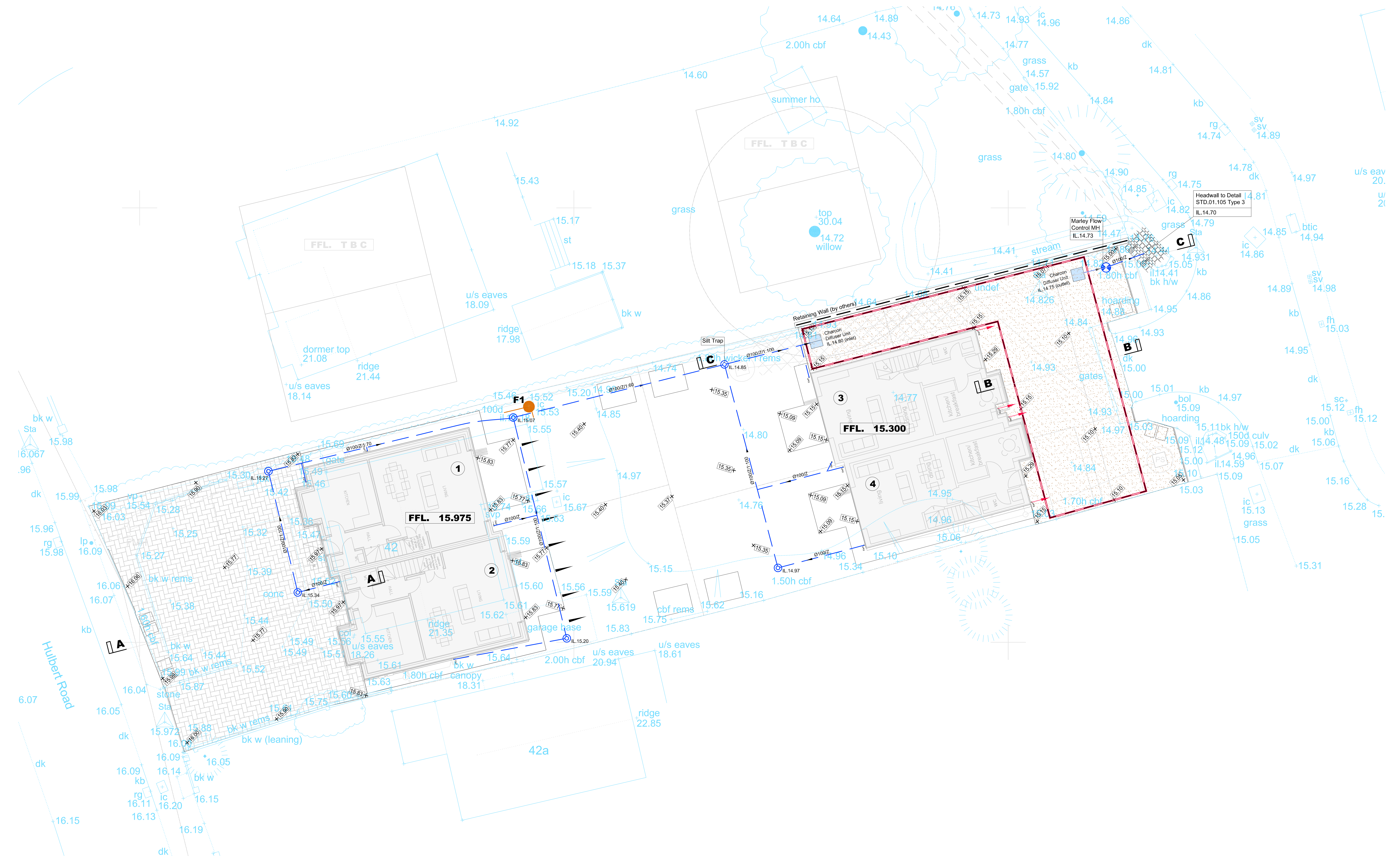


OUTSTANDING DESIGN ISSUES:

- Precise foul outlet & RWP locations
- Foul Water drainage design (by others)
- Retaining Wall on northern boundary (by others)

WARNING :

- High groundwater levels found locally.
- Risk of unstable trenches / pits.

KEY

Topographical Survey
Proposals
Proposed Surface Water Drains Ø100 Unless Noted Otherwise
Surface Water Manhole/ Storm Ø450 Insp. Chamber/ Rodding Eye
Foul Drainage : By Others
Foul Drainage : By Others
Fully Perforated Distribution Pipe
Ø100/S/1:80
Gradient
Bed Type (See STD.01.85)
Pipe Diameter
Direction of Fall
708 x 708mm Charcon Permavoid Rainwater Diffuser Unit (wrapped in 2mm mesh fabric) as inlet / outlet
Rainwater Downpipe discharging through angled pipe shoe at base onto shingle
Extent of Impermeable Liner : Visqueen GX Hydrocarbon UDG or equivalent, with site welded joints

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 Solent Surveys
For full topographic survey information see Solent drawing No. 14079-S1.
All levels based on O.S. Datum by GPS.

4 Existing levels shown thus: +15.73

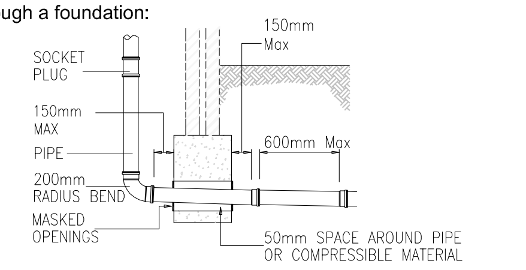
5 Before excavation commences, the Contractor shall ascertain the depths, sizes and locations of all services to be crossed. Any conflicts in levels between new works and existing services shall be notified to the Engineer.

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.

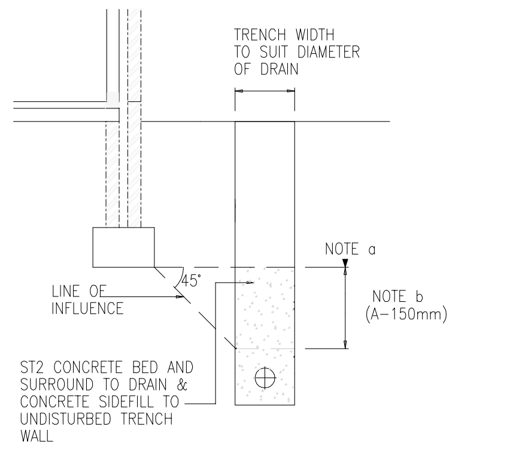
11 Where trench foundation levels lie above original levels, levels shall be made up with either well compacted layers of D.O.T type 1 or mix ST2 concrete.

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.
b) For long crossings under building footprint :
i) Clay pipes, extra strength or super strength in accordance with BS EN 295: 1991

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 Not used

24 Gullies shall be in accordance with the gulley schedule.

25 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 : Vehicular areas : D400 Pedestrian areas : B125

26 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.

27 Redundant / abandoned gullies, soakaways and manholes shall be broken out to a depth of 600mm then infilled with foamed concrete.

NOTES (Continued)

28 Finishes :

▨ PERMEABLE BLOCK PAVED PARKING

Construction : 80mm Formpave Aquaflow Concrete Blocks, or equivalent
Herringbone Bond (Block Type to be confirmed)
30mm of 6mm Nominal Sized Basalt Aggregate, or equivalent
- Lotrak 1800 Geotextile
290mm Type 3 Sub - Base
- Triax Tx160 Geogrid by Tensar, or equivalent
- Class 6F5 Coarse Capping as Fill
400mm Minimum Total
Anticipated formation : Made Ground
(Plots 1 & 2)

▨ SHINGLE PARKING

Construction : 75mm of 5-20mm crushed aggregate / shingle surface. Details to be agreed with The Architect
Depth Varies (250 to 425mm) Type 3 Sub - Base
Impermeable Visqueen Liner
50mm Coarse Sand Bed

FOUL MANHOLE SCHEDULE (Foul drainage by others)

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	15.180	15.530	EXISTING	EXISTING	-	-	

REV	DESCRIPTION	CHECKED	DATE
P2	REDRAWN WITH REVISED FFLs.	-	PF-04-06-18

Archibald Shaw
Consulting Civil & Structural Engineers
One Little London Chichester West Sussex PO19 1PP
Telephone: 01243 786471 Facsimile: 01243 779346
mail@archibaldshaw.co.uk www.archibaldshaw.co.uk

CLIENT
Amclo Developments

PROJECT
Proposed Development
42 Hulbert Road, Bedhampton
Surface Water Drainage General Arrangement

DRAWN BY	CHECKED BY	DESIGNED BY
PF	VC	PF
SCALE @ A1	© DATE	STATUS
1:125	May 2018	Preliminary
JOB NO.	DRAWING NO.	REVISION
29732	EX.01	P2