



FOUL MANHOLE SCHEDULE

M.H. REF.	INVERT LEVEL, LOWEST PIPE	COVER LEVEL	CHAMBER SIZE INTERNAL DIMS	COVER SIZE CLEAR OPENING	COVER TYPE	M.H. TYPE	COMMENT / DRG.
F1	4.1480	4.750	EXISTING	EXISTING	-	-	NEW BACKDROP
F2	4.3275	4.930	Ø1050	600 x 600	D400	P3	STD.01.23
F3	3.395	4.870	Ø1050	600 x 600	D400	P3	STD.01.23
F4	3.565	4.915	750 x 675	750 x 600	D400	P2	STD.01.22
F5	3.800	4.930	750 x 675	750 x 600	D400	P2	STD.01.22

SURFACE WATER MANHOLE SCHEDULE

M.H. REF.	INVERT LEVEL, LOWEST PIPE	COVER LEVEL	CHAMBER SIZE INTERNAL DIMS	COVER SIZE CLEAR OPENING	COVER TYPE	M.H. TYPE	COMMENT / DRG.
S1	4.150	4.870	750 x 675	750 x 600	D400*	P2	STD.01.22
S2	4.150	4.870	750 x 675	750 x 600	D400*	P2	STD.01.22
S3	4.150	4.890	750 x 675	750 x 600	D400*	P2	STD.01.22
S3A	4.150	4.850	750 x 675	750 x 600	D400*	P2	STD.01.22
S4	4.150	4.890	750 x 675	750 x 600	D400*	P2	STD.01.22
S4A	4.150	4.860	750 x 675	750 x 600	D400*	P2	STD.01.22
S5	4.150	4.930	750 x 675	750 x 600	D400*	P2	STD.01.22
S6	4.150	5.040	750 x 675	750 x 600	D400*	P2	STD.01.22

* = Chamber with Vented Cover

SOAKAWAY SCHEDULE

TYPE	LOWEST INCOMING INVERT LEVEL	EFFECTIVE DEPTH (H)	TOTAL DEPTH (m)	RING DIA. (m)	PIT DIMENSIONS PLAN (L x W) (m)	COVER SIZE (CLEAR OPENING) (mm)	COVER TYPE	COMMENT
SA1	as shown	1.20	1.80	-	2.00 x 2.50	Ø225 (2 No.)	B125	SEE DWG 01.63 HIGH STORGE S.A.
SA2	as shown	1.20	1.80	-	2.00 x 2.50	Ø225 (2 No.)	B125	SEE DWG 01.63 HIGH STORGE S.A.
SA3	as shown	1.20	1.80	-	2.00 x 2.50	Ø225 (2 No.)	B125	SEE DWG 01.63 HIGH STORGE S.A.
SA4	as shown	1.20	1.80	-	2.00 x 2.50	Ø225 (2 No.)	B125	SEE DWG 01.63 HIGH STORGE S.A.
SA5	as shown	1.20	1.80	-	2.00 x 2.50	Ø225 (2 No.)	B125	SEE DWG 01.63 HIGH STORGE S.A.

1. A Lotrak 1800 geotextile or equivalent surround is required.

2. Soakaways shall be a minimum of 5.00 m from any buildings or structures.

3. The Contractor shall immediately notify the Engineer if groundwater is encountered in soakaway pits.

4. A soil infiltration rate of 4.50 x 10⁻⁶ m/sec has been used for soakaway design.

WARNING :

- Surface water drainage design is subject to further on site groundwater level monitoring.

OUTSTANDING DESIGN ISSUES:

- Precise RWP Locations
- Precise Foul Outlet Locations
- Foundation Details

KEY

- TOPOGRAPHICAL SURVEY
- PROPOSALS
- PROPOSED SURFACE WATER DRAINS Ø 100 UNLESS NOTED OTHERWISE
- SURFACE WATER MANHOLE/ Ø 450 INSPECTION CHAMBER/ ROOFING EYE
- FULLY PERFORATED DISTRIBUTION PIPE, TYPE 'S' BED, SEE DETAIL
- PROPOSED FOUL WATER DRAINS Ø 100 UNLESS NOTED OTHERWISE
- FOUL WATER MANHOLE/ Ø 450 INSPECTION CHAMBER/ ROOFING EYE
- GRADIENT BED TYPE (SEE STD.01.85)
- PIPE DIAMETER
- DIRECTION OF FALL
- CHANNEL DRAIN
- SOAKAWAY, SEE SCHEDULE
- HYDRAULIC BREAK, SEE DETAILED DRAWING

Notes

- This drawing to be read in conjunction with all relevant Architects and Engineers drawings and specifications.
- Dimensions are in millimetres unless noted otherwise.
- Original topographic survey undertaken by Geodime Limited. For full topographic survey information see Geodime drawings. All levels based on O.S. Datum by GPS.
- Existing levels shown thus: +5.77
- Before excavation commences, the Contractor shall ascertain the depths, sizes and locations of all services to be crossed. Any conflicts in levels between new works and existing services shall be notified to the Engineer.
- All drainage shall be in accordance with Building Regulations 2002: Part H & W.S.A Sewers for Adoption 7th edition.
- Details of existing sewers & drains shall be confirmed by the contractor on site prior to the commencement of works.
- Sewers of different diameters shall be laid soffit to soffit in manholes, unless backdrops are detailed.
- Private drains passing through walls and footings are to be sleeved and a 600mm length of rocker pipe shall be laid on each side of the wall or footing. Runs under building shall have a type 'S' bed and surround, unless depth below underside of slab is less than 300mm where a 150mm bed and surround of concrete is to be used. Where pipes pass beneath foundations 600mm length rocker pipes shall be laid on each side. Below is shown a typical detail of a pipe sleeved through a foundation:
- Manhole (M.H.) covers and inspection chamber (I.C.) shall be adjusted to suit final surface levels.
- Where trench foundation levels lie above original levels, levels shall be made up with either well compacted layers of D.O.T Type 1 or mix ST2 concrete.
- For positions of SVP's stub stacks and rainwater pipes see detailed Architects layouts.
- Minimum gradients for pipes where no gradient is shown shall be 1:80.
- Dimensions of M.H. on private drains and sewers to be in accordance with requirements of the Building Regulations.
- Drainage trenches lower than foundations:
 - Where drainage trench is within 1.0 distance of a building the trench is to be filled with concrete mix ST 2 up to the level of the foundation, in accordance with Building Regulation 2002: Part H, diagram 8.
 - Where drainage trench is distance 'A' from footing and the depth of trench below foundation level is greater than 'A' the lower trench shall be infilled with concrete mix ST 2 such that the top level of concrete infill is no less than (A' - 150mm) below foundation level. Notes a) and b) are represented diagrammatically below:
- Pipe materials shall be:
 - For external private drain runs:
 - Clay pipes, extra strength or super strength in accordance with BS EN 295: 1991
 - UPVC pipes in accordance with BS 4660 & BS 5481: 1989 (flexible pipes)
 - Ductile iron pipe work in accordance with BS EN 598, as Stanton Integral with high performance joints or equivalent.
 - For foul sewer F2-F3-F4-F5: Manley Quantum Sewer Pipes or equivalent.
- Definition of 'rigid' and 'flexible' pipes shall be as Building Regulations Part H, table 7.
- Flexible pipes - Where private flexible pipes have more than 900mm cover under vehicular areas and more than 600mm cover under gardens, bedding and backfill shall be Type S as shown on drawing STD.01.85.
 - Where private flexible pipes have less than 900mm cover under vehicular areas, a reinforced concrete bridging slab shall be used (as Type 'Y' drawing STD.01.85) Reference Building Regulations 2002: Part H.
 - Where private flexible pipes have less than 600mm cover under gardens, concrete paving slabs laid as bridging slab shall be used (as Type 'X' drawing STD.01.85.) Reference Building Regulations 2002: Part H.
- Rigid pipes - Bedding and backfill shall be Type 'S' as shown on drawing STD.01.85, except on lengths where special protection is required (see notes below).
 - Where Ø 100mm private rigid pipes have less than 400mm cover under vehicular areas, a Type 'Z' concrete surround shall be used (see drawing STD.01.85) Reference Building Regulations 2002: Part H.
 - Where Ø 100mm private rigid pipes have less than 300mm cover under garden areas, a Type 'Z' concrete surround shall be used (see drawing STD.01.85) Reference Building Regulations 2002: Part H.
 - Where Ø 150mm private rigid pipes have less than 600mm cover under any areas, a Type 'Z' concrete surround shall be used (see drawing STD.01.85) Reference Building Regulations 2002: Part H.
- Private storm and foul drainage connections shall be detailed by the Architect.
- All external rainwater down pipes shall discharge through a proprietary bottle gully as shown on drawing STD.01.12
- Trenches below existing carriageways and parking areas shall be reinstated with D.O.E Type 1 material in accordance with standard detail STD.02.05.
- Road gullies shall be trapped in accordance with standard detail STD.01.05 Type 1T.
- All utility covers & frames within the extent of the works shall be adjusted as necessary. The Contractor shall ensure that all services within vehicular areas have appropriate grade covers & frames as shown below:

Vehicular areas:	D400	Pedestrian areas:	B125
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- Where drains are to be abandoned they shall be removed or infilled by grouting in accordance with The Civil Engineering Specification for the Water Industry - 6th Edition, clause 5.23. Drainage runs shall be CCTV Surveyed prior to being abandoned to ascertain whether any "blind" junctions exist.
- Redundant / abandoned gullies, soakaways and manholes shall be broken out to a depth of 600mm then infilled with well compacted Type 6F46F5 capping material.
- Channel drains shall be Aco Multidrain MD150 with 0.5% in built gradient, or equivalent. They shall discharge via a sump by Aco or equivalent. Grating shall be Hegldgrat Class D400. To be installed in accordance with manufacturers instructions.

C2	FOUL CONNECTIONS TP PLOTS 4.5.8 & 10 UPDATED.	-	PF-01-03-17
C1	ON HIGHWAY WORKS UPDATED TO ACCORD WITH HANTS CC COMMENTS.	-	PF-24-02-17
REV	DESCRIPTION	CHECKED	DATE

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CLIENT	Kingsham Homes		
PROJECT	Housing Development		
Bound Lane, Hayling Island			
General Arrangement - Drainage - 10 Unit Development			
DRAWN BY	CHECKED BY	DESIGNED BY	
PF	VC	PF	
SCALE @ A1	DATE	STATUS	
1:200	Oct. 2016	Construction	
JOB NO.	DRAWING NO.	REVISION	
28476	201	C2	