

RISK ASSESSMENT: SIGNIFICANT RISKS THAT CANNOT BE DESIGNED OUT	SUGGESTED ACTION
RISK	LEVEL OF RISK (H/M)
DEEP EXCAVATIONS ASSOCIATED WITH DEEP DRAINAGE WORKS	HIGH
HANDLING LARGE DIAMETER MANHOLE AND SOAKAWAY RINGS	HIGH
CONTACT WITH SEWAGE/WORKING IN CONFINED SPACES	MEDIUM
NOISE FROM MACHINERY	MEDIUM
EXCAVATIONS NEAR TO UTILITIES	HIGH
EXCAVATIONS IN PUBLIC HIGHWAY	HIGH
IT IS ASSUMED THAT WORKS ASSOCIATED WITH THIS DESIGN WILL BE SUPERVISED BY PERSON(S) WITH COMPETENT AND HAVE THE REQUIRED LEVEL OF EXPERIENCE AND EXPERTISE.	
ENSURE ALL EXCAVATIONS HAVE ADEQUATE TRENCH SUPPORTS AND ARE FENCED OFF TO PROTECT FROM FALLS.	
USE CORRECT LIFTING EQUIPMENT AND ENSURE OPERATIVES WEAR THE CORRECT PERSONAL PROTECTIVE EQUIPMENT.	
USE GAS DETECTORS/BREATHING EQUIPMENT AND ENSURE OPERATIVES WEAR THE CORRECT PERSONAL PROTECTIVE EQUIPMENT.	
OPERATIVES TO WEAR THE CORRECT EAR PROTECTION.	
UTILITY MAPS TO BE INSPECTED AND APPARATUS LOCATED USING APPROPRIATE EQUIPMENT PRIOR TO EXCAVATION.	
ENSURE ALL EXCAVATIONS HAVE ADEQUATE TRENCH SUPPORTS AND ARE FENCED 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 connection points to be located and checked for position and level prior to the commencement of any works.
STN GSM1
Ordnance Survey Grid & Datum
(Trimble GPS system OSN02)

Sewers For Adoption Under a Section 104 Agreement

- All adoptable sewer works and material to be in accordance with the relevant standards of the Institution of Civil Engineers and Yorkshire Water's Standard Requirements/Adoption to the mechanical and electrical specification and Memorandum.
- Manhole covers must have a clear opening of 600mm and shall be Class D400 to BS EN 124 with 150mm deep frames in highways.
3. Filter ground must be filled and consolidated under the supervision of a competent person or Yorkshire Water before any sewer works are carried out.
4. Yorkshire Water is not obliged to accept filter drain/land drainage runoff into the public sewer network or adoptable drainage system (directly or indirectly). An alternative method of disposal of land drainage runoff will 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 kitemarked product is different to that of the cover and frame, a bearing bearing slab should be fitted above the cover slab to cover size. Please refer to CPDA Technical Bulletin issued Autumn 2004 for kitemarked cover also opening sizes.
6. Sulphate resistant cement (C20-DC2) and precast concrete products must be used or a laboratory report provided proving that such precautions are not required.
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 also refer to Figure 2.3, page 33 in Sewers for Adoption 6th Edition for further details)
9. Sewers to be laid in Class "S" bedding (150mm granular bed & surround) and where depth of cover to the top of the sewer is less than 1.2m in highway and verges (or less than 900mm in non-vehicular areas) then a concrete 10. Bedding and backfill material to conform to the requirements of Water Industry Specification 420-02 (Table A2).
11. The chamber size of manholes with more than one connection may and be increased an increment to accommodate the connections.
12. Yorkshire Water policy is not to accept 'Type C' brick manholes and 1000mm dia manhole rings. Instead it is preferred that you use a 'Type B' manhole with 900mm dia or 600mm dia rings in the 0.6m dia or 0.75m dia cover. The cover must be 1.5m dia or 1.2m dia and be made of concrete or steel.
13. Stone backfill is required to all sewer trenches under vehicular areas. As dug material may be used on other areas subject to the written approval of the drainage authority.
14. Minimum pipe casting strength to be 150mm dia, 40kN/m, 225 dia, 48kN/m requirements of BS EN 285:1 (1991).
15. All pipework provisions of BS 5911, Strength class 1620 EN 18765S 5911-1:2002.
16. All pipework provisions of BS 5911, Strength class 1620 EN 18765S 5911-1:2002.
17. All pipework provisions of BS 5911, Strength class 1620 EN 18765S 5911-1:2002.
18. All pipework provisions of BS 5911, Strength class 1620 EN 18765S 5911-1:2002.
19. All pipework provisions of BS 5911, Strength class 1620 EN 18765S 5911-1:2002.
20. All pipework provisions of BS 5911, Strength class 1620 EN 18765S 5911-1:2002.
21. All pipework provisions of BS 5911, Strength class 1620 EN 18765S 5911-1:2002.
22. All pipework provisions of BS 5911, Strength class 1620 EN 18765S 5911-1:2002.
23. All pipework provisions of BS 5911, Strength class 1620 EN 18765S 5911-1:2002.
24. All pipework provisions of BS 5911, Strength class 1620 EN 18765S 5911-1:2002.
25. All pipework provisions of BS 5911, Strength class 1620 EN 18765S 5911-1:2002.
26. All pipework provisions of BS 5911, Strength class 1620 EN 18765S 5911-1:2002.
27. All pipework provisions of BS 5911, Strength class 1620 EN 18765S 5911-1:2002.
28. All pipework provisions of BS 5911, Strength class 1620 EN 18765S 5911-1:2002.
29. All pipework provisions of BS 5911, Strength class 1620 EN 18765S 5911-1:2002.
30. All pipework provisions of BS 5911, Strength class 1620 EN 18765S 5911-1:2002.
31. All pipework provisions of BS 5911, Strength class 1620 EN 18765S 5911-1:2002.
32. All pipework provisions of BS 5911, Strength class 1620 EN 18765S 5911-1:2002.
33. All pipework provisions of BS 5911, Strength class 1620 EN 18765S 5911-1:2002.
34. All pipework provisions of BS 5911, Strength class 1620 EN 18765S 5911-1:2002.
35. All pipework provisions of BS 5911, Strength class 1620 EN 18765S 5911-1:2002.
36. All pipework provisions of BS 5911, Strength class 1620 EN 18765S 5911-1:2002.
37. All pipework provisions of BS 5911, Strength class 1620 EN 18765S 5911-1:2002.
38. All pipework provisions of BS 5911, Strength class 1620 EN 18765S 5911-1:2002.
39. All pipework provisions of BS 5911, Strength class 1620 EN 18765S 5911-1:2002.
40. All pipework provisions of BS 5911, Strength class 1620 EN 18765S 5911-1:2002.
41. All pipework provisions of BS 5911, Strength class 1620 EN 18765S 5911-1:2002.
42. All pipework provisions of BS 5911, Strength class 1620 EN 18765S 5911-1:2002.
43. All pipework provisions of BS 5911, Strength class 1620 EN 18765S 5911-1:2002.
44. All pipework provisions of BS 5911, Strength class 1620 EN 18765S 5911-1:2002.
45. All pipework provisions of BS 5911, Strength class 1620 EN 18765S 5911-1:2002.
46. All pipework provisions of BS 5911, Strength class 1620 EN 18765S 5911-1:2002.
47. All pipework provisions of BS 5911, Strength class 1620 EN 18765S 5911-1:2002.
48. All pipework provisions of BS 5911, Strength class 1620 EN 18765S 5911-1:2002.
49. All pipework provisions of BS 5911, Strength class 1620 EN 18765S 5911-1:2002.
50. All pipework provisions of BS 5911, Strength class 1620 EN 18765S 5911-1:2002.
51. All pipework provisions of BS 5911, Strength class 1620 EN 18765S 5911-1:2002.
52. All pipework provisions of BS 5911, Strength class 1620 EN 18765S 5911-1:2002.
53. All pipework provisions of BS 5911, Strength class 1620 EN 18765S 5911-1:2002.
54. All pipework provisions of BS 5911, Strength class 1620 EN 18765S 5911-1:2002.
55. All pipework provisions of BS 5911, Strength class 1620 EN 18765S 5911-1:2002.
56. All pipework provisions of BS 5911, Strength class 1620 EN 18765S 5911-1:2002.
57. All pipework provisions of BS 5911, Strength class 1620 EN 18765S 5911-1:2002.
58. All pipework provisions of BS 5911, Strength class 1620 EN 18765S 5911-1:2002.
59. All pipework provisions of BS 5911, Strength class 1620 EN 18765S 5911-1:2002.
60. All pipework provisions of BS 5911, Strength class 1620 EN 18765S 5911-1:2002.
61. All pipework provisions of BS 5911, Strength class 1620 EN 18765S 5911-1:2002.
62. All pipework provisions of BS 5911, Strength class 1620 EN 18765S 5911-1:2002.
63. All pipework provisions of BS 5911, Strength class 1620 EN 18765S 5911-1:2002.
64. All pipework provisions of BS 5911, Strength class 1620 EN 18765S 5911-1:2002.
65. All pipework provisions of BS 5911, Strength class 1620 EN 18765S 5911-1:2002.
66. All pipework provisions of BS 5911, Strength class 1620 EN 18765S 5911-1:2002.
67. All pipework provisions of BS 5911, Strength class 1620 EN 18765S 5911-1:2002.
68. All pipework provisions of BS 5911, Strength class 1620 EN 18765S 5911-1:2002.
69. All pipework provisions of BS 5911, Strength class 1620 EN 18765S 5911-1:2002.
70. All pipework provisions of BS 5911, Strength class 1620 EN 18765S 5911-1:2002.
71. All pipework provisions of BS 5911, Strength class 1620 EN 18765S 5911-1:2002.
72. All pipework provisions of BS 5911, Strength class 1620 EN 18765S 5911-1:2002.
73. All pipework provisions of BS 5911, Strength class 1620 EN 18765S 5911-1:2002.
74. All pipework provisions of BS 5911, Strength class 1620 EN 18765S 5911-1:2002.
75. All pipework provisions of BS 5911, Strength class 1620 EN 18765S 5911-1:2002.
76. All pipework provisions of BS 5911, Strength class 1620 EN 18765S 5911-1:2002.
77. All pipework provisions of BS 5911, Strength class 1620 EN 18765S 5911-1:2002.
78. All pipework provisions of BS 5911, Strength class 1620 EN 18765S 5911-1:2002.
79. All pipework provisions of BS 5911, Strength class 1620 EN 18765S 5911-1:2002.
80. All pipework provisions of BS 5911, Strength class 1620 EN 18765S 5911-1:2002.
81. All pipework provisions of BS 5911, Strength class 1620 EN 18765S 5911-1:2002.
82. All pipework provisions of BS 5911, Strength class 1620 EN 18765S 5911-1:2002.
83. All pipework provisions of BS 5911, Strength class 1620 EN 18765S 5911-1:2002.
84. All pipework provisions of BS 5911, Strength class 1620 EN 18765S 5911-1:2002.
85. All pipework provisions of BS 5911, Strength class 1620 EN 18765S 5911-1:2002.
86. All pipework provisions of BS 5911, Strength class 1620 EN 18765S 5911-1:2002.
87. All pipework provisions of BS 5911, Strength class 1620 EN 18765S 5911-1:2002.
88. All pipework provisions of BS 5911, Strength class 1620 EN 18765S 5911-1:2002.
89. All pipework provisions of BS 5911, Strength class 1620 EN 18765S 5911-1:2002.
90. All pipework provisions of BS 5911, Strength class 1620 EN 18765S 5911-1:2002.
91. All pipework provisions of BS 5911, Strength class 1620 EN 18765S 5911-1:2002.
92. All pipework provisions of BS 5911, Strength class 1620 EN 18765S 5911-1:2002.
93. All pipework provisions of BS 5911, Strength class 1620 EN 18765S 5911-1:2002.
94. All pipework provisions of BS 5911, Strength class 1620 EN 18765S 5911-1:2002.
95. All pipework provisions of BS 5911, Strength class 1620 EN 18765S 5911-1:2002.
96. All pipework provisions of BS 5911, Strength class 1620 EN 18765S 5911-1:2002.
97. All pipework provisions of BS 5911, Strength class 1620 EN 18765S 5911-1:2002.
98. All pipework provisions of BS 5911, Strength class 1620 EN 18765S 5911-1:2002.
99. All pipework provisions of BS 5911, Strength class 1620 EN 18765S 5911-1:2002.
100. All pipework provisions of BS 5911, Strength class 1620 EN 18765S 5911-1:2002.

Preliminary

Rev	Details	24-2-20 AST 15-1-20 AST Date	Drawn Checked
B	Changes to Layout		
A	Changes to Layout		
Avant Homes			
Lidgett Lane/Pilley Green			
Pilley, Barnsley			
Section 185 Plan			
Dwg No. : STE/19/28/11 B			
Date : 7-1-20			
Scale : 1:500			
Copyright © Shaun Tonge Engineering			

SHAUNTONGE
ENGINEERING



11 Broomfield Road, Wortwell, Barnsley, S73 0SA.
Tel: 01226 755929, Mobile 07528 278707, Email: Shaun.tonge@tongeeng.co.uk