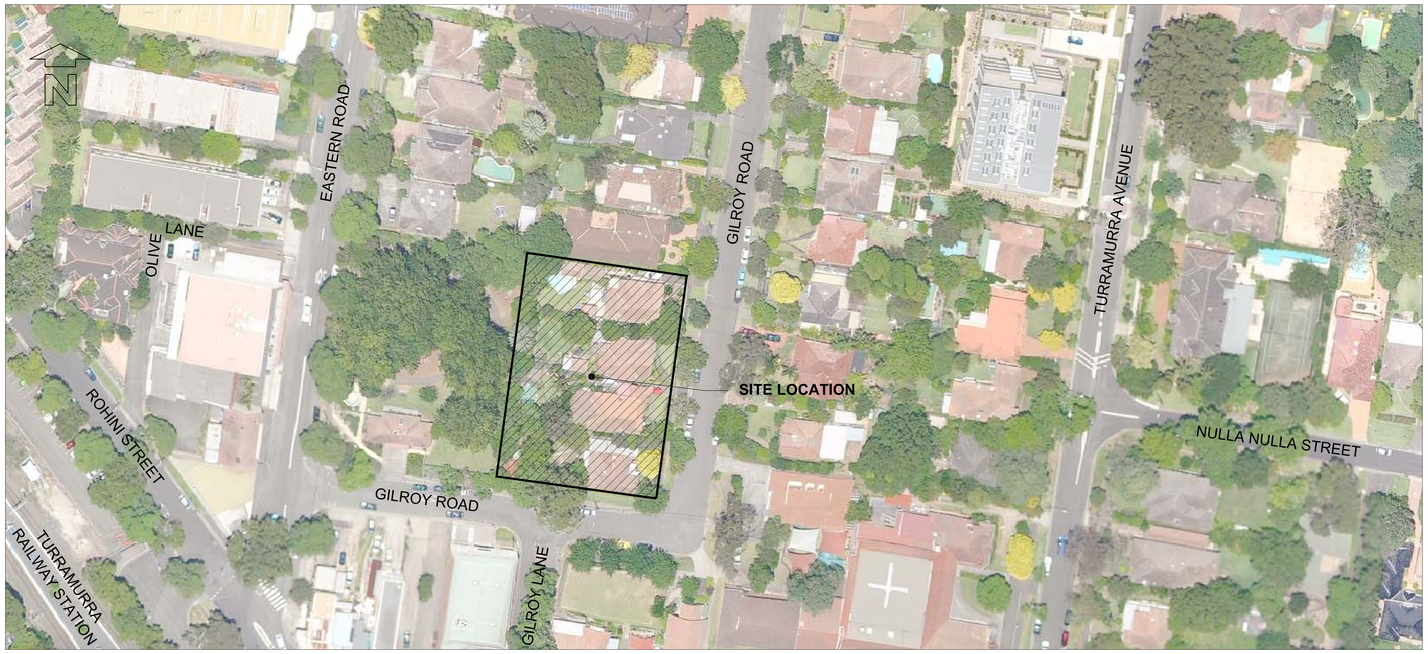
RESIDENTIAL DEVELOPMENT

CONCEPT EROSION & SEDIMENT CONTROL AND STORMWATER MANAGEMENT PLANS

2 - 8 GILROY ROAD, TURRAMARRA



LOCALITY SKETCH

NOT TO SCALE

DRAWING SCHEDULE

DA1.01	COVER SHEET, LOCALITY SKETCH AND DRAWING SCHEDULE DA2.01
DA2.01	CONCEPT SEDIMENT & EROSION CONTROL PLAN
DA3.01	CONCEPT STORMWATER MANAGEMENT PLAN - GROUND FLOOR
DA3.02	CONCEPT STORMWATER MANAGEMENT PLAN - UNDERSIDE OF GROUND FLOOR SLAB
DA3.03	CONCEPT STORMWATER MANAGEMENT PLAN - BASEMENT LEVEL 1
DA3.04	CONCEPT STORMWATER MANAGEMENT PLAN - BASEMENT LEVEL 2
DA3.11	ON SITE DETENTION FACILITY - DETAILED SECTIONS
DA4.01	STORMWATER DETAILS - SHEET 1
DA4.02	STORMWATER DETAILS - SHEET 2

ISSUE	AMENDMENT	DRAWN	VER'D	APP'D	DATE
1	ISSUED FOR DA		GE	SF	19.04.11
2	REISSUED FOR DA		GE	SF	02.09.11

CLIENT: IC homes

ARCHITECT: MACKENZIE

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PROJECT: 2 - 8 GILROY ROAD TURRAMURRA

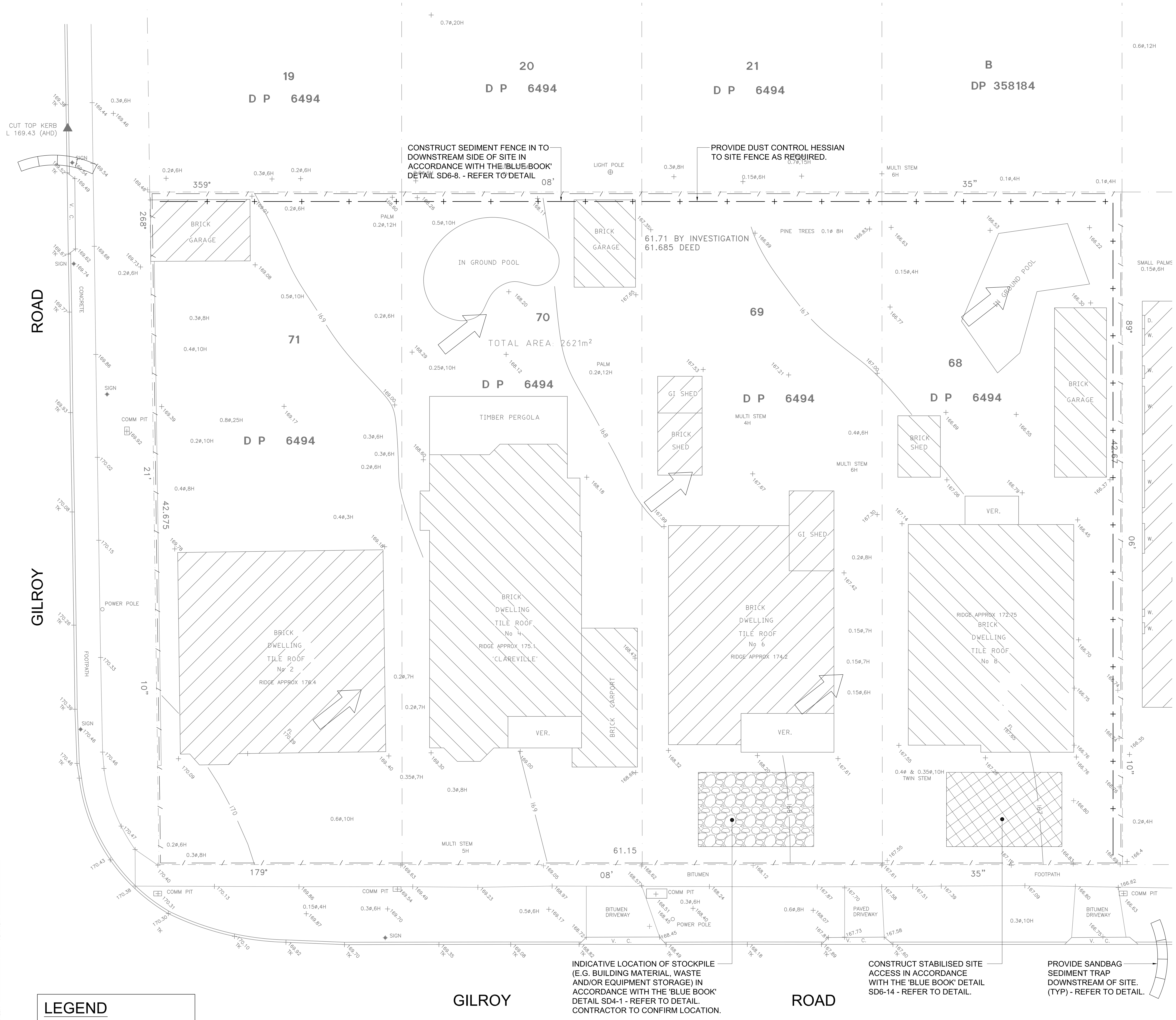
DRAWING TITLE: COVER SHEET, LOCALITY SKETCH & DRAWING SCHEDULE

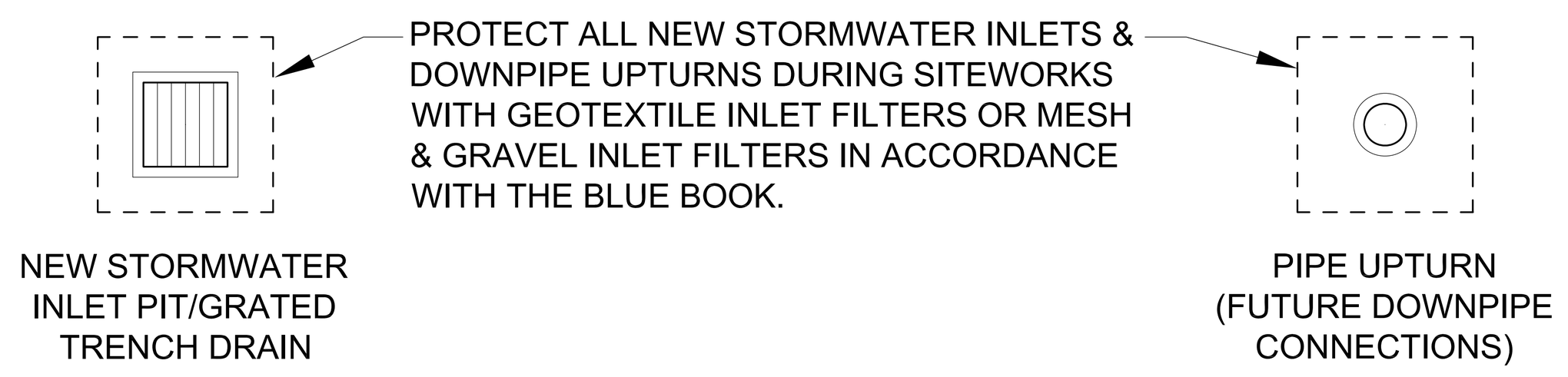
JOB NUMBER: 11136

DRAWING NUMBER: DA1.01

REVISION: 2

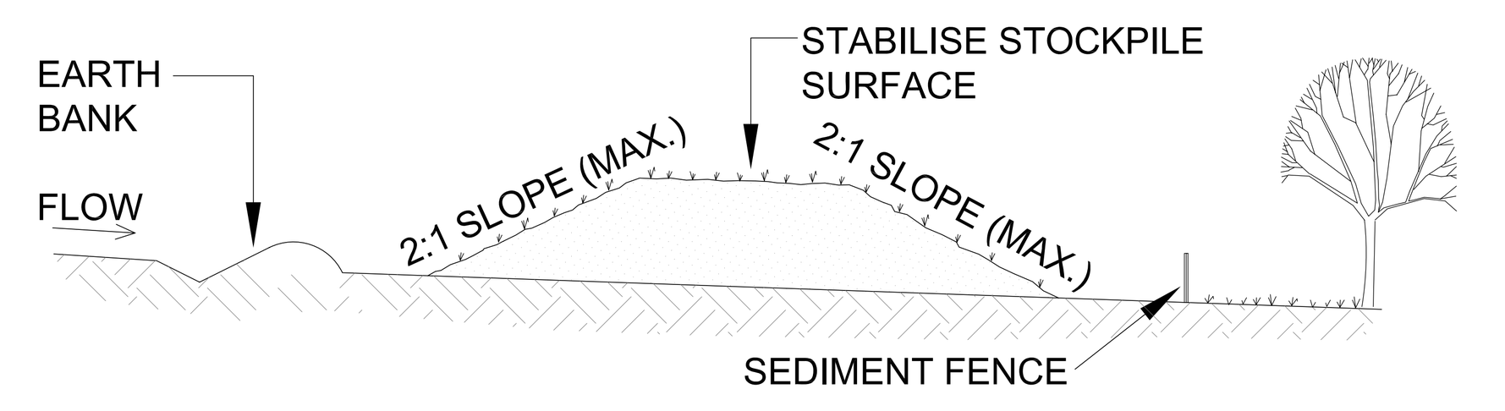
DRAWING SHEET SIZE = A0





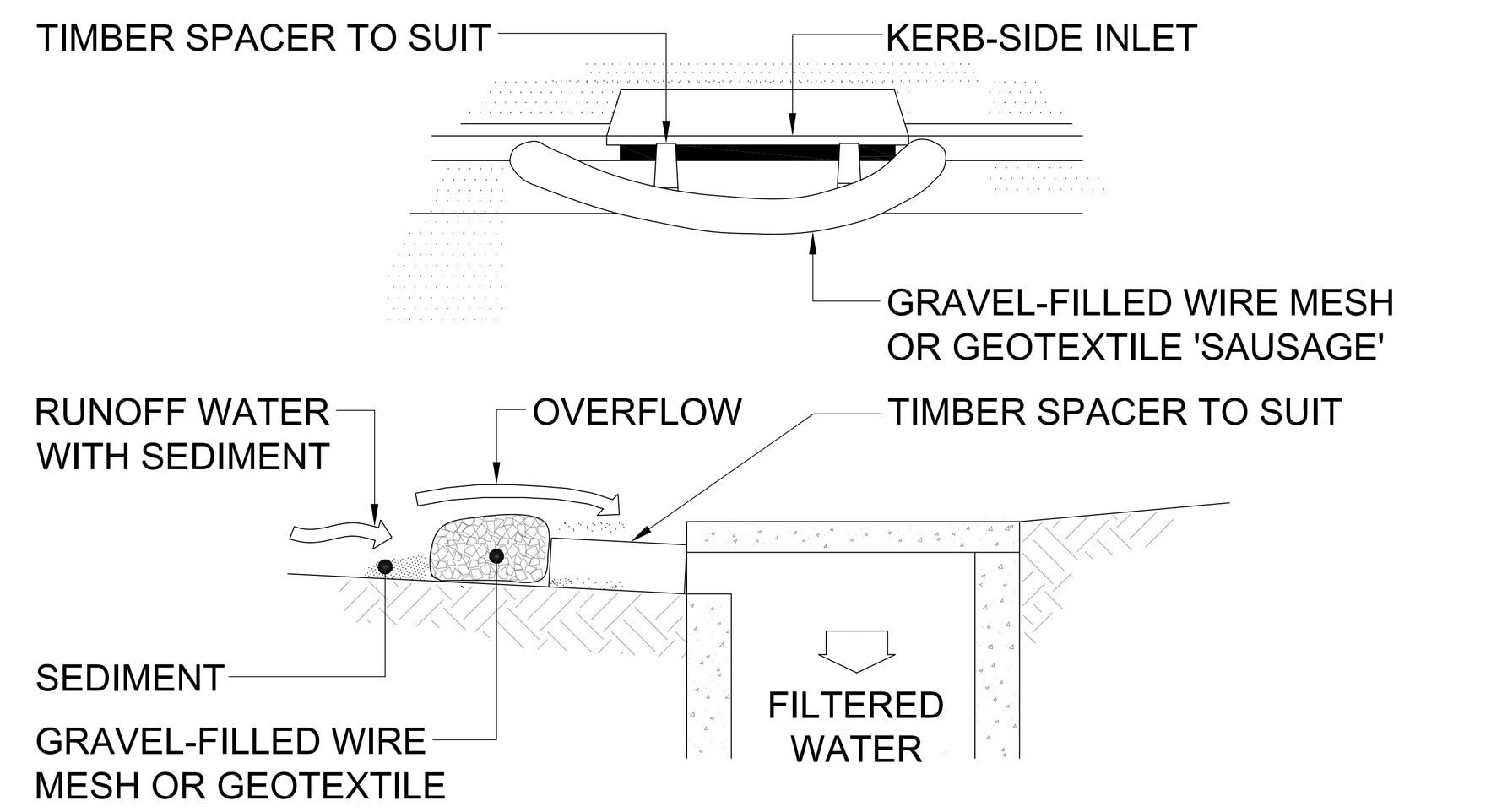
PROTECTED STORMWATER DRAINAGE INLETS

NOT TO SCALE



STOCKPILE

NOT TO SCALE



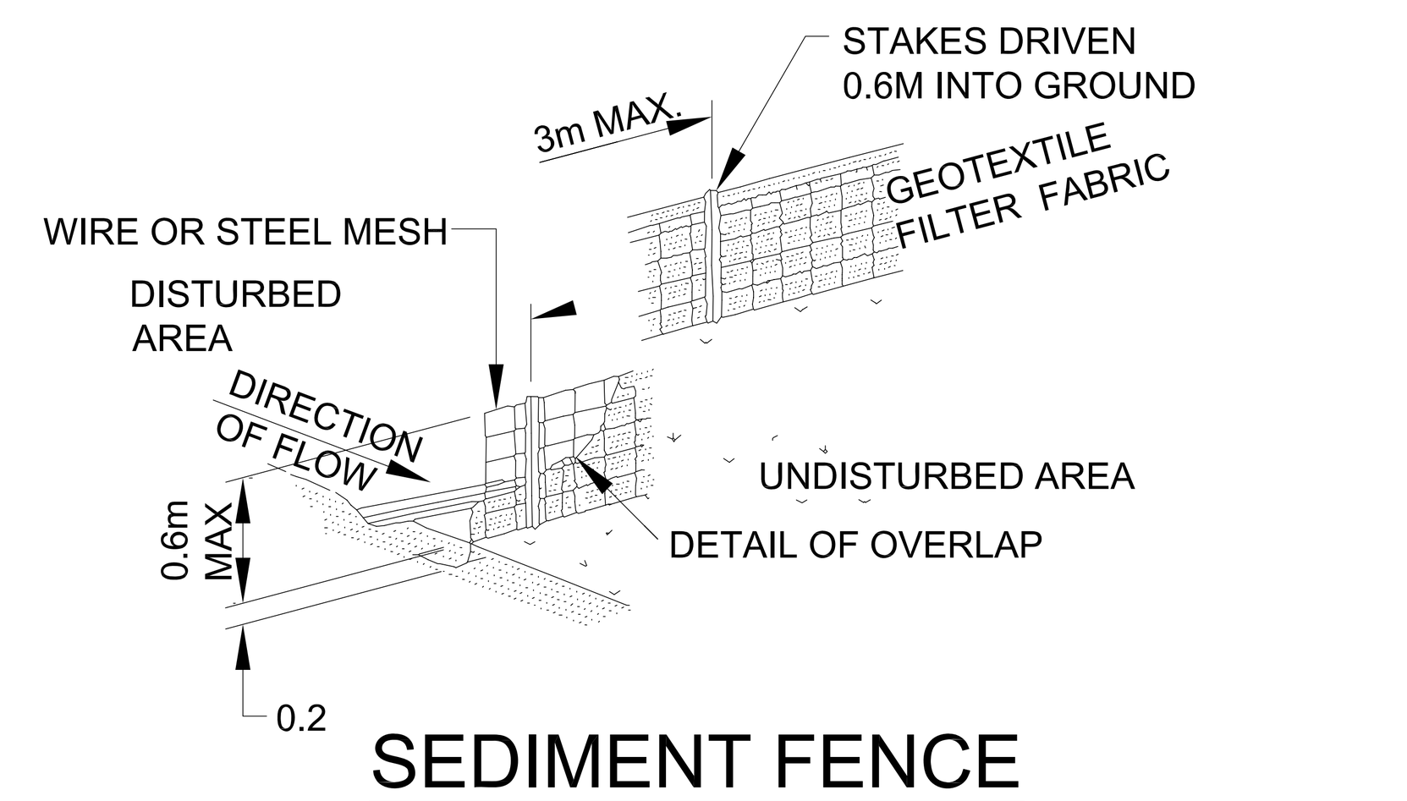
NOTE: THIS PRACTICE ONLY TO BE USED WHERE SPECIFIED IN AN APPROVED SWMP/ESCP.

CONSTRUCTION NOTES

1. INSTALL FILTERS TO PITS SHOWN.
2. FABRICATE A SLEEVE MADE FROM GEOTEXTILE OR WIRE MESH LONGER THAN THE LENGTH OF THE INLET PIT AND FILL IT WITH 25mm TO 50mm GRAVEL.
3. FORM AN ELLIPTICAL CROSS-SECTION ABOUT 150mm HIGH x 400mm WIDE.
4. PLACE THE FILTER AT THE OPENING LEAVING AT LEAST A 100mm SPACE BETWEEN IT AND THE KERB INLET. MAINTAIN THE OPENING WITH SPACER BLOCKS.
5. FORM A SEAL WITH THE KERB TO PREVENT SEDIMENT BYPASSING THE FILTER.
6. SANDBAGS FILLED WITH GRAVEL CAN SUBSTITUTE FOR THE MESH OR GEOTEXTILE PROVIDING THEY ARE PLACED SO THAT THEY FIRMLY ABUT EACH OTHER AND SEDIMENT-LADEN WATERS CANNOT PASS BETWEEN.

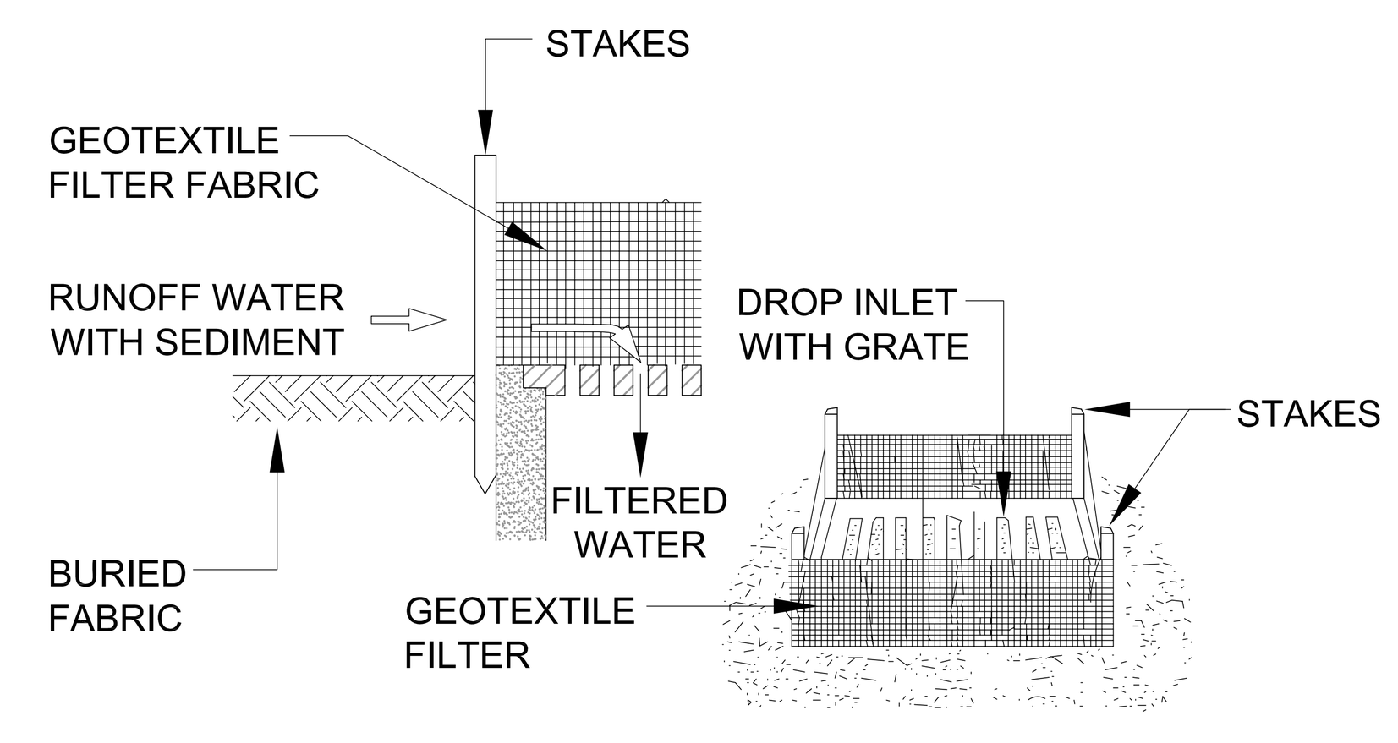
MESH AND GRAVEL INLET FILTER

NOT TO SCALE



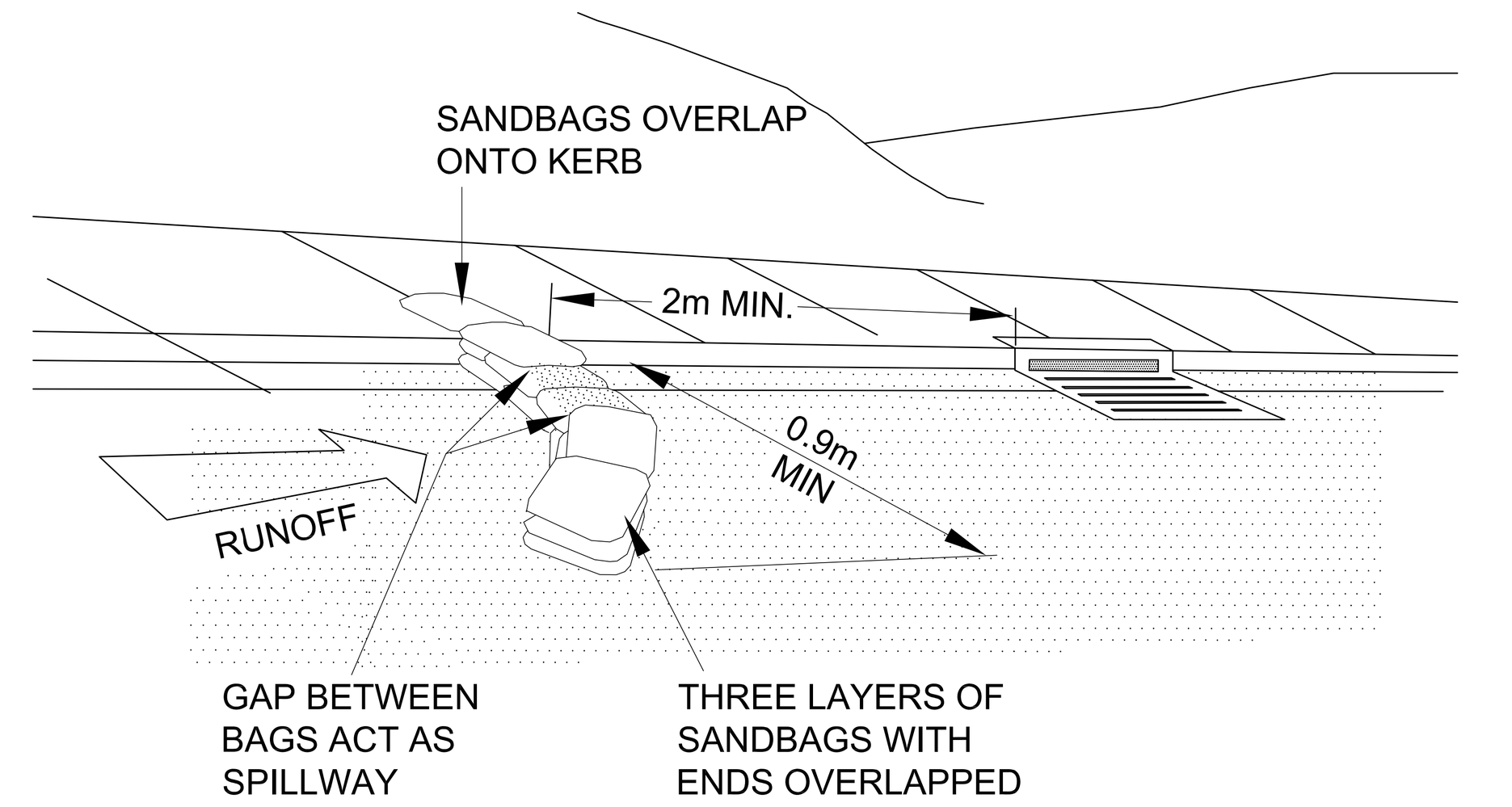
SEDIMENT FENCE

NOT TO SCALE



GEOTEXTILE FILTER FABRIC DROP INLET SEDIMENT TRAP

- DRAINAGE AREA - 0.4ha.

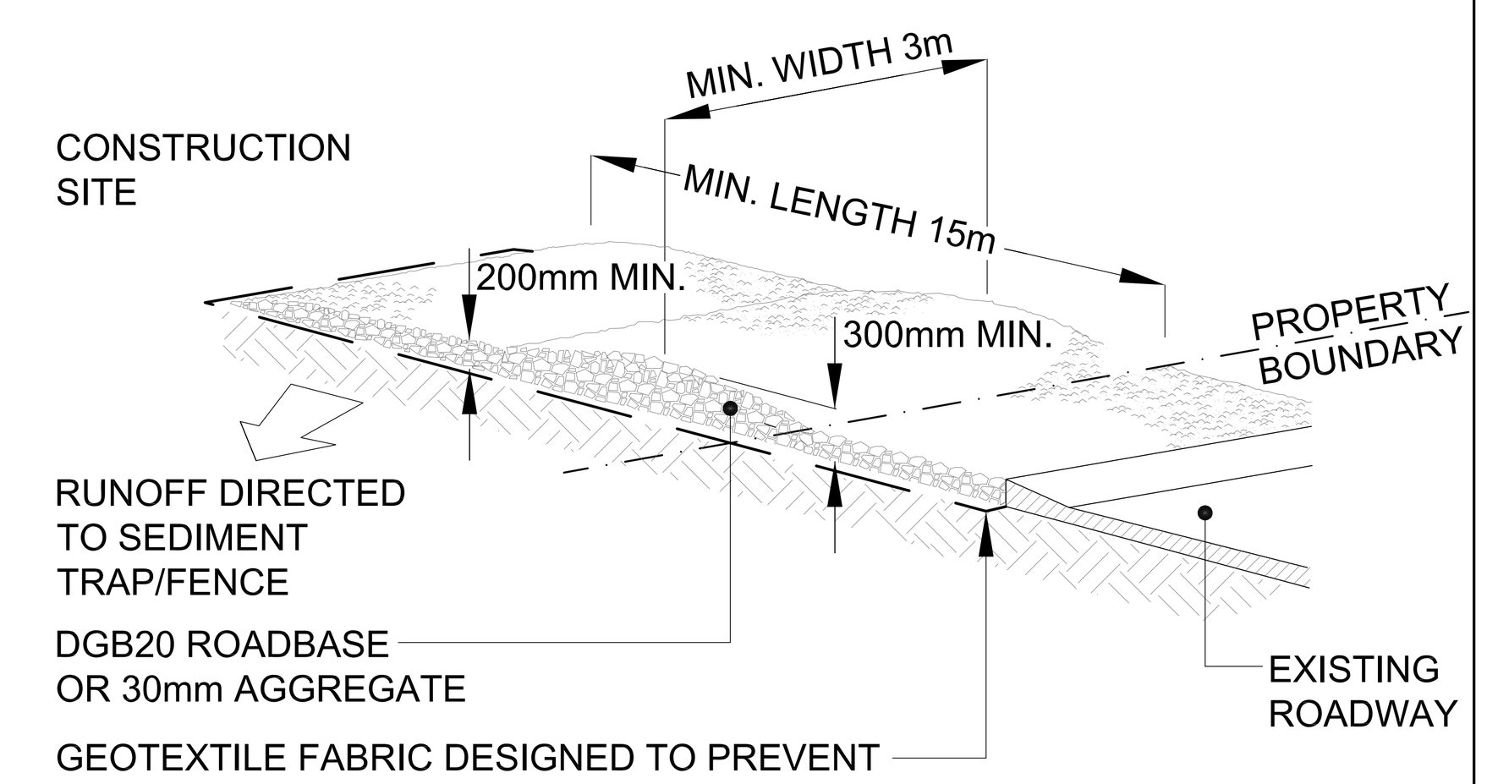


SANDBAG SEDIMENT TRAP

NOT TO SCALE

GENERAL NOTES

1. THE FOLLOWING STANDARD DRAWINGS SHALL BE USED IN CONJUNCTION WITH THIS PLAN;
   SD4-1 STOCKPILE
   SD6-8 SEDIMENT FENCE
   SD6-11 MESH & GRAVEL INLET FILTER
   SD6-12 GEOTEXTILE INLET FILTER
   SD6-14 STABLISED SITE ACCESS
2. ALL SEDIMENT AND EROSION CONTROL MEASURES TO BE IN ACCORDANCE WITH NSW MEASURES DEPARTMENT OF HOUSING "MANAGING URBAN STORMWATER:SOILS AND CONSTRUCTION" (ALSO REFERED TO AS THE "BLUE BOOK").
3. PROTECT ALL INLETS TO STORMWATER DRAINAGE SYSTEM FOR THE DURATION OF CONSTRUCTION - REFER DETAIL SD6-11 & SD6-12.
4. KEEP DISTURBED AREAS TO A MINIMUM ALLOW TO DIVERT UPSTREAM RUNOFF AROUND ANY DISTURBED AREAS THROUGHOUT CONSTRUCTION.
5. SEDIMENT AND EROSION CONTROL MEASURES SHOWN ON THIS PLAN ARE PREPARED AS A GUIDE ONLY & ARE TO BE CONFIRMED BY CONTRACTOR. IT DOES NOT IN ANY WAY RELIEVE THE CONTRACTOR OF THEIR RESPONSIBILITY TO PLAN AND IMPLEMENT ENVIRONMENTAL PROTECTION MEASURES REQUIRED BY LAW, THE COUNCIL AND CONTRACT THROUGHOUT THE WORKS.
6. SEDIMENT & EROSION CONTROL MEASURES CONFIRMED BY CONTRACTOR ARE TO BE STAGED ACCORDINGLY.



CONSTRUCTION NOTES

1. STRIP THE TOPSOIL, LEVEL THE SITE AND COMPACT THE SUBGRADE.
2. COVER THE AREA WITH NEEDLE-PUNCHED GEOTEXTILE.
3. CONSTRUCT A 200mm THICK PAD OVER THE GEOTEXTILE USING ROAD BASE OR 30mm AGGREGATE.
4. ENSURE THE STRUCTURE IS AT LEAST 15m LONG OR TO BUILDING ALIGNMENT AND AT LEAST 3m WIDE.
5. WHERE A SEDIMENT FENCE JOINS ONTO THE STABILISED ACCESS, CONSTRUCT A HUMP IN THE STABILISED ACCESS TO DIVERT WATER TO THE SEDIMENT FENCE.

STABILISED SITE ACCESS

NOT TO SCALE

LEGEND

- SEDIMENT FENCE
- SITE FENCE
- GEOTEXTILE INLET FILTER
- SANDBAG TRAP
- MESH & GRAVEL INLET FILTER
- STABILISED SITE ACCESS
- STOCKPILE
- DIRECTION OF FLOW

NOT FOR CONSTRUCTION

ISSUE	AMENDMENT	DRAWN	VER'D	APP'D	DATE
1	ISSUED FOR DA		GE	SF	19.04.11
2	REISSUED FOR DA		GE	SF	02.09.11

CLIENT: ic homes

ARCHITECT: MACKENZIE

SCALE 1:100 @ A0

NORTHROP — Bringing people, ideas & engineering together — Sydney

PROJECT: 2 - 8 GILROY ROAD TURRAMURRA

DRAWING TITLE: CONCEPT SEDIMENT & EROSION CONTROL PLAN

JOB NUMBER: 11136

DRAWING NUMBER: DA2.01 | REVISION: 2

DRAWING SHEET SIZE = A0

ROAD

GILROY

GILROY ROAD

SUBSTATION

600 x 200mm OVERFLOW BLOCKOUT AT BASE OF PRIVACY WALLS (TYP.)

80m LONG x 1.9m WIDE VEGETATED SWALE TO PROVIDE FILTRATION TRAETMENT TO RUNOFF FROM LANDSCAPED AREAS NOT DRAINING TO THE OSD SYSTEM IN ACCORDANCE WITH COUNCIL SPECIFICATION.

DENOTES RAINWATER OUTLET AT GROUND LEVEL TO CARRIER PIPE SLUNG TO UNDERSIDE OF GROUND FLOOR SLAB (TYP.).

DENOTES DOWNPIPE FROM HIGHER LEVEL BALCONIES TO CARRIER PIPE SLUNG TO UNDERSIDE OF GROUND FLOOR SLAB (TYP.).

FFL 167.30

FFL 169.20

FFL 167.70

DENOTES GTD AT GROUND LEVEL OUTLET TO CARRIER PIPE SLUNG TO UNDERSIDE OF GROUND FLOOR SLAB (TYP.).

RISING MAIN FROM BASEMENT PUMP OUT PIT - REFER DRAWING DA3.04 FOR CONTINUATION.

ON-SITE STORMWATER DETENTION TANK SUSPENDED BELOW GROUND FLOOR SLAB. TOTAL STORAGE VOLUME 34.79m³. REFER TO DRAWINGS DA3.11 FOR DETAILS.

RAINWATER TANK WITHIN CARPARK BASEMENT LEVEL 1
BOTTOM OF TANK RL167.70,
TWL = 168.7
BASE AREA = 15m²
TOTAL STORAGE VOLUME MINIMUM = 15m³.

PROVIDE 900 SQ CLASS B INSPECTION ACCESS COVER EXTERNAL TO BUILDING TO RAINWATER REUSE TANK. RL = 169.170

DENOTES DOWNPIPE FROM ROOF TO CARRIER PIPE SLUNG TO UNDERSIDE OF GROUND FLOOR SLAB (TYP.).

DENOTES BASEMENT FOOTPRINT.

PROVIDE Ø225mm OVERFLOW PIPE FROM RAINWATER REUSE TANK WITH NON-RETURN VALVE TO OSD FACILITY. REFER TO DRAWING DA3.02 FOR CONTINUATION.

PROVIDE 900 SQ CLASS B INSPECTION ACCESS COVER EXTERNAL TO BUILDING TO ON SITE DETENTION TANK

ABOVE GROUND BIO RETENTION ON-SITE STORMWATER DETENTION BASIN MAINTENANCE ACCESS.

PROVIDE 900 SQ CLASS B EMERGENCY OVERFLOW / INSPECTION ACCESS GRATE EXTERNAL TO BUILDING TO OSD TANK. RL = 167.60

900x600 DISCHARGE CONTROL PIT WITH GRATED ACCESS LID - REFER TO DRAWING DA3.11 DETAILS.

600 x 600 SEALED JUNCTION PIT.

RETAINING WALL TOW 167.70 MIN.

200 x 75 GALVANISED RHS. USIL = 166.32

IL 166.25

500x900mm OPENING TO ALLOW OSD TANK AND ABOVE GROUND LANDSCAPE OSD BASIN VOLUMES TO BE BALANCED. REFER TO DRAWING DA3.01 FOR CONTINUATION.

ABOVE GROUND BIO RETENTION ON-SITE STORMWATER DETENTION BASIN 1.
SURFACE AREA = 73.5m²
BASIN TWL = 167.40
BASIN RL 166.82
MAX PONDING DEPTH 580mm.
TOTAL VOLUME = 42.60m³

1400mm WIDE EMERGENCY OVERFLOW WEIR IL=167.40

LEGEND

- DENOTES PROPOSED BOUNDARY LOCATION
- FFL 167.7 — DENOTES FINISHED FLOOR LEVEL
- DENOTES PROPOSED STORMWATER DRAINAGE PIPE (LAID AT MIN 1.0% LONGITUDINAL GRADE U.N.O).
- DENOTES SURFACE INLET PIT / SURCHARGE PIT
- GTD — DENOTES GTD AT GROUND LEVEL OUTLET TO CARRIER PIPE SLUNG TO UNDERSIDE OF GROUND FLOOR SLAB (TYP.).
- RWO — DENOTES 300x 300mm RAINWATER OUTLET AT GROUND LEVEL/PLANTER BOX BASE TO CARRIER PIPE SLUNG TO UNDERSIDE OF GROUND FLOOR SLAB (TYP.),
- BDP — DENOTES INDICATIVE LOCATION OF DOWNPIPES FROM HIGHER LEVEL BALCONIES TO CARRIER PIPE SLUNG TO UNDERSIDE OF GROUND FLOOR SLAB (TYP.),
- RDP — DENOTES INDICATIVE LOCATION OF DOWNPIPES FROM ROOF TO CARRIER PIPE SLUNG TO UNDERSIDE OF GROUND FLOOR SLAB (TYP.).
- DENOTES 600 x 200mm OVERFLOW BLOCKOUT AT BASE OF PRIVACY WALLS (TYP.)
- CHILDPROOF FENCING TO BE ESTABLISHED AROUND OSD AREA IN ACCORDANCE WITH COUNCIL SPECIFICATION.

NOT FOR CONSTRUCTION

ISSUE	AMENDMENT	DRAWN	VER'D	APP'D	DATE
1	ISSUED FOR DA		GE	SF	19.04.11
2	ISSUED FOR COORDINATION		GE	SF	01.09.11
3	REISSUED FOR DA		GE	SF	02.09.11

CLIENT: IG homes

ARCHITECT: MACKENZIE

SCALE 1:100 @ A0

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Sydney

PROJECT: 2 - 8 GILROY ROAD TURRAMURRA

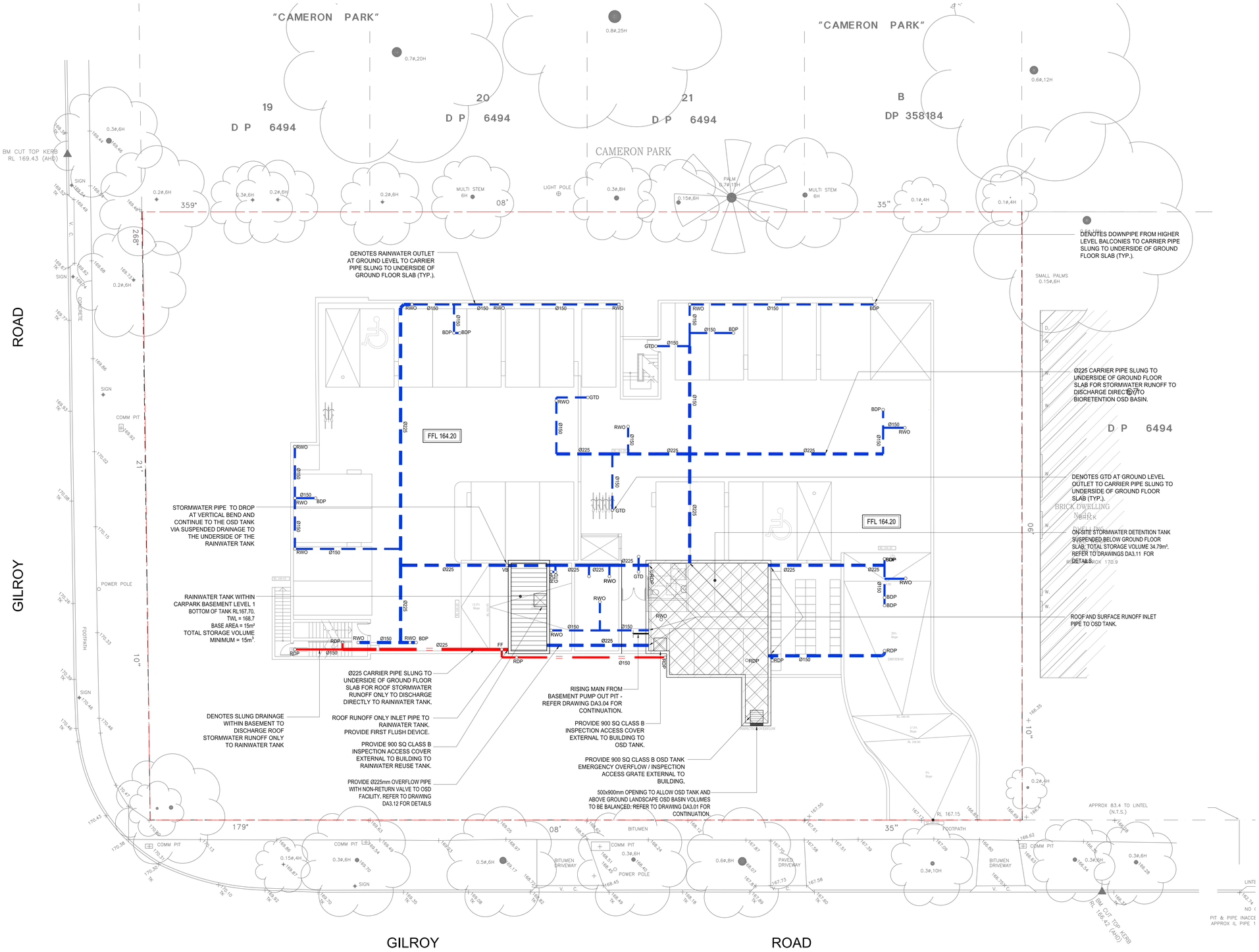
DRAWING TITLE: CONCEPT STORMWATER MANAGEMENT PLAN - GROUND LEVEL

JOB NUMBER: 11136

DRAWING NUMBER: DA3.01

REVISION: 3

DRAWING SHEET SIZE = A0



LEGEND

FFL 164.70	DENOTES FINISHED FLOOR LEVEL
— — —	DENOTES PROPOSED CARRIER PIPE SLUNG TO UNDERSIDE OF GROUND FLOOR SLAB / BASEMENT WALLS FOR ROOF / SURFACE RUNOFF TO DISCHARGE DIRECTLY TO OSD TANK.
— = —	DENOTES PROPOSED CARRIER PIPE SLUNG TO UNDERSIDE OF GROUND FLOOR SLAB / BASEMENT WALLS FOR ROOF RUNOFF ONLY TO DISCHARGE DIRECTLY TO RAINWATER REUSE TANK.
○ RWO	DENOTES GTD AT GROUND LEVEL OUTLET TO CARRIER PIPE SLUNG TO UNDERSIDE OF GROUND FLOOR SLAB (TYP.).
○ GTD	DENOTES 450 x 450mm RAINWATER OUTLET AT GROUND LEVEL TO CARRIER PIPE SLUNG TO UNDERSIDE OF GROUND FLOOR SLAB (TYP.).
○ BDP	DENOTES INDICATIVE LOCATION OF DOWNPIPES FROM HIGHER LEVEL BALCONIES TO CARRIER PIPE SLUNG TO UNDERSIDE OF GROUND FLOOR SLAB (TYP.).
○ RDP	DENOTES INDICATIVE LOCATION OF DOWNPIPES FROM ROOF TO CARRIER PIPE SLUNG TO UNDERSIDE OF GROUND FLOOR SLAB (TYP.).

RAINWATER RE-USE

1. PROVIDE RAINWATER RE-USE SYSTEM TO SUPPLY WATER FOR TOILET FLUSHING.
2. GUTTER GUARD TO BE INSTALLED ON ALL EAVES GUTTERS.
3. PRESSURE PUMP / TAP TO BE PROVIDED FOR RE-USE OF CAPTURED TANK WATER.
4. A PERMANENT SIGN IS TO BE LOCATED IN THE VICINITY OF THE TANK STATING THE WATER IS NOT FOR POTABLE USE.
5. ALL RAINWATER SERVICES SHALL BE CLEARLY LABELED "NON POTABLE WATER" WITH APPROPRIATE HAZARD IDENTIFICATION.
6. PIPEWORK USED FOR RAINWATER SERVICES SHALL BE COLOURED LILAC IN ACCORDANCE WITH AS1345.
7. ALL VALVES AND APERTURES SHALL BE CLEARLY AND PERMANENTLY LABELED WITH SAFETY SIGNS TO COMPLY WITH AS1319.
8. AN AIR GAP OR A RPZD TO BE INSTALLED TO ENSURE BACKFLOW PREVENTION.
9. RAINWATER TANK RETICULATION SYSTEM AND MAINS TOP ARRANGEMENT TO BE INSTALLED IN ACCORDANCE WITH AS/NZS 3500.1.2-2003 AND THE NSW CODE OF PRACTICE: PLUMBING AND DRAINING.
10. A FIRST FLUSH DEVICE IS TO BE PROVIDED AT RAINWATER TANK TO BY PASS THE FIRST 5mm OF RAINWATER FROM CONTRIBUTING ROOF AREA.

SLUNG DRAINAGE

1. ALL SLUNG/SUSPENDED STORMWATER DRAINAGE WITHIN BASEMENT AREA TO BE uPVC (CLASS SN4) SEWER GRADE DRAINAGE PIPE U.N.O.
2. ALL SLUNG/SUSPENDED STORMWATER DRAINAGE WITHIN BASEMENT AREA TO BE INSTALLED IN ACCORDANCE WITH AS/NZS PLUMBING AND DRAINAGE - STORMWATER DRAINAGE.
3. EACH PIPE RUN IS TO BE PROVIDED WITH RODDING EYES AT EACH END AND AT ANY BENDS TO ALLOW FOR FUTURE MAINTAINANCE.
4. THE SLUNG/SUSPENDED STORMWATER DRAINAGE WITHIN BASEMENT AREA TO BE CO-ORDINATED WITH ALL OTHER SERVICES TO MAXIMISE FUTURE MAINTAINANCE.
5. ALL SLUNG/SUSPENDED STORMWATER DRAINAGE WITHIN BASEMENT AREA TO BE LAID AT A FALL OF 1:100 MINIMUM

ISSUE	AMENDMENT	DRAWN	VER'D	APP'D	DATE
1	ISSUED FOR DA		GE	SF	19.04.11
2	REISSUED FOR DA		GE	SF	02.09.11

CLIENT: ic homes

ARCHITECT: MACKENZIE

0 1 2 3 4 5m SCALE 1:100 @ A0

The Grafton Bond Store
60 Hickson Road,
Sydney, N.S.W., 2000
Ph: (02) 9241 4188
Fax (02) 9241 4324
P.O. Box H177
Australia Square, N.S.W. 1215
Email: sydney@northrop.com.au
ABN 81 094 433 100
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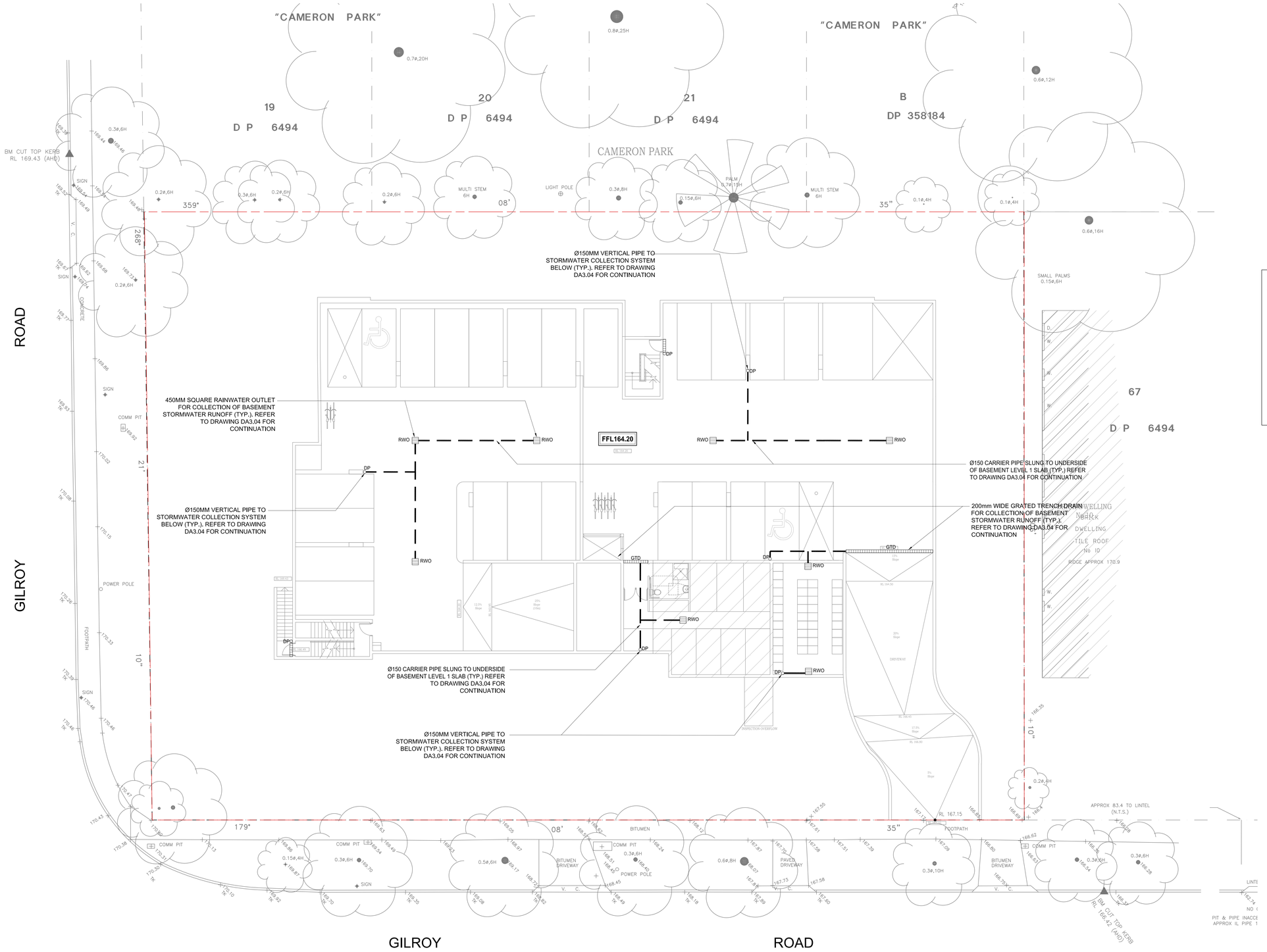
PROJECT: 2 - 8 GILROY ROAD TURRAMURRA

DRAWING TITLE: CONCEPT STORMWATER MANAGEMENT PLAN - UNDERSIDE OF GROUND FLOOR SLAB

JOB NUMBER: 11136
DRAWING NUMBER: DA3.02
REVISION: 2
DRAWING SHEET SIZE = A0



LEGEND

- DENOTES PROPOSED BOUNDARY LOCATION
- FFL164.70 — DENOTES FINISHED FLOOR LEVEL
- DENOTES PROPOSED STORMWATER CARRIER PIPE SLUNG TO UNDERSIDE OF BASEMENT LEVEL SLAB.
- GTD — DENOTES 200mm WIDE GTD FOR COLLECTION OF BASEMENT STORMWATER RUNOFF. REFER DA3.04 FOR CONTINUATION.
- RWO — DENOTES 450mm SQUARE RAINWATER OUTLET FOR COLLECTION OF BASEMENT STORMWATER RUNOFF. REFER DA3.04 FOR CONTINUATION.
- DP — DENOTES INDICATIVE LOCATION OF Ø100mm VERTICAL DOWNPIPE TO STORMWATER COLLECTION SYSTEM BELOW. REFER DRAWING DA3.04 FOR CONTINUATION.

SLUNG DRAINAGE

1. ALL SLUNG/SUSPENDED STORMWATER DRAINAGE WITHIN BASEMENT AREA TO BE uPVC (CLASS SN4) SEWER GRADE DRAINAGE PIPE U.N.O.
2. ALL SLUNG/SUSPENDED STORMWATER DRAINAGE WITHIN BASEMENT AREA TO BE INSTALLED IN ACCORDANCE WITH AS/NZS PLUMBING AND DRAINAGE - STORMWATER DRAINAGE.
3. EACH PIPE RUN IS TO BE PROVIDED WITH RODDING EYES AT EACH END AND AT ANY BENDS TO ALLOW FOR FUTURE MAINTAINANCE.
4. THE SLUNG/SUSPENDED STORMWATER DRAINAGE WITHIN BASEMENT AREA TO BE CO-ORDINATED WITH ALL OTHER SERVICES TO MAXIMISE FUTURE MAINTAINANCE.
5. ALL SLUNG/SUSPENDED STORMWATER DRAINAGE WITHIN BASEMENT AREA TO BE LAID AT A FALL OF 1:100 MINIMUM.

NOT FOR CONSTRUCTION

ISSUE	AMENDMENT	DRAWN	VER'D	APP'D	DATE
1	ISSUED FOR DA		GE	SF	19.04.11
2	REISSUED FOR DA		GE	SF	02.09.11

CLIENT: IG homes

ARCHITECT: MACKENZIE

SCALE 1:100 @ A0

The Grafton Bond Store
60 Hickson Road,
Sydney, N.S.W. 2000
Ph: (02) 9241 4188
Fax (02) 9241 4324
P.O. Box H171,
Australia Square, N.S.W. 1215
Email: sydney@northrop.com.au
ABN 81 094 433 100
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PROJECT: 2 - 8 GILROY ROAD TURRAMURRA

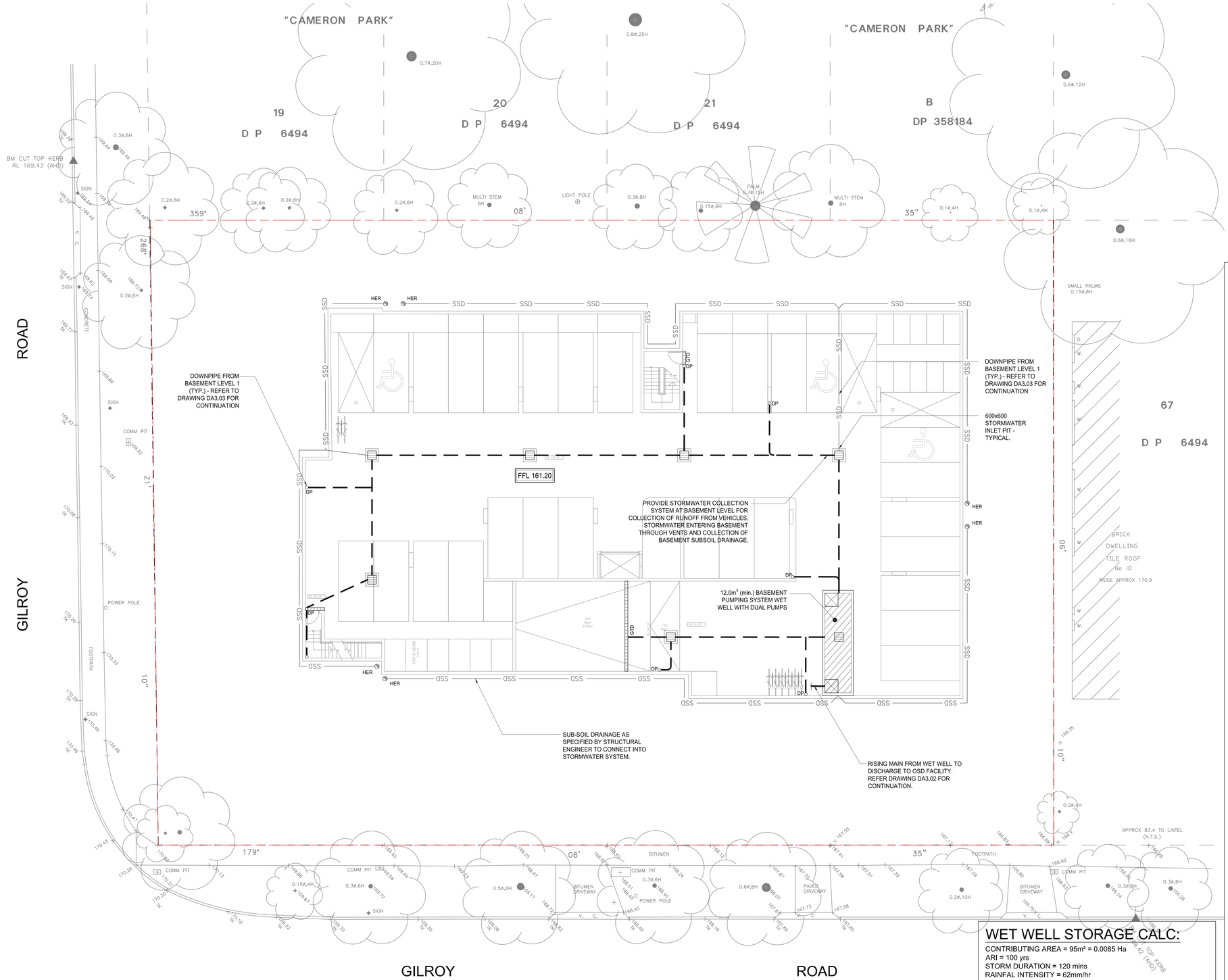
DRAWING TITLE: CONCEPT STORMWATER MANAGEMENT PLAN - BASEMENT LEVEL 1

JOB NUMBER: 11136

DRAWING NUMBER: DA3.03

REVISION: 2

DRAWING SHEET SIZE = A0



LEGEND

- DENOTES PROPOSED BOUNDARY LOCATION
- FFL 161.70 — DENOTES FINISHED FLOOR LEVEL
- DENOTES PROPOSED STORMWATER DRAINAGE PIPE (LAID AT MIN 1.0% LONGITUDINAL GRADE U.N.O).
- SSD — DENOTES Ø90 SUBSOIL DRAINAGE LINE WITH NON-WOVEN GEOTEXTILE FILTER SOCK SURROUND LAID AT MIN 1% GRADE AND NEATLY CONNECTED TO DOWNSTREAM STORMWATER STRUCTURE.
- HER — DENOTES SUBSOIL DRAINAGE HIGH END RISER WITH HEAVY DUTY uPVC COVER AND CONNECTED TO SUBSOIL DRAINAGE LINE.
- DENOTES 600 x 600mm SURFACE INLET PIT FOR COLLECTION OF BASEMENT STORMWATER RUNOFF..
- GTD — DENOTES 200mm WIDE GTD FOR COLLECTION OF BASEMENT STORMWATER RUNOFF.
- DP — DENOTES INDICATIVE LOCATION OF DOWNPIPES FROM BASEMENT LEVEL 1 - REFER DRAWING DA3.03 FOR CONTINUATION.

PUMPED SYSTEM NOTES:

GENERAL

PUMPED SYSTEMS ARE FOR AREAS NORMALLY LESS THAN 2000 M2 WHERE IT IS NOT POSSIBLE FOR THE STORMWATER TO BE DISCHARGED BY GRAVITY THROUGH THE AVAILABLE GRAVITATIONAL POINT OF CONNECTION. THE PUMPING EQUIPMENT SHALL INCLUDE A WET WELL, PUMPS AND MOTORS, PIPEWORK AND ELECTRICAL EQUIPMENT AND BE LOCATED TO FACILITATE EASY CONNECTION TO EITHER THE SURFACE WATER SYSTEM OR THE PUMPED POINT OF CONNECTION.

WET WELLS

GENERAL -
THE WET WELLS, FOR SUBMERSIBLE OR NON-SUBMERSIBLE TYPE PUMPS, SHALL BE INSTALLED IN ACCESSIBLE LOCATIONS.
CONSTRUCTION AND MATERIALS -
THE STRUCTURE SHALL BE SOUND AND CONSTRUCTED OF MATERIALS THAT WILL RESIST CORROSION FROM GROUND WATER AND AGGRESSIVE SOILS.
AUTHORIZED MATERIALS INCLUDE PRE-CAST OR CAST IN SITU REINFORCED CONCRETE, CORROSION-RESISTANT METALS, BRICKRWORK OR GLASS-REINFORCED PLASTICS.
BASE -
THE BASE SHALL BE CONSTRUCTED OF MATERIALS COMPATIBLE WITH THE WALLS AND SHALL MAINTAIN A SELF-CLEANSING GRADIENT TOWARDS THE PUMP INLET. THE BASE SHALL BE SUPPORTED ON STABLE GROUND.
COVER -
THE COVER SHALL BE CONSTRUCTED OF SIMILAR MATERIALS TO THAT OF THE WET WELL AND SHALL HAVE REMOVABLE ACCESS OPENINGS SIZED FOR MAINTENANCE PURPOSES. IF THE ACCESS OPENING IS AIRTIGHT, A BREATHER PIPE WITH A NON-CORRODIBLE SCREEN SHALL BE INSTALLED.
LADDERS -
WHERE A WET WELL EXCEEDS A DEPTH OF 1.2m A LADDER, IN ACCORDANCE WITH AS/NZ 3500 SHALL BE INSTALLED.
WET WELL STORAGE VOLUME -
THE REQUIRED WET WELL STORAGE SHALL NOT BE LESS THAN THE VOLUME OF THE RUN-OFF FROM THE STORM OF ARI = I00 YEARS AND DURATION OF 120 MINS.
THE MINIMUM WET WELL STORAGE BETWEEN THE HIGH AND LOW WORKING LEVELS EXPRESSED IN CUBIC METRES SHALL BE 1% OF THE CATCHMENT AREA IN m² BUT IN ANY CASE SHALL NOT BE LESS THAN 3m³.

ALARM

HIGH-LEVEL AND LOW LEVEL ALARMS SHALL BE INSTALLED IN EACH WET WELL AND LOCATED CLEAR OF THE DISCHARGE FROM THE INLET PIPE SO THAT FALSE ALARMS ARE PREVENTED. THE HIGH LEVEL ALARM SHOULD BE SET NO HIGHER THAN 100MM ABOVE THE INVERT OF THE INLET PIPE, PROVIDED THAT FLOODING OF HABITABLE OR STORAGE AREAS AND VEHICLE GARAGES SHALL BE AVOIDED.

INLET

THE INVERT OF THE INLET PIPE TO THE WET WELL SHALL BE LOCATED AT LEAST 100 MM ABOVE THE LEVEL OF THE DESIGN TOP WATER LEVEL

SEALING

ALL PIPES OR APPARATUS PASSING THROUGH A WALL OR COVER OF A WET WELL SHALL BE SEALED WITH A COMPATIBLE MATERIAL.

PUMPS

THE MINIMUM PUMPING CAPACITY SHALL BE 10 L/S.
THE PUMPS SHALL BE SUITABLE FOR UNSCREENED STORMWATER AND SHALL BE INSTALLED AS FOLLOWS:
(A) PUMPS SHALL BE IN DUPLICATE. THE MAXIMUM CAPACITY OF EACH PUMP SHALL BE SELECTED SO THAT THE CAPACITY OF THE SYSTEM RECEIVING THE DISCHARGE IS NOT EXCEEDED. THE PUMP CONTROLS SHALL BE SET UP TO ENABLE ALTERNATE PUMP OPERATION AT EACH START. IN THE EVENT THAT A PUMP FAILS TO OPERATE WHEN THE WATER LEVEL IN THE WET WELL REACHES THE PUMP START, THE OTHER PUMP SHALL BE ACTIVATED AND A VISIBLE ALARM INITIATED. IN THE EVENT BOTH PUMPS FAIL TO OPERATE, AN AUDIBLE ALARM SHALL BE INITIATED.
(B) PUMPING EQUIPMENT SHALL BE SECURELY FIXED TO THE WET WELL USING CORROSION-RESISTANT FIXINGS.
(C) PUMPS SHALL BE FITTED WITH A GATE VALVE AND NON-RETURN VALVE ON THE DELIVERY SIDE OF EACH PUMP.
(D) PUMPS SHALL HAVE FLANGES OR UNIONS INSTALLED TO FACILITATE REMOVAL.
(E) PUMPS SHALL BE CONTROLLED SO AS TO LIMIT THE NUMBER OF STARTS PER HOUR TO WITHIN THE CAPACITY OF THE ELECTRICAL MOTORS AND EQUIPMENT, AND SHALL, AS FAR AS PRACTICABLE, EMPTY THE CONTENTS OF THE WET WELL AT EACH OPERATION. THE REQUIRED PUMPING RATE SHALL BE CALCULATED BASED ON AN ASSESSMENT OF THE EXPECTED INFLOW AND, WHERE APPROPRIATE, THE ALLOWABLE DISCHARGE RATE.

RISING MAINS

RISING MAINS SHALL COMPLY WITH THE RELEVANT SECTIONS OF AS/NZS 3500.1 AND AS/NZS 3500.3, AND CONNECT TO -
(A) A STORMWATER OR INLET PIT; OR
(B) DIRECT TO A STORMWATER DRAIN OR ON SITE DETENTION SYSTEM

ELECTRICAL CONNECTION

ALL ELECTRICAL MOTORS AND EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH AS/NZS 3000

WET WELL STORAGE CALC:

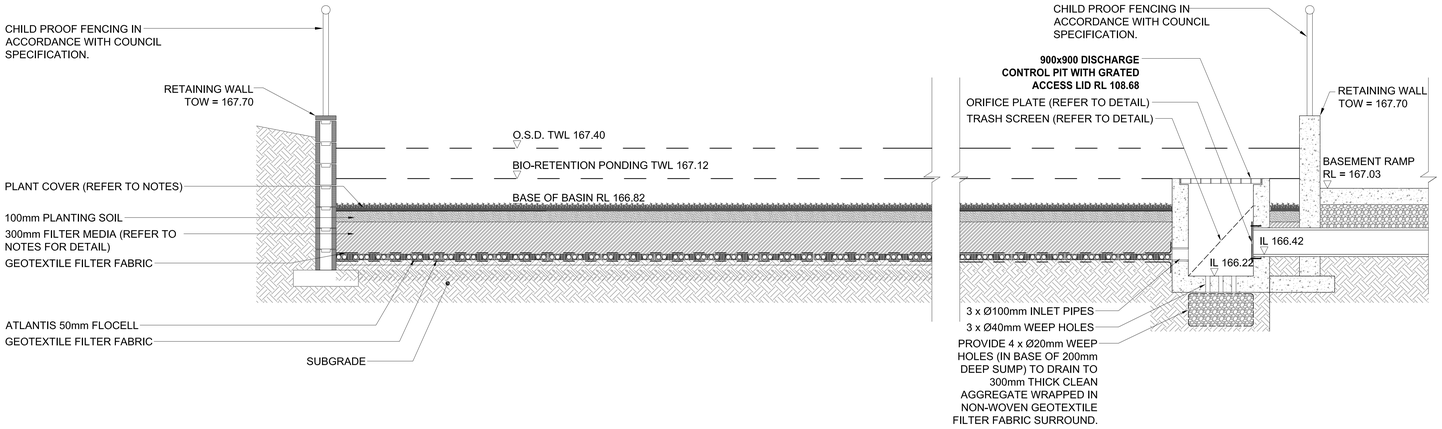
CONTRIBUTING AREA = 95m² = 0.0085 Ha
ARI = 100 yrs
STORM DURATION = 120 mins
RAINFAL INTENSITY = 62mm/hr

PEAK DISCHARGE CALCULATED BY RATIONAL METHOD
Q = C x I x A
Q = 1 x 0.0095 x 62/360
Q = 1.636 l/s

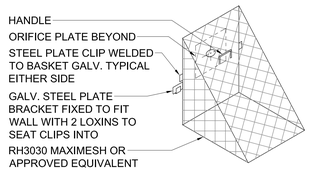
VOLUME FOR TWO HOURS
V = 1.636 x 2 x 3600/1000
V = 11.78m³ = MINIMUM WET WELL STORAGE CAPACITY VOLUME
VOLUME PROVIDED = 12.0m³

ISSUE	AMENDMENT	DRAWN	VER'D	APP'D	DATE
1	ISSUED FOR DA		GE	SF	19.04.11
2	REISSUED FOR DA		GE	SF	02.09.11

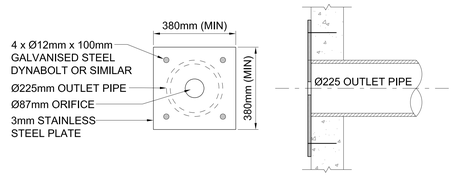
CLIENT: ic homes
ARCHITECT: MACKENZIE
SCALE 1:100 @ A0
NORTHROP — Bringing people, Ideas & engineering together
PROJECT: 2 - 8 GILROY ROAD TURRAMURRA
DRAWING TITLE: CONCEPT STORMWATER MANAGEMENT PLAN - BASEMENT LEVEL 2
JOB NUMBER: 11136
DRAWING NUMBER: DA3.04
REVISION: 2
DRAWING SHEET SIZE - A0



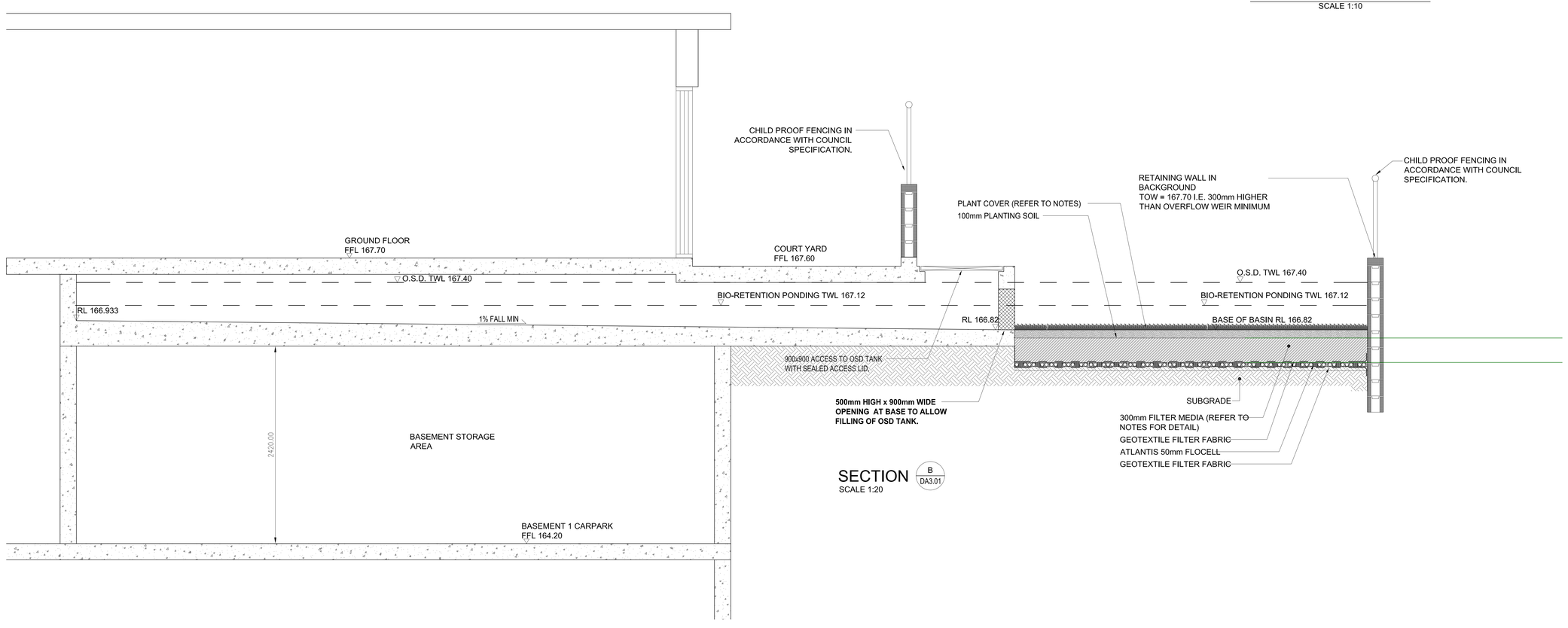
SECTION A DA3.01
SCALE 1:20



TRASH SCREEN DETAIL
NOT TO SCALE



ORIFICE PLATE DETAIL
SCALE 1:10



SECTION B DA3.01
SCALE 1:20

NOT FOR CONSTRUCTION

ISSUE	AMENDMENT	DRAWN	VER'D	APP'D	DATE
1	ISSUED FOR DA		GE	SF	19.04.11
2	REISSUED FOR DA		GE	SF	02.09.11

CLIENT: IG homes

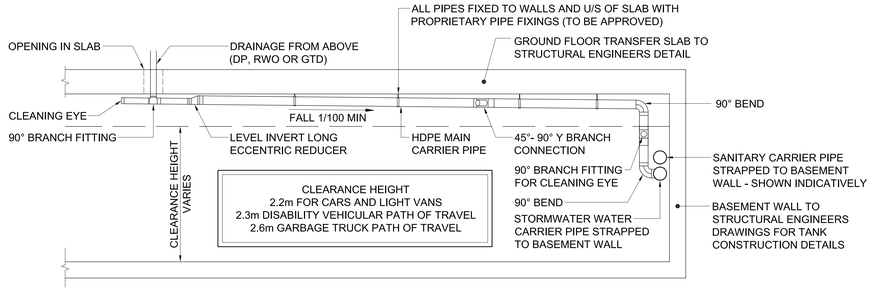
ARCHITECT: MACKENZIE

NORTHROP
Bringing people, ideas & engineering together
Sydney
The Grafton Bond Store
80 Hickson Road
Sydney, N.S.W. 2000
Ph: (02) 9241 4188
Fax: (02) 9241 4324
P.O. Box H179
Australia Square, N.S.W. 1215
Email: sydney@northrop.com.au
ABN 81 094 433 100

PROJECT: 2 - 8 GILROY ROAD TURRAMURRA

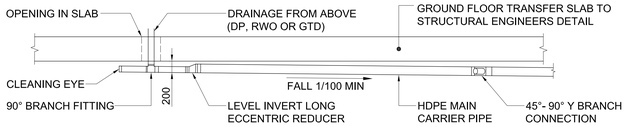
DRAWING TITLE: ON SITE DETENTION FACILITY DETAILED SECTIONS

JOB NUMBER: 11136
DRAWING NUMBER: DA3.11
REVISION: 2
DRAWING SHEET SIZE = A0



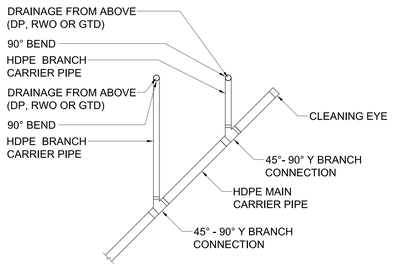
TYPICAL SECTION THROUGH BASEMENT SLUNG DRAINAGE

SCALE 1:40



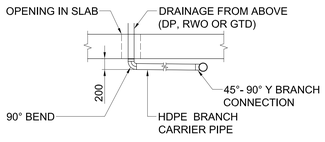
BASEMENT SLUNG DRAINAGE PIPE DETAILS TYPICAL DETAIL A

SCALE 1:40



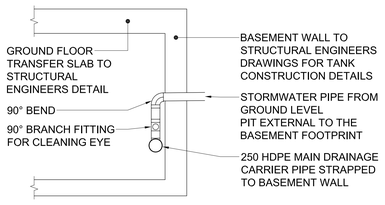
BASEMENT SLUNG DRAINAGE PIPE DETAILS TYPICAL DETAIL C

SCALE 1:40



BASEMENT SLUNG DRAINAGE PIPE DETAILS TYPICAL DETAIL B

SCALE 1:40



BASEMENT SLUNG DRAINAGE PIPE DETAILS TYPICAL DETAIL D

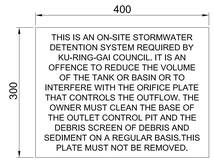
SCALE 1:40

COLOURS:	
'DANGER' AND BACKGROUND	WHITE
ELLIPTICAL AREA	RED
RECTANGLE CONTAINING ELIPSE	BLACK
OTHER LETTERING AND BORDER	BLACK

CONFINED SPACE WARNING

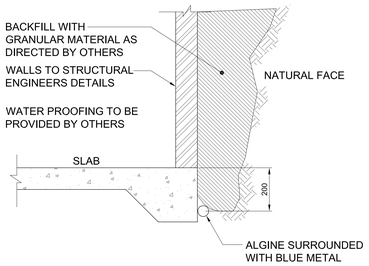
NOT TO SCALE

1. A CONFINED SPACE DANGER SIGN SHALL BE POSITIONED IN A LOCATION AT ALL ACCESS POINTS, SUCH THAT IT IS CLEARLY VISIBLE TO PERSONS PROPOSING TO ENTER THE BELOW GROUND TANK/S CONFINED SPACE.
2. MINIMUM DIMENSIONS OF THE SIGN
   - 300mm x 450mm (LARGE ENTRIES, SUCH AS DOOR)
   - 250mm x 180mm (SMALL ENTRIES SUCH AS GRATES MANHOLES)
3. THE SIGN SHALL BE MANUFACTURED FROM COLOUR BONDED ALUMINIUM OR POLYPROPYLENE.
4. SIGN SHALL BE AFFIXED USING SCREWS AT EACH CORNER OF THE SIGN.



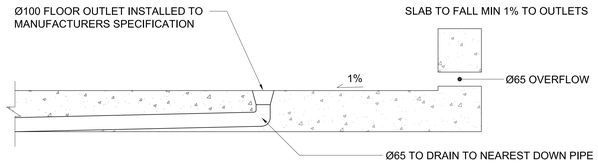
OSD WARNING SIGN

NOT TO SCALE



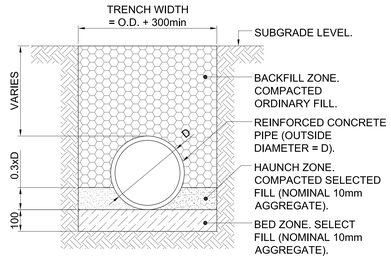
TYPICAL BASEMENT WALL DRAINAGE DETAIL WITH SPACE BEHIND THE WALL

NOT TO SCALE



BALCONY OUTLET DETAIL

SCALE 1:10

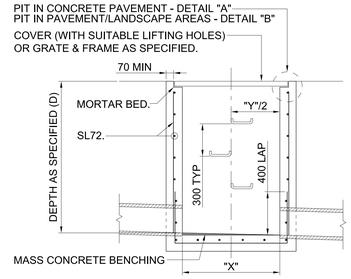


TYPICAL PIPE TRENCH

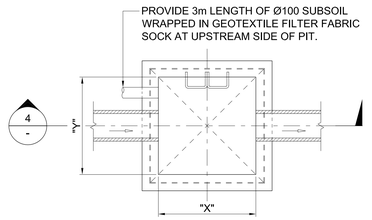
GENERAL AREAS

NOT TO SCALE

NOTES:
1. TRENCH WIDTH MAY NEED TO BE INCREASED SUBJECT TO ACHIEVING ADEQUATE COMPACTION.
2. MINIMUM PIPE COVER NOT UNDER ROADS = 300mm UNO.
3. THE CONTRACTOR SHALL ENSURE THAT THE SHOREING OF TRENCHES IS INSTALLED AS REQUIRED BY STATUTORY REQUIREMENTS.
4. ENSURE BACKFILLING OF TRENCHES NOT UNDER PAVEMENTS IS COMPACTED TO 90% SMDD.



SECTION 4/-



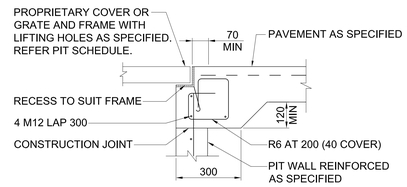
PLAN

PIT STRUCTURE TO BE 150 THICK UNLESS NOTED OTHERWISE.

SURFACE INLET / JUNCTION PIT

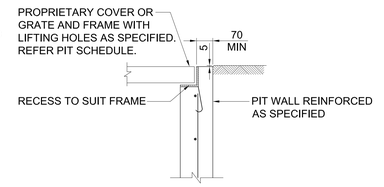
NOT TO SCALE

- PIT STRUCTURE TO BE 150 THICK UNLESS NOTED OTHERWISE.
- PROVIDE STEP IRONS IF PIT DEEPER THAN 900mm IN ACCORDANCE WITH AUSTRALIAN STANDARDS.
- INTERNAL DIMENSIONS AS SPECIFIED



DETAIL 'A'

SCALE 1:10



DETAIL 'B'

SCALE 1:10

NOTES: JUNCTION PITS TYPE A

1. CONCRETE TO HAVE A MINIMUM COMPRESSIVE STRENGTH OF 25mPA AT 28 DAYS
2. PIT STRUCTURE TO BE 150 THICK UNLESS NOTED OTHERWISE. INTERNAL DIMENSIONS AS SPECIFIED
3. TOP OF BENCHING TO BE 1/3 OF OUTLET PIPE DIAMETER
4. PROVIDE 3m LENGTH OF 100mmØ SUBSOIL DRAINAGE PIPE WRAPPED IN FABRIC SOCK ADJACENT TO TO INLET PIPE INVERT AND DRAINING TO PIT
5. ALL COVERS AND GRATES TO BE HOP DIPPED GALVANISED
6. FOR GRATES PROVIDE WELDLOCK HOP DIPPED HINGED PIT GRATES HPG6060B OR HPG9090B OR APPROVED EQUIVALENT.
7. ALL GRATES TO BE PROVIDED WITH LOCKING CLIP
8. ALL PITS GREATER THAN 0.9m (FROM GRATE TO INVERT) TO BE PROVIDED WITH STEP IRONS
9. PROVIDE ONE CENTRAL LAYER OF SL82 MESH TO FLOOR AND WALLS FOR FULL DEPTH FOR PIT DEPTHS GREATER THAN 1.5m.

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CLIENT: ic homes

ARCHITECT: MACKENZIE

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The Grafton Bond Store
60 Hickson Road,
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Ph: (02) 9241 4188
Fax (02) 9241 4324
P.O. Box H271
Australia Square, N.S.W. 1215
Email: sydney@northrop.com.au
ABN 81 094 433 100
Sydney

PROJECT: 2 - 8 GILROY ROAD TURRAMURRA

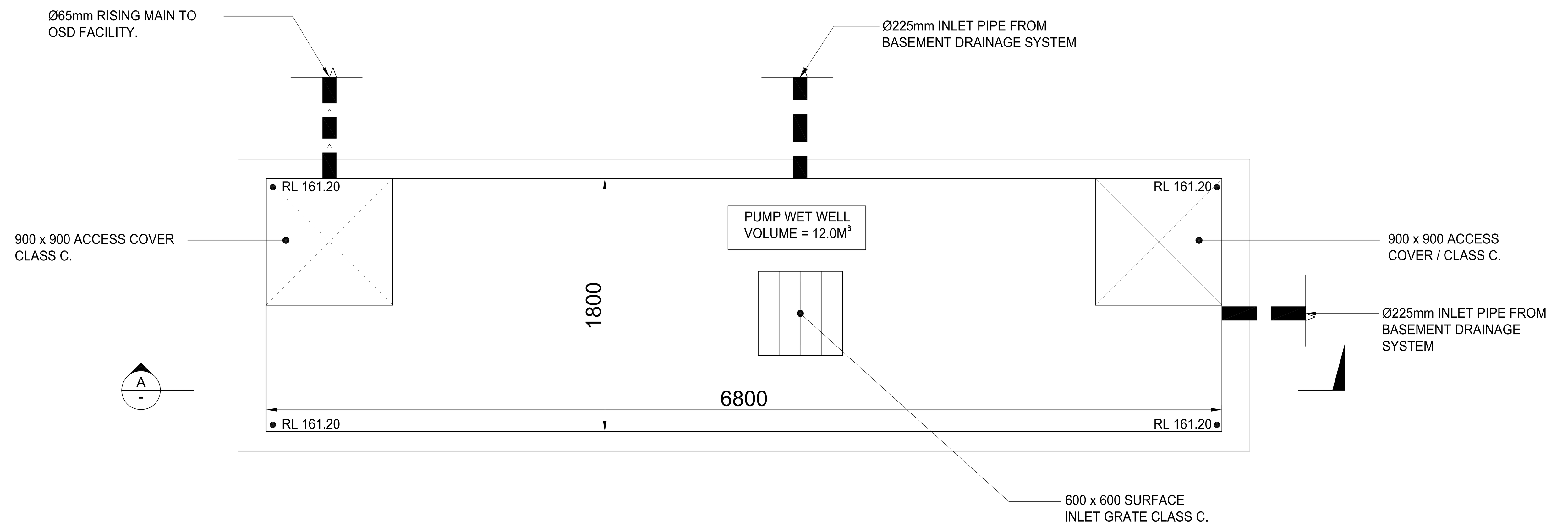
DRAWING TITLE: STORMWATER DETAILS - SHEET 1

JOB NUMBER: 11136

DRAWING NUMBER: DA4.01

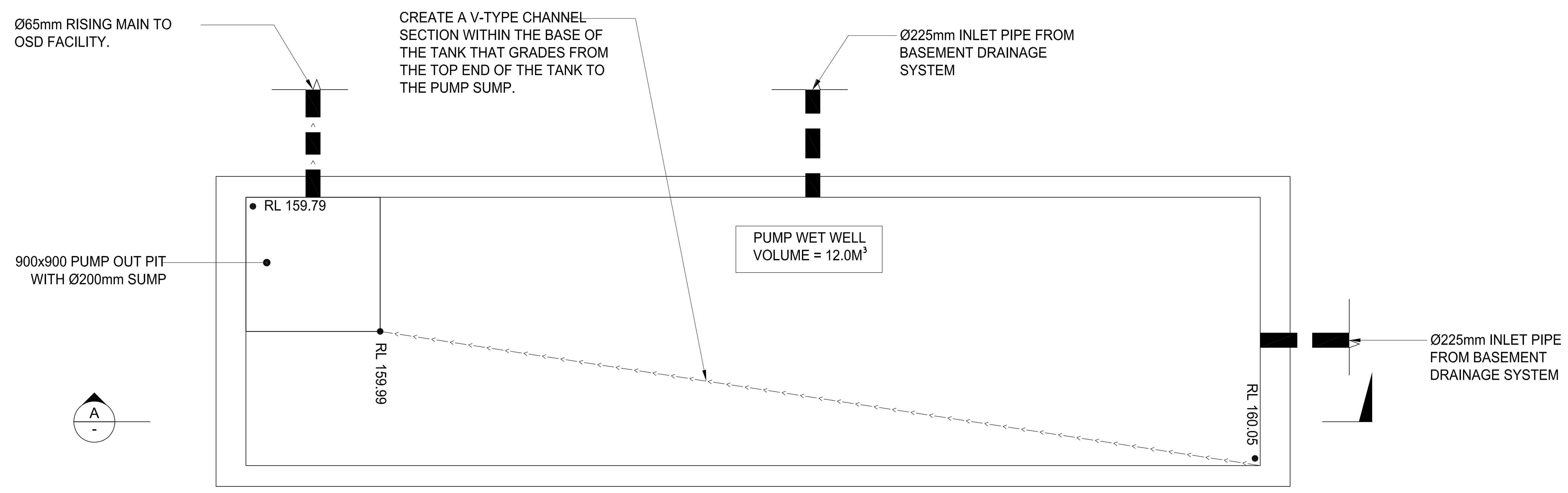
REVISION: 2

DRAWING SHEET SIZE = A0



BASEMENT PUMPING SYSTEM PLAN

SCALE 1:25



BASEMENT PUMPING SYSTEM ROOF

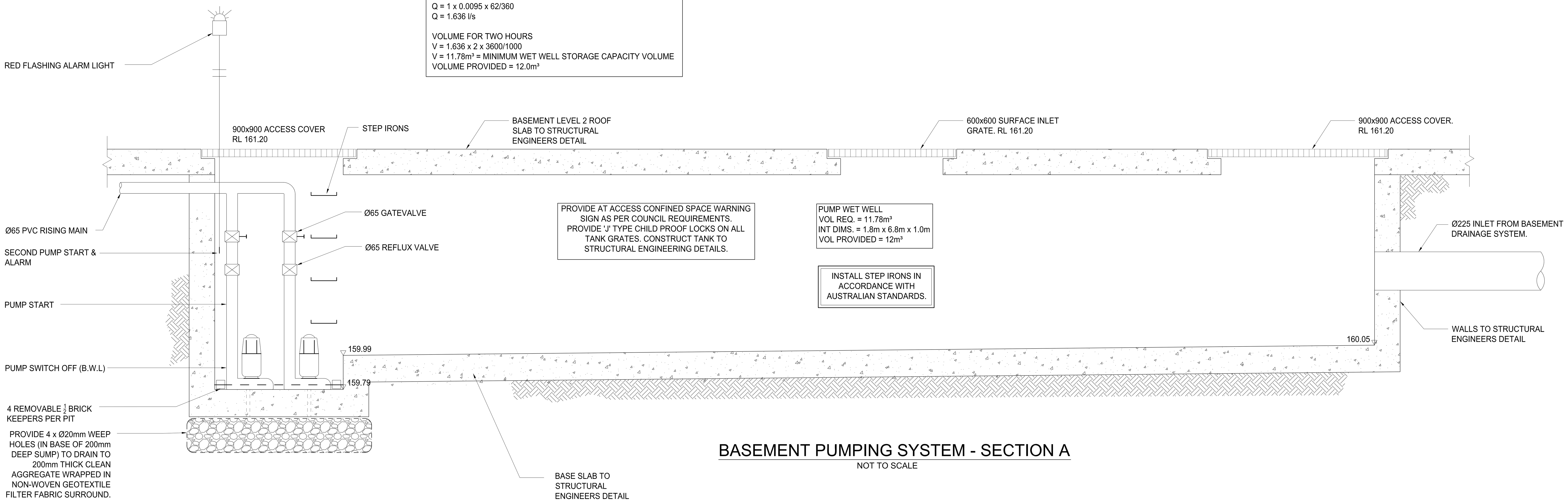
SCALE 1:25

WET WELL STORAGE CALC:

CONTRIBUTING AREA = 95m² = 0.0085 Ha
ARI = 100 yrs
STORM DURATION = 120 mins
RAINFAL INTENSITY = 62mm/hr

PEAK DISCHARGE CALCULATED BY RATIONAL METHOD
Q = C x I x A
Q = 1 x 0.0095 x 62/360
Q = 1.636 l/s

VOLUME FOR TWO HOURS
V = 1.636 x 2 x 3600/1000
V = 11.78m³ = MINIMUM WET WELL STORAGE CAPACITY VOLUME
VOLUME PROVIDED = 12.0m³



BASEMENT PUMPING SYSTEM - SECTION A

NOT TO SCALE

NOT FOR CONSTRUCTION

ISSUE	AMENDMENT	DRAWN	VER'D	APP'D	DATE
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60 Hickson Road,
Sydney, N.S.W. 2000
Ph (02) 9241 4188
Fax (02) 9241 4324
P.O. Box H171
Australia Square, N.S.W. 1215
Email sydney@northrop.com.au ABN 81 094 433 100
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Sydney

PROJECT: 2 - 8 GILROY ROAD TURRAMURRA

DRAWING TITLE: STORMWATER DETAILS - SHEET 2

JOB NUMBER: 11136

DRAWING NUMBER: DA4.02

REVISION: 2

DRAWING SHEET SIZE = A0