

Drainage Notes

This drawing is to be read in conjunction with all relevant architects, engineers drawings and specifications.

Do not scale this drawing. Any ambiguities, omissions and errors on the drawings shall be brought to the engineers attention immediately. All dimensions must be checked and verified on site.

All drainage works to be in accordance with the civil engineering specification for the water industry (CESW) as included in sewers for adoption 7th edition, the requirements of approved document H (2015 edition), building regulations 2000 and the details provided on the contract drawings.

The contractor must survey the retained drainage and report the line, level and condition of the existing drainage to the engineer. We would recommend that the existing drainage to be surveyed is cleared before undertaking these works.

Any redundant manholes are to be broken out and backfilled with a approved compacted granular material. Redundant pipes are to be filled with a 10:1 PFA/CEMENT MIX OR BROKEN OUT AND BACKFILLED WITH A APPROVED COMPACTED GRANULAR MATERIAL.

All foul and surface water drains up to and including 300mm diameter are to be vitrified clay such as LEPCORTH SUPERSLEVE/SUPERSEAL OR SIMILAR APPROVED (BS EN 295-1). All pipes greater than 300mm diameter are to be concrete class 120 (BS EN 1916:2002). All concrete manholes to be in accordance with BS EN 1917.

As an alternative (subject to the clients approval) the contractor may use structural wall pipes (MISA 4-35-01 & BS EN 13476) such as;

- POLYSEWER - POLYPIPE BUILDING PRODUCTS - SIZE 150mm to 300mm
- QUANTUM - MARLEY - SIZE 150mm to 300mm
- ULTRARIB - UPONOR - SIZE 150mm to 300mm
- ULTRARIB - WAIN - SIZE 150mm to 300mm
- RODSEWER - POLYPIPE CIVILS LTD - SIZE 400mm to 900mm
- MEHLITE - ASSET INTERNATIONAL - SIZE 450mm to 3000mm

Pipes laid within vehicle trafficked areas with less than 900mm of cover shall be surrounded in class 2 bedding. Pipes less than 300mm below the underside of a ground floor slab shall be surrounded in class 2 bedding. Where class 2 bedding is used as a surround a compressible material must be placed at every pipe joint. All other pipes are to be laid in a class 5 bedding.

All drainage must be protected during construction where intermediate cover is less than 900mm.

Where foul and surface drains/sewers cross within 100mm of each other concrete protection (class 2 bedding) many be required to prevent any potential contamination.

All cover levels are approximate only. All manhole covers to be set at the proposed finished pavement or floor level. Refer to the architects proposed levels drawing for level confirmation.

For typical manhole construction details, pipe bedding/trench details and other associated drainage details. Refer to SGI typical details drawing.

All foul and surface water connections to be 100mm diameter unless stated. All external gully connections and channel drain sump/gully connections to be 150mm diameter unless stated. All gully and channel drain outlets to be trapped and roadable. All internal gullies and channel drains to be specified by others.

Channels drains to be fitted with a HEALGUARD CAST IRON GRATING. GRATINGS to be to load class D400 specification unless otherwise agreed. Linear channels to have a 200mm minimum concrete bed and haunch.

All foul stacks and RWP's to have low level rodding access plates unless an alternative means of access is agreed. Access point size to be in accordance with document H and STED above any connected ground floor appliance spill level.

All connections passing through foundation bases and/or edge beams to be within sealed sleeves. Alternatively connections may be cast-in with flexible joints not greater than 150mm from face of the concrete.

All manhole covers located within the road and car parking areas to be D400 class. Covers located within block/slab paving areas with pedestrian traffic only to be B125 class. Covers located within block/slab paving areas to be recessed to suit the proposed paving and of the appropriate grade. All internal covers to be recessed with double sealed bolt down covers such as HOME GREEN 5000 series or similar approved.

Channels within type 1 & 2 manholes must use pre-formed clayware sections for pipes up to and including 300mm diameter. Channels to be set at the appropriate incoming and outgoing pipe gradients.

All manholes connections to be formed at soffit to soffit unless otherwise stated. All branch connections to be made with swept bends in the direction of flow in the main sewer. Internal drainage connections are provided to the penetration positions shown on and coordinated by the architect/M&E consultant.

External linear channel drains shall be designed and constructed in accordance with the manufacturers requirements and shall discharge via trapped roadable gully units unless advised otherwise. Linear channels and HEALGUARD CAST IRON GRATINGS to be to load class D400 specification. All channels shall have a 200mm minimum concrete bed and haunch.

The type and size of the separator is specified on this drawing and shall be a class 1 type. It shall be installed in complete accordance with the manufacturers instructions and vented via 75mm pipe work. The interceptor requires power for the high level oil alarm and the arrangement shall be intrinsically safe and explosion proof. The contractor shall provide the required ducting & cabling to internal monitoring position together with audio and visual monitoring unit all in accordance with BS7671:2008 1+1:2011

SW NODE S1000 INFORMATION
FLOW CONTROL = VORTEX
MODELED TYPE = GRABE
DESIGN FLOW = 3.30m³/s
DESIGN HEAD = 12.8 /s
DESIGN COVER = 47.52mm
DESIGN INVERT = 44.92m

SW NODE S1000 INFORMATION
FULL RETENTION SEPARATOR
TYPE = CONDER CDS305/11
SIZE = 3.870m x 1.510m
INLET = 44.19m(225)
OUTLET = 44.19m(225)

SW NODE S1000 INFORMATION
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TANK DEPTH = 1.075m
TOP OF TANK LEVEL = 45.432m
ESTIMATED TANK COVER = 46.814m (PROPOSED)
THRU PIPE GRADIENT = 1.407m
APPROX VOD RATIO = 95%
APPROX TANK PLAN AREA = 11m x 10.5m = 115.5m²
DESIGN TANK VOLUME = 124.2m³

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C9	Flow Control changes to ACO B broke type	17.11.2020
C8	Highway drainage amended to suit latest levels	05.11.2020
C7	Gully within washdown pit updated.	28.10.2020
C6	Grade downstream changed to 1:115	
C5	Drainage at wash area adjusted	22.10.2020
C4	SW1003 removed as discussed	16.10.2020
C3	Pop-ups corrected. RWP from Filling station amended	15.10.2020
C2	S106 invert amended	20.08.2020
C2	Wash area amended. Foul amended as requested	04.08.2020

Revisions

Project

Salford Van Hire

Client

Innov8 Development Solutions

Scale 1/500 Date 21.07.2020 Drawn by DOR

Drawing

Surface Water Drainage Review

Shepherd Gilmour Consulting Engineers

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Drawing No C1386-500 Rev: C9

Status Construction

FOR FOUL DRAINAGE DETAILS
REFER TO SECTION 106 LAYOUT
DRAWING NUMBER C1386-S106-102

- EXISTING PUBLIC COMBINED SEWER
- EXISTING PUBLIC SEWER EASEMENT
- PROPOSED SURFACE WATER SEWER AND MANHOLE
- PROPOSED RAINWATER PIPE AND CONNECTION
- PROPOSED SUMPED GULLY AND CONNECTION
- PROPOSED ACO QMAX 350 CHANNEL DRAIN
- PROPOSED ACO QMAX 150 CHANNEL DRAIN
- PROPOSED ACO M2000 10.0
- PROPOSED ACO MULTIDRAIN - SIZE NOTED ON PLAN
- PROPOSED QMAX ACCESS POINT
- PROPOSED QMAX ACCESS CHAMBER SUMP/OUTLET
- PROPOSED FLOW CONTROL CHAMBER
- PROPOSED PRECAST CONCRETE HEADWALL
- PROPOSED CELLULAR ATTENUATION TANK
- PROPOSED FUTURE PHASES OF CONSTRUCTION UNDER SEPARATE PLANNING APPLICATION
- PROPOSED FUTURE FLOW SEWER
- EXTENT OF HANDSTANDING FOR EARLY HANDOVER (TO BE CONFIRMED WITH SWH)