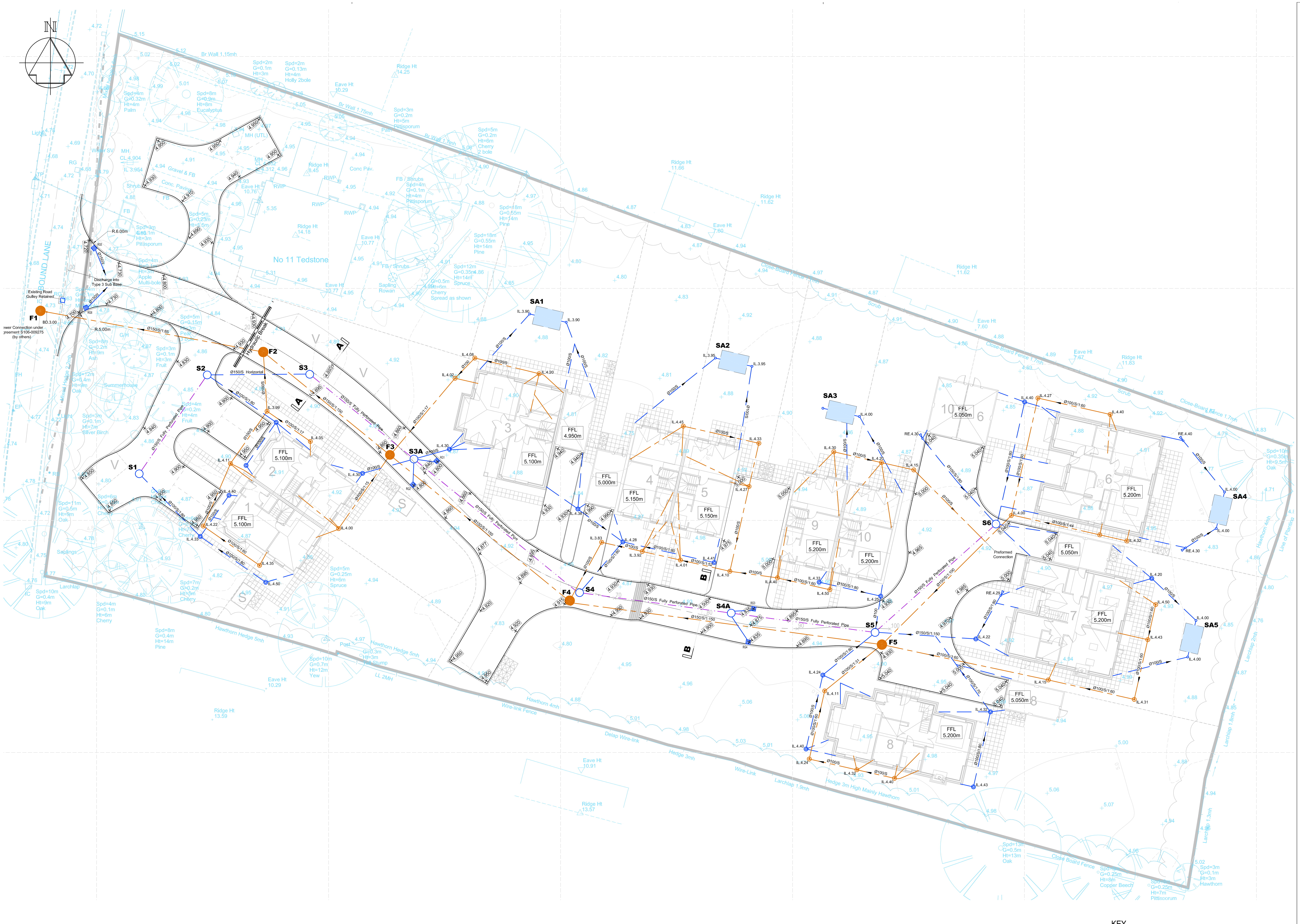


Notes

1 This drawing to be read in conjunction with all relevant Architects and Engineers drawings and specifications.

2 Dimensions are in millimetres unless noted otherwise.

3 Original topographic survey undertaken by Geodime Limited.
For full topographic survey information see Geodime drawings.
All levels based on O.S. Datum by GPS.

4 Existing levels shown thus: +5.77

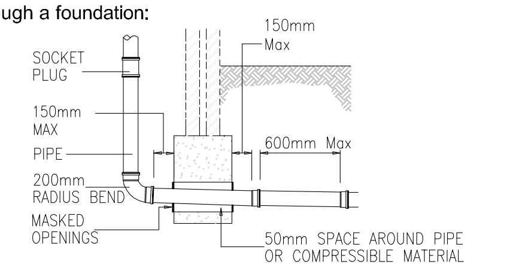
5 Before excavation commences, the Contractor shall ascertain the depths, sizes and locations of all services to be crossed. Any conflicts in levels between new works and existing services shall be notified to the Engineer.

6 All drainage shall be in accordance with Building Regulations 2002: Part H & W.S.A Sewers for Adoption 7th edition.

7 Details of existing sewers & drains shall be confirmed by the contractor on site prior to the commencement of works.

8 Sewers of different diameters shall be laid soffit to soffit in manholes, unless backdrops are detailed.

9 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:



10 Manhole (M.H.) covers and inspection chamber (I.C.) shall be adjusted to suit final surface levels.

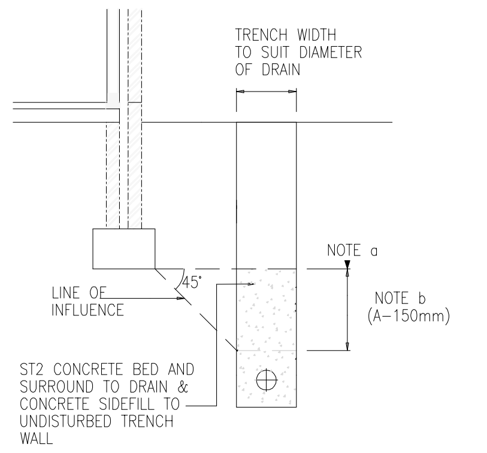
11 Where trench foundation levels lie above original levels, levels shall be made up with either well compacted layers of D.O.T type 1 or mix ST2 concrete.

12 For positions of SVP's stub stacks and rainwater pipes see detailed Architects layouts.

13 Minimum gradients for pipes where no gradient is shown shall be 1:80.

14 Dimensions of M.H. on private drains and sewers to be in accordance with requirements of the Building Regulations.

15 Drainage trenches lower than foundations:
a) Where drainage trench is within 1.0 distance of a building the trench is to be filled with concrete mix ST 2up to the level of the foundation, in accordance with Building Regulation 2002: Part H, diagram 8.
b) Where drainage trench is distance 'A' from footing and the depth of trench below foundation level is geater 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 diagramatically below:


TRENCH WIDTH TO SUIT DIAMETER OF DRAIN
NOTE a
NOTE b (A–150mm)
45°
LINE OF INFLUENCE
ST2 CONCRETE BED AND SURROUND TO DRAIN & CONCRETE SIDEFILL TO UNDISTURBED TRENCH WALL

16 Pipe materials shall be:
a) For external private drain runs:
i) Clay pipes, extra strength or super strength in accordance with BS EN 295: 1991
ii) UPVC pipes on accordance with BS 4660 & BS 5481: 1989 (flexible pipes)
iii) Ductile iron pipe work in accordance with BS EN 598, as Stanton Integral with high performance joints or equivalent.
b) For adoptable sewers/highway drains, see longitudinal sections.

17 Definition of 'rigid' and 'flexible' pipes shall be as Building Regulations Part H, table 7.

18 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.
For special protection where pipes are laid with less cover see notes below.
a) 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 2000: Part H.
b) 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.

19 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).
a) Where Ø 100mm private ridid 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.
b) Where Ø 100mm private ridid 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
c) Where Ø 150mm private ridid 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

20 Private storm and foul drainage connections shall be detailed by the Architect.

21 All external rainwater down pipes shall discharge through a proprietary bottle gulley as shown on drawing STD.01.12.

22 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.

23 Road gullies shall be trapped in accordance with standard detail STD.01.05 Type 1T.

24 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

25 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.

26 Redundant / abandoned gullies, soakaways and manholes shall be broken out to a depth of 600mm then infilled with well compacted Type 6F4/6F5 capping material.

27 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 Heelguard Class D400. To be installed in accordance with manufacturers instructions.

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	IL.1.480 BD.3.000	4.730	EXISTING	EXISTING	–	–	NEW BACKDROP
F2	3.275	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 STORAGE S.A.
SA2	as shown	1.20	1.80	–	2.00 x 2.50	ø225 (2 No.)	B125	SEE DWG 01.63 HIGH STORAGE S.A.
SA3	as shown	1.20	1.80	–	2.00 x 2.50	ø225 (2 No.)	B125	SEE DWG 01.63 HIGH STORAGE S.A.
SA4	as shown	1.20	1.80	–	2.00 x 2.50	ø225 (2 No.)	B125	SEE DWG 01.63 HIGH STORAGE S.A.
SA5	as shown	1.20	1.80	–	2.00 x 2.50	ø225 (2 No.)	B125	SEE DWG 01.63 HIGH STORAGE 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:

- Highway Works Agreement
- Sewer Connection Agreement
- 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/ RODDING 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/ RODDING EYE
Ø100/S/1:80
(13.54)
GRADIENT
BED TYPE (SEE STD.01.85)
PIPE DIAMETER
DISTANCE CHAMBER CENTRE TO CHAMBER CENTRE
DIRECTION OF FALL
CHANNEL DRAIN
SOAKAWAY. SEE SCHEDULE
HYDRAULIC BREAK. SEE DETAILED DRAWING

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	Preliminary
JOB NO.	DRAWING NO.	REVISION
28476	201	P1