Node ID	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	MH Type	Connections	Link ID	IL (m)	Dia (mm)	Cover Type
S1	493987.503	101566.187	2.784	0.970	1200	PCC Rings (Catchpit)	0	S1.000	1.814	225	D400
S3	493982.341	101586.310	2.953	1.231	1200	PCC Rings (Catchpit)	1 0	S1.000 S1.001	1.722 1.722	225 375	D400
S5	493969.018	101573.728	2.715	0.515	150	Rodding Eye	0	S3.000	2.200	100	Rodding Eye
S6	493941.865	101566.794	2.715	0.704	450	PP Inspection Chamber	1 0	S3.000 S3.001	2.011 2.011	150 150	B125
S7	493911.789	101559.106	2.715	0.896	450	PP Inspection Chamber	1 0	S3.001 S3.002	1.819 1.819	150 150	B125
S8	493903.294	101566.222	2.687	1.237	1200	PCC Rings (Catchpit)	1 2 3 4 0	S1.001 S3.002 S5.000 S6.000 S1.002	1.450 1.725 1.612 1.500 1.450	375 150 100 100 375	D400
S9	493864.964	101567.472	2.500	0.784	450	PP Inspection Chamber	0	S7.000	1.716	100	B125
S10	493905.645	101559.137	2.600	0.750	450	PP Inspection Chamber	0	S5.000	1.850	100	B125
S11	493889.040	101559.066	2.780	1.430	1200	PCC Rings (Catchpit)	1 2 0	S1.002 S7.000 S1.003	1.350 1.550 1.350	375 100 Tank	D400
S13	493975.485	101571.247	2.715	0.615	150	Rodding Eye	0	S8.000	2.100	150	Rodding Eye
S14	493982.255	101544.587	2.846	0.954	600	PP Inspection Chamber	1 0	S8.000 S8.001	1.992 1.916	150 225	B125
S15	493952.938	101536.840	2.684	0.944	600	PP Inspection Chamber	1 0	S8.001 S8.002	1.779 1.779	225 225	B125
S16	493921.024	101528.738	2.699	1.199	600	PP Inspection Chamber	1 0	S8.002 S8.003	1.662 1.587	225 300	B125
S17	493911.361	101547.078	2.568	0.750	450	PP Inspection Chamber	0	S9.000	1.818	100	D400
S19	493874.290	101531.171	2.576	0.750	450	PP Inspection Chamber	0	S10.000	1.826	100	D400
S20	493975.807	101577.062	2.650	0.750	450	PP Inspection Chamber	0	S2.000	1.900	100	D400
S22	493886.816	101525.369	2.806	1.506	1200	Tubosider Built-In Access Chamber (with Hydrobrake)	1 2 3 4 5 0	S1.003 S6.003 S7.000 S8.000 RWP S1.004	1.300 1.300 1.490 1.584 1.990 1.300	Tank 300 100 100 100 150	D400
S23	493929.865	101565.367	2.600	0.750	450	PP Inspection Chamber	0	S4.000	1.850	100	D400
S24	493904.928	101570.521	2.700	0.750	450	PP Inspection Chamber	0	S6.000	1.950	100	D400
SW900	493878.000	101523.000	2.707	1.457	Existing MH	Existing MH	1 0	S1.004 EX PIPE	1.270 1.250	300 450	D400

* CP - Catchpit arrangement, depth in schedule does not include minimum 450mm catchpit depth
N.B. Recessed covers and frames to manholes/chambers in feature paved areas
S2, S4, S12, S18 and S21 manholes omitted and no longer required.
EXSW900 amend cover level to suit new proposed external levels.
Tubosider covers to be vented in line with manufactures recommendations

Node ID	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	MH Type	IL (m)	Dia (mm)	Cover
F1	493958.339	101539.574	2.700	0.580	450	PP Inspection Chamber	2.120	100	D400
F2	493945.966	101536.352	2.700	0.840	450	PP Inspection Chamber	1.860	150	D400
F3	493908.956	101524.671	2.400	0.850	450	PP Inspection Chamber	1.550	100	B125
F4	493917.778	101526.992	2.400	0.950	450	PP Inspection Chamber	1.450	100	B125
F5	493919.612	101529.489	2.700	1.330	450	PP Inspection Chamber	1.370	150	B125
F6	493910.799	101558.230	2.700	1.630	450	PP Inspection Chamber	1.070	150	B125
F7	493902.906	101579.925	3.050	2.210	1200	PCC Rings	0.840	150	B125

- Recessed covers and frames to manholes/chambers in feature paved areas

Notes:

1. This drawing is to be read in conjunction with all relevant architects, engineers and specialist sub-contractors drawings and the specification.

2. All setting out to be in accordance with the schedules. any discrepancies between the engineers and the architects drawings to be referred to the architect before proceeding. Dimensions must not be scaled.

3. All private drainage is to be in accordance with BS EN 752-1-2-3-4, BS EN 1295-1, BS EN 1610 and all relevant sections of approved document H of the building regulations (2015 Edition).

4. Where drainage pipework is to be flexibly jointed extra strength vitrified clay it should be to BS EN 295-1, Hepworth 'Supersleve' or equivalent.

5. Where drainage pipework is plastic i.e. PVC-U it shall be to BS EN 1401-1 Osma or equivalent. Private pipework to be type SN4 and all adoptable pipework to be type SN8.

6. Where drainage pipework is cast iron it shall be to BS EN 877 and for ductile iron it shall be to BS EN 598.

7. All concrete pipework, shall be to BS EN 1916 and BS 5911-1. Manholes and fittings shall be to BS 5911 parts 3 and 4 and BS EN 1917.

8. All materials for adoptable drainage are to be Kitemarked as appropriate.

9. Where drains pass through foundations or connect to manholes, flexible pipe joints are to be provided within 150mm of the face of the structure and within a further 600mm to form a rocker pipe.

10. Where depth to invert does not exceed 600mm and the pipe size does not exceed 100mm diameter, 300mm dia. polypropylene access chambers may be used. Elsewhere, proprietary polypropylene or precast concrete manholes are to be used.

11. Where connections are to be made to existing manholes / sewers, invert levels, pipe sizes and orientation should be checked prior to the commencement of the works and any variance reported to the engineer immediately. Where connections are to be made on or off site the contractor is to check the line and level of any services / mains, to ensure that no clashes exist prior to works commencing.

12. Where pipelines cross, each is to be surrounded with grade ST4 mass concrete for a distance not less than 1.0m centred on the crossing point. Length of surround to be extended as necessary to within 150mm of the next nearest flexible joints.

13. For private drainage, concrete protection is to be provided where the effective cover to the crown of the pipe(s) is less than 1.2m in trafficked areas and 0.6m in soft landscaped or pedestrianised areas.

14. The contractor is to ensure that protective measures are taken to ensure that drainage pipework and fittings are not damaged by site traffic prior to oversite filling operations being completed around buildings.

15. The top run of each private foul drainage network is to be laid to falls no slacker than 1:40, the head of each run is to be vented to atmosphere in accordance with approved document H.

16. All surface water drainage to be min 100mm dia, laid at a gradient no slacker than 1/80. And all foul water drainage to be min 100mm dia. unless stated otherwise.

17. The contractor is to ensure that all pipework connections are arranged to direct flows down or into the main channel in the direction of the main flow. Where necessary 3/4 bends are to be used on oblique connections inside the manhole benching where sufficient room exists or the pipelines on oblique connections are arranged outside the chamber to be able to divert flows down the main channel. Connections brought in perpendicular to the main channel are not acceptable. Where possible the main channel flow shall be from any connections with WC's to ensure a flush through the main channel is achieved.

18. The contractor is to ensure that when preformed polypropylene manhole bases are used that they are orientated such that the main flow is through the main channel of the base. this should be achieved by incorporating long radius bends outside of the manhole.

19. The contractors attention is drawn to the need to ensure that any trenches excavated through previously compacted filled areas, in particular under the building footprint and immediately around the outside, are re-compacted to ensure localised differential settlement does not occur.

20. Where new connections are to be made into existing manholes or sewers, all invert levels, pipe orientation and sizes should be checked on-site prior to the commencement of the works, with any variance reported to the engineer once identified. Where new connections are to be made either on or off-site, the contractor is to check the line and level of any existing services / mains, to ensure that no clashes exist prior to the works commencing.

21. Porous paving surface finish 'to the architects spec'. Any alteration to the extents of the porous paving may have an adverse affect upon the Surface water drainage design and must therefore be discussed with the engineer.

22. Contractor to allow for threshold channel drainage to building access points where required by Architect.

23. The rising main should be laid with a minimum Cover of 1.2m within trafficked areas and 0.9m within pedestrianised areas.

24. The private rising main trench is to have a warning tape fitted. Allow for 1.0m of tape coiled inside the pump chamber at the upstream end.

25. Unscheduled inspection chambers are to be minimum 300mm dia. non-access shallow inspection chambers to provide rodding access into building. Invert level provided on plan.

26. Existing foul and surface water invert levels taken from Greenhatch survey 41405A_T. Any variance from these levels are to be notified to the drainage engineer prior to works commencing.

27. All pipes to be laid soffit to soffit unless otherwise specified within the manhole schedule.

Rev.	Date	Description
G	19.04.22	S22 manhole type amended to reflect built in chamber.
F	04.04.22	Further amendments to address LLFA comments.
E	15.03.22	Amended to pick up LLFA comments.
D	02.03.22	Issued for Condition 12 Approval
C	24.02.22	S11 amended.
B	10.02.22	Tubosider tank added S18 and S21 removed.
A	08.02.22	Construction Issue

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Client
RICHMOND MOTOR GROUP

Project Title
Saltbox

Drawing Title
Drainage Layout
Sheet 2 of 2

Drawing Status
Construction

Originator No.	Rev by	Chk by	Scale
114378	DB	PW	NTS @A1

PROJECT | ORIGINATOR | ZONE | LEVEL | TYPE | ROLE | NO.
114378-CAL-XX-XX-DR-D-0101

Revision
G