

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. Modular crate attenuation system(s) to be 'Wavin Aquacell' or 'Polypipe Polystorm'. Any other system offered will need to be provided with a separate warranty for design and installation.
23. Contractor to allow for threshold channel drainage to building access points where required.
24. The rising main should be laid with a minimum Cover of 1.2m within trafficked areas and 0.9m within pedestrianised areas.
25. 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.
26. Package pumping station(s) to be 'a specialist design element'. For installation guidance refer to manufacture's specification. Any vent pipes to be taken to a position agreed with the architect. A three phase electricity supply is required to provide power to the pumping station control panel. The control panel, if external, is to be located inside a kiosk within close proximity of the pumping station. An informative notice plaque should be located on or near the control panel stating 'in the event of the alarm sounding or warning light flashing please contact the number below insert contact telephone number'.

27. Unscheduled inspection chambers are to be non-access shallow inspection chambers to provide rodding access into building. Invert level provided on plan.

T2	06.12.21	External Levels Amended.
T1	15.11.21	Drawn
Rev.	Date	Description



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Client
RICHMOND MOTOR GROUP

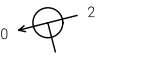
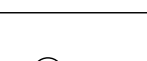
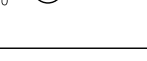
Project Title
Saltbox

Drawing Title
Drainage Layout
Sheet 2 of 2

Drawing Status
For Information

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

PROJECT ORIGINATOR ZONE LEVEL TYPE ROLE NO.	Revision
114378-CAL-XX-XX-DR-D-0101	T2

Node ID	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	MH Type	Connections	Link ID	IL (m)	Dia (mm)	Cover
S1	493987.503	101566.187	2.784	1.425	1200	PCC Rings (Catchpit)	 0	S1.000	1.359	225	D400
S3	493982.341	101586.211	2.953	1.791	1200	PCC Rings (Catchpit)	 0	S1.000 S1.001	1.237 1.162	225 300	150 D400
S4	493942.817	101576.217	2.843	1.976	1200	PCC Rings (Catchpit)	 0	S1.001 S1.002	0.867 0.867	300 300	D400
S5	493969.018	101573.728	2.715	0.600	150	Rodding Eye	 0	S2.000	2.115	100	B125
S6	493941.865	101566.794	2.715	0.965	450	PP Inspection Chamber	 0	S2.000 S2.001	1.750 1.750	100 100	B125
S7	493911.789	101559.106	2.715	1.353	450	PP Inspection Chamber	 0	S2.001 S2.002	1.362 1.362	100 100	B125
S8	493903.294	101566.222	2.687	1.987	1200	PCC Rings (Catchpit)	 0	S1.002 S2.002 S1.003	0.700 0.789 0.700	300 100 300	D400
S9	493864.964	101567.472	2.466	0.750	450	PP Inspection Chamber (Catchpit)	 0	S3.000	1.716	100	D400
S10	493903.436	101558.557	2.600	0.750	450	PP Inspection Chamber (Catchpit)	 0	S4.000	1.850	100	D400
S11	493893.761	101560.374	2.798	2.164	1200	PCC Rings (Catchpit)	 0	S1.003 S3.000 S4.000 S1.004	0.634 1.468 1.612 0.634	300 100 100 Tank	D400
S12	493884.108	101558.101	2.780	2.146	1200	PCC Rings (Catchpit)	 0	S3.000 S1.004	1.290 0.634	100 Tank	D400
S13	493975.485	101571.247	2.715	0.685	150	Rodding Eye	 0	S5.000	2.030	150	B125
S14	493982.255	101544.587	2.846	1.354	450	PP Inspection Chamber	 0	S5.000 S5.001	1.567 1.492	150 225	B125
S15	493962.938	101536.840	2.684	1.557	450	PP Inspection Chamber	 0	S5.001 S5.002	1.127 1.127	225 225	B125
S16	493921.024	101528.738	2.699	1.899	600	PP Inspection Chamber (Catchpit)	 0	S5.002 S5.003	0.800 0.800	225 225	B125
S17	493911.361	101547.078	2.568	0.750	450	PP Inspection Chamber (Catchpit)	 0	S6.000	1.818	100	D400
S18	493901.600	101530.730	2.841	2.200	1200	PCC Rings (Catchpit)	 0	S5.003 S5.004	0.641 0.641	225 225	D400
S19	493874.290	101531.171	2.576	0.750	450	PP Inspection Chamber (Catchpit)	 0	S7.000	1.826	100	D400
S20	493891.441	101533.134	2.820	0.750	450	PP Inspection Chamber (Catchpit)	 0	S8.000	2.070	100	D400
S21	493891.619	101528.254	2.806	2.272	1200	PCC Rings (Catchpit)	 0	S1.004 S5.004 S7.000 S8.000 S1.005	0.534 0.641 1.584 1.584 0.534	Tank 225 100 100 300	D400
S22	493885.092	101524.938	2.716	Total depth by specialist	1800	Pumping Station by Specialist	 0	S1.005 S1.006 S1.006	0.434 0.434 1.280	300 Rising Main Rising Main	D400 EXTG
SW900	493878.000	101523.000	2.619	EXTG	EXTG	EXTG	 1				

* CP - Catchpit arrangement, depth in schedule does not include 300mm catchpit depth
N.B. Recessed covers and frames to manholes/chambers in feature paved areas
Pump station to be designed by specialist
S2 manhole no longer required.