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All dimensions are in millimetres unless noted otherwise.

DO NOT SCALE THIS DRAWING - IF IN DOUBT ASK

- 1. All dimensions & levels to be checked by the contractor prior to commencement of work, any discrepancy shall be reported immediately to Avie Consulting Ltd. 2. All work shall be carried out in accordance with Local Authority, statutory authority,
- health & safety requirements and regulations. 3. The drawings shall be read in accordance with all other contract documents relevant
- at that time of issue and during the period of the contract. 4. The contractor must ensure the overall stability of the works is adequate at all stages of the construction.
- 5. No allowance has been made for cutouts, holes, notches, etc. for services. All of these are to be agreed prior to the start of the works.

## General Notes

All adoptable sewer works and material to be in accordance with 'Sewers for Adoption' 6th Edition, the relevant British/European and Yorkshire Water's standards/requirements/addendum 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.

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.

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.

Cover slabs must carry the BSI Kitemark or will be rejected by Yorkshire Water's inspector. Where the clear opening of the Kitemarked product is different to that of the cover and frame, a loading 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.

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

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 (please also refer to figure 2.3 on page 33 in 'Sewers for Adoption' 6th Edition for restrictions on tree planting adjacent to sewers)'.

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.

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

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.

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 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 to be laid in maximum 3 meter 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 sections in manholes. We have found that plastic channels are difficult to set in concre because they float and a satisfactory finish can not be obtained on the benching.



In addition to the hazards/ risks associated with the types of

Construction: 1. Existing live storm and foul sewers present on site.

2. Existing buried and overhead services are present on site. 3. Sewers > 3m in depth - risks falling from height and confided spaces.

4. Working near watercourses - waterborne diseases and pathogens are a potential hazard to health.

It is assumed that all works will be carried out by a competent contractor working, where appropriate, to an approved method statement.

-REINFORCED CONCRETE COVER SLAB TO BS EN 1917:2002 BEDDED ON MORTAR, PROPRIETARY BITUMEN OR RESIN MASTIC SEALANT AND TO BE KITEMARKED. COVER SLAB TO HAVE A 1800X600

-BENCHING FORMED WITH GEN3 CONCRETE WITH A HIGH STRENGTH TOPPING MIN. 40mm

-300mm THICK CAST IN-SITU REINFORCED CONCRETE BASE SLAB FORMED IN GRADE GEN3 CONCRETE WITH 2 LAYERS A393 MESH IN BOTH TOP AND BOTTOM FACES. MIN COVER 50mm ON 50mm CONCRETE BLINDING



HYDROBRAKE SPECIFICATION TO BE MD-SHE-0163-1370-1350-1370 TO SUIT DISCHARGE RATE OF 13.71/s UNDER A HEAD OF 1.35m (1 IN 100 STORM +40% CC)

NOTE: 300Ø OUTLET PIPE TO BE SET 50mm LOWER THAN INLET PIPE TO PREVENT STANDING WATER ON BENCHING