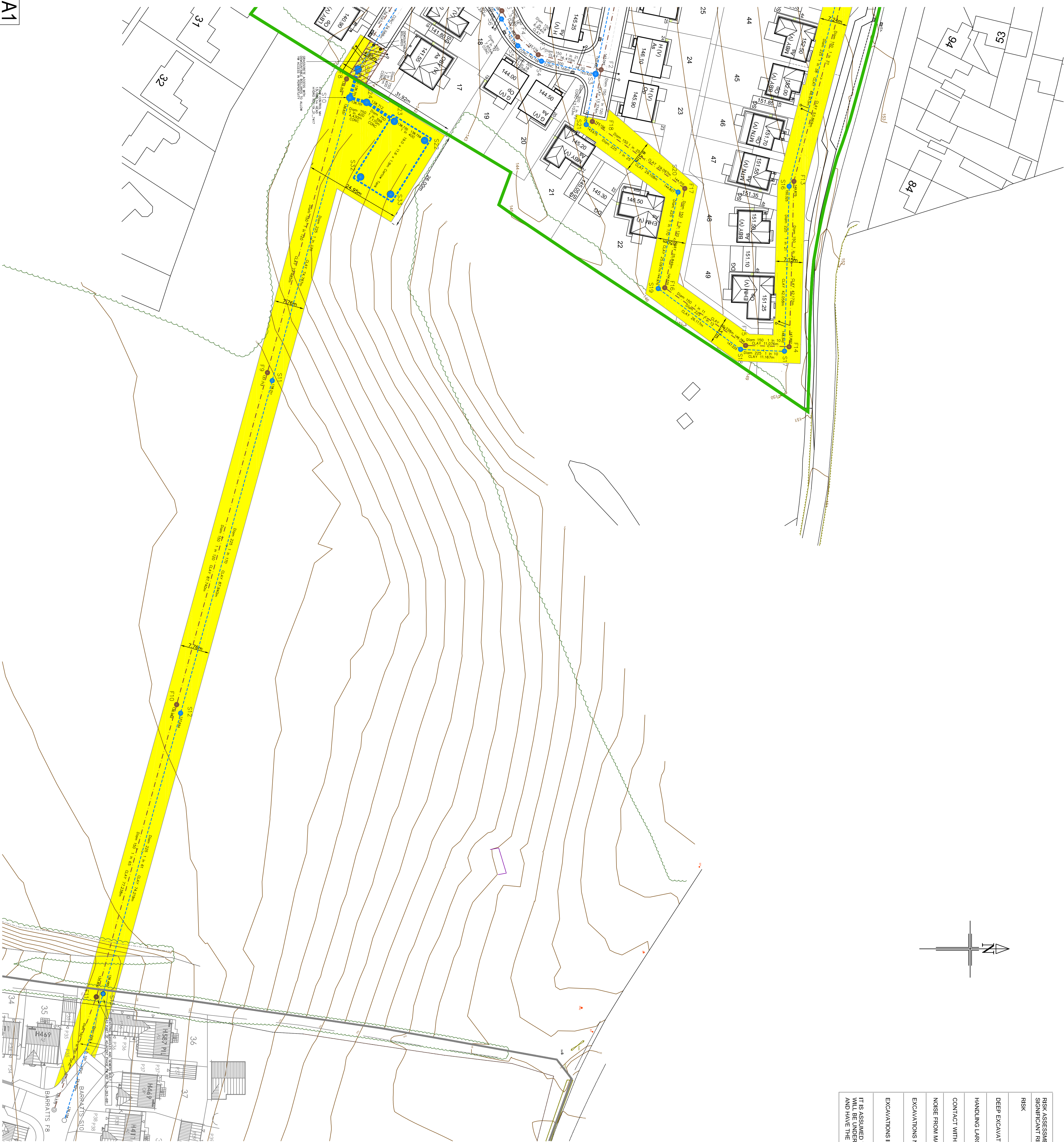


RISK ASSESSMENT: SIGNIFICANT RISKS THAT CANNOT BE DESIGNED OUT		SUGGESTED ACTION	
RISK	LEVEL OF RISK		
DEEP EXCAVATIONS ASSOCIATED WITH DEEP DRAINAGE WORKS	HIGH	ENSURE ALL EXCAVATIONS HAVE ADEQUATE TRENCH SUPPORTS AND ARE BRIDGED OFF TO PROTECT FROM FALLS.	
HANDLING LARGE DIAMETER MANHOLE AND SOAKAWAY RINGS	HIGH	USE CORRECT LIFTING EQUIPMENT AND ENSURE OPERATIVES WEAR THE CORRECT PERSONAL PROTECTIVE EQUIPMENT.	
CONTACT WITH SEWAGEWORKING IN CONFINED SPACES	MEDIUM	USE GAS DETECTORS/BREATHING EQUIPMENT AND ENSURE OPERATIVES WEAR THE CORRECT PERSONAL PROTECTIVE EQUIPMENT.	
NOISE FROM MACHINERY	MEDIUM	OPERATIVES TO WEAR THE CORRECT EAR PROTECTION.	
EXCAVATIONS NEAR TO UTILITIES	HIGH	UTILITY MAPS TO BE INSPECTED AND APPARATUS LOCATED USING APPROPRIATE EQUIPMENT PRIOR TO EXCAVATION.	
EXCAVATIONS IN PUBLIC HIGHWAY	HIGH	ENSURE ALL EXCAVATIONS HAVE ADEQUATE TRENCH SUPPORTS AND ARE BRIDGED OFF TO PROTECT FROM FALLS. ENSURE THE CORRECT SIGNAGE/TRAFFIC CONTROL IS USED.	

KEY

- Existing Public sewer to be abandoned
- Existing Public foul sewer to remain
- Existing Public surface water sewer to remain
- Proposed adoptable surface water sewer
- Proposed adoptable foul sewer
- Proposed foul lateral
- Proposed surface water lateral
- Proposed gully
- Existing gully

NOTES

All drainage connections apply to be located and checked for position and level prior to the commencement of any works.

STN GSM1

Odourless Survey Gull & Drain

(Fitted to S System (S/NM2))

- Sewers For Adoption Under a Section 104 Agreement**
1. All adoptable sewer works and materials to be in accordance with 'Sewerage for Adoption' (8th Edition) The Institution of Civil Engineers and Yorkshire Water's Standard Requirements/Adoption to the mechanical and electrical specification and Kitemarked.
 2. Manhole covers must have a clear opening of 600mm and shall be Class D400 to BS EN 124 with 150mm deep kerbs at highways.
 3. All manhole covers must be installed in accordance with the requirements and to the satisfaction of Yorkshire Water before any sewer works are carried out.
 4. Yorkshire Water is not obliged to accept filter drainland drainage runoff into the public sewer network or adoptable drainage system (directly or indirectly) unless it is satisfied that the proposed system is suitable and therefore be required. Please consult with the local Authority and drainage Section.
 5. Cover slabs must carry the BS1 Kitemark or will be rejected by Yorkshire Water. Where the clear opening of the site marked product is different to that of the proposed product, the proposed product shall be used. The cover slab to bring the size down to 600mm x 600mm for the Yorkshire Water specified cover size. Please refer to CRSA Technical bulletin Issued Autumn 2004 for Kitemarked cover slab opening sizes.
 6. Suitable resistant cement (C20-C22) and precast concrete products must be necessary. A technical report provides proving that such precautions are not necessary.
 7. The adoptable sewers should be a minimum of 1m and manholes 0.5m from kerb faces and service margins.
 8. Sewers must have 5 metres clearance from trees and hedges, (please refer to the 'Sewerage for Adoption' (8th Edition) for further details on tree planting adjacent to sewers.)
 9. Sewers to be laid in Class 'S' bedding (150mm granular bed & surround) Where depth of cover to the top of the sewer is less than 1.2m in Highway and verges (or less than 500mm in non-vehicular areas) then a concrete bedding and backfill material to conform to the requirements of Water Industry Specification 4-00-02 (Table A2)
 11. The granular size of manholes with more than one connection may vary and bands.
 12. Yorkshire Water policy is not to accept Type 'C' brick manholes and 1000mm dia manhole rings. However it is preferred that you use a Type 'B' over the channel where depth of cover to pipe outlet is 1.0-1.5m
 13. Stone backfill is required to all sewer trenches under vehicular areas. As dug material may be used on other areas subject to the requirements of BS EN 2957-1: 1991.
 14. All 150mm & 225mm dia pipes must be laid to comply with the relevant requirements of BS EN 2957-1: 1991.
 15. Minimum pipe crushing strength to be 150mm dia, 40kN/m, 225 dia, 45kN/m
 16. All pipes 300mm dia and above to be concrete pipes to comply with BS EN 2957-1: 1991.
 17. Where a B 325 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.

Preliminary

B. VM reference added		26-2-20	AST
A. Changes to layout. Odourless sewers added		15-1-20	AST
Rev	Details	Date	Drawn/Chk

Wortley Construction

Lidgett Lane/Pilley Green
Pilley, Barnsley

Section 104 Layout
Sheet 2

Dwg No.: STE/17/121002 B

Date: 7-1-20
Scale: 1:500

Copyright © Shaun Tonge Engineering

SHAUN TONGE
ENGINEERING



11 Broomhead Road, Wortley, Barnsley, S73 3SA,
Tel 01226 755929, Mobile 07529 218070, Email Shaun.tonge@stengr.co.uk