

General Notes

- DO NOT SCALE.
- This drawing is to be read in conjunction with all other relevant drawings and details.
- Should there be any conflict between the details indicated on this drawing and those on other drawings the Engineer should be informed PRIOR to construction on site.
- Until technical approval has been obtained from the relevant Authority, it should be understood that all coverings and details are Preliminary and NOT for construction. Should the Contractor commence site work prior to such approval being given it is entirely at their own risk.
- Sketch proposals are for illustrative purposes only and as such are subject to detailed site investigation including ground conditions / contaminants, drainage, design and planning / density negotiations.
- All dimensions are in millimetres unless otherwise stated.
- The Farrow Walsh Consulting Designers Risk Assessments for this project must be reviewed PRIOR to the commencement of any works on site.

NOTES

- This drawing to be read in conjunction with all other relevant Engineers and Architect's details.
- All work to be carried out in accordance with the current British Standards, codes of practice, building regulations and with Sewers for Adoption 6th Edition guidance.
- All drainage offered for adoption has been designed to not attenuate flows in excess of the 1:30 year return storm event.
- The exact position, level, size and use of existing sewers to be confirmed on site by the Contractor. Any discrepancies to be reported to the Engineer prior to commencement of works.
- All uncovered and shallow pipelines to be protected against construction traffic as part of the Contractor's temporary works requirements.
- Exact location line and level of existing stubs to existing manholes in the road to be confirmed on site prior to construction.
- All connections to road gullies and channels shall be 150mm nominal bore pipework. No pipe work to be downsized in the direction of flow.
- Connections to four terminal fittings to be 100mm nominal bore pipework subject to confirmation of above ground pipe diameters and/or design flow. No pipe work to be downsized in the direction of flow.
- All pipework to be U-PVC type in accordance with WIS 4-35-01 unless otherwise noted.
- All pipes connecting to adopted manholes up to and including 300mm dia. to be Wavin Ultrarib or Polypipe Polysewer (See pipe Table A).
- All pipes connecting to adopted manholes greater than 300mm dia. to be Concrete or Polypipe Ridssewer (max. 2000mm, see pipe Table A).
- Pipes of different diameters entering manholes should be installed with soffits at the same level.
- Pre-formed channels to be used at all manholes to be cut under any circumstances. Other options, manhole built up with concrete or brick work to the top of the pipe.
- High strength concrete benching to be steel trowelled to a dense smooth face neatly shaped and finished to all branch connections and laid in accordance with the specification.
- Precast concrete manhole rings will not be cut under any circumstances. Other options, manhole built up with concrete or brick work to the top of the pipe.
- All catchpits shall not be adopted.
- Pipe bends to be provided to suit direction of flow.
- All manhole covers to be 675x675mm covered frame to maintain clear 600x600mm clear opening, unless otherwise stated, in accordance with BS EN 124. Class D400 Xite material covers and frames to be ductile iron heavy duty double triangular type, embossed T/W or S/W as appropriate, where applicable.
- All proposed manhole covers & frames at a minimum of 675x675mm to comply with Severn Trent Water Ltd current Health & Safety standards.
- The use of in-fill covers and frames in block paved areas is not permitted in accordance with SFA 6th Edition, Section 2.9.6.
- All new drainage to be constructed adjacent new and proposed tree planting to be protected against root activity using 'rootcontrol' root barrier material by green-tech or similar approved. All tree positions to be in accordance with the SFA 6th Edition, Section B2.3.
- First flexible joint in pipes adjacent to a manhole shall be 600mm max. From inside face of manhole, connecting to rooker pipe. For pipe diameters 150mm - 450mm the rooker pipe length shall be 500mm - 750mm and for pipe diameters 450mm - 750mm the rooker pipe length shall be 750mm - 1000mm.
- Manholes with outgoing pipes greater than 600mm dia. shall be fitted with guard bars, safety chains or other approved safety devices.
- Sewer easements at all of change in width, these should be 2.5m to either side of the pipe for pipe sizes up to 300mm diameter and 1.2/1200mm cover in traffic areas.
- All concrete pipework with cover less than 1.2m shall be to Class 120 and have concrete slab protection.
- Where pipe crossing, plastic membrane to be used for protection to eliminate any chances of cross contamination.
- The outside of the sewer should be in vehicle carriageway (not footpath) and be at least 1.0m away from the kerb line. The outside of manholes should be at least 0.5m away from the kerb line.
- All soft spots encountered in the trench formation to be removed and replaced with graded granular material unless instructed otherwise.
- Where the formation of a pipe trench is above original ground level, levels are to be made up with compacted D1P Type 2 material or better.
- All buried concrete must cater for Class 2 sulphates conditions in accordance with Table 1 of BRE Digest 363.
- Concrete protection shall be provided to all pipes with less than 300mm cover in pedestrian areas, to all pipes with less than 600mm cover in private driveways used by commercial vehicles, and to all pipes with less than 1200mm cover in roads or private driveways used by commercial vehicles. Where concrete surround is specified flexibility of joints is to be maintained by using compressible bitumen impregnated fibreglass at each joint.
- All materials used are suitable for the ground conditions.
- The design of any temporary works required shall be the responsibility of the Contractor.
- Any discrepancies are to be recorded and reported to the Engineers immediately.
- All work is to be to the satisfaction of the Engineer and Severn Trent Water.
- The Contractor is responsible for and must take all necessary precautions to ensure the stability of the works at all times during construction.
- All services are to be located and protected as necessary by the Contractor prior to the commencement of the works.
- No backdrops to be used, steeper gradients are preferred to the use of backdrops.
- For Type E manholes the opening and cover and frame should be located centrally over the pipe - refer to SFA 6th Edition Figure 2.8 Type E details (page 38).
- In situation where traffic loading is anticipated to be heavier than would occur on a typical road estate distributor road (i.e. braking or turning near a junction) a higher specification cover (E600) should be used.

Severn Trent Water Notes

- Infill covers and frames in block paved areas are not to be used.
- Catchpits shall not be adopted.
- Easements at any change in width should be 2.5m to each side of the centre pipe line.
- Where pipe crossing, plastic membrane to be used for protection to eliminate any chances of cross contamination.
- No back drops to be used, steeper gradients are preferred to the use of back drops.
- Precast concrete manhole rings will not be cut under any circumstances. Other options are preferred, manhole built up with concrete or brickwork to the top of the pipe.
- Protective concrete cover should be used on pipes in non traffic area which doesn't achieve 0.9m/900mm cover level and 1.2m/1200mm cover in traffic area.
- The outside of the sewer should be in vehicle carriageway (not footpath) and be at least 1m from the kerb line. The outside manholes should be at least 0.5m from the kerb line.
- Trees on the drawing are existing or proposed and adhere to B2.3 (page 33) of SFA6. The trees specified will be as per Sewers for Adoption and positioned. Where clearances with vegetation is not achievable, appropriate root protection will be provided.
- All proposed manhole covers & frames at a minimum 675mmx675mm to maintain clear opening and comply with Severn Trent Water Ltd current Health & Safety Standards.
- The materials to be used are suitable for the ground conditions.
- Temporary screen to be fitted during construction works to avoid debris going into the existing network.
- Cover and frames should be kitemarked.

A5	Schedules updated to reflect previous Phase outfall changes	JD	OP	DM	10.08.20
A4	Schedules updated to reflect amended road design with all ramps removed.	BM	OP	JD	04.03.20
A3	Manhole diameters increased as instructed by Persimmon 16.01.2020.	BM	OP	JD	22.01.20

Rev Description of updates

Revision Schedule

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FOR APPROVAL

Client: Persimmon Homes

Project: Phases 5-7
Boulton Moor, Derby

Title: Adoptable Manhole Schedules

Drawn: BM Checked: OP Approved: JD Date: August 2020 Scale: As Shown

Drawing No. FW1832-D-006 Revision: A5

Network 1 - Section 104 Adoptable Storm Water Manhole Schedule										
MH Ref.	Cover Level	Invert Level	Pipe Dia. (mm)	Depth to Soffit (m)	MH Type	MH Size (mm)	Frame	Cover	Easting (m)	Northing (m)
S1	41.643	40.085	375	1.182	E(S)	Ø1500	675x675x150mm	D400	440266.511	331559.793
S2	41.799	39.851	450	1.498	E(S)	Ø1500	675x675x150mm	D400	440220.006	331548.727
S3	41.862	39.965	375	1.522	B	Ø1500	675x675x150mm	D400	440211.382	331483.836
S4	41.615	39.686	600	1.330	E(S)	Ø1500	675x675x150mm	D400	440204.138	331498.299
S5	41.453	39.658	600	1.195	E(S)	Ø1500	675x675x150mm	D400	440200.440	331513.637
S6	41.744	39.618	600	1.526	B	Ø1800	675x675x150mm	D400	440190.241	331533.999
S7	41.630	39.354	600	1.676	B	Ø1500	675x675x150mm	D400	440183.765	331530.795
S8	41.491	39.336	600	1.655	B	Ø1500	675x675x150mm	D400	440174.139	331532.935
S9	41.277	39.279	600	1.399	E(S)	Ø1500	675x675x150mm	D400	440166.699	331565.013
S10	41.171	39.321	600	1.249	E(S)	Ø1500	675x675x150mm	D400	440226.948	331611.005
S11	41.380	38.892	900	1.588	B	Ø2100	675x675x150mm	D400	440159.651	331595.408
S12	41.028	38.853	900	1.275	E(S)	Ø1800	675x675x150mm	D400	440151.396	331629.581
S15	41.228	39.545	450	1.233	E(S)	Ø1500	675x675x150mm	D400	440233.930	331674.111
S16	41.400	39.569	375	1.456	E(S)	Ø1500	675x675x150mm	D400	440154.747	331710.601
S17	41.447	39.016	750	1.681	B	Ø1800	675x675x150mm	D400	440166.809	331658.555
S18	41.116	38.989	750	1.377	E(S)	Ø1800	675x675x150mm	D400	440147.436	331654.065
S19	41.015	38.816	900	1.299	E(S)	Ø2100	675x675x150mm	D400	440138.188	331647.087
S20	41.090	38.808	900	1.382	E(S)	Ø1800	675x675x150mm	D400	440131.428	331649.085
S21	41.167	38.798	900	1.469	E(S)	Ø1800	675x675x150mm	D400	440123.064	331646.561
S22	41.566	39.558	450	1.557	B	Ø1500	675x675x150mm	D400	440110.561	331456.315
S23	41.498	39.450	600	1.448	E(S)	Ø1500	675x675x150mm	D400	440044.416	331494.956
S24	41.586	39.352	600	1.634	B	Ø1500	675x675x150mm	D400	440098.691	331507.535
S25	41.747	39.687	300	1.760	B	Ø1200	675x675x150mm	D400	440131.500	331515.138
S26	41.588	39.321	600	1.667	B	Ø1800	675x675x150mm	D400	440115.973	331511.540
S27	41.295	39.204	600	1.491	E(S)	Ø1500	675x675x150mm	D400	440100.898	331576.546
S28	41.221	39.191	600	1.430	E(S)	Ø1800	675x675x150mm	D400	440097.756	331583.102
S29	41.538	39.710	375	1.453	E(S)	Ø1500	675x675x150mm	D400	439969.764	331543.238
S30	41.534	39.436	450	1.648	B	Ø1500	675x675x150mm	D400	440007.445	331572.837
S31	41.296	39.389	450	1.457	E(S)	Ø1500	675x675x150mm	D400	440021.471	331585.504
S32	41.214	39.218	600	1.396	E(S)	Ø1500	675x675x150mm	D400	440029.395	331583.225
S33	41.171	39.009	750	1.411	E(S)	Ø1500	675x675x150mm	D400	440059.809	331596.874
S34	41.377	38.981	750	1.646	B	Ø2100	675x675x150mm	D400	440076.586	331610.052
S35	41.361	38.777	900	1.683	B	Ø2400	675x675x150mm	D400	440108.161	331634.855
S36	41.523	38.758	900	1.865	B	Ø1800	675x675x150mm	D400	440097.199	331648.812
S37	41.593	38.742	900	1.951	B	Ø1800	675x675x150mm	D400	440090.799	331661.816
Ex.S22	41.452	38.623	900	1.929	Existing	Existing	Existing	Existing	440075.871	331680.979

Network 1 - Section 104 Adoptable Storm Water Pipe Schedule									
Pipe Ref.	Upstream IL	Downstream IL	Diameter (mm)	Distance (m)	Fall (m)	Pipe Gradient 1:X	Pipe Gradient %	Pipe Material	Pipe Bedding
S1 - S2	40.085	39.926	375	47.804	0.159	1:300.0	0.333%	Concrete	Class S
S2 - S6	39.851	39.768	450	33.209	0.083	1:400.0	0.250%	Concrete	Class S
S3 - S4	39.965	39.911	375	16.176	0.054	1:300.0	0.333%	Concrete	Class S
S4 - S5	39.686	39.658	600	15.777	0.028	1:570.0	0.175%	Concrete	Class S
S5 - S6	39.658	39.618	600	22.774	0.040	1:570.0	0.175%	Concrete	Class S
S6 - S7	39.618	39.354	600	7.226	0.264	1:27.3	3.657%	Concrete	Class S
S7 - S8	39.354	39.336	600	9.861	0.017	1:570.0	0.175%	Concrete	Class S
S8 - S9	39.336	39.279	600	32.929	0.058	1:570.0	0.175%	Concrete	Class S
S9 - S11	39.279	39.199	600	31.202	0.087	1:360.3	0.278%	Concrete	Class S
S10 - S11	39.321	39.192	600	69.081	0.129	1:535.5	0.187%	Concrete	Class S
S11 - S12	38.892	38.853	900	35.156	0.039	1:900.0	0.111%	Concrete	Class S
S12 - S19	38.853	38.816	900	21.930	0.037	1:593.4	0.169%	Concrete	Class S
S15 - S17	39.545	39.316	450	68.900	0.230	1:300.0	0.333%	Concrete	Class S
S16 - S17	39.569	39.391	375	53.426	0.178	1:300.0	0.333%	Polysewer	Class S
S17 - S18	39.016	38.989	750	19.887	0.027	1:750.0	0.133%	Concrete	Class S
S18 - S19	38.989	38.966	750	11.585	0.023	1:500.1	0.200%	Concrete	Class S
S19 - S20	38.816	38.808	900	7.048	0.008	1:900.0	0.111%	Concrete	Class S
S20 - S21	38.808	38.798	900	8.737	0.010	1:900.0	0.111%	Concrete	Class S
S21 - S35	38.798	38.777	900	18.950	0.021	1:900.0	0.111%	Concrete	Class S
S22 - S24	39.558	39.427	450	52.577	0.131	1:400.0	0.250%	Concrete	Class S
S23 - S24	39.450	39.352	600	55.713	0.098	1:570.0	0.175%	Concrete	Class S
S24 - S26	39.352	39.321	600	17.740	0.031	1:570.0	0.175%	Concrete	Class S
S25 - S26	39.687	39.621	300	15.938	0.066	1:240.0	0.417%	Polysewer	Class S
S26 - S27	39.321	39.204	600	66.371	0.117	1:570.0	0.175%	Concrete	Class S
S27 - S28	39.204	39.191	600	7.270	0.013	1:570.0	0.175%	Concrete	Class S
S28 - S34	39.191	39.131	600	34.271	0.060	1:570.0	0.175%	Concrete	Class S
S29 - S30	39.710	39.551	375	47.917	0.160	1:300.0	0.333%	Concrete	Class S
S30 - S31	39.436	39.389	450	18.899	0.047	1:400.0	0.250%	Concrete	Class S
S31 - S32	39.389	39.368	450	8.245	0.021	1:400.0	0.250%	Concrete	Class S
S32 - S33	39.218	39.159	600	33.336	0.056	1:570.0	0.175%	Concrete	Class S
S33 - S34	39.009	38.981	750	21.334	0.028	1:750.0	0.133%	Concrete	Class S
S34 - S35	38.961	38.927	750	40.152	0.054	1:750.0	0.133%	Concrete	Class S
S35 - S36	38.777	38.758	900	17.747	0.020	1:900.0	0.111%	Concrete	Class S
S36 - S37	38.758	38.742	900	14.493	0.016	1:900.0	0.111%	Concrete	Class S
S37-Ex. S23	38.742	38.623	900	24.291	0.119	1:204.1	0.490%	Concrete	Class S

Network 1 - Section 38 Adoptable Storm Water Manhole Schedule										
MH Ref.	Cover Level	Invert Level	Pipe Dia. (mm)	Depth to Soffit (m)	MH Type	MH Size (mm)	Frame	Cover	Easting (m)	Northing (m)
S13*	41.475	39.564	300	1.311	CP	Ø1200	675x675x150mm	D400	440250.986	331640.687
S14*	41.336	39.446	300	1.290	CP	Ø1200	675x675x150mm	D400	440244.561	331668.410
* Denotes Catchpit Chamber with 300mm sump, IL shown INCLUDES sump.										

Network 1 - Section 38 Adoptable Storm Water Pipe Schedule									
Pipe Ref.	Upstream IL	Downstream IL	Diameter (mm)	Distance (m)	Fall (m)	Pipe Gradient 1:X	Pipe Gradient %	Pipe Material	Pipe Bedding
S13 - S14	39.864	39.746	300	28.458	0.119	1:240.0	0.417%	Polysewer	Class S
S14 - S15	39.746	39.695	300	12.063	0.050	1:240.0	0.417%	Polysewer	Class S

Note: All pipe lengths, slopes and gradient percentages are based on centre of chamber to centre of chamber. Drainage contractor is responsible to check this information for construction purposes prior to any works

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