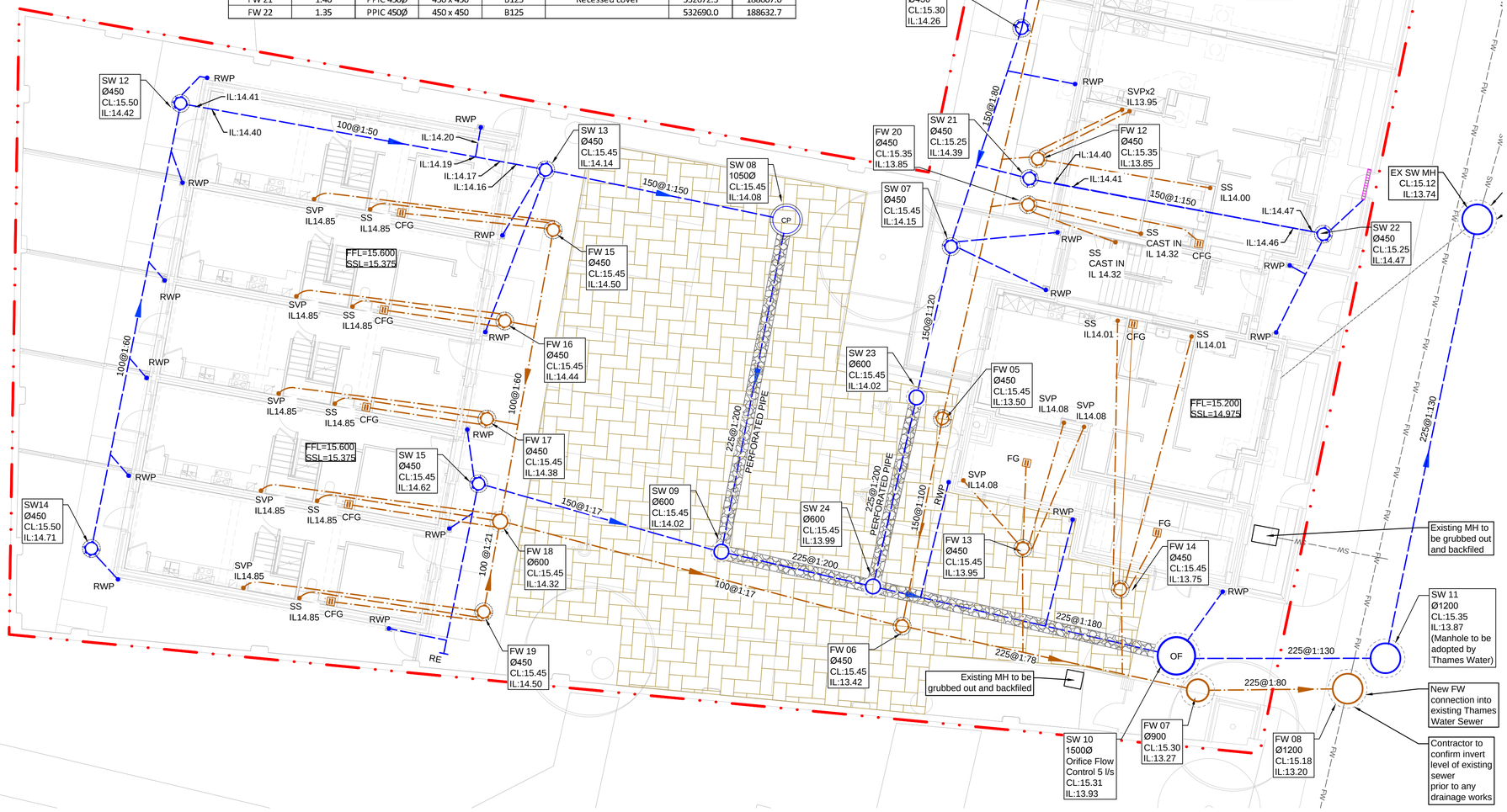
SURFACE WATER MANHOLE SCHEDULE

MANHOLE REF	DEPTH (M)	TYPE/SIZE(MM)	OPENING SIZE	COVER TYPE	NOTES	EASTINGS	NORTHINGS
SW 01	0.45	PPIC 450Ø	450 x 450	B125		532686.0	188642.8
SW 02	0.47	PPIC 450Ø	450 x 450	B125		532677.8	188641.9
SW 03	0.57	PPIC 450Ø	450 x 450	B125	Recessed cover	532675.3	188629.5
SW 04	0.75	PPIC 450Ø	450 x 450	B125	Recessed cover	532673.4	188622.2
SW 05	NO LONGER REQUIRED						
SW 06	1.04	PPIC 450Ø	450 x 450	B125	Recessed cover	532668.6	188598.4
SW 07	1.30	PPIC 450Ø	450 x 450	B125	Recessed cover	532665.9	188589.9
SW 08	1.37	PCC 1050Ø	600 X 600	D400	Catch Pit,Recessed cover	532659.5	188591.0
SW 09	1.43	PPIC 600Ø	600 X 600	D400	Recessed cover	532657.0	188578.1
SW 10	1.38	PCC 1500Ø	675 X 676	D400	Flow Control Device	532674.6	188574.1
SW 11	1.48	PCC 1200Ø	675 X676	D400	Recessed cover	532682.7	188574.0
SW 12	1.08	PPIC 450Ø	450 x 450	B125	Recessed cover	532636.0	188595.5
SW 13	1.31	PPIC 450Ø	450 x 450	B125	Recessed cover	532650.2	188592.9
SW 14	0.69	PPIC 450Ø	450 x 450	B125	Recessed cover	532632.5	188578.2
SW 15	0.83	PPIC 450Ø	450 x 450	B125		532647.6	188580.7
SW 16	0.72	PPIC 450Ø	450 x 450	B125	Recessed cover	532676.2	188621.7
SW 17	0.67	PPIC 450Ø	450 x 450	B125	Recessed cover	532681.5	188620.7
SW 18	NO LONGER REQUIRED						
SW 19	0.86	PPIC 450Ø	450 x 450	B125	Recessed cover	532671.8	188606.4
SW 20	0.60	PPIC 450Ø	450 x 450	B125	Recessed cover	532683.0	188604.0
SW 21	0.86	PPIC 450Ø	450 x 450	B125	Recessed cover	532668.9	188592.6
SW 22	0.78	PPIC 450Ø	450 x 450	B125	Recessed cover	532680.3	188590.4
SW 23	1.43	PPIC 600Ø	450 x 450	B125	Recessed cover	532664.5	188584.1
SW 24	1.46	PPIC 600Ø	450 x 450	B125	Recessed cover	532662.9	188576.7

FOUL WATER MANHOLE SCHEDULE

MANHOLE REF	DEPTH (M)	TYPE/SIZE(MM)	OPENING SIZE	COVER TYPE	NOTES	EASTINGS	NORTHINGS
FW 01	0.72	PPIC 600Ø	450 x 450	B125	Recessed cover	532676.1	188629.1
FW 02	1.03	PPIC 450Ø	450 x 450	B125	Recessed cover	532674.7	188622.9
FW 03	1.23	PPIC 450Ø	450 x 450	B125	Recessed cover	532673.9	188615.2
FW 04	1.24	PPIC 450Ø	450 x 450	B125	Recessed cover	532673.2	188611.2
FW 05	1.95	PPIC 450Ø	450 x 450	D400	Recessed cover	532665.5	188583.2
FW 06	2.02	PPIC 450Ø	450 x 450	D400	Recessed cover	532664.0	188575.2
FW 07	2.03	PCC 900Ø	675X676	D400	Recessed cover	532675.4	188572.7
FW 08	1.98	PCC 1200Ø	675X676	D400	Recessed cover	532681.3	188572.8
FW 09	0.62	PPIC 450Ø	450 x 450	B125	Recessed cover	532681.7	188623.8
FW 10	0.67	PPIC 450Ø	450 x 450	B125	Recessed cover	532678.9	188621.9
FW 11	0.90	PPIC 450Ø	450 x 450	B125	Recessed cover	532671.9	188605.0
FW 12	1.50	PPIC 450Ø	450 x 450	B125	Recessed cover	532669.2	188593.3
FW 13	1.70	PPIC 450Ø	450 x 450	B125	Recessed cover	532668.7	188578.2
FW 14	1.70	PPIC 450Ø	450 x 450	B125	Recessed cover	532672.4	188576.6
FW 15	1.00	PPIC 450Ø	450 x 450	B125	Recessed cover	532650.5	188590.6
FW 16	1.01	PPIC 450Ø	450 x 450	B125		532648.6	188587.0
FW 17	1.07	PPIC 450Ø	450 x 450	B125		532647.9	188583.2
FW 18	1.18	PPIC 600Ø	450 x 450	B125	Recessed cover	532648.4	188579.3
FW 19	1.00	PPIC 450Ø	450 x 450	B125	Recessed cover	532647.8	188575.8
FW 20	1.50	PPIC 450Ø	450 x 450	B125	Recessed cover	532668.9	188591.6
FW 21	1.40	PPIC 450Ø	450 x 450	B125	Recessed cover	532672.3	188607.0
FW 22	1.35	PPIC 450Ø	450 x 450	B125		532690.0	188632.7



Legend

- Existing Foul Sewer
- Existing Storm Sewer
- Existing Combined Sewer
- Proposed Foul Sewer
- Proposed Storm Sewer
- Site Boundary
- Perforated pipe
- Drainage channel
- Proposed Surface Water Manhole
- Proposed Foul Water Manhole
- FFL=15.40 — finished floor level
- OF — Manhole with orifice flow control
- CP — Catchment pit
- Distribution into permavoid system
- Permeable paving with tanked sub-base
- SVP ● SS — Soil Vent Pipe/stub Stack
- ● RWP — Proposed Rainwater Pipe
- CFG — Proposed Capped floor gully

NOTES

1. Invert levels and positions of existing drains / chambers / sewers where new connections are to be made must be checked and confirmed to the engineer prior to the commencement of any works.
2. All drainage works shall be carried out in accordance with the requirements of the Local Authority, the Environment Agency and in conjunction with all relevant British Standards, Codes of Practice and 'Sewers for Adoption' 7th Edition and any addendums as appropriate.
3. All drainage shall comply with the typical details and the requirements of BS EN 752 and Part H of the Building Regulations.
4. Any part of the existing drainage system to be retained as part of the new scheme shall be cleaned and inspected. Any structural defects shall be repaired using appropriate and approved means.
5. For setting-out dimensions of SVP's, RWP's etc, refer to Architect's or Mechanical Engineer's drawings. Positions shown are indicative and subject to final design.
6. All foul and RWP connections shall be 100mm diameter unless otherwise specified.
7. All precast concrete units used in the drainage works shall be manufactured using sulphate resisting cement.
8. Manhole covers and frames shall be to BS EN 124 and shall be Kitemarked. Covers and frames shall be heavy duty D400 in carriageways and vehicular areas and medium duty B125 in footways and soft landscaping. In blocked/concrete paved areas covers shall be recessed fabricated steel. All recessed covers shall in accordance with the FACTA association gradings.
9. All internal inspection chambers to be recessed, double sealed with screw down covers.
10. Cover levels are to be adjusted locally to suit finished ground levels.
11. At least one soil pipe at the head of each foul run shall vent to the atmosphere.
12. Existing drainage to be removed is to be broken out to bed level and void backfilled with granular material, compacted in layers not exceeding 250mm.
13. All drain runs from SVP's, stub stacks or FW gullies to be laid at 1:40 gradient unless otherwise stated. All RWP's to be laid 1:80 min unless otherwise stated.
14. All manholes / inspection chambers in block paved areas, to have recessed covers. MH covers in paved areas to have cover & frame orientated 'square' with paving to minimise cut slabs or blocks.
15. All private drainage to be laid to levels shown using flexibly jointed pipes, either uPVC to BS 4660 and BS 5481 or vitrified clayware to BS EN 295. Pipes below structural building slabs or basements shall be Cast Iron to BS 437.
16. Rodding eyes, etc are to be laid to manufacturers minimum cover and depth to allow adequate fall from adjoining unit.
17. All proposed trees to have appropriate tree barrier details linking pits to ensure roots are directed away from drainage.
18. Where new sewers are constructed within 5m of a new or existing tree the sewer shall be concrete encased against root intrusion. Refer to drainage details.
19. All new drainage to be jetted and CCTV surveyed on completion. Contractor to make sure that the drainage is fully operational. Refer to Drainage maintenance manual for maintenance details.
20. All runs connecting into the public drainage network to be vitrified clay, extra length to BS EN 295 or BS65 with plain sleeved or socketed flexible joints.
21. CDM note: All pipework, silt traps, catchpits, trapped gullies and attenuation tanks to be regularly inspected every three months and cleared out on a regular frequency for the first nine months. After this period the frequency can be reduced to every six months. Porous surface to be regularly swept three times a year to remove the silt.
22. This drawing is to be read in conjunction with all relevant Conisbee drawings.
23. HEALTH AND SAFETY: The works shall be carried out by specialist competent and experienced contractors who are members of a recognised national organisation.Operatives shall have received full and appropriate training for the operations they are to undertake. All work shall be carried out in accordance with all pertinent Health and Safety Regulations.

Design Notes :

Existing Site Area:	2,056 m²
Proposed Site Area:	2,056 m²
Total Existing Impermeable Area:	1,995 m²
Total Proposed Impermeable Area:	1,905m²
Existing Peak rate run off from Impermeable Areas (50mm/hr):	28.0 l/s
Proposed restricted Surface Water discharge rate:	5 l/s
Total Attenuation for 100YS + 30%CC:	**80 m³**
Foul Water Discharge:	**7.7 l/s**

Attenuation Notes

Permeable Paving with 0.45m deep sub-base	Total Area = 300m², assumed 0.450m deep sub-base **Total =40.50m³**
0.15m Permavoid layer	Total Area = 300m², assumed 0.15m deep Permavoid **Total =42.75m³**
TOTAL ATTENUATION	**83.25 m³**

0 1 2 3 4 5 6 Meters 1:100

THIS DRAWING SHOULD BE READ IN FULL COLOUR

Rev	Date	Description	Drawn	Check
C5	28.06.17	ISSUED FOR CONSTRUCTION	DW	TG
C4	23.05.17	ISSUED FOR CONSTRUCTION	DW	TG
C3	26.04.17	ISSUED FOR CONSTRUCTION	DW	TG
C2	21.04.17	ISSUED FOR CONSTRUCTION	WB	DW
C1	12.04.17	ISSUED FOR CONSTRUCTION	WB	DW

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Drawing Status: CONSTRUCTION

Project: 289 ST ANNS ROAD LONDON N15

Title: DRAINAGE STRATEGY

Drawing No: **170111-X-00-DR-C1000**

Date: APR 2017
Scale: 1:100
Drawn: WB
Engineer: DW
Project No: **170111**
Revision: **C5**