

Project name	One Silk Street Limited, Manchester		
Design note title	Drainage Planning Condition		
Document reference	C-13149-TN-002		
Author	L W Pilsbury		
Revision	P01		
Date	10 March 2022	Approved	☐

Bengal Street, Manchester, Reference Planning Application : 120893/FO/2018

With reference to the above planning application this note and the attached information has been prepared to discharge the below planning condition

The condition reads as follows:

Drainage Maintenance Management

Prior to the first occupation of the development, details of the implementation, maintenance and management of the sustainable drainage scheme shall be submitted for approval in writing by the City Council, as Local Planning Authority. For the avoidance of doubt this shall include:

Verification reporting providing photographic evidence of construction;

Management and maintenance plan for the lifetime of the development which shall include the arrangements adoption by any public body or statutory undertaker, or any other arrangements to secure the operation of the sustainable drainage scheme throughout its lifetime.

To enable the above condition to be discharged the following information is attached to this note:

- Drawing BGS-HYD-XX-XX-DR-C-0001 Rev C01 - Drainage Layout
- Drawing BGS-HYD-XX-XX-DR-C-0012 Rev C01 - Standard Details Sheet 3
- EC5015 090221 Inspection Letter

Verification report providing photographic evidence of construction;

The following photographs were taken of the below ground drainage construction during site inspections dated between 13/05/20 and 16/09/20.

The indicate the construction of chambers, oversized storage pipework, and complex flow control chambers in conjunction with the proposed drainage layout and construction detail drawings.



Photo 1 – As built Chamber



Photo 2 – Installation of Winsor Interceptor on outfall of flow control chamber



Photo 3 – Flow Control Chamber Construction – Incoming 600mm diameter storage pipe



Photo 4 – PPIC Construction

United Utilities Inspection Notice – S106;

The below inspection letter, received from United Utilities dated 09/02/2021, confirms the final approval for the S106 connection application into the public combined sewer within Radium Street.

United Utilities Water Ltd

Developer Services & Metering

Your Reference	EC5015
Our Reference	4200030683
Date	09/02/2021

Dear Sir/Madam

Location:	Radium Street, Ancoats, Manchester
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I am writing to you in reference to your recent sewer connection application. I can confirm that the connection has been inspected at Radium Street, Ancoats, Manchester and is deemed as satisfactory.

Please accept this letter as our final approval for this sewer connection.

Should you need to enquire about this application please telephone our Customer Service Centre on 0345 072 6067 and quote the above reference number.

Yours faithfully

Louise Dack

Developer Services and Metering

United Utilities Water Ltd
Developer Services Network Delivery
2nd Floor, Grasmere House
Lingley Green Ave, Great Sankey
Warrington
WA5 3LP

Telephone : 0345 072 6067
WastewaterDeveloperServices@uuplc.co.uk

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United Utilities Inspection Notice

This form is to confirm a new connection has been made
to an existing public sewer under Section 106 of the
Water Industry Act 1991



Water for the North West

Site details: Details of the site or premise that have been connected to the public sewer	
United Utilities notification reference (EC/NC/SC/WC)	EC5015
Site address	Radium Street, Ancoats, Manchester
Development type	New property

Contractor Details	
Contractor name / Company Name	Sub-Tech Contracts Ltd
Contractor Email Address	info@sub-tech.co.uk
Works Supervisor	Shpetim Lulaj
Confirm sewer 'log on' & 'log off' procedure followed	Yes ☒ No ☐

Principal Contractor Details (if applicable)	
Company name (if applicable)	JRL Structures Ltd
Name of Contact for Project	Darren Hynes
Email Address	darren.hynes@jreddington.co.uk
Number of site inspections conducted by United Utilities	1

Connection details	
Sewer connection type	Combined
Combined sewer pipesize diameter	300mm
Connecting into:	457x685mm brick Existing Sewer Type Combined
Connecting to asset:	a saddle
Connection Location	Radium Street

Outcome	
Connection status	Satisfactory

Comments
I can confirm that the Combined Sewer connection is SATISFACTORY - 300mm Combined Sewer connecting into the 457x685mm brick Combined connected via a saddle in Radium Street

Approved: I confirm the sewer connection detailed above has been satisfactorily completed and inspected

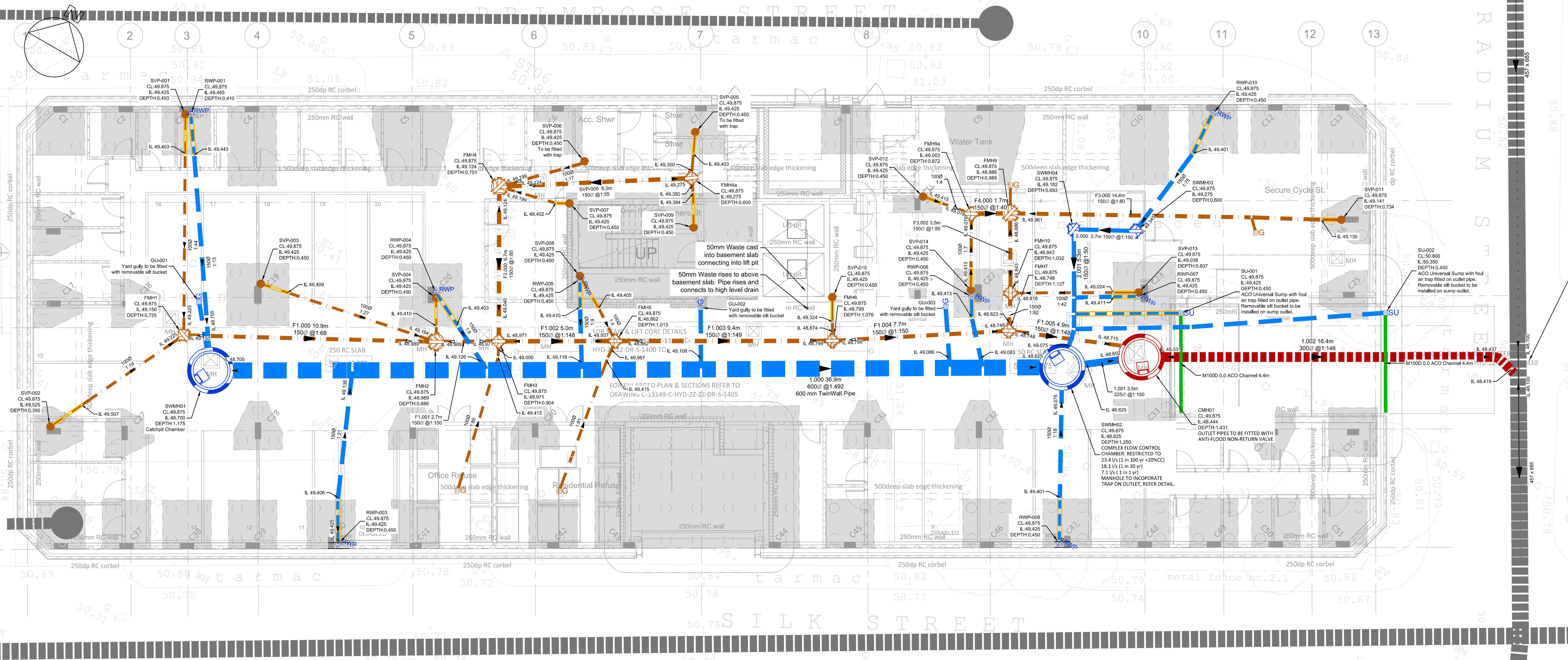
Developer Services Inspector	Phil Harper
Date of Inspection	08/02/2021

Management and Maintenance;

To enable the water treatment process and operation of the sustainable drainage scheme throughout its lifetime the drainage network shall require maintenance. The maintenance strategy and responsibilities are as set out in the table below.

Component to be maintained	Actions	Frequency	Responsibility of:
Site wide external areas	Site to be generally kept free from litter and debris which may enter the drainage system.	On-going	Site owner and facility operator
Cellular attenuation tank and flow control device	Inspection of manholes upstream and downstream of the attenuation for silt build up (every 3 months) and maintenance (annual) in accordance with the manufacturer's specification, to maintain cleanliness and correct design flows in and out of the attenuation system. Any silt shall be removed directly and not washed through the attenuation.	Inspections (3 months), Maintenance (Yearly)	Site owner and facility operator
General network inc. pipes/ manholes/ catchpits	Manholes covers to be lifted and inspected for sediment build up, remove as required	Yearly	Site owner and facility operator

Structure Table						
Structure Name	Internal Diameter	Type	Cover Level	Invert Level	Depth	Northing
CMH01	1200ø	Manhole Type B	49.875	48.444	1.431	C250
FMH1	450ø	PPIC	49.875	49.150	0.725	C250
FMH2	600ø	PPIC	49.875	48.989	0.886	C250
FMH3	450ø	PPIC	49.875	48.971	0.904	C250
FMH4	600ø	PPIC	49.875	49.124	0.751	C250
FMH4a	450ø	PPIC	49.875	49.275	0.600	C250
FMH5	450ø	PPIC	49.875	48.862	1.013	C250
FMH6	450ø	PPIC	49.875	48.799	1.076	C250
FMH7	450ø	PPIC	49.875	48.748	1.127	C250
FMH9	600ø	PPIC	49.875	48.886	0.989	C250
FMH9a	450ø	PPIC	49.875	49.003	0.872	C250
FMH10	450ø	PPIC	49.875	48.843	1.032	C250
SWMH01	1500ø	Catchpit Chamber with 300mm Sump	49.875	48.700	1.175	C250
SWMH02	1500ø	Flow Control	49.875	48.625	1.250	C250
SWMH03	450ø	PPIC	49.875	49.275	0.600	C250
SWMH04	450ø	PPIC	49.875	49.182	0.693	C250



NOTE:

Information shown on this layout is based upon existing drainage depths and images provided by J.Reddington on 20.02.20.

RWP & SVP Pop up locations are taken from West Lancashire Group drawing "16082-WLC-ZZ-00-DR-M-5201" rev P6 received 24.02.20, and FCH Architects drawing "P16082-FCH-BA-B1-DR-DR-A-3030" dated 10.03.20.

OUTLET CONNECTION REVISED FROM NEW CHAMBER AS PER JRL REQUEST					
C01	L. W. PILSBURY	23.09.20	R. HENSHALL	23.09.20	R. HENSHALL
AMENDMENTS TO GRADIENTS AND LEVELS TO SUIT 75mm STEP AS PER JRL COMMENTS.					
P07	L. W. PILSBURY	08.04.20	J. HAYDEN	08.04.20	R. HENSHALL
FLOW CONTROL CHAMBER RELOCATED.					
P06	L. W. PILSBURY	19.03.20	R. HENSHALL	19.03.20	R. HENSHALL
POP-UPS REVISED TO REFLECT WLJ DRAWING REV P6					
P05	L. W. PILSBURY	17.03.20	R. HENSHALL	17.03.20	R. HENSHALL
POP-UPS REVISED FOLLOWING JRL COMMENTS					
P04	L. W. PILSBURY	03.03.20	R. HENSHALL	03.03.20	R. HENSHALL
ACO CHANNEL DRAIN SPECIFIED					
P03	L. W. PILSBURY	26.02.20	J. HAYDEN	26.02.20	R. HENSHALL
OUTFALL LOCATION REVISED					
P02	J. HAYDEN	29.11.19	J. HAYDEN	29.11.19	J. HAYDEN
PRELIMINARY ISSUE					
P01	G. WARSAMA	11.10.19	J. HAYDEN	11.10.19	J. HAYDEN
PRELIMINARY ISSUE					
REVISION NOTES/COMMENTS					
REV	DRAWN BY	DATE	CHECKED BY	DATE	APPROVED BY

- NOTES:**
- THIS DRAWING IS NOT TO BE SCALED.
 - THE CONTRACTOR SHALL CHECK ALL DIMENSIONS AND LEVELS ON SITE.
 - 'MARKED UP' DRAWINGS ARE TO BE PROVIDED TO THE ENGINEER UPON COMPLETION TO ENABLE PRODUCTION OF 'AS BUILT' DRAWING IN ACCORDANCE WITH CONSTRUCTION (DESIGN & MANAGEMENT): 2015 REGULATIONS 22(i).
 - THE CONTRACTOR SHALL ALLOW FOR THE PROTECTION, TEMPORARY AND PERMANENT SUPPORT AND DIVERSION WORKS AS NECESSARY, TO ALL EXISTING SERVICES TO THE SATISFACTION OF THE PUBLIC UTILITIES.
 - THE CONTRACTOR SHALL ALLOW FOR DEALING WITH SURFACE WATER RUN-OFF INTO EXCAVATION AND FROM GROUNDWATER BY MEANS OF SUMPS, PUMPING AND DE-WATERING AS APPROPRIATE, IN ORDER TO KEEP THE EXCAVATION AS REASONABLY DRY AS POSSIBLE DURING THE CONSTRUCTION OF THE WORKS.
 - ALL EXTERNAL DRAINAGE WORKS SHALL BE CONSTRUCTED IN ACCORDANCE WITH 'CIVIL ENGINEERING SPECIFICATION FOR THE WATER INDUSTRY' 7th EDITION FOR ADOPTABLE DRAINAGE, AND TO THE RELEVANT PROJECT SPECIFICATION AS DIRECTED BY THE ENGINEER FOR PRIVATE DRAINAGE.
 - PIPE MATERIAL SHALL BE AS FOLLOWS:
1000 TO 2250 - CLAYWARE TO BS EN 295
3000 AND ABOVE - CONCRETE TO BS EN 1916
DRAINAGE PROPOSED FOR ADOPTION TO COMPLY WITH THE MATERIALS SPECIFIED ABOVE.
 - N.B PVCu PIPES TO BE EN 1401-1:1998 MAY BE USED SUBJECT TO THE APPROVAL OF THE ENGINEER. PIPES OF LESS THAN 400MM DIAMETER TO HAVE A RESISTANCE OF 270 BAR.
 - ALL FOUL PIPES ARE TO BE 1000 UNLESS STATED OTHERWISE OR TO SUIT ABOVE GROUND PIPEWORK. SURFACE WATER PIPE DIAMETERS ARE AS INDICATED
PIPE GRADIENTS UNLESS SHOWN ARE:
FOUL:
MINIMUM GRADIENT WITH W.C. TO BE 1:80.
UNLESS OTHERWISE NOTED INVERT LEVEL AT REST BEND TO BE 450mm BELOW FFL
 - CLAY AND CONCRETE PIPES SHALL BE BEDDED ON CLASS S BEDDING UNLESS COVER IS LESS THAN 1.2m IN TRAFFICKED AREAS, THEN CLASS Z BEDDING. DRAINAGE PROPOSED FOR ADOPTION TO COMPLY WITH THE BEDDINGS SPECIFIED ABOVE.
 - WHERE THE CROWN OF THE PIPE IS WITHIN 300MM OF THE UNDERSIDE OF THE SLAB, THE PIPEWORK SHOULD BE SURROUNDED WITH 150MM CONCRETE.
 - UPVC PIPES SHALL BE BEDDED ON CLASS P BEDDING UNLESS COVER IS LESS THAN 1.2m IN TRAFFICKED AREAS, THEN CLASS Q OR Z BEDDING.
 - BACKFILL TO TRENCHES MAY BE SUITABLE EXCAVATED MATERIAL IN LANDSCAPED AREAS & UNDER DRIVEWAYS, PATIOS ETC. TYPE 1 GRANULAR MATERIAL TO BE USED UNDER HARDSTANDINGS AND ROADS.
 - DESIGN OF THE DRAINAGE CHANNELS IS INDICATIVE ONLY. DETAILED DESIGN SHALL BE UNDERTAKEN BY THE CONTRACTOR'S PREFERRED CHANNEL MANUFACTURER/ SUPPLIER.
 - ALL MANHOLE AND DRAINAGE CHANNEL COVERS SHALL COMPLY WITH BS EN 124. FOR DETAILS OF COVER TYPE & LOCATION, PLEASE REFER TO THE MANHOLE SCHEDULE. ALL MANHOLE COVERS WITHIN BUILDING FOOTPRINT SHALL BE RECESSED & DOUBLE SEALED.
 - VENTILATION SHALL BE PROVIDED AT THE HEAD OF FOUL DRAINAGE RUNS. FOR SETTING OUT OF SOIL AND RAINWATER PIPES, SEE ARCHITECT'S LAYOUT "P16082-FCH-BA-B1-DR-A-3030" REV ""
 - ACCESS FOR RODDING/JETTING SHALL BE PROVIDED TO ALL SOIL AND RAINWATER DOWNPIPES ABOVE BASEMENT FLOOR LEVEL.
 - FOR DETAILS OF MANHOLE TYPES AND PIPE BEDDING ETC, SEE STANDARD DETAIL DRAWING(S).
 - COVER LEVELS SHOWN ARE APPROXIMATE. COVERS SHOULD BE ADJUSTED TO MATCH SURROUNDING FINISH LEVELS.
 - THE CONTRACTOR IS TO PROTECT EXISTING BURIED PIPES (PARTICULARLY SHALLOW PIPES) AND TREE ROOTS FROM DAMAGE CAUSED BY LOADS IMPOSED BY CONSTRUCTION.
 - ROCKERS PIPE REQUIRED WHERE DRAINAGE EXITS PAD FOUNDATION. REFER STANDARD DETAIL.
 - FOR DRAINAGE DETAILS REFER TO DRAWINGS
"BGS-HYD-XX-XX-DR-C-0010_0011- Standard details Sheet 1-2"

- LEGEND**
- Proposed Surface Water Drainage
 - Proposed Surface Water PPIC
 - Gully
 - Rain Water Pipe
 - Channel Drain SUMP
 - Channel Drain
 - Pipe through foundation
 - Proposed Foul Sewer Drainage
 - Foul Sewer Back Drop
 - Internal Gully
 - Foul Pop Up Position
 - Proposed Combined Sewer Drainage
 - Existing Foul Sewer Drainage

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PROJECT

**BENGAL STREET
MANCHESTER**

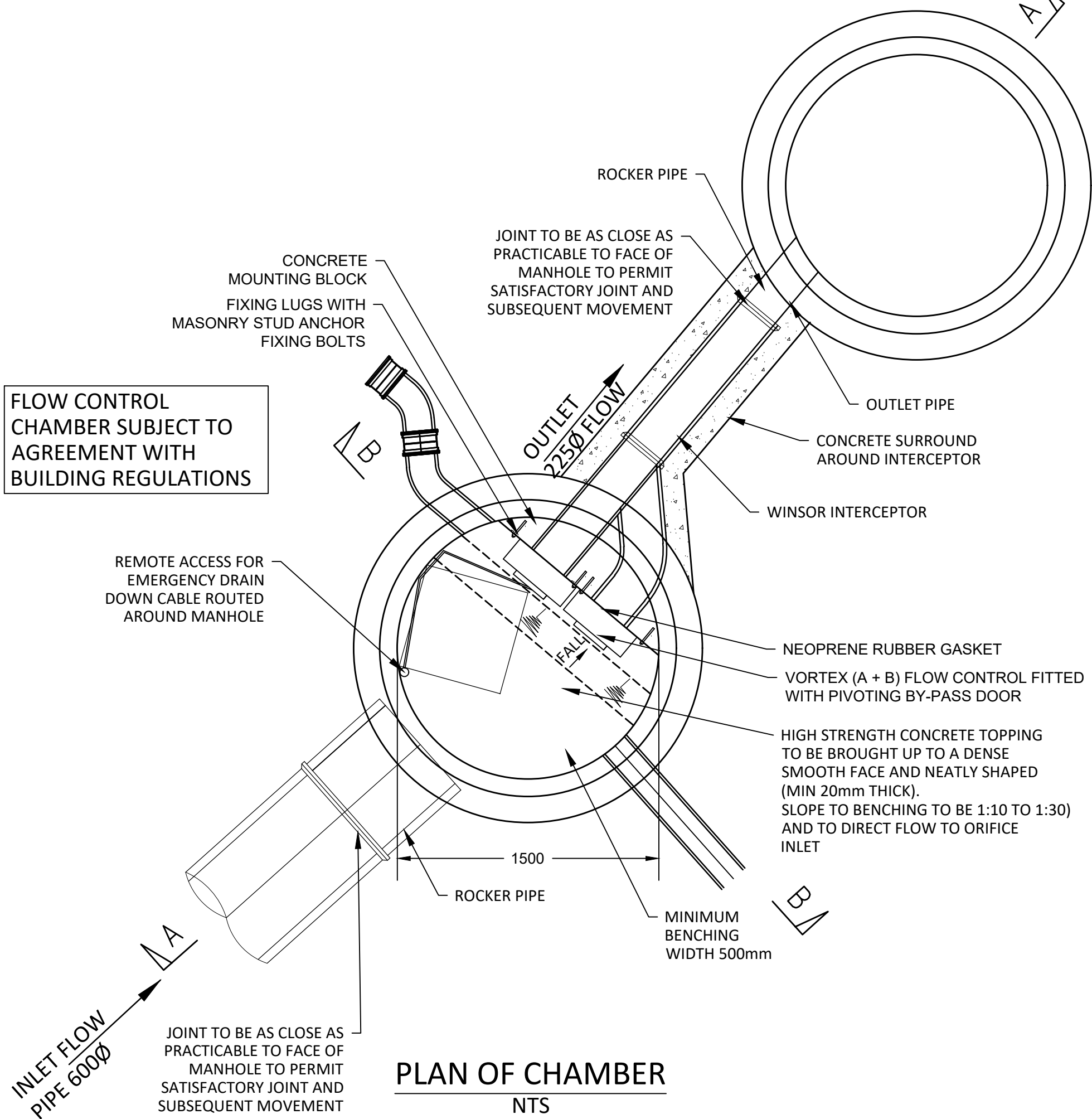
TITLE

**DRAINAGE OUTFALL
REVIEW**

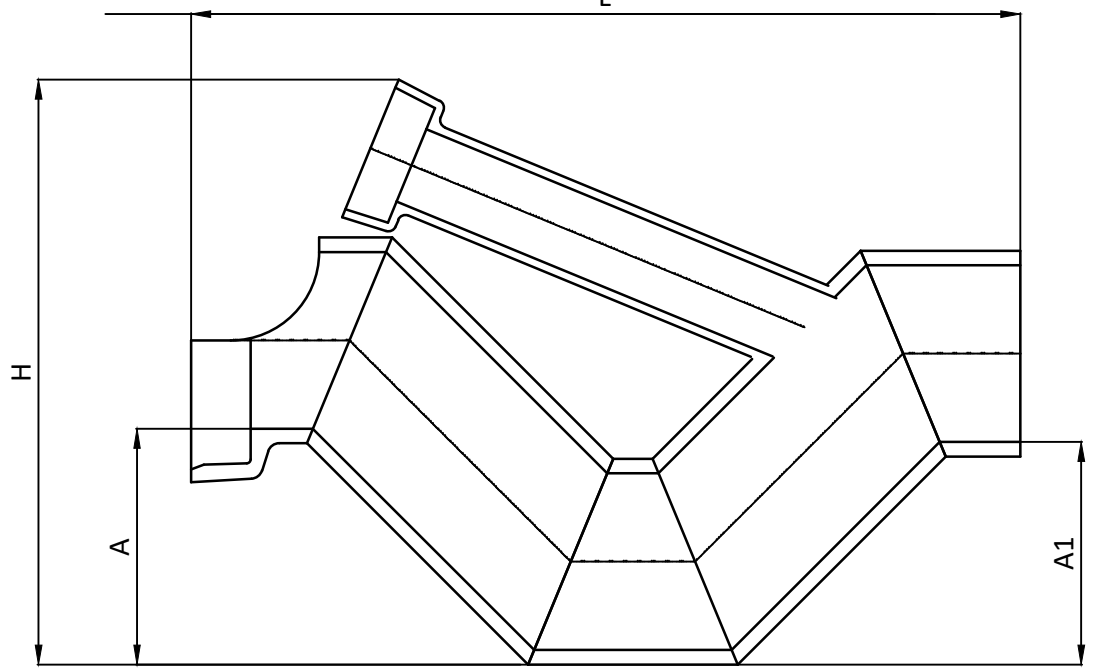
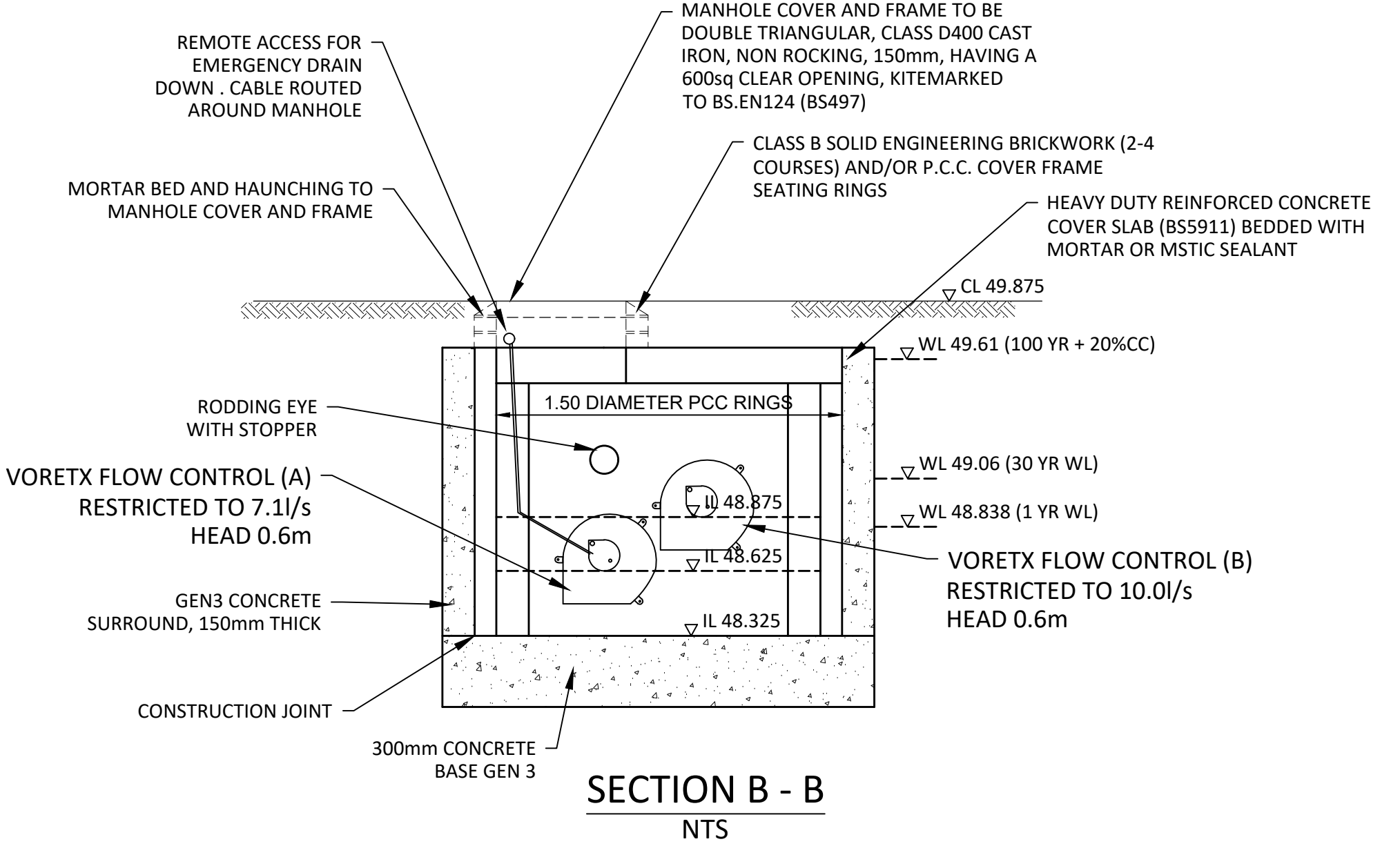
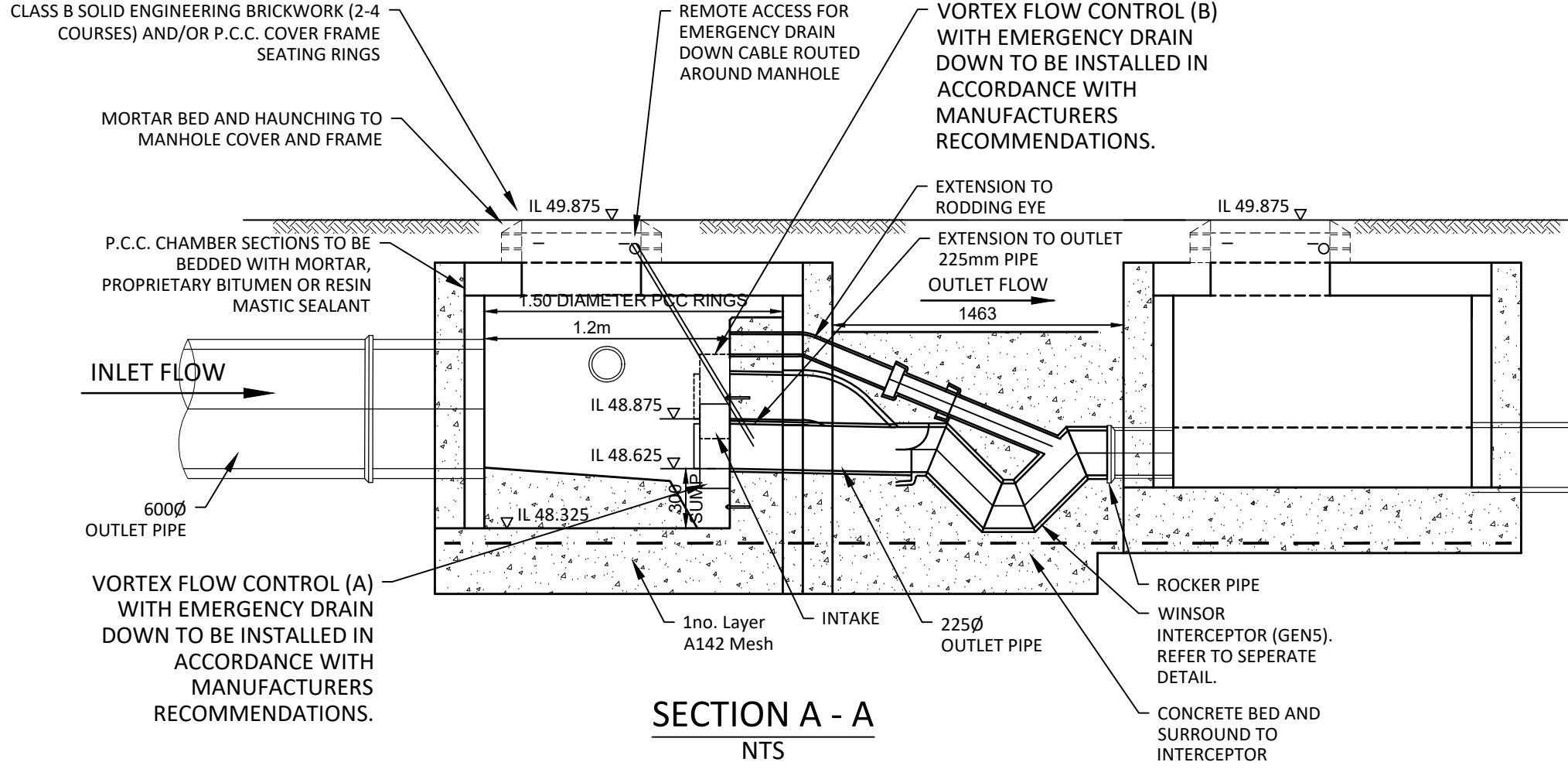
HYDROCK PROJECT NO.
C-13149

SCALE @ A1
1/100

STATUS DESCRIPTION CONSTRUCTION	STATUS S2
DRAWING NO. (PROJECT CODE-ORIGINATOR-ZONE-LEVEL-TYPE-ROLE-NUMBER) BGS-HYD-XX-XX-DR-C-0001	REVISION C01



MANHOLE SWMH02 DETAIL



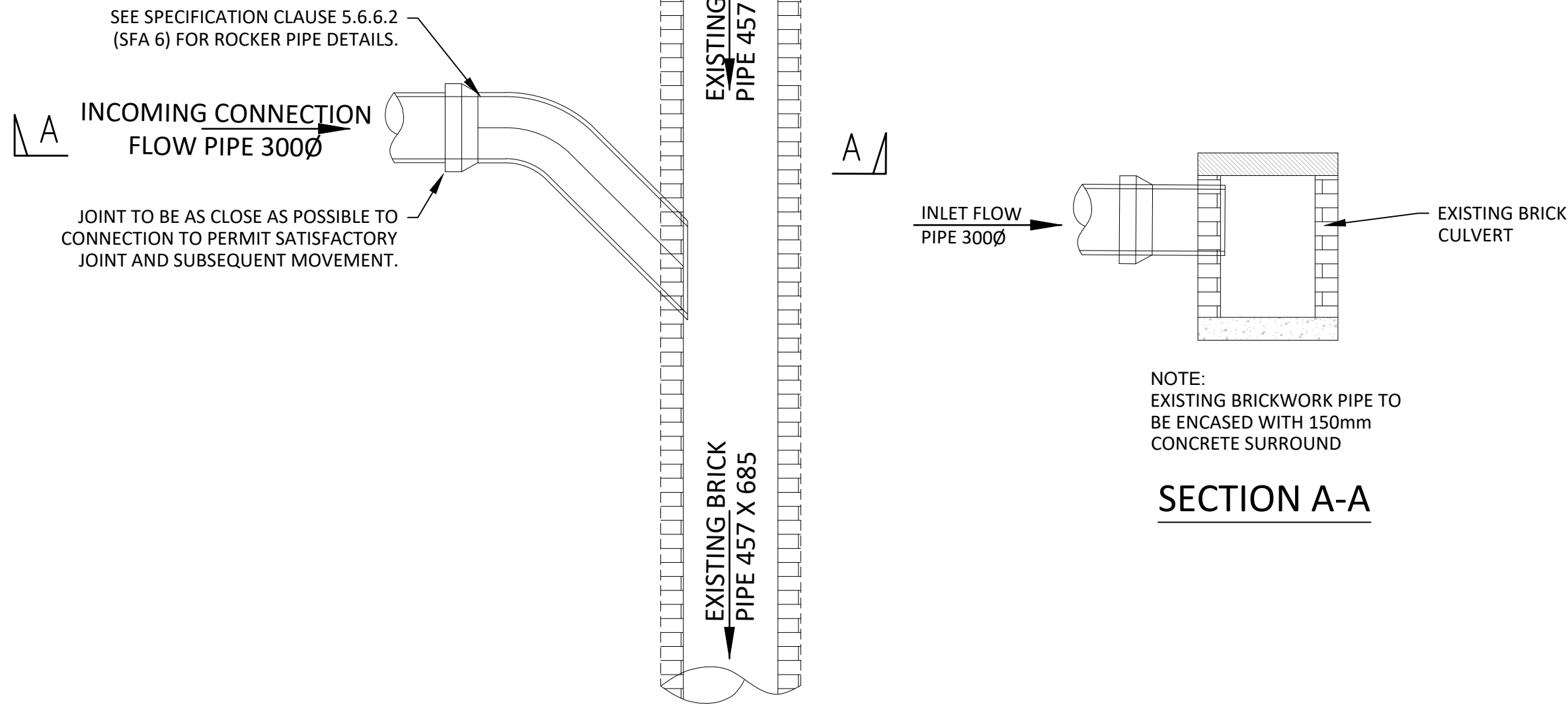
Interceptor (Winsor)	
Nominal diameter	225
Outlet diameter	225
L Overall length	1060
H Overall height	750
A1 Outlet height	285
A Inlet height	300
Code	RI1/3

- Notes -
1. Dimensions shown may vary due to manufacturing tolerances.
 2. 225 Ø units are manufactured segmentally from straight pipe.

INTERCEPTOR DETAIL (WINSOR)
BY HEPWORTH OR SIMILAR

SCALE 1:10

NOTE:
CONTRACTOR TO PROVIDE METHOD
STATEMENT FOR CONSTRUCTION OF
OUTFALL CONNECTION



CONNECTION DETAIL

SCALE 1:25

C01	OUTFALL CONNECTION DETAILED REVISED					
	L. W. PILSBURY	23.09.20	R. HENSHALL	23.09.20	R. HENSHALL	23.09.20
P04	OUTFALL CHAMBER MOVED TO DRAWING 0013					
	L. W. PILSBURY	05.05.20	R. HENSHALL	05.05.20	R. HENSHALL	05.05.20
P03	OUTFALL CHAMBER DETAIL AMENDED					
	L. W. PILSBURY	14.04.20	J.HAYDEN	14.04.20	R. HENSHALL	14.04.20
P02	FLOW CONTROL CHAMBER DETAIL AMENDED					
	L. W. PILSBURY	08.04.20	J.HAYDEN	08.04.20	J.HAYDEN	08.04.20
P01	PRELIMINARY ISSUE					
	L. W. PILSBURY	31.03.20	J.HAYDEN	31.03.20	J.HAYDEN	31.03.20
REV	REVISION NOTES/COMMENTS					
	DRAWN BY	DATE	CHECKED BY	DATE	APPROVED BY	DATE

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PROJECT

BENGAL STREET

TITLE

STANDARD DETAILS
SHEET 3

HYDROCK PROJECT NO. C-13149	SCALE @ A1 NTS	STATUS S3
STATUS DESCRIPTION CONSTRUCTION		
DRAWING NO. (PROJECT CODE-ORIGINATOR-ZONE-LEVEL-TYPE-ROLE-NUMBER) BGS-HYD-XX-XX-DR-C-0012	REVISION C01	