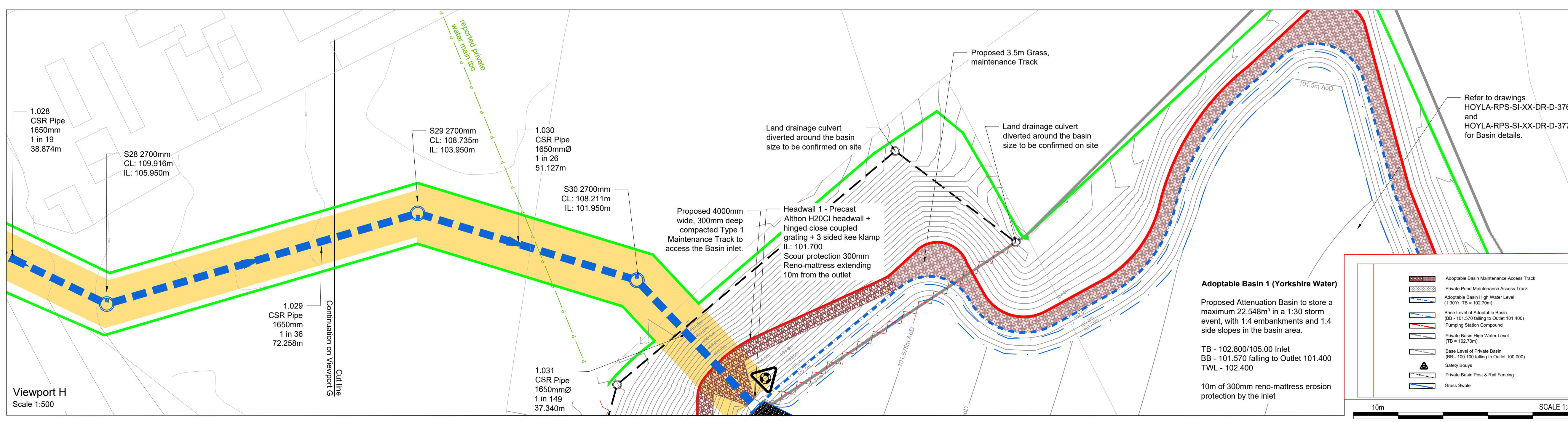
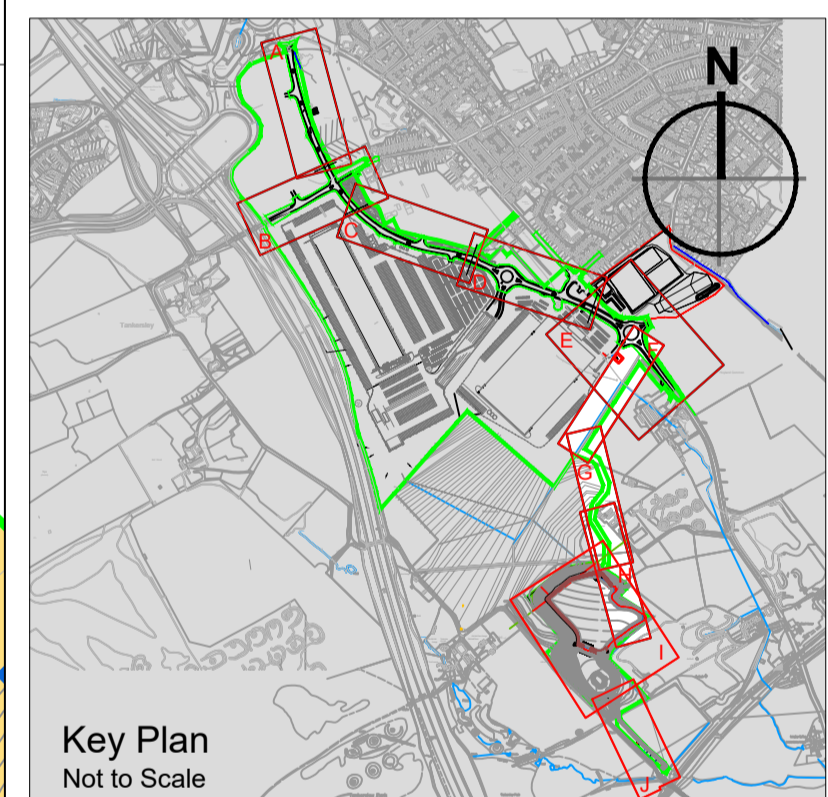


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- If received electronically it is the recipient's responsibility to print to correct scale. Only written dimensions should be used.
- This drawing should be read in conjunction with all other relevant drawings and specifications.
- All adoptable sewer works and material to be in accordance with "Code for Adoption". The Relevant British/European and Yorkshire Water's Standards/Requirements/Adendum to the Mechanical and Electrical Specification and Kitemarked.
- Manhole covers shall have a clear opening of 600mm and shall be Class D400 to BS EN 124 with 150mm deep frames in highways.
- 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 indirectly). 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/land drainage run-off.
- Cover slabs must carry the BS 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 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 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.
- 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 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 that Type 'C' brick manholes and 1050mm dia manhole rings are not preferred. 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 BS1 Kitemarked (certified to WIS 4-35-01 and BS EN 13470). Adoptable plastic sewer pipes to be laid in maximum 3 metre 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 in manholes. We have found that plastic channels are difficult to set in concrete because they float and a satisfactory finish cannot be obtained on the bedding.
- The minimum crushing strength for clay pipes should be as follows: 100mm dia. 40kN/m, 150mm dia. 40kN/m, 225mm dia. 45kN/m and 300mm dia. 72kN/m. The minimum crushing strength for concrete pipes should be - (Class 120 to EN 1916/BS5911-1-2002). Plastic pipes should conform to WIS 4-35-01 and BS EN 13476.
- 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.
- Yorkshire Water's Signs will be required once the detention basin is transferred to Yorkshire Water (Yorkshire Water will provide the signs and charge the developer for the signs).



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Rev	Description	By	Ckd	Date

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Project: **Hoyland Common**

Title: **Proposed Drainage GA S104 Approval (Sheet 4 of 6)**

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