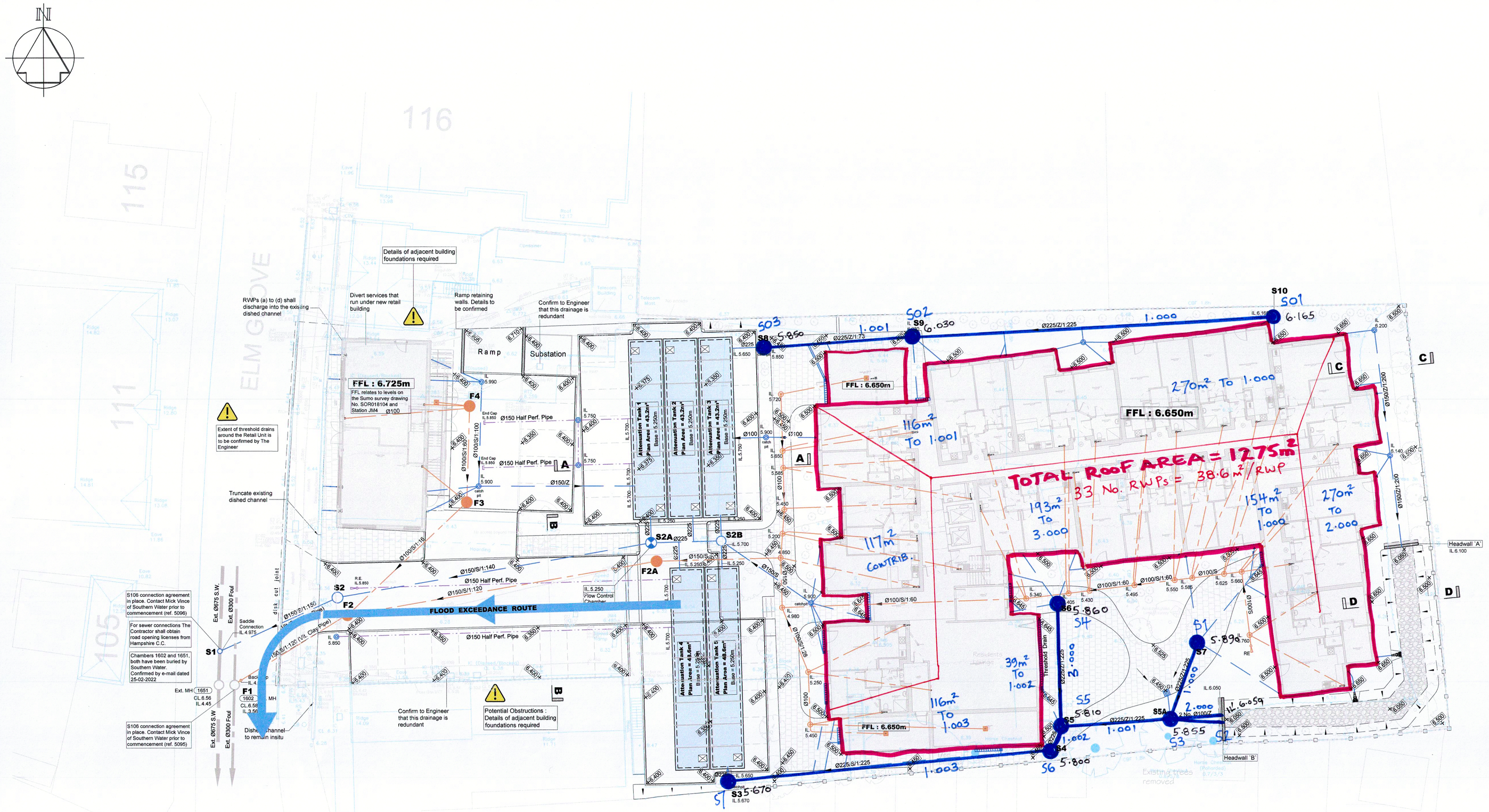


NOTES

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 3D Services Limited.
For full topographic survey information see drawing 19/088/01 by 3D Services.
All levels based on O.S. by G.P.S.

4 Existing levels shown thus: +5.775

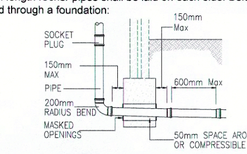
5 Before excavation commences, the Contractor shall ascertain the depths, sizes and locations of all services to be crossed. Any conflicts in levels between new works and existing services shall be notified to the Engineer.

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.

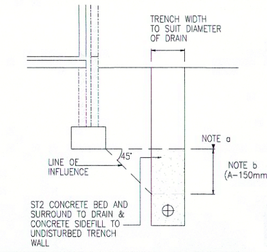
11 Where trench foundation levels lie above original levels, levels shall be made up with either well compacted layers of D.O.T type 1 or mix ST2 concrete.

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.
b) For foul sewer connections :
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 2002: 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 900mm 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 gardens 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 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.

28 All internal rain water pipes and foul outlets that do not connect directly to an inspection chamber shall have a rodding access provided above floor level for future maintenance purposes. Pre-formed connections shall be installed for all 'Y' and 'T' junctions.

REV	DESCRIPTION	CHECKED	DATE
P9	VEHICULAR CROSSOVER SHOWN IN LIEU OF BELLMOUTH ENTRANCE.	-	PF-21-02-22
P8	RETAIL UNIT FFL SHOWN AT 6.450m.	-	PF-14-02-22
P7	SWALE DETAILED TO SOUTH EAST OF BUILDING. HEADWALLS 'A' & 'B' ADDED. THRESHOLD DRAINS ADDED.	-	PF-12-05-21
P6	PRECAST BOX CULVERTS SHOWN AS STORAGE TANKS IN LIEU OF PLASTIC CRATE SYSTEM.	-	PF-09-04-21
P5	DRAINAGE CHANNEL REPOSITIONED. CHAMBER S8A ADDED.	-	PF-25-11-20
P4	REDRAWN WITH FINISHED FLOOR LEVEL = 6.650m.	-	PF-29-10-20
P3	REDRAWN WITH FINISHED FLOOR LEVEL = 6.450m.	-	PF-15-06-20
P2	REDRAWN WITH FINISHED FLOOR LEVEL = 6.200m.	-	PF-29-05-20

NOTE :

- For setting out information refer to Architect's and Speedeck's drawings

OUTSTANDING DESIGN ISSUES :

- Precise RWP locations
- Precise foul outlet locations

SURFACE WATER MANHOLE / CATCHPIT 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	4.975	-	New Saddle Connection	-	-	-	-
S2	5.050	6.400	750 x 675	750 x 600	D400	P2	STD.01.22
S2A	5.250	6.400	Ø600 Flowloc	750 x 750	D400*	Manhol Flowloc Chamber. See Detail Drawing	
S2B	5.250	6.400	750 x 675	750 x 600	D400	P2	STD.01.22
S3	5.670	6.400	900 x 675	600 x 600	B125	C2A	STD.01.50 (Catchpit)
S4	5.800	6.500	750 x 675	750 x 600	B125	P2	STD.01.22
S5	5.810	6.500	750 x 675	750 x 600	B125	P2	STD.01.22
S5A	5.855	6.500	750 x 675	750 x 600	B125	P2	STD.01.22
S6	5.860	6.600	750 x 675	750 x 600	B125	P2	STD.01.22
S7	5.890	6.550	750 x 675	750 x 600	B125	P2	STD.01.22
S8	5.850	6.450	900 x 675	600 x 600	B125	C2A	STD.01.50 (Catchpit)
S9	6.030	6.500	750 x 675	750 x 600	B125	P2	STD.01.22
S10	6.165	6.500	750 x 675	750 x 600	B125	P2	STD.01.22

* = Vented Cover by Manhole Covers Limited or equivalent (Contact : sales@manholecovers.co.uk)

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	5.580 (IL 4.140)	6.580	Existing Adopted Buried Chamber		-	-	Backdrop Connection See detail STD.01.55
F2	4.530	6.400	Ø1050	600 x 600	D400	P3	STD.01.23
F2A	4.760	6.400	Ø1050	600 x 600	D400	P3	STD.01.23
F3	5.535	6.400	750 x 675	750 x 600	D400	P2	STD.01.22
F4	5.650	6.400	750 x 675	750 x 600	D400	P2	STD.01.22

GULLEY SCHEDULE

REF.	CHAMBER	GRATING	MIN. CLEAR WATERWAY	COMMENT / DRG.
G1	Drg. STD.01.10 (Type 2 Brick)	Stanton PAM Waterflow Pedestrian Grate Ref. HP693.1	787cm²	Grade C250 Grate
-				

KEY

- TOPOGRAPHICAL SURVEY
- PROPOSALS
- PROPOSED SURFACE WATER DRAINS Ø 100 UNLESS NOTED OTHERWISE
- SURFACE WATER MANHOLE / Ø 450 INSPECTION CHAMBER / RODDING EYE
- Ø100 FOUL DRAINAGE UNLESS NOTED OTHERWISE
- FOUL MANHOLE / Ø 450 INSPECTION CHAMBER / TRAPPED RODDABLE GULLEY
- INTERNAL FOUL MANHOLE
- Ø100/S/1:80 (13.54) GRADIENT
- BED TYPE (SEE STD.01.85)
- PIPE DIAMETER
- DISTANCE CHAMBER CENTRE TO CENTRE - NOT USED
- DIRECTION OF FALL
- PRECAST BOX CULVERT ATTENUATION TANK : SEE SECTIONS
- GULLEY. SEE SCHEDULE
- THRESHOLD DRAIN. TO ARCHITECT'S DETAILS
- ACO SWALE INLET OR EQUIVALENT
- Ø150 HALF PERFORATED PIPE. PERFORATIONS UPPERMOST. FILTER DRAIN TYPE 1A. SEE DETAIL STD.01.75
- FENCE - INCORPORATING 300mm DEEP GRAVEL BOARD TO RETAIN SOIL. NO MORE THAN 300mm SHALL BE RETAINED. NO VEHICULAR LOADS SHALL BE RETAINED BY GRAVEL BOARDS.

REV	DESCRIPTION	CHECKED	DATE
C3	FFL OF THE RETAIL UNIT CHANGED TO 6.725m (RELATIVE TO THE SUMO SURVEY DRAWING).	-	PF-27-09-22
C2	FFL OF THE RETAIL UNIT CHANGED FURTHER TO SETTING OUT / SURVEY PROBLEMS.	-	PF-13-09-22
C1	CONSTRUCTION ISSUE. PILING LAYOUTS UPDATED TO ACCORD WITH SPEEDECK DETAILS.	-	PF-20-06-22
P17	REQUIREMENT FOR TRIAL PIT TO NORTH OF RETAIL UNIT ADDED. ADDITIONAL THRESHOLD DRAINS ADDED.	-	PF-07-06-22
P16	F1 BACKDROP SHOWN IN LIEU OF INTERNAL DROP. TEA POINT OUTLET ADDED. GULLIES ADDED TO SERVE REFUSE AREAS, BUGGY ROOM & PLANT ROOM.	-	PF-06-06-22
P15	RETAIL UNIT DRAINAGE ADDED. RETAIL UNIT FFL RAISED TO 6.500m. CONNECTION TO CHAMBER I. 5.340m ADDED TO AVOID LIFT PIT.	-	PF-19-04-22
P14	Ø450 CHAMBERS DETAILED IN LIEU OF MHs F3, F4, F5 + F6. ADDITIONAL Ø450 CHAMBERS ADDED.	-	PF-29-03-22
P13	FOUL INVERT LEVELS F3 TO F6 RAISED.	-	PF-21-03-22
P12	INTERNAL MHs REPLACED WITH EXTERNAL FOUL SYSTEM.	-	PF-14-03-22
P11	INTERNAL MH DETAIL ADDED. FOUL INVERT LEVELS REVISED.	-	PF-10-03-22
P10	GRAVEL BOARDS SHOWN IN LIEU OF RETAINING WALLS. INVERT LEVELS FOR CHAMBERS F3 - F11 SHOWN.	-	PF-06-03-22

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CLIENT
Hamlet Homes

PROJECT
Elm Grove
Hayling Island

MARK-UP SHOWING:-
- CATCHMENTS
- FLOOD EXCEEDANCE ROUTE
- S.W. DRAINAGE NETWORKS

Drainage General Arrangement

DRAWN BY	CHECKED BY	DESIGNED BY
PF	VC	VC/PF
SCALE @ A1	©DATE	STATUS
1:200	May. 2020	Construction
JOB NO.	DRAWING NO.	REVISION
30666	EX.01	C3