



Prior to commencing works the Contractor is to familiarise themselves with the ground conditions detailed within the Elemental GI Ltd Phase II Geo-Environmental Investigation Report (Jan 2022, Ref: E21242/2/1) and the findings of JPP Geotechnical additional ground investigations undertaken in February 2023. The Contractor is to ensure suitable safe working practices are followed in accordance with current best practice. The Contractor is to ensure the excavations are suitably managed with supports or benched to prevent collapse, and de-watering / pump equipment in place where required. Excavations are not to be left open for long periods

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

- E: mail@jppuk.net
W: jppuk.net

- Infrastructure Design
- Structural Engineering
- Development Planning
- Geotechnical & Environmental
- Surveying
- Professional Advice

Drawn By:	SH	Client	Burmor Construction		
Chkd By:	LC	Project	Land East of Surfleet Road Pinchbeck		
Scale @ A1:	1:20				
Date:	March 2023	Title	S6 - Flow Control Manhole Construction Details		
Status:	FOR TECHNICAL APPROVAL				
Project No.:	26043	Drawing No:	123	Rev:	B

jpp

1. This drawing is to be used in conjunction with all relevant drawings, specifications and details.
2. All dimensions are in millimetres unless noted otherwise.
3. Do not scale from this drawing.

1. All adoptable drainage works shall be in accordance with WRC Codes for Adoption and Anglian Water's guidance notes.
2. All adoptable manhole covers shall comply with BS EN 124 in accordance with Codes for Adoption, clause 5.3.32.
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 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 surround or 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 WRC Codes for Adoption. Flow routes shall be kept clear of permanent physical obstructions which may obstruct the flow of surface water and cause flooding.
7. Screens/grill to be located in last manhole to prevent any debris/rubble from entering the existing uncovered drainage construction
8. All unworked 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 Anglian Water for all connections (including indirectly) to the existing public sewer network prior to any connection being made.
11. All pipe lengths and gradients are based on centre of manhole to centre of manhole.
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 black paved areas.
16. Protective concrete cover slabs to be used on pipes in non traffic area which doesn't 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 shall not be cut under any circumstances. Other options 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 0.5m from the carriageway are located at least 1m from the kerb. The manholes are located 0.5m from the kerbs.
22. All manholes covers to be Ø75x65mm 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's current Health & Safety Standards.

1. Other types of proprietary vortex flow control devices have different pump configuration always consult manufacturer prior to construction/installation.
2. The concrete manhole base and benching is to be resistant to attack by sewage environment.
3. Pre-cast concrete manhole rings are not to be cut under any circumstances.
4. Warning signs are to be installed in this manhole, in any upstream manholes/headwalls or in the downstream manholes/headwalls.
5. The warning signs are to be 40mm high red lettering on a white plastic base. The plastic base dimensions are to be approx. 300mm x 300mm x 6mm
6. The warning sign is to be mounted on a removable safety grid available from the cover & frame manufacturer.
7. The sign in this manhole is to read: 'Caution - Hydrobake in this manhole'
8. A sign must be fitted in/on all upstream manholes or headwalls to read: 'Caution - Hydrobake in this manhole'
9. A sign must be fitted in/on all downstream manholes or headwalls to read: 'Caution - Hydrobake upstream'

1. The concrete mix requirements for specific elements are as shown on the relevant detail.
2. All designated mixes shall be produced in accordance with the relevant clauses of BS EN 206-1:2000/ BS 8500-2:2016 and shall be placed, compacted and cured in accordance with BS 13670:2009 Execution of Concrete Structures.
3. The execution of all concrete works shall be in accordance with the current BS EN 13670:2009.
4. The concrete shall be supplied from a plant whose quality control system has third party accreditation for product conformity.
5. The Contractor shall provide the Engineer with written details of all materials and their sources, together with the mix design(s) prior to any concreting works being carried out.

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.

Maintenance schedule	Required action	Recommended frequency
Regular maintenance	Inspect and identify areas that are not operating correctly. If required take remedial action.	Monthly for the first 3 months then six monthly
	Debris removal from catchment surface (where may cause risks to performance)	Monthly
	Remove sediment from inspection chamber	Annually or as required
	Cleaning/jetting of annually, or as required, pipes, rodding eyes and manholes	As required