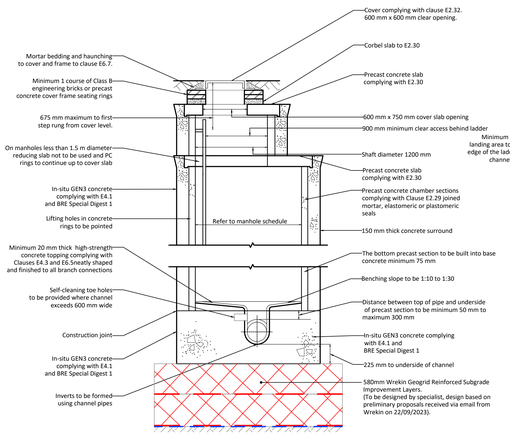
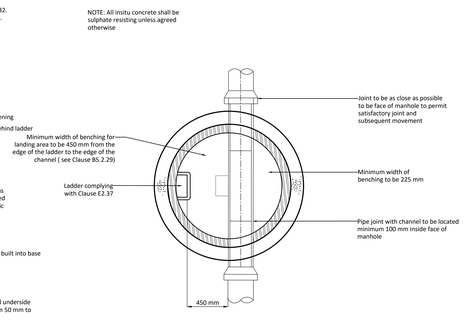


SECTION A-A

SHAFT DIAMETERS	
Dia of largest pipe in MH (mm)	Int. Dia of MH (mm)
Less than 375	1200
375 to 450	1350
500 to 750	1500
750 to 900	1800
Greater than 900	Pipe diameter + 900

For every two additional incoming pipes, the diameter of the manhole shall be increase by 150mm.

Note: For clauses referenced above refer to Water UK Sewerage Sector Guidance Appendix C'

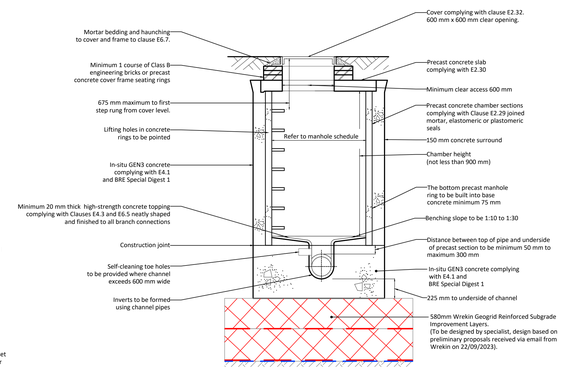


PLAN

ROCKER PIPES	
Pipe diameter (mm)	Effective Length (mm)
150 to 600	600

Note: For clauses referenced above refer to Water UK Sewerage Sector Guidance Appendix C'

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

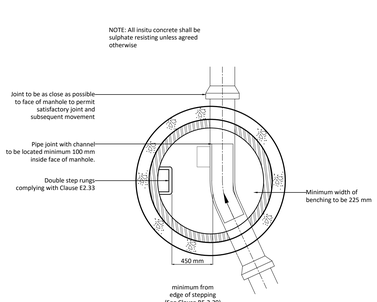


SECTION A-A

SHAFT DIAMETERS	
Dia of largest pipe in MH (mm)	Int. Dia of MH (mm)
Less than 375	1200
375 to 450	1350
500 to 750	1500
750 to 900	1800
Greater than 900	Pipe diameter + 900

For every two additional incoming pipes, the diameter of the manhole shall be increase by 150mm.

Note: For clauses referenced above refer to Water UK Sewerage Sector Guidance Appendix C'



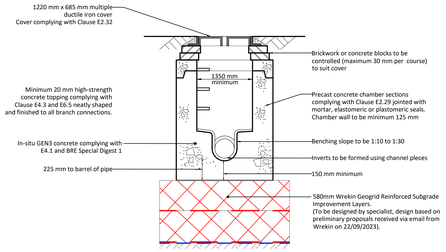
PLAN

ROCKER PIPES	
pipe diameter (mm)	Effective length (mm)
150 to 600	600
over 600	1000
over 750	1250

Note: For clauses referenced above refer to Water UK Sewerage Sector Guidance Appendix C'

Precast Concrete Manhole Type A
Depth from cover level to soffit of pipe 3.0 m to 6.0 m with ladder and reducing slab
Rigid material construction with concrete surround

Precast Concrete Manhole Type B
Depth from cover level to soffit of pipe 1.5 m to 3.0m
Alternative rigid material construction with concrete surround



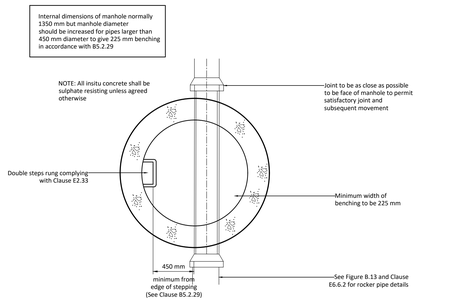
SECTION A-A

SHAFT DIAMETERS	
Dia of largest pipe in MH (mm)	Int. Dia of MH (mm)
Up to 375	1350
375 to 450	1350

If the pipe diameter exceeds 375mm, manhole types B or C shall be used

For every two additional incoming pipes, the diameter of the manhole shall be increase by 150mm.

Note: For clauses referenced above refer to Water UK Sewerage Sector Guidance Appendix C'



PLAN

ROCKER PIPES	
Pipe diameter (mm)	Effective Length (mm)
150 to 600	600

Note: For clauses referenced above refer to Water UK Sewerage Sector Guidance Appendix C'

Note: The use of precast concrete chamber units to E2.29 with 150 mm GEN3 in-situ concrete complying with E4.1 and BRE Special Digest 1 in place of brickwork construction is permitted

Precast Concrete Manhole Type C
Depth from cover level to soffit of pipe less than 1.5m
Maximum pipe size 450 mm diameter
Rigid material construction

General Notes

1. **All dimensions are in metres unless otherwise stated.**
2. **All levels are in metres.**
3. **This drawing is to be read in conjunction with all relevant Engineers and Architect's drawings, Specifications, Reports and Engineering Details.**
4. **Do not scale from this drawing.**

Section 104 notes

1. All adoptable drainage works shall be in accordance with Design & Construction Guidance and Anglian Water's guidance notes
2. All adoptable manhole covers shall comply with BSEN 124 in accordance with Design & Construction Guidance.
3. Lateral manholes with a depth of less than 1.2m from cover to soffit shall have a chamber with a minimum internal diameter of 450mm.
4. Lateral manholes with a depth of more than 1.2m from cover to soffit shall have a chamber with a minimum internal diameter of 450mm, with a restricted access opening of 350mm for safety reasons.
5. All pipework with less than 1.2m cover in Highway or less than 0.9m cover in soft shall have a concrete protective cover slab to adopting water company requirements.
6. Flow routes need to facilitate the potential route of flood flow in rainfall events exceeding the storm sewer design criteria, as required by the Design & Construction Guidance. Flow routes shall be kept clear of permanent physical obstructions which may obstruct the flow of surface water and cause flooding.
7. Screen/grill to be located in last manhole to prevent any debris/rubble from entering the existing network during construction
8. All uncovered and shallow pipework to be protected against construction traffic as part of the contractors temporary works.
9. Manholes with outgoing pipes greater than 600mm diameter shall be fitted with guard bars, safety chains or other approved safety device.
10. A Section 106 application and approval is required with Water Company for all connections (including indirectly) to the existing public sewer network prior to any connection being made.
11. Any amendments to the section 104 agreement after section 104 technical approval compliance is issued, may incur a charge from Anglian Water. Refer to table 22 of Anglian Water's Developer Changing Arrangement 2022-2023 for details of any fees.
12. The exact position, level, size and use of existing sewers to be confirmed on site and reported to the Engineer prior to the commencement of works.
13. All pipes are to be laid with level soffit's or as indicated.
14. Trapped road gullies to be used for all gullies designed in shared parking areas.
15. No infill covers and frames to be used in block paved areas
16. Protective concrete cover slabs to be used on pipes in non traffic area which doesnt achieve 0.9m cover level and 1.2 cover in traffic area
17. Where pipe crossing, plastic membrane to be used for protection to eliminate any chance of cross contamination
18. Precast concrete manhole rings will not be cut under any circumstances. Other options will instead be utilised such as building up with concrete or brickwork to the top of the pipe.
19. Covers and frames should be kitemarked.
20. Pipes of different diameters entering the same manhole should be installed with soffits at the same level.
21. All pipes located within the carriageway are located at least 1m from the kerb. The manholes are located 0.5m from the kerb.
22. All manholes covers to be 675x675mm cover and frame to maintain clear 600x600mm access in accordance with BS EN 124 Class D400 and embossed FW or SW as appropriate. All proposed manhole covers must comply with Anglian Water Ltd current Health & Safety Standards.
23. All manhole construction is to be construction in accordance with the Design and Construction Guidance.
24. Non degradable marker tape is to be laid 300mm above the top of the rising main.

Health, safety & the environment

In accordance with the Construction (Design and Management) Regulations 2015, the designs and details on this drawing have been the subject of a Designers Risk Assessment, to identify risks in the construction, use, or demolition of the scheme.

It is not considered necessary for Designers to highlight obvious and/or common risks (such as deep excavations, manual handling and working around heavy plant) which Contractors should be familiar with, and be able to control by good management and site practice.

So far as is reasonably practicable, the risks inherent in the design have been eliminated. Where it has been considered that elimination of a risk (or part of a risk) is not reasonably practicable, it has been reduced.

This drawing has been based/developed using the following external drawings

Type	Company	Drawing date	Drawing title	Date received	Rev
Site Layout	JGA Architects	02.05.2023	23001 1000-P02 GA Site Layout	02.05.2023	P02
Topographical survey	EMP Surveys LTD	July 2022	1021_Pinchbeck Topographical Survey_Final	04.01.2023	P05
Utilities and Drainage survey	Survey Solutions	26.06.2023	48518NGUG-01 & 02	26.06.2023	B

Agreement	Approval Granted
S23 (Land drainage consent)	NOT APPROVED
S104 (Adoption of sewers)	NOT APPROVED
S278 (Works in existing highway)	NOT APPROVED
S106 (Foul connection)	Approved 23.05.2023

WORKS TO BE IN ACCORDANCE WITH LINCOLNSHIRE COUNTY COUNCIL SECTION 278 WORKS SPECIFICATION + CONSTRUCTION - MARCH 2017

ALL ADOPTABLE DRAINAGE WORKS TO BE IN ACCORDANCE WITH CODES FOR ADOPTION DESIGN & CONSTRUCTION GUIDANCE

DRAWINGS HAVE NOT BEEN APPROVED, UNTIL THE DRAWINGS ARE APPROVED THE DESIGNS AND DETAILS SHOWN ON THIS DRAWING ARE SUBJECT TO CHANGE.

ANY WORKS UNDERTAKEN PRIOR TO TECHNICAL APPROVAL IS ENTIRELY AT THE CONTRACTORS' RISK.

Northampton
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Northampton, NN6 9UD
T: 01604 781811

Warwick
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Warwick Technology Park, Gallows Hill, Warwick, CV34 6UW
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Milton Keynes
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Denbigh, Milton Keynes, MK1 1DN
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Poole
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Bourne Valley Road, Poole, Dorset, BH12 1ED
T: 01202 540888

E: mail@jppuk.net
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- Infrastructure Design
- Structural Engineering
- Development Planning
- Geotechnical & Environmental
- Surveying
- Professional Advice

Rev A Geogrid reinforced subgrade improvement layers added. By SH Checked LC 09.10.2023

Drawn By:	AD	**Client**	Burmor Construction
Chkd By:	LC	**Project**	Land East of Surfleet Road Pinchbeck
Scale @ A0:	NTS	**Title**	Adoptable Drainage Construction Details (Sheet 1)
Date:	February 2023		
Status:	FOR TECHNICAL APPROVAL		
Project No.:	26043	**Drawing No:**	103 (1) **Rev:** A