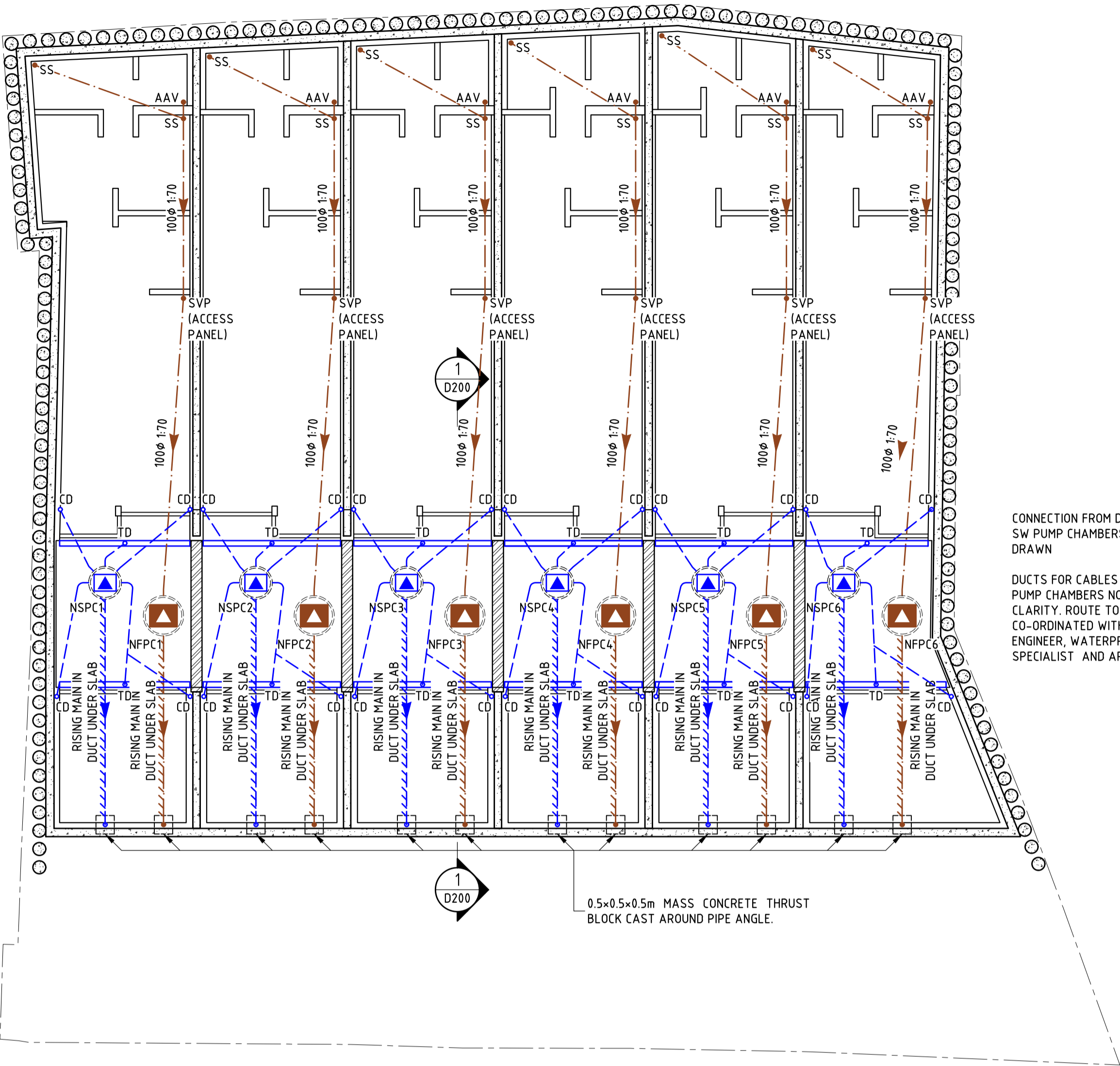


BASEMENT FLOOR DRAINAGE

1:100 @ A1/1200 @ A3



CONNECTION FROM DELTA SUMP TO SW PUMP CHAMBERS TBC AND NOT DRAWN

DUCTS FOR CABLES & VENTING FROM PUMP CHAMBERS NOT DRAWN FOR CLARITY. ROUTE TO BE CO-ORDINATED WITH ELECTRICAL ENGINEER, WATERPROOFING SPECIALIST AND ARCHITECT.

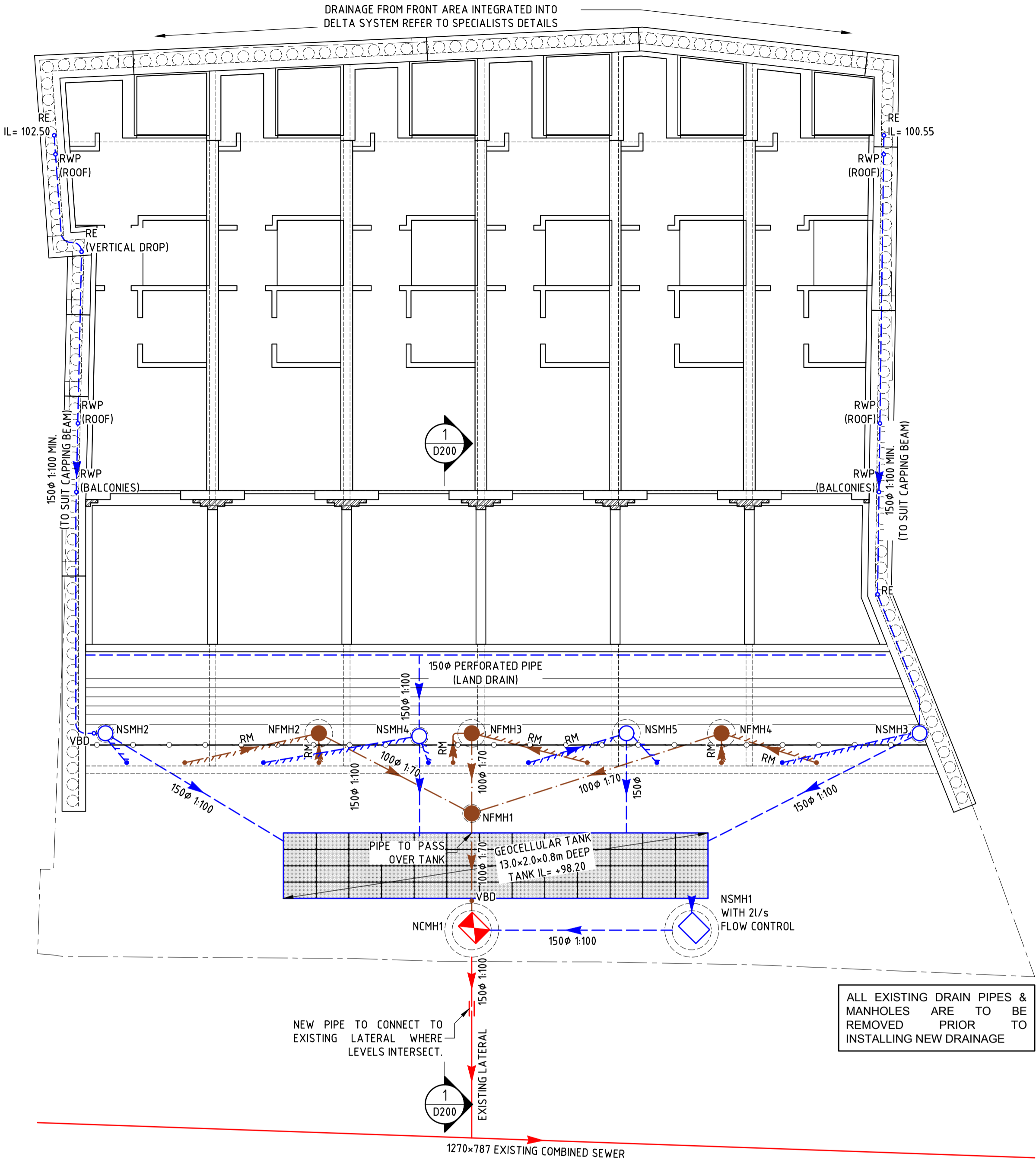
0.5x0.5x0.5m MASS CONCRETE THRUST BLOCK CAST AROUND PIPE ANGLE.

MANHOLE SCHEDULE									
MANHOLE No.	APPROX. COVER LEVEL	INVERT LEVEL IN	INVERT LEVEL OUT	DEPTH (mm)	PIPE SIZE OUT (mm)	GRADIENT OUT	TYPE/COMMENT		COVER
							SIZE/DIA.	TYPE	
NCMH1	100.53	98.05	98.05	2480	150ø	1:100 MINIMUM	1200ø	P.C. RING (DETAIL 1)	750x600 DUCTILE IRON 'C250'
NSMH1	100.53	98.15	98.15	2380	150ø	1:100	1200ø	P.C. RING WITH FLOW CONTROL (DETAIL 1a)	750x600 DUCTILE IRON 'C250'
NSMH2	99.99	98.86	98.86	1130	150ø	1:100	450ø	UIC (DETAIL 3)	450ø PLASTIC 'B125'
NSMH3	99.99	99.54	99.54	450	150ø	1:10	450ø	BACKWASH DISCHARGE CHAMBER (DETAIL 2)	450ø PLASTIC 'B125'
NSMH4	99.99	99.14	99.14	1150	150ø	1:100	450ø	UIC (DETAIL 3a)	450ø PLASTIC 'B125'
NSMH5	99.99	99.54	99.54	450	150ø	1:4	450ø	BACKWASH DISCHARGE CHAMBER (DETAIL 2)	450ø PLASTIC 'B125'
NFMH1	100.59	99.44	99.44	1150	100ø	1:70	450ø	UIC (DETAIL 3)	450ø PLASTIC 'B125'
NFMH2	99.99	99.54	99.54	450	100ø	1:70	450ø	BACKWASH DISCHARGE CHAMBER (DETAIL 2)	450ø PLASTIC 'B125'
NFMH3	99.99	99.54	99.54	450	100ø	1:70	450ø	BACKWASH DISCHARGE CHAMBER (DETAIL 2)	450ø PLASTIC 'B125'
NFMH4	99.99	99.54	99.54	450	100ø	1:70	450ø	BACKWASH DISCHARGE CHAMBER (DETAIL 2)	450ø PLASTIC 'B125'

ANNOTATIONS					MANHOLE COVERS TO BS EN 124		
UIC	UNIVERSAL INSPECTION CHAMBER	CLASS A	LIGHT DUTY	PEDESTRIAN ONLY			
NEIC	NON-ENTRY INSPECTION CHAMBER	CLASS B	MEDIUM DUTY	LIGHT VEHICLES			
TRAD./ P.C. RING	TRADITIONAL BRICK OR PRECAST CONCRETE CHAMBER CONSTRUCTION	CLASS C	HEAVY DUTY	CARRIAGEWAY <0.5m FROM KERB			
		CLASS D	HEAVY DUTY	CARRIAGEWAY & HARD SHOULDERS			
NOTE:	ALL DETAIL 4 CATCHPIT MANHOLES ARE 300mm DEEPER THAN INVERT LEVELS SHOWN TO ALLOW FOR SILT PIT						

LOWER GROUND FLOOR DRAINAGE

1:100 @ A1/1200 @ A3



NEW PIPE TO CONNECT TO EXISTING LATERAL WHERE LEVELS INTERSECT.

1270x787 EXISTING COMBINED SEWER

ALL EXISTING DRAIN PIPES & MANHOLES ARE TO BE REMOVED PRIOR TO INSTALLING NEW DRAINAGE

PUMP CHAMBER SCHEDULE						
TANK N°	STORAGE CAPACITY (l)	PUMP CAPACITY (l/s)	APPROX. RISE (m)	SIZE (mm)	COVER & FRAME NOT BY DELTA	NOTES
NFPC1	1100	4.5	4.5	1000ø x2000 DEEP	750x600 DOUBLE SEALED	SUPPLIED BY WATERPROOFING SPECIALIST  CABLE DUCT AND VENT 110 ø PIPE  INLETS 110 ø PIPES  OUTLET CONNECTION FEMALE 2" BSP THREAD
NFPC2	1100	4.5	4.5	1000ø x2000 DEEP	750x600 DOUBLE SEALED	
NFPC3	1100	4.5	4.5	1000ø x2000 DEEP	750x600 DOUBLE SEALED	
NFPC4	1100	4.5	4.5	1000ø x2000 DEEP	750x600 DOUBLE SEALED	
NFPC5	1100	4.5	4.5	1000ø x2000 DEEP	750x600 DOUBLE SEALED	
NFPC6	1100	4.5	4.5	1000ø x2000 DEEP	750x600 DOUBLE SEALED	
NSPC1	600	2.75	4.5	800ø x1300 DEEP	450x600	SUPPLIED BY WATERPROOFING SPECIALIST  CABLE DUCT AND VENT 50mm SPIGOT FOR WASTE PIPE  INLETS 110 ø PIPES  OUTLET CONNECTION FEMALE 2" BSP THREAD
NSPC2	600	2.75	4.5	800ø x1300 DEEP	450x600	
NSPC3	600	2.75	4.5	800ø x1300 DEEP	450x600	
NSPC4	600	2.75	4.5	800ø x1300 DEEP	450x600	
NSPC5	600	2.75	4.5	800ø x1300 DEEP	450x600	
NSPC6	600	2.75	4.5	800ø x1300 DEEP	450x600	
EXACT LOCATION OF PUMP CHAMBERS TO BE CO-ORDINATED BETWEEN ARCHITECT AND WATERPROOFING SPECIALIST ADVISE ENGINEER OF LOCATIONS FOR AS BUILT DRAWINGS.						
ARCHITECT TO CONFIRM IF RECESSED COVERS ARE REQUIRED AND TO COORDINATE SET OUT WITH PAVING SET OUT.						

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- ALL MATERIALS AND WORKMANSHIP ARE TO COMPLY WITH THE RELEVANT CURRENT BRITISH 'STANDARDS' AND, WHERE REQUIRED BY THE EMPLOYER, TO NHBC STANDARDS.

DRAINAGE NOTES

NOTATION KEY

- COMBINED WATER PIPE RUN
- COMBINED WATER MANHOLE OR INSPECTION CHAMBER
- FOUL WATER PIPE RUN
- FOUL WATER RISING MAIN
- FOUL WATER MANHOLE OR INSPECTION CHAMBER
- FOUL WATER PUMPING CHAMBER
- SURFACE WATER PIPE RUN
- SURFACE WATER RISING MAIN
- SURFACE WATER MANHOLE OR INSPECTION CHAMBER
- SURFACE WATER PUMPING CHAMBER

- SVP: SOIL AND VENT PIPE
- RWP: RAIN WATER PIPE
- SS: STUB STACK
- AAV: AIR ADMITTANCE VALVE
- YG: YARD GULLY
- RE: RODDING EYE
- TD: THRESHOLD DRAIN
- CD: CAVITY DRAIN CHANNEL DISCHARGE (DELTA)
- VBD: VERTICAL BACKDROP
- NFMH: NEW FOUL WATER MANHOLE
- NSMH: NEW SURFACE WATER MANHOLE
- NCMH: NEW COMBINED WATER MANHOLE
- NFPC: NEW FOUL WATER PUMP CHAMBER
- NSPC: NEW SURFACE WATER PUMP CHAMBER

SPECIFICATION

- FOUL DRAINS ARE TO BE 100mm NOMINAL DIAMETER LAID AT A GRADIENT NOT FLATTER THAN 1:70 UNO.
- DRAINS ARE TO BE CONSTRUCTED USING VITRIFIED CLAY PIPES TO BS 65 OR FLEXIBLE UPVC PIPES TO BS4640 WITH FLEXIBLE JOINTS BEDDED AND BACKFILLED IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS AND BS 8301.
- 100mm RIGID PIPES WITH LESS THAN 300mm COVER OR PIPES OF 150mm OR GREATER DIAMETER WITH LESS THAN 600mm COVER ARE TO BE SURROUNDED BY 150mm OF CONCRETE WITH MOVEMENT JOINTS PROVIDED AT EVERY PIPE JOINT.
- FLEXIBLE PIPES WITH LESS THAN 600mm COVER ARE TO BE SURROUNDED WITH CONCRETE OR TO HAVE CONCRETE PAVING SLABS LAID AS BRIDGING ABOVE THE PIPE. PIPES UNDER BUILDINGS ARE TO BE SURROUNDED WITH 100mm MIN. OF GRANULAR MATERIAL.
- ACCESS TO DRAINS MAY PROVIDED BY VITRIFIED CLAY, GRP OR POLYPROPYLENE INSPECTION CHAMBERS TO BS 758, OR MANHOLES CONSTRUCTED USING CLASS B ENGINEERING BRICKS TO BS 3921, OR PRECAST CONCRETE SECTIONS TO BS 5911, SURROUNDED WITH 150mm OF CONCRETE MINIMUM DIMENSIONS TO CONFORM TO TABLE 8 OF BS 8301. COVERS AND FRAMES FOR MANHOLES/INSPECTION CHAMBERS MUST COMPLY WITH THE APPROPRIATE LOADING GRADE OF BS 497 OR BS 5911.
- PROVIDE GULLIES AND RWPS WITH RODDABLE ACCESS.
- ALL PIPES THAT CONNECT TO MAIN RUN DRAINAGE MANHOLES TO BE FIXED 'CROWNS ADJACENT'
- CONCRETE BEDDING & SURROUND TO BE MIX TYPE GEN 1 TO TABLE 4 OF BS 5328-PART 2 UNO. IF A DIFFERENT 'GEN' MIX IS SPECIFIED IT WILL BE TO THE ABOVE TABLE.
- ALL RWPS TO CONNECT INTO RODDABLE GULLIES.

Status: CONSTRUCTION

Client: Space Free Ltd.

Project: 138-140 Highgate Road, London, NW5 1PB

Title: Drainage G.A. Sheet 1

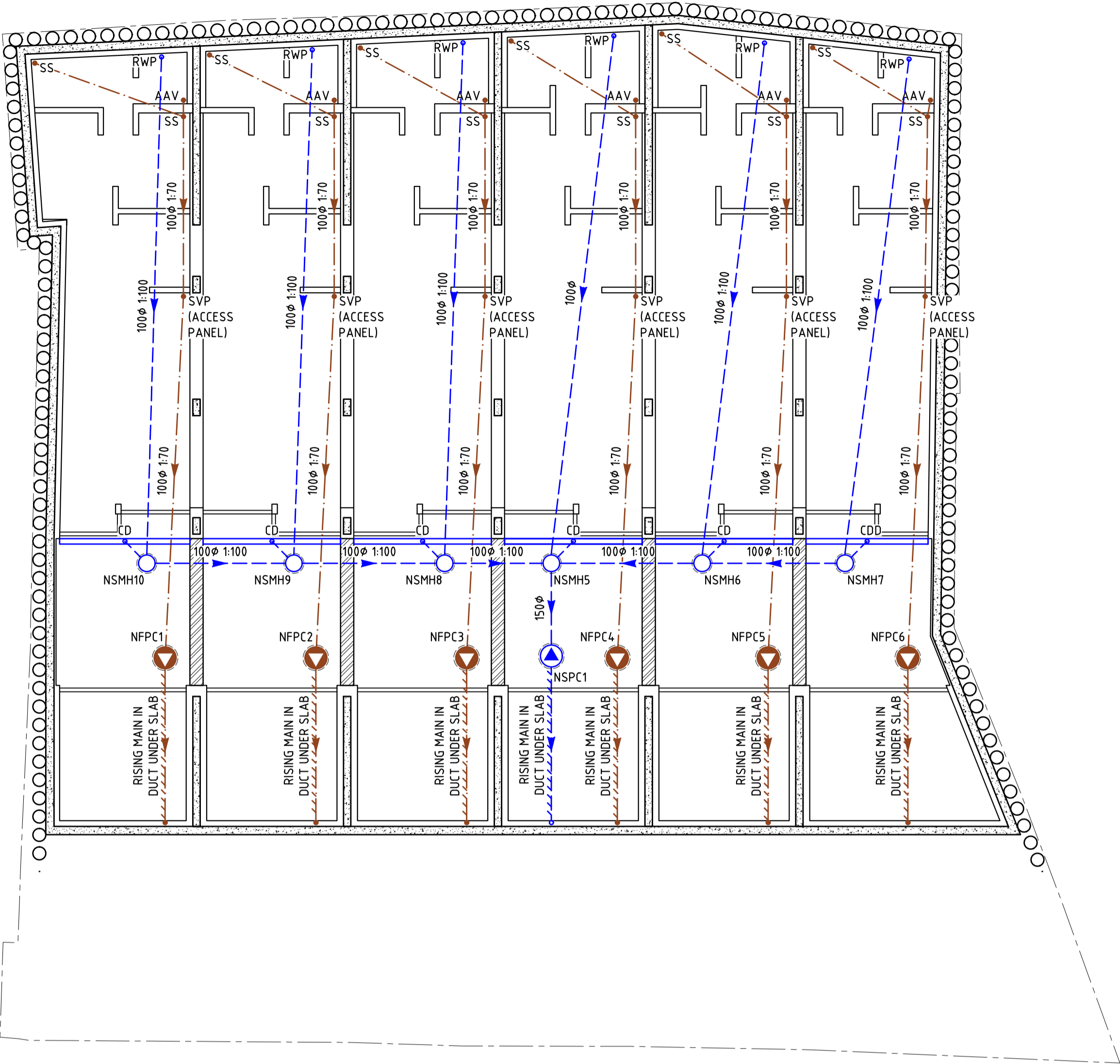
Project N°:	Drawing N°:	Rev:
18035	D100	C2
Date:	Jul 2019	
Scale @A1:	1:100	
Drawn:	JL	
Engineer:	NK	

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www.amaed.co.uk

C2	Basement courtyard drainage revised and Delta cavity discharge points added	25/06/20
C1	Pumps rev'd to DELTA quote Gullies removed from front area.	05/05/20
T2	Revised as clouded	17/10/19
T1	Tender	05/08/19
REV	DETAIL	DATE

BASEMENT FLOOR DRAINAGE

1:25 @ A1/150 @ A3



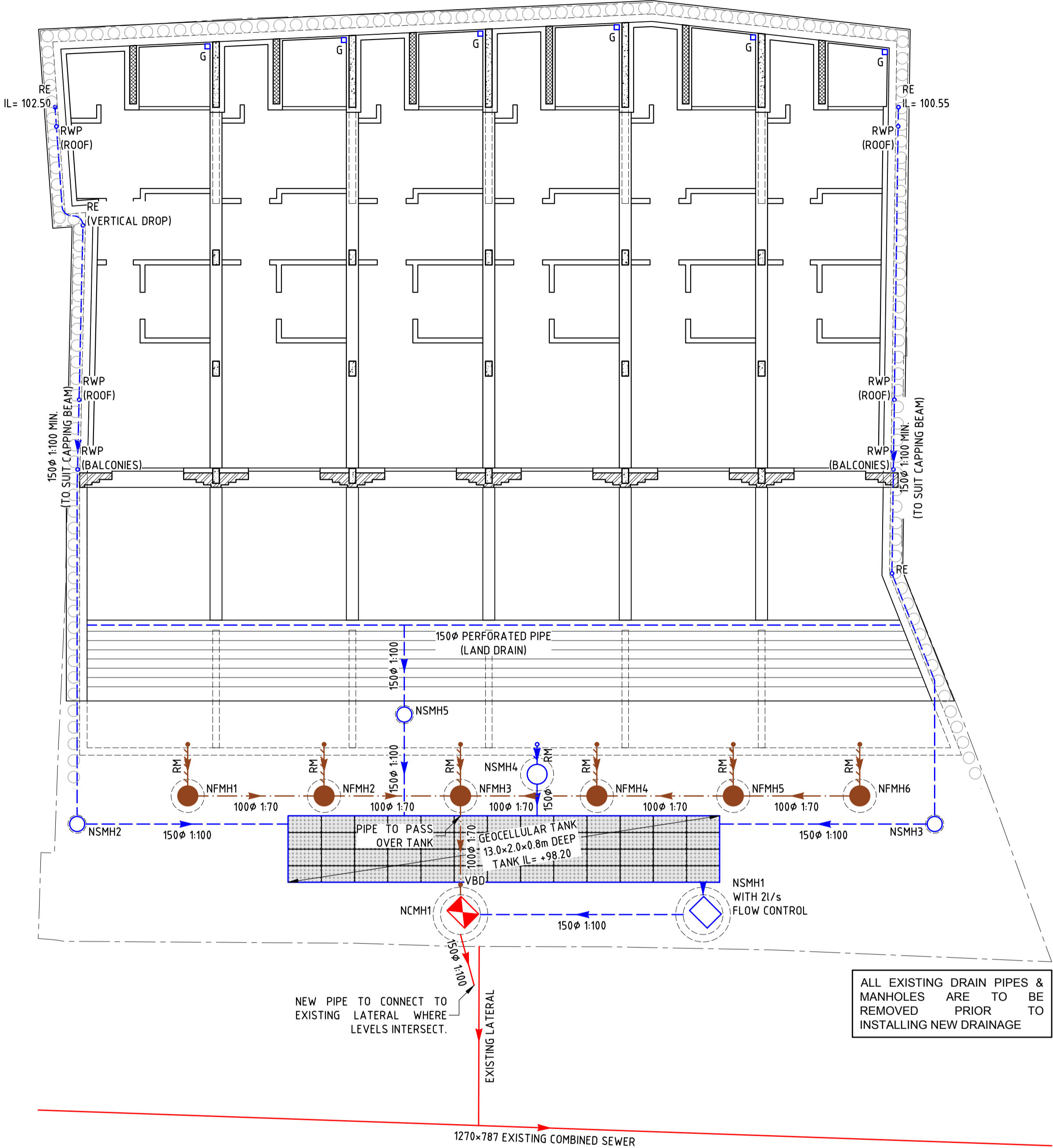
MANHOLE SCHEDULE									
MANHOLE No.	APPROX. COVER LEVEL	INVERT LEVEL IN	INVERT LEVEL OUT	DEPTH (mm)	PIPE SIZE OUT (mm)	GRADIENT OUT	TYPE/COMMENT		COVER
							SIZE/DIA.	TYPE	
NCMH1	100.53	98.05	98.05	2480	150ø	1:100 MINIMUM	1200ø	P.C. RING	750x600 DUCTILE IRON 'C250'
NSMH1	100.53	98.15	98.15	2380	150ø	1:100	1200ø	P.C. RING WITH FLOW CONTROL	750x600 DUCTILE IRON 'C250'
NSMH2	100.64	100.00	100.00	640	150ø	1:6	450ø	UIC	450ø PLASTIC 'B125'
NSMH3	100.64	99.70	99.70	940	150ø	1:100	450ø	UIC	450ø PLASTIC 'B125'
NSMH4	100.53	99.33	99.33	1200	150ø	1:2	600ø	DISCHARGE CHAMBER	600ø PLASTIC 'B125'
NSMH5	100.00	98.85	98.85	1150	150ø	1:100	450ø	UIC	450ø PLASTIC 'B125'
NSMH6	96.16	95.26	95.26	900	150ø	1:100	450ø	UIC CATCHPIT	450ø PLASTIC 'B125'
NSMH7	96.16	95.29	95.29	870	100ø	1:100	450ø	UIC	450ø PLASTIC 'B125'
NSMH8	96.16	95.32	95.32	840	100ø	1:100	450ø	UIC	450ø PLASTIC 'B125'
NSMH9	96.16	95.29	95.29	870	100ø	1:100	450ø	UIC	450ø PLASTIC 'B125'
NSMH10	96.16	95.32	95.32	840	100ø	1:100	450ø	UIC	450ø PLASTIC 'B125'
NSMH11	96.16	95.35	95.35	810	100ø	1:100	450ø	UIC	450ø PLASTIC 'B125'
NFMH1	100.57	99.70	99.70	870	100ø	1:70	600ø	DISCHARGE CHAMBER	600ø PLASTIC 'B125'
NFMH2	100.57	99.65	99.65	920	100ø	1:70	600ø	DISCHARGE CHAMBER	600ø PLASTIC 'B125'
NFMH3	100.57	99.60	99.60	970	100ø	1:70	600ø	DISCHARGE CHAMBER	600ø PLASTIC 'B125'
NFMH4	100.57	99.65	99.65	920	100ø	1:70	600ø	DISCHARGE CHAMBER	600ø PLASTIC 'B125'
NFMH5	100.57	99.70	99.70	870	100ø	1:70	600ø	DISCHARGE CHAMBER	600ø PLASTIC 'B125'
NFMH6	100.57	99.75	99.75	820	100ø	1:70	600ø	DISCHARGE CHAMBER	600ø PLASTIC 'B125'

ANNOTATIONS					MANHOLE COVERS TO BS EN 124		
UIC	UNIVERSAL INSPECTION CHAMBER	CLASS A	LIGHT DUTY	PEDESTRIAN ONLY			
NEIC	NON-ENTRY INSPECTION CHAMBER	CLASS B	MEDIUM DUTY	LIGHT VEHICLES			
TRAD./ P.C. RING	TRADITIONAL BRICK OR PRECAST CONCRETE CHAMBER CONSTRUCTION	CLASS C	HEAVY DUTY	CARRIAGEWAY <0.5m FROM KERB			
		CLASS D	HEAVY DUTY	CARRIAGEWAY & HARD SHOULDERS			
NOTE:	ALL CATCHPIT MANHOLES ARE 200mm DEEPER THAN INVERT LEVELS SHOWN TO ALLOW FOR SILT PIT						

PUMP CHAMBER SCHEDULE				
TANK N°	STORAGE CAPACITY (l)	PUMP CAPACITY (l/s)	APPROX. RISE (m)	LOCATION
NFPC1	1000	3.0	4.5	BURIED IN COURTYARD
NFPC2	1000	3.0	4.5	BURIED IN COURTYARD
NFPC3	1000	3.0	4.5	BURIED IN COURTYARD
NFPC4	1000	3.0	4.5	BURIED IN COURTYARD
NFPC5	1000	3.0	4.5	BURIED IN COURTYARD
NFPC6	1000	3.0	4.5	BURIED IN COURTYARD
NSPC1	1000	6.0	4.5	BURIED IN COURTYARD

LOWER GROUND FLOOR DRAINAGE

1:25 @ A1/150 @ A3



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- ALL MATERIALS AND WORKMANSHIP ARE TO COMPLY WITH THE RELEVANT CURRENT BRITISH STANDARDS AND, WHERE REQUIRED BY THE EMPLOYER, TO NHBC STANDARDS.

DRAINAGE NOTES

NOTATION KEY

- SVP: SOIL AND VENT PIPE  
RWP: RAIN WATER PIPE  
SS: STUB STACK  
AAV: AIR ADMITTANCE VALVE  
YG: YARD GULLY  
RE: RIDDING EYE  
VBD: VERTICAL BACKDROP  
NFMH: NEW FOUL WATER MANHOLE  
NSMH: NEW SURFACE WATER MANHOLE  
NCMH: NEW COMBINED WATER MANHOLE  
NFPC: NEW FOUL WATER PUMP CHAMBER  
NSPC: NEW SURFACE WATER PUMP CHAMBER

- COMBINED WATER PIPE RUN  
→ COMBINED WATER MANHOLE OR INSPECTION CHAMBER  
→ FOUL WATER PIPE RUN  
→ FOUL WATER RISING MAIN  
→ FOUL WATER MANHOLE OR INSPECTION CHAMBER  
→ FOUL WATER PUMPING CHAMBER  
→ SURFACE WATER PIPE RUN  
→ SURFACE WATER RISING MAIN  
→ SURFACE WATER MANHOLE OR INSPECTION CHAMBER  
→ SURFACE WATER PUMPING CHAMBER

SPECIFICATION

- FOUL DRAINS ARE TO BE 100mm NOMINAL DIAMETER LAID AT A GRADIENT NOT FLATTER THAN 1:70 UNO.
- DRAINS ARE TO BE CONSTRUCTED USING VITRIFIED CLAY PIPES TO BS 65 OR FLEXIBLE UPVC PIPES TO BS4660 WITH FLEXIBLE JOINTS BEDDED AND BACKFILLED IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS AND BS 8301.
- 100mm RIGID PIPES WITH LESS THAN 300mm COVER OR PIPES OF 150mm OR GREATER DIAMETER WITH LESS THAN 600mm COVER ARE TO BE SURROUNDED BY 150mm OF CONCRETE WITH MOVEMENT JOINTS PROVIDED AT EVERY PIPE JOINT.
- FLEXIBLE PIPES WITH LESS THAN 600mm COVER ARE TO BE SURROUNDED WITH CONCRETE OR TO HAVE CONCRETE PAVING SLABS LAID AS BRIDGING ABOVE THE PIPE. PIPES UNDER BUILDINGS ARE TO BE SURROUNDED WITH 100mm MIN. OF GRANULAR MATERIAL.
- ACCESS TO DRAINS MAY PROVIDED BY VITRIFIED CLAY, GRP OR POLYPROPYLENE INSPECTION CHAMBERS TO BS 758, OR MANHOLES CONSTRUCTED USING CLASS B ENGINEERING BRICKS TO BS 3921 OR PRECAST CONCRETE SECTIONS TO BS 5911, SURROUNDED WITH 150mm OF CONCRETE MINIMUM DIMENSIONS TO CONFORM TO TABLE 8 OF BS 8301. COVERS AND FRAMES FOR MANHOLES/ INSPECTION CHAMBERS MUST COMPLY WITH THE APPROPRIATE LOADING GRADE OF BS 497 OR BS 5911.
- PROVIDE GULLIES AND RWP'S WITH RODDABLE ACCESS.
- ALL PIPES THAT CONNECT TO MAIN RUN DRAINAGE MANHOLES TO BE FIXED 'CROWNS ADJACENT'.
- CONCRETE BEDDING & SURROUND TO BE MIX TYPE GEN 1 TO TABLE 6 OF BS 5328-PART 2 UNO. IF A DIFFERENT GEN MIX IS SPECIFIED IT WILL BE TO THE ABOVE TABLE.
- ALL RWP'S TO CONNECT INTO RODDABLE GULLIES.

NOT FOR CONSTRUCTION

P1 Preliminary	08/07/19
REV	DETAIL DATE

Status: PRELIMINARY

Client: Space Free Ltd.

Project: 138-140 Highgate Road,  
London, NW5 1PB

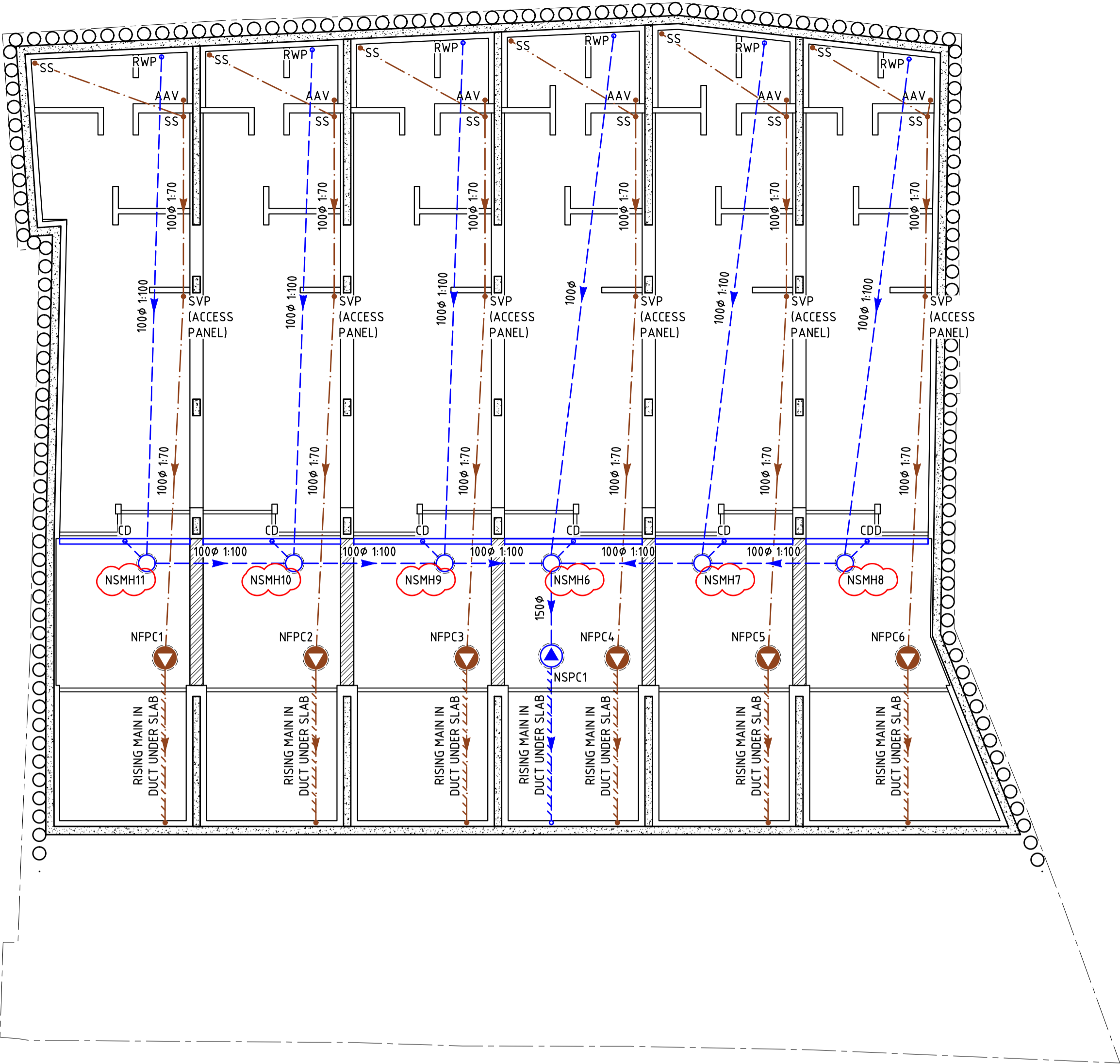
Title: Drainage G.A. Sheet 1

Project N°:	Drawing N°:	Rev:
18035	D100	P1

Date: Jul 2019  
Scale @A1: 1:100  
Drawn: JL  
Engineer: NK  
AMA Consulting Engineers  
3 Marconi Place, London, N11 1PE  
+44(0)20 8361 6827  
www.amad.co.uk

BASEMENT FLOOR DRAINAGE

1:25 @ A1/150 @ A3

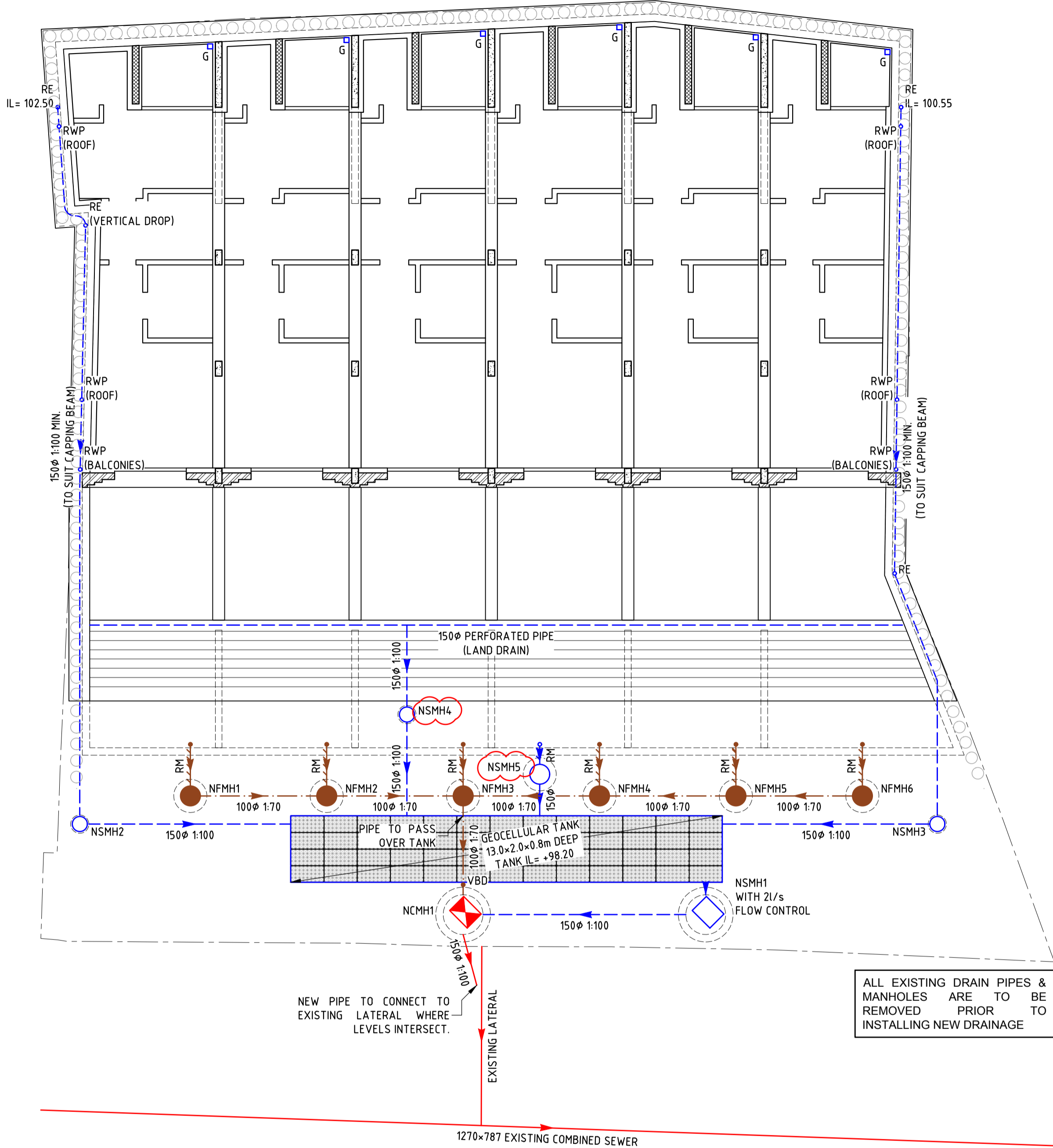


MANHOLE No.	APPROX. COVER LEVEL	INVERT LEVEL IN	INVERT LEVEL OUT	DEPTH (mm)	PIPE SIZE OUT (mm)	GRADIENT OUT	TYPE/COMMENT		COVER
							SIZE/DIA.	TYPE	
NCMH1	100.53	98.05	98.05	2480	150ø	1:100 MINIMUM	1200ø	P.C. RING (DETAIL 1)	750x600 DUCTILE IRON 'C250'
NSMH1	100.53	98.15	98.15	2380	150ø	1:100	1200ø	P.C. RING WITH FLOW CONTROL (DETAIL 1a)	750x600 DUCTILE IRON 'C250'
NSMH2	100.64	100.00	100.00	640	150ø	1:6	450ø	UIC (DETAIL 3)	450ø PLASTIC 'B125'
NSMH3	100.64	99.70	99.70	940	150ø	1:100	450ø	UIC (DETAIL 3)	450ø PLASTIC 'B125'
NSMH4	100.00	98.85	98.85	1150	150ø	1:100	450ø	UIC (DETAIL 3a)	450ø PLASTIC 'B125'
NSMH5	100.53	99.33	99.33	1200	150ø	1:2	600ø	BACKWASH DISCHARGE CHAMBER (DETAIL 2)	600ø PLASTIC 'B125'
NSMH6	96.16	95.26	95.26	900	150ø	1:100	450ø	UIC CATCHPIT (DETAIL 4)	450ø PLASTIC 'B125'
NSMH7	96.16	95.29	95.29	870	100ø	1:100	450ø	UIC (DETAIL 3a)	450ø PLASTIC 'B125'
NSMH8	96.16	95.32	95.32	840	100ø	1:100	450ø	UIC (DETAIL 3a)	450ø PLASTIC 'B125'
NSMH9	96.16	95.29	95.29	870	100ø	1:100	450ø	UIC (DETAIL 3a)	450ø PLASTIC 'B125'
NSMH10	96.16	95.32	95.32	840	100ø	1:100	450ø	UIC (DETAIL 3a)	450ø PLASTIC 'B125'
NSMH11	96.16	95.35	95.35	810	100ø	1:100	450ø	UIC (DETAIL 3a)	450ø PLASTIC 'B125'
NFMH1	100.57	99.70	99.70	870	100ø	1:70	600ø	BACKWASH DISCHARGE CHAMBER (DETAIL 2)	600ø PLASTIC 'B125'
NFMH2	100.57	99.65	99.65	920	100ø	1:70	600ø	BACKWASH DISCHARGE CHAMBER (DETAIL 2)	600ø PLASTIC 'B125'
NFMH3	100.57	99.60	99.60	970	100ø	1:70	600ø	BACKWASH DISCHARGE CHAMBER (DETAIL 2)	600ø PLASTIC 'B125'
NFMH4	100.57	99.65	99.65	920	100ø	1:70	600ø	BACKWASH DISCHARGE CHAMBER (DETAIL 2)	600ø PLASTIC 'B125'
NFMH5	100.57	99.70	99.70	870	100ø	1:70	600ø	BACKWASH DISCHARGE CHAMBER (DETAIL 2)	600ø PLASTIC 'B125'
NFMH6	100.57	99.75	99.75	820	100ø	1:70	600ø	BACKWASH DISCHARGE CHAMBER (DETAIL 2)	600ø PLASTIC 'B125'

ANNOTATIONS		MANHOLE COVERS TO BS EN 124		
UIC	UNIVERSAL INSPECTION CHAMBER	CLASS A	LIGHT DUTY	PEDESTRIAN ONLY
NEIC	NON-ENTRY INSPECTION CHAMBER	CLASS B	MEDIUM DUTY	LIGHT VEHICLES
TRAD./ P.C. RING	TRADITIONAL BRICK OR PRECAST CONCRETE CHAMBER CONSTRUCTION	CLASS C	HEAVY DUTY	CARRIAGEWAY <0.5m FROM KERB
		CLASS D	HEAVY DUTY	CARRIAGEWAY & HARD SHOULDERS
NOTE:	ALL CATCHPIT MANHOLES ARE 200mm DEEPER THAN INVERT LEVELS SHOWN TO ALLOW FOR SILT PIT			

LOWER GROUND FLOOR DRAINAGE

1:25 @ A1/150 @ A3



PUMP CHAMBER SCHEDULE					
TANK N°	STORAGE CAPACITY (l)	PUMP CAPACITY (l/s)	APPROX. RISE (m)	LOCATION	CONSTRUCTION TYPE
NFPC1	1000	3.0	4.5	BURIED IN COURTYARD	SIMILAR TO DETAIL 3a
NFPC2	1000	3.0	4.5	BURIED IN COURTYARD	SIMILAR TO DETAIL 3a
NFPC3	1000	3.0	4.5	BURIED IN COURTYARD	SIMILAR TO DETAIL 3a
NFPC4	1000	3.0	4.5	BURIED IN COURTYARD	SIMILAR TO DETAIL 3a
NFPC5	1000	3.0	4.5	BURIED IN COURTYARD	SIMILAR TO DETAIL 3a
NFPC6	1000	3.0	4.5	BURIED IN COURTYARD	SIMILAR TO DETAIL 3a
NSPC1	1000	6.0	4.5	BURIED IN COURTYARD	SIMILAR TO DETAIL 3a

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- ALL MATERIALS AND WORKMANSHIP ARE TO COMPLY WITH THE RELEVANT CURRENT BRITISH STANDARDS AND, WHERE REQUIRED BY THE EMPLOYER, TO NHBC STANDARDS.

DRAINAGE NOTES

NOTATION KEY

SVP:	SOIL AND VENT PIPE
RWP:	RAIN WATER PIPE
SS:	STUB STACK
AAV:	AIR ADMITTANCE VALVE
YG:	YARD GULLY
RE:	ROOFING EYE
VBD:	VERTICAL BACKDROP
NFMH:	NEW FOUL WATER MANHOLE
NSMH:	NEW SURFACE WATER MANHOLE
NCMH:	NEW COMBINED WATER MANHOLE
NFPC:	NEW FOUL WATER PUMP CHAMBER
NSPC:	NEW SURFACE WATER PUMP CHAMBER

	COMBINED WATER PIPE RUN
	COMBINED WATER MANHOLE OR INSPECTION CHAMBER
	FOUL WATER PIPE RUN
	FOUL WATER RISING MAIN
	FOUL WATER MANHOLE OR INSPECTION CHAMBER
	FOUL WATER PUMPING CHAMBER
	SURFACE WATER PIPE RUN
	SURFACE WATER RISING MAIN
	SURFACE WATER MANHOLE OR INSPECTION CHAMBER
	SURFACE WATER PUMPING CHAMBER

SPECIFICATION

- FOUL DRAINS ARE TO BE 100mm NOMINAL DIAMETER LAID AT A GRADIENT NOT FLATTER THAN 1:70 UNO.
- DRAINS ARE TO BE CONSTRUCTED USING VITRIFIED CLAY PIPES TO BS 65 OR FLEXIBLE UPVC PIPES TO BS4660 WITH FLEXIBLE JOINTS BEDDED AND BACKFILLED IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS AND BS 8301.
- 100mm RIGID PIPES WITH LESS THAN 300mm COVER OR PIPES OF 150mm OR GREATER DIAMETER WITH LESS THAN 600mm COVER ARE TO BE SURROUNDED BY 150mm OF CONCRETE WITH MOVEMENT JOINTS PROVIDED AT EVERY PIPE JOINT.
- FLEXIBLE PIPES WITH LESS THAN 600mm COVER ARE TO BE SURROUNDED WITH CONCRETE OR TO HAVE CONCRETE PAVING SLABS LAID AS BRIDGING ABOVE THE PIPE. PIPES UNDER BUILDINGS ARE TO BE SURROUNDED WITH 100mm MIN. OF GRANULAR MATERIAL.
- ACCESS TO DRAINS MAY PROVIDED BY VITRIFIED CLAY, GRP OR POLYPROPYLENE INSPECTION CHAMBERS TO BS 758, OR MANHOLES CONSTRUCTED USING CLASS B ENGINEERING BRICKS TO BS 3921 OR PRECAST CONCRETE SECTIONS TO BS 5911, SURROUNDED WITH 150mm OF CONCRETE MINIMUM DIMENSIONS TO CONFORM TO TABLE 8 OF BS 8301. COVERS AND FRAMES FOR MANHOLES/ INSPECTION CHAMBERS MUST COMPLY WITH THE APPROPRIATE LOADING GRADE OF BS 497 OR BS 5911.
- PROVIDE GULLIES AND RWPS WITH RODDABLE ACCESS.
- ALL PIPES THAT CONNECT TO MAIN RUN DRAINAGE MANHOLES TO BE FIXED 'CROWNS ADJACENT'.
- CONCRETE BEDDING & SURROUND TO BE MIX TYPE GEN 1 TO TABLE 6 OF BS 5328-PART 2 UNO. IF A DIFFERENT GEN MIX IS SPECIFIED IT WILL BE TO THE ABOVE TABLE.

NOT FOR CONSTRUCTION

P2	Revised as clouded	15/07/19
P1	Preliminary	08/07/19
REV	DETAIL	DATE

Status: PRELIMINARY

Client: Space Free Ltd.

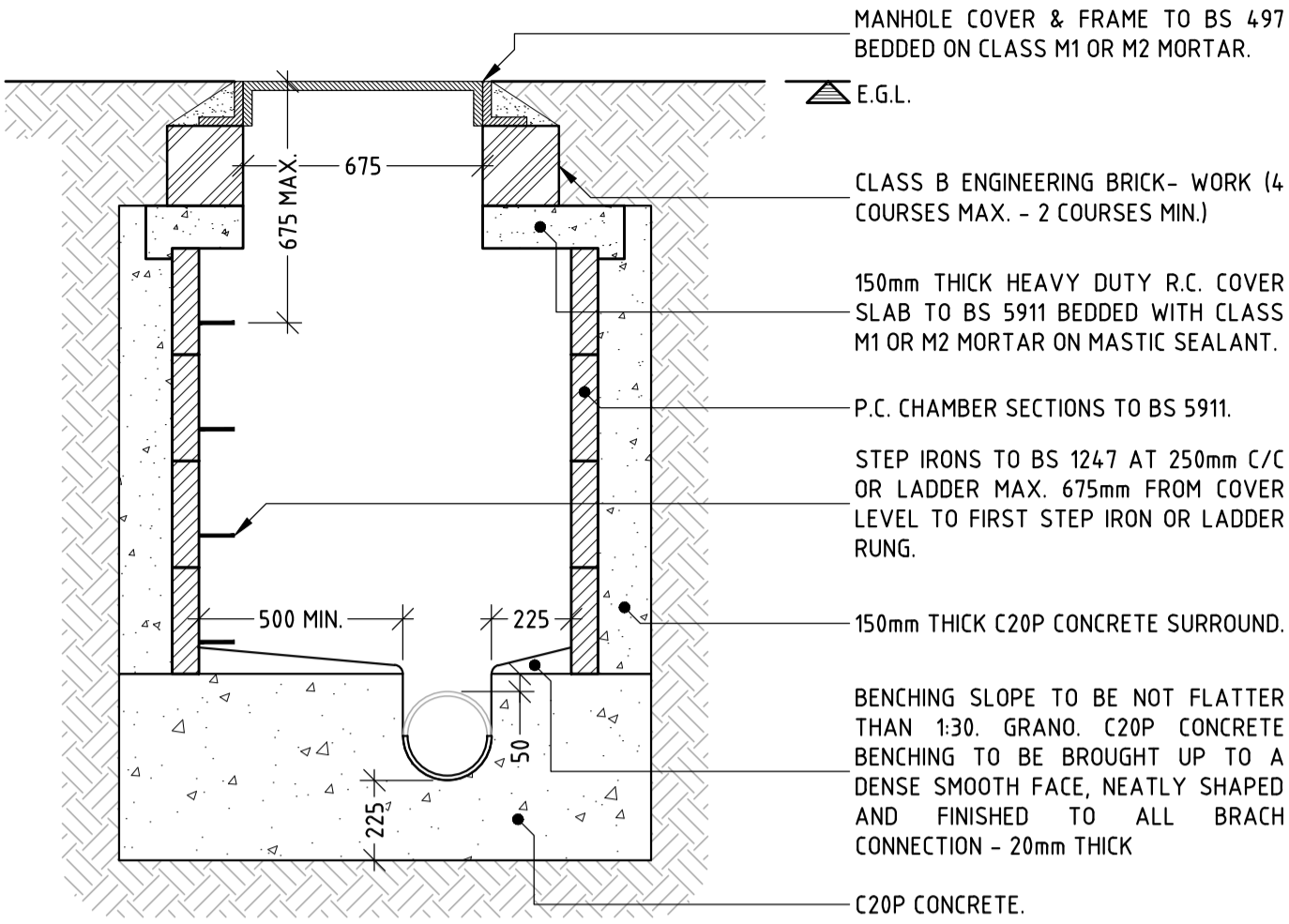
Project: 138-140 Highgate Road,  
London, NW5 1PB

Title: Drainage G.A. Sheet 1

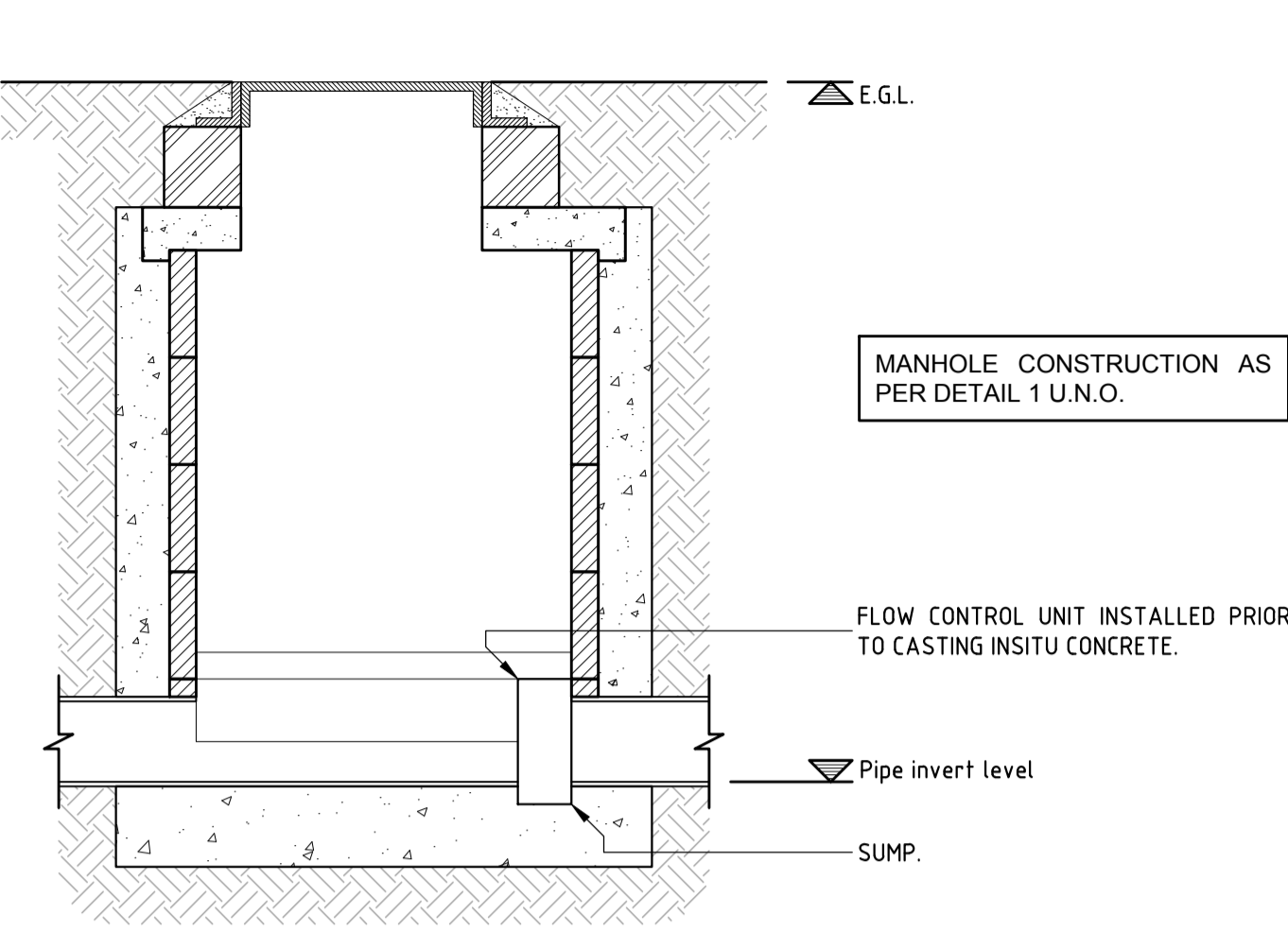
Project N°:	Drawing N°:	Rev:
18035	D100	P2
Date:	Jul 2019	
Scale @A1:	1:100	
Drawn:	JL	
Engineer:	NK	

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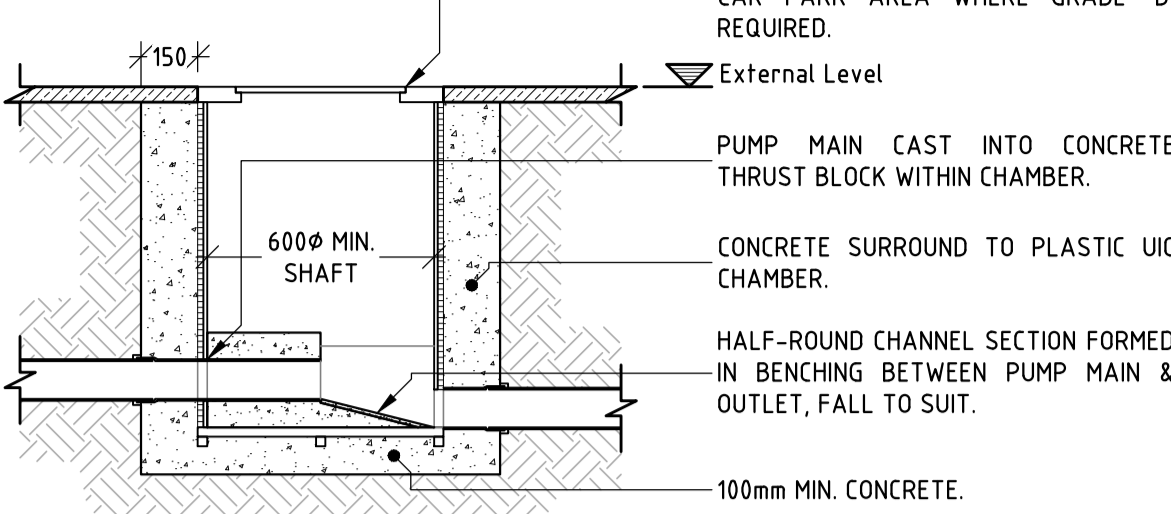
DETAIL 1: P.C. RING  
MANHOLE CHAMBER 1.2-3.0m DEEP  
NOT TO SCALE



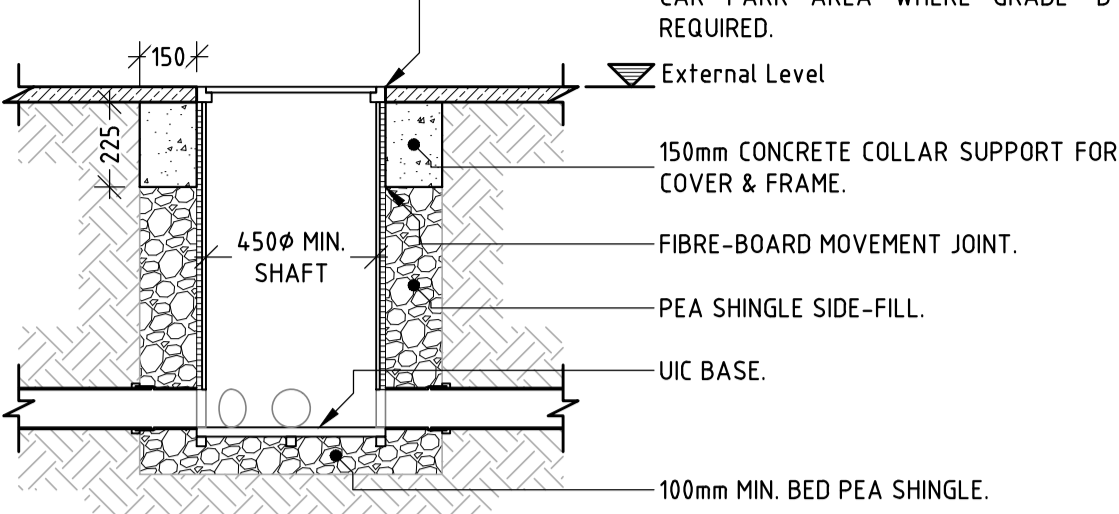
DETAIL 1a: FLOW CONTROL UNIT  
TO P.C. RING MANHOLE 1.2-3.0m DEEP  
NOT TO SCALE



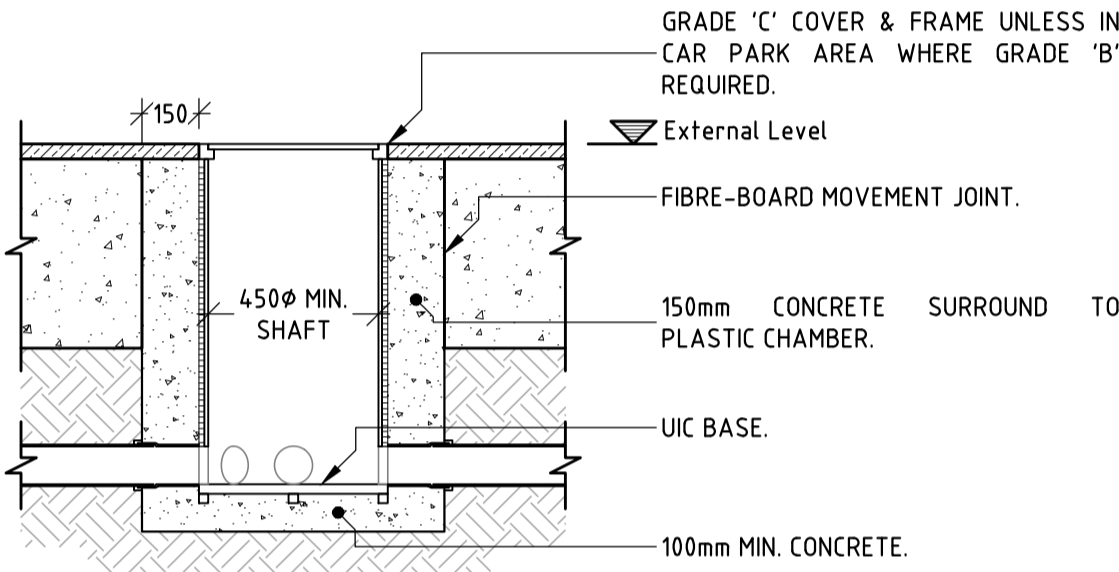
DETAIL 2: BACKWASH  
DISCHARGE CHAMBER (BWD) 0.6 - 1.2m DEEP  
NOT TO SCALE



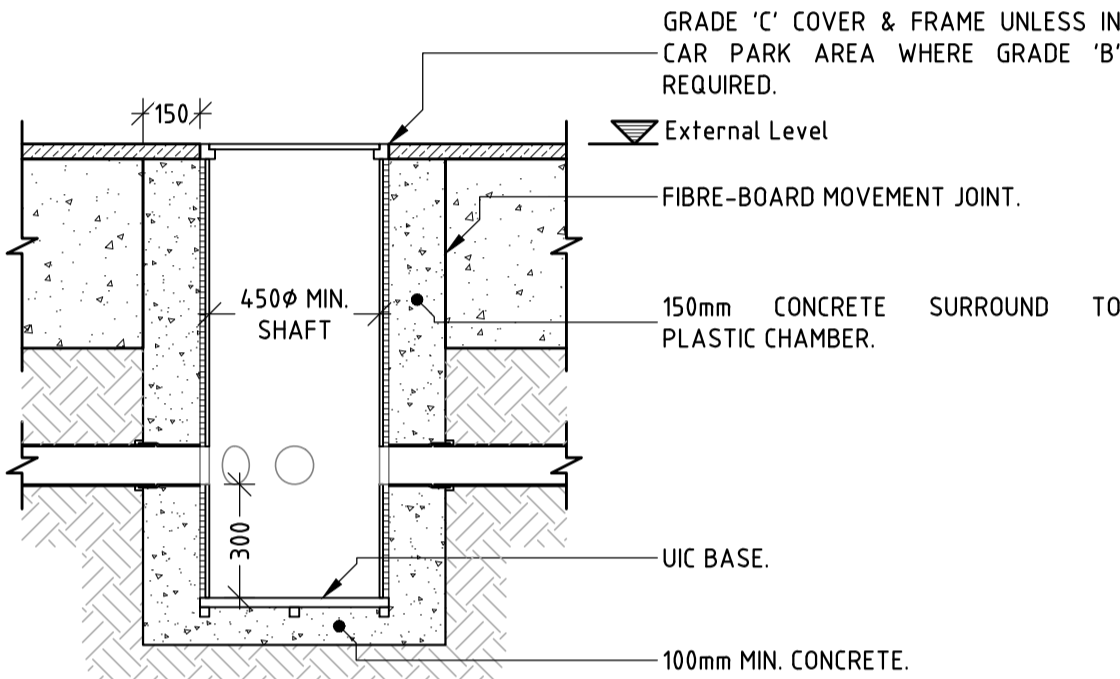
DETAIL 3: UNIVERSAL  
INSPECTION CHAMBER (UIC) 0.6 - 1.2m DEEP  
NOT TO SCALE



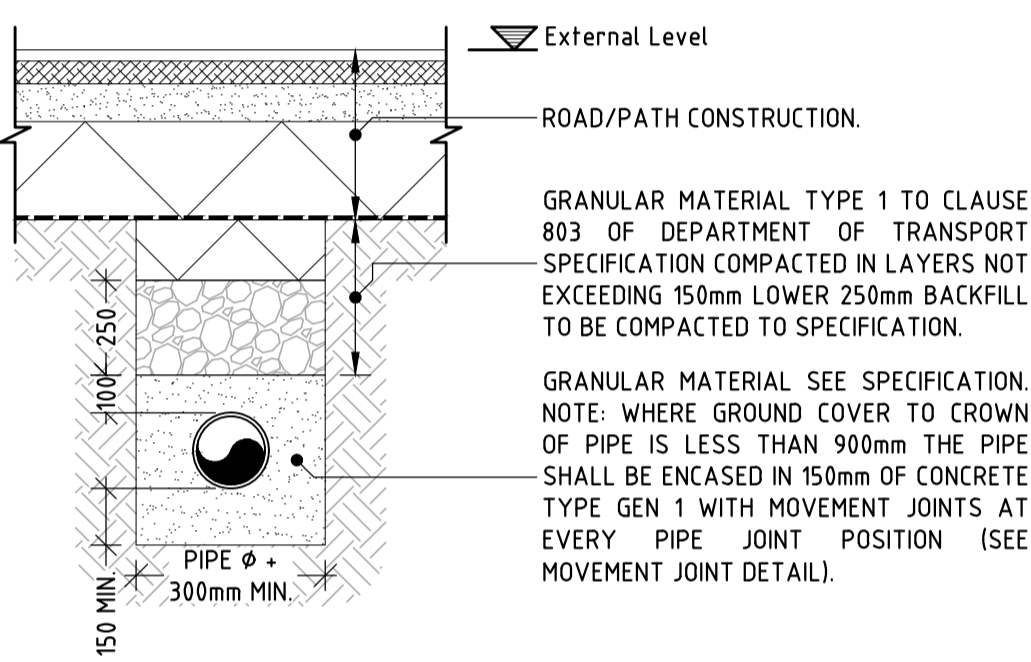
DETAIL 3a: CAST THROUGH SLAB  
UNIVERSAL INSPECTION CHAMBER (UIC) 0.6 - 1.2m DEEP  
NOT TO SCALE



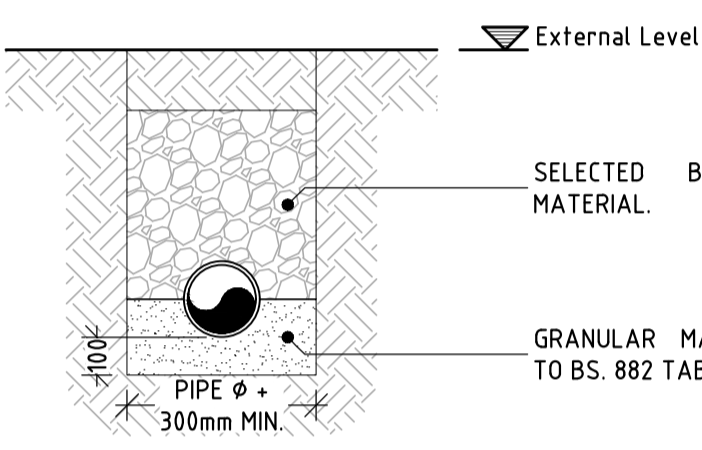
DETAIL 4: CATCH-PIT UNIVERSAL  
INSPECTION CHAMBER (UIC) 0.6 - 1.2m DEEP  
NOT TO SCALE



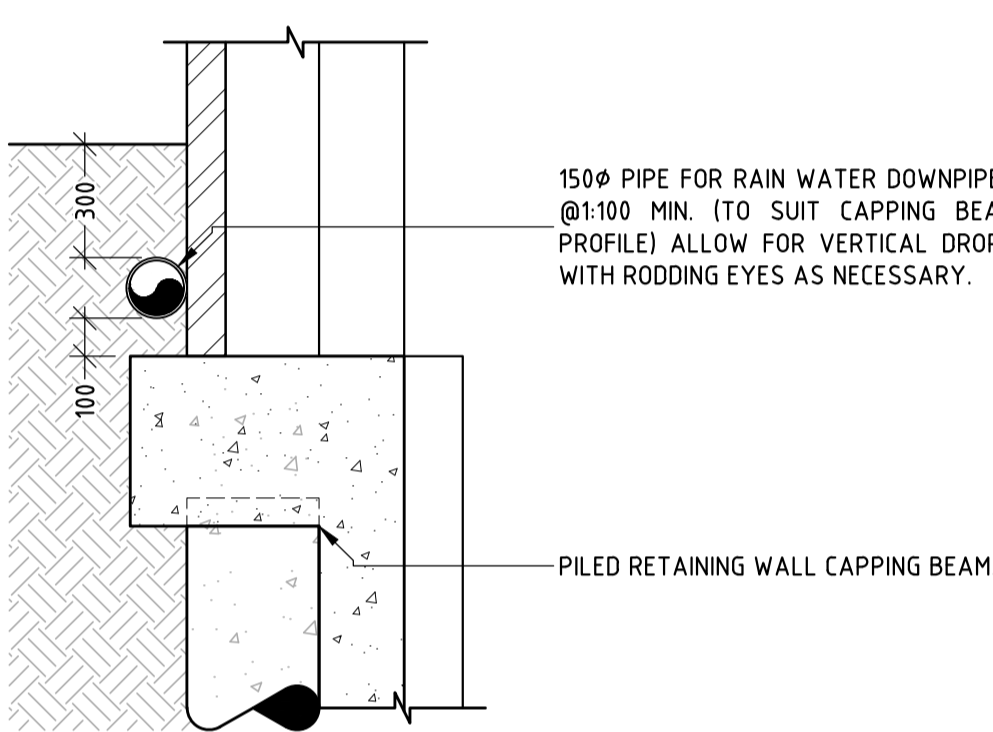
BEDDING CONSTRUCTION FOR DRAINAGE  
UNDER ROADS, CARPARKS & PUBLIC FOOTWAYS  
NOT TO SCALE



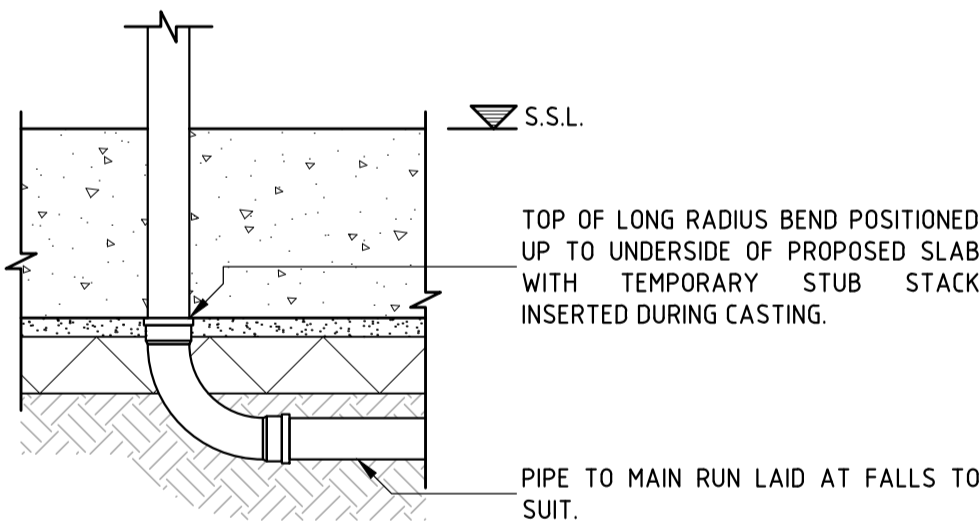
BEDDING CONSTRUCTION FOR  
DRAINAGE UNDER LANDSCAPING  
NOT TO SCALE



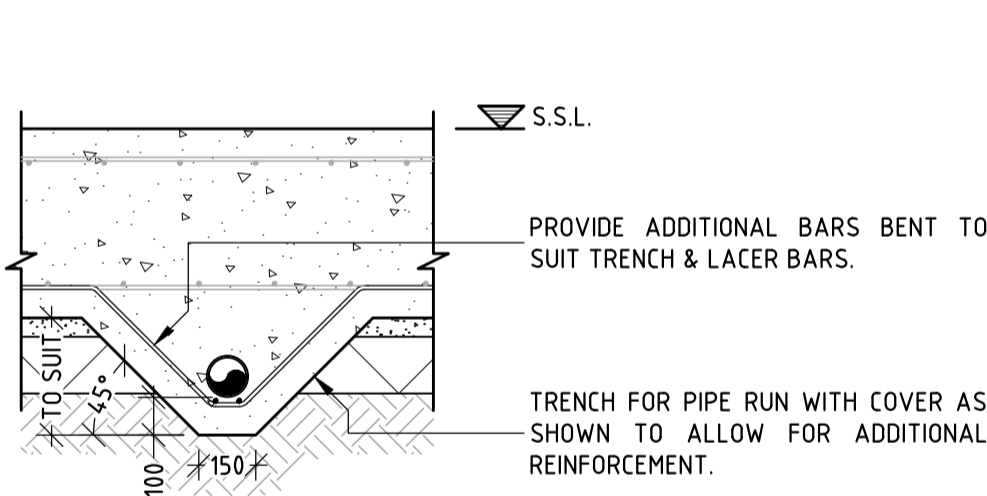
PIPE RUN OVER CAPPING BEAM  
NOT TO SCALE



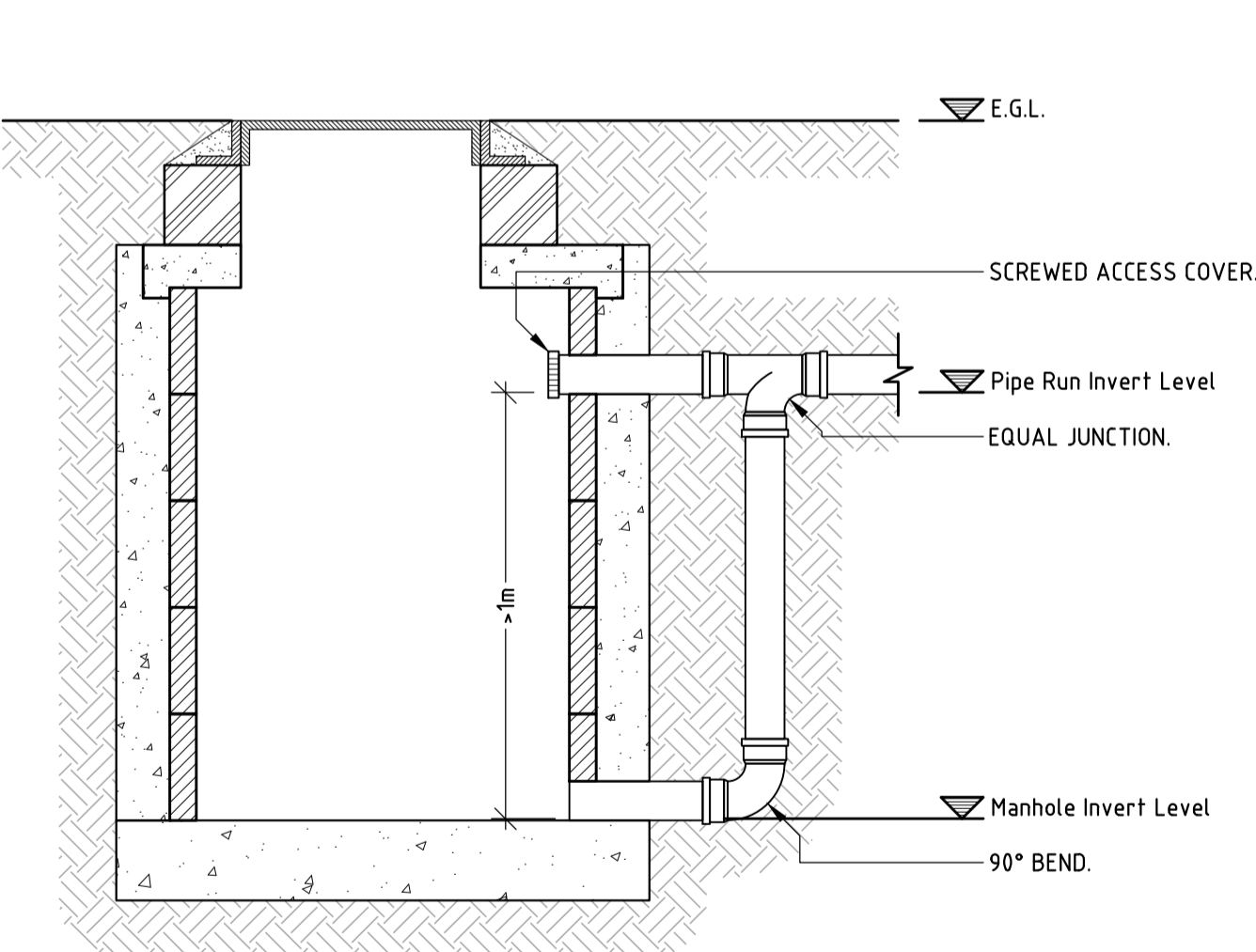
TYPICAL STUB STACK  
NOT TO SCALE



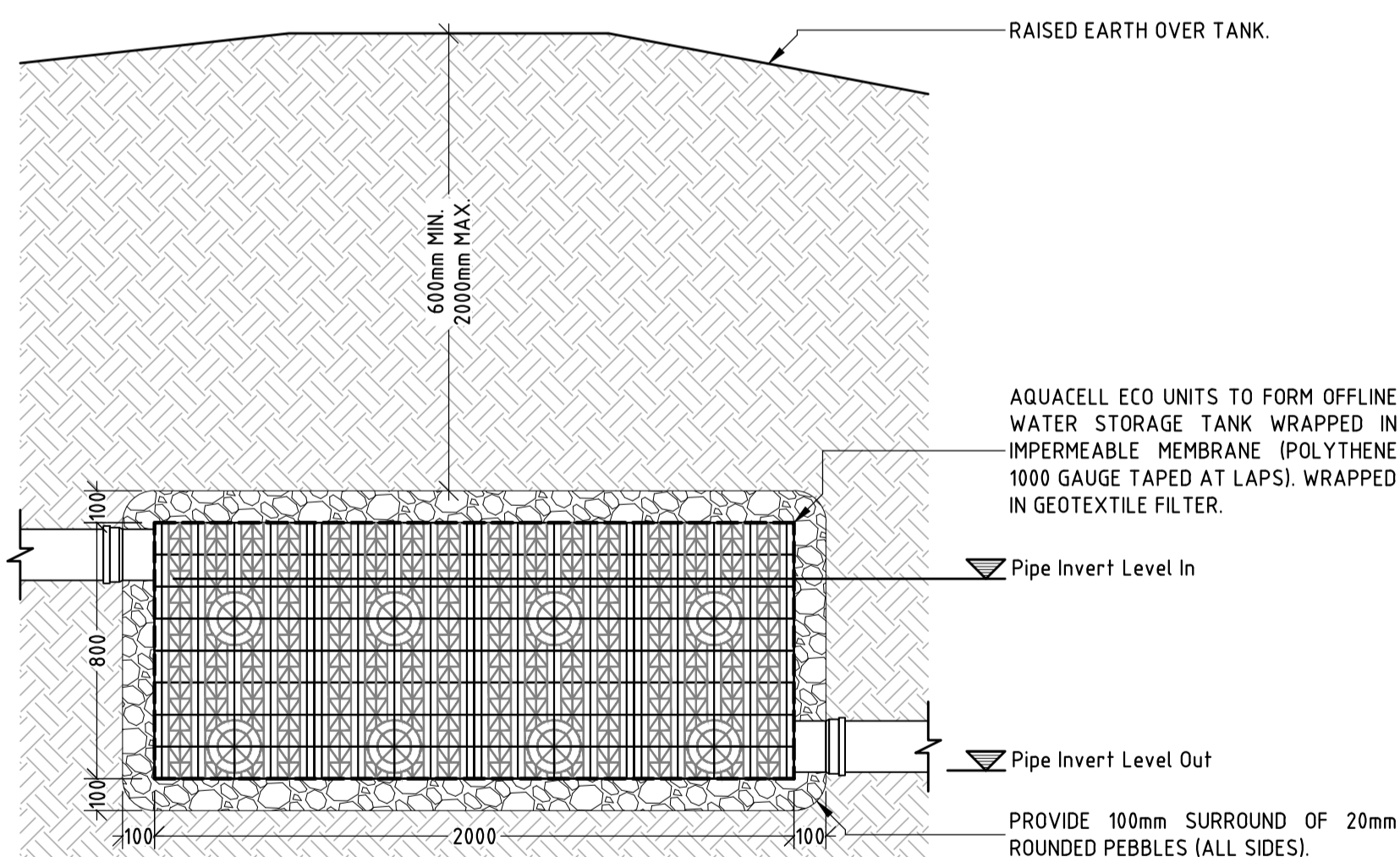
TYPICAL STUB STACK  
NOT TO SCALE



TYPICAL VERTICAL BACKDROP  
CONNECTION FOR DROPS GREATER THAN 1m  
NOT TO SCALE



TYPICAL GEOCELLULAR  
STORAGE TANK (SECTION)  
NOT TO SCALE



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## NOT FOR CONSTRUCTION

P1	Preliminary	15/07/19
REV	DETAIL	DATE

Status: PRELIMINARY

Client: Space Free Ltd.

Project: 138-140 Highgate Road,  
London, NW5 1PB

Title: Drainage Details Sheet 1

Project N°:	Drawing N°:	Rev:
18035	D300	P1

Date: Jul 2019

Scale @A1: As Noted

Drawn: JL

Engineer: NK

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