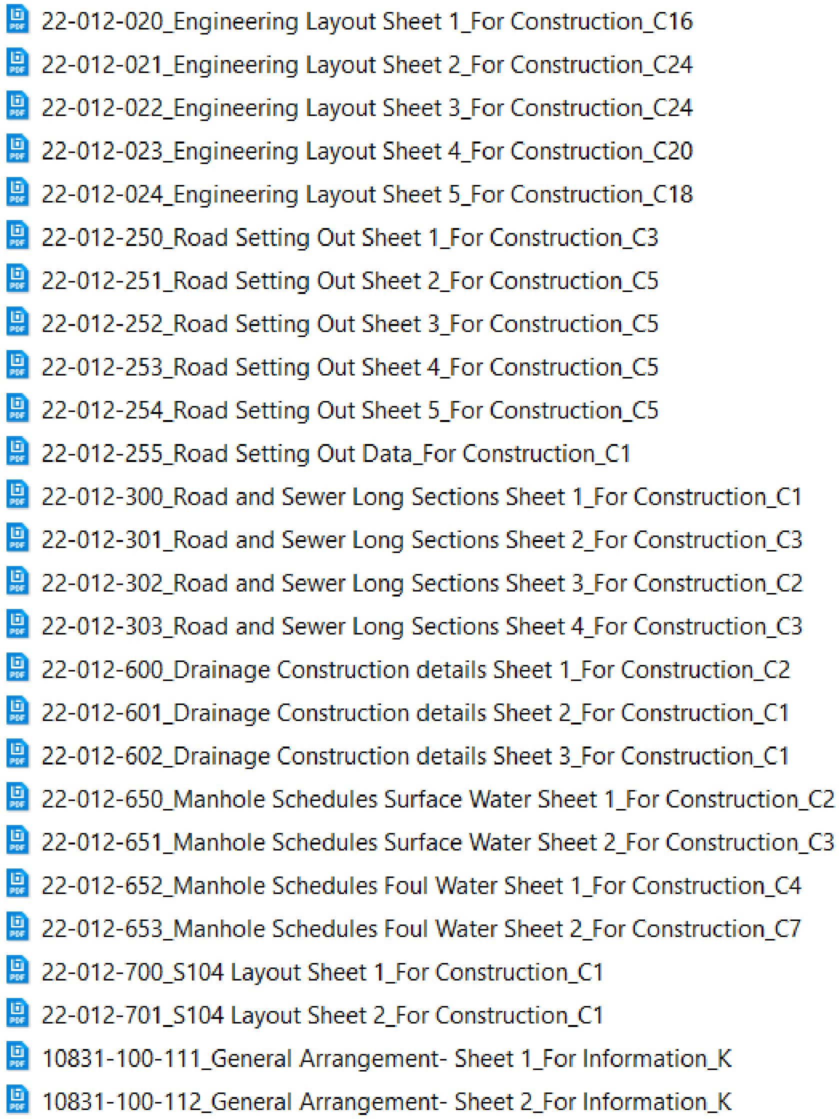
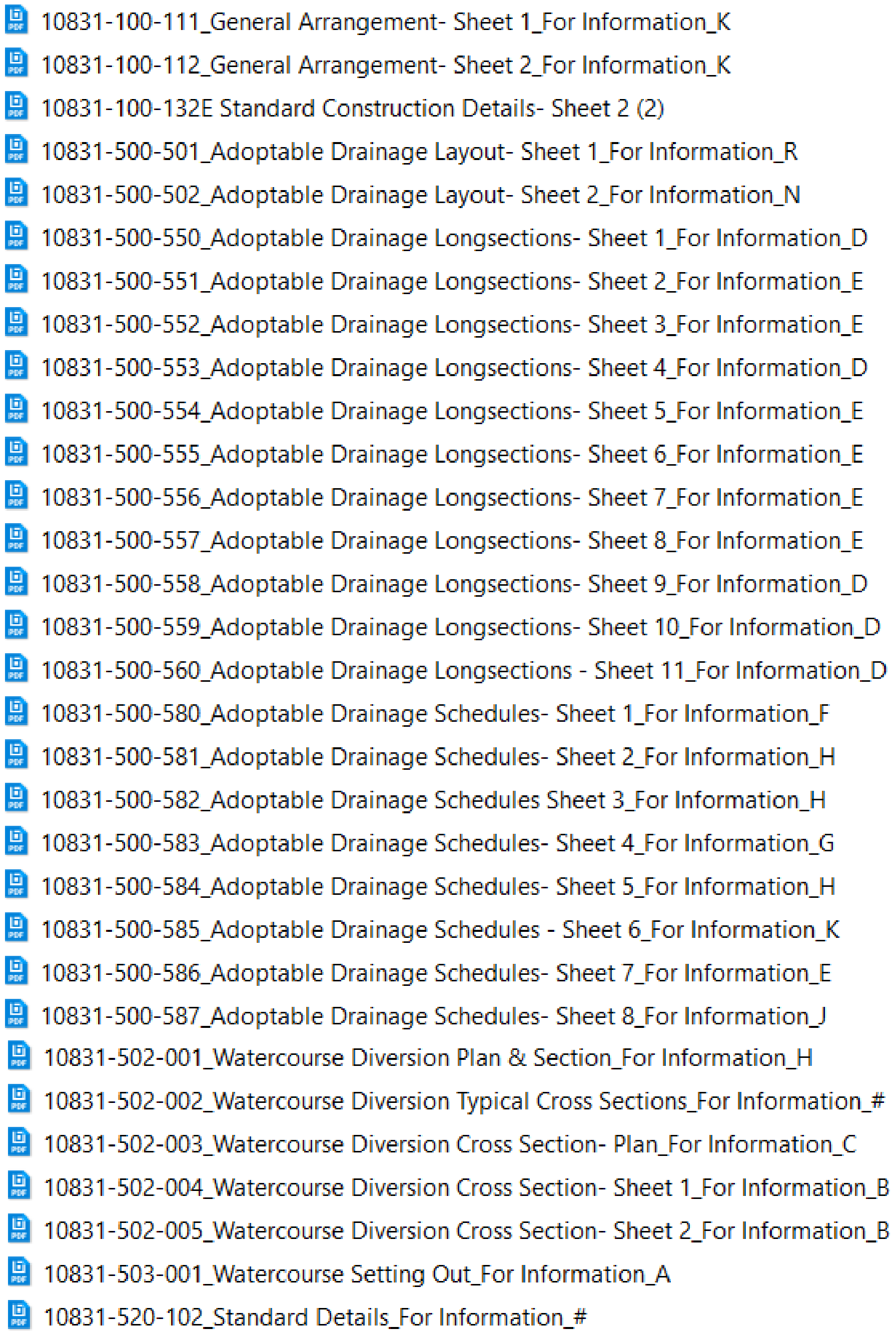
Appendix A – As-Built Drawings

Construction drawings by Withers Design Associates



22-012-020_Engineering Layout Sheet 1_For Construction_C16
22-012-021_Engineering Layout Sheet 2_For Construction_C24
22-012-022_Engineering Layout Sheet 3_For Construction_C24
22-012-023_Engineering Layout Sheet 4_For Construction_C20
22-012-024_Engineering Layout Sheet 5_For Construction_C18
22-012-250_Road Setting Out Sheet 1_For Construction_C3
22-012-251_Road Setting Out Sheet 2_For Construction_C5
22-012-252_Road Setting Out Sheet 3_For Construction_C5
22-012-253_Road Setting Out Sheet 4_For Construction_C5
22-012-254_Road Setting Out Sheet 5_For Construction_C5
22-012-255_Road Setting Out Data_For Construction_C1
22-012-300_Road and Sewer Long Sections Sheet 1_For Construction_C1
22-012-301_Road and Sewer Long Sections Sheet 2_For Construction_C3
22-012-302_Road and Sewer Long Sections Sheet 3_For Construction_C2
22-012-303_Road and Sewer Long Sections Sheet 4_For Construction_C3
22-012-600_Drainage Construction details Sheet 1_For Construction_C2
22-012-601_Drainage Construction details Sheet 2_For Construction_C1
22-012-602_Drainage Construction details Sheet 3_For Construction_C1
22-012-650_Manhole Schedules Surface Water Sheet 1_For Construction_C2
22-012-651_Manhole Schedules Surface Water Sheet 2_For Construction_C3
22-012-652_Manhole Schedules Foul Water Sheet 1_For Construction_C4
22-012-653_Manhole Schedules Foul Water Sheet 2_For Construction_C7
22-012-700_S104 Layout Sheet 1_For Construction_C1
22-012-701_S104 Layout Sheet 2_For Construction_C1
10831-100-111_General Arrangement- Sheet 1_For Information_K
10831-100-112_General Arrangement- Sheet 2_For Information_K

Construction drawings by Brookbanks – Bellway's area including the masterplanning SuDS



10831-100-111_General Arrangement- Sheet 1_For Information_K
10831-100-112_General Arrangement- Sheet 2_For Information_K
10831-100-132E Standard Construction Details- Sheet 2 (2)
10831-500-501_Adoptable Drainage Layout- Sheet 1_For Information_R
10831-500-502_Adoptable Drainage Layout- Sheet 2_For Information_N
10831-500-550_Adoptable Drainage Longsections- Sheet 1_For Information_D
10831-500-551_Adoptable Drainage Longsections- Sheet 2_For Information_E
10831-500-552_Adoptable Drainage Longsections- Sheet 3_For Information_E
10831-500-553_Adoptable Drainage Longsections- Sheet 4_For Information_D
10831-500-554_Adoptable Drainage Longsections- Sheet 5_For Information_E
10831-500-555_Adoptable Drainage Longsections- Sheet 6_For Information_E
10831-500-556_Adoptable Drainage Longsections- Sheet 7_For Information_E
10831-500-557_Adoptable Drainage Longsections- Sheet 8_For Information_E
10831-500-558_Adoptable Drainage Longsections- Sheet 9_For Information_D
10831-500-559_Adoptable Drainage Longsections- Sheet 10_For Information_D
10831-500-560_Adoptable Drainage Longsections - Sheet 11_For Information_D
10831-500-580_Adoptable Drainage Schedules- Sheet 1_For Information_F
10831-500-581_Adoptable Drainage Schedules- Sheet 2_For Information_H
10831-500-582_Adoptable Drainage Schedules Sheet 3_For Information_H
10831-500-583_Adoptable Drainage Schedules- Sheet 4_For Information_G
10831-500-584_Adoptable Drainage Schedules- Sheet 5_For Information_H
10831-500-585_Adoptable Drainage Schedules - Sheet 6_For Information_K
10831-500-586_Adoptable Drainage Schedules- Sheet 7_For Information_E
10831-500-587_Adoptable Drainage Schedules- Sheet 8_For Information_J
10831-502-001_Watercourse Diversion Plan & Section_For Information_H
10831-502-002_Watercourse Diversion Typical Cross Sections_For Information_#
10831-502-003_Watercourse Diversion Cross Section- Plan_For Information_C
10831-502-004_Watercourse Diversion Cross Section- Sheet 1_For Information_B
10831-502-005_Watercourse Diversion Cross Section- Sheet 2_For Information_B
10831-503-001_Watercourse Setting Out_For Information_A
10831-520-102_Standard Details_For Information_#

Pumping Station

Pagham Manhole Survey

Surface Water

Manhole Number	Cover Level	Invert Leve	Pipe Diameter	Pipe Material
S202	6.587	5.28	225mm	Clay
S203	6.367	5.149	225mm	Clay
S204	6.49	4.681	525mm	Concrete
S205	5.836	4.529	525mm	Concrete
S216	N/A	3.969	750mm	Concrete
S217	N/A	3.906	750mm	Concrete
S218	N/A	3.87	750mm	Concrete
S219	N/A	3.854	750mm	Concrete
S220	N/A	3.771	750mm	Concrete
S227	N/A	4.343	450mm	Concrete
S228	N/A	3.989	450mm	Concrete
S235	6.786	5.786	150mm	Clay
S236	6.848	5.618	150mm	Clay
S237	6.871	5.526	150mm	Clay
S238	6.527	5.167	150mm	Clay
S239	6.465	5.132	150mm	Clay
S240	6.41	4.989	150mm	Clay
S241	6.417	4.822	150mm	Clay
S206	6.669	4.539	600mm	Concrete
S207	6.667	4.445	600mm	Concrete
S208	6.47	4.359	600mm	Concrete
S209	6.407	4.307	600mm	Concrete
S210	6.522	5.322	300mm	Clay
S211	6.762	5.208	300mm	Clay
S212	6.646	5.106	300mm	Clay
S213	6.425	4.695	450mm	Concrete
S214	6.407	4.155	750mm	Concrete
S215	6.568	4.258	750mm	Concrete
S221	6.825	5.469	300mm	Clay
S222	N/A	5.296	300mm	Clay
S223	N/A	5.103	375mm	Concrete
S224	N/A	4.931	450mm	Concrete
S225	N/A	4.609	450mm	Concrete
S226	N/A	4.515	450mm	Concrete

Foul

Manhole Number	Cover Level	Invert Leve	Pipe Diameter	Piper Material
F111	N/A	5.123	100mm	Clay
F112	N/A	4.951	100mm	Clay
F123	N/A	3.98	150mm	Clay
F126	6.81	5.393	150mm	Clay
F127	6.836	5.222	150mm	Clay
F128	6.548	3.459	150mm	Clay
F129	6.335	5.469	100mm	Clay
F130	6.604	5.159	150mm	Clay
F113	4.415	4.38	150mm	Clay
F107	6.634	2.899	150mm	Clay
F108	6.695	2.825	150mm	Clay
F109	6.52	2.72	150mm	Clay
F110	6.354	2.537	150mm	Clay
F113	6.658	4.338	150mm	Clay
F114	6.52	4.002	150mm	Clay
F115	6.387	2.367	150mm	Clay
F116	6.419	2.289	150mm	Clay
F117	6.479	4.809	150mm	Clay
F118	6.723	4.671	150mm	Clay
F119	6.634	2.084	150mm	Clay
F120	6.89	1.908	150mm	Clay
F121	6.965	1.715	150mm	Clay
F122	6.711	1.51	150mm	Clay
F124	6.464	1.364	150mm	Clay

Notes :

1. As-built survey carried out using national ordance datum
2. survey infomation has been carried out without entering manholes.
Although every effort has been made to accurately survey
To correctly identify this infomation, it should alwys
checked in areas thst are critical to the future proposal
3. All drainage is presumed to be stright between chambers

KEY

6.500	As-built Road Level
6.500	As-built Floor Levels
◬ ◬	Bellway Storm/Foul
○ ○	Vistry Storm/Foul

BARAM

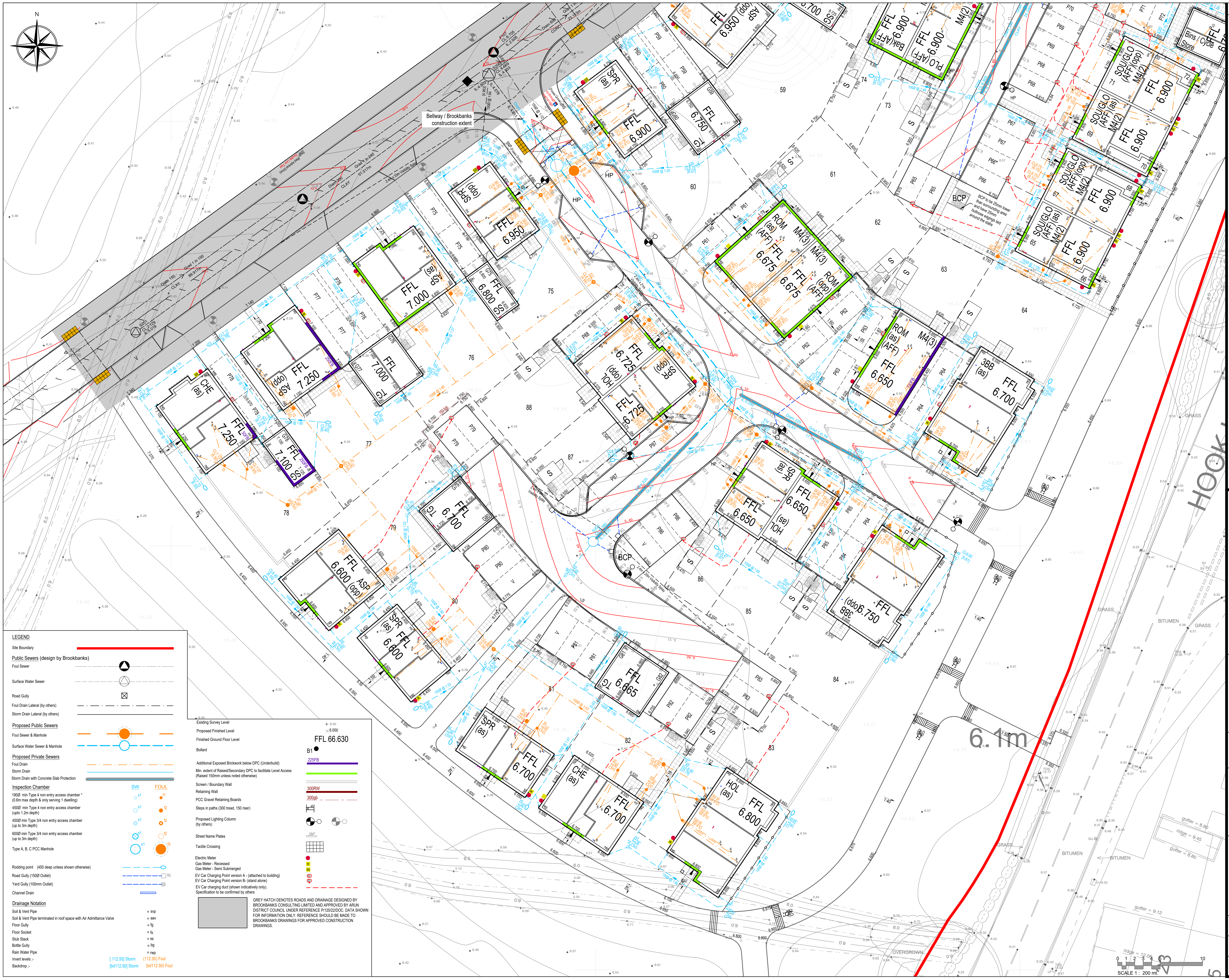
YELFS YARD, BOTLEY ROAD
SOUTHAMPTON
SO32 1DR

VISTRY HOMES
HOOK LANE
PAGHAM

PAGHAM ASBUILT SURVEY

Scale	Sheet Size:	Sheet Number:	Date:
N/A	A0	1	May 2025

Drawing number:	Rev:	Surveyed By:	Approved By:
160425-1	-	JF	BS



No Dimensions are to be scaled from this drawing.

NOTES

1. Withers Design Associates Ltd have prepared this drawing for the sole use of the client. Where any data supplied by the client or from other sources has been used, it has been assumed that the information is correct. No responsibility can be accepted by Withers Design Associates Ltd for inaccuracies in the data supplied by any other party.
2. All works based on the Topographical Survey by Interlock Surveys (Drg. 150595-3D) dated September 2015 and supplementary data by MK Surveys (ref: 29477) dated January 2021.
3. All Adoptable drainage works are to be constructed as detailed in Sewer Sector Guidance (SSG) Appendix C: Design & Construction Guidance to the satisfaction of IWNL.
4. All private drainage is to be constructed, in accordance with the Building Regulations 2000, BS EN 752 (Parts 1-7) and where appropriate the relevant Agrement Certificates.
5. For typical drainage construction details see drawing series 22-012/600 to 602.
6. Private Drains are to be constructed using Polypipe or HS Funke plastic pipes bedded and backfilled as per the manufacturers instructions and the publications listed in 4 above. Where clay pipes are required they shall be Hepworth "SuperSleve/Hepsleve/ Hepseal vitrified clay pipes as appropriate.
7. All drains to be 100mm dia unless stated otherwise. Drains serving more than 10 properties are to be 150mm minimum diameter.
8. Private drains located adjacent to dwellings are to be constructed in accordance with Fig.8 of Approved Document H1.
9. Drainage in "made" or "soft" ground is to be laid in accordance with Technical Advice notes by the Clay Pipe Development Association and where appropriate, the Concrete Pipe Association, and should generally be laid using short length pipes on Class B bedding on 600mm crushed and compacted concrete with 75mm concrete blinding beneath the Class "B" bed.
10. Inspection Chambers on private drains up to 3m depth are to be Type 3 to 4, preformed polypropylene or clayware depending on location and number of connections. Where the above criteria do not apply precast concrete sections with 150mm concrete surround should be used as below;-
11.

Invert Depth	Min Size	Min Access Size
<1.5m	1.2Ø or 1.20 x 0.675	1.20 x 0.675
>1.5m	1.2Ø or 1.20 x 1.00	0.60 x 0.60

(See Table 12 of App. Doc. H1)

12. Rainwater downpipes to be connected direct to drain via adaptor, removable to permit access for rodding.
13. Where back inlet gullies are used they should be roddable.
14. Lintels or sleeves are to be provided for drains passing through foundations or walls in accordance with Diagram 7 of App. Doc. H1.
15. Positions of rainwater pipes, soil pipes, stubstacks, W.C. outlets, etc. are shown on the Architects working drawings.
16. All Stated internal levels are FINISHED FLOOR LEVELS. Garage levels refer to Finished Screed Level at the garage door.
17. All private drains beneath Public Highways, existing trees and screen/retaining wall foundations are to be surrounded with 150mm concrete. Drains beneath tree canopys are to be hand dug.
18. Pipes with less than 0.9m cover in vehicular areas and 0.6m cover in non-vehicular areas are to be protected in accordance with the manufacturers shallow trench detail.
19. Prior to the commencement of works the groundworks Contractor shall investigate all drainage outfalls and satisfy themselves & Vistry (Kent) of the level, diameter and suitability of the outfall point.
20. Drainage depths have been kept to a minimum where possible, however, depths in excess of 2m can not be avoided. Excavations to be carried out in accordance with HSE document HSG150 'Health and Safety in Construction'.
21. All Redundant sewers and drains to be wholly removed of filled with cementuous grout over the full redundant length.

REVISIONS

P1-C1	Refer to 4Projects for previous revisions.	
C2	Tanking legend updated. Plot 81/82 garage level changed.	13/01/23
C3	Pergola's removed from parking to plots 79-83. Levels to parking bays 79-83 changed. Manhole reference changed to suit Adoptable extent. RWP's amended to plots 6-9, 18-19, 23-24, 43-44, 65-75 & 86-88.	16/02/23
C4	Bin collection point changed from soft to hard landscape finish. Handing label corrected on Aspen house type.	06/03/23
C5	Notes 3 amended from ICOSA to IWNL.	06/04/23
C6	Additional level information added to all garages. Front path gradients added to all plots.	18/04/23
C7	RWP changes to housetypes Mulberry, Spruce, Maple, Quad Car Port, Single Garage and Sales Garage.	20/06/23
C8	FS added to plots 47-50, 61-62 & 63 for washing machine	04/07/23
C9	Site Levels updated as clouded following site wide review	20/10/23
C10	Tactile paving added to the Cycle path, levels to the rear of plots 73-74 revised in line with part M4(2) advice.	10/11/23
C11	Note in key revised as clouded	20/02/24
C12	Planning ref number added to the note in the key	20/02/24
C13	Note in Key revised to planners comments	21/02/24
C14	25mm Bullnose kerbs added to BCP to the front of plot 65	15/03/24
C15	Street Name Plate information added.	29/05/24
C16	Rear Path level to plot 73 revised, top of kerb levels added to front door.	17/07/24

LEGEND

Site Boundary

Public Sewers (design by Brookbanks)

Foul Sewer

Surface Water Sewer

Road Gully ⊠

Foul Drain Lateral (by others)

Storm Drain Lateral (by others)

Proposed Public Sewers

Foul Sewer & Manhole

Surface Water Sewer & Manhole

Proposed Private Sewers

Foul Drain

Storm Drain

Storm Drain with Concrete Slab Protection

Inspection Chamber

	SW	FOUL
190Ø min Type 4 non entry access chamber * (0.6m max depth & only serving 1 dwelling)	s1	f1
450Ø min Type 4 non entry access chamber (upto 1.2m depth)	s1	f2
450Ø min Type 3/4 non entry access chamber (up to 3m depth)	s1	f2
600Ø min Type 3/4 non entry access chamber (up to 3m depth)	s1	f2
Type A, B, C PCC Manhole	s1	f3

Rodding point (450 deep unless shown otherwise)

Road Gully (150Ø Outlet) RG

Yard Gully (100mm Outlet)

Channel Drain

Drainage Notation

Soil & Vent Pipe	○ svp	
Soil & Vent Pipe terminated in roof space with Air Admittance Valve	○ aav	
Floor Gully	○ fg	
Floor Socket	○ fs	
Stub Stack	○ ss	
Bottle Gully	○ bg	
Rain Water Pipe	○ rwp	
Invert levels ;-	[112.50] Storm	(112.50) Foul
Backdrop ;-	[bd112.50] Storm	(bd112.50) Foul

Existing Survey Level	+ 6.00
Proposed Finished Level	× 6.000
Finished Ground Floor Level	FFL 66.630
Bollard	B1 ●
Additional Exposed Brickwork below DPC (Underbuild)	225FB
Min. extent of Raised/Secondary DPC to facilitate Level Access (Raised 150mm unless noted otherwise)	
Screen / Boundary Wall	
Retaining Wall	300RW
PCC Gravel Retaining Boards	300gb
Steps in paths (300 tread, 150 riser)	st st
Proposed Lighting Column (by others)	
Street Name Plates	SNP
Tactile Crossing	
Electric Meter	●
Gas Meter - Recessed	R
Gas Meter - Semi Submerged	SS
EV Car Charging Point version A - (attached to building)	EV
EV Car Charging Point version B- (stand alone)	EV
EV Car charging duct (shown indicatively only). Specification to be confirmed by others	

▨ GREY HATCH DENOTES ROADS AND DRAINAGE DESIGNED BY BROOKBANKS CONSULTING LIMITED AND APPROVED BY ARUN DISTRICT COUNCIL UNDER REFERENCE P/120/22/DOC. DATA SHOWN FOR INFORMATION ONLY. REFERENCE SHOULD BE MADE TO BROOKBANKS DRAWINGS FOR APPROVED CONSTRUCTION DRAWINGS.

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DESIGN ASSOCIATES
CIVIL ENGINEERING & INFRASTRUCTURE DESIGN
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Wakes Colne, Colchester, Essex
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01206 247081
ISO 9001
Certificate No. GB2005412

PROJECT
HOOK LANE, PAGHAM,
WEST SUSSEX

CLIENT
Bovis Homes
Linden HOMES
Part of the Vistry Group

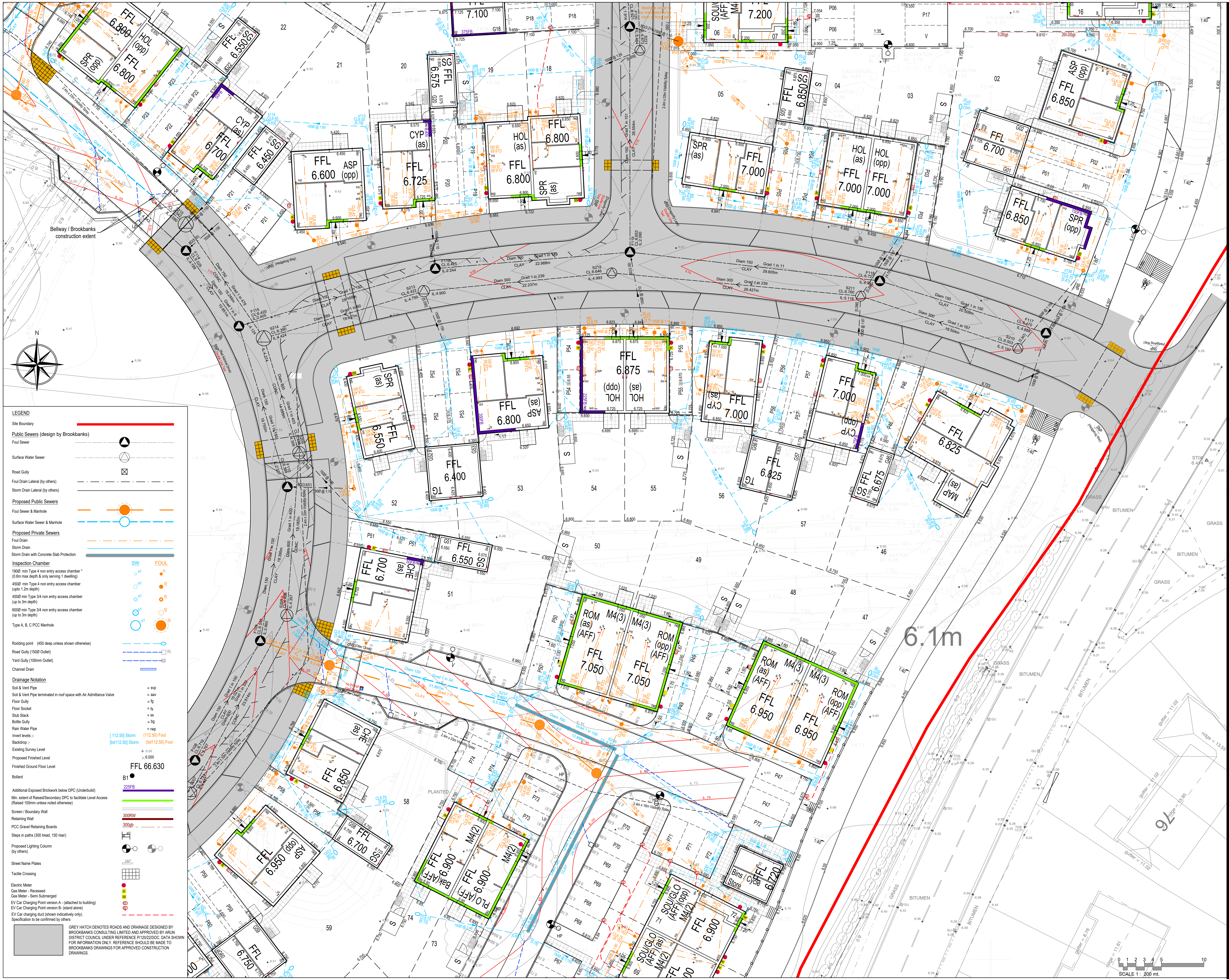
DRAWING TITLE
ENGINEERING LAYOUT
Sheet 1 of 5

Sheet Layout
05
04
03
02
01

SCALE	DATE	INIT	CHKD
1:200	05/22	cb	mw

STATUS
CONSTRUCTION

DRG NO	REVISION
22-012/020	C16



LEGEND

Site Boundary	▬

Public Sewers (design by Brookbanks)

Foul Sewer	▲
Surface Water Sewer	△
Road Gully	☒
Foul Drain Lateral (by others)	— · — · —
Storm Drain Lateral (by others)	——

Proposed Public Sewers

Foul Sewer & Manhole	●
Surface Water Sewer & Manhole	○

Proposed Private Sewers

Foul Drain	— · — · —
Storm Drain	——
Storm Drain with Concrete Slab Protection	▬

Inspection Chamber

	SW	FOUL
190Ø min Type 4 non entry access chamber * (0.6m max depth & only serving 1 dwelling)	s1	f1
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Type A, B, C PCC Manhole	s1	f3

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Channel Drain	

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(See Table 12 of App. Doc. H1)

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21. All Redundant sewers and drains to be wholly removed of filled with cementuous grout over the full redundant length.

REVISIONS

C4	Manholes rotated to SVP's intake. Handing label corrected on Aspen house type.	06/03/23
C5	Notes 3 amended from ICOSA to IWNL.	06/04/23
C6	Additional level information added to all garages. Front path gradients added to all plots.	18/04/23
C7	Plot 47 changed to M4(3) unit and associated parking bays.	05/05/23
C8	RWP changes to housetypes Mulberry, Spruce, Maple, Quad Car Port, Single Garage and Sales Garage.	20/06/23
C9	FS added to plots 47-50, 61-62 & 63 for washing machine foul run in plot 5 revised	04/07/23
C10	Foul revised to plots 3 - 5	07/07/23
C11	Head FW Chambers to Plots 3-6 repositioned.	10/07/23
C12	Manhole f28 updated & f26-f27 gradients updates.	25/09/23
C13	Manhole F126-F127 & f28 updated.	26/09/23
C14	Site Levels updated as clouded following site wide review	20/10/23
C15	Tactile paving added to the Cycle path, levels to the rear of plots 73-74 revised in line with part M4(2) advice.	10/11/23
C16	Note in key revised as clouded	20/02/24
C17	Planning ref number added to the note in the key	20/02/24
C18	Note in Key revised to planners comments	21/02/24
C19	Entrance path to plot 7 revised	07/03/24
C20	Street Name Plates added adjacent plots 21 & 52	18/03/24
C21	Boundary Wall to plots 46-47 revised	24/04/24
C22	Street Name Plate information added.	29/05/24
C23	Street Name Plates removed adjacent plot 24 & 52	04/06/24
C24	Rear Path level to plot 73 revised, top of kerb levels added to front door.	17/07/24

WITHERS
DESIGN ASSOCIATES
CIVIL ENGINEERING & INFRASTRUCTURE DESIGN
Unit 12, Wakes Hall Business Centre
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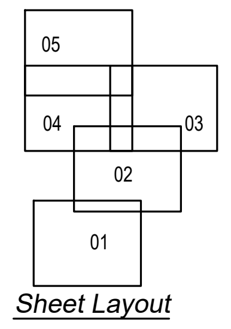
CO6 2DY
01206 247081
ISO 9001
Certificate No. GB2005412

PROJECT
**HOOK LANE, PAGHAM,
WEST SUSSEX**

CLIENT
Bovis Homes
Linden HOMES
Part of the Vistry Group

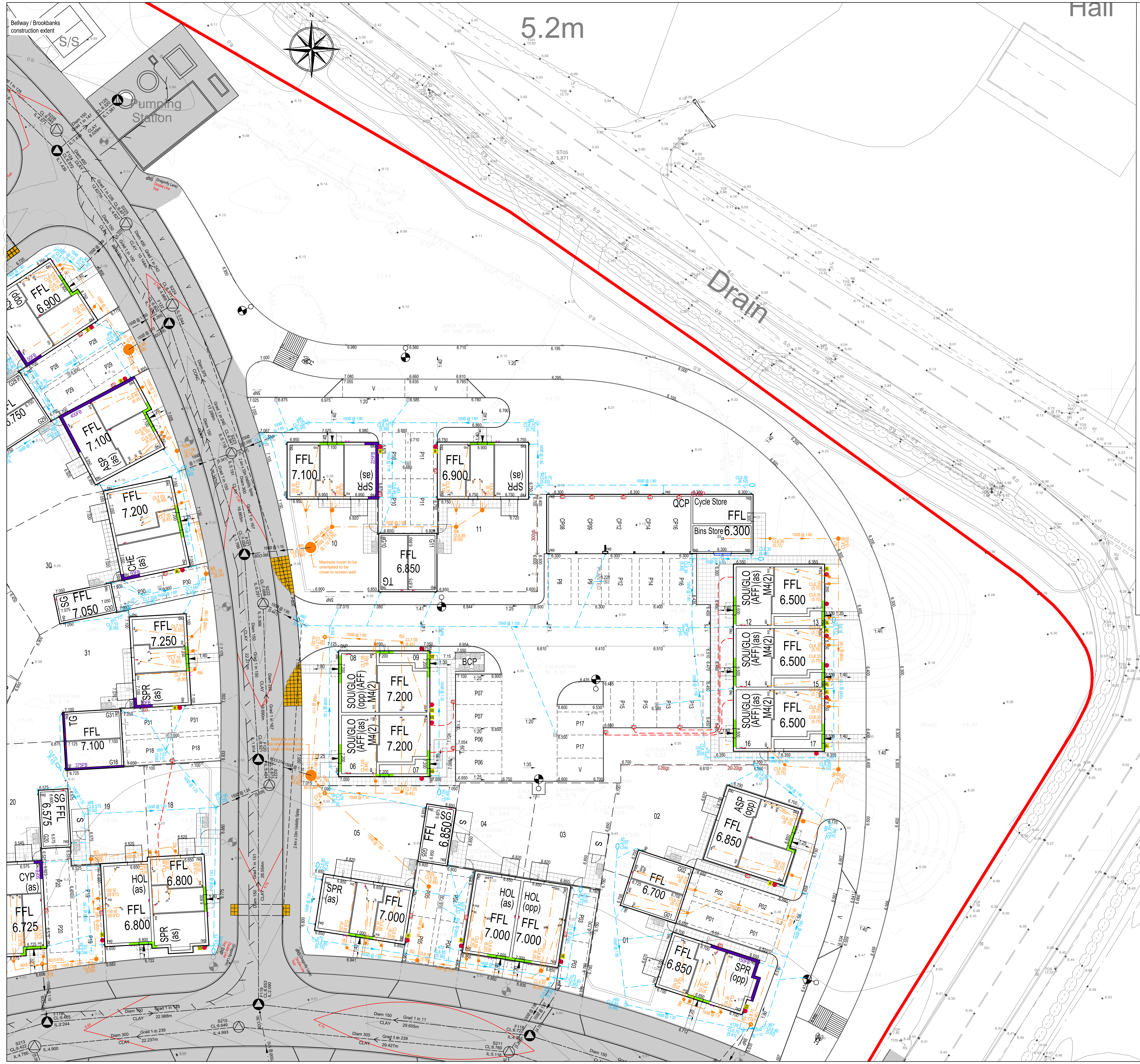
DRAWING TITLE
**ENGINEERING LAYOUT
Sheet 2 of 5**



SCALE	DATE	INIT	CHKD
1:200	05/22	cb	mw

STATUS
CONSTRUCTION

DRG NO	REVISION
22-012/021	C24



LEGEND

Site Boundary	

Public Sewers (design by Brookbanks)

- Foul Sewer
- Surface Water Sewer
- Road Gully ☒
- Foul Drain Lateral (by others)
- Storm Drain Lateral (by others)

Proposed Public Sewers

- Foul Sewer & Manhole
- Surface Water Sewer & Manhole

Proposed Private Sewers

- Foul Drain
- Storm Drain
- Storm Drain with Concrete Slab Protection

Inspection Chamber	SW	FOUL
190Ø min Type 4 non entry access chamber * (0.6m max depth & only serving 1 dwelling)	s1	f1
450Ø min Type 4 non entry access chamber (upto 1.2m depth)	s1	f2
450Ø min Type 3/4 non entry access chamber (up to 3m depth)	s1	f2
600Ø min Type 3/4 non entry access chamber (up to 3m depth)	s1	f2
Type A, B, C PCC Manhole	s1	f3

- Rodding point (450 deep unless shown otherwise)
- Road Gully (150Ø Outlet) RG
- Yard Gully (100mm Outlet)
- Channel Drain

Drainage Notation

Soil & Vent Pipe	o svp	
Soil & Vent Pipe terminated in roof space with Air Admittance Valve	o aav	
Floor Gully	o fg	
Floor Socket	o fs	
Stub Stack	o ss	
Bottle Gully	o bg	
Rain Water Pipe	o rwp	
Invert levels ;-	[112.50] Storm	(112.50) Foul
Backdrop ;-	[bd112.50] Storm	(bd112.50) Foul
Existing Survey Level	+ 6.00	
Proposed Finished Level	× 6.000	
Finished Ground Floor Level	FFL 66.630	
Bollard	B1 ●	
Additional Exposed Brickwork below DPC (Underbuild)	225FB	
Min. extent of Raised/Secondary DPC to facilitate Level Access (Raised 150mm unless noted otherwise)		
Screen / Boundary Wall		
Retaining Wall	300RW	
PCC Gravel Retaining Boards	300gb	
Steps in paths (300 tread, 150 riser)	st	
Proposed Lighting Column (by others)		
Street Name Plates	SNP	
Tactile Crossing		
Electric Meter	●	
Gas Meter - Recessed	R	
Gas Meter - Semi Submerged	SS	
EV Car Charging Point version A - (attached to building)	EV	
EV Car Charging Point version B- (stand alone)	EV	
EV Car charging duct (shown indicatively only). Specification to be confirmed by others		

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4. All private drainage is to be constructed, in accordance with the Building Regulations 2000, BS EN 752 (Parts 1-7) and where appropriate the relevant Agrement Certificates.
5. For typical drainage construction details see drawing series 22-012/600 to 602.
6. Private Drains are to be constructed using Polypipe or HS Funke plastic pipes bedded and backfilled as per the manufacturers instructions and the publications listed in 4 above. Where clay pipes are required they shall be Hepworth "SuperSleve/Hepsleve/ Hepseal vitrified clay pipes as appropriate.
7. All drains to be 100mm dia unless stated otherwise. Drains serving more than 10 properties are to be 150mm minimum diameter.
8. Private drains located adjacent to dwellings are to be constructed in accordance with Fig.8 of Approved Document H1.
9. Drainage in "made" or "soft" ground is to be laid in accordance with Technical Advice notes by the Clay Pipe Development Association and where appropriate, the Concrete Pipe Association, and should generally be laid using short length pipes on Class B bedding on 600mm crushed and compacted concrete with 75mm concrete blinding beneath the Class "B" bed.
10. Inspection Chambers on private drains up to 3m depth are to be Type 3 to 4, preformed polypropylene or clayware depending on location and number of connections. Where the above criteria do not apply precast concrete sections with 150mm concrete surround should be used as below;-
11.

Invert Depth	Min Size	Min Access Size
<1.5m	1.2Ø or 1.20 x 0.675	1.20 x 0.675
>1.5m	1.2Ø or 1.20 x 1.00	0.60 x 0.60

(See Table 12 of App. Doc. H1)

12. Rainwater downpipes to be connected direct to drain via adaptor, removable to permit access for rodding.
13. Where back inlet gullies are used they should be roddable.
14. Lintels or sleeves are to be provided for drains passing through foundations or walls in accordance with Diagram 7 of App. Doc. H1.
15. Positions of rainwater pipes, soil pipes, stubstacks, W.C. outlets, etc. are shown on the Architects working drawings.
16. All Stated internal levels are FINISHED FLOOR LEVELS. Garage levels refer to Finished Screed Level at the garage door.
17. All private drains beneath Public Highways, existing trees and screen/retaining wall foundations are to be surrounded with 150mm concrete. Drains beneath tree canopys are to be hand dug.
18. Pipes with less than 0.9m cover in vehicular areas and 0.6m cover in non-vehicular areas are to be protected in accordance with the manufacturers shallow trench detail.
19. Prior to the commencement of works the groundworks Contractor shall investigate all drainage outfalls and satisfy themselves & Vistry (Kent) of the level, diameter and suitability of the outfall point.
20. Drainage depths have been kept to a minimum where possible, however, depths in excess of 2m can not be avoided. Excavations to be carried out in accordance with HSE document HSG150 'Health and Safety in Construction'.
21. All Redundant sewers and drains to be wholly removed of filled with cementuous grout over the full redundant length.

REVISIONS

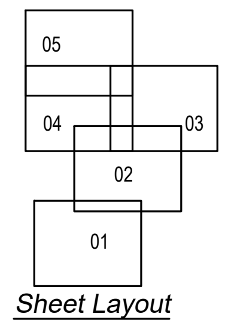
C5	Pump station and substation layout changed to TA layout.	29/03/23
C6	Notes 3 amended from ICOSA to IWNL.	06/04/23
C7	Additional level information added to all garages. Front path gradients added to all plots.	18/04/23
C8	Correcting upload error	25/04/23
C9	Missing side door added to plot 12/13. BCP paving amended.	05/05/23
C10	RWP changes to housetypes Mulberry, Spruce, Maple, Quad Car Port, Single Garage and Sales Garage.	20/06/23
C11	RWP's removed from the front of the sales centre	21/06/23
C12	Foul run to f51 revised on plot 5	04/07/23
C13	Foul drainage revised to plots 3-5. EV ducts removed from plots 7-9 to the car barn	07/07/23
C14	Head FW Chambers to Plots 3-6 repositioned.	10/07/23
C15	Foul drainage to the front of plots 31-29 revised. lateral removed to F121	17/07/23
C16	Site Levels updated as clouded following site wide review	20/10/23
C17	Tactile paving added to the Cycle path	10/11/23
C18	Note in key revised as clouded	20/02/24
C19	Planning ref number added to the note in the key	20/02/24
C20	Note in Key revised to planners comments	21/02/24
C21	Entrance path to plot 7 revised	07/03/24
C22	Street Name Plates added adjacent plots 28	18/03/24
C23	Street Name Plate information added.	29/05/24
C24	Street Name Plates removed adjacent plot 28	04/06/24

WITHERS
DESIGN ASSOCIATES
CIVIL ENGINEERING & INFRASTRUCTURE DESIGN
Unit 12, Wakes Hall Business Centre
Wakes Colne, Colchester, Essex
CO6 2DY
01206 247081

PROJECT
HOOK LANE, PAGHAM,
WEST SUSSEX

CLIENT
Bovis Homes
Linden HOMES
Part of the Vistry Group

DRAWING TITLE
ENGINEERING LAYOUT
Sheet 3 of 5

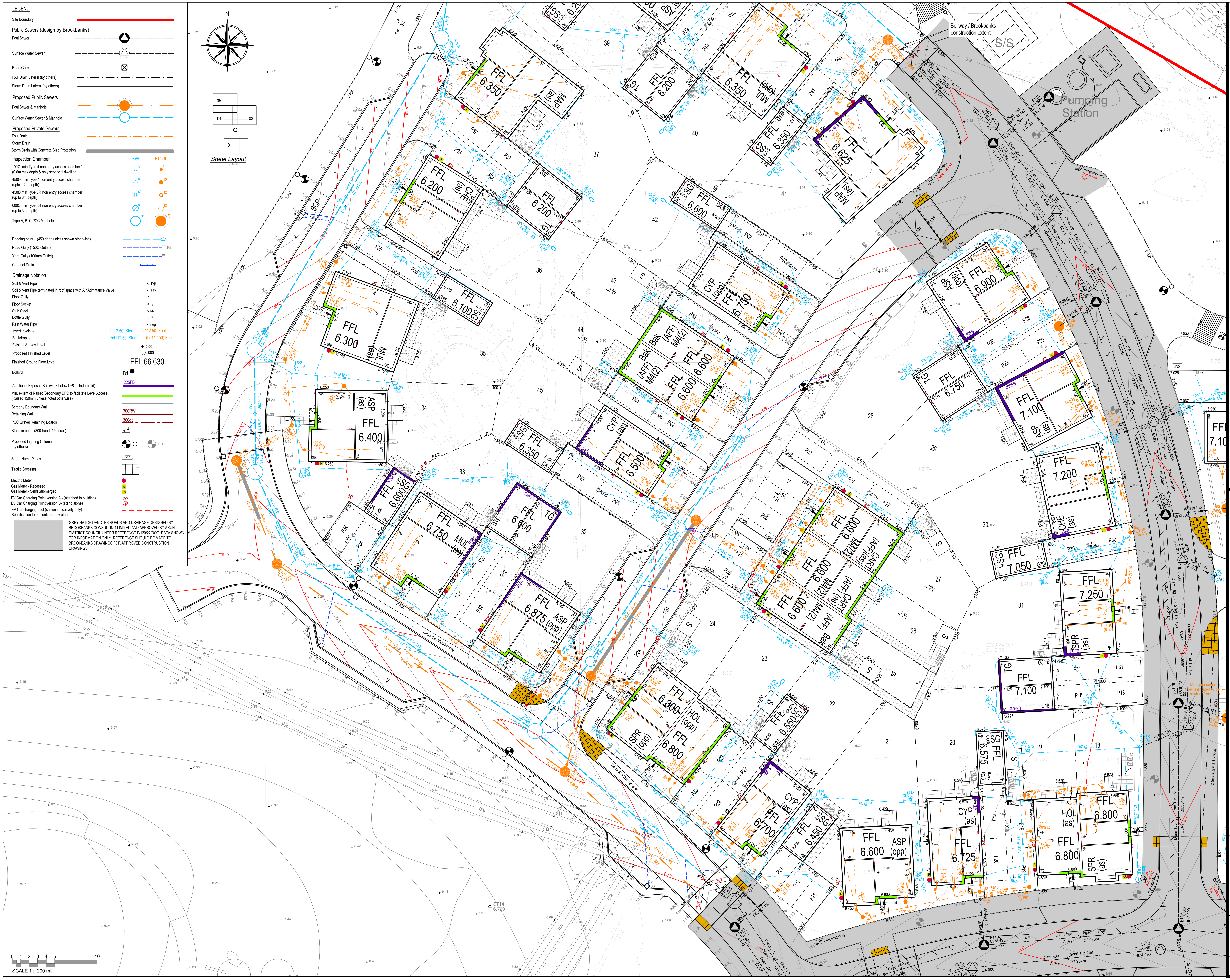


Sheet Layout

SCALE	DATE	INIT	CHKD
1:200	05/22	cb	mw

STATUS
CONSTRUCTION

DRG NO	REVISION
22-012/022	C24



LEGEND

Site Boundary	🟥

Public Sewers (design by Brookbanks)
- Foul Sewer
- Surface Water Sewer
- Road Gully ☒
- Foul Drain Lateral (by others)
- Storm Drain Lateral (by others)

Proposed Public Sewers
- Foul Sewer & Manhole
- Surface Water Sewer & Manhole

Proposed Private Sewers
- Foul Drain
- Storm Drain
- Storm Drain with Concrete Slab Protection

Inspection Chamber	SW	FOUL
190Ø min Type 4 non entry access chamber * (0.6m max depth & only serving 1 dwelling)	s1	f1
450Ø min Type 4 non entry access chamber (upto 1.2m depth)	s1	f2
450Ø min Type 3/4 non entry access chamber (up to 3m depth)	s1	f2
600Ø min Type 3/4 non entry access chamber (up to 3m depth)	s1	f2
Type A, B, C PCC Manhole	s1	f3

Rodding point (450 deep unless shown otherwise)	
Road Gully (150Ø Outlet)	RG
Yard Gully (100mm Outlet)	
Channel Drain	

Drainage Notation		
Soil & Vent Pipe	○ svp	
Soil & Vent Pipe terminated in roof space with Air Admittance Valve	○ aav	
Floor Gully	○ fg	
Floor Socket	○ fs	
Stub Stack	○ ss	
Bottle Gully	○ bg	
Rain Water Pipe	○ rwp	
Invert levels ;-	[112.50] Storm	(112.50) Foul
Backdrop ;-	[bd112.50] Storm	(bd112.50) Foul
Existing Survey Level	+ 6.00	
Proposed Finished Level	× 6.000	
Finished Ground Floor Level	FFL 66.630	
Bollard	B1 ●	
Additional Exposed Brickwork below DPC (Underbuild)	225FB	
Min. extent of Raised/Secondary DPC to facilitate Level Access (Raised 150mm unless noted otherwise)	🟩	
Screen / Boundary Wall		
Retaining Wall	300RW	
PCC Gravel Retaining Boards	300gb	
Steps in paths (300 tread, 150 riser)	st	
Proposed Lighting Column (by others)		
Street Name Plates	SNP	
Tactile Crossing	▦	
Electric Meter	●	
Gas Meter - Recessed	R	
Gas Meter - Semi Submerged	SS	
EV Car Charging Point version A - (attached to building)	EV	
EV Car Charging Point version B- (stand alone)	EV	
EV Car charging duct (shown indicatively only). Specification to be confirmed by others		

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Invert Depth	Min Size	Min Access Size
<1.5m	1.2Ø or 1.20 x 0.675	1.20 x 0.675
>1.5m	1.2Ø or 1.20 x 1.00	0.60 x 0.60

(See Table 12 of App. Doc. H1)

12. Rainwater downpipes to be connected direct to drain via adaptor, removable to permit access for rodding.
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14. Lintels or sleeves are to be provided for drains passing through foundations or walls in accordance with Diagram 7 of App. Doc. H1.
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21. All Redundant sewers and drains to be wholly removed of filled with cementuous grout over the full redundant length.

REVISIONS

P1-C3	Refer to 4Projects for previous revisions.	
C4	Light column by pump station moved. Handing label corrected on Aspen house type.	06/03/23
C5	RWP's amended to plots 25-27	14/03/23
C6	Plot 21 orientation changed to achieve 1m to plot boundary. Pump station and substation layout changed to TA layout.	29/03/23
C7	Notes 3 amended from ICOSA to IWNL. Pipe gradient and size amended following IWNL comments.	06/04/23
C8	Additional level information added to all garages. Front path gradients added to all plots.	18/04/23
C9	RWP changes to housetypes Mulberry, Spruce, Maple, Quad Car Port, Single Garage and Sales Garage.	20/06/23
C10	Patio revised @ Plots 43 & 44.	11/07/23
C11	Foul drainage to the front of plots 31-29 revised. lateral removed to F121	17/07/23
C12	Site Levels updated as clouded following site wide review	20/10/23
C13	Tactile paving added to the Cycle path, levels to the rear of plots 43-44 & 25-27 revised in line with part M4(2) advice.plot 25 made an M4(2) unit.	10/11/23
C14	Road gully relocated in the bellmouth of Road 8 & 6, Gully leads added to gully's at the start of Road 6	30/01/24
C15	Note in key revised as clouded	20/02/24
C16	Planning ref number added to the note in the key	20/02/24
C17	Note in Key revised to planners comments	21/02/24
C18	Street Name Plates added adjacent plots 28 & 41	18/03/24
C19	Street Name Plate information added.	29/05/24
C20	Street Name Plates removed adjacent plot 24 & 28	04/06/24

WITHERS
DESIGN ASSOCIATES
CIVIL ENGINEERING & INFRASTRUCTURE DESIGN
Unit 12, Wakes Hall Business Centre
Wakes Colne, Colchester, Essex
CO6 2DY
01206 247081
ISO 9001
Certificate No. GB2005412

PROJECT
**HOOK LANE, PAGHAM,
WEST SUSSEX**

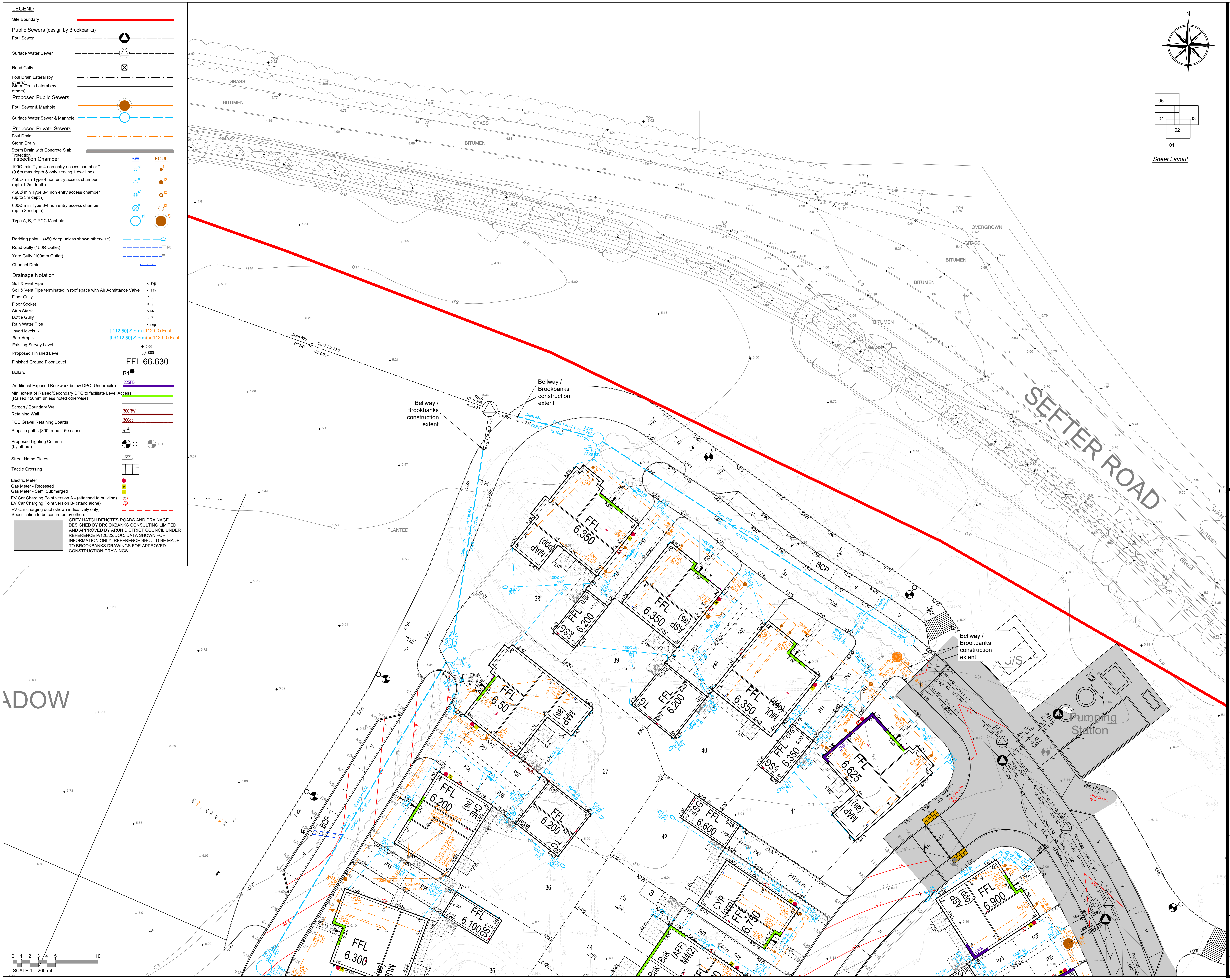
CLIENT
Bovis Homes
Linden HOMES
Part of the Vistry Group

DRAWING TITLE
ENGINEERING LAYOUT
Sheet 4 of 5

SCALE	DATE	INIT	CHKD
1:200	05/22	cb	mw

STATUS
CONSTRUCTION

DRG NO	REVISION
22-012/023	C20



LEGEND

Site Boundary

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- Foul Sewer
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- Road Gully
- Foul Drain Lateral (by others)
- Storm Drain Lateral (by others)

Proposed Public Sewers

- Foul Sewer & Manhole
- Surface Water Sewer & Manhole

Proposed Private Sewers

- Foul Drain
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- Storm Drain with Concrete Slab Protection

Inspection Chamber

	SW	FOUL
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Drainage Notation

Soil & Vent Pipe	○ svp
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Floor Socket	○ fs
Stub Stack	○ ss
Bottle Gully	○ bg
Rain Water Pipe	○ rwp
Invert levels ;-	[112.50] Storm (112.50) Foul
Backdrop ;-	[bd112.50] Storm(bd112.50) Foul
Existing Survey Level	+ 6.00
Proposed Finished Level	× 6.000
Finished Ground Floor Level	FFL 66.630
Bollard	B1●
Additional Exposed Brickwork below DPC (Underbuild)	225FB
Min. extent of Raised/Secondary DPC to facilitate Level Access (Raised 150mm unless noted otherwise)	
Screen / Boundary Wall	
Retaining Wall	300RW
PCC Gravel Retaining Boards	300gb
Steps in paths (300 tread, 150 riser)	st
Proposed Lighting Column (by others)	
Street Name Plates	SNP
Tactile Crossing	
Electric Meter	●
Gas Meter - Recessed	R
Gas Meter - Semi Submerged	SS
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EV Car charging duct (shown indicatively only). Specification to be confirmed by others	

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(See Table 12 of App. Doc. H1)

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21. All Redundant sewers and drains to be wholly removed of filled with cementuous grout over the full redundant length.

REVISIONS

C7	Additional level information added to all garages. Front path gradients added to all plots.	18/04/23
C8	RWP changes to housetypes Mulberry, Spruce, Maple, Quad Car Port, Single Garage and Sales Garage.	20/06/23
C9	Patio revised @ Plots 43 & 44.	11/07/23
C10	Site Levels updated as clouded following site wide review	20/10/23
C11	Tactile paving added to the Cycle path, levels to the rear of plots 43-44 revised in line with part M4(2) advice.	10/11/23
C12	Note in key revised as clouded	20/02/24
C13	Planning ref number added to the note in the key	20/02/24
C14	Note in Key revised to planners comments	21/02/24
C15	Street Name Plates added adjacent plots 28 & 41	18/03/24
C16	Street Name Plate information added.	29/05/24
C17	Street Name Plates removed adjacent plot 28	04/06/24
C18	Manhole S227 re-located to tie in with Brookbank design. FFL of plot 37 changed following client instruction, drainage to plots 36 & 37 updated to suit levels.	03/03/25

WITHERS
DESIGN ASSOCIATES
CIVIL ENGINEERING & INFRASTRUCTURE DESIGN

Unit 12, Wakes Hall Business Centre
Wakes Colne, Colchester, Essex
CO6 2DY
01206 247081

ISO 9001
Certificate No. GB2005412

PROJECT
**HOOK LANE, PAGHAM,
WEST SUSSEX**

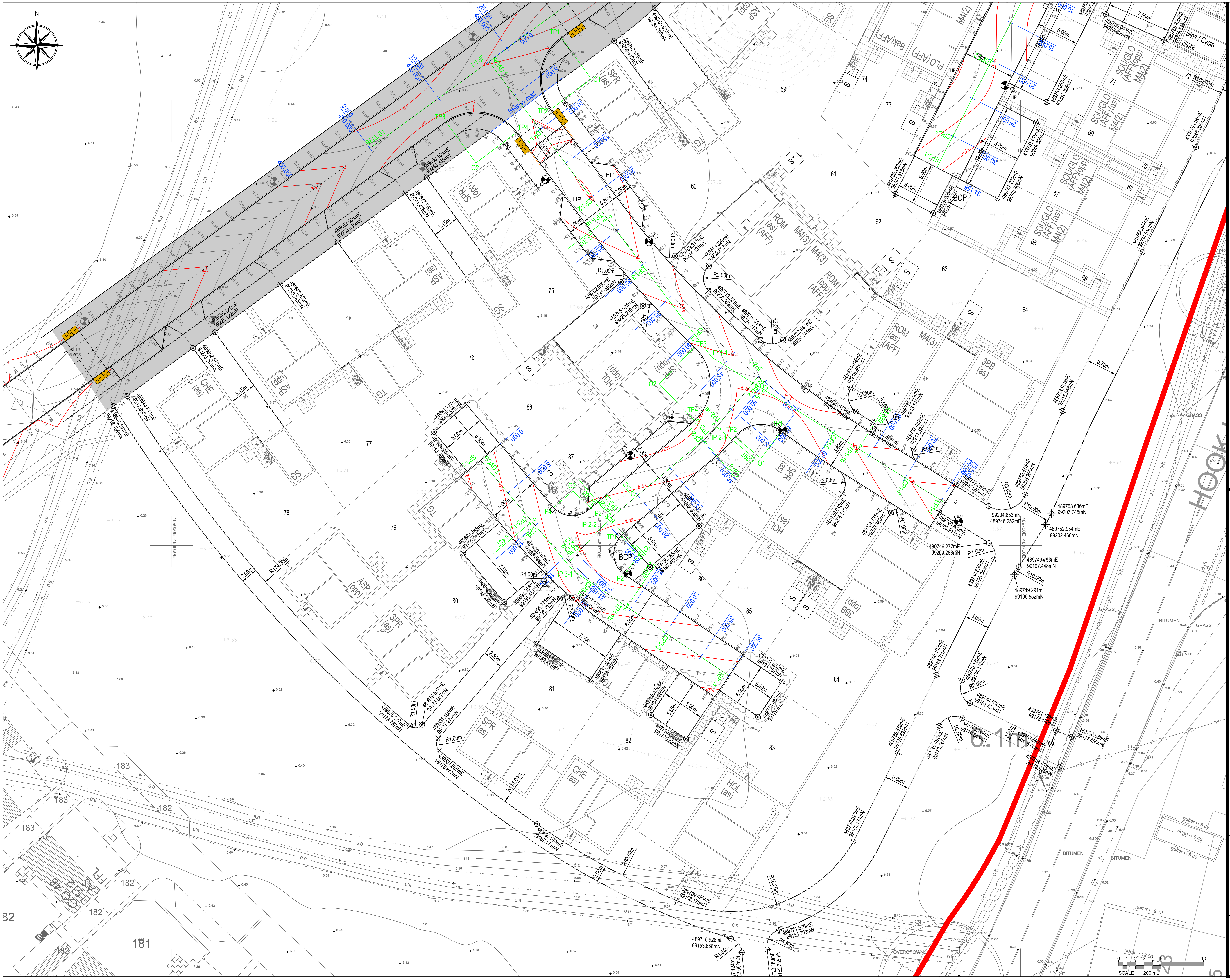
CLIENT
Bovis Homes
Linden HOMES
Part of the Vistry Group

DRAWING TITLE
**ENGINEERING LAYOUT
Sheet 5 of 5**

SCALE	DATE	INIT	CHKD
1:200	05/22	cb	mw

STATUS
CONSTRUCTION

DRG NO	REVISION
22-012/024	C18


N
Bellway Road
ROAD 1
Bins / Cycle Store
59
60
61
62
63
64
65
66
67
68
69
70
71
72
73
74
75
76
77
78
79
80
81
82
83
84
85
86
87
88
181
182
183
SPR (as)
SPR (opp)
ASP (as)
ASP (opp)
HOL (opp)
HOL (as)
CHE (as)
ROM (as) (AFF)
ROM (opp) (AFF)
M4(3)
M4(2)
SOUGLO (AFF) (as)
SOUGLO (AFF) (opp)
3BB (as)
3BB (opp)
PLO (AFF)
TG
SG
BCP
HP
GRASS
BITUMEN
OVERGROWN
3.70m
R10.00m
R2.00m
R1.00m
R174.00m
5.00m
SCALE 1 : 200 mt.

No Dimensions are to be scaled from this drawing.

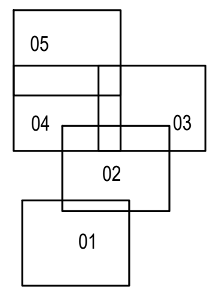
NOTES

1. All works based on the Topographical Survey by Interlock Surveys (Drg. 150595-3D) dated September 2015 and supplementary data by MK Surveys (ref: 29477) dated January 2021.
2. The Contractor is responsible for obtaining all necessary licenses for working in the public highway, inclusive of the agreement of all traffic and pedestrian management arrangements.
3. Setting Out to roads refers to centreline setting out, with offsets and coordinates to key areas also provided.
4. For Road Setting Out data, refer to Drawing Nos 22-012/255.
5. For Building Setting Out, refer to Drawing Nos 22-012/800 to 805.

LEGEND

Site Boundary 🟥

▨ GREY HATCH DENOTES ROAD AND DRAINAGE DESIGN BY BROOKBANKS CONSULTING LIMITED. DATA SHOWN FOR INFORMATION ONLY. REFERENCE SHOULD BE MADE TO BROOKBANKS DRAWINGS FOR CONSTRUCTION.


05
04
03
02
01

Sheet Layout

REVISIONS

P1	Preliminary Issue.	24/06/22
T1	Tender Issue.	30/06/22
T2	Road levels adjusted between chainage CH0-30 on Road 1 to tie-in to revised Brookbanks road design.	15/08/22
T3	Plot 82 moved. New Street Lighting added.	16/09/22
T4	Cycle store size amended to 8'x6'. Screen walls amended to remove angles/curves. Archaeological dig topo added.	11/11/22
C1	Shared cycle path widened to 3.7m for fire access. Construction Issue.	06/12/22
C2	Pergola's removed from parking to plots 79-83. Levels to parking bays 79-83 changed.	16/02/23
C3	Handing label corrected on Aspen house type.	06/03/23

WITHERS
DESIGN ASSOCIATES
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Unit 12, Wakes Hall Business Centre
Wakes Colne, Colchester, Essex
CO6 2DY
01206 247081

ISO 9001
Certificate No. GB2005412

PROJECT
HOOK LANE, PAGHAM,
WEST SUSSEX

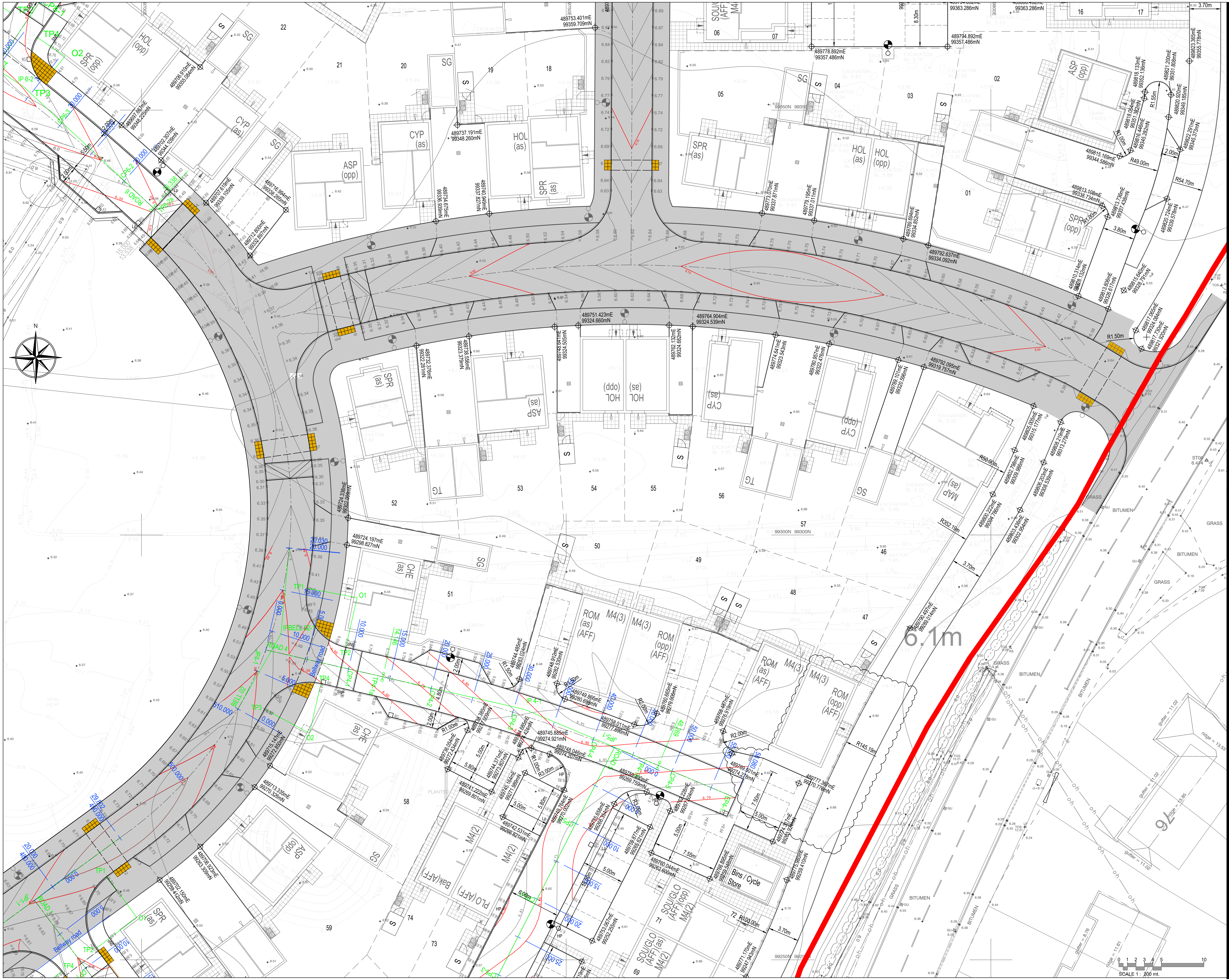
CLIENT
Bovis Homes
Linden HOMES
Part of the Vistry Group

DRAWING TITLE
ROAD SETTING OUT
Sheet 1 of 5

SCALE	DATE	INIT	CHKD
1:200	05/22	cb	mw

STATUS
CONSTRUCTION

DRG NO	REVISION
22-012/250	C3


22
21
20
19
18
05
04
03
02
01
06
07
16
17
52
53
54
55
56
57
50
49
48
47
46
51
58
59
71
72
73
74
69
SPR (opp)
HOL (opp)
CYP (as)
ASP (opp)
CYP (as)
HOL (as)
SPR (as)
SPR (as)
HOL (as)
HOL (opp)
ASP (opp)
SPR (opp)
SPR (as)
ASP (as)
HOL (opp)
HOL (as)
CYP (as)
CYP (opp)
MAP (as)
CHE (as)
ROM (as) (AFF)
M4(3)
ROM (opp) (AFF)
M4(2)
PLO (AFF)
Bak (AFF)
SOU/GLO (AFF) (opp) M4(2)
SOU/GLO (AFF) (as) M4(2)
Bins / Cycle Store
TG
SG
S
6.1m
3.70m
3.80m
R1.50m
R49.00m
R54.70m
R50.00m
R352.19m
R145.19m
R100.00m
BITUMEN
GRASS
N
489724.339mE 99302.992mN
489764.904mE 99324.539mN
489751.423mE 99324.660mN
489792.637mE 99334.092mN
489792.095mE 99319.757mN
ROAD 4
ROAD 6
0 1 2 3 4 5 10
SCALE 1 : 200 mt.

No Dimensions are to be scaled from this drawing.

NOTES

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4. For Road Setting Out data, refer to Drawing Nos 22-012/255.
5. For Building Setting Out, refer to Drawing Nos 22-012/800 to 805.

LEGEND

Site Boundary	🟥
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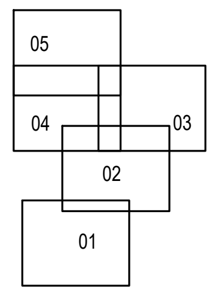
05
04
03
02
01

Sheet Layout

REVISIONS

P1	Preliminary Issue.	24/06/22
T1	Tender Issue.	30/06/22
T2	Road levels adjusted between chainage CH0-30 on Road 1 to tie-in to revised Brookbanks road design.	15/08/22
T3	New Street Lighting added.	16/09/22
T4	Cycle store size amended to 8'x6'. Screen walls amended to remove angles/curves. Archaeological dig topo added.	11/11/22
C1	Shared cycle path widened to 3.7m for fire access. Construction Issue.	06/12/22
C2	End of shared cycle path moved to suit tracking movement coordination with S278 tactile paving.	13/01/23
C3	S278 verge removed/moved and light column moved to suit fire vehicle tracking.	16/02/23
C4	Handing label corrected on Aspen house type.	06/03/23
C5	Plot 47 changed to M4(3) unit and associated parking bays.	05/05/23

WITHERS
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ISO 9001
Certificate No. GB2005412

PROJECT
HOOK LANE, PAGHAM,
WEST SUSSEX

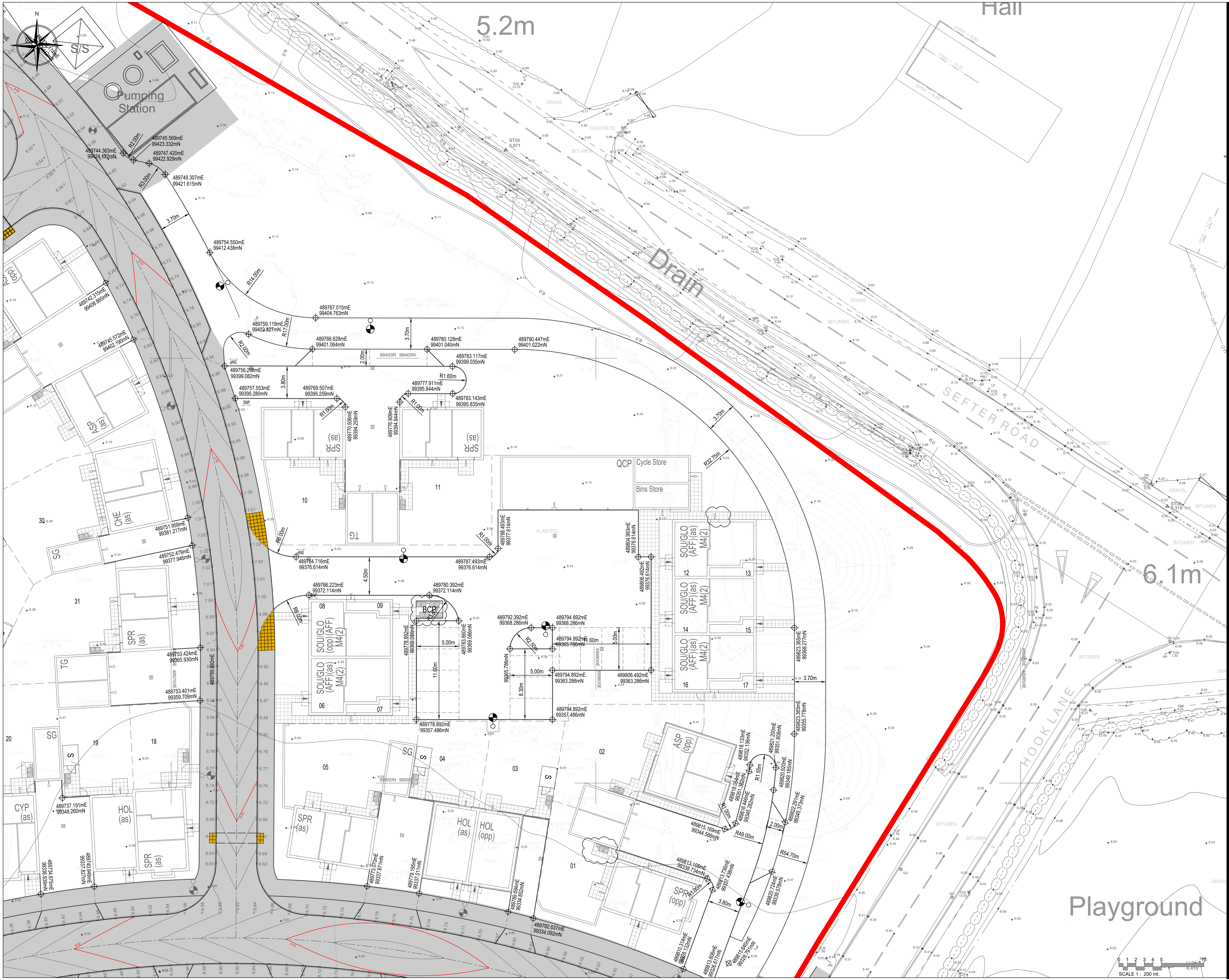
CLIENT
Bovis Homes
Linden HOMES
Part of the Vistry Group

DRAWING TITLE
ROAD SETTING OUT
Sheet 2 of 5

SCALE	DATE	INIT	CHKD
1:200	05/22	cb	mw

STATUS
CONSTRUCTION

DRG NO	REVISION
22-012/251	C5


Hall
5.2m
N
S/S
Pumping Station
Drain
SEFTER ROAD
HOOK LANE
6.1m
Playground
QCP
Cycle Store
Bins Store
BCP
TG
SG
PLANTED
GRASS
CONCRETE
BITUMEN
GRAVEL
R2.00m
R3.00m
3.70m
R14.00m
R17.00m
R2.00m
2.00m
3.80m
3.70m
R1.60m
R1.00m
R6.00m
4.50m
5.00m
11.60m
R2.50m
1.60m
5.00m
8.30m
R32.75m
3.70m
R1.55m
R49.00m
2.00m
R54.70m
3.80m
R1.00m
489745.569mE 99423.332mN
489744.363mE 99424.132mN
489747.420mE 99422.929mN
489749.307mE 99421.615mN
489754.550mE 99412.438mN
489742.315mE 99408.865mN
489767.015mE 99404.763mN
489759.119mE 99402.827mN
489766.628mE 99401.064mN
489780.128mE 99401.040mN
489790.447mE 99401.022mN
489745.572mE 99402.190mN
489783.117mE 99399.035mN
489756.298mE 99399.082mN
489777.911mE 99395.844mN
489757.553mE 99395.280mN
489769.507mE 99395.259mN
489783.143mE 99395.835mN
489751.959mE 99381.217mN
489752.479mE 99377.946mN
489764.716mE 99376.614mN
489787.493mE 99376.614mN
489766.223mE 99372.114mN
489780.392mE 99372.114mN
489792.392mE 99368.286mN
489794.892mE 99368.286mN
489794.892mE 99365.786mN
489794.892mE 99363.286mN
489806.492mE 99363.286mN
489794.892mE 99357.486mN
489778.892mE 99357.486mN
489753.424mE 99365.930mN
489753.401mE 99359.709mN
489737.191mE 99348.260mN
489815.169mE 99344.586mN
489813.108mE 99338.734mN
489792.637mE 99334.092mN
99400N 99400N
99350N 99350
SOU/GLO (AFF)(as) M4(2)
SOU/GLO (opp)(AFF) M4(2)
SPR (as)
ASP (as)
CHE (as)
ASP (opp)
SPR (opp)
HOL (as)
HOL (opp)
CYP (as)
SCALE 1 : 200 mt.
0 1 2 3 4 5 10

No Dimensions are to be scaled from this drawing.

NOTES

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LEGEND

Site Boundary 🟥

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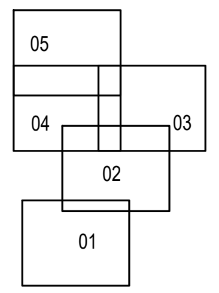
05
04
03
02
01

Sheet Layout

REVISIONS

P1	Preliminary Issue.	24/06/22
T1	Tender Issue.	30/06/22
T2	Plot 30 house and garage moved. New Street Lighting added.	16/09/22
T3	Cycle store size amended to 8'x6'. Screen walls amended to remove angles/curves. Archaeological dig topo added.	11/11/22
C1	Shared cycle path widened to 3.7m for fire access. Construction Issue.	06/12/22
C2	Pump station and substation location updated to reflect Legal Plans.	16/02/23
C3	Light column by pump station moved. Handing label corrected on Aspen house type.	06/03/23
C4	Pump station and substation layout changed to TA layout.	29/03/23
C5	Missing side door added to plot 12/13. BCP paving amended.	05/05/23

WITHERS
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Unit 12, Wakes Hall Business Centre
Wakes Colne, Colchester, Essex
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01206 247081
ISO 9001 Certificate No. GB2005412

PROJECT
HOOK LANE, PAGHAM, WEST SUSSEX

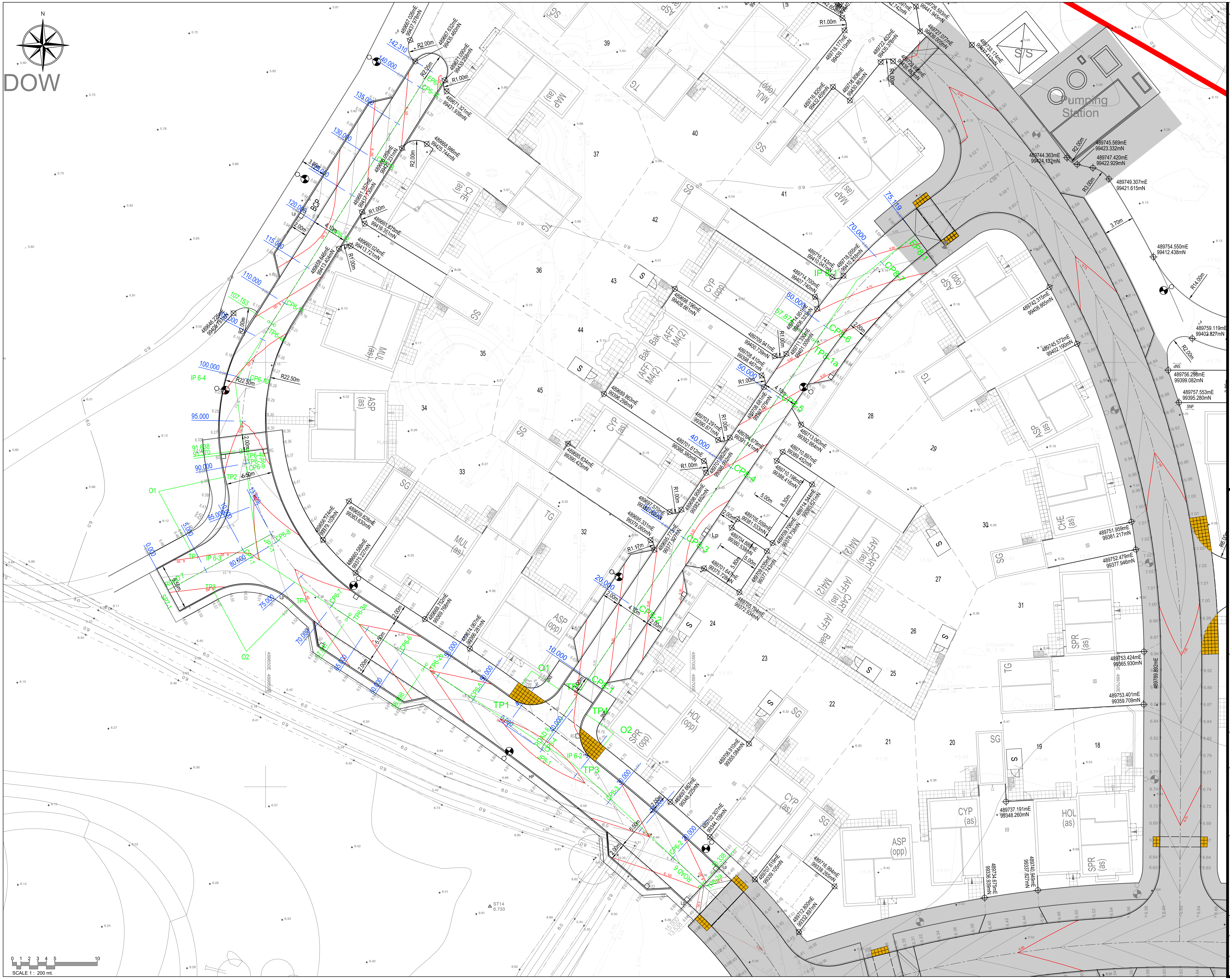
CLIENT
Bovis Homes
Linden HOMES
Part of the Vistry Group

DRAWING TITLE
ROAD SETTING OUT
Sheet 3 of 5

SCALE	DATE	INIT	CHKD
1:200	05/22	cb	mw

STATUS
CONSTRUCTION

DRG NO	REVISION
22-012/252	C5



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LEGEND

Site Boundary	🟥
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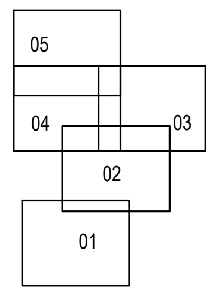

Sheet Layout

REVISIONS

P1	Preliminary Issue.	24/06/22
T1	Tender Issue.	30/06/22
T2	Road levels lowered on Road 8 to reduce cut and fill.	15/08/22
T3	Plot 30 house and garage moved. New Street Lighting added.	16/09/22
T4	Cycle store size amended to 8'x6'. Screen walls amended to remove angles/curves. Archaeological dig topo added.	11/11/22
C1	Shared cycle path widened to 3.7m for fire access. Construction Issue.	06/12/22
C2	Pump station and substation location updated to reflect Legal Plans.	16/02/23
C3	Light column by pump station moved. Handing label corrected on Aspen house type.	06/03/23
C4	Plot 21 orientation changed to achieve 1m to plot boundary. Pump station and substation layout changed to TA layout.	29/03/23
C5	Patio revised @ Plots 43 & 44.	11/07/23

WITHERS
DESIGN ASSOCIATES
CIVIL ENGINEERING & INFRASTRUCTURE DESIGN
Unit 12, Wakes Hall Business Centre
Wakes Colne, Colchester, Essex
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01206 247081

PROJECT
**HOOK LANE, PAGHAM,
WEST SUSSEX**

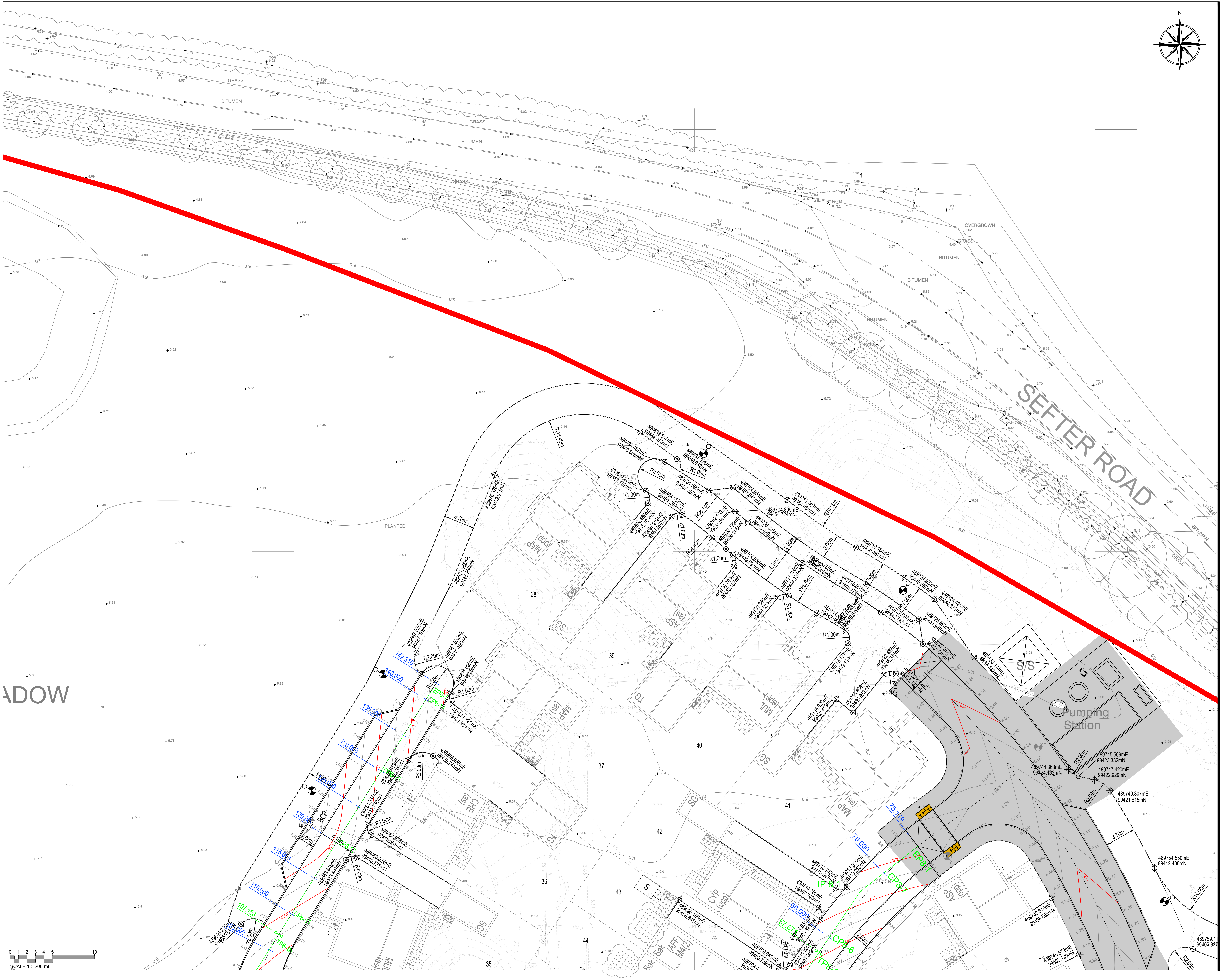
CLIENT
Bovis Homes
Linden HOMES
Part of the Vistry Group

DRAWING TITLE
**ROAD SETTING OUT
Sheet 4 of 5**

SCALE	DATE	INIT	CHKD
1:200	05/22	cb	mw

STATUS
CONSTRUCTION

DRG NO	REVISION
22-012/253	C5


N
SEFTER ROAD
GRASS
BITUMEN
OVERGROWN
PLANTED
ADOW
Pumping Station
S/S
35
36
37
38
39
40
41
42
43
44
MAP
ASP (as)
MUL (opp)
SG
TG
CYP (opp)
CHE (as)
BCP
R11.40m
R2.05m
R1.00m
R2.00m
R3.00m
R14.00m
R79.58m
R38.13m
R34.03m
R88.88m
3.70m
2.00m
4.10m
142.310
140.000
135.000
130.000
125.000
120.000
115.000
110.000
107.151
75.119
70.000
80.000
87.87
489704.805mE 99454.724mN
489710.164mE 99450.461mN
489744.363mE 99424.132mN
489745.569mE 99423.332mN
489747.420mE 99422.929mN
489749.307mE 99421.615mN
489754.550mE 99412.438mN
489742.315mE 99408.865mN
489745.572mE 99402.190mN
489759.11 99402.827
0 1 2 3 4 5 10
SCALE 1 : 200 mt.

No Dimensions are to be scaled from this drawing.

NOTES

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LEGEND

Site Boundary	🟥
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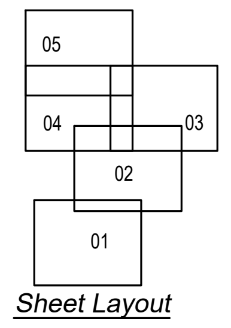
05
04
03
02
01

Sheet Layout

REVISIONS

P1	Preliminary Issue.	24/06/22
T1	Tender Issue.	30/06/22
T2	Road levels lowered on Road 8 to reduce cut and fill.	15/08/22
T3	Boundary fence and brickwall moved at Plots 37-40. New Street Lighting added.	16/09/22
T4	Cycle store size amended to 8'x6'. Screen walls amended to remove angles/curves. Archaeological dig topo added.	11/11/22
C1	Shared cycle path widened to 3.7m for fire access. Construction Issue.	06/12/22
C2	Pump station and substation location updated to reflect Legal Plans.	16/02/23
C3	Light column by pump station moved. Handing label corrected on Aspen house type.	06/03/23
C4	Pump station and substation layout changed to TA layout.	29/03/23
C5	Patio revised @ Plots 43 & 44.	11/07/23

WITHERS
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PROJECT
**HOOK LANE, PAGHAM,
WEST SUSSEX**

CLIENT
Bovis Homes
Linden HOMES
Part of the Vistry Group

DRAWING TITLE
**ROAD SETTING OUT
Sheet 5 of 5**

SCALE	DATE	INIT	CHKD
1:200	05/22	cb	mw

STATUS
CONSTRUCTION

DRG NO	REVISION
22-012/254	C5

ALIGNMENT ROAD 1

LOCATION	CHAINAGE	EASTING	NORTHING	LEVEL	RADIUS	BEARING	ANGLE	ARC LENGTH	TANL
JP1-1	0.000	489687.396	99257.008	-999.900		143.00279			
CP1-1	10.000	489693.414	99249.022	6.720					
CP1-2	20.000	489699.432	99241.035	6.804					
TP1-1a	23.207	489701.362	99238.474	6.775		143.00279			
IP1-1		489713.632	99222.189		110.000		21.00279	40.322	20.390
CP1-3	30.000	489705.614	99233.178	6.690					
CP1-4	40.000	489712.450	99225.884	6.565					
CP1-5	50.000	489719.919	99219.240	6.440					
CP1-6	60.000	489727.961	99213.302	6.466					
TP1-1b	63.530	489730.924	99211.384	6.510		122.00000			
CP1-7	70.000	489736.411	99207.955	6.591					
EP1-1	75.539	489741.109	99205.020	6.660		122.00000			

ALIGNMENT ROAD 2

LOCATION	CHAINAGE	EASTING	NORTHING	LEVEL	RADIUS	BEARING	ANGLE	ARC LENGTH	TANL
JP2-1	0.000	489719.114	99219.899	-999.900		219.58912			
TP2-1a	7.697	489714.209	99213.967	6.541		219.58912			
IP2-1		489713.512	99213.125		12.000		10.41088	2.180	1.093
TP2-1b	9.878	489712.675	99212.422	6.560		230.00000			
CP2-1	10.000	489712.581	99212.344	6.561					
CP2-2	20.000	489704.921	99205.916	6.479					
TP2-2a	24.109	489701.773	99203.275	6.428		230.00000			
IP2-2		489701.641	99203.163		3.000		6.60243	0.346	0.173
TP2-2b	24.455	489701.522	99203.038	6.423		223.39757			
CP2-3	30.000	489697.712	99199.008	-999.900					
JP2-2	31.188	489696.895	99198.145	-999.900		223.39757			

ALIGNMENT ROAD 3

LOCATION	CHAINAGE	EASTING	NORTHING	LEVEL	RADIUS	BEARING	ANGLE	ARC LENGTH	TANL
SP3-1	0.000	489686.422	99210.029	6.650		140.00000			
TP3-1a	9.407	489692.469	99202.822	6.532		140.00000			
IP3-1		489697.347	99197.009		54.000		16.00000	15.080	7.589
CP3-1	10.000	489692.853	99202.370	6.525					
CP3-2	20.000	489700.028	99195.425	6.430					
TP3-1b	24.487	489703.639	99192.765	6.469		124.00000			
CP3-3	30.000	489708.210	99189.682	6.538					
EP3-1	38.960	489715.638	99184.671	6.650		124.00000			

ALIGNMENT ROAD 4

LOCATION	CHAINAGE	EASTING	NORTHING	LEVEL	RADIUS	BEARING	ANGLE	ARC LENGTH	TANL
JP4-1	0.000	489714.629	99286.476	-999.900		102.94356			
CP4-1	10.000	489724.374	99284.236	6.591					
TP4-1a	14.146	489728.416	99283.307	6.643		102.94356			
IP4-1		489745.084	99279.477		200.000		9.77532	34.122	17.103
CP4-2	20.000	489734.100	99281.913	6.716					
CP4-3	30.000	489743.709	99279.148	6.841					
CP4-4	40.000	489753.168	99275.906	6.918					
TP4-1b	48.269	489760.859	99272.871	6.823		112.71888			
CP4-5	50.000	489762.456	99272.203	6.801					
EP4-1	58.080	489769.909	99269.082	6.700		112.71888			

ALIGNMENT ROAD 5

LOCATION	CHAINAGE	EASTING	NORTHING	LEVEL	RADIUS	BEARING	ANGLE	ARC LENGTH	TANL
JP5-1	0.000	489755.659	99274.964	-999.900		207.00008			
CP5-1	10.000	489751.119	99266.054	6.739					
CP5-2	20.000	489746.579	99257.144	6.815					
CP5-3	30.000	489742.039	99248.233	6.770					
EP5-1	34.158	489740.151	99244.529	6.718		207.00008			

ALIGNMENT ROAD 6

LOCATION	CHAINAGE	EASTING	NORTHING	LEVEL	RADIUS	BEARING	ANGLE	ARC LENGTH	TANL
SP6-1	0.000	489711.132	99326.740	6.358		329.56812			
IP6-1		489707.680	99332.617		47.000		16.50402	13.538	6.816
CP6-1	10.000	489705.191	99334.761	6.460					
TP6-1b	13.538	489702.700	99337.272	6.496		313.06410			
TP6-2a	15.338	489701.385	99338.501	6.515		313.06410			
IP6-2		489686.165	99352.725		240.000		9.92171	41.560	20.832
CP6-2	20.000	489697.948	99341.650	6.562					
CP6-3	30.000	489690.374	99348.179	6.664					
CP6-4	40.000	489682.534	99354.386	6.728					
CP6-5	50.000	489674.443	99360.261	6.661					
TP6-2b	56.898	489668.722	99364.115	6.592		303.14239			
CP6-6	60.000	489666.125	99365.810	6.561					
TP6-3a	67.647	489659.722	99369.991	6.485		303.14239			
IP6-3		489649.125	99376.911		27.500		49.42676	23.723	12.656
CP6-7	70.000	489657.809	99371.360	6.461					
CP6-8	80.000	489651.214	99378.804	6.361					
CP6-9	90.000	489647.699	99388.107	6.261					
TP6-3b	91.370	489647.488	99389.461	6.244		352.56915			
TP6-4a	91.638	489647.453	99389.726	6.240		352.56915			
IP6-4		489646.408	99397.738		22.500		39.50936	15.515	8.080
CP6-10	100.000	489647.920	99398.027	6.136					
TP6-4b	107.153	489650.699	99404.585	6.046		32.07851			
CP6-11	110.000	489652.211	99406.997	6.011					
CP6-12	120.000	489657.522	99415.471	5.912					
CP6-13	130.000	489662.833	99423.944	6.016					
CP6-14	140.000	489668.144	99432.417	6.141					
EP6-1	142.310	489669.370	99434.374	6.170		32.07851			

ALIGNMENT ROAD 7

LOCATION	CHAINAGE	EASTING	NORTHING	LEVEL	RADIUS	BEARING	ANGLE	ARC LENGTH	TANL
SP7-1	0.000	489638.519	99373.187	6.392		61.54914			
CP7-1	10.000	489647.311	99377.951	6.292					
JP7-1	13.809	489650.660	99379.766	-999.900		61.54914			

ALIGNMENT ROAD 8

LOCATION	CHAINAGE	EASTING	NORTHING	LEVEL	RADIUS	BEARING	ANGLE	ARC LENGTH	TANL
JP8-1	0.000	489682.432	99354.463	-999.900		33.97787			
CP8-1	10.000	489688.021	99362.756	6.569					
CP8-2	20.000	489693.609	99371.048	6.444					
CP8-3	30.000	489699.198	99379.341	6.323					
CP8-4	40.000	489704.787	99387.633	6.392					
CP8-5	50.000	489710.376	99395.926	6.517					
TP8-1a	57.874	489714.776	99402.456	6.615		33.97787			
IP8-1		489719.635	99409.665		55.000		17.96441	17.245	8.694
CP8-6	60.000	489715.998	99404.195	6.642					
CP8-7	70.000	489722.602	99411.686	6.767					
EP8-1	75.119	489726.480	99415.024	6.831		51.94228			

JUNCTION DETAILS : ROAD 1 - BELL 01 LH Side

Curve 1		E	N	Level	Radius
Centre	O1 :	489699.451	99254.969		6.000
Start	TP1:	489695.916	99259.817	6.713	
End	TP2:	489694.659	99251.358	6.646	

JUNCTION DETAILS : ROAD 1 - BELL 01 RH Side

Curve 2		E	N	Level	Radius
Centre	O2 :	489685.874	99245.070		6.000
Start	TP3:	489682.339	99249.918	6.575	
End	TP4:	489690.666	99248.680	6.643	

JUNCTION DETAILS : ROAD 2 - ROAD 1 LH Side

Curve 1		E	N	Level	Radius
Centre	O1 :	489719.442	99210.252		4.000
Start	TP1:	489721.819	99213.469	6.431	
End	TP2:	489716.359	99212.802	6.475	

JUNCTION DETAILS : ROAD 2 - ROAD 1 RH Side

Curve 2		E	N	Level	Radius
Centre	O2 :	489707.462	99219.025		6.000
Start	TP3:	489711.605	99223.364	6.591	
End	TP4:	489711.628	99214.707	6.615	

JUNCTION DETAILS : ROAD 2 - ROAD 3 LH Side

Curve 1		E	N	Level	Radius
Centre	O1 :	489705.168	99199.034		3.000
Start	TP1:	489702.988	99201.095	6.358	
End	TP2:	489703.376	99196.628	6.365	

JUNCTION DETAILS : ROAD 2 - ROAD 3 RH Side

Curve 2		E	N	Level	Radius
Centre	O2 :	489697.286	99206.418		3.000
Start	TP3:	489699.466	99204.356	6.478	
End	TP4:	489695.001	99204.474	6.453	

JUNCTION DETAILS : ROAD 4 - BELL 02 LH Side

Curve 1		E	N	Level	Radius
Centre	O1 :	489725.392	99292.621		6.000
Start	TP1:	489719.496	99293.731	6.424	
End	TP2:	489724.048	99286.774	6.640	

JUNCTION DETAILS : ROAD 4 - BELL 02 RH Side

Curve 2		E	N	Level	Radius
Centre	O2 :	489719.782	99276.673		6.000
Start	TP3:	489714.489	99279.499	6.567	
End	TP4:	489721.126	99282.520	6.497	

JUNCTION DETAILS : ROAD 7 - ROAD 6 LH Side

Curve 1		E	N	Level	Radius
Centre	O1 :	489637.398	99384.807		8.000
Start	TP1:	489641.210	99377.773	6.278	
End	TP2:	489645.212	99386.524	6.203	

JUNCTION DETAILS : ROAD 7 - ROAD 6 RH Side

Curve 2		E	N	Level	Radius
Centre	O2 :	489647.729	99365.951		8.000
Start	TP3:	489643.918	99372.985	6.414	
End	TP4:	489653.382	99371.612	6.360	

JUNCTION DETAILS : ROAD 8 - ROAD 6 LH Side

Curve 1		E	N	Level	Radius
Centre	O1 :	489681.333	99363.658		4.000
Start	TP1:	489679.002	99360.408	6.629	
End	TP2:	489684.650	99361.423	6.657	

JUNCTION DETAILS : ROAD 8 - ROAD 6 RH Side

Curve 2		E	N	Level	Radius
Centre	O2 :	489691.003	99356.356		4.000
Start	TP3:	489688.515	99353.224	6.640	
End	TP4:	489687.686	99358.591	6.563	

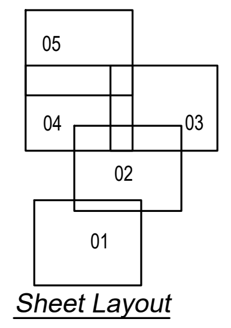
No Dimensions are to be scaled from this drawing.

NOTES

1. All works based on the Topographical Survey by Interlock Surveys (Drg. 150595-3D) dated September 2015 and supplementary data by MK Surveys (ref: 29477) dated January 2021.
2. The Contractor is responsible for obtaining all necessary licenses for working in the public highway, inclusive of the agreement of all traffic and pedestrian management arrangements.
3. Setting Out to roads refers to centreline setting out, with offsets and coordinates to key areas also provided.
4. For Road Setting Out data, refer to Drawing Nos 22-012/255.
5. For Building Setting Out, refer to Drawing Nos 22-012/800 to 805.

LEGEND

Site Boundary	🟥
▨	GREY HATCH DENOTES ROAD AND DRAINAGE DESIGN BY BROOKBANKS CONSULTING LIMITED. DATA SHOWN FOR INFORMATION ONLY. REFERENCE SHOULD BE MADE TO BROOKBANKS DRAWINGS FOR CONSTRUCTION.



Sheet Layout

REVISIONS

P1	Preliminary Issue.	24/06/22
T1	Tender Issue.	30/06/22
T2	Setting out data amended to Road 1 and Road 8	15/08/22
C1	Shared cycle path widened to 3.7m for fire access. Construction Issue.	06/12/22

WITHERS
DESIGN ASSOCIATES
CIVIL ENGINEERING & INFRASTRUCTURE DESIGN
Unit 12, Wakes Hall Business Centre
Wakes Colne, Colchester, Essex
CO6 2DY
01206 247081

ISO 9001
Certificate No. GB2005412

PROJECT
**HOOK LANE, PAGHAM,
WEST SUSSEX**

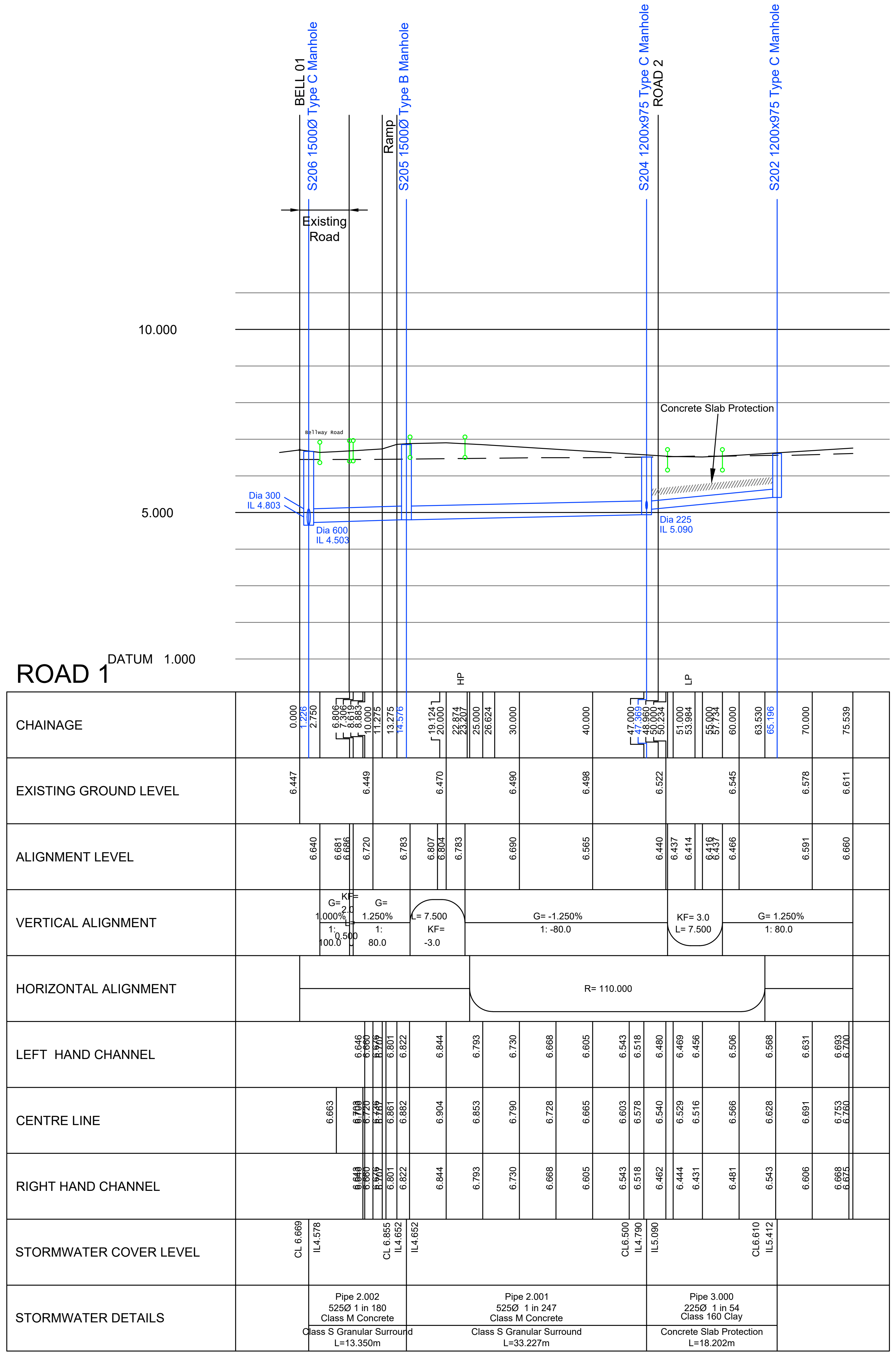
CLIENT
Bovis Homes
Linden HOMES
Part of the Vistry Group

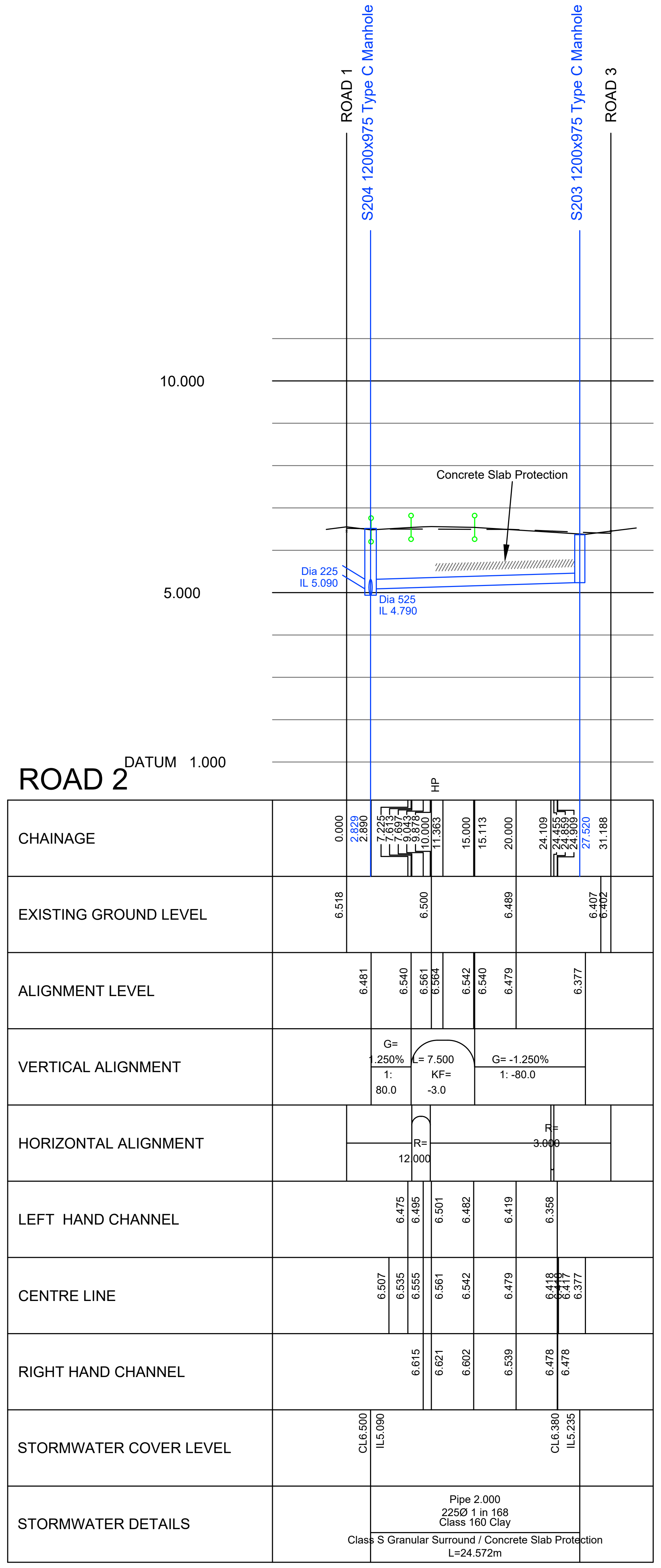
DRAWING TITLE
**ROAD SETTING OUT DATA
Sheet 1**

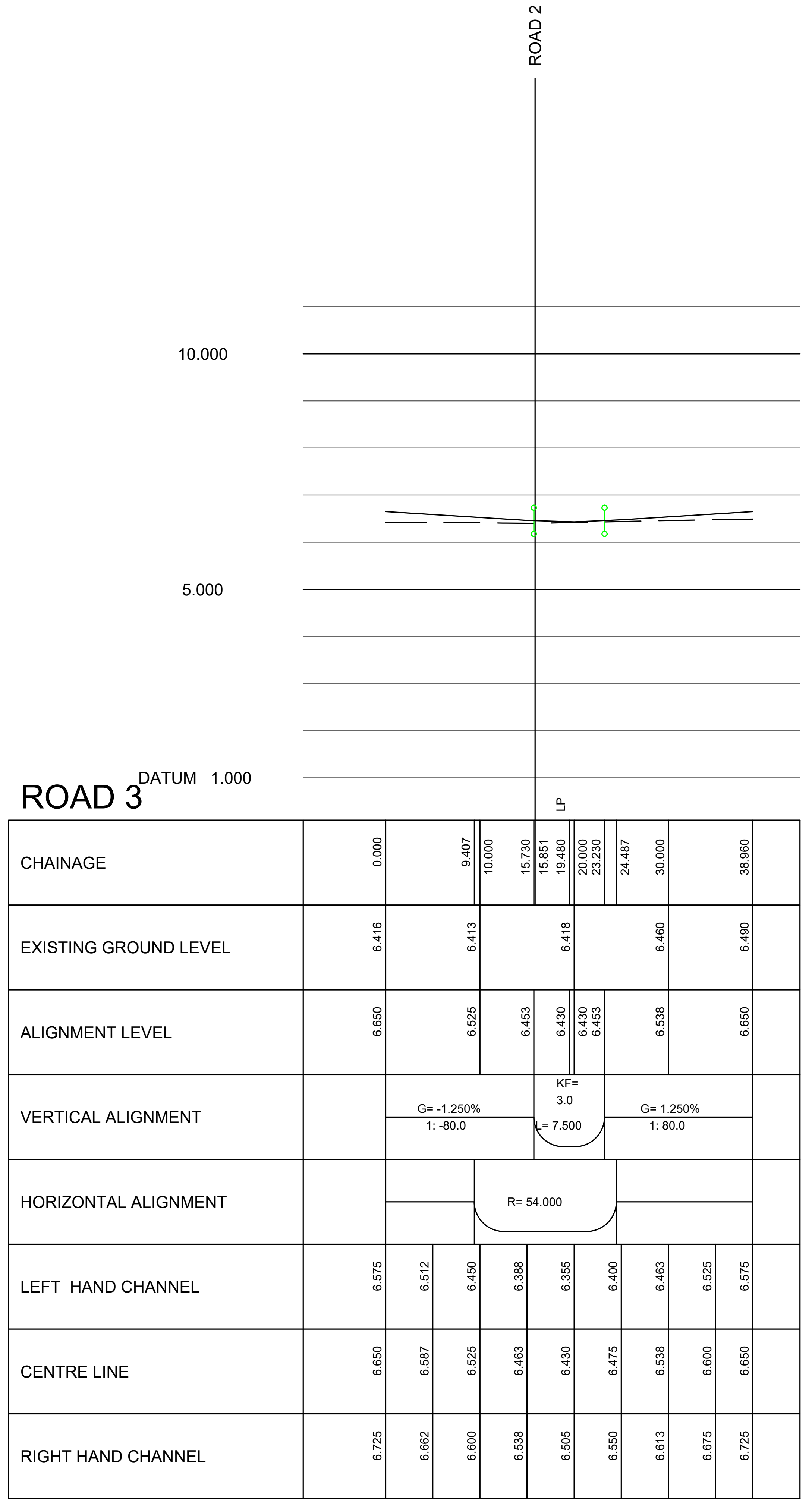
SCALE	DATE	INIT	CHKD
NTS	05/22	cb	mw

STATUS
CONSTRUCTION

DRG NO	REVISION
22-012/255	C1


BELL 01
S206 1500Ø Type C Manhole
Ramp
S205 1500Ø Type B Manhole
S204 1200x975 Type C Manhole
ROAD 2
S202 1200x975 Type C Manhole
Existing Road
10.000
5.000
Bellway Road
Concrete Slab Protection
Dia 300
IL 4.803
Dia 600
IL 4.503
Dia 225
IL 5.090
ROAD 1
DATUM 1.000
HP
LP
CHAINAGE
0.000 1.226 2.750 6.806 7.306 8.619 8.883 10.000 11.275 13.275 14.576 19.124 20.000 22.874 23.207 25.000 26.624 30.000 40.000 47.000 47.369 48.960 50.000 50.234 51.000 53.984 55.000 57.734 60.000 63.530 65.196 70.000 75.539
EXISTING GROUND LEVEL
6.447 6.449 6.470 6.490 6.498 6.522 6.545 6.578 6.611
ALIGNMENT LEVEL
6.640 6.681 6.686 6.720 6.783 6.807 6.804 6.783 6.690 6.565 6.440 6.437 6.414 6.416 6.437 6.466 6.591 6.660
VERTICAL ALIGNMENT
G= 1.000% 1: 100.0
KF= 2.0 L= 0.500
G= 1.250% 1: 80.0
L= 7.500 KF= -3.0
G= -1.250% 1: -80.0
KF= 3.0 L= 7.500
G= 1.250% 1: 80.0
HORIZONTAL ALIGNMENT
R= 110.000
LEFT HAND CHANNEL
6.646 6.660 6.676 6.707 6.801 6.822 6.844 6.793 6.730 6.668 6.605 6.543 6.518 6.480 6.469 6.456 6.506 6.568 6.631 6.693 6.700
CENTRE LINE
6.663 6.703 6.700 6.720 6.739 6.767 6.861 6.882 6.904 6.853 6.790 6.728 6.665 6.603 6.578 6.540 6.529 6.516 6.566 6.628 6.691 6.753 6.760
RIGHT HAND CHANNEL
6.646 6.640 6.660 6.676 6.707 6.801 6.822 6.844 6.793 6.730 6.668 6.605 6.543 6.518 6.462 6.444 6.431 6.481 6.543 6.606 6.668 6.675
STORMWATER COVER LEVEL
CL 6.669 IL4.578
CL 6.855 IL4.652 IL4.652
CL6.500 IL4.790 IL5.090
CL6.610 IL5.412
STORMWATER DETAILS
Pipe 2.002 525Ø 1 in 180 Class M Concrete
Class S Granular Surround L=13.350m
Pipe 2.001 525Ø 1 in 247 Class M Concrete
Class S Granular Surround L=33.227m
Pipe 3.000 225Ø 1 in 54 Class 160 Clay
Concrete Slab Protection L=18.202m


ROAD 1
S204 1200x975 Type C Manhole
S203 1200x975 Type C Manhole
ROAD 3
10.000
5.000
Concrete Slab Protection
Dia 225
IL 5.090
Dia 525
IL 4.790
ROAD 2
DATUM 1.000
HP
CHAINAGE
0.000 2.829 2.890 7.225 7.613 7.697 9.043 9.878 10.000 11.363 15.000 15.113 20.000 24.109 24.455 24.859 24.909 27.520 31.188
EXISTING GROUND LEVEL
6.518 6.500 6.489 6.407 6.402
ALIGNMENT LEVEL
6.481 6.540 6.561 6.564 6.542 6.540 6.479 6.377
VERTICAL ALIGNMENT
G= 1.250% 1: 80.0
L= 7.500 KF= -3.0
G= -1.250% 1: -80.0
HORIZONTAL ALIGNMENT
R= 12.000
R= 3.000
LEFT HAND CHANNEL
6.475 6.495 6.501 6.482 6.419 6.358
CENTRE LINE
6.507 6.535 6.555 6.561 6.542 6.479 6.418 6.418 6.417 6.377
RIGHT HAND CHANNEL
6.615 6.621 6.602 6.539 6.478 6.478
STORMWATER COVER LEVEL
CL6.500 IL5.090
CL6.380 IL5.235
STORMWATER DETAILS
Pipe 2.000 225Ø 1 in 168 Class 160 Clay
Class S Granular Surround / Concrete Slab Protection L=24.572m


ROAD 2
10.000
5.000
ROAD 3
DATUM 1.000
LP
CHAINAGE
0.000 9.407 10.000 15.730 15.851 19.480 20.000 23.230 24.487 30.000 38.960
EXISTING GROUND LEVEL
6.416 6.413 6.418 6.460 6.490
ALIGNMENT LEVEL
6.650 6.525 6.453 6.430 6.430 6.453 6.538 6.650
VERTICAL ALIGNMENT
G= -1.250% 1: -80.0
KF= 3.0 L= 7.500
G= 1.250% 1: 80.0
HORIZONTAL ALIGNMENT
R= 54.000
LEFT HAND CHANNEL
6.575 6.512 6.450 6.388 6.355 6.400 6.463 6.525 6.575
CENTRE LINE
6.650 6.587 6.525 6.463 6.430 6.475 6.538 6.600 6.650
RIGHT HAND CHANNEL
6.725 6.662 6.600 6.538 6.505 6.550 6.613 6.675 6.725

0 5 10 20 30 40 50
SCALE 1 : 500 mt.

No Dimensions are to be scaled from this drawing.

NOTES

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2. Withers Design Associates Ltd have prepared this drawing for the sole use of the client. Where any data supplied by the client or from other sources has been used, it has been assumed that the information is correct. No responsibility can be accepted by Withers Design Associates Ltd for inaccuracies in the data supplied by any other party.
3. All works based on the Topographical Survey by Interlock Surveys (Drg. 150595-3D) dated September 2015 and supplementary data by MK Surveys (ref: 29477) dated January 2021.
4. The contractor shall, before commencing the works, verify all site and setting out dimensions, and the level of drainage outfall points. The contractor shall be responsible for the true and proper setting out of the works and for the correctness of the position, levels, dimensions, and alignment of all parts of the works.
5. Prior to these works, the contractor is to confirm the invert level of the existing sewer at the proposed point of connection and obtain all necessary Licences for carrying out any necessary offsite works.
6. The contractor shall be responsible for locating and protecting all existing services affected by the works.
7. All adoptable foul and surface water drainage shall be in accordance with tjhe requirements of the "Sewerage Sector Guidance - Appendix C 2019" together with any local addendums.
8. All pipes to be laid with Class S bedding unless noted otherwise. All Adoptable sewers with less than 1.2m cover to the crown of pipe are to be provided with concrete slab protection. (Class S bedding is sufficient where minimum 1.2m cover in highway/ vehicular areas is achieved and where 0.9m minimum cover is achieved in non highway/ non vehicular areas).
9. Clayware pipes are to conform to BS EN 295. Concrete pipes are to conform to BS 5911(2002). For Non-Adopted (Private) sewer works, clayware pipes may be substituted with proprietary PVC-U below ground drainage pipes complying with BS EN 1401 & 13476-2.
10. All private connections to Adoptable sewers to be in clayware and to be at gradients of 1 in 80 minimum, 1 in 10 maximum unless otherwise agreed with adopting Water Authority.
11. All pipes running beneath highways with less than 1.2m cover, beneath driveways with less than 0.9m cover and beneath existing tree canopies are to be surrounded with 150mm ST2 concrete. All pipes running with more than 1.2m cover to be laid with Class S Granular Surround.
12. Drainage in "made" or "soft" ground is to be laid in accordance with Technical Advice notes by the Clay Pipe Development Association and where appropriate, the Concrete Pipe Association, and should generally be laid using short length pipes on Class B bedding on 600mm crushed and compacted concrete with 75mm concrete blinding beneath the Class "B" bed.
13. ⚠ Drainage depths have been kept to a minimum where possible, however, depths in excess of 2m can not be avoided. Excavations to be carried out in accordance with HSE document HSG150 'Health and Safety in Construction'.

Pipe Classes

Dim	Material	Class
100	PE / Clay	FN28
150	PE / Clay	FN28
225	PE	160
300-750	Concrete	M

REVISIONS

P1	Preliminary Issue.	24/06/22
T1	Tender Issue.	30/06/22
T2	Vertical alignment changed on Road 1 between CH0-30 to tie into revised brookbank road design.	15/08/22
C1	Construction Issue.	06/12/22

WITHERS
DESIGN ASSOCIATES
CIVIL ENGINEERING & INFRASTRUCTURE DESIGN
Unit 12, Wakes Hall Business Centre
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01206 247081

PROJECT
HOOK LANE, PAGHAM,
WEST SUSSEX

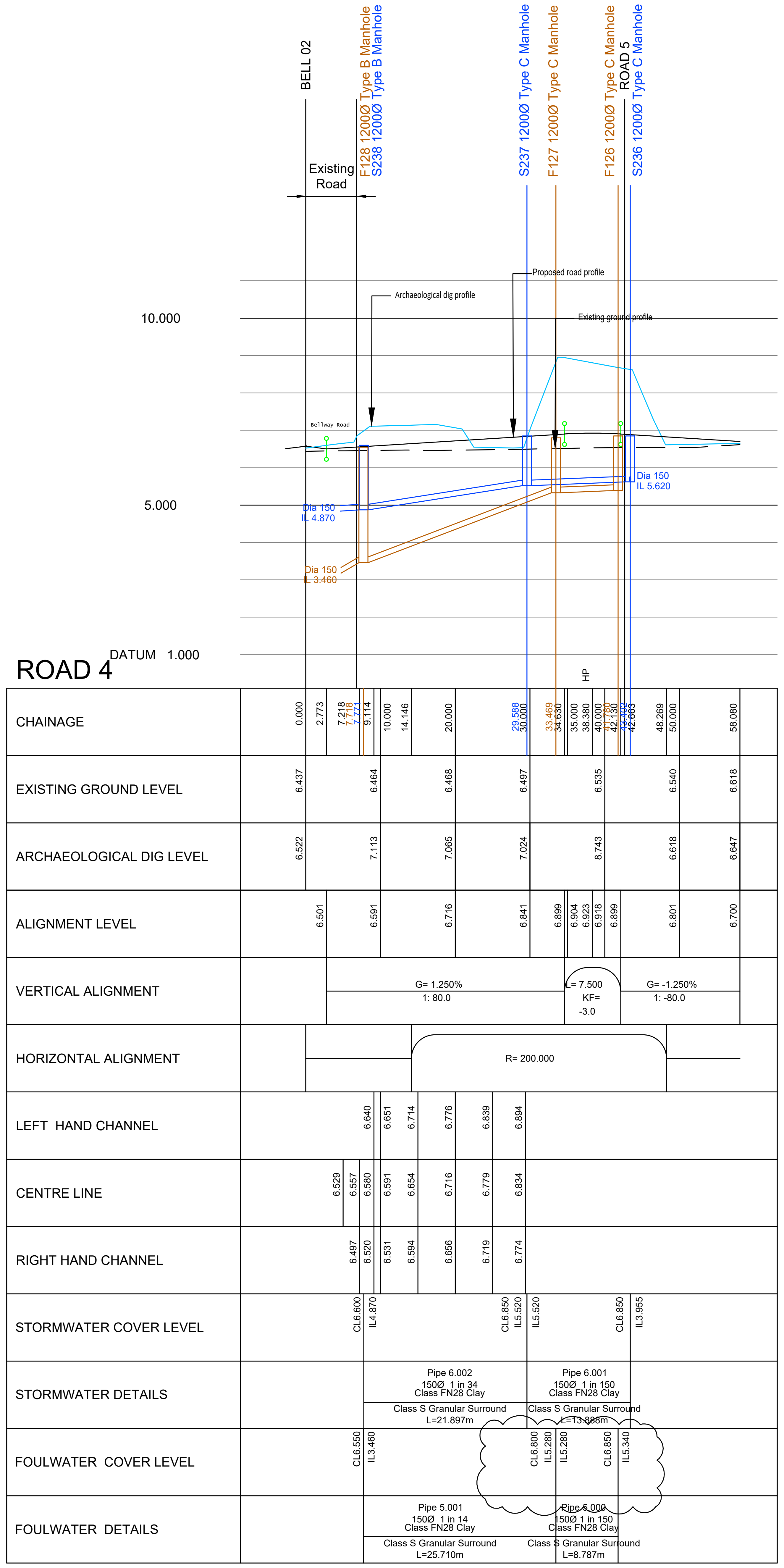
CLIENT
Bovis Homes
Linden HOMES
Part of the Vistry Group

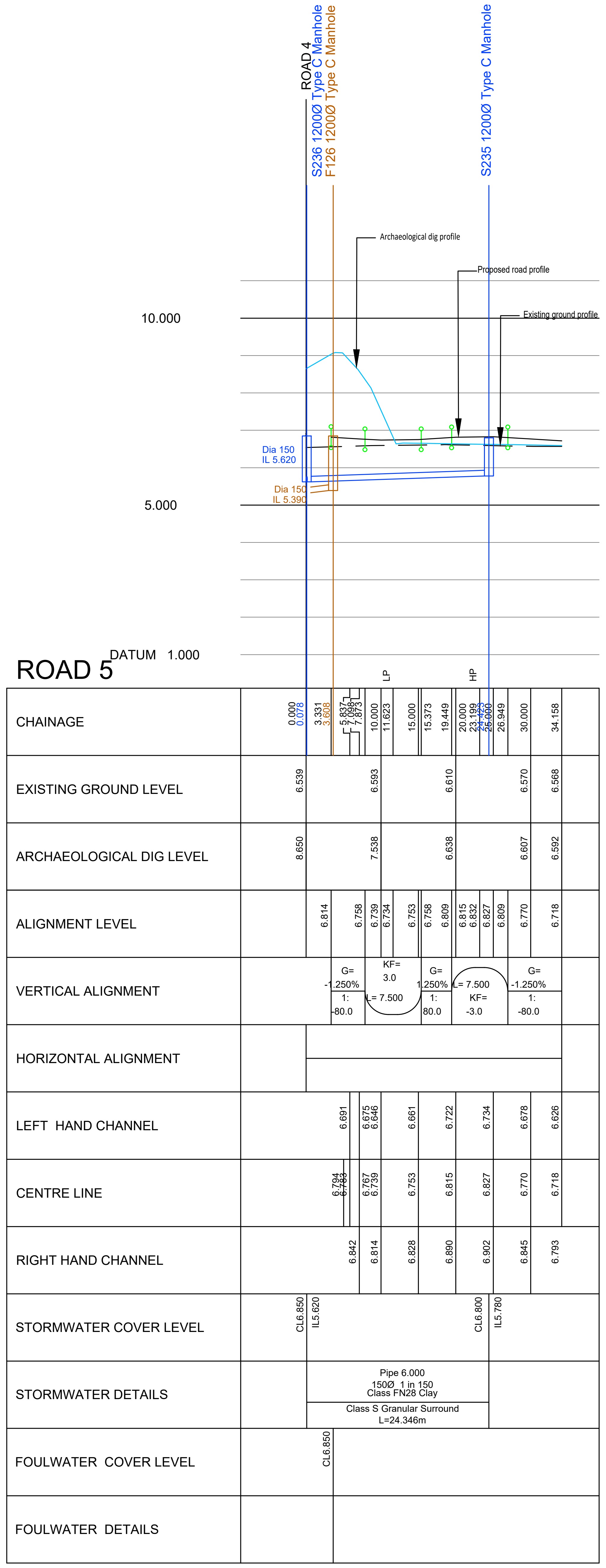
DRAWING TITLE
ROAD AND SEWER LONG SECTIONS
Sheet 1 of 4

SCALE	DATE	INIT	CHKD
1:500	05/22	cb	mw

STATUS
CONSTRUCTION

DRG NO	REVISION
22-012/300	C1


BELL 02
Existing Road
F128 1200Ø Type B Manhole
S238 1200Ø Type B Manhole
S237 1200Ø Type C Manhole
F127 1200Ø Type C Manhole
F126 1200Ø Type C Manhole
ROAD 5
S236 1200Ø Type C Manhole
Proposed road profile
Archaeological dig profile
Existing ground profile
Bellway Road
10.000
5.000
Dia 150
IL 4.870
Dia 150
IL 3.460
Dia 150
IL 5.620
ROAD 4
DATUM 1.000
HP
CHAINAGE
0.000
2.773
7.218
7.718
7.771
9.114
10.000
14.146
20.000
29.588
30.000
33.469
34.630
35.000
38.380
40.000
41.780
42.130
43.402
42.663
48.269
50.000
58.080
EXISTING GROUND LEVEL
6.437
6.464
6.468
6.497
6.535
6.540
6.618
ARCHAEOLOGICAL DIG LEVEL
6.522
7.113
7.065
7.024
8.743
6.618
6.647
ALIGNMENT LEVEL
6.501
6.591
6.716
6.841
6.899
6.904
6.923
6.918
6.899
6.801
6.700
VERTICAL ALIGNMENT
G= 1.250%
1: 80.0
L= 7.500
KF=
-3.0
G= -1.250%
1: -80.0
HORIZONTAL ALIGNMENT
R= 200.000
LEFT HAND CHANNEL
6.640
6.651
6.714
6.776
6.839
6.894
CENTRE LINE
6.529
6.557
6.580
6.591
6.654
6.716
6.779
6.834
RIGHT HAND CHANNEL
6.497
6.520
6.531
6.594
6.656
6.719
6.774
STORMWATER COVER LEVEL
CL6.600
IL4.870
CL6.850
IL5.520
IL5.520
CL6.850
IL3.955
STORMWATER DETAILS
Pipe 6.002
150Ø 1 in 34
Class FN28 Clay
Class S Granular Surround
L=21.897m
Pipe 6.001
150Ø 1 in 150
Class FN28 Clay
Class S Granular Surround
L=13.888m
FOULWATER COVER LEVEL
CL6.550
IL3.460
CL6.800
IL5.280
IL5.280
CL6.850
IL5.340
FOULWATER DETAILS
Pipe 5.001
150Ø 1 in 14
Class FN28 Clay
Class S Granular Surround
L=25.710m
Pipe 5.000
150Ø 1 in 150
Class FN28 Clay
Class S Granular Surround
L=8.787m


ROAD 4
S236 1200Ø Type C Manhole
F126 1200Ø Type C Manhole
S235 1200Ø Type C Manhole
Archaeological dig profile
Proposed road profile
Existing ground profile
10.000
5.000
Dia 150
IL 5.620
Dia 150
IL 5.390
ROAD 5
DATUM 1.000
LP
HP
CHAINAGE
0.000
0.078
3.331
3.608
5.837
7.098
7.873
10.000
11.623
15.000
15.373
19.449
20.000
23.199
24.423
25.000
26.949
30.000
34.158
EXISTING GROUND LEVEL
6.539
6.593
6.610
6.570
6.568
ARCHAEOLOGICAL DIG LEVEL
8.650
7.538
6.638
6.607
6.592
ALIGNMENT LEVEL
6.814
6.758
6.739
6.734
6.753
6.758
6.809
6.815
6.832
6.827
6.809
6.770
6.718
VERTICAL ALIGNMENT
G=
-1.250%
1:
-80.0
KF=
3.0
L= 7.500
G=
1.250%
1:
80.0
L= 7.500
KF=
-3.0
G=
-1.250%
1:
-80.0
HORIZONTAL ALIGNMENT
LEFT HAND CHANNEL
6.691
6.675
6.646
6.661
6.722
6.734
6.678
6.626
CENTRE LINE
6.794
6.783
6.767
6.739
6.753
6.815
6.827
6.770
6.718
RIGHT HAND CHANNEL
6.842
6.814
6.828
6.890
6.902
6.845
6.793
STORMWATER COVER LEVEL
CL6.850
IL5.620
CL6.800
IL5.780
STORMWATER DETAILS
Pipe 6.000
150Ø 1 in 150
Class FN28 Clay
Class S Granular Surround
L=24.346m
FOULWATER COVER LEVEL
CL6.850
FOULWATER DETAILS

0
5
10
20
30
40
50
SCALE 1 : 500 mt.

No Dimensions are to be scaled from this drawing.

NOTES

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5. Prior to these works, the contractor is to confirm the invert level of the existing sewer at the proposed point of connection and obtain all necessary Licences for carrying out any necessary offsite works.
6. The contractor shall be responsible for locating and protecting all existing services affected by the works.
7. All adoptable foul and surface water drainage shall be in accordance with tjhe requirements of the "Sewerage Sector Guidance - Appendix C 2019" together with any local addendums.
8. All pipes to be laid with Class S bedding unless noted otherwise. All Adoptable sewers with less than 1.2m cover to the crown of pipe are to be provided with concrete slab protection. (Class S bedding is sufficient where minimum 1.2m cover in highway/ vehicular areas is achieved and where 0.9m minimum cover is achieved in non highway/ non vehicular areas).
9. Clayware pipes are to conform to BS EN 295. Concrete pipes are to conform to BS 5911(2002). For Non-Adopted (Private) sewer works, clayware pipes may be substituted with proprietary PVC-U below ground drainage pipes complying with BS EN 1401 & 13476-2.
10. All private connections to Adoptable sewers to be in clayware and to be at gradients of 1 in 80 minimum, 1 in 10 maximum unless otherwise agreed with adopting Water Authority.
11. All pipes running beneath highways with less than 1.2m cover, beneath driveways with less than 0.9m cover and beneath existing tree canopies are to be surrounded with 150mm ST2 concrete. All pipes running with more than 1.2m cover to be laid with Class S Granular Surround.
12. Drainage in "made" or "soft" ground is to be laid in accordance with Technical Advice notes by the Clay Pipe Development Association and where appropriate, the Concrete Pipe Association, and should generally be laid using short length pipes on Class B bedding on 600mm crushed and compacted concrete with 75mm concrete blinding beneath the Class "B" bed.
13. ⚠ Drainage depths have been kept to a minimum where possible, however, depths in excess of 2m can not be avoided. Excavations to be carried out in accordance with HSE document HSG150 'Health and Safety in Construction'.

Pipe Classes

Dim	Material	Class
100	PE / Clay	FN28
150	PE / Clay	FN28
225	PE	160
300-750	Concrete	M

REVISIONS

P1	Preliminary Issue.	24/06/22
T1	Tender Issue.	30/06/22
T2	Archaeological dig level added to sections	11/11/22
C1	Construction Issue.	06/12/22
C2	Adoptable drainage added to Roads 4 and 5.	16/02/23
C3	Invert levels updated for F126 & F127	27/09/23

WITHERS
DESIGN ASSOCIATES
CIVIL ENGINEERING & INFRASTRUCTURE DESIGN

Unit 12, Wakes Hall Business Centre
Wakes Colne, Colchester, Essex
CO6 2DY
01206 247081

PROJECT
HOOK LANE, PAGHAM,
WEST SUSSEX

CLIENT
Bovis Homes
Linden HOMES
Part of the Vistry Group

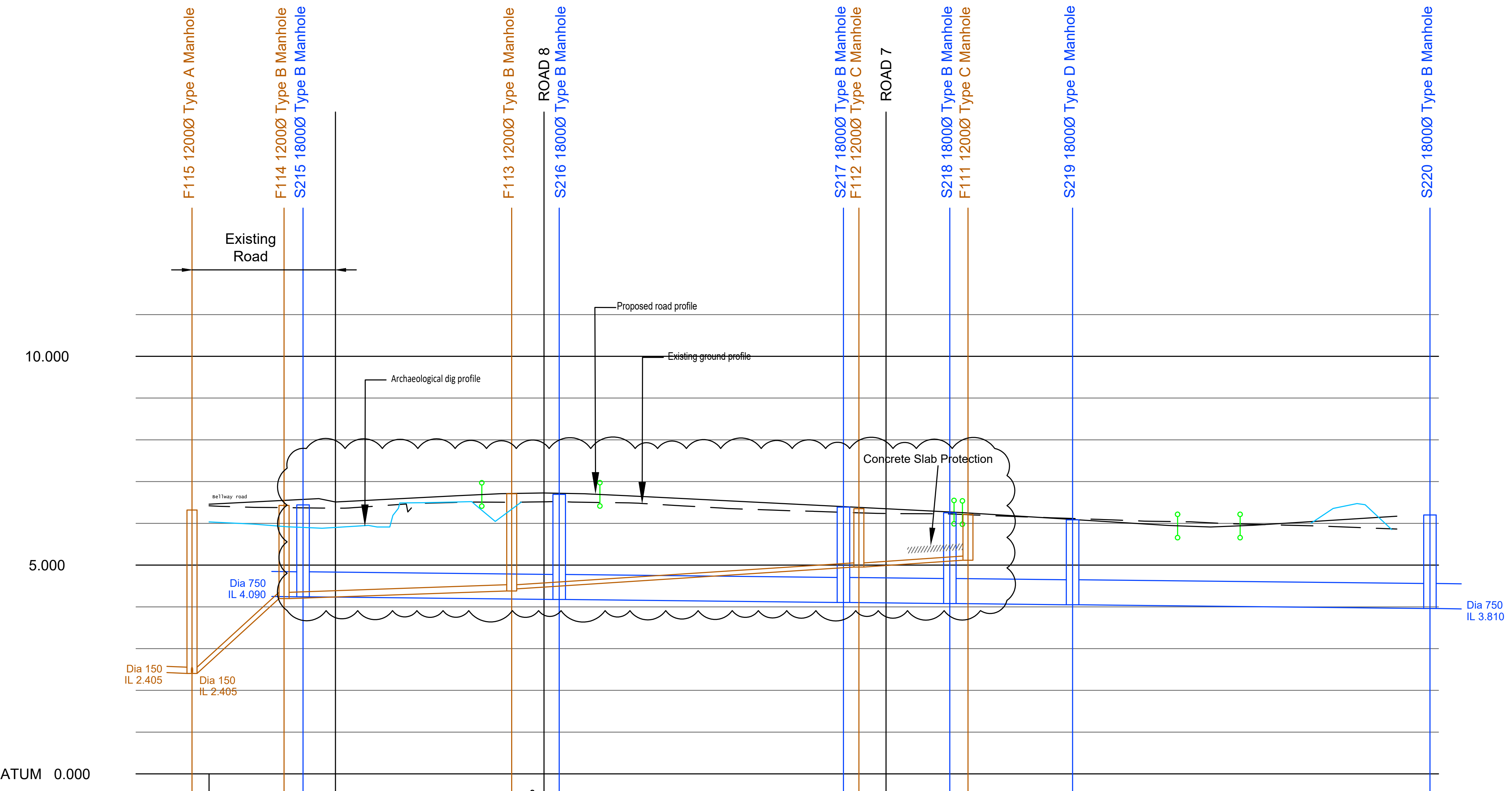
DRAWING TITLE

ROAD AND SEWER LONG SECTIONS
Sheet 2 of 4

SCALE	DATE	INIT	CHKD
1:500	05/22	cb	mw

STATUS
CONSTRUCTION

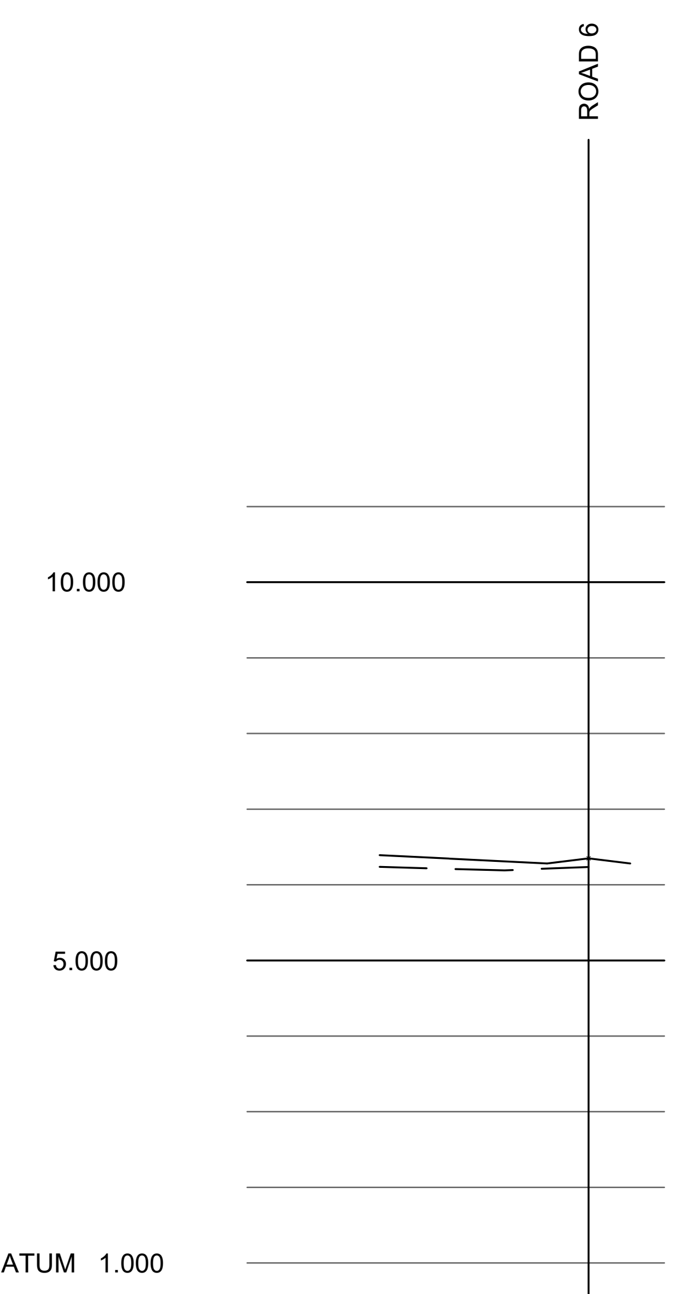
DRG NO	REVISION
22-012/301	C3


F115 1200Ø Type A Manhole
F114 1200Ø Type B Manhole
S215 1800Ø Type B Manhole
F113 1200Ø Type B Manhole
ROAD 8
S216 1800Ø Type B Manhole
S217 1800Ø Type B Manhole
F112 1200Ø Type C Manhole
ROAD 7
S218 1800Ø Type B Manhole
F111 1200Ø Type C Manhole
S219 1800Ø Type D Manhole
S220 1800Ø Type B Manhole
Existing Road
Proposed road profile
Existing ground profile
Archaeological dig profile
Concrete Slab Protection
Bellway road
10.000
5.000
Dia 750 IL 4.090
Dia 150 IL 2.405
Dia 150 IL 2.405
Dia 750 IL 3.810
HP
LP

ROAD 6

DATUM 0.000

CHAINAGE	-2.043 0.000 8.984 10.000 11.265 13.140 13.538 15.338 15.140 20.000 30.000 32.682 35.000 36.261 39.829 40.000 40.128 41.949 45.000 46.829 50.000 56.898 60.000 67.647 70.000 76.009 77.857 80.000 81.110 88.755 89.261 90.000 90.261 90.928 91.370 91.638 93.145 100.000 103.457 107.153 108.145 110.000 116.039 119.789 120.000 123.539 130.000 140.000 142.310 146.275
EXISTING GROUND LEVEL	6.420 6.374 6.413 6.504 6.515 6.491 6.382 6.299 6.238 6.215 6.141 6.069 6.012 5.951 5.880 5.864
ARCHAEOLOGICAL DIG LEVEL	6.033 5.912 5.915 6.513 6.167
ALIGNMENT LEVEL	6.358 6.460 6.562 6.664 6.692 6.712 6.728 6.728 6.709 6.693 6.661 6.561 6.461 6.361 6.269 6.261 6.258 6.136 6.011 5.935 5.912 5.912 5.935 6.016 6.141 6.170
VERTICAL ALIGNMENT	G= 1.021% 1: 97.9 L= 14.147 KF= -7.0 G= -1.000% 1: -100.0 L= 1.000 KF= -4.0 G= -1.250% 1: -80.0 KF= 3.0 L= 7.500 G= 1.250% 1: 80.0
HORIZONTAL ALIGNMENT	R= 47.000 R= 240.000 R= 27.500 R= 22.500
LEFT HAND CHANNEL	6.389 6.440 6.491 6.523 6.449 6.444 6.493 6.545 6.596 6.643 6.659 6.640 6.593 6.543 6.493 6.443 6.393 6.343 6.293 6.243 6.192 6.153 6.132 6.075 6.018 5.983 5.960 5.897 5.861 5.902 5.965 6.027 6.090 6.119
CENTRE LINE	6.458 6.509 6.560 6.592 6.518 6.513 6.562 6.613 6.664 6.712 6.728 6.709 6.661 6.611 6.561 6.511 6.461 6.411 6.361 6.311 6.261 6.222 6.198 6.136 6.073 6.034 6.011 5.948 5.912 5.954 6.016 6.079 6.141 6.170
RIGHT HAND CHANNEL	6.389 6.440 6.491 6.523 6.449 6.444 6.493 6.545 6.596 6.643 6.659 6.640 6.593 6.543 6.493 6.443 6.393 6.343 6.293 6.243 6.192 6.182 6.176 6.156 6.128 6.085 6.062 6.000 5.963 6.005 6.067 6.130 6.192 6.221
STORMWATER COVER LEVEL	CL6.542 IL4.090 CL6.693 IL4.026 IL4.026 CL6.389 IL3.955 IL3.955 CL6.253 IL3.929 IL3.929 CL6.085 IL3.899 IL3.899 CL6.200 IL3.810
STORMWATER DETAILS	Pipe 1.006 750Ø 1 in 482 Class M Concrete Class S Granular Surround L=30.862m Pipe 1.007 750Ø 1 in 477 Class M Concrete Class S Granular Surround L=33.870m Pipe 1.008 750Ø 1 in 474 Class M Concrete Class S Gran. Surr. L=12.332m Pipe 1.009 750Ø 1 in 478 Class M Concrete Class S Gran. Surr. L=14.344m Pipe 1.010 750Ø 1 in 482 Class M Concrete Class S Granular Surround L=42.861m
FOULWATER COVER LEVEL	CL6.420 IL2.405 CL6.529 IL4.199 IL4.199 CL6.709 IL4.380 IL4.430 CL6.356 IL4.972 IL4.972 CL6.225 IL5.154
FOULWATER DETAILS	Pipe 2.003 150Ø 1 in 6 Class FN28 Clay Class S Granular Surround L=10.851m Pipe 2.002 150Ø 1 in 150 Class FN28 Clay Class S Granular Surround L=27.130m Pipe 2.001 100Ø 1 in 80 Class FN28 Clay Class S Granular Surround L=41.816m Pipe 2.000 100Ø 1 in 80 Class FN28 Clay Class S Granular Surround L=13.071m



ROAD 7

DATUM 1.000

CHAINAGE	0.000 4.551 4.651 10.000 13.809
EXISTING GROUND LEVEL	6.236 6.206 6.235
ALIGNMENT LEVEL	6.392 6.292 6.281
VERTICAL ALIGNMENT	G= -1.000% 1: -100.0
HORIZONTAL ALIGNMENT	
LEFT HAND CHANNEL	6.323 6.278
CENTRE LINE	6.392 6.347 6.346 6.342 6.292 6.281
RIGHT HAND CHANNEL	6.461 6.415 6.414

0 5 10 20 30 40 50
SCALE 1 : 500 mt.

No Dimensions are to be scaled from this drawing.

NOTES

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3. All works based on the Topographical Survey by Interlock Surveys (Drg. 150595-3D) dated September 2015 and supplementary data by MK Surveys (ref: 29477) dated January 2021.
4. The contractor shall, before commencing the works, verify all site and setting out dimensions, and the level of drainage outfall points. The contractor shall be responsible for the true and proper setting out of the works and for the correctness of the position, levels, dimensions, and alignment of all parts of the works.
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11. All pipes running beneath highways with less than 1.2m cover, beneath driveways with less than 0.9m cover and beneath existing tree canopies are to be surrounded with 150mm ST2 concrete. All pipes running with more than 1.2m cover to be laid with Class S Granular Surround.
12. Drainage in "made" or "soft" ground is to be laid in accordance with Technical Advice notes by the Clay Pipe Development Association and where appropriate, the Concrete Pipe Association, and should generally be laid using short length pipes on Class B bedding on 600mm crushed and compacted concrete with 75mm concrete blinding beneath the Class "B" bed.
13. ⚠ Drainage depths have been kept to a minimum where possible, however, depths in excess of 2m can not be avoided. Excavations to be carried out in accordance with HSE document HSG150 'Health and Safety in Construction'.

Pipe Classes

Dim	Material	Class
100	PE / Clay	FN28
150	PE / Clay	FN28
225	PE	160
300-750	Concrete	M

REVISIONS

P1	Preliminary Issue.	24/06/22
T1	Tender Issue.	30/06/22
T2	Brookbanks drainage levels amended to Road 6.	15/08/22
T3	Archaeological dig level added to sections	11/11/22
C1	Construction Issue.	06/12/22
C2	Foul Water pipe gradient and size amended following IWNL comments.	06/04/23

WITHERS
DESIGN ASSOCIATES
CIVIL ENGINEERING & INFRASTRUCTURE DESIGN
Unit 12, Wakes Hall Business Centre
Wakes Colne, Colchester, Essex
CO6 2DY
01206 247081

PROJECT
HOOK LANE, PAGHAM,
WEST SUSSEX

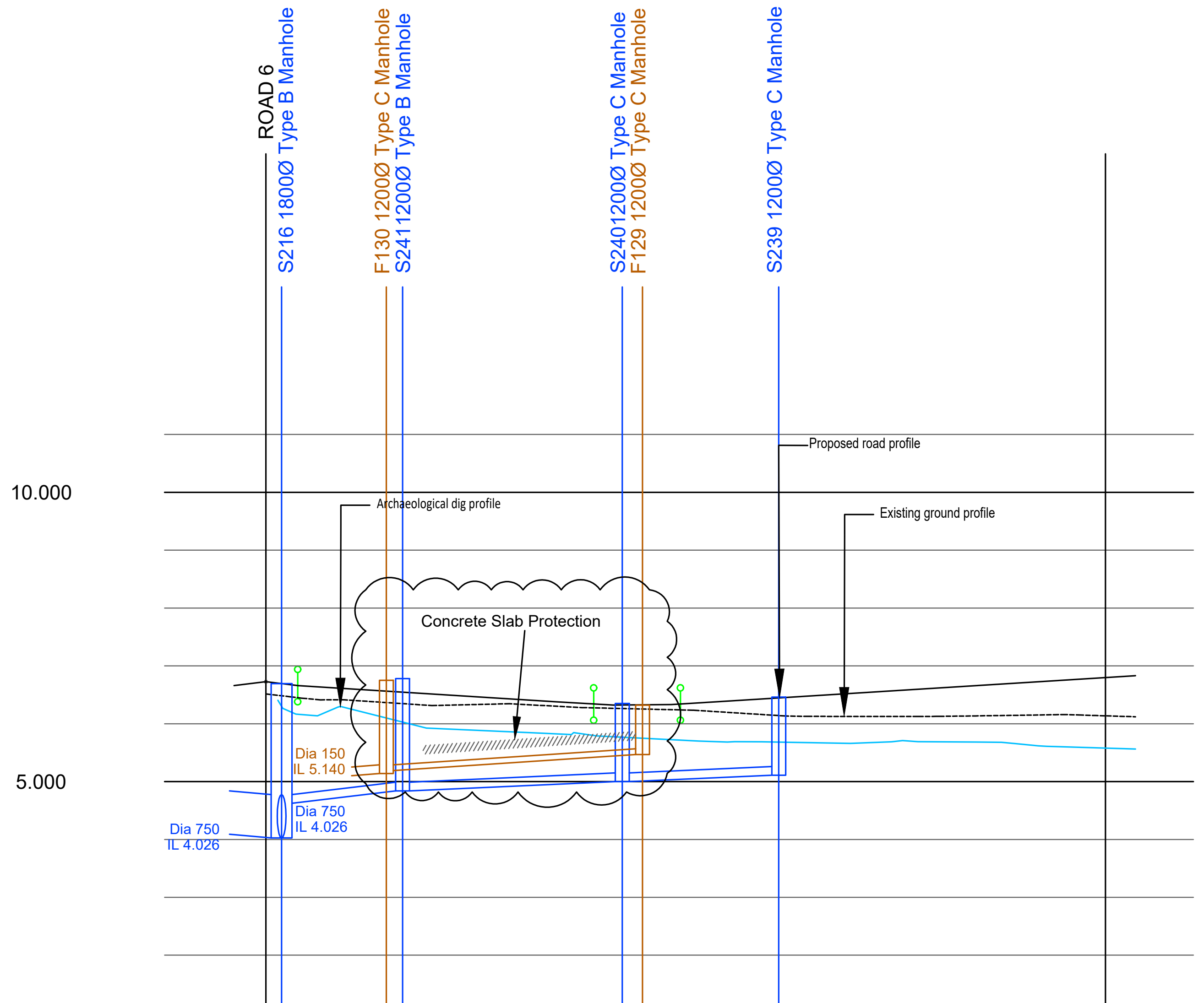
CLIENT
Bovis Homes
Linden HOMES
Part of the Vistry Group

DRAWING TITLE
ROAD AND SEWER LONG SECTIONS
Sheet 3 of 4

SCALE	DATE	INIT	CHKD
1:500	05/22	cb	mw

STATUS
CONSTRUCTION

DRG NO	REVISION
22-012/302	C2


ROAD 6
S216 1800Ø Type B Manhole
F130 1200Ø Type C Manhole
S241 1200Ø Type B Manhole
S240 1200Ø Type C Manhole
F129 1200Ø Type C Manhole
S239 1200Ø Type C Manhole
10.000
5.000
Proposed road profile
Archaeological dig profile
Existing ground profile
Concrete Slab Protection
Dia 150
IL 5.140
Dia 750
IL 4.026
Dia 750
IL 4.026
LP

ROAD 8

DATUM 1.000

CHAINAGE: 0.000, 1.356, 2.754, 6.360, 7.011, 10.000, 10.407, 11.808, 20.000, 28.317, 30.000, 30.785, 32.067, 32.536, 35.000, 35.817, 40.000, 44.303, 50.000, 57.874, 60.000, 70.000, 75.119

EXISTING GROUND LEVEL: 6.516, 6.371, 6.341, 6.267, 6.195, 6.127, 6.132, 6.153, 6.121

ARCHAEOLOGICAL DIG LEVEL: 6.119, 5.870, 5.775, 5.685, 5.662, 5.685, 5.594, 5.564

ALIGNMENT LEVEL: 6.659, 6.569, 6.444, 6.340, 6.323, 6.316, 6.331, 6.340, 6.392, 6.517, 6.642, 6.767, 6.831

VERTICAL ALIGNMENT: G= -1.250% 1: -80.0 | KF= 3.0 L= 7.500 | G= 1.250% 1: 80.0

HORIZONTAL ALIGNMENT: R= 55.000

LEFT HAND CHANNEL: 6.657, 6.620, 6.557, 6.495, 6.432, 6.375, 6.382, 6.443, 6.506, 6.568, 6.631, 6.667, 6.694, 6.759, 6.824, 6.889, 6.891

CENTRE LINE: 6.631, 6.614, 6.606, 6.569, 6.506, 6.444, 6.381, 6.323, 6.331, 6.392, 6.455, 6.517, 6.580, 6.615, 6.642, 6.705, 6.767, 6.830, 6.831

RIGHT HAND CHANNEL: 6.563, 6.555, 6.517, 6.455, 6.392, 6.330, 6.272, 6.279, 6.341, 6.403, 6.466, 6.528, 6.564, 6.590, 6.650, 6.710, 6.770, 6.771

STORMWATER COVER LEVEL: CL6.600 IL4.870 | CL6.850 IL5.520 IL5.520 | CL6.850 IL5.520 IL5.520 | CL6.850 IL3.955

STORMWATER DETAILS:

Pipe 7.002	Pipe 7.001	Pipe 7.000
150Ø 1 in 49 Class FN28 Clay	150Ø 1 in 119 Class FN28 Clay	150Ø 1 in 123 Class FN28 Clay
Class S Granular Surround L=10.486m	Class S Granular Surround L=18.977m	Class S Granular Surround L=13.519m

FOULWATER COVER LEVEL: CL6.750 IL5.190 | CL6.320 IL5.467

FOULWATER DETAILS: Pipe 6.000 100Ø 1 in8 Class FN28 Clay | Class S Granular Surround L=22.128m

0 5 10 20 30 40 50
SCALE 1 : 500 mt.

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Pipe Classes

Dim	Material	Class
100	PE / Clay	FN28
150	PE / Clay	FN28
225	PE	160
300-750	Concrete	M

REVISIONS

P1	Preliminary Issue.	24/06/22
T1	Tender Issue.	30/06/22
T2	Vertical alignment on Road 8 changed to reduce cut and fill.	15/08/22
T3	Archaeological dig level added to sections	11/11/22
C1	Construction Issue.	06/12/22
C2	Adoptable drainage added to Road 8.	16/02/23
C3	Foul Water pipe gradient and size amended following IWNL comments.	06/04/23

WITHERS
DESIGN ASSOCIATES
CIVIL ENGINEERING & INFRASTRUCTURE DESIGN
Unit 12, Wakes Hall Business Centre
Wakes Colne, Colchester, Essex
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01206 247081

PROJECT
HOOK LANE, PAGHAM, WEST SUSSEX

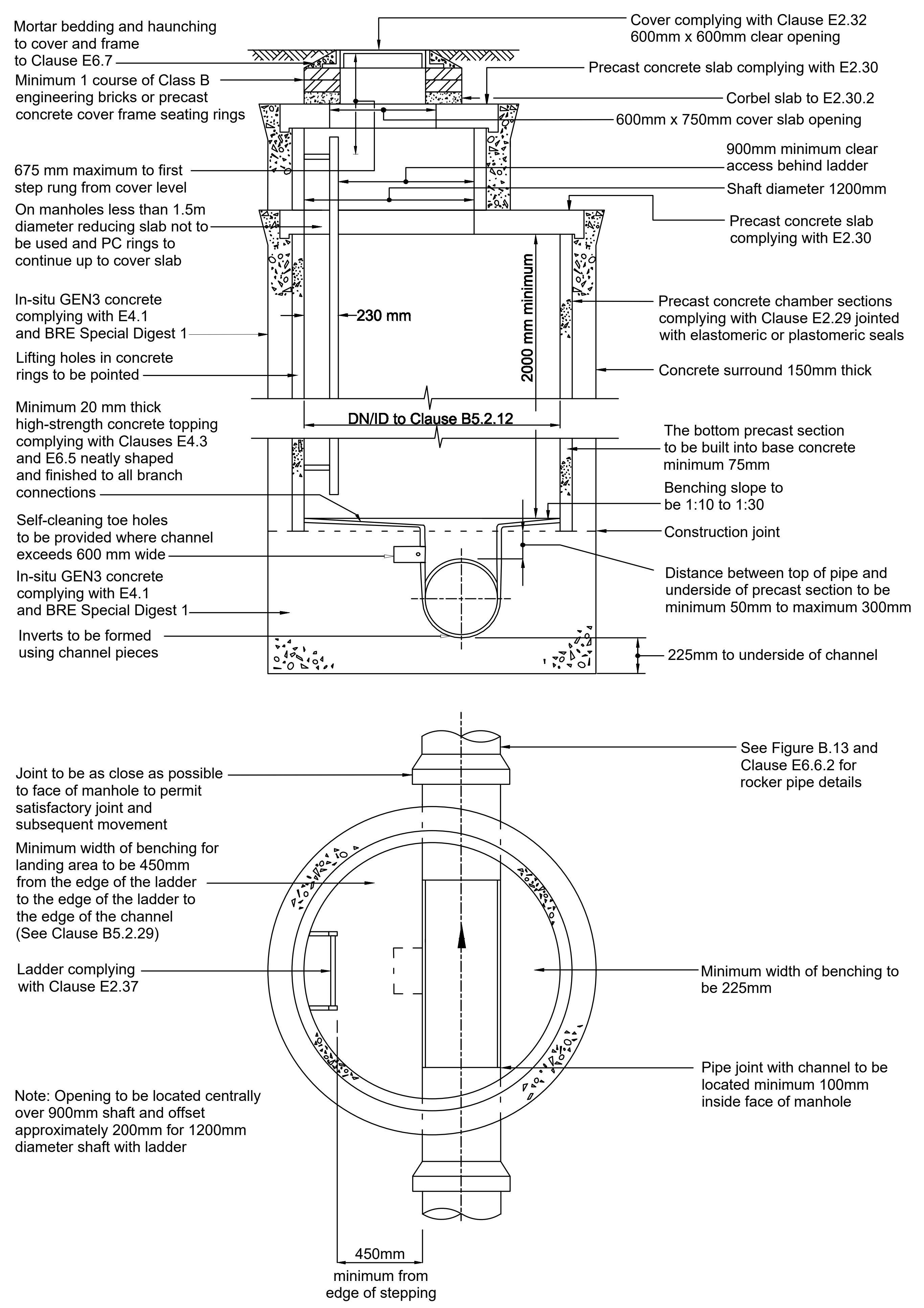
CLIENT
Bovis Homes Linden HOMES
Part of the Vistry Group

DRAWING TITLE
ROAD AND SEWER LONG SECTIONS
Sheet 4 of 4

SCALE	DATE	INIT	CHKD
1:500	05/22	cb	mw

STATUS
CONSTRUCTION

DRG NO	REVISION
22-012/303	C3


Mortar bedding and haunching to cover and frame to Clause E6.7
Minimum 1 course of Class B engineering bricks or precast concrete cover frame seating rings
675 mm maximum to first step rung from cover level
On manholes less than 1.5m diameter reducing slab not to be used and PC rings to continue up to cover slab
In-situ GEN3 concrete complying with E4.1 and BRE Special Digest 1
Lifting holes in concrete rings to be pointed
Minimum 20 mm thick high-strength concrete topping complying with Clauses E4.3 and E6.5 neatly shaped and finished to all branch connections
Self-cleaning toe holes to be provided where channel exceeds 600 mm wide
In-situ GEN3 concrete complying with E4.1 and BRE Special Digest 1
Inverts to be formed using channel pieces
Cover complying with Clause E2.32 600mm x 600mm clear opening
Precast concrete slab complying with E2.30
Corbel slab to E2.30.2
600mm x 750mm cover slab opening
900mm minimum clear access behind ladder
Shaft diameter 1200mm
Precast concrete slab complying with E2.30
230 mm
2000 mm minimum
Precast concrete chamber sections complying with Clause E2.29 jointed with elastomeric or plastomeric seals
Concrete surround 150mm thick
DN/ID to Clause B5.2.12
The bottom precast section to be built into base concrete minimum 75mm
Benching slope to be 1:10 to 1:30
Construction joint
Distance between top of pipe and underside of precast section to be minimum 50mm to maximum 300mm
225mm to underside of channel
Joint to be as close as possible to face of manhole to permit satisfactory joint and subsequent movement
Minimum width of benching for landing area to be 450mm from the edge of the ladder to the edge of the ladder to the edge of the channel (See Clause B5.2.29)
Ladder complying with Clause E2.37
See Figure B.13 and Clause E6.6.2 for rocker pipe details
Minimum width of benching to be 225mm
Pipe joint with channel to be located minimum 100mm inside face of manhole
450mm minimum from edge of stepping

Note: Opening to be located centrally over 900mm shaft and offset approximately 200mm for 1200mm diameter shaft with ladder

TYPICAL MANHOLE DETAIL - TYPE A1
Depth to soffit 3m to 6m

⚠ Trench support required for all excavations >2m and/or in water logged or otherwise unstable ground.

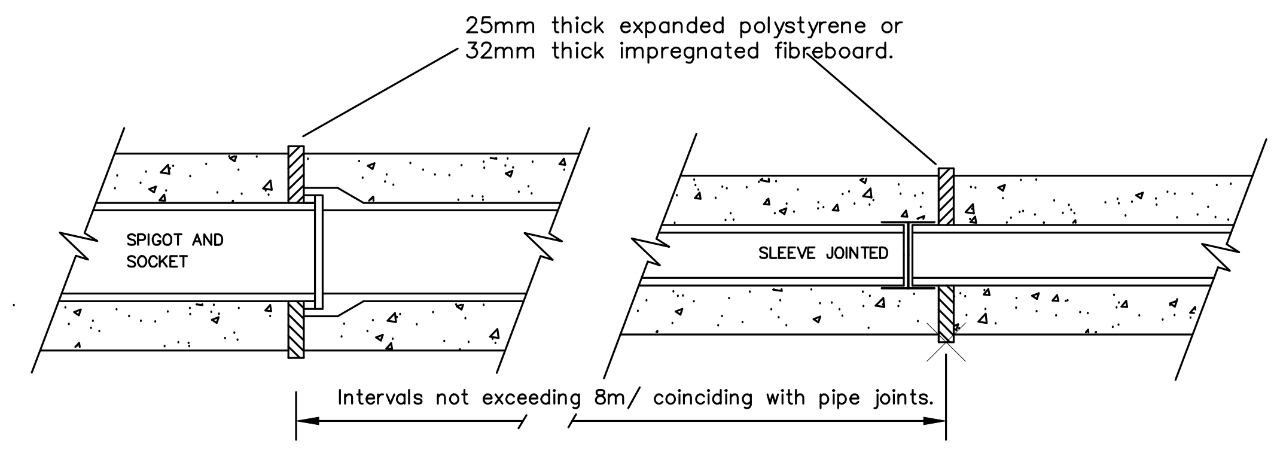
CHAMBER DIAMETERS SHALL BE IN ACCORDANCE WITH THE TABLE BELOW

LARGEST PIPE DIAMETER (mm)	MIN CHAMBER SECTION DIAMETER (mm)
Less than 375mm	1200
375 - 450	1350
500 - 700	1500
750 - 900	1800

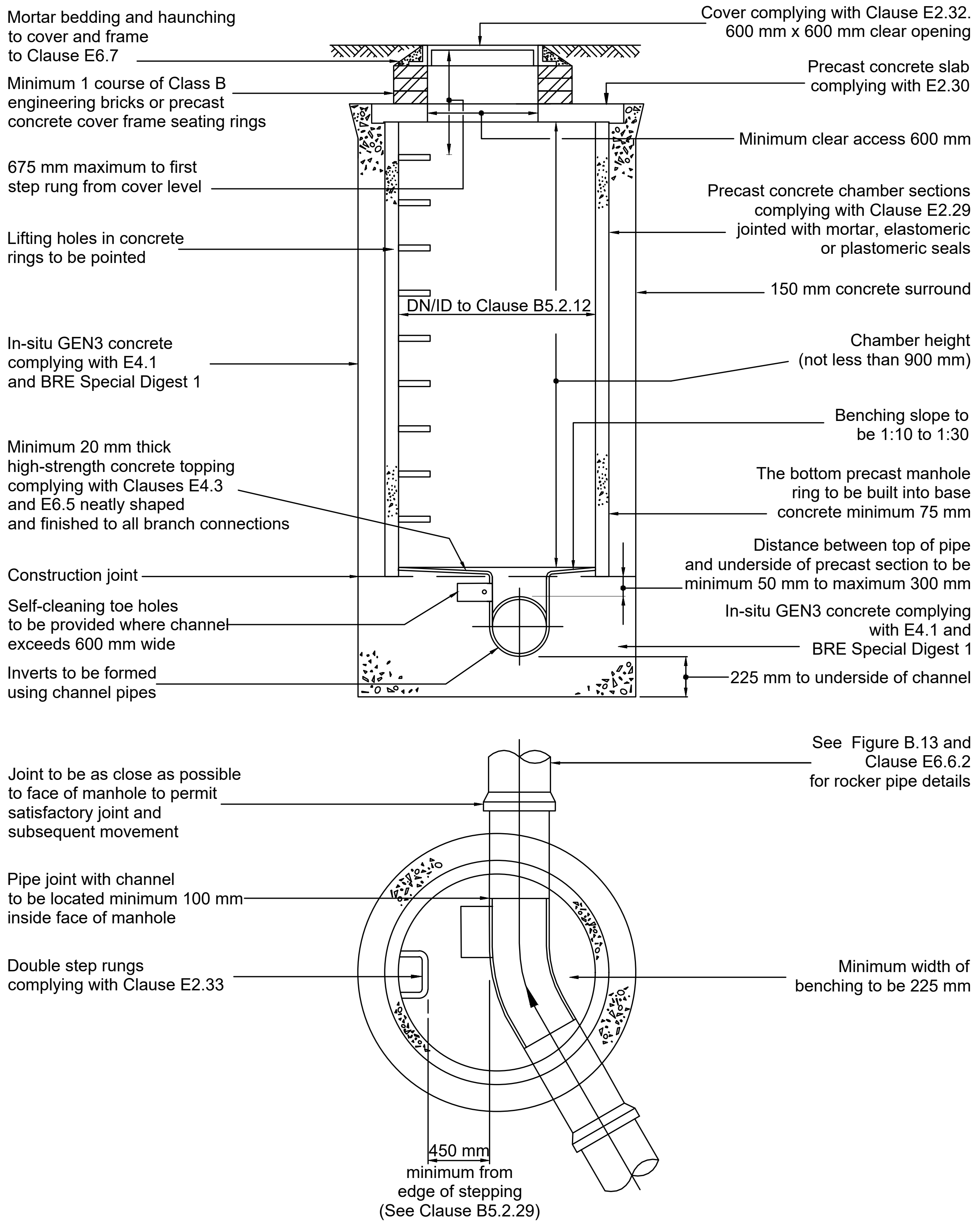
1. Chamber diameters quoted are the minimum. If two or more pipes enter the manhole the chamber diameter must be sufficient to accomodate adequate benching. All incoming pipes to be built with soffits level.

2. Chamber height of a Type A manhole (benching to slab soffit) should be 2000mm. When this is not practical Type B manholes are preferred, subject to an absolute minimum internal chamber height of 900mm

3. Cover slab and eccentric cover frame can be rotated to suit ladder or step rungs.

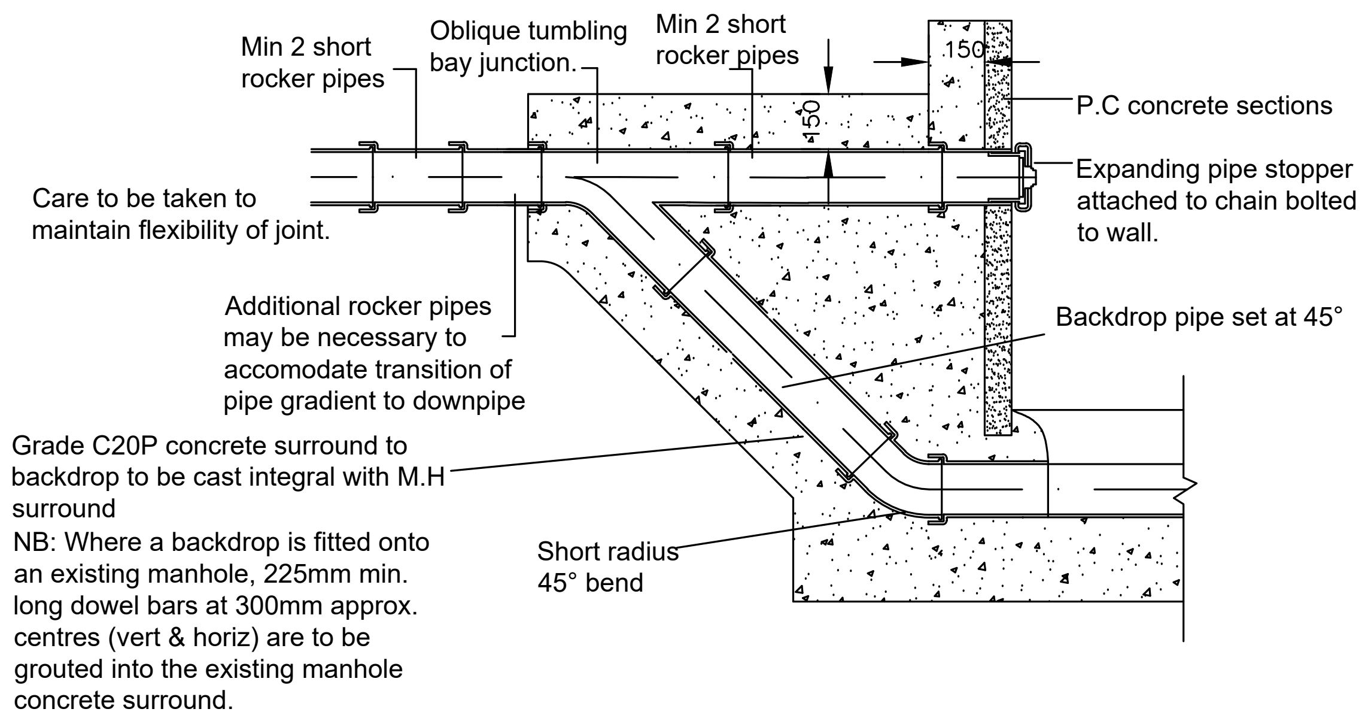

25mm thick expanded polystyrene or 32mm thick impregnated fibreboard.
SPIGOT AND SOCKET
SLEEVE JOINTED
Intervals not exceeding 8m/ coinciding with pipe joints.

DETAIL OF FLEXIBLE JOINTS IN CONCRETE SURROUND


Mortar bedding and haunching to cover and frame to Clause E6.7
Minimum 1 course of Class B engineering bricks or precast concrete cover frame seating rings
675 mm maximum to first step rung from cover level
Lifting holes in concrete rings to be pointed
In-situ GEN3 concrete complying with E4.1 and BRE Special Digest 1
Minimum 20 mm thick high-strength concrete topping complying with Clauses E4.3 and E6.5 neatly shaped and finished to all branch connections
Construction joint
Self-cleaning toe holes to be provided where channel exceeds 600 mm wide
Inverts to be formed using channel pipes
Cover complying with Clause E2.32. 600 mm x 600 mm clear opening
Precast concrete slab complying with E2.30
Minimum clear access 600 mm
Precast concrete chamber sections complying with Clause E2.29 jointed with mortar, elastomeric or plastomeric seals
150 mm concrete surround
DN/ID to Clause B5.2.12
Chamber height (not less than 900 mm)
Benching slope to be 1:10 to 1:30
The bottom precast manhole ring to be built into base concrete minimum 75 mm
Distance between top of pipe and underside of precast section to be minimum 50 mm to maximum 300 mm
In-situ GEN3 concrete complying with E4.1 and BRE Special Digest 1
225 mm to underside of channel
Joint to be as close as possible to face of manhole to permit satisfactory joint and subsequent movement
Pipe joint with channel to be located minimum 100 mm inside face of manhole
Double step rungs complying with Clause E2.33
See Figure B.13 and Clause E6.6.2 for rocker pipe details
Minimum width of benching to be 225 mm
450 mm minimum from edge of stepping (See Clause B5.2.29)

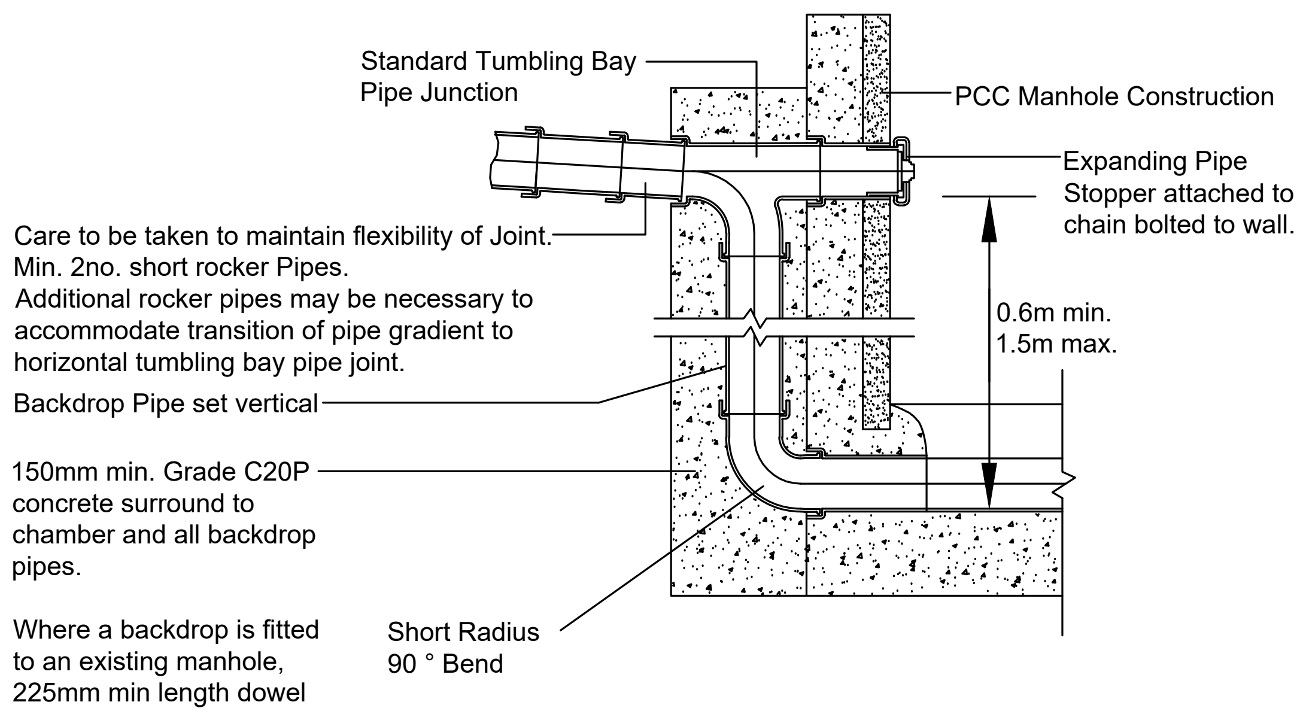
TYPICAL MANHOLE DETAIL - TYPE B
Depth to soffit 1.5m to 3.0m

⚠ Trench support required for all excavations >2m and/or in water logged or otherwise unstable ground.


Min 2 short rocker pipes
Oblique tumbling bay junction.
Min 2 short rocker pipes
150
450
P.C concrete sections
Care to be taken to maintain flexibility of joint.
Expanding pipe stopper attached to chain bolted to wall.
Additional rocker pipes may be necessary to accomodate transition of pipe gradient to downpipe
Backdrop pipe set at 45°
Grade C20P concrete surround to backdrop to be cast integral with M.H surround
Short radius 45° bend

NB: Where a backdrop is fitted onto an existing manhole, 225mm min. long dowel bars at 300mm approx. centres (vert & horiz) are to be grouted into the existing manhole concrete surround.

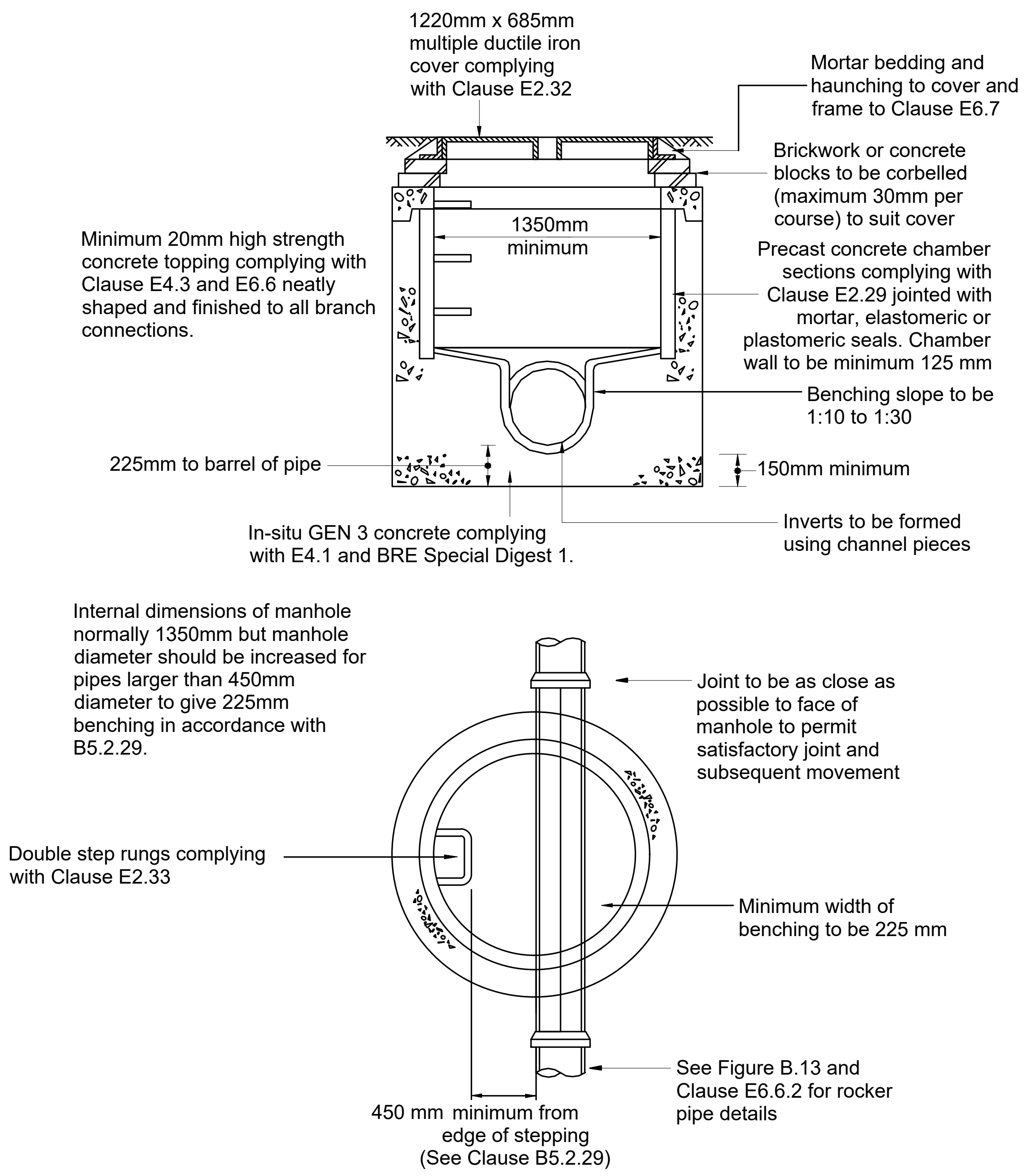
TYPICAL BACKDROP DETAIL


Standard Tumbling Bay Pipe Junction
PCC Manhole Construction
Care to be taken to maintain flexibility of Joint.
Expanding Pipe Stopper attached to chain bolted to wall.
0.6m min. 1.5m max.
Backdrop Pipe set vertical
150mm min. Grade C20P concrete surround to chamber and all backdrop pipes.
Short Radius 90 ° Bend

Care to be taken to maintain flexibility of Joint.
Min. 2no. short rocker Pipes.
Additional rocker pipes may be necessary to accommodate transition of pipe gradient to horizontal tumbling bay pipe joint.

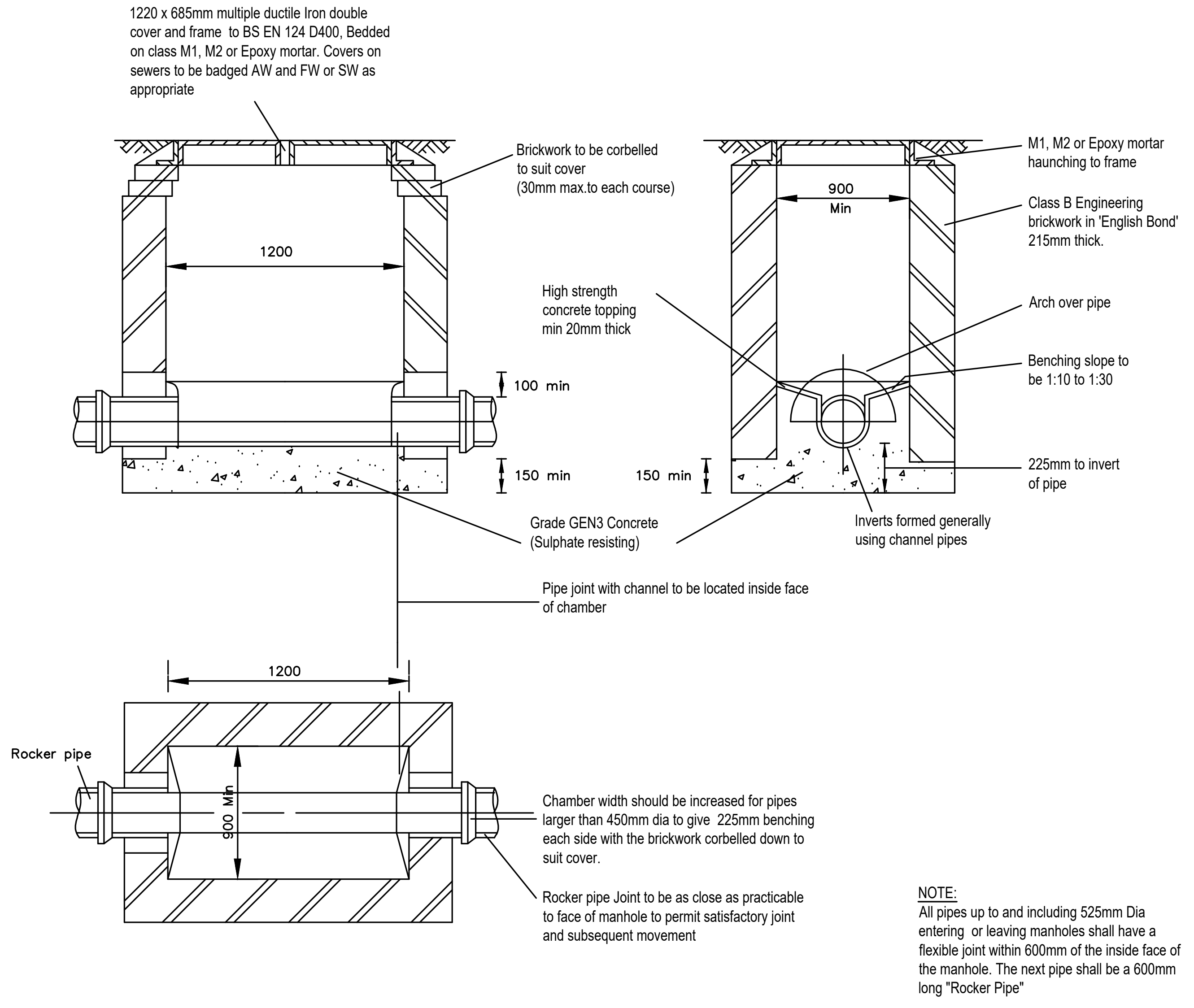
Where a backdrop is fitted to an existing manhole, 225mm min length dowel bars at 300mm centres (horiz & vert) are to be grouted into the existing manhole surround.

TYPICAL VERTICAL BACKDROP DETAIL


1220mm x 685mm multiple ductile iron cover complying with Clause E2.32
Mortar bedding and haunching to cover and frame to Clause E6.7
Brickwork or concrete blocks to be corbelled (maximum 30mm per course) to suit cover
1350mm minimum
Minimum 20mm high strength concrete topping complying with Clause E4.3 and E6.6 neatly shaped and finished to all branch connections.
Precast concrete chamber sections complying with Clause E2.29 jointed with mortar, elastomeric or plastomeric seals. Chamber wall to be minimum 125 mm
Benching slope to be 1:10 to 1:30
225mm to barrel of pipe
150mm minimum
In-situ GEN 3 concrete complying with E4.1 and BRE Special Digest 1.
Inverts to be formed using channel pieces
Joint to be as close as possible to face of manhole to permit satisfactory joint and subsequent movement
Double step rungs complying with Clause E2.33
Minimum width of benching to be 225 mm
See Figure B.13 and Clause E6.6.2 for rocker pipe details
450 mm minimum from edge of stepping (See Clause B5.2.29)

Internal dimensions of manhole normally 1350mm but manhole diameter should be increased for pipes larger than 450mm diameter to give 225mm benching in accordance with B5.2.29.

TYPICAL MANHOLE DETAIL - TYPE C
Depth to soffit less than 1.5m


1220 x 685mm multiple ductile Iron double cover and frame to BS EN 124 D400, Bedded on class M1, M2 or Epoxy mortar. Covers on sewers to be badged AW and FW or SW as appropriate
Brickwork to be corbelled to suit cover (30mm max.to each course)
1200
100 min
150 min
150 min
900 Min
M1, M2 or Epoxy mortar haunching to frame
Class B Engineering brickwork in 'English Bond' 215mm thick.
High strength concrete topping min 20mm thick
Arch over pipe
Benching slope to be 1:10 to 1:30
225mm to invert of pipe
Grade GEN3 Concrete (Sulphate resisting)
Inverts formed generally using channel pipes
Pipe joint with channel to be located inside face of chamber
1200
Rocker pipe
900 Min
Chamber width should be increased for pipes larger than 450mm dia to give 225mm benching each side with the brickwork corbelled down to suit cover.
Rocker pipe Joint to be as close as practicable to face of manhole to permit satisfactory joint and subsequent movement

NOTE:
All pipes up to and including 525mm Dia entering or leaving manholes shall have a flexible joint within 600mm of the inside face of the manhole. The next pipe shall be a 600mm long "Rocker Pipe"

TYPICAL MANHOLE DETAIL - TYPE C
Depth to soffit up to 1.2m

No Dimensions are to be scaled from this drawing.

NOTES

1. All dimensions are in millimetres unless specified otherwise.
2. Except for concretes having an equivalent compressive strength of less than 20N/mm2, sulphate-resisting Portland cement shall be used in all cases or consist of a special combination of cement complying with the relevant provisions of BS 12 and ggbs or pfa unless the Developer can satisfy the Engineer that any attack from soils or groundwaters will adequately be resisted by the the use of cement to BS 12.
3. Manhole Types A1, B & C to be used within main carriageways. Access Chambers Type 3 - 4 may be used outside of carriageways and at the head of lateral connections to the adoptable sewers.
4. Lateral Connections made as saddle connections to a main sewer must be made using preformed junction pipes.
5. All private drainage works to comply with current Building Regulations Part H and BS EN 752.
6. Workmanship on site shall accord with the principles of BS8000-14 "Workmanship on Building Sites. Code of Practice for Below Ground Drainage" and general good working practices.
7. Before commencing any sewer or drainage works, the Contractor's ground worker must satisfy themselves, Vistry (South) and the Local Authority of actual levels and conditions of existing sewers.
8. Depth and location of existing services to be traced by the Contractor prior to commencing any drainage excavations.
9. Drainage pipelines to be laid under roads, parking bays and other trafficked areas shall be either:
   a) Vitrified clayware to BS EN295.
   b) Concrete to BS5911 Class M.
10. Buried concrete shall be suitable for Class DS-4 unless testing can be provided to show Icosa that a lower class will resist attack from soils and groundwater in accordance with BRE Special Digest 1.
11. Manholes/Inspection Chambers located within highways or vehicular areas accessible to commercial vehicles shall have a Grade D400 double triangular manhole cover complying with BS EN124 and have a min. clear opening of 600mm. Grade C250 covers may be used for manholes non vehicular areas and all footways and verges. Inspection chambers in footways, pedestrian areas, private drives serving one property and landscaped areas to be provided with B125 covers. Chambers located under trafficked areas to have concrete surround.
12. All private Type 3 - 4 chambers in light vehicular of pedestrian areas to be fitted with inset covers of appropriate loading class where located in paved areas.
13. Covers/Inspection chambers must not be located directly outside doors.
14. Where private manholes and catchpits are constructed using precast concrete circular rings, they are to be constructed to BS 5911-200 and generally in accordance with Appendix C of the Sewerage Sector Guidance.
15. All abandoned, buried obstructions encountered during the construction of Highway & Drainage Works are to be broken out to bed level of drains and sewers, and to the formation of car parks and drives etc., and to sufficient depth to allow for laying service company's mains and services.
16. On sites where the risk of 'landfill' gas migration has been identified, all drainage entries under buildings should be sealed with a clay stank, comprising 1.0m length of clean 'puddle' clay bed, surround and backfill to pipe trench.
17. Drainage depths have been kept to a minimum where possible, however, depths in excess of 2m can not be avoided. Excavations to be carried out in accordance with HSE document HSG150 'Health and Safety in Construction'.

REVISIONS

P1	Preliminary Issue.	24/06/22
T1	Tender Issue.	30/06/22
T2	Brick construction Type C manhole detail added.	15/08/22
C1	Construction Issue.	06/12/22
C2	Typical Vertical Backdrop detail added.	23/06/23

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PROJECT
HOOK LANE, PAGHAM,
WEST SUSSEX

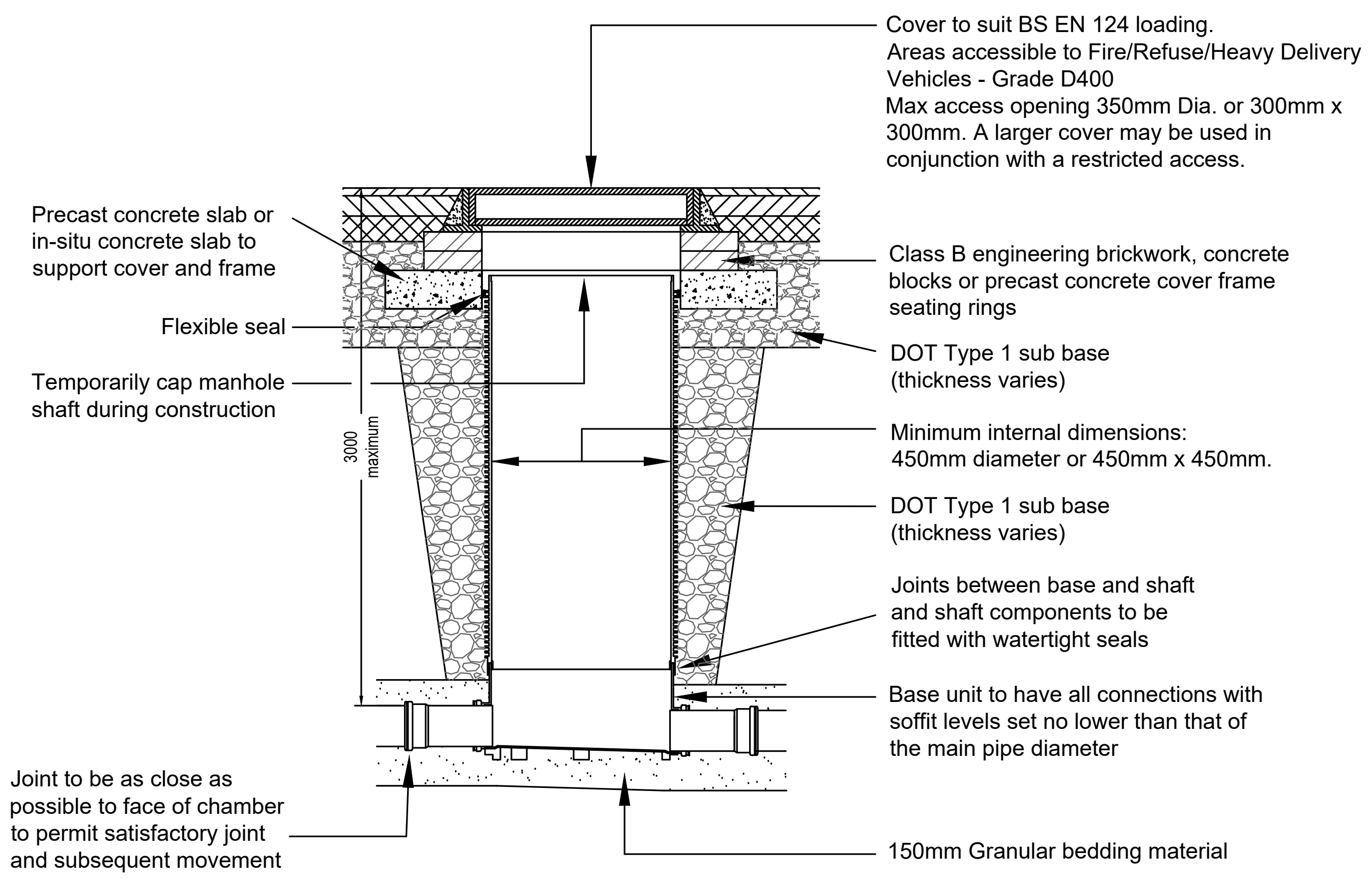
CLIENT
Bovis Homes
Linden HOMES
Part of the Vistry Group

DRAWING TITLE
DRAINAGE
CONSTRUCTION DETAILS
Sheet 1

SCALE	DATE	INIT	CHKD
NTS	05/22	me	cb

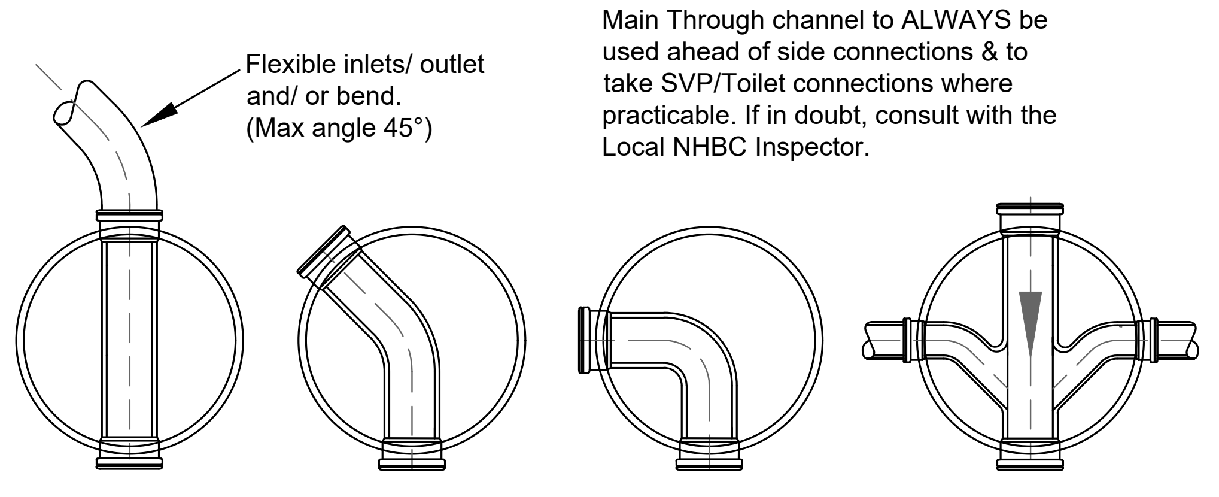
STATUS
CONSTRUCTION

DRG NO	REVISION
22-012/600	C2

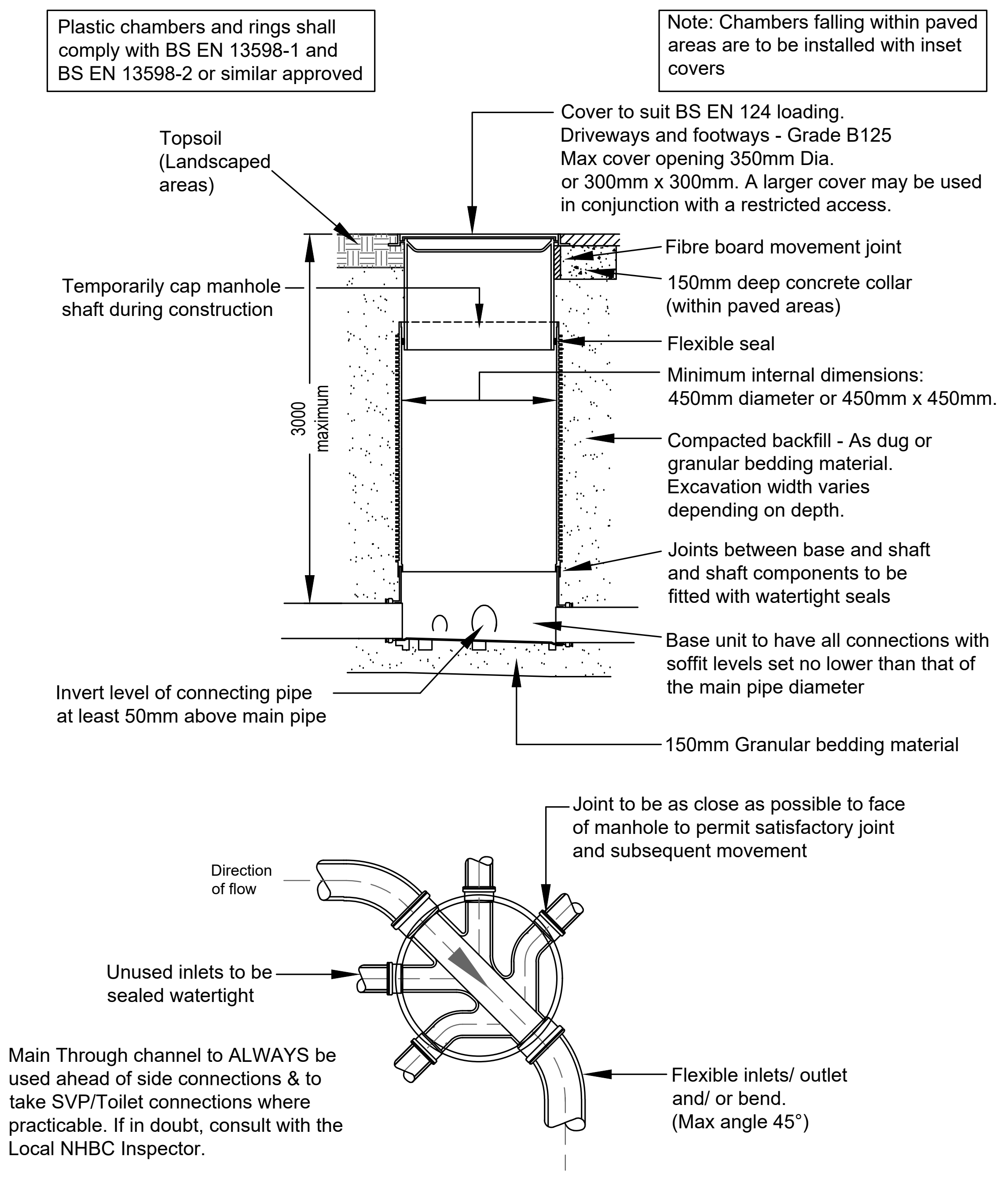

Cover to suit BS EN 124 loading.
Areas accessible to Fire/Refuse/Heavy Delivery Vehicles - Grade D400
Max access opening 350mm Dia. or 300mm x 300mm. A larger cover may be used in conjunction with a restricted access.
Precast concrete slab or in-situ concrete slab to support cover and frame
Class B engineering brickwork, concrete blocks or precast concrete cover frame seating rings
Flexible seal
DOT Type 1 sub base (thickness varies)
Temporarily cap manhole shaft during construction
3000 maximum
Minimum internal dimensions: 450mm diameter or 450mm x 450mm.
DOT Type 1 sub base (thickness varies)
Joints between base and shaft and shaft components to be fitted with watertight seals
Base unit to have all connections with soffit levels set no lower than that of the main pipe diameter
Joint to be as close as possible to face of chamber to permit satisfactory joint and subsequent movement
150mm Granular bedding material

TYPICAL ACCESS CHAMBER TYPE 3 (Flexible material detail)

Depth of soffit less than 3m - Non entry
For areas accessible to Fire/Refuse/Heavy Delivery Vehicles


Flexible inlets/ outlet and/ or bend. (Max angle 45°)
Main Through channel to ALWAYS be used ahead of side connections & to take SVP/Toilet connections where practicable. If in doubt, consult with the Local NHBC Inspector.

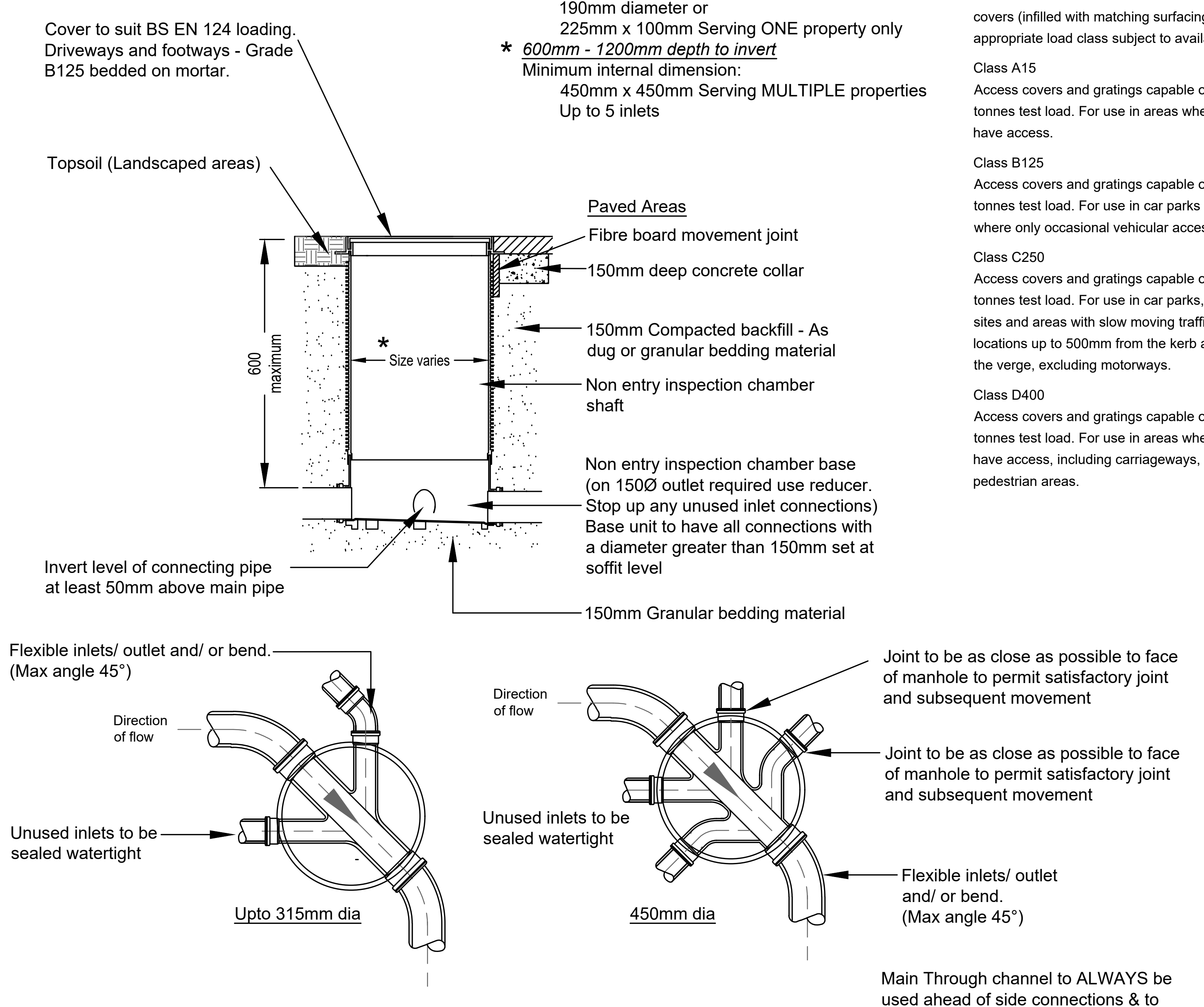
Alternative base invert layouts.
All connecions to be minimum soffit to soffit


Plastic chambers and rings shall comply with BS EN 13598-1 and BS EN 13598-2 or similar approved
Note: Chambers falling within paved areas are to be installed with inset covers
Topsoil (Landscaped areas)
Cover to suit BS EN 124 loading. Driveways and footways - Grade B125
Max cover opening 350mm Dia. or 300mm x 300mm. A larger cover may be used in conjunction with a restricted access.
Fibre board movement joint
Temporarily cap manhole shaft during construction
150mm deep concrete collar (within paved areas)
Flexible seal
Minimum internal dimensions: 450mm diameter or 450mm x 450mm.
3000 maximum
Compacted backfill - As dug or granular bedding material. Excavation width varies depending on depth.
Joints between base and shaft and shaft components to be fitted with watertight seals
Base unit to have all connections with soffit levels set no lower than that of the main pipe diameter
Invert level of connecting pipe at least 50mm above main pipe
150mm Granular bedding material
Joint to be as close as possible to face of manhole to permit satisfactory joint and subsequent movement
Direction of flow
Unused inlets to be sealed watertight
Main Through channel to ALWAYS be used ahead of side connections & to take SVP/Toilet connections where practicable. If in doubt, consult with the Local NHBC Inspector.
Flexible inlets/ outlet and/ or bend. (Max angle 45°)

TYPICAL ACCESS CHAMBER TYPE 3 (Flexible material detail)

Depth of soffit less than 3m - Non entry
For areas subject to light vehicle or pedestrian loading only.

* *Up to 600mm depth to invert*
Minimum internal dimensions:
190mm diameter or
225mm x 100mm Serving ONE property only
* *600mm - 1200mm depth to invert*
Minimum internal dimension:
450mm x 450mm Serving MULTIPLE properties
Up to 5 inlets


Cover to suit BS EN 124 loading. Driveways and footways - Grade B125 bedded on mortar.
Topsoil (Landscaped areas)
Paved Areas
Fibre board movement joint
150mm deep concrete collar
600 maximum
*
Size varies
150mm Compacted backfill - As dug or granular bedding material
Non entry inspection chamber shaft
Non entry inspection chamber base (on 150Ø outlet required use reducer. Stop up any unused inlet connections) Base unit to have all connections with a diameter greater than 150mm set at soffit level
Invert level of connecting pipe at least 50mm above main pipe
150mm Granular bedding material
Flexible inlets/ outlet and/ or bend. (Max angle 45°)
Direction of flow
Unused inlets to be sealed watertight
Upto 315mm dia
Direction of flow
Joint to be as close as possible to face of manhole to permit satisfactory joint and subsequent movement
Joint to be as close as possible to face of manhole to permit satisfactory joint and subsequent movement
Unused inlets to be sealed watertight
Flexible inlets/ outlet and/ or bend. (Max angle 45°)
450mm dia

TYPICAL ACCESS CHAMBER TYPE 4 (Flexible material detail)

Depth of invert up to 1200mm - Non entry
For Driveways, pedestrian and soft landscaped areas

Main Through channel to ALWAYS be used ahead of side connections & to take SVP/Toilet connections where practicable. If in doubt, consult with the Local NHBC Inspector.

Chamber Cover Load Class to BS EN 124

Manhole & Inspection Chambers are to be fitted with cover appropriate to their loading situation as detailed below.

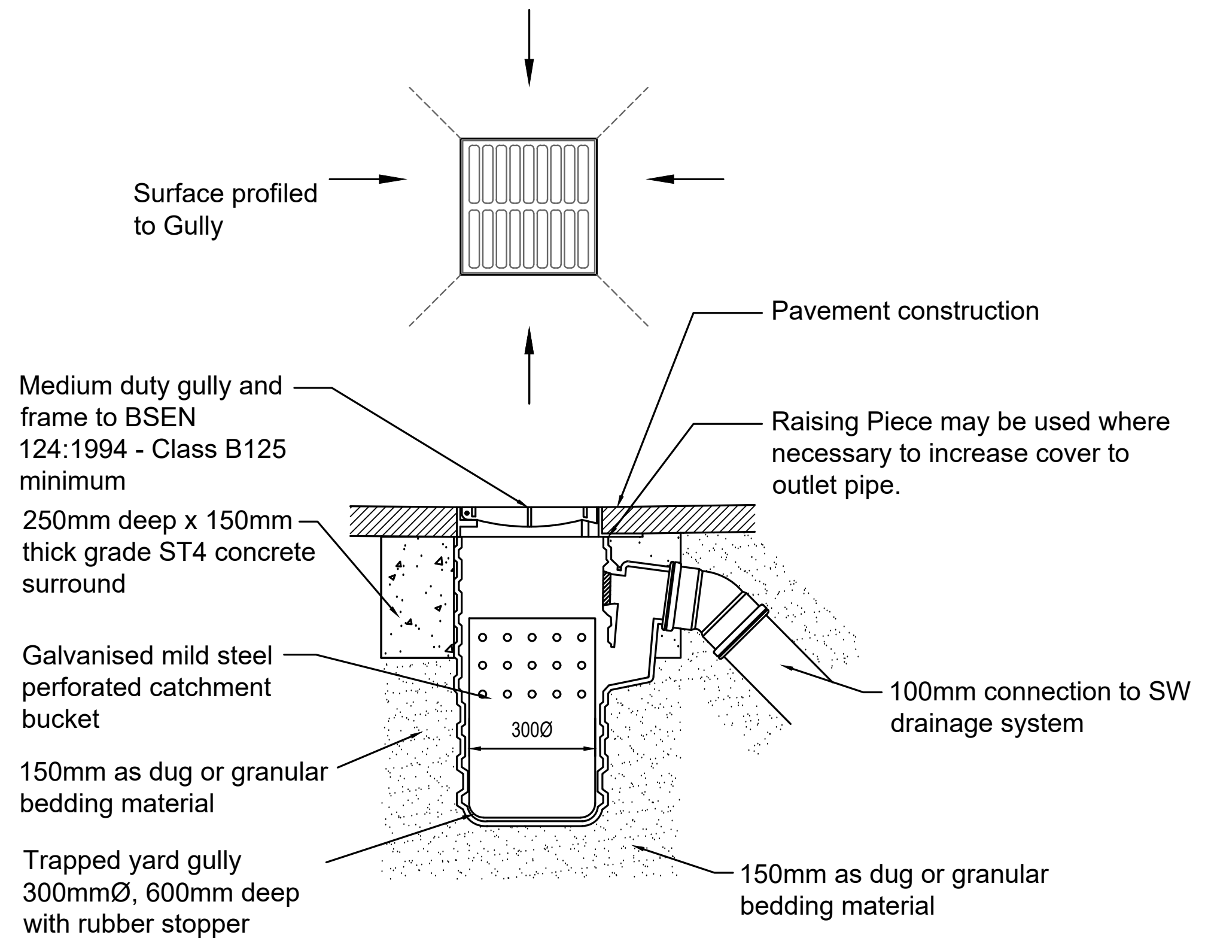
Covers in Paved or Block Paved Areas are to be Inset covers (infilled with matching surfacing material) of appropriate load class subject to availability

Class A15
Access covers and gratings capable of withstanding a 1.5 tonnes test load. For use in areas where only pedestrians have access.

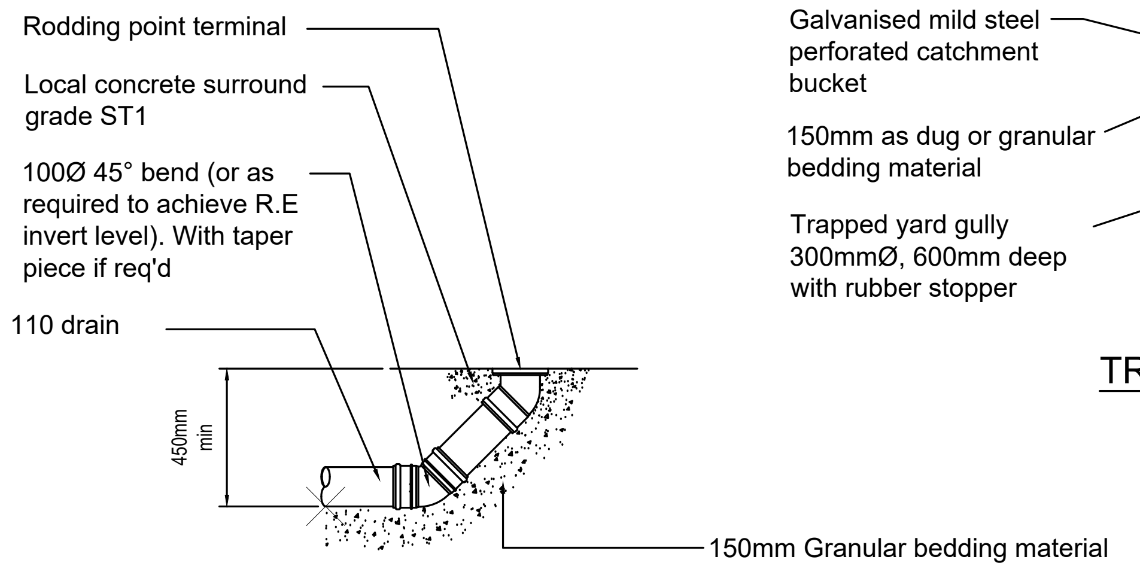
Class B125
Access covers and gratings capable of withstanding a 12.5 tonnes test load. For use in car parks and pedestrian areas where only occasional vehicular access is likely.

Class C250
Access covers and gratings capable of withstanding a 25 tonnes test load. For use in car parks, forecourts, industrial sites and areas with slow moving traffic also in highway locations up to 500mm from the kerb and up to 200mm into the verge, excluding motorways.

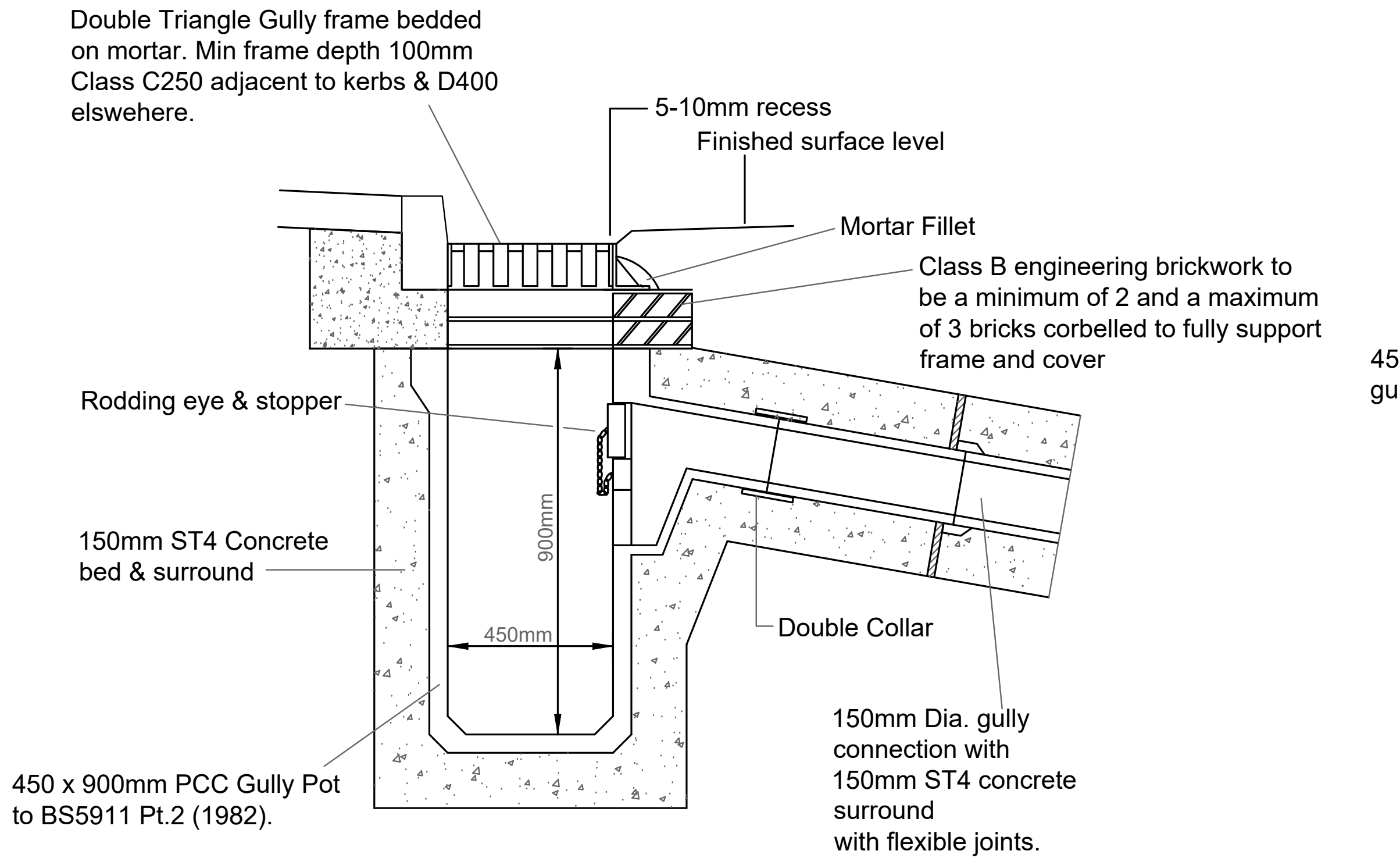
Class D400
Access covers and gratings capable of withstanding a 40 tonnes test load. For use in areas where cars and lorries have access, including carriageways, hard shoulders and pedestrian areas.


Surface profiled to Gully
Pavement construction
Medium duty gully and frame to BSEN 124:1994 - Class B125 minimum
Raising Piece may be used where necessary to increase cover to outlet pipe.
250mm deep x 150mm thick grade ST4 concrete surround
Galvanised mild steel perforated catchment bucket
300Ø
100mm connection to SW drainage system
150mm as dug or granular bedding material
Trapped yard gully 300mmØ, 600mm deep with rubber stopper
150mm as dug or granular bedding material

TRAPPED YARD GULLY
(for private drives)

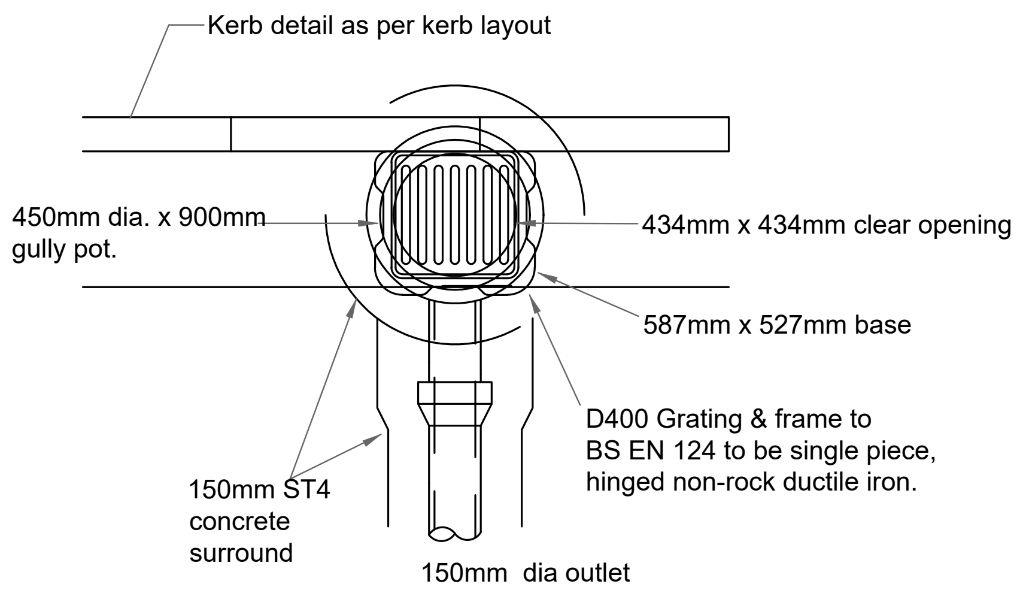

Rodding point terminal
Local concrete surround grade ST1
100Ø 45° bend (or as required to achieve R.E invert level). With taper piece if req'd
110 drain
450mm min
150mm Granular bedding material

RODDING EYE

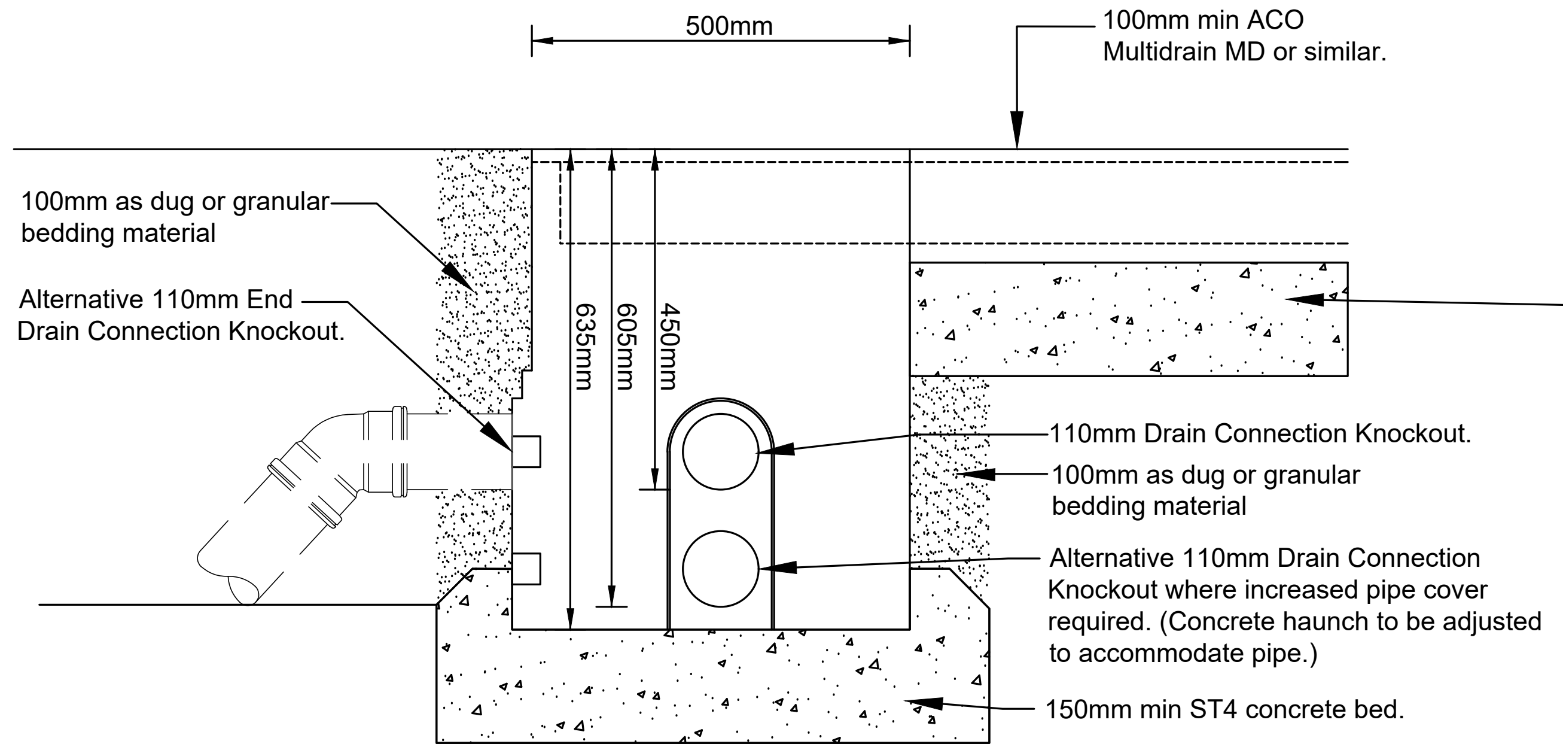

Double Triangle Gully frame bedded on mortar. Min frame depth 100mm Class C250 adjacent to kerbs & D400 elswehere.
5-10mm recess
Finished surface level
Mortar Fillet
Class B engineering brickwork to be a minimum of 2 and a maximum of 3 bricks corbelled to fully support frame and cover
Rodding eye & stopper
150mm ST4 Concrete bed & surround
900mm
450mm
Double Collar
150mm Dia. gully connection with 150mm ST4 concrete surround with flexible joints.
450 x 900mm PCC Gully Pot to BS5911 Pt.2 (1982).

All road gullies are to have Cycle friendly gratings.

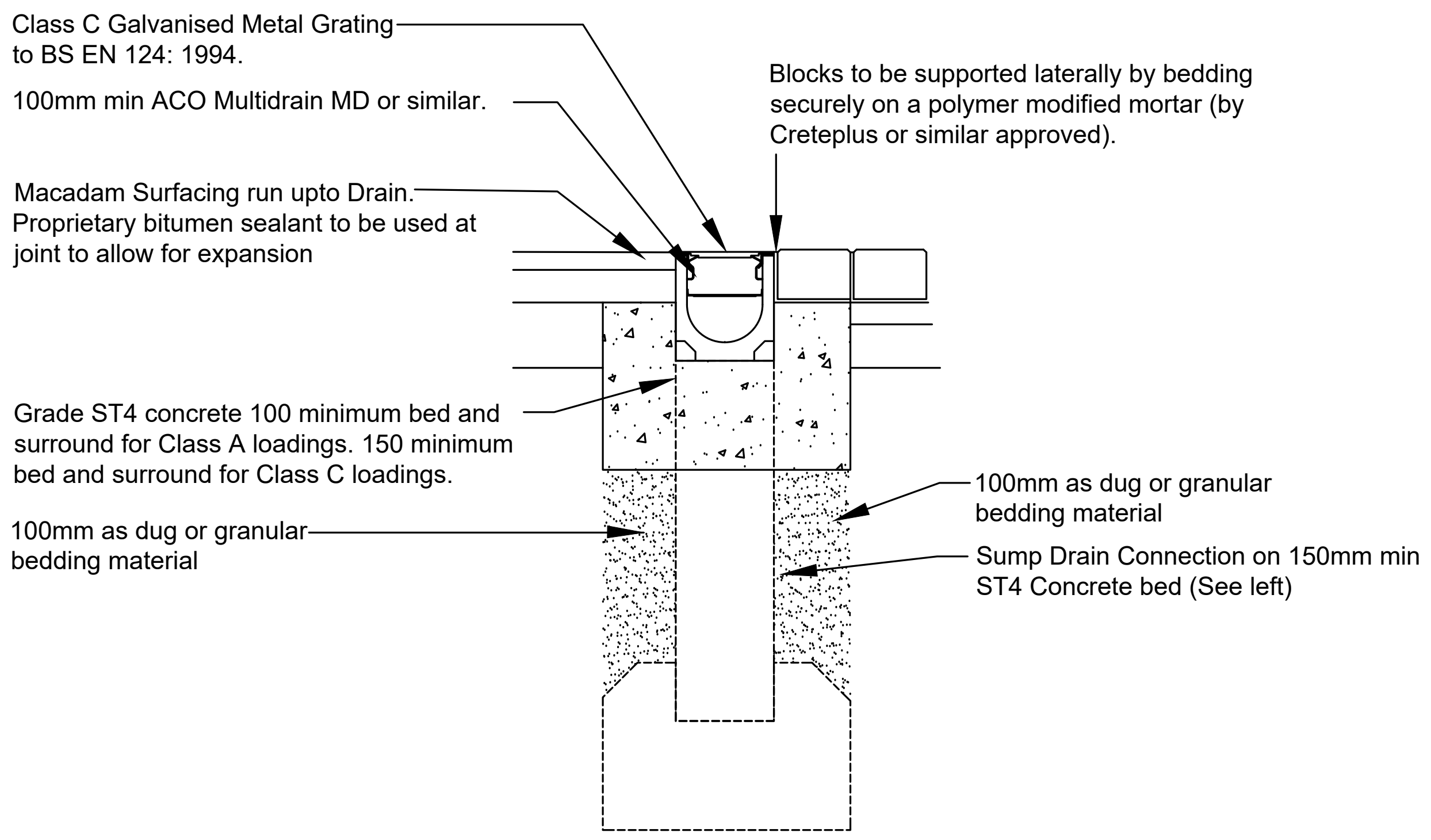
ROAD GULLY DETAIL
(for private roads)


Kerb detail as per kerb layout
450mm dia. x 900mm gully pot.
434mm x 434mm clear opening
587mm x 527mm base
D400 Grating & frame to BS EN 124 to be single piece, hinged non-rock ductile iron.
150mm ST4 concrete surround
150mm dia outlet

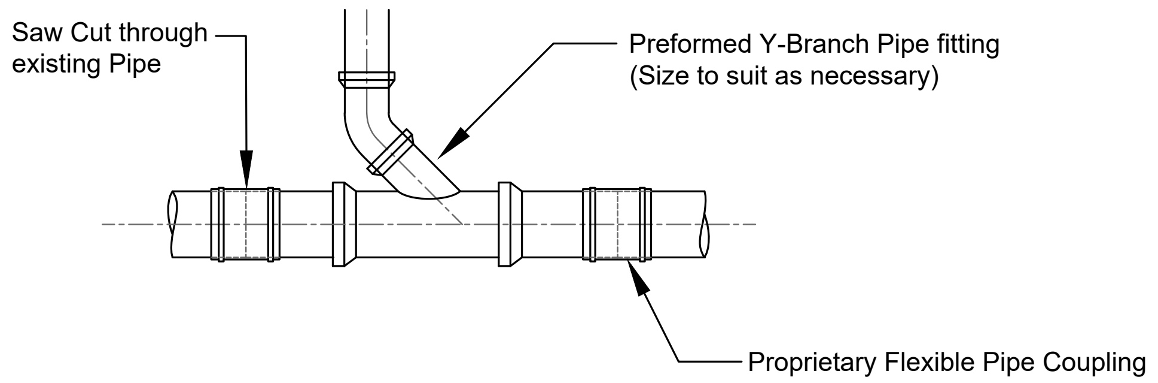
TYPICAL PLAN OF OF CARRIAGEWAY GULLY
N.T.S


500mm
100mm min ACO Multidrain MD or similar.
100mm as dug or granular bedding material
Alternative 110mm End Drain Connection Knockout.
635mm
605mm
450mm
110mm Drain Connection Knockout.
100mm as dug or granular bedding material
Alternative 110mm Drain Connection Knockout where increased pipe cover required. (Concrete haunch to be adjusted to accommodate pipe.)
150mm min ST4 concrete bed.

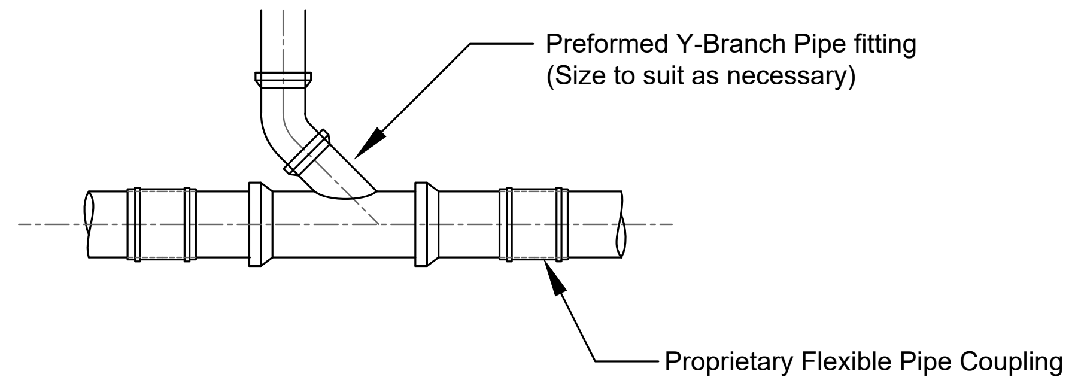
CHANNEL DRAIN SUMP UNIT


Class C Galvanised Metal Grating to BS EN 124: 1994.
100mm min ACO Multidrain MD or similar.
Blocks to be supported laterally by bedding securely on a polymer modified mortar (by Creteplus or similar approved).
Macadam Surfacing run upto Drain. Proprietary bitumen sealant to be used at joint to allow for expansion
Grade ST4 concrete 100 minimum bed and surround for Class A loadings. 150 minimum bed and surround for Class C loadings.
100mm as dug or granular bedding material
100mm as dug or granular bedding material
Sump Drain Connection on 150mm min ST4 Concrete bed (See left)

CHANNEL DRAIN DETAIL


Saw Cut through existing Pipe
Preformed Y-Branch Pipe fitting (Size to suit as necessary)
Proprietary Flexible Pipe Coupling (Flexseal, Bandseal or similar)

Saddle Connections to Existing Sewers


Preformed Y-Branch Pipe fitting (Size to suit as necessary)
Proprietary Flexible Pipe Coupling (Flexseal, Bandseal or similar)

Typical Saddle Connections

No Dimensions are to be scaled from this drawing.

NOTES

1. All dimensions are in millimetres unless specified otherwise.
2. Except for concretes having an equivalent compressive strength of less than 20N/mm2, sulphate-resisting Portland cement shall be used in all cases or consist of a special combination of cement complying with the relevant provisions of BS 12 and ggbs or pfa unless the Developer can satisfy the Engineer that any attack from soils or groundwaters will adequately be resisted by the the use of cement to BS 12.
3. Manhole Types A1, B & C to be used within main carriageways. Access Chambers Type 3 - 4 may be used outside of carriageways and at the head of lateral connections to the adoptable sewers.
4. Lateral Connections made as saddle connections to a main sewer must be made using preformed junction pipes.
5. All private drainage works to comply with current Building Regulations Part H and BS EN 752.
6. Workmanship on site shall accord with the principles of BS8000-14 "Workmanship on Building Sites. Code of Practice for Below Ground Drainage" and general good working practices.
7. Before commencing any sewer or drainage works, the Contractor's ground worker must satisfy themselves, Vistry (South) and the Local Authority of actual levels and conditions of existing sewers.
8. Depth and location of existing services to be traced by the Contractor prior to commencing any drainage excavations.
9. Drainage pipelines to be laid under roads, parking bays and other trafficked areas shall be either:
   a) Vitrified clayware to BS EN295.
   b) Concrete to BS5911 Class M.
10. Buried concrete shall be suitable for Class DS-4 unless testing can be provided to show Icosa that a lower class will resist attack from soils and groundwater in accordance with BRE Special Digest 1.
11. Manholes/Inspection Chambers located within highways or vehicular areas accessible to commercial vehicles shall have a Grade D400 double triangular manhole cover complying with BS EN124 and have a min. clear opening of 600mm. Grade C250 covers may be used for manholes non vehicular areas and all footways and verges. Inspection chambers in footways, pedestrian areas, private drives serving one property and landscaped areas to be provided with B125 covers. Chambers located under trafficked areas to have concrete surround.
12. All private Type 3 - 4 chambers in light vehicular of pedestrian areas to be fitted with inset covers of appropriate loading class where located in paved areas.
13. Covers/Inspection chambers must not be located directly outside doors.
14. Where private manholes and catchpits are constructed using precast concrete circular rings, they are to be constructed to BS 5911-200 and generally in accordance with Appendix C of the Sewerage Sector Guidance.
15. All abandoned, buried obstructions encountered during the construction of Highway & Drainage Works are to be broken out to bed level of drains and sewers, and to the formation of car parks and drives etc., and to sufficient depth to allow for laying service company's mains and services.
16. On sites where the risk of 'landfill' gas migration has been identified, all drainage entries under buildings should be sealed with a clay stank, comprising 1.0m length of clean 'puddle' clay bed, surround and backfill to pipe trench.
17. Drainage depths have been kept to a minimum where possible, however, depths in excess of 2m can not be avoided. Excavations to be carried out in accordance with HSE document HSG150 'Health and Safety in Construction'.

REVISIONS

P1	Preliminary Issue.	24/06/22
T1	Tender Issue.	30/06/22
C1	Construction Issue.	06/12/22

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Certificate No. GB2005412

PROJECT
**HOOK LANE, PAGHAM,
WEST SUSSEX**

CLIENT
Bovis Homes
Linden HOMES
Part of the Vistry Group

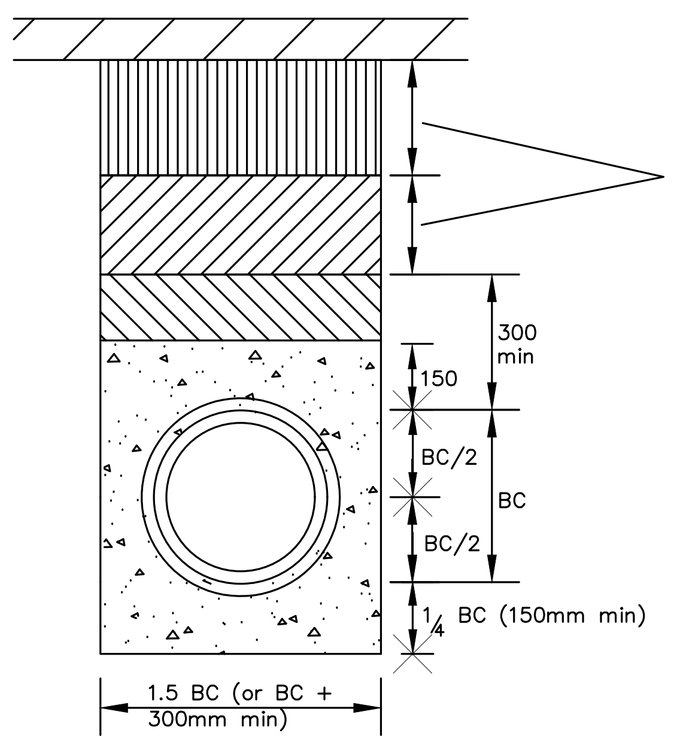
DRAWING TITLE
**DRAINAGE
CONSTRUCTION DETAILS
Sheet 2**

SCALE	DATE	INIT	CHKD
NTS	05/22	me	cb

STATUS
CONSTRUCTION

DRG NO
22-012/601

REVISION
C1



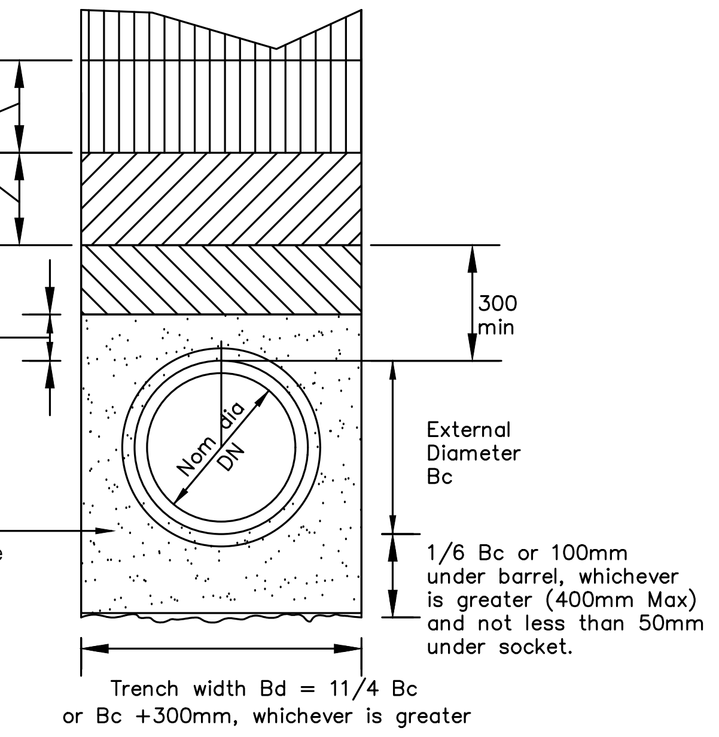
Layers not exceeding 225mm uncompacted thickness

Concrete Bed and Surround. TYPE-AS

Pipes under carriageway or footways with less than 1.2m cover and also road gully connecting pipes.

1/6 Bc or 100mm over barrel, whichever is greater (400mm Max) and not less than 50mm over socket.

14mm nominal single sized granular bedding material (in accordance with the recommendations of IGN No. 4-08-01). Geotextile fabric to be wrapped around bedding in water-logged ground.

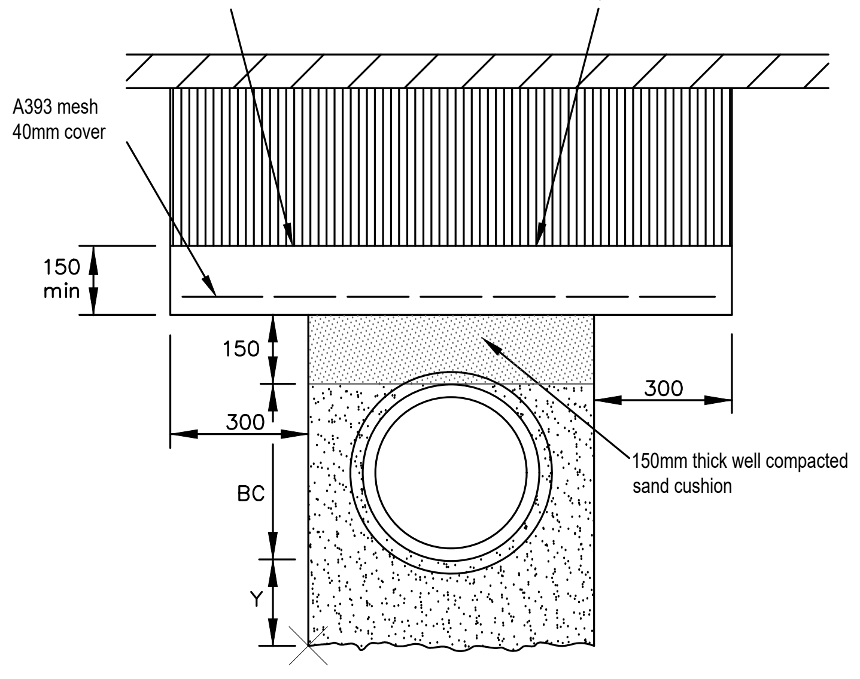

Nom dia
DN
300
min
External
Diameter
Bc
1/6 Bc or 100mm under barrel, whichever is greater (400mm Max) and not less than 50mm under socket.
Trench width Bd = 11/4 Bc or Bc +300mm, whichever is greater

Class S granular surround, Bedding factor 2.2
(Cover to pipe 1.2m or greater)

C20 concrete slab 20mm thick compressible board expansion joints to be provided at 6m centres

1200g Polythene where road reinstatement lies straight on protection slab

A393 mesh 40mm cover



150mm thick well compacted sand cushion

Concrete Protection Slab

To be used where cover is less than 1.2m under roads, hardstandings etc. and less than 0.9m under fields

BEDDING & BACKFILLING DETAILS

▥	Approved BACKFILL material compacted in layers not exceeding 225mm uncompacted thickness
▨	Backfill to trench beneath highway to be DoT limestone type 1 material compacted in layers not exceeding 225mm uncompacted thickness. OR Approved BACKFILL material hand packed (A light mechanical rammer may be used) in layers not exceeding 225mm uncompacted thickness.
▧	Selected FILL Type 'B' hand packed to 300mm min above crown of pipe in layers not exceeding 150mm. No mechanical ramming.
▫	Grade C20P Concrete
░	Granular Bedding Type A 14mm single size stone or gravel (in accordance with the recommendations of WIs No. 4-08-01). Geotextile fabric to be wrapped around bedding in water-logged ground.

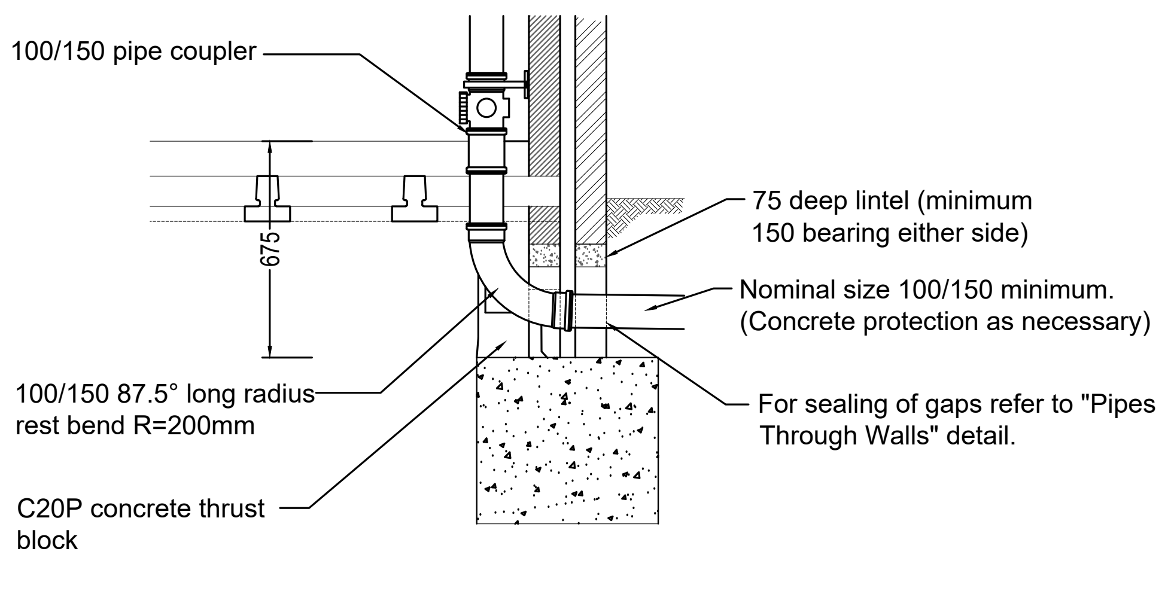
Y= 1/6 Bc or 100mm under pipe barrels whichever is the greater (but not less than 50mm under sockets)

N.B:Where rock is found at the base of the trench this dimension is to be increased to 1/4 Bc and 150mm min under sockets (400mm max)

BC= Outside diameter of pipe.

BEDDING/ BACKFILL NOTES

1. As dug materials may not be used for bedding or sidefill on land contaminated by domestic building or industrial waste.
2. Imported air cooled blast furnace slag and pulverised fuel ash are not to be used with ductile iron or steel pipelines.
3. Sulphate content of bedding/ backfill material not to exceed 0.3% when expressed as sulphur trioxide.
4. Backfill material under all Adoptable carriageways, footways and existing Public Highway shall be DoT limestone Type 1 material in accordance with the Local Authority specification.
Backfilling to all trenches within 1m of an adoptable highway hard surface to be DoT limestone type 1 material.



100/150 pipe coupler

75 deep lintel (minimum 150 bearing either side)

Nominal size 100/150 minimum. (Concrete protection as necessary)

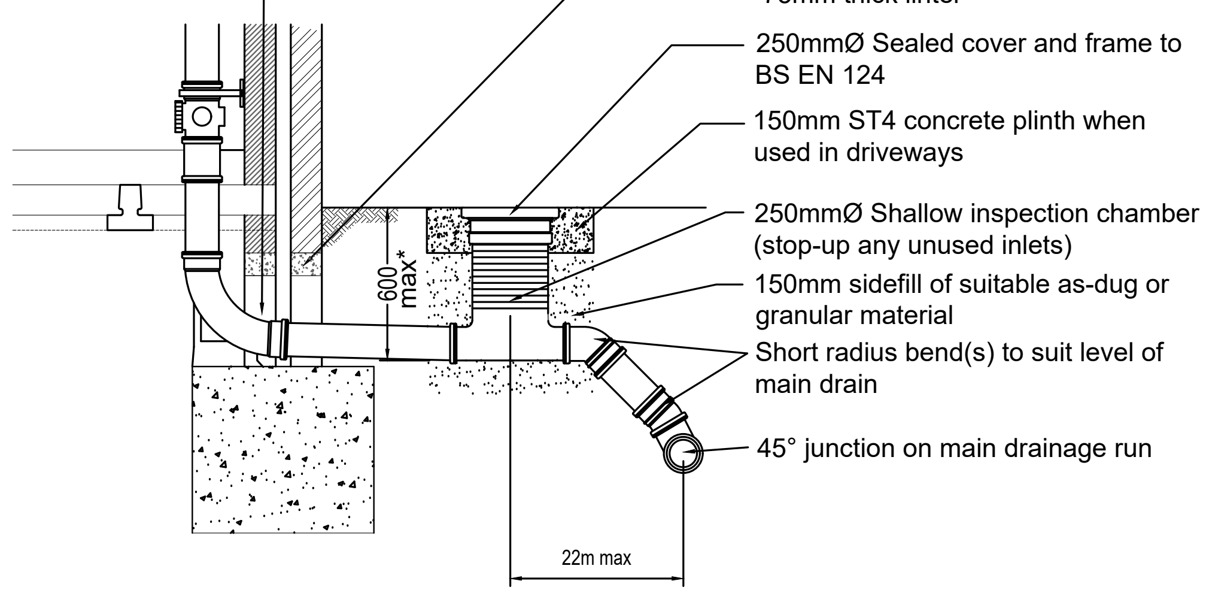
100/150 87.5° long radius rest bend R=200mm

For sealing of gaps refer to "Pipes Through Walls" detail.

C20P concrete thrust block

Universal Internal Discharge Stack & Ground Beam/Foundation Arrangement

For sealing of gaps refer to "Pipes Through Walls" detail.



75mm thick lintel

250mmØ Sealed cover and frame to BS EN 124

150mm ST4 concrete plinth when used in driveways

250mmØ Shallow inspection chamber (stop-up any unused inlets)

150mm sidefill of suitable as-dug or granular material

Short radius bend(s) to suit level of main drain

45° junction on main drainage run

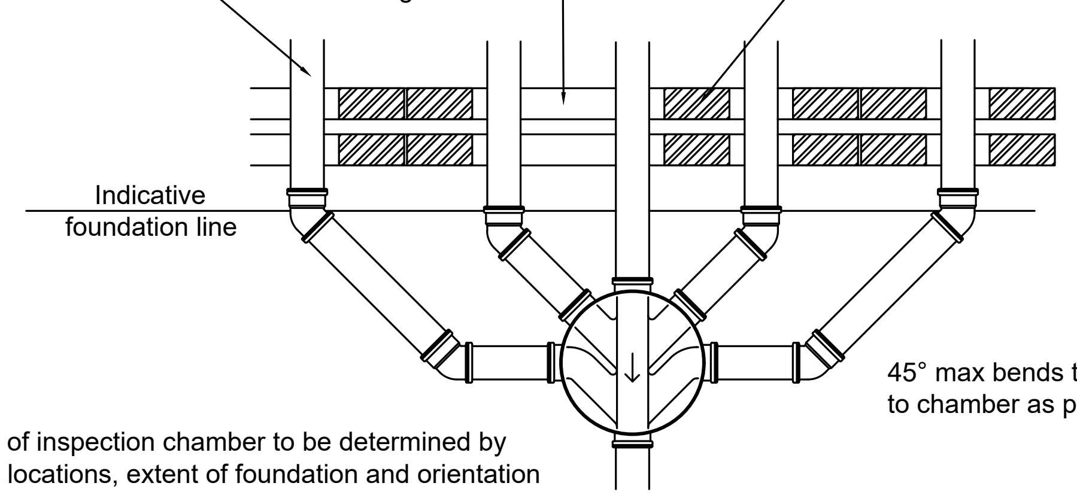
Shallow Inspection Chamber

For use in soft or pedestrian areas only
(Similar detail for use with 450Ø I.C.'s where necessary at heads of drain runs)

Drainage to exit the building perpendicular where possible

650 maximum clear opening unless otherwise agreed with Structural Engineer

Min 1 brick long supports to lintel (no cut bricks)



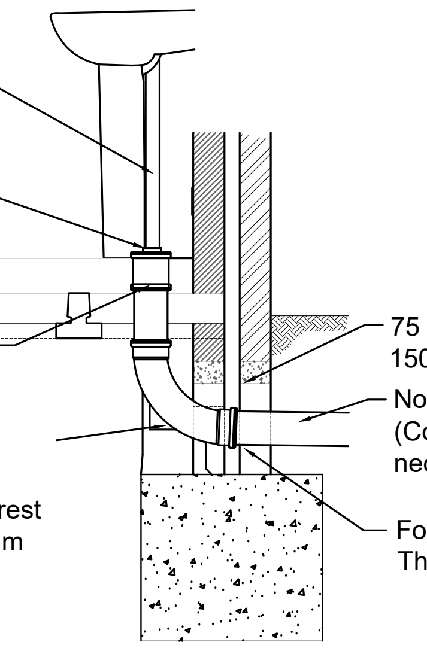
Indicative foundation line

45° max bends to be as close to chamber as possible.

Final location of inspection chamber to be determined by internal stack locations, extent of foundation and orientation of outfall drain. Typically 500 min off external face of brickwork or as shown on Drainage Layout.

Universal Inspection Chamber - Full Usage Detail

To indicate lintel support requirements / typical drainage arrangement
(Inlet/Outlet & 4 branch connections for 100Ø pipes)
(Inlet/Outlet & 2 branch connections for 150Ø pipes)



32/40 waste pipe

100 socket plug with boss socket adaptor

100 pipe coupler

100Ø 87.5° short radius bend upto 3 storeys
100Ø 87.5° long radius rest bend R=200mm minimum for 4 storeys

75 deep lintel (minimum 150 bearing either side)

Nominal size 100 minimum. (Concrete protection as necessary.)

For sealing of gaps refer to "Pipes Through Walls" detail.

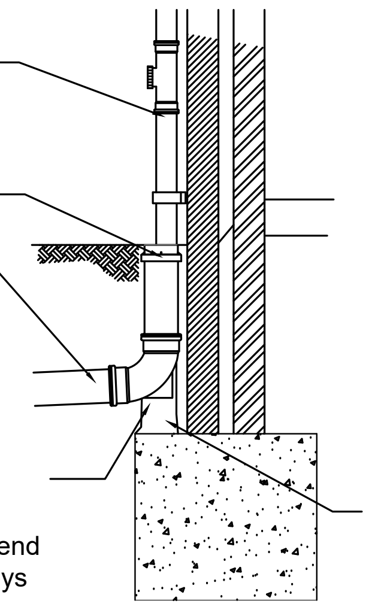
Internal Waste Pipe Connection

(Direct Connections, Floor Sockets, Floor Gullies etc.)

Downpipe from suspended drainage or Rainwater pipe to Architect/ M&E Consultants detail

Rainwater adaptor (if required)

Nominal size 100/150 minimum. (Concrete protection as necessary.)



100/150 87.5° short radius bend upto 3 storeys
100/150 87.5° long radius rest bend R=200mm minimum for >3 storeys

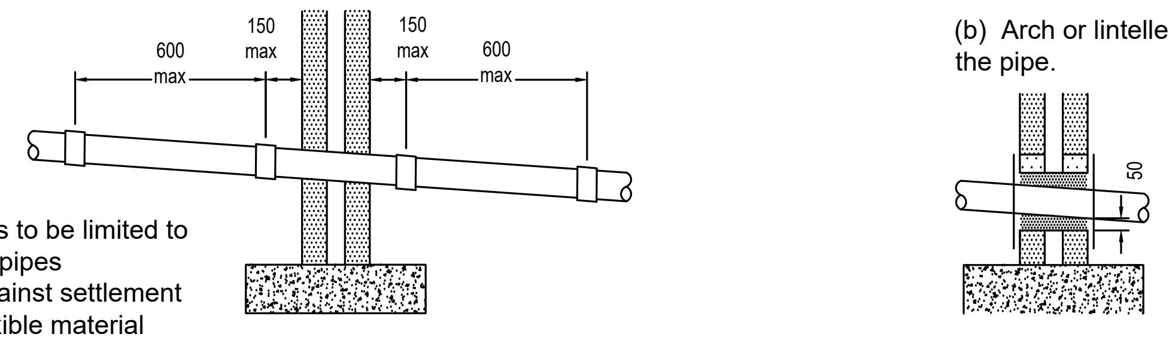
C20P concrete thrust block

External Rainwater Downpipe (RWP) to Drain

Note: Invert Level of rest bend to be 450 nom below external finished ground level but may be increased to avoid pipe clashes with adjacent foul drains/I.C.'s exiting buildings above the ground beam.

(a) Short length of pipe bedded in wall, joints fromed within 150 of either wallface. Adjacent rocker pipes of max. length 600 with flexible joints.

(b) Arch or lintelled opening to give 50 space all round the pipe.



Pipe Joints beneath floors to be limited to minimum necessary and pipes adequately supported against settlement with 100mm granular/flexible material around the pipe.

Mask opening both sides with rigid sheet material to prevent entry of fill or vermin.

Important: Fill void with compressible sealant to prevent entry of gas.

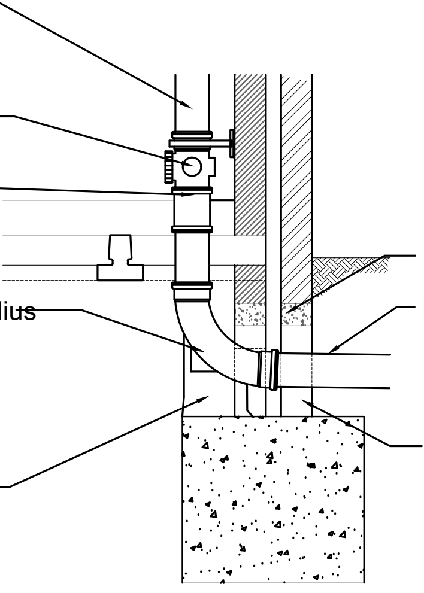
Built In

Lintel Opening

Pipes Through Walls

(Building Regs Part H1 - Diagram 7)

Lowest Branch Connection to be:
a. 450mm above reset bend for buildings up to 3 storeys
b. 750mm for 4-5 storeys.
c. Buildings over 5 storeys to have seperate Ground Floor Discharge Pipes.



82/100/150 SVP or 50/82/100/150 stub stack

100/150 access pipe

100/150 pipe coupler and socket reducer as required.

100/150Ø 87.5° long radius rest bend R=200mm minimum for 4 storeys

C20P concrete thrust block

75mm deep lintel

Nominal size 100/150 minimum. (Concrete protection as necessary.)

For sealing of gaps, refer to "Pipes through walls" detail

Soil and Vent Pipe/Stub Stack Connection

No Dimensions are to be scaled from this drawing.

NOTES

1. All dimensions are in millimetres unless specified otherwise.
2. Except for concretes having an equivalent compressive strength of less than 20N/mm2, sulphate-resisting Portland cement shall be used in all cases or consist of a special combination of cement complying with the relevant provisions of BS 12 and ggbs or pfa unless the Developer can satisfy the Engineer that any attack from soils or groundwaters will adequately be resisted by the the use of cement to BS 12.
3. Manhole Types A1, B & C to be used within main carriageways. Access Chambers Type 3 - 4 may be used outside of carriageways and at the head of lateral connections to the adoptable sewers.
4. Lateral Connections made as saddle connections to a main sewer must be made using preformed junction pipes.
5. All private drainage works to comply with current Building Regulations Part H and BS EN 752.
6. Workmanship on site shall accord with the principles of BS8000-14 "Workmanship on Building Sites. Code of Practice for Below Ground Drainage" and general good working practices.
7. Before commencing any sewer or drainage works, the Contractor's ground worker must satisfy themselves, Vistry (South) and the Local Authority of actual levels and conditions of existing sewers.
8. Depth and location of existing services to be traced by the Contractor prior to commencing any drainage excavations.
9. Drainage pipelines to be laid under roads, parking bays and other trafficked areas shall be either:
a) Vitrified clayware to BS EN295.
b) Concrete to BS5911 Class M.
10. Buried concrete shall be suitable for Class DS-4 unless testing can be provided to show Icosa that a lower class will resist attack from soils and groundwater in accordance with BRE Special Digest 1.
11. Manholes/Inspection Chambers located within highways or vehicular areas accessible to commercial vehicles shall have a Grade D400 double triangular manhole cover complying with BS EN124 and have a min. clear opening of 600mm. Grade C250 covers may be used for manholes non vehicular areas and all footways and verges. Inspection chambers in footways, pedestrian areas, private drives serving one property and landscaped areas to be provided with B125 covers. Chambers located under trafficked areas to have concrete surround.
12. All private Type 3 - 4 chambers in light vehicular of pedestrian areas to be fitted with inset covers of appropriate loading class where located in paved areas.
13. Covers/Inspection chambers must not be located directly outside doors.
14. Where private manholes and catchpits are constructed using precast concrete circular rings, they are to be constructed to BS 5911-200 and generally in accordance with Appendix C of the Sewerage Sector Guidance.
15. All abandoned, buried obstructions encountered during the construction of Highway & Drainage Works are to be broken out to bed level of drains and sewers, and to the formation of car parks and drives etc., and to sufficient depth to allow for laying service company's mains and services.
16. On sites where the risk of 'landfill' gas migration has been identified, all drainage entries under buildings should be sealed with a clay stank, comprising 1.0m length of clean 'puddle' clay bed, surround and backfill to pipe trench.
17. Drainage depths have been kept to a minimum where possible, however, depths in excess of 2m can not be avoided. Excavations to be carried out in accordance with HSE document HSG150 'Health and Safety in Construction'.

REVISIONS

P1	Preliminary Issue.	24/06/22
T1	Tender Issue.	30/06/22
C1	Construction Issue.	06/12/22

WITHERS
DESIGN ASSOCIATES
CIVIL ENGINEERING & INFRASTRUCTURE DESIGN
Unit 12, Wakes Hall Business Centre
Wakes Colne, Colchester, Essex
CO6 2DY
01206 247081
ISO 9001
Certificate No. GB2005412

PROJECT
**HOOK LANE, PAGHAM,
WEST SUSSEX**

CLIENT
Bovis Homes
Linden HOMES
Part of the Vistry Group

DRAWING TITLE
**DRAINAGE
CONSTRUCTION DETAILS
Sheet 3**

SCALE	DATE	INIT	CHKD
NTS	05/22	me	cb

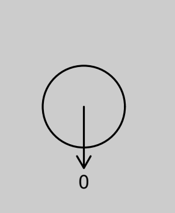
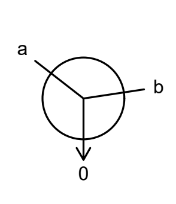
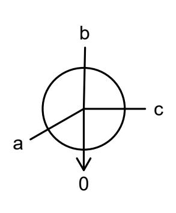
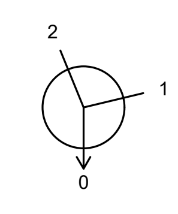
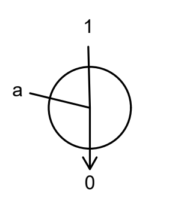
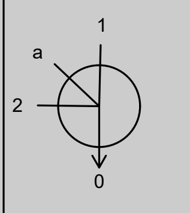
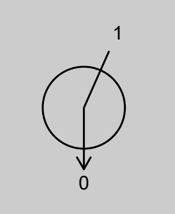
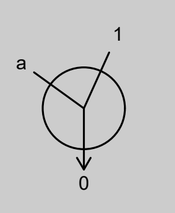
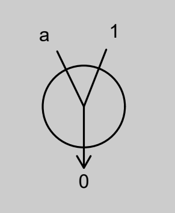
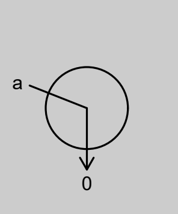
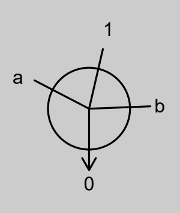
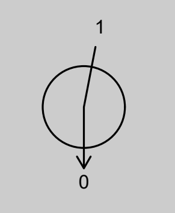
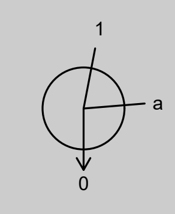
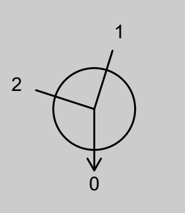
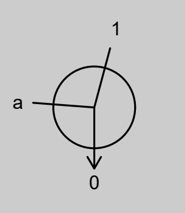
STATUS
CONSTRUCTION

DRG NO
22-012/602

REVISION
C1

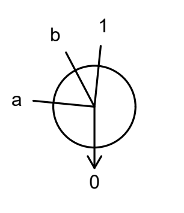
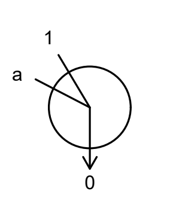
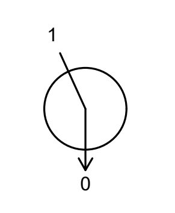
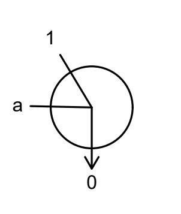
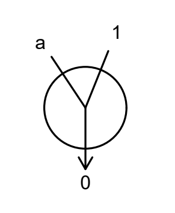
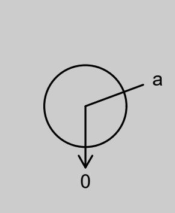
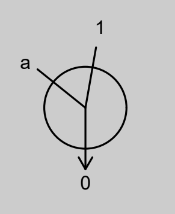
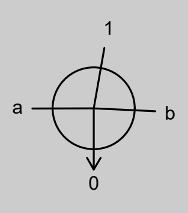
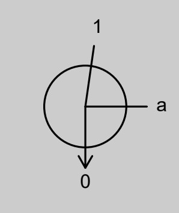
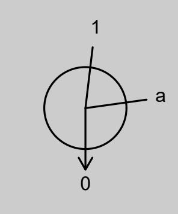
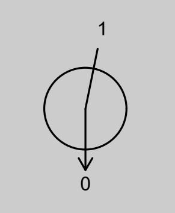
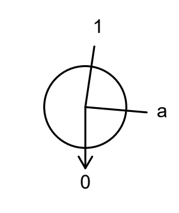
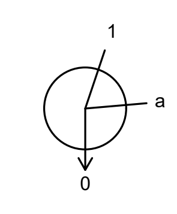
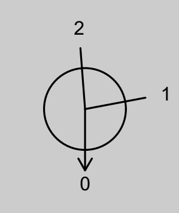
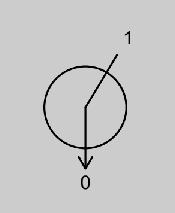
SURFACE WATER MANHOLE SCHEDULE

Sheet 1 of 3

Manhole Number Coordinates	Cover Level Depth To Soffit	Connections	Pipe Code		Inverts	Diams Inv-soff	Manhole Size	Types Manhole	Cover
S201 E. 489645.827 N. 99225.166	7.129 1.811		0	1.000	5.018	300	1200	B	D400
S202 E. 489731.896 N. 99209.796	6.610 0.973		a b 0	 3.000	5.537 5.537 5.412	100 100 225	1200 x 900	C	D400
S203 E. 489699.736 N. 99200.487	6.380 0.920		a b c 0	Gully Gully 2.000	5.310 5.360 5.310 5.235	150 100 150 225	1200 x 900	C	D400
S204 E. 489716.612 N. 99218.053	6.500 1.185		1 2 0	2.000 3.000 2.001	5.090 5.090 4.790	225 225 525	1200 x 975	C	D400
S205 E. 489695.454 N. 99244.830	6.855 1.708		1 a 0	2.001 2.002	4.625 5.030 4.802	525 150 525	1500	B	D400
S206 E. 489687.454 N. 99255.517	6.669 1.566		1 2 a 0	1.000 2.002 1.001	4.803 4.578 4.953 4.503	300 525 150 600	1500	B	D400
S207 E. 489705.775 N. 99269.608	6.724 1.693		1 0	1.001 1.002	4.431 4.431	600 600	1500	B	D400
S208 E. 489717.125 N. 99290.543	6.499 1.542		1 a 0	1.002 1.003	4.357 4.807 4.357	600 150 600	1500	B	D400
S209 E. 489718.552 N. 99309.682	6.406 1.497		1 a 0	1.003 1.004	4.309 4.759 4.309	600 150 600	1500	C	D400
S210 E. 489803.176 N. 99321.958	6.503 1.006		a 0	 4.000	5.347 5.197	150 300	1200 x 900	C	D400
S211 E. 489784.671 N. 99328.121	6.760 1.344		1 a b 0	4.000 4.001	5.116 5.266 5.266 5.116	300 150 150 300	1350	C	D400
S212 E. 489755.371 N. 99330.847	6.646 1.353		1 0	4.001 4.002	4.993 4.993	300 300	1350	C	D400
S213 E. 489733.238 N. 99328.702	6.422 1.222		1 a 0	4.002 4.003	4.900 5.050 4.750	300 150 450	1350	C	D400
S214 E. 489714.411 N. 99323.155	6.390 1.516		1 2 0	1.004 4.003 1.005	4.274 4.424 4.124	600 450 750	1800	B	D400
S215 E. 489705.219 N. 99336.550	6.542 1.601		1 a 0	1.005 1.006	4.090 4.690 4.090	750 150 750	1800	B	D400

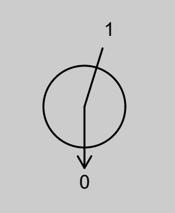
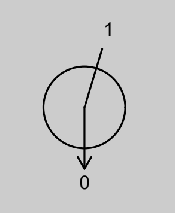
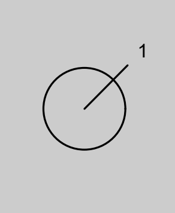
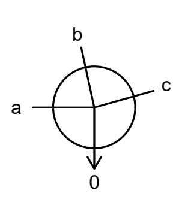
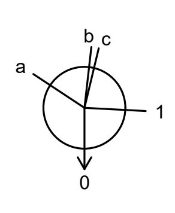
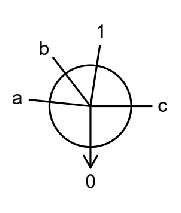
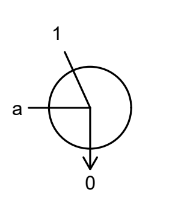
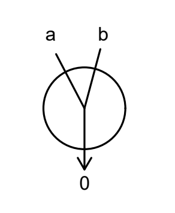
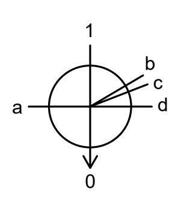
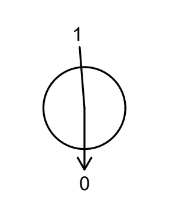
SURFACE WATER MANHOLE SCHEDULE

Sheet 2 of 3

Manhole Number Coordinates	Cover Level Depth To Soffit	Connections	Pipe Code		Inverts	Diams Inv-soff	Manhole Size	Types Manhole	Cover
S216 E. 489681.732 N. 99356.570	6.693 1.917		1 a b 0	1.006 Gully 1.007	4.026 4.626 4.626 4.026	750 150 150 750	1800	B	D400
S217 E. 489653.888 N. 99375.854	6.389 1.684		1 a 0	1.007 1.008	3.955 4.555 3.955	750 150 750	1800	B	D400
S218 E. 489648.780 N. 99387.078	6.253 1.574		1 0	1.008 1.009	3.929 3.929	750 750	1800	B	D400
S219 E. 489648.727 N. 99401.422	6.085 1.436		1 a 0	1.009 1.010	3.899 4.499 3.899	750 150 750	1800	C	D400
S220 E. 489670.676 N. 99438.236	6.200 1.640		1 a 0	1.010 1.011	3.810 4.410 3.810	750 150 750	1800	B	D400
S221 E. 489758.687 N. 99357.044	6.873 1.214		a 0	 5.000	5.509 5.484	150 225	1350	C	D400
S222 E. 489758.006 N. 99376.722	7.056 1.465		1 a 0	5.000 5.001	5.366 5.441 5.291	225 150 300	1350	C	D400
S223 E. 489754.587 N. 99393.033	6.941 1.450		1 a b 0	5.001 5.002	5.191 5.341 5.341 5.116	300 150 150 375	1350	C	D400
S224 E. 489748.181 N. 99409.091	6.771 1.625		1 a 0	5.002 5.003	5.044 5.269 4.969	375 150 450	1350	C	D400
S225 E. 489743.147 N. 99417.898	6.671 1.594		1 a 0	5.003 5.004	4.627 5.227 4.627	450 150 450	1350	C	D400
S226 E. 489735.639 N. 99428.051	6.545 1.524		1 0	5.004 5.005	4.571 4.571	450 450	1350	C	D400
S227 E. 489719.284 N. 99442.844	6.225 1.349		1 a 0	5.005 5.006	4.426 4.726 4.426	450 150 450	1350	C	D400
S228 E. 489688.021 N. 99463.765	5.747 1.200		1 a 0	5.006 5.007	4.097 4.497 4.097	450 150 450	1350	C	D400
S229 E. 489675.289 N. 99467.243	5.396 0.900		1 2 0	1.011 5.007 1.012	3.746 4.056 3.671	750 450 825	1800 x 1275	C	D400
S230 E. 489632.639 N. 99482.494	5.314 0.900		1 0	1.012 1.013	3.589 3.589	825 825	1800 x 1275	C	D400

SURFACE WATER MANHOLE SCHEDULE

Sheet 3 of 3

Manhole Number Coordinates	Cover Level Depth To Soffit	Connections	Pipe Code		Inverts	Diams Inv-soff	Manhole Size	Types Manhole	Cover
S231 E. 489625.276 N. 99481.022	4.955 0.555		1 0	1.013 1.014	3.575 3.575	825 825	Headwall		
S232 E. 489553.199 N. 99441.901	4.955 0.705		1 0	1.014 1.015	3.425 3.425	825 300	1800 x 1275	C	D400
S234 E. 489537.149 N. 99425.684	4.705 1.075		1	1.015	3.330	300	Headwall		
S235 E. 489745.239 N. 99252.862	6.800 0.870		a b c 0	 Gully 6.000	5.780 5.780 5.830 5.780	150 150 100 150	1200	C	D400
S236 E. 489756.292 N. 99274.554	6.850 1.080		1 a b c 0	6.000 Gully 6.001	5.620 5.670 5.620 5.670 5.620	150 100 150 100 150	1200	C	D400
S237 E. 489743.615 N. 99280.226	6.850 1.180		1 a b c 0	6.001 Yard Gully 6.002	5.520 5.570 5.570 5.570 5.520	150 100 100 100 150	1200	C	D400
S238 E. 489722.495 N. 99286.008	6.600 1.730		1 a 0	6.002 6.003	4.870 4.920 4.870	150 100 150	1200	B	D400
S239 E. 489706.438 N. 99391.710	6.460 1.200		a b 0	 Gully 7.000	5.160 5.110 5.110	100 150 150	1200	C	D400
S240 E. 489698.878 N. 99380.503	6.350 1.200		1 a b c d 0	7.000 Gully Gully 7.001	5.000 5.050 5.000 5.000 5.050 5.000	150 100 150 150 100 150	1200	C	D400
S241 E. 489688.267 N. 99364.770	6.780 1.790		1 0	7.001 7.002	4.840 4.840	150 150	1200	B	D400

▨ GREY HATCH DENOTES DRAINAGE DESIGN BY BROOKBANKS CONSULTING LIMITED. DATA SHOWN FOR INFORMATION ONLY. REFERENCE SHOULD BE MADE TO BROOKBANKS DRAWINGS FOR CONSTRUCTION.

No Dimensions are to be scaled from this drawing.

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6. Chamber types and depths are based on SSG standard details and Osma Wavin products. All chambers are designed to be Non Man Entry.
7. References 'a', 'b' etc denote private lateral or gully connections.

REVISIONS

P1	Preliminary Issue.	24/06/22
T1	Tender Issue.	30/06/22
T2	Manhole information updated to reflect Brookbanks design update.	15/08/22
T3	Manhole information updated to reflect Brookbanks design update.	11/11/22
C1	Construction Issue.	06/12/22
C2	Manhole information added to reflect new S104 Adoption extent.	16/02/23

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PROJECT
**HOOK LANE, PAGHAM,
WEST SUSSEX**

CLIENT
Bovis Homes
Linden HOMES
Part of the Vistry Group

DRAWING TITLE
**PRIVATE SURFACE WATER
MANHOLE SCHEDULES
Sheet 1 of 2**

SCALE	DATE	INIT	CHKD
NTS	05/22	cb	mw

STATUS
CONSTRUCTION

DRG NO	REVISION
22-012/650	C2

SURFACE WATER MANHOLE SCHEDULE

Private Plot Connections

Chamber Number	Cover Level	Invert Level	Depth to Invert	Easting	Northing	Min. Chamber Dia
s1	6.65	6.12	0.53	489715.944	99157.722	450 Chamber
s2	6.55	5.94	0.61	489703.868	99164.498	450 Chamber
s3	6.80	5.79	1.01	489710.829	99174.776	450 Chamber
s4	6.45	5.85	0.60	489668.974	99188.003	450 Chamber
s5	6.70	6.05	0.65	489677.808	99203.616	450 Chamber
s6	6.45	5.70	0.75	489678.282	99195.814	450 Chamber
s7	6.50	5.54	0.96	489686.913	99185.530	450 Chamber
s8	6.45	5.36	1.09	489696.531	99196.594	450 Chamber
s9	6.60	5.81	0.79	489742.559	99198.593	450 Chamber
s10	6.55	5.75	0.80	489722.313	99194.367	450 Chamber
s12	6.73	5.99	0.74	489704.691	99228.839	450 Chamber
s13	6.575	5.84	0.74	489712.866	99219.946	450 Chamber
s14	6.50	5.71	0.79	489720.247	99212.866	450 Chamber
s15	6.58	5.56	1.02	489730.395	99206.399	450 Chamber
s16	6.55	5.76	0.79	489745.599	99206.592	450 Chamber
s17	6.70	5.96	0.74	489712.608	99233.602	450 Chamber
s18	6.56	5.86	0.70	489732.425	99228.186	450 Chamber
s19	6.48	5.73	0.75	489725.130	99219.707	450 Chamber
s20	6.66	5.56	1.10	489736.750	99212.122	450 Chamber
s21	7.30	6.34	0.96	489646.256	99217.442	450 Chamber
s22	7.08	6.33	0.75	489661.647	99215.087	450 Chamber
s23	7.17	6.19	0.98	489655.184	99223.951	450 Chamber
s24	6.97	6.22	0.75	489671.947	99227.585	450 Chamber
s25	7.05	6.00	1.05	489667.858	99233.193	450 Chamber
s26	7.00	6.35	0.65	489680.390	99220.048	450 Chamber
s27	6.80	6.05	0.75	489684.904	99230.291	450 Chamber
s28	6.85	5.85	1.00	489677.607	99240.300	450 Chamber
s29	6.80	6.05	0.75	489694.806	99237.054	450 Chamber
s30	6.80	5.90	0.90	489688.344	99245.918	450 Chamber
s31	6.60	5.04	1.56	489686.545	99246.817	450 Deep Chamber
s32	6.72	5.97	0.75	489707.524	99255.432	450 Chamber
s33	6.80	5.90	0.90	489704.188	99259.863	450 Chamber
s34	6.85	5.77	1.08	489696.052	99253.738	450 Chamber
s35	6.75	6.07	0.68	489712.074	99244.839	450 Chamber
s36	6.81	5.61	1.20	489703.093	99244.187	450 Chamber
s37	6.75	5.25	1.50	489700.878	99247.129	450 Deep Chamber
s38	6.63	5.85	0.78	489768.773	99264.996	450 Chamber
s39	6.80	6.10	0.70	489764.776	99242.908	450 Chamber
s40	6.80	5.85	0.95	489754.996	99247.891	450 Chamber
s42	6.80	6.04	0.76	489780.281	99271.400	450 Chamber
s43	6.95	5.80	1.15	489762.622	99278.573	450 Chamber
s45	6.82	5.90	0.92	489741.050	99270.858	450 Chamber
s46	7.00	6.01	0.99	489747.689	99281.889	450 Chamber
s48	6.85	5.74	1.11	489714.015	99270.410	450 Chamber
s49	6.60	5.58	1.02	489720.640	99281.294	450 Chamber
s50	6.60	5.55	1.05	489722.932	99281.388	450 Chamber
s51	6.55	5.10	1.45	489723.979	99287.770	450 Chamber
s53	6.52	5.77	0.75	489733.324	99298.658	450 Chamber
s54	6.55	5.05	1.50	489726.688	99303.489	450 Deep Chamber
s55	6.55	4.86	1.69	489725.563	99302.096	450 Deep Chamber
s56	6.75	5.78	0.97	489749.296	99322.991	450 Chamber
s57	6.36	5.61	0.75	489736.662	99312.923	450 Chamber
s58	6.60	5.10	1.50	489735.880	99321.865	450 Deep Chamber
s59	6.725	5.975	0.75	489763.909	99313.792	450 Chamber
s60	6.93	5.84	1.09	489766.012	99324.145	450 Chamber
s61	6.80	6.05	0.75	489774.287	99313.347	450 Chamber
s62	6.97	5.70	1.27	489776.625	99323.021	450 Deep Chamber
s63	6.65	5.90	0.75	489786.900	99312.285	450 Chamber
s64	6.85	5.68	1.17	489787.374	99320.550	450 Chamber
s65	6.92	5.36	1.56	489784.308	99321.267	450 Deep Chamber
s66	6.77	5.94	0.83	489819.506	99352.884	450 Chamber
s67	6.60	5.62	0.98	489812.368	99330.889	450 Chamber
s69	6.65	5.88	0.77	489797.366	99333.244	450 Deep Chamber
s70	6.85	6.15	0.70	489763.530	99340.313	450 Chamber
s71	6.82	6.07	0.75	489779.155	99344.901	450 Chamber
s72	6.85	5.95	0.90	489778.069	99338.020	450 Chamber
s73	6.85	5.65	1.20	489790.895	99335.995	450 Chamber
s74	6.85	5.36	1.49	489789.654	99336.191	450 Deep Chamber
s75	6.35	6.02	0.33	489819.882	99360.016	450 Chamber
s76	6.35	5.85	0.50	489806.042	99360.016	450 Chamber
s77	6.30	5.85	0.45	489804.514	99381.592	450 Chamber
s78	6.48	5.76	0.72	489804.514	99374.114	450 Chamber
s79	7.00	6.30	0.70	489765.202	99356.678	450 Chamber
s80	6.95	5.49	1.46	489762.672	99374.345	450 Deep Chamber
s81	6.75	5.83	0.92	489787.799	99389.576	450 Chamber
s82	6.75	5.75	1.00	489787.799	99396.339	450 Chamber
s83	6.85	6.00	0.85	489772.006	99388.263	450 Chamber
s84	6.75	5.56	1.19	489772.006	99396.341	450 Chamber
s85	7.05	5.45	1.60	489762.874	99396.340	450 Deep Chamber
s86	7.10	5.40	1.70	489758.742	99394.702	450 Deep Chamber
s87	6.65	6.10	0.55	489739.389	99338.942	450 Chamber
s88	6.575	5.92	0.66	489738.605	99353.892	450 Chamber
s89	7.07	6.11	0.96	489747.475	99360.823	450 Chamber
s90	7.00	5.75	1.25	489752.899	99354.641	450 Deep Chamber
s91	7.10	6.50	0.60	489742.482	99375.289	450 Chamber
s92	7.025	6.28	0.75	489744.985	99377.632	450 Chamber
s93	7.05	6.18	0.87	489751.112	99378.917	450 Chamber
s94	6.75	5.40	1.35	489748.927	99391.086	450 Deep Chamber
s95	6.75	6.00	0.75	489735.709	99396.387	450 Chamber
s96	6.75	6.00	0.75	489731.725	99402.513	450 Chamber
s97	6.75	5.95	0.80	489733.401	99399.935	450 Chamber
s98	6.82	5.30	1.52	489742.767	99405.997	450 Deep Chamber
s99	6.75	6.02	0.73	489735.655	99415.188	450 Chamber
s100	6.85	5.30	1.55	489738.087	99412.940	450 Deep Chamber

SURFACE WATER MANHOLE SCHEDULE

Private Plot Connections

Chamber Number	Cover Level	Invert Level	Depth to Invert	Easting	Northing	Min. Chamber Dia
s101	6.45	5.70	0.75	489716.759	99386.704	450 Chamber
s102	6.45	5.73	0.72	489716.418	99363.938	450 Chamber
s103	6.45	5.57	0.88	489706.098	99370.899	450 Chamber
s104	6.45	5.49	0.96	489708.293	99374.153	450 Chamber
s105	6.60	5.61	0.99	489712.872	99408.303	450 Chamber
s106	6.45	5.48	0.97	489707.374	99400.152	450 Chamber
s107	6.45	5.68	0.77	489701.340	99391.199	450 Chamber
s108	6.35	5.40	0.95	489695.615	99382.704	450 Chamber
s111	6.60	5.72	0.88	489699.029	99347.321	450 Chamber
s112	6.50	5.90	0.60	489727.528	99338.654	450 Chamber
s113	6.55	5.78	0.77	489726.532	99348.037	450 Chamber
s114	6.45	5.63	0.82	489714.525	99348.828	450 Chamber
s115	6.57	4.71	1.86	489707.984	99339.336	450 Deep Chamber
s116	6.80	5.90	0.90	489681.339	99362.018	450 Chamber
s117	6.60	5.90	0.70	489676.228	99379.064	450 Chamber
s118	6.75	5.72	1.03	489669.924	99369.717	450 Chamber
s119	6.60	5.91	0.69	489679.477	99386.563	450 Chamber
s120	6.60	5.77	0.83	489668.602	99386.217	450 Chamber
s121	6.57	5.29	1.28	489661.269	99375.469	450 Deep Chamber
s122	6.25	4.76	1.49	489652.972	99398.768	450 Deep Chamber
s123	6.10	5.35	0.75	489669.597	99410.287	450 Chamber
s124	6.05	5.24	0.81	489662.120	99414.959	450 Chamber
s125	6.05	5.49	0.56	489677.174	99418.706	450 Chamber
s126	6.20	5.45	0.75	489678.951	99420.976	450 Chamber
s127	6.15	5.05	1.10	489670.173	99427.846	450 Chamber
s128	6.20	4.73	1.47	489672.010	99435.303	450 Deep Chamber
s129	6.20	5.50	0.70	489701.457	99433.257	450 Chamber
s130	6.10	5.33	0.77	489699.095	99437.998	450 Chamber
s131	6.20	5.20	1.00	489706.061	99446.677	450 Chamber
s132	6.18	5.30	0.88	489689.231	99446.782	450 Chamber
s133	6.24	5.04	1.20	489695.774	99454.934	450 Chamber
s134	6.14	4.62	1.52	489687.578	99461.318	450 Chamber
s135	6.20	5.60	0.60	489710.839	99430.848	450 Chamber
s136	6.35	5.55	0.80	489714.119	99428.215	450 Chamber
s137	6.45	5.42	1.03	489720.286	99435.899	450 Chamber
s138	6.30	5.05	1.25	489716.858	99439.818	450 Deep Chamber
s139	6.70	5.41	1.29	489810.061	99330.531	450 Deep Chamber
s140	6.75	5.95	0.80	489748.153	99234.460	450 Chamber
s141	6.75	6.00	0.75	489766.009	99259.341	450 Chamber

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7. References 'a', 'b' etc denote private lateral or gully connections.

REVISIONS

P1	Preliminary Issue.	24/06/22
T1	Tender Issue.	30/06/22
T2	Chamber and laterals updated to tie-in to Brookbanks design update. Sales area drainage moved to landscaped area and rationalised.	15/08/22
T3	Chambers moved to suit plot moves and landscape coordination.	16/09/22
T4	Chambers moved to suit utility coordination.	11/11/22
C1	Construction Issue.	06/12/22
C2	Chambers s41, s44, s47, s52, s109, s110 and s140 deleted.	16/02/23
C3	Chambers s93 & s94 relocated	17/07/23

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PROJECT
**HOOK LANE, PAGHAM,
WEST SUSSEX**

CLIENT
Bovis Homes
Linden HOMES
Part of the Vistry Group

DRAWING TITLE
**PRIVATE SURFACE WATER
MANHOLE SCHEDULES
Sheet 2 of 2**

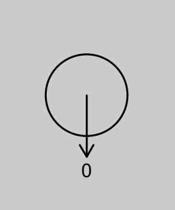
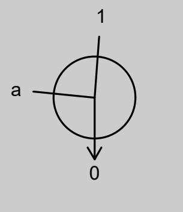
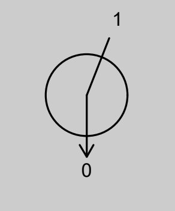
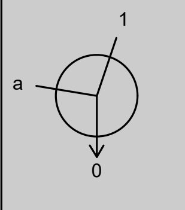
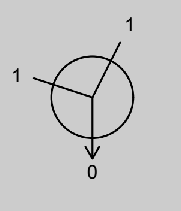
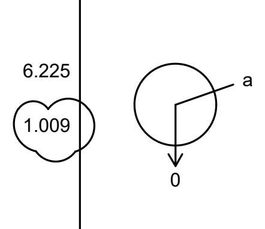
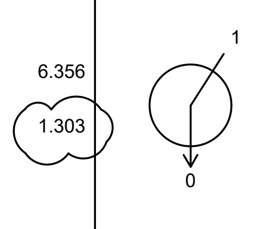
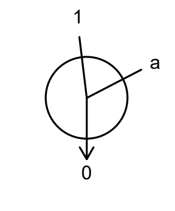
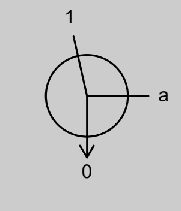
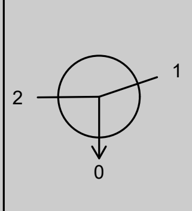
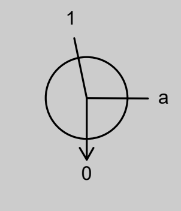
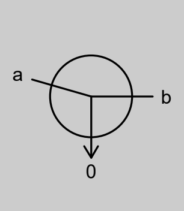
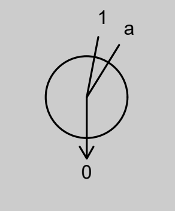
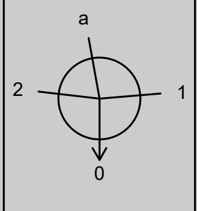
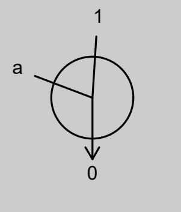
SCALE	DATE	INIT	CHKD
NTS	05/22	cb	mw

STATUS
CONSTRUCTION

DRG NO	REVISION
22-012/651	C3

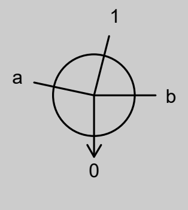
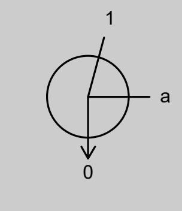
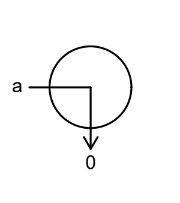
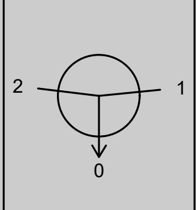
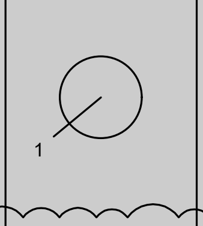
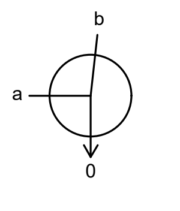
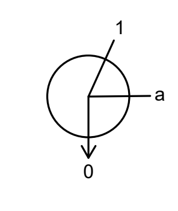
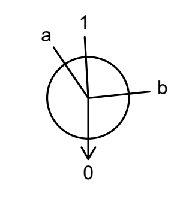
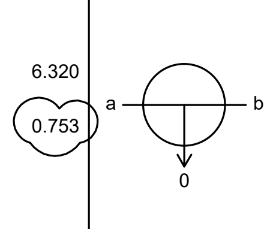
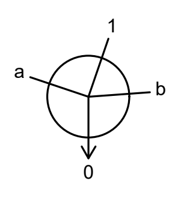
FOUL WATER MANHOLE SCHEDULE

Sheet 1 of 2

Manhole Number	Cover Level	Connections	Pipe				Manhole Size	Types	
Coordinates	Depth To Soffit		Code		Inverts	Diams Inv-soff		Manhole	Cover
F106 E. 489614.939 N. 99205.742	6.912 3.237		0	1.000	3.525	150	1200	A	D400
F107 E. 489687.989 N. 99258.170	6.705 3.629		1	1.000	2.926	150	1200	A	D400
			a		2.926	150			
			0	1.001	2.926	150			
F108 E. 489706.318 N. 99273.484	6.712 3.795		1	1.001	2.767	150	1200	A	D400
			0	1.002	2.767	150			
F109 E. 489713.996 N. 99287.545	6.542 3.732		1	1.002	2.660	150	1200	A	D400
			a		2.660	150			
			0	1.003	2.660	150			
F110 E. 489717.174 N. 99305.663	6.369 3.682		1	1.003	2.537	150	1200	A	D400
			a		BD 3.837	150			
			0	1.004	2.537	150			
F111 E. 489646.588 N. 99388.440	6.225 1.009		a		5.116	100	1200	C	D400
			0	2.000	5.116	100			
F112 E. 489651.345 N. 99376.265	6.356 1.303		1	2.000	4.953	100	1200	C	D400
			0	2.001	4.953	100			
F113 E. 489685.249 N. 99351.789	6.709 2.179		1	2.001	4.430	100	1200	B	D400
			a		BD 5.000	150			
			0	2.002	4.380	150			
F114 E. 489705.251 N. 99333.459	6.529 2.180		1	2.002	4.199	150	1200	B	D400
			a		BD 5.000	150			
			0	2.003	4.199	150			
F115 E. 489711.479 N. 99324.574	6.420 3.865		1	2.003	2.405	150	1200	A	D400
			2	1.004	2.405	150			
			0	1.005	2.405	150			
F116 E. 489734.606 N. 99331.354	6.425 4.031		1	1.005	2.244	150	1200	A	D400
			a		BD 3.544	150			
			0	1.006	2.244	150			
F117 E. 489806.492 N. 99323.760	6.470 1.432		a		4.888	150	1200	C	D400
			b		4.888	150			
			0	3.000	4.888	150			
F118 E. 489786.923 N. 99329.901	6.722 1.821		1	3.000	4.751	150	1200	B	D400
			a		4.751	150			
			0	3.001	4.751	150			
F119 E. 489757.513 N. 99333.287	6.653 4.413		1	1.006	2.090	150	1200	A	D400
			2	3.001	2.090	150			
			a		BD 3.390	150			
			0	1.007	2.090	150			
F120 E. 489757.484 N. 99359.841	6.921 4.857		1	1.007	1.914	150	1200	A	D400
			a		BD 3.214	150			
			0	1.008	1.914	150			

FOUL WATER MANHOLE SCHEDULE

Sheet 2 of 2

Manhole Number	Cover Level	Connections	Pipe				Manhole Size	Types	
Coordinates	Depth To Soffit		Code		Inverts	Diams Inv-soff		Manhole	Cover
F121 E. 489755.988 N. 99382.062	7.058 5.142		1	1.008	1.766	150	1200	A	D400
			a		BD 3.066	150			
			b		BD 3.066	150			
			0	1.009	1.766	150			
F122 E. 489747.824 N. 99407.112	6.802 5.062		1	1.009	1.590	150	1200	A	D400
			a		BD 2.890	150			
			0	1.010	1.590	150			
F123 E. 489723.279 N. 99438.010	6.450 2.006		a		BD 5.030	150	1200	B	D400
			0	4.000	4.294	150			
F124 E. 489735.673 N. 99425.832	6.572 4.983		1	4.000	1.439	150	1200	A	D400
			2	1.010	1.439	150			
			0	1.011	1.439	150			
F125 E. 489742.235 N. 99431.295	6.320 4.789		1	1.011	1.381	150	1200	A	D400
F126 E. 489753.575 N. 99271.976	6.850 1.360		a		5.390	100	1200	C	D400
			0	5.000	5.340	150			
F127 E. 489746.866 N. 99277.650	6.800 1.370		1	5.000	5.280	150	1200	C	D400
			a		5.330	100			
			0	5.001	5.280	150			
F128 E. 489722.134 N. 99284.675	6.550 2.940		1	5.001	3.460	150	1200	B	D400
			a		BD 5.110	100			
			b		BD 5.110	100			
			0	5.002	3.460	150			
F129 E. 489700.686 N. 99381.396	6.320 0.753		a		5.467	100	1200	C	D400
			b		5.467	100			
			0	6.000	5.467	100			
F130 E. 489688.319 N. 99363.046	6.750 1.460		1	6.000	5.190	100	1200	C	D400
			a		5.190	100			
			b		BD 5.550	100			
			0	6.001	5.140	150			

▨ GREY HATCH DENOTES DRAINAGE DESIGN BY BROOKBANKS CONSULTING LIMITED. DATA SHOWN FOR INFORMATION ONLY. REFERENCE SHOULD BE MADE TO BROOKBANKS DRAWINGS FOR CONSTRUCTION.

No Dimensions are to be scaled from this drawing.

NOTES

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2. Setting Out coordinates to Inspection chambers refer to the centre of chamber.
3. Setting Out coordinates to precast manholes refer to the centre of pipe through the manhole chambers. Manhole rings can be eccentrically offset to suit site conditions and orientation of incoming/outgoing pipes.
4. Chamber sizes are MINIMUM and may be increased on site to suit local conditions and the number/diameter of incoming pipes.
5. All private chambers serving more than one property are to be 450mm min diameter.
6. Chamber types and depths are based on SSG standard details and Osma Wavin products. All chambers are designed to be Non Man Entry.
7. References 'a', 'b' etc denote private lateral or gully connections.

REVISIONS

P1	Preliminary Issue.	24/06/22
T1	Tender Issue.	30/06/22
T2	Manhole information updated to reflect Brookbanks design update.	15/08/22
T3	Manhole information updated to reflect Brookbanks design update.	11/11/22
C1	Construction Issue.	06/12/22
C2	Manhole information added to reflect new S104 Adoption extent.	16/02/23
C3	Invert levels and pipe sizes changed to manholes F111, F112, F113, F129 & F130 following IWNL comments.	06/04/23
C4	F126 & F127 updated.	26/09/23

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Certificate No. GB2005412

PROJECT
**HOOK LANE, PAGHAM,
WEST SUSSEX**

CLIENT
Bovis Homes
Linden HOMES
Part of the Vistry Group

DRAWING TITLE
**PRIVATE FOUL WATER
MANHOLE SCHEDULES
Sheet 1 of 2**

SCALE	DATE	INIT	CHKD
NTS	05/22	cb	mw

STATUS
CONSTRUCTION

DRG NO	REVISION
22-012/652	C4

FOUL WATER MANHOLE SCHEDULE

Private Plot Connections

Chamber Number	Cover Level	Invert Level	Depth to Invert	Easting	Northing	Min. Chamber Dia
f1	6.60	5.90	0.70	489708.029	99174.233	450 Chamber
f2	6.60	5.34	1.26	489688.003	99187.795	450 Deep Chamber
f3	7.10	6.50	0.60	489656.290	99209.443	315 Chamber
f4	6.75	5.78	0.97	489663.733	99204.809	450 Chamber
f5	6.75	5.00	1.75	489670.030	99209.400	450 Deep Chamber
f6	6.60	6.00	0.60	489735.934	99201.784	315 Chamber
f8	6.50	5.50	1.00	489718.993	99213.107	450 Chamber
f7	6.50	5.90	0.60	489715.570	99207.226	315 Chamber
f9	6.65	5.825	0.83	489708.360	99213.925	450 Chamber
f10	6.575	5.40	1.18	489712.942	99219.075	450 Chamber
f11	6.575	5.27	1.31	489706.332	99226.620	450 Chamber
f12	6.57	4.54	2.03	489699.774	99231.087	450 Deep Chamber
f13	6.60	4.33	2.27	489693.543	99241.333	450 Deep Chamber
f14	6.55	5.95	0.60	489743.238	99208.657	315 Chamber
f15	6.48	5.69	0.79	489725.475	99218.577	450 Chamber
f16	6.75	6.15	0.60	489698.405	99251.456	315 Chamber
f17	6.60	5.05	1.55	489700.416	99246.206	450 Deep Chamber
f18	6.70	4.30	2.40	489697.474	99244.207	1200 Manhole
f19	6.75	6.15	0.60	489755.293	99231.216	315 Chamber
f20	6.75	6.00	0.75	489747.413	99234.110	450 Chamber
f21	6.75	6.15	0.60	489768.663	99257.451	315 Chamber
f22	6.75	5.60	1.15	489762.142	99263.018	450 Chamber
f26	6.80	6.20	0.60	489777.405	99273.235	315 Chamber
f27	6.90	6.30	0.60	489751.310	99281.372	315 Chamber
f28	6.98	5.93	1.05	489756.515	99277.745	450 Chamber
f30	6.85	6.05	0.80	489745.015	99270.904	450 Chamber
f32	6.80	6.20	0.60	489709.060	99263.642	315 Chamber
f33	6.83	6.05	0.78	489715.876	99271.925	450 Chamber
f34	6.60	5.35	1.25	489721.481	99281.956	450 Deep Chamber
f35	6.55	5.95	0.60	489729.378	99286.712	315 Chamber
f37	6.40	5.80	0.60	489724.098	99316.340	315 Chamber
f38	6.54	4.55	1.99	489724.999	99305.467	450 Deep Chamber
f39	6.65	6.05	0.60	489740.033	99321.679	250 Chamber
f40	6.78	5.89	0.89	489752.147	99324.331	450 Chamber
f41	6.85	6.25	0.60	489765.766	99317.082	315 Chamber
f42	6.91	6.15	0.76	489763.929	99324.330	450 Chamber
f43	6.85	4.23	2.62	489759.118	99324.331	450 Deep Chamber
f44	6.85	6.25	0.60	489785.605	99313.230	315 Chamber
f45	6.675	5.925	0.75	489793.738	99318.042	450 Chamber
f46	6.65	5.79	0.86	489803.689	99314.829	450 Chamber
f47	6.35	5.63	0.72	489820.382	99383.782	450 Chamber
f48	6.35	5.33	1.02	489820.382	99358.769	450 Chamber
f49	6.70	6.10	0.60	489803.625	99333.824	315 Chamber
f50	6.70	4.95	1.75	489810.889	99331.117	450 Deep Chamber
f51	6.85	6.25	0.60	489767.476	99340.197	315 Chamber
f52	6.97	5.98	0.99	489774.731	99338.054	450 Chamber
f52a	6.76	5.88	0.88	489775.977	99346.063	450 Chamber
f53	7.05	6.45	0.60	489773.027	99357.479	315 Chamber
f54	7.00	5.69	1.31	489764.702	99356.178	450 Deep Chamber
f55	7.05	6.45	0.60	489773.039	99372.514	315 Chamber
f56	7.10	6.35	0.75	489764.702	99373.114	450 Deep Chamber
f57	7.02	3.80	3.22	489763.207	99358.110	1200 Manhole
f58	6.85	6.00	0.85	489778.941	99385.057	450 Chamber
f59	6.92	5.76	1.16	489765.488	99385.049	450 Chamber
f60	6.925	3.786	3.14	489763.165	99382.813	1200 Manhole
f61	6.45	5.70	0.75	489720.309	99334.678	450 Chamber
f62	6.65	6.05	0.60	489748.499	99349.905	315 Chamber
f63	6.575	5.83	0.75	489739.361	99349.025	450 Chamber
f64	6.68	5.69	0.99	489739.929	99338.205	450 Chamber
f65	6.61	4.175	2.44	489734.076	99337.645	450 Deep Chamber
f66	7.10	6.50	0.60	489750.494	99369.775	315 Chamber
f67	7.05	6.45	0.60	489748.772	99389.562	315 Chamber
f68	7.19	6.34	0.85	489751.835	99379.965	450 Chamber
f68a	7.06	6.16	0.90	489748.672	99393.283	450 Chamber
f69	6.95	6.35	0.60	489747.289	99394.853	315 Chamber
f70	6.75	6.15	0.60	489736.001	99413.445	315 Chamber
f71	6.88	3.58	3.30	489743.448	99404.271	1200 Manhole
f72	6.45	5.85	0.60	489716.366	99385.227	315 Chamber
f73	6.70	5.69	1.01	489708.611	99376.055	450 Chamber
f74	6.60	6.00	0.60	489711.881	99407.734	315 Chamber
f75	6.45	5.64	0.81	489697.008	99383.875	450 Chamber
f77	6.85	5.95	0.90	489692.556	99362.227	450 Chamber
f78	6.60	6.00	0.60	489663.413	99374.712	315 Chamber
f79	6.75	5.70	1.05	489682.319	99360.753	450 Chamber
f80	6.75	5.63	1.12	489685.259	99365.111	450 Chamber
f82	6.70	6.10	0.60	489697.574	99350.920	315 Chamber
f83	6.65	5.04	1.61	489710.308	99337.800	450 Deep Chamber
f84	6.35	5.80	0.55	489673.299	99434.100	450 Chamber
f85	6.15	5.46	0.69	489658.310	99411.874	450 Chamber
f86	6.26	5.297	0.96	489652.316	99400.342	450 Chamber
f87	6.35	5.20	1.15	489653.071	99392.600	450 Chamber
f88	6.20	5.60	0.60	489687.483	99460.372	315 Chamber
f89	6.45	5.06	1.39	489720.174	99434.850	450 Deep Chamber
f90	6.350	5.875	0.48	489714.926	99427.336	315 Chamber
f91	6.475	5.875	0.60	489727.283	99426.373	315 Chamber
f92	6.20	5.60	0.60	489688.980	99448.067	315 Chamber
f94	6.20	5.30	0.90	489705.357	99446.597	450 Chamber

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7. References 'a', 'b' etc denote private lateral or gully connections.

REVISIONS

P1	Preliminary Issue.	24/06/22
T1	Tender Issue.	30/06/22
T2	Chamber and laterals updated to tie-in to Brookbanks design update. Sales area drainage moved to landscaped area and rationalised.	15/08/22
T3	Chambers moved to suit plot moves and landscape coordination.	16/09/22
T4	Chambers moved to suit utility coordination.	11/11/22
C1	Construction Issue.	06/12/22
C2	Chambers f29, f31, f36, f76 and f81 deleted.	16/02/23
C3	Chambers amended to suit Plot 21 orientation change.	29/03/23
C4	Invert levels changed to manholes f84-87 following IWNL comments.	06/04/23
C5	Manholes f52 & f52a updated	07/07/23
C6	Manholes f68 & f68a updated	17/07/23
C7	Manhole f28 updated.	25/09/23

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Certificate No. GB2005412

PROJECT
HOOK LANE, PAGHAM,
WEST SUSSEX

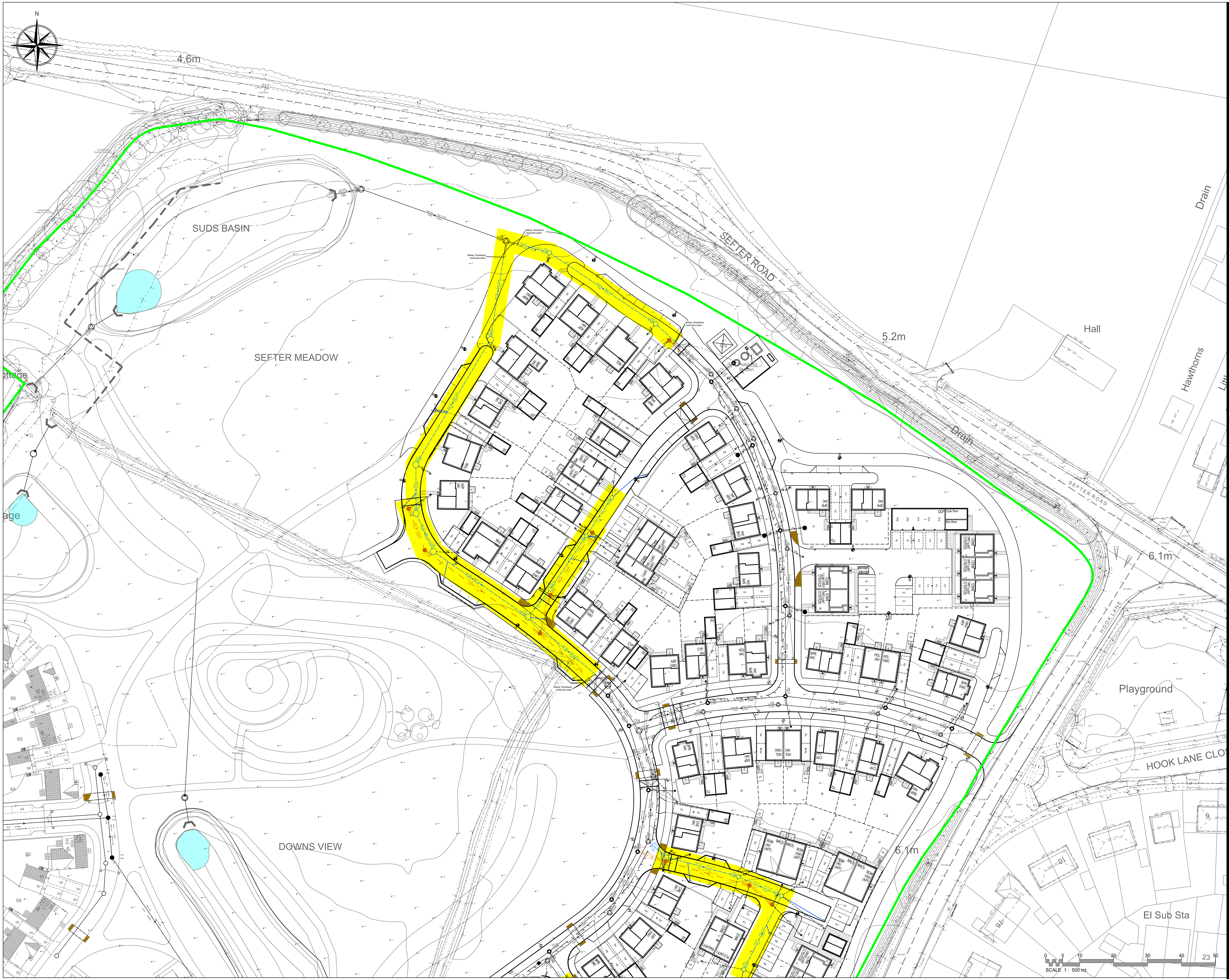
CLIENT
Bovis Homes
Linden HOMES
Part of the Vistry Group

DRAWING TITLE
PRIVATE FOUL WATER
MANHOLE SCHEDULES
Sheet 2 of 2

SCALE	DATE	INIT	CHKD
NTS	**05/22**	**cb**	**mw**

STATUS
CONSTRUCTION

DRG NO
22-012/653
REVISION
C7



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NOTES

1. The contractor is responsible for obtaining all necessary licences for works in the Public Highway.
2. All adoptable drainage works shall conform to the requirements of "Sewer Sector Guidance (SSG) Appendix C: Design & Construction Guidance", to the satisfaction of Independent Water Networks Limited.
3. All fill material up to foundation level of the proposed highways to be approved and compacted in layers as directed and to the satisfaction of the Highways Inspector.
4. All redundant connections in existing manholes/ chambers that are affected by the works shall be sealed and the benching made good as directed and to the satisfaction of the Highways Inspector and/ or utility company involved.
5. Any existing live drains, sewers, ducts, cables etc. that will pass under the proposed highway shall be surveyed, probed, traced, rodded, jetted, CCTVd etc. to ascertain their structural condition and suitability to fall within the new highway. If deemed necessary, special protection and/ or replacement may be required as directed and to the satisfaction of the Highways Inspector, Area Engineer and/ or utility company involved.
6. Any existing live manholes, chambers, boxes etc. that will be located within the proposed highway shall be surveyed to ascertain their structural condition and suitability to fall within the new highway. If deemed necessary, special protection and/ or replacement may be required as directed and to the satisfaction of the Highways Inspector, Area Engineer and/ or Utility Company involved.
7. All ironwork within the carriageway to have 150mm deep frame. (manhole covers, gully gratings etc).
8. For Drainage construction details, refer to Drg. 22-012/600 to 602.
9. For Highway Construction details, refer to Drg. 22-012/475 to 479.
10. Sewers with less than 1.2m cover beneath highways and 0.9m cover elsewhere to have concrete cover slab protection in accordance with the Adopting Authorities requirements.
11. Bedding to all pipework to be Class S granular bed and surround.
12. Pipes up to 300mm diameter shall be either vitrified clay or plastic. Pipes greater than 300m diameter shall be precast concrete or plastic.

Sewers by Bellway/Brookbanks
(Adopted under a separate S104 application)

Adoptable Foul Sewer and Manhole
Adoptable Storm Sewer and Manhole
Highway Gully and Connection ☒
Rising Main
Foul Water Lateral and Chamber ●
Surface Water Lateral and Chamber

Proposed

Adoptable Foul Sewer & Manhole F10
Adoptable Surface Water Sewer & Manhole S30
Manhole with external backdrop BD IL119.58
Highway Gully and Connection RG
Foul Water Lateral and Chamber ●
Surface Water Lateral and Chamber
Site Boundary 🟩
6m Sewer Easement 🟨

REVISIONS

P1	Preliminary Issue.	10/02/23
P2	Plot 21 orientation changed to achieve 1m to plot boundary. Pump station and substation layout changed to TA layout.	29/03/23
P3	Pipe gradient and size amended following IWNL comments.	06/04/23
C1	IWNL Technical Approval.	05/05/23

1
2
SHEET LAYOUT

WITHERS
DESIGN ASSOCIATES
CIVIL ENGINEERING & INFRASTRUCTURE DESIGN
Unit 12, Wakes Hall Business Centre
Wakes Colne, Colchester, Essex
CO6 2DY
01206 247081

ISO 9001
Certificate No. GB2005412

PROJECT
HOOK LANE, PAGHAM, WEST SUSSEX

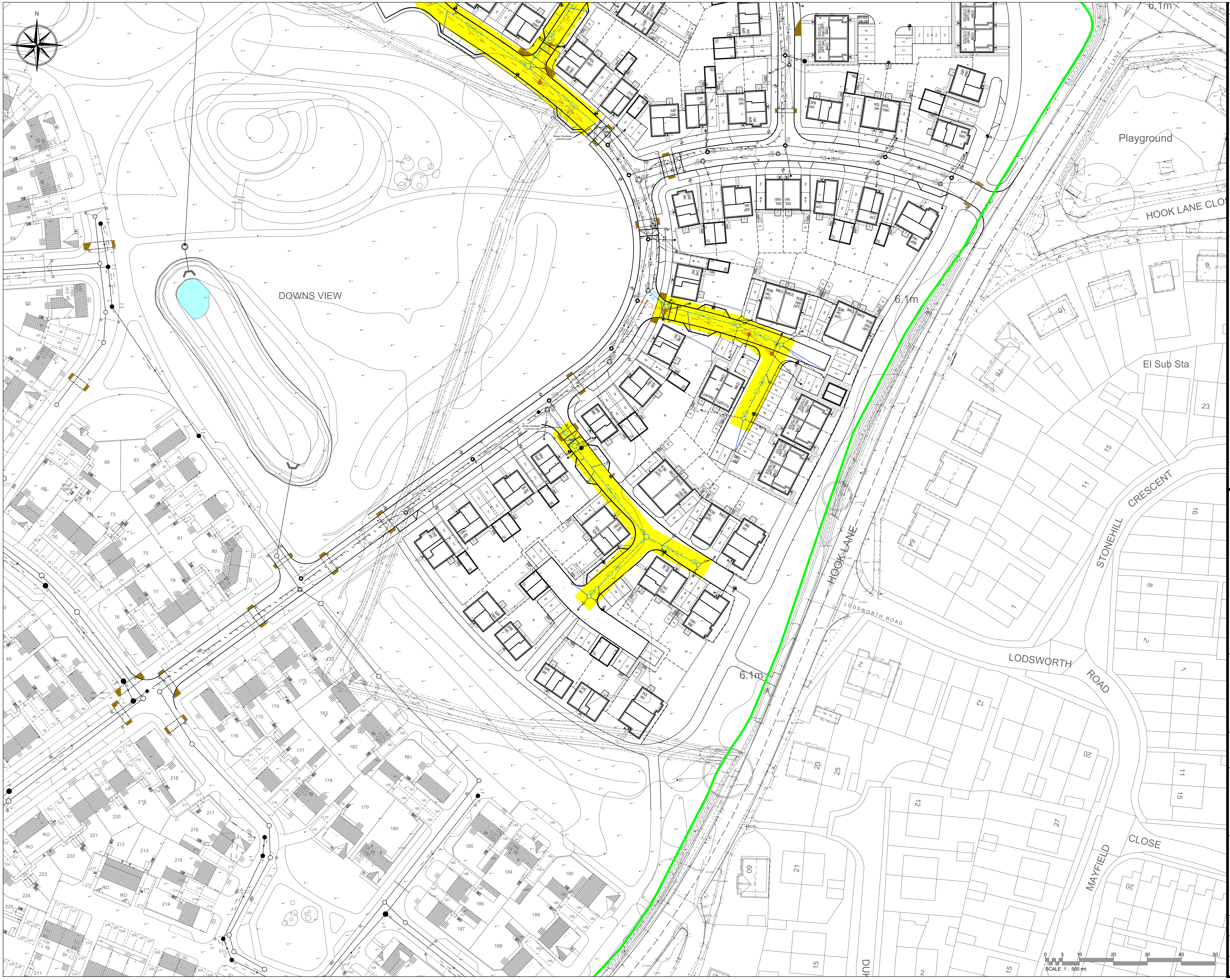
CLIENT
Bovis Homes
Linden HOMES
Part of the Vistry Group

DRAWING TITLE
SECTION 104 PLAN
GENERAL ARRANGEMENT
Sheet 1 of 2

SCALE	DATE	INIT	CHKD
1:500	01/23	cb	mw

STATUS
CONSTRUCTION

DRG NO **22-012/700**
REVISION **C1**



No Dimensions are to be scaled from this drawing.

NOTES

1. The contractor is responsible for obtaining all necessary licences for works in the Public Highway.
2. All adoptable drainage works shall conform to the requirements of "Sewer Sector Guidance (SSG) Appendix C: Design & Construction Guidance", to the satisfaction of Independent Water Networks Limited.
3. All fill material up to foundation level of the proposed highways to be approved and compacted in layers as directed and to the satisfaction of the Highways Inspector.
4. All redundant connections in existing manholes/ chambers that are affected by the works shall be sealed and the benching made good as directed and to the satisfaction of the Highways Inspector and/ or utility company involved.
5. Any existing live drains, sewers, ducts, cables etc. that will pass under the proposed highway shall be surveyed, probed, traced, rodded, jetted, CCTVd etc. to ascertain their structural condition and suitability to fall within the new highway. If deemed necessary, special protection and/ or replacement may be required as directed and to the satisfaction of the Highways Inspector, Area Engineer and/ or utility company involved.
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Highway Gully and Connection ☒
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Manhole with external backdrop BD IL119.58
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6m Sewer Easement 🟨

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Unit 12, Wakes Hall Business Centre
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01206 247081
ISO 9001
Certificate No. GB2005412

PROJECT
HOOK LANE, PAGHAM,
WEST SUSSEX

CLIENT
Bovis Homes
Linden HOMES
Part of the Vistry Group

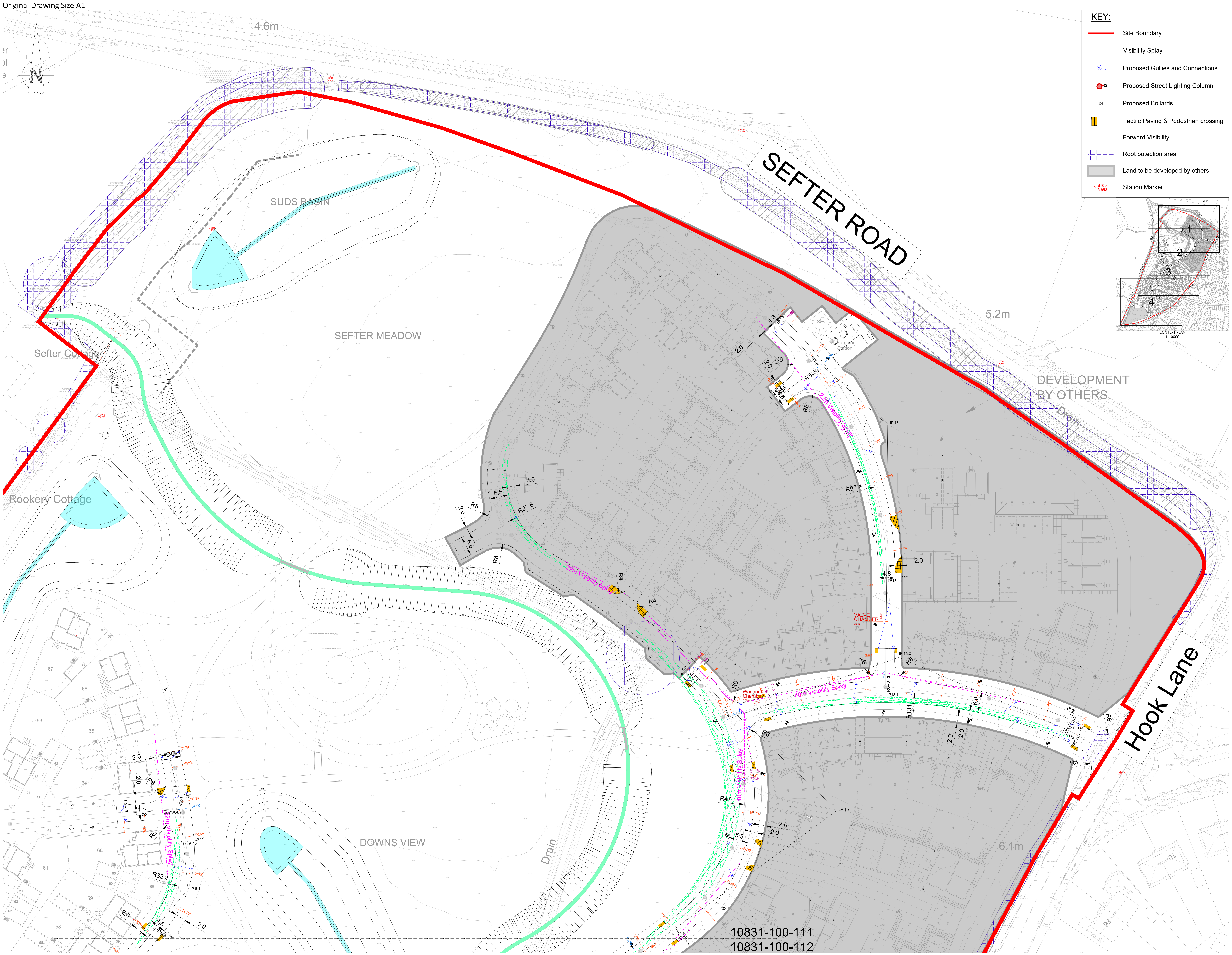
DRAWING TITLE
SECTION 104 PLAN
GENERAL ARRANGEMENT
Sheet 2 of 2

SCALE	DATE	INIT	CHKD
1:500	01/23	cb	mw

STATUS
CONSTRUCTION

DRG NO	REVISION
22-012/701	C1

Original Drawing Size A1



KEY:

▬	Site Boundary
- - -	Visibility Splay
◇	Proposed Gullies and Connections
●	Proposed Street Lighting Column
⊗	Proposed Bollards
▦	Tactile Paving & Pedestrian crossing
- - -	Forward Visibility
▦	Root potection area
▨	Land to be developed by others
ST09 6.653	Station Marker

Construction Design and Management (CDM)
Key Residual Risks

Contractors entering the site should gain permission from the relevant land owners and/or principle contractor working on site at the time of entry. Contractors shall be responsible for carrying out their own risk assessments and for liaising with the relevant services companies and authorities. Listed below are Site Specific key risks associated with the project.

1) Overhead and underground services
2) Working adjacent to water courses and flood plain
3) Soft ground conditions
4) Working adjacent to live highways
5) Unchartered services

NOTES:

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3. Brookbanks Consulting Ltd has prepared this drawing for the sole use of the client. The drawing may not be relied upon by any other party without the express agreement of the client and Brookbanks Consulting Ltd. Where any data supplied by the client or from other sources has been used, it has been assumed that the information is correct. No responsibility can be accepted by Brookbanks Consulting Ltd for inaccuracies in the data supplied by any other party. The drawing has been produced based on the assumption that all relevant information has been supplied by those bodies from whom it was requested.
4. No part of this drawing may be copied or duplicated without the express permission of Brookbanks Consulting.
5. All materials, workmanship and highway construction works to be in accordance with the contract specification, and Specification for Highway Works.
6. All planting in visibility splays to be agreed and approved by the Engineer and in all cases no planting to be above 600mm in height above the carriageway. Also no obstructions of any kind within the visibility splay areas.
7. All Brookbanks Consulting drawings should also be read in conjunction with any drawings produced by third parties connected with this project.
8. All works within existing Public Highway, including any temporary works or traffic management measures, are subject to the approval of the approving highway authority. When works are required on the Public Highway, the Contractor shall liaise with and obtain all Statutory Approvals from Approving Authority , before commencing these works. These approvals include, but are not limited to, approval of traffic management measures, issue of works commencement notices, road opening notices, temporary traffic regulation orders etc.
9. All traffic management shall comply with the requirements as set out in Chapter 8 of the Traffic Signs Manual. Warning signs may be erected outside the indicated boundaries. Any obstructions to traffic or pedestrians shall be properly signed and protected with barriers, cones, signs, and lamps.
10. All traffic signs and road markings are to be in accordance with the 'Traffic Signs Regulations and General Directions 2016'.
11. Street lighting to be designed and approved by approving authority approved supplier.
12. Highway Inspector to be present during inspections / CBR testing.
13. For construction requirements and typical sections refer to Standard Details drawings 10831-100-131
14. For further notes and guidance refer to the respective approving authority construction details

K	Vistry layout updated	MA	DC	RM	02.03.23
J	Construction issue	MA	DC	RM	18.01.23
H	Watercourse Layout amended	CDW	DC	RM	18.11.22
G	Tactile paving amended, ditch amended, minor amendment to roads 1 & 11	SMG	DC	RM	25.10.22
F	Minor amendments	DC	RM	RM	04.07.22
E	Layout updated	DC	RM	RM	21.06.22
D	Various amendments	DC	DC	RM	31.05.22
C	Vistry layout updated	DC	DC	RM	25.04.22
B	Updated According to Bellway Comments	CL	DC	RM	21.01.22
A	Street Lighting Layout Updated	BM	DC	JI	17.12.21
-	First Issue	CL	JI	JI	25.11.21

BROOKBANKS

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T +44 (0)203 958 5400 E mail@brookbanks.com
W brookbanks.com

Bellway

Hook Lane
Pagham

General Arrangement
Sheet 1 of 4

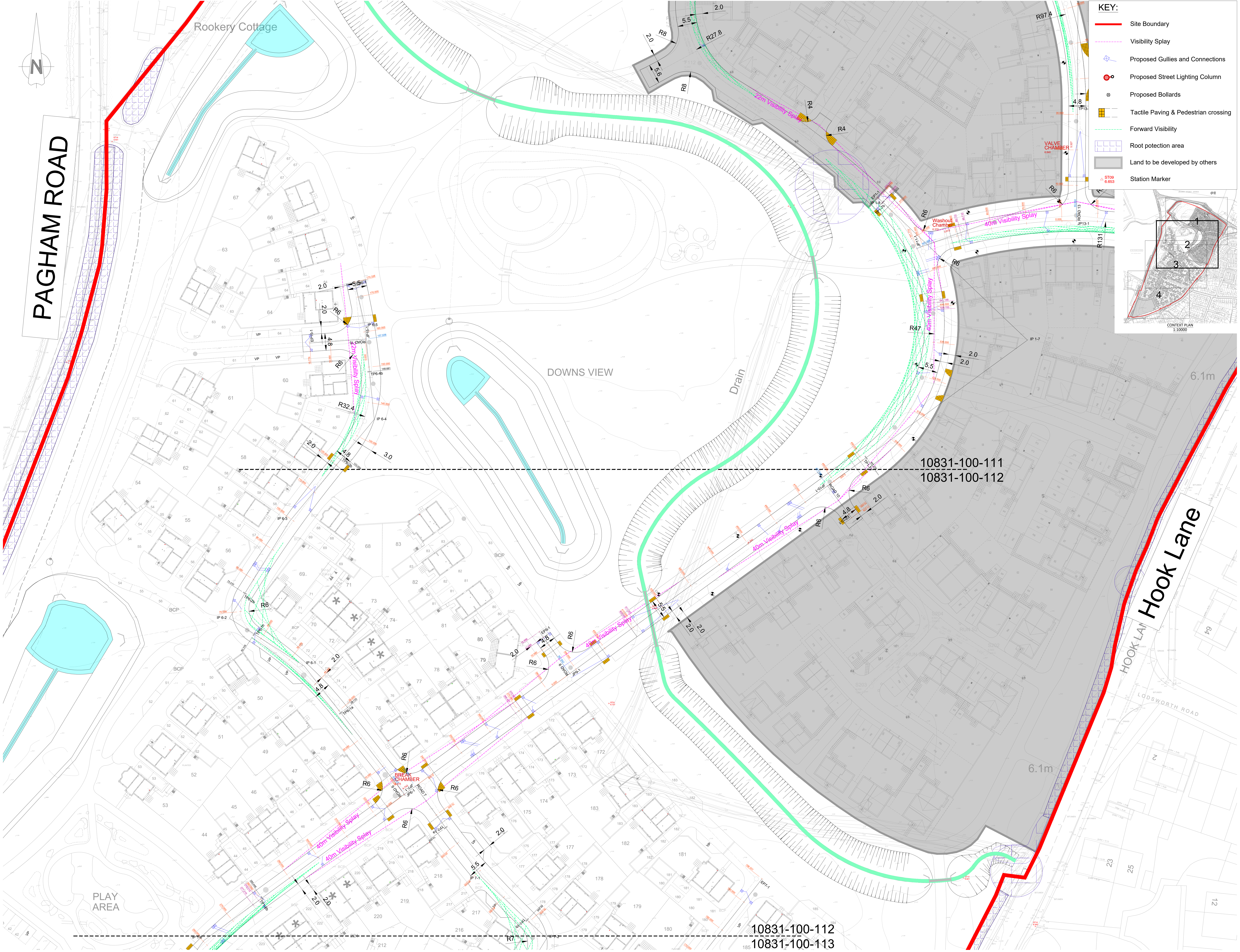
Construction		June 2022
CL	DC	21.01.2022
1:500	10831-100-111	K

0 10 20 30 40 50
METRES

UNTIL TECHNICAL APPROVAL HAS BEEN OBTAINED FROM THE RELEVANT LOCAL AUTHORITIES, IT SHOULD BE UNDERSTOOD THAT ALL DRAWINGS ARE ISSUED AS PRELIMINARY AND NOT FOR CONSTRUCTION. SHOULD THE CONTRACTOR COMMENCE SITE WORK PRIOR TO APPROVAL BEING GIVEN, IT IS ENTIRELY AT HIS OWN RISK.

P:\10831\CAD\BCL\Working Drawings\10831-100-111K,112K,113K,114J General Arrangement.dwg

Original Drawing Size A1


N
PAGHAM ROAD
Rookery Cottage
DOWNS VIEW
Drain
PLAY AREA
Hook Lane
HOOK LANE
LODSWORTH ROAD
6.1m
6.1m
22m Visibility Splay
40m Visibility Splay
40m Visibility Splay
40m Visibility Splay
40m Visibility Splay
40m Visibility Splay
VALVE CHAMBER
Washout Chamber
BREAK CHAMBER
10831-100-111
10831-100-112
10831-100-112
10831-100-113
KEY:
Site Boundary
Visibility Splay
Proposed Gullies and Connections
Proposed Street Lighting Column
Proposed Bollards
Tactile Paving & Pedestrian crossing
Forward Visibility
Root protection area
Land to be developed by others
Station Marker
1
2
3
4
CONTEXT PLAN
1:10000

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BROOKBANKS

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Bellway

Hook Lane
Pagham

General Arragement
Sheet 2 of 4

Construction		June 2022
CL	DC	21.01.2022
1:500	10831-100-112	K

0 10 20 30 40 50
METRES

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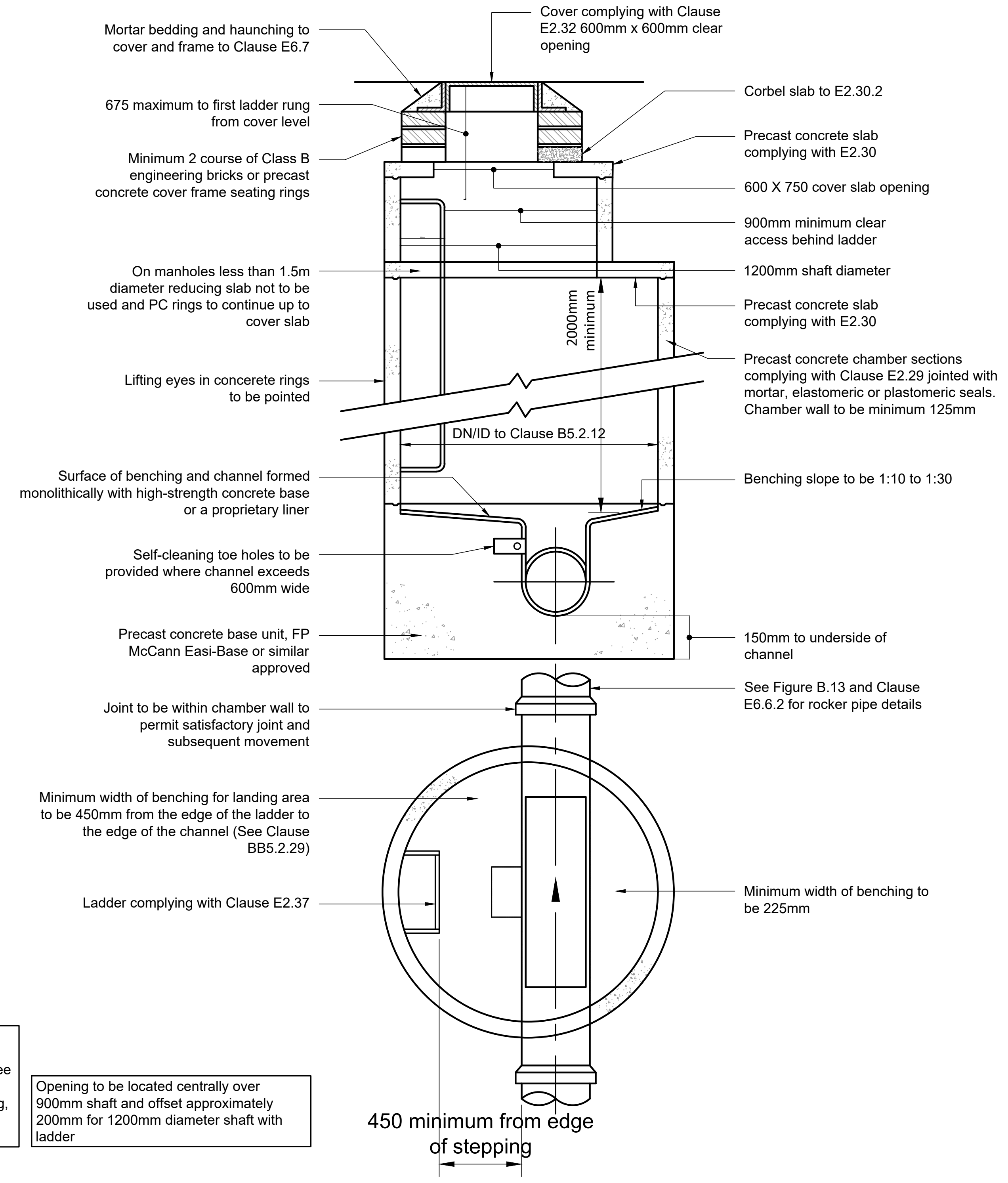
P:\10831\CAD\BCL\Working Drawings\10831-100-111K,112K,113K,114J General Arrangement.dwg

Original Drawing Size A1

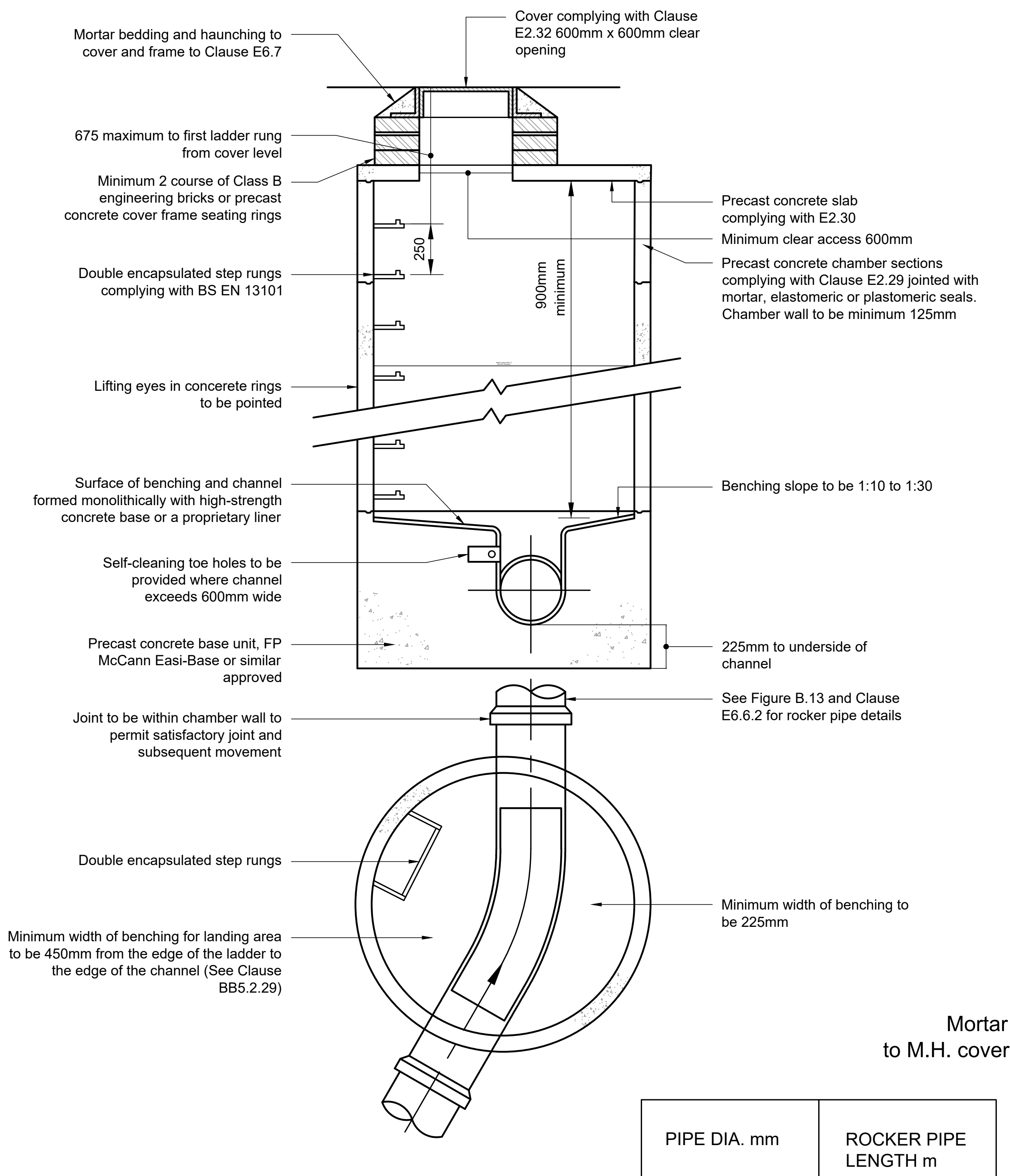

Mortar bedding and haunching to cover and frame to Clause E6.7
Cover complying with Clause E2.32 600mm x 600mm clear opening
Corbel slab to E2.30.2
675 maximum to first ladder rung from cover level
Precast concrete slab complying with E2.30
Minimum 2 course of Class B engineering bricks or precast concrete cover frame seating rings
600 X 750 cover slab opening
900mm minimum clear access behind ladder
On manholes less than 1.5m diameter reducing slab not to be used and PC rings to continue up to cover slab
1200mm shaft diameter
Precast concrete slab complying with E2.30
2000mm minimum
Precast concrete chamber sections complying with Clause E2.29 jointed with mortar, elastomeric or plastomeric seals. Chamber wall to be minimum 125mm
Lifting eyes in concerete rings to be pointed
DN/ID to Clause B5.2.12
Surface of benching and channel formed monolithically with high-strength concrete base or a proprietary liner
Benching slope to be 1:10 to 1:30
Self-cleaning toe holes to be provided where channel exceeds 600mm wide
Precast concrete base unit, FP McCann Easi-Base or similar approved
150mm to underside of channel
See Figure B.13 and Clause E6.6.2 for rocker pipe details
Joint to be within chamber wall to permit satisfactory joint and subsequent movement
Minimum width of benching for landing area to be 450mm from the edge of the ladder to the edge of the channel (See Clause BB5.2.29)
Ladder complying with Clause E2.37
Minimum width of benching to be 225mm
450 minimum from edge of stepping

Manhole details indicate general arrangment adjacent to manhole covers for concrete pavement. See Architects plans for details. For flexible and concrete block paving, paving to continue to outside of frame.

Opening to be located centrally over 900mm shaft and offset approximately 200mm for 1200mm diameter shaft with ladder

TYPE A1 - DCG Figure B4

(Depth from cover level to soffit of pipe 3m to 6m)


Mortar bedding and haunching to cover and frame to Clause E6.7
Cover complying with Clause E2.32 600mm x 600mm clear opening
675 maximum to first ladder rung from cover level
Minimum 2 course of Class B engineering bricks or precast concrete cover frame seating rings
Precast concrete slab complying with E2.30
Minimum clear access 600mm
250
Double encapsulated step rungs complying with BS EN 13101
900mm minimum
Precast concrete chamber sections complying with Clause E2.29 jointed with mortar, elastomeric or plastomeric seals. Chamber wall to be minimum 125mm
Lifting eyes in concerete rings to be pointed
Surface of benching and channel formed monolithically with high-strength concrete base or a proprietary liner
Benching slope to be 1:10 to 1:30
Self-cleaning toe holes to be provided where channel exceeds 600mm wide
Precast concrete base unit, FP McCann Easi-Base or similar approved
225mm to underside of channel
See Figure B.13 and Clause E6.6.2 for rocker pipe details
Joint to be within chamber wall to permit satisfactory joint and subsequent movement
Double encapsulated step rungs
Minimum width of benching to be 225mm
Minimum width of benching for landing area to be 450mm from the edge of the ladder to the edge of the channel (See Clause BB5.2.29)

TYPE B - DCG Figure B9

(Max. depth from cover level to soffit of pipe 1.5m to 3.0m)

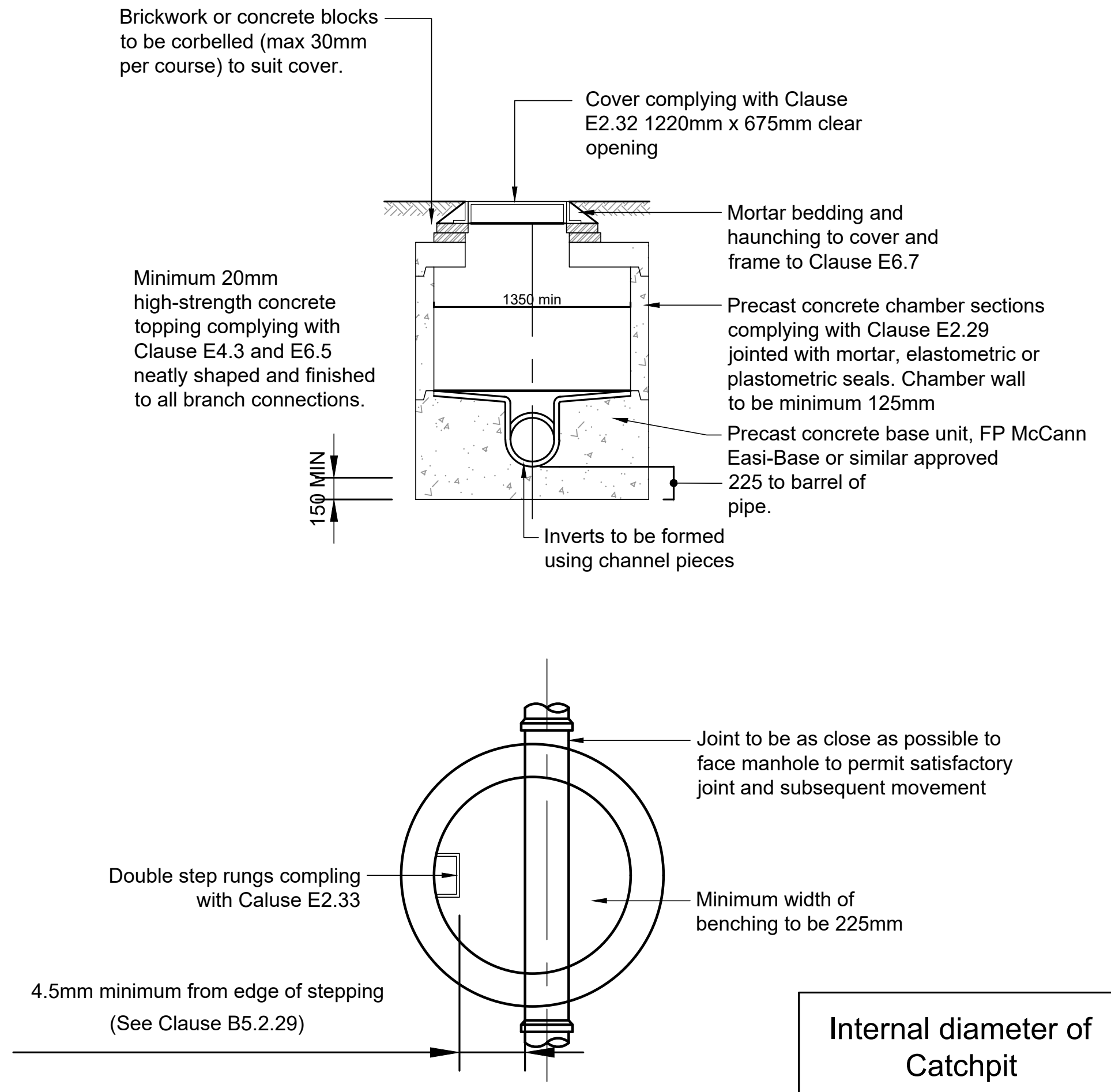
TYPICAL MANHOLE CONSTRUCTION DETAILS

N.T.S.

POSITION & SIZE OF ACCESS IN CONCRETE COVER SLAB		
SHAFT / CHAMBER SIZE	M/H DEPTH LESS THAN 1.5m	M/H DEPTH 1.5m OR GREATER
1200mm - 1350mm	1200 X 675mm CENTRAL	675 X 675mm ECCENTRIC
1500mm	1200 X 675mm CENTRAL	675 X 675mm ECCENTRIC
1800mm - 3000mm	1200 X 675mm CENTRAL	675 X 675mm ECCENTRIC

MANHOLE CHAMBER SIZES STANDARD DETAILS	
DIA OF LARGEST PIPE IN MH	INTERNAL CHAMBER DIA (mm)
LESS THAN 375mm	1200 (1350 where less than 1.5m deep)
375mm - 450mm	1350
500mm - 700mm	1500
750mm - 900mm	1800
GREATER THAN 900mm	ENGINEER TO ADVISE

PIPE DIA. mm	ROCKER PIPE LENGTH m
150-600	0.6
675-750	1.0
>825	1.25


Brickwork or concrete blocks to be corbelled (max 30mm per course) to suit cover.
Cover complying with Clause E2.32 1220mm x 675mm clear opening
Mortar bedding and haunching to cover and frame to Clause E6.7
Minimum 20mm high-strength concrete topping complying with Clause E4.3 and E6.5 neatly shaped and finished to all branch connections.
1350 min
Precast concrete chamber sections complying with Clause E2.29 jointed with mortar, elastometric or plastometric seals. Chamber wall to be minimum 125mm
Precast concrete base unit, FP McCann Easi-Base or similar approved
225 to barrel of pipe.
150 MIN
Inverts to be formed using channel pieces
Joint to be as close as possible to face manhole to permit satisfactory joint and subsequent movement
Double step rungs compling with Caluse E2.33
Minimum width of benching to be 225mm
4.5mm minimum from edge of stepping
(See Clause B5.2.29)

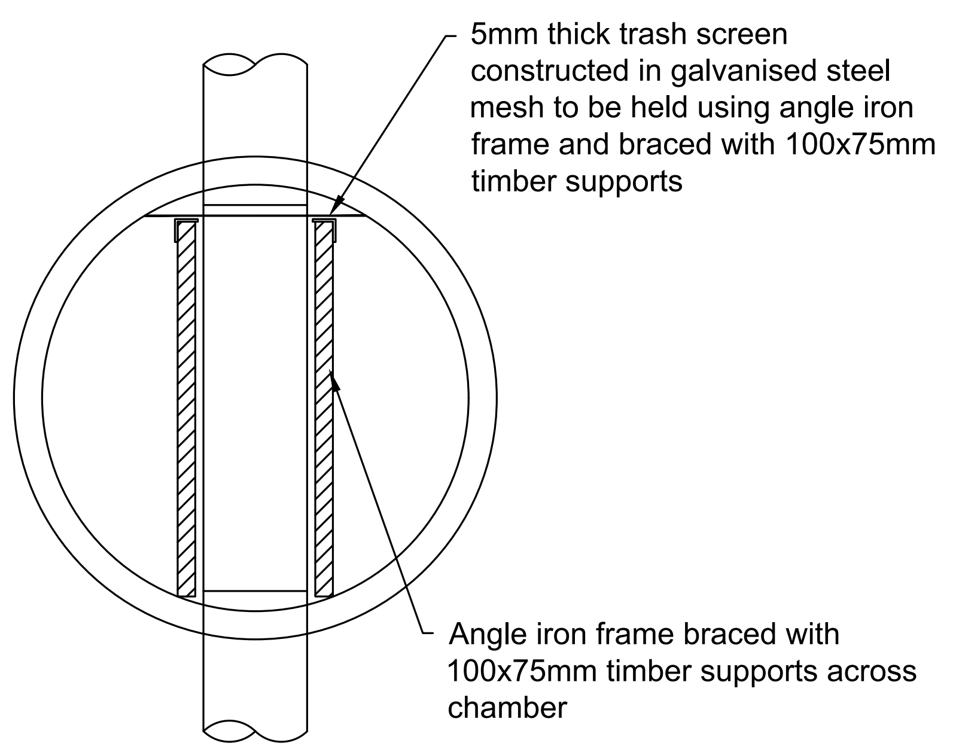
TYPE C

(Depth from cover level to soffit of pipe 1.0m - 1.5m, maximum pipe dia 450mm)

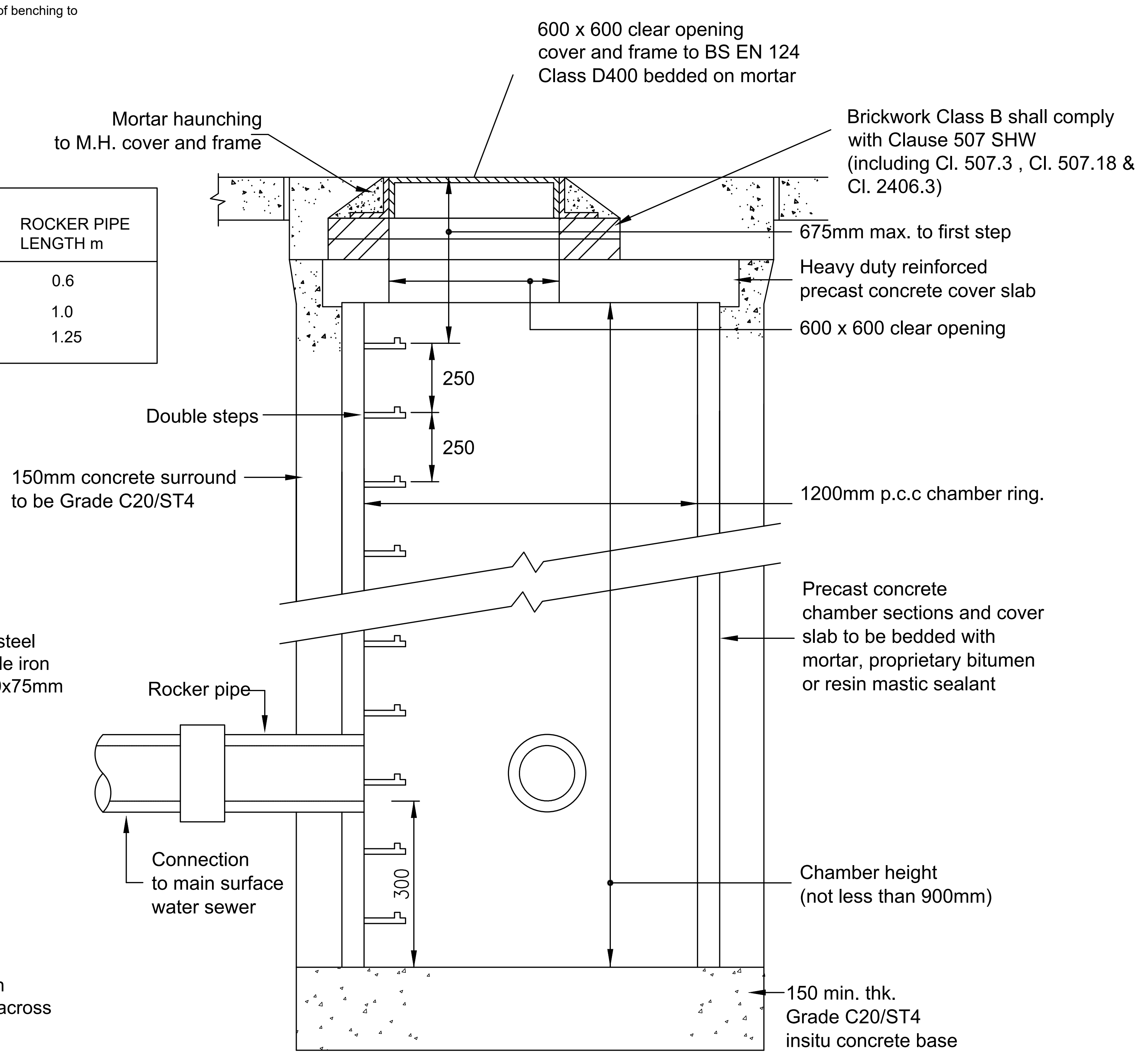
Internal diameter of Catchpit	Diameter of largest pipe in Catchpit
1200	Less than 375
1500	375 - 700
1800	750 - 900

NOTE:

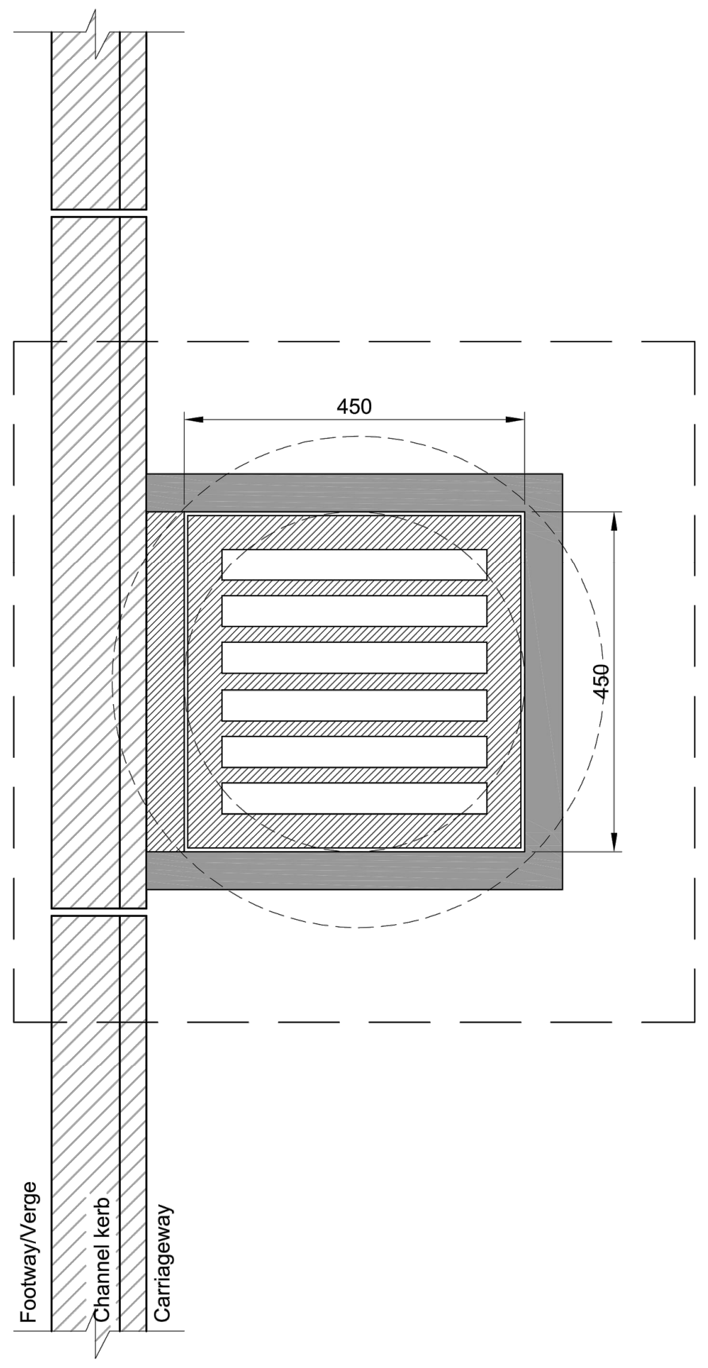
1. Temporary debris screen to be provided in the last surface water manhole of a run before discharge to a pond/basin
2. Upon completion of works and prior to final inspection temporary debris screen and associated materials are to be removed off site


5mm thick trash screen constructed in galvanised steel mesh to be held using angle iron frame and braced with 100x75mm timber supports
Angle iron frame braced with 100x75mm timber supports across chamber

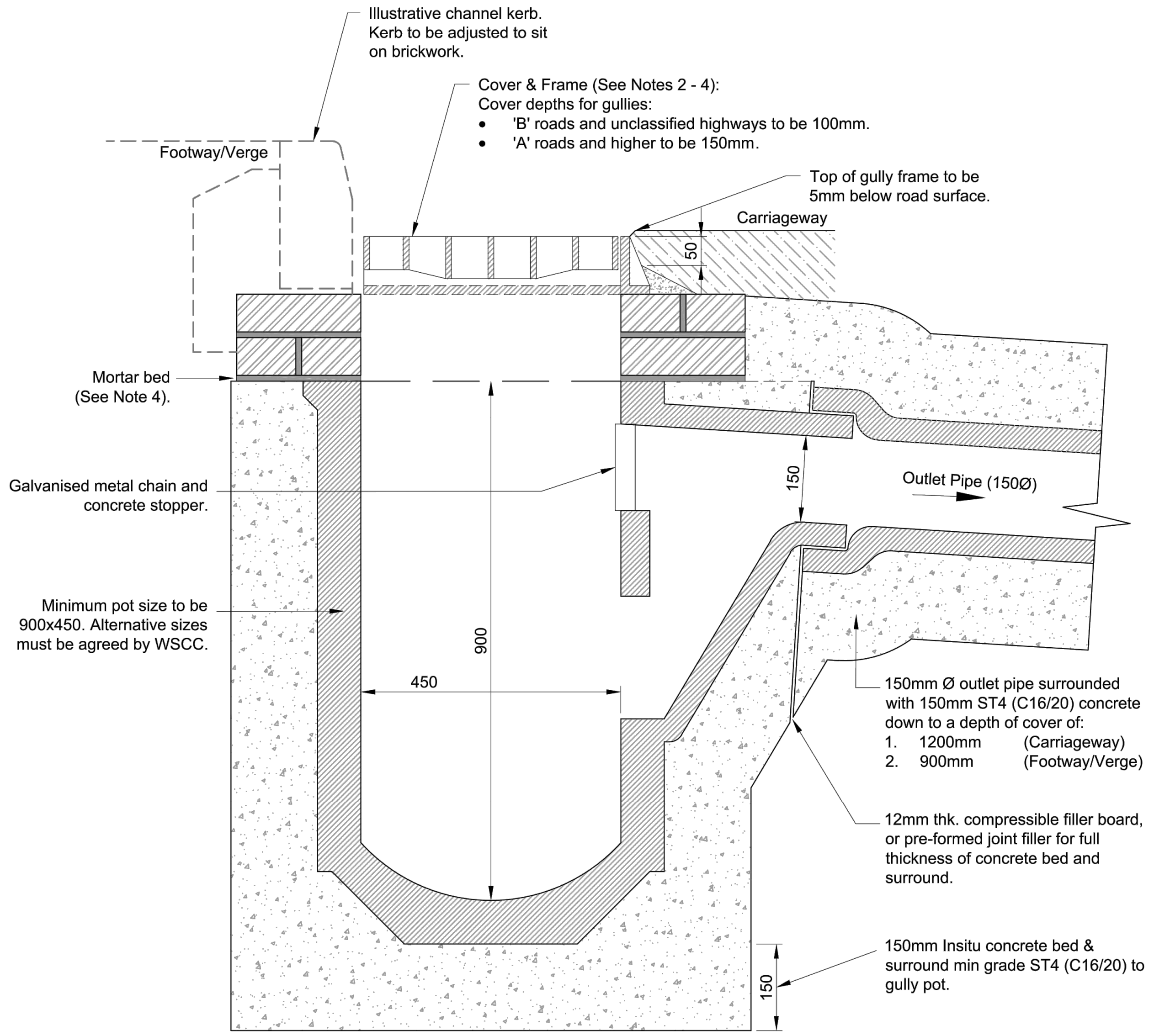
TEMPORARY DEBRIS SCREEN


600 x 600 clear opening cover and frame to BS EN 124 Class D400 bedded on mortar
Mortar haunching to M.H. cover and frame
Brickwork Class B shall comply with Clause 507 SHW (including Cl. 507.3 , Cl. 507.18 & Cl. 2406.3)
675mm max. to first step
Heavy duty reinforced precast concrete cover slab
600 x 600 clear opening
250
250
Double steps
150mm concrete surround to be Grade C20/ST4
1200mm p.c.c chamber ring.
Precast concrete chamber sections and cover slab to be bedded with mortar, proprietary bitumen or resin mastic sealant
Rocker pipe
Connection to main surface water sewer
300
Chamber height (not less than 900mm)
150 min. thk. Grade C20/ST4 insitu concrete base

CATCHPIT DETAIL


450
450
Footway/Verge
Channel kerb
Carriageway

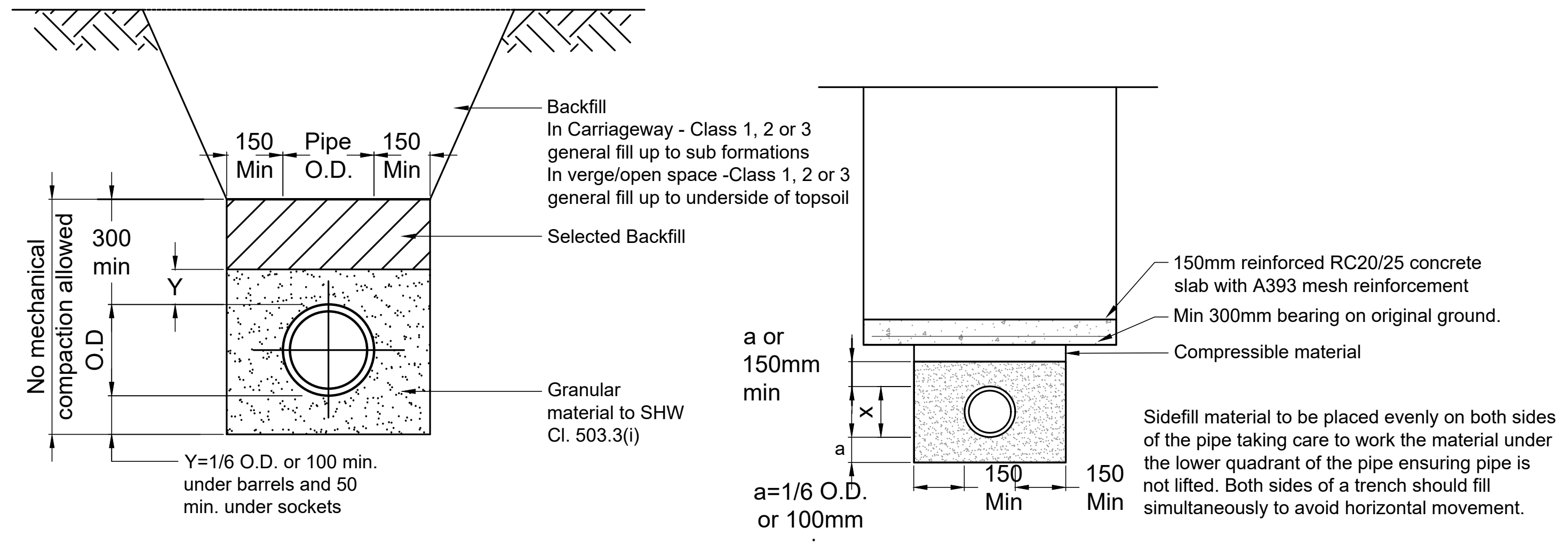
GULLY A
TYPE: PRECAST CONCRETE
PLAN
(1:10)


Illustrative channel kerb. Kerb to be adjusted to sit on brickwork.
Cover & Frame (See Notes 2 - 4):
Cover depths for gullies:
'B' roads and unclassified highways to be 100mm.
'A' roads and higher to be 150mm.
Footway/Verge
Top of gully frame to be 5mm below road surface.
Carriageway
50
Mortar bed (See Note 4).
Galvanised metal chain and concrete stopper.
150
Outlet Pipe (150Ø)
Minimum pot size to be 900x450. Alternative sizes must be agreed by WSCC.
900
450
150mm Ø outlet pipe surrounded with 150mm ST4 (C16/20) concrete down to a depth of cover of:
1. 1200mm (Carriageway)
2. 900mm (Footway/Verge)
12mm thk. compressible filler board, or pre-formed joint filler for full thickness of concrete bed and surround.
150mm Insitu concrete bed & surround min grade ST4 (C16/20) to gully pot.
150
150

GULLY A
TYPE: PRECAST CONCRETE
SECTION
(1:10)

Pipe Bedding Notes

1. All bedding and selected backfill material to be in accordance with the Contract Specification, the HA Manual of Contract Documents for Highway Works Vol.1 Specification for Highway Works, unless otherwise noted.
2. Backfill and selected backfill to trenches:
   - 2.1. Paved Areas: Type 1 granular sub-base (to CL. 803) to underside of pavement construction.
   - 2.2. Unpaved Areas: Selected excavated material.


150 Min
Pipe O.D.
150 Min
Backfill
In Carriageway - Class 1, 2 or 3 general fill up to sub formations
In verge/open space -Class 1, 2 or 3 general fill up to underside of topsoil
Selected Backfill
No mechanical compaction allowed
300 min
Y
O.D
Granular material to SHW Cl. 503.3(i)
Y=1/6 O.D. or 100 min. under barrels and 50 min. under sockets
150mm reinforced RC20/25 concrete slab with A393 mesh reinforcement
Min 300mm bearing on original ground.
Compressible material
a or 150mm min
x
a
a=1/6 O.D. or 100mm min
150 Min
150 Min
Sidefill material to be placed evenly on both sides of the pipe taking care to work the material under the lower quadrant of the pipe ensuring pipe is not lifted. Both sides of a trench should fill simultaneously to avoid horizontal movement.

BED CLASS S
(Granular bed and surround)

BED CLASS Z
(Bedding factor 3.4
R.C Concrete Slab Protection)

PIPE BEDDING DETAILS
Scale 1:20

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Construction Design and Management (CDM)
Key Residual Risks

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1) Overhead and underground services
2) Working adjacent to water courses and flood plain
3) Soft ground conditions
4) Working adjacent to live highways
5) Unchartered services

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6. For further notes and guidance refer to the respective approving authority construction details

E	Construction issue	MA	DC	RM	18.01.23
D	Type S and Z pipe bedding details added	DC	RM	RM	03.11.22
C	Type C manhole amended, Chamber size table amended	NO	RM	RM	29.07.22
B	Chamber Linework fixed	DC	DC	RM	08.02.22
A	Enlarged	CL	DC	RM	21.01.22
-	First Issue	CL	JI	JI	08.11.21

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Bellway

Hook Lane
Pagham

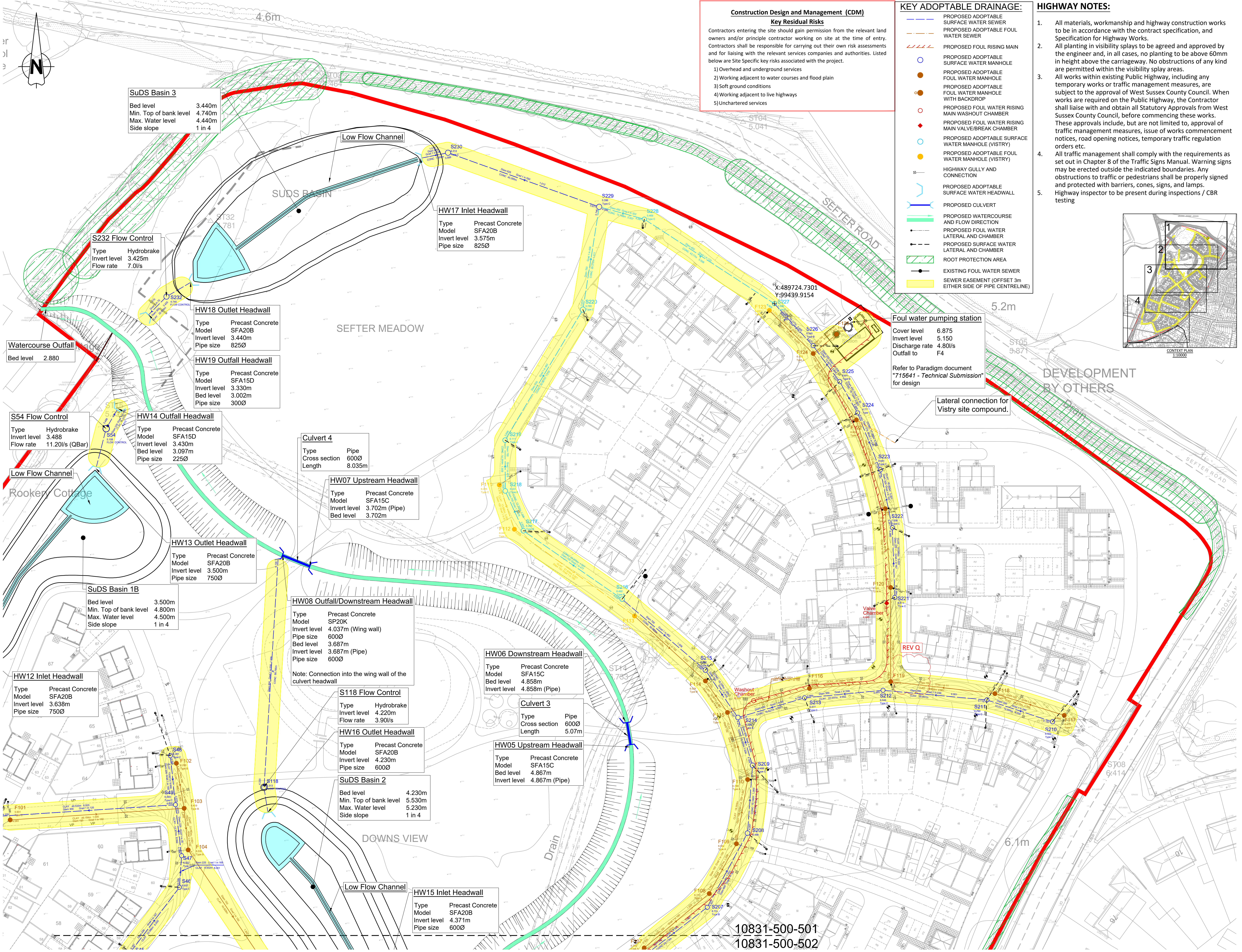
Standard Construction Details
Sheet 2
Drainage Details

Status		Status Date
Construction		Nov 2021
Drawn	Checked	Date
CL	JI	21.11.2021
Scale	Number	Rev
1:500	10831-100-132	E

0 10 20 30 40 50
METRES

P:\10831\CAD\BCL\Working Drawings\10831-100-131B,132E,133C,134A,135A,136B,137A,138B Standard Construction Details.dwg

Original Drawing Size A1



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2) Working adjacent to water courses and flood plain
3) Soft ground conditions
4) Working adjacent to live highways
5) Unchartered services

SuDS Basin 3

Bed level	3.440m
Min. Top of bank level	4.740m
Max. Water level	4.440m
Side slope	1 in 4

Low Flow Channel

S232 Flow Control

Type	Hydrobrake
Invert level	3.425m
Flow rate	7.0l/s

HW17 Inlet Headwall

Type	Precast Concrete
Model	SFA20B
Invert level	3.575m
Pipe size	825Ø

HW18 Outlet Headwall

Type	Precast Concrete
Model	SFA20B
Invert level	3.440m
Pipe size	825Ø

Watercourse Outfall

Bed level	2.880

HW19 Outfall Headwall

Type	Precast Concrete
Model	SFA15D
Invert level	3.330m
Bed level	3.002m
Pipe size	300Ø

S54 Flow Control

Type	Hydrobrake
Invert level	3.488
Flow rate	11.20l/s (QBar)

HW14 Outfall Headwall

Type	Precast Concrete
Model	SFA15D
Invert level	3.430m
Bed level	3.097m
Pipe size	225Ø

Low Flow Channel

Culvert 4

Type	Pipe
Cross section	600Ø
Length	8.035m

HW07 Upstream Headwall

Type	Precast Concrete
Model	SFA15C
Invert level	3.702m (Pipe)
Bed level	3.702m

HW13 Outlet Headwall

Type	Precast Concrete
Model	SFA20B
Invert level	3.500m
Pipe size	750Ø

SuDS Basin 1B

Bed level	3.500m
Min. Top of bank level	4.800m
Max. Water level	4.500m
Side slope	1 in 4

HW08 Outfall/Downstream Headwall

Type	Precast Concrete
Model	SP20K
Invert level	4.037m (Wing wall)
Pipe size	600Ø
Bed level	3.687m
Invert level	3.687m (Pipe)
Pipe size	600Ø

Note: Connection into the wing wall of the culvert headwall

HW12 Inlet Headwall

Type	Precast Concrete
Model	SFA20B
Invert level	3.638m
Pipe size	750Ø

S118 Flow Control

Type	Hydrobrake
Invert level	4.220m
Flow rate	3.90l/s

HW16 Outlet Headwall

Type	Precast Concrete
Model	SFA20B
Invert level	4.230m
Pipe size	600Ø

SuDS Basin 2

Bed level	4.230m
Min. Top of bank level	5.530m
Max. Water level	5.230m
Side slope	1 in 4

Low Flow Channel

HW15 Inlet Headwall

Type	Precast Concrete
Model	SFA20B
Invert level	4.371m
Pipe size	600Ø

HW06 Downstream Headwall

Type	Precast Concrete
Model	SFA15C
Bed level	4.858m
Invert level	4.858m (Pipe)

Culvert 3

Type	Pipe
Cross section	600Ø
Length	5.07m

HW05 Upstream Headwall

Type	Precast Concrete
Model	SFA15C
Bed level	4.867m
Invert level	4.867m (Pipe)

Foul water pumping station

Cover level	6.875
Invert level	5.150
Discharge rate	4.80l/s
Outfall to	F4

Refer to Paradigm document *"715641 - Technical Submission"* for design

KEY ADOPTABLE DRAINAGE:

— — —	PROPOSED ADOPTABLE SURFACE WATER SEWER
— · — · —	PROPOSED ADOPTABLE FOUL WATER SEWER
⁄⁄⁄	PROPOSED FOUL RISING MAIN
○	PROPOSED ADOPTABLE SURFACE WATER MANHOLE
●	PROPOSED ADOPTABLE FOUL WATER MANHOLE
∘●	PROPOSED ADOPTABLE FOUL WATER MANHOLE WITH BACKDROP
○	PROPOSED FOUL WATER RISING MAIN WASHOUT CHAMBER
◆	PROPOSED FOUL WATER RISING MAIN VALVE/BREAK CHAMBER
○	PROPOSED ADOPTABLE SURFACE WATER MANHOLE (VISTRY)
●	PROPOSED ADOPTABLE FOUL WATER MANHOLE (VISTRY)
⊠—	HIGHWAY GULLY AND CONNECTION
⟩	PROPOSED ADOPTABLE SURFACE WATER HEADWALL
⟩—⟨	PROPOSED CULVERT
🟩	PROPOSED WATERCOURSE AND FLOW DIRECTION
•— · — · —	PROPOSED FOUL WATER LATERAL AND CHAMBER
•— — —	PROPOSED SURFACE WATER LATERAL AND CHAMBER
▨	ROOT PROTECTION AREA
—●—	EXISTING FOUL WATER SEWER
🟨	SEWER EASEMENT (OFFSET 3m EITHER SIDE OF PIPE CENTRELINE)

HIGHWAY NOTES:

1. All materials, workmanship and highway construction works to be in accordance with the contract specification, and Specification for Highway Works.
2. All planting in visibility splays to be agreed and approved by the engineer and, in all cases, no planting to be above 60mm in height above the carriageway. No obstructions of any kind are permitted within the visibility splay areas.
3. All works within existing Public Highway, including any temporary works or traffic management measures, are subject to the approval of West Sussex County Council. When works are required on the Public Highway, the Contractor shall liaise with and obtain all Statutory Approvals from West Sussex County Council, before commencing these works. These approvals include, but are not limited to, approval of traffic management measures, issue of works commencement notices, road opening notices, temporary traffic regulation orders etc.
4. All traffic management shall comply with the requirements as set out in Chapter 8 of the Traffic Signs Manual. Warning signs may be erected outside the indicated boundaries. Any obstructions to traffic or pedestrians shall be properly signed and protected with barriers, cones, signs, and lamps.
5. Highway inspector to be present during inspections / CBR testing

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7. Any discrepancies between the information displayed in this drawings and others to be reported to the engineer before the commencement of works.
8. Any damage caused to existing footways, roads or other third party property to be made good to the county engineers requirements.

ADOPTABLE DRAINAGE NOTES:

1. All adoptable drainage to be in accordance with Sewerage Sector Guidance (SSG) Appendix C - Design and Construction Guidance (DCG)
2. All Sustainable Urban Drainage (SuDS) to be in accordance with CIRIA report C753 "*The SuDS Manual*" and supporting documents.
3. Culverts designed to be in accordance with CIRIA report C689 "*Culvert Design and Operation Guide*".
4. Contractor to check all existing invert levels and watercourse bed/water levels for outfalls on site ahead of commencing work.
5. All lateral connections to be 150mm diameter unless noted otherwise.
6. Sewers with less than 1.2m cover beneath highways and 0.9m cover elsewhere to have special concrete cover slab protection in accordance with the adopting authority's requirements. Flexibility of pipeline to be maintained.
7. Bedding to all remaining pipework is to be class S granular bed and surround.
8. Pipes up to 300mm diameter shall be either vitrified clay or plastic. Pipes greater than 300mm diameter shall be precast concrete or plastic, excluding those crossing beneath watercourses. All pipes to be in accordance with the adopting authority's approved manufacturers. All pipes to be to BS EN 1295 with either sleeved of spigot & socket flexible joints, and shall satisfy the minimum crushing strengths stated below:

   150Ø - 22kN/m^2 375Ø - 45kN/m^2 750Ø - 90kN/m^2
   225Ø - 28kN/m^2 450Ø - 54kN/m^2 825Ø - 99kN/m^2
   300Ø - 36kN/m^2 600Ø - 72kN/m^2
9. Drainage indicated as (Vistry) to be constructed by Vistry as per the design indicated on this drawing.

R	Drainage amendments	IL	MT	RM	24.09.24
Q	Additional gully added to junction near F119, easements shown	DC	DC	MT	26.03.24
P	Layout amended to show new gas governor and substation locations, amended pumping station.	MA	DC	RM	11.07.23
N	IL and Pumping station chamber amended	DC	MT	RM	03.04.23
M	Vistry layout updated	MA	DC	RM	02.03.23
L	Construction issue	MA	DC	RM	18.01.23
K	Minor amendments to headwalls	DC	RM	RM	13.12.22
J	Culvert invert levels amended, ditch amended, root protection area shown.	DC	RM	RM	18.11.22
H	Lateral inverts amended, backdrops added, manhole type indicated, S225 & S226 dropped.	DC	RM	RM	26.07.22
G	Culverts amended	DC	RM	RM	31.06.22
F	Drainage amended to lower levels as per client request	DC	RM	RM	21.06.22
E	Drainage to be built by Vistry indicated	DC	RM	RM	06.05.22
D	Lateral inverts added to Vistry parcels. Culvert headwall details added. Vistry parcel layout amended.	DC	RM	RM	08.04.22
C	Drainage levels amended, details added, notes updated	DC	DC	RM	01.04.22
B	Key amended	DC	DC	RM	07.02.22
A	Amended as per comments received	DC	DC	RM	21.01.22
-	First Issue	CL	JI	JI	14.12.21

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Bellway

Hook Lane
Pagham

Adoptable Drainage Layout
Sheet 1 of 4

Status		Status Date
Construction		June 2022
Drawn	**Checked**	**Date**
CL	JI	14.12.2021
Scale	**Number**	**Rev**
1:500	18031-500-501	R

0 10 20 30 40 50
METRES

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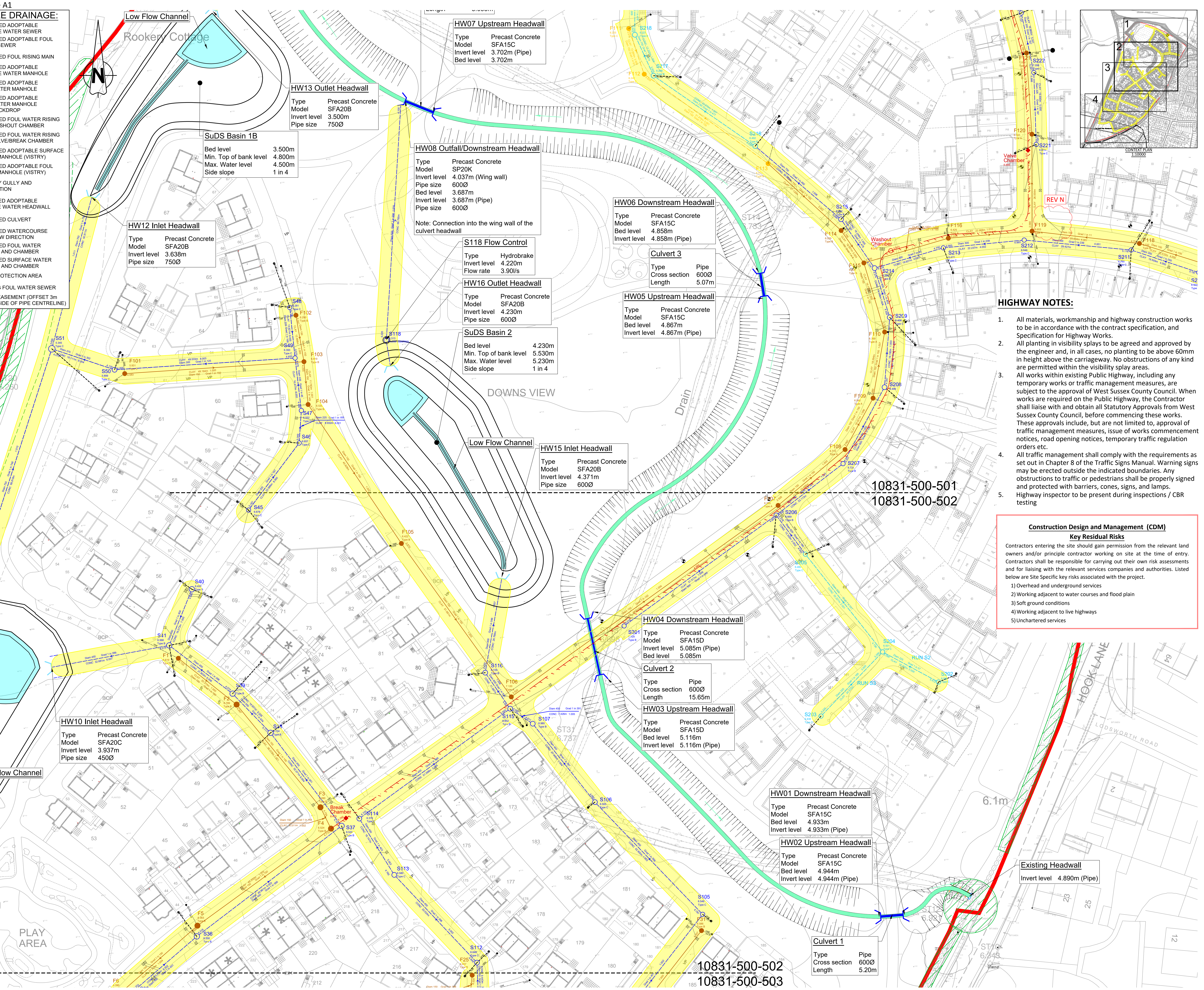
P:\10831\CAD\BCL\Working Drawings\10831-500-501R,502N,503P,504Q Adoptable Drainage Layout.dwg


A1
E DRAINAGE:
ED ADOPTABLE
E WATER SEWER
ED ADOPTABLE FOUL
EWER
ED FOUL RISING MAIN
ED ADOPTABLE
E WATER MANHOLE
ED ADOPTABLE
TER MANHOLE
ED ADOPTABLE
TER MANHOLE
CKDROP
ED FOUL WATER RISING
SHOUT CHAMBER
ED FOUL WATER RISING
VE/BREAK CHAMBER
ED ADOPTABLE SURFACE
MANHOLE (VISTRY)
ED ADOPTABLE FOUL
MANHOLE (VISTRY)
Y GULLY AND
TION
ED ADOPTABLE
E WATER HEADWALL
ED CULVERT
ED WATERCOURSE
W DIRECTION
ED FOUL WATER
AND CHAMBER
ED SURFACE WATER
AND CHAMBER
OTECTION AREA
FOUL WATER SEWER
ASEMENT (OFFSET 3m
IDE OF PIPE CENTRELINE)
N
Low Flow Channel
Rookery Cottage
HW07 Upstream Headwall
Type Precast Concrete
Model SFA15C
Invert level 3.702m (Pipe)
Bed level 3.702m
HW13 Outlet Headwall
Type Precast Concrete
Model SFA20B
Invert level 3.500m
Pipe size 750Ø
SuDS Basin 1B
Bed level 3.500m
Min. Top of bank level 4.800m
Max. Water level 4.500m
Side slope 1 in 4
HW08 Outfall/Downstream Headwall
Type Precast Concrete
Model SP20K
Invert level 4.037m (Wing wall)
Pipe size 600Ø
Bed level 3.687m
Invert level 3.687m (Pipe)
Pipe size 600Ø
Note: Connection into the wing wall of the culvert headwall
HW06 Downstream Headwall
Type Precast Concrete
Model SFA15C
Bed level 4.858m
Invert level 4.858m (Pipe)
Culvert 3
Type Pipe
Cross section 600Ø
Length 5.07m
HW12 Inlet Headwall
Type Precast Concrete
Model SFA20B
Invert level 3.638m
Pipe size 750Ø
S118 Flow Control
Type Hydrobrake
Invert level 4.220m
Flow rate 3.90l/s
HW16 Outlet Headwall
Type Precast Concrete
Model SFA20B
Invert level 4.230m
Pipe size 600Ø
HW05 Upstream Headwall
Type Precast Concrete
Model SFA15C
Bed level 4.867m
Invert level 4.867m (Pipe)
SuDS Basin 2
Bed level 4.230m
Min. Top of bank level 5.530m
Max. Water level 5.230m
Side slope 1 in 4
DOWNS VIEW
Drain
Low Flow Channel
HW15 Inlet Headwall
Type Precast Concrete
Model SFA20B
Invert level 4.371m
Pipe size 600Ø
10831-500-501
10831-500-502
HW04 Downstream Headwall
Type Precast Concrete
Model SFA15D
Invert level 5.085m (Pipe)
Bed level 5.085m
Culvert 2
Type Pipe
Cross section 600Ø
Length 15.65m
HW03 Upstream Headwall
Type Precast Concrete
Model SFA15D
Bed level 5.116m
Invert level 5.116m (Pipe)
HW10 Inlet Headwall
Type Precast Concrete
Model SFA20C
Invert level 3.937m
Pipe size 450Ø
Low Flow Channel
Break Chamber
PLAY AREA
HW01 Downstream Headwall
Type Precast Concrete
Model SFA15C
Bed level 4.933m
Invert level 4.933m (Pipe)
HW02 Upstream Headwall
Type Precast Concrete
Model SFA15C
Bed level 4.944m
Invert level 4.944m (Pipe)
Existing Headwall
Invert level 4.890m (Pipe)
Culvert 1
Type Pipe
Cross section 600Ø
Length 5.20m
10831-500-502
10831-500-503
HOOK LANE
LODSWORTH ROAD
6.1m
RUN S2
RUN S3
REV N
Washout Chamber
Valve Chamber
CONTEXT PLAN 1:10000
1
2
3
4

HIGHWAY NOTES:

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5. Highway inspector to be present during inspections / CBR testing

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2. All Sustainable Urban Drainage (SuDS) to be in accordance with CIRIA report C753 "*The SuDS Manual*" and supporting documents.
3. Culverts designed to be in accordance with CIRIA report C689 "*Culvert Design and Operation Guide*".
4. Contractor to check all existing invert levels and watercourse bed/water levels for outfalls on site ahead of commencing work.
5. All lateral connections to be 150mm diameter unless noted otherwise.
6. Sewers with less than 1.2m cover beneath highways and 0.9m cover elsewhere to have special concrete cover slab protection in accordance with the adopting authority's requirements. Flexibility of pipeline to be maintained.
7. Bedding to all remaining pipework is to be class S granular bed and surround.
8. Pipes up to 300mm diameter shall be either vitrified clay or plastic. Pipes greater than 300mm diameter shall be precast concrete or plastic, excluding those crossing beneath watercourses. All pipes to be in accordance with the adopting authority's approved manufacturers. All pipes to be to BS EN 1295 with either sleeved of spigot & socket flexible joints, and shall satisfy the minimum crushing strengths stated below:

   150Ø - 22kN/m^2 375Ø - 45kN/m^2 750Ø - 90kN/m^2
   225Ø - 28kN/m^2 450Ø - 54kN/m^2 825Ø - 99kN/m^2
   300Ø - 36kN/m^2 600Ø - 72kN/m^2
9. Drainage indicated as (Vistry) to be constructed by Vistry as per the design indicated on this drawing.

N	Additional gully added to junction near F119, easements shown	DC	DC	MT	26.03.24
M	Vistry layout updated	MA	DC	RM	02.03.23
L	Construction issue	MA	DC	RM	18.01.23
K	Minor amendments to headwalls	DC	RM	RM	13.12.22
J	Culvert invert levels amended, ditch amended, root protection area shown.	DC	RM	RM	18.11.22
H	Lateral inverts amended, backdrops added, manhole type indicated	DC	RM	RM	26.07.22
G	Culverts amended	DC	RM	RM	31.06.22
F	Drainage amended to lower levels as per client request	DC	RM	RM	21.06.22
E	Drainage to be built by Vistry indicated	DC	RM	RM	06.05.22
D	Lateral inverts added to Vistry parcels. Culvert headwall details added.	DC	RM	RM	08.04.22
C	Drainage levels amended, details added, notes updated	DC	DC	RM	01.04.22
B	Rising main additional chamber at low point added	DC	DC	RM	07.02.22
A	Amended as per comments received	DC	DC	RM	21.01.22
-	First Issue				

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Bellway

Hook Lane
Pagham

Adoptable Drainage Layout
Sheet 2 of 4

Status		Status Date
Construction		June 2022
Drawn	**Checked**	**Date**
CL	JI	14.12.2021
Scale	**Number**	**Rev**
1:500	10831-500-502	N

0 10 20 30 40 50
METRES

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ings\10831-500-501Q,502N,503P,504Q Adoptable Drainage Layout.dwg

Original Drawing Size A1

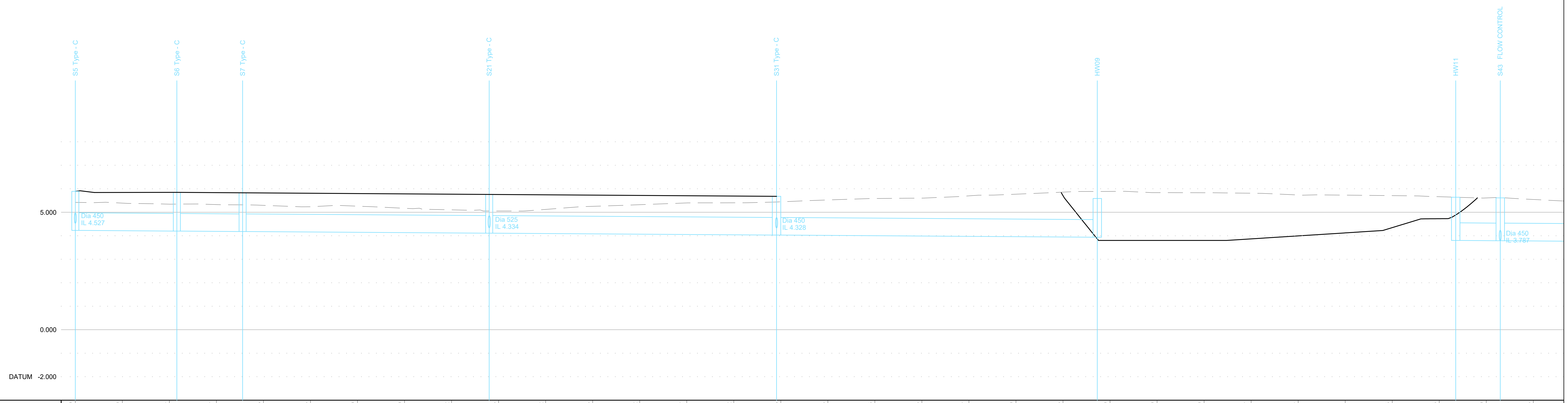
KEY

╌ Existing ground profile

— Proposed ground profile

▭ Proposed surface water sewer

▭ Proposed foul water sewer



GROUND LEVEL	5.889	5.390	5.344	5.327	5.295	5.233	5.259	5.169	5.102	5.053	5.122	5.253	5.322	5.397	5.402	5.445	5.523	5.586	5.603	5.697	5.770	5.708	3.800	3.800	3.800	3.867	3.994	4.121	4.346	4.726	5.610	5.543

STORMWATER COVER LEVEL	5.889	5.848	5.829	5.759	5.678			5.627	
STORMWATER INVERT		4.227 4.198	4.198 4.179	4.179 4.109	4.109 4.028	4.028 3.937	3.937	3.800 3.787	3.787
STORMWATER DETAILS		Pipe 1.004 Dia 750 Circular CONC 1 in 744	Pipe 1.005 Dia 750 Circular CONC 1 in 736	Pipe 1.006 Dia 750 Circular CONC 1 in 749	Pipe 1.007 Dia 750 Circular CONC 1 in 754	Pipe 1.008 Dia 750 Circular CONC 1 in 749	BASIN 1A	Pipe 1.009 Dia 750 Circular CONC 1 in 748	
STORMWATER LENGTHS		21.588	13.978	52.435	61.096	68.194		9.47	

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ADOPTABLE DRAINAGE NOTES:

1. All adoptable drainage to be in accordance with Sewerage Sector Guidance (SSG) Appendix C - Design and Construction Guidance (DCG)
2. All Sustainable Urban Drainage (SuDS) to be in accordance with CIRIA report C753 "*The SuDS Manual*" and supporting documents.
3. Contractor to check all existing invert levels and watercourse bed/water levels for outfalls on site ahead of commencing work.
4. All lateral connections to be 150mm diameter unless noted otherwise.
5. Sewers with less than 1.2m cover beneath highways and 0.9m cover elsewhere to have special concrete cover slab protection in accordance with the adopting authority's requirements. Flexibility of pipeline to be maintained.
6. Bedding to all remaining pipework is to be class S granular bed and surround.
7. Pipes up to 300mm diameter shall be either vitrified clay or plastic. Pipes greater than 300mm diameter shall be precast concrete or plastic, excluding those crossing beneath watercourses. All pipes to be in accordance with the adopting authority's approved manufacturers. All pipes to be to BS EN 1295 with either sleeved of spigot & socket flexible joints, and shall satisfy the minimum crushing strengths stated below:

150Ø - 22kN/m^2	375Ø - 45kN/m^2	750Ø - 90kN/m^2
225Ø - 28kN/m^2	450Ø - 54kN/m^2	825Ø - 99kN/m^2
300Ø - 36kN/m^2	600Ø - 72kN/m^2	

D	Construction issue	MA	DC	RM	18.01.23
C	S43 amended, manhole type indicated	DC	RM	RM	26.07.22
B	Drainage amended to lower levels as per client request	CDW	DC	RM	20.06.22
A	Cover levels updated	DC	RM	RM	31.05.22
-	First Issue	DC	RM	RM	08.04.22

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Bellway

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Pagham

Adoptable Drainage Longsections Sheet 1

Status		Status Date
Construction		JUNE 2022
Drawn	**Checked**	**Date**
DC	RM	08.04.2022
Scale	**Number**	**Rev**
H 1:500 V 1:100	10831-500-550	D

0 10 20 30 40 50
METRES

Construction Design and Management (CDM)
Key Residual Risks

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3) Working adjacent to water courses and flood plain
4) Soft ground conditions
5) Working adjacent to live highways
6) Unchartered services

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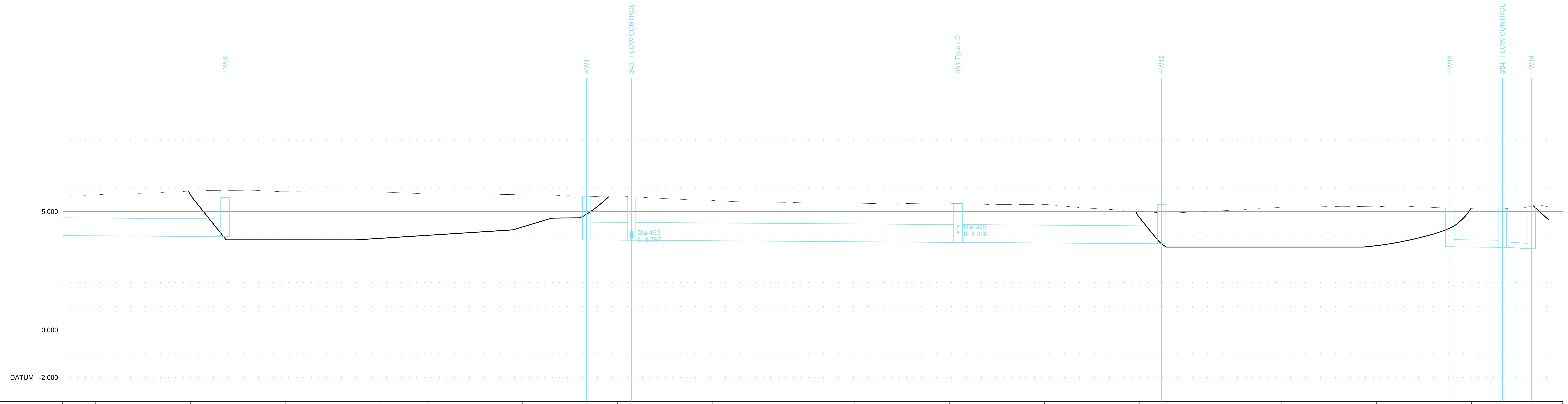
P:\10831\CAD\BCL\Working Drawings\10831-500-550D,551E,552E,553D,554E,555E,556E,557E,558D,559D,560C Adoptable Drainage Longsections.dwg

Original Drawing Size A1



KEY

- - -	Existing ground profile
—	Proposed ground profile
🟦	Proposed surface water sewer
🟧	Proposed foul water sewer

GROUND LEVEL	5.697 5.770 5.708	3.800 3.800 3.800 3.867 3.994 4.121 4.346 4.726	5.610	5.543 5.465 5.401 5.364 5.347 5.332 5.342	5.296 5.296 5.129 4.750	3.500 3.500 3.500 3.500 3.557 3.941	5.119	5.139
STORMWATER COVER LEVEL			5.627	5.345			5.108	5.193
STORMWATER INVERT	3.937	3.937	3.800 3.787	3.787 3.695	3.695 3.638	3.638 3.787	3.787 3.488	3.488 3.430
STORMWATER DETAILS	1.008 750 CONC 749	BASIN 1A	Pipe 1.009 Dia 750 Circular CONC 1 in 748	Pipe 1.010 Dia 750 Circular CONC 1 in 748	Pipe 1.011 Dia 750 Circular CONC 1 in 753	BASIN 1B	Pipe 1.012 Dia 300 Circular CONC 1 in 37	Pipe 1.013 Dia 225 Circular CLAY 1 in 105
STORMWATER LENGTHS	194		9.47	68.818	42.911		11.070	6.096

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225Ø - 28kN/m^2	450Ø - 54kN/m^2	825Ø - 99kN/m^2
300Ø - 36kN/m^2	600Ø - 72kN/m^2	

E	Construction issue	MA	DC	RM	18.01.23
D	HW14 amended	DC	RM	RM	18.11.22
C	S43 amended, manhole type indicated	DC	RM	RM	26.07.22
B	Drainage amended to lower levels as per client request	CDW	DC	RM	20.06.22
A	Cover levels updated	DC	RM	RM	31.05.22
-	First Issue	DC	RM	RM	08.04.22

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Adoptable Drainage
Longsections
Sheet 2

Status		Status Date
Construction		JUNE 2022
Drawn	Checked	Date
DC	RM	08.04.2022
Scale	Number	Rev
H 1:500 V 1:100	10831-500-551	E

0 10 20 30 40 50
METRES

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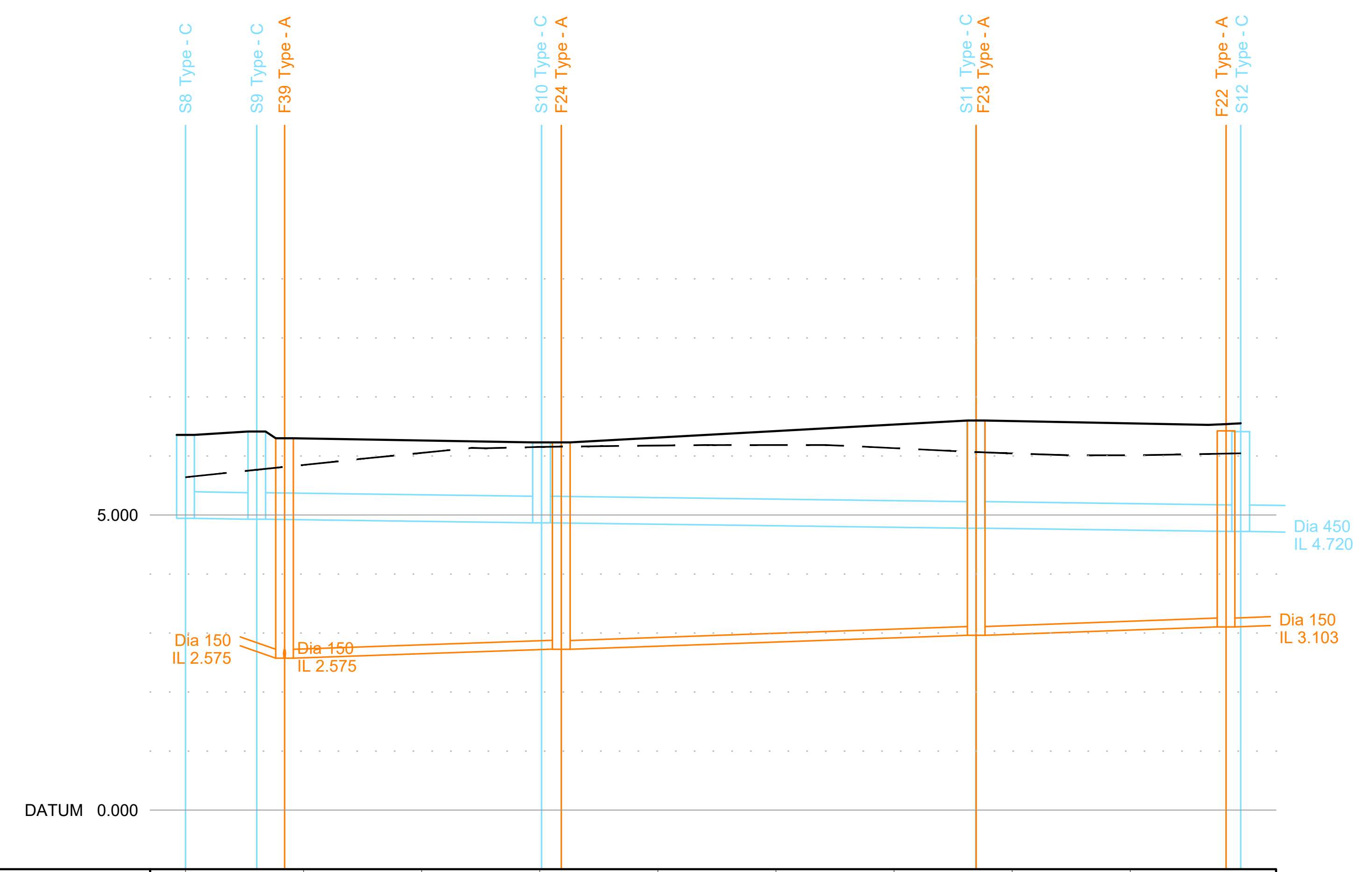
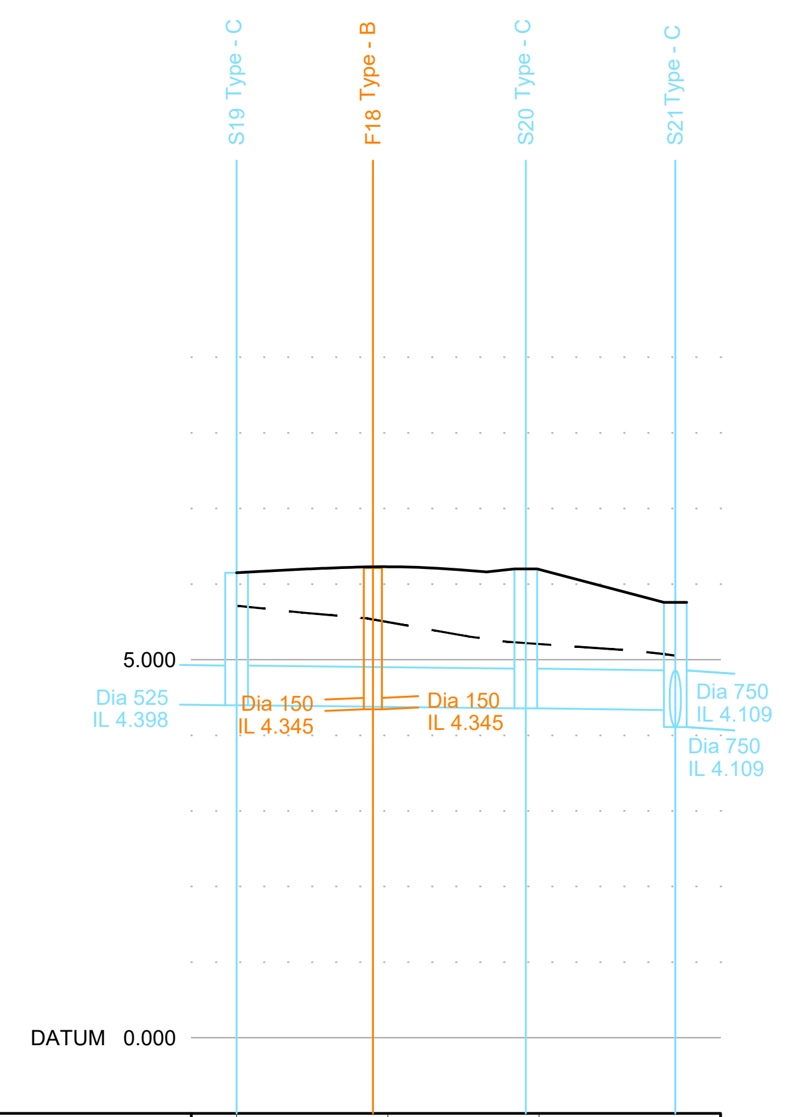
P:\10831\CAD\BCL\Working Drawings\10831-500-550D,551E,552E,553D,554E,555E,556E,557E,558D,559D,560C Adoptable Drainage Longsections.dwg

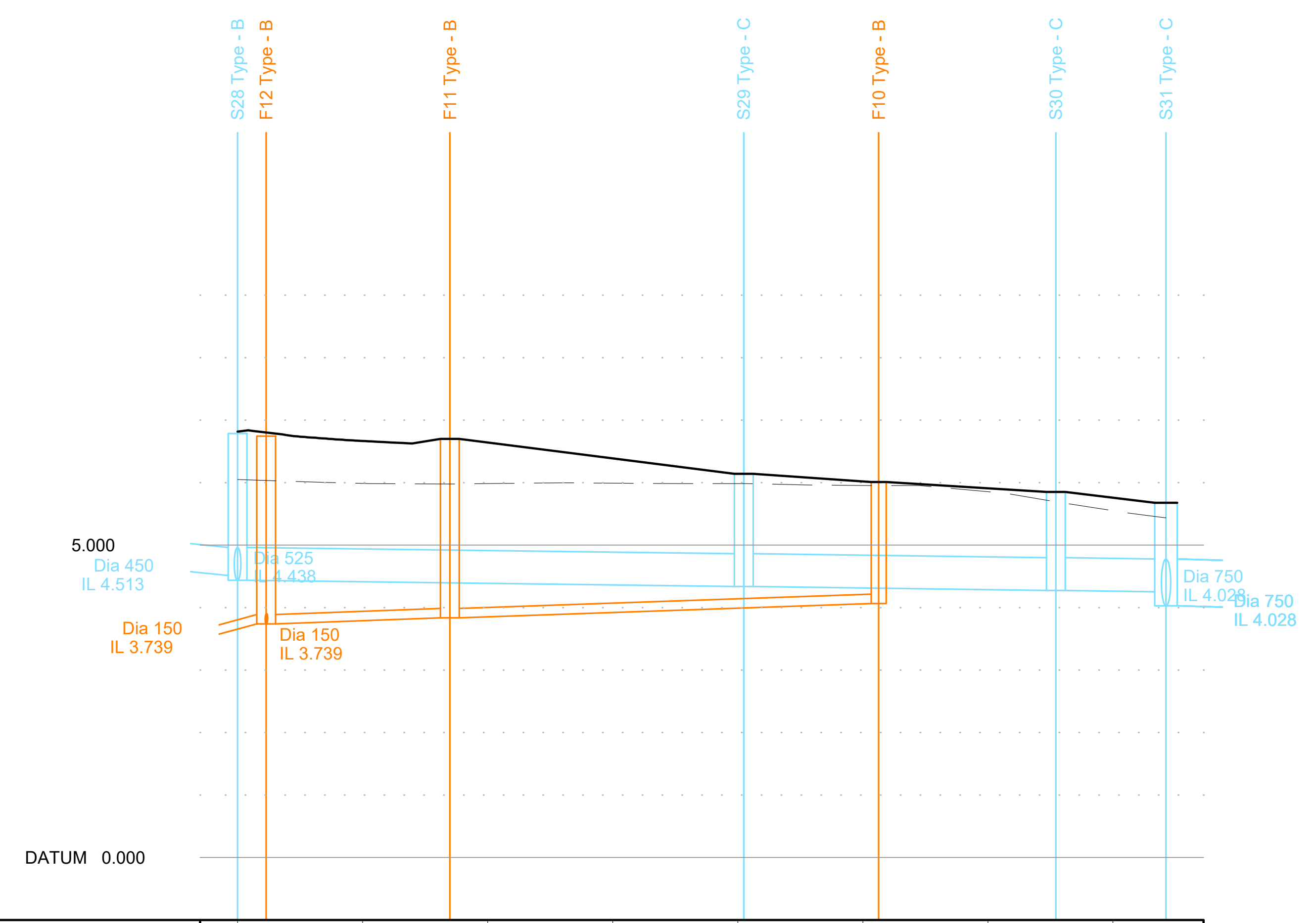
KEY
- Existing ground profile
- Proposed ground profile
- Proposed surface water sewer
- Proposed foul water sewer



GROUND LEVEL	5.641	5.848	6.052	6.153	6.177	6.185	6.133	6.044	6.012
STORMWATER COVER LEVEL	6.357	6.410	6.230	6.600	6.412				
STORMWATER INVERT	4.943	4.928	4.928	4.868	4.868	4.776	4.776	4.720	
STORMWATER DETAILS	Pipe 2.000 Dia 450 Circular CONC 1 in 402	Pipe 2.001 Dia 450 Circular CONC 1 in 402	Pipe 2.002 Dia 450 Circular CONC 1 in 400	Pipe 2.003 Dia 450 Circular CONC 1 in 401					
STORMWATER LENGTHS	6.035	24.113	36.778	22.434					
FOULWATER COVER LEVEL	6.300	6.230	6.600	6.426					
FOULWATER INVERT	2.575	2.727	2.724	2.961	2.961	3.103			
FOULWATER DETAILS	Pipe 1.013 Dia 150 Circular CLAY 1 in 149	Pipe 1.012 Dia 150 Circular CLAY 1 in 149	Pipe 1.011 Dia 150 Circular CLAY 1 in 149						
FOULWATER LENGTHS	22.716	35.402	21.157						



GROUND LEVEL	6.150	6.229	5.207	
STORMWATER COVER LEVEL	6.150	6.200	5.759	
STORMWATER INVERT	4.398	4.356	4.356	4.334
STORMWATER DETAILS	Pipe 2.007 Dia 525 Circular CONC 1 in 455	Pipe 2.008 Dia 525 Circular CONC 1 in 449		
STORMWATER LENGTHS	19.121	9.884		
FOULWATER COVER LEVEL	6.212			



GROUND LEVEL	6.815	6.666	5.984	5.991	5.985	5.953	5.855	5.551
STORMWATER COVER LEVEL	6.786	6.220	5.750	5.678				
STORMWATER INVERT	4.438	4.337	4.337	4.275	4.275	4.253		
STORMWATER DETAILS	Pipe 4.005 Dia 525 Circular CONC 1 in 401	Pipe 4.006 Dia 525 Circular CONC 1 in 403	Pipe 4.007 Dia 525 Circular CONC 1 in 400					
STORMWATER LENGTHS	40.476	24.959	8.809					
FOULWATER COVER LEVEL	6.745	6.700	6.010					
FOULWATER INVERT	3.739	3.837	3.837	4.065				
FOULWATER DETAILS	Pipe 3.001 Dia 150 Circular CLAY 1 in 150	Pipe 3.000 Dia 150 Circular CLAY 1 in 150						
FOULWATER LENGTHS	14.699	34.260						

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225Ø - 28kN/m^2	450Ø - 54kN/m^2	825Ø - 99kN/m^2
300Ø - 36kN/m^2	600Ø - 72kN/m^2	

E	Construction issue	MA	DC	RM	18.01.23
D	S8, S9, S29 & S30 amended, manhole type indicated	DC	RM	RM	26.07.22
C	S30 amended	DC	RM	RM	04.07.22
B	Drainage amended to lower levels as per client request	CDW	DC	RM	20.06.22
A	Cover levels updated	DC	RM	RM	31.05.22
-	First Issue	DC	RM	RM	08.04.22

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Adoptable Drainage
Longsections
Sheet 3

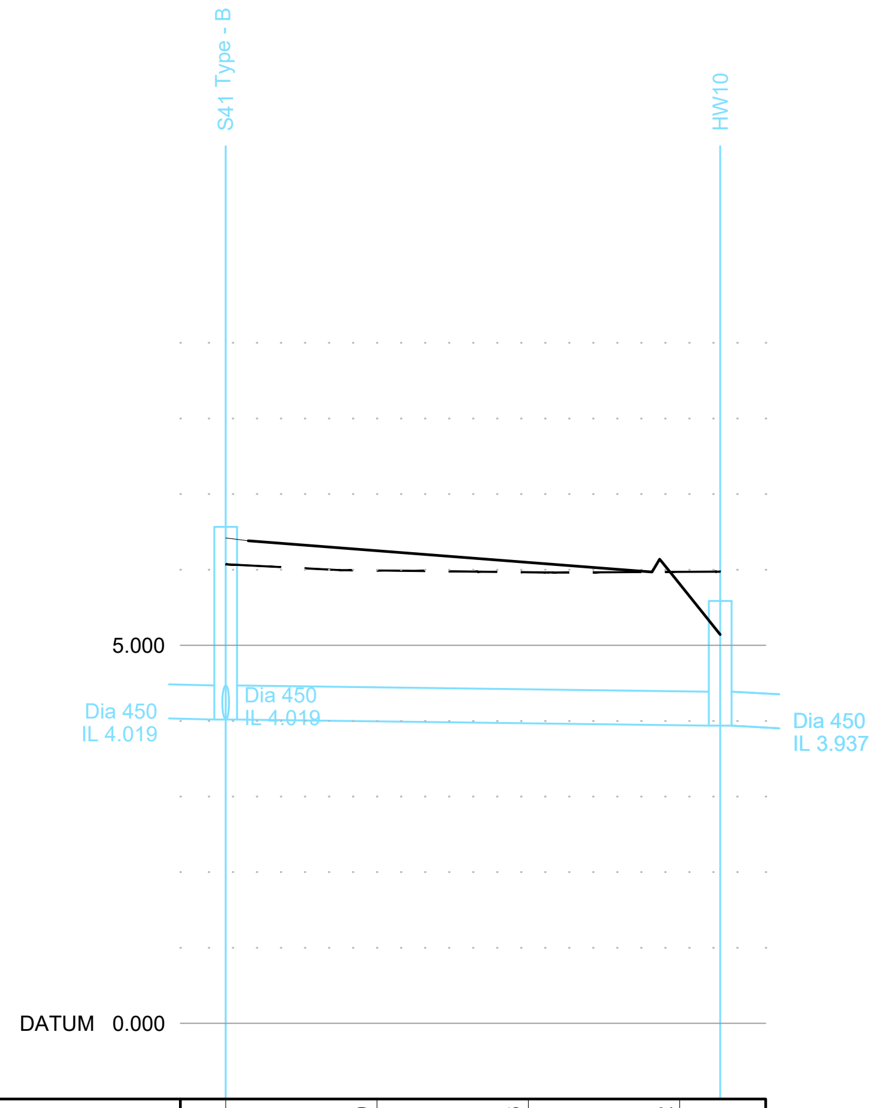
Status		Status Date
Construction		JUNE 2022
Drawn	Checked	Date
DC	RM	08.04.2022
Scale	Number	Rev
H 1:500 V 1:100	10831-500-552	E

0 10 20 30 40 50
METRES

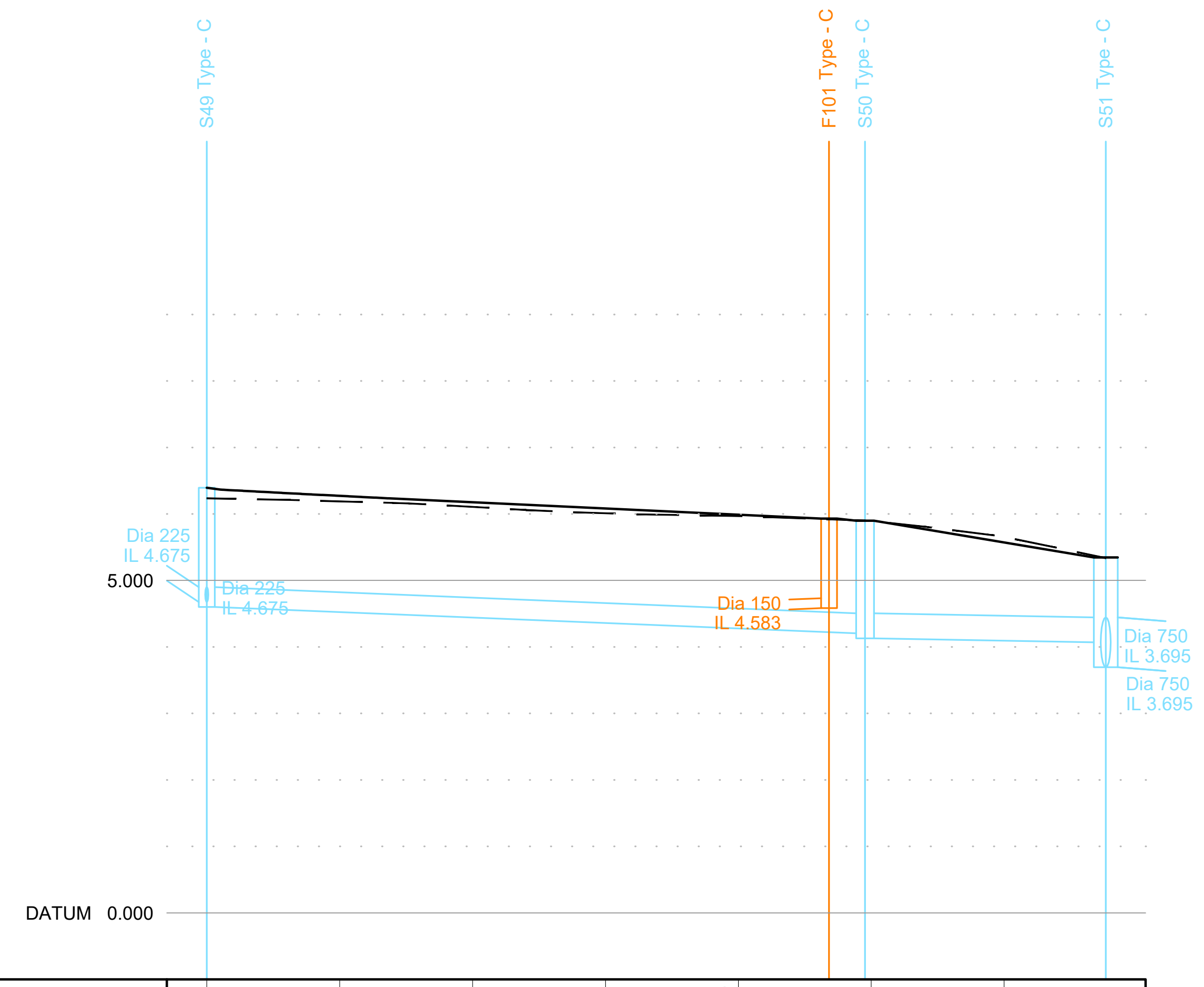
Original Drawing Size A1

KEY

- — — — Existing ground profile
- ——— Proposed ground profile
- Proposed surface water sewer
- Proposed foul water sewer



GROUND LEVEL	6.421	5.989	5.966	5.812
STORMWATER COVER LEVEL	6.568			5.587
STORMWATER INVERT	4.019			3.937
STORMWATER DETAILS	Pipe 6.007 Dia 450 Circular CONC 1 in 399			
STORMWATER LENGTHS	32.681			



GROUND LEVEL	6.393	6.272	6.106	6.010	5.969	5.894	5.656
STORMWATER COVER LEVEL	6.393					5.899	5.345
STORMWATER INVERT	4.600					4.205 4.130	4.070
STORMWATER DETAILS	Pipe 8.003 Dia 300 Circular CLAY 1 in 125					Pipe 8.004 Dia 375 Circular CONC 1 in 302	
STORMWATER LENGTHS	49.533					18.111	
FOULWATER COVER LEVEL					5.931		

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825Ø - 99kN/m^2

D	Construction issue	MA	DC	RM	18.01.23
C	Manhole type indicated	MA	DC	RM	26.07.22
B	Drainage amended to lower levels as per client request	CDW	DC	RM	20.06.22
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Adoptable Drainage
Longsections
Sheet 4

Status		Status Date
Construction		JUNE 2022
Drawn	**Checked**	**Date**
DC	RM	08.04.2022
Scale	**Number**	**Rev**
H 1:500 V 1:100	10831-500-553	D

0 10 20 30 40 50
METRES

Original Drawing Size A1

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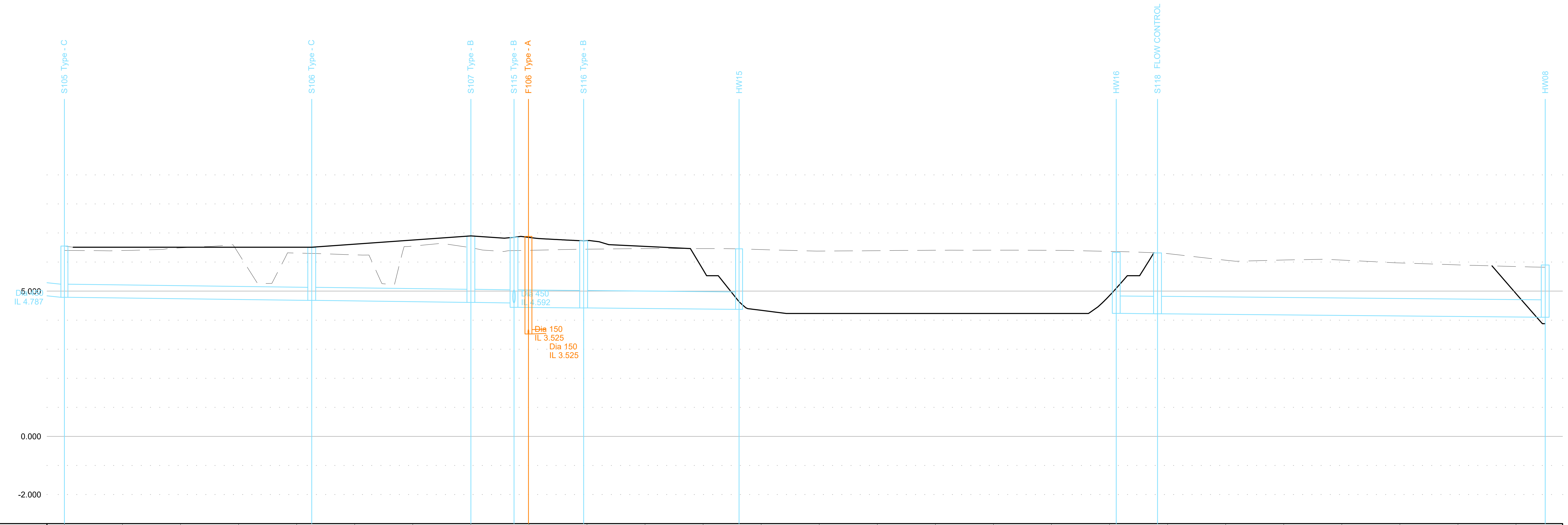
- — — — Existing ground profile
- —— Proposed ground profile
- Proposed surface water sewer
- Proposed foul water sewer



GROUND LEVEL	6.549 6.396 6.488 6.293 6.309 6.247 6.549 6.495 6.847 6.735 6.463 5.735 4.339 4.230 4.230 4.230 4.230 4.230 4.847 6.291 6.064 6.070 6.067 5.969 5.902 4.915
STORMWATER COVER LEVEL	6.549 6.500 6.980 6.852 6.729 6.313
STORMWATER INVERT	4.787 4.680 4.680 4.611 4.611 4.592 4.442 4.420 4.420 4.371 4.371 4.230 4.230 4.220 4.220 4.100 4.100
STORMWATER DETAILS	Pipe 1.003 Dia 450 Circular CONC 1 in 398 Pipe 1.004 Dia 450 Circular CONC 1 in 397 Pipe 1.005 Dia 450 Circular CONC 1 in 391 Pipe 1.006 Dia 600 Circular CONC 1 in 545 Pipe 1.007 Dia 600 Circular CONC 1 in 546 Pipe 1.008 Dia 600 Circular CONC 1 in 711 Pipe 1.009 Dia 600 Circular CONC 1 in 556
STORMWATER LENGTHS	42.600 27.405 7.426 11.997 26.768 BASIN 2 7.113 66.765
FOULWATER COVER LEVEL	6.882
FOULWATER INVERT	
FOULWATER DETAILS	
FOULWATER LENGTHS	

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ADOPTABLE DRAINAGE NOTES:

1. All adoptable drainage to be in accordance with Sewerage Sector Guidance (SSG) Appendix C - Design and Construction Guidance (DCG)
2. All Sustainable Urban Drainage (SuDS) to be in accordance with CIRIA report C753 "*The SuDS Manual*" and supporting documents.
3. Contractor to check all existing invert levels and watercourse bed/water levels for outfalls on site ahead of commencing work.
4. All lateral connections to be 150mm diameter unless noted otherwise.
5. Sewers with less than 1.2m cover beneath highways and 0.9m cover elsewhere to have special concrete cover slab protection in accordance with the adopting authority's requirements. Flexibility of pipeline to be maintained.
6. Bedding to all remaining pipework is to be class S granular bed and surround.
7. Pipes up to 300mm diameter shall be either vitrified clay or plastic. Pipes greater than 300mm diameter shall be precast concrete or plastic, excluding those crossing beneath watercourses. All pipes to be in accordance with the adopting authority's approved manufacturers. All pipes to be to BS EN 1295 with either sleeved of spigot & socket flexible joints, and shall satisfy the minimum crushing strengths stated below:

150Ø - 22kN/m^2	375Ø - 45kN/m^2	750Ø - 90kN/m^2
225Ø - 28kN/m^2	450Ø - 54kN/m^2	825Ø - 99kN/m^2
300Ø - 36kN/m^2	600Ø - 72kN/m^2	

E	Construction issue	MA	DC	RM	18.01.23
D	S106 & S107 amended, manhole type indicated	DC	RM	RM	26.07.22
C	Drainage amended to lower levels as per client request	CDW	DC	RM	20.06.22
B	Cover levels updated	DC	RM	RM	31.05.22
A	S106 & S107 cover levels amended	DC	RM	RM	13.05.22
-	First Issue	DC	RM	RM	08.04.22

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Bellway

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Pagham

Adoptable Drainage Longsections Sheet 5

Status		Status Date
Construction		JUNE 2022
Drawn	Checked	Date
DC	RM	31.03.2022
Scale	Number	Rev
H 1:500 V 1:100	10831-500-554	E

0 10 20 30 40 50
METRES

Construction Design and Management (CDM)
Key Residual Risks

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2) Street Lighting Cables
3) Working adjacent to water courses and flood plain
4) Soft ground conditions
5) Working adjacent to live highways
6) Unchartered services

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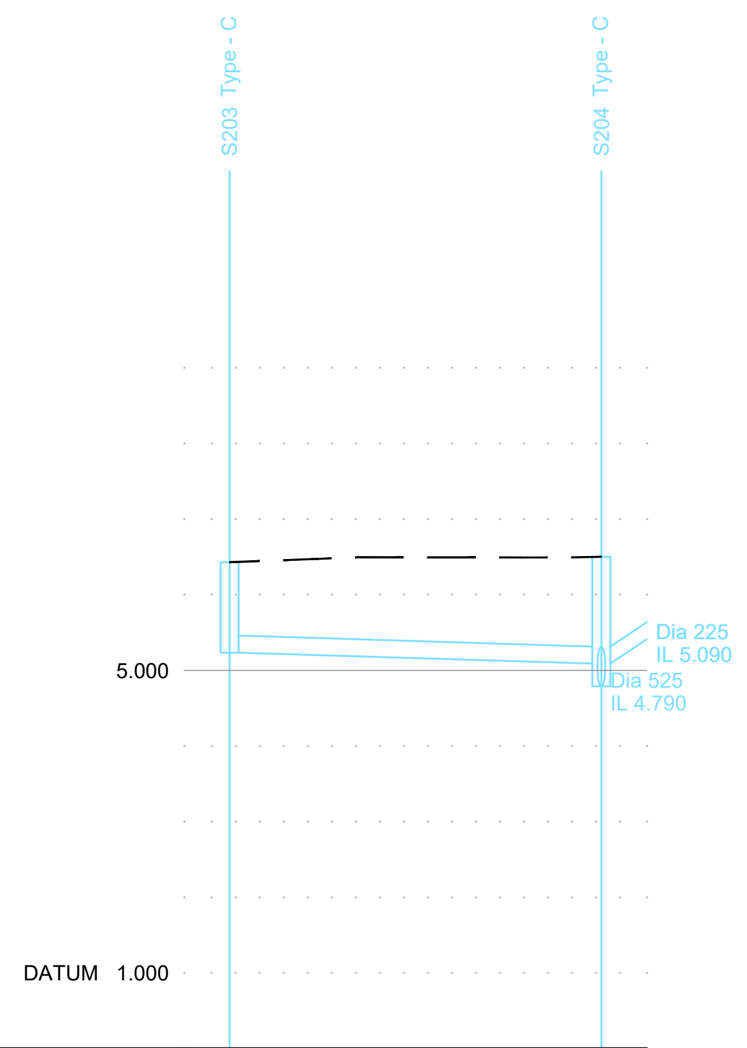
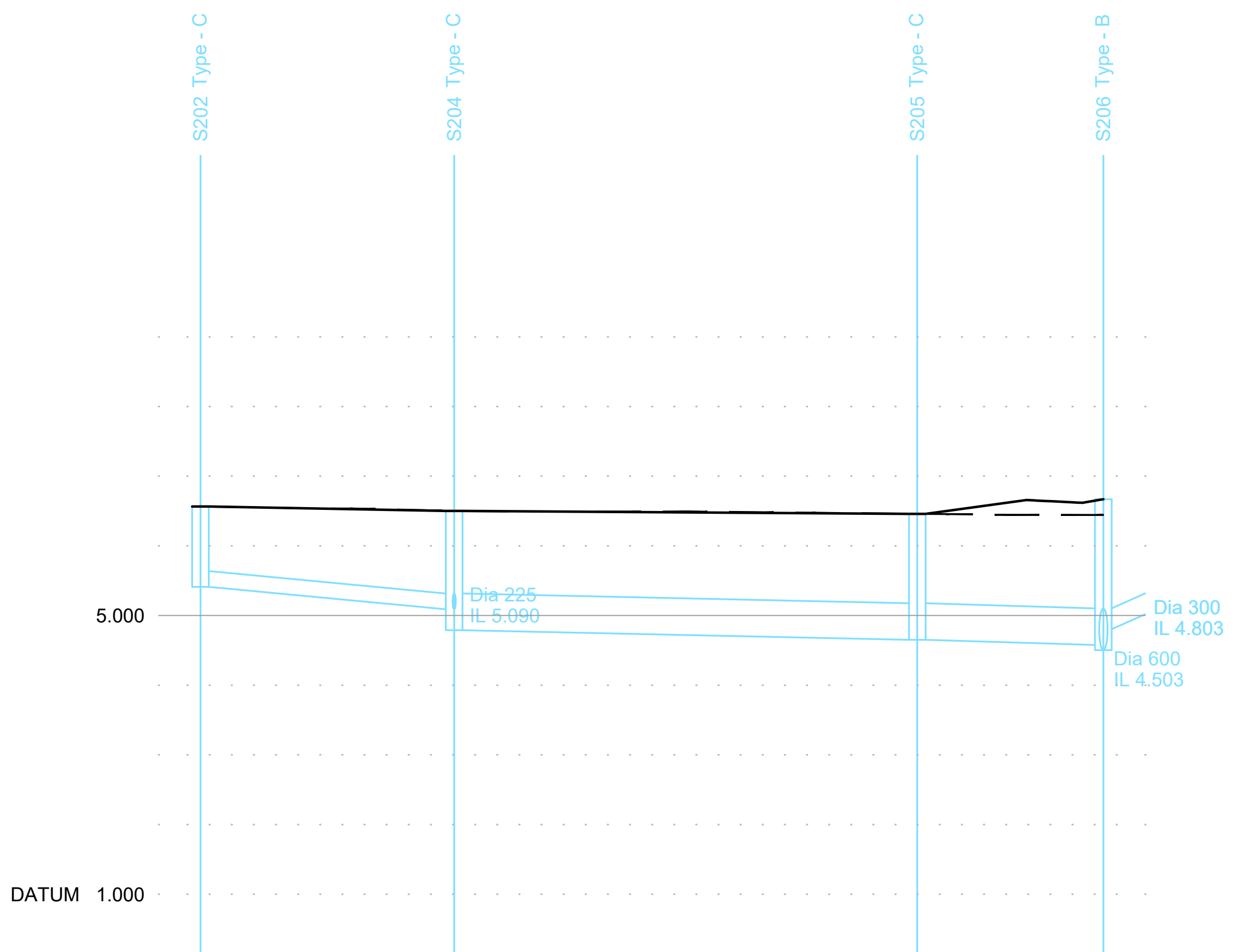
P:\10831\CAD\BCL\Working Drawings\10831-500-550D,551E,552E,553D,554E,555E,556E,557E,558D,559D,560C Adoptable Drainage Longsections.dwg

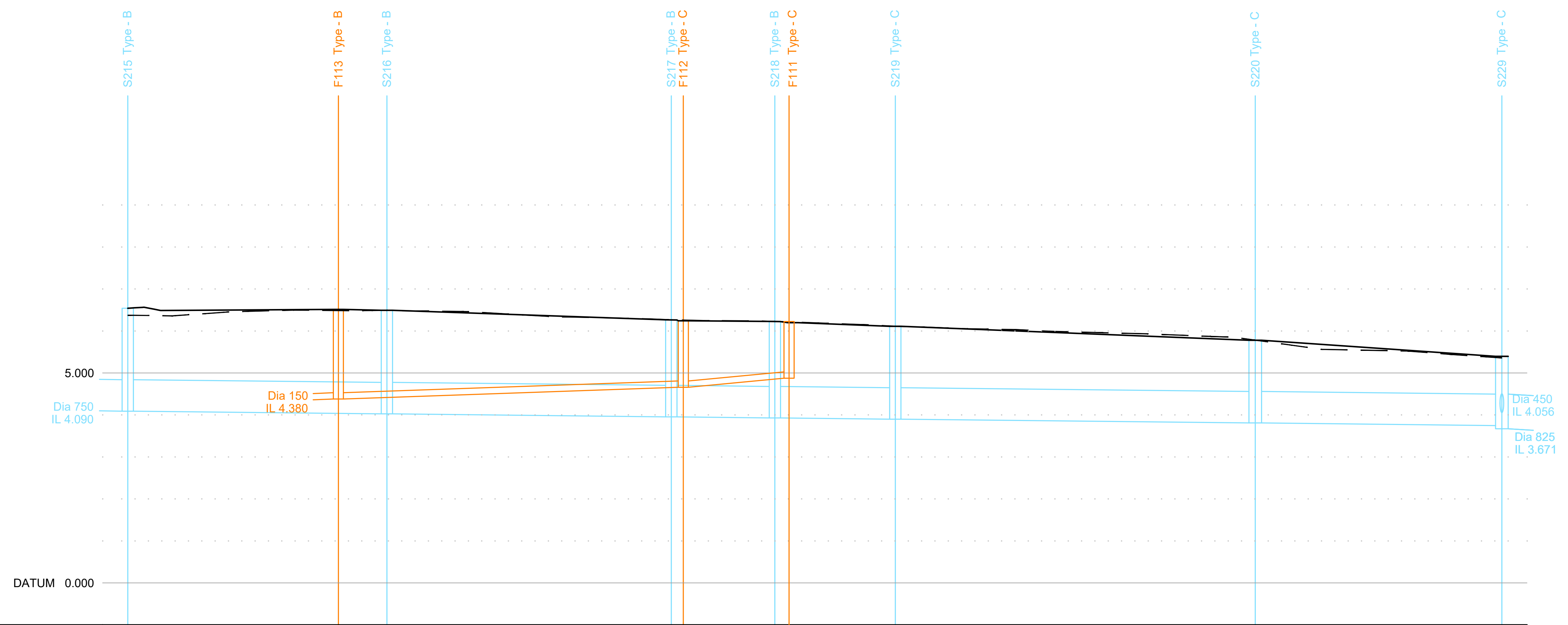
Original Drawing Size A1



GROUND LEVEL	6.430	6.495	6.493	
STORMWATER COVER LEVEL	6.430	6.501		
STORMWATER INVERT	5.235	5.090		
STORMWATER DETAILS	Pipe 3.000 Dia 225 Circular CLAY 1 in 169			
STORMWATER LENGTHS	24.572			



GROUND LEVEL	6.565	6.536	6.498	6.491	6.483	6.463	6.651
STORMWATER COVER LEVEL	6.565	6.501	6.460	6.669			
STORMWATER INVERT	5.412	5.090	4.790	4.652	4.652	4.578	
STORMWATER DETAILS	Pipe 2.000 Dia 225 Circular CLAY 1 in 57	Pipe 2.001 Dia 525 Circular CONC 1 in 241	Pipe 2.002 Dia 525 Circular CONC 1 in 180				
STORMWATER LENGTHS	18.202	33.227	13.350				



GROUND LEVEL	6.542	6.425	6.496	6.490	6.464	6.349	6.299	6.245	6.207	6.127	6.052	5.992	5.939	5.862	5.623	5.532	5.408
STORMWATER COVER LEVEL	6.542	6.492	6.266	6.227	6.111	5.780	5.396										
STORMWATER INVERT	4.090	4.026	4.026	3.955	3.955	3.929	3.929	3.899	3.899	3.810	3.810	3.746					
STORMWATER DETAILS	Pipe 1.006 Dia 750 Circular CONC 1 in 482	Pipe 1.007 Dia 750 Circular CONC 1 in 477	Pipe 1.008 Dia 750 Circular CONC 1 in 474	Pipe 1.009 Dia 750 Circular CONC 1 in 478	Pipe 1.010 Dia 750 Circular CONC 1 in 482	Pipe 1.011 Dia 750 Circular CONC 1 in 459											
STORMWATER LENGTHS	30.862	33.870	12.332	14.344	42.861	29.372											
FOULWATER COVER LEVEL	6.513	6.242	6.225														
FOULWATER INVERT	4.380	4.659	4.659	4.875													
FOULWATER DETAILS	Pipe 3.001 Dia 150 Circular CLAY 1 in 150	Pipe 3.000 Dia 150 Circular CLAY 1 in 61															
FOULWATER LENGTHS	41.816	13.202															

KEY

— — —	Existing ground profile
———	Proposed ground profile
▯	Proposed surface water sewer
▯	Proposed foul water sewer

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150Ø - 22kN/m^2	375Ø - 45kN/m^2	750Ø - 90kN/m^2
225Ø - 28kN/m^2	450Ø - 54kN/m^2	825Ø - 99kN/m^2
300Ø - 36kN/m^2	600Ø - 72kN/m^2	

E	Construction issue	MA	DC	RM	18.01.23
D	F111 amended	DC	RM	RM	21.11.22
C	Manhole type indicated	MA	DC	RM	26.07.22
B	Drainage amended to lower levels as per client request	CDW	DC	RM	20.06.22
A	Cover levels updated	DC	RM	RM	31.05.22
-	First Issue	DC	RM	RM	08.04.22

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Bellway

Hook Lane
Pagham

Adoptable Drainage
Longsections
Sheet 6

Status	Status Date
Construction	JUNE 2022

Drawn	Checked	Date
DC	RM	08.04.2022
Scale	Number	Rev
H 1:500 V 1:100	10831-500-555	E

0 10 20 30 40 50
METRES

Construction Design and Management (CDM)
Key Residual Risks

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4) Soft ground conditions
5) Working adjacent to live highways
6) Unchartered services

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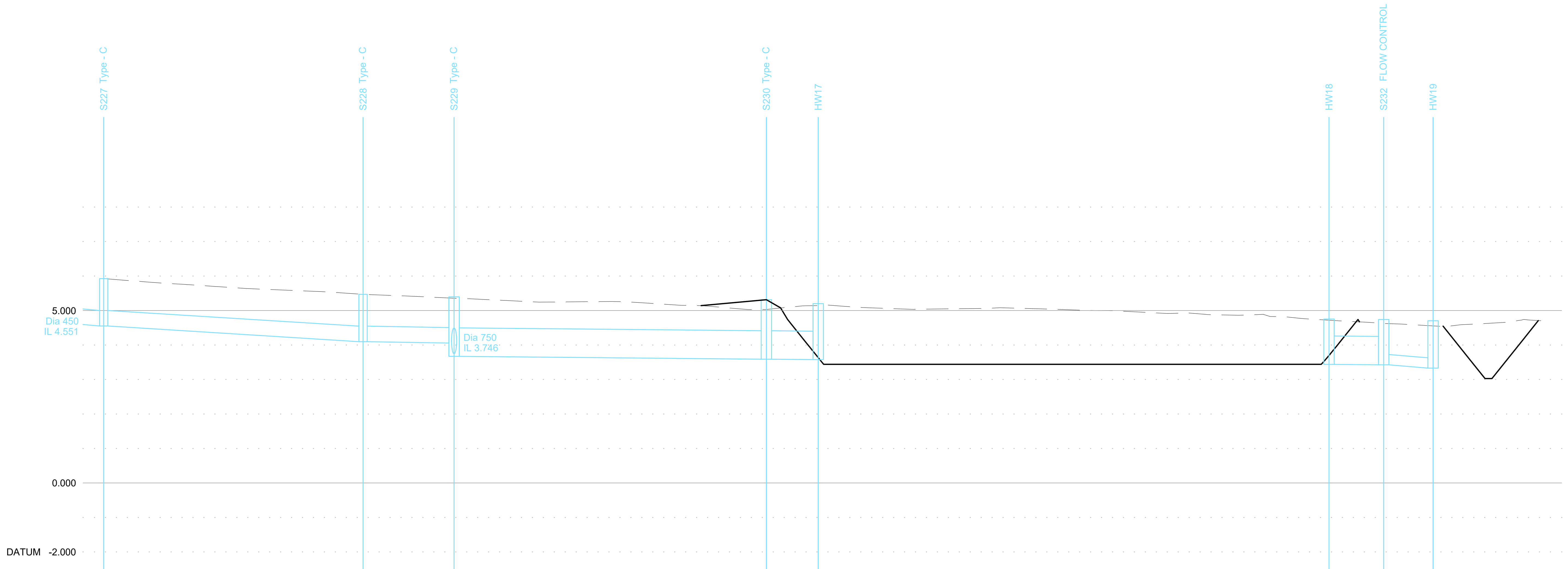
P:\10831\CAD\BCL\Working Drawings\10831-500-550D,551E,552E,553D,554E,555E,556E,557E,558D,559D,560C Adoptable Drainage Longsections.dwg

Original Drawing Size A1

KEY

Existing ground profile
Proposed ground profile
Proposed surface water sewer
Proposed foul water sewer



GROUND LEVEL	5.926 5.777 5.648 5.561 5.451 5.364 5.274 5.256 5.200 5.086 4.537 3.440 3.440 3.440 3.440 3.440 3.440 3.440 4.265 4.587 3.110
STORMWATER COVER LEVEL	5.926 5.469 5.396 5.314 4.740 4.705
STORMWATER INVERT	4.551 4.097 4.097 4.056 3.671 3.589 3.589 3.575 3.575 3.440 3.440 3.425 3.425 3.330
STORMWATER DETAILS	Pipe 5.006 Dia 450 Circular CONC 1 in 83 Pipe 5.007 Dia 450 Circular CONC 1 in 322 Pipe 1.012 Dia 825 Circular CONC 1 in 552 Pipe 1.013 Dia 825 Circular CONC 1 in 536 BASIN 3 Pipe 1.014 Dia 825 Circular CLAY 1 in 528 Pipe 1.015 Dia 300 Circular CLAY 1 in 75
STORMWATER LENGTHS	37.617 13.198 45.295 7.509 7.93 7.166

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300Ø - 36kN/m^2	600Ø - 72kN/m^2	

E	Construction issue	MA	DC	RM	18.01.23
D	HW19 amended	DC	RM	RM	18.11.22
C	Manhole type indicated	MA	DC	RM	26.07.22
B	Drainage amended to lower levels as per client request	CDW	DC	RM	20.06.22
A	Cover levels updated	DC	RM	RM	31.05.22
-	First Issue	DC	RM	RM	08.04.22

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Bellway

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Adoptable Drainage
Longsections
Sheet 7

Status		Status Date
Construction		JUNE 2022
Drawn	Checked	Date
DC	RM	08.04.2022
Scale	Number	Rev
H 1:500 V 1:100	10831-500-556	E

0 10 20 30 40 50
METRES

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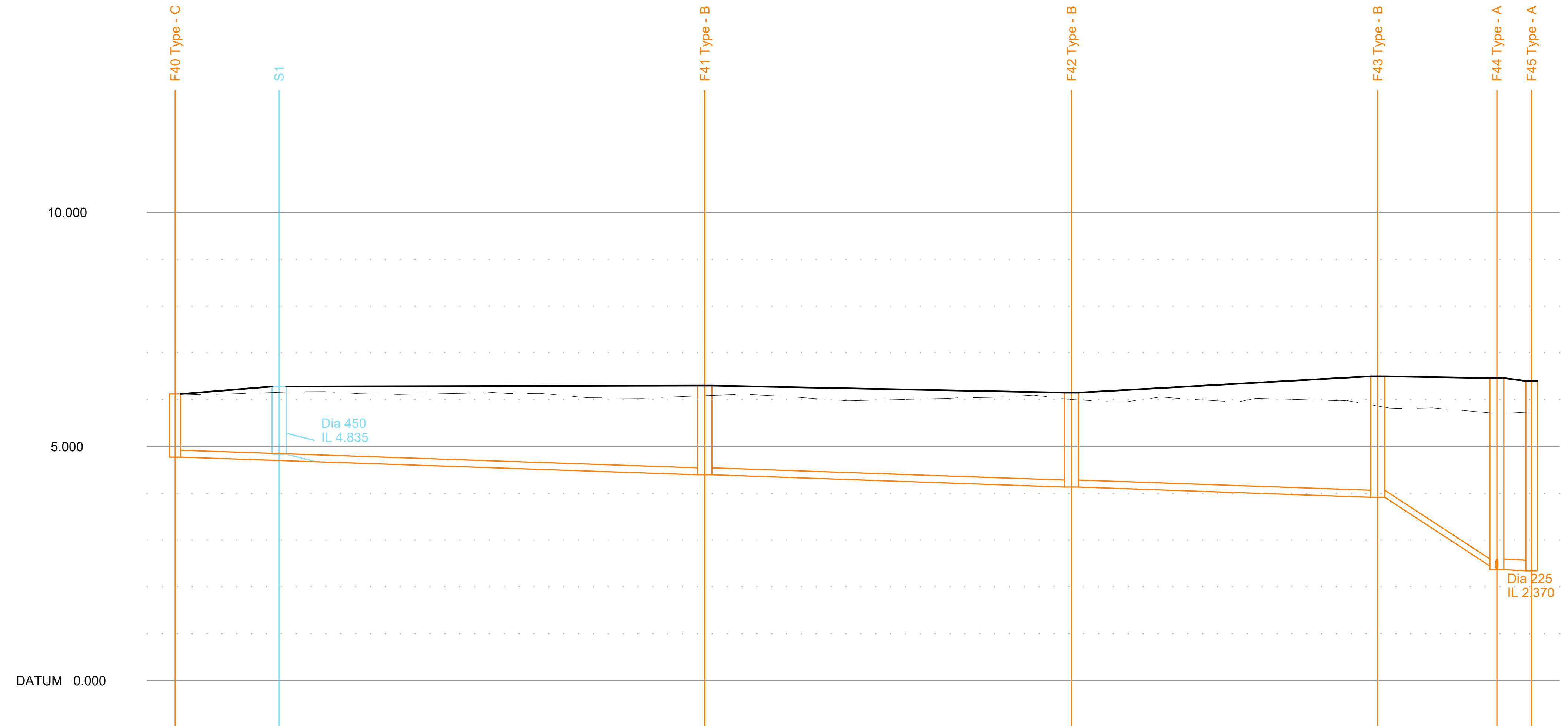
P:\10831\CAD\BCL\Working Drawings\10831-500-550D,551E,552E,553D,554E,555E,556E,557E,558D,559D,560C Adoptable Drainage Longsections.dwg

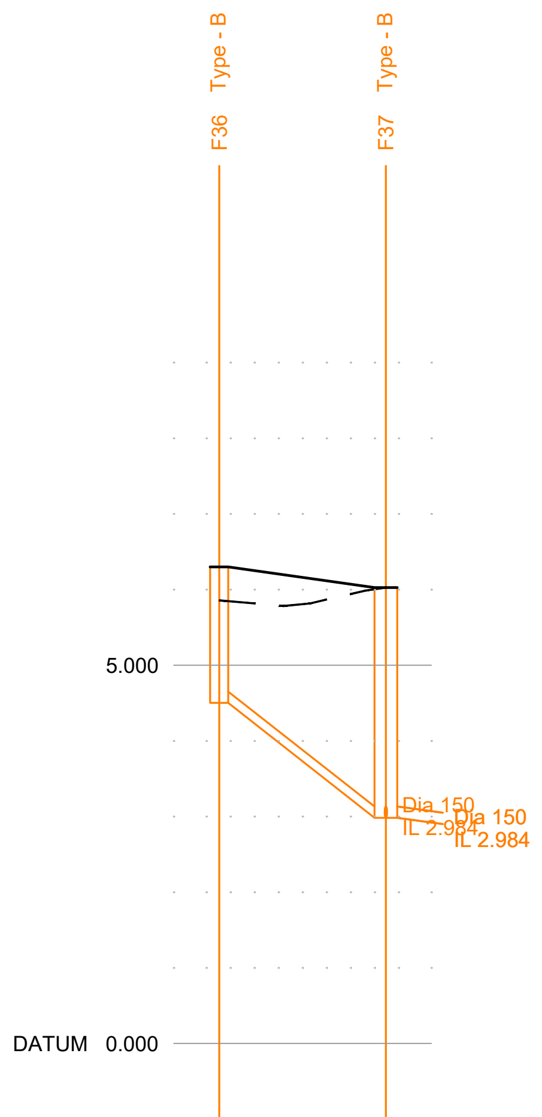
Original Drawing Size A1

KEY

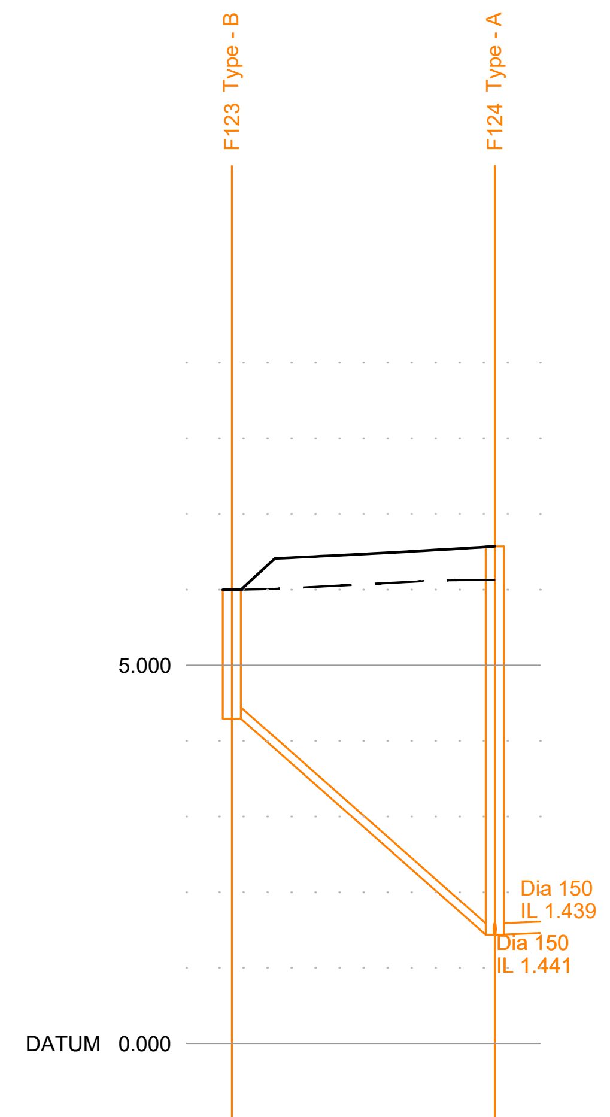
— — — Existing ground profile
——— Proposed ground profile
Proposed surface water sewer
Proposed foul water sewer



GROUND LEVEL	6.121	6.149	6.126	6.131	6.115	6.032	6.109	6.001	6.015	6.077	5.952	5.991	6.002	5.817	5.728
STORMWATER COVER LEVEL		6.280													
STORMWATER INVERT															
STORMWATER DETAILS															
STORMWATER LENGTHS															
FOULWATER COVER LEVEL	6.121	6.300	6.150	6.500	6.460	6.400									
FOULWATER INVERT	4.771	4.394	4.394	4.133	4.133	3.915	3.915	2.445	2.370	2.345					
FOULWATER DETAILS	Pipe 9.000 Dia 150 Circular CLAY 1 in 150	Pipe 9.001 Dia 150 Circular CLAY 1 in 150	Pipe 9.002 Dia 150 Circular CLAY 1 in 150	Pipe 9.003 Dia 150 Circular CLAY 1 in 9	Pipe 1.015 Dia 225 Circular CLAY 1 in 148										
FOULWATER LENGTHS	56.592	39.153	32.728	12.725	3.697										



GROUND LEVEL	5.858	5.997
FOULWATER COVER LEVEL	6.300	6.027
FOULWATER INVERT	4.502	2.984
FOULWATER DETAILS	Pipe 8.000 Dia 150 Circular CLAY 1 in 7	
FOULWATER LENGTHS	11.013	



GROUND LEVEL	5.997	6.484
FOULWATER COVER LEVEL	5.997	6.572
FOULWATER INVERT	4.294	1.439
FOULWATER DETAILS	Pipe 5.000 Dia 150 Circular CLAY 1 in 6	
FOULWATER LENGTHS	17.376	

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225Ø - 28kN/m^2 450Ø - 54kN/m^2 825Ø - 99kN/m^2
300Ø - 36kN/m^2 600Ø - 72kN/m^2

E	Construction issue	MA	DC	RM	18.01.23
D	Manhole type indicated, pipe 1.015 upsized	MA	DC	RM	26.07.22
C	Drainage amended to lower levels as per client request	CDW	DC	RM	20.06.22
B	Cover levels updated	DC	RM	RM	31.05.22
A	Sections F40-F45 & F36-F37	DC	RM	RM	13.05.22
-	First Issue	DC	RM	RM	08.04.22

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Bellway

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Adoptable Drainage
Longsections
Sheet 8

Status	Status Date
Construction	JUNE 2022

Drawn	Checked	Date
DC	RM	08.04.2022

Scale	Number	Rev
H 1:500 V 1:100	10831-500-557	E

0 10 20 30 40 50
METRES

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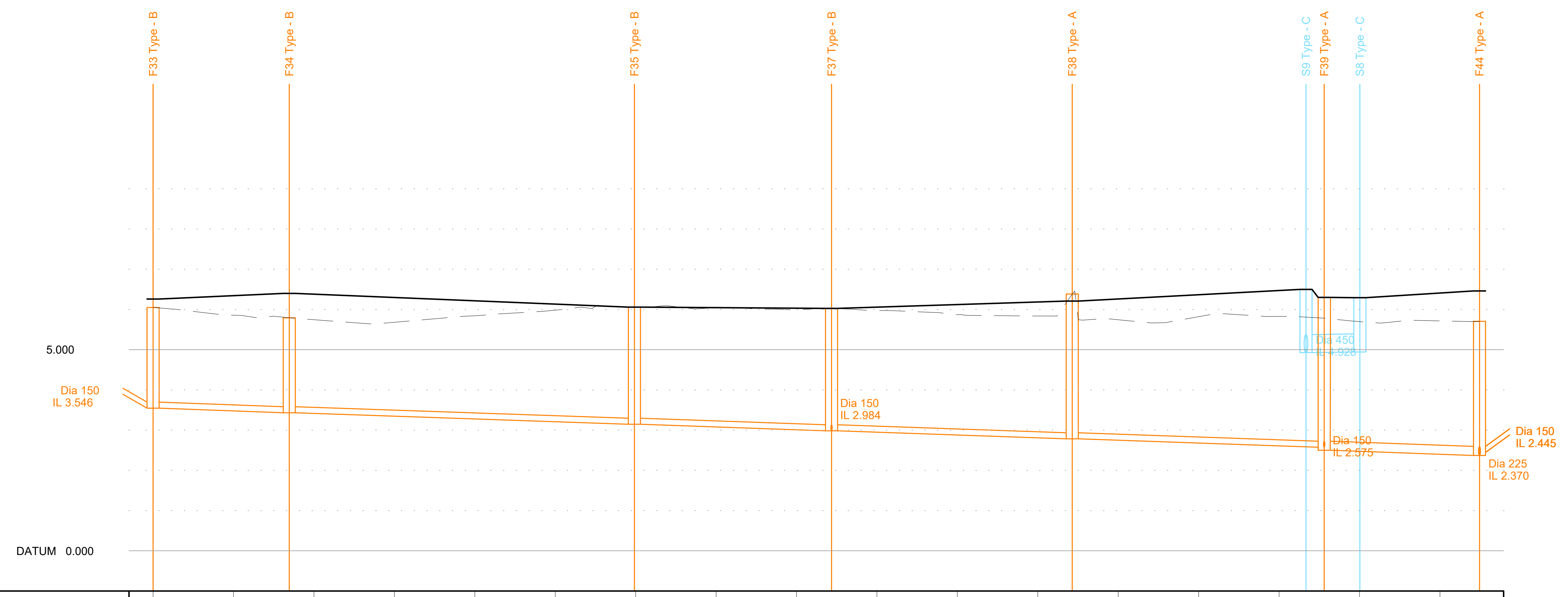
P:\10831\CAD\BCL\Working Drawings\10831-500-550D,551E,552E,553D,554E,555E,556E,557E,558D,559D,560C Adoptable Drainage Longsections.dwg

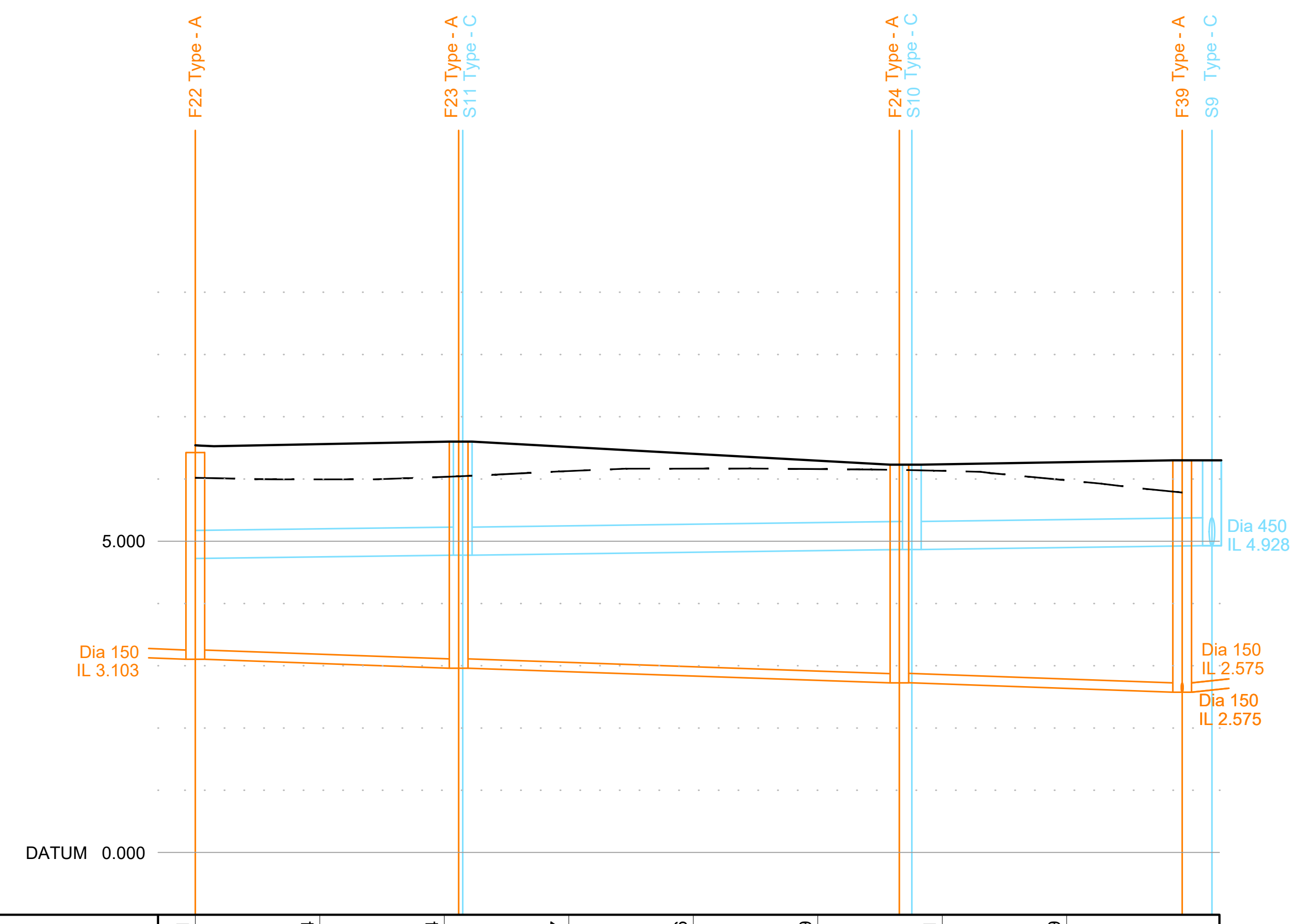
Original Drawing Size A1

KEY

- — — — Existing ground profile
- ——— Proposed ground profile
- Proposed surface water sewer
- Proposed foul water sewer



GROUND LEVEL	6.051 5.858 5.746 5.682 5.843 5.984 6.057 6.036 5.988 5.975 5.871 5.839 5.744 5.822 5.828 5.699 5.716
STORMWATER COVER LEVEL	6.410 6.357
STORMWATER INVERT	4.928 4.943
STORMWATER DETAILS	Pipe 2.000 Dia 450 Circular CONC 1 in 402
STORMWATER LENGTHS	6.035
FOULWATER COVER LEVEL	6.260 6.400 6.058 6.027 6.210 6.300 6.400
FOULWATER INVERT	3.546 3.433 3.433 3.147 3.147 2.984 2.984 2.784 2.784 2.575 2.500 2.370
FOULWATER DETAILS	Pipe 6.007 Dia 150 Circular CLAY 1 in 150 Pipe 6.008 Dia 150 Circular CLAY 1 in 150 Pipe 6.009 Dia 150 Circular CLAY 1 in 150 Pipe 6.010 Dia 150 Circular CLAY 1 in 150 Pipe 6.011 Dia 150 Circular CLAY 1 in 150 Pipe 1.014 Dia 225 Circular CLAY 1 in 149
FOULWATER LENGTHS	16.931 42.909 24.514 29.928 31.325 19.311



GROUND LEVEL	6.541 5.994 6.034 6.127 6.166 6.159 6.131 5.979
STORMWATER COVER LEVEL	6.600 6.230 6.300
STORMWATER INVERT	4.776 4.776 4.868 4.868 4.928
STORMWATER DETAILS	Pipe 2.003 Dia 450 Circular CONC 1 in 401 Pipe 2.002 Dia 450 Circular CONC 1 in 400 Pipe 2.001 Dia 450 Circular CONC 1 in 402
STORMWATER LENGTHS	22.434 36.778 24.113
FOULWATER COVER LEVEL	6.426 6.600 6.230 6.300
FOULWATER INVERT	3.103 2.961 2.961 2.724 2.727 2.575
FOULWATER DETAILS	Pipe 1.011 Dia 150 Circular CLAY 1 in 149 Pipe 1.012 Dia 150 Circular CLAY 1 in 149 Pipe 1.013 Dia 150 Circular CLAY 1 in 149
FOULWATER LENGTHS	21.157 35.402 22.716

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8. Any damage caused to existing footways, roads or other third party property to be made good to the county engineers requirements.

ADOPTABLE DRAINAGE NOTES:

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2. All Sustainable Urban Drainage (SuDS) to be in accordance with CIRIA report C753 "*The SuDS Manual*" and supporting documents.
3. Contractor to check all existing invert levels and watercourse bed/water levels for outfalls on site ahead of commencing work.
4. All lateral connections to be 150mm diameter unless noted otherwise.
5. Sewers with less than 1.2m cover beneath highways and 0.9m cover elsewhere to have special concrete cover slab protection in accordance with the adopting authority's requirements. Flexibility of pipeline to be maintained.
6. Bedding to all remaining pipework is to be class S granular bed and surround.
7. Pipes up to 300mm diameter shall be either vitrified clay or plastic. Pipes greater than 300mm diameter shall be precast concrete or plastic, excluding those crossing beneath watercourses. All pipes to be in accordance with the adopting authority's approved manufacturers. All pipes to be to BS EN 1295 with either sleeved of spigot & socket flexible joints, and shall satisfy the minimum crushing strengths stated below:

150Ø - 22kN/m^2	375Ø - 45kN/m^2	750Ø - 90kN/m^2
225Ø - 28kN/m^2	450Ø - 54kN/m^2	825Ø - 99kN/m^2
300Ø - 36kN/m^2	600Ø - 72kN/m^2	

D	Construction issue	MA	DC	RM	18.01.23
C	Manhole type indicated, Pipe 1.014 upsized	MA	DC	RM	26.07.22
B	Drainage amended to lower levels as per client request	CDW	DC	RM	20.06.22
A	Cover levels updated	DC	RM	RM	31.05.22
-	First Issue	DC	RM	RM	08.04.22

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Bellway

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Pagham

Adoptable Drainage
Longsections
Sheet 9

Construction Design and Management (CDM)
Key Residual Risks

Contractors entering the site should gain permission from the relevant land owners and/or principle contractor working on site at the time of entry. Contractors shall be responsible for carrying out their own risk assessments and for liaising with the relevant services companies and authorities. Listed below are Site Specific key risks associated with the project.

1) Overhead and underground services
2) Street Lighting Cables
3) Working adjacent to water courses and flood plain
4) Soft ground conditions
5) Working adjacent to live highways
6) Unchartered services

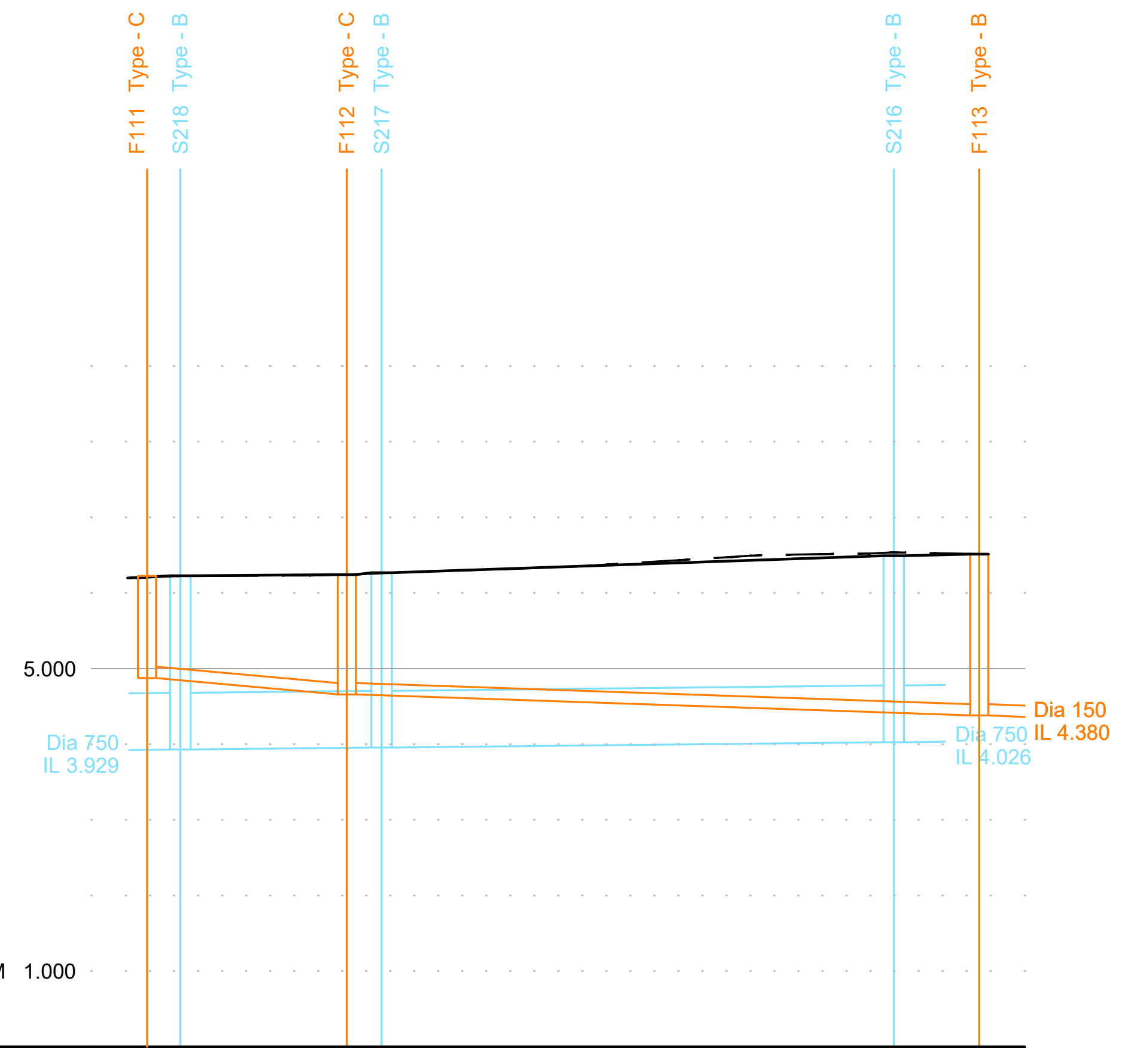
UNTIL TECHNICAL APPROVAL HAS BEEN OBTAINED FROM THE RELEVANT LOCAL AUTHORITIES, IT SHOULD BE UNDERSTOOD THAT ALL DRAWINGS ARE ISSUED AS PRELIMINARY AND NOT FOR CONSTRUCTION. SHOULD THE CONTRACTOR COMMENCE SITE WORK PRIOR TO APPROVAL BEING GIVEN, IT IS ENTIRELY AT HIS OWN RISK.

Status		Status Date
Construction		JUNE 2022
Drawn	**Checked**	**Date**
DC	RM	08.04.2022
Scale	**Number**	**Rev**
H 1:500 V 1:100	10831-500-558	D

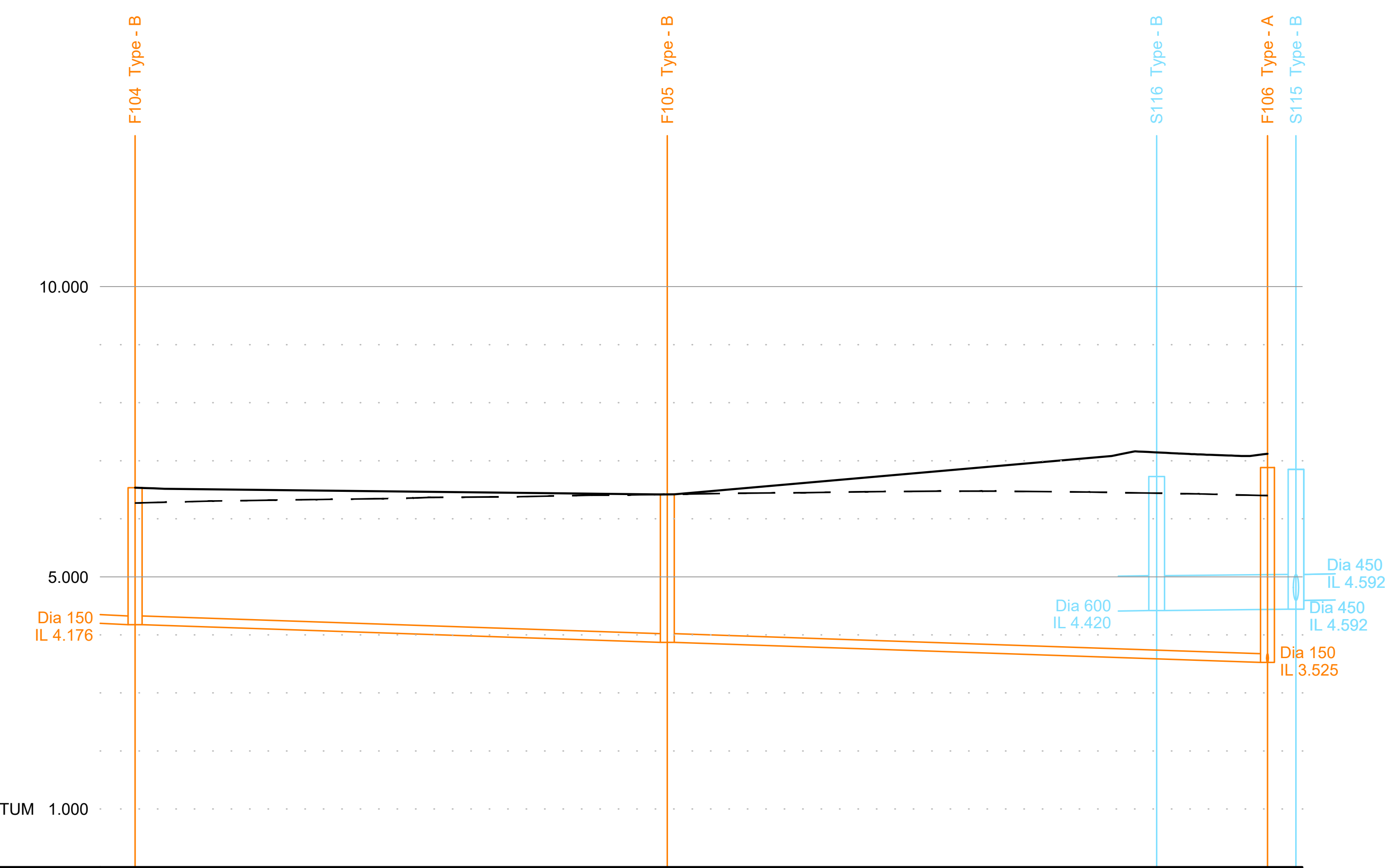
0 10 20 30 40 50
METRES

P:\10831\CAD\BCL\Working Drawings\10831-500-550D,551E,552E,553D,554E,555E,556E,557E,558D,559D,560C Adoptable Drainage Longsections.dwg

Original Drawing Size A1



GROUND LEVEL	6.206			6.230				6.291	6.358	6.484	6.534	
STORMWATER COVER LEVEL		6.227				6.266					6.492	
STORMWATER INVERT			3.929			3.955	3.955				4.026	
STORMWATER DETAILS				Pipe 1.008 Dia 750 Circular CONC 1 in 474					Pipe 1.007 Dia 750 Circular CONC 1 in 477			
STORMWATER LENGTHS				12.332					33.870			
FOULWATER COVER LEVEL	6.225				6.242							6.513
FOULWATER INVERT		4.875			4.659	4.659						4.380
FOULWATER DETAILS				Dia 150 Circular CLAY 1 in 61					Pipe 3.001 Dia 150 Circular CLAY 1 in 150			
FOULWATER LENGTHS				13.202					41.816			



GROUND LEVEL	6.535		6.316	6.343	6.375	6.406			6.435	6.457	6.476	6.465		7.124		
STORMWATER COVER LEVEL													6.729			6.852
STORMWATER INVERT														4.420		4.442
STORMWATER DETAILS															Pipe 1.006 Dia 600 Circular CONC 1 in 545	
STORMWATER LENGTHS															11.997	
FOULWATER COVER LEVEL	6.535						6.422								6.882	
FOULWATER INVERT		4.176					3.870	3.870							3.525	
FOULWATER DETAILS				Pipe 1.002 Dia 150 Circular CLAY 1 in 150							Pipe 1.003 Dia 150 Circular CLAY 1 in 150					
FOULWATER LENGTHS				45.828							51.681					

KEY

- — — — Existing ground profile
- ——— Proposed ground profile
- Proposed surface water sewer
- Proposed foul water sewer

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7. Pipes up to 300mm diameter shall be either vitrified clay or plastic. Pipes greater than 300mm diameter shall be precast concrete or plastic, excluding those crossing beneath watercourses. All pipes to be in accordance with the adopting authority's approved manufacturers. All pipes to be to BS EN 1295 with either sleeved of spigot & socket flexible joints, and shall satisfy the minimum crushing strengths stated below:

150Ø - 22kN/m^2 375Ø - 45kN/m^2 750Ø - 90kN/m^2
225Ø - 28kN/m^2 450Ø - 54kN/m^2 825Ø - 99kN/m^2
300Ø - 36kN/m^2 600Ø - 72kN/m^2

D	Construction issue	MA	DC	RM	18.01.23
C	F111 amended	DC	RM	RM	18.11.22
B	Manhole type indicated	MA	DC	RM	26.07.22
A	Drainage amended to lower levels as per client request	CDW	DC	RM	20.06.22
-	First Issue	DC	RM	RM	31.05.22

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Adoptable Drainage
Longsections
Sheet 10

Status		Status Date
Construction		JUNE 2022
Drawn	**Checked**	**Date**
DC	RM	13.05.2022
Scale	**Number**	**Rev**
H 1:500 V 1:100	10831-500-559	D

0 10 20 30 40 50
METRES

Construction Design and Management (CDM)

Key Residual Risks

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Original Drawing Size A1

KEY

- – – – Existing ground profile
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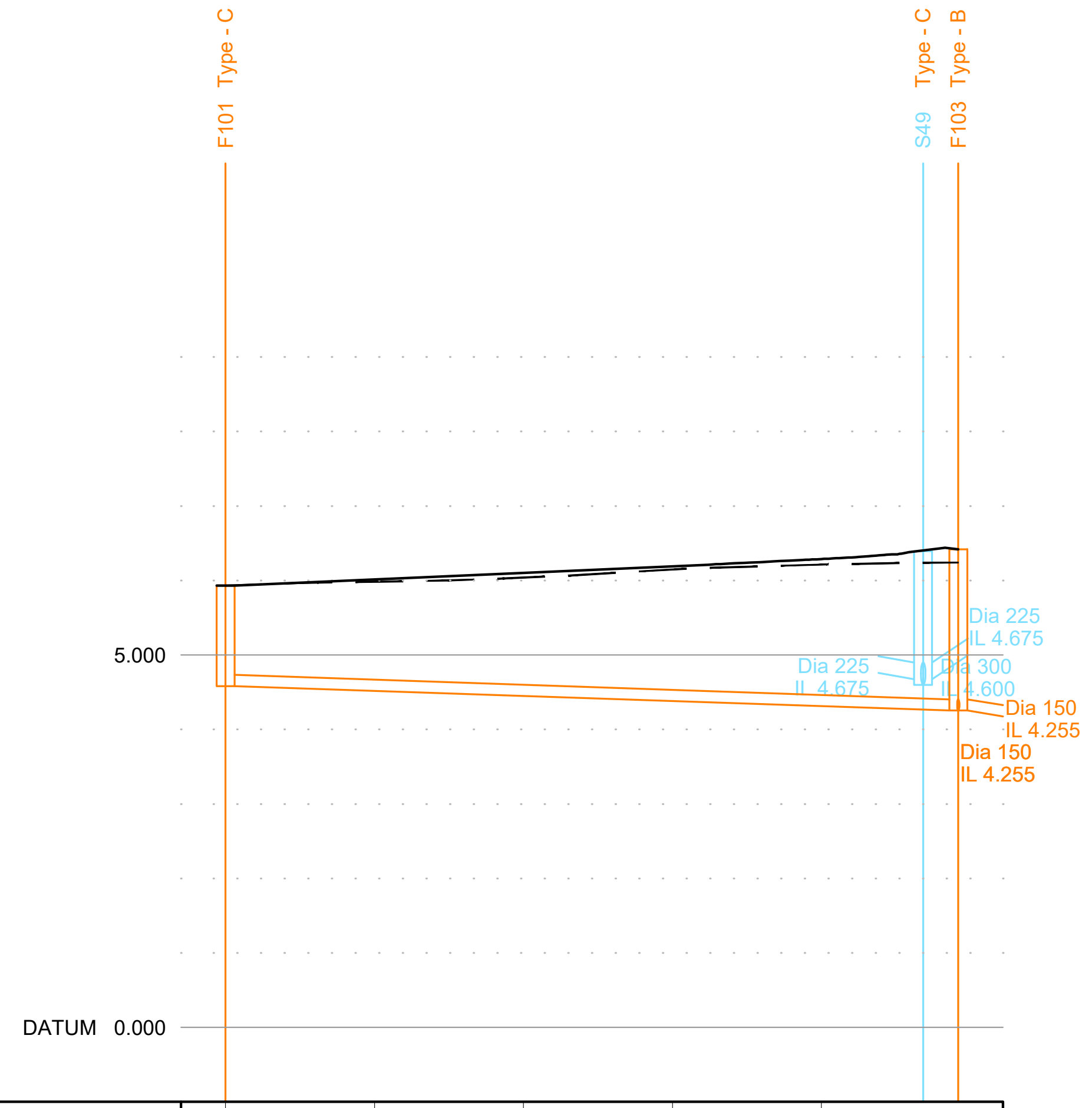
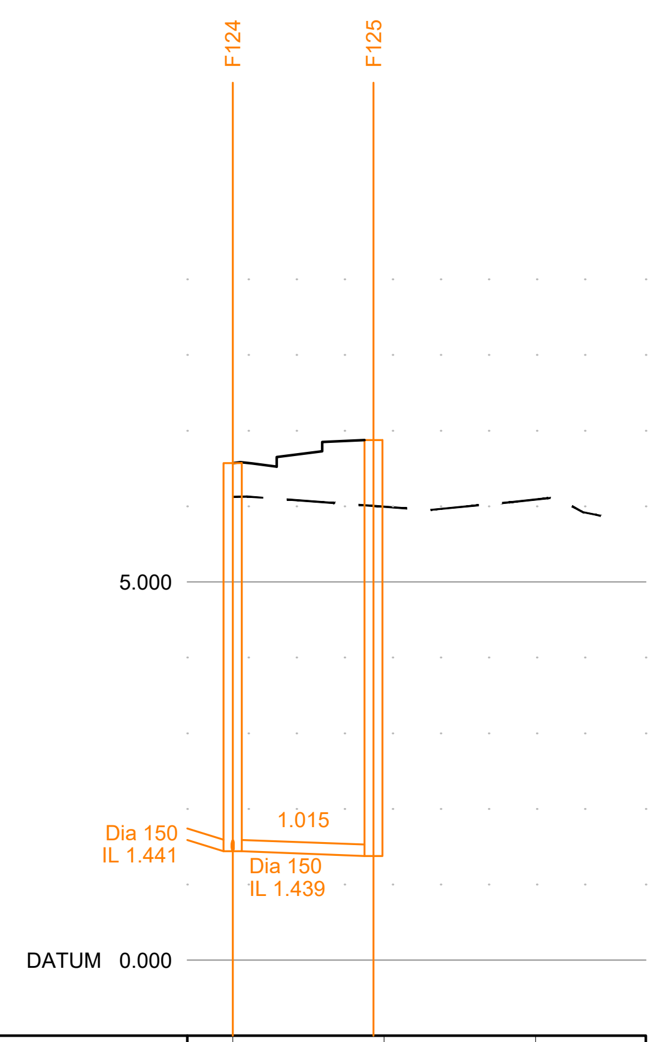
- ▯ Proposed surface water sewer
- ▯ Proposed foul water sewer



	F101					S49	F103
GROUND LEVEL	5.931	5.984	6.038	6.148	6.288		
STORMWATER COVER LEVEL						6.393	
FOULWATER COVER LEVEL	5.931						6.419
FOULWATER INVERT	4.583						4.255
FOULWATER DETAILS	Pipe 1.000 Dia 150 Circular CLAY 1 in 150						
FOULWATER LENGTHS	49.184						



	F124	F125	
GROUND LEVEL	6.572	5.994	6.090
FOULWATER COVER LEVEL	6.572	6.875	
FOULWATER INVERT	1.439	1.377	
FOULWATER DETAILS	Pipe 1.015 Dia 150 Circular CLAY 1 in 150		
FOULWATER LENGTHS	9.295		

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D	F124 - F125 section added	DC	MT	RM	07.03.23
C	Construction issue	MA	DC	RM	18.01.23
B	Manhole type indicated	MA	DC	RM	26.07.22
A	Drainage amended to lower levels as per client request	CDW	DC	RM	20.06.22
-	First Issue	DC	RM	RM	31.05.22

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Bellway

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Adoptable Drainage
Longsections
Sheet 11

Status		Status Date
Construction		JUNE 2022
Drawn	**Checked**	**Date**
DC	RM	13.05.2022
Scale	**Number**	**Rev**
H 1:500 V 1:100	10831-500-560	D

0 10 20 30 40 50
METRES

Construction Design and Management (CDM)
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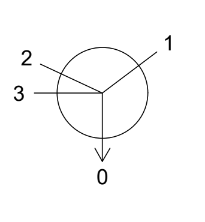
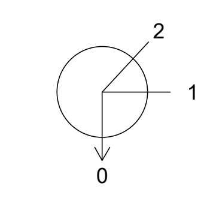
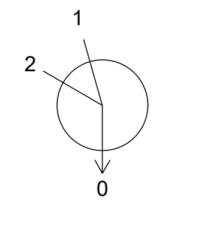
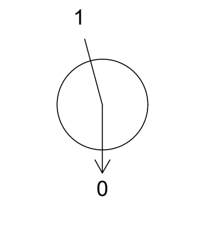
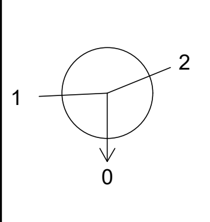
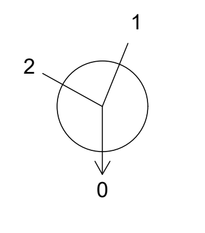
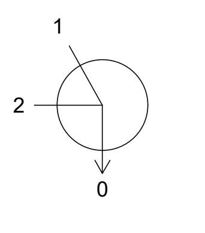
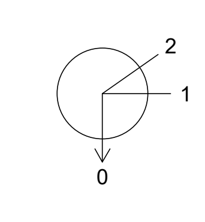
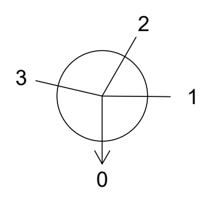
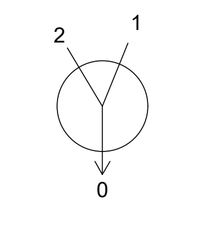
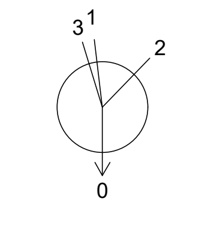
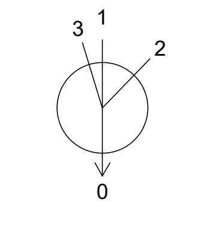
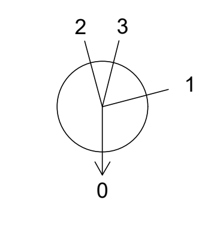
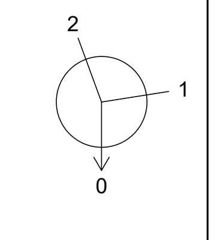
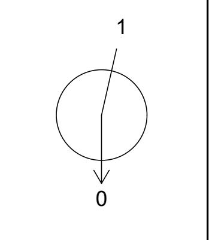
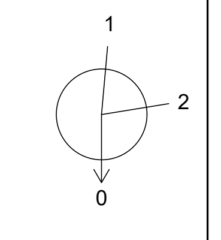
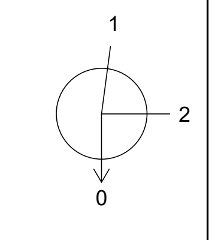
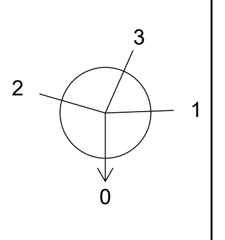
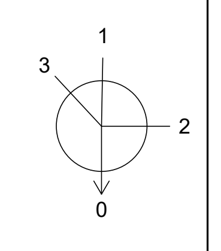
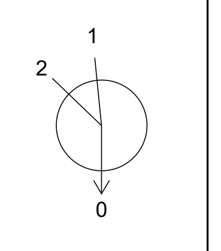
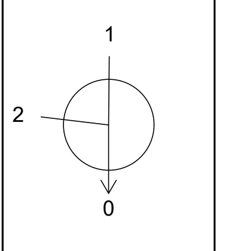
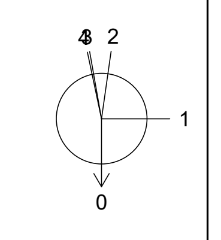
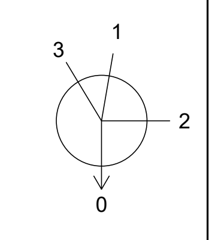
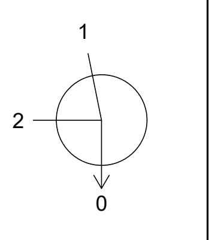
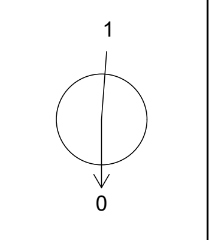
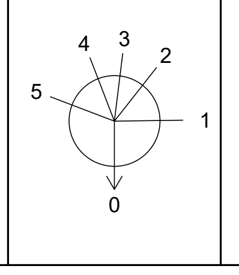
P:\10831\CAD\BCL\Working Drawings\10831-500-550D,551E,552E,553D,554E,555E,556E,557E,558D,559D,560D Adoptable Drainage Longsections.dwg

Original Drawing Size A1

Manhole Number	Cover Level		Pipe				Manhole Size	Types	
Coordinates	Depth To Soffit	Connections		Code	Inverts	Diams		Manhole	Cover
S1 E. 489453.959 N. 98901.796	6.280 0.995		1 2 3 0	Gully Gully Lateral 1.000	5.135 5.135 5.135 4.835	150 150 150 450	1350	C	D400
S2 E. 489431.921 N. 98958.862	6.517 1.385		1 2 0	1.000 Lateral 1.001	4.682 5.497 4.682	450 150 450	1350	C	D400
S3 E. 489408.690 N. 98949.891	6.227 1.157		1 2 0	1.001 Lateral 1.002	4.620 4.920 4.620	450 150 450	1350	C	D400
S4 E. 489387.733 N. 98947.936	5.966 0.949		1 0	1.002 1.003	4.567 4.567	450 450	1350	C	D400
S5 E. 489371.873 N. 98950.627	5.889 0.912		1 2 0	1.003 Gully 1.004	4.527 4.827 4.227	450 150 750	1800	C	D400
S6 E. 489376.434 N. 98971.728	5.848 0.900		1 2 0	1.004 Lateral 1.005	4.198 4.798 4.198	750 150 750	1800	C	D400
S7 E. 489374.049 N. 98985.501	5.829 0.900		1 2 0	1.005 Lateral 1.006	4.179 4.779 4.179	750 150 750	1800	C	D400
S8 E. 489583.795 N. 98963.179	6.357 0.964		1 2 0	Lateral Lateral 2.000	5.243 5.243 4.943	150 150 450	1350	C	D400
S9 E. 489587.499 N. 98967.944	6.410 1.032		1 2 3 0	2.000 Lateral Lateral 2.001	4.928 5.228 5.228 4.928	450 150 150 450	1350	C	D400
S10 E. 489568.299 N. 98982.531	6.230 0.912		1 2 0	2.001 Lateral 2.002	4.868 5.168 4.868	450 150 450	1350	C	D400
S11 E. 489532.803 N. 98992.157	6.600 1.374		1 2 3 0	2.002 Lateral Lateral 2.003	4.776 5.076 5.076 4.776	450 150 150 450	1350	C	D400
S12 E. 489512.018 N. 99000.598	6.412 1.242		1 2 3 0	2.003 Lateral Lateral 2.004	4.720 5.020 5.020 4.720	450 150 150 450	1350	C	D400
S13 E. 489473.160 N. 99016.458	6.382 1.317		1 2 3 0	2.004 Lateral Lateral 2.005	4.615 4.915 4.915 4.615	450 150 150 450	1350	C	D400

Manhole Number	Cover Level		Pipe				Manhole Size	Types	
Coordinates	Depth To Soffit	Connections		Code	Inverts	Diams		Manhole	Cover
S14 E. 489440.844 N. 98966.351	6.679 1.526		1 2 0	Lateral Gully 3.000	5.003 5.003 4.703	150 150 450	1350	B	D400
S15 E. 489450.823 N. 98976.623	6.750 1.633		1 0	3.000 3.001	4.667 4.667	450 450	1350	B	D400
S16 E. 489458.265 N. 98988.800	6.646 1.565		1 2 0	3.001 Lateral 3.002	4.631 4.931 4.631	450 150 450	1350	B	D400
S17 E. 489462.755 N. 98997.906	6.644 1.588		1 2 0	3.002 Lateral 3.003	4.606 4.906 4.606	450 150 450	1350	B	D400
S18 E. 489465.612 N. 99006.418	6.560 1.526		1 2 3 0	3.003 2.005 Lateral 2.006	4.584 4.584 4.884 4.509	450 450 150 525	1500	B	D400
S19 E. 489418.312 N. 99024.355	6.150 1.227		1 2 3 0	2.006 Lateral Lateral 2.007	4.398 4.773 4.773 4.398	525 150 150 525	1500	C	D400
S20 E. 489400.301 N. 99030.774	6.200 1.319		1 2 0	2.007 Lateral 2.008	4.356 4.731 4.356	525 150 525	1500	C	D400
S21 E. 489391.364 N. 99034.995	5.759 0.900		1 2 0	1.006 2.008 1.007	4.109 4.334 4.109	750 525 750	1800	C	D400
S22 E. 489580.896 N. 99037.852	6.432 1.174		1 2 3 4 0	Lateral Gully Lateral Gully 4.000	5.108 5.108 5.108 5.108 4.733	150 150 150 150 525	1500	C	D400
S23 E. 489528.888 N. 99058.864	6.454 1.336		1 2 3 0	4.000 Lateral Lateral 4.001	4.593 5.434 5.434 4.593	525 150 150 525	1500	C	D400
S24 E. 489518.640 N. 99061.063	6.423 1.331		1 2 0	4.001 Lateral 4.002	4.567 4.942 4.567	525 150 525	1500	C	D400
S25 E. 489506.741 N. 99066.261	6.531 1.471		1 0	4.002 4.003	4.535 4.535	525 525	1500	C	D400
S26 E. 489482.565 N. 99074.670	6.829 1.833		1 2 3 4 5 0	4.003 Lateral Gully Gully Lateral 4.004	4.471 4.846 4.846 4.846 4.846 4.471	525 150 150 150 150 525	1500	B	D400

GENERAL NOTES:

1. Do not scale from this drawing.
2. All dimensions are in metres unless otherwise stated.
3. Brookbanks Consulting Ltd has prepared this drawing for the sole use of the client. The drawing may not be relied upon by any other party without the express agreement of the client and Brookbanks Consulting Ltd. Where any data supplied by the client or from other sources has been used, it has been assumed that the information is correct. No responsibility can be accepted by Brookbanks Consulting Ltd for inaccuracies in the data supplied by any other party. The drawing has been produced based on the assumption that all relevant information has been supplied by those bodies from whom it was requested.
4. No part of this drawing may be copied or duplicated without the express permission of Brookbanks Consulting Ltd.
5. All Brookbanks Consulting drawings should be read in conjunction with other relevant Brookbanks Consulting drawings and any drawings produced by third parties connected with this project.
6. Any existing services shown on this drawing are not necessarily complete, nor is their location with regard to the position and depth precise. It is the contractors responsibility to liaise with all relevant services companies to ensure that all services are accurately located and adequately protected during construction. The contractors attention is drawn to the fact that it is highly likely that street lighting cables (or other private supplies) are present, which are not shown on incumbent services drawings.
7. Any discrepancies between the information displayed in this drawings and others to be reported to the engineer before the commencement of works.
8. Any damage caused to existing footways, roads or other third party property to be made good to the county engineers requirements.

ADOPTABLE DRAINAGE NOTES:

1. All adoptable drainage to be in accordance with Sewerage Sector Guidance (SSG) Appendix C - Design and Construction Guidance (DCG)
2. All Sustainable Urban Drainage (SuDS) to be in accordance with CIRIA report C753 "*The SuDS Manual*" and supporting documents.
3. Contractor to check all existing invert levels and watercourse bed/water levels for outfalls on site ahead of commencing work.
4. All lateral connections to be 150mm diameter unless noted otherwise.
5. Sewers with less than 1.2m cover beneath highways and 0.9m cover elsewhere to have special concrete cover slab protection in accordance with the adopting authority's requirements. Flexibility of pipeline to be maintained.
6. Bedding to all remaining pipework is to be class S granular bed and surround.
7. Pipes up to 300mm diameter shall be either vitrified clay or plastic. Pipes greater than 300mm diameter shall be precast concrete or plastic, excluding those crossing beneath watercourses. All pipes to be in accordance with the adopting authority's approved manufacturers. All pipes to be to BS EN 1295 with either sleeved of spigot & socket flexible joints, and shall satisfy the minimum crushing strengths stated below:

   150Ø - 22kN/m^2
   225Ø - 28kN/m^2
   300Ø - 36kN/m^2
   375Ø - 45kN/m^2
   450Ø - 54kN/m^2
   600Ø - 72kN/m^2
   750Ø - 90kN/m^2
   825Ø - 99kN/m^2

F	Construction issue	MA	DC	RM	18.01.23
E	S22-S26 amended. Chamber sizes amended.	NO	RM	RM	29.07.22
D	Chamber types amended	DC	RM	RM	25.07.22
C	S3, S5, S8, S9, S14, S21, S22, S23 & S25 amended	DC	RM	RM	08.07.22
B	Drainage amended to lower levels as per client request	CDW	DC	RM	20.06.22
A	Cover levels amended, lateral and gully connections shown	DC	RM	RM	31.05.22
-	First Issue	DC	RM	RM	08.04.22

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Bellway

Hook Lane
Pagham

Construction Design and Management (CDM)
Key Residual Risks

Contractors entering the site should gain permission from the relevant land owners and/or principle contractor working on site at the time of entry. Contractors shall be responsible for carrying out their own risk assessments and for liaising with the relevant services companies and authorities. Listed below are Site Specific key risks associated with the project.

1) Overhead and underground services
2) Street Lighting Cables
3) Working adjacent to water courses and flood plain
4) Soft ground conditions
5) Working adjacent to live highways and railway line
6) Unchartered services
7) Existing buildings with potential asbestos hazards

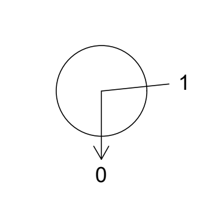
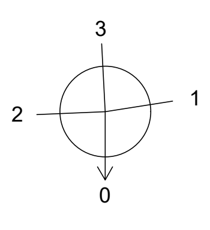
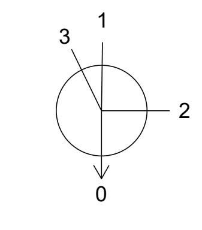
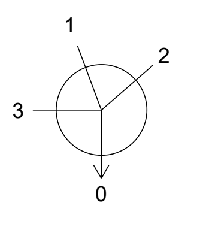
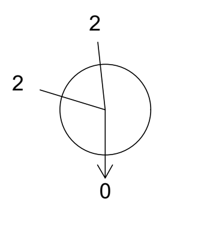
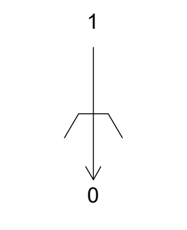
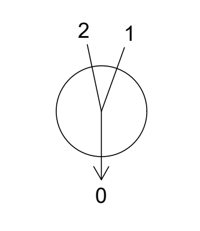
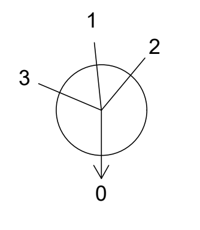
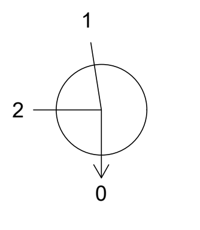
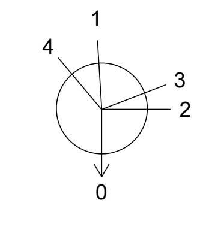
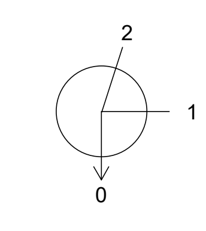
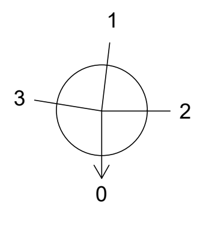
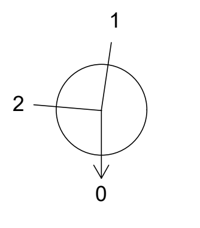
UNTIL TECHNICAL APPROVAL HAS BEEN OBTAINED FROM THE RELEVANT LOCAL AUTHORITIES, IT SHOULD BE UNDERSTOOD THAT ALL DRAWINGS ARE ISSUED AS PRELIMINARY AND NOT FOR CONSTRUCTION. SHOULD THE CONTRACTOR COMMENCE SITE WORK PRIOR TO APPROVAL BEING GIVEN, IT IS ENTIRELY AT HIS OWN RISK.

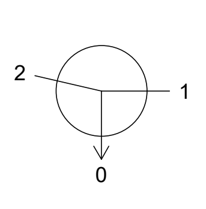
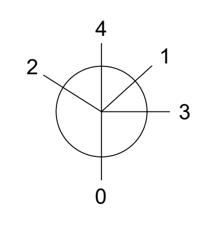
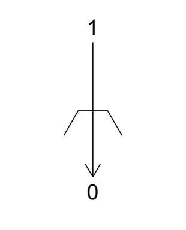
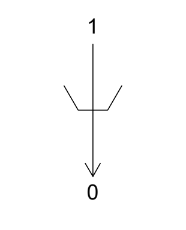
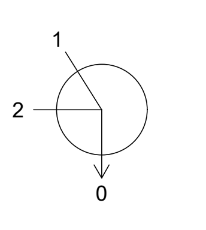
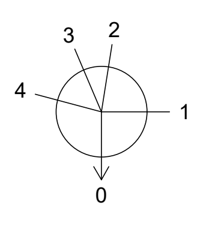
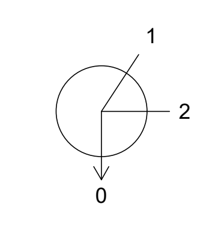
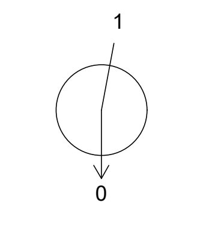
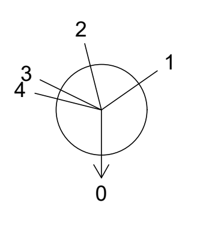
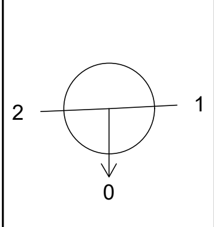
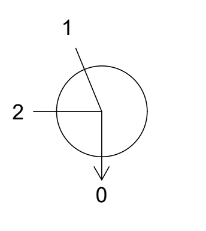
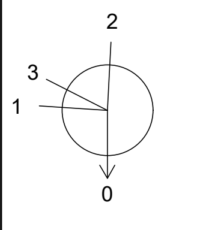
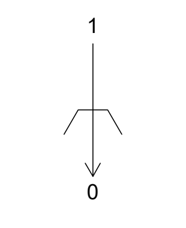
Adoptable Drainage Schedules
Sheet 1

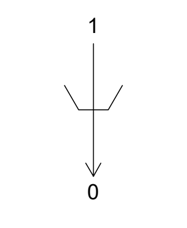
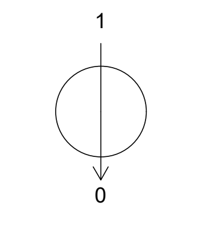
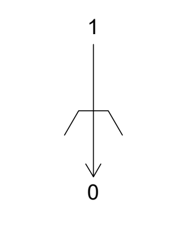
Status		Status Date
Construction		June 2022
Drawn	Checked	Date
DC	RM	08.04.2022
Scale	Number	Rev
NTS	10831-500-580	F

P:\10831\CAD\BCL\Working Drawings\10831-500-580F,581H,582G,583G,584H,585H,586E,587J Adoptable Drainage Schedules.dwg

Original Drawing Size A1

Manhole Number	Cover Level		Pipe				Manhole Size	Types	
Coordinates	**Depth To Soffit**	**Connections**		**Code**	**Inverts**	**Diams**		**Manhole**	**Cover**
S27 E. 489470.462 N. 99030.806	6.554 1.510		1 0	Lateral 5.000	4.894 4.594	150 450	1350	B	D400
S28 E. 489478.087 N. 99062.380	6.785 1.822		1 2 3 0	5.000 4.004 Lateral 4.005	4.513 4.438 4.813 4.438	450 525 150 525	1500	B	D400
S29 E. 489440.667 N. 99077.808	6.220 1.358		1 2 3 0	4.005 Lateral Lateral 4.006	4.337 4.712 4.712 4.337	525 150 150 525	1500	C	D400
S30 E. 489417.458 N. 99086.988	5.750 0.950		1 2 3 0	4.006 Lateral Lateral 4.007	4.275 4.650 4.650 4.275	525 150 150 525	1500	C	D400
S31 E. 489410.909 N. 99092.880	5.678 0.900		1 2 0	1.007 4.007 1.008	4.028 4.253 4.028	750 525 750	1800	C	D400
HW09 E. 489439.629 N. 99154.731			1 0	1.008 Basin 1A	3.937	750		HEADWALL	
S33 E. 489495.164 N. 99103.803	6.638 1.748		1 2 0	Gully Gully 6.000	4.740 4.740 4.440	150 150 450	1350	B	D400
S34 E. 489502.652 N. 99114.774	6.506 1.649		1 2 3 0	6.000 Lateral Lateral 6.001	4.407 4.707 4.707 4.407	450 150 150 450	1350	B	D400
S35 E. 489511.259 N. 99124.955	6.378 1.554		1 2 0	6.001 Lateral 6.002	4.374 4.674 4.374	450 150 450	1350	B	D400
S36 E. 489528.844 N. 99140.141	6.350 1.584		1 2 3 4 0	6.002 Lateral Gully Gully 6.003	4.316 4.616 4.616 4.616 4.316	450 150 150 150 450	1350	B	D400
S37 E. 489568.472 N. 99170.402	6.524 1.883		1 2 0	6.003 Lateral 6.004	4.191 4.491 4.191	450 150 450	1350	B	D400
S38 E. 489549.007 N. 99195.891	6.734 2.173		1 2 3 0	6.004 Lateral Lateral 6.005	4.111 4.411 4.411 4.111	450 150 150 450	1350	B	D400
S39 E. 489538.619 N. 99206.616	6.771 2.247		1 2 0	6.005 Lateral 6.006	4.074 4.374 4.074	450 150 450	1350	B	D400

Manhole Number	Cover Level		Pipe				Manhole Size	Types	
Coordinates	**Depth To Soffit**	**Connections**		**Code**	**Inverts**	**Diams**		**Manhole**	**Cover**
S40 E. 489527.475 N. 99235.212	6.458 1.948		1 2 0	Lateral Lateral 7.000	4.360 4.360 4.060	150 150 450	1350	B	D400
S41 E. 489521.283 N. 99219.839	6.568 2.099		1 2 3 4 0	6.006 7.000 Lateral Lateral 6.007	4.019 4.019 4.319 4.319 4.019	450 450 150 150 450	1350	B	D400
HW10 E. 489489.153 N. 99213.865			1 0	7.001 Basin 1A	3.937	450		HEADWALL	
HW11 E. 489470.394 N. 99226.379			1 0	Basin 1A 1.009	 3.800	 750		HEADWALL	
S43 E. 489468.043 N. 99235.557	5.627 1.200		1 2 0	1.009 Lateral 1.010	3.787 4.387 3.787	750 150 750	3000	FLOW CONTROL CHAMBER	D400
S45 E. 489543.006 N. 99256.912	6.678 1.266		1 2 3 4 0	Lateral Gully Gully Lateral 8.000	5.262 5.262 5.262 5.262 5.187	150 150 150 150 225	1350	C	D400
S46 E. 489556.856 N. 99275.256	6.657 1.383		1 2 0	8.000 Lateral 8.001	5.049 5.124 5.049	225 150 225	1350	C	D400
S47 E. 489557.451 N. 99284.168	6.552 1.331		1 0	8.001 8.002	4.996 4.996	225 225	1350	C	D400
S48 E. 489554.280 N. 99312.387	6.281 1.298		1 2 3 4 0	Gully Lateral Gully Lateral 9.000	4.833 4.833 4.833 4.833 4.758	150 150 150 150 225	1350	C	D400
S49 E. 489555.734 N. 99298.543	6.393 1.494		1 2 0	8.002 9.000 8.003	4.675 4.675 4.600	225 225 300	1350	C	D400
S50 E. 489506.305 N. 99295.329	5.899 1.394		1 2 0	8.003 Lateral 8.004	4.205 4.355 4.130	300 150 375	1350	C	D400
S51 E. 489489.127 N. 99301.065	5.345 0.900		1 2 3 0	1.010 8.004 Lateral 1.011	3.695 4.070 4.295 3.695	750 375 150 750	1800	C	D400
HW12 E. 489500.052 N. 99342.562			1 0	1.011 BASIN 1B	3.638	750		HEADWALL	

Manhole Number	Cover Level		Pipe				Manhole Size	Types	
Coordinates	**Depth To Soffit**	**Connections**		**Code**	**Inverts**	**Diams**		**Manhole**	**Cover**
HW13 E. 489533.419 N. 99393.929			1 0	BASIN 1B 1.012	3.500	750		HEADWALL	
S54 E. 489536.179 N. 99404.653	5.108 1.395		1 0	1.012 1.013	3.488 3.488	300 225	3000	FLOW CONTROL CHAMBER	D400
HW14 E. 489539.246 N. 99409.922			1 0	1.013 OUTFALL	3.430	225		HEADWALL	

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300Ø - 36kN/m^2	600Ø - 72kN/m^2	

H	Construction issue	MA	DC	RM	18.01.23
G	HW14 coordinates amended	DC	RM	RM	18.08.22
F	HW14 coordinates amended	DC	RM	RM	15.08.22
E	S28-S31 amended. Chamber sizes amended	NO	RM	RM	29.07.22
D	S45 amended, chamber types amended	DC	RM	RM	25.07.22
C	S29, S30 & S31 amended	DC	RM	RM	08.07.22
B	Drainage amended to lower levels as per client request	CDW	DC	RM	20.06.22
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Bellway

Hook Lane
Pagham

Adoptable Drainage Schedules
Sheet 2

Status		Status Date
Construction		June 2022
Drawn	**Checked**	**Date**
DC	RM	08.04.2022
Scale	**Number**	**Rev**
NTS	10831-500-581	H

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Key Residual Risks

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5) Working adjacent to live highways and railway line
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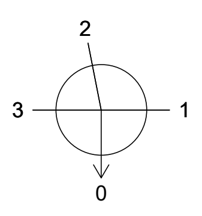
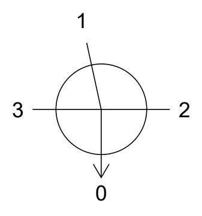
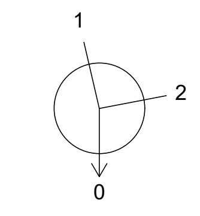
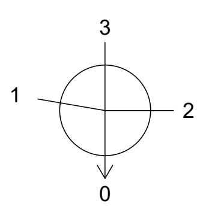
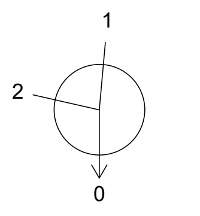
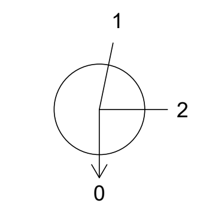
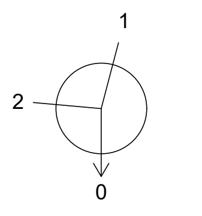
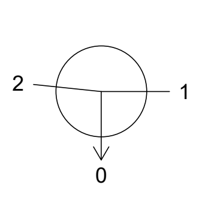
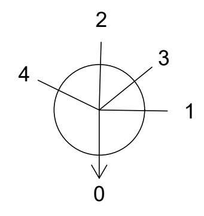
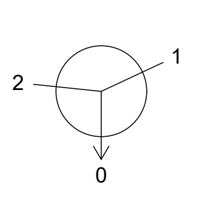
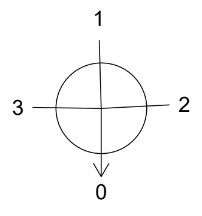
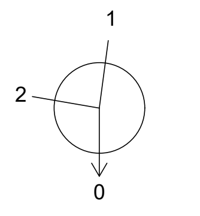
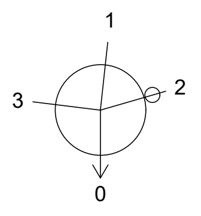
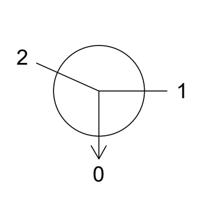
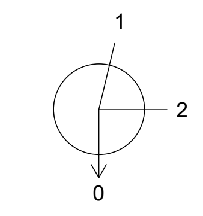
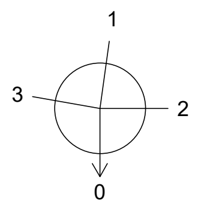
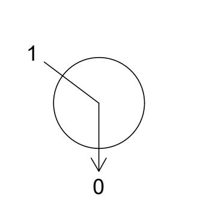
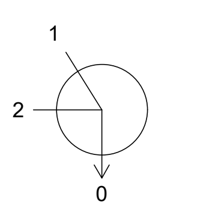
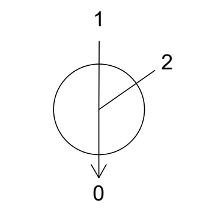
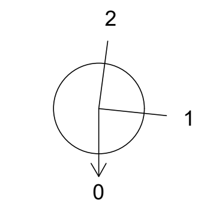
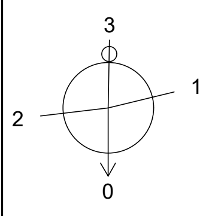
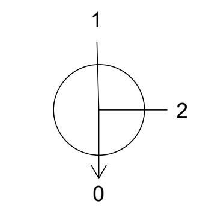
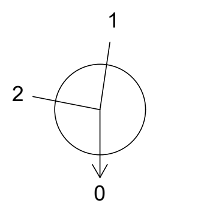
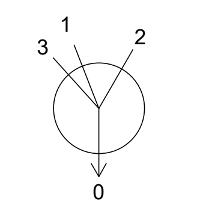
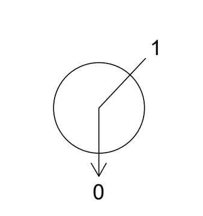
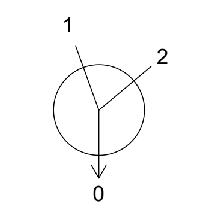
7) Existing buildings with potential asbestos hazards

UNTIL TECHNICAL APPROVAL HAS BEEN OBTAINED FROM THE RELEVANT LOCAL AUTHORITIES, IT SHOULD BE UNDERSTOOD THAT ALL DRAWINGS ARE ISSUED AS PRELIMINARY AND NOT FOR CONSTRUCTION. SHOULD THE CONTRACTOR COMMENCE SITE WORK PRIOR TO APPROVAL BEING GIVEN, IT IS ENTIRELY AT HIS OWN RISK.

Original Drawing Size A1

Manhole Number	Cover Level	Connections	Pipe				Manhole Size	Types	
Coordinates	Depth To Soffit			Code	Inverts	Diams		Manhole	Cover
F1	6.619		1	Lateral	5.133	150	1350	C	D400
	1.336		2	Lateral	5.133	150			
			3	Lateral	5.133	150			
E. 489523.760									
N. 99216.298			0	1.000	5.133	150			
F2	6.789		1	1.000	4.997	150	1200	B	D400
	1.642		2	Lateral	4.997	150			
			3	Lateral	4.997	150			
E. 489539.721									
N. 99203.636			0	1.001	4.997	150			
F3	6.490		1	1.001	4.754	150	1200	B	D400
	1.586		2	Lateral	4.754	150			
E. 489562.687									
N. 99175.500			0	1.002	4.754	150			
F4	6.524		1	1.002	4.710	150	1200	B	D400
	1.664		2	Lateral	4.710	150			
			3	Rising Main	4.710	150			
E. 489565.567									
N. 99169.661			0	1.003	4.710	150			
F5	6.363		1	1.003	4.408	150	1200	B	D400
	1.805		2	Lateral	4.408	150			
E. 489529.007									
N. 99143.080			0	1.004	4.408	150			
F6	6.390		1	1.004	4.224	150	1200	B	D400
	2.016		2	Lateral	4.224	150			
E. 489508.285									
N. 99124.974			0	1.005	4.224	150			
F7	6.645		1	1.005	4.052	150	1200	B	D400
	2.443		2	Lateral	4.052	150			
E. 489492.674									
N. 99104.484			0	1.006	4.052	150			
F8	6.421		1	Lateral	4.392	150	1200	B	D400
	1.879		2	Lateral	4.392	150			
E. 489521.638									
N. 99061.793			0	2.000	4.392	150			
F9	6.832		1	2.000	3.859	150	1200	B	D400
	2.823		2	1.006	3.859	150			
			3	Lateral	3.859	150			
			4	Lateral	3.859	150			
E. 489481.554									
N. 99077.855			0	1.007	3.859	150			
F10	6.010		1	Lateral	4.065	150	1200	B	D400
	1.795		2	Lateral	4.065	150			
E. 489429.842									
N. 99079.784			0	3.000	4.065	150			
F11	6.700		1	3.000	3.837	150	1200	B	D400
	2.713		2	Lateral	3.837	150			
			3	Lateral	3.837	150			
E. 489461.628									
N. 99067.000			0	3.001	3.837	150			
F12	6.745		1	1.007	3.739	150	1200	B	D400
	2.856		2	3.001	3.739	150			
E. 489475.104									
N. 99061.131			0	1.008	3.739	150			
F13	6.494		1	1.008	3.564	150	1200	B	D400
	2.780		2	BD Lateral	4.770	150			
			3	Lateral	3.564	150			
E. 489468.927									
N. 99035.653			0	1.009	3.564	150			
F14	6.640		1	Lateral	4.253	150	1200	B	D400
	2.237		2	Lateral	4.253	150			
E. 489436.250									
N. 98964.485			0	4.000	4.253	150			
F15	6.750		1	4.000	4.116	150	1200	B	D400
	2.484		2	Lateral	4.116	150			
E. 489450.399									
N. 98979.330			0	4.001	4.116	150			
F16	6.681		1	4.001	4.004	150	1200	B	D400
	2.527		2	Lateral	4.004	150			
			3	Lateral	4.004	150			
E. 489458.879									
N. 98993.872			0	4.002	4.004	150			
F17	6.218		1	Lateral	4.400	150	1200	B	D400
	1.668								
E. 489401.129									
N. 99024.194			0	5.000	4.400	150			
F18	6.212		1	5.000	4.345	150	1200	B	D400
	1.717		2	Lateral	4.345	150			
E. 489409.244									
N. 99025.750			0	5.001	4.345	150			
F19	6.307		1	5.001	4.037	150	1200	B	D400
	2.120		2	Lateral	4.037	150			
E. 489452.364									
N. 99009.262			0	5.002	4.037	150			
F20	6.558		1	5.002	3.923	150	1200	A	D400
	2.485		2	4.002	3.923	150			
E. 489463.456									
N. 99005.068			0	4.003	3.923	150			
F21	6.472		1	1.009	3.433	150	1200	B	D400
	2.889		2	4.003	3.433	150			
			3	BD Lateral	4.120	150			
E. 489466.368									
N. 99016.252			0	1.010	3.433	150			
F22	6.426		1	1.010	3.103	150	1200	A	D400
	3.173		2	Lateral	3.103	150			
E. 489512.457									
N. 98998.377			0	1.011	3.103	150			
F23	6.600		1	1.011	2.961	150	1200	A	D400
	3.489		2	Lateral	2.961	150			
E. 489531.968									
N. 98990.195			0	1.012	2.961	150			
F24	6.230		1	1.012	2.724	150	1200	A	D400
	3.356		2	Lateral	2.724	150			
			3	Lateral	2.724	150			
E. 489566.264									
N. 98981.415			0	1.013	2.727	150			
F25	6.657		1	Lateral	4.534	150	1200	B	D400
	1.973								
E. 489604.233									
N. 99129.514			0	6.000	4.534	150			
F26	6.598		1	6.000	4.497	150	1200	B	D400
	1.951		2	Lateral	4.497	150			
E. 489603.688									
N. 99124.052			0	6.001	4.497	150			

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300Ø - 36kN/m^2	600Ø - 72kN/m^2	

H	F18 Lateral removed	DC	DC	RM	01.06.23
G	Construction issue	MA	DC	RM	18.01.23
F	Chamber sizes amended	NO	RM	RM	29.07.22
E	Chamber types amended	DC	RM	RM	25.07.22
D	F1, F12, F13 & F21 amended	DC	RM	RM	08.07.22
C	Drainage amended to lower levels as per client request	CDW	DC	RM	20.06.22
B	Cover levels amended, lateral and gully connections shown	DC	RM	RM	31.05.22
A	Various cover levels amended	DC	RM	RM	13.05.22
-	First Issue	DC	RM	RM	08.04.22

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Bellway

Hook Lane
Pagham

Adoptable Drainage Schedules
Sheet 3

Status		Status Date
Construction		June 2022
Drawn	Checked	Date
DC	RM	08.04.2022
Scale	Number	Rev
NTS	10831-500-582	H

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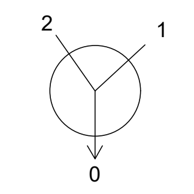
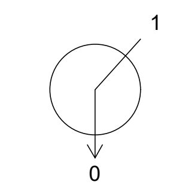
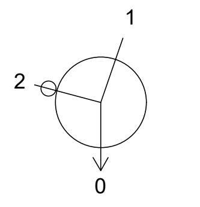
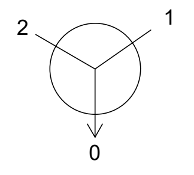
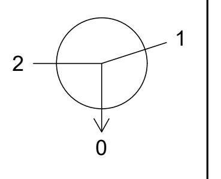
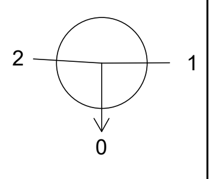
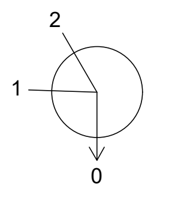
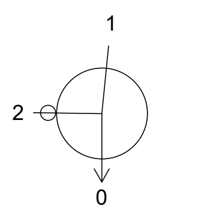
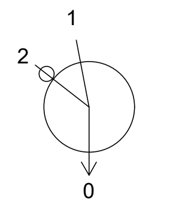
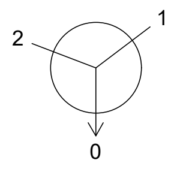
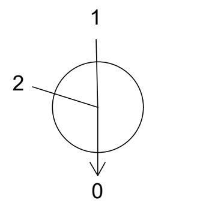
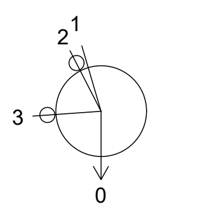
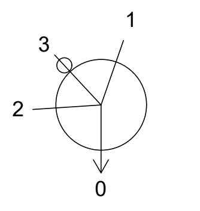
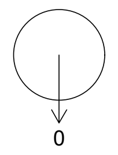
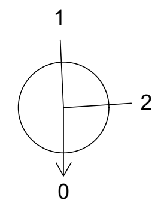
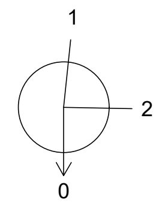
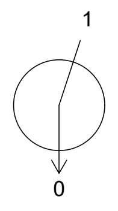
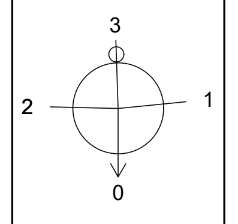
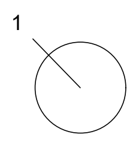
6) Unchartered services
7) Existing buildings with potential asbestos hazards

UNTIL TECHNICAL APPROVAL HAS BEEN OBTAINED FROM THE RELEVANT LOCAL AUTHORITIES, IT SHOULD BE UNDERSTOOD THAT ALL DRAWINGS ARE ISSUED AS PRELIMINARY AND NOT FOR CONSTRUCTION. SHOULD THE CONTRACTOR COMMENCE SITE WORK PRIOR TO APPROVAL BEING GIVEN, IT IS ENTIRELY AT HIS OWN RISK.

P:\10831\CAD\BCL\Working Drawings\10831-500-580F,581H,582H,583G,584H,585K,586E,587J Adoptable Drainage Schedules.dwg

Original Drawing Size A1

Manhole Number	Cover Level		Pipe				Manhole Size	Types	
Coordinates	Depth To Soffit	Connections		Code	Inverts	Diams		Manhole	Cover
F27	6.587		1	6.001	4.317	150	1200	B	D400
			2	Lateral	4.317	150			
E. 489592.053 N. 99099.612	2.120		0	6.002	4.317	150			
F28	6.647		1	6.002	4.272	150	1200	B	D400
E. 489594.570 N. 99093.368	2.225		0	6.003	4.272	150			
F29	6.730		1	6.003	4.157	150	1200	B	D400
			2	BD Lateral	4.800	150			
E. 489610.034 N. 99085.804	2.423		0	6.004	4.157	150			
F30	6.662		1	6.004	4.090	150	1200	B	D400
			2	Lateral	4.090	150			
E. 489620.004 N. 99084.593	2.422		0	6.005	4.090	150			
F31	6.586		1	Lateral	4.337	150	1200	B	D400
			2	Lateral	4.337	150			
E. 489667.031 N. 99141.727	2.099		0	7.000	4.337	150			
F32	6.790		1	7.000	3.891	150	1200	B	D400
			2	6.005	3.891	150			
E. 489639.823 N. 99106.903	2.749		0	6.006	3.891	150			
F33	6.260		1	6.006	3.546	150	1200	B	D400
			2	Lateral	3.546	150			
E. 489679.934 N. 99075.287	2.564		0	6.007	3.546	150			
F34	6.400		1	6.007	3.433	150	1200	B	D400
			2	BD Lateral	4.900	150			
E. 489669.907 N. 99061.644	2.817		0	6.008	3.433	150			
F35	6.058		1	6.008	3.147	150	1200	B	D400
			2	BD Lateral	3.800	150			
E. 489648.076 N. 99024.704	2.761		0	6.009	3.147	150			
F36	6.300		1	Lateral	4.502	150	1200	B	D400
			2	Lateral	4.502	150			
E. 489626.390 N. 99015.892	1.648		0	8.000	4.502	150			
F37	6.027		1	6.009	2.984	150	1200	B	D400
			2	8.000	2.984	150			
E. 489631.850 N. 99006.328	2.893		0	6.010	2.984	150			
F38	6.210		1	6.010	2.784	150	1200	A	D400
			2	BD Lateral	4.200	150			
			3	BD Lateral	4.200	150			
E. 489611.540 N. 98984.347	3.276		0	6.011	2.784	150			
F39	6.300		1	6.011	2.575	150	1200	A	D400
			2	1.013	2.575	150			
			3	BD Lateral	4.000	150			
E. 489584.717 N. 98968.167	3.575		0	1.014	2.500	225			

Manhole Number	Cover Level		Pipe				Manhole Size	Types	
Coordinates	Depth To Soffit	Connections		Code	Inverts	Diams		Manhole	Cover
F40	6.121						1350	C	D400
E. 489444.123 N. 98896.477	1.200		0	9.000	4.771	150			
F41	6.300		1	9.000	4.394	150	1200	B	D400
			2	Lateral	4.394	150			
E. 489496.593 N. 98917.680	1.756		0	9.001	4.394	150			
F42	6.150		1	9.001	4.133	150	1200	B	D400
			2	Lateral	4.133	150			
E. 489533.538 N. 98930.642	1.867		0	9.002	4.133	150			
F43	6.500		1	9.002	3.915	150	1200	B	D400
E. 489563.165 N. 98944.548	2.435		0	9.003	3.915	150			
F44	6.460		1	1.014	2.370	225	1200	A	D400
			2	9.003	2.445	150			
			3	Lateral	2.445	150			
E. 489572.432 N. 98953.268	3.865		0	1.015	2.370	225			
F45	6.400		1	1.015	2.345	225	1200	A	D400
E. 489575.781 N. 98949.871	3.830								

GENERAL NOTES:

1. Do not scale from this drawing.
2. All dimensions are in metres unless otherwise stated.
3. Brookbanks Consulting Ltd has prepared this drawing for the sole use of the client. The drawing may not be relied upon by any other party without the express agreement of the client and Brookbanks Consulting Ltd. Where any data supplied by the client or from other sources has been used, it has been assumed that the information is correct. No responsibility can be accepted by Brookbanks Consulting Ltd for inaccuracies in the data supplied by any other party. The drawing has been produced based on the assumption that all relevant information has been supplied by those bodies from whom it was requested.
4. No part of this drawing may be copied or duplicated without the express permission of Brookbanks Consulting Ltd.
5. All Brookbanks Consulting drawings should be read in conjunction with other relevant Brookbanks Consulting drawings and any drawings produced by third parties connected with this project.
6. Any existing services shown on this drawing are not necessarily complete, nor is their location with regard to the position and depth precise. It is the contractors responsibility to liaise with all relevant services companies to ensure that all services are accurately located and adequately protected during construction. The contractors attention is drawn to the fact that it is highly likely that street lighting cables (or other private supplies) are present, which are not shown on incumbent services drawings.
7. Any discrepancies between the information displayed in this drawings and others to be reported to the engineer before the commencement of works.
8. Any damage caused to existing footways, roads or other third party property to be made good to the county engineers requirements.

ADOPTABLE DRAINAGE NOTES:

1. All adoptable drainage to be in accordance with Sewerage Sector Guidance (SSG) Appendix C - Design and Construction Guidance (DCG)
2. All Sustainable Urban Drainage (SuDS) to be in accordance with CIRIA report C753 "*The SuDS Manual*" and supporting documents.
3. Contractor to check all existing invert levels and watercourse bed/water levels for outfalls on site ahead of commencing work.
4. All lateral connections to be 150mm diameter unless noted otherwise.
5. Sewers with less than 1.2m cover beneath highways and 0.9m cover elsewhere to have special concrete cover slab protection in accordance with the adopting authority's requirements. Flexibility of pipeline to be maintained.
6. Bedding to all remaining pipework is to be class S granular bed and surround.
7. Pipes up to 300mm diameter shall be either vitrified clay or plastic. Pipes greater than 300mm diameter shall be precast concrete or plastic, excluding those crossing beneath watercourses. All pipes to be in accordance with the adopting authority's approved manufacturers. All pipes to be to BS EN 1295 with either sleeved of spigot & socket flexible joints, and shall satisfy the minimum crushing strengths stated below:

150Ø - 22kN/m^2	375Ø - 45kN/m^2	750Ø - 90kN/m^2
225Ø - 28kN/m^2	450Ø - 54kN/m^2	825Ø - 99kN/m^2
300Ø - 36kN/m^2	600Ø - 72kN/m^2	

G	Construction issue	MA	DC	RM	18.01.23
F	Chamber sizes amended. F39, F44 & F45 amended.	NO	RM	RM	29.07.22
E	F44 amended, chamber types amended	DC	RM	RM	25.07.22
D	F29, F34, F35, F38 & F39 amended	DC	RM	RM	08.07.22
C	Drainage amended to lower levels as per client request	CDW	DC	RM	20.06.22
B	Cover levels amended, lateral and gully connections shown	DC	RM	RM	31.05.22
A	Various cover levels amended	DC	RM	RM	13.05.22
-	First Issue	DC	RM	RM	08.04.22

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Bellway

Hook Lane
Pagham

Adoptable Drainage Schedules
Sheet 4

Status		Status Date
Construction		June 2022
Drawn	Checked	Date
DC	RM	08.04.2022
Scale	Number	Rev
NTS	10831-500-583	G

Construction Design and Management (CDM)
Key Residual Risks

Contractors entering the site should gain permission from the relevant land owners and/or principle contractor working on site at the time of entry. Contractors shall be responsible for carrying out their own risk assessments and for liaising with the relevant services companies and authorities. Listed below are Site Specific key risks associated with the project.

1) Overhead and underground services
2) Street Lighting Cables
3) Working adjacent to water courses and flood plain
4) Soft ground conditions
5) Working adjacent to live highways and railway line
6) Unchartered services
7) Existing buildings with potential asbestos hazards

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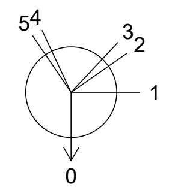
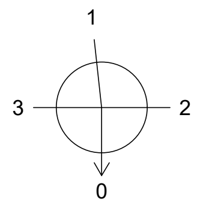
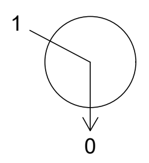
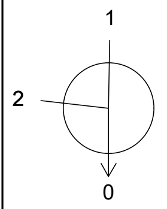
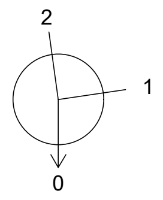
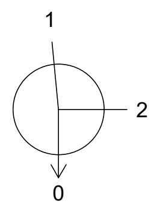
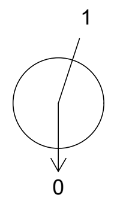
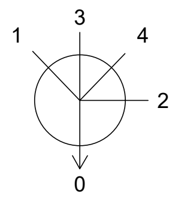
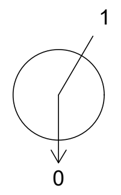
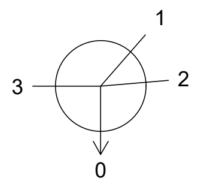
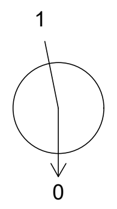
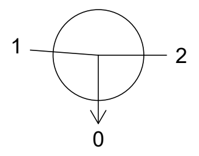
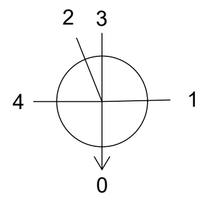
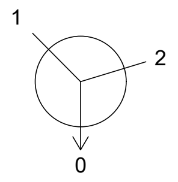
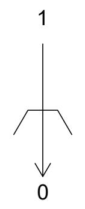
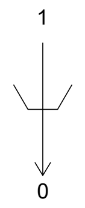
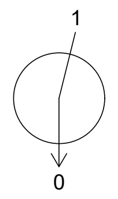
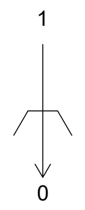
P:\10831\CAD\BCL\Working Drawings\10831-500-580F,581H,582G,583G,584H,585H,586E,587J Adoptable Drainage Schedules.dwg

Original Drawing Size A1

Manhole Number	Cover Level	Connections	Pipe				Manhole Size	Types	
Coordinates	Depth To Soffit			Code	Inverts	Diams		Manhole	Cover
S101 E. 489672.157 N. 99083.734	6.355 0.900		1 2 3 4 5 0	Lateral Gully Lateral Gully Lateral 1.000	5.305 5.305 5.305 5.305 5.305 5.005	150 150 150 150 150 450	1350	C	D400
S102 E. 489645.705 N. 99104.393	6.694 1.323		1 2 3 0	1.000 Lateral Lateral 1.001	4.921 5.221 5.221 4.921	450 150 150 450	1350	C	D400
S103 E. 489621.708 N. 99088.148	6.642 1.221		1 0	Lateral 2.000	5.271 4.971	150 450	1350	C	D400
S104 E. 489639.571 N. 99110.375	6.820 1.470		1 2 0	2.000 1.001 1.002	4.900 4.900 4.900	450 450 450	1350	C	D400
S105 E. 489667.337 N. 99146.180	6.549 1.312		1 2 0	1.002 Lateral 1.003	4.787 5.087 4.787	450 150 450	1350	C	D400
S106 E. 489637.843 N. 99176.919	6.500 1.370		1 2 0	1.003 Lateral 1.004	4.680 4.980 4.680	450 150 450	1350	C	D400
S107 E. 489620.809 N. 99198.387	6.980 1.919		1 0	1.004 1.005	4.611 4.611	450 450	1350	B	D400
S108 REMOVED									
S109 REMOVED									
S110 E. 489593.789 N. 99100.722	6.597 1.210		1 2 3 4 0	Gully Lateral Lateral Gully 3.000	5.237 5.237 5.237 5.237 4.937	150 150 150 150 450	1350	C	D400
S111 E. 489605.920 N. 99123.525	6.598 1.276		1 0	3.000 3.001	4.872 4.872	450 450	1350	C	D400
S112 E. 489605.543 N. 99132.960	6.684 1.386		1 2 3 0	3.001 Lateral Lateral 3.002	4.848 5.148 5.148 4.848	450 150 150 450	1350	C	D400
S113 E. 489582.892 N. 99156.992	6.580 1.365		1 0	3.002 3.003	4.765 4.765	450 450	1350	C	D400

Manhole Number	Cover Level	Connections	Pipe				Manhole Size	Types	
Coordinates	Depth To Soffit			Code	Inverts	Diams		Manhole	Cover
S114 E. 489573.327 N. 99172.413	6.370 1.276		1 2 0	3.003 Lateral 3.004	4.720 5.020 4.720	450 150 450	1350	C	D400
S115 E. 489614.627 N. 99202.502	6.852 1.810		1 2 3 4 0	3.004 1.005 Lateral Gully 1.006	4.592 4.592 4.892 4.892 4.442	450 450 150 150 600	1500	B	D400
S116 E. 489607.805 N. 99212.370	6.729 1.709		1 2 0	1.006 Lateral 1.007	4.420 4.870 4.420	600 150 600	1500	B	D400
HW15 E. 489612.426 N. 99238.737			1 0	1.007 BASIN 2	4.371	600		HEADWALL	D400
HW16 E. 489581.904 N. 99295.932			1 0	BASIN 2 1.008	4.230	600		HEADWALL	D400
S118 E. 489580.718 N. 99303.453	6.313 1.493		1 0	1.008 1.009	4.220 4.220	600 600	3000	FLOW CONTROL CHAMBER	D400
HW08 E. 489583.859 N. 99368.458			1 0	1.009 OUTFALL	4.037	600		HEADWALL	

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4. All lateral connections to be 150mm diameter unless noted otherwise.
5. Sewers with less than 1.2m cover beneath highways and 0.9m cover elsewhere to have special concrete cover slab protection in accordance with the adopting authority's requirements. Flexibility of pipeline to be maintained.
6. Bedding to all remaining pipework is to be class S granular bed and surround.
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150Ø - 22kN/m^2	375Ø - 45kN/m^2	750Ø - 90kN/m^2
225Ø - 28kN/m^2	450Ø - 54kN/m^2	825Ø - 99kN/m^2
300Ø - 36kN/m^2	600Ø - 72kN/m^2	

H	Construction issue	MA	DC	RM	18.01.23
G	HW08 amended	DC	RM	RM	03.11.22
F	S108-S115 amended. Chamber sizes amended	NO	RM	RM	29.07.22
E	S118 amended, chamber types amended	DC	RM	RM	25.07.22
D	S101, S106, S107 & HW16 amended	DC	RM	RM	08.07.22
C	Drainage amended to lower levels as per client request	CDW	DC	RM	20.06.22
B	Cover levels amended, lateral and gully connections shown	DC	RM	RM	31.05.22
A	S101 & S102 amended S106 & S107 cover levels amended	DC	RM	RM	13.05.22
-	First Issue	DC	RM	RM	08.04.22

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Bellway

Hook Lane
Pagham

Adoptable Drainage Schedules
Sheet 5

Status			Status Date
Construction			June 2022
Drawn	Checked		Date
DC	RM		08.04.2022
Scale	Number		Rev
NTS	10831-500-584		H

Construction Design and Management (CDM)
Key Residual Risks

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3) Working adjacent to water courses and flood plain
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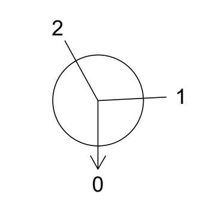
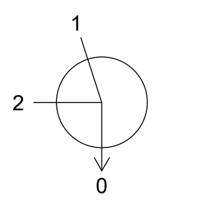
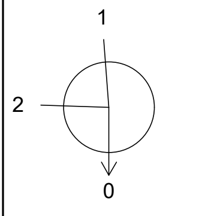
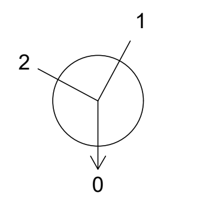
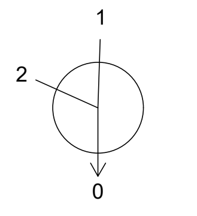
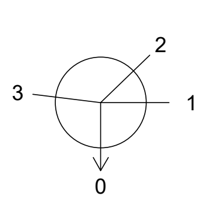
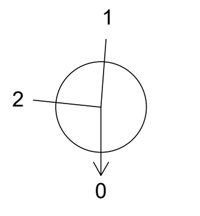
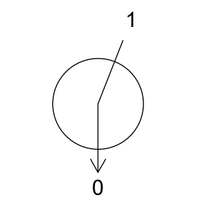
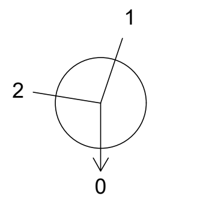
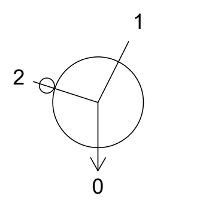
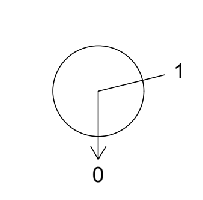
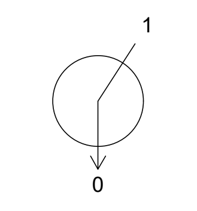
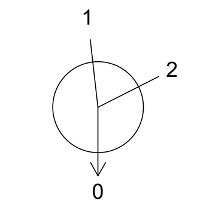
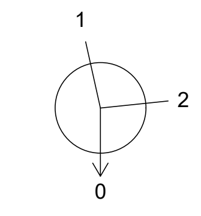
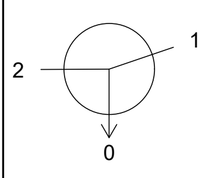
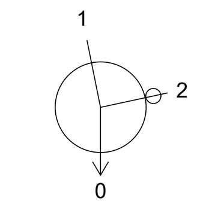
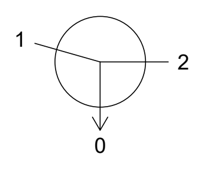
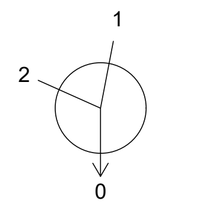
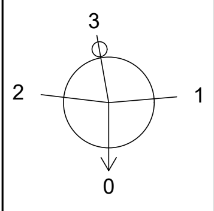
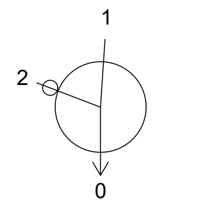
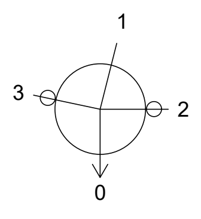
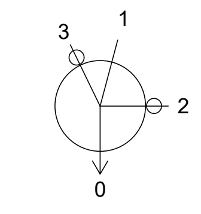
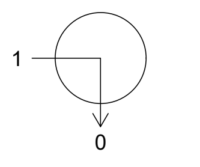
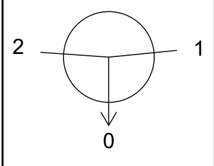
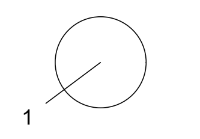
P:\10831\CAD\BCL\Working Drawings\10831-500-580F,581H,582G,583G,584H,585H,586E,587J Adoptable Drainage Schedules.dwg

Original Drawing Size A1

Manhole Number	Cover Level		Pipe				Manhole Size	Types	
Coordinates	Depth To Soffit	Connections	Code		Inverts	Diams		Manhole	Cover
F101 E. 489509.091 N. 99294.266	5.931 1.198		1 2 0	Lateral Lateral 1.000	4.583 4.583 4.583	150 150 150	1200	C	D400
F102 E. 489555.966 N. 99310.247	6.290 1.799		1 2 0	Lateral Lateral 2.000	4.341 4.341 4.341	150 150 150	1200	B	D400
F103 E. 489558.166 N. 99297.538	6.419 2.014		1 2 0	2.000 1.000 1.001	4.255 4.255 4.255	150 150 150	1200	B	D400
F104 E. 489559.306 N. 99285.810	6.535 2.209		1 2 0	1.001 Lateral 1.002	4.176 4.176 4.176	150 150 150	1200	B	D400
F105 E. 489584.846 N. 99247.758	6.422 2.402		1 2 0	1.002 Lateral 1.003	3.870 3.870 3.870	150 150 150	1200	B	D400
F106 E. 489614.939 N. 99205.742	6.882 3.207		1 2 3 0	1.003 Lateral Lateral 1.004	3.525 3.525 3.525 3.525	150 150 150 150	1200	A	D400
F107 E. 489687.989 N. 99258.170	6.705 3.629		1 2 0	1.004 Lateral 1.005	2.926 2.926 2.926	150 150 150	1200	A	D400
F108 E. 489706.318 N. 99273.484	6.712 3.795		1 0	1.005 1.006	2.767 2.767	150 150	1200	A	D400
F109 E. 489713.996 N. 99287.545	6.542 3.732		1 2 0	1.006 Lateral 1.007	2.660 2.660 2.660	150 150 150	1200	A	D400
F110 E. 489717.174 N. 99305.663	6.369 3.682		1 2 0	1.007 BD Lateral 1.008	2.537 3.837 2.537	150 150 150	1200	A	D400
F111 E. 489647.092 N. 99388.764	6.225 1.200		1 0	Lateral 3.000	4.875 4.875	150 150	1200	C	D400
F112 E. 489651.345 N. 99376.265	6.242 1.433		1 0	3.000 3.001	4.659 4.659	150 150	1200	C	D400
F113 E. 489685.249 N. 99351.789	6.513 1.983		1 2 0	3.001 Lateral 3.002	4.380 4.380 4.380	150 150 150	1200	B	D400
F114 E. 489705.251 N. 99333.459	6.529 2.180		1 2 0	3.002 Lateral 3.003	4.199 4.199 4.199	150 150 150	1200	B	D400
F115 E. 489711.479 N. 99324.574	6.420 3.865		1 2 0	3.003 1.008 1.009	2.405 2.405 2.405	150 150 150	1200	A	D400
F116 E. 489734.606 N. 99331.354	6.425 4.031		1 2 0	1.009 BD Lateral 1.010	2.244 3.544 2.244	150 150 150	1200	A	D400
F117 E. 489806.492 N. 99323.760	6.470 1.432		1 2 0	Lateral Lateral 4.000	4.888 4.888 4.888	150 150 150	1200	C	D400
F118 E. 489786.923 N. 99329.901	6.723 1.822		1 2 0	4.000 Lateral 4.001	4.751 4.751 4.751	150 150 150	1200	B	D400
F119 E. 489757.513 N. 99333.287	6.653 4.413		1 2 3 0	1.010 4.001 BD Lateral 1.011	2.090 2.090 3.390 2.090	150 150 150 150	1200	A	D400
F120 E. 489757.484 N. 99359.841	6.921 4.857		1 2 0	1.011 BD Lateral 1.012	1.914 3.214 1.914	150 150 150	1200	A	D400
F121 E. 489755.988 N. 99382.062	7.058 5.142		1 2 3 0	1.012 BD Lateral BD Lateral 1.013	1.766 3.066 3.066 1.766	150 150 150 150	1200	A	D400
F122 E. 489747.824 N. 99407.112	6.802 5.062		1 2 3 0	1.013 BD Lateral BD Lateral 1.014	1.590 2.890 3.240 1.590	150 150 150 150	1200	A	D400
F123 E. 489723.279 N. 99438.010	5.997 1.553		1 0	Lateral 5.000	4.294 4.294	150 150	1200	B	D400
F124 E. 489735.673 N. 99425.832	6.572 4.983		1 2 0	5.000 1.014 1.015	1.439 1.439 1.439	150 150 150	1200	A	D400
F125 E. 489743.120 N. 99431.395	6.875 5.348		1	1.015	1.377	150	1200	A	D400

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300Ø - 36kN/m^2	600Ø - 72kN/m^2	

K	F122 lateral added for Vistry service yard	DC	MT	RM	24.03.23
J	F125 IL and CL amended	DC	MT	RM	07.03.23
H	Construction issue	MA	DC	RM	18.01.23
G	F111 amended	DC	RM	RM	21.11.22
F	Chamber sizes amended	NO	RM	RM	29.07.22
E	F110, F112,F121,F122 & F124 amended, chamber types amended	DC	RM	RM	25.07.22
D	F117 amended	DC	RM	RM	08.07.22
C	Drainage amended to lower levels as per client request	CDW	DC	RM	20.06.22
B	Cover levels amended, lateral and gully connections shown	DC	RM	RM	31.05.22
A	F101 & F105 cover levels amended	DC	RM	RM	13.05.22
-	First Issue	DC	RM	RM	08.04.22

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Bellway

Hook Lane
Pagham

Adoptable Drainage Schedules
Sheet 6

Status		Status Date
Construction		June 2022
Drawn	Checked	Date
DC	RM	08.04.2022
Scale	Number	Rev
NTS	10831-500-585	K

Construction Design and Management (CDM)
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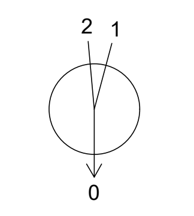
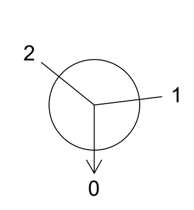
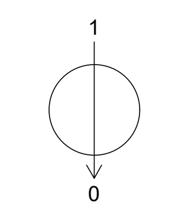
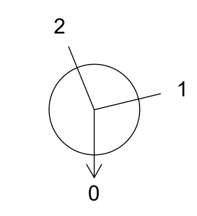
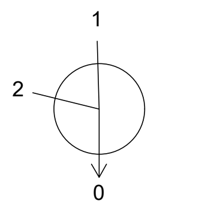
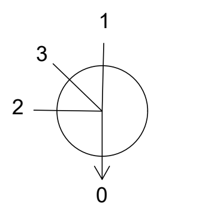
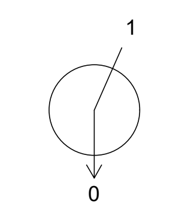
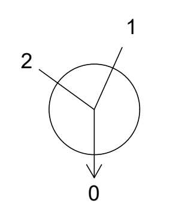
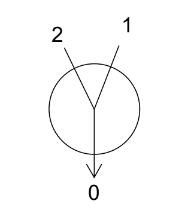
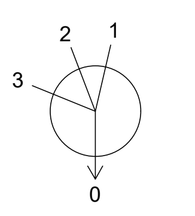
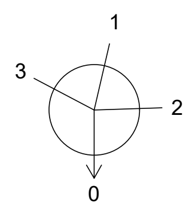
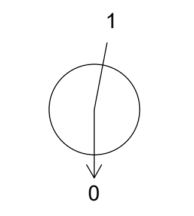
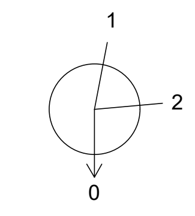
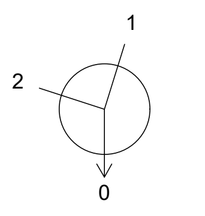
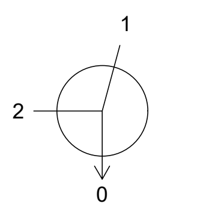
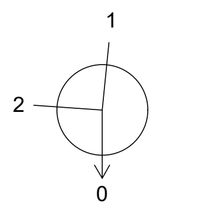
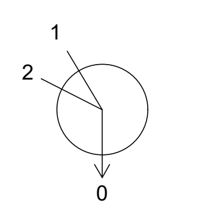
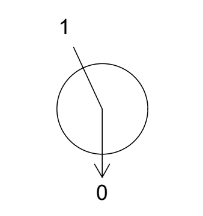
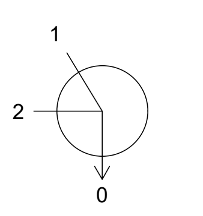
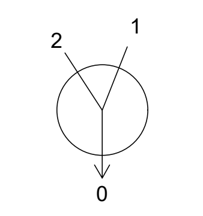
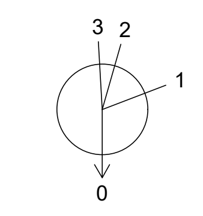
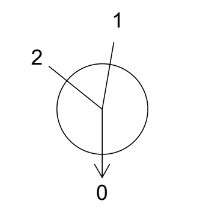
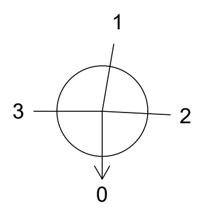
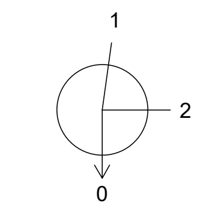
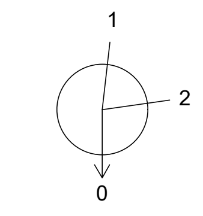
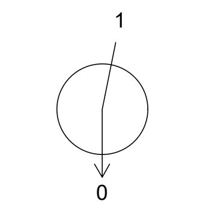
P:\10831\CAD\BCL\Working Drawings\10831-500-580F,581H,582G,583G,584H,585K,586E,587J Adoptable Drainage Schedules.dwg

Original Drawing Size A1

Manhole Number	Cover Level	Connections	Pipe				Manhole Size	Types	
Coordinates	Depth To Soffit		Code		Inverts	Diams		Manhole	Cover
S201	7.129		1	Gully	5.168	150	1200	B	D400
E. 489645.827	1.811		2	Gully	5.168	150			
N. 99225.166			0	1.000	5.018	300			
S202	6.565		1	Lateral	5.487	150	1350	C	D400
E. 489731.896	0.928		2	Lateral	5.487	150			
N. 99209.796			0	2.000	5.412	225			
S203	6.430		1	Lateral	5.310	150	1350	C	D400
E. 489699.736	0.970								
N. 99200.487			0	3.000	5.235	225			
S204	6.501		1	3.000	5.090	225	1500	C	D400
E. 489716.612	1.186		2	2.000	5.090	225			
N. 99218.053			0	2.001	4.790	525			
S205	6.460		1	2.001	4.652	525	1500	C	D400
E. 489695.454	1.283		2	Lateral	5.027	150			
N. 99244.830			0	2.002	4.652	525			
S206	6.669		1	1.000	4.803	300	1500	B	D400
E. 489687.454	1.566		2	2.002	4.578	525			
N. 99255.517			3	Lateral	4.953	150			
			0	1.001	4.503	600			
S207	6.724		1	1.001	4.431	600	1500	B	D400
E. 489705.775	1.693								
N. 99269.608			0	1.002	4.431	600			
S208	6.499		1	1.002	4.357	600	1500	B	D400
E. 489717.125	1.542		2	Lateral	4.807	150			
N. 99290.543			0	1.003	4.357	600			
S209	6.406		1	1.003	4.309	600	1500	C	D400
E. 489718.552	1.497		2	Lateral	4.759	150			
N. 99309.682			0	1.004	4.309	600			
S210	6.503		1	Gully	5.383	150	1350	C	D400
E. 489803.176	1.006		2	Gully	5.383	150			
N. 99321.958			3	Lateral	5.383	150			
			0	4.000	5.197	300			
S211	6.760		1	4.000	5.116	300	1350	C	D400
E. 489784.671	1.344		2	Lateral	5.266	150			
N. 99328.121			3	Lateral	5.266	150			
			0	4.001	5.116	300			
S212	6.646		1	4.001	4.993	300	1350	C	D400
E. 489755.371	1.353								
N. 99330.847			0	4.002	4.993	300			
S213	6.422		1	4.002	4.900	300	1350	C	D400
E. 489733.238	1.222		2	Lateral	5.050	150			
N. 99328.702			0	4.003	4.750	450			
S214	6.390		1	1.004	4.274	600	1800	B	D400
E. 489714.411	1.516		2	4.003	4.424	450			
N. 99323.155			0	1.005	4.124	750			
S215	6.542		1	1.005	4.090	750	1800	B	D400
E. 489705.219	1.702		2	Lateral	4.690	150			
N. 99336.550			0	1.006	4.090	750			
S216	6.492		1	1.006	4.026	750	1800	B	D400
E. 489681.732	1.716		2	Lateral	4.626	150			
N. 99356.570			0	1.007	4.026	750			
S217	6.266		1	1.007	3.955	750	1800	B	D400
E. 489653.888	1.561		2	Lateral	4.555	150			
N. 99375.854			0	1.008	3.955	750			
S218	6.227		1	1.008	3.929	750	1800	B	D400
E. 489648.780	1.548								
N. 99387.078			0	1.009	3.929	750			
S219	6.111		1	1.009	3.899	750	1800	C	D400
E. 489648.727	1.462		2	Lateral	4.499	150			
N. 99401.422			0	1.010	3.899	750			
S220	5.780		1	1.010	3.810	750	1800	C	D400
E. 489670.676	1.220		2	Lateral	4.410	150			
N. 99438.236			0	1.011	3.810	750			
S221	6.873		1	Lateral	5.559	150	1350	C	D400
E. 489758.687	1.164		2	Gully	5.559	150			
N. 99357.044			3	Gully	5.559	150			
			0	5.000	5.484	225			
S222	7.056		1	5.000	5.366	225	1350	C	D400
E. 489758.006	1.465		2	Lateral	5.441	150			
N. 99376.722			0	5.001	5.291	300			
S223	6.941		1	5.001	5.191	300	1350	C	D400
E. 489754.587	1.450		2	Lateral	5.341	150			
N. 99393.033			3	Lateral	5.341	150			
			0	5.002	5.116	375			
S224	6.771		1	5.002	5.044	375	1350	C	D400
E. 489748.181	1.352		2	Lateral	5.269	150			
N. 99409.091			0	5.003	4.969	450			
S225	6.671		1	5.003	4.627	450	1350	B	D400
E. 489743.147	1.594		2	Lateral	4.927	150			
N. 99417.898			0	5.004	4.627	450			
S226	6.545		1	5.004	4.571	450	1350	B	D400
E. 489735.639	1.524								
N. 99428.051			0	5.005	4.571	450			

GENERAL NOTES:

1. Do not scale from this drawing.
2. All dimensions are in metres unless otherwise stated.
3. Brookbanks Consulting Ltd has prepared this drawing for the sole use of the client. The drawing may not be relied upon by any other party without the express agreement of the client and Brookbanks Consulting Ltd. Where any data supplied by the client or from other sources has been used, it has been assumed that the information is correct. No responsibility can be accepted by Brookbanks Consulting Ltd for inaccuracies in the data supplied by any other party. The drawing has been produced based on the assumption that all relevant information has been supplied by those bodies from whom it was requested.
4. No part of this drawing may be copied or duplicated without the express permission of Brookbanks Consulting Ltd.
5. All Brookbanks Consulting drawings should be read in conjunction with other relevant Brookbanks Consulting drawings and any drawings produced by third parties connected with this project.
6. Any existing services shown on this drawing are not necessarily complete, nor is their location with regard to the position and depth precise. It is the contractors responsibility to liaise with all relevant services companies to ensure that all services are accurately located and adequately protected during construction. The contractors attention is drawn to the fact that it is highly likely that street lighting cables (or other private supplies) are present, which are not shown on incumbent services drawings.
7. Any discrepancies between the information displayed in this drawings and others to be reported to the engineer before the commencement of works.
8. Any damage caused to existing footways, roads or other third party property to be made good to the county engineers requirements.

ADOPTABLE DRAINAGE NOTES:

1. All adoptable drainage to be in accordance with Sewerage Sector Guidance (SSG) Appendix C - Design and Construction Guidance (DCG)
2. All Sustainable Urban Drainage (SuDS) to be in accordance with CIRIA report C753 "*The SuDS Manual*" and supporting documents.
3. Contractor to check all existing invert levels and watercourse bed/water levels for outfalls on site ahead of commencing work.
4. All lateral connections to be 150mm diameter unless noted otherwise.
5. Sewers with less than 1.2m cover beneath highways and 0.9m cover elsewhere to have special concrete cover slab protection in accordance with the adopting authority's requirements. Flexibility of pipeline to be maintained.
6. Bedding to all remaining pipework is to be class S granular bed and surround.
7. Pipes up to 300mm diameter shall be either vitrified clay or plastic. Pipes greater than 300mm diameter shall be precast concrete or plastic, excluding those crossing beneath watercourses. All pipes to be in accordance with the adopting authority's approved manufacturers. All pipes to be to BS EN 1295 with either sleeved of spigot & socket flexible joints, and shall satisfy the minimum crushing strengths stated below:

150Ø - 22kN/m^2	375Ø - 45kN/m^2	750Ø - 90kN/m^2
225Ø - 28kN/m^2	450Ø - 54kN/m^2	825Ø - 99kN/m^2
300Ø - 36kN/m^2	600Ø - 72kN/m^2	

E	Construction issue	MA	DC	RM	18.01.23
D	S225&226 amended. Chamber sizes amended	NO	RM	RM	29.07.22
C	S202, S203, S204, S216, S221 & S225 amended, chamber types amended	DC	RM	RM	25.07.22
B	Drainage amended to lower levels as per client request	CDW	DC	RM	20.06.22
A	Cover levels amended, lateral and gully connections shown	DC	RM	RM	31.05.22
-	First Issue	DC	RM	RM	08.04.22

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Bellway

Hook Lane
Pagham

Construction Design and Management (CDM)
Key Residual Risks

Contractors entering the site should gain permission from the relevant land owners and/or principle contractor working on site at the time of entry. Contractors shall be responsible for carrying out their own risk assessments and for liaising with the relevant services companies and authorities. Listed below are Site Specific key risks associated with the project.

1) Overhead and underground services
2) Street Lighting Cables
3) Working adjacent to water courses and flood plain
4) Soft ground conditions
5) Working adjacent to live highways and railway line
6) Unchartered services
7) Existing buildings with potential asbestos hazards

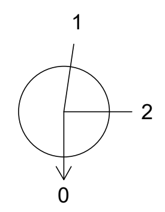
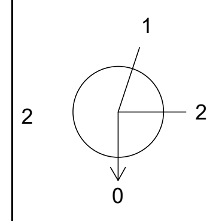
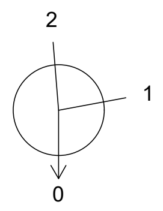
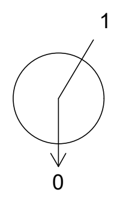
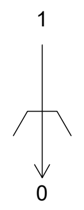
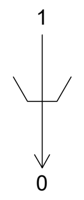
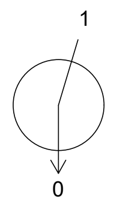
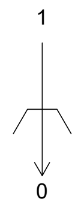
Adoptable Drainage Schedules
Sheet 7

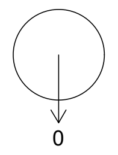
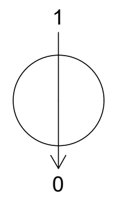
Status		Status Date
Construction		June 2022
Drawn	**Checked**	**Date**
DC	RM	08.04.2022
Scale	**Number**	**Rev**
NTS	10831-500-586	E

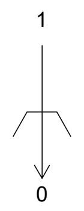
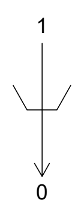
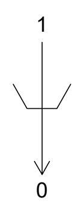
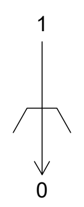
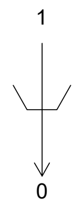
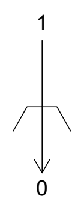
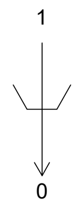
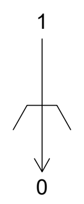
UNTIL TECHNICAL APPROVAL HAS BEEN OBTAINED FROM THE RELEVANT LOCAL AUTHORITIES, IT SHOULD BE UNDERSTOOD THAT ALL DRAWINGS ARE ISSUED AS PRELIMINARY AND NOT FOR CONSTRUCTION. SHOULD THE CONTRACTOR COMMENCE SITE WORK PRIOR TO APPROVAL BEING GIVEN, IT IS ENTIRELY AT HIS OWN RISK.

P:\10831\CAD\BCL\Working Drawings\10831-500-580F,581H,582G,583G,584H,585H,586E,587J Adoptable Drainage Schedules.dwg

Original Drawing Size A1

Manhole Number / Coordinates	Cover Level / Depth To Soffit	Connections	Pipe	Code	Inverts	Diams	Manhole Size	Types: Manhole	Types: Cover
S227 E. 489719.284 N. 99442.844	5.926 1.050		1	5.005	4.426	450	1200	C	D400
			2	Lateral	4.726	150			
			0	5.006	4.426	450			
S228 E. 489688.021 N. 99463.765	5.469 0.922		1	5.006	4.097	450	1350	C	D400
			2	Lateral	4.397	150			
			0	5.007	4.097	450			
S229 E. 489675.289 N. 99467.243	5.396 0.900		1	1.011	3.746	750	1800	C	D400
			2	5.007	4.056	450			
			0	1.012	3.671	825			
S230 E. 489632.639 N. 99482.494	5.314 0.900		1	1.012	3.589	825	1800	C	D400
			0	1.013	3.589	825			
HW17 E. 489625.276 N. 99481.022			1	1.013	3.575	825		HEADWALL	
			0	BASIN 3					
HW18 E. 489560.033 N. 99445.935			1	BASIN 3				HEADWALL	
			0	1.014	3.440	825			
S232 E. 489553.199 N. 99441.901	4.740 1.015		1	1.014	3.425	825	3000	FLOW CONTROL CHAMBER	D400
			0	1.015	3.425	300			
HW19 E. 489548.158 N. 99436.807			1	1.015	3.330	300		HEADWALL	
			0	OUTFALL					

S300 E. 489354.859 N. 98948.686	5.775 1.200		0	1.000	4.425	150	1350	C	D400
S301 E. 489366.232 N. 98979.761	6.240 1.890		1	1.000	4.200	150	1200	B	D400

HW01 E. 489722.153 N. 99146.052			1	CULVERT 1	4.933	600		HEADWALL	
			0	DITCH					
HW02 E. 489716.169 N. 99145.590			1	DITCH				HEADWALL	
			0	CULVERT 1	4.944	600			
HW03 E. 489639.218 N. 99211.847			1	DITCH	5.116	600		HEADWALL	
			0	CULVERT 2					
HW04 E. 489635.869 N. 99227.135			1	CULVERT 2				HEADWALL	
			0	DITCH	5.085	600			
HW05 E. 489684.073 N. 99316.070			1	DITCH	4.867	600		HEADWALL	
			0	CULVERT 3					
HW06 E. 489683.225 N. 99321.188			1	CULVERT 3				HEADWALL	
			0	DITCH	4.858	600			
HW07 E. 489593.236 N. 99365.958			1	DITCH	3.702	600		HEADWALL	
			0	CULVERT 4					
HW08 E. 489585.944 N. 99368.860			1	CULVERT 4				HEADWALL	
			0	DITCH	3.687	600			

GENERAL NOTES:

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5. All Brookbanks Consulting drawings should be read in conjunction with other relevant Brookbanks Consulting drawings and any drawings produced by third parties connected with this project.
6. Any existing services shown on this drawing are not necessarily complete, nor is their location with regard to the position and depth precise. It is the contractors responsibility to liaise with all relevant services companies to ensure that all services are accurately located and adequately protected during construction. The contractors attention is drawn to the fact that it is highly likely that street lighting cables (or other private supplies) are present, which are not shown on incumbent services drawings.
7. Any discrepancies between the information displayed in this drawings and others to be reported to the engineer before the commencement of works.
8. Any damage caused to existing footways, roads or other third party property to be made good to the county engineers requirements.

ADOPTABLE DRAINAGE NOTES:

1. All adoptable drainage to be in accordance with Sewerage Sector Guidance (SSG) Appendix C - Design and Construction Guidance (DCG)
2. All Sustainable Urban Drainage (SuDS) to be in accordance with CIRIA report C753 "*The SuDS Manual*" and supporting documents.
3. Contractor to check all existing invert levels and watercourse bed/water levels for outfalls on site ahead of commencing work.
4. All lateral connections to be 150mm diameter unless noted otherwise.
5. Sewers with less than 1.2m cover beneath highways and 0.9m cover elsewhere to have special concrete cover slab protection in accordance with the adopting authority's requirements. Flexibility of pipeline to be maintained.
6. Bedding to all remaining pipework is to be class S granular bed and surround.
7. Pipes up to 300mm diameter shall be either vitrified clay or plastic. Pipes greater than 300mm diameter shall be precast concrete or plastic, excluding those crossing beneath watercourses. All pipes to be in accordance with the adopting authority's approved manufacturers. All pipes to be to BS EN 1295 with either sleeved of spigot & socket flexible joints, and shall satisfy the minimum crushing strengths stated below:

150Ø - 22kN/m^2	375Ø - 45kN/m^2	750Ø - 90kN/m^2
225Ø - 28kN/m^2	450Ø - 54kN/m^2	825Ø - 99kN/m^2
300Ø - 36kN/m^2	600Ø - 72kN/m^2	

J	Construction issue	MA	DC	RM	18.01.23
H	HW03,HW04 & HW08 coordinates amended	DC	RM	RM	09.12.22
G	HW19 coordinates amended, HW01 - HW08 amended	DC	RM	RM	18.11.22
F	HW19 coordinates amended	DC	RM	RM	15.08.22
E	S227 amended. Chamber sizes amended.	NO	RM	RM	29.07.22
D	S301 chamber type amended	DC	RM	RM	25.07.22
C	S300, S301 & Swale headwalls added	DC	RM	RM	04.07.22
B	Drainage amended to lower levels as per client request	CDW	DC	RM	20.06.22
A	Cover levels amended, lateral and gully connections shown	DC	RM	RM	31.05.22
-	First Issue	DC	RM	RM	08.04.22

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Bellway

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Adoptable Drainage Schedules
Sheet 8

Construction Design and Management (CDM)
Key Residual Risks

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2) Street Lighting Cables
3) Working adjacent to water courses and flood plain
4) Soft ground conditions
5) Working adjacent to live highways and railway line
6) Unchartered services
7) Existing buildings with potential asbestos hazards

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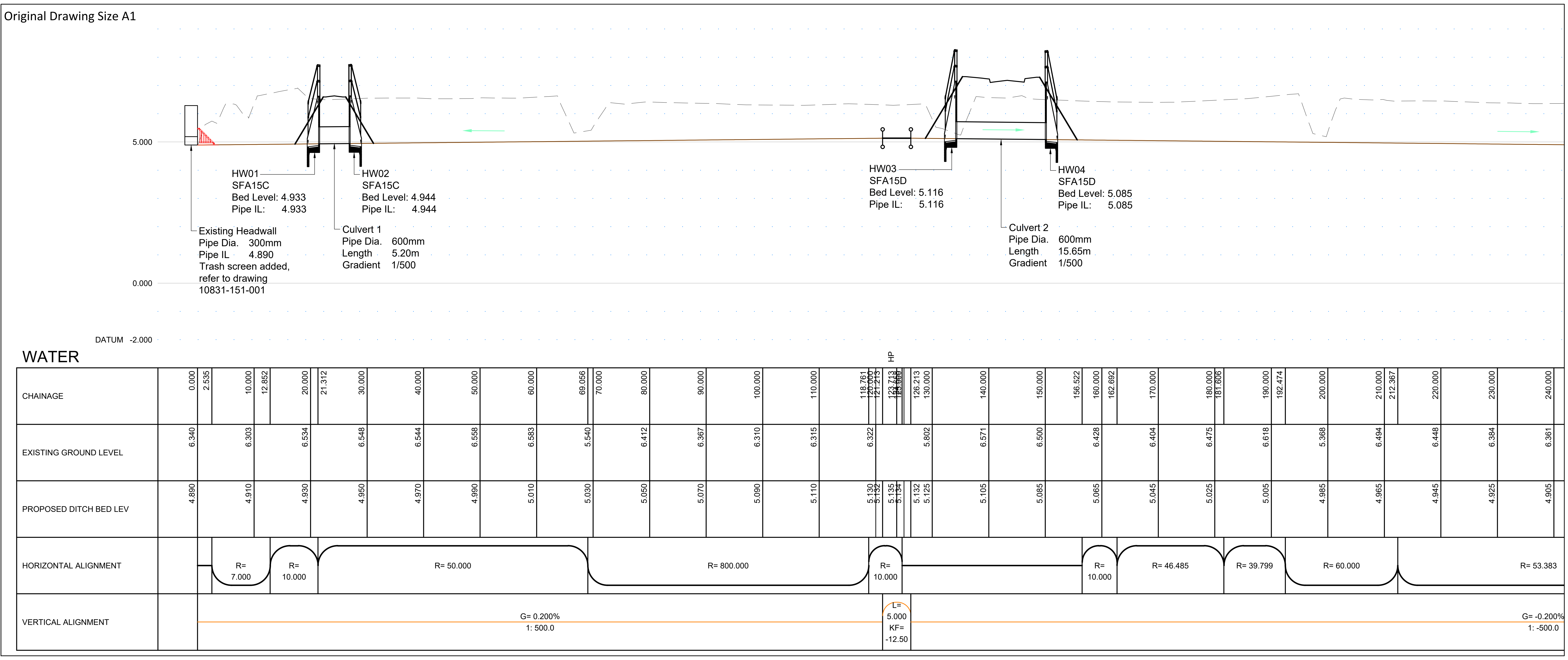
Status		Status Date
Construction		June 2022
Drawn	**Checked**	**Date**
DC	RM	08.04.2022
Scale	**Number**	**Rev**
NTS	10831-500-587	J

P:\10831\CAD\BCL\Working Drawings\10831-500-580F,581H,582G,583G,584H,585H,586E,587J Adoptable Drainage Schedules.dwg

Original Drawing Size A1


5.000
HW01
SFA15C
Bed Level: 4.933
Pipe IL: 4.933
HW02
SFA15C
Bed Level: 4.944
Pipe IL: 4.944
Existing Headwall
Pipe Dia. 300mm
Pipe IL 4.890
Trash screen added,
refer to drawing
10831-151-001
Culvert 1
Pipe Dia. 600mm
Length 5.20m
Gradient 1/500
HW03
SFA15D
Bed Level: 5.116
Pipe IL: 5.116
HW04
SFA15D
Bed Level: 5.085
Pipe IL: 5.085
Culvert 2
Pipe Dia. 600mm
Length 15.65m
Gradient 1/500
0.000
DATUM -2.000
WATER
HP
CHAINAGE
0.000
2.535
10.000
12.852
20.000
21.312
30.000
40.000
50.000
60.000
69.056
70.000
80.000
90.000
100.000
110.000
118.761
120.000
121.213
123.713
126.213
130.000
140.000
150.000
156.522
160.000
162.692
170.000
180.000
181.606
190.000
192.474
200.000
210.000
212.367
220.000
230.000
240.000
EXISTING GROUND LEVEL
6.340
6.303
6.534
6.548
6.544
6.558
6.583
5.540
6.412
6.367
6.310
6.315
6.322
5.802
6.571
6.500
6.428
6.404
6.475
6.618
5.368
6.494
6.448
6.384
6.361
PROPOSED DITCH BED LEV
4.890
4.910
4.930
4.950
4.970
4.990
5.010
5.030
5.050
5.070
5.090
5.110
5.130
5.132
5.135
5.134
5.132
5.125
5.105
5.085
5.065
5.045
5.025
5.005
4.985
4.965
4.945
4.925
4.905
HORIZONTAL ALIGNMENT
R= 7.000
R= 10.000
R= 50.000
R= 800.000
R= 10.000
R= 10.000
R= 46.485
R= 39.799
R= 60.000
R= 53.383
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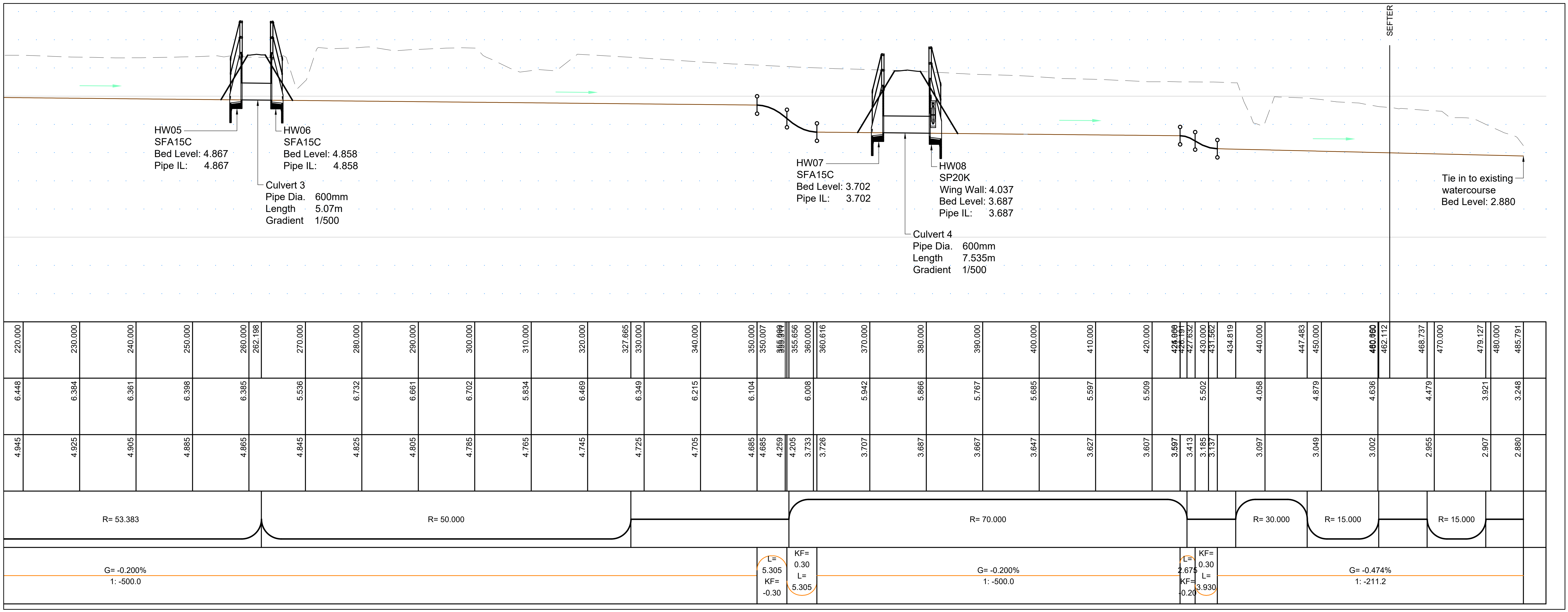
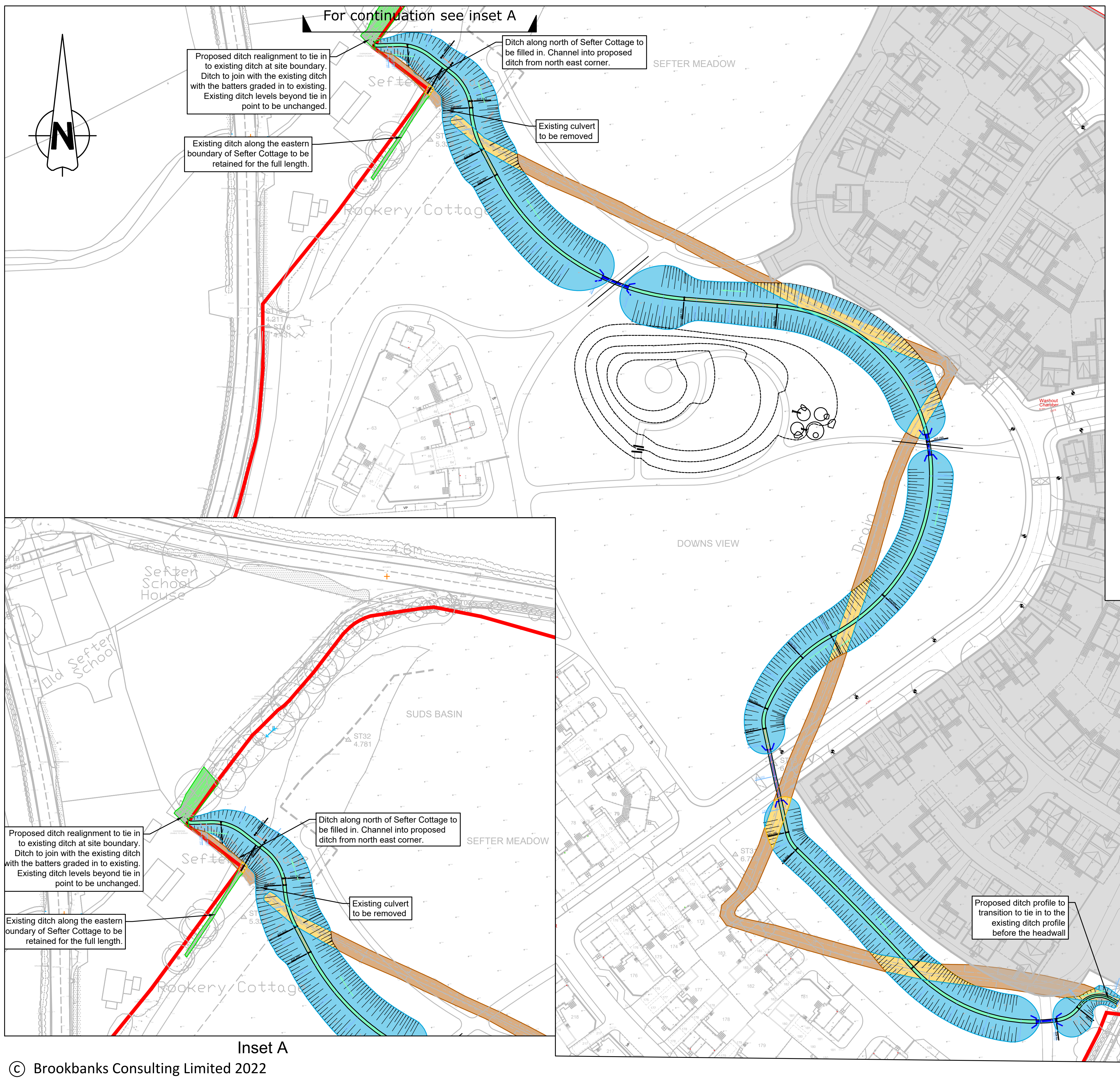
L= 5.000
KF= -12.50
G= -0.200%
1: -500.0


SEFTER
HW05
SFA15C
Bed Level: 4.867
Pipe IL: 4.867
HW06
SFA15C
Bed Level: 4.858
Pipe IL: 4.858
Culvert 3
Pipe Dia. 600mm
Length 5.07m
Gradient 1/500
HW07
SFA15C
Bed Level: 3.702
Pipe IL: 3.702
HW08
SP20K
Wing Wall: 4.037
Bed Level: 3.687
Pipe IL: 3.687
Culvert 4
Pipe Dia. 600mm
Length 7.535m
Gradient 1/500
Tie in to existing
watercourse
Bed Level: 2.880
220.000
230.000
240.000
250.000
260.000
262.198
270.000
280.000
290.000
300.000
310.000
320.000
327.665
330.000
340.000
350.000
350.007
355.656
360.000
360.616
370.000
380.000
390.000
400.000
410.000
420.000
426.191
427.632
430.000
431.562
434.819
440.000
447.483
450.000
462.112
468.737
470.000
479.127
480.000
485.791
6.448
6.384
6.361
6.398
6.385
5.536
6.732
6.661
6.702
5.834
6.469
6.349
6.215
6.104
6.008
5.942
5.866
5.767
5.685
5.597
5.509
5.502
4.058
4.879
4.636
4.479
3.921
3.248
4.945
4.925
4.905
4.885
4.865
4.845
4.825
4.805
4.785
4.765
4.745
4.725
4.705
4.685
4.685
4.259
4.205
3.733
3.726
3.707
3.687
3.667
3.647
3.627
3.607
3.597
3.413
3.185
3.137
3.097
3.049
3.002
2.955
2.907
2.880
R= 53.383
R= 50.000
R= 70.000
R= 30.000
R= 15.000
R= 15.000
G= -0.200%
1: -500.0
L= 5.305
KF= -0.30
KF= 0.30
L= 5.305
G= -0.200%
1: -500.0
L= 2.675
KF= -0.20
KF= 0.30
L= 3.930
G= -0.474%
1: -211.2

LONGITUDINAL SECTIONS
H 1:500 V 1:100


For continuation see inset A
N
SEFTER MEADOW
Sefter Cottage
Rookery Cottage
DOWNS VIEW
Old Sefter School
Sefter School House
SUDS BASIN
ST32
4.781

Proposed ditch realignment to tie in to existing ditch at site boundary. Ditch to join with the existing ditch with the batters graded in to existing. Existing ditch levels beyond tie in point to be unchanged.

Ditch along north of Sefter Cottage to be filled in. Channel into proposed ditch from north east corner.

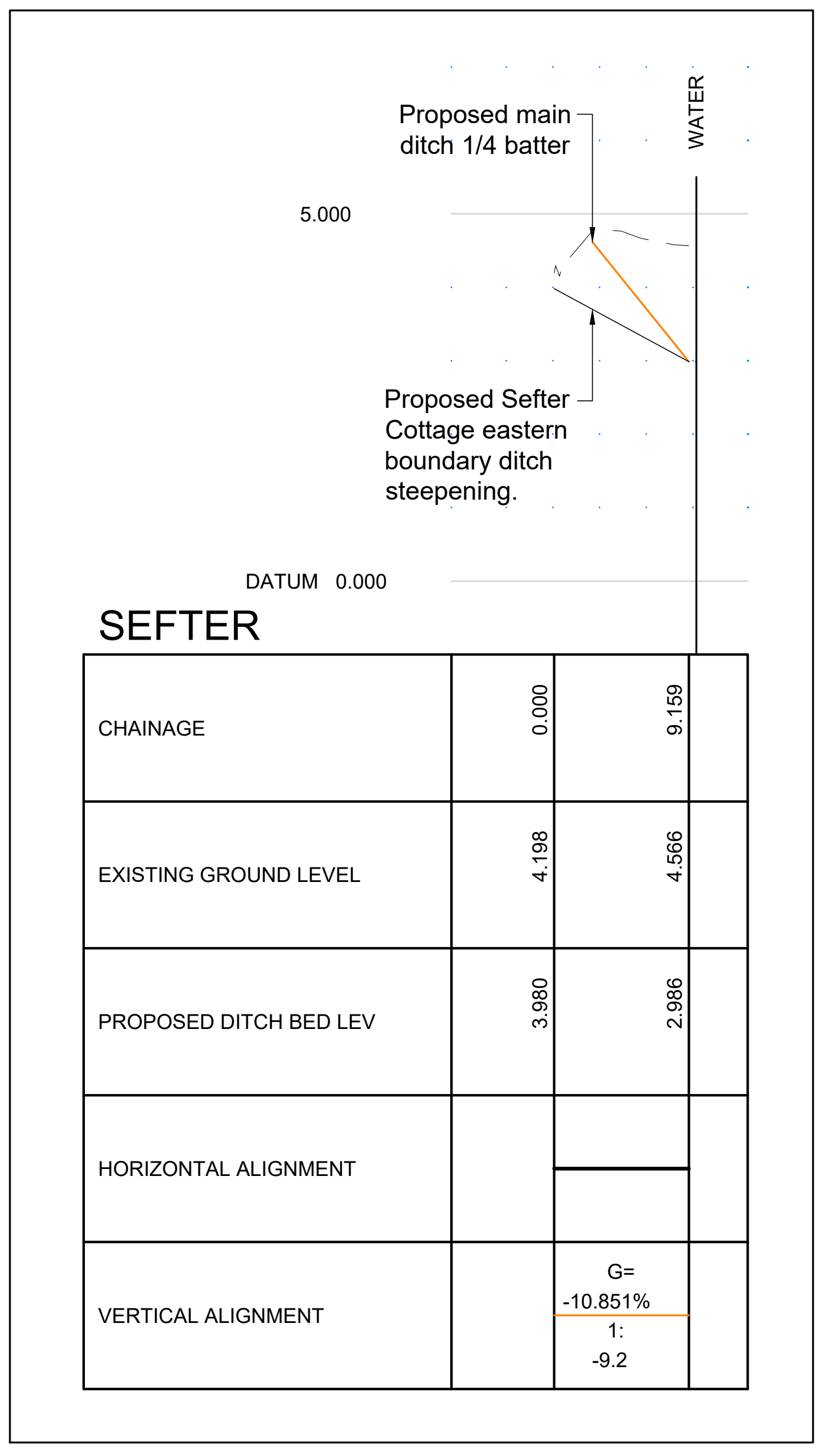
Existing culvert to be removed

Existing ditch along the eastern boundary of Sefter Cottage to be retained for the full length.

Proposed ditch profile to transition to tie in to the existing ditch profile before the headwall

Existing culvert continues along Hook Lane.

Inset A


WATER
5.000
DATUM 0.000
SEFTER
CHAINAGE
0.000
9.159
EXISTING GROUND LEVEL
4.198
4.566
PROPOSED DITCH BED LEV
3.980
2.986
HORIZONTAL ALIGNMENT
VERTICAL ALIGNMENT
G=
-10.851%
1:
-9.2

Proposed main ditch 1/4 batter

Proposed Sefter Cottage eastern boundary ditch steepening.

KEY:

🟥	Site Boundary
🟦	New watercourse
🟫	Exisiting watercourse to be abandoned
🟨	Existing watercourse reprofiled
🟩	Exisiting watercourse retained

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5. Details & locations of existing sewers are based on the topographical survey and utility recordings and should be considered indicative and approximate only. All sewers must be accurately located by the contractor prior to commencement of works.
6. Existing watercourse to be abandoned to be backfilled using Class 4 material and method compaction to SHW cl 612.
7. Local CBR testing to be carried out where the proposed road crosses the filled ditch upon completion of backfilling to determine local capping requirement.

H	Vistry layout updated	MA	DC	RM	02.03.23
G	Construction issue	MA	DC	RM	18.01.23
F	HW08 moved	DC	RM	RM	09.12.22
E	Ditch & Sefter Cottage ditch amended	DC	RM	RM	21.11.22
D	Culverts shown on section, ditch levels amended	DC	RM	RM	31.10.22
C	Extend of proposed and exist ditches highlighted	MA	DC	RM	12.08.22
B	Cross section chainages added	DC	DC	RM	15.07.22
A	Culvert & presentation amendments	DC	DC	RM	04.07.22
-	This drawing is amended from drawing 10641-DR-0003 - Watercourse Diversion Plan & Section	CDW	DC	RM	20.06.22

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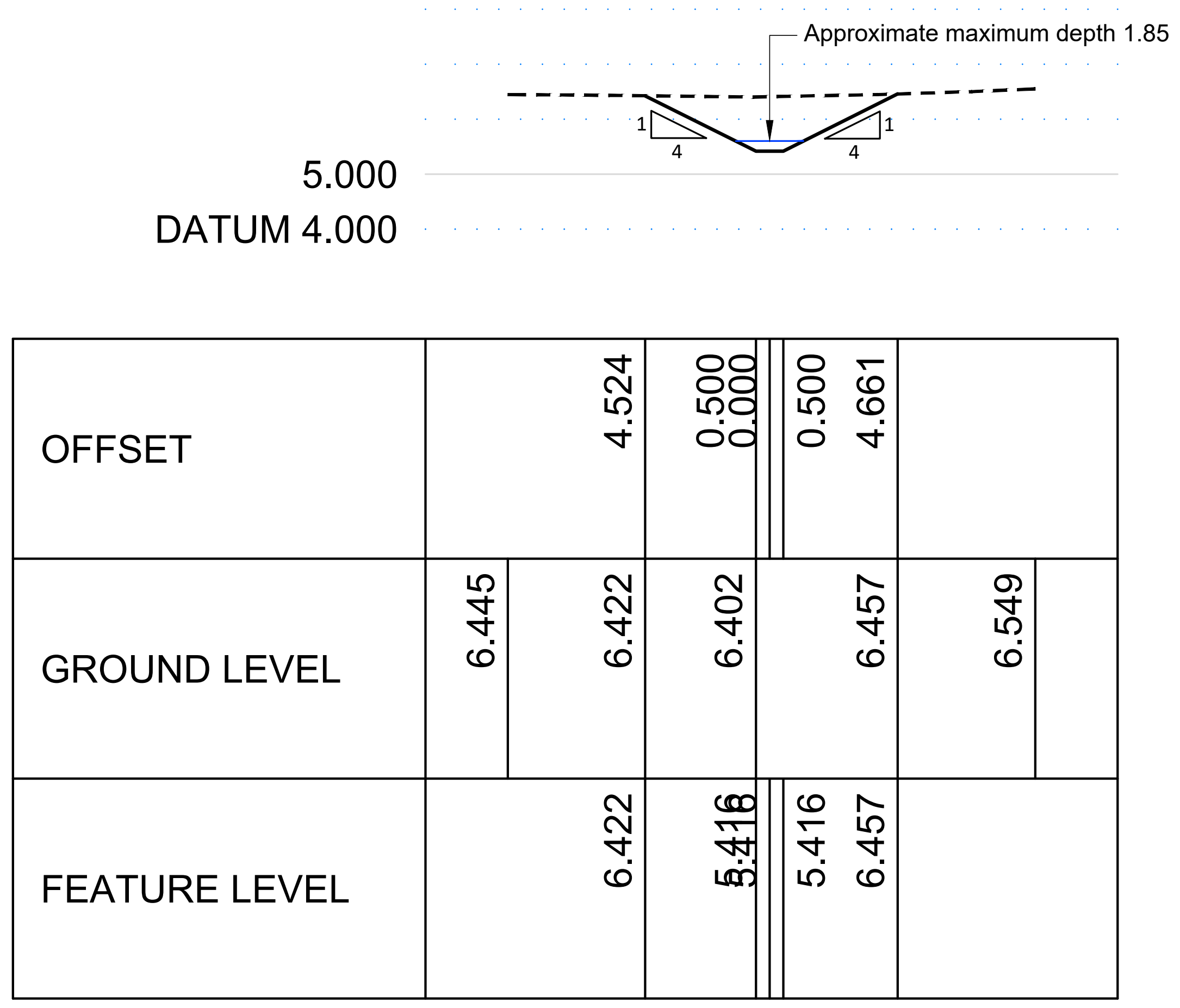
Watercourse Diversion
Plan & Section

Construction		JUN 2022
CDW	DC	20.06.22
1:1000	10831-502-001	H

0 20 40 60 80 100
METRES

Original Drawing Size A1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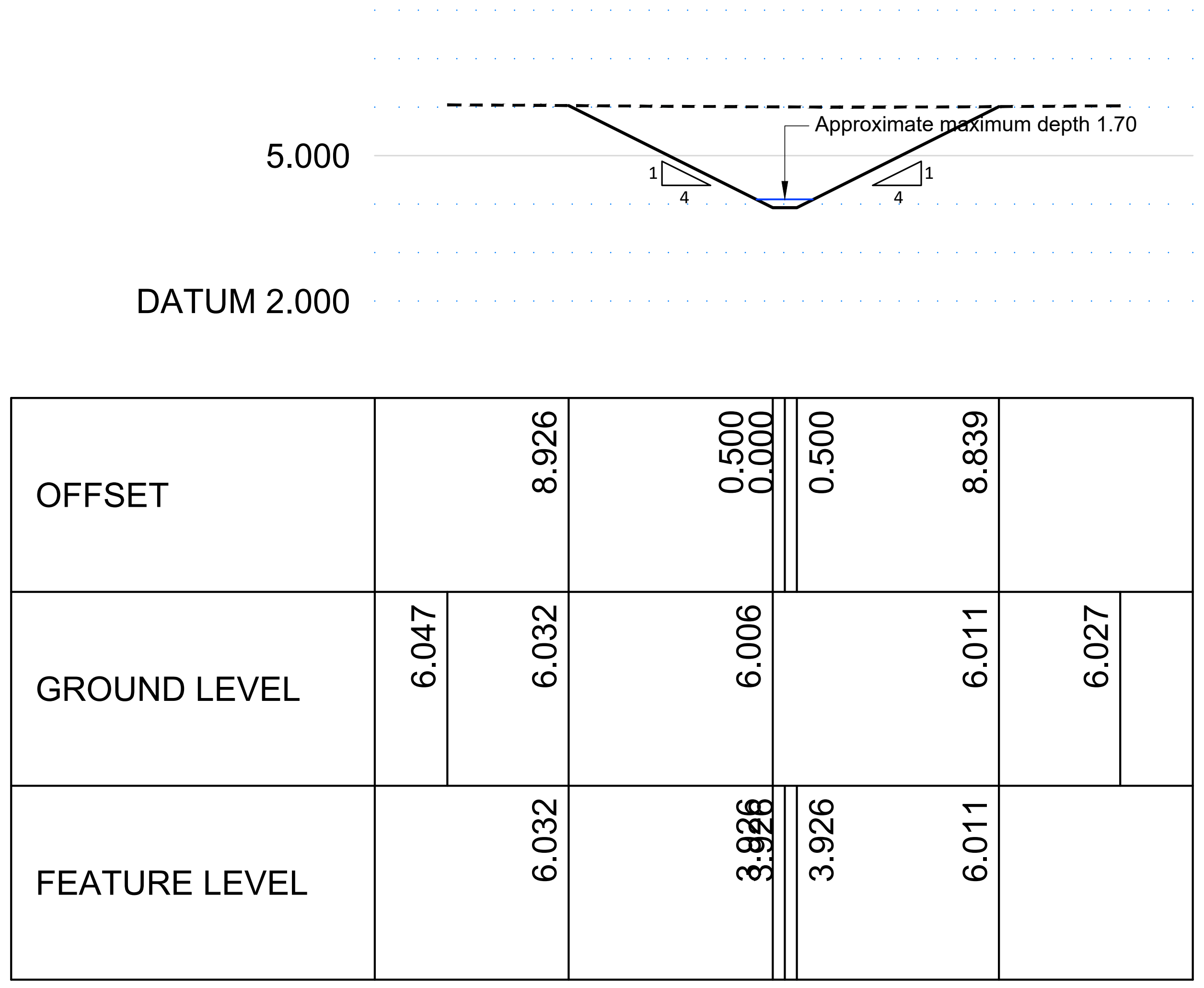
4
1
4
5.000
DATUM 4.000
OFFSET
4.524
0.500
0.000
0.500
4.661
GROUND LEVEL
6.445
6.422
6.402
6.457
6.549
FEATURE LEVEL
6.422
5.416
5.416
5.416
6.457


Approximate maximum depth 1.70
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4
1
4
5.000
DATUM 2.000
OFFSET
8.926
0.500
0.000
0.500
8.839
GROUND LEVEL
6.047
6.032
6.006
6.011
6.027
FEATURE LEVEL
6.032
3.926
3.926
3.926
6.011

Construction Design and Management (CDM)
Key Residual Risks

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7) Existing buildings with potential asbestos hazards

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- First Issue DC RM RM 15.07.22

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Bellway

Hook Lane
Pagham

Watercourse Diversion
Typical Cross Sections

Status		Status Date
Construction		Jul 2022
Drawn	**Checked**	**Date**
DC	RM	15.07.2022
Scale	**Number**	**Rev**
H:1:250 V:1:125	10831-502-002	-

0 5 10 15 20 25
METRES

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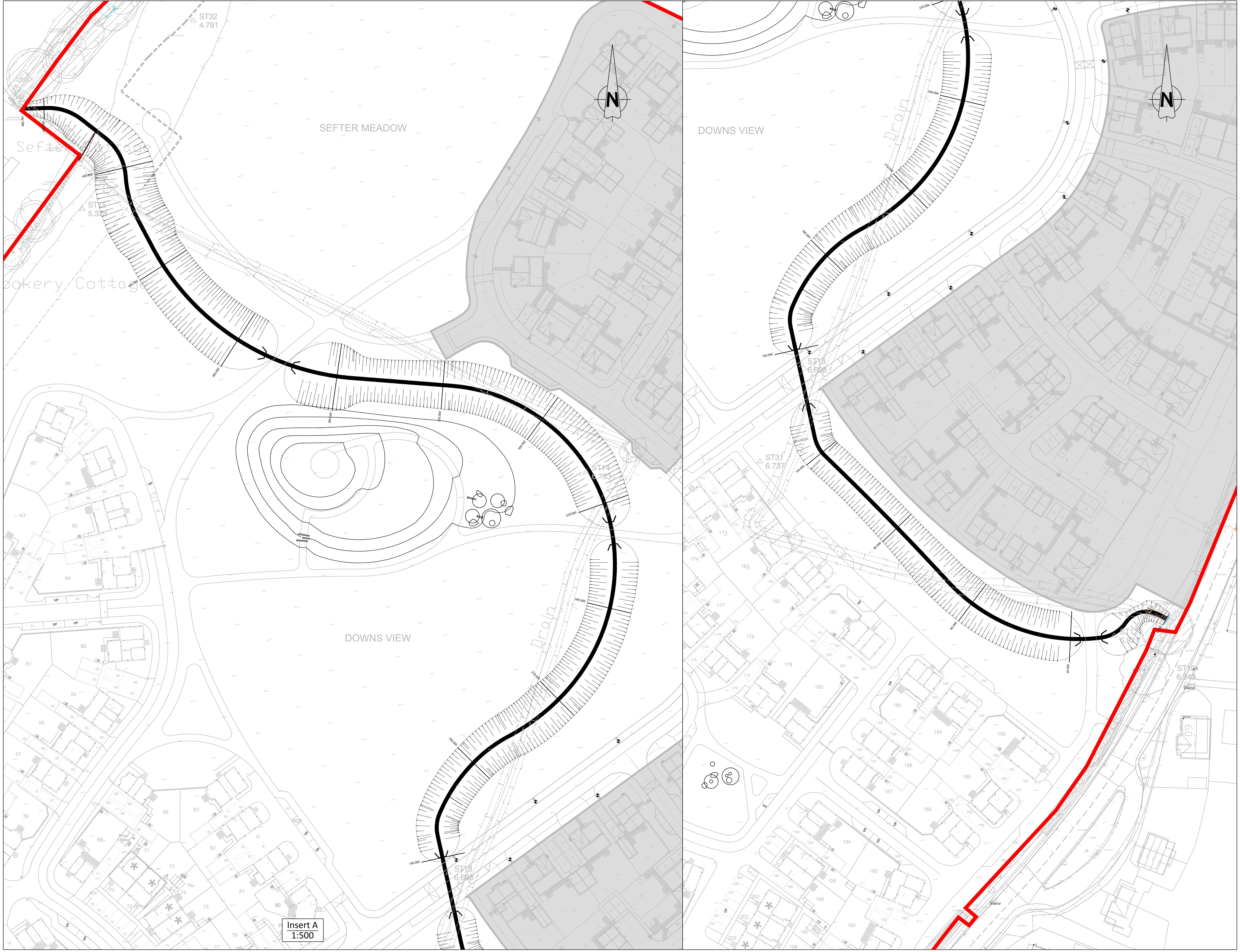
P:\10831\CAD\BCL\Working Drawings\10831-502-001B,002 - Watercourse Diversion Plan & Section.dwg

Original Drawing Size A1



Construction Design and Management (CDM)
Key Residual Risks

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KEY:

— Site Boundary

C	Vistry layout updated	MA	DC	RM	02.03.23
B	Construction issue	MA	DC	RM	18.01.23
A	Cross Sections updated	DC	DC	RM	13.12.22
-	First Issue	CL	DC	DC	10.08.22

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Watercourse Diversion
Cross Section - Plan

Construction		Aug 2022
CL	DC	10.08.22
1:500	10831-502-003	C

0 10 20 30 40 50
METRES

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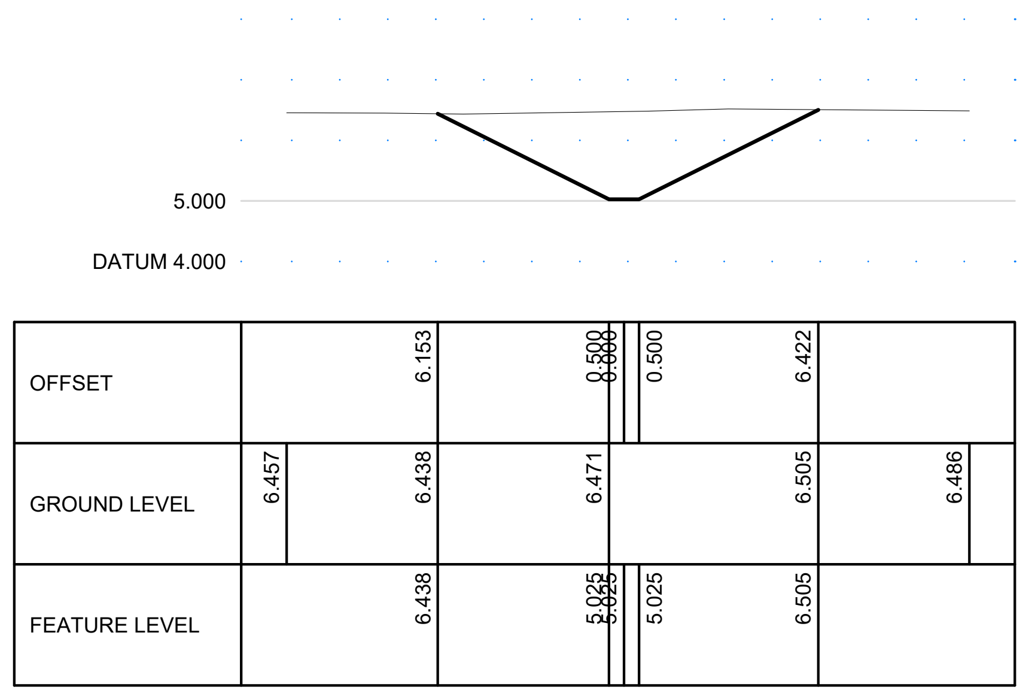
P:\10831\CAD\BCL\Working Drawings\10831-502-003C,004B,005B - Watercourse Diversion Cross Section.dwg

Original Drawing Size A1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OFFSET 6.153 0.500 0.000 0.500 6.422
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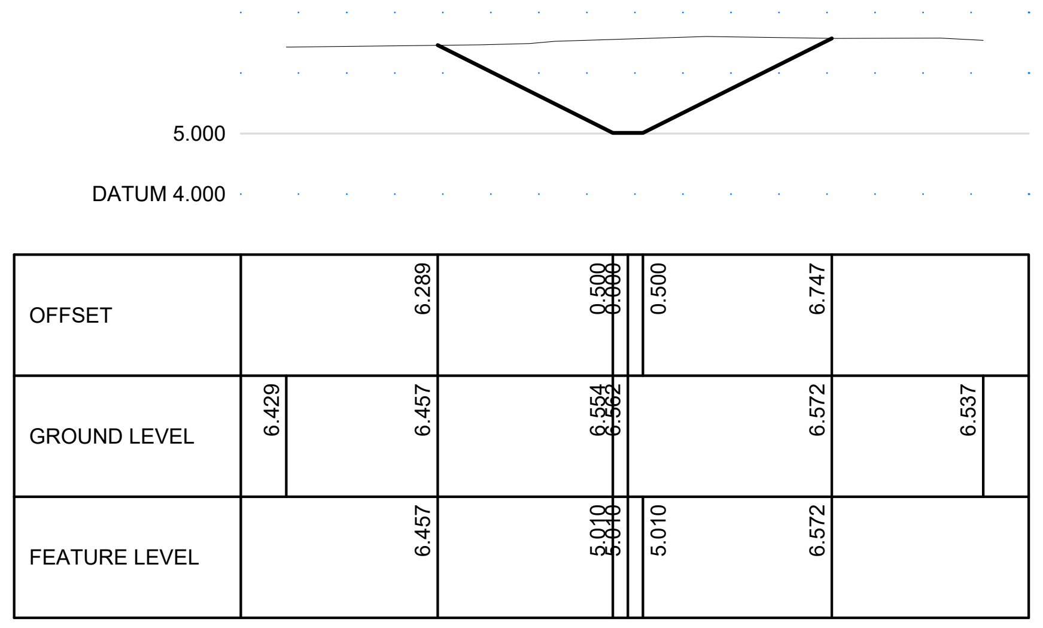
FEATURE LEVEL 6.438 5.025 5.025 5.025 6.505

ALIGNMENT WATER
CHAINAGE 180.000


5.000
DATUM 4.000
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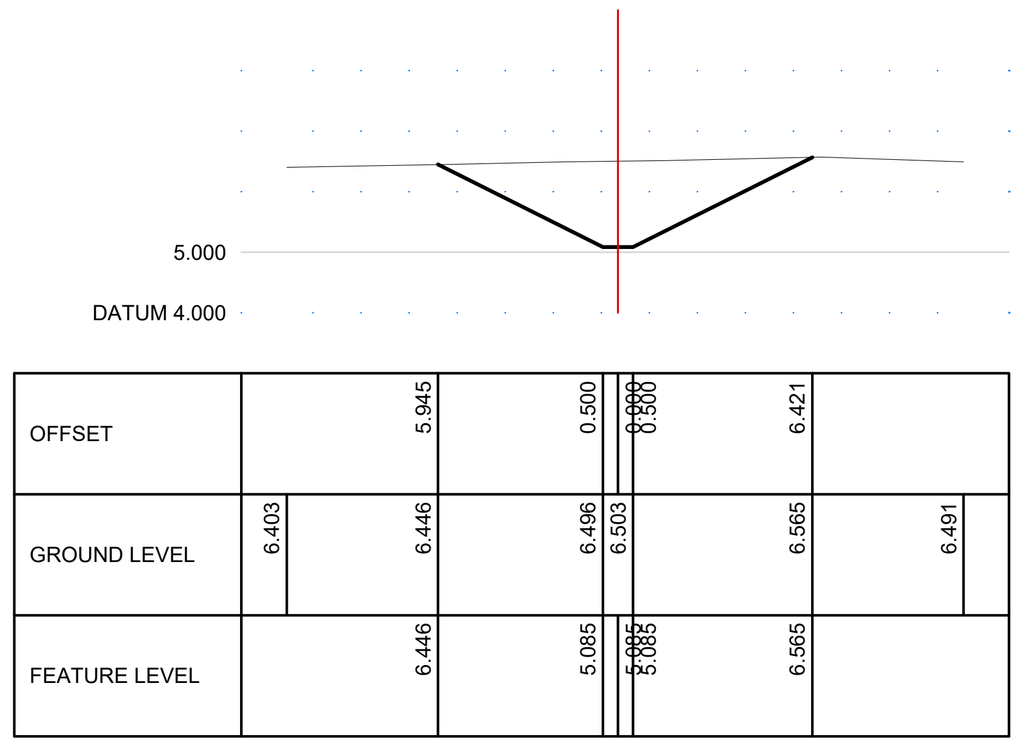
FEATURE LEVEL 6.457 5.010 5.010 5.010 6.572

ALIGNMENT WATER
CHAINAGE 60.000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DATUM 4.000
OFFSET 5.945 0.500 0.000 0.500 6.421
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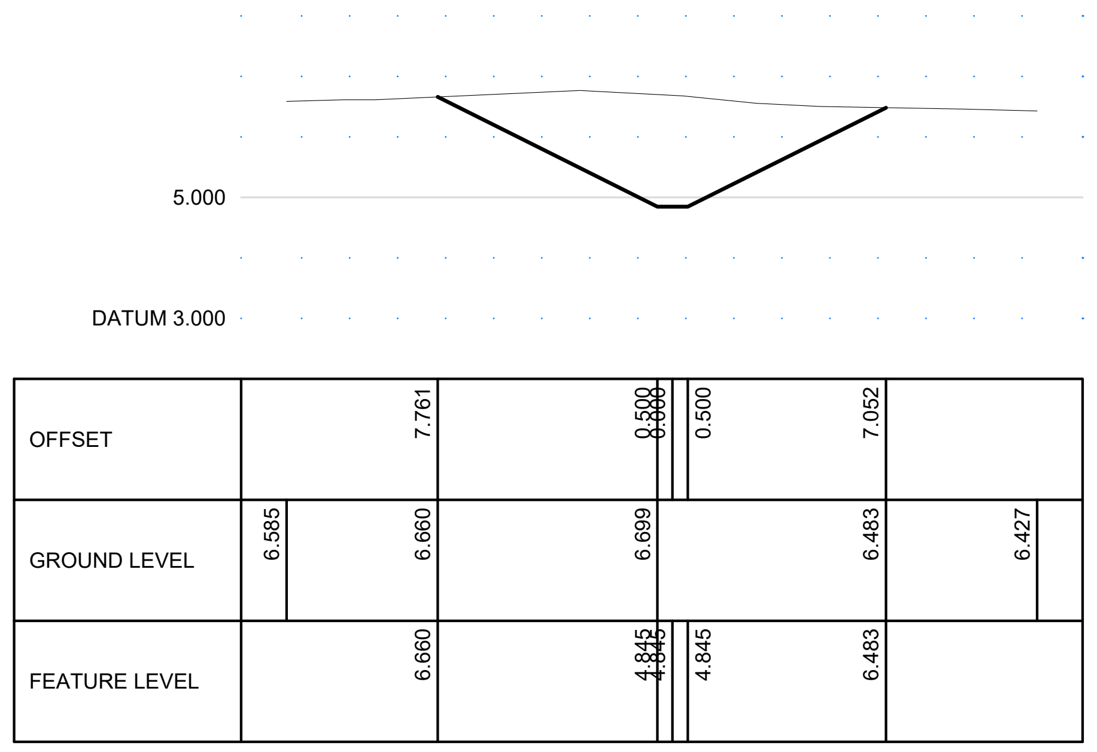
FEATURE LEVEL 6.446 5.085 5.085 5.085 6.565

ALIGNMENT WATER
CHAINAGE 150.000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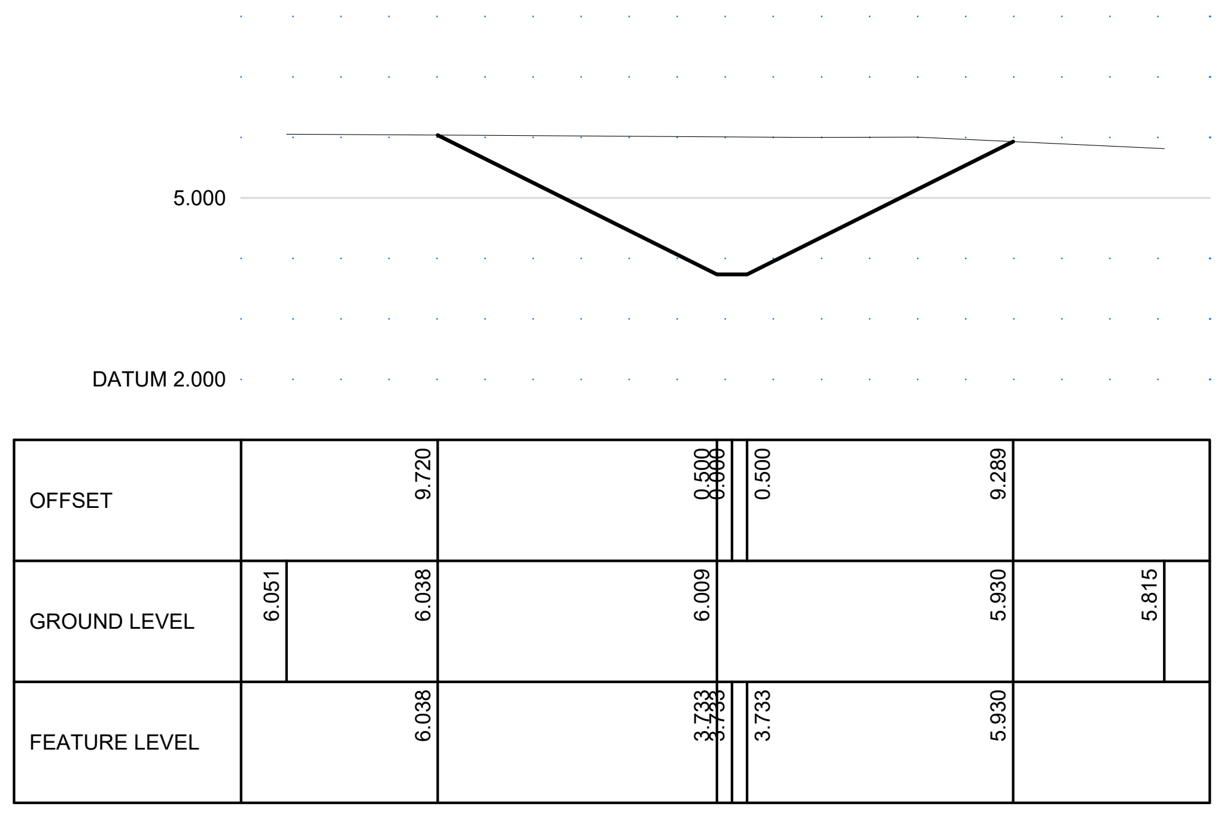
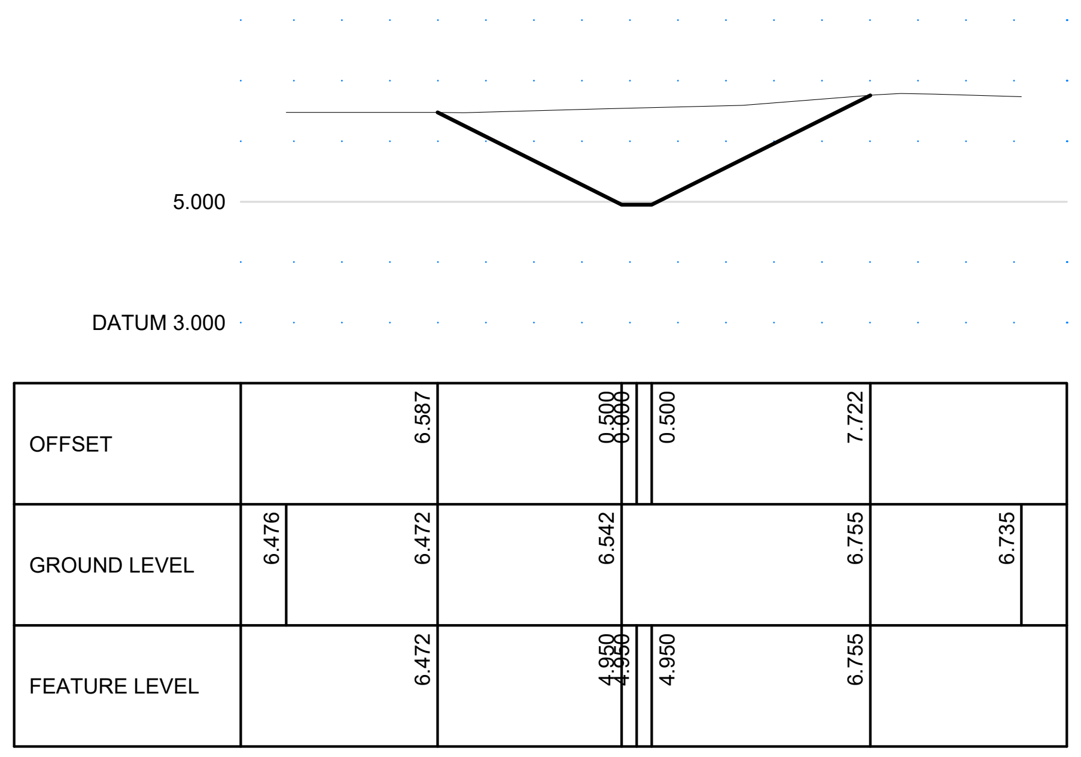
DATUM 3.000
OFFSET 7.761 0.500 0.000 0.500 7.052
GROUND LEVEL 6.585 6.660 6.699 6.483 6.427
FEATURE LEVEL 6.660 4.845 4.845 4.845 6.483

ALIGNMENT WATER
CHAINAGE 270.000


5.000
DATUM 2.000
OFFSET 9.720 0.500 0.000 0.500 9.289
GROUND LEVEL 6.051 6.038 6.009 5.930 5.815
FEATURE LEVEL 6.038 3.733 3.733 3.733 5.930

ALIGNMENT WATER
CHAINAGE 360.000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ALIGNMENT WATER
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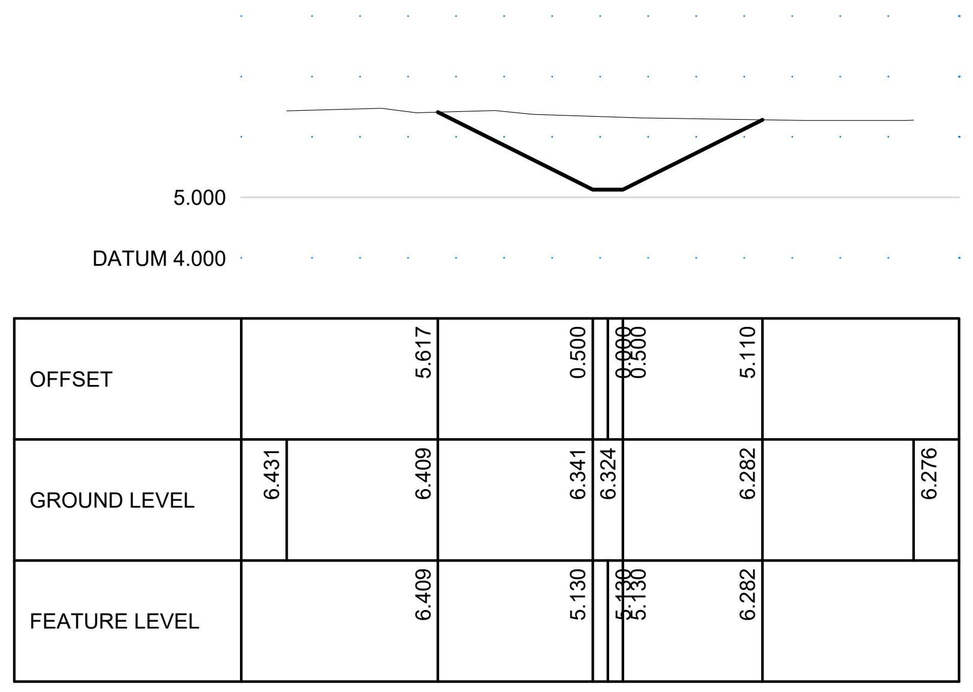
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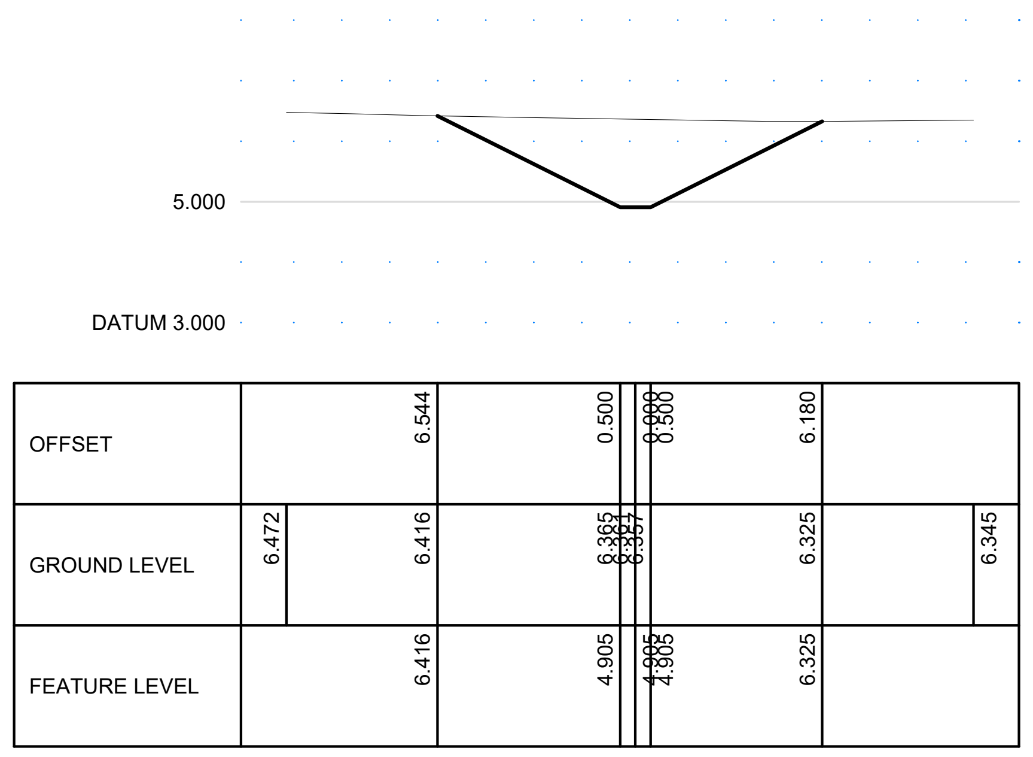
ALIGNMENT WATER
CHAINAGE 120.000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ALIGNMENT WATER
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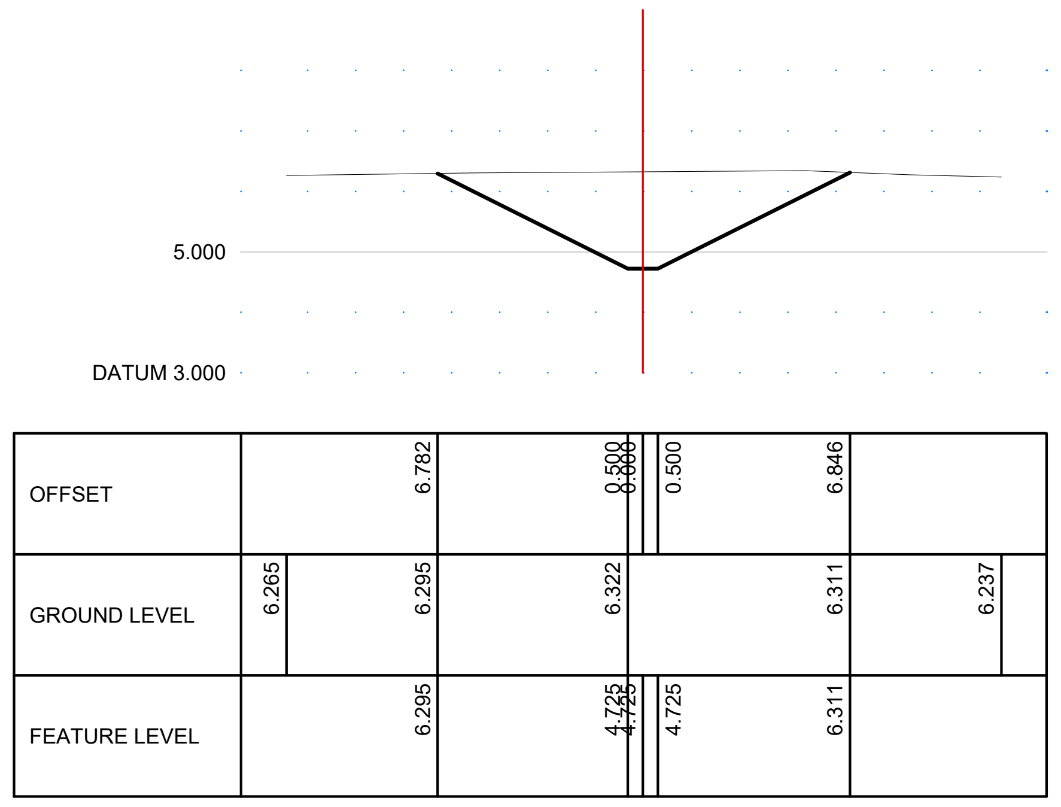
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ALIGNMENT WATER
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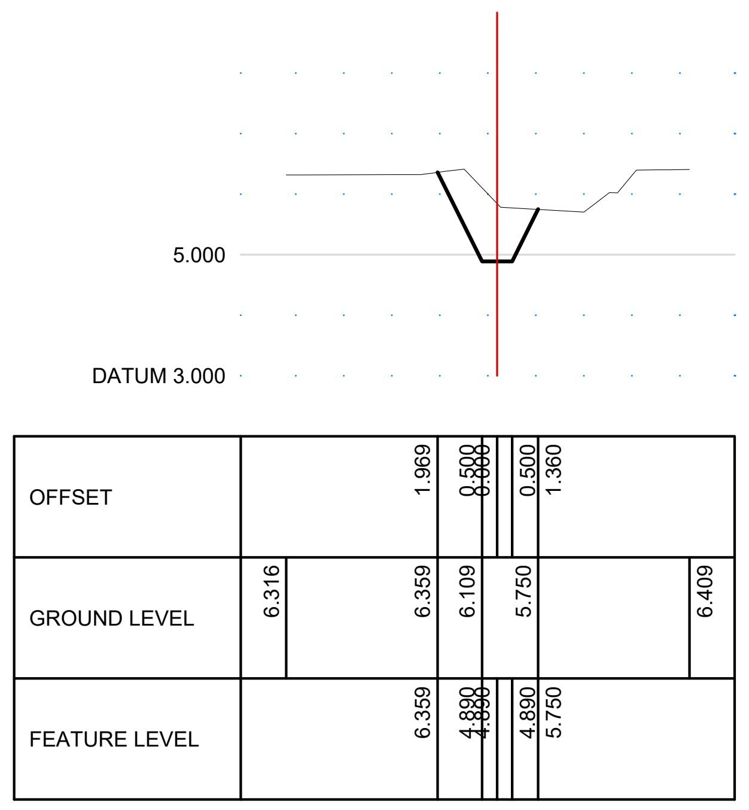
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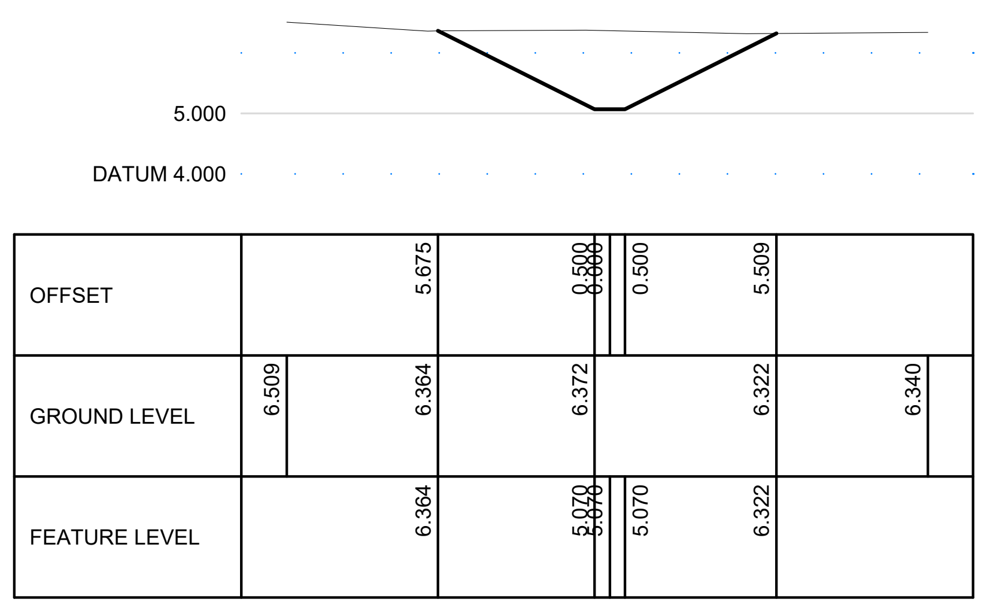
ALIGNMENT WATER
CHAINAGE 0.000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ALIGNMENT WATER
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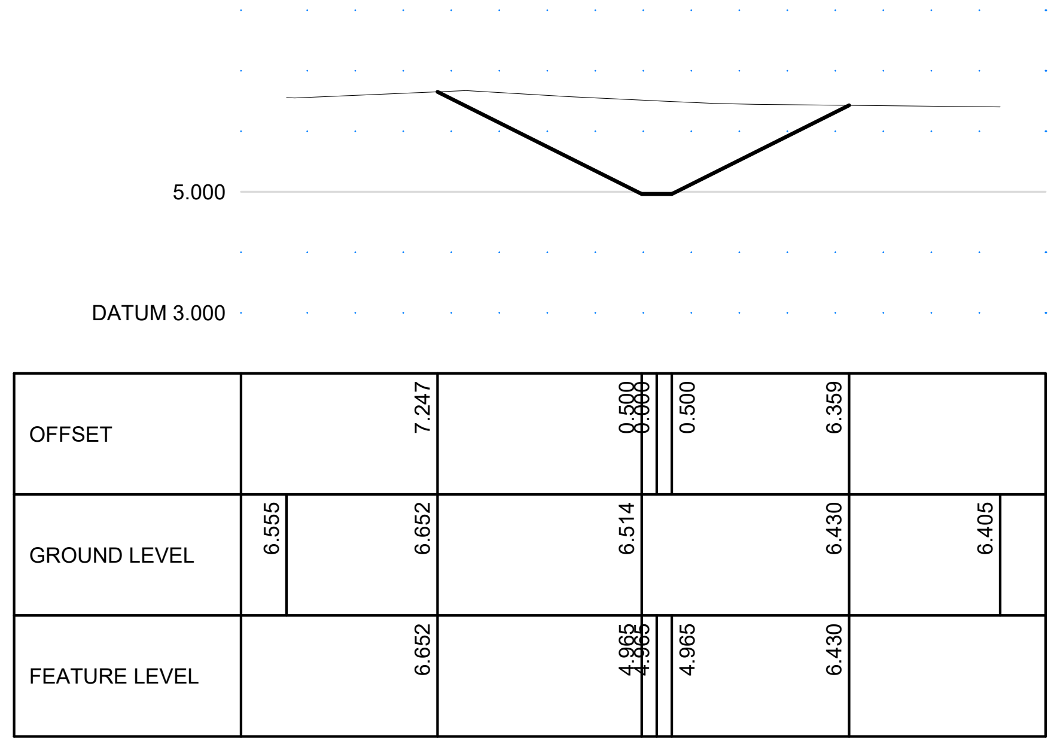
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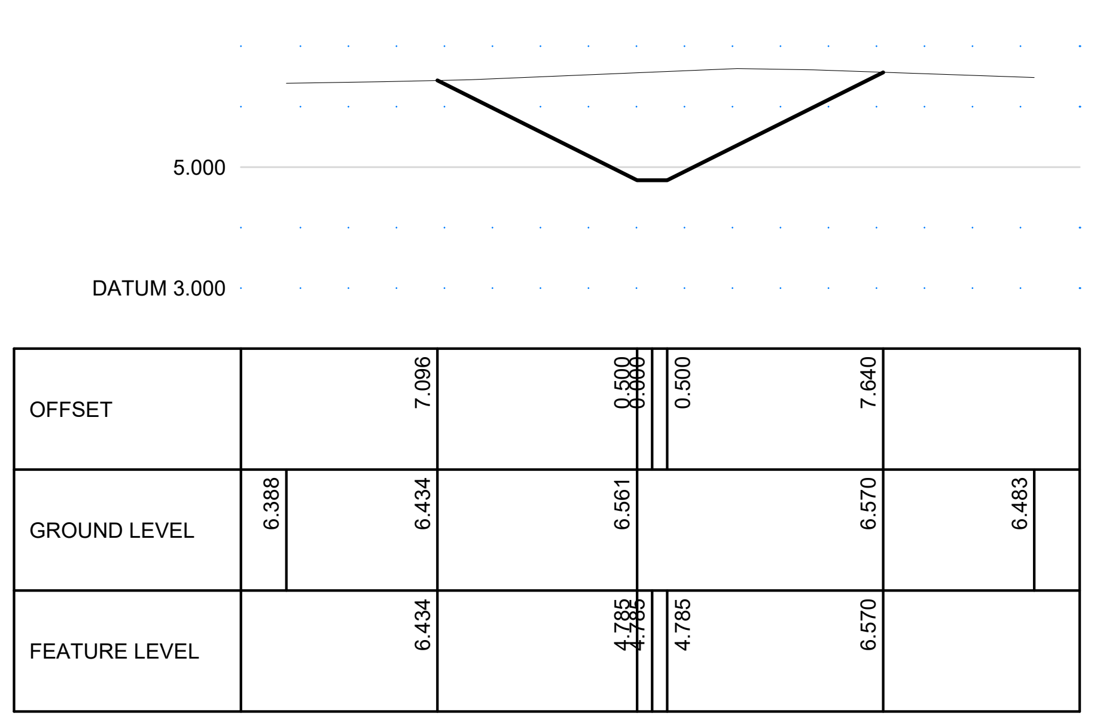
ALIGNMENT WATER
CHAINAGE 210.000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ALIGNMENT WATER
CHAINAGE 300.000

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P:\10831\CAD\BCL\Working Drawings\10831-502-003B,004B,005B - Watercourse Diversion Cross Section.dwg

Construction Design and Management (CDM)
Key Residual Risks

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B	Construction issue	MA	DC	RM	18.01.23
A	Updated sections	DC	DC	RM	13.12.22
-	First Issue	CL	DC	DC	10.08.22

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Bellway

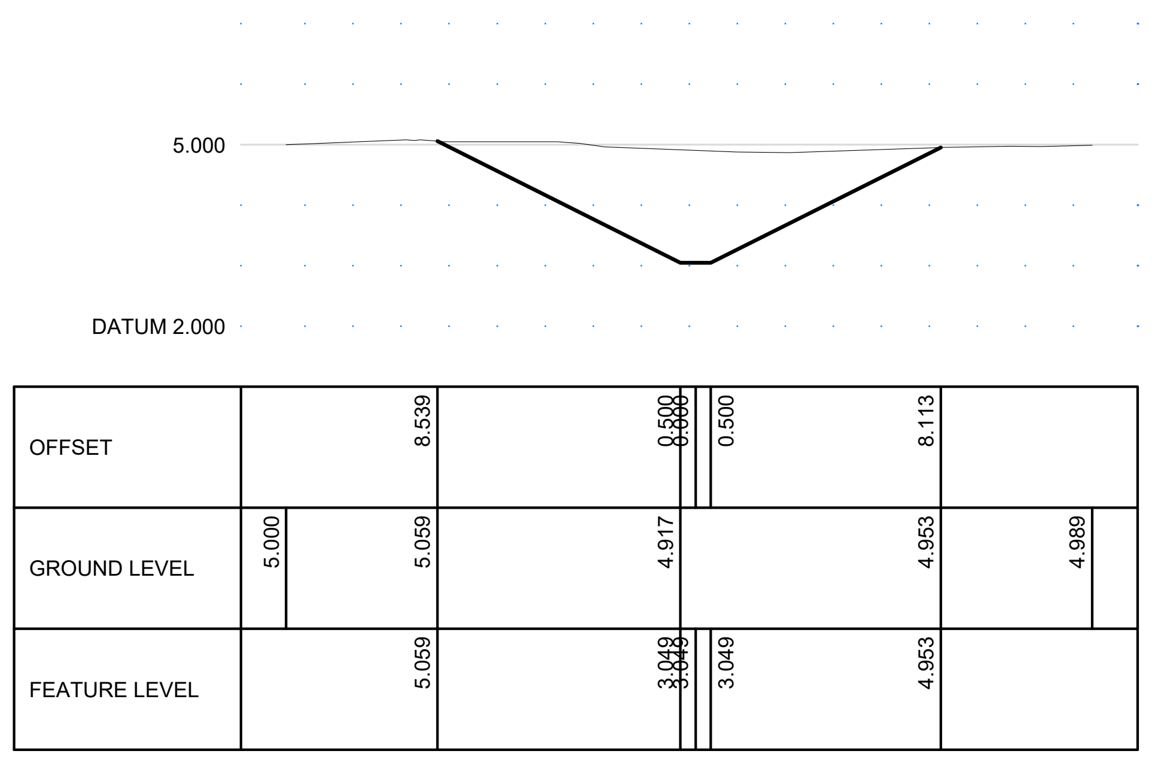
Hook Lane
Pagham

Watercourse Diversion
Cross Section
Sheet 1

Construction		Aug 2022
CL	DC	10.08.22
H: 1:250 V: 1:125	10831-502-004	B

0 5 10 15 20 25
METRES

Original Drawing Size A1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ALIGNMENT WATER
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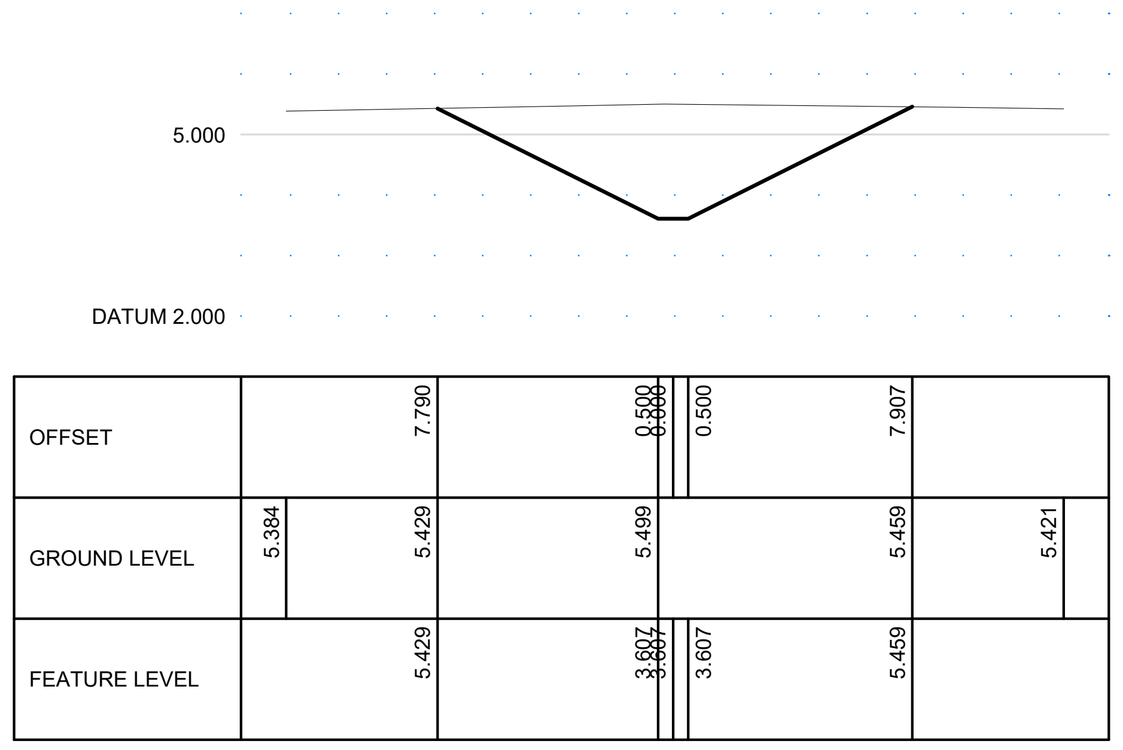
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ALIGNMENT WATER
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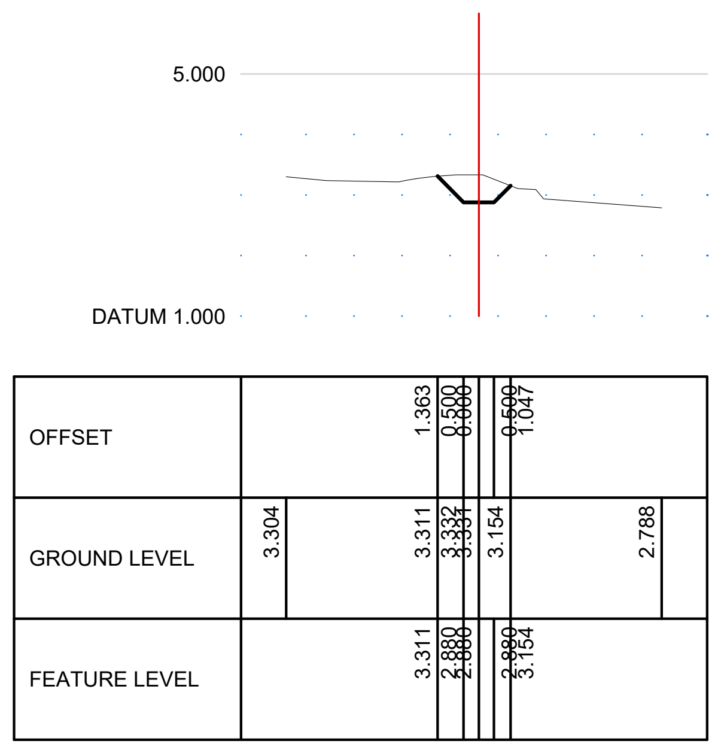
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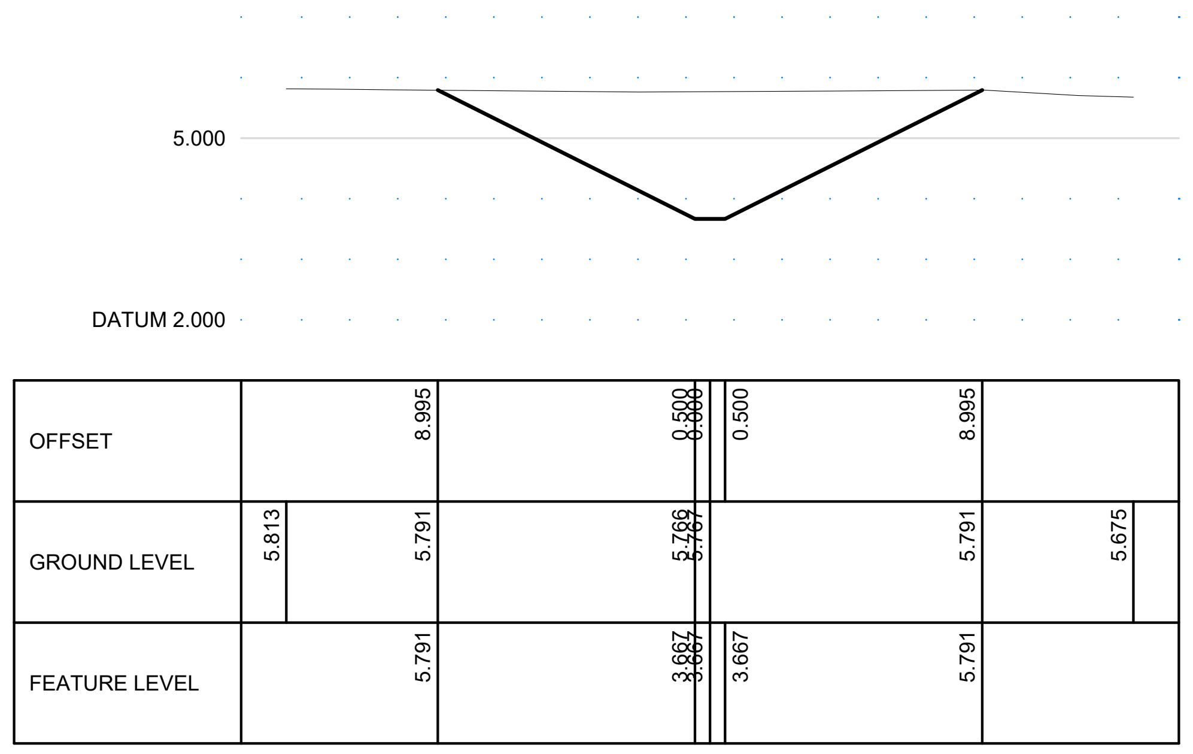
ALIGNMENT WATER
CHAINAGE 485.791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FEATURE LEVEL
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ALIGNMENT WATER
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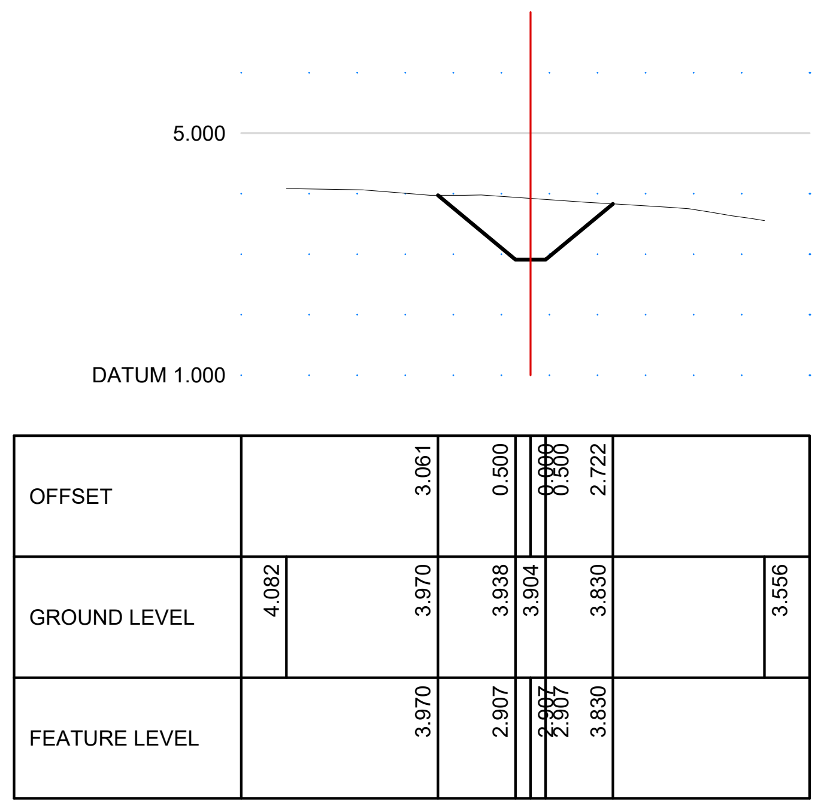
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FEATURE LEVEL
3.970
2.907
2.907
2.907
3.830

ALIGNMENT WATER
CHAINAGE 480.000

Construction Design and Management (CDM)
Key Residual Risks

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B	Construction issue	MA	DC	RM	18.01.23
A	Updated sections	DC	RM	RM	13.12.22
-	First Issue	CL	DC	DC	10.08.22

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Bellway

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Pagham

Watercourse Diversion
Cross Section
Sheet 2

Construction		Aug 2022
CL	DC	10.08.22
H: 1:250 V: 1:125	10831-502-005	B

0 5 10 15 20 25
METRES

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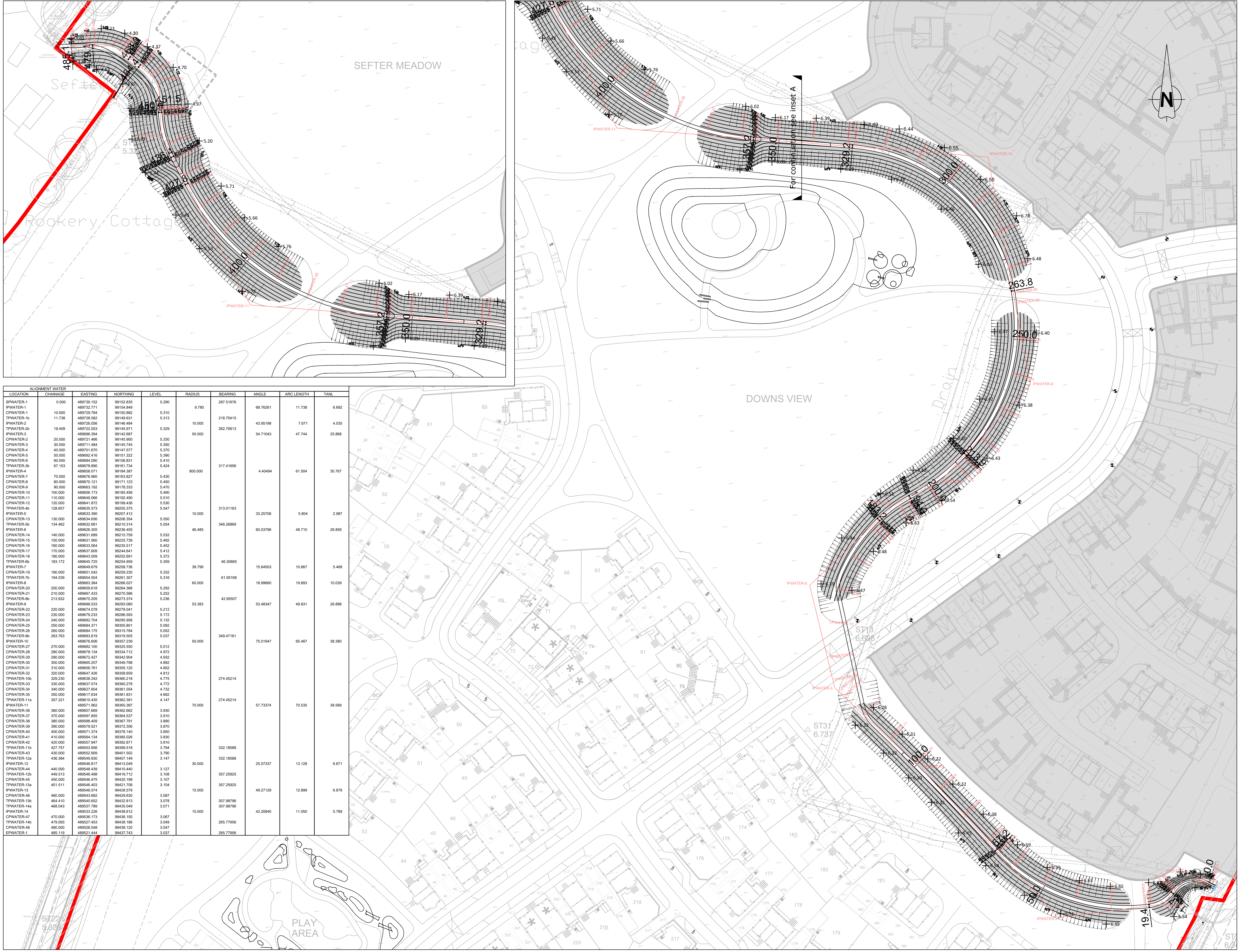
P:\10831\CAD\BCL\Working Drawings\10831-502-003B,004B,005B - Watercourse Diversion Cross Section.dwg

Original Drawing Size A1



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IPWATER-1		489732.771	99154.849		9.780		68.76261	11.738	6.692
CPWATER-1	10.000	489729.784	99150.882	5.310					
TPWATER-1b	11.738	489728.582	99149.631	5.313		218.75415			
IPWATER-2		489726.056	99146.484		10.000		43.95198	7.671	4.035
TPWATER-2b	19.409	489722.053	99145.971	5.329		262.70613			
IPWATER-3		489696.394	99142.687		50.000		54.71043	47.744	25.868
CPWATER-2	20.000	489721.466	99145.900	5.330					
CPWATER-3	30.000	489711.484	99145.745	5.350					
CPWATER-4	40.000	489701.670	99147.577	5.370					
CPWATER-5	50.000	489692.416	99151.322	5.390					
CPWATER-6	60.000	489684.090	99156.831	5.410					
TPWATER-3b	67.153	489678.890	99161.734	5.424		317.41656			
IPWATER-4		489658.071	99184.387		800.000		4.40494	61.504	30.767
CPWATER-7	70.000	489676.960	99163.827	5.430					
CPWATER-8	80.000	489670.121	99171.123	5.450					
CPWATER-9	90.000	489663.192	99178.333	5.470					
CPWATER-10	100.000	489656.173	99185.456	5.490					
CPWATER-11	110.000	489649.066	99192.490	5.510					
CPWATER-12	120.000	489641.872	99199.436	5.530					
TPWATER-4b	128.657	489635.573	99205.375	5.547		313.01163			
IPWATER-5		489633.390	99207.412		10.000		33.25706	5.804	2.987
CPWATER-13	130.000	489634.656	99206.354	5.550					
TPWATER-5b	134.462	489632.681	99210.314	5.554		346.26869			
IPWATER-6		489626.305	99236.405		46.485		60.03796	48.710	26.859
CPWATER-14	140.000	489631.689	99215.759	5.532					
CPWATER-15	150.000	489631.560	99225.739	5.492					
CPWATER-16	160.000	489633.564	99235.517	5.452					
CPWATER-17	170.000	489637.609	99244.641	5.412					
CPWATER-18	180.000	489643.509	99252.691	5.372					
TPWATER-6b	183.172	489645.725	99254.959	5.359		46.30665			
IPWATER-7		489649.679	99258.736		39.799		15.64503	10.867	5.468
CPWATER-19	190.000	489651.042	99259.230	5.332					
TPWATER-7b	194.039	489654.504	99261.307	5.316		61.95168			
IPWATER-8		489663.364	99266.027		60.000		18.99660	19.893	10.039
CPWATER-20	200.000	489659.618	99264.366	5.292					
CPWATER-21	210.000	489667.433	99270.586	5.252					
TPWATER-8b	213.932	489670.205	99273.374	5.236		42.95507			
IPWATER-9		489688.533	99293.060		53.383		53.48347	49.831	26.898
CPWATER-22	220.000	489674.078	99278.041	5.212					
CPWATER-23	230.000	489679.233	99286.593	5.172					
CPWATER-24	240.000	489682.704	99295.956	5.132					
CPWATER-25	250.000	489684.371	99305.801	5.092					
CPWATER-26	260.000	489684.175	99315.784	5.052					
TPWATER-9b	263.763	489683.619	99319.505	5.037		349.47161			
IPWATER-10		489676.606	99357.239		50.000		75.01947	65.467	38.380
CPWATER-27	270.000	489682.100	99325.550	5.012					
CPWATER-28	280.000	489678.134	99334.712	4.972					
CPWATER-29	290.000	489672.427	99342.904	4.932					
CPWATER-30	300.000	489665.207	99349.798	4.892					
CPWATER-31	310.000	489656.761	99355.120	4.852					
CPWATER-32	320.000	489647.426	99358.659	4.812					
TPWATER-10b	329.230	489638.342	99360.218	4.775		274.45214			
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CPWATER-34	340.000	489627.604	99361.054	4.732					
CPWATER-35	350.000	489617.634	99361.831	4.692					
TPWATER-11a	357.221	489610.435	99362.391	4.147		274.45214			
IPWATER-11		489571.962	99365.387		70.000		57.73374	70.535	38.589
CPWATER-36	360.000	489607.669	99362.662	3.930					
CPWATER-37	370.000	489597.855	99364.537	3.910					
CPWATER-38	380.000	489588.409	99367.791	3.890					
CPWATER-39	390.000	489579.521	99372.356	3.870					
CPWATER-40	400.000	489571.374	99378.140	3.850					
CPWATER-41	410.000	489564.134	99385.026	3.830					
CPWATER-42	420.000	489557.947	99392.871	3.810					
TPWATER-11b	427.757	489553.956	99399.518	3.794		332.18588			
CPWATER-43	430.000	489552.909	99401.502	3.790					
TPWATER-12a	436.384	489549.930	99407.149	3.147		332.18588			
IPWATER-12		489546.817	99413.049		30.000		25.07337	13.128	6.671
CPWATER-44	440.000	489548.439	99410.440	3.127					
TPWATER-12b	449.513	489546.498	99419.712	3.108		357.25925			
CPWATER-45	450.000	489546.475	99420.199	3.107					
TPWATER-13a	451.511	489546.403	99421.708	3.104		357.25925			
IPWATER-13		489546.074	99428.579		15.000		49.27129	12.899	6.879
CPWATER-46	460.000	489543.682	99429.630	3.087					
TPWATER-13b	464.410	489540.652	99432.813	3.078		307.98796			
TPWATER-14a	468.043	489537.789	99435.049	3.071		307.98796			
IPWATER-14		489533.226	99438.612		15.000		42.20840	11.050	5.789
CPWATER-47	470.000	489536.173	99436.150	3.067					
TPWATER-14b	479.093	489527.453	99438.186	3.049		265.77956			
CPWATER-48	480.000	489526.548	99438.120	3.047					
EPWATER-1	485.119	489521.444	99437.743	3.037		265.77956			

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A	Vistry layout updated	MA	DC	RM	02.03.2023
-	First Issue	DC	RM	RM	09.09.2022

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Bellway

Hook Lane
Pagham

Watercourse Setting Out Plan

Construction		Sept 2022
DC	RM	09.09.2022
1:500	10831-503-001	A

0 10 20 30 40 50
METRES

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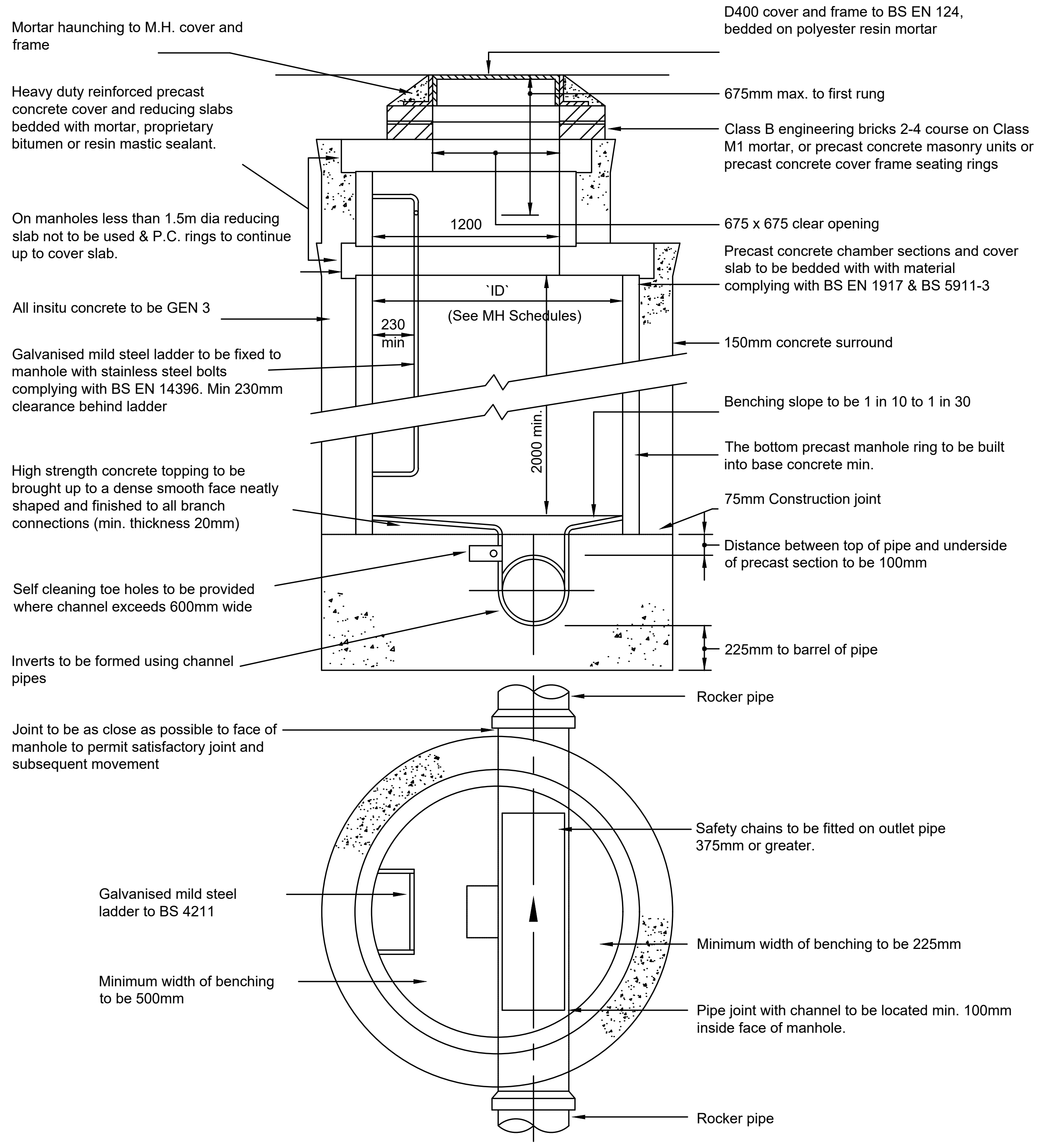
P:\10831\CAD\BCL\Working Drawings\10831-503-001A - Watercourse Setting Out.dwg

Original Drawing Size A1

TYPICAL MANHOLE CONSTRUCTION DETAILS

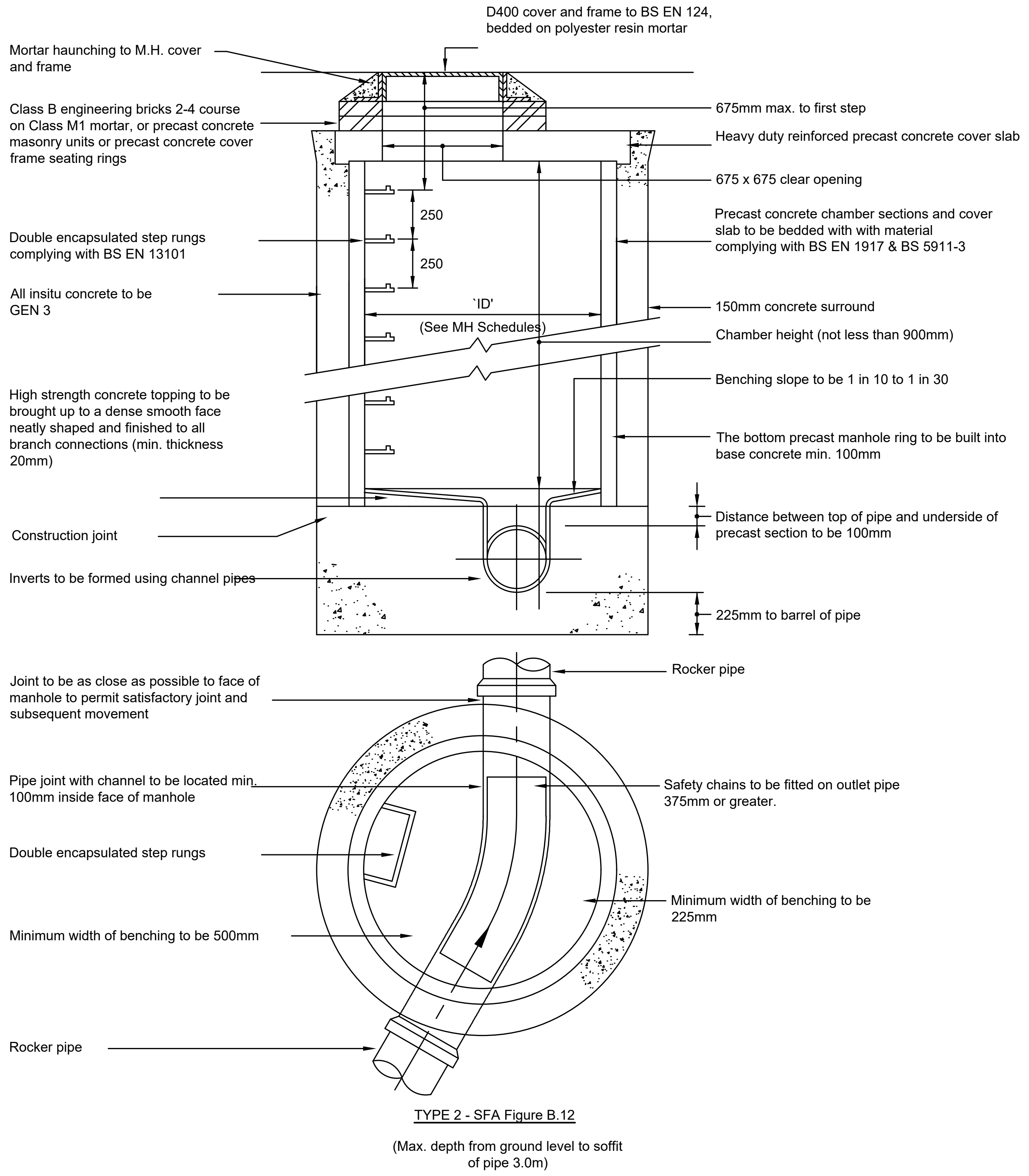
N.T.S.


Mortar haunching to M.H. cover and frame
D400 cover and frame to BS EN 124, bedded on polyester resin mortar
Heavy duty reinforced precast concrete cover and reducing slabs bedded with mortar, proprietary bitumen or resin mastic sealant.
675mm max. to first rung
Class B engineering bricks 2-4 course on Class M1 mortar, or precast concrete masonry units or precast concrete cover frame seating rings
On manholes less than 1.5m dia reducing slab not to be used & P.C. rings to continue up to cover slab.
1200
675 x 675 clear opening
Precast concrete chamber sections and cover slab to be bedded with with material complying with BS EN 1917 & BS 5911-3
All insitu concrete to be GEN 3
`ID`
(See MH Schedules)
230 min
150mm concrete surround
Galvanised mild steel ladder to be fixed to manhole with stainless steel bolts complying with BS EN 14396. Min 230mm clearance behind ladder
2000 min.
Benching slope to be 1 in 10 to 1 in 30
The bottom precast manhole ring to be built into base concrete min.
High strength concrete topping to be brought up to a dense smooth face neatly shaped and finished to all branch connections (min. thickness 20mm)
75mm Construction joint
Distance between top of pipe and underside of precast section to be 100mm
Self cleaning toe holes to be provided where channel exceeds 600mm wide
225mm to barrel of pipe
Inverts to be formed using channel pipes
Rocker pipe
Joint to be as close as possible to face of manhole to permit satisfactory joint and subsequent movement
Safety chains to be fitted on outlet pipe 375mm or greater.
Galvanised mild steel ladder to BS 4211
Minimum width of benching to be 225mm
Minimum width of benching to be 500mm
Pipe joint with channel to be located min. 100mm inside face of manhole.
Rocker pipe

TYPE 1A - SFA Figure B.8

(Depth from ground level to soffit of pipe 3m to 6m)

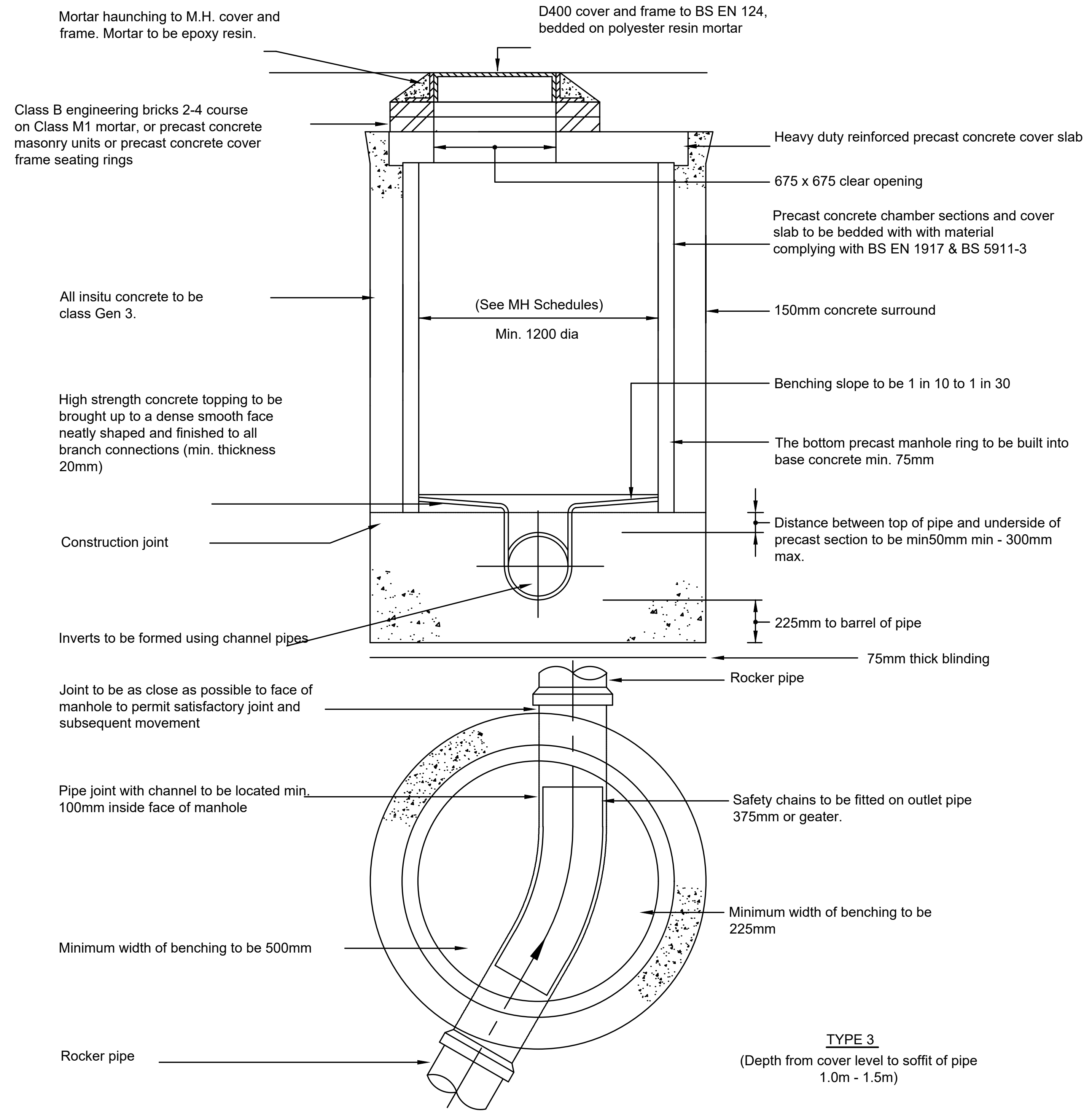
(Alternative construction Type 1A - SFA Figure B.9 using wide wall manhole sections is also acceptable.)


D400 cover and frame to BS EN 124, bedded on polyester resin mortar
Mortar haunching to M.H. cover and frame
675mm max. to first step
Class B engineering bricks 2-4 course on Class M1 mortar, or precast concrete masonry units or precast concrete cover frame seating rings
Heavy duty reinforced precast concrete cover slab
675 x 675 clear opening
250
250
Precast concrete chamber sections and cover slab to be bedded with with material complying with BS EN 1917 & BS 5911-3
Double encapsulated step rungs complying with BS EN 13101
All insitu concrete to be GEN 3
`ID'
(See MH Schedules)
150mm concrete surround
Chamber height (not less than 900mm)
Benching slope to be 1 in 10 to 1 in 30
High strength concrete topping to be brought up to a dense smooth face neatly shaped and finished to all branch connections (min. thickness 20mm)
The bottom precast manhole ring to be built into base concrete min. 100mm
Distance between top of pipe and underside of precast section to be 100mm
Construction joint
Inverts to be formed using channel pipes
225mm to barrel of pipe
Rocker pipe
Joint to be as close as possible to face of manhole to permit satisfactory joint and subsequent movement
Pipe joint with channel to be located min. 100mm inside face of manhole
Safety chains to be fitted on outlet pipe 375mm or greater.
Double encapsulated step rungs
Minimum width of benching to be 225mm
Minimum width of benching to be 500mm
Rocker pipe

TYPE 2 - SFA Figure B.12

(Max. depth from ground level to soffit of pipe 3.0m)

(Alternative construction Type 2 - SFA Figure B.13 using wide wall manhole sections is also acceptable.)


Mortar haunching to M.H. cover and frame. Mortar to be epoxy resin.
D400 cover and frame to BS EN 124, bedded on polyester resin mortar
Class B engineering bricks 2-4 course on Class M1 mortar, or precast concrete masonry units or precast concrete cover frame seating rings
Heavy duty reinforced precast concrete cover slab
675 x 675 clear opening
Precast concrete chamber sections and cover slab to be bedded with with material complying with BS EN 1917 & BS 5911-3
All insitu concrete to be class Gen 3.
(See MH Schedules)
Min. 1200 dia
150mm concrete surround
Benching slope to be 1 in 10 to 1 in 30
High strength concrete topping to be brought up to a dense smooth face neatly shaped and finished to all branch connections (min. thickness 20mm)
The bottom precast manhole ring to be built into base concrete min. 75mm
Construction joint
Distance between top of pipe and underside of precast section to be min50mm min - 300mm max.
225mm to barrel of pipe
Inverts to be formed using channel pipes
75mm thick blinding
Rocker pipe
Joint to be as close as possible to face of manhole to permit satisfactory joint and subsequent movement
Pipe joint with channel to be located min. 100mm inside face of manhole
Safety chains to be fitted on outlet pipe 375mm or geater.
Minimum width of benching to be 225mm
Minimum width of benching to be 500mm
Rocker pipe

TYPE 3

(Depth from cover level to soffit of pipe 1.0m - 1.5m)

(Alternative construction Type 3 using wide wall manhole sections is also acceptable.)

NOTES:

1. Do not scale from this drawing.
2. All dimensions are in metres unless otherwise stated.
3. Brookbanks Consulting Ltd has prepared this drawing for the sole use of the client. The drawing may not be relied upon by any other party without the express agreement of the client and Brookbanks Consulting Ltd. Where any data supplied by the client or from other sources has been used, it has been assumed that the information is correct. No responsibility can be accepted by Brookbanks Consulting Ltd for inaccuracies in the data supplied by any other party. The drawing has been produced based on the assumption that all relevant information has been supplied by those bodies from whom it was requested.
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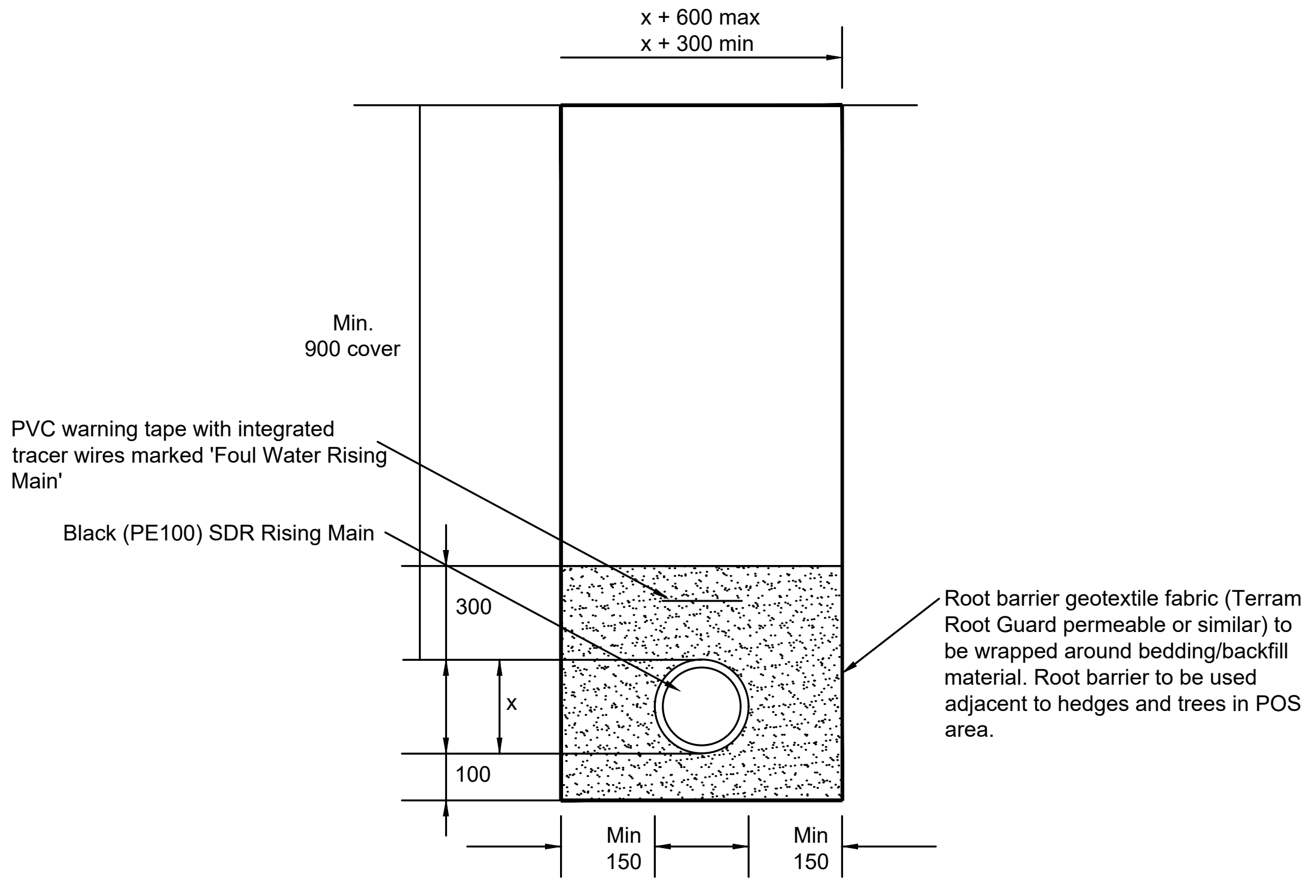
5. All Brookbanks Consulting Ltd drawings should be read in conjunction with other relevant Brookbanks Consulting Ltd drawings and drawings produced by third parties connected with this project.
6. Any discrepancies between the information displayed on this drawing and others are to be reported to the engineer before the commencement of works.
7. Any damage caused to existing footways, roads or other third party property is to be made good to the county engineers requirements.
8. All adoptable drainage to be in accordance with Sewerage Sector Guidance (SSG) Appendix C - Design and Construction Guidance (DCG).
9. This drawing should not be used for construction purposes until approval has been granted from the relevant water authority.

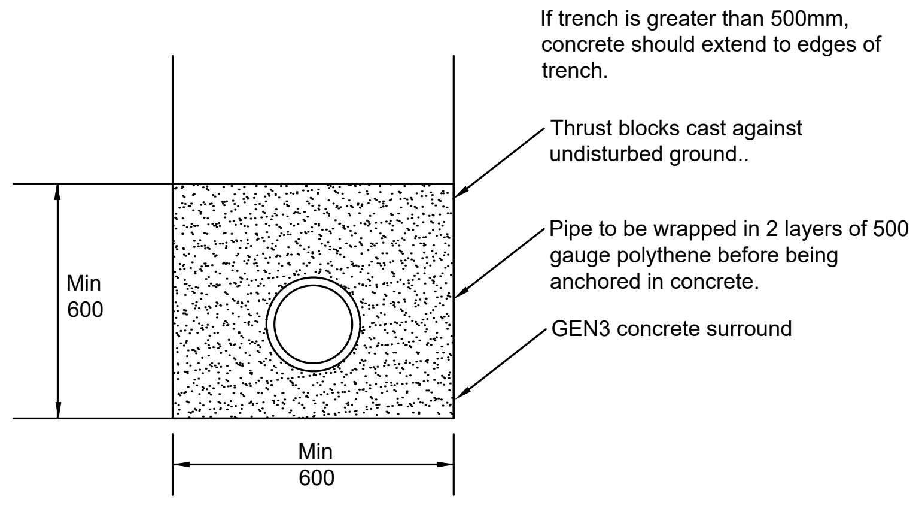
POSITION & SIZE OF ACCESS IN CONCRETE COVER SLAB		
SHAFT / CHAMBER SIZE	M/H DEPTH LESS THAN 1.5m	M/H DEPTH 1.5m OR GREATER
1200mm - 1350mm	675 X 675mm CENTRAL	675 X 675mm ECCENTRIC
1500mm	1200 X 675mm CENTRAL	675 X 675mm ECCENTRIC
1800mm - 3000mm	1200 X 675mm CENTRAL	675 X 675mm ECCENTRIC

TYPE S

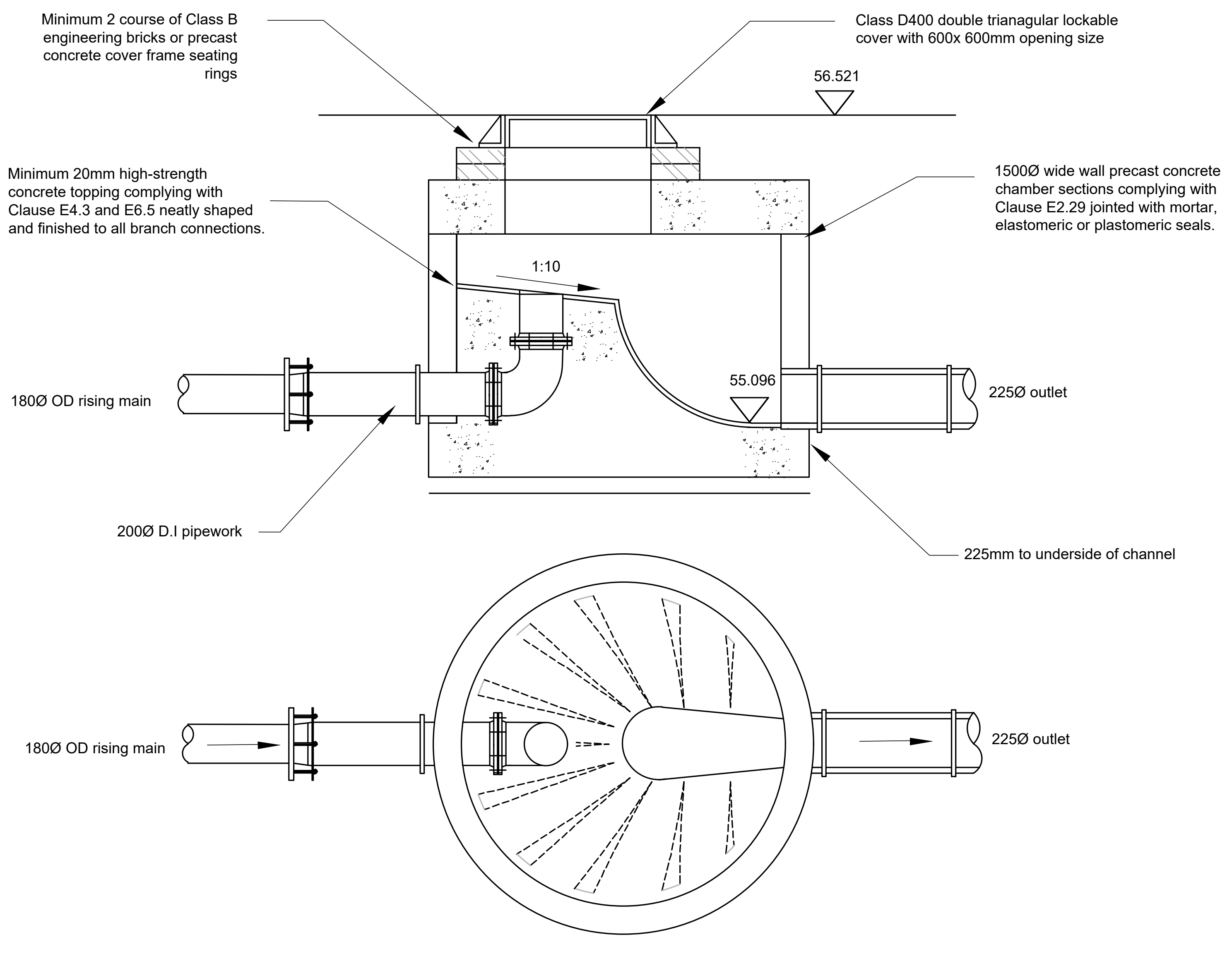
Bedding Factor - 2.5


x + 600 max
x + 300 min
Min. 900 cover
PVC warning tape with integrated tracer wires marked 'Foul Water Rising Main'
Black (PE100) SDR Rising Main
300
x
100
Root barrier geotextile fabric (Terram Root Guard permeable or similar) to be wrapped around bedding/backfill material. Root barrier to be used adjacent to hedges and trees in POS area.
Min 150
Min 150

RISING MAIN BEDDING DETAIL
GRANULAR BED & SURROUND


If trench is greater than 500mm, concrete should extend to edges of trench.
Thrust blocks cast against undisturbed ground..
Pipe to be wrapped in 2 layers of 500 gauge polythene before being anchored in concrete.
GEN3 concrete surround
Min 600
Min 600

RISING MAIN THRUST BLOCK DETAIL


Minimum 2 course of Class B engineering bricks or precast concrete cover frame seating rings
Class D400 double trianagular lockable cover with 600x 600mm opening size
56.521
Minimum 20mm high-strength concrete topping complying with Clause E4.3 and E6.5 neatly shaped and finished to all branch connections.
1500Ø wide wall precast concrete chamber sections complying with Clause E2.29 jointed with mortar, elastomeric or plastomeric seals.
1:10
55.096
180Ø OD rising main
225Ø outlet
200Ø D.I pipework
225mm to underside of channel
180Ø OD rising main
225Ø outlet

Rising Main - Break Chamber

UNTIL TECHNICAL APPROVAL HAS BEEN OBTAINED FROM THE RELEVANT LOCAL AUTHORITIES, IT SHOULD BE UNDERSTOOD THAT ALL DRAWINGS ARE ISSUED AS PRELIMINARY AND NOT FOR CONSTRUCTION. SHOULD THE CONTRACTOR COMMENCE SITE WORK PRIOR TO APPROVAL BEING GIVEN, IT IS ENTIRELY AT HIS OWN RISK.

-	First Issue	CL	DC	RM	07.12.22

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Bellway

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S185 Rising Main Diversion
Standard Details

Status		Status Date
Approval		Dec 2022
Drawn	Checked	Date
CL	DC	07.02.2022
Scale	Number	Rev
As Shown	10831-520-102	-

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