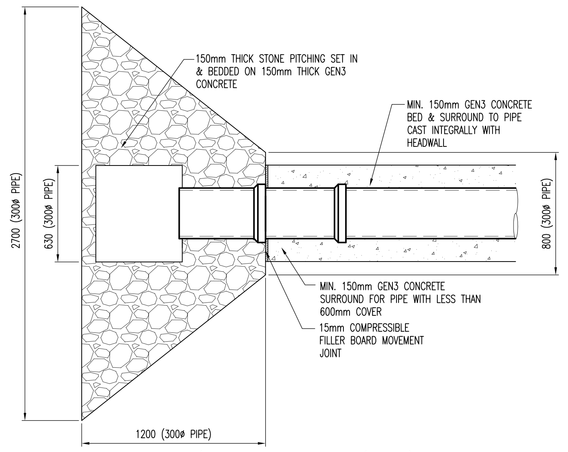
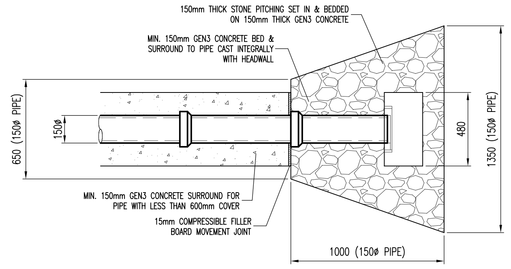


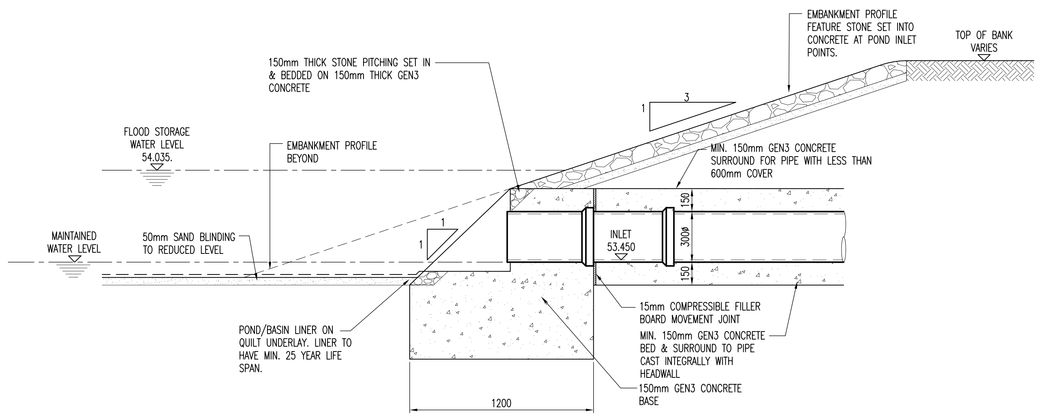
TYPICAL PLAN ON INLET/OUTLET HEADWALL (300ø)

SCALE 1:20



TYPICAL PLAN ON INLET HEADWALL (150ø)

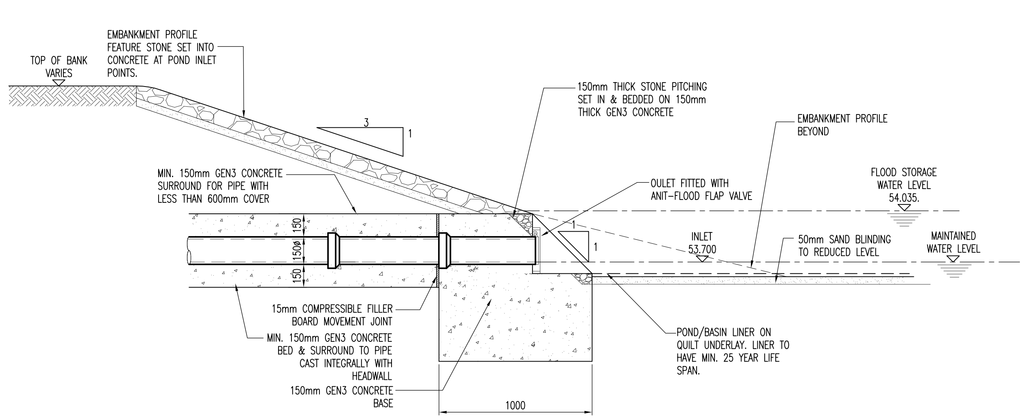
SCALE 1:20



TYPICAL POND INLET DETAIL (300ø)

SCALE 1:20

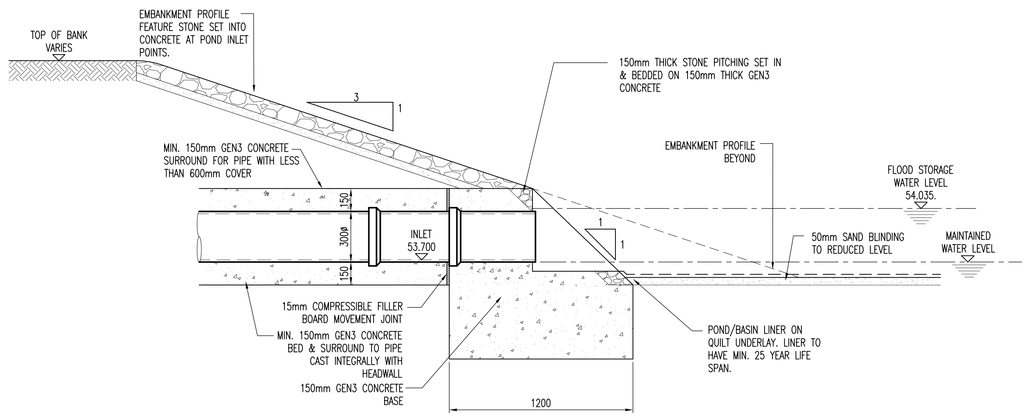
DETENTION BASINS 1 AND 2



TYPICAL POND INLET DETAIL (150ø)

SCALE 1:20

DETENTION BASIN 3



TYPICAL POND OUTLET DETAIL (300ø)

SCALE 1:20

DETENTION BASINS 3

TYPICAL ROAD GULLY DETAIL (SCALE 1:20)

TYPICAL ACCESS GULLY (100mm ø OUTLET TO 150mm PIPE) DETAIL

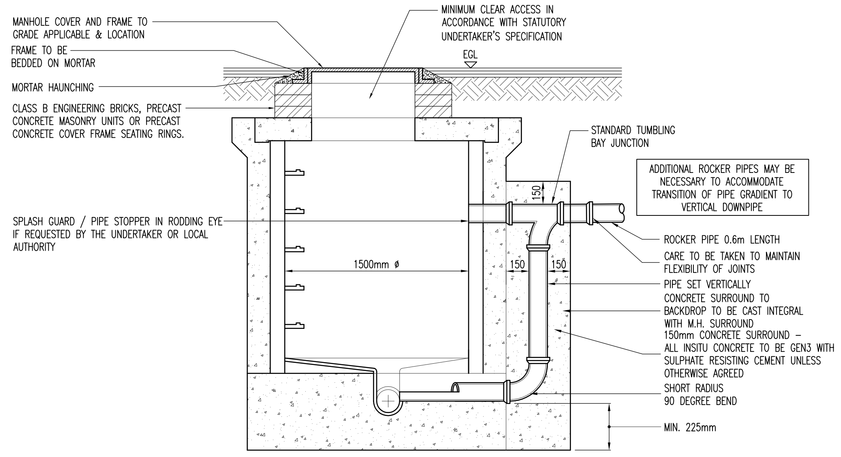
SCALE 1:20

TYPICAL PPIC DETAIL

SCALE 1:20

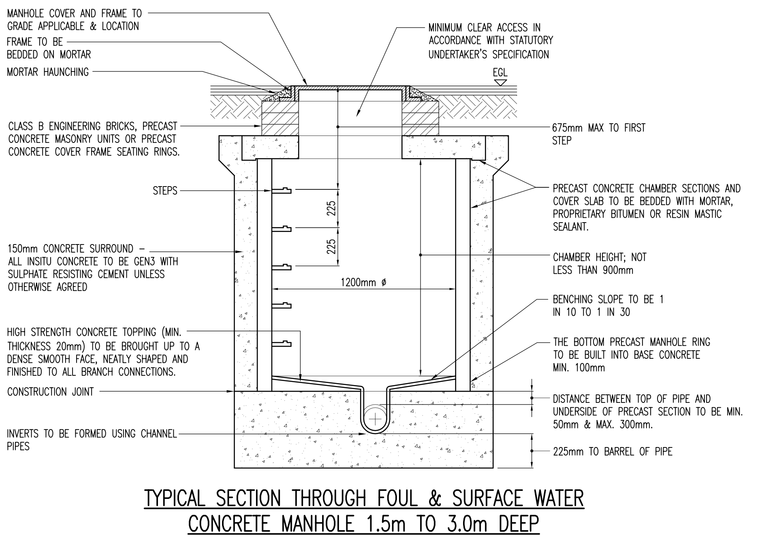
TYPICAL PIPE JOINT DETAIL

SCALE 1:20



TYPICAL SECTION THROUGH SURFACE WATER BACKDROP MANHOLE 1.5m TO 3.0m DEEP

SCALE 1:20



TYPICAL SECTION THROUGH FOUL & SURFACE WATER CONCRETE MANHOLE 1.5m TO 3.0m DEEP

SCALE 1:20

PIPE TRENCH & BEDDING DETAIL FOR SOFT LANDSCAPED AREAS AND PAVED/TRAFFICKED AREAS WITH 1.20m+ COVER DEPTH TO PIPE CLASS N BEDDING FACTOR 1.1

SCALE 1:20

PIPE TRENCH & BEDDING DETAIL FOR PAVED & TRAFFICKED AREAS WITH LESS THAN 1.20m COVER DEPTH TO PIPE BEDDING FACTOR 4.5

SCALE 1:20

TYPICAL PLAN ON SURFACE WATER BACKDROP MANHOLE 1.5m TO 3.0m DEEP

SCALE 1:20

TYPICAL PLAN ON FOUL & SURFACE WATER CONCRETE MANHOLE 1.5m TO 3.0m DEEP

SCALE 1:20

0 20 40 60 80 100mm

0.5

CONSTRUCTION

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The originator shall have no responsibility for any liability, loss, cost, damage or expense arising from or relating to any use of this document other than for its intended purpose on this project.

This drawing shall be read in conjunction with all other relevant drawings, specifications and associated documentation. Any discrepancies, errors or omissions are to be reported to the originator before proceeding with work.

All dimensions are to be checked on site by the contractor prior to proceeding with any work.

Hazard Identification

ref	hazard	date

GENERAL NOTES

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT BRADSHAW GASS & HOPE LLP DRAWINGS AND SPECIFICATIONS ALONG WITH ALL ARCHITECTURAL AND MECHANICAL & ELECTRICAL ENGINEERING CONTRACT DOCUMENTS.

2. THE MATERIALS AND WORKMANSHIP OF ALL RELEVANT TRADES AND BUILDING OPERATIONS SHALL COMPLY WITH THE RECOMMENDATIONS SET IN CURRENT BRITISH STANDARDS AND CODES OF PRACTICE.

3. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE DESIGN AND CONSTRUCTION OF ALL THE TEMPORARY WORKS PROPPING AND SHORING.

4. ALL WORK IS TO COMPLY WITH ALL RELEVANT HEALTH AND SAFETY LEGISLATION AND REGULATIONS.

5. ALL DIMENSIONS ARE SHOWN IN MILLIMETERS UNLESS NOTED OTHERWISE.. DIMENSIONS MUST NOT BE SCALED, USE ANNOTATED DIMENSIONS ONLY.

6. ALL DIMENSIONS ARE TO BE CHECKED ON SITE BY THE CONTRACTOR PRIOR TO CONSTRUCTION.

7. ALL LEVELS ARE IN METRES AND RELATE TO A DATUM AT FINISHED FLOOR LEVEL OF 55.500m.

8. ALL WORK TO BE IN ACCORDANCE WITH SEWERS FOR ADOPTION LATEST EDITION AND BS 8000 PT 14 CODE OF PRACTICE FOR BELOW GROUND DRAINAGE.

9. THE SIZES OF MANHOLES STATED ARE MINIMUM. IF TWO OR MORE PIPES ENTER THE MANHOLE THE CHAMBER SIZE MUST BE SUFFICIENT TO ACCOMMODATE ADEQUATE BENCHING. ALL PIPES BUILT INTO THE MANHOLE INVERT SHOULD BE INSTALLED WITH SOFFIT LEVEL.

10. THE CONTRACTOR SHALL GIVE AT LEAST THREE WORKING DAYS NOTICE TO THE ENGINEER TO ALLOW OPPORTUNITY TO EXAMINE ANY FORMATION OR WITNESS ANY TESTING.

11. ALL SOFT SPOTS TO BE REMOVED FROM BOTTOM OF EXCAVATIONS AND TO BE REFILLED TO FORMATION LEVEL WITH THE SAME MATERIAL AS PERMANENT WORKS WHICH REST IN IT.

12. UNLESS NOTED OTHERWISE ALL MANHOLE CHAMBER COVERS TO BE DUCTILE IRON TO BS EN 124 D400.

13. UNLESS NOTED OTHERWISE ALL MORTAR TO BE CLASS 1 1:3 CEMENT : SAND.

14. CUT ENDS OF REINFORCED CONCRETE PIPES ARE TO BE TREATED WITH EPOXY RESIN PAINT/MORTAR.

15. CONSTRUCTION JOINTS IN CONCRETE SURROUND MUST NOT BE WITHIN 150MM OF CHAMBER RING JOINTS.

16. ALL DRAINAGE PRODUCTS TO BE KITEMARK APPROVED & TESTED.

17. GULLY GRATINGS SHALL BE END HINGED & DUCTILE IRON, BS EN 124 CLASS D400

18. ALL ABOVE GROUND FOUL AND SURFACE WATER DRAINAGE DETAILS, INCLUDING SETTING-OUT DIMENSIONS TO SOIL PIPES, SOIL & VENT PIPES AND RAINWATER PIPES, ARE TO ARCHITECTS' / M&E ENGINEER'S DETAILS AND SPECIFICATION.

19. ALL DRAINAGE UNDER FOOTPRINT OF BUILDING TO BE ENCASED IN 150mm CONCRETE SURROUND.

20. ALL DRAINAGE INSTALLATIONS SHALL BE AIR TESTED IN ACCORDANCE WITH BS EN 1610 IN THE PRESENCE OF THE BUILDING CONTROL OFFICER OR BRADSHAW GASS & HOPE LLP ENGINEER.

21. UPON COMPLETION OF THE PROPOSED DRAINAGE WORKS, THE CONTRACTOR IS TO ARRANGE FOR ALL SYSTEMS, INCLUDING INTERFACES WITH EXISTING DRAINAGE PIPES AND MANHOLES, TO BE CCTV SURVEYED AND A REPORT PROVIDED TO BRADSHAW GASS & HOPE LLP.

22. ALL HEPWORTH BELOW GROUND DRAINAGE IS TO BE CONNECTED VIA HEPWORTH POLYPROPYLENE EPDM SEAL COUPLINGS REFERENCED – SC1/1 FOR 100ø, SC1/2 FOR 150ø, SC1/5 FOR 225ø AND SC1/7 FOR 300ø.

23. DRAINS ARE TO BE LAID TO THE GRADIENTS INDICATED ON PLAN. IN THE ABSENCE OF THIS INFORMATION THE FOLLOWING MINIMUM GRADIENTS CAN BE ADOPTED;
FOUL OR COMBINED WATER 100mm ø = 1 IN 40
FOUL OR COMBINED WATER 150mm ø = 1 IN 80
SURFACE WATER (ALL) = 1 IN 150
REFER TO DRAINAGE LAYOUT DRAWING No. 2139.01.101.

24. ALL CONCRETE MANHOLES ARE TO BE FORMED USING STANTON BONNA CONCRETE RINGS, COVER SLABS AND REDUCING SLABS (WHERE APPLICABLE) OR SIMILAR APPROVED TO BS EN 1917 AND BS 5911–3. FOR CONSTRUCTION AND SIZES, REFER TO DETAILS DRAWING.

25. DRAINAGE DESIGN AND CONSTRUCTION TO BE IN ACCORDANCE WITH; BUILDING REGULATIONS APPROVED DOCUMENT H, BS EN 12056 – GRAVITY DRAINAGE SYSTEMS INSIDE BUILDINGS, BS EN 752 – DRAIN AND SEWER SYSTEMS OUTSIDE BUILDINGS. BS EN 1610 – CONSTRUCTION AND TESTING OF DRAINS AND SEWERS. SEWERS FOR ADOPTION – 7TH EDITION.

C2	DETENTION BASIN DETAILS REVISED/ADDED	RS	03.03.17
C1	ISSUED FOR CONSTRUCTION	MEC	18.11.16
T1	ISSUED FOR TENDER	VPR	24.12.15
ref	revision	by	date

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project
ASHBURY WORKS
NEW OFFICE, FACTORY AND WAREHOUSE

drawing
DRAINAGE DETAILS

drawn by	DMC	date	MAY 2015
checked by	AC	date	DEC 2015
scale	1:200		A0
dwg no.	2139.01.102	rev	C2