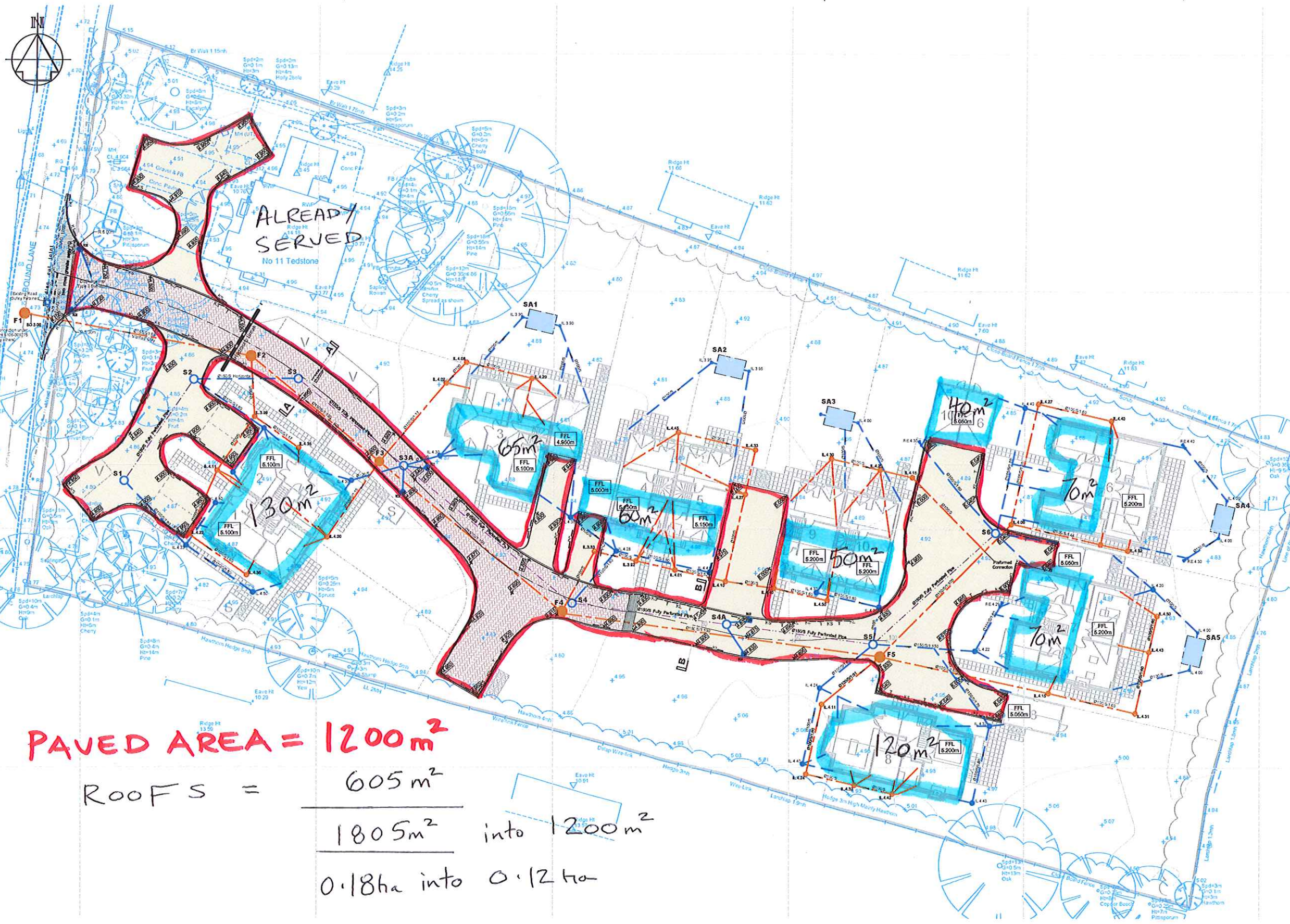




- Notes**
- This drawing is to be read in conjunction with all relevant Architects and Engineers drawings and specifications.
 - Dimensions are in millimetres unless noted otherwise.
 - Original topographic survey undertaken by Goodie Limited. For full topographic survey information see Geodetic drawings. All levels based on O.S. Datum by GPS.
 - Existing levels shown thus: 45.77
 - 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 & A. Severs 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 floors are to be sleeved and a 600mm length of rodder pipe shall be laid on each side of the wall or floor. 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 rodder 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 to show original levels, levels shall be made up with either well compacted layers of D.O.T type 1 or mix ST1 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 below foundations:
 - Where drainage trench is within 1.0 distance of a building the trench is to be filled with concrete mix ST2 up to the level of the foundation, in accordance with Building Regulation 2002: Part H, clause 8.
 - Where drainage trench is distance 'A' from footing and the depth of trench below foundation level is greater than 'A' the trench shall be filled with concrete mix ST2 such that the top level of concrete FFL is no less than (A - 150mm) below foundation level. Notes a) and b) are represented diagrammatically below:
-
- Pipe materials shall be:
 - For external private drains runs:
 - Clay pipes, extra strength or super strength in accordance with BS EN 295: 1991
 - UPVC pipes in accordance with BS 4660 & BS 5481: 1993 (flexible pipes)
 - Ducts from pipe work in accordance with BS EN 12688, as standard integral with high performance joints or equivalent.
 - For foul sewer F2-F4-F5: Marley 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 are laid with less cover see notes below
 - Where private flexible pipes have less than 400mm cover under vehicular areas, a reinforced concrete bedding slab shall be used (see 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 bedding slab shall be used (see 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 150mm 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 150mm 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 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 carparking 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. Drains runs shall be CCTV Surveyed prior to being abandoned to ascertain whether any 'blind' locations exist.
 - Redundant / abandoned gullies, soakaways and manholes shall be broken out to a depth of 600mm then filled with well compacted Type F4/F5 compacted material.
 - Channel drains shall be to BS 4838 M105 with 0.5% in built gradient, or equivalent. They shall discharge via a pump by Aco or equivalent. Grating shall be Heavy-Duty 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 DMS	COVER SIZE CLEAR OPENING	COVER TYPE	M.H. TYPE	COMMENT / DRG.
F1	4.130	4.730	EXISTING	EXISTING	—	—	NEW BACKDROP
F2	3.975	4.830	600 x 600	600 x 600	D400	P3	STD 01.23
F3	3.355	4.870	600 x 600	600 x 600	D400	P3	STD 01.23
F4	3.555	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 DMS	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	4.890	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	4.890	750 x 675	750 x 600	D400*	P2	STD 01.22
S5	4.150	4.890	750 x 675	750 x 600	D400*	P2	STD 01.22
S5	4.150	5.040	750 x 675	750 x 600	D400*	P2	STD 01.22

* Chamber with Vented Cover

SOAKAWAY SCHEDULE

TYPE	INVERT LEVEL LOWEST PIPE	DEPTH (m)	TOTAL DEPTH (m)	RING DIA. (m)	PIT DIMENSIONS PLAN (L x W) (m)	COVER SIZE (CLEAR OPENING) (m)	COVER TYPE	COMMENT
SA1	as above	1.20	1.80	—	2.00 x 2.50	925 (2 No.)	B125	SEE DRG 01.63 NEW STONE SL
SA2	as above	1.20	1.80	—	2.00 x 2.50	925 (2 No.)	B125	SEE DRG 01.63 NEW STONE SL
SA3	as above	1.20	1.80	—	2.00 x 2.50	925 (2 No.)	B125	SEE DRG 01.63 NEW STONE SL
SA4	as above	1.20	1.80	—	2.00 x 2.50	925 (2 No.)	B125	SEE DRG 01.63 NEW STONE SL
SA5	as above	1.20	1.80	—	2.00 x 2.50	925 (2 No.)	B125	SEE DRG 01.63 NEW STONE SL

- A Leaktight 1500 geotextile or equivalent surround is required.
- Soakaways shall be a minimum of 5.00m from any buildings or structures.
- The Contractor shall immediately notify the Engineer if groundwater is encountered in soakaway pits.
- A soil infiltration rate of 4.50 x 10⁻³ l/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
- Sever Connection Agreement
- Private RVP Locations
- Private Foul Outlet Locations
- Foundation Details

KEY

- TOPOGRAPHICAL SURVEY
- PROPOSALS
- PROPOSED SURFACE WATER DRAINS Ø 150 UNLESS NOTED OTHERWISE
- SURFACE WATER MANHOLE Ø 400 IN SECTION CHAMBER, ROOFS EYE
- FULLY PERFORATED DISTRIBUTION PIPE TYPE 8 BED SEE DETAIL
- PROPOSED FOUL WATER DRAINS Ø 150 UNLESS NOTED OTHERWISE
- FOUL WATER MANHOLE Ø 450 IN SECTION CHAMBER, ROOFS EYE
- GRADIENT BED TYPE (SEE STD 01.85)
- PPE DIAMETER
- DISTANCE CHAMBER CENTRE TO CHAMBER CENTRE
- DIRECTION OF FALL
- CHANNEL DRAIN
- SOAKAWAY SEE SCHEDULE
- HYDRAULIC BREAK SEE DETAILED DRAWING

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CUSTOMER
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
1200	Oct 2016	Preliminary

JOB NO.	DRAWING NO.	REVISION
28476	201	P1