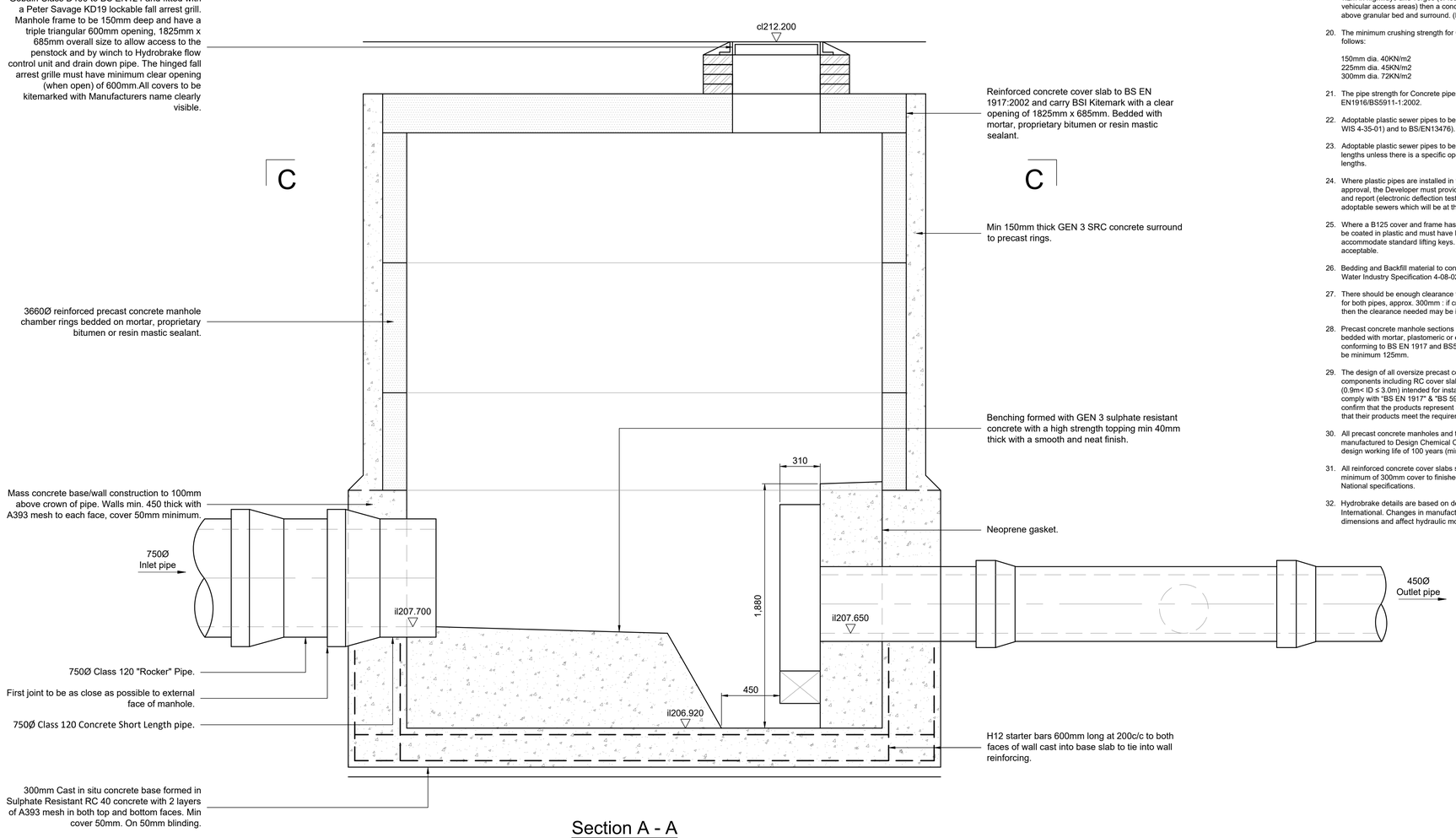
YWS REF : H-3-XXX-XXX



Section A - A

Notes

16. Plastic channel sections in manholes are not acceptable and Yorkshire Water would prefer clayware channels in manholes. Plastic channels are difficult to set in concrete because they float and a satisfactory finish cannot be obtained on the benching.

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

18. Sulphate resistant cement (C20-DC2) and precast concrete products must be used or a laboratory report provided proving that such precautions are not necessary.

19. 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 none vehicular access areas) then a concrete slab should be provided above granular bed and surround. (Ref. S.F.A.6 TABLE 2.4)

20. The minimum crushing strength for Clay pipes should be as follows:

    150mm dia. 40KN/m2
    225mm dia. 45KN/m2
    300mm dia. 72KN/m2

21. The pipe strength for Concrete pipes should be Class 120 to EN1916/BS5911-1:2002.

22. Adoptable plastic sewer pipes to be BSI Kitemarked (certified to WIS 4-35-01) and to BS/EN13476).

23. Adoptable plastic sewer pipes to be laid in maximum of 3 metre lengths unless there is a specific operational need to lay longer lengths.

24. Where plastic pipes are installed in the ground prior to getting approval, the Developer must provide a light-line CCTV Survey and report (electronic deflection testing) of the prospectively adoptable sewers which will be at the Developers expense.

25. 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.

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

27. 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".

28. Precast concrete manhole sections and cover slab to be bedded with mortar, plastomeric or elastomeric seal conforming to BS EN 1917 and BS5911-3 Chamber wall to be minimum 125mm.

29. The design of all oversize precast concrete manholes and their components including RC cover slabs with an internal diameter (0.9m< ID ≤ 3.0m) intended for installation in the highway shall comply with "BS EN 1917" & "BS 5911-3" and marked as such to confirm that the products represent a manufacture's declaration that their products meet the requirement of these standards.

30. All precast concrete manholes and their components shall be manufactured to Design Chemical Class (DC-4) for an intended design working life of 100 years (min).

31. All reinforced concrete cover slabs shall be installed with a minimum of 300mm cover to finished levels to comply with National specifications.

32. Hydrobrake details are based on design provided by Hydro International. Changes in manufacturer may influence dimensions and affect hydraulic model.

CONSTRUCTION RISKS		
CONSTRUCTION RISKS	MAINTENANCE RISKS	DEMOLITION RISKS
Collapse of excavations.		No future abnormal demolition risks associated with Roads and Sewers.
Un-charted buried existing services.		
Working on live sewers.		
Working adjacent to the public highway.		
Working within existing watercourses.		

In addition to the hazards/risks normally associated with this type of work detailed on this drawing take note of the above. iD Civils Design are only required to provide information about any significant risks associated with the design.

Health and Safety Notes/CDM Regulations 2015

In line with the above regulations we are obliged to inform the Contractor of the abnormal risks that may be encountered in the construction of these works. As part of the design process all the salient health & safety aspects are given full consideration and these are observed within the designs viewed on this document. Although considerable effort is undertaken to eliminate risks, the very nature of the project gives rise to some hazards and risks.

Significant risks that cannot be eliminated by design and could not be foreseen by a competent contractor are noted in the risk assessment boxes on the drawings.

Notes

1. No work should commence on site until written approval is received from Yorkshire Water/Adopting Highway Authority or any relevant Authority. Works undertaken prior to approval are at the Developers risk and iD Civils Design will not be held responsible for subsequent delays in approvals, remedial costs or construction programme delays.

2. Prior to the commencement of on site works the contractor is to check the location, invert levels, sizes and conditions of manholes, pipes, and any ditches or watercourses in which it is intended to outfall. Any discrepancy is to be reported immediately to iD Civils Design.

3. Prior to construction the actual position and depth of services likely to be affected by the work should be established by means of a hand dig in close liaison with the statutory service authorities. The contractor shall immediately inform iD Civils Design of any services exposed that may affect the

4. The Local Authority and statutory service providers are to be notified prior to the commencement of work on site.

5. All highway works to be carried out in accordance with Kirklees Council's specification for Highway Works.

6. All road markings and signage details shall be in accordance with Kirklees Council's requirements and the Traffic Signs Regulations and General Directions 2016 and the current Traffic Signs Manual. Reflectorised paint shall be used.

7. Street lighting to be in accordance with Kirklees Council drawing no. ????.

8. All sewer works to be adopted to be in accordance with "Sewers for Adoption" (6th Edition), the relevant British/European and Yorkshire Water's Standards/Requirements/Addendum and "Kitemarked".

9. Yorkshire Water is not obliged to accept filter drain/land drainage runoff into the public sewer network or adoptable drainage system (directly or in-directly). An alternative method of disposal of the land drainage runoff 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 runoff.

10. Adoptable sewers should be a minimum of 1.0m and manholes 0.5m from kerb faces and service margins.

11. Sewers must have 5 metres clearance from trees and hedges, any existing trees should be removed and no new trees planted within this zone. Refer to Figure 2.3 on page 23 "Sewers for Adoption" 6th Edition for restrictions on tree planting adjacent to sewers.

12. Cover slabs must carry the BSI Kitemark or will be rejected by Yorkshire Water Inspector. Where the clear opening of the Kitemarked product is different to that of the cover and frame, a load bearing slab should be fitted above the cover slab to bring the size down to 600mm x 600mm for the Yorkshire Water specified cover size. Please refer to Concrete Pipe Systems Association (CPSA), 'Technical Bulletin' issued autumn 2004 for Kitemarked cover slab opening sizes.

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

14. The chamber size of manholes with more than one connection in them may need to be increased an increment to accommodate the connections and bends.

15. Yorkshire Water policy is not to accept Type "C" brick manholes and 1050mm dia. manhole rings. 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 the depth of cover to pipe soffit is 1-1.5m.

Rev	Description	By	Date

Client:

Barratt Homes
West Yorkshire

Project Title:

Wellhouse Lane,
Penistone

Drawing Title:

Flow Control Manhole S16
Construction Details
Sheet 2

Scale	Date	
1:20 @ A1	14.07.21	
Drawing No	Revision	Status
4619-C-D4-02	0	Approval

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Structures
Civils
iD Civils Design
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