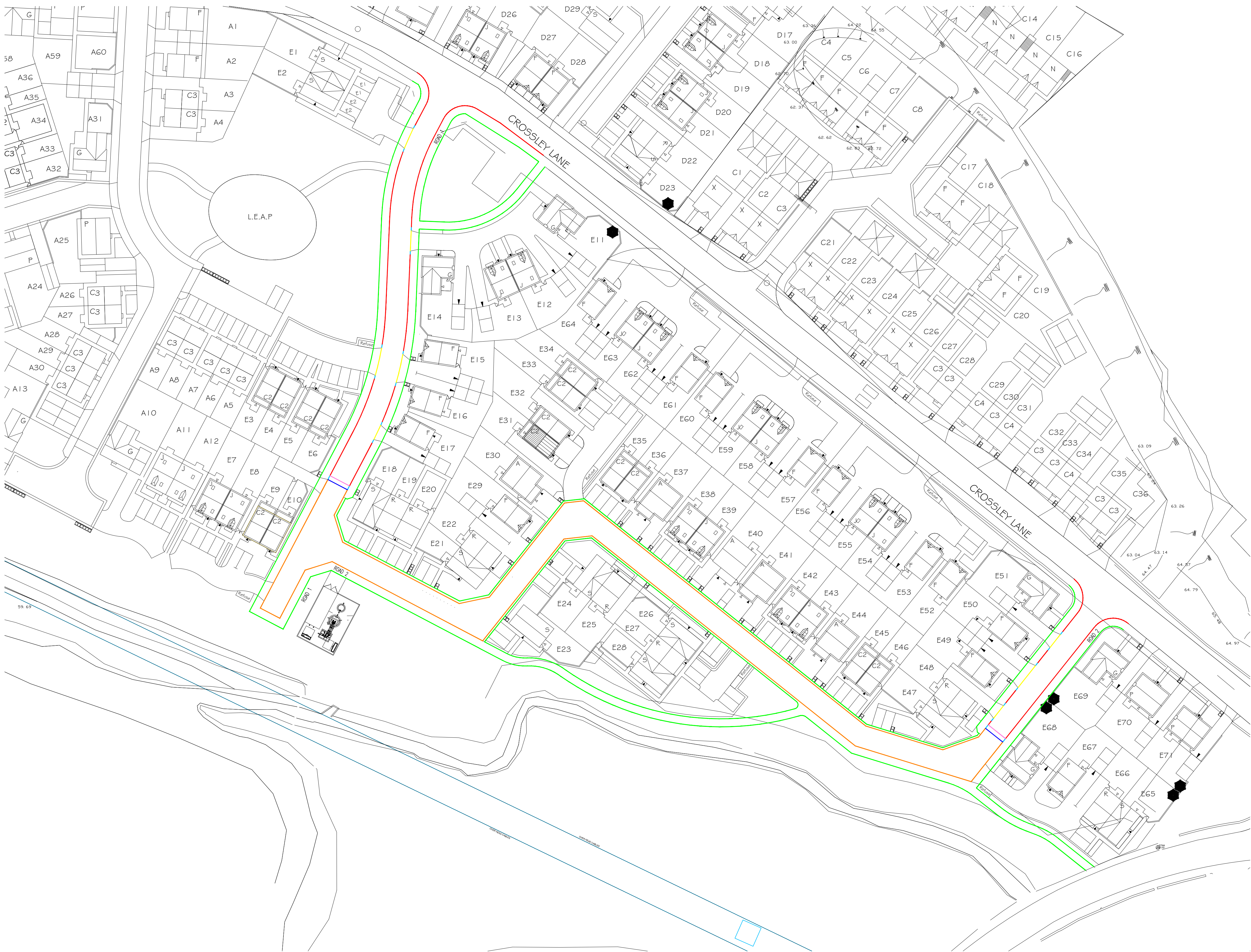




N O T E S

Ref	Colour	Description	Kerb face Upstand
1	Red	125 x 255 Half Battered Kerb	100mm
2	Blue	Transition Kerb	NA
3	Orange	125 x 175 Chamfered Kerb	30mm
4	Yellow	125 x 150 Bullnosed Kerb	30mm
5	Green	50 x 150 Edging	NA
6	Pink	125 x 150 Bullnose Kerb (Pedestrian Crossing)	0-6mm
7	Purple	150 x 150 Channel Block	NA
8	Magenta	150 x 175 Centre Kerb	30mm

1. Refer to typical section Drawing No 0906/03/04.01 for highway details.
2. Dropped kerbs and tactile pavings are required at the junctions to facilitate the movement of wheelchairs etc. The dropped kerbs to be laid with a 10mm upstand.
3. Adaptable sewers are not to be constructed under or within 1.0 metres of any footpath/ kerb line / service strip.
4. No walls are to be constructed 1m of the highway drains located in gardens or verge.
5. No water should be allowed to discharge from any private drives onto the adoptable highway.
6. All highway works are to be the subject of a Section 38 Agreement of the Highways Act 1980.
7. Any coated base material in carriageway left exposed for more than seven days to be sealed using bituminous sealing grit.
8. Highway boundary to be indicated by back edgings laid flush or change of material on Private drives.
9. All vertical faces of joints involving flexible materials shall be treated with "oxy-bit" or other approved joint sealant. This includes ironwork, and precast products. Overbanding will not be accepted by Kirklees Metropolitan Borough Council.
10. Do not scale from this drawing.

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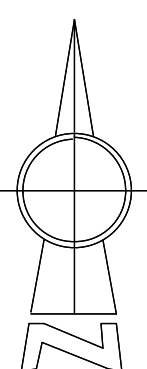
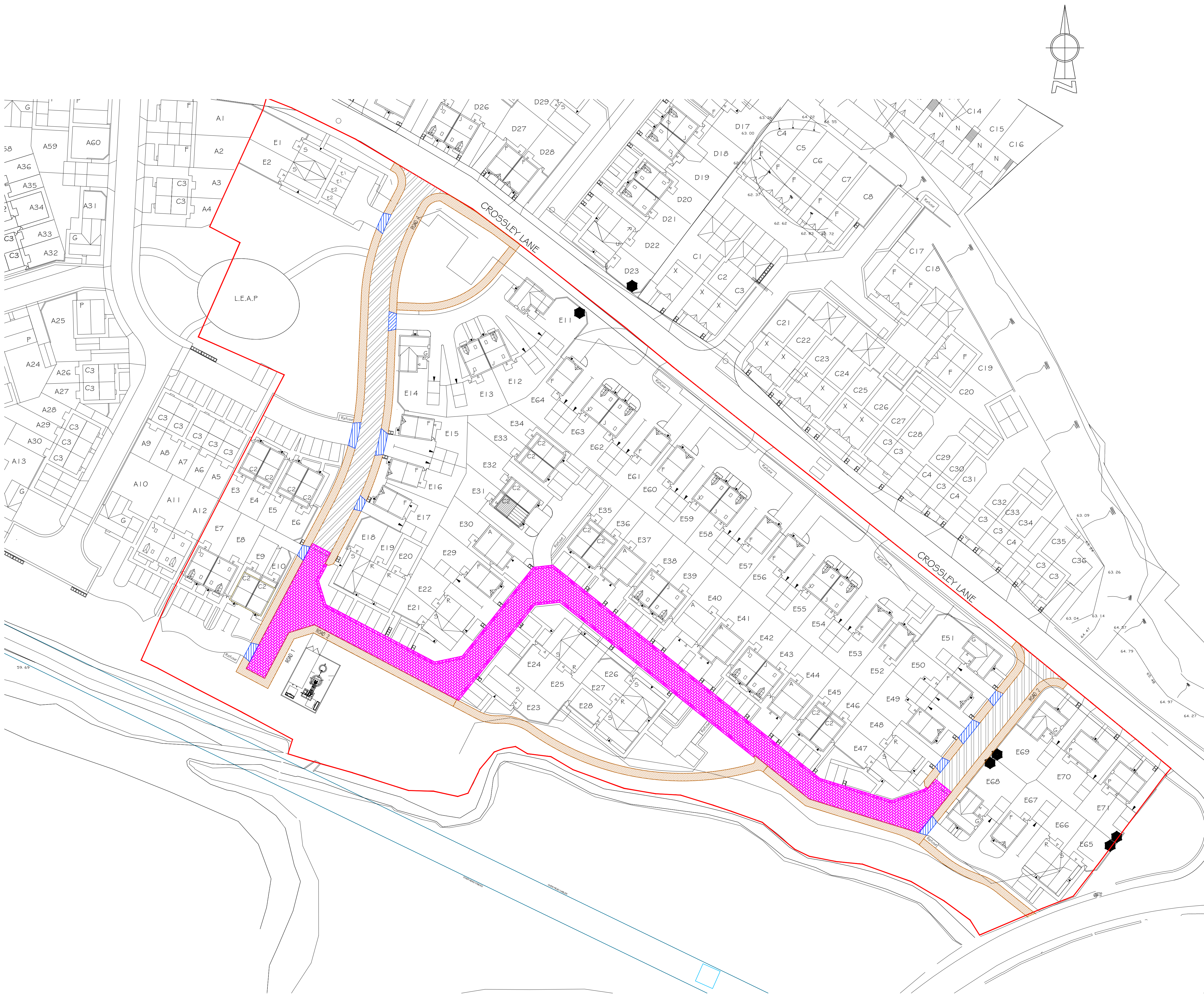
Rev	By	Date	Revision	MI	MI
	DJG	26.01.24	Issued for approval	Chk	Apvd

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TITLE		
KERBING LAYOUT PARCEL 5		
PROJECT		
CROSSLEY LANE HUDDERSFIELD		
CLIENT		
MINERVA WORKS DEVELOPMENTS LTD		
DRAWING STATUS		
PRELIMINARY		
Scale	Date	Drawn
1:500 @ A1	JAN 24	DJG
	Chk.	MI
Drg. No.		Rev
0906/03/02.02		/



N O T E S	
Key	Description
	Bituminous carriageways
	Bituminous footway
	Vehicular crossing of footway
	Block Paving
	Verges/Service Margins
	Site Boundary

1. Refer to typical section Drawing No 0906/03/04.01 for highway details.
2. Dropped kerbs and tactile pavings are required at the junctions to facilitate the movement of wheelchairs etc. The dropped kerbs to be laid with a 10mm upstand.
3. Adoptable sewers are not to be constructed under or within 1.0 metres of any footpath/ kerb line / service strip.
4. No walls are to be constructed 1m of the highway drains located in gardens or verge.
5. No water should be allowed to discharge from any private drives onto the adoptable highway.
6. All highway works are to be the subject of a Section 38 Agreement of the highways Act 1980.
7. Any coated base material in carriageway left exposed for more than seven days to be sealed using bituminous sealing grit.
8. Highway boundary to be indicated by back edgings laid flush or change of material on Private drives.
9. All vertical faces of joints involving flexible materials shall be treated with "Oxy-bit" or other approved joint sealant. This includes ironwork, and precast products. Overbanding will not be accepted by Kirklees Metropolitan Borough Council.
10. Do not scale from this drawing.

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TITLE	
SURFACING LAYOUT PARCEL 5	
PROJECT	
CROSSLEY LANE HUDDERSFIELD	
CLIENT	
MINERVA WORKS DEVELOPMENTS LTD	
DRAWING STATUS	
PRELIMINARY	
Scale	Date
1:500 @ A1	JAN 24
Drg. No.	Rev
0906/03/02.03	/



- Gully
- Storm water manhole
- Foul water manhole
- Storm water sewer
- Foul water sewer
- Combined sewer
- Highway drainage
- Development Boundary
- Existing Gas Main
- Chainage
- Tactile Paving
- Proposed street lighting column

	Footways and footpath (including cycle routes)
	Vehicular crossing of footways
	Flexible surfaced carriageways
	Sett paved carriageways – Mews Court
	Parking areas
	Ramps and rumble strips
	Existing flexible surfaced carriageways (resurface)
	Service margin
	Highway Burr Wall

1. Refer to typical section Drawing No 0906/03/04 for typical highway details.
2. Dropped kerbs and tactile pavings are required at the junctions to facilitate the movement of wheelchairs etc. The dropped kerbs to be laid with a 10mm upstand.
3. Adaptable sewers are not to be constructed under or within 1.0 metres of any footpath/ kerb line / service strip.
4. Off-site drainage already built must have invert levels checked prior to connection of the site drainage.
5. Gully positions shown are subject to adjustment on site to ensure full drainage and the absence of ponding.
6. No walls are to be constructed 1m of the highway drains located in gardens or verges.
7. No water should be allowed to discharge from any private drives onto the adaptable highway.
8. All highway works are to be the subject of a Section 38 Agreement of the highways Act 1980.
9. All public sewers to comply with the requirements of the Water Authorities publication "Sewers for Adoption 6th Edition" together with any additional specific requirements of the drainage authority.
10. All public sewers are to be the subject of a Section 104 Agreement of the Water Industry Act 1991.
11. Any coated base material in carriageway left exposed for more than seven days to be covered using bituminous sealing grit.
12. Highway boundary to be indicated by back edgings laid flush or change of material on Private drives.
13. All vertical faces of joints involving flexible materials shall be treated with "Oxy-bit" or other approved joint sealant. This includes ironwork, and precast products. Overbanding will not be accepted with Kirklees Council.
14. Do not scale from this drawing

/	DJG	01.10.24	Issued for approval	MI	MI
Rev	By	Date	Revision	Chk	Apvd



TITLE _____

SECTION 38 LAYOUT
PARCEL 4

PROJECT

CROSSLEY LANE
HUDDERSFIELD

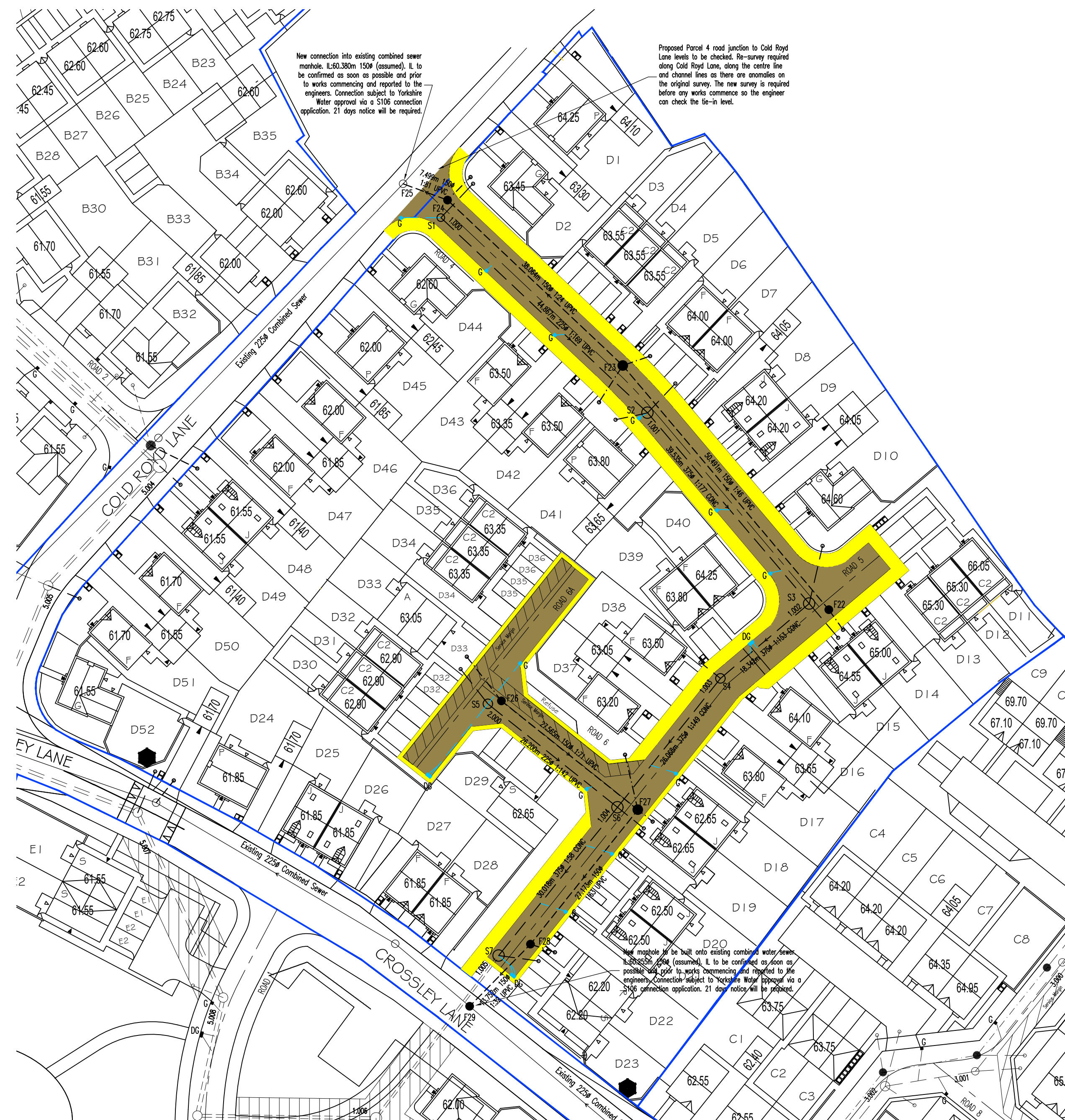
CLIENT

MINERVA WORKS
DEVELOPMENTS LTD

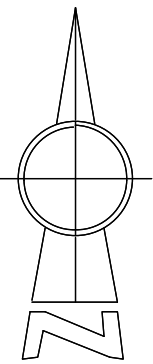
DRAWING STATUS
PRELIMINARY

Scale 1:500 @ A1	Date SEP 24	Drawn DJG
		Chk. MI

Drg. No.	0906/03/02.17	Rev	/
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1. Refer to typical section Drawing No 0906/03/04.01 for highway details.
2. Dropped kerbs and tactile pavings are required at the junctions to facilitate the movement of wheelchairs etc. The dropped kerbs to be laid with a 10mm upstand.
3. Adaptable sewers are not to be constructed under or within 1.0 metres of any footpath/ kerb line / service strip.
4. No walls are to be constructed 1m of the highway drains located in gardens or verge.
5. No water should be allowed to discharge from any private drives onto the adoptable highway.
6. All highway works are to be the subject of a Section 38 Agreement of the highways Act 1980.
7. Any coated base material in carriageway left exposed for more than seven days to be sealed using bituminous sealing grit.
8. Highway boundary to be indicated by back edgings laid flush or change of material on Private drives.
9. All vertical faces of joints involving flexible materials shall be treated with "Oxy-bit" or other approved joint sealant. This includes ironwork, and precast products. Overbanding will not be accepted by Kirklees Metropolitan Borough Council.
10. Do not scale from this drawing.

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Rev	By	Date	Revision	MI	MI
1	DJC	01.10.24	Issued for approval		

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TITLE
**SURFACING & KERBING
LAYOUT PARCEL 4**

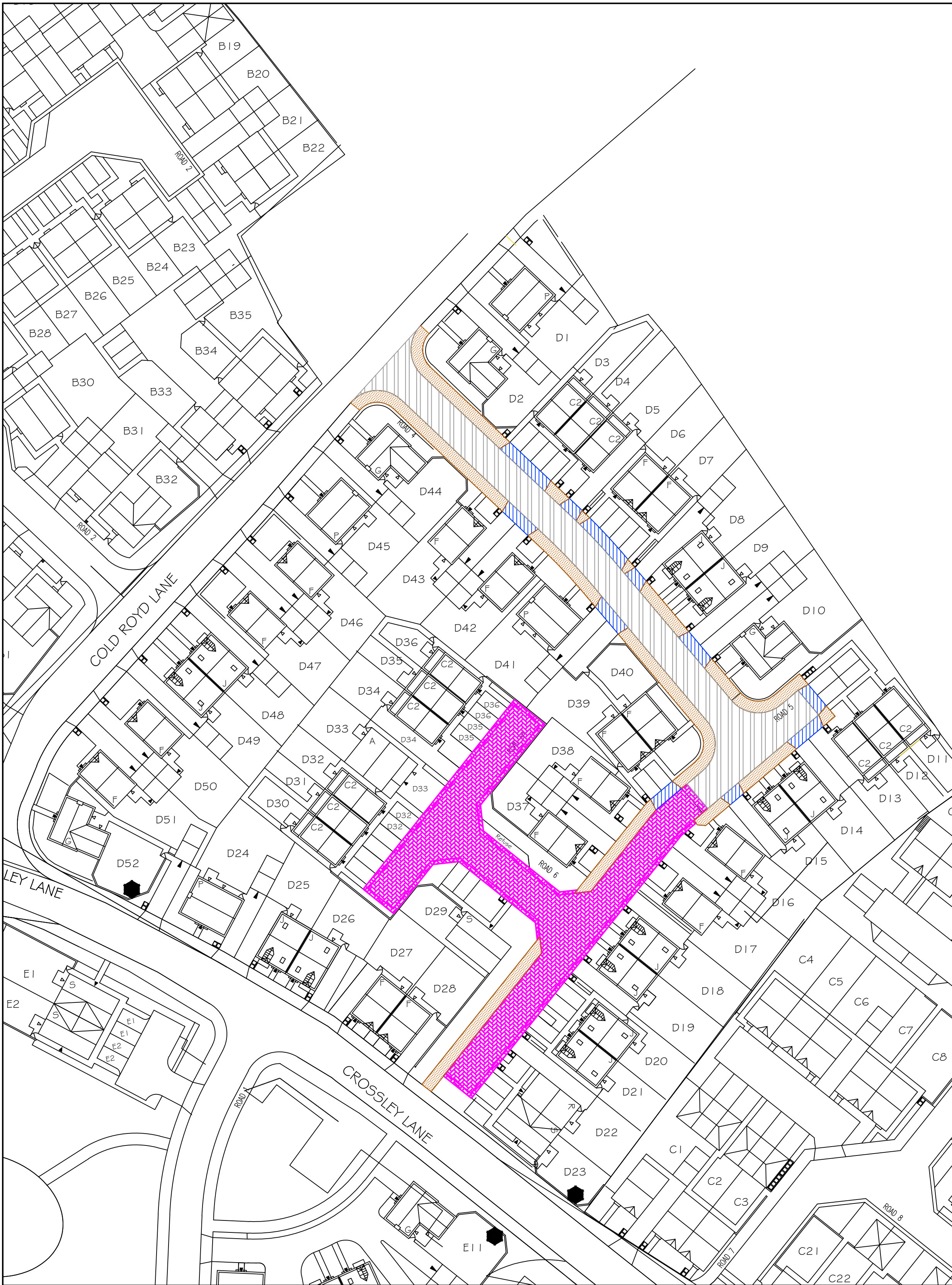
PROJECT
**CROSSLEY LANE
HUDDERSFIELD**

CLIENT
**MINERVA WORKS
DEVELOPMENTS LTD**

DRAWING STATUS
PRELIMINARY

Scale 1:500 @ A1	Date SEP 24	Drawn DJC
	Chk. MI	

Drg. No. 0906/03/02.18	Rev /
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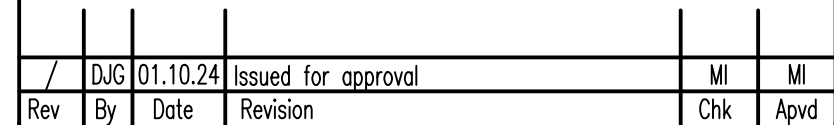
SURFACING LAYOUT (1:500)

Key	Description
	Bituminous carriageways
	Bituminous footway
	Vehicular crossing of footway
	Block Paving
	Verges/Service Margins
	Site Boundary



KERBING LAYOUT (1:500)

Ref	Colour	Description	Kerb face Upstand
1	Red	125 x 255 Half Battered Kerb	100mm
2	Blue	Transition Kerb	NA
3	Orange	125 x 175 Chamfered Kerb	30mm
4	Green	125 x 150 Bullnosed Kerb	30mm
5	Yellow	50 x 150 Edging	NA
6	Pink	125 x 150 Bullnose Kerb (Pedestrian Crossing)	0-6mm
7	Blue	150 x 150 Channel Block	NA
8	Pink	150 x 175 Centre Kerb	30mm



TITLE SECTION 38
ROAD CONTOURS
PARCEL 4

PROJECT

CROSSLEY LANE
HUDDERSFIELD

CLIENT

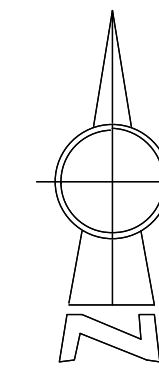
MINERVA WORKS
DEVELOPMENTS LTD

DRAWING STATUS
PRELIMINARY

Scale	Date	Drawn
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		Chk. MI

Drg. No.	0906/03/02.19	Rev	/
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N O T E S

Rev	By	Date	Revision	MI	MI
	DJC	01.10.24	Issued for approval		

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TITLE **SECTION 38
GENERAL ARRANGEMENT
PARCEL 4**

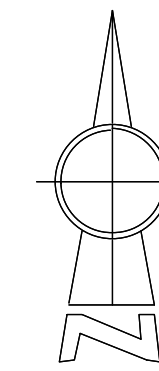
PROJECT **CROSSLEY LANE
HUDDERSFIELD**

CLIENT **MINERVA WORKS
DEVELOPMENTS LTD**

DRAWING STATUS **PRELIMINARY**

Scale	Date	Drawn	Chk.
1:500 @ A1	SEP 24	DJC	MI

Dwg. No.	Rev
0906/03/02.20	/



N O T E S

Rev	By	Date	Revision	MI	MI
				Chk	Apvd

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TITLE SECTION 38
WHITE LINING & SIGNAGE
PARCEL 4

PROJECT CROSSLEY LANE
HUDDERSFIELD

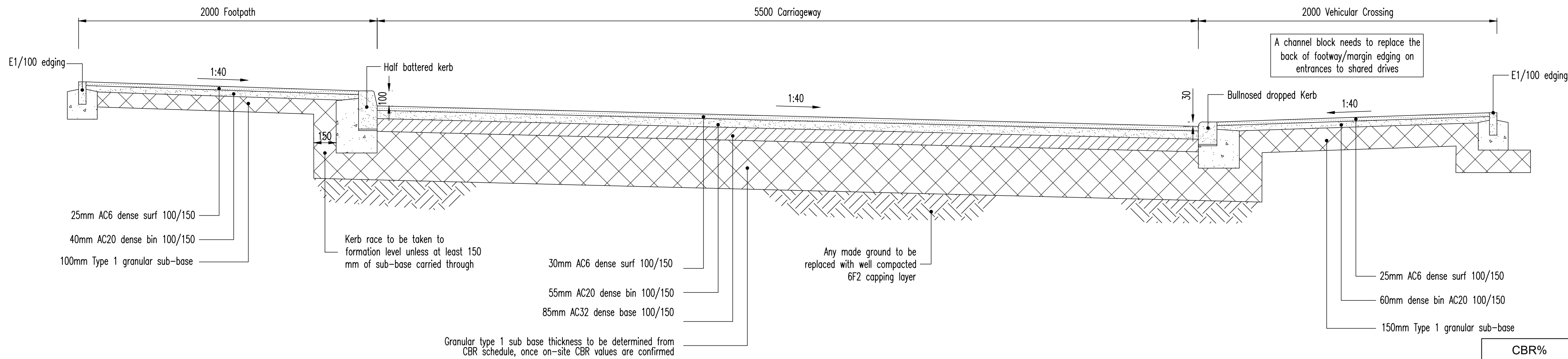
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DEVELOPMENTS LTD

DRAWING STATUS
PRELIMINARY

Scale	Date	Drawn	DJG
1:500 @ A1	SEP 24	Chk.	MI

Dwg. No.	0906/03/02.21	Rev	/
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AUTHITIES

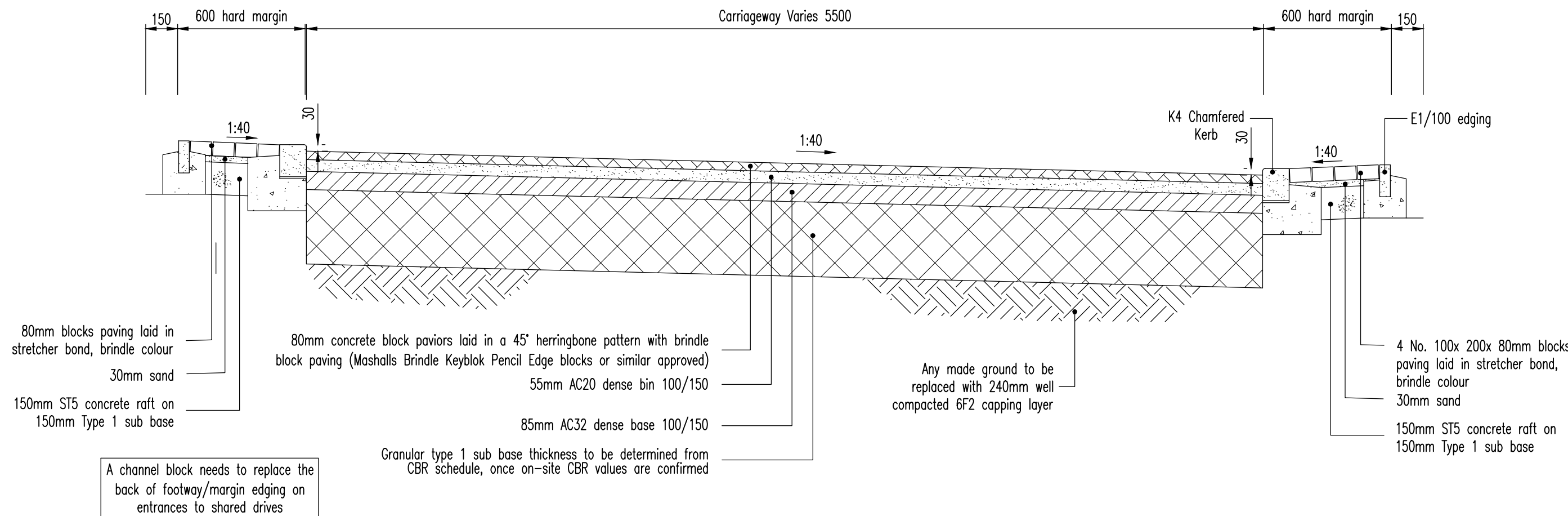


TYPICAL SECTION THROUGH TRADITIONAL ESTATE ROAD
(1:20)

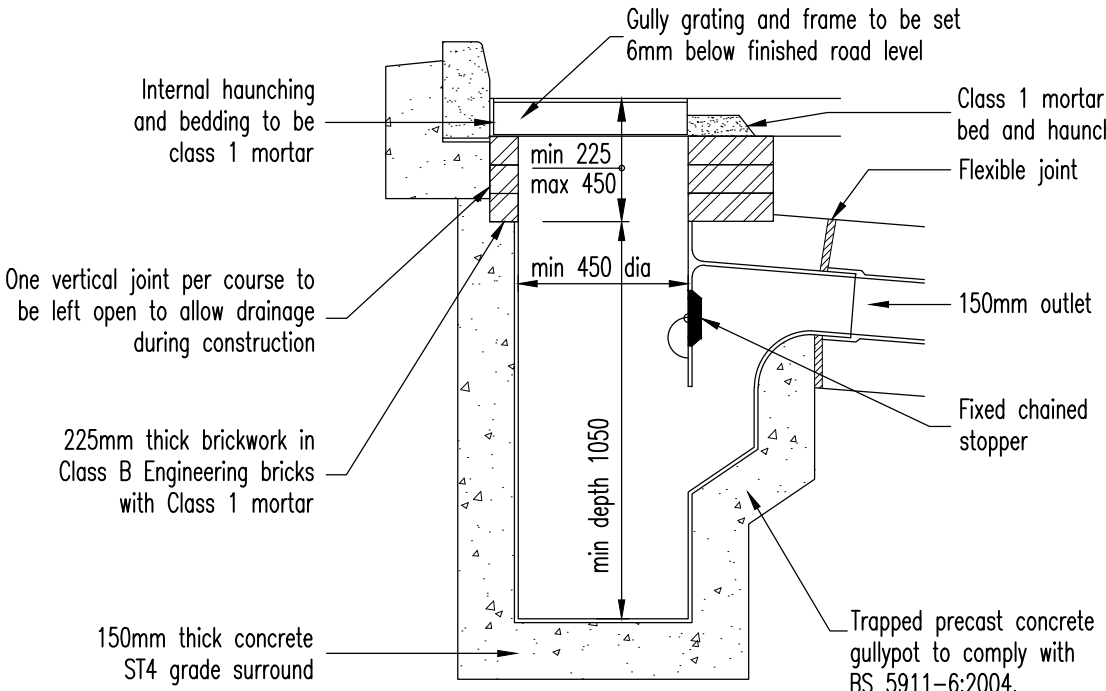
* Recommended minimum
150mm sub-base + 600mm capping with 1 layer geogrid

- Where <2m of made ground is present full excavation and replacement with engineered fill is required (usually without geogrids).
- Where 2m to 5m of made ground is present a minimum 2m depth of excavation is required and replacement with geogrid (minimum 2 no. layers) reinforced engineered fill (proposal requires approval). The precise depth may be increased to protect drainage assets.
- Where >5m of made ground is present specific ground improvement (proposal requires approval) is required.

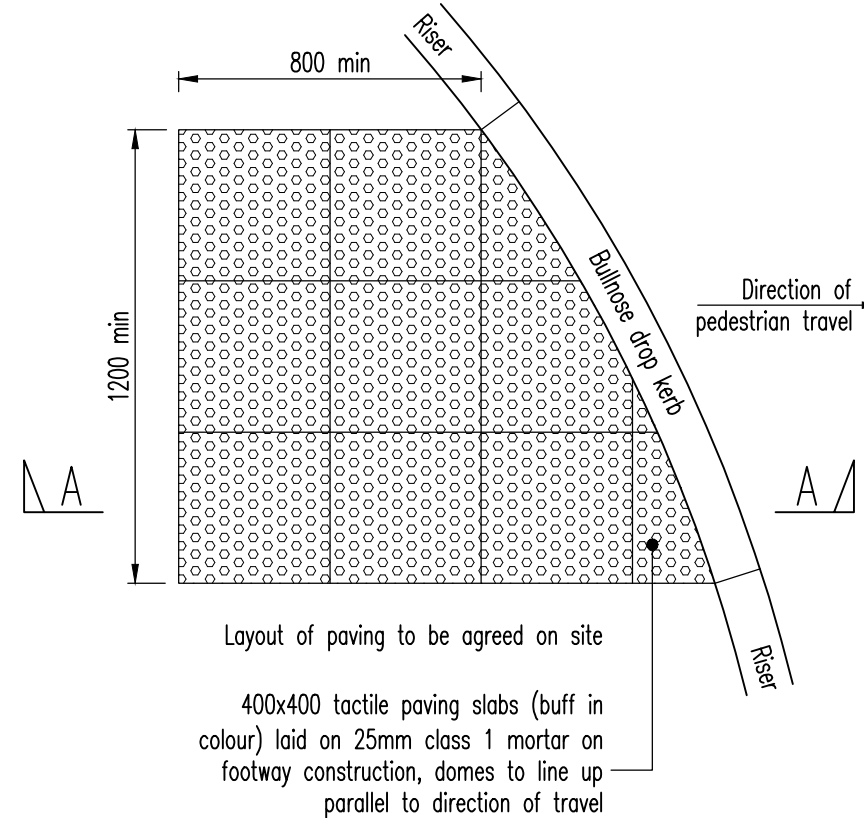
CBR%	INCLUDING CAPPING LAYER			EXCLUDING CAPPING LAYER
	CAPPING(mm)	SUB-BASE (mm)		SUB-BASE ONLY (mm)
Less than 2.5	Ground improvement / special construction required*		or	
2.5	250	350		475
3	250	325		450
4	225	275		375
5 - 10	200	250		325
10-15	175	175		250
Greater than 15	150	150		200



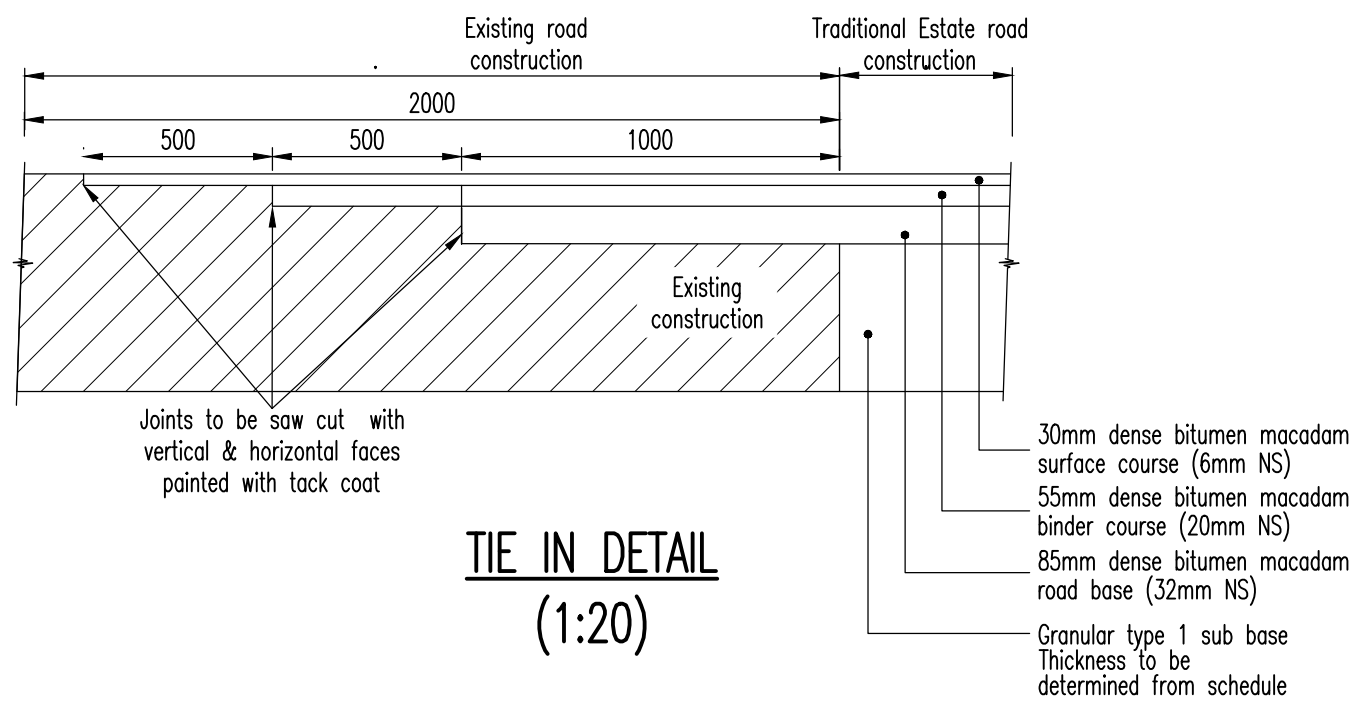
SHARED SURFACE/MEWS COURT ROAD
(1:20)



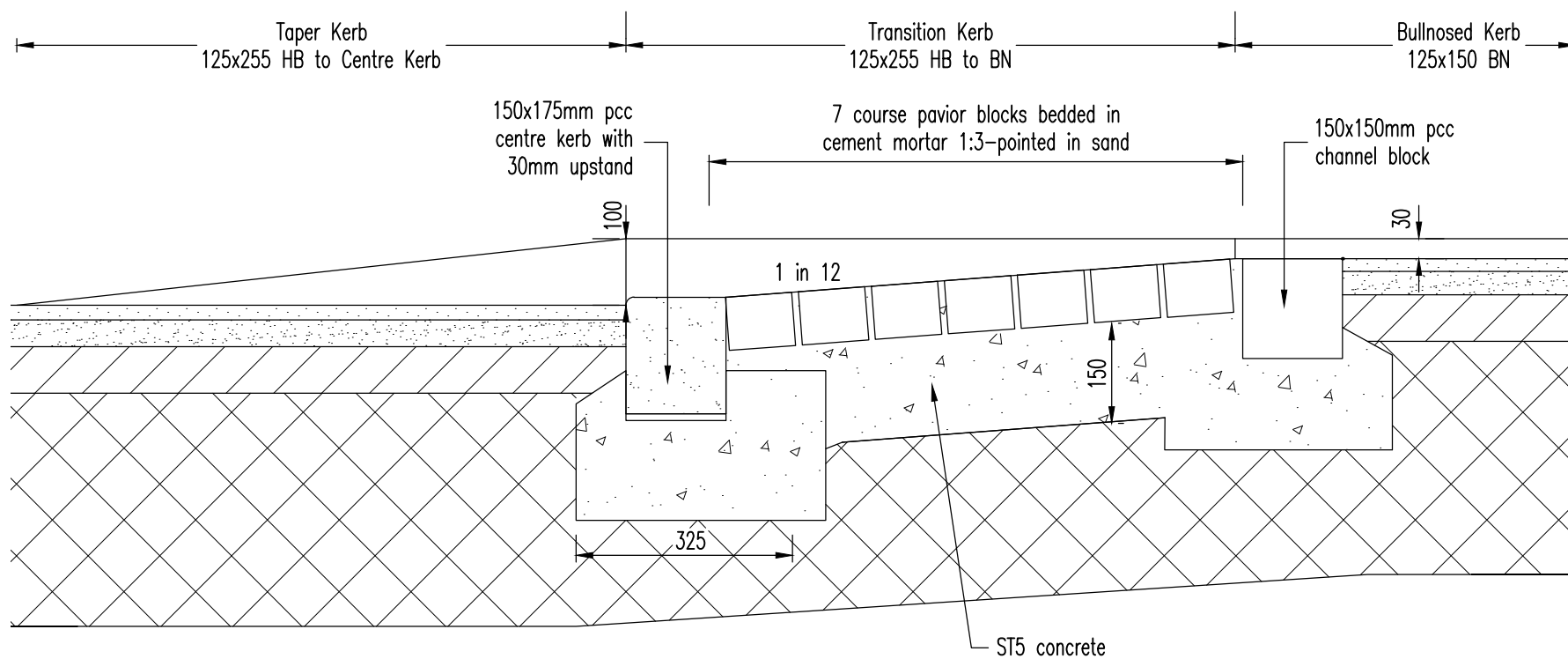
TYPICAL ROAD GULLY DETAIL
(1:20)



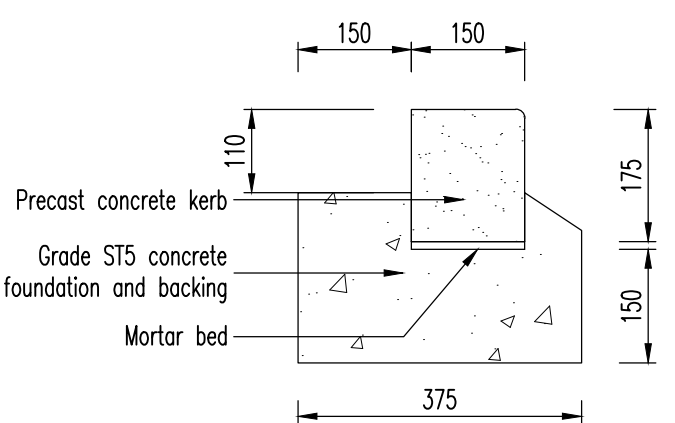
PLAN ON TACTILE CROSSING AWAY FROM JUNCTION
(1:20)



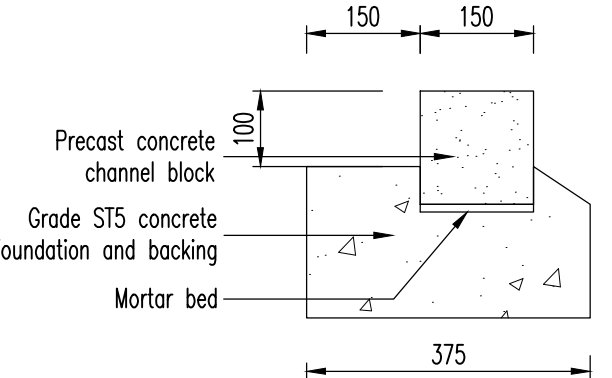
TIE IN DETAIL
(1:20)



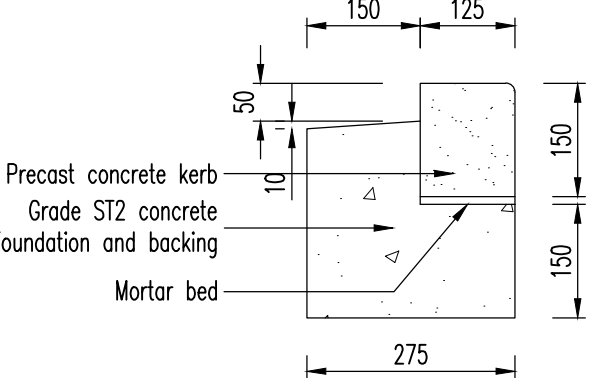
RAMP DETAIL
(1:10)



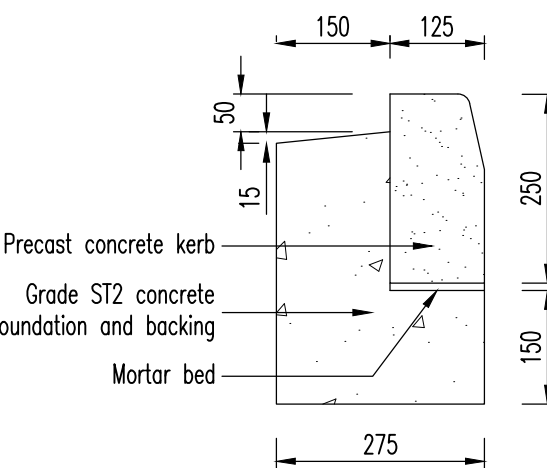
CENTRE KERB
(1:10)



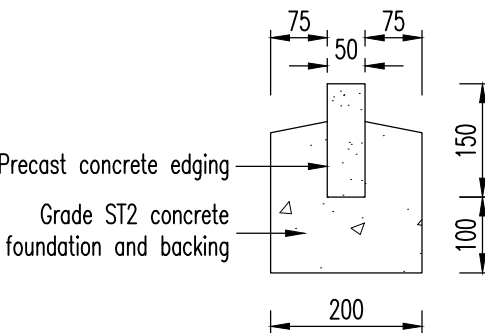
CHANNEL BLOCK
(1:10)



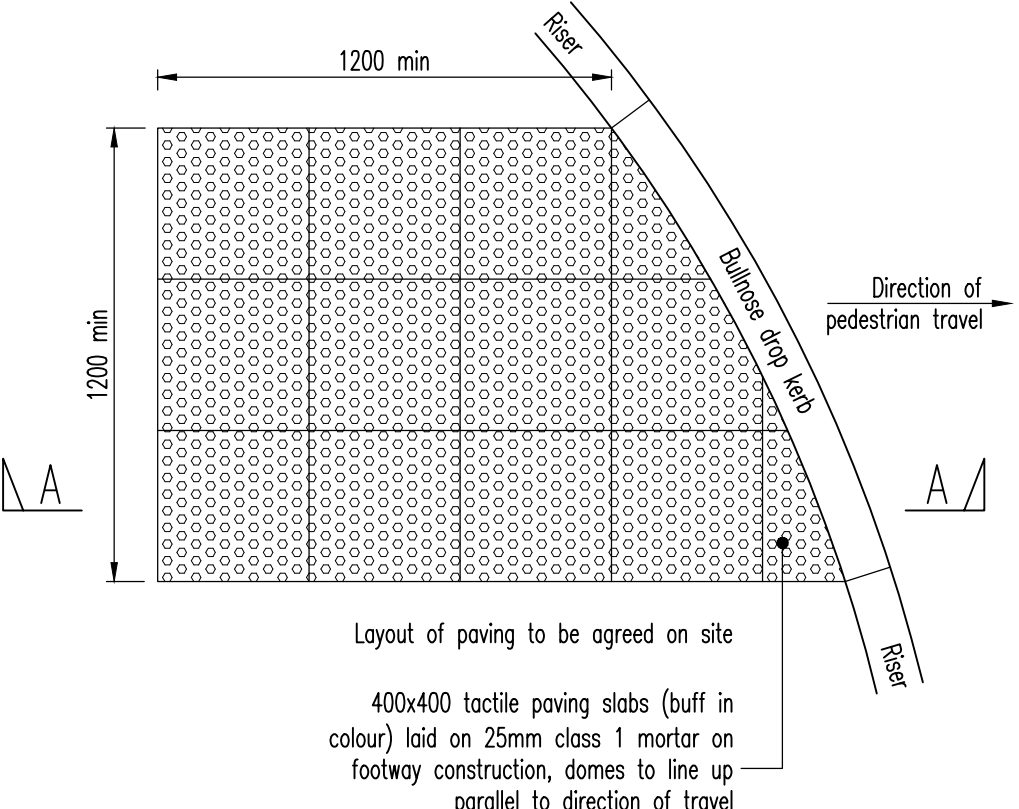
BULLNOSE KERB
(DROPPED CROSSINGS)
(1:10)



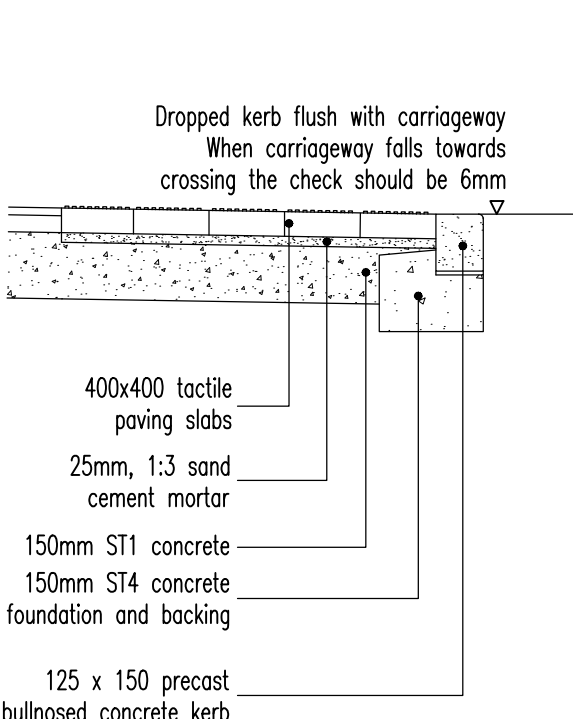
HALF BATTERED KERB
(1:10)



E1/100 EDGING
(1:10)



PLAN ON TACTILE CROSSING
(1:20)



SECTION A-A
THROUGH CROSSING
(1:20)

N O T E S

- All highway works are to be constructed in accordance with the West Yorkshire Residential Design Guide and Kirklees Metropolitan Council construction specification.
- All highway works are to be subject of a section 38 Agreement of the Highways Act 1980.
- All public sewers to comply with the requirements of the Water Authorities publication "Sewers for Adoption 6th Edition" together with any additional specific requirements of the drainage authority.
- All public sewers are to be subject of a Section 104 Agreement of the Water Industry Act 1991. With the exception of highway only drainage.
- Any coated base material in the carriageway left exposed for more than seven days to be sealed using bituminous sealing grit.
- Highway boundary to be indicated by back edgings laid flush or change of material on private drives.
- All vertical faces of joints involving flexible materials shall be treated with "oxy-bit" or other approved joint sealant. This includes ironwork and precast products. Overbanding shall not be accepted by Kirklees Metropolitan Council.
- Any final surfacing to be discussed with Kirklees Metropolitan Council.
- Unsealed and loose material such as crushed stone, gravel or pebbles is not acceptable to the adaptable highway.
- Do not scale from this drawing.

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AUTHORITIES

Rev	By	Date	Revision	Chk	Apd
1	DJC	01.10.24	Title revised	MI	MI
2	DJC	26.01.24	Issued for approval		

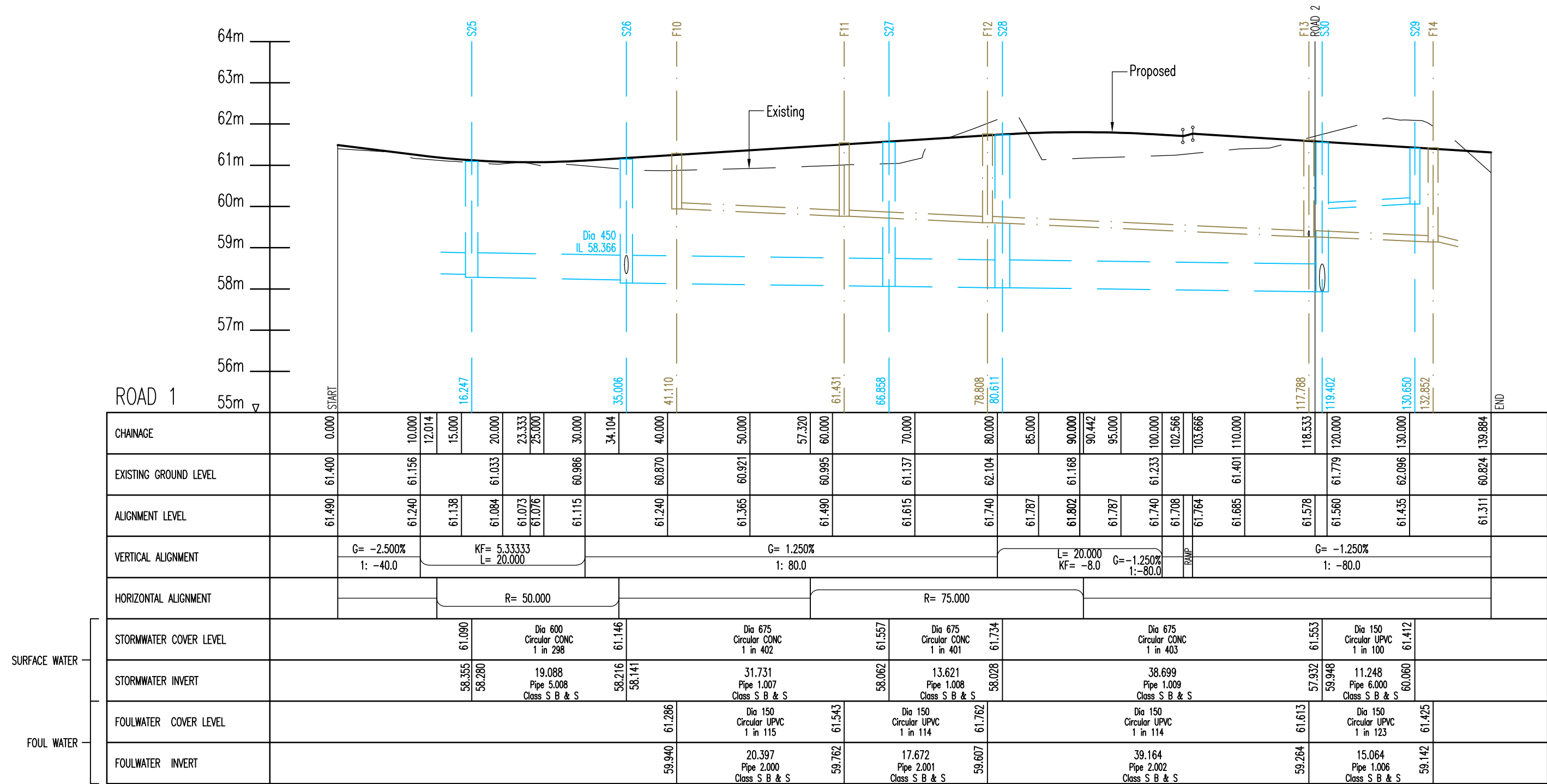
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TITLE		
TYPICAL ROAD DETAILS PARCELS 2-5		
PROJECT		
CROSSLEY LANE, HUDDERSFIELD		
CLIENT		
MINERVA WORKS DEVELOPMENT LTD		
DRAWING STATUS		
PRELIMINARY		
Scale	Date	Drawn
AS SHOWN @ A1	JAN 24	DJC
Rev	Chk	MI
Drg. No.	0906/03/04	Rev A

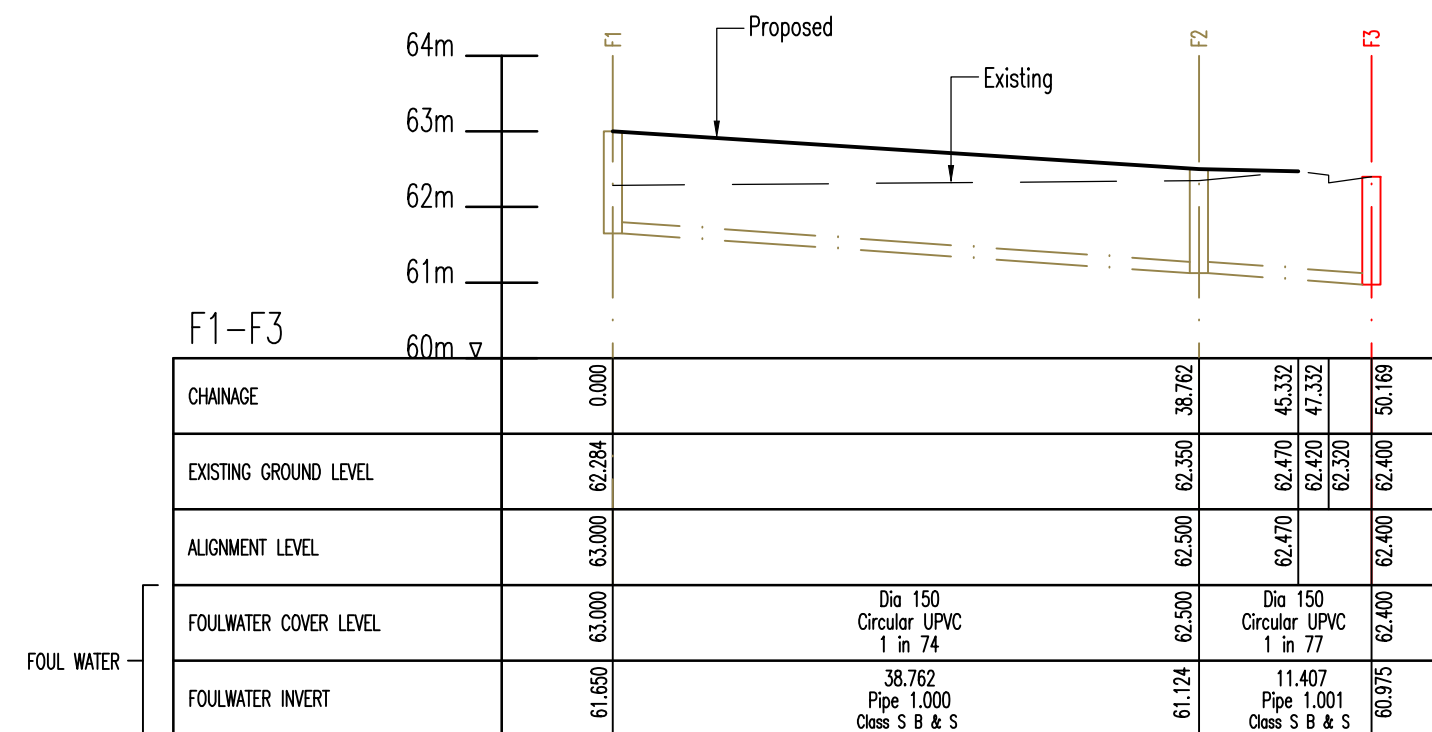
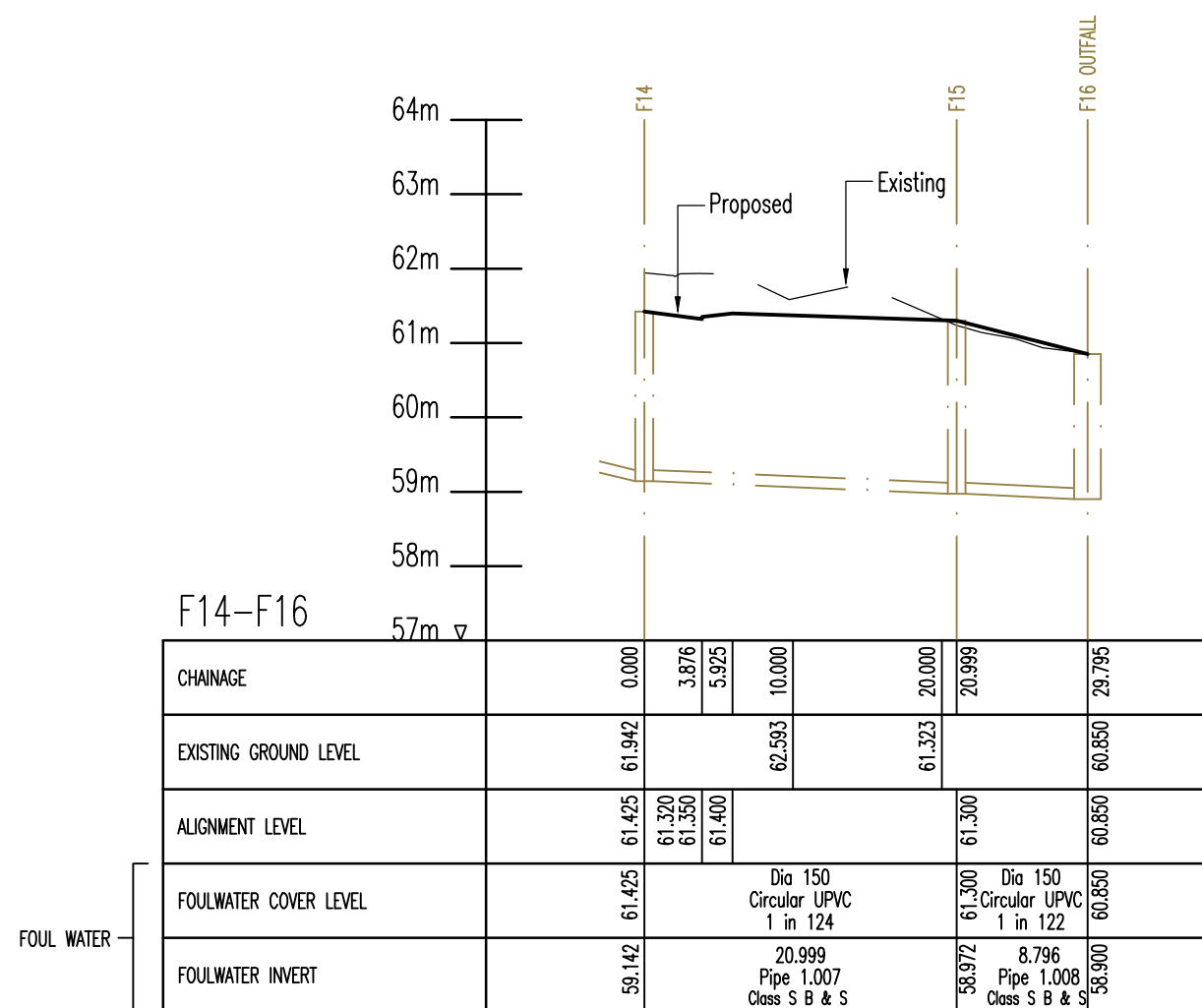
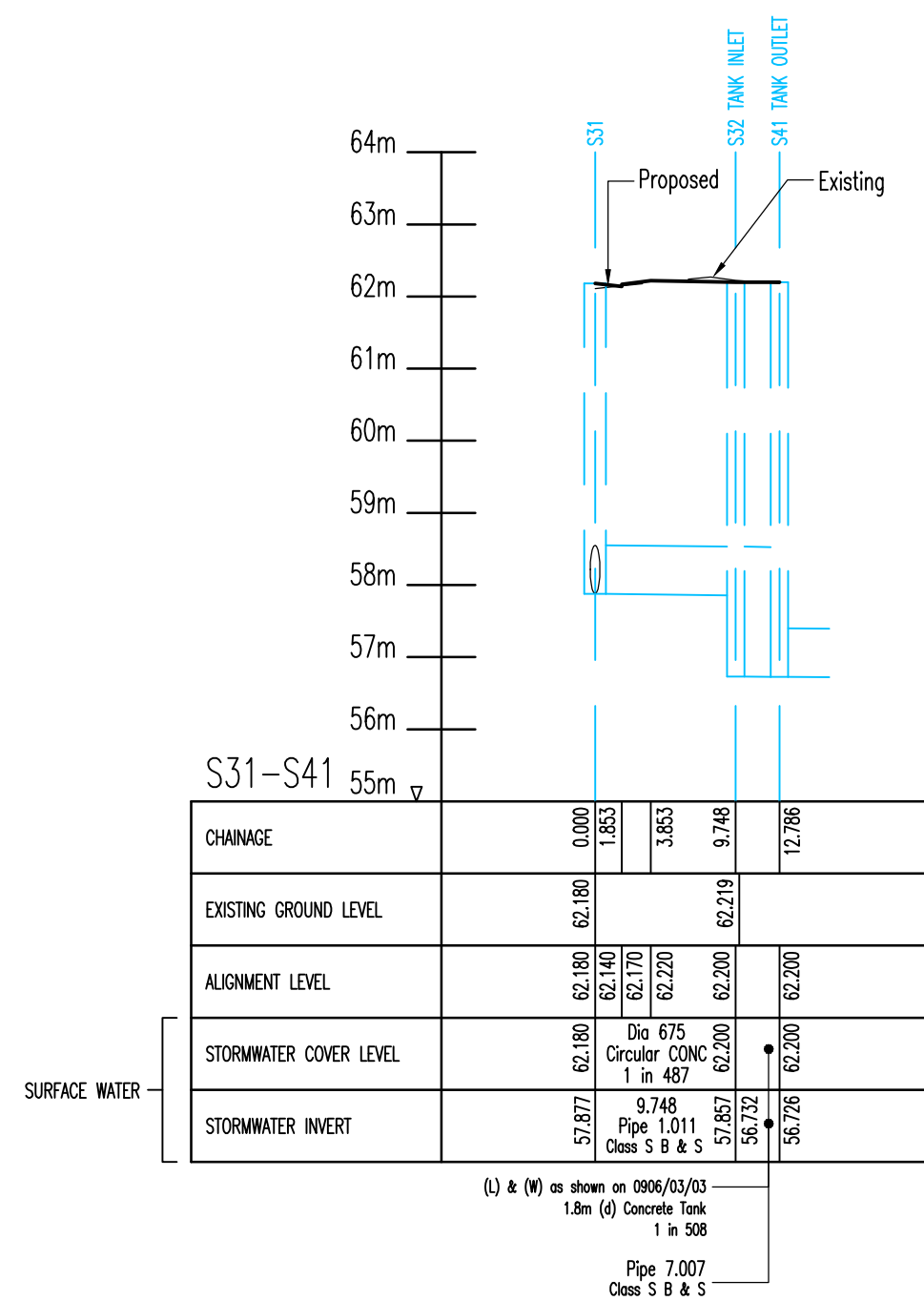
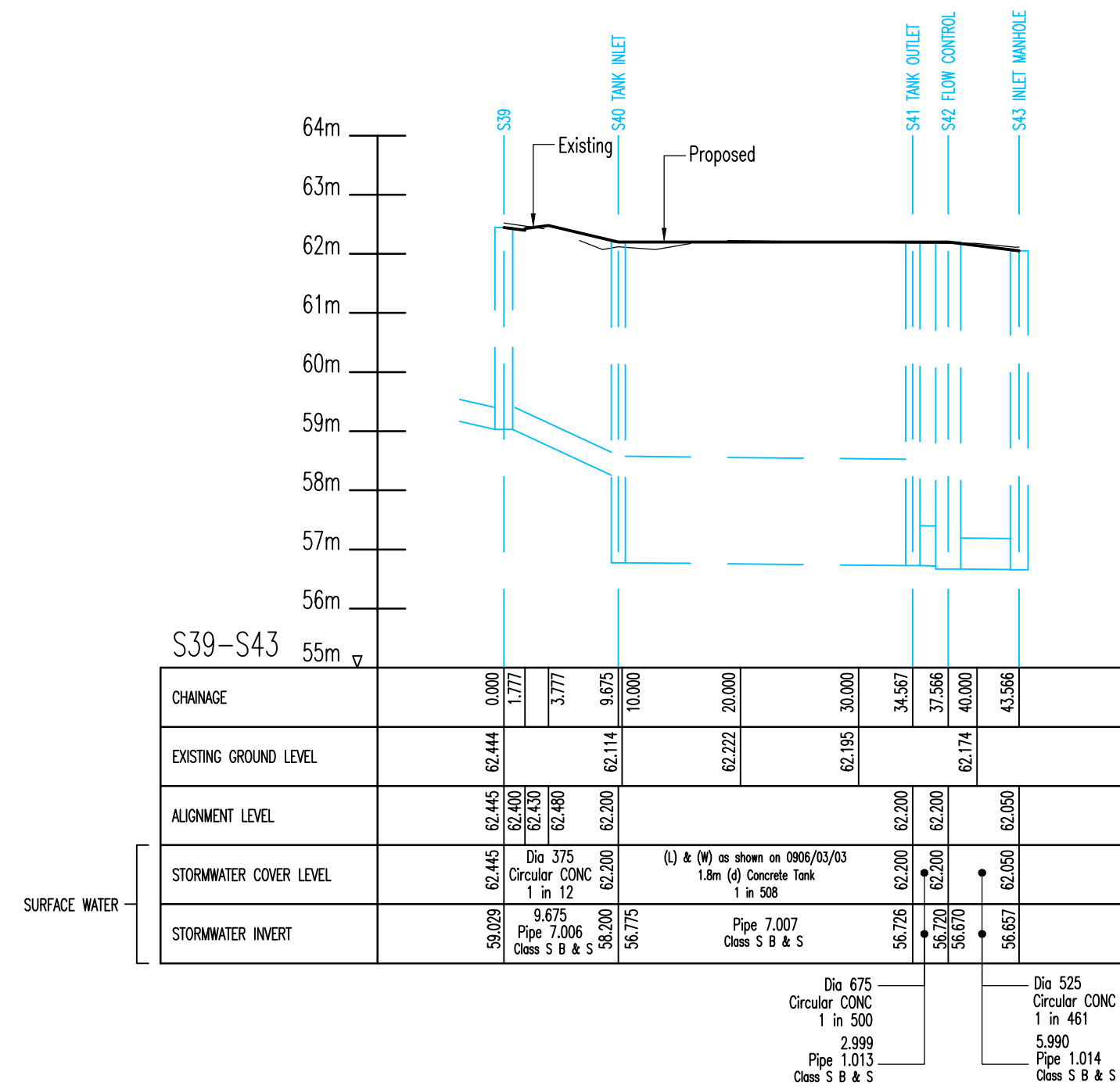
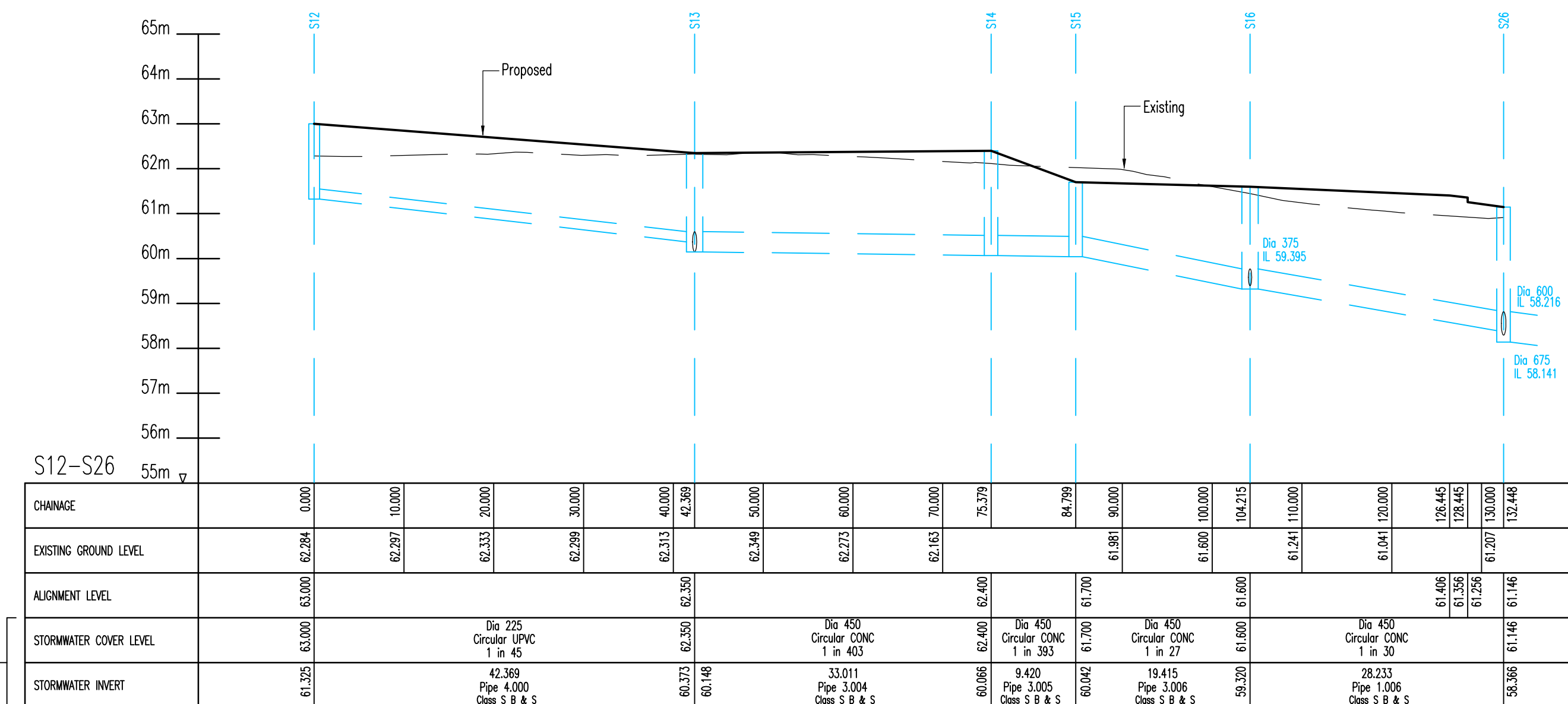
- Yorkshire Water General Notes
- All adoptable sewer works and material to be in accordance with Sewerage Sector Guidance Design and Construction Guidance [Code for Adoption]. The Relevant British/European and Yorkshire Water's Standards/Requirements/Local Practice for the Adoption of Small Submersible Foul and Surface Water Pumping Stations and Kitemarked.
 - Manhole covers shall/must have a clear opening of 600mm and shall be Class D400 to BS EN 124 with 150mm deep frames in highways.
 - Filled ground must be filled and consolidated under the supervision and to the satisfaction of Yorkshire Water before any sewer works are carried out.
 - Yorkshire Water is not obliged to accept filter drain/land drainage run-off into the public sewer network or adoptable drainage system (directly or in-directly). An alternative method of disposal of the land drainage run-off will therefore be required and you will have to liaise with the Local Authority, Land Drainage Section with regard to the disposal of the filter drain/land drainage run-off.
 - The adoptable sewers should be a minimum of 1m and manholes 0.5m from kerb faces and service margins.
 - Sewers must have 5 metres clearance from trees and hedges or the width of the canopy at mature height.
 - Sewers to be laid in Class "S" Bedding (150mm granular bed and surround). Where depth of cover to top of the sewer is less than 1.2m in highways and verges (or less than 900mm in non-vehicular access areas) then a concrete slab should be provide above granular bed and surround.
 - There must be enough clearance at crossovers to accommodate bedding to both pipes, approx. 300mm ; if crossover is near the rocker then the clearance needed may be increased".
 - Bedding and backfill material to conform to the requirement of Water Industry Specification 4-06-02 (Table A2).
 - Adoptable plastic sewer pipes to be BSI Kitemarked (certified to WIS 4-35-01 and BS/EN13476). Adoptable plastic sewer pipes to be laid in maximum 3 metre lengths unless there is a specific operational need to lay longer lengths. Plastic channel sections in manholes are not acceptable and Yorkshire Water would prefer clayware channel in manholes.
 - The minimum crushing strength for clay pipes should be as follows : 100mm dia. 40KN/m, 150mm dia. 40KN/m, 225mm dia. 45KN/m and 300mm dia. 72KN/m. The minimum crushing strength for concrete pipes should be - (Class 120 to EN 1916/BS5911-1 2002). Plastic pipes should conform to WIS 4-35-01 and BS EN13476.
 - Yorkshire Water policy is that type "C" brick manholes and 1050mm dia. manhole rings are not preferred. Instead it is preferred that you use a type "B" manhole with 1200mm dia or 1500mm dia rings, with the opening sited over the channel where depth of cover to pipe soffit is 1 - 1.5m.
 - Where a B125 cover and frame has been approved, this must not be coated in plastic and must have lifting eyes suitably sized to accommodate standard lifting keys. Screw down covers are not acceptable.



N O T E S

Yorkshire Water General Notes

1. All adoptable sewer works and material to be in accordance with *Sewerage Sector Guidance Design and Construction Guidance [Code for Adoption]*, The Relevant British/European and Yorkshire Water's Standards/Requirements/Local Practice for the Adoption of Small Submersible Flow and Surface Water Pumping Stations and Kitemarked.
2. Manhole covers shall/must have a clear opening of 600mm and shall be Class D400 to BS EN 124 with 150mm deep frames in highways.
3. Filled ground must be filled and consolidated under the supervision and to the satisfaction of Yorkshire Water before any sewer works are carried out.
4. Yorkshire Water is not obliged to accept filter drain/land drainage run-off into the public sewer network or adoptable drainage system (directly or indirectly). An alternative method of disposal of the land drainage run-off will therefore be required and you will have to liaise with the Local Authority Land Drainage Section with regard to the disposal of the filter drain/land drainage run-off.
5. The adoptable sewers should be a minimum of 1m and manholes 0.5m, from kerb faces and service margins.
6. Sewers must have 5 metres clearance from trees and hedges or the width of the canopy at mature height.
7. Sewers to be laid in Class "S" Bedding (150mm granular bed and surround), where depth of cover to top of the sewer is less than 1.2m in highways and verges (or less than 900mm in non-vehicular access areas) then a concrete slab should be provided above granular bed and surround.
8. There must be enough clearance at crossovers to accommodate bedding to both pipes, approx. 300mm : if crossover is near the rocker then the clearance needed may be increased".
9. Bedding and backfill material to conform to the requirement of Water Industry Specification 4-08-02 (Table A2).
10. Adoptable plastic sewer pipes to be BSI Kitemarked (certified to WIS 4-35-01 and BS EN13476). Adoptable plastic sewer pipes to be laid in maximum 3 metres lengths unless there is a specific operation needed to lay longer lengths. Plastic channel sections in manholes are not acceptable and Yorkshire Water would prefer clayware channel in manholes.
11. The minimum crushing strength for clay pipes should be as follows : 1000mm dia. 40kN/m, 1500mm dia. 40kN/m, 2250mm dia. 45kN/m and 3000mm dia. 72kN/m. The minimum crushing strength for concrete pipes should be : (Class 120 to EN 1916/BS5911-1: 2002). Plastic pipes should conform to WIS 4-35-01 and BS EN13476.
12. Yorkshire Water policy is that type "C" brick manholes and 1050mm dia. manholes are not acceptable. Instead it is preferred that you use a type "P" manhole with 1200mm dia. x 1500mm dia rings, with the opening sized over the frame where depth of cover to pipe soffit is 1 - 1.5m.
13. Where a B125 cover and frame has been approved, this must not be coated in plastic and must have lifting eyes suitably sized to accommodate standard lifting jacks. Screw down covers are not acceptable.



NOTE
There should be enough clearance to accommodate the bedding for both pipes, approx 300mm. If crossover is near the rocker then the clearance needed may be increased.

/	DJG	26.01.24	Issued for approval	MI	MI
Rev	By	Date	Revision	Chk	Apvd



Northwest House • 5 & 6 Northwest Business Park • Servia Hill, Leeds • LS6 2QH
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ARP Associates is a trading division of ARP Geotechnical Ltd, a company registered in England and Wales with number 3771811, whose registered office is at 5/6 Northwest Business Park, Servia Hill, Leeds LS6 2QH

TITLE PHASE 5
LONGITUDINAL SECTIONS
SHEET 2 OF 2

PROJECT
CROSSLEY LANE,
HUDDERSFIELD

CLIENT
MINERVA WORKS
DEVELOPMENT LTD

DRAWING STATUS
PRELIMINARY

Scale	Date	Drawn
1:500H 1:100V @ A1	JAN 24	DJG
		Chk. MI

Drg. No.	0906/03/06.02	Rev	/
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- Yorkshire Water General Notes
- All adoptable sewer works and material to be in accordance with Sewerage Sector Guidance Design and Construction Guidance [Code for Adoption]. The Relevant British/European and Yorkshire Water's Standards/Requirements/Local Practice for the Adoption of Small Submersible Foul and Surface Water Pumping Stations and Kitemarked.
 - Manhole covers shall/must have a clear opening of 600mm and shall be Class D400 to BS EN 124 with 150mm deep frames in highways.
 - Filled ground must be filled and consolidated under the supervision and to the satisfaction of Yorkshire Water before any sewer works are carried out.
 - Yorkshire Water is not obliged to accept filter drain/land drainage run-off into the public sewer network or adoptable drainage system (directly or in-directly). An alternative method of disposal of the land drainage run-off will therefore be required and you will have to liaise with the Local Authority, Land Drainage Section with regard to the disposal of the filter drain/land drainage run-off.
 - The adoptable sewers should be a minimum of 1m and manholes 0.5m from kerb faces and service margins.
 - Sewers must have 5 metres clearance from trees and hedges or the width of the canopy at mature height.
 - Sewers to be laid in Class "S" Bedding (150mm granular bed and surround). Where depth of cover to top of the sewer is less than 1.2m in highways and verges (or less than 900mm in non-vehicular access areas) then a concrete slab should be provide above granular bed and surround.
 - There must be enough clearance at crossovers to accommodate bedding to both pipes, approx. 300mm : if crossover is near the rocker then the clearance needed may be increased".
 - Bedding and backfill material to conform to the requirement of Water Industry Specification 4-06-02 (Table A2).
 - Adoptable plastic sewer pipes to be BSI Kitemarked (certified to WIS 4-35-01 and BS/EN13476). Adoptable plastic sewer pipes to be laid in maximum 3 metre lengths unless there is a specific operational need to lay longer lengths. Plastic channel sections in manholes are not acceptable and Yorkshire Water would prefer clayware channel in manholes.
 - The minimum crushing strength for clay pipes should be as follows :
100mm dia. 40KN/m, 150mm dia. 40KN/m, 225mm dia. 45KN/m and 300mm dia. 72KN/m. The minimum crushing strength for concrete pipes should be - (Class 120 to EN 1916/BS5911-1 2002). Plastic pipes should conform to WIS 4-35-01 and BS EN13476.
 - Yorkshire Water policy is that type "C" brick manholes and 1050mm dia. manhole rings are not preferred. Instead it is preferred that you use a type "B" manhole with 1200mm dia or 1500mm dia rings, with the opening sited over the channel where depth of cover to pipe soffit is 1 - 1.5m.
 - Where a B125 cover and frame has been approved, this must not be coated in plastic and must have lifting eyes suitably sized to accommodate standard lifting keys. Screw down covers are not acceptable.

/	DJG	01.10.24	Issued for approval	MI	MI
Rev	By	Date	Revision	Chk	Apvd



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ARP Associates is a trading division of ARP Geotechnical Ltd, a company registered in England and Wales with company number 3773311, whose registered office is at 5/6 Northwest Business Park, Servia Hill, Leeds LS6 2QH

TITLE
PARCEL 4
LONGITUDINAL SECTIONS

PROJECT
CROSSLEY LANE,
HUDDERSFIELD

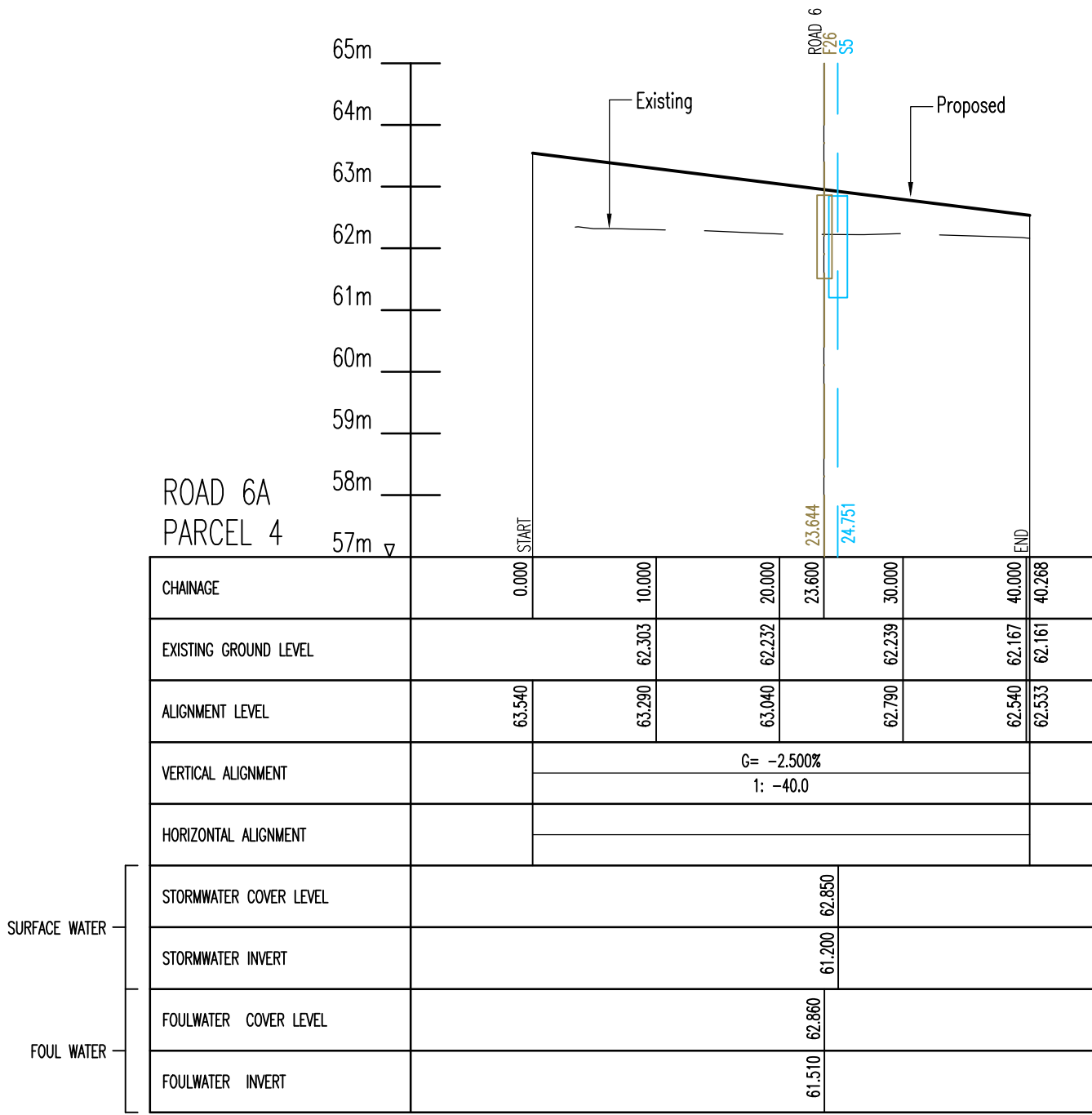
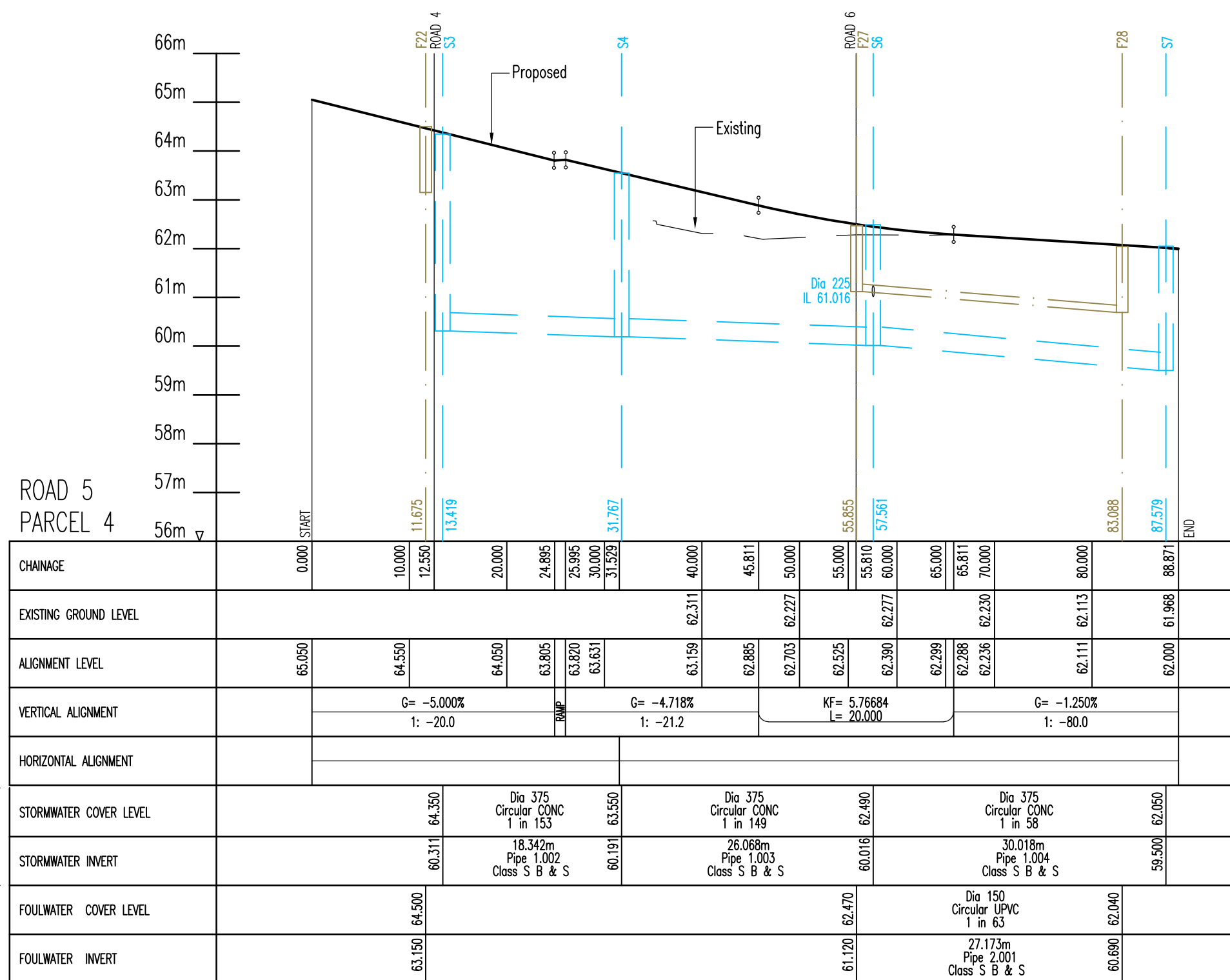
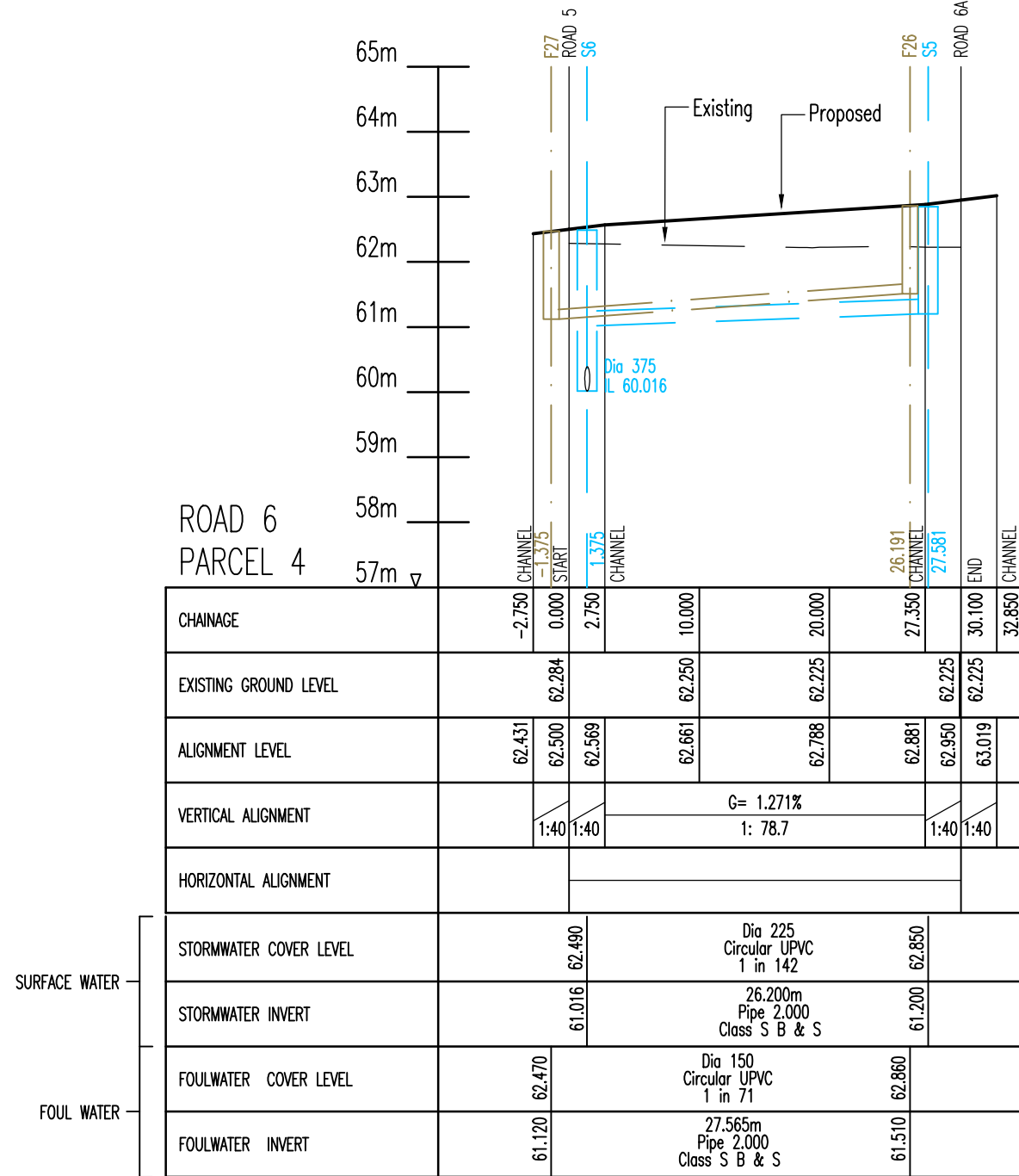
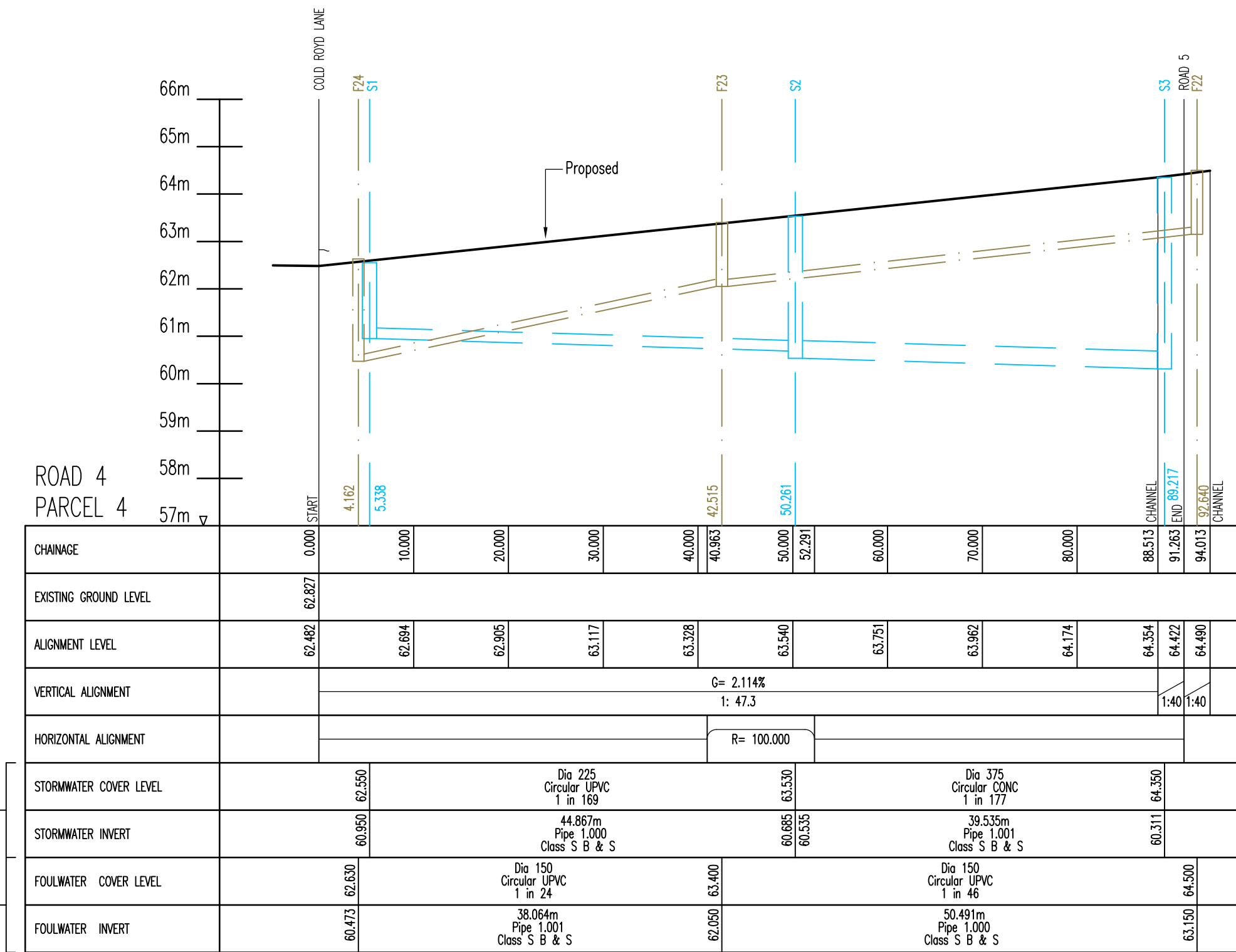
CLIENT
MINERVA WORKS
DEVELOPMENT LTD

DRAWING STATUS
PRELIMINARY

Scale	Date	Drawn
1:500H 1:100V @ A1	OCT 24	DJG
Drg. No.	Chk.	MI

0906/03/06.05

Rev /



NOTE
There should be enough clearance to accommodate the bedding for both pipes, approx 300mm. If crossover is near the rocker then the clearance needed may be increased.

Typical Manhole Details

April 2023



YorkshireWater

Typical Manhole Details

The drawings included in this document are typical details that should be Incorporated Into the design of a development site that you are proposing for adoption under Section 104 of the Water Industry Act 1991.

A developer who is planning to construct a sewer network which will be adopted by Yorkshire Water should ensure that the prospective public sewers and associated assets are designed and constructed in accordance with the Design and Construction Guidance (DCG), Local Practices and Technical Standards contained within the Code for Adoption.

These drawings are to be used as a guide as part of your S104 application submission. All drawings submitted for assessment must be site specific and marked up with the site name and appropriate drawing reference number.

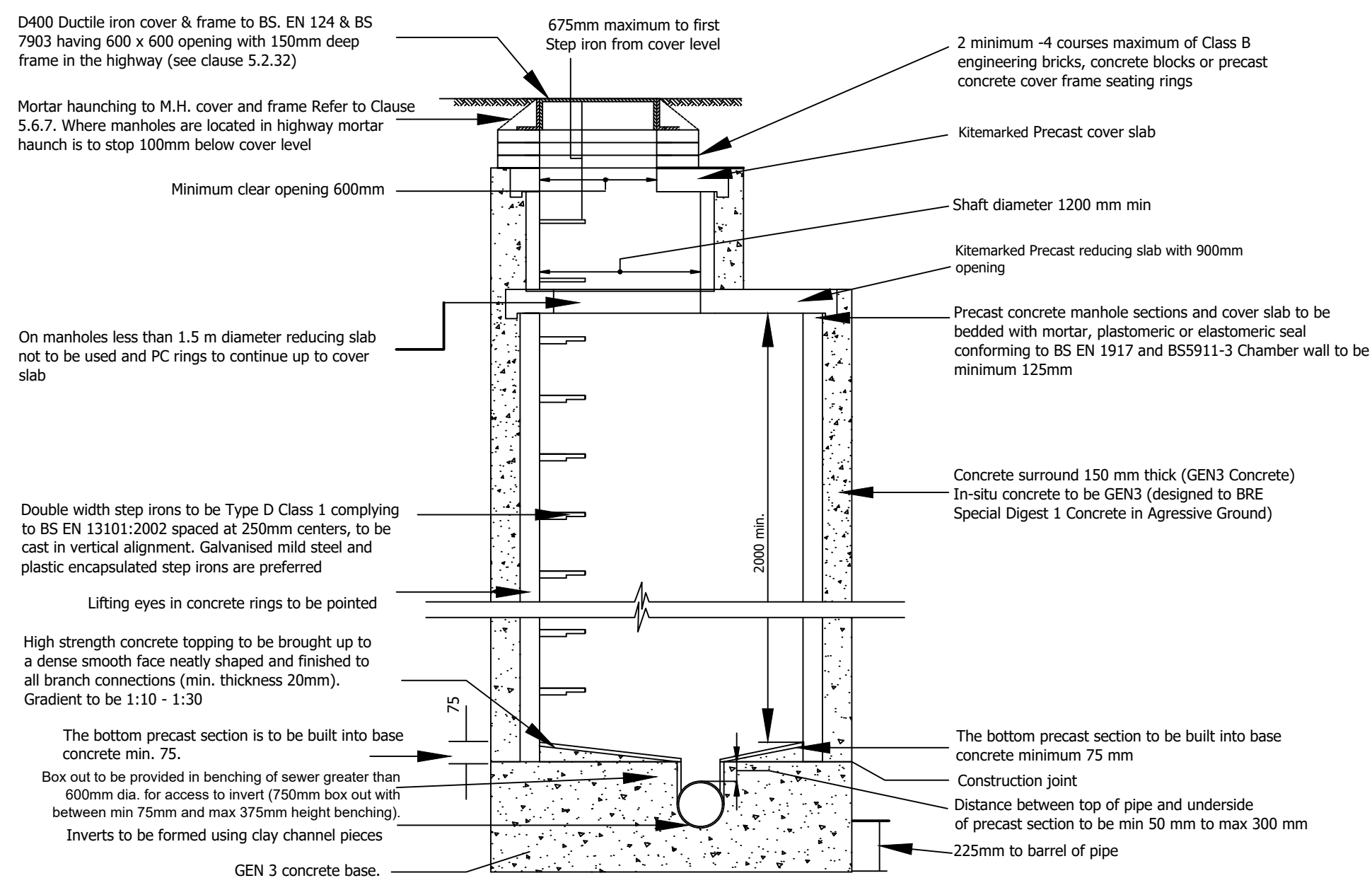
This document contains the following typical manhole details:

- YW-DS-001 - Typical Manhole Details
- YW-DS-002 - Wide Wall Manhole Details
- YW-DS-003 - Typical Demarcation Chambers
- YW-DS-004 - Typical Construction Details

Typical Manhole Construction

Type A1 (Design and Construction Guidance)

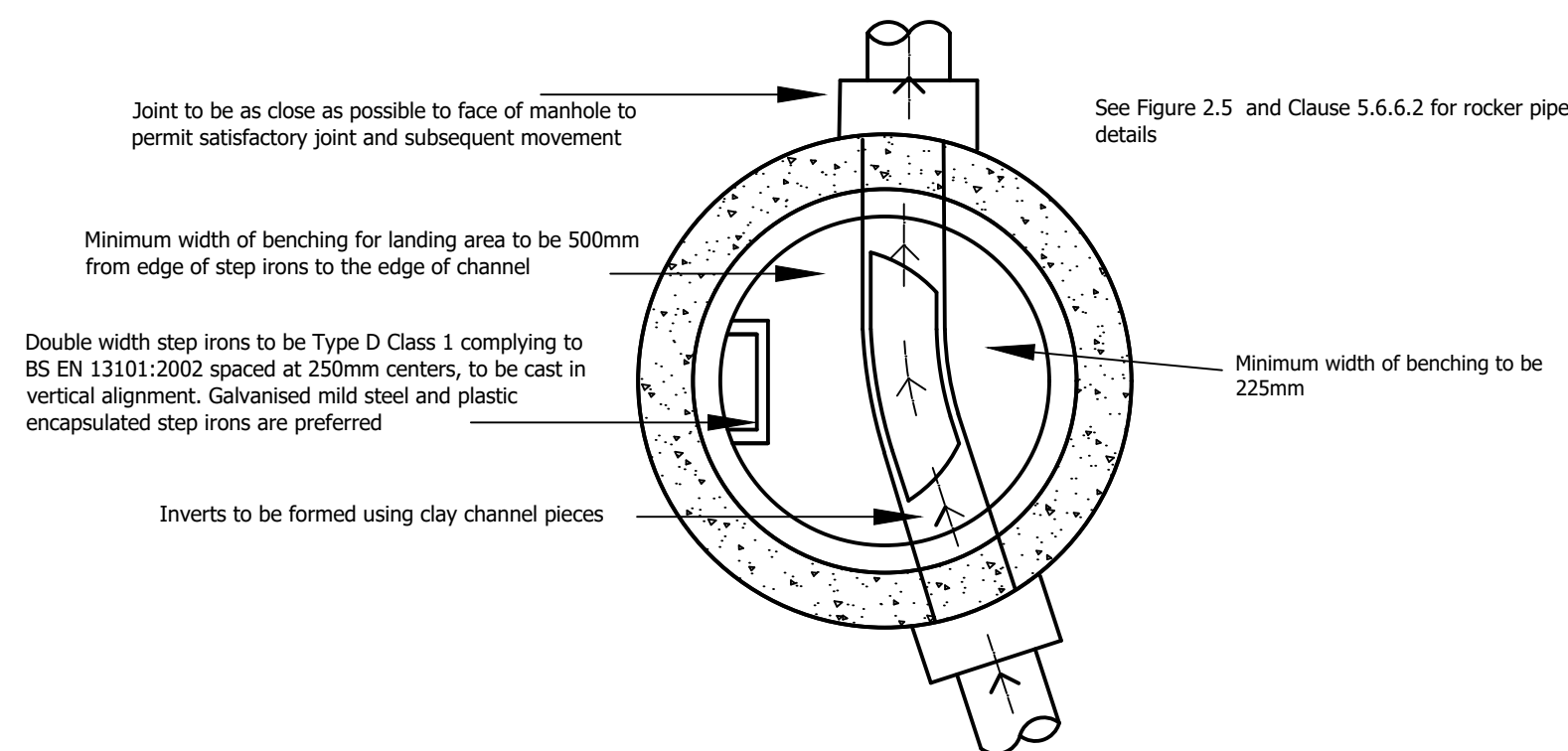
For use on manholes of depth from cover level to soffit of pipe between 3000mm and 6000mm



Section View

Typical Manhole Plan View

Type A and Type B (Design and Construction Guidance)

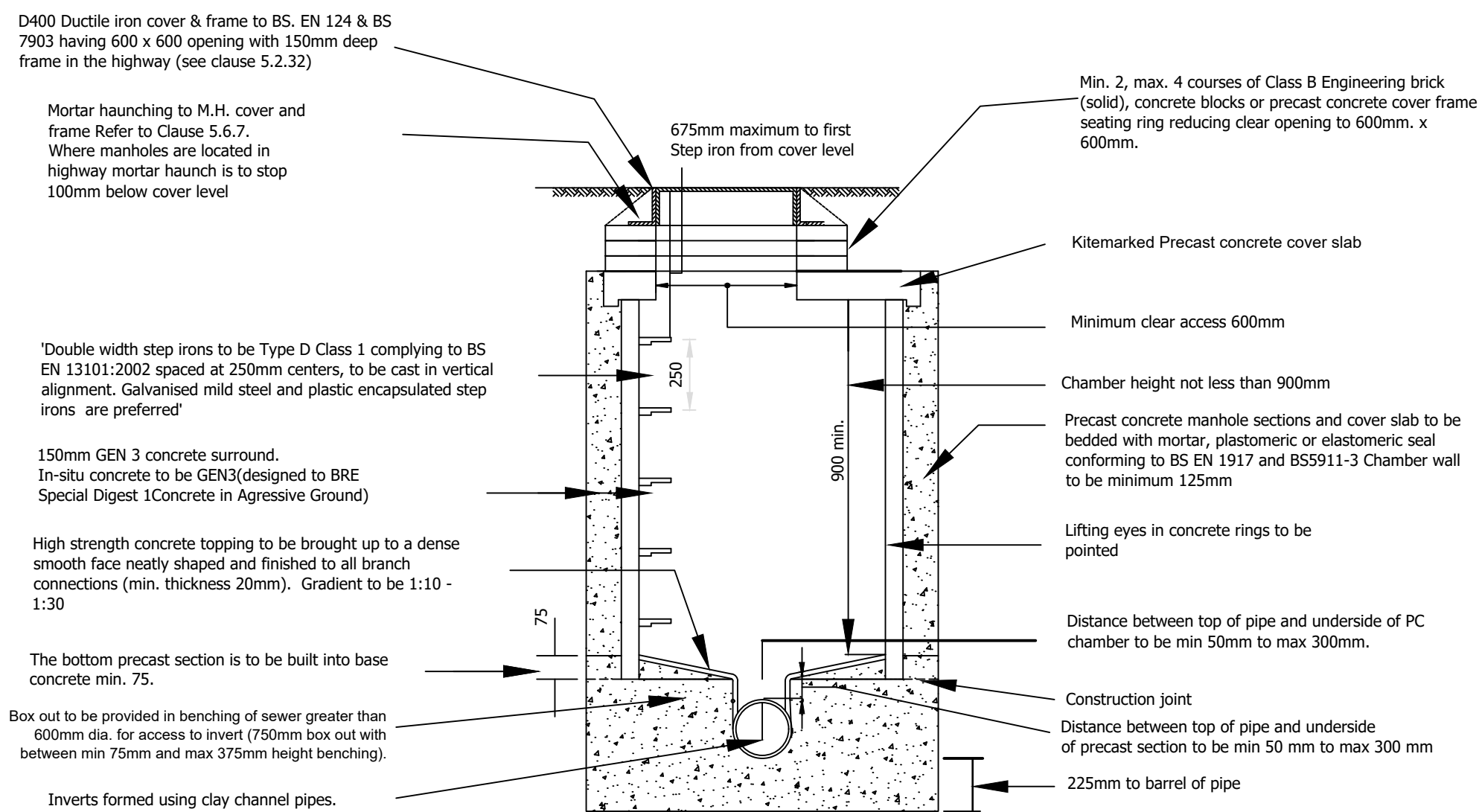


Manhole Diameters	
Nominal internal diameter of largest pipe in manhole (mm)	Minimum nominal internal dimension of manhole (mm)
Up to 300	1200
375-450	1350
500-700	1500
750-900	1800
Greater than 900	Specific detailed drawing required

Typical Manhole Construction

Type B (Design and Construction Guidance)

For use on manholes with maximum depth from cover level
to soffit of pipe 3000mm

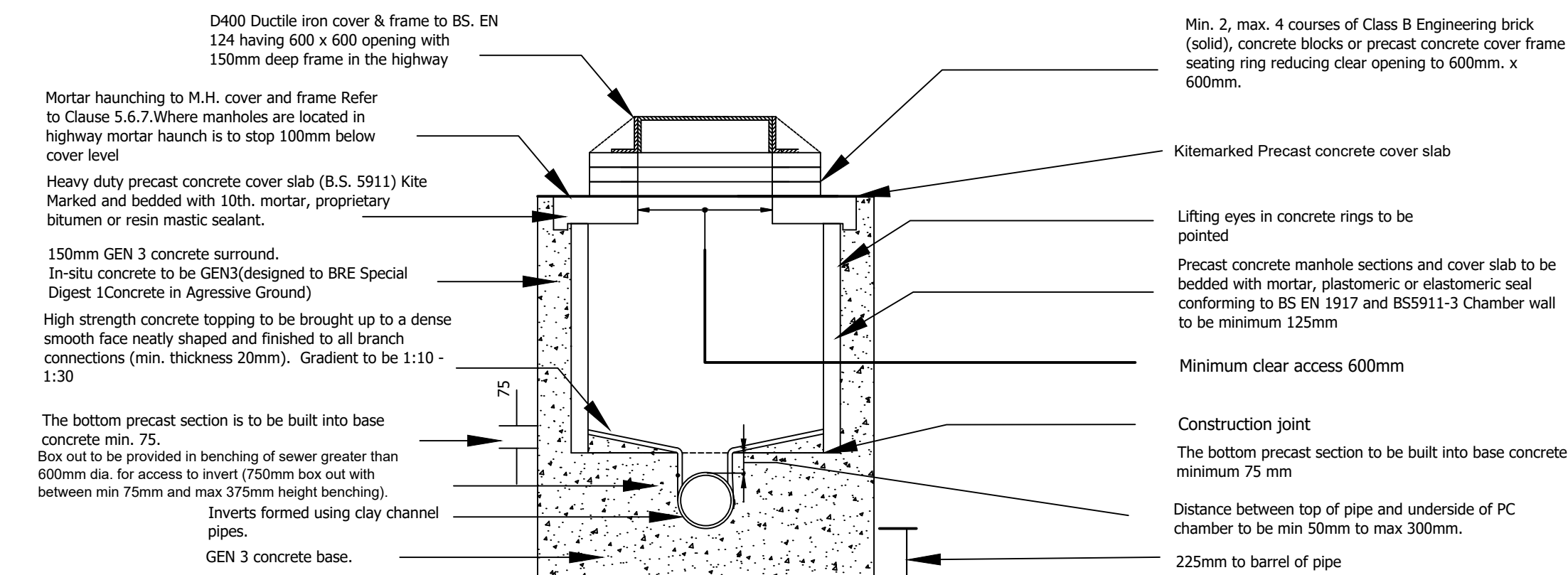


Section View

Shallow Manhole Construction

Type C (Design and Construction Guidance)

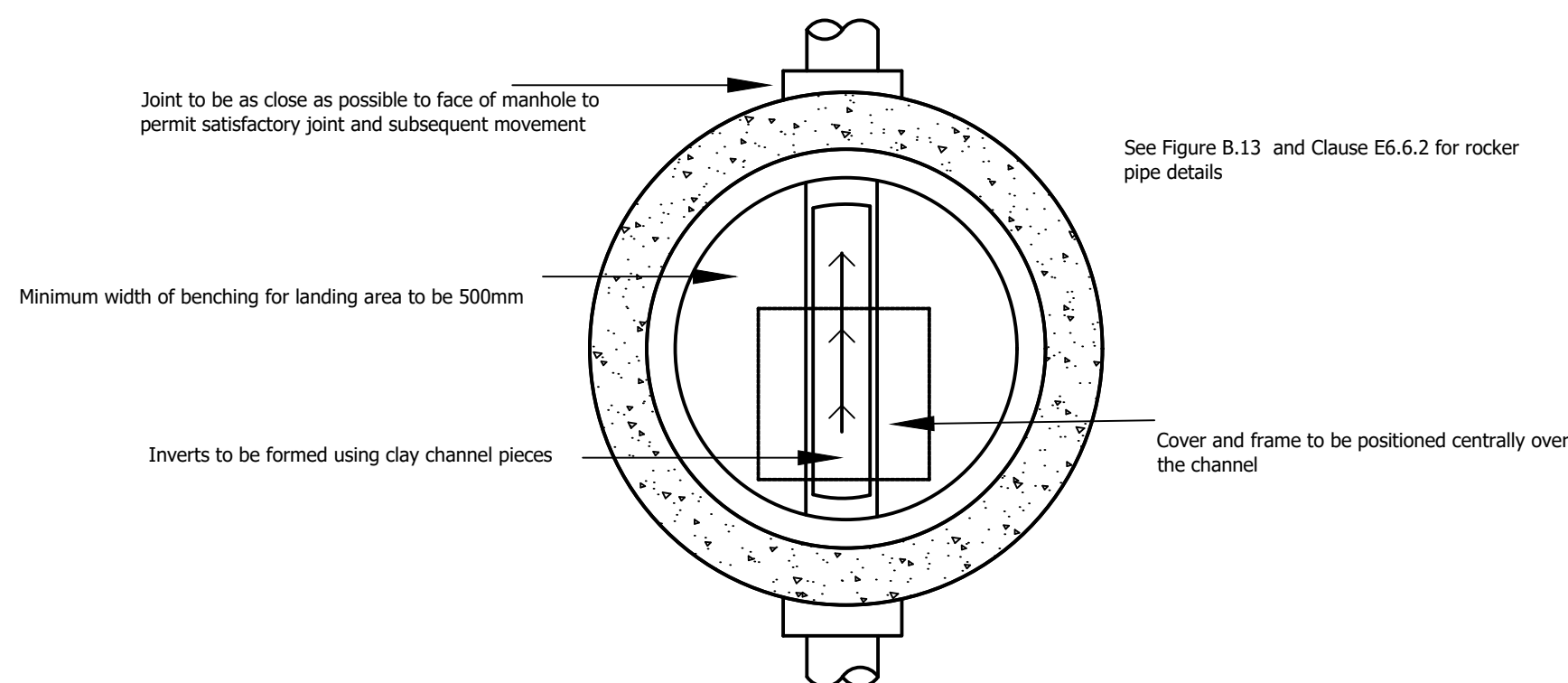
Construction of manhole where depth from soffit to cover level less than 1.5m



Where Type C manholes are 1500mm or greater in diameter a 1220mm x 675mm clear opening is required with a double twin 600mm x 600mm covers is required.

Shallow Manhole Plan View

Type C (Design and Construction Guidance)



Yorkshire Water Notes

1. All adoptable sewer works and material to be in accordance with "Code for Adoption". The Relevant British/European and Yorkshire Water's Standards/Requirements/Addendum to the Mechanical and Electrical Specification and Kitemarked.
2. Manhole covers shall/must have a clear opening of 600mm and shall be Class D400 to BS EN 124 with 150mm deep frames in highways.
3. Filled ground must be filled and consolidated under the supervision and to the satisfaction of Yorkshire Water before any sewer works are carried out.
4. Yorkshire Water is **not** obliged to accept filter drain/land drainage run-off into the public sewer network or adoptable drainage system (**directly or in-directly**). An alternative method of disposal of the land drainage run-off will therefore be required and you will have to liaise with the Local Authority, Land Drainage Section regarding the disposal of the filter drain/land drainage run-off.
5. The adoptable sewers should be a minimum of 1m and manholes 0.5m from kerb faces and service margins.
6. Sewers must have 5 metres clearance from trees and hedges or the width of the canopy at mature height.
7. Sewers to be laid in Class "S" Bedding (**150mm granular bed and surround**). Where depth of cover to top of the sewer is less than 1.2m in highways and verges (**or less than 900mm in nonvehicular access areas**) then a concrete slab should be provided above granular bed and surround.
8. Bedding and backfill material to conform to the requirement of Water Industry Specification 4-08-02 (**Table A2**).
9. Yorkshire Water policy is that Type "C" brick manholes and 1050mm diameter manhole rings are not preferred. Instead, it is preferred that you use a type "B" manhole with 1200mm diameter or 1500mm diameter manhole rings, with the opening sized over the channel where depth of cover to pipe soffit is 1 - 1.5m.
10. Adoptable plastic sewer pipes to be BSI Kitemarked (**certified to WIS 4-35-01 and BS EN13476**). Adoptable plastic sewer pipes to be laid in maximum 3 metre lengths unless there is a specific operational need to lay longer lengths. Plastic channel sections in manholes are not acceptable and Yorkshire Water would require clay ware channel in manholes.
11. The minimum crushing strength for clay pipes should be as follows: 100mm dia. 40kN/m, 150mm dia. 40kN/m, 225mm dia. 45kN/m and 300mm dia. 72kN/m. The minimum crushing strength for concrete pipes should be - (Class 120 to EN 1916/BS5911-1 2002). Plastic pipes should conform to WIS 4-35-01 and BS EN3476.
12. Where a B125 cover and frame has been approved, this **must not** be coated in plastic and must have lifting eyes suitably sized to accommodate standard lifting keys. Screw down covers are not acceptable.
13. There must be enough clearance at crossovers to accommodate bedding to both pipes, approx. 300mm. If crossover is near the rocker then the clearance needed may need to be increased".

**For all clause and table references
please refer to Design and
Construction Guidance contained
within the Code for Adoption**

Developer Services

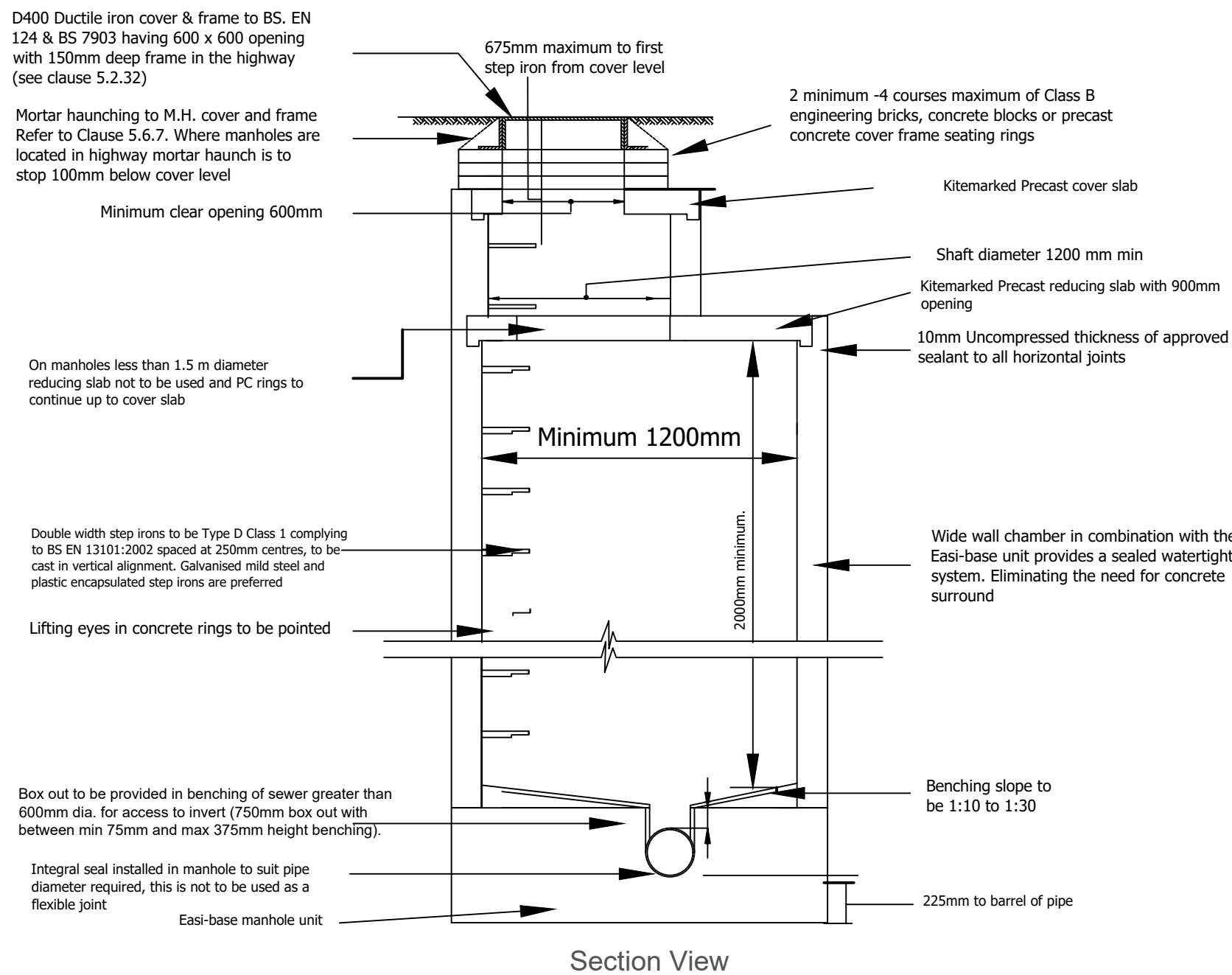
Title	Typical Manhole Details
Drawing No	YW-DS-001
Revision	-
Date	01 April 2023



Typical Wide Wall Manhole Construction

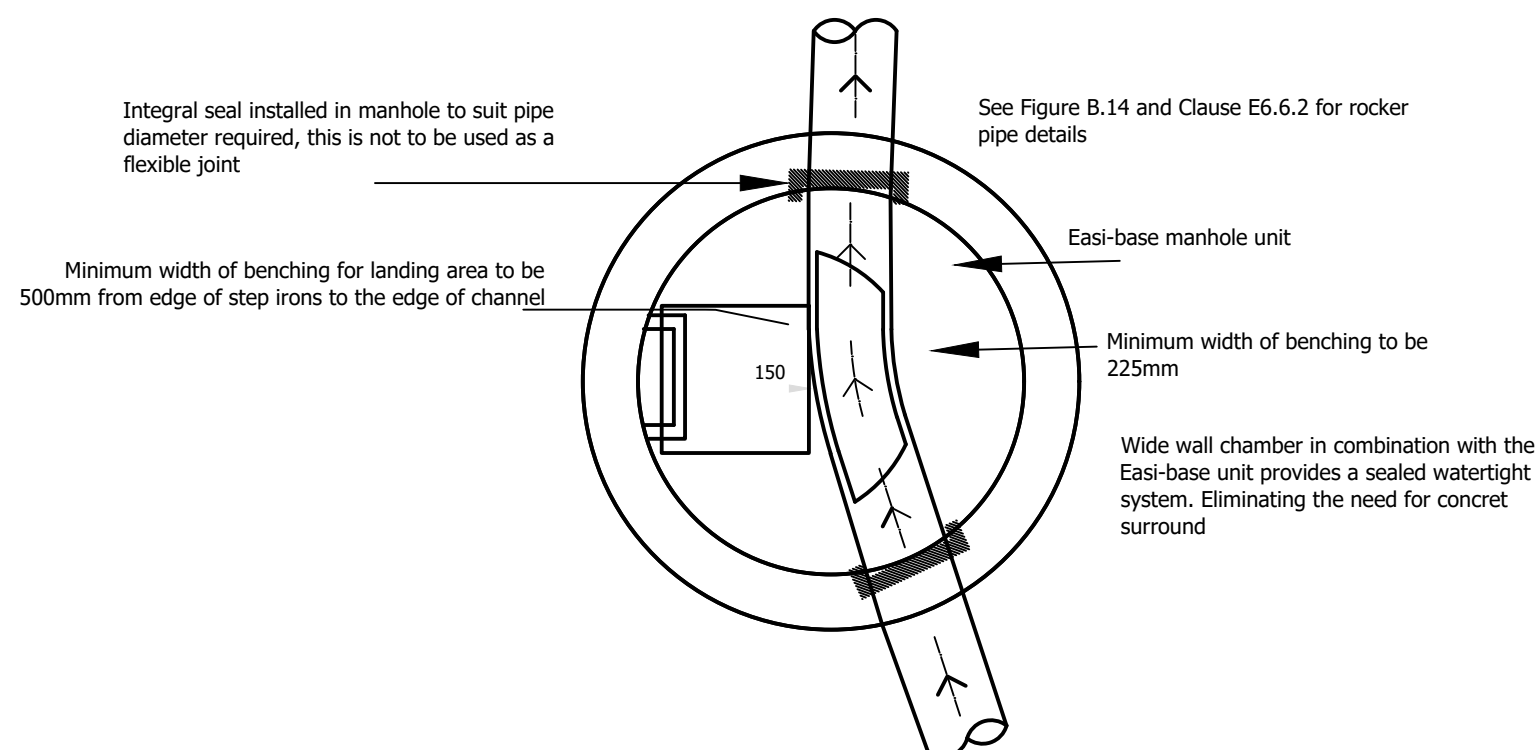
Type A Alternative Wide Wall Manhole (Design and Construction Guidance)

For use on manholes of depth from cover level to soffit of pipe between 3000mm and 6000mm.



Typical Wide Wall Manhole Plan View

Type A and Type B (Design and Construction Guidance)



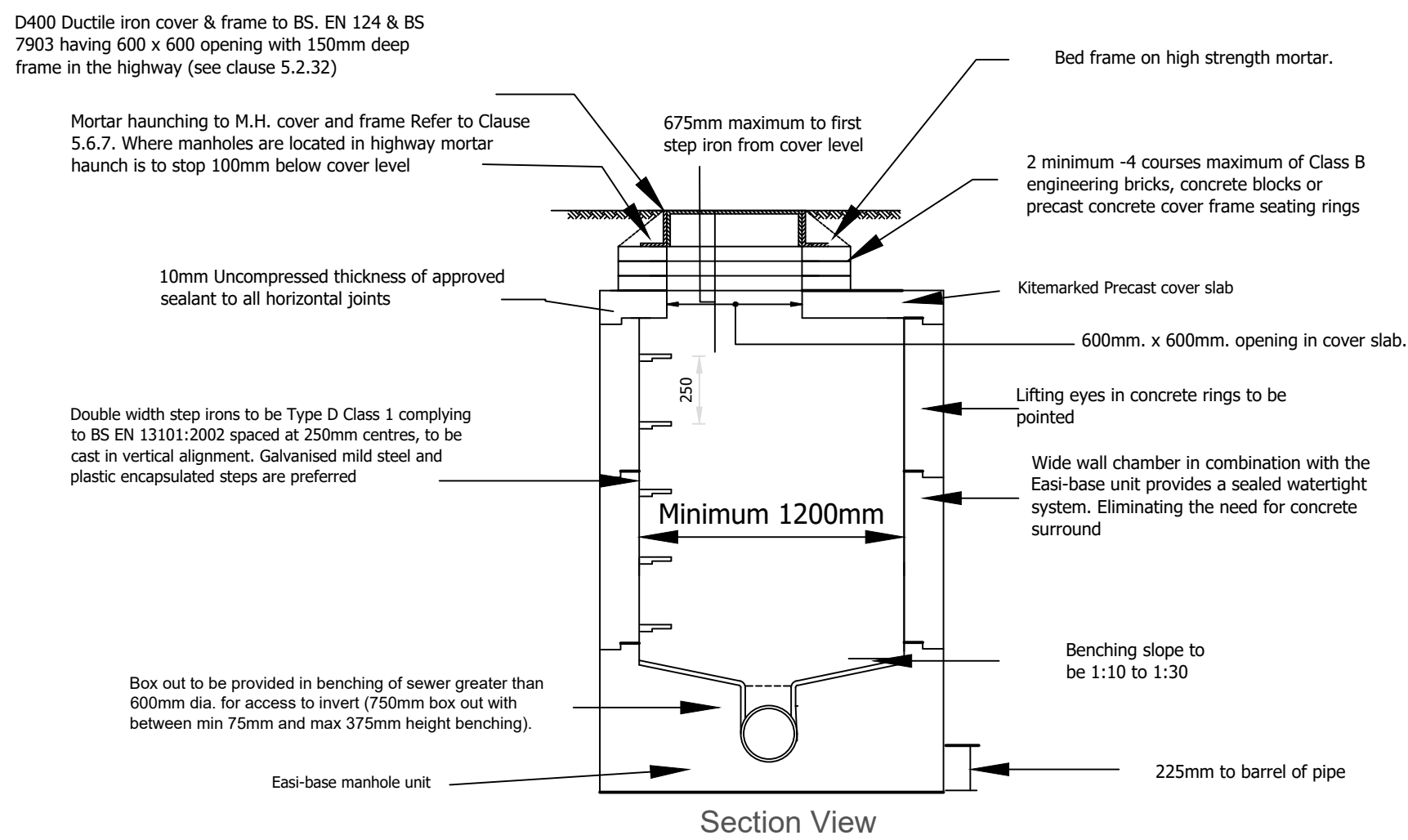
Manhole Diameters	
Nominal internal diameter of largest pipe in manhole (mm)	Minimum nominal internal dimension of manhole (mm)
Up to 300	1200
375-450	1350
500-700	1500
750-900	1800
Greater than 900	Specific detailed drawing required

**PLEASE NOTE WHERE
MANHOLES HAVE
BACKDROP CONNECTIONS
A FULL 150MM CONCRETE
SURROUND TO THE
MANHOLE IS REQUIRED**

Typical Wide Wall Manhole Construction

Type B Alternative Wide Wall Manhole (Design and Construction Guidance)

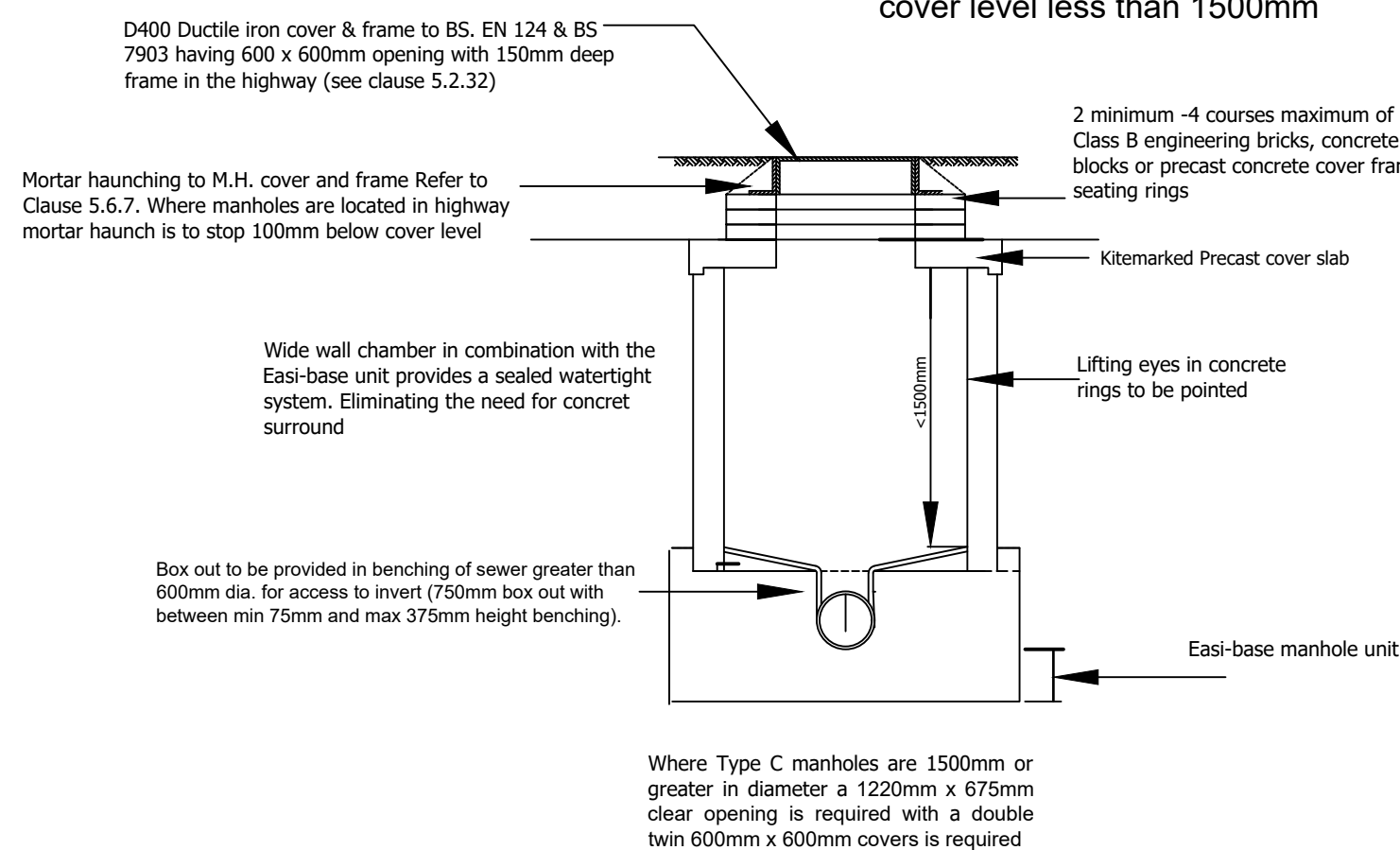
For use on manholes with maximum depth from cover level
to soffit of pipe 3000mm



Shallow Manhole Construction

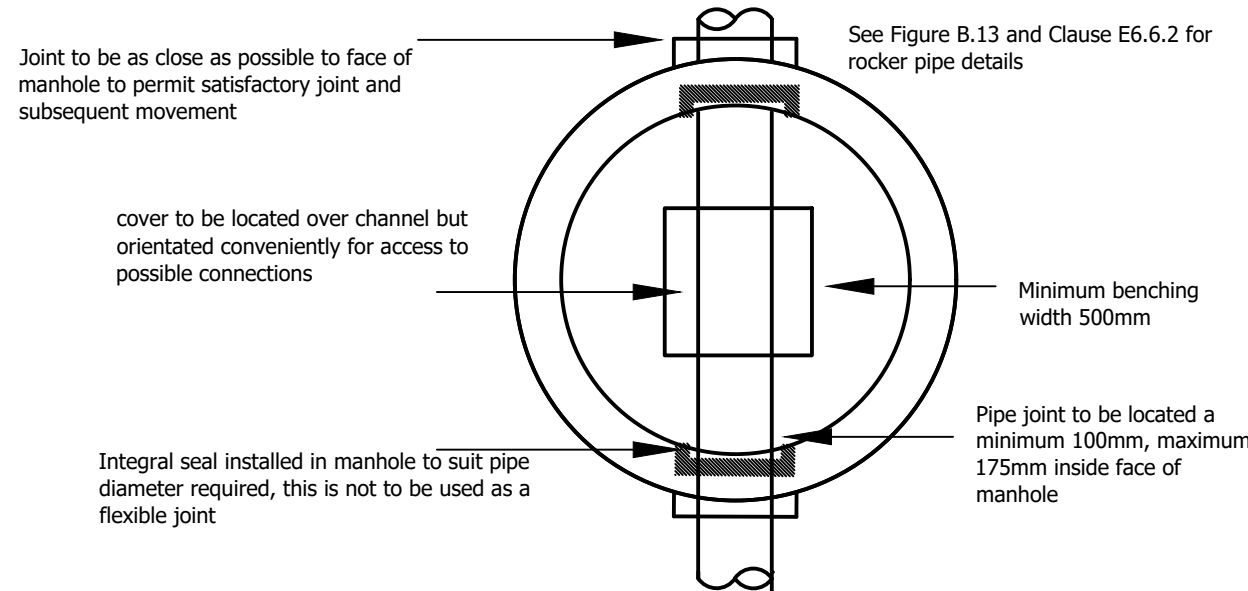
Type C (Design and Construction Guidance)

Construction of manhole where depth from soffit to cover level less than 1500mm



Shallow Wide Wall Manhole Plan View

Type C (Design and Construction Guidance)



Yorkshire Water Notes

1. All adoptable sewer works and material to be in accordance with "Code for Adoption". The Relevant British/European and Yorkshire Water's Standards/Requirements/Addendum to the Mechanical and Electrical Specification and Kitemarked.
2. Manhole covers shall/must have a clear opening of 600mm and shall be Class D400 to BS EN 124 with 150mm deep frames in highways.
3. Filled ground must be filled and consolidated under the supervision and to the satisfaction of Yorkshire Water before any sewer works are carried out.
4. Yorkshire Water is **not** obliged to accept filter drain/land drainage run-off into the public sewer network or adoptable drainage system (**directly or in-directly**). An alternative method of disposal of the land drainage run-off will therefore be required and you will have to liaise with the Local Authority, Land Drainage Section regarding the disposal of the filter drain/land drainage run-off.
5. The adoptable sewers should be a minimum of 1m and manholes 0.5m from kerb faces and service margins.
6. Sewers must have 5 metres clearance from trees and hedges or the width of the canopy at mature height.
7. Sewers to be laid in Class "S" Bedding (**150mm granular bed and surround**). Where depth of cover to top of the sewer is less than 12m in highways and verges (**or less than 900mm in nonvehicular access areas**) then a concrete slab should be provided above granular bed and surround.
8. Bedding and backfill material to conform to the requirement of Water Industry Specification 4-08-02 (**Table A2**).
9. Yorkshire Water policy is that Type "C" brick manholes and 1050mm diameter manhole rings are not preferred. Instead, it is preferred that you use a type "B" manhole with 1200mm diameter or 1500mm diameter rings, with the opening sited over the channel where depth of cover to pipe soffit is 1 - 1.5m.
10. Adoptable plastic sewer pipes to be BSI Kitemarked (**certified to WIS 4-35-01 and BS/EN13476**). Adoptable plastic sewer pipes to be laid in maximum 3 metre lengths unless there is a specific operational need to lay longer lengths. Plastic channel sections in manholes are not acceptable and Yorkshire Water would require clay ware channel in manholes.
11. The minimum crushing strength for clay pipes should be as follows: 100mm dia. 40kN/m, 150mm dia. 40kN/m, 225mm dia. 45kN/m and 300mm dia. 72kN/m. The minimum crushing strength for concrete pipes should be - (Class 120 to EN 1916/BS5911-1 2002). Plastic pipes should conform to WIS 4-35-01 and BS EN13476.
12. Where a B125 cover and frame has been approved, this **must not** be coated in plastic and must have lifting eyes suitably sized to accommodate standard lifting keys. Screw down covers are not acceptable.
13. There must be **directly** clearance at crossovers to accommodate bedding to both pipes, approx. 300mm if; crossover is near the rocker then the clearance needed may need to be increased".

**For all clause and table references
please refer to Design and
Construction Guidance contained
within the Code for Adoption**

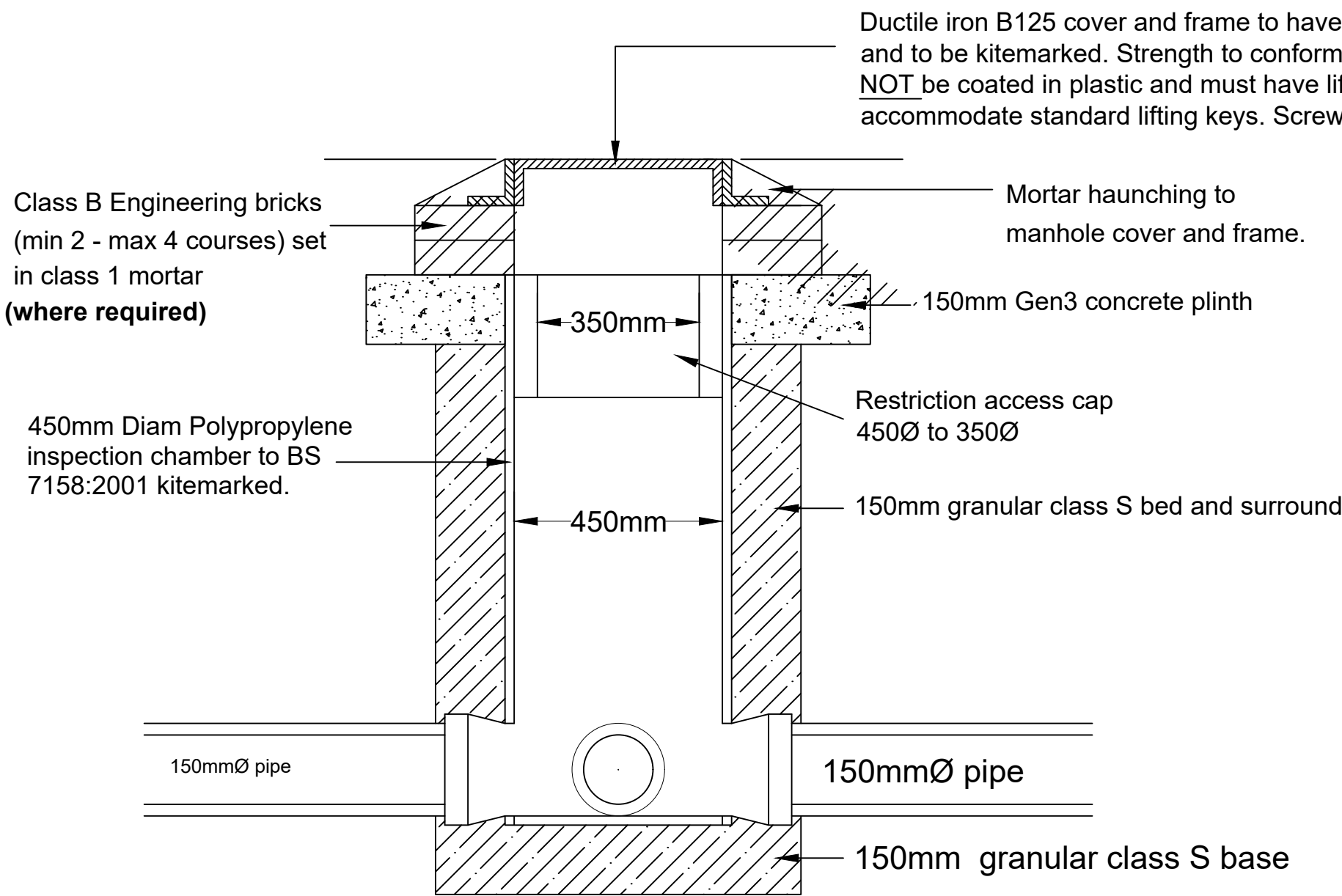
Developer Services

Title	Wide Wall Manhole Details
Drawing No	YW-DS-002
Revision	-
Date	01 April 2023



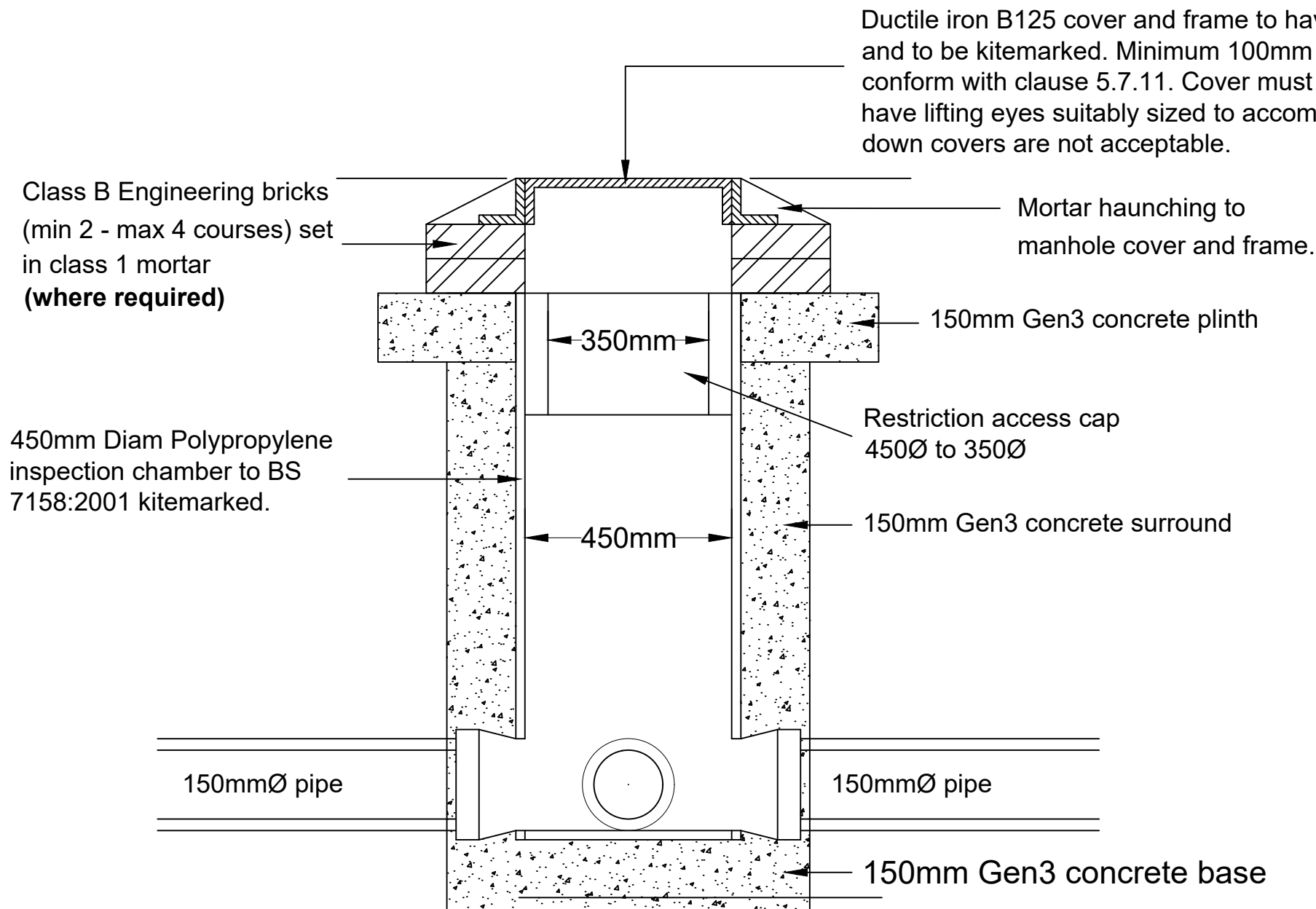
DEMARCATIION CHAMBER LOCATED IN GARDENS

For depth of chamber greater than 1200mm maximum depth 3000mm



DEMARCATIION CHAMBER LOCATED IN DRIVEWAY

For depth of chamber greater than 1200mm maximum depth 3000mm



Pipes

Diameter (mm)	Gradient	
	Foul	S.W
100	1:80	-
150	1:80	1:80

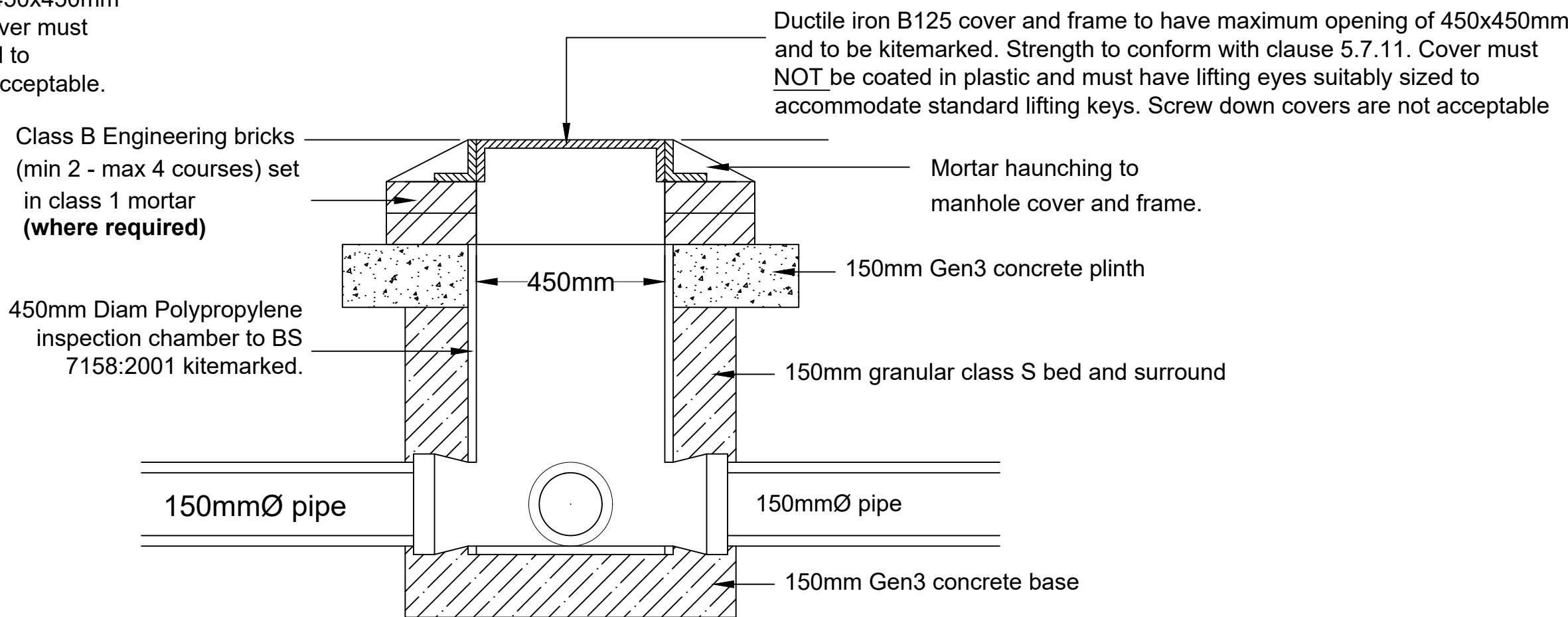
Vitrified clay pipes to BS EN 295 kitemarked.
Unplasticised PVC pipes to BS 4660:200 & BS EN 1401-1 kitemarked.
Structured Wall Unplasticisd PVC pipes to WIS 4-35-01 kitemarked.

Demarcation Chamber Covers and Frames

Surface	Class (Loading in kN)	Loading
Road	D400	Vehicle Impact
Footway & Driveway	B125	Occasional vehicle loading
Gardens	B125	Pedestrian/cyclist

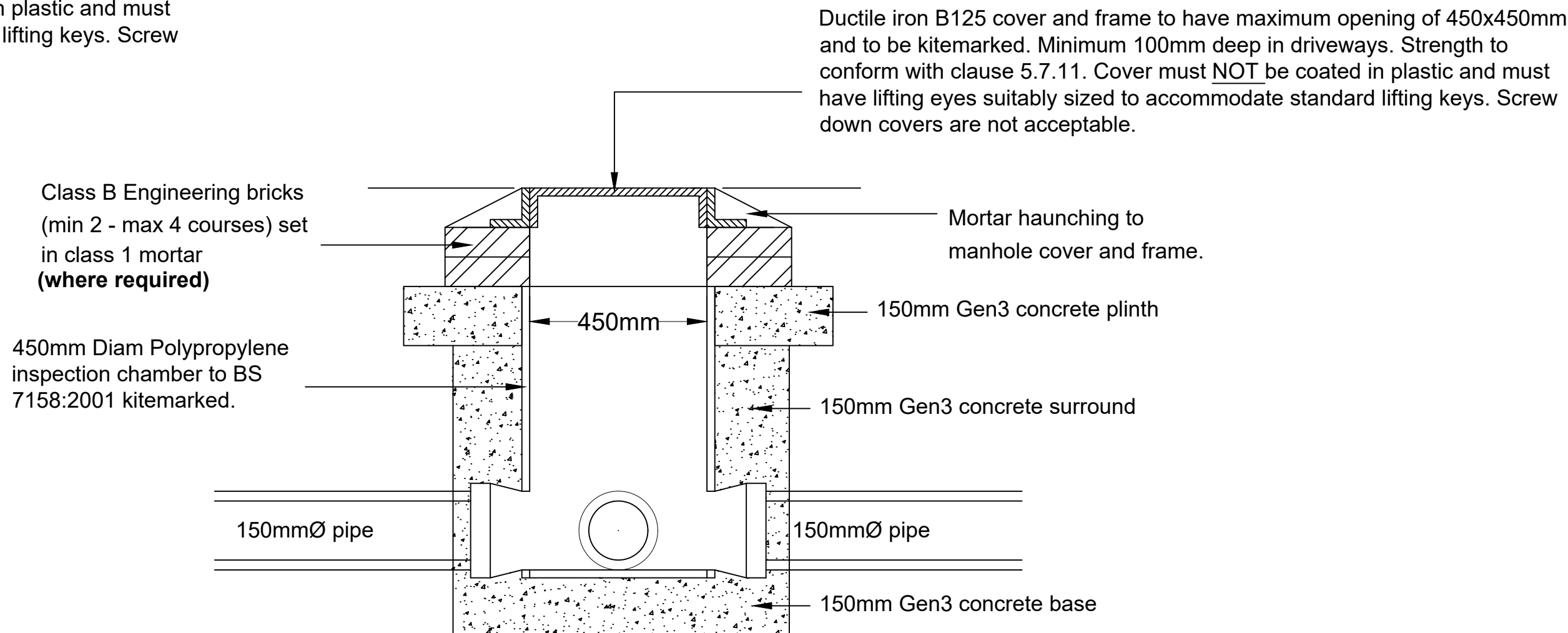
DEMARCATIION CHAMBER LOCATED IN GARDENS

For depth of chamber from cover level to invert level of pipe chamber less than 1200mm

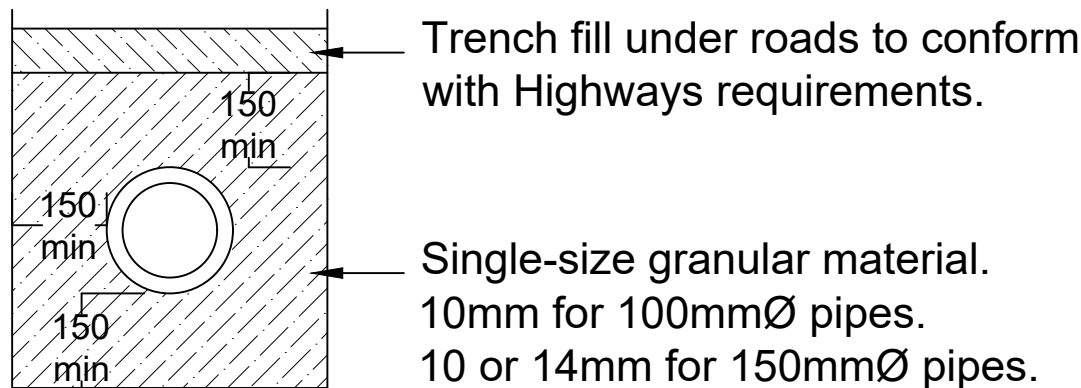


DEMARCATIION CHAMBER LOCATED IN DRIVEWAY

For depth of chamber from cover level to invert level of pipe chamber less than 1200mm



LATERAL DRAIN BEDDING DETAIL



Yorkshire Water Notes

- All adoptable sewer works and material to be in accordance with "Code for Adoption". The Relevant British/European and Yorkshire Water's Standards/Requirements/Addendum to the Mechanical and Electrical Specification and Kitemarked.
- Manhole covers shall/must have a clear opening of 600mm and shall be Class D400 to BS EN 124 with 150mm deep frames in highways.
- Filled ground must be filled and consolidated under the supervision and to the satisfaction of Yorkshire Water before any sewer works are carried out.
- Yorkshire Water is **not** obliged to accept filter drain/land drainage run-off into the public sewer network or adoptable drainage system (**directly or in-directly**). An alternative method of disposal of the land drainage run-off will therefore be required and you will have to liaise with the Local Authority, Land Drainage Section regarding the disposal of the filter drain/land drainage run-off.
- The adoptable sewers should be a minimum of 1m and manholes 0.5m from kerb faces and service margins.
- Sewers must have 5 metres clearance from trees and hedges or the width of the canopy at mature height.
- Sewers to be laid in Class "S" Bedding (**150mm granular bed and surround**). Where depth of cover to top of the sewer is less than 1.2m in highways and verges (**or less than 900mm in nonvehicular access areas**) then a concrete slab should be provided above granular bed and surround.
- Bedding and backfill material to conform to the requirement of Water Industry Specification 4-08-02 (**Table A2**).
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- Adoptable plastic sewer pipes to be BSI Kitemarked (**certified to WIS 4-35-01** and BS/EN13476). Adoptable plastic sewer pipes to be laid in maximum 3 metre lengths unless there is a specific operational need to lay longer lengths. Plastic channel sections in manholes are not acceptable and Yorkshire Water would require clay ware channel in manholes.
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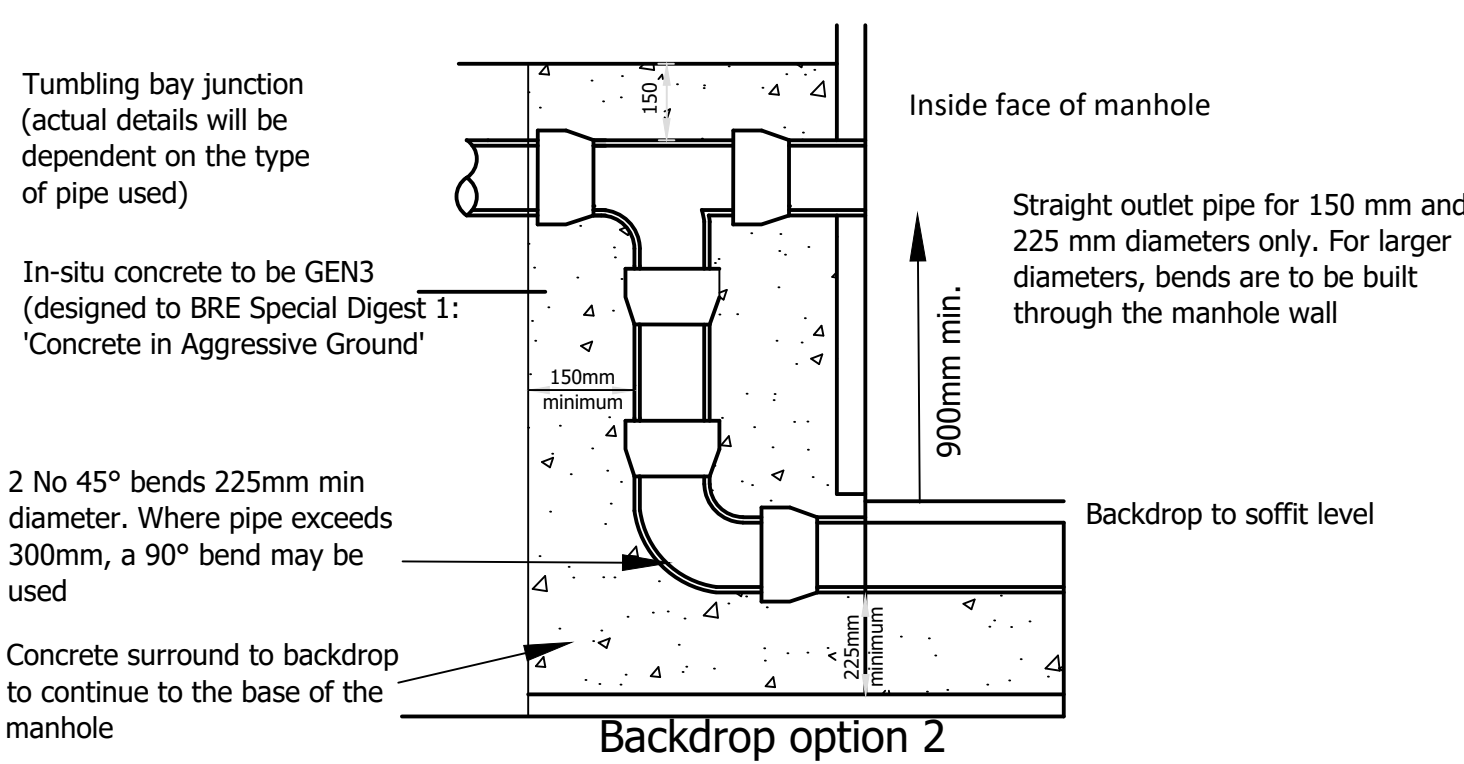
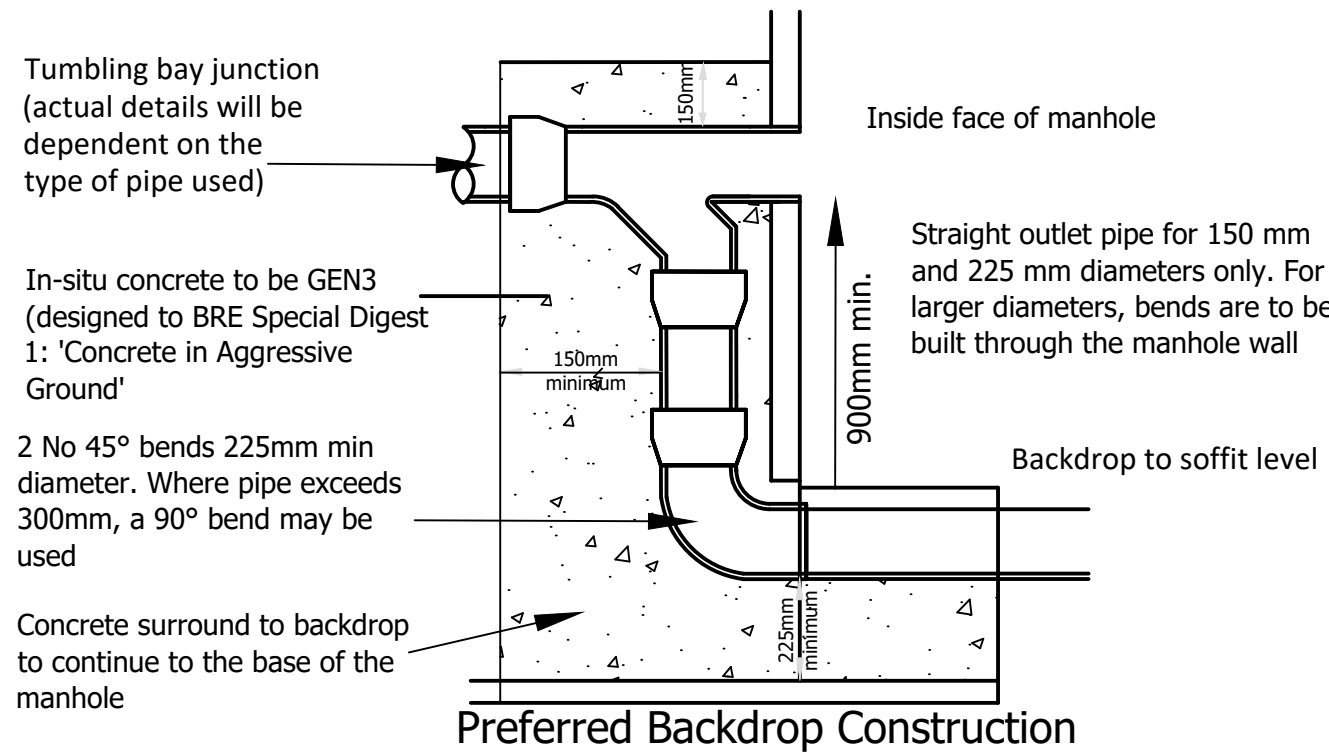
For all clause and table references please refer to Design and Construction Guidance contained within the Code for Adoption

Developer Services

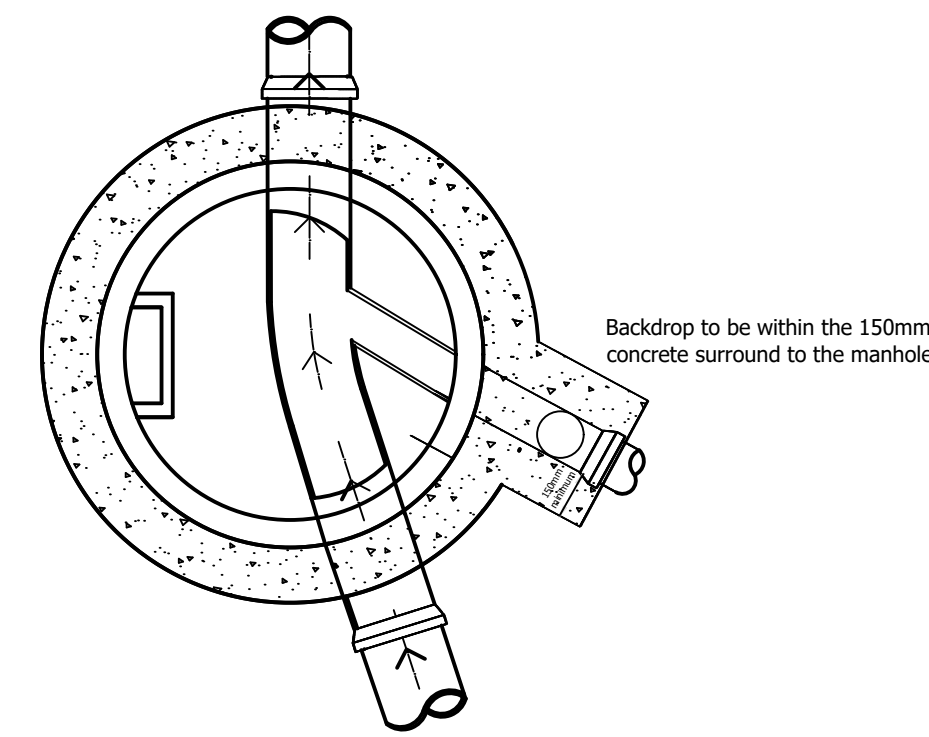
Title	Typical Demarcation Chambers
Drawing No	YW-DS-003
Revision	-
Date	01 April 2023



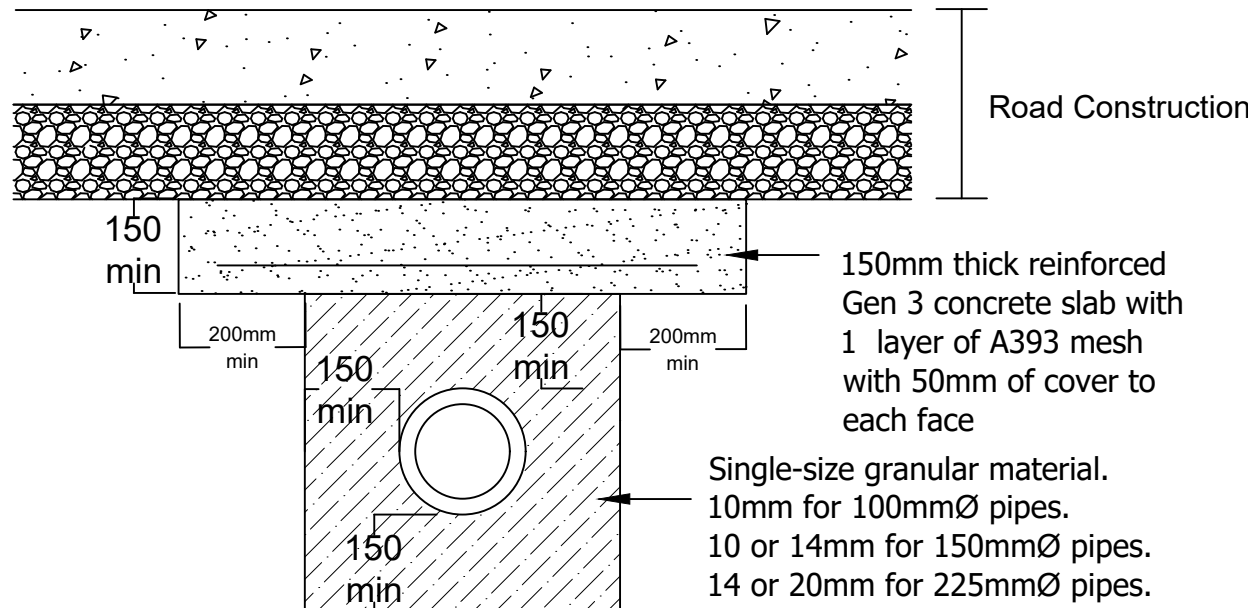
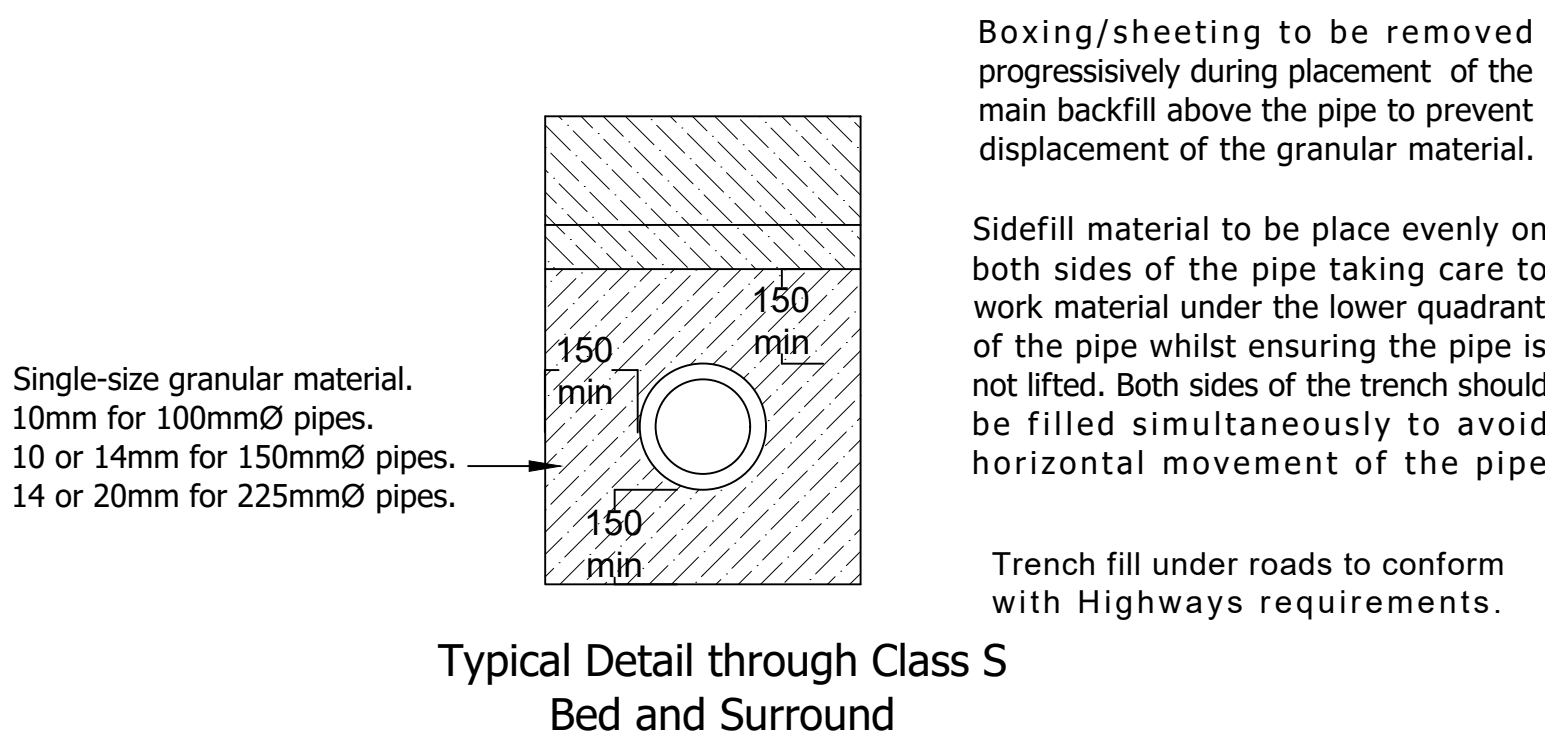
Backdrop Detail



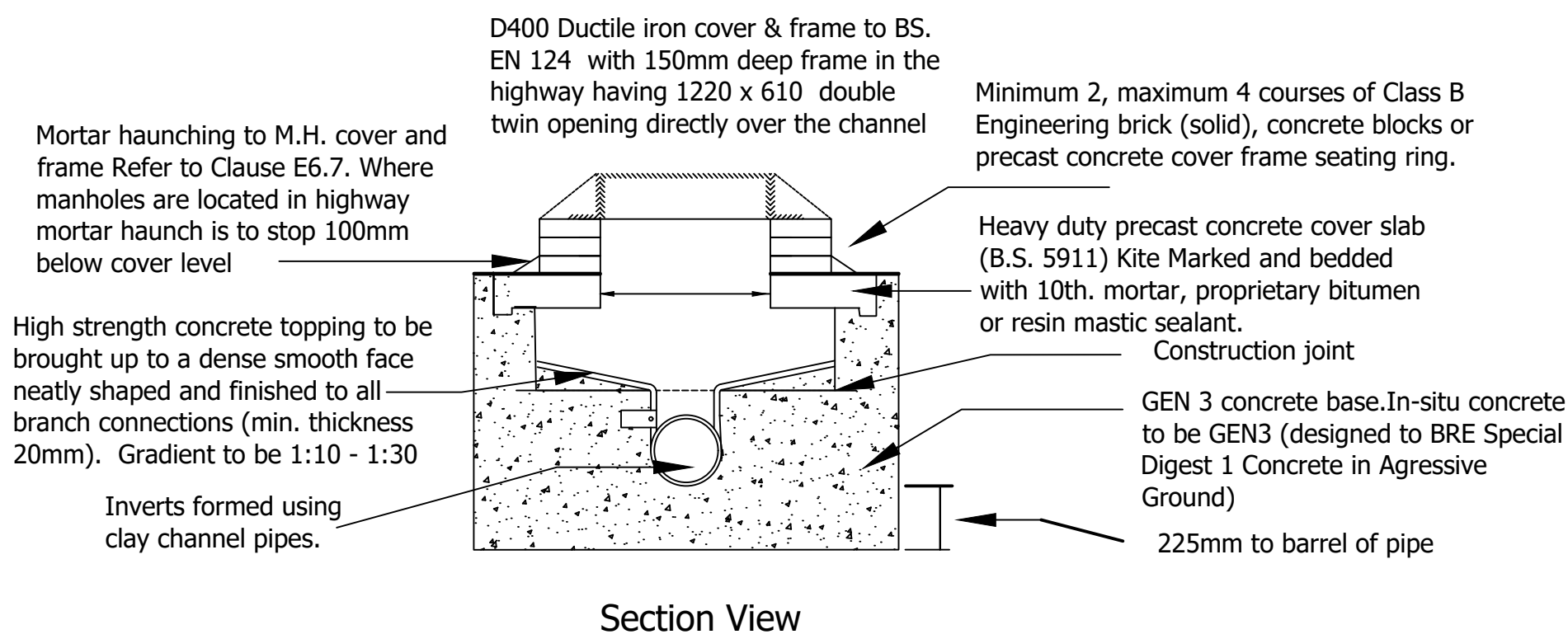
Backdrop Plan View



Pipe Surround Detail

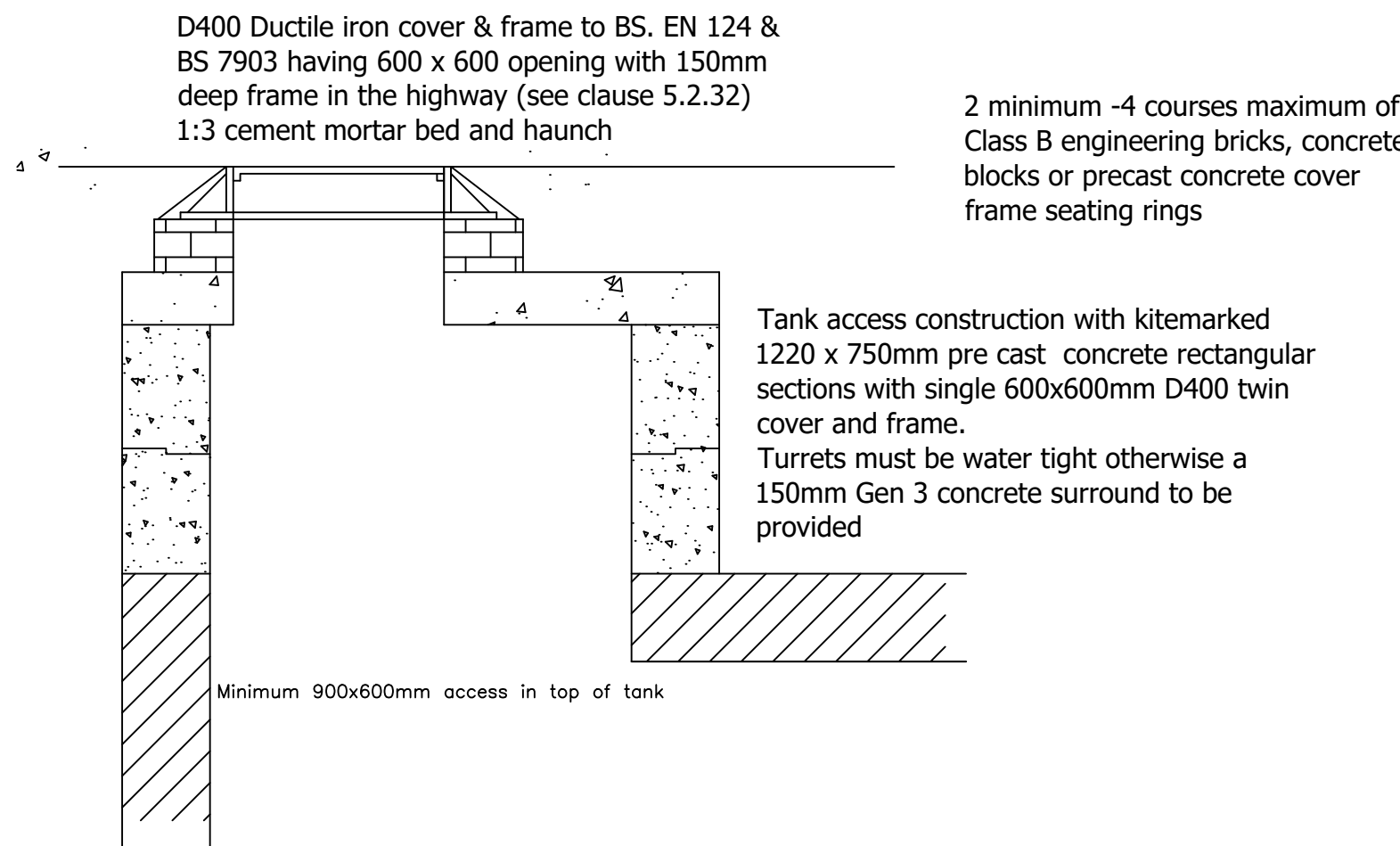


Shallow Manhole Detail

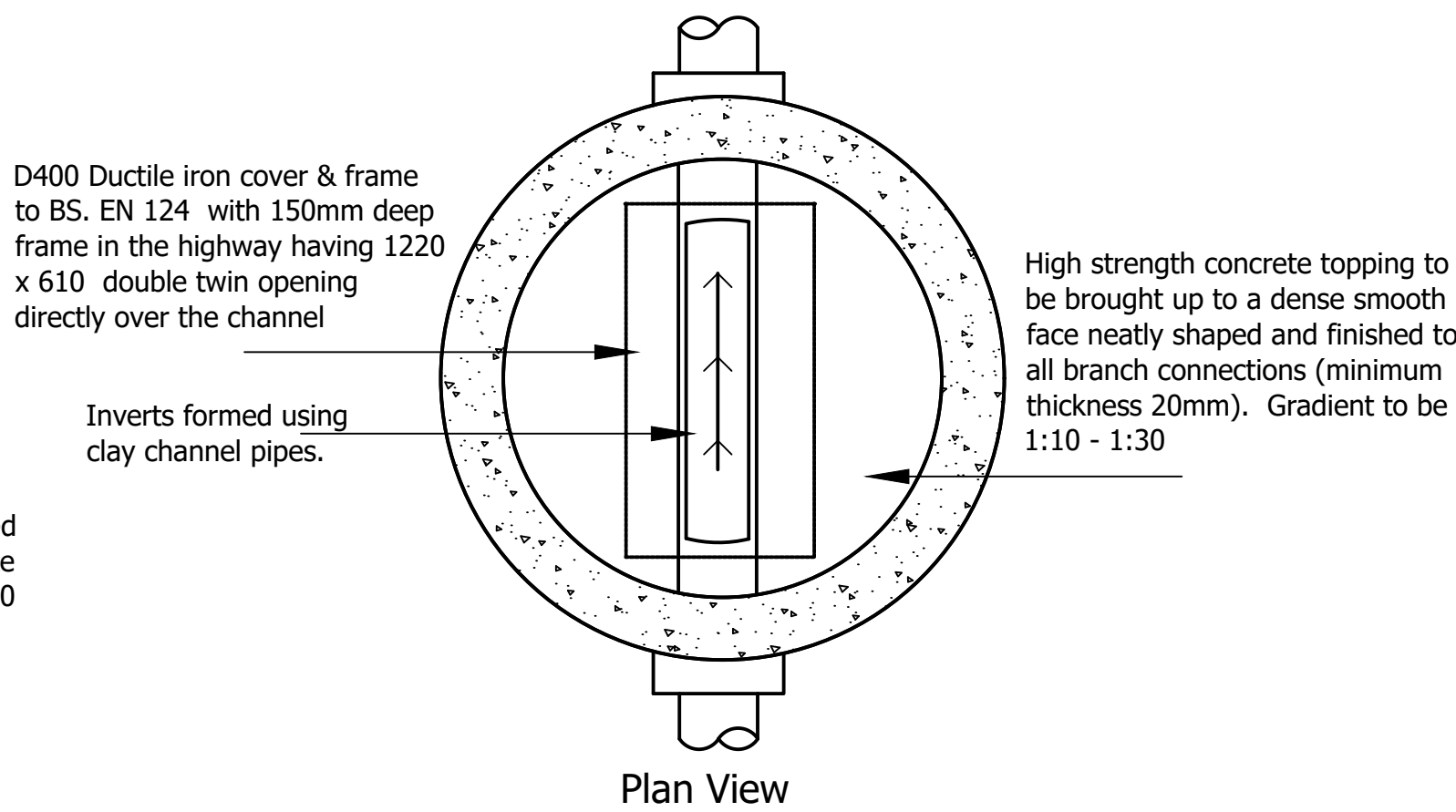
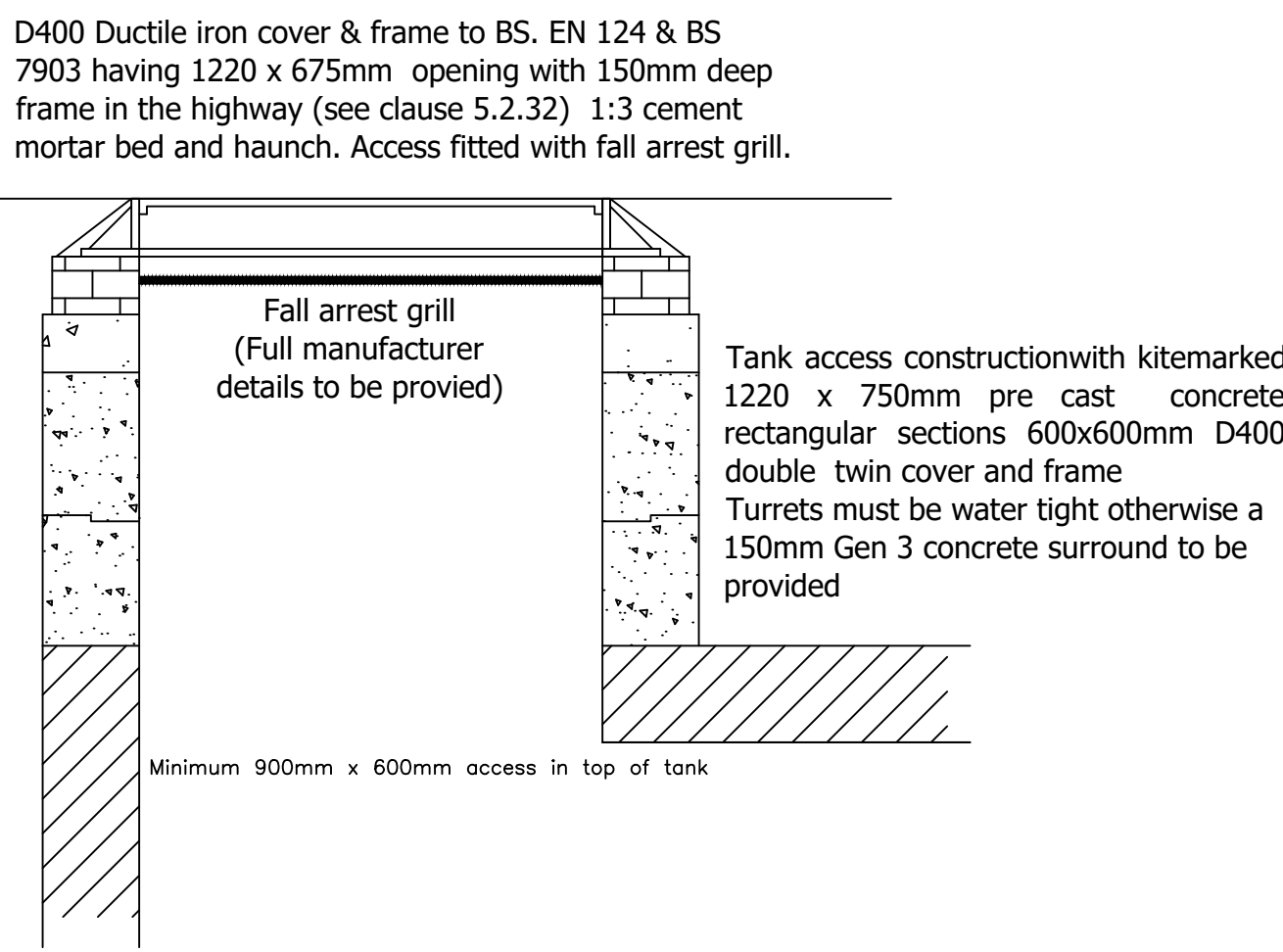


Tank Access Detail

Standard Tank Access

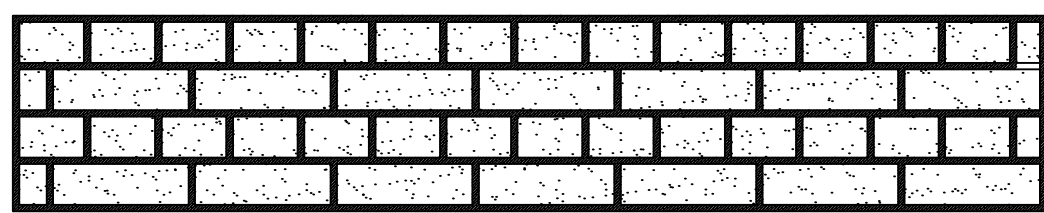


Tank Access Over Inlet/Outlet Points

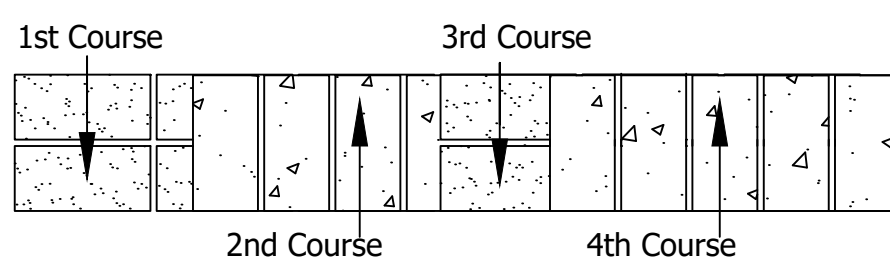


Brickwork Detail

All brickwork to be minimum 2 - maximum 4 courses of Class B engineering bricks constructed in English Bond



English Bond



Brickwork Plan View

Yorkshire Water Notes

- All adoptable sewer works and material to be in accordance with 'Code for Adoption'. The Relevant British/European and Yorkshire Water's Standards/Requirements/Addendum to the Mechanical and Electrical Specification and Kitemarked.
- Manhole covers shall/must have a clear opening of 600mm and shall be Class D400 to BS EN 124 with 150mm deep frames in highways.
- Filled ground must be filled and consolidated under the supervision and to the satisfaction of Yorkshire Water before any sewer works are carried out.
- Yorkshire Water is **not** obliged to accept filter drain/land drainage run-off into the public sewer network or adoptable drainage system (**directly or in-directly**). An alternative method of disposal of the land drainage run-off will therefore be required and you will have to liaise with the Local Authority, Land Drainage Section regarding the disposal of the filter drain/land drainage run-off.
- The adoptable sewers should be a minimum of 1m and manholes 0.5m from kerb faces and service margins.
- Sewers must have 5 metres clearance from trees and hedges or the width of the canopy at mature height.
- Sewers to be laid in Class "S" Bedding (**150mm granular bed and surround**). Where depth of cover to top of the sewer is less than 1.2m in highways and verges (**or less than 900mm in nonvehicular access areas**) then a concrete slab should be provided above granular bed and surround.
- Bedding and backfill material to conform to the requirement of Water Industry Specification 4-08-02 (**Table A2**).
- Yorkshire Water policy is that Type "C" brick manholes and 1050mm diameter manhole rings are not preferred. Instead, it is preferred that you use a type "B" manhole with 1200mm diameter or 1500mm diameter rings, with the opening sited over the channel where depth of cover to pipe soffit is 1 - 1.5m.
- Adoptable plastic sewer pipes to be BSI Kitemarked (**certified to WIS 4-35-01** and BS/EN13476). Adoptable plastic sewer pipes to be laid in maximum 3 metre lengths unless there is a specific operational need to lay longer lengths. Plastic channel sections in manholes are not acceptable and Yorkshire Water would require clay ware channel in manholes.
- The minimum crushing strength for clay pipes should be as follows: 100mm dia. 40kN/m, 150mm dia. 40kN/m, 225mm dia. 45kN/m and 300mm dia. 72kN/m. The minimum crushing strength for concrete pipes should be - (Class 120 to EN 1916/BS5911-1 2002). Plastic pipes should conform to WIS 4-35-01 and BS EN13476.
- Where a B125 cover and frame has been approved, this **must not** be coated in plastic and must have lifting eyes suitably sized to accommodate standard lifting keys. Screw down covers are not acceptable.
- There must be enough clearance at crossovers to accommodate bedding to both pipes, approx. 300mm; if crossover is near the rocker then the clearance needed may need to be increased.

For all clause and table references please refer to Design and Construction Guidance contained within the Code for Adoption

Developer Services

Title	Typical Construction Details
Drawing No	YW-DS-004
Revision	-
Date	01 April 2023



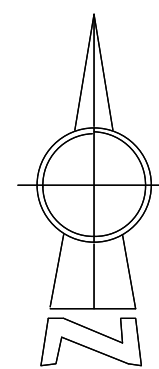
Rev	By	Date	Issued for approval	MI	MI
				Chk	Apvd

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TITLE			
GULLY CATCHMENT AREAS PHASE 5			
PROJECT			
CROSSLEY LANE HUDDERSFIELD			
CLIENT			
MINERVA WORKS DEVELOPMENTS LTD			
DRAWING STATUS			
PRELIMINARY			
Scale	Date	Drawn	DJG
1:500 @ A1	JAN 24	Chk.	MI
Dwg. No.			Rev
0906/03/09.02			

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Rev	By	Date	Revision	Chk	Apvd
1	DJC	01.10.24	Issued for approval	MI	MI



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TITLE			
GULLY CATCHMENT AREAS PARCEL 4			
PROJECT			
CROSSLEY LANE HUDDERSFIELD			
CLIENT			
MINERVA WORKS DEVELOPMENTS LTD			
DRAWING STATUS			
PRELIMINARY			
Scale	Date	Drawn	DJC
1:500 @ A1	SEP 24	Chk.	MI
Drg. No.	0906/03/09.08		Rev /

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Manhole Number	Cover Level	Connections	Pipe			Manhole Size	Types		
			Code	Inverts	Diams		Manhole	Cover	
F1	63.000								
E. 1034.108	1.200		0	1.000	61.650	150	1200	C	D400
N. 3177.631									
F2	62.500		1	1.000	61.124	150	1200	C	D400
E. 1003.944	1.226		0	1.001	61.124	150			
N. 3201.975									
F3	62.400		1	1.001	60.975	150			
	1.275		0	Existing	60.900	225	EXISTING	EXISTING	EXISTING
F4	62.353								
E. 1056.956	1.203		0	1.000	61.000	150	1200	C	D400
N. 3101.192									
F5	62.457		1	1.000	60.773	150			
E. 1032.068	1.534		0	1.001	60.773	150	1200	B	D400
N. 3108.694									
F6	62.885		1	1.001	60.473	150			
E. 1005.287	2.262		0	1.002	60.473	150	1200	B	D400
N. 3130.077									
F7	63.010		1	1.002	60.045	150			
E. 967.029	2.815		0	1.003	60.045	150	1200	B	D400
N. 3160.623									
F8	62.934		1	1.003	59.992	150			
E. 960.981	2.792		0	1.004	59.992	150	1200	B	D400
N. 3159.946									
F9	62.488		1	1.004	59.704	150			
E. 940.518	2.634		0	1.005	59.704	150	1200	B	D400
N. 3134.199									
F10	61.290								
E. 921.185	1.200		0	2.000	59.940	150	1200	C	D400
N. 3228.703									
F11	61.543		1	2.000	59.762	150			
E. 920.335	1.631		0	2.001	59.762	150	1200	B	D400
N. 3208.324									
F12	61.762		1	2.001	59.607	150			
E. 916.643	2.005		0	2.002	59.607	150	1200	B	D400
N. 3191.042									
F13	61.613		1	1.005	59.264	150			
E. 898.824	2.199		2	2.002	59.264	150	1200	B	D400
N. 3156.167			0	1.006	59.264	150			

Manhole Number	Cover Level	Connections	Pipe			Manhole Size	Types		
			Code	Inverts	Diams		Manhole	Cover	
F14	61.425		1	1.006	59.142	150	1200	B	D400
E. 891.801	2.133		0	1.007	59.142	150			
N. 3142.840			0	1.007	58.972	150			
F15	61.300		1	1.007	58.972	150	1200	B	D400
E. 871.585	2.178		0	1.008	58.972	150			
N. 3148.521			0	1.008	58.900	150			
F16	60.850		1	1.008	58.900	150	1800	B	D400
E. 864.458	1.800		0	Existing	58.225	825			
N. 3143.366			0	Existing	58.225	825			

NOTES

1. This drawing is to be read in conjunction with all relevant ARP and Architects drawings and project specifications.

2. Survey related to topographical survey supplied by Minerva Works Developments Ltd.

3. Co-ordinates to be checked prior to works commencing. Any discrepancies to be brought to the immediate attention of ARP.

Yorkshire Water General Notes

1. All adoptable sewer works and material to be in accordance with Sewerage Sector Guidance Design and Construction Guidance [Code for Adoption]. The Relevant British/European and Yorkshire Water's Standards/Requirements/Local Practice for the Adoption of Small Submersible Foul and Surface Water Pumping Stations and Kitemarked.

2. Manhole covers shall/must have a clear opening of 600mm and shall be Class D400 to BS EN 124 with 150mm deep frames in highways.

3. Filled ground must be filled and consolidated under the supervision and to the satisfaction of Yorkshire Water before any sewer works are carried out.

4. Yorkshire Water is not obliged to accept filter drain/land drainage run-off into the public sewer network or adoptable drainage system (directly or in-directly). An alternative method of disposal of the land drainage run-off will therefore be required and you will have to liaise with the Local Authority, Land Drainage Section with regard to the disposal of the filter drain/land drainage run-off.

5. The adoptable sewers should be a minimum of 1m and manholes 0.5m from kerb faces and service margins.

6. Sewers must have 5 metres clearance from trees and hedges or the width of the canopy at mature height.

7. Sewers to be laid in Class "S" Bedding (150mm granular bed and surround). Where depth of cover to top of the sewer is less than 1.2m in highways and verges (or less than 900mm in non-vehicular access areas) then a concrete slab should be provide above granular bed and surround.

8. There must be enough clearance at crossovers to accommodate bedding to both pipes, approx. 300mm : if crossover is near the rocker then the clearance needed may be increased".

9. Bedding and backfill material to conform to the requirement of Water Industry Specification 4-08-02 (Table A2).

10. Adoptable plastic sewer pipes to be BS1 Kitemarked (certified to WIS 4-35-01 and BS/EN13476). Adoptable plastic sewer pipes to be laid in maximum 3 metre lengths unless there is a specific operational need to lay longer lengths. Plastic channel sections in manholes are not acceptable and Yorkshire Water would prefer clayware channel in manholes.

11. The minimum crushing strength for clay pipes should be as follows : 100mm dia. 40KN/m, 150mm dia. 40KN/m, 225mm dia. 45KN/m and 300mm dia. 72KN/m. The minimum crushing strength for concrete pipes should be ~ (Class 120 to EN 1916/BS5911-1:2002). Plastic pipes should conform to WIS 4-35-01 and BS EN13476.

12. Yorkshire Water policy is that Type "C" brick manholes and 1050mm dia. manhole rings are not preferred. Instead it is preferred that you use a type "B" manhole with 1200mm dia or 1500mm dia rings, with the opening sited over the channel where depth of cover to pipe soffit is 1 - 1.5m.

13. Where a B125 cover and frame has been approved, this must not be coated in plastic and must have lifting eyes suitably sized to accommodate standard lifting keys. Screw down covers are not acceptable.

Rev

By

Date

Issued for approval

Revision

MI

MI

ARP

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TITLE

PHASE 5

FOUL WATER

MANHOLE SCHEDULES

PROJECT

CROSSLEY LANE,

HUDDERSFIELD

CLIENT

MINERVA WORKS

DEVELOPMENTS LTD

DRAWING STATUS

PRELIMINARY

Scale

N/A @ A1

Date

JAN 24

Drawn

DJG

Chk.

MI

Drg. No.

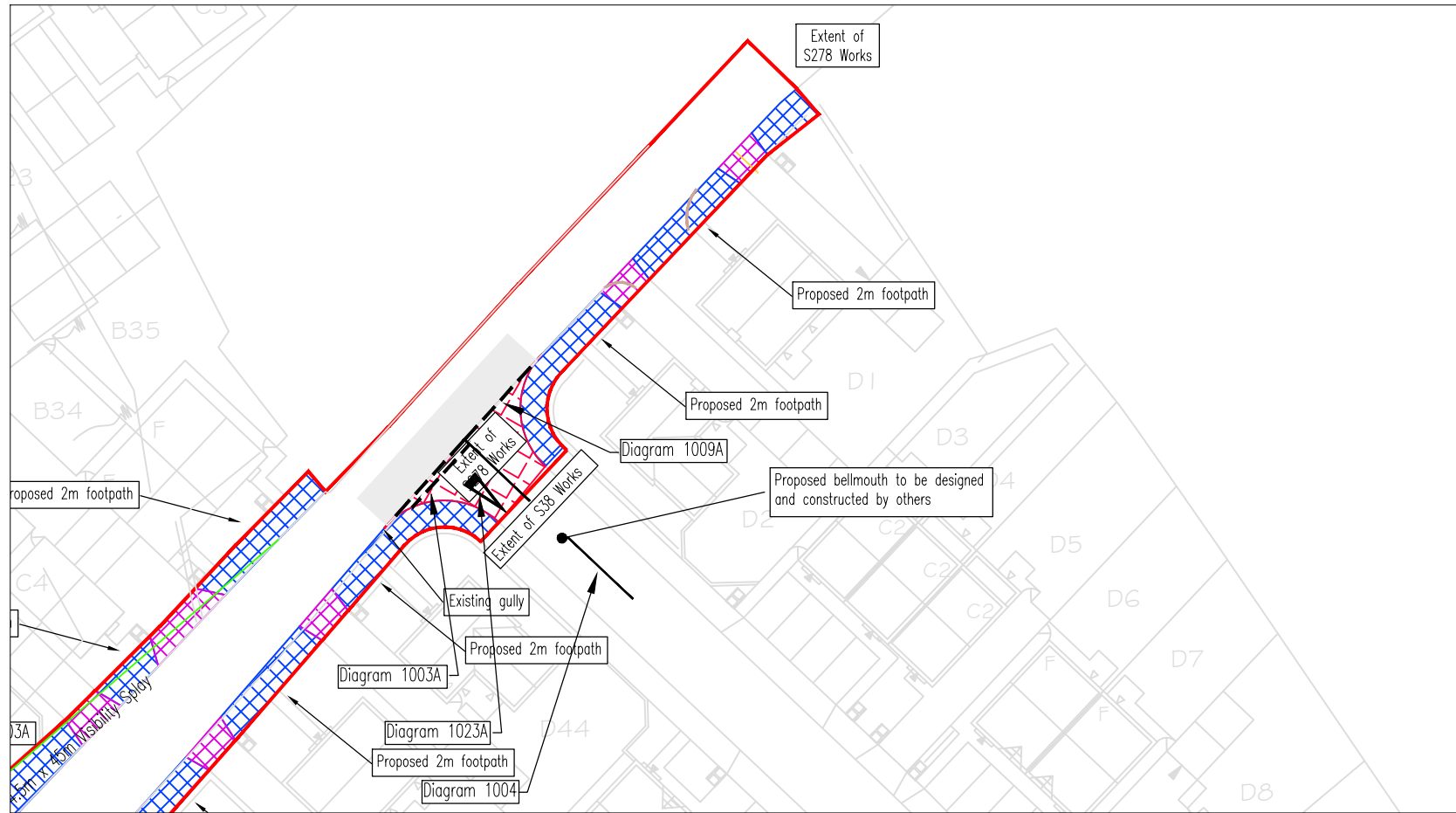
0906/03/11.02

Rev

/

SUBJECT TO THE
APPROVAL OF
ALL RELEVANT
AUTHORITIES

N O T E S									
1. This drawing is to be read in conjunction with all relevant ARP and Architects drawings and project specifications. 2. Survey related to topographical survey supplied by Minerva Works Developments Ltd. 3. Co-ordinates to be checked prior to works commencing. Any discrepancies to be brought to the immediate attention of ARP.									
Yorkshire Water General Notes 1. All adoptable sewer works and material to be in accordance with Sewerage Sector Guidance Design and Construction Guidance [Code for Adoption]. The Relevant British/European and Yorkshire Water's Standards/Requirements/Local Practice for the Adoption of Small Submersible Foul and Surface Water Pumping Stations and Kitemarked. 2. Manhole covers shall/must have a clear opening of 600mm and shall be Class D400 to BS EN 124 with 150mm deep frames in highways. 3. Filled ground must be filled and consolidated under the supervision and to the satisfaction of Yorkshire Water before any sewer works are carried out. 4. Yorkshire Water is <u>not</u> obliged to accept filter drain/land drainage run-off into the public sewer network or adoptable drainage system (directly or in-directly). An alternative method of disposal of the land drainage run-off will therefore be required and you will have to liaise with the Local Authority, Land Drainage Section with regard to the disposal of the filter drain/land drainage run-off. 5. The adoptable sewers should be a minimum of 1m and manholes 0.5m from kerb faces and service margins. 6. Sewers must have 5 metres clearance from trees and hedges or the width of the canopy at mature height. 7. Sewers to be laid in Class "S" Bedding (150mm granular bed and surround). Where depth of cover to top of the sewer is less than 1.2m in highways and verges (or less than 900mm in non-vehicular access areas) then a concrete slab should be provide above granular bed and surround. 8. There must be enough clearance at crossovers to accommodate bedding to both pipes, approx. 300mm : if crossover is near the rocker then the clearance needed may be increased". 9. Bedding and backfill material to conform to the requirement of Water Industry Specification 4-08-02 (Table A2). 10. Adoptable plastic sewer pipes to be BS1 Kitemarked (certified to WIS 4-35-01 and BS/EN13476). Adoptable plastic sewer pipes to be laid in maximum 3 metre lengths unless there is a specific operational need to lay longer lengths. Plastic channel sections in manholes are not acceptable and Yorkshire Water would prefer clayware channel in manholes. 11. The minimum crushing strength for clay pipes should be as follows : 100mm dia. 40KN/m, 150mm dia. 40KN/m, 225mm dia. 45KN/m and 300mm dia. 72KN/m. The minimum crushing strength for concrete pipes should be – (Class 120 to EN 1916/BS5911-1, 2002). Plastic pipes should conform to WIS 4-35-01 and BS EN13476. 12. Yorkshire Water policy is that Type "C" brick manholes and 1050mm dia. manhole rings are not preferred. Instead it is preferred that you use a type "B" manhole with 1200mm dia or 1500mm dia rings, with the opening sited over the channel where depth of cover to pipe soffit is 1 – 1.5m. 13. Where a B125 cover and frame has been approved, this <u>must not</u> be coated in plastic and must have lifting eyes suitably sized to accommodate standard lifting keys. Screw down covers are not acceptable.									



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KEY

Proposed S278 Boundary

Refer to Typical Highway Construction Drawing 0906/03/04 for full specification

Proposed Carriageway Full Construction

Proposed Footway Construction

Proposed Drive Crossing Construction

Existing Drive Crossing

Existing Footway to be resurfaced

Proposed Carriageway Resurfacing

Proposed Grass Verge

1. All highway works are to be constructed in accordance with the Kirklees Council construction specification.

2. All public sewers to comply with the requirements of the Water Authorities publication "Codes for Adoption" together with any additional specific requirements of the drainage authority.

3. All public sewers are to be the subject of a Section 104 Agreement of the Water Industry Act 1991.

4. Gully positions shown are subject to adjustment on site to ensure full drainage and the absence of ponding.

5. All gully's, gully leads and highway drains to be clay or concrete.

6. No trees to be sited within 1.5m of the highway boundary.

7. Any coated base material in carriageway left exposed for more than seven days to be sealed using bituminous sealing grit.

8. No limestone aggregate is to be used in the binder course, which is to be used as a running surface.

9. Highway boundary to be indicated by back edgings.

10. All vertical faces of joints involving flexible materials shall be treated with "oxy-bit" or other approved joint sealant. This includes ironwork, and precast products. Overbanding will not be accepted.

11. Any final surfacing to be discussed with Kirklees Council.

12. Analysis of the Carriageway Construction shall take place to determine what option is to be adopted. All tests will be scheduled within the programme of works for the scheme.

SUBJECT TO THE APPROVAL OF ALL RELEVANT AUTHORITIES

Rev	DJC	30.07.24	Issued for approval	MI	MI
	By	Date	Revision	Chk	Apvd

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TITLE
SECTION 278
GENERAL ARRANGEMENT

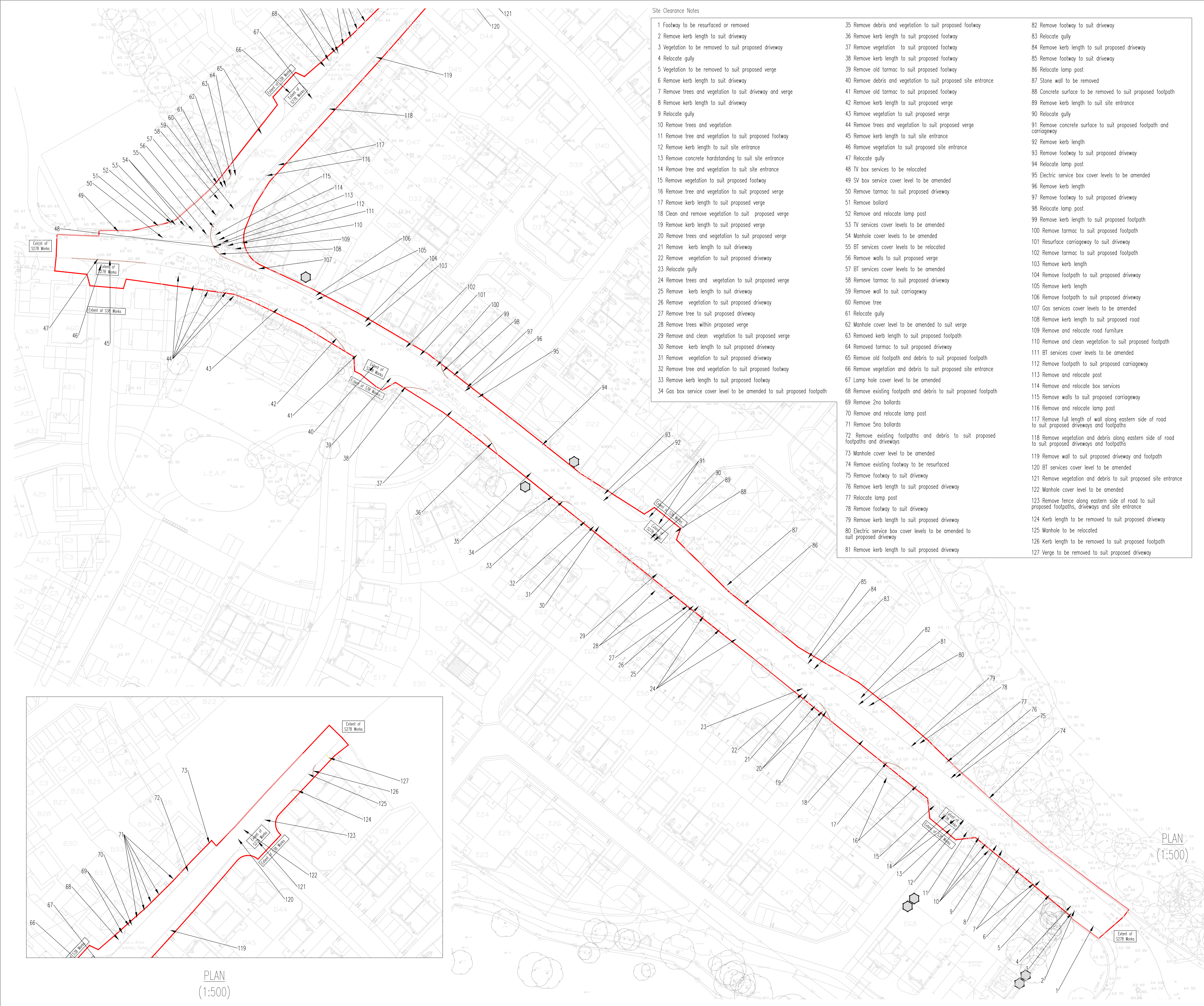
PROJECT
CROSSLEY LANE
HUDDERSFIELD

CLIENT
MINERVA WORKS
DEVELOPMENTS LTD

DRAWING STATUS
PRELIMINARY

Scale	Date	Drawn
1:500 @ A1	JAN 24	DJC
		Chk. MI

Drg. No.	Rev
0906/03/20.01	/



Site Clearance Notes

- 1 Footway to be resurfaced or removed
- 2 Remove kerb length to suit driveway
- 3 Vegetation to be removed to suit proposed driveway
- 4 Relocate gully
- 5 Vegetation to be removed to suit proposed verge
- 6 Remove kerb length to suit driveway
- 7 Remove trees and vegetation to suit driveway and verge
- 8 Remove kerb length to suit driveway
- 9 Relocate gully
- 10 Remove trees and vegetation
- 11 Remove tree and vegetation to suit proposed footway
- 12 Remove kerb length to suit site entrance
- 13 Remove concrete hardstanding to suit site entrance
- 14 Remove tree and vegetation to suit site entrance
- 15 Remove vegetation to suit proposed footway
- 16 Remove tree and vegetation to suit proposed verge
- 17 Remove kerb length to suit proposed verge
- 18 Clean and remove vegetation to suit proposed verge
- 19 Remove kerb length to suit proposed verge
- 20 Remove trees and vegetation to suit proposed verge
- 21 Remove kerb length to suit driveway
- 22 Remove vegetation to suit proposed driveway
- 23 Relocate gully
- 24 Remove trees and vegetation to suit proposed verge
- 25 Remove kerb length to suit driveway
- 26 Remove vegetation to suit proposed driveway
- 27 Remove tree to suit proposed driveway
- 28 Remove trees within proposed verge
- 29 Remove and clean vegetation to suit proposed verge
- 30 Remove kerb length to suit proposed driveway
- 31 Remove vegetation to suit proposed driveway
- 32 Remove tree and vegetation to suit proposed footway
- 33 Remove kerb length to suit proposed footway
- 34 Gas box service cover level to be amended to suit proposed footpath
- 35 Remove debris and vegetation to suit proposed footway
- 36 Remove kerb length to suit proposed footway
- 37 Remove vegetation to suit proposed footway
- 38 Remove kerb length to suit proposed footway
- 39 Remove old tarmac to suit proposed footway
- 40 Remove debris and vegetation to suit proposed site entrance
- 41 Remove old tarmac to suit proposed footway
- 42 Remove kerb length to suit proposed verge
- 43 Remove vegetation to suit proposed verge
- 44 Remove trees and vegetation to suit proposed verge
- 45 Remove kerb length to suit site entrance
- 46 Remove vegetation to suit proposed site entrance
- 47 Relocate gully
- 48 TV box services to be relocated
- 49 SV box service cover level to be amended
- 50 Remove tarmac to suit proposed driveway
- 51 Remove bollard
- 52 Remove and relocate lamp post
- 53 TV services cover levels to be amended
- 54 Manhole cover levels to be amended
- 55 BT services cover levels to be relocated
- 56 Remove walls to suit proposed verge
- 57 BT services cover levels to be amended
- 58 Remove tarmac to suit proposed driveway
- 59 Remove wall to suit carriageway
- 60 Remove tree
- 61 Relocate gully
- 62 Manhole cover level to be amended to suit verge
- 63 Removed kerb length to suit proposed footpath
- 64 Removed tarmac to suit proposed driveway
- 65 Remove old footpath and debris to suit proposed footpath
- 66 Remove vegetation and debris to suit proposed site entrance
- 67 Lamp hole cover level to be amended
- 68 Remove existing footpath and debris to suit proposed footpath
- 69 Remove 2no bollards
- 70 Remove and relocate lamp post
- 71 Remove 5no bollards
- 72 Remove existing footpaths and debris to suit proposed footpaths and driveways
- 73 Manhole cover level to be amended
- 74 Remove existing footway to be resurfaced
- 75 Remove footway to suit driveway
- 76 Remove kerb length to suit proposed driveway
- 77 Relocate lamp post
- 78 Remove footway to suit driveway
- 79 Remove kerb length to suit proposed driveway
- 80 Electric service box cover levels to be amended to suit proposed driveway
- 81 Remove kerb length to suit proposed driveway
- 82 Remove footway to suit driveway
- 83 Relocate gully
- 84 Remove kerb length to suit proposed driveway
- 85 Remove footway to suit driveway
- 86 Relocate lamp post
- 87 Stone wall to be removed
- 88 Concrete surface to be removed to suit proposed footpath
- 89 Remove kerb length to suit site entrance
- 90 Relocate gully
- 91 Remove concrete surface to suit proposed footpath and carriageway
- 92 Remove kerb length
- 93 Remove footway to suit proposed driveway
- 94 Relocate lamp post
- 95 Electric service box cover levels to be amended
- 96 Remove kerb length
- 97 Remove footway to suit proposed driveway
- 98 Relocate lamp post
- 99 Remove kerb length to suit proposed footpath
- 100 Remove tarmac to suit proposed footpath
- 101 Resurface carriageway to suit driveway
- 102 Remove tarmac to suit proposed footpath
- 103 Remove kerb length
- 104 Remove footpath to suit proposed driveway
- 105 Remove kerb length
- 106 Remove footpath to suit proposed driveway
- 107 Gas services cover levels to be amended
- 108 Remove kerb length to suit proposed road
- 109 Remove and relocate road furniture
- 110 Remove and clean vegetation to suit proposed footpath
- 111 BT services cover levels to be amended
- 112 Remove footpath to suit proposed carriageway
- 113 Remove and relocate post
- 114 Remove and relocate box services
- 115 Remove walls to suit proposed carriageway
- 116 Remove and relocate lamp post
- 117 Remove full length of wall along eastern side of road to suit proposed driveways and footpaths
- 118 Remove vegetation and debris along eastern side of road to suit proposed driveways and footpaths
- 119 Remove wall to suit proposed driveway and footpath
- 120 BT services cover level to be amended
- 121 Remove vegetation and debris to suit proposed site entrance
- 122 Manhole cover level to be amended
- 123 Remove fence along eastern side of road to suit proposed footpaths, driveways and site entrance
- 124 Kerb length to be removed to suit proposed driveway
- 125 Manhole to be relocated
- 126 Kerb length to be removed to suit proposed footpath
- 127 Verge to be removed to suit proposed driveway

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KEY

Proposed S278 Boundary

Length of existing kerb to be removed

SUBJECT TO THE
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AUTHORITIES

Rev	By	Date	Revision	MI	MI
/		ACSC 30.07.24	Issued for approval		

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TITLE

SERIES 200
SITE CLEARANCE

PROJECT

CROSSLEY LANE
HUDDERSFIELD

CLIENT

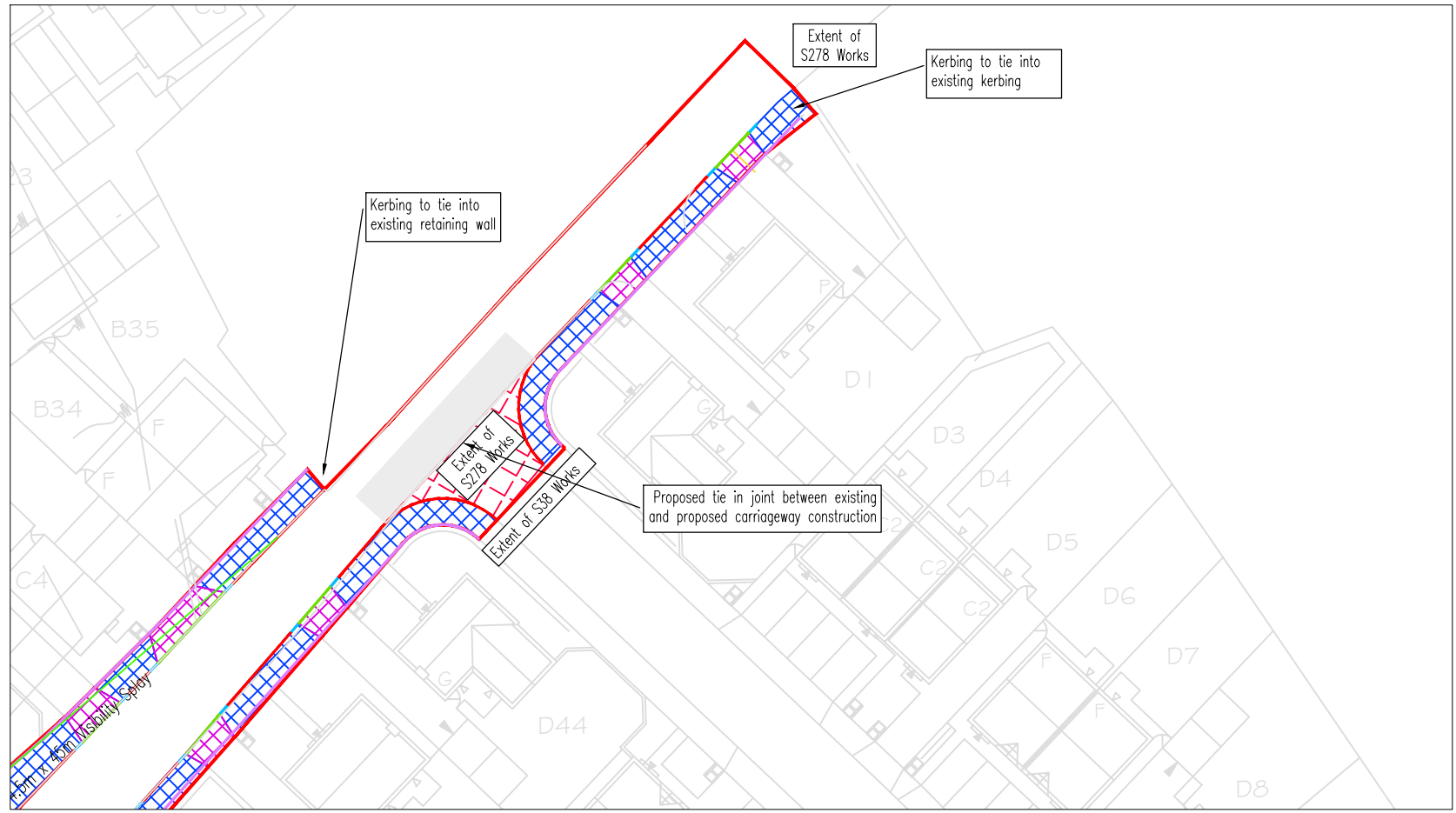
MINERVA WORKS
DEVELOPMENTS LTD

DRAWING STATUS

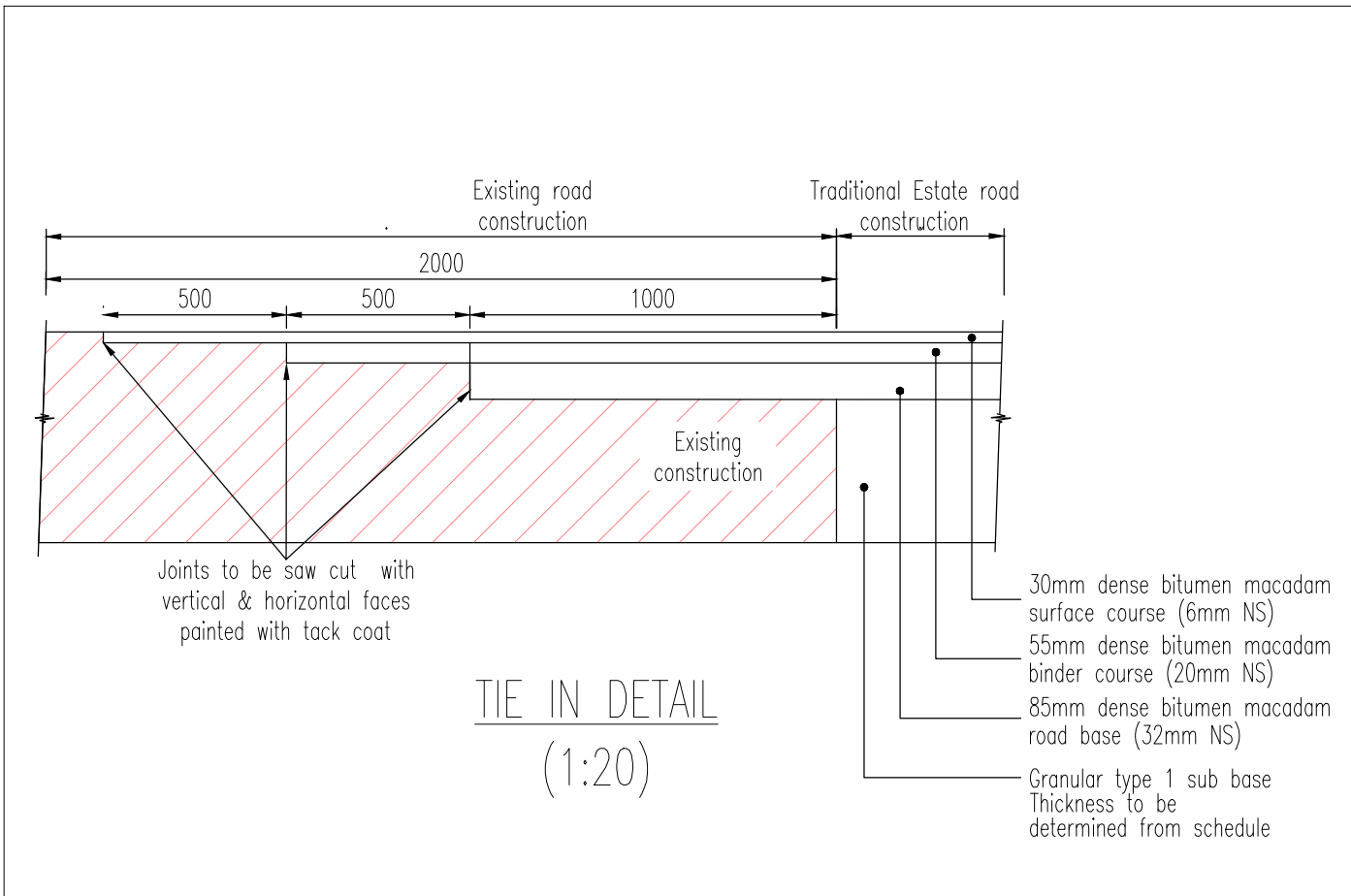
PRELIMINARY

Scale	Date	Drawn	AGSC
AS SHOWN @ A1	APR 24	Chk.	MI

Drg. No.	0906/03/200.01	Rev	/
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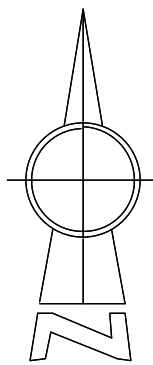


(1:20)

KEY

 Proposed S278 Boundary

Refer to Typical Highway Construction Drawing 0906/03/04 for full specification



1. All highway works are to be constructed in accordance with the Kirkcaldy Council construction specification.
2. All public sewers to comply with the requirements of the Water Authorities publication "Codes for Adoption" together with any additional specific requirements of the drainage authority.
3. All public sewers are to be the subject of a Section 104 Agreement of the Water Industry Act 1991.
4. Gully positions shown are subject to adjustment on site to ensure full drainage and the absence of ponding.
5. All gully's, gully leads and highway drains to be clay or concrete.
6. No trees to be sited within 1.5m of the highway boundary.
7. Any coated base bituminous sealing grit exposed for more than seven days to be sealed using bituminous car parking grit.
8. No limestone aggregate is to be used in the binder course, which is to be used as a running surface.
9. Highway boundary to be indicated by back edgings.
10. All vertical faces of joints involving flexible materials shall be treated with "Oxy-bit" or other approved sealant. This includes ironwork, and precast products. Overboarding will not be accepted.
11. Any final surfacing to be discussed with Kirkcaldy Council.
12. Analysis of the Carriageway Construction shall take place to determine what option is to be adopted. All tests will be scheduled within the programme of works for the scheme.

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AUTHORITIES

Rev	By	Date	Revision	Chk	Appv
/	DJG	30.07.24	Issued for approval	MI	MI



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TITLE

SERIES 700
ROAD PAVEMENTS

PROJECT

CROSSLEY LANE
HUDDERSFIELD

CLIENT

MINERVA WORKS
DEVELOPMENTS LTD

DRAFTING STATUS

PRELIMINARY

Scale

AS SHOWN @ A1

Date _____

IAN 24

Drawn

	DJG
Cbk	

Drg. No.

0906/03/700.01

Rev



N
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KEY

125x255 PCC Half Battered Kerb

Transition Kerb

125x150 Bullnosed (0-6mm Upstand)

50x150 PCC Edging

125x150 PCC Bullnosed Dropped Kerb (30mm upstand)

1. Refer to typical section Drawing No 0906/03/04 for highway details.

2. Dropped kerbs and tactile pavings are required at the junctions to facilitate the movement of wheelchairs etc. The dropped kerbs to be laid with a 0-6mm upstand at pedestrian crossings and 30mm upstand at vehicular crossings.

3. Adoptable sewers are not to be constructed under or within 1.0 metres of any footpath/ kerb line / service strip.

4. No walls are to be constructed 1m of the highway drains located in gardens or verge.

5. No water should be allowed to discharge from any private drives onto the adoptable highway.

6. All highway works are to be the subject of a Section 278 Agreement of the highways Act 1980.

7. Any coated base material in carriageway left exposed for more than seven days to be sealed using bituminous sealing grit.

8. Highway boundary to be indicated by back edgings laid flush or change of material on Private drives.

9. All vertical faces of joints involving flexible materials shall be treated with "Oxy-bit" or other approved joint sealant. This includes ironwork, and precast products. Overbanding will not be accepted by Kirklees Council.

10. Do not scale from this drawing.

SUBJECT TO THE
APPROVAL OF
ALL RELEVANT
AUTHORITIES

Rev	DJC	30.07.24	Issued for approval	MI	MI
	By	Date	Revision	Chk	Apvd

ARP

ARP ASSOCIATES
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ARP Associates is a trading division of ARP Geotechnical Ltd, a company registered in England and Wales with company number 3770811, whose registered office is at 5/6 Northwest Business Park, Servia Hill, Leeds LS6 2QH

TITLE
SERIES 1100
KERBING

PROJECT
CROSSLEY LANE
HUDDERSFIELD

CLIENT
MINERVA WORKS
DEVELOPMENTS LTD

DRAWING STATUS
PRELIMINARY

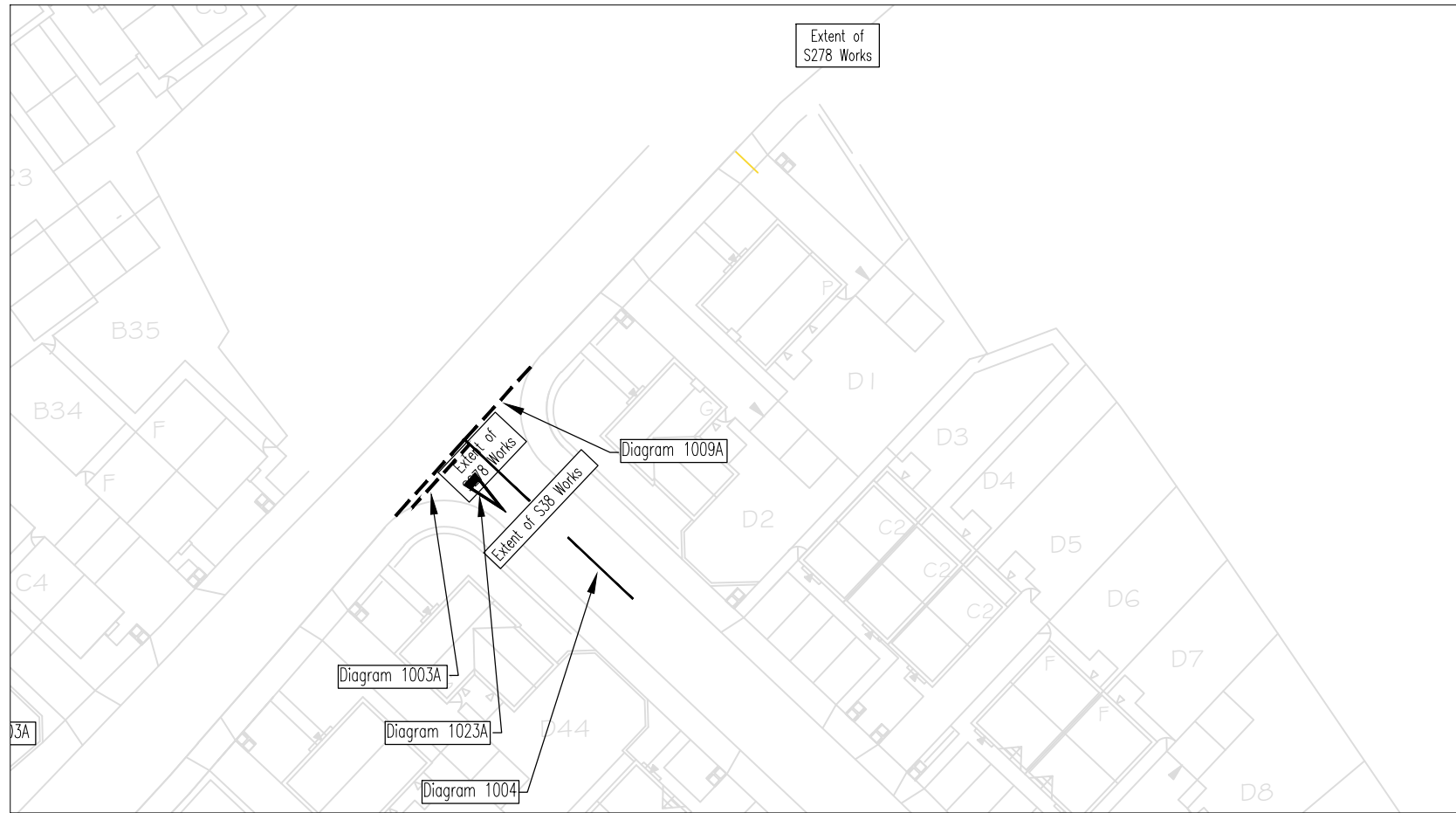
Scale
AS SHOWN @ A1

Date
JAN 24

Drawn
DJC
Chk.
MI

Drg. No.
0906/03/1100

Rev
/



N
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K E Y

Dia. No.	Description
1003A	600mm line 300mm gap 200mm wide: White. 2no rows of markings 300mm apart.
1004	4000mm line 2000mm gap 100mm wide: White
1009A	600mm 300mm gap 100mm wide: White
1023A	Give Way Marking: White

Notes:

- All signs and road markings to comply with the 'Traffic Signs Regulations and General Directions 2016'.
- New sign positions to be agreed on site with Engineer from Kirklees Council
- Electrical feeds to illuminated signs taken from nearest Lighting column.

Proposed S278 Boundary

SUBJECT TO THE APPROVAL OF ALL RELEVANT AUTHORITIES

Rev	By	Date	Revision	MI	MI
/	DJC	30.07.24	Issued for approval	MI	MI

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TITLE

SERIES 1200
ROAD MARKINGS AND SIGNS

PROJECT

CROSSLEY LANE
HUDDERSFIELD

CLIENT

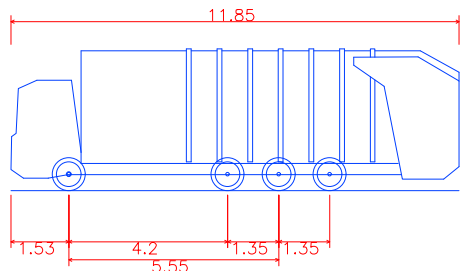
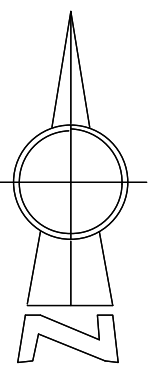
MINERVA WORKS
DEVELOPMENTS LTD

DRAWING STATUS

PRELIMINARY

Scale	Date	Drawn
AS SHOWN @ A1	APR 24	DJC
	Chk.	MI

Drg. No.	Rev
0906/03/1100	/



11.85m Refuse Vehicle
Overall Length 11.850m
Overall Width 2.500m
Overall Body Height 3.749m
Min Body Ground Clearance 0.302m
Track Width 2.490m
Lock to lock time 6.00s
Wall to Wall Turning Radius 11.000m



Rev	By	Date	Revision	MI	MI
				Chk	Apvd

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TITLE REFUSE VEHICLE
SWEEP PATH ANALYSIS
PARCEL 4

PROJECT
CROSSLEY LANE
HUDDERSFIELD

CLIENT
MINERVA WORKS
DEVELOPMENTS LTD

DRAWING STATUS
PRELIMINARY

Scale	Date	Drawn
1:500 @ A1	OCT 24	DJG
	Chk.	MI

Dwg. No.	Rev
0906/03/SK03	/