



Citylabs 4.0

125592/FO/2019: Erection of a seven storey building comprising flexible Office (Use Class B1a), Research and Development (Use Class B1b) and Educational Space (Use Class D1), together with ground floor ancillary Retail uses (Use Classes A1 and A3), in addition to associated cycle parking, accessible car parking, landscaping, provision of plant and servicing and related access and highway's works, and other associated works (associated advert application reference 125593/AO/2019)

Condition 10 Drainage Scheme

Appendix A - 30/05/25 in response to LLFA Comments 07/03/2025

Application details:	<p>Application number: CDN/25/0048</p> <p>Proposal: Discharge of conditions 6 (UXO), 10 (SUDs), 12 (Landscaping), 15a (Acoustics), 16 (Ground contamination), 17 (CIS), 19 (BREEAM), 22 (Highways works), 26a (External lighting strategy), 28 (Hours of use) attached to planning permission 125592/FO/2019.</p> <p>Location: Citylabs 4.0 , Hathersage Road, Manchester, M13 9WL.</p>
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LLFA Comments 07/03/2025

The following Information has been considered:

Planning Portal uploads:	21/01/2025 - 14/02/2025
Further submission emails:	NA
Previous CDN attempts to discharge the Condition:	Approved design CDN/22/0339 considered.

Condition number	10
Decision Notice	125592/FO/2019

Decision Notice Clause	Contained in submission	Approvable standard	Further information required:
Prior to the first occupation of the development details of the implementation, maintenance and management of the drainage scheme for each phase shall be submitted to and approved in writing by the City Council as local planning authority. The scheme shall be implemented and thereafter managed and maintained in accordance with the approved details. Those details shall include: - A verification report providing photographic evidence of construction as per design drawings.	N	N	Please update with the photographic evidence of flow control and storage tank.
As built construction drawings (if different from design construction drawings).	Y	N	Please update with the evidence for storage Volume of Attenuation tank, flow rate , connection point to the outfall showing how it connects to the public sewer.
A management and maintenance plan for the lifetime of the development which shall include the arrangements for inspections, adoption by any public body or statutory undertaker, or any other arrangements to secure the operation of the sustainable drainage scheme throughout its lifetime.	Y	Y	

% Complete submission:	66 %
% At approvable standard:	33 %
Refusal trigger points: Submission 1 = less than 20% complete. Submission 2 = not 100% approvable standard.	

LLFA Recommendation:	Further information required (as detailed above).
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Phil Whelan

From: Thomas Harrison [REDACTED]
Sent: 21 May 2025 16:41
To: Andy King; Sam Styles
Cc: Phil Whelan; Ian Nuttall; Ian Roberts
Subject: RE: L025 - CL4 Drainage Planning Condition
Attachments: L025-ARU-90-01.XX-D-C-007009.pdf; L025-ARU-90-01.XX-D-C-002006.pdf

Follow Up Flag: Follow up
Flag Status: Flagged

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Hi Andy,

Just seen your call, please see the two drawings attached and below for the narrative regarding the provided storage volume. If there's anything else you need let me know.

As agreed during consultation with the Lead Local Flood Authority, surface water is discharged via the existing on-site connection to the public combined sewer within Hathersage Road via a flow control device with a 10l/s flow restriction and a design head of 1.95m, installed within chamber SMH5 in the north west corner of the site. Attenuation of surface water within the site has been designed to provide at least 140m³ of storage, through a combination of an oversized pipe, providing a 54.7m³ storage volume, supplemented with a geocellular storage tank providing 83.4m³ with the remaining storage volume provided within the wider below ground surface water drainage system. Inspection of the hydraulic modelling results for the 1 in 100yr +40yr cc storm event demonstrates that no surface water flooding occurs during this event.

Thomas Harrison
Engineer

Arup
6th Floor 3 Piccadilly Place, Manchester, M1 3BN
United Kingdom
[REDACTED]

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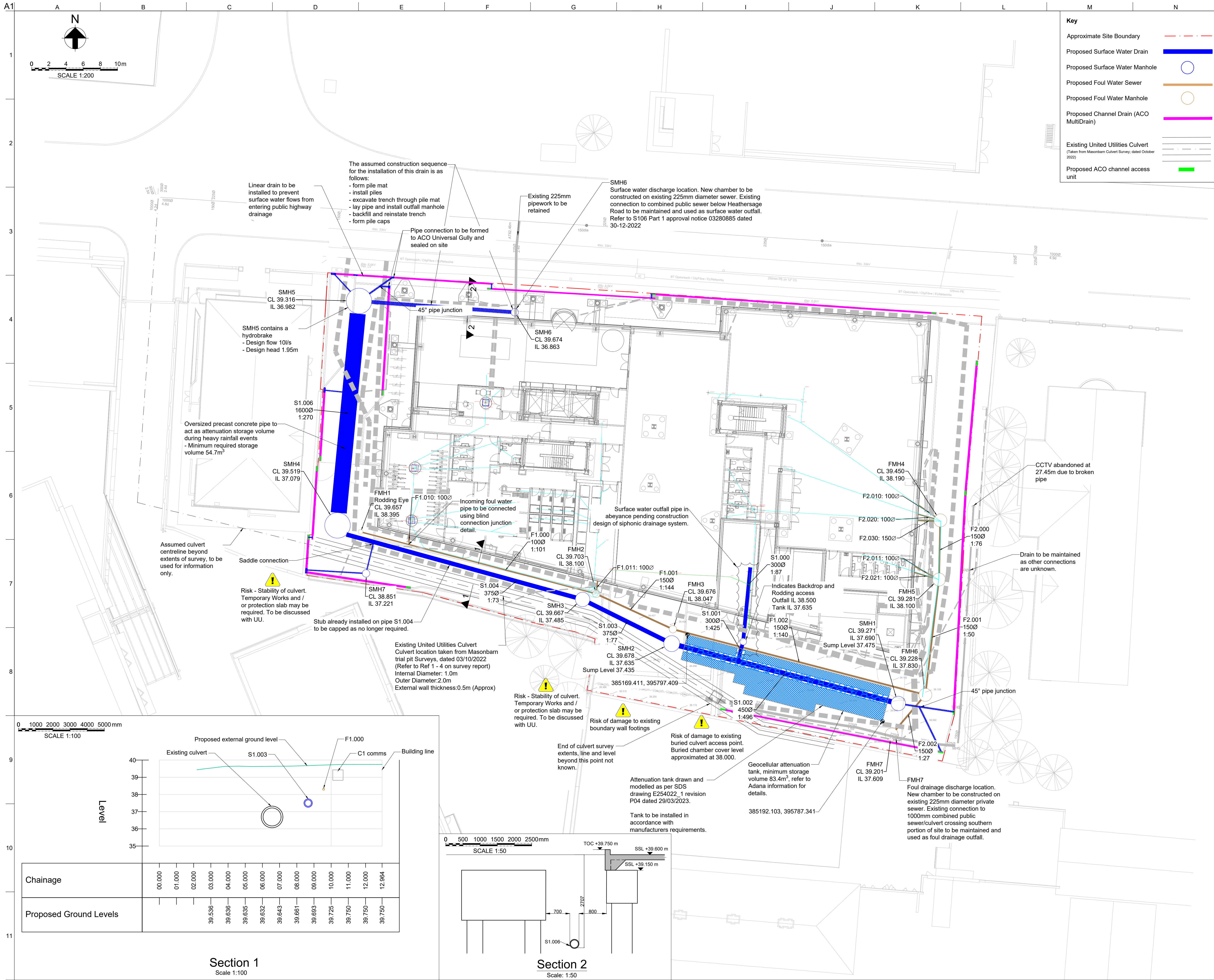
Ove Arup & Partners Limited | Registered in England & Wales Registered Number: 1312453 | Registered Address: 8 Fitzroy Street, London, W1T 4BJ

Electronic mail messages entering and leaving Arup business systems are scanned for viruses and acceptability of content.

From: Andy King <[REDACTED]>
Sent: 21 May 2025 16:28
To: Thomas Harrison <[REDACTED]>; Sam Styles <[REDACTED]>
Cc: Phil Whelan <[REDACTED]>; Ian Nuttall <[REDACTED]>; Ian Roberts <[REDACTED]>
Subject: RE: L025 - CL4 Drainage Planning Condition

Would it be possible to have a response to this?

Citylabs 4.0 - Revised As Build Information



- Key**
- Approximate Site Boundary
 - Proposed Surface Water Drain
 - Proposed Surface Water Manhole
 - Proposed Foul Water Sewer
 - Proposed Foul Water Manhole
 - Proposed Channel Drain (ACO MultiDrain)
 - Existing United Utilities Culvert
 - Proposed ACO channel access unit
- Notes**
- All dimensions are in mm, all levels in mAOD, unless specified otherwise.
 - Document Status: The drawing represents the final revision of Construction information, including available as-built surveys provided by GMI.
 - This layout is based on the following survey information:
 - Topographical Survey drawing '22C168' rev 001 undertaken by Survey Operations; dated June 2022.
 - Drainage CCTV Survey report '12703a SURVEY OPS CITY LABS MANCHESTER' produced by Underground Surveys; dated December 2019.
 - Utility GPR Survey drawing '19F248' rev 001 produced by Survey Operations; dated August 2019.
 - Outfall trial hole surveys undertaken by GMI; dated 17-04-2023.
 - This layout is based on the following drawings:
 - Landscaping General Arrangement drawing '184-LYR-XX-ZZ-DWG-L-1001' rev9 dated 31-03-2023.
 - Ground Floor Architectural General Arrangement drawing '6312-SRA-XX-00-DR-A-20100 rev P18'.
 - S278 Highways Layout General Arrangement drawing '074034-CUR-00-XX-DR-D-75100 rev P01' dated 09-01-2020.
 - This layout is based upon:
 - WS4 Arup Structural Foundation Plan 'CLAB-ARUP-04-F-GA-S-10-4F01'.
 - WS4 Arup PH Below Slab Drainage Design 'CLAB-ARUP-04-GF-DR-P-2501 rev P03'.
 - WS4 Arup PH Rainwater Disposal Performance Specification 'P-SPEC-002'.
 - Approximate Site Boundary is taken from Sheppard Robson Location Plan, supplied 19th January 2023; drawing reference '6312-SRA-XX-XX-DR-A-00001 P02 dated 18-01-23.
 - Refer to manhole schedule L025-ARU-90-01.00-D-C-001007 for details on invert levels and pipe connections.
 - Refer to the following documents for more information:
 - L025-ARU-90-01.00-D-C-000002 - Drainage Strategy and FRA
 - L025-ARU-90-01.00-D-C-000003 - Geocellular Performance Specification
 - L025-ARU-90-01.00-D-C-000001 - Infrastructure Works Specification
 - Setting out for building drainage connections provided to coordinate and inform the construction of external drainage only. Refer to the latest Below Slab Drainage construction information for the setting out of below slab drainage connections.
 - This drawing has been provided as a Final Construction Record, including the provision of as-built information. The information on this drawing is provided for records only and the Contractor takes full responsibility for the reliability of any as-built information provided.

C06	16/05/25	RR	TH	SS
Updated Construction Record				
C05	29/11/24	OW	TH	SS
Final Construction Record				
C04	07/10/24	OW	EC	AL
Updated for Contractor comments				
C03	24/09/24	OW	TH	AL
Updated for new landscaping layout				
C02	19/04/23	DG	TH	KO
Updated for new attenuation tank design				
C01	31/03/23	DG	TH	KO
First construction issue				
Rev	Date	By	Chkd	Appd

ARUP

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www.arup.com

Client
GMI Construction Group

Project Title
Citylabs 4.0

Drawing Title
**External Works
Drainage
General Arrangement**

Scale at A1
1:200

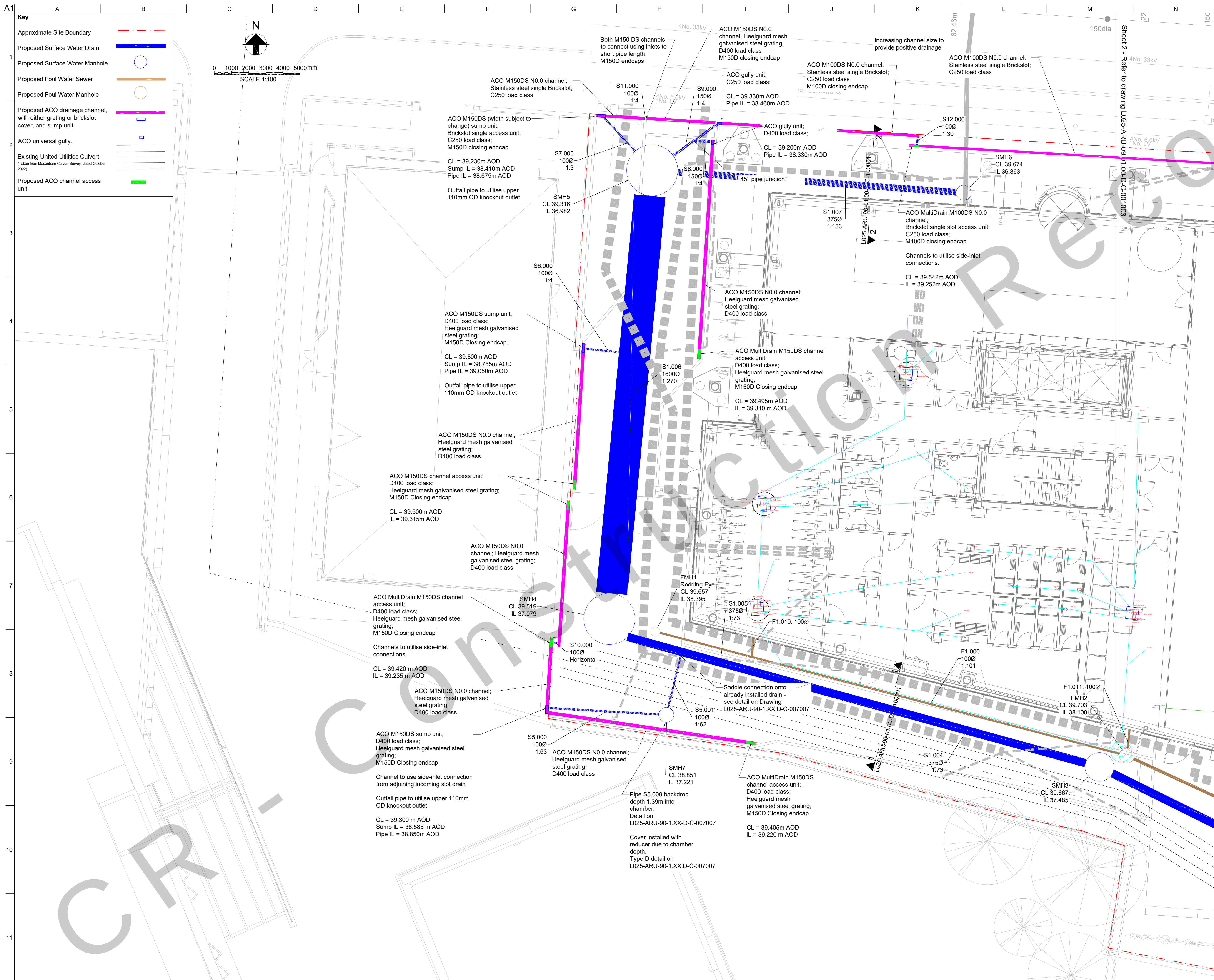
Role
Civils

Suitability
CR- Final Construction Record

Arup Job No
267661-00

Rev
C06

Name
L025-ARU-90-01.XX-D-C-002006



- Notes**
- All dimensions are in mm, all levels in mAOD, unless specified otherwise.
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 - Drainage CCTV Survey report: '12703a SURVEY OPS CITY LABS MANCHESTER' produced by Underground Surveys; dated December 2019.
 - Utility GPR Survey drawing '19F248' rev 001 produced by Survey Operations; dated August 2019.
 - Outfall trial hole surveys undertaken by GMI, dated 17-04-2023.
 - This layout is based on the following drawings:
 - Landscape General Arrangement drawing '184-LYR-XX-ZZ-DWG-L-1001' rev9 dated 31-03-2023.
 - Ground Floor Architectural General Arrangement drawing '6312-SRA-XX-00-DR-A-20100 rev P18'.
 - S278 Highways Layout General Arrangement drawing '074034-CUR-00-XX-DR-D-75100 rev P01' dated 09-01-2020.
 - This layout is based upon:
 - WS4 Arup Structural Foundation Plan 'CLAB-ARUP-04-F-GA-S-10-4F01'.
 - WS4 Arup PH Below Slab Drainage Design 'CLAB-ARUP-04-GF-DR-P-2501 rev P03'.
 - WS4 Arup PH Rainwater Disposal Performance Specification 'P-SPEC-002'.
 - Approximate Site Boundary is taken from Sheppard Robson Location Plan, supplied 19th January 2023; drawing reference '6312-SRA-XX-XX-DR-A-00001 P02' dated 18-01-23.
 - Refer to manhole schedule L025-ARU-90-01.00-D-C-000107 for details on invert levels and pipe connections.
 - Refer to the following documents for more information:
 - L025-ARU-90-01.00-D-C-000002 - Drainage Strategy and FRA
 - L025-ARU-90-01.00-D-C-000003 - Geocellular Performance Specification
 - L025-ARU-90-01.00-D-C-000001 - Infrastructure Works Specification
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C05	29/11/24	OW	TH	SS
Final Construction Record				
C04	07/10/24	OW	EC	AL
Updated for Contractor comments				
C03	24/09/24	OW	TH	AL
Updated for new landscaping layout				
C02	19/04/23	DG	TH	KO
Updated for new attenuation tank design				
C01	31/03/23	DG	TH	KO
First construction issue				
Rev	Date	By	Chkd	Appd

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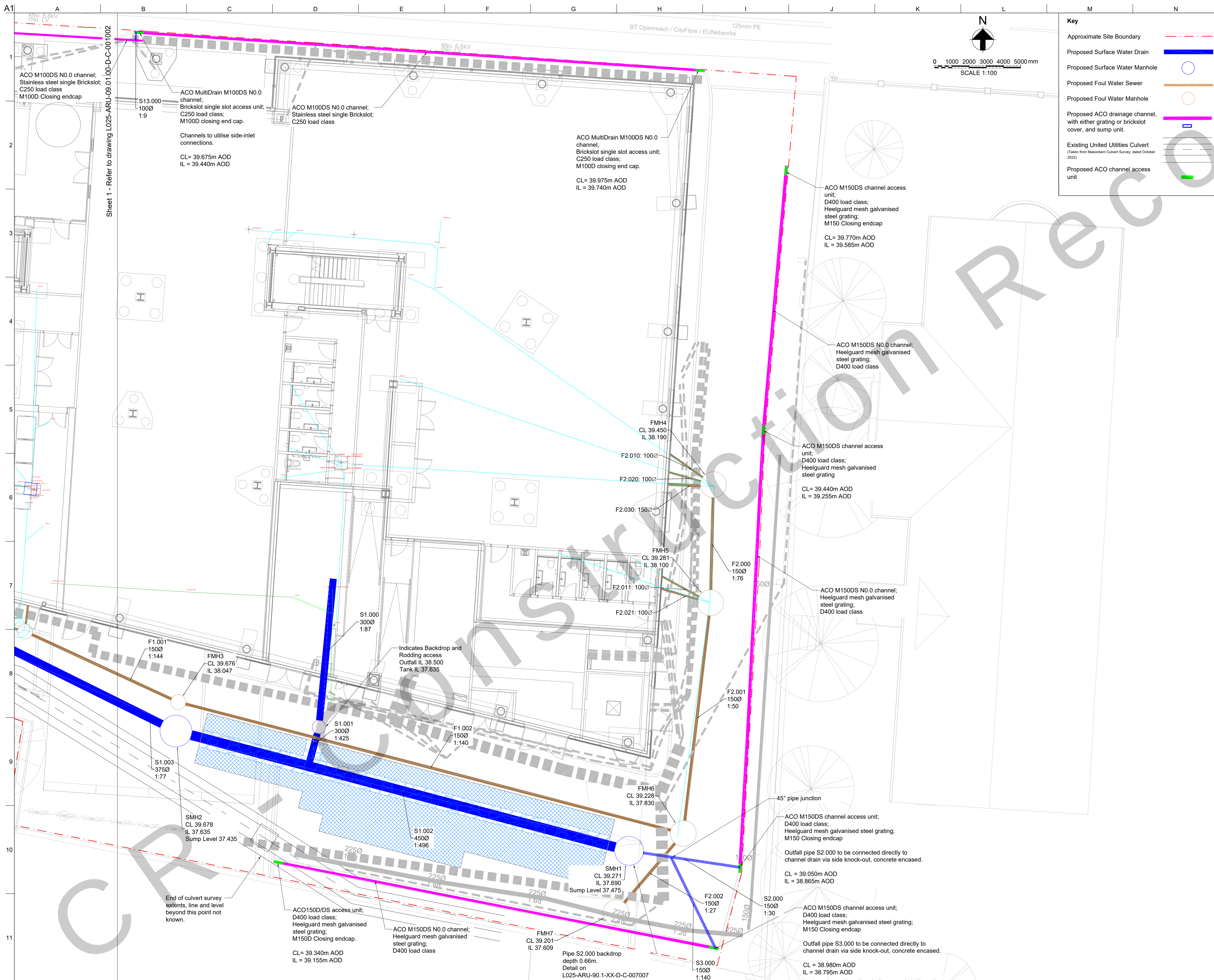
Client
GMI Construction Group

Project Title
Citylabs 4.0

Drawing Title
**External Works
Drainage
Detailed GA Sheet 1**

Scale at A1 1:100
Role
Civils
Suitability
CR- Final Construction Record

Arup Job No
267661-00
Name
L025-ARU-90-01.00-D-C-001002
Rev
C05



Key

- Approximate Site Boundary
- Proposed Surface Water Drain
- Proposed Surface Water Manhole
- Proposed Foul Water Sewer
- Proposed Foul Water Manhole
- Proposed ACO drainage channel, with either grating or brickslot cover, and sump unit.
- Existing United Utilities Culvert (Taken from Masonbarn Culvert Survey, dated October 2022)
- Proposed ACO channel access unit

- Notes**
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 - Drainage CCTV Survey report '12703a SURVEY OPS CITY LABS MANCHESTER' produced by Underground Surveys; dated December 2019.
 - Utility GPR Survey drawing '19F248' rev 001 produced by Survey Operations; dated August 2019.
 - Outfall trial hole surveys undertaken by GMI; dated 17-04-2023.
 - This layout is based on the following drawings:
 - Landscaping General Arrangement drawing '184-LYR-XX-ZZ-DWG-L-1001' rev9 dated 31-03-2023.
 - Ground Floor Architectural General Arrangement drawing '6312-SRA-XX-00-DR-A-20100 rev P18'.
 - S278 Highways Layout General Arrangement drawing '074034-CUR-00-XX-DR-D-75100 rev P01' dated 09-01-2020.
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 - Refer to manhole schedule L025-ARU-90-01.00-D-C-001007 for details on invert levels and pipe connections.
 - Refer to the following documents for more information:
 - L025-ARU-90-01.00-D-C-000002 - Drainage Strategy and FRA
 - L025-ARU-90-01.00-D-C-000003 - Geocellular Performance Specification
 - L025-ARU-90-01.00-D-C-000001 - Infrastructure Works Specification
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C05	29 /11/24	OW	TH	SS
Final Construction Record				
C04	07 /10/24	OW	EC	AL
Updated for Contractor comments				
C03	24 /09/24	OW	TH	AL
Updated for new landscaping layout				
C02	19 /04/23	DG	TH	KO
Updated for new attenuation tank design				
C01	31 /03/23	DG	TH	KO
First construction issue				
Rev	Date	By	Chkd	Appd

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Client
GMI Construction Group

Project Title
Citylabs 4.0

Drawing Title
**External Works
Drainage
Detailed GA Sheet 2**

Scale at A1
1:100

Role
Civils

Suitability
CR- Final Construction Record

Arup Job No
267661-00

Rev
C05

Name
L025-ARU-90-01.00-D-C-001003

A1

1

2

3

4

5

6

7

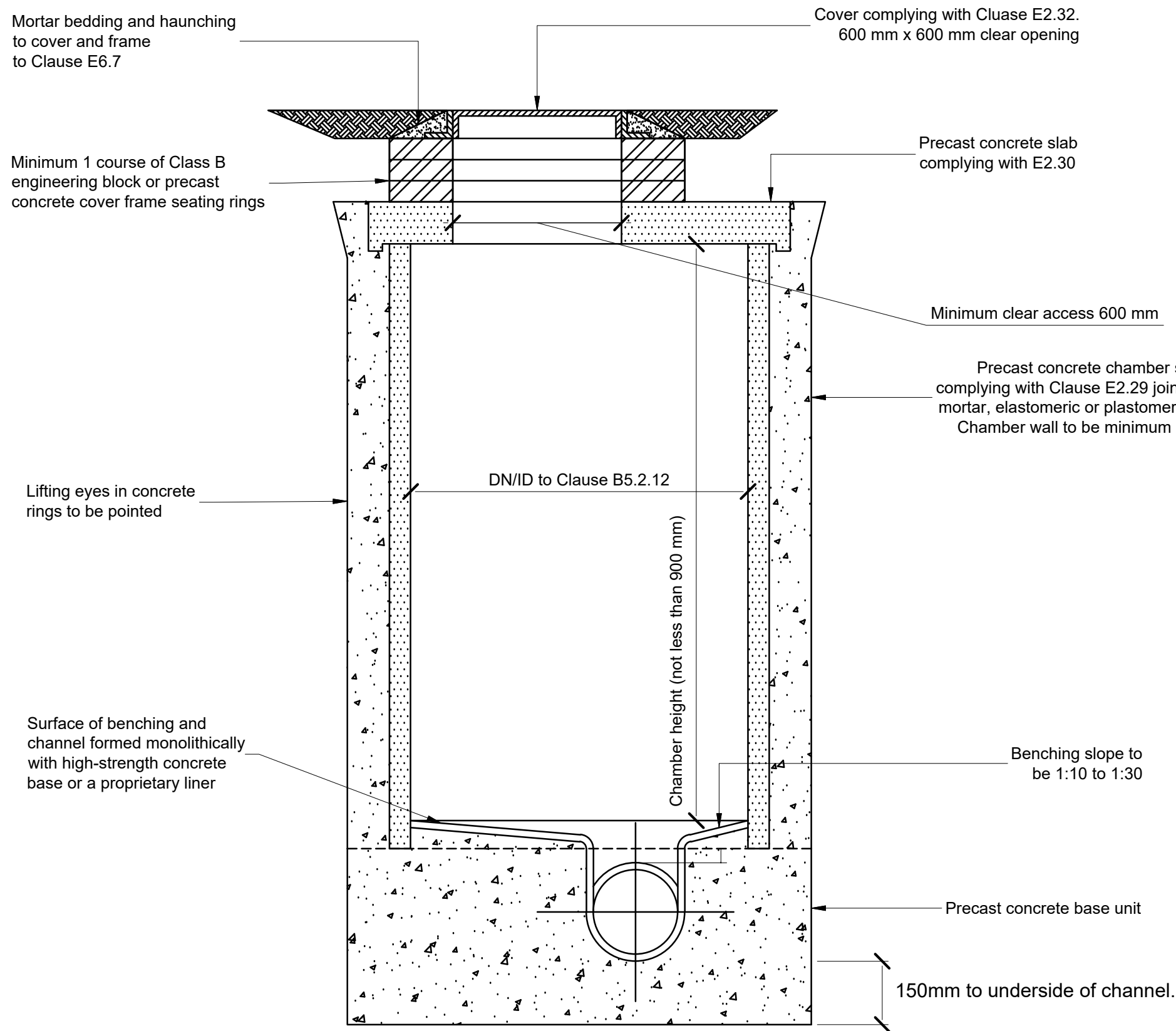
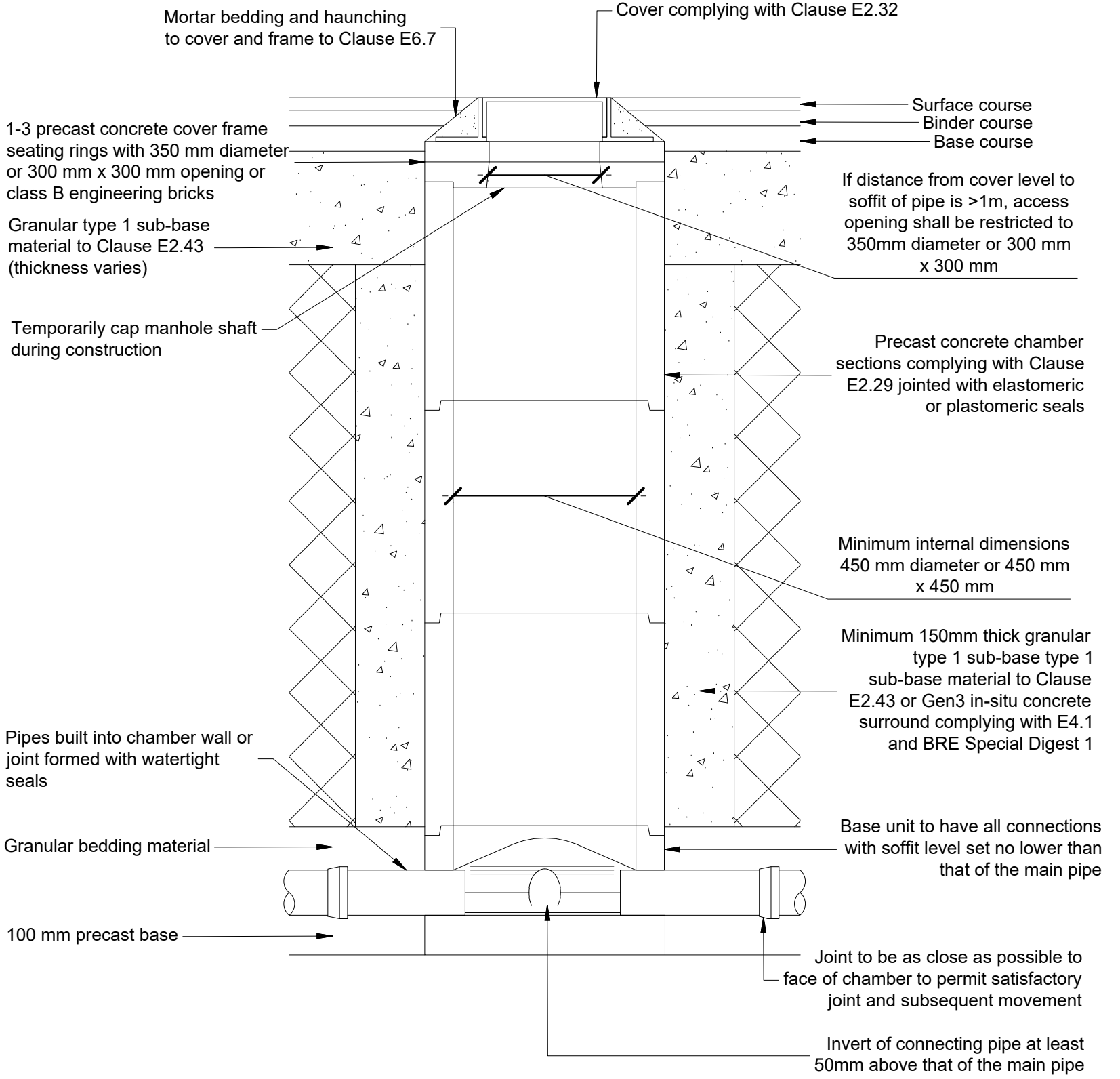
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9

10

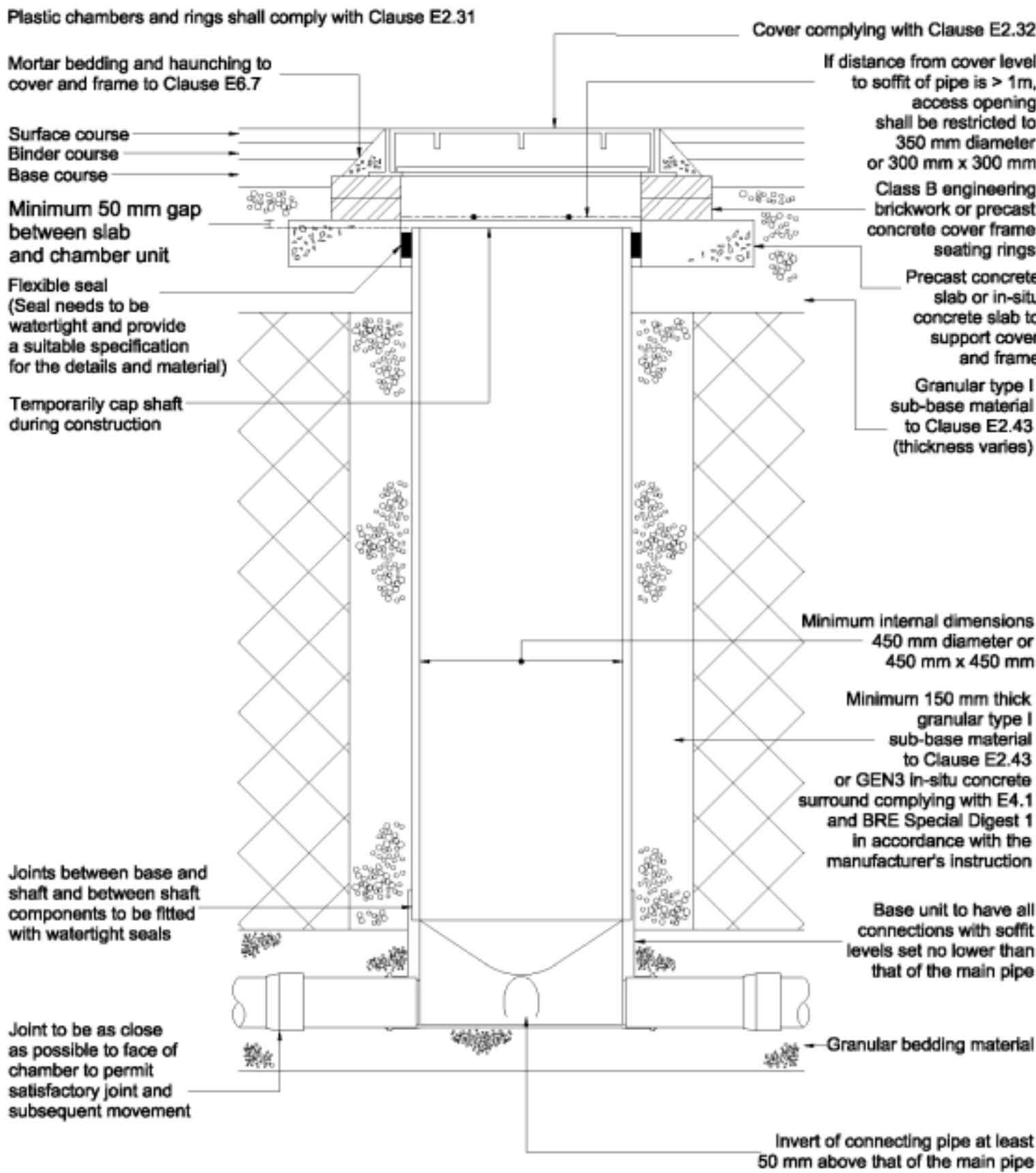
11

Do not scale



Typical Inspection Chamber Detail - Type D
Depth from cover level to soffit of pipe up to 3m
Rigid material construction for use in areas subject to vehicle loading

Figure B 18
Typical inspection chamber detail – Type D
Depth from cover level to soffit of pipe up to 3 m
Flexible material construction for use in areas subject to vehicle loading



Notes

1. All dimensions are in mm, all levels in mAOD, unless specified otherwise.
 2. Document Status: The drawing is subject to further design development, revision or replacement as design progresses.
- This drawing is the Final Construction Issue for inclusion in the Operation and Maintenance Manual. This drawing should represent the finished works on site and incorporates comments from the Site Engineer.*

C01	20 /05/25	RR	TH	KO
Final construction issue				
Rev	Date	By	Chkd	Appd

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Client
GMI Construction Group

Project Title
Citylabs 4.0

Drawing Title
**External Works
Drainage Typical Details
Sheet 3 of 3**

Scale at A1	NTS
Role	Civils
Suitability	S4 - Suitable for Construction
Arup Job No	Rev
267661-00	C01
Name	
L025-ARU-90-01.XX-D-C-007009	

SURFACE WATER PIPE SCHEDULE						
Pipe Name	Size (mm)	Plan Length (m)	Slope	Start Invert Level	End Invert Level	Bedding Class
S1.000	300	8.672	1:87	38.600	38.500	Class S
S1.001	300	2.126	1:425	37.640	37.635	Class S
S1.002	450	27.279	1:496	37.690	37.635	Class S
S1.003	375	11.576	1:77	37.635	37.485	Class S
S1.004	375	15.998	1:73	37.485	37.267	Class S
S1.005	375	13.743	1:73	37.267	37.079	Class S
S1.006	1600	26.238	1:270	37.079	36.982	Class S
S1.007	375	18.175	1:153	36.982	36.863	Class S
S2.000	150	6.530	1:30	38.865	38.650	Class A
S3.000	150	5.882	1:140	38.795	38.753	Class A
S5.000	100	6.945	1:63	38.850	38.740	Class A
S5.001	100	3.749	1:62	37.350	37.290	Class A
S6.000	100	2.945	1:4	39.050	38.250	Class A
S7.000	100	4.280	1:3	38.675	37.257	Class A
S8.000	150	1.173	1:4	38.330	38.000	Class A
S9.000	150	4.760	1:4	38.460	37.207	Class A
S10.000	100	0.475	Horizontal	39.235	39.235	Class A
S11.000	100	0.444	1:4	39.103	38.997	Class A
S12.000	100	0.593	1:30	39.252	39.232	Class A
S13.000	100	0.476	1:9	39.440	39.388	Class A

notes:

The schedule represents the final revision of Construction information, including available as-built surveys provided by GMI.

This schedule should be read in conjunction with: L025-ARU-90-01.XX-D-C-002006.

All Easting and Northing's are taken from the centers of structures.

The schedule does not include coordinates and levels of as-built locations of drainage. For that information, refer to the Contractor's own as-built surveys.

C05	29/11/24	OW	TH	SS
Final Construction Record				
C04	07/10/24	OW	EC	AL
Updated for Contractor comments \$4,000 removed				
C03	24/09/24	OW	TH	AL
Updated for new landscaping layout				
C02	19/04/23	DG	TH	KO
Updated for new attenuation tank design				
C01	31/03/23	DG	TH	KO
First construction issue				
Rev	Date	By	Chkd	Appd

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Client
GMI Construction Group

Project Title
Citylabs 4.0

Drawing Title

Manhole and Pipe Schedule

Scale at A1 NTS

Role	Civilians
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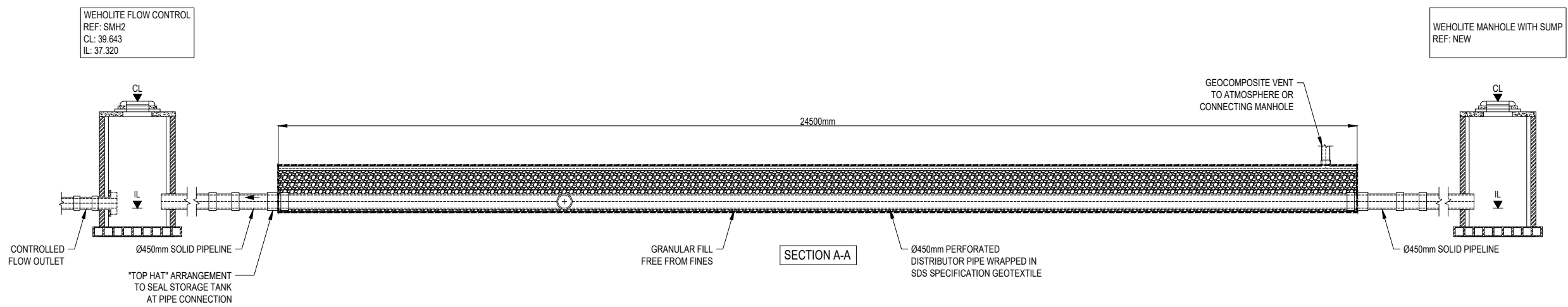
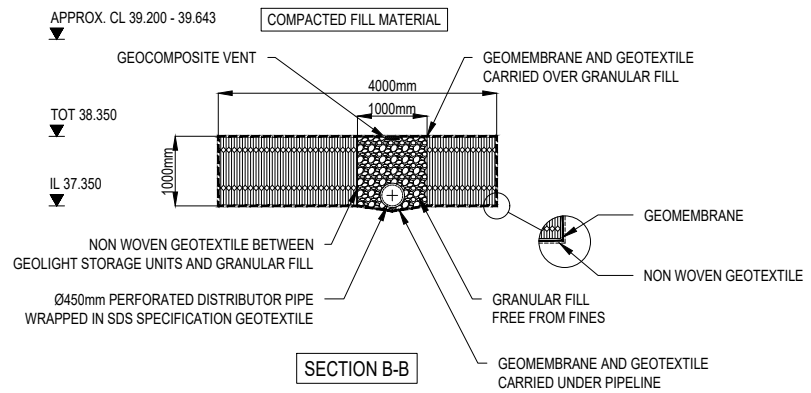
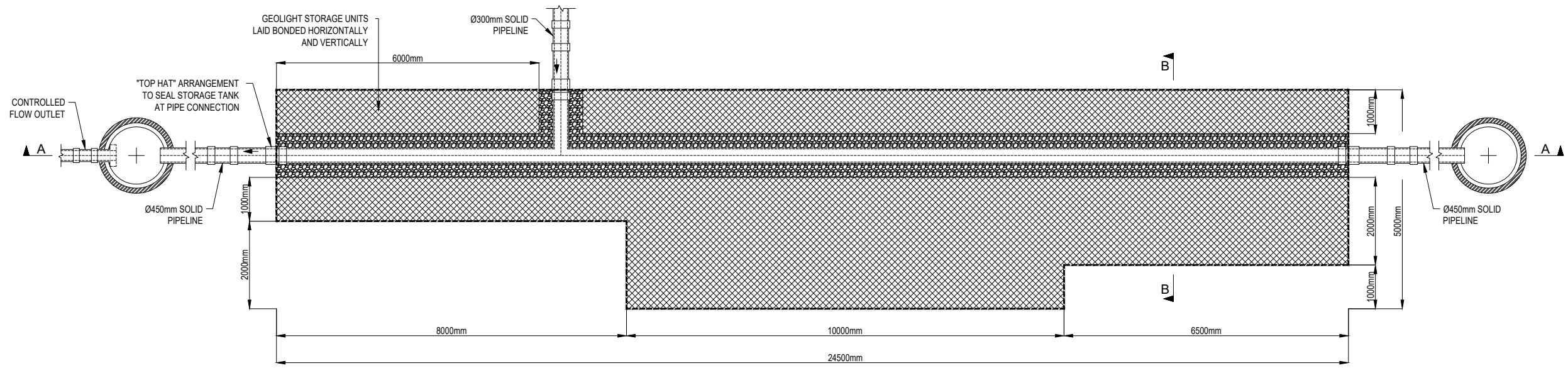
Suitability CR- Final Construction Record

Arup Job No

267661-00

L025-ARU-90-01.00-L-C-007010

CONSTRUCTION
AS BUILT



Notes:

This Drawing is to be read in conjunction with all relevant Architect's Engineer's and specialists' drawings and specifications.

Do not scale from this drawing in either paper or digital form. Use written dimensions only.

SDS to leave solid stub only, exiting tank for connection by others.

All external Manholes, Access Points, Junctions & Pipe are shown for guidance only and not part of the SDS program unless otherwise agreed.

C	DRAWING FRAME UPDATE	14.05.25
CG	1	SP
B	DRAWING FRAME UPDATE	02.07.23
SP	1	SP
-	ISSUED AS BUILT	21.06.23
CG	1	SP
A	DIMENSIONAL UPDATE	21.06.23
CG	1	SP
-	ISSUED FOR CONSTRUCTION	18.04.23
CG	1	SP
-	ISSUED FOR APPROVAL	29.03.23
CG	1	SP
Rev	Comments	Date
		DRW/CHK



Clearwater House
Castlemills
Biddisham
Somerset
BS26 2RE
+44 (0)1934 751303

sdslimited.com

Project
CITYLABS 4.0
MANCHESTER

Client
ADANA

File
ATTENUATION TANK 1 DETAIL

ATTENUATION TANK NETT STORAGE VOLUME: 83.490m³

REFERENCE DRAWINGS:			
Drawing Number	Revision	Drawing Title	Date
CLAB-ARUP-04-EX-DR-C-2006	CR01	DRAINAGE - GENERAL ARRANGEMENT	-

Scale	NTS	Date	29.03.23
Drawing No	E254022_01	Rev	C

Citylabs 4.0 - Photographic Evidence

Citylabs 4.0 - Photographic Evidence

SMH 1 - Catch-pit Manhole. Upstream side of a attenuation tank .



Citylabs 4.0 - Photographic Evidence

SMH 2 - Catch-pit Manhole. Downstream side of a attenuation tank .



Citylabs 4.0 - Photographic Evidence

Attenuation tank .



Citylabs 4.0 - Photographic Evidence

Attenuation tank .



Citylabs 4.0 - Photographic Evidence

Attenuation tank .



Citylabs 4.0 - Photographic Evidence

Attenuation tank .



Citylabs 4.0 - Photographic Evidence

Attenuation tank .



Citylabs 4.0 - Photographic Evidence

Attenuation tank .



Citylabs 4.0 - Photographic Evidence

1600 Diameter Attenuation Pipe - Upstream Side



Citylabs 4.0 - Photographic Evidence

1600 Diameter Attenuation Pipe - Downstream Side



Citylabs 4.0 - Photographic Evidence

1600 Diameter Attenuation Pipe - Downstream Side



Citylabs 4.0 - Photographic Evidence

SMH5 & Flow Control Device.



Citylabs 4.0 - Photographic Evidence

SMH5 & Flow Control Device.



Citylabs 4.0 - Photographic Evidence

SMH5 & Flow Control Device.



Citylabs 4.0 - Photographic Evidence

SMH5 & Flow Control Device.



Technical Specification

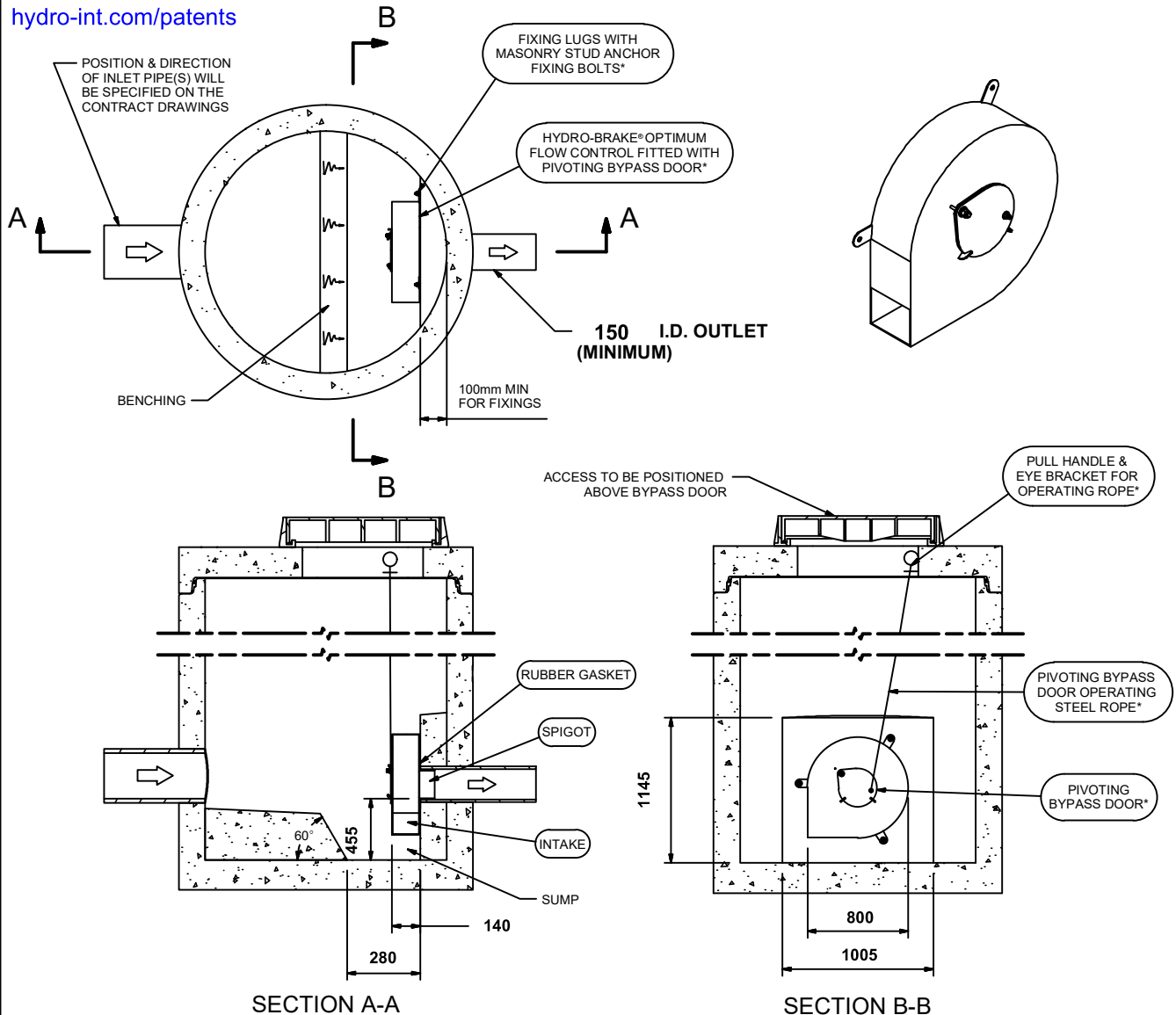
Control Point	Head (m)	Flow (l/s)
Primary Design	1.950	10.000
Flush-Flo™	0.574	9.996
Kick-Flo®	1.178	7.900
Mean Flow		8.773

Hydro-Brake® Optimum Flow Control including:

- 5 mm grade 304L stainless steel
- Integral stainless steel pivoting by-pass door allowing clear line of sight through to outlet, c/w stainless steel operating rope
- Beed blasted finish to maximise corrosion resistance
- Stainless steel fixings
- Rubber gasket to seal outlet
- Indicative Weight: 55 kg



hydro-int.com/patents



IMPORTANT: LIMIT OF HYDRO INTERNATIONAL SUPPLY
 THE DEVICE WILL BE HANDED TO SUIT SITE CONDITIONS
 FOR SITE SPECIFIC DETAILS AND MINIMUM CHAMBER SIZE REFER TO HYDRO INTERNATIONAL
 ALL CIVIL AND INSTALLATION WORK BY OTHERS
 * WHERE SUPPLIED
 HYDRO-BRAKE® FLOW CONTROL & HYDRO-BRAKE® OPTIMUM FLOW CONTROL ARE REGISTERED TRADEMARKS FOR FLOW
 CONTROLS DESIGNED AND MANUFACTURED EXCLUSIVELY BY HYDRO INTERNATIONAL

THIS DESIGN LAYOUT IS FOR ILLUSTRATIVE PURPOSES ONLY. NOT TO SCALE.

DESIGN ADVICE



The head/flow characteristics of this SHE-0132-1000-1950-1000 Hydro-Brake® Optimum Flow Control are unique. Dynamic hydraulic modelling evaluates the full head/flow characteristic curve.
The use of any other flow control will invalidate any design based on this data and could constitute a flood risk.

Hydro
International

DATE	18/05/2023 10:47
SITE	18_21_6049 City Labs, The Boulevard, Off Hathersage Road
DESIGNER	
REF	HQT-136134

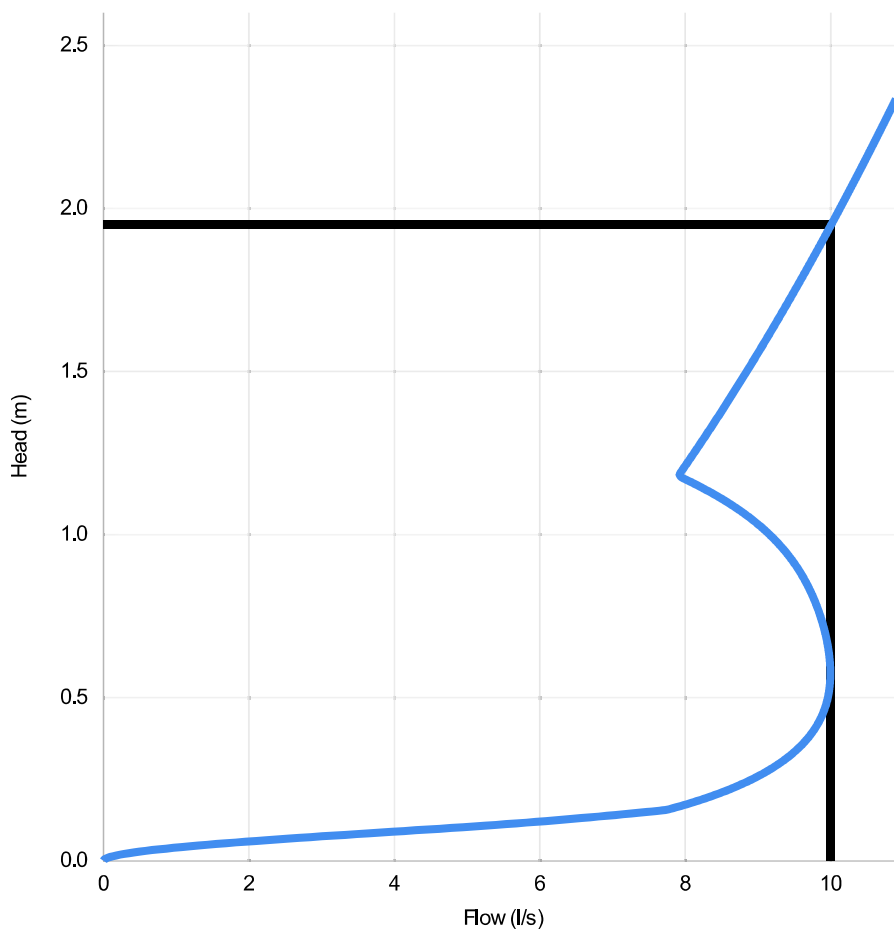
SHE-0132-1000-1950-1000
Hydro-Brake® Optimum

Technical Specification

Control Point	Head (m)	Flow (l/s)
Primary Design	1.950	10.000
Flush-Flo	0.574	9.996
Kick-Flo®	1.178	7.900
Mean Flow		8.773



hydro-int.com/patents



Head (m)	Flow (l/s)
0.000	0.000
0.067	2.501
0.134	6.751
0.202	8.408
0.269	9.082
0.336	9.514
0.403	9.779
0.471	9.926
0.538	9.989
0.605	9.992
0.672	9.951
0.740	9.874
0.807	9.763
0.874	9.610
0.941	9.402
1.009	9.120
1.076	8.741
1.143	8.238
1.210	7.999
1.278	8.204
1.345	8.404
1.412	8.598
1.479	8.788
1.547	8.974
1.614	9.155
1.681	9.332
1.748	9.506
1.816	9.677
1.883	9.844
1.950	10.008

DESIGN ADVICE



The head/flow characteristics of this SHE-0132-1000-1950-1000 Hydro-Brake Optimum® Flow Control are unique. Dynamic hydraulic modelling evaluates the full head/flow characteristic curve.

The use of any other flow control will invalidate any design based on this data and could constitute a flood risk.

Hydro
International

DATE	18/05/2023 10:47
Site	18_21_6049 City Labs, The Boulevard, Off Hathersage Road
DESIGNER	
Ref	HQT-136134

SHE-0132-1000-1950-1000
Hydro-Brake Optimum®

Citylabs 4.0 - Photographic Evidence

SMH6 Final outfall connection manhole.



Citylabs 4.0 - Photographic Evidence

SMH6 Final outfall connection manhole.

