislation and the rules and data defined in the current UK or EU technical guidance (Appendix C) (note that HP 9 Infectious is not assessed). It is the responsibility of the classifier named below to:

- understand the origin of the waste
- select the correct List of Waste code(s)
- confirm that the list of determinands, results and sampling plan are fit for purpose
- select and justify the chosen metal species (Appendix B)
- correctly apply moisture correction and other available corrections
- add the meta data for their user-defined substances (Appendix A)
- check that the classification engine is suitable with respect to the national destination of the waste (Appendix C)



YNVE1-LPCBO-46MBV

To aid the reviewer, the laboratory results, assumptions and justifications managed by the classifier are highlighted in **pale yellow**.

Report is invalid if pages are removed.

Job name

29708 - William Hulme's Grammar School

Description/Comments

Project

Site

Manchester

Classified by

Name: **Libby Rogers**
Date: **28 Jul 2025 09:30 GMT**
Telephone: **01604 781811**
Company: **JPP Geotechnical & Environmental Ltd**
Grand Union Works
Whilton Locks
Daventry
NN11 2NH

HazWasteOnline™ provides a two day, hazardous waste classification course that covers the use of the software and both basic and advanced waste classification techniques. Certification has to be renewed every 3 years.

HazWasteOnline™ Certification:

Course
Hazardous Waste Classification

Date

Purpose of classification

4 - Classification of Waste Products

Address of the waste

Post Code

SIC for the process giving rise to the waste

Description of industry/producer giving rise to the waste

Description of the specific process, sub-process and/or activity that created the waste

Description of the waste

Made Ground composite



Job summary

#	Sample name	Depth [m]	Classification Result	Hazard properties	Page
1	MG Composite 01	0.40-0.60	Non Hazardous		3

Related documents

#	Name	Description
1	Example worst case waste stream template: 17 05 04 or 17 05 03 *	waste stream template used to create this Job

Report

Created by: Libby Rogers

Created date: 28 Jul 2025 09:30 GMT

Appendices	Page
Appendix A: Classifier defined and non GB MCL determinands	6
Appendix B: Rationale for selection of metal species	7
Appendix C: Version	8

Classification of sample: MG Composite 01

 **Non Hazardous Waste**
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:	LoW Code:
MG Composite 01	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
0.40-0.60 m	Entry:
Moisture content:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
8.8%	
(no correction)	

Hazard properties

None identified

Determinands

Moisture content: 8.8% No Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number							
1	asbestos fibres detected (Yes/No)				No					
			ACM_FIBRES							
2	antimony { antimony trioxide }				<0.017 mg/kg	1.197	<0.0204 mg/kg	<0.00000204 %		<LOD
	051-005-00-X	215-175-0	1309-64-4							
3	arsenic { arsenic acid and its salts with the exception of those specified elsewhere in this Annex }				29 mg/kg	1.895	54.941 mg/kg	0.00549 %		
	033-005-00-1									
4	barium { barium oxide }				0.527 mg/kg	1.117	0.588 mg/kg	0.0000588 %		
		215-127-9	1304-28-5							
5	cadmium { cadmium sulfate }				0.3 mg/kg	1.855	0.556 mg/kg	0.0000556 %		
	048-009-00-9	233-331-6	10124-36-4							
6	chromium in Cr(III) compounds { chromium(III) oxide }				16 mg/kg	1.462	23.385 mg/kg	0.00234 %		
		215-160-9	1308-38-9							
7	chromium in Cr(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }				<1.8 mg/kg	2.27	<4.086 mg/kg	<0.000409 %		<LOD
	024-017-00-8									
8	copper { copper sulphate pentahydrate }				120 mg/kg	3.929	471.486 mg/kg	0.0471 %		
	029-023-00-4	231-847-6	7758-99-8							
9	lead { lead chromate }			1	460 mg/kg	1.56	717.515 mg/kg	0.046 %		
	082-004-00-2	231-846-0	7758-97-6							
10	mercury { mercury dichloride }				1.1 mg/kg	1.353	1.489 mg/kg	0.000149 %		
	080-010-00-X	231-299-8	7487-94-7							
11	molybdenum { molybdenum(VI) oxide }				0.06 mg/kg	1.5	0.09 mg/kg	0.000009 %		
	042-001-00-9	215-204-7	1313-27-5							
12	nickel { nickel dibromate }				31 mg/kg	5.358	166.108 mg/kg	0.0166 %		
	028-053-00-5	238-596-1	14550-87-9							
13	selenium { nickel selenate }				1.4 mg/kg	2.554	3.575 mg/kg	0.000358 %		
	028-031-00-5	239-125-2	15060-62-5							
14	zinc { zinc chromate }				120 mg/kg	2.774	332.898 mg/kg	0.0333 %		
	024-007-00-3	236-878-9	13530-65-9							
15	TPH (C6 to C40) petroleum group				14 mg/kg		14 mg/kg	0.0014 %		
			TPH							

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number							
16	benzene				<5 mg/kg		<5 mg/kg	<0.0005 %		<LOD
	601-020-00-8	200-753-7	71-43-2							
17	toluene				<5 mg/kg		<5 mg/kg	<0.0005 %		<LOD
	601-021-00-3	203-625-9	108-88-3							
18	ethylbenzene				<5 mg/kg		<5 mg/kg	<0.0005 %		<LOD
	601-023-00-4	202-849-4	100-41-4							
19	xylene				<8 mg/kg		<8 mg/kg	<0.0008 %		<LOD
	601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]							
20	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }				<1 mg/kg	1.884	<1.884 mg/kg	<0.000188 %		<LOD
	006-007-00-5									
21	pH		PH		8.1 pH		8.1 pH	8.1 pH		
22	naphthalene				13 mg/kg		13 mg/kg	0.0013 %		
	601-052-00-2	202-049-5	91-20-3							
23	acenaphthylene				<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
		205-917-1	208-96-8							
24	acenaphthene				20 mg/kg		20 mg/kg	0.002 %		
		201-469-6	83-32-9							
25	fluorene				16 mg/kg		16 mg/kg	0.0016 %		
		201-695-5	86-73-7							
26	phenanthrene				150 mg/kg		150 mg/kg	0.015 %		
		201-581-5	85-01-8							
27	anthracene				41 mg/kg		41 mg/kg	0.0041 %		
		204-371-1	120-12-7							
28	fluoranthene				160 mg/kg		160 mg/kg	0.016 %		
		205-912-4	206-44-0							
29	pyrene				150 mg/kg		150 mg/kg	0.015 %		
		204-927-3	129-00-0							
30	benzo[a]anthracene				72 mg/kg		72 mg/kg	0.0072 %		
	601-033-00-9	200-280-6	56-55-3							
31	chrysene				66 mg/kg		66 mg/kg	0.0066 %		
	601-048-00-0	205-923-4	218-01-9							
32	benzo[b]fluoranthene				69 mg/kg		69 mg/kg	0.0069 %		
	601-034-00-4	205-911-9	205-99-2							
33	benzo[k]fluoranthene				26 mg/kg		26 mg/kg	0.0026 %		
	601-036-00-5	205-916-6	207-08-9							
34	benzo[a]pyrene; benzo[def]chrysene				62 mg/kg		62 mg/kg	0.0062 %		
	601-032-00-3	200-028-5	50-32-8							
35	indeno[123-cd]pyrene				29 mg/kg		29 mg/kg	0.0029 %		
		205-893-2	193-39-5							
36	dibenz[a,h]anthracene				6.3 mg/kg		6.3 mg/kg	0.00063 %		
	601-041-00-2	200-181-8	53-70-3							
37	benzo[ghi]perylene				33 mg/kg		33 mg/kg	0.0033 %		
		205-883-8	191-24-2							
38	phenol				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
	604-001-00-2	203-632-7	108-95-2							
Total:								0.244 %		



Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Determinand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Supplementary Hazardous Property Information

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and <= 75°C"

Force this Hazardous Property to non-hazardous for cumulative determinand results below the threshold of: 1000 mg/kg (0.1%)
because: Solid, no free draining liquid

Hazard Statements hit:

Flam. Liq. 3; H226 "Flammable liquid and vapour."

Because of determinand:

TPH (C6 to C40) petroleum group (conc.: 0.0014%)

Appendix A: Classifier defined and non GB MCL determinands

■ **asbestos fibres detected (Yes/No)** (CAS Number: ACM_FIBRES)

Description/Comments: not classified, information only

Data source: N/A

Data source date: 15 Jan 2020

Hazard Statements: None.

■ **barium oxide** (EC Number: 215-127-9, CAS Number: 1304-28-5)

Description/Comments: Data from ECHA's C&L Inventory Database, Sigma Aldrich SDS dated 6/2/20

Data source: <https://echa.europa.eu/information-on-chemicals/cl-inventory-database/-/discli/details/88825>

Data source date: 02 Apr 2020

Hazard Statements: Acute Tox. 3; H301, Skin Corr. 1B; H314, Eye Dam. 1; H318, Acute Tox. 1; H332

■ **chromium(III) oxide** (EC Number: 215-160-9, CAS Number: 1308-38-9)

Description/Comments: Data from ECHA's C&L inventory database

Data source: <https://echa.europa.eu/information-on-chemicals/cl-inventory-database/-/discli/details/33806>

Data source date: 30 Apr 2020

Hazard Statements: Acute Tox. 4; H302, Skin Sens. 1; H317, Eye Irrit. 2; H319

■ **TPH (C6 to C40) petroleum group** (CAS Number: TPH)

Description/Comments: Unknown Oil

Hazard statements taken from WM3 1st Edition 2015

Data source: WM3 1st Edition 2015

Data source date: 25 May 2015

Hazard Statements: Flam. Liq. 3; H226, Asp. Tox. 1; H304, STOT RE 2; H373, Muta. 1B; H340, Carc. 1B; H350, Repr. 2; H361d, Aquatic Chronic 2; H411

■ **ethylbenzene** (EC Number: 202-849-4, CAS Number: 100-41-4)

GB MCL index number: 601-023-00-4

Description/Comments:

Additional Hazard Statement(s): Carc. 2; H351

Reason for additional Hazards Statement(s):

20 Nov 2021 - Carc. 2; H351 hazard statement sourced from: IARC Group 2B (77) 2000

■ **salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex**

GB MCL index number: 006-007-00-5

Description/Comments: Conversion factor based on a worst case compound: sodium cyanide

Additional Hazard Statement(s): EUH032 >= 0.2 %

Reason for additional Hazards Statement(s):

20 Nov 2021 - EUH032 >= 0.2 % hazard statement sourced from: WM3, Table C12.2

■ **pH** (CAS Number: PH)

Description/Comments: Appendix C4

Data source: WM3 1st Edition 2015

Data source date: 25 May 2015

Hazard Statements: None.

■ **acenaphthylene** (EC Number: 205-917-1, CAS Number: 208-96-8)

Description/Comments: Data from C&L Inventory Database

Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>

Data source date: 17 Jul 2015

Hazard Statements: Acute Tox. 4; H302, Acute Tox. 1; H330, Acute Tox. 1; H310, Eye Irrit. 2; H319, STOT SE 3; H335, Skin Irrit. 2; H315

■ **acenaphthene** (EC Number: 201-469-6, CAS Number: 83-32-9)

Description/Comments: Data from C&L Inventory Database

Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>

Data source date: 17 Jul 2015

Hazard Statements: Eye Irrit. 2; H319, STOT SE 3; H335, Skin Irrit. 2; H315, Aquatic Acute 1; H400, Aquatic Chronic 1; H410, Aquatic Chronic 2; H411

■ **fluorene** (EC Number: 201-695-5, CAS Number: 86-73-7)

Description/Comments: Data from C&L Inventory Database

Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>

Data source date: 06 Aug 2015

Hazard Statements: Aquatic Acute 1; H400, Aquatic Chronic 1; H410

▪ **phenanthrene** (EC Number: 201-581-5, CAS Number: 85-01-8)

Description/Comments: Data from C&L Inventory Database

Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>

Data source date: 06 Aug 2015

Hazard Statements: Acute Tox. 4; H302 , Eye Irrit. 2; H319 , STOT SE 3; H335 , Carc. 2; H351 , Skin Sens. 1; H317 , Aquatic Acute 1; H400 , Aquatic Chronic 1; H410 , Skin Irrit. 2; H315

▪ **anthracene** (EC Number: 204-371-1, CAS Number: 120-12-7)

Description/Comments: Data from C&L Inventory Database

Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>

Data source date: 17 Jul 2015

Hazard Statements: Eye Irrit. 2; H319 , STOT SE 3; H335 , Skin Irrit. 2; H315 , Skin Sens. 1; H317 , Aquatic Acute 1; H400 , Aquatic Chronic 1; H410

▪ **fluoranthene** (EC Number: 205-912-4, CAS Number: 206-44-0)

Description/Comments: Data from C&L Inventory Database

Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>

Data source date: 21 Aug 2015

Hazard Statements: Acute Tox. 4; H302 , Aquatic Acute 1; H400 , Aquatic Chronic 1; H410

▪ **pyrene** (EC Number: 204-927-3, CAS Number: 129-00-0)

Description/Comments: Data from C&L Inventory Database; SDS Sigma Aldrich 2014

Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>

Data source date: 21 Aug 2015

Hazard Statements: Skin Irrit. 2; H315 , Eye Irrit. 2; H319 , STOT SE 3; H335 , Aquatic Acute 1; H400 , Aquatic Chronic 1; H410

▪ **indeno[123-cd]pyrene** (EC Number: 205-893-2, CAS Number: 193-39-5)

Description/Comments: Data from C&L Inventory Database

Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>

Data source date: 06 Aug 2015

Hazard Statements: Carc. 2; H351

▪ **benzo[ghi]perylene** (EC Number: 205-883-8, CAS Number: 191-24-2)

Description/Comments: Data from C&L Inventory Database; SDS Sigma Aldrich 28/02/2015

Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>

Data source date: 23 Jul 2015

Hazard Statements: Aquatic Acute 1; H400 , Aquatic Chronic 1; H410

Appendix B: Rationale for selection of metal species

antimony {antimony trioxide}

Worst case CLP species based on hazard statements/molecular weight and low solubility. Industrial sources include: flame retardants in electrical apparatus, textiles and coatings (edit as required)

arsenic {arsenic acid and its salts with the exception of those specified elsewhere in this Annex}

Worst case CLP species based on hazard statements/molecular weight and conversion factor for arsenic acid H₃AsO₄. (edit as required)

barium {barium oxide}

There is enough Metal and Cr(VI) to make the Metal chromate but you don't have hazardous levels in any case.

cadmium {cadmium sulfate}

Worst case CLP species based on hazard statements/molecular weight. (edit as required)

chromium in Cr(III) compounds {chromium(III) oxide}

There is enough Metal and Cr(VI) to make the Metal chromate but you don't have hazardous levels in any case.

chromium in Cr(VI) compounds {chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex}

Worst case species based on hazard statements/molecular weight (edit as required)

copper {copper sulphate pentahydrate}

Worst case CLP species based on hazard statements/molecular weight. (edit as required)

lead {lead chromate}

Worst case CLP species based on hazard statements/molecular weight (edit as required)

mercury {mercury dichloride}

Reasonable worst case CLP species based on hazard statements/molecular weight and assuming no evidence for the use of explosives. (edit as required)

molybdenum {molybdenum(VI) oxide}

Worst case CLP species based on hazard statements/molecular weight (edit as required)

nickel {nickel dibromate}

Worst case CLP species based on hazard statements/molecular weight. (edit as required)

selenium {nickel selenate}

Worst case CLP species based on hazard statements/molecular weight (edit as required)

zinc {zinc chromate}

Worst case CLP species based on hazard statements/molecular weight (edit as required)

cyanides {salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex}

Harmonised group entry used as most reasonable case as complex cyanides and those specified elsewhere in the annex are not likely to be present in this soil: [Note conversion factor based on a worst case compound: sodium cyanide] (edit as required)

Appendix C: Version

HazWasteOnline Classification Engine: **WM3 1st Edition v1.2.GB - Oct 2021**

HazWasteOnline Classification Engine Version: 2025.206.6723.12195 (27 Jul 2025)

HazWasteOnline Database: 2025.206.6723.12195 (27 Jul 2025)

This classification utilises the following guidance and legislation:

WM3 v1.2.GB - Waste Classification - 1st Edition v1.2.GB - Oct 2021

CLP Regulation - Regulation 1272/2008/EC of 16 December 2008

1st ATP - Regulation 790/2009/EC of 10 August 2009

2nd ATP - Regulation 286/2011/EC of 10 March 2011

3rd ATP - Regulation 618/2012/EU of 10 July 2012

4th ATP - Regulation 487/2013/EU of 8 May 2013

Correction to 1st ATP - Regulation 758/2013/EU of 7 August 2013

5th ATP - Regulation 944/2013/EU of 2 October 2013

6th ATP - Regulation 605/2014/EU of 5 June 2014

WFD Annex III replacement - Regulation 1357/2014/EU of 18 December 2014

Revised List of Waste 2014 - Decision 2014/955/EU of 18 December 2014

7th ATP - Regulation 2015/1221/EU of 24 July 2015

8th ATP - Regulation (EU) 2016/918 of 19 May 2016

9th ATP - Regulation (EU) 2016/1179 of 19 July 2016

10th ATP - Regulation (EU) 2017/776 of 4 May 2017

HP14 amendment - Regulation (EU) 2017/997 of 8 June 2017

13th ATP - Regulation (EU) 2018/1480 of 4 October 2018

14th ATP - Regulation (EU) 2020/217 of 4 October 2019

15th ATP - Regulation (EU) 2020/1182 of 19 May 2020

The Chemicals (Health and Safety) and Genetically Modified Organisms (Contained Use)(Amendment etc.) (EU Exit)

Regulations 2020 - UK: 2020 No. 1567 of 16th December 2020

The Waste and Environmental Permitting etc. (Legislative Functions and Amendment etc.) (EU Exit) Regulations 2020 - UK:

2020 No. 1540 of 16th December 2020

GB MCL List - version 1.1 of 09 June 2021

GB MCL List v2.0 - version 2.0 of 20th October 2023

GB MCL List v3.0 - version 3.0 of 11th January 2024

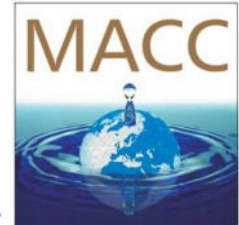
GB MCL List v4.0 - version 4.0 of 2nd March 2024

GB MCL List v5.0 - version 5.0 of 26th June 2024

GB MCL List v6.0 - version 6.0 of 15th February 2025



Appendix D
UXO Preliminary Risk Review



MACC International Ltd, Camilla Court, Nacton, Ipswich, Suffolk, IP10 0EU, UK

Lydia Crawford
Director
JPP Geotechnical and Environmental Ltd

Your Reference:

Our Reference: HL/9411/04

Email 1st Instance: Lydia.Crawford@jppuk.net

Date: 18/06/2025

Unexploded Ordnance Preliminary Risk Review
William Hulme's Grammar School, Spring Bridge Road, Manchester, M16 8PR

MACC International Ltd (MACC) has conducted a preliminary risk review for the site footprint. The review has drawn on open source and in-house information, references have been provided where available (See Annex A).

The review has been conducted to provide JPP Geotechnical and Environmental Limited with a review of the risk which may be posed by UXO while conducting investigations on the site.

This document has been produced in the United Kingdom by MACC International Limited and has been provided solely as an aid in decision making. It is not intended to be used by any person for any purpose other than that specified. Any liability arising out of use by a third party of this document for purposes not wholly connected with the above shall be the responsibility of that party, who shall indemnify MACC International Limited against all claims, costs, damages and losses arising out of such use.

Records indicate that the general area suffered significant enemy bombing during WWII with at least one HE bomb recorded within the site footprint and further strikes recorded within the immediate surrounding area. Whilst considering the history of the site and the level of post-war development, the following conclusions have been reached:

It is considered that there is a credible likelihood of encountering UXO on the plot. Consequently, the UXO risk is considered to be Medium within the site boundary.

It is recommended that a Detailed UXO Risk Assessment is conducted to more accurately define the risk levels within the site footprint. Alternatively, the stated preliminary risk level is accepted and the following mitigation procedures are implemented:

1. All site personnel are provided with a UXO Safety Awareness Talk before intrusive works are commenced.
2. All intrusive investigations into post war un-worked ground should be supported by specialist EOD services.

I trust this document has provided you with sufficient information to meet your immediate needs, should you require anything further, please do not hesitate to contact me.

Yours Sincerely

Hannah Lees
Research Manager

Tel: +44 (0)1473 655127

E-mail: macc@macc-eod.com Web: www.macc-eod.com

Registered in England: No. 3014471



Unexploded Ordnance Preliminary Risk Review

Site Location 	Site Address: William Hulme's Grammar School, Spring Bridge Road, Manchester, M16 8PR Grid Reference: 383749, 394323 
Scope of Intended works	Preliminary review of the risk that may be posed by UXO to geotechnical investigations.
History	Wartime Use: The site footprint was largely occupied by playing fields associated with William Hulme's Grammar School during WWII. Post War Development: The north-western area of the site footprint has undergone post-war development through construction of sports facilities.
Wartime History	Enemy Bombing: The general area suffered a significant level of enemy bombing during WWII. Records indicate that at least one HE bomb struck the eastern area of the site footprint with a further strike recorded approximately 90m east at Prestbury Avenue. Incendiary bombs also fell on the school gymnasium adjacent to the west of the site footprint and on the school science block. Anti-Aircraft Guns: Anti-Aircraft guns were positioned in the area to defend against air attack including a Heavy Anti-Aircraft Battery approximately 950m south-west of the site. Military Use: Records indicate a wartime military presence in the area with potential military use of land adjacent to the north of the site footprint visible within 1945 aerial imagery. One report was found to indicate that a 'Z' battery was established in this area approximately 100m north of the site. However, no records were found to confirm significant military activity within the site footprint specifically which remained in use as a school.
Unexploded Ordnance (UXO) Finds	No records were found to confirm a UXO find within the site footprint.



Appendix E

Utilities records

Enquirer

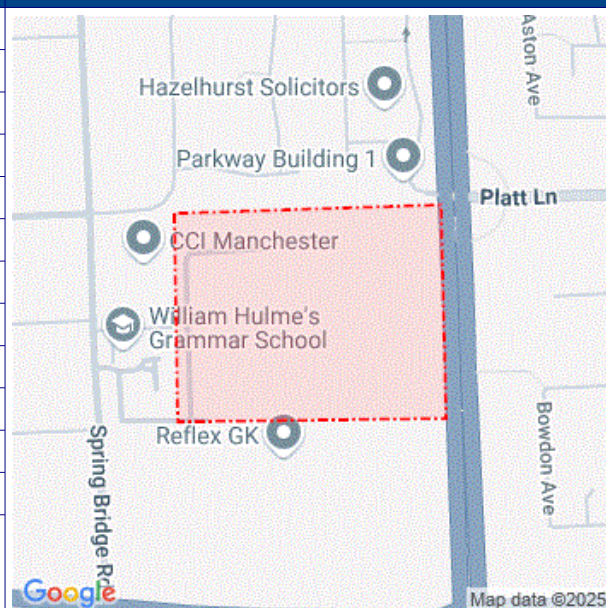
Name	Miss Natalie Randall	Phone	01604 781811
Company	JPP G&E Ltd	Mobile	Not Supplied
Address	JPP G& E Ltd Grand Union Works, Whilton Locks Daventry Northamptonshire NN11 2NH		
Email	natalie.randall@jppuk.net		

Enquiry Details

Enquiry type	Planned Works
Work category	Development Projects
Work type	Commercial/industrial
Work type buffer*	75 metres
Start date	25/06/2025
End date	02/07/2025
Scheme/Reference	29708 - William Hulme's Grammar School, Manchester
Search location	XY= 383740, 394277
Confirmed location	383743 394316
Site size	39394 metres square
Site Contact Name	Natalie Randall
Site Phone No.	01604781811
Description of Works	All Services Obtained for Use Of Service Avoidance Only

* The WORK TYPE BUFFER is a distance added to your search area based on the Work type you have chosen.

Site Map



Please note that the above map only displays the location of the proposed work site and will not display any of the Members' pipes and cables. It is imperative that this area accurately reflects the proposed work site.

Affected LSBUD members

(LSBUD Members who have assets registered on LSBUD within the vicinity of your search area.)

Do not proceed until all Members listed below have confirmed that your works can continue.

Asset Owner	Phone/Email	Emergency Only	Status
Cadent Gas	0800688588	0800111999	Await response
Electricity North West Limited	08001954141	08001954141	Await response
Neos Networks	03453053337	03453053337	Await response
Zayo Group UK Ltd c/o JSM Group Ltd	01992257688	08001691646	Await response

Status explanation

Await Response means that the asset owner will contact you. This is typically by sending the plan response but they may ask for further information before being able to do so, particularly if any payments or authorisations are required.

Email Additional Info means that the asset owner needs further information about your works to assess your enquiry before providing a response. Please provide any details you have available including plans, method statements etc. if available.

Important notices

It is very important that you correctly understand what the service does and the procedures in order for you to work safely. Please refer to the LSBUD Support Page (www.lsbud.co.uk/lineasearchbeforeudig-support) for further guidance.

This information includes how to provide additional information to the LSBUD Members who request it to provide a response to your enquiry.

Validity and search criteria. The results of this enquiry are based on the confirmed information you entered and are valid only as at the date and time of the enquiry. It is your responsibility to ensure that the Enquiry Details are correct, and LineasearchbeforeUdig (LSBUD) accepts no responsibility for any errors or omissions in the Enquiry Details or any consequences thereof. LSBUD Members update their asset information on a regular basis so you are advised to consider this when undertaking any works. It is your responsibility to choose the period of time after which you need to resubmit any enquiry but the maximum time (after which your enquiry will no longer be dealt with by the LSBUD Helpdesk and LSBUD Members) is 28 days. If any details of the enquiry change, particularly including, but not limited to, the location of the work, then a further enquiry must be made.

Terms and Conditions. Please note that this enquiry is subject always to our standard terms and conditions available at www.lsbud.co.uk ("Terms of Use") and the disclaimer at the end of this document. Please note that in the event of any conflict or ambiguity between the terms of this Enquiry Confirmation and the Terms of Use, the Terms of Use shall take precedence.

List of not affected LSBUD members

(LSBUD Members who do not have assets registered on the LSBUD service within the vicinity of your search area.)

Advanced Electricity Networks	Air Products PLC	AllPoints Fibre
Angus Energy	AWE Pipeline	B & D Energy Limited
Balfour Beatty Investments Limited	BOC Limited (A Member of the Linde Group)	Box Broadband
BP Exploration Operating Company Limited	BPA	Burwell 11 Solar Limited
Cambridge Water	Cambridgeshire County Council Climate Change and Energy Services	CATS Pipeline c/o Wood Group PSN
Cemex	Centrica Storage Ltd	CNG Services Ltd
Concept Solutions People Ltd	ConocoPhillips (UK) Teesside Operator Ltd	D.S.Smith
Diamond Transmission Corporation	DIO (MOD Live Pipelines)	Drax Power Limited
Eden Estuary Energy Limited	EDF Energy Renewables Ltd	EET Fuels
EirGrid	Eleclink Limited	Energy Assets Networks
ENI & Himor c/o Penspen Ltd	EnQuest Heather Ltd	EP Langage Limited
ESB CCGT Power station (Carrington Gas Pipeline)	ESP Utilities Group	Esso Petroleum Company Limited
euNetworks Fiber UK Ltd	EXA Infrastructure	Exolum Pipeline System
Fulcrum Electricity Assets Limited	Fulcrum Pipelines Limited	G.Network Communication Ltd c/o JSM Group Ltd
Gamma	Gas Networks Ireland (UK)	Gateshead Energy Company
Gigaclear Ltd	Greenlink Interconnector Ltd	Harbour Energy
Heathrow Airport LTD	Humbly Grove Energy	IGas Energy
Impala Terminals Infrastructure Ltd	INEOS FPS Pipelines	INEOS Manufacturing (Scotland and TSEP)
INOVYN ChlorVinyls Limited	INOVYN Enterprises Limited	Intergen (Coryton Energy or Spalding Energy)
Kensa Utilities	Last Mile	Liverpool City Region Connect
Mainline Pipelines Limited	Manchester Jetline Limited	Manx Cable Company
Marchwood Power Ltd (Gas Pipeline)	Melbourn Solar Limited	MUA Group Limited
Mutual Energy	National Gas Transmission	National Grid Electricity Distribution
National Grid Electricity Transmission	National Grid Ventures	Northern Gas Networks Limited
Northumbrian Water Group	NPower CHP Pipelines	NTT Global Data Centers EMEA UK Ltd
NYnet Ltd	Ogi	Oikos Storage Limited
Ørsted	Palm Paper Ltd	Perenco UK Limited (Purbeck Southampton Pipeline)
Petroineos	Phillips 66	Portsmouth Water
Redundant Pipelines - LPDA	RWE - Great Yarmouth Pipeline (Bacton to Great Yarmouth Power Station)	RWEnpower (Little Barford and South Haven)
SABIC UK Petrochemicals	SAS Utility Services Ltd	Scottish and Southern Electricity Networks
Scottish Power Generation	Seabank Power Ltd	SES Water

SGN	Shell	Shell NOP
South Staffs Water	SP Energy Networks	Spring Fibre Limited
Squire Energy Networks	SSE Generation Ltd	SSE Transmission
SSE Utility Solutions Limited	Storengy	Sutton Bridge Power Generation
Tata Communications (c/o JSM Construction Ltd)	TfL – London Underground HV Cables (Road & Track Side Cables)	toob Limited
Total (Colnbrook) c/o Penspen	Total Finaline Pipelines	Transmission Capital
Trojan Energy Limited	UK Power Distribution	UK Power Networks
Uniper UK Ltd	University of Cambridge Granta Backbone Network	Vattenfall
Veolia ES SELCHP Limited	Veolia ES Sheffield Ltd	Virgin Media O2
Voneus Limited	VPI Power Limited	Wales and West Utilities
Welsh Power	West of Duddon Sands Transmission Ltd	West Sussex OpenNetwork (Cooperative National Infrastructure)
Westminster City Council	Winnington CHP Ltd	

Non-LSBUD members (Asset owners not registered on LSBUD)

(The following Non-LSBUD Members may have assets in your search area. It is YOUR RESPONSIBILITY to contact them before proceeding.

Please be aware this list is not exhaustive and it is your responsibility to identify and contact all asset owners within your search area.)

Asset Owner	Preferred contact method	Phone	Status
Arelion UK Ltd	check-network@arelion.com		Not Notified
Bring Energy	nrsua@bringenergy.com	0800 130 3600	Not Notified
BT	https://www.swns.bt.com/pls/mbe/welcome.home	08000232023	Not Notified
CityFibre	asset.team@cityfibre.com	033 3150 7282	Not Notified
Colt	plantenquiries@catelecomuk.com	01227768427	Not Notified
GTC	https://pe.gtc-uk.co.uk/PlantEnqMembership	01359240363	Not Notified
Lumen Technologies	plantenquiries@ocugroup.com	02087314613	Not Notified
Manchester City Council	https://www.manchester.gov.uk		Not Notified
Mobile Broadband Network Limited	mbnl.plant.enquiries@turntown.com	01212 621 100	Not Notified
Sky UK Limited	nrsua@sky.uk	02070323234	Not Notified
Sota	sota.plantenquiries@ocugroup.com		Not Notified
United Utilities	WastewaterDeveloperServices@uuplc.co.uk	08707510101	Not Notified
Utility assets Ltd	assetrecords@utilityassets.co.uk		Not Notified
Verizon Business	osp-team@uk.verizonbusiness.com	01293611736	Not Notified
Virgin Media	http://www.digdat.co.uk	08708883116	Not Notified
Vodafone	osm.enquiries@atkinsglobal.com	01454662881	Not Notified

Disclaimer

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The results of this Enquiry are personal to the Enquirer and shall not be shared with or relied upon by any other party. The asset information on which the Enquiry results are based has been provided by LSBUD Members, therefore LSBUD will provide no guarantee that such information is accurate or reliable nor does it monitor such asset information for accuracy and reliability going forward. There may also be asset owners which do not participate in the enquiry service operated by LSBUD, including but not exclusively those set out above. Therefore, LSBUD cannot make any representation or give any guarantee or warranty as to the completeness of the information contained in the enquiry results or accept any responsibility for the accuracy of the mapping images used. LSBUD and its employees, agents and consultants accept no liability (save that nothing in this Enquiry Confirmation excludes or limits our liability for death or personal injury arising from our negligence, or our fraud or fraudulent misrepresentation, or any other liability that cannot be excluded or limited by English law) arising in respect thereof or in any other way for errors or omissions including responsibility to any person by reason of negligence.

JPP Geotechnical & Environmental Ltd

**4
Ironstone Way, Brixworth
Northampton, Northamptonshire
NN6 9UD**

FAO:

How to contact us:

**United Utilities Water Limited
Property Searches
Haweswater House
Lingley Mere Business Park
Great Sankey
Warrington
WA5 3LP**

Telephone: 0370 7510101

E-mail: propertysearches@uuplc.co.uk

**Your Ref: 29708
Our Ref: UUPS-ORD-660361
Date: 25/06/2025**

Dear Sirs

Location: William Hulme's Grammar School

I acknowledge with thanks your request dated 24/06/2025 for information on the location of our services.

Please find enclosed plans showing the approximate position of United Utilities' apparatus known to be in the vicinity of this site.

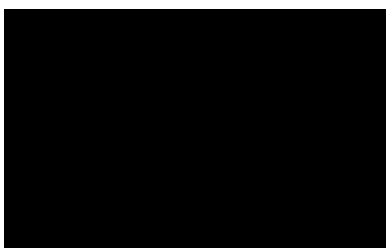
The enclosed plans are being provided to you subject to the United Utilities terms and conditions for both the wastewater and water distribution plans which are shown attached.

If you are planning works anywhere in the North West, please read United Utilities' access statement before you start work to check how it will affect our network. <http://www.unitedutilities.com/work-near-asset.aspx>.

I trust the above meets with your requirements and look forward to hearing from you should you need anything further.

If you have any queries regarding this matter please [contact us](#).

Yours Faithfully,



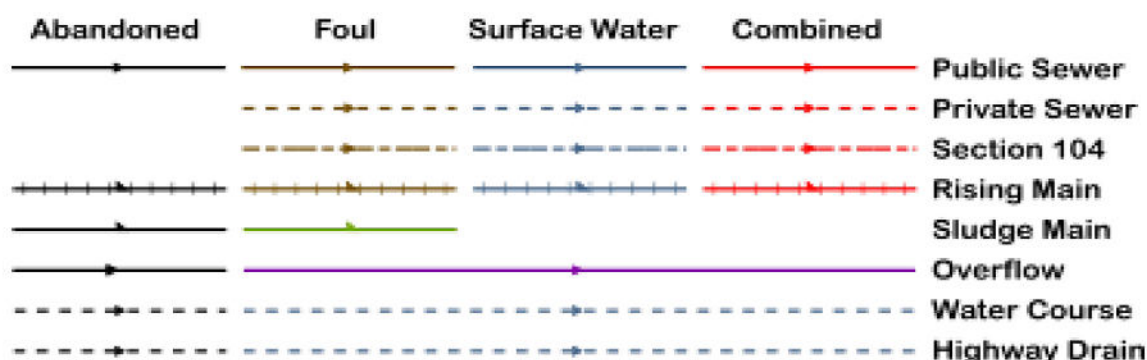
TERMS AND CONDITIONS - WASTEWATER AND WATER DISTRIBUTION PLANS

These provisions apply to the public sewerage, water distribution and telemetry systems (including sewers which are the subject of an agreement under Section 104 of the Water Industry Act 1991 and mains installed in accordance with the agreement for the self construction of water mains) (UUWL apparatus) of United Utilities Water Limited "(UUWL)".

TERMS AND CONDITIONS:

- This Map and any information supplied with it is issued subject to the provisions contained below, to the exclusion of all others and no party relies upon any representation, warranty, collateral contract or other assurance of any person (whether party to this agreement or not) that is not set out in this agreement or the documents referred to in it.
- This Map and any information supplied with it is provided for general guidance only and no representation, undertaking or warranty as to its accuracy, completeness or being up to date is given or implied.
- In particular, the position and depth of any UUWL apparatus shown on the Map are approximate only. UUWL strongly recommends that a comprehensive survey is undertaken in addition to reviewing this Map to determine and ensure the precise location of any UUWL apparatus. The exact location, positions and depths should be obtained by excavation trial holes.
- The location and position of private drains, private sewers and service pipes to properties are not normally shown on this Map but their presence must be anticipated and accounted for and you are strongly advised to carry out your own further enquiries and investigations in order to locate the same.
- The position and depth of UUWL apparatus is subject to change and therefore this Map is issued subject to any removal or change in location of the same. The onus is entirely upon you to confirm whether any changes to the Map have been made subsequent to issue and prior to any works being carried out.
- This Map and any information shown on it or provided with it must not be relied upon in the event of any development, construction or other works (including but not limited to any excavations) in the vicinity of UUWL apparatus or for the purpose of determining the suitability of a point of connection to the sewerage or other distribution systems.
- No person or legal entity, including any company shall be relieved from any liability howsoever and whensoever arising for any damage caused to UUWL apparatus by reason of the actual position and/or depths of UUWL apparatus being different from those shown on the Map and any information supplied with it.
- If any provision contained herein is or becomes legally invalid or unenforceable, it will be taken to be severed from the remaining provisions which shall be unaffected and continue in full force and affect.
- This agreement shall be governed by English law and all parties submit to the exclusive jurisdiction of the English courts, save that nothing will prevent UUWL from bringing proceedings in any other competent jurisdiction, whether concurrently or otherwise.

Wastewater Symbolology



All point assets follow the standard colour convention: **red** – combined **brown** - foul
blue – surface water **purple** - overflow

Manhole	Side Entry Manhole
Head of System	Outfall
Extent of Survey	Screen Chamber
Rodding Eye	Inspection Chamber
Inlet	Bifurcation Chamber
Discharge Point	Lamp Hole
Vortex	T Junction / Saddle
Penstock	Catchpit
Washout Chamber	Valve Chamber
Valve	Vent Column
Air Valve	Vortex Chamber
Non Return Valve	Penstock Chamber
Soakaway	Network Storage Tank
Gully	Sewer Overflow
Cascade	Ww Treatment Works
Flow Meter	Ww Pumping Station
Hatch Box	Septic Tank
Oil Interceptor	Control Kiosk
Summit	DNM Network Monitoring Point
Drop Shaft	Change of Characteristic
Orifice Plate	



SEWER RECORDS

Address or Site Reference

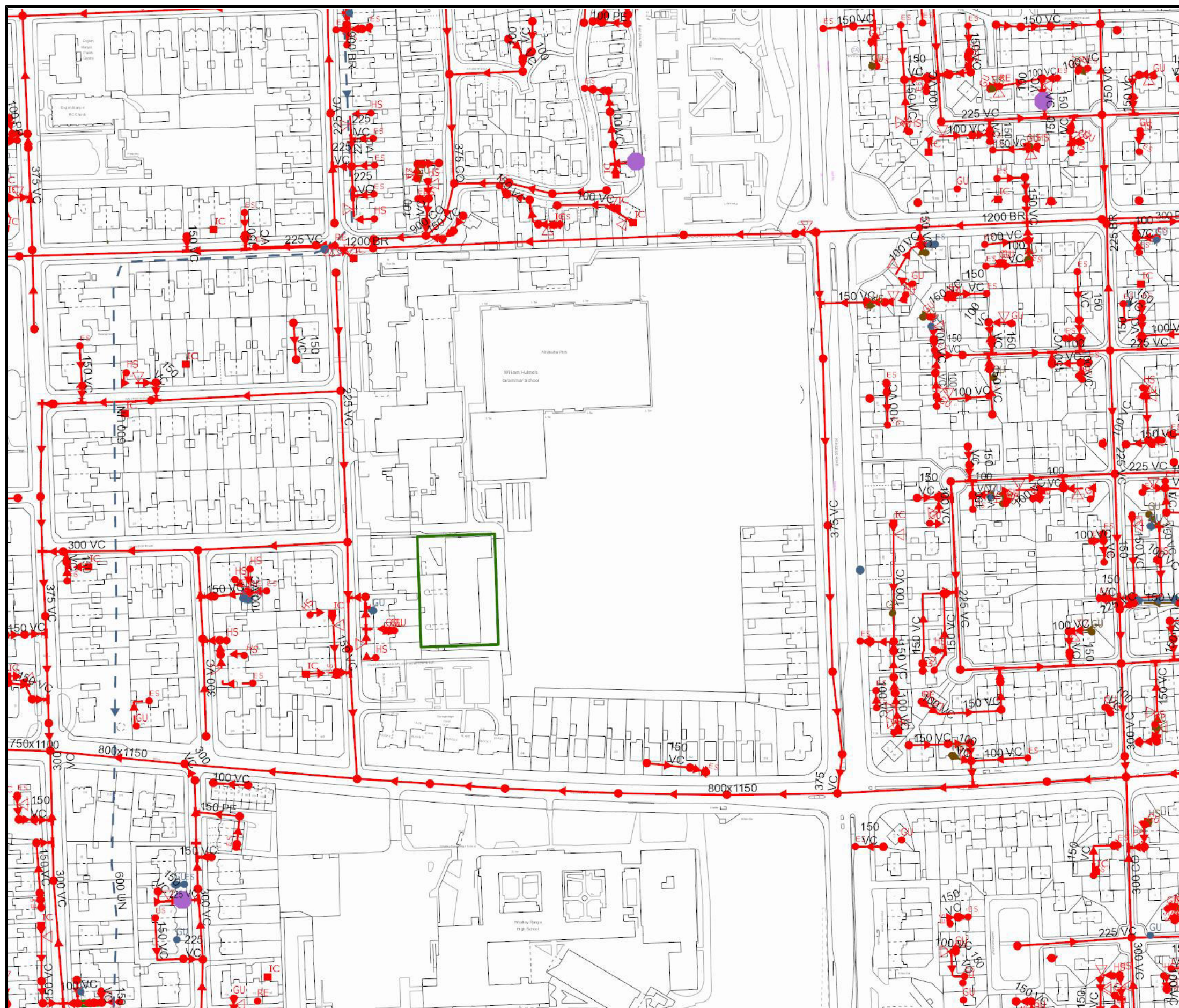
William Hulme's Grammar School,

Scale: 1:2500
Date: 25/06/2025

Printed by: Property Searches

The position of the underground apparatus shown on this plan is approximate only and is given in accordance with the best information currently available. United Utilities Water will not accept liability for any loss or damage caused by the actual position being different from those shown.

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Clean Water Symbolology

Proposed	Abandoned	Live	
			Distribution Main
			Trunk Main
			Comms Pipe
			Private Pipe
			Concessionary Service
			Raw Water
			LDTM Raw Water
			LDTM Treated Water
			Air Valve
			AC Valve, open
			AC Valve, closed
			CC Valve, open
			CC Valve, closed
			Non Return Valve
			Pressure Management Valve
			OMS Valve
			Stop Tap
			Flow Meter
			Domestic Meter
			Commercial Meter
			Pump
			Hydrant
			Fire Hydrant
			Anode
			Chlorination Point
			De-chlorination Point
			Strainer Point
			Access Point
			Hatch Box
			IP Point
			Sampling Station
			Logger Box
			Bore Hole
			Inlet Point
			Bulk Supply Point
			End Cap
			Site Termination
			Change of Characteristic
			Condition Report
			<u>Property Types</u>
			Water Tower
			Valve House
			Booster Pumping Station
			Intake Pumping Station
			Water Treatment Works
			Supply Reservoir
			Service Reservoir
			Impounding Reservoir
			Pipe Bridge

Symbology for proposed assets is the same as above, but shown in **green**
 Symbology for abandoned assets is the same as above, but shown in **black**



WATER MAIN RECORDS

Address or Site Reference

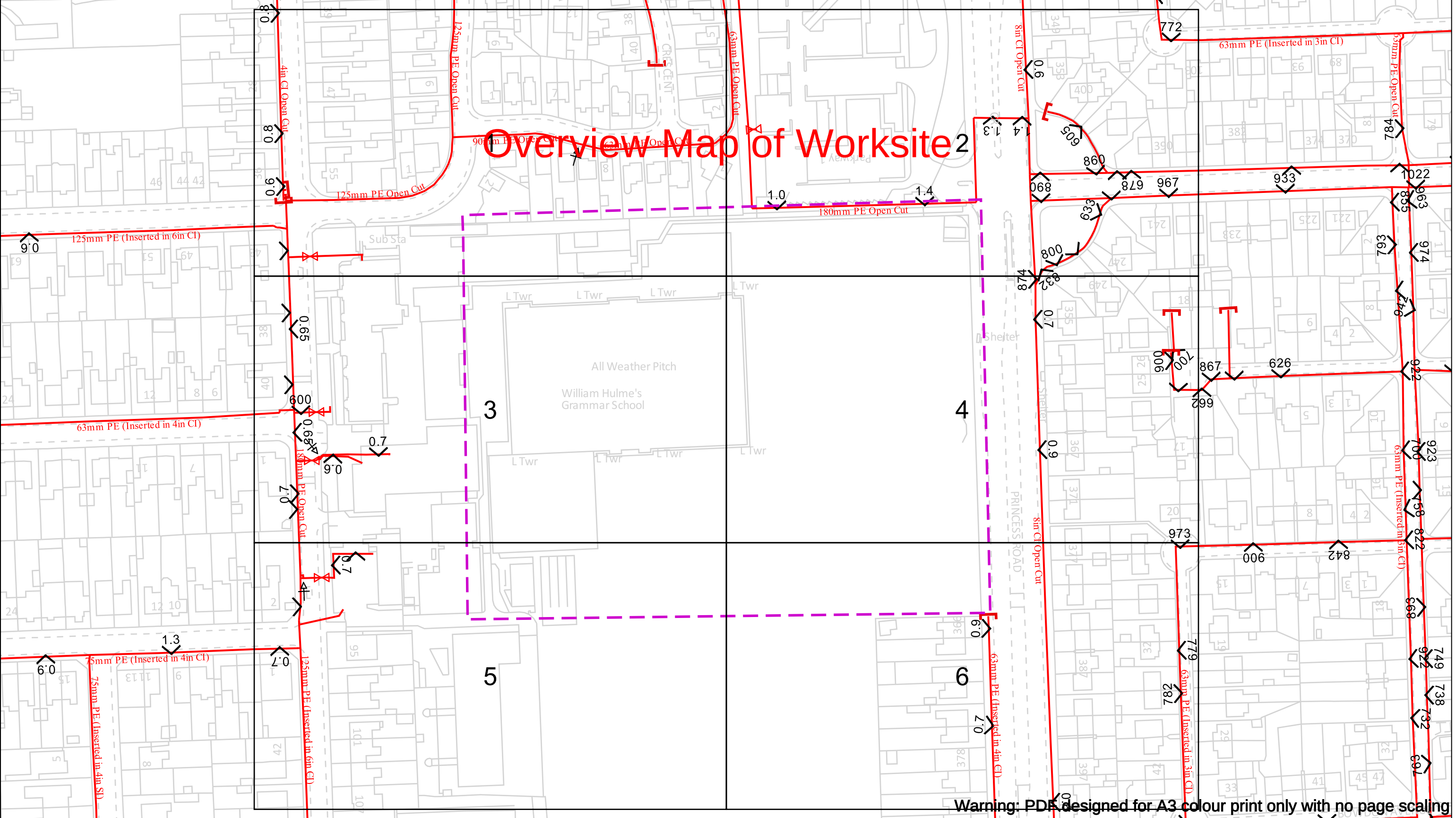
William Hulme's Grammar School,

Scale: 1:2500
Date: 25/06/2025

Printed by: Property Searches

The position of the underground apparatus shown on this plan is approximate only and is given in accordance with the best information currently available. United Utilities Water will not accept liability for any loss or damage caused by the actual position being different from those shown.

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Warning: PDF designed for A3 colour print only with no page scaling

Date Requested: 24/06/2025
Job Reference: 37744285
Site Location: 383743 394316
Requested by:
Miss Natalie Randall
Your Scheme/Reference: 29708
- William Hulme's Grammar School, Manchester

Scale: 1:1537 (When plotted at A3)

View extent: 200m, 115m

IMPORTANT NOTICES

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In case of an emergency call 0800 111 999

Dig Sites	Area:	Line:
LP Mains	Valve	Diameter Change
MP Mains	Depth of cover	Material Change
IP Mains	Syphon	Out of Standard Service
LHP Mains		

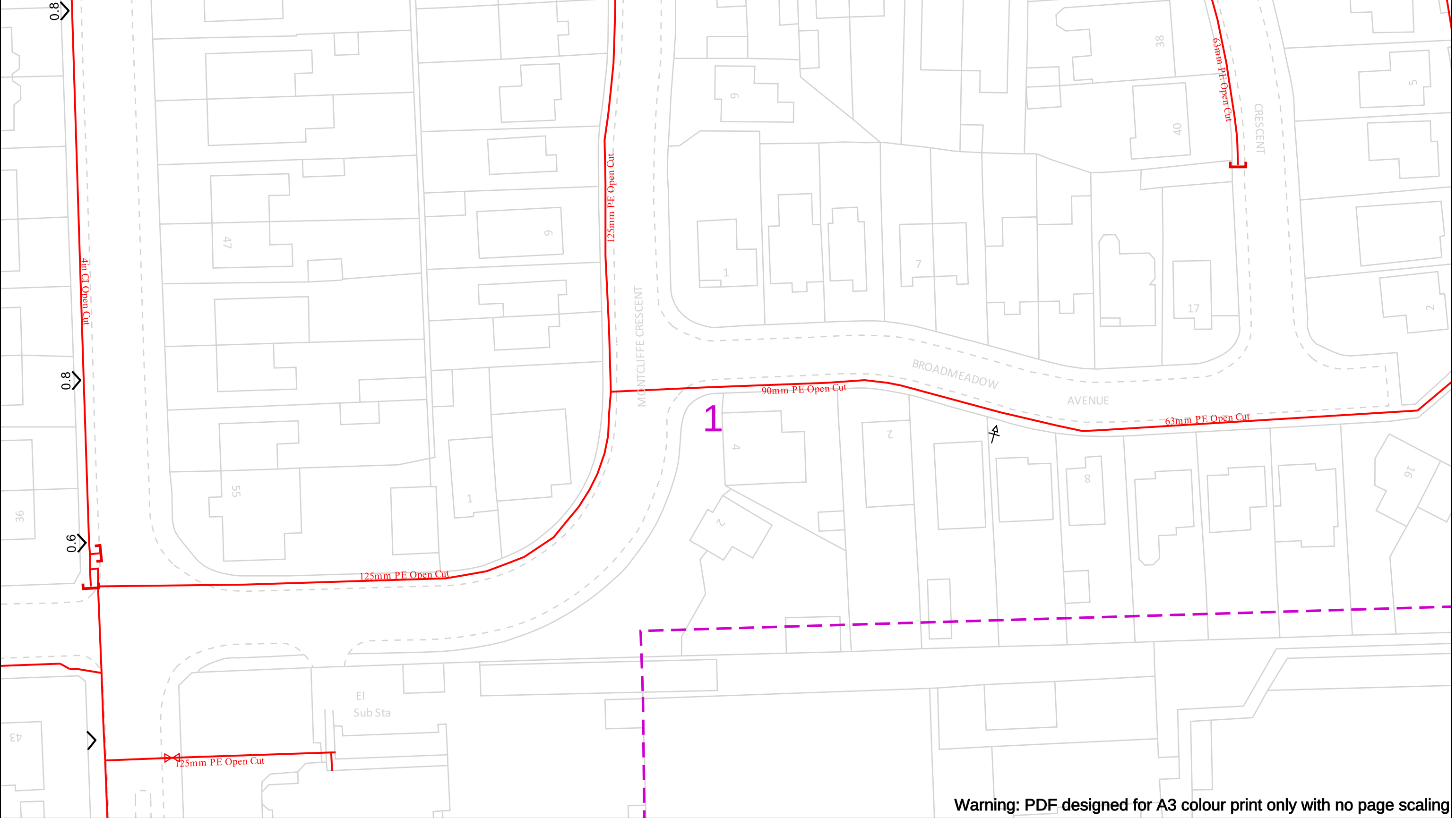
Where an out-of-standard service is present please contact plant protection 0800 688 588 for further information. Out-of-standard service symbology may be used to indicate one or more of the following:

- Identification of shallow services
- Identification of dual services
- Recording of non-perpendicular services

A perpendicular service/connection is laid in a straight line from the entry point at the property to the connection at the main – this includes a pipe that has a perpendicular connection and is not straight but does not deviate more than 1m off centre line.

Your Gas Network

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Date Requested: 24/06/2025
Job Reference: 37744285
Site Location: 383743 394316
Requested by:
Miss Natalie Randall
Your Scheme/Reference: 29708 - William Hulme's Grammar School, Manchester

Scale: 1:500 (When plotted at A3)

View extent: 200m, 115m

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50m

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MP Mains	Depth of cover	Material Change
IP Mains	Syphon	Out of Standard Service
LHP Mains		

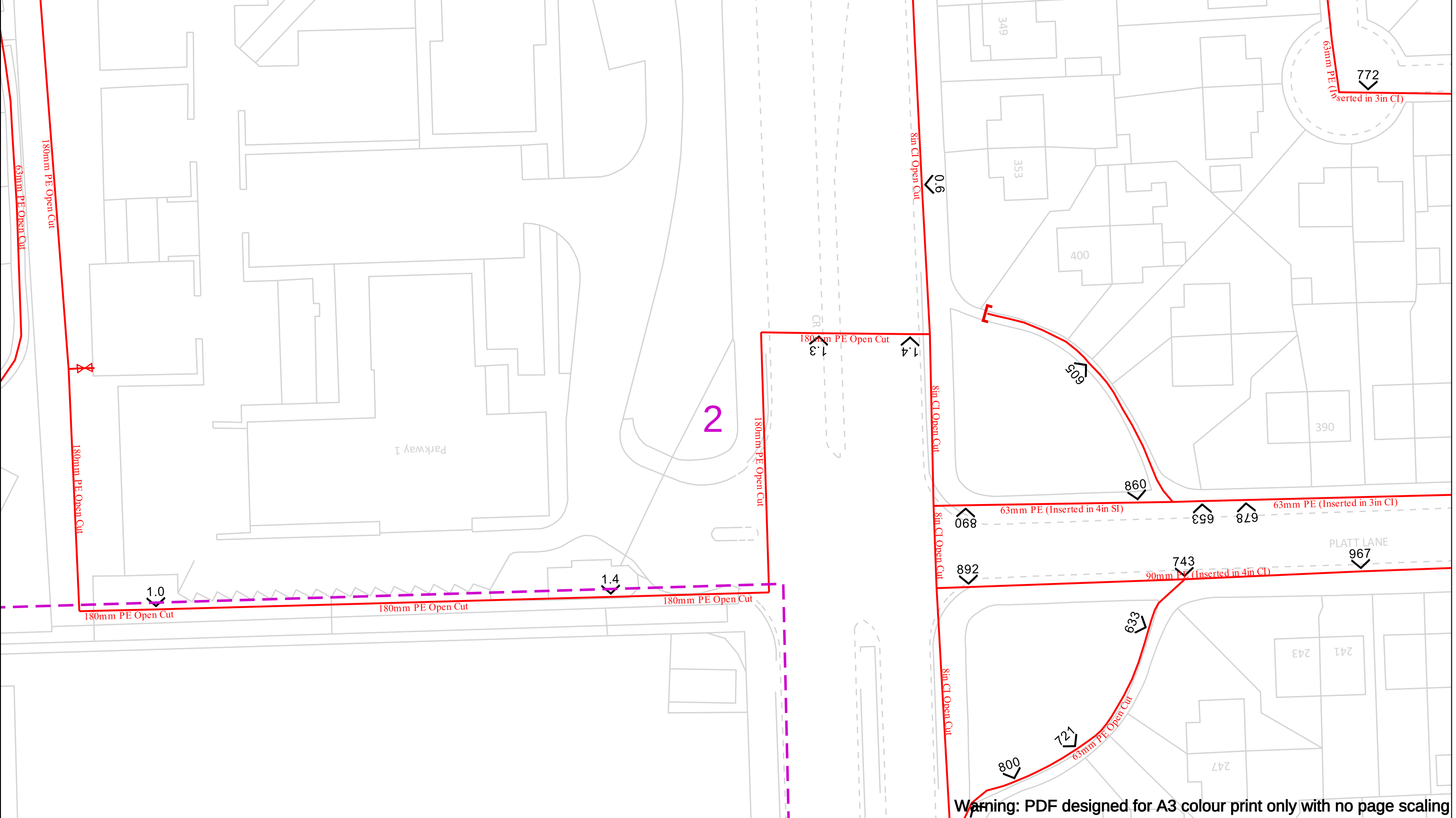
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Dig Sites

	LP Mains		Valve		Area:		Line:
	MP Mains		Depth of cover				
	IP Mains		Syphon				
	LHP Mains		Out of Standard Service				

50m

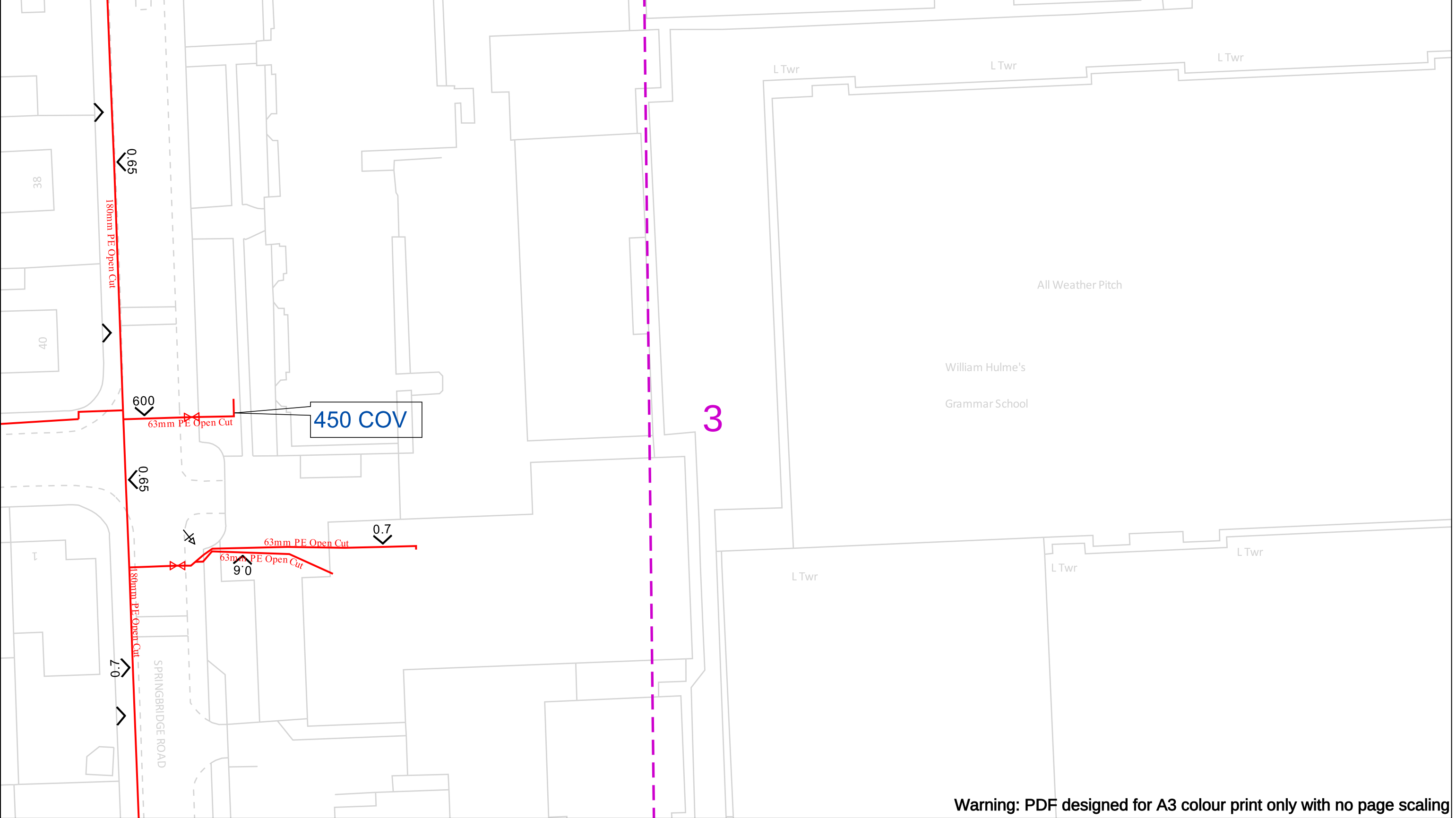
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Dig Sites

LP Mains
MP Mains
IP Mains
LHP Mains

Valve
Depth of cover
Syphon

Diameter Change
Material Change
Out of Standard Service

Area: Line:

50m

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• Identification of dual services

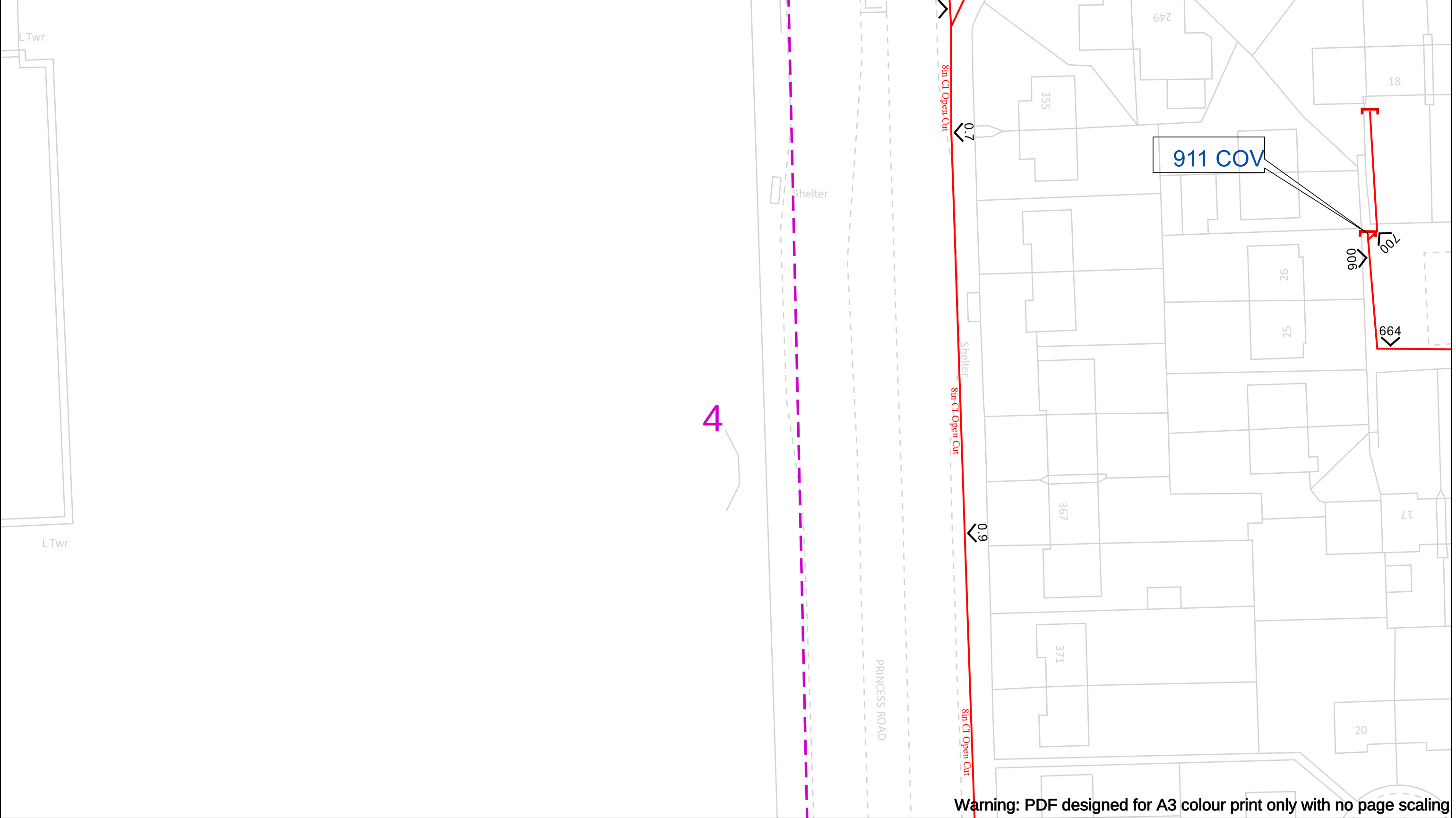
• Recording of non-perpendicular services

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Cadent

Your Gas Network

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50m

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LP Mains	Valve	Diameter Change
MP Mains	Depth of cover	Material Change
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LHP Mains		

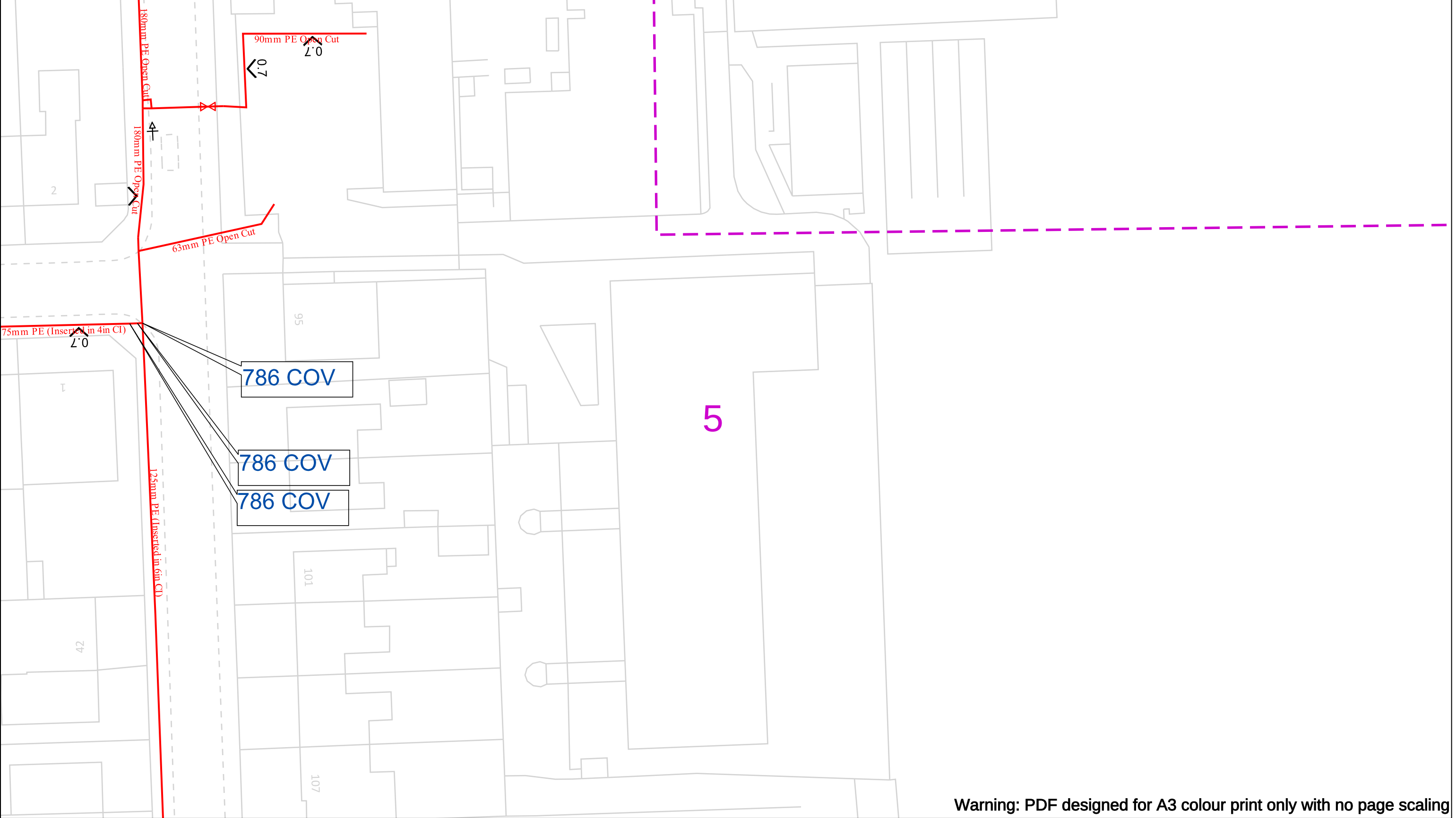
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50m

Dig Sites	Area:	Line:	
	LP Mains		Valve
	MP Mains		Depth of cover
	IP Mains		Syphon
	LHP Mains		Diameter Change
			Material Change
			Out of Standard Service

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Dig Sites

Area:  Line: 

	LP Mains		Valve		Diameter Change
	MP Mains		Depth of cover		Material Change
	IP Mains		Syphon		Out of Standard Service
	LHP Mains				

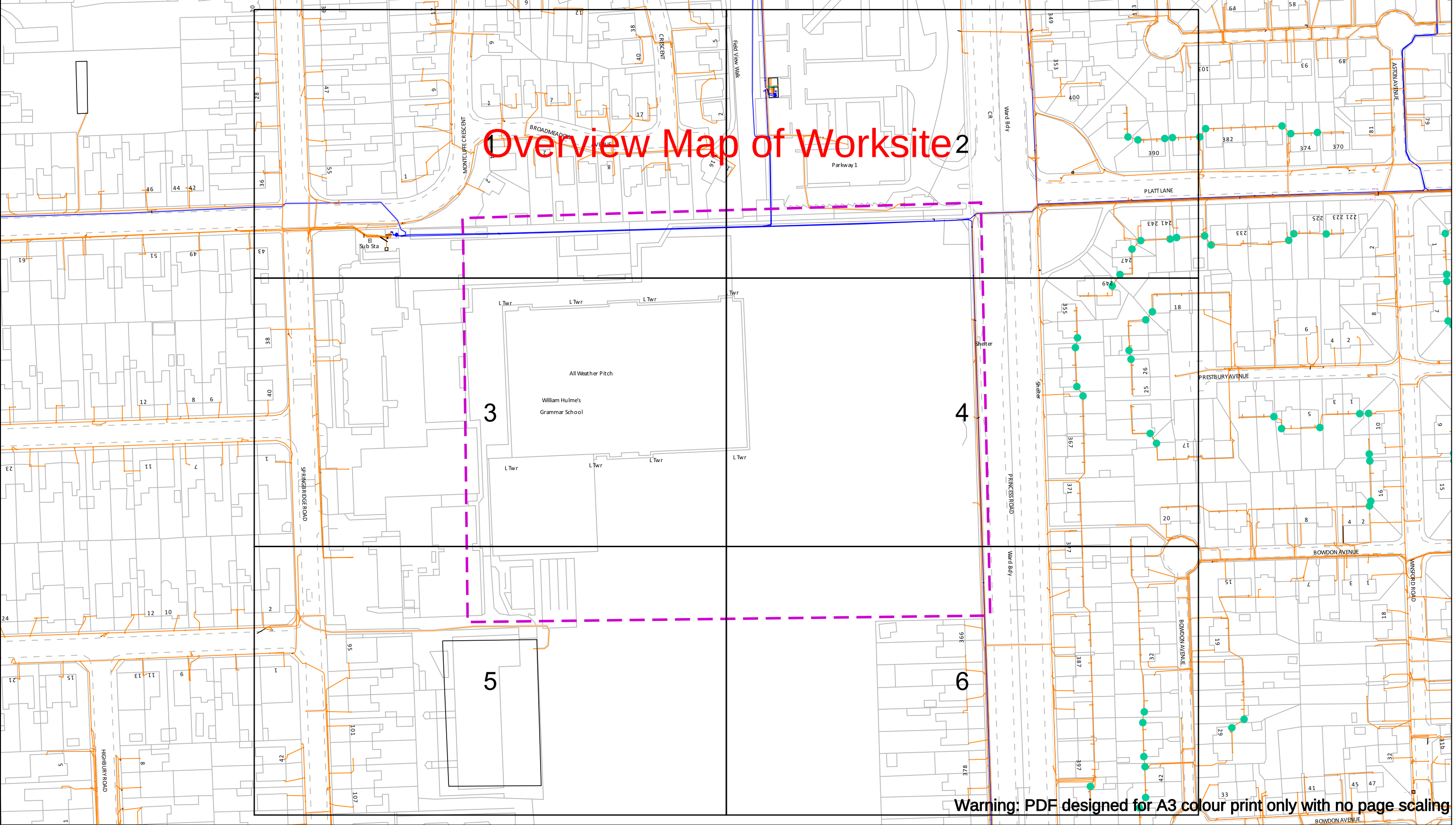
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In an emergency call 105,
24 hours a day

Date Requested: 24/06/2025
Job Reference: 37744285
Site Location: 383743 394316
Requested by:
Miss Natalie Randall
Your Scheme/Reference: 29708
- William Hulme's Grammar
School, Manchester

Scale: 1:1538 (When plotted at A3)

IMPORTANT INFO

Unless otherwise indicated the depth of Electricity North West Limited cables are in accordance with NJUG (450mm for Low Voltage & 600mm for 11kV cables) 33kV and 132kV cables are laid at depths as marked. The depth and positions of Electricity North West Limited equipment was accurate as shown when the equipment was installed. However third parties may have altered the level & other reference data. Therefore Electricity North West Limited accept no responsibility for the position of Electricity North West Limited equipment being different from shown. No person, body or company, shall be relieved from liability for damage caused to Electricity North West Limited equipment by reason of being located differently to the indications on this drawing or from any regulatory loss of income or incentive, or expense, which may be suffered by Electricity North West Limited and which is caused or contributed to by any loss of supply as a result of any damage caused to Electricity North West Limited's equipment. Service cables are not necessarily shown but must be assumed to exist to all premises, streetlights and signs. There may be other Electricity North West Limited apparatus in the vicinity which is not indicated on the cable records. Other apparatus may also be present which is owned by a third party other than Electricity North West Limited.

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Operating Voltage	Colour Code	Line Colour	Dig Sites
132kV	Black		Area:
33kV	Green		Line:
22kV-25kV	Yellow		
11kV	Red		
6kV-6.6kV	Blue		
1kV-6kV	Violet		
LV	Orange		
Unknown Voltage	Brown		

Electricity North West
Borron Street
Portwood, Stockport
Cheshire, SK1 2 JD
Phone: 0800 195 4141
Email: planrequest@enwl.co.uk



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Operating Voltage

132kV

33kV

22kV-25kV

11kV

6kV-6.6kV

1kV-6kV

LV

Unknown Voltage

Colour Code

Black

Green

Yellow

Red

Blue

Violet

Orange

Brown

Line Colour



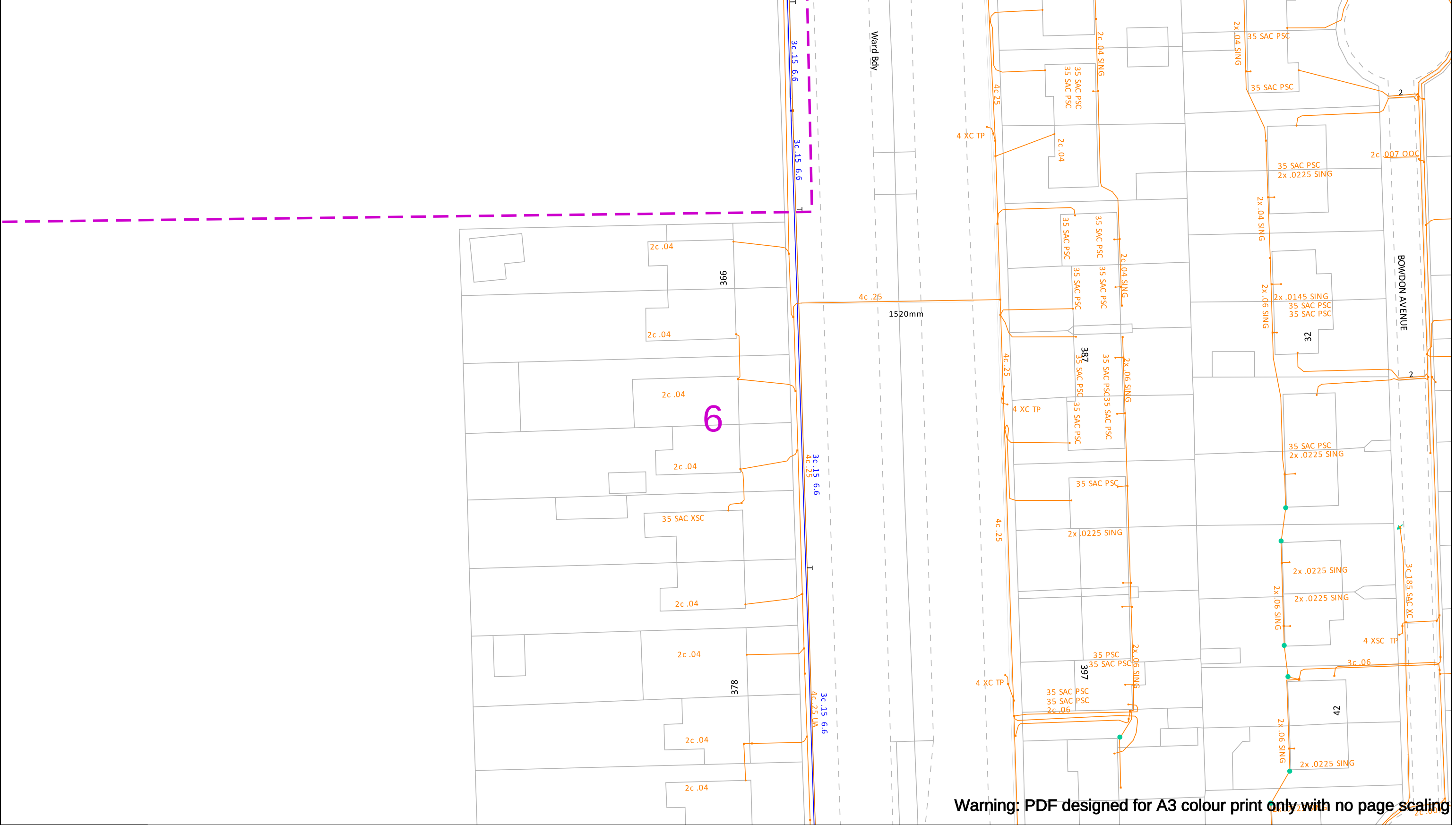
Dig Sites

Area: 

Line: — — — —



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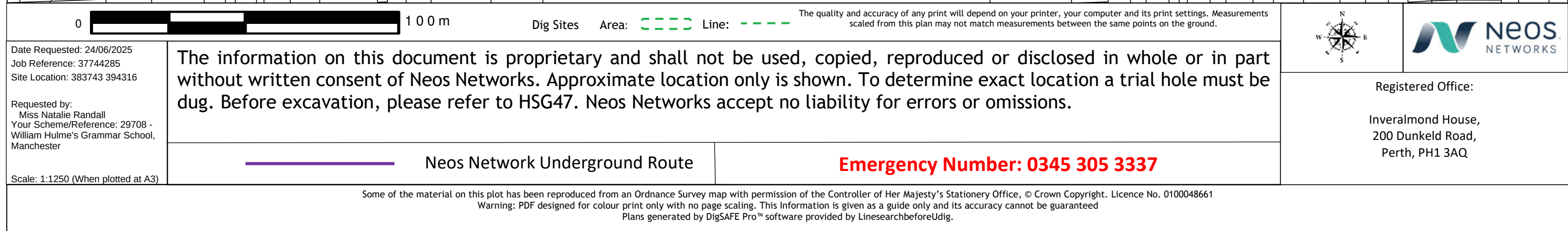
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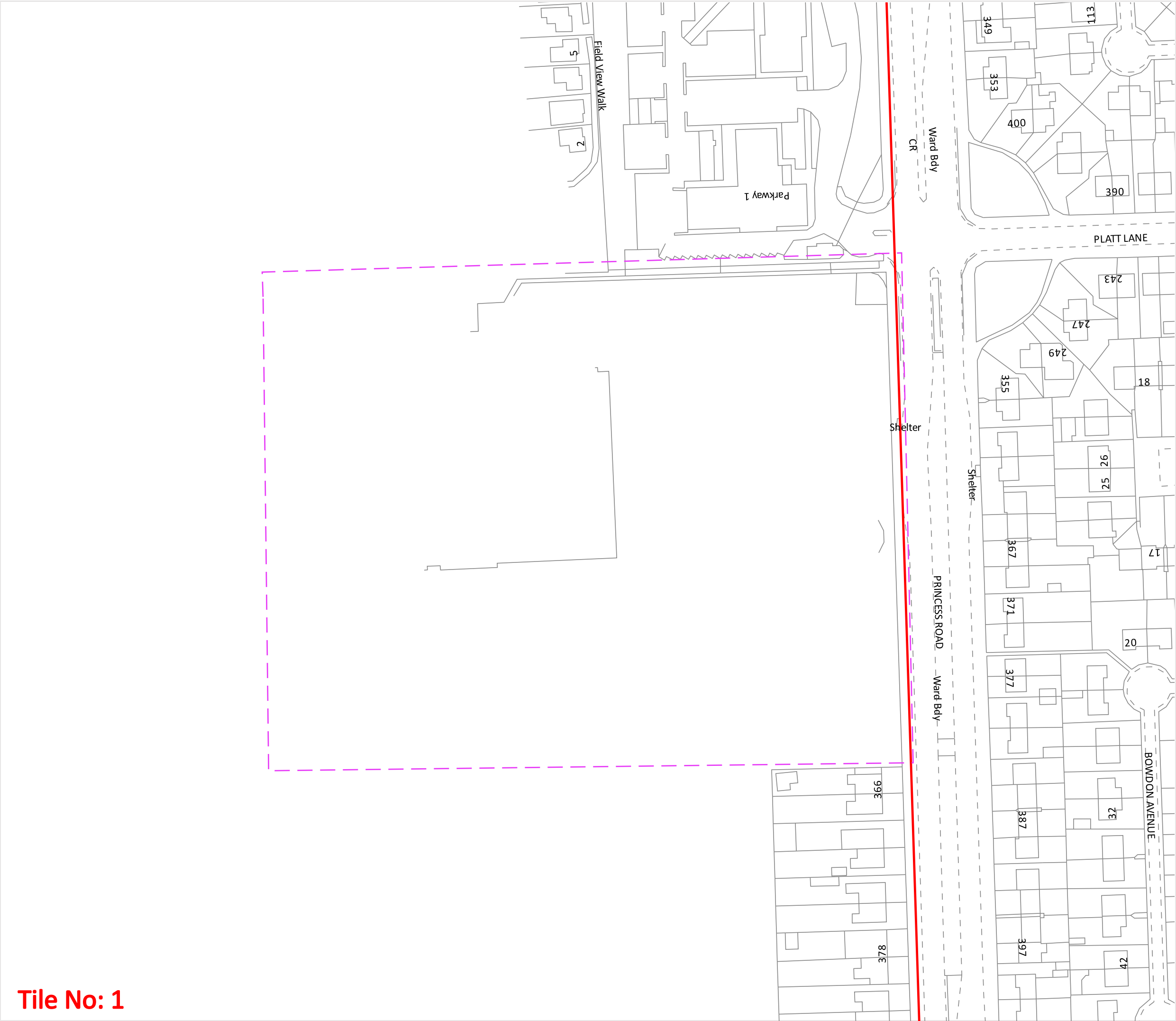
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Zayo Group UK Ltd
4th Floor Harmsworth House
13-15 Bouverie Street
London, EC4Y 8DP

JSM Group Ltd
Sterling House
Mutton Lane, Potters Bar
Hertfordshre, EN6 3AR
T: 01992 655 919
zayoplantenquiries@jsmgroup.com

Legend

- Zayo Duct
- Zayo Chamber
- Enquiry Area

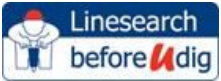
Date requested: 24 Jun 2025
Requested by: Miss Natalie Randall
Company: JPP G&E Ltd
Job reference: 37744285
Your reference: 29708 - William Hulme's Grammar

Scale on A3 paper: 1:1250

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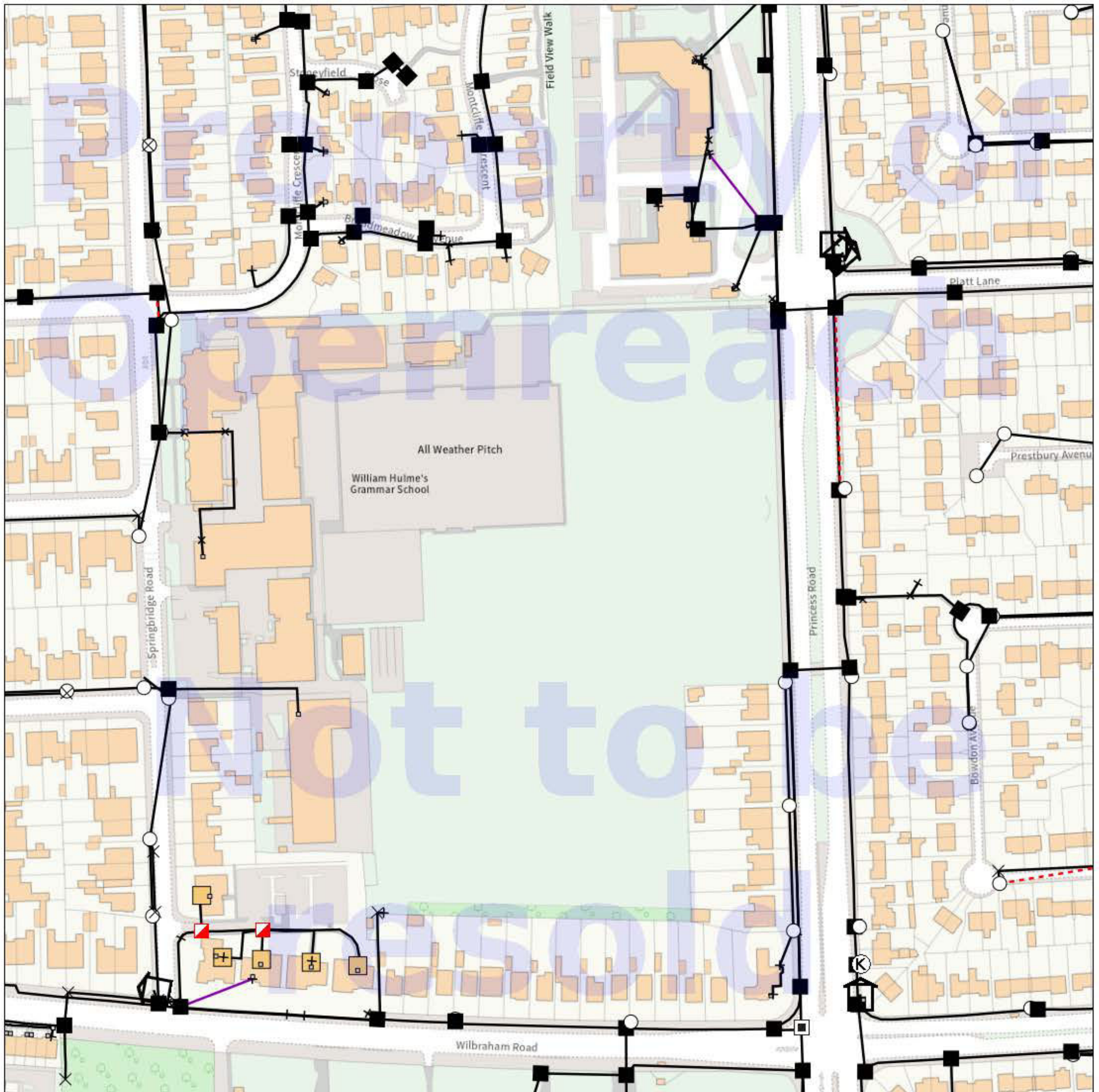


Protecting Lives, Cables & Pipes

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damaged call: 0800 169 1646**

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Maps on Demand Plant Information Reply



IMPORTANT WARNING

Information regarding the location of BT apparatus is given for your assistance and is intended for general guidance only. No guarantee is given of its accuracy. It should not be relied upon in the event of excavations or other works being made near to BT apparatus which may exist at various depths and may deviate from the marked route.

openreach

CLICK BEFORE YOU DIG

FOR PROFESSIONAL FREE ON SITE ASSISTANCE PRIOR TO COMMENCEMENT OF EXCAVATION WORKS INCLUDING LOCATE AND MARKING SERVICE

email cbud@openreach.co.uk

ADVANCE NOTICE REQUIRED
(Office hours: Monday - Friday 08.00 to 17.00)
www.openreach.co.uk/cbud

Accidents happen

If you do damage any Openreach equipment please let us know by calling 0800 023 2023 (opt 1 + opt 1) and we can get it fixed ASAP

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KEY TO BT SYMBOLS

	Planned	Live	Change Of State	+	Hatchings	
PCP			Split Coupling	×	Built	
Pole			Duct Tee	▲	Planned	
Box			Building		Inferred	
Manhole			Kiosk	Ⓚ	Duct	
Cabinet			Other proposed plant is shown using dashed lines. BT Symbols not listed above may be disregarded. Existing BT Plant may not be recorded. Information valid at time of preparation. Maps are only valid for 90 days after the date of publication.			
	Pending Add	In Place	Pending Remove	Not In Use		
Power Cable						
Power Duct				N/A		

BT Ref : AUY10014C

Map Reference : (centre) SJ8374494295

Easting/Northing : (centre) 383744,394295

Scale : 1:500

Issued : 24/06/2025 10:01:17

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