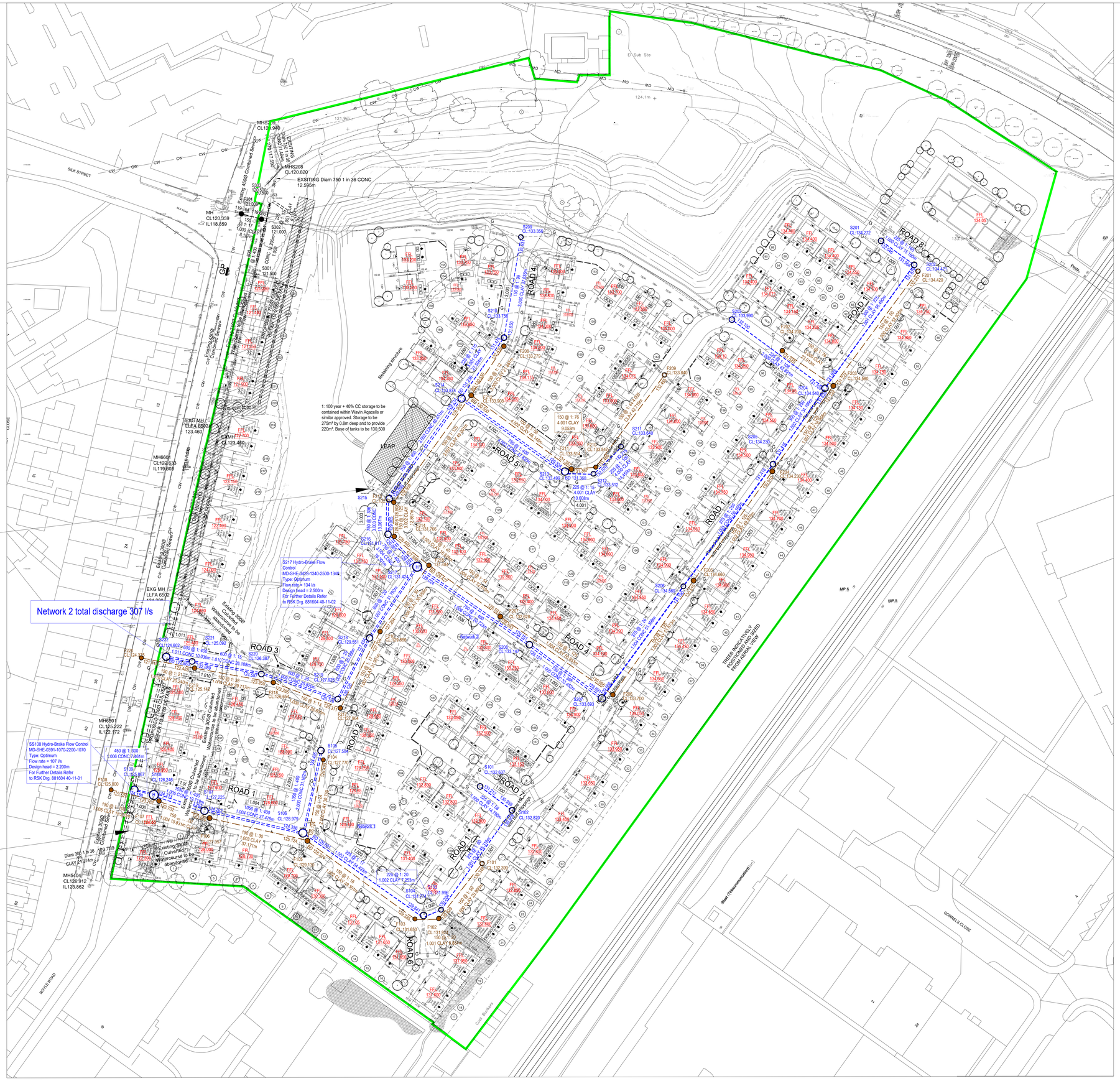

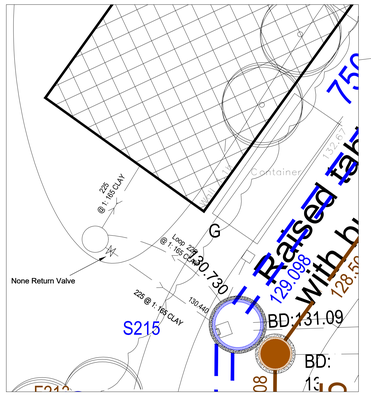

OFFLINE STORAGE PIPES

SCALE 1:100

For Further Details of Culverted Watercourse Diversion Please Refer to RSK Drg. 881604 40-12-01

Notes

- All adoptable sewer works and material to be in accordance with Sewers for Adoption 6th Edition, The Relevant British/European and United Utilities' Standards/Requirements/Addendum and Kitemarked.
- 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.
- Filled ground must be filled and consolidated under the supervision and to the satisfaction of United Utilities before any sewer works are carried out.
- United Utilities 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 United Utilities 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 United Utilities 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 6 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).
- Unless noted otherwise, sewers are to be laid in Class S bedding in accordance with United Utilities standard details. Refer to Drainage Details drawing for pipe embedment details. 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 Class Z concrete bed and surround shall be provided.
- United Utilities 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.
- All lateral drains to be 150mm dia to first dragout manholee. All private drainage to be a minimum 100mm dia UNO
- UPVC pipes to be used to meet specification standards

Drainage Legend:

- Existing combined sewer and manhole
- Existing surface water sewer and manhole
- F1 Proposed foul water sewer and manhole
- S1 Proposed surface water sewer and manhole
- Proposed 150Ø foul water lateral and connection
- Proposed 150Ø surface water lateral and connection
- G Proposed road gully with Ø150 connecting pipe
- Diverted culverted watercourse
- Existing culverted watercourse
- Existing culverted watercourse to be abandoned

Note: The drainage works are subject to Technical Approval from United Utilities & Rochdale MBC and may therefore change

NOTE:- Drainage designed to contain the 5 year, 30 year and 100 year + 40% climate change event storm event.
5 year- No surcharge
30 year- No flooding, all to be contained within adoptable drainage network
100 year +40% climate change event- Flood volumes stored in Wavin Aquacell units (or similar preferred) laid under LEAP area with low volume over land. See flood route plan for further details

Exact alignment of existing culverted watercourse to surveyed and recorded and reported back to engineer so that the drainage design can be updated accordingly.

B	06.03.20	AB	FFL's amended following external works review

COUNTRYSIDE
Places People Love

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site: **Royle Road Rochdale**

title: **Proposed S104 Drainage Layout**

scale: @A0	1:500	drawn by:	JJP
date:	06.02.2020	checked:	AB
		drawing no:	RRR-X-C-DR-00-1000
FS 53054 EHS 61520	ISO 9001:2008 ISO 14001:2004	sheet no: Sheet 1 of 1	revision: B

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DRAWING_LOCATION