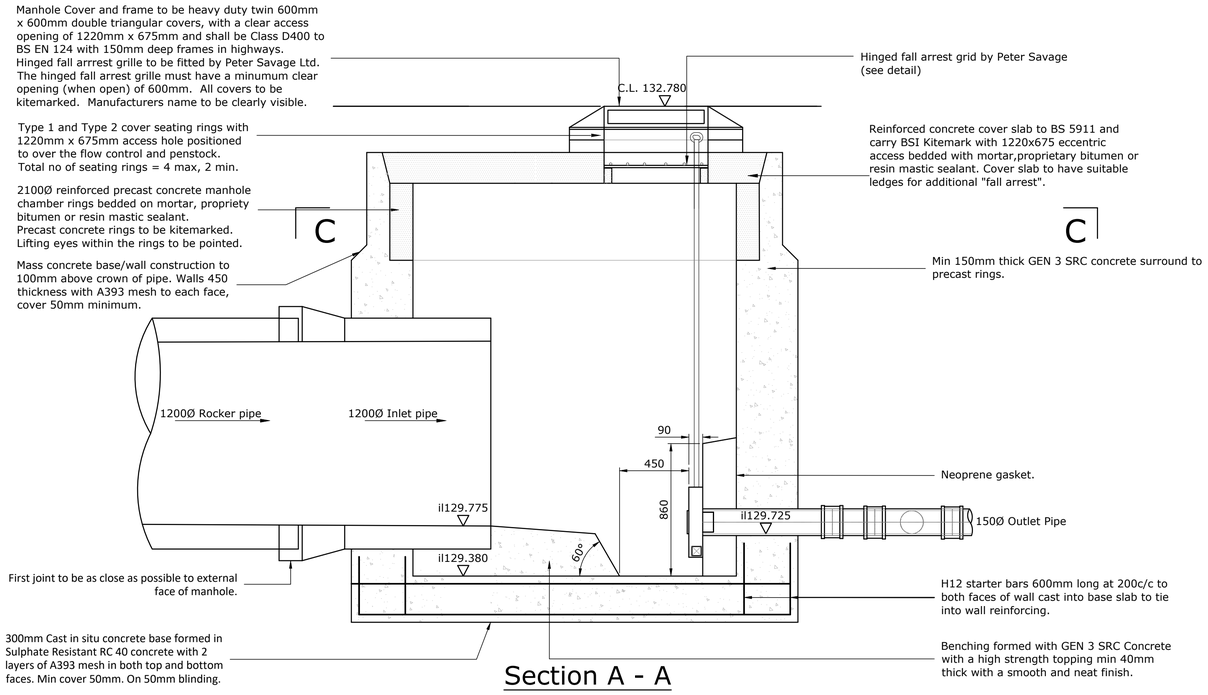
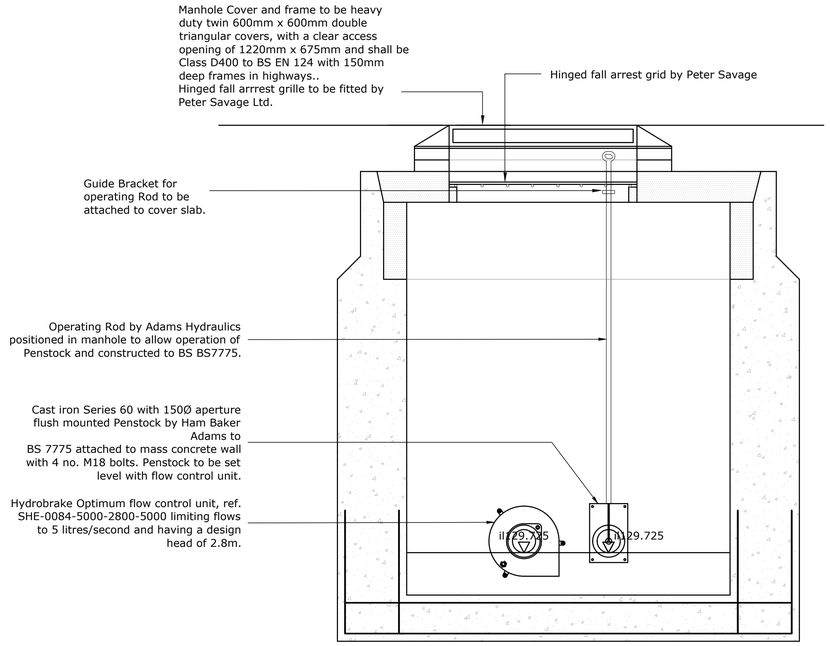
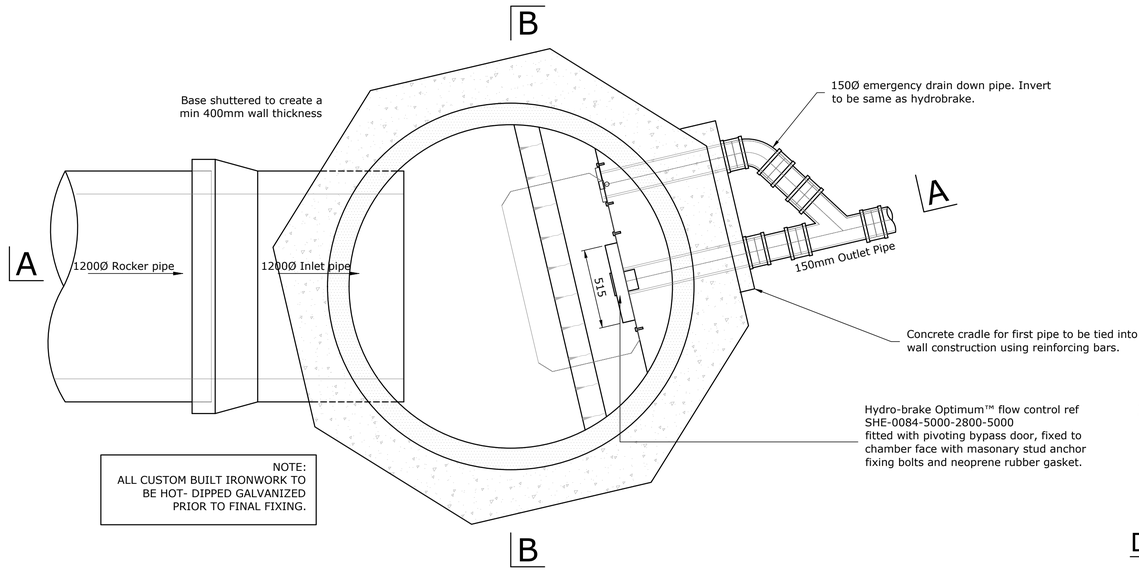
YORKSHIRE WATER REF: H-3-264-305



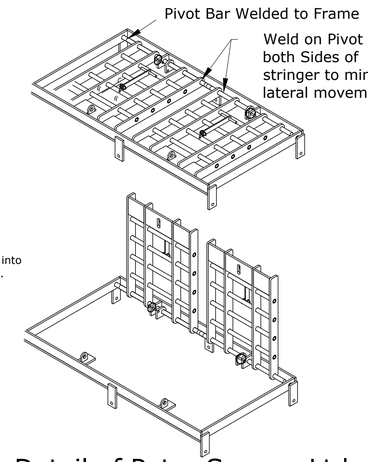

## Section A - A




## Section B - B




## Sectional Plan C - C




## Detail of Peter Savage Ltd, KD19 Fall Arrest Grille

N.T.S.
For full details refer to Peter Savage Ltd. drawing ref:IS12370

ADOPTABLE DRAINAGE (YORKSHIRE WATER) 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. All adoptable sewer works and materials to be in accordance with "Sewers for Adoption" (6th Edition), the relevant British/European and Yorkshire Water's Standards/Requirements/Addendum to the Mechanical and Electrical Specification and "Kitemarked".
3. Manhole covers shall/must have a clear opening of 600 x 600mm and shall be Class D400 to BS EN 124 with 150mm deep frames in highways.
4. Bedding and Backfill material to conform to the requirement of Water Industry Specification 4-08-02 (Table A2).
5. The adoptable sewers should be a minimum of 1.0m and manholes 0.5m from kerbs and service margins.
6. Sewers must have 5 metres clearance from trees and hedges. (refer to Figure 2.3 on page 33 "Sewers for Adoption" 6th Edition for restrictions on tree planting adjacent to sewers).
7. Sewers to be laid in Class S Bedding (150mm granular bed and surround). Where depth of cover to top of 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 the granular surround as protection - see drawing no 4359-C-D4-01 for details.
8. 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.
9. 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 design.
10. The Local Authority and statutory service providers are to be notified prior to the commencement of work on site.
11. Filled ground must be filled and consolidated under the supervision and satisfaction of Yorkshire Water before any sewer works are carried out.
12. Land drainage and filter drains **cannot** be connected into the adoptable sewers, either directly or indirectly. An alternative method of disposal ofthe land drainage will therefore be required. You will have to liaise with the Local Authority Land Drainage Section with regard to the disposal of filter drain/land drainage run-off.
13. Manhole cover slabs must carry the BSI Kitemark or will be rejected by the 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 CPSA Technical Bulletin issued Autumn 2004 for kitemarked cover slab opening sizes.
14. Sulphate resistant cement (C20-DC2) and precast concrete products must be used unless a laboratory report is provided proving these precautions are not necessary.
15. The minimum crushing strength for clay pipes should be as follows: 100mmØ - 40KN/m, 150mmØ - 40KN/m, 225mmØ - 45KN/m, 300mmØ - 72Kn/m.
16. The minimum crushing strength for concrete pipes should be (Class 120 to EN1916/BS5911-1 2002). Plastic pipes to conform to WIS 4-35-01 and BS EN 13476.
17. 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 3.0m 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 channels in manholes. They have found that plastic channels are difficult to set in concrete because they float and a satisfactory finish cannot be achieved on the benching.
18. All new connections to adopted sewers to be covered by a Section 106 Agreement with Yorkshire Water. The application form to be completed by the Main Contractor and accompanied by the relevant fee.
19. Prior to commencement, the Main Contractor is to provide Yorkshire Water with documentary evidence from the manufacturer that any plastic pipes used are suitable for the ground conditions.
20. The chamber size of manholes with more than one connection in may need to be increased an increment to accommodate the connections and bends.
21. Yorkshire Water policy is not to accept Type "C" brick manholes and 1050mmØ manhole rings. Instead it is preferred that you use a Type "B" manhole with 1200mmØ or 1500mmØ rings, with the opening sited over the channel where depth of cover to pipe soffit is 1.0m - 1.5m.
22. 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.

ADDITIONAL DRAINAGE NOTE:
The clearance of the crossover points (min 300mm) between surface water, foul sewers, the rising main, and other services should be sufficient to provide 150mm granular bed and surround around both pipes.

All pipework 300mm Ø or less to be Polypipe PVC "Polysewer" to WIS 4 -35-01 Pipework to be laid in maximum 3metres lengths and must all be stamped with Polypipe PVC Polysewer to WI 4-35-01.
All pipework 375mm Ø or greater to be concrete class CLASS 120, 54 kN/m minimum crushing strength

New connections to th public sewer should be connected "soffit to soffit" unless stated otherwise.

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. All existing drainage levels are to be checked prior to commencement of any works on site and iD Civils Design informed of any discrepancies to the design drawings.
2. All adoptable drainage works are to be in accordance with "Sewers for Adoption" 6th Edition. The relevant British/European and Yorkshire Water's Standards/Requirements/ Addendum and "Kitemarked".
3. Manhole covers shall have a minimum clear opening of 600mm and shall be Class D400 to BS EN 124 with 150mm deep frames in highways.
4. All adoptable sewers should be a minimum of 1m and manholes 0.5 metres from kerb lines and service margins.
5. Sewers must have 5 metre clearance from trees and hedges. Where it is not possible to schieve this clearance concrete bed and surround is required.
6. Where depth of cover to the top of the sewer is less than 1.2 metres in highways and verges then 150mm concrete bed and surround is required.
7. The chamber size of manholes with more than one connection in them may need to be increased an increment to accommodate connections and bends.
8. Bedding and Backfill material to conform to the requirement of Water Industry Specification 4-08-02 (Table A2).

| Rev | Description | By | Date |
|---|---|---|---|
| A | Updated following YW comments | CR | 07.08.19 |

Client:

Rouse Homes

Project Title:

New Road
Tankersley

Drawing Title:

Flow Control Manhole S9
Construction Details

| Scale | Date |
|---|---|
| 1:20 @ A1 | 21.05.19 |

| Drawing No | Revision | Status |
|---|---|---|
| 4759-C-D4-03 | A | A |


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