OUTSTANDING DESIGN ISSUES:

- Highway Works Agreement
- Precise RWP Locations
- Precise Foul Outlet Locations
- Foundation (Pile & Ground Beam) Details

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 Kings Surveyors.
For full topographic survey information see Kings drawing No. 96926.0001.
All levels based on O.S. Datum by GPS.

4 Existing levels shown thus: +6.77

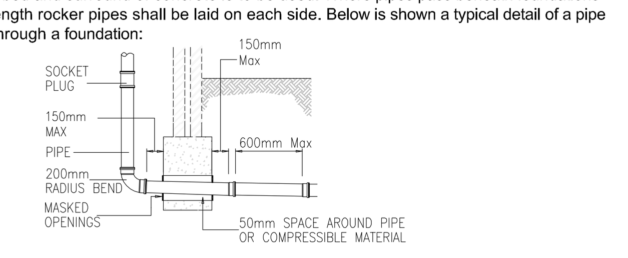
5 Before excavation commences, the Contractor shall ascertain the depths, sizes and locations of all services to be crossed. Any conflicts in levels between new works and existing services shall be notified to the Engineer.

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.

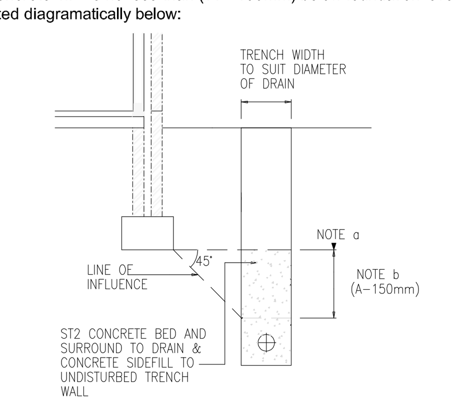
11 Where trench foundation levels lie above original levels, levels shall be made up with either well compacted layers of D.O.T type 1 or mix ST2 concrete.

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:



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 Gullies RG1, RG2 & RG5 shall be brickwork in accordance with standard detail STD.01.10. Road gullies RG3 & RG4 shall be trapped in accordance with 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

WARNINGS :

- Contaminated Ground :
Remediation of contaminated soils may be required in the vicinity of soakaway structures that will concentrate flows into the ground. See Ground Management Report G6308.
- Foul Drains / Sewers :
Due to the close proximity of permeable pavements to foul drain runs on the site, it is not anticipated that Southern Water will adopt any of the new foul drainage system apart from manhole F3.

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	3.370	6.100	EXISTING MH	EXISTING	-	-	
F2	3.750	6.480	EXISTING MH	EXISTING	-	-	
F3*	4.060	6.460	Ø1200	675 x 675	D400	B	STD.01.30
F4	4.200	6.340	EXISTING MH	EXISTING	-	-	

* NOTE : Southern Water connection / new manhole licence required

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	5.770	6.420	EXISTING MH	EXISTING	-	-	EXISTING MH
S2	5.450	6.455	750 x 675	750 x 600	D400	CATCHPIT	STD.01.47
S3	-	6.380	EXISTING MH	EXISTING	-	-	DEMOLISH EXT. MH
S4	5.450	6.300	750 x 675	750 x 600	D400	CATCHPIT	STD.01.47
S5	5.400	6.325	750 x 675	750 x 600	D400	CATCHPIT	STD.01.47
S6	5.400	6.220	750 x 675	750 x 600	D400	CATCHPIT	STD.01.47
S7	5.400	6.450	750 x 675	750 x 600	D400	CATCHPIT	STD.01.47
S8	5.400	6.200	750 x 675	750 x 600	D400	CATCHPIT	STD.01.47
S9	5.650	6.200	750 x 675	750 x 600	D400	P2	STD.01.22
S10	5.510	6.500	750 x 675	750 x 600	D400	P2	STD.01.22

SOAKAWAY SCHEDULE

TYPE	EFFECTIVE DEPTH (H)	TOTAL DEPTH (m)	RING DIA. (m)	PIT DIMENSIONS PLAN (L x W) (m)	COVER SIZE (CLEAR OPENING) (mm)	COVER TYPE	COMMENT
SA 1	1.200	1.700	-	14.0 x 0.50	2 x Ø225	B125	SEE DWG 01.63 HIGH STORAGE SOAKAWAY
SA 2	1.200	1.700	-	10.0 x 0.50	2 x Ø225	B125	SEE DWG 01.63 HIGH STORAGE SOAKAWAY
SA 3	1.200	1.700	-	23.0 x 0.50	2 x Ø225	B125	SEE DWG 01.63 HIGH STORAGE SOAKAWAY
SA 4	1.200	1.700	-	14.0 x 0.50	2 x Ø225	B125	SEE DWG 01.63 HIGH STORAGE SOAKAWAY
SA 5	1.200	1.700	-	19.0 x 0.50	3 x Ø225	B125	SEE DWG 01.63 HIGH STORAGE SOAKAWAY

1. A Lotrak 1800 geotextile or equivalent surround is required.
2. Soakaways shall be a minimum of 5.00m from any buildings or structures.
3. The Contractor shall immediately notify the Engineer if groundwater is encountered in soakaway pits.
4. A provisional soil infiltration rate of 2.50 x 10^{6} m/sec has been used for soakaway design.

KEY

- TOPOGRAPHICAL SURVEY
- PROPOSALS
- PROPOSED SURFACE WATER DRAINS Ø 100 UNLESS NOTED OTHERWISE
- SURFACE WATER MANHOLE/ Ø 450 INSPECTION CHAMBER/ RODDING EYE
- EXISTING FOUL WATER SEWER
- FULLY PERFORATED DISTRIBUTION PIPE
- 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
- DRAIN TO BE ABANDONED
- HIGH STORAGE SOAKAWAY. SEE SCHEDULE
  CL. = INSPECTION WELL COVER LEVEL
  BL. = BASE OF STORAGE UNIT LEVEL

REV	DESCRIPTION	CHECKED	DATE
P5	SOAKAWAYS RESIZED. HYDRAULIC BREAK ON WEST BOUNDARY ADDED. SPEED TABLE ADDED. PERMEABLE PAVEMENT NORTH OF KINGSHAVEN.	-	PF-09-05-18
P4	MANHOLE COVER & BASE LEVELS ADDED. GULLIES RG6 & 7 ADDED.	-	PF-30-04-18
P3	ADDITIONAL EXTERNAL LEVELS SHOWN.	-	PF-23-04-18
P2	SOAKAWAYS MADE SHALLOWER & WIDER.	-	PF-06-03-18

Archibald Shaw
Consulting Civil & Structural Engineers
One Little London Chichester West Sussex P019 1PP
Telephone: 01243 786471 Facsimile: 01243 779346
mail@archibaldshaw.co.uk www.archibaldshaw.co.uk

CLIENT
Plotlife

PROJECT
Housing Development
Kings Close, Yapton
General Arrangement showing Drainage

DRAWN BY	CHECKED BY	DESIGNED BY
PF	VC	PF
SCALE @ A1	**© DATE**	**STATUS**
1:200	Jan. 2018	Preliminary
JOB NO.	**DRAWING NO.**	**REVISION**
28854	101	P5

ARUN DISTRICT COUNCIL Y/100/18/DOC