

51 ARTHUR STREET, FORESTVILLE

PROPOSED MIXED USE DEVELOPMENT

STORMWATER CONCEPT PLANS



LOCALITY PLAN
N.T.S

DRAWING INDEX	
Drawing No.	DESCRIPTION
000	COVER SHEET PLAN
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103	STORMWATER CONCEPT PLAN GROUND LEVEL
104	OSD & WSUD DETAILS AND CALCULATION SHEETS
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NOT FOR CONSTRUCTION

B	ARCHITECTURAL AMENDMENTS	02/10/2020	EHZ	JSF
A	ISSUE FOR DEVELOPMENT APPLICATION	31/08/2020	EHZ	JSF
Issue	Description	Date	Design	Checked
1:100m at full size				

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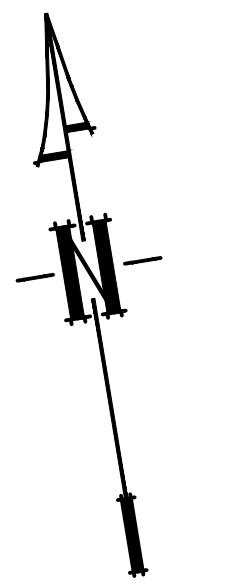
Client
Gabrielian Holdings Pty. Ltd
Council
Northern Beaches City Council

Scale

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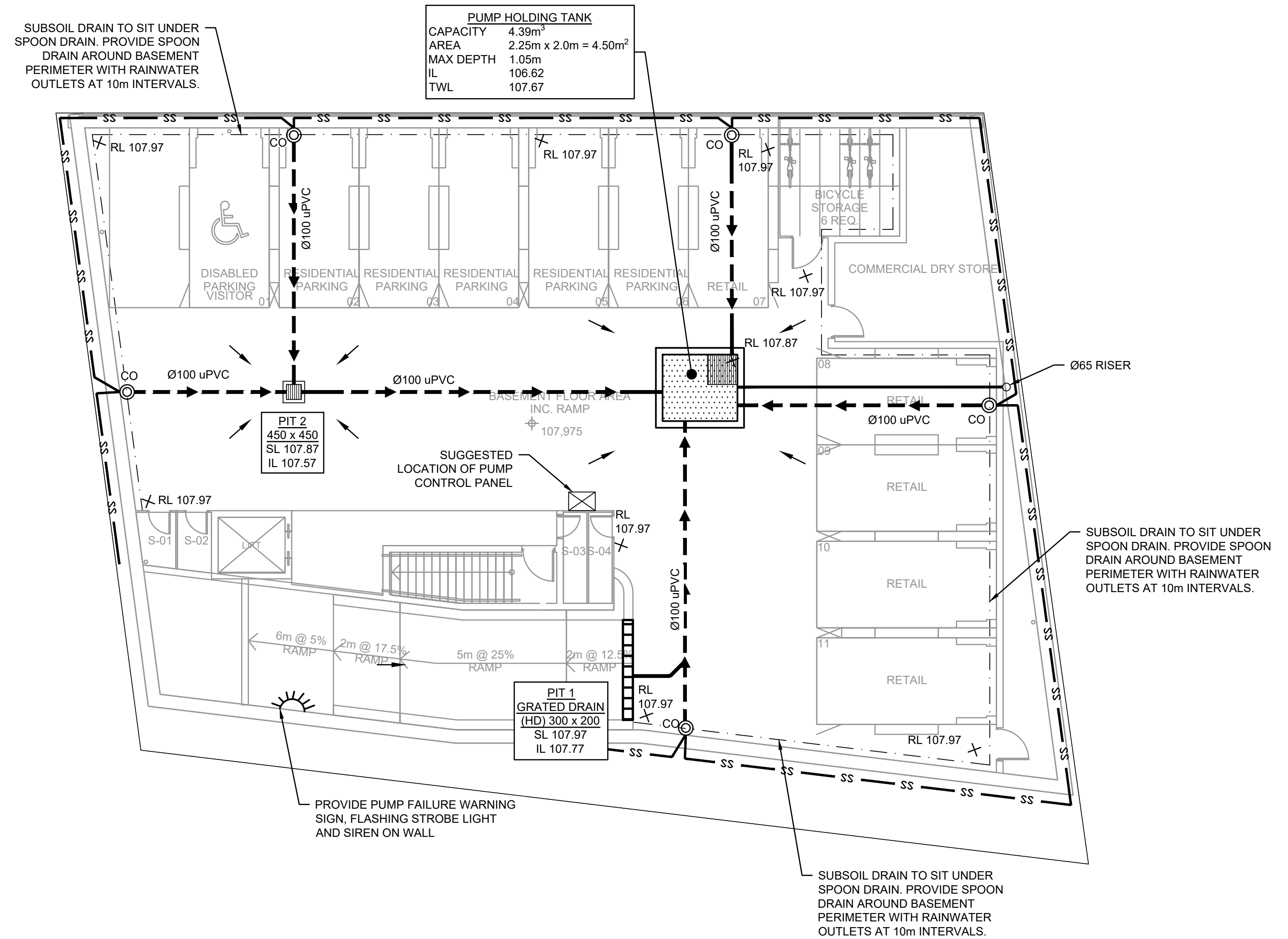
Project
51 ARTHUR STREET, FORESTVILLE
PROPOSED MIXED USE DEVELOPMENT
STORMWATER CONCEPT PLANS
DEVELOPMENT APPLICATION

Drawing Title COVER SHEET PLAN				
Scale N.T.S.	A1	Project No. 200706	Dwg. No. 000	Issue B



STREET

ARTHUR



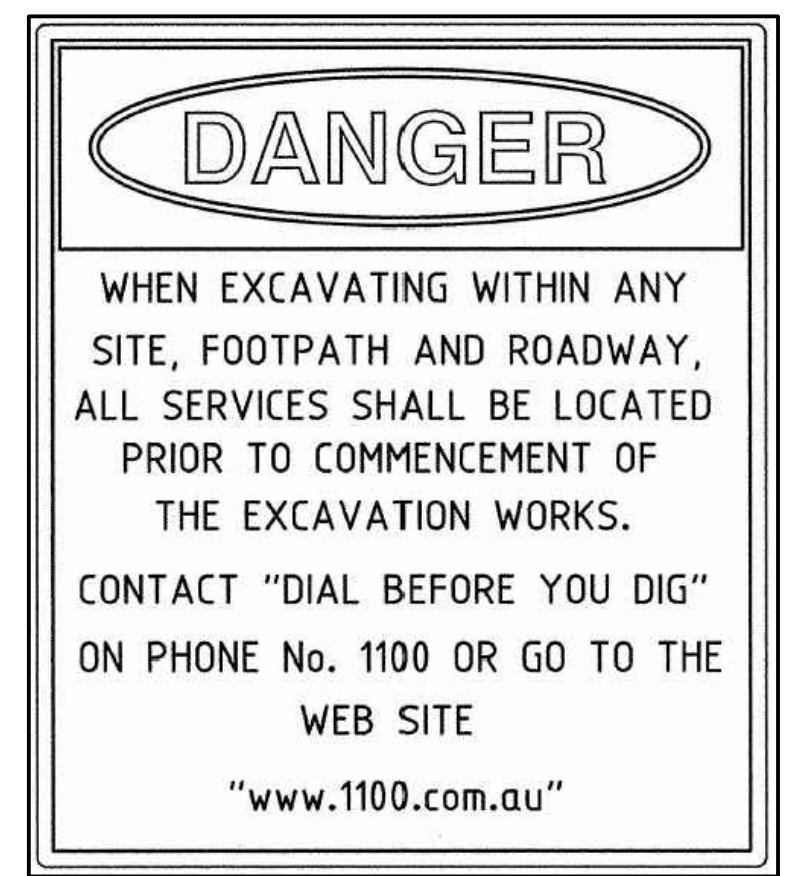
BASEMENT PLAN
SCALE 1:100

LEGEND

- PROPOSED STORMWATER
- SURFACE FLOW ARROWS
- SUBSOIL DRAINAGE
- CLEANING EYE (OR INSPECTION EYE)
- PROPOSED STORAGE AREA
- FINISHED SURFACE LEVEL
- GRADED DRAIN

STANDARD PUMP OUT DESIGN NOTES



- THE PUMP OUT SYSTEM SHALL BE DESIGN TO BE OPERATED IN THE FOLLOWING MANNER:
- 1 - THE PUMP SHALL BE PROGRAMMED TO WORK ALTERNATELY TO ALLOW BOTH PUMPS TO HAVE AN EQUAL OPERATION LOAD AND PUMP LIFE.
 - 2 - A FLOAT SHALL BE PROVIDED TO ENSURE OF THE MINIMUM REQUIRED WATER LEVEL IS MAINTAINED WITHIN THE SUMP AREA OF THE BELOW GROUND TANK. IN THIS REGARD THIS FLOAT WILL FUNCTION AS AN OFF SWITCH FOR THE PUMPS AT THE MINIMUM WATER LEVEL. THE SAME FLOAT SHALL BE SET TO TURN ONE OF THE PUMPS ON UPON THE WATER LEVEL IN THE TANK RISING TO APPROXIMATELY 300mm ABOVE THE MINIMUM WATER LEVEL. THE PUMP SHALL OPERATE UNTIL THE TANK IS DRAINED TO THE MINIMUM WATER LEVEL.
 - 3 - A SECOND FLOAT SHALL BE PROVIDE AT A HIGH LEVEL, WHICH IS APPROXIMATELY THE ROOF LEVEL OF THE BELOW GROUND TANK. THIS FLOAT SHALL START THE OTHER PUMP THAT IS NOT OPERATING AND ACTIVATE THE ALARM.
 - 4 - AN ALARM SYSTEM SHALL BE PROVIDE WITH A FLASHING STROBE LIGHT AND A PUMP FAILURE WARNING SIGN WHICH ARE TO BE LOCATED AT THE DRIVEWAY ENTRANCE TO THE BASEMENT LEVEL THE ALARM SYSTEM SHALL BE PROVIDED WITH A BATTERY BACK-UP IN CASE OF POWER FAILURE.
 - 5 - A CONFINED SPACE DANGER SIGN SHALL BE PROVIDED AT ALL ACCESS POINT TO THE PUMP-OUT STORAGE TANK IN ACCORDANCE WITH THE UPPER PARRAMATA RIVER CATCHMENT TRUST OSD HANDBOOK.



CONFINED SPACE DANGER SIGN

- A) 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.
- B) MINIMUM DIMENSIONS OF THE SIGN - 300mm x 450mm (LARGE ENTRIES, SUCH AS DOORS) -250mm x 180mm (SMALL ENTRIES SUCH AS GRATES & MANHOLES)
- C) THE SIGN SHALL BE MANUFACTURED FROM COLOUR BONDED ALUMINUM OR POLYPROPYLENE
- D) SIGN SHALL BE AFFIXED USING SCREWS AT EACH CORNER OF THE SIGN
- COLOURS:
"DANGER" & BACKGROUND = WHITE
ELLIPTICAL AREA = RED
RECTANGLE CONTAINING ELLIPSE = BLACK
BORDER AND OTHER LETTERING = BLACK

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						Ramsay Architects	Gabrielian Holdings Pty. Ltd						
						Sydney Auckland	Council						
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GENERAL NOTES

- ALL THE CLEANING EYES (OR INSPECTION EYES) FOR THE UNDERGROUND PIPES HAVE TO BE TAKEN UP TO THE FINISHED GROUND LEVEL FOR EASY IDENTIFICATION AND MAINTENANCE PURPOSES
- ALL LEVELS SHALL RELATE TO THE ESTABLISHED BENCH MARK.
- THE BUILDER SHALL ENSURE THAT THE STORMWATER ENGINEERS DRAWINGS CORRESPOND TO THE ARCHITECTURAL, STRUCTURAL AND LANDSCAPING DRAWINGS. IF THERE EXISTS AND DISCREPANCIES BETWEEN THE DRAWINGS, THE BUILDER SHALL REPORT THE DISCREPANCIES TO THE ENGINEER PRIOR TO COMMENCEMENT OF ANY WORKS
- ALL MULCHING TO BE USED WITHIN THE AREA DESIGNATED AS ONS-SITE DETENTION STORAGE SHALL BE OF A NON-FLOATABLE MATERIAL SUCH AS DECORATIVE RIVER GRAVEL. PINE BARK MULCHING SHALL NOT BE USED WITHIN THE DETENTION STORAGE AREA.
- ALL RETAINING WALLS SHALL BE CONSTRUCTED COMPLETELY WITHIN THE PROPERTY BOUNDARY LIMITS TO DETAILS PREPARED BY THE STRUCTURAL ENGINEER. WALLS FORMING THE ON-SITE DETENTION SYSTEM SHALL BE OF MASONRY/BRICK CONSTRUCTION AND WATER TIGHT.
- ALL SUB-SOIL DRAINAGE SHALL BE A MINIMUM OF 65MM DIA AND SHALL BE PROVIDED WITH A FILTER SOCK. THE SUBSOIL DRAINAGE SHALL BE INSTALLED IN ACCORDANCE WITH DETAILS TO BE PROVIDED BY THE LANDSCAPE ARCHITECT.
- PRIOR TO COMMENCING ANY WORKS, THE BUILDER SHALL ENSURE THAT THE INVERT LEVELS OF WHERE THE SITE STORMWATER SYSTEM CONNECTS INTO THE COUNCIL'S KERB/DRAINAGE SYSTEM MATCHED THE DESIGN LEVELS. ANY DISCREPANCIES SHALL BE REPORTED TO THE DESIGN ENGINEER IMMEDIATELY.
- ALL LINES ARE TO BE Ø90 uPVC 1.0% GRADE UNLESS NOTED OTHERWISE. CHARGED LINES TO BE SEWERGRADE & SEALED.
- EXISTING SERVICES LOCATIONS SHOWN INDICATIVE ONLY.
- IT IS THE CONTRACTORS RESPONSIBILITY TO LOCATE & LEVEL ALL EXISTING SERVICES PRIOR TO THE COMMENCEMENT OF ANY EARTHWORKS.
- ALL PIPES TO HAVE MIN 150mm COVER IF LOCATED WITHIN PROPERTY.
- ALL PITS IN DRIVEWAYS TO BE 450x450 CONCRETE AND ALL PITS IN LANDSCAPED AREAS TO BE 450x450PLASTIC.
- PITS LESS THAN 450 DEEP MAY BE BRICK, PRECAST OR CONCRETE.
- ALL BALCONIES AND ROOFS TO BE DRAINED AND TO HAVE SAFETY OVERFLOWS IN ACCORDANCE WITH RELEVANT AUSTRALIAN STANDARDS.
- ALL EXTERNAL SLABS TO BE WATERPROOFED.
- ALL GRATES TO HAVE CHILD PROOF LOCKS.
- ALL DRAINAGE WORKS TO AVOID TREE ROOTS.
- ALL DP'S TO HAVE LEAF GUARDS.
- ALL EXISTING LEVELS TO BE CONFIRMED BY BUILDER PRIOR TO CONSTRUCTION.
- ALL WORK WITHIN COUNCIL RESERVE TO BE INSPECTED BY COUNCIL PRIOR TO CONSTRUCTION.
- COUNCIL'S ISSUED FOOTWAY DESIGN LEVELS TO BE INCORPORATED INTO THE FINISHED LEVELS ONCE ISSUED BY COUNCIL.
- ALL WORK SHALL BE IN ACCORDANCE WITH B.C.A. AND A.S.3500.3.
- REFER TO LANDSCAPE ARCHITECT'S DRAWINGS FOR LANDSCAPING.
- ALL WALLS FORMING THE DETENTION BASINS SHALL BE CONSTRUCTED WHOLLY WITHIN THE PROPERTY BOUNDARIES OF THE SITE BEING DEVELOPED.
- OSD WARNING SIGN AND SAFETY FENCING SHALL BE PROVIDED TO ABOVE GROUND OSD STORAGE AREA IN ACCORDANCE WITH COUNCIL'S REQUIREMENTS.
- ENSURE THAT NON FLOATABLE MULCH IS USED IN DETENTION BASINS, ie, USE DECORATIVE ROCK MULCH OR EQUIVALENT.
- THE OSD BASIN / TANK IS TO BE BUILT TO THE CORRECT LEVELS & SIZE AS PER THIS DESIGN. ANY VARIATIONS ARE TO BE DONE UNDER CONSULTATION FROM OUR OFFICE ONLY. ANY AMENDMENTS WITHOUT OUR APPROVAL WOULD RESULT IN ADDITIONAL FEES FOR REDESIGN AT OC STAGE OR IF A SOLUTION CANNOT BE FOUND, RECONSTRUCTION IS REQUIRED UNDER THE CONTRACTOR'S EXPENSES
- ALL PIPES IN BALCONIES TO BE Ø65 uPVC IN CONCRETE SLAB. CONTRACTOR TO PROVIDE A BREAK / OPEN VOID IN RAIL / BALLUSTRADE FOR STORMWATER EMERGENCY OVERFLOW. ALL ENCLOSED AREAS / PLANTER BOXES TO BE FITTED WITH FLOOR WASTES & DRAINED TO OSD. DOWNPIPES TO BE CHECKED BY ARCHITECT & PLUMBER PRIOR TO CONSTRUCTION.

LEGEND

- > [Symbol] PROPOSED STORMWATER
- S --- EXISTING SEWER MAIN (FROM RECORDS)
- W --- EXISTING WATER (FROM RECORDS)
- E --- EXISTING POWER (FROM RECORDS)
- T --- EXISTING TELSTRA (FROM RECORDS)
- DP GUTTER DOWNPIPE
- U DP DOWNPIPE WITH VERTICAL BEND
- DP1 150 DOWNPIPE NUMBER AND SIZE
- ROOF SLOPE
- SURFACE FLOW ARROWS
- X RL 47.00 DESIGN SURFACE LEVEL
- X S 26.45 EXISTING SURFACE LEVEL
- [Symbol] Ø65 RISER WITH NON-RETURN VALVE

PIPES NOTE:

Ø65 PVC @ MIN 1.0%
Ø90 PVC @ MIN 1.0%
Ø100 PVC @ MIN 1.0%
Ø150 PVC @ MIN 1.0%
Ø225 PVC @ MIN 0.5%
Ø300 PVC @ MIN 0.4%
UNLESS NOTED OTHERWISE

ROOF NOTE:

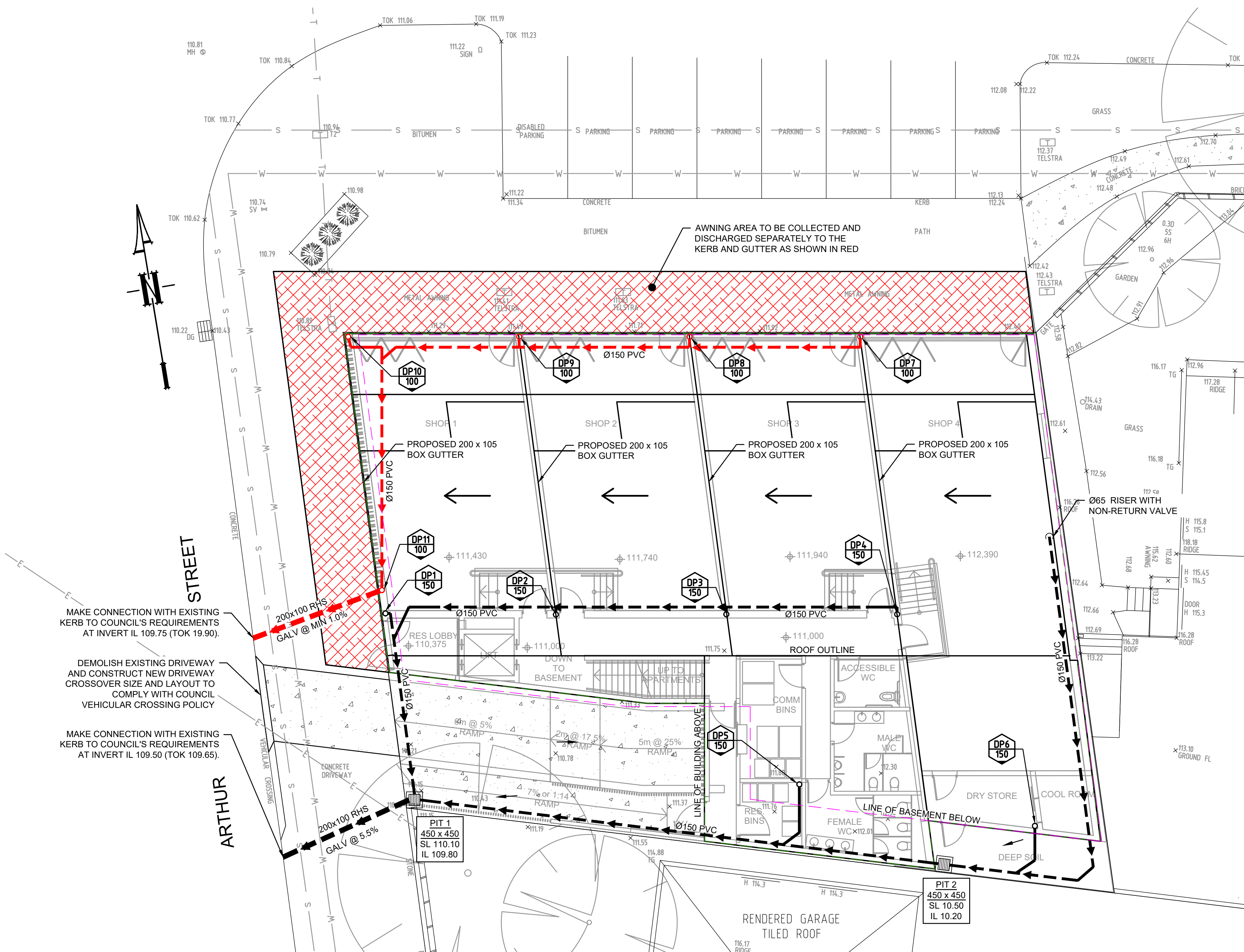
ALL ROOF DRAINAGE SYSTEM TO BE IN ACCORDANCE WITH BASIX REPORT & IS SUBJECT TO DETAILED DESIGN STAGE.

ROOF NOTE:

IT IS CONTRACTOR'S RESPONSIBILITY TO ENSURE MINIMUM 30 TO 40MM OF PONDING IS ACHIEVED OVER THE RAINWATER OUTLETS BY GRADING CATCHMENTS' SURFACES AT MINIMUM 0.5% FALL FOR PAVED SURFACES AND MINIMUM 1% FALL FOR OTHER SURFACES.

	Number Req'd	Number Used	Gutter Area?	Gutter Width	Gutter Depth?
90 Dia:	2.56	3	7684	120	65
100 Dia:	2.02	3	7684	120	65
150 Dia:	0.81	1	20628	200	105
225 Dia:	0.32	1	20628	200	105
300 Dia:	0.17	1	20628	200	105

BOX GUTTER CALCULATION



GROUND FLOOR PLAN

SCALE 1:100

THIS JOB IS EXEMPT FROM ON SITE DETENTION DESIGN SINCE ACCORDING TO "WARRINGAH LOCAL ENVIRONMENTAL PLAN 2000", PART 4, DIVISION 6, CLAUSE 76, IT CAN BE DEMONSTRATED THAT:

- THE ADDITIONAL IMPERVIOUS SURFACE RESULTING FROM THE DEVELOPMENT WILL NOT EXCEED 50m² IN AREA AND
- THE ADDITIONAL RUNOFF CREAED BY THE DEVELOPMENT WILL NOT ADVERSELY AFFECT ANY NATURAL OR CONSTRUCTED DRAINAGE SYSTEM EITHER DOWNSTREAM OR UPSTREAM OF THE DEVELOPMENT SITE.

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Scale
0 2 4 6m
SCALE 1:100 @ A1

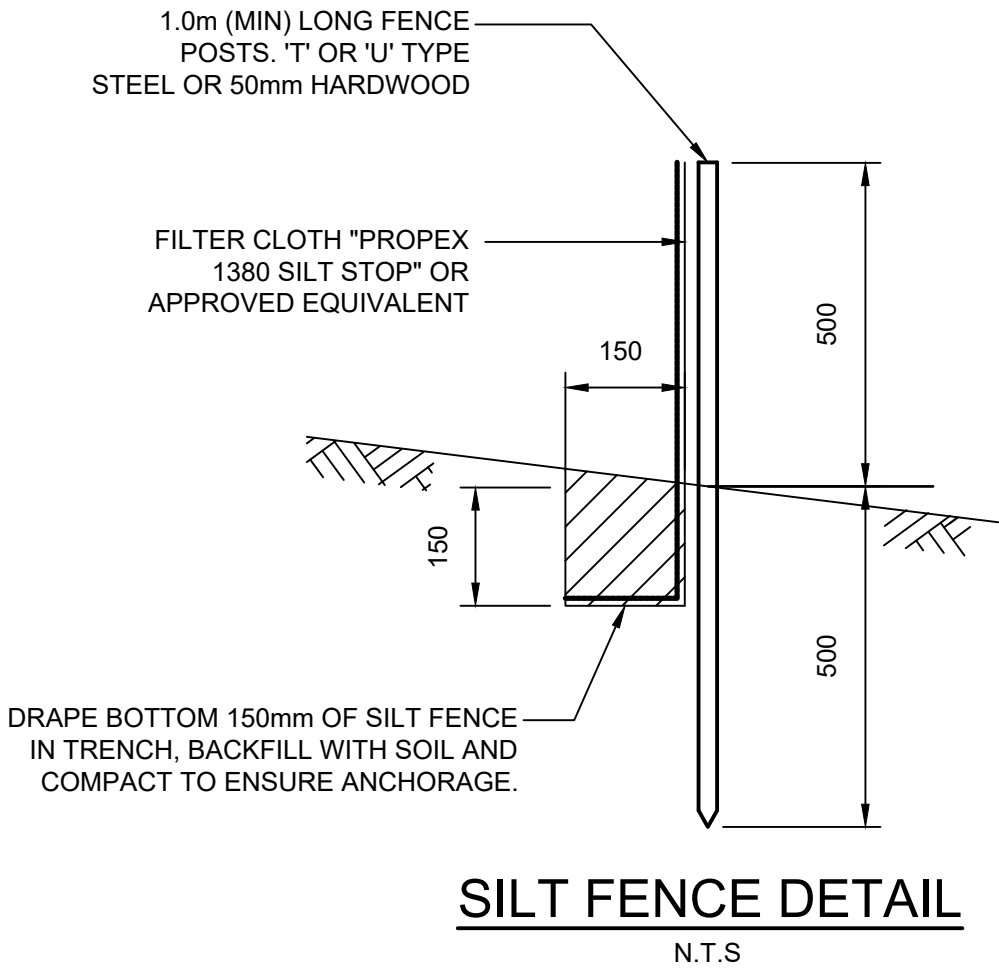
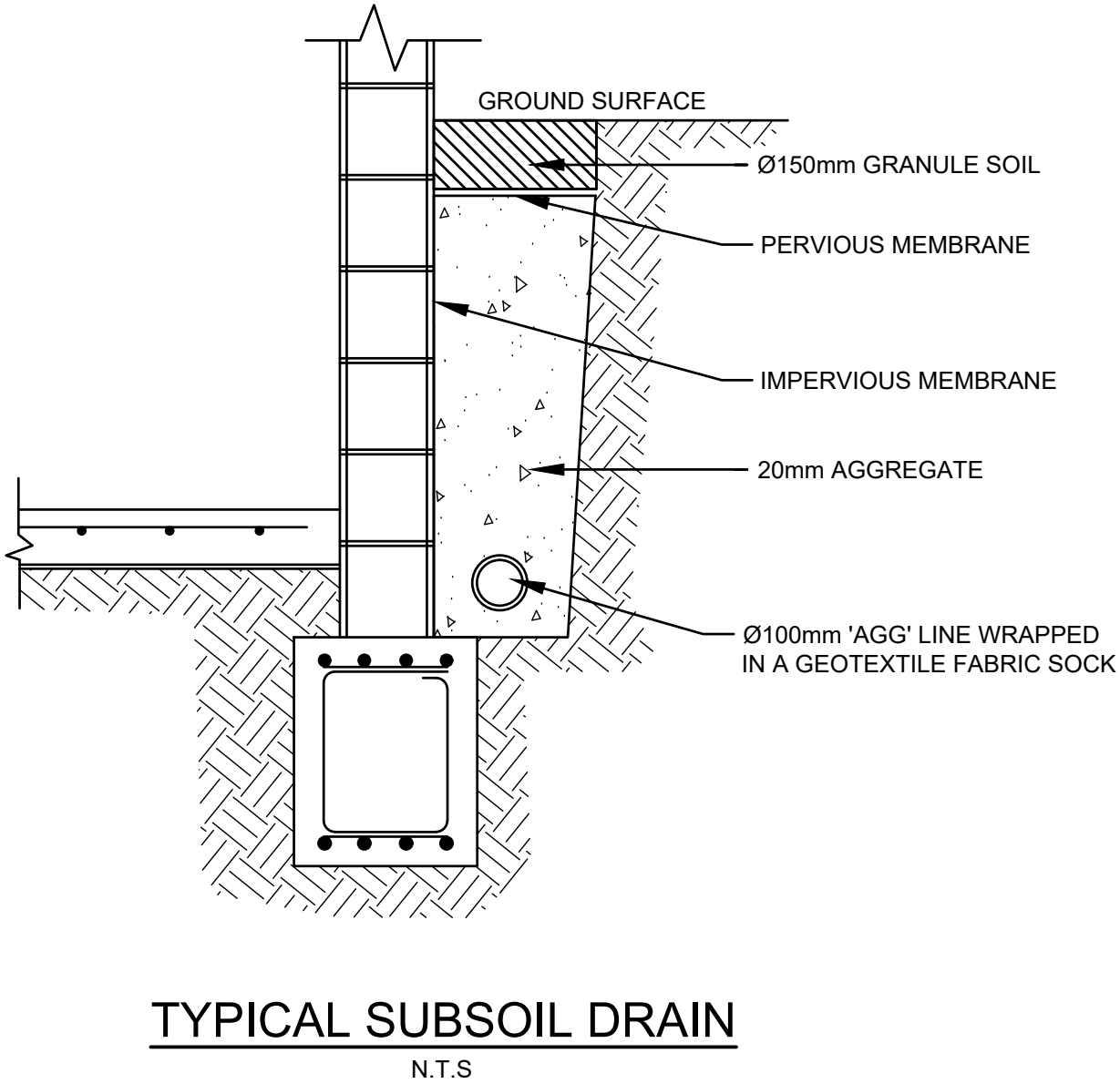
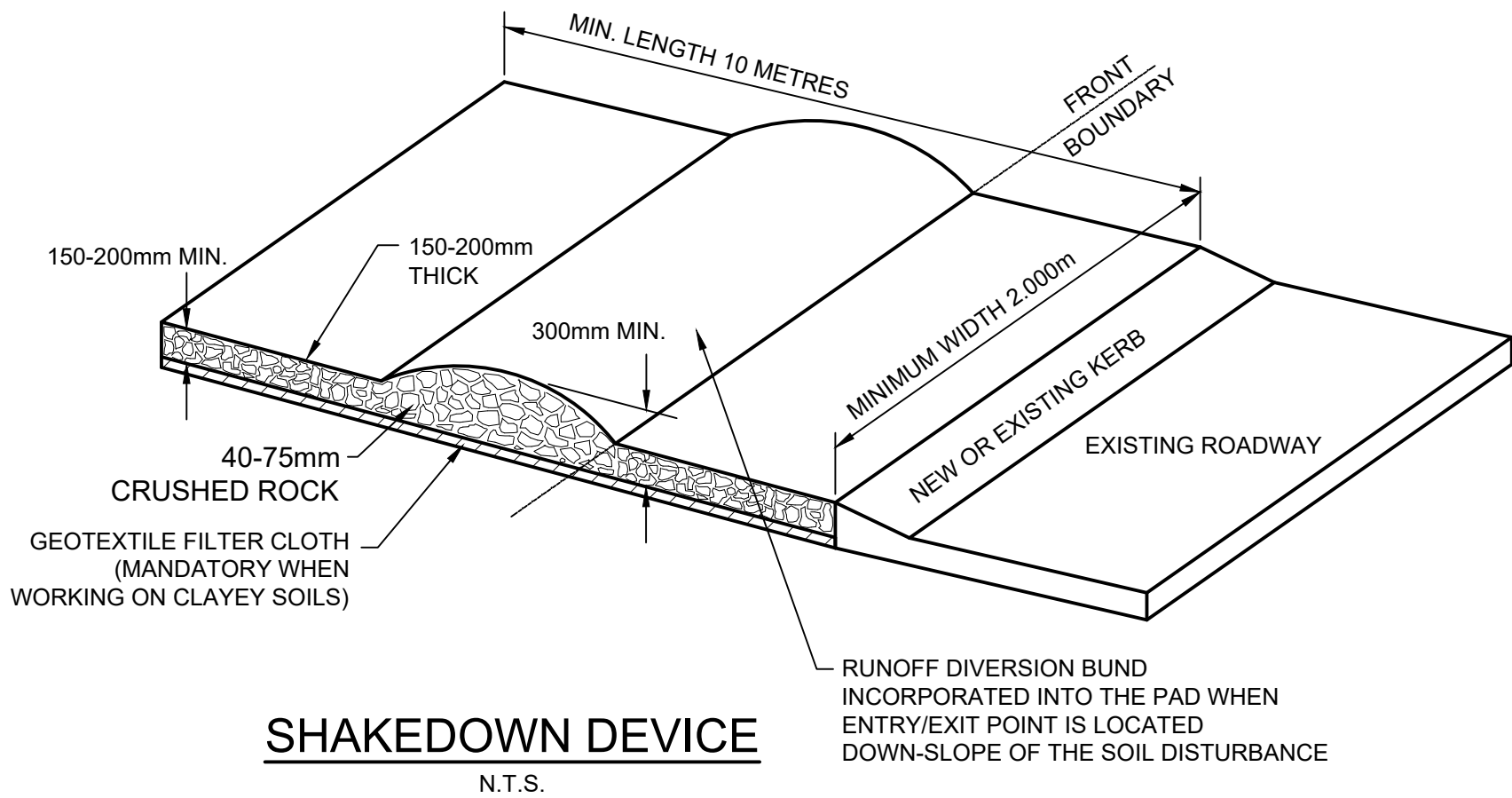
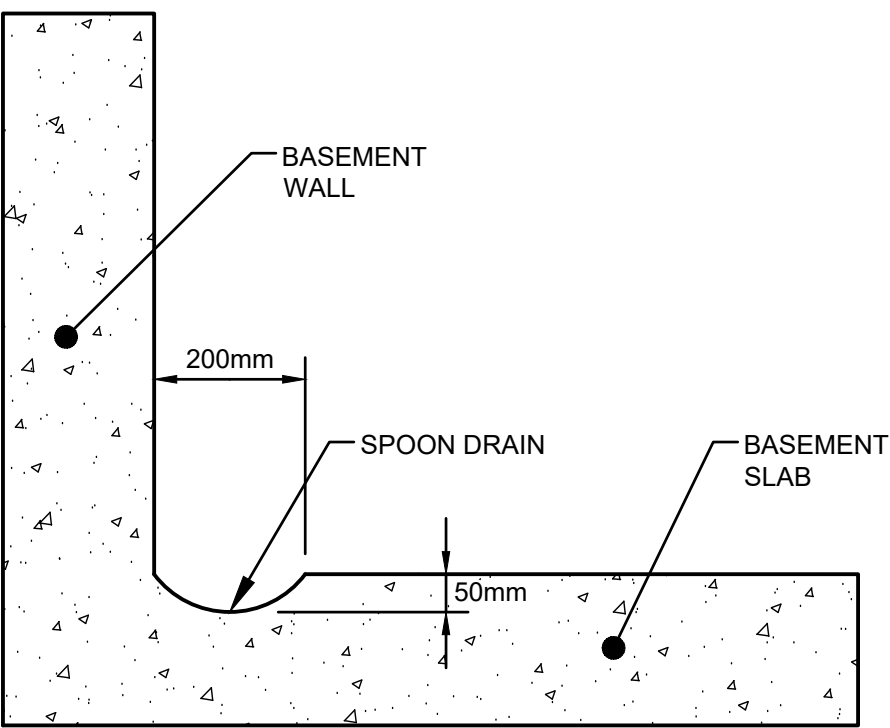
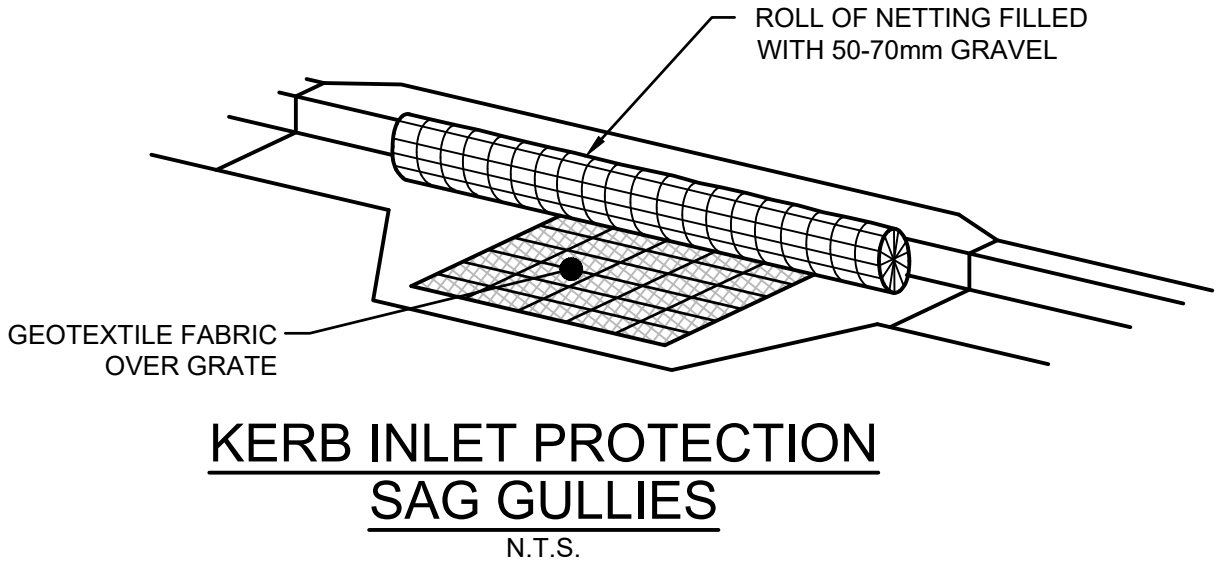
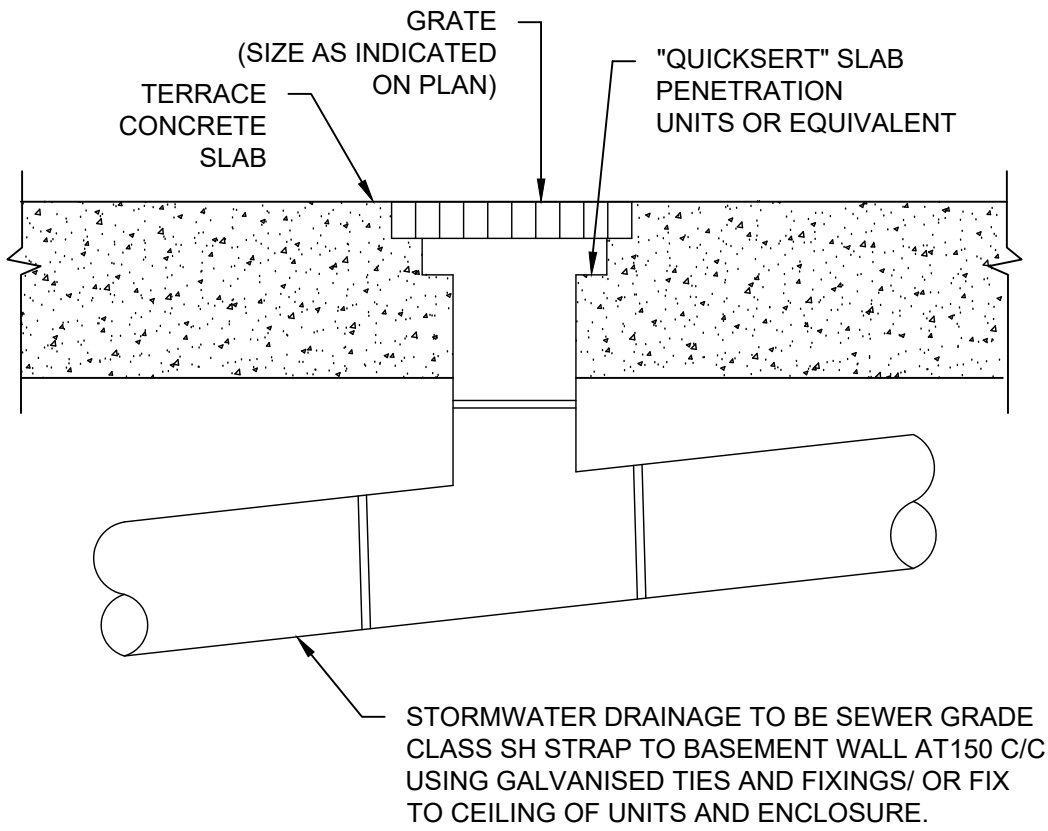
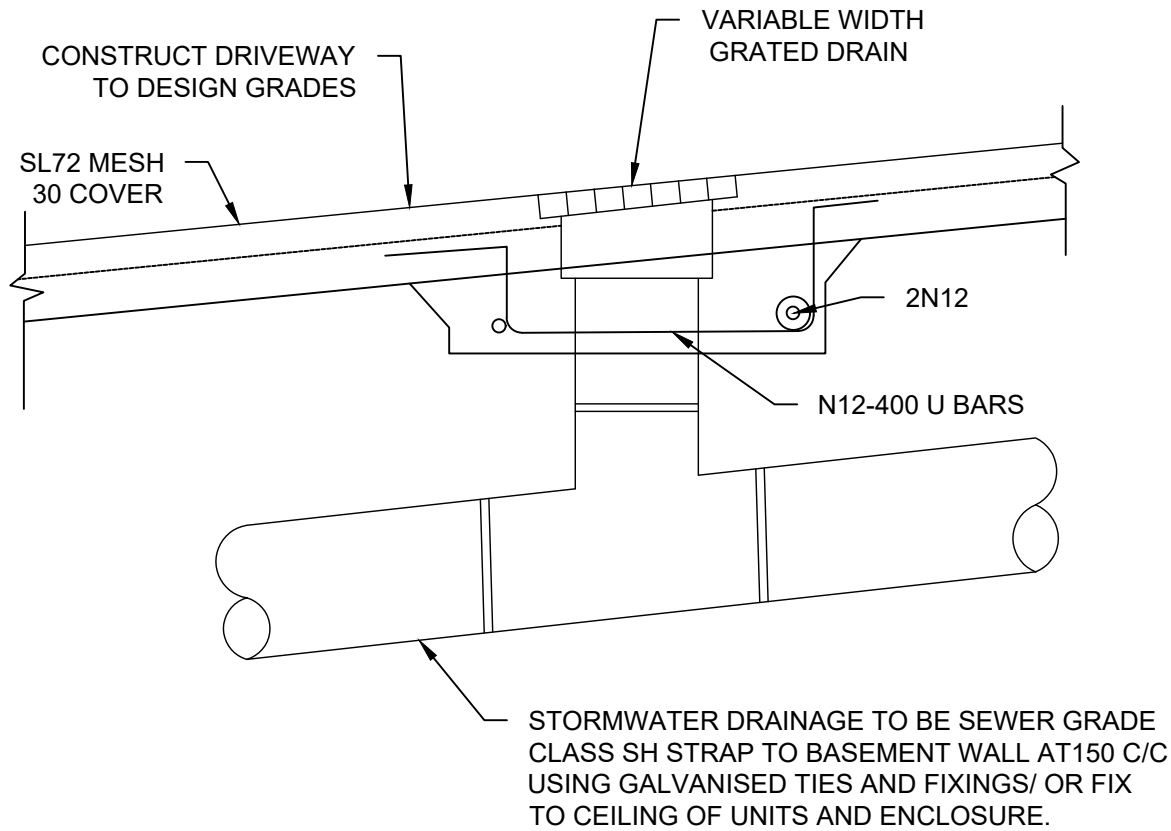
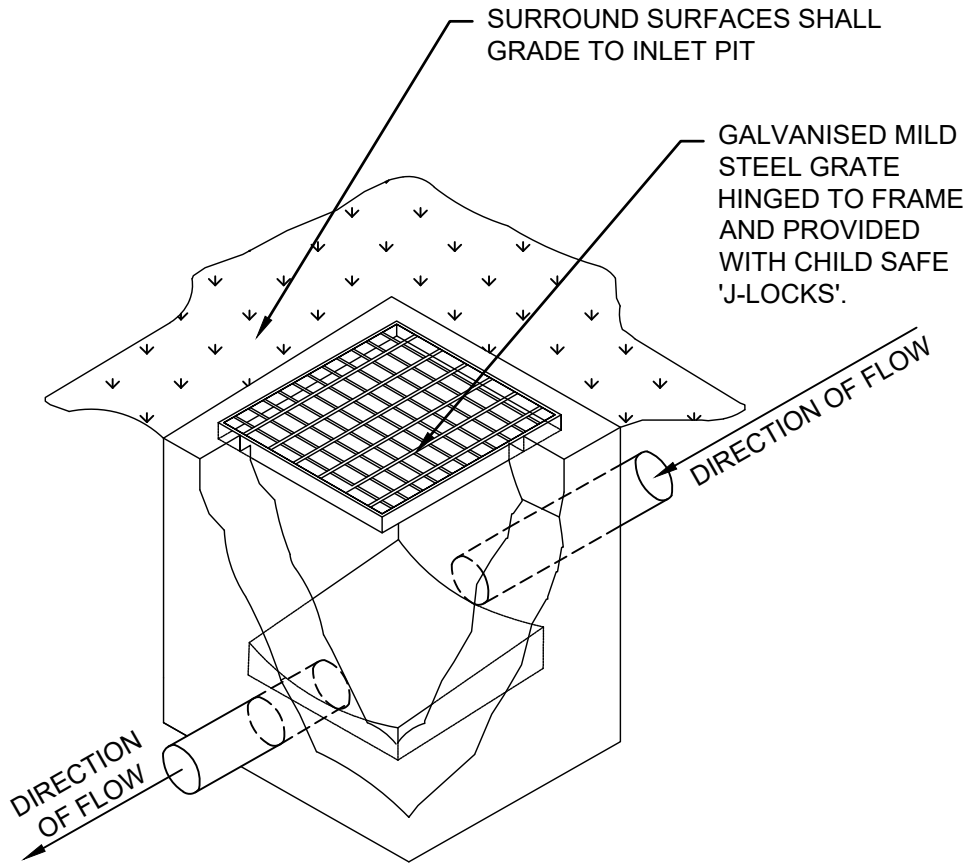
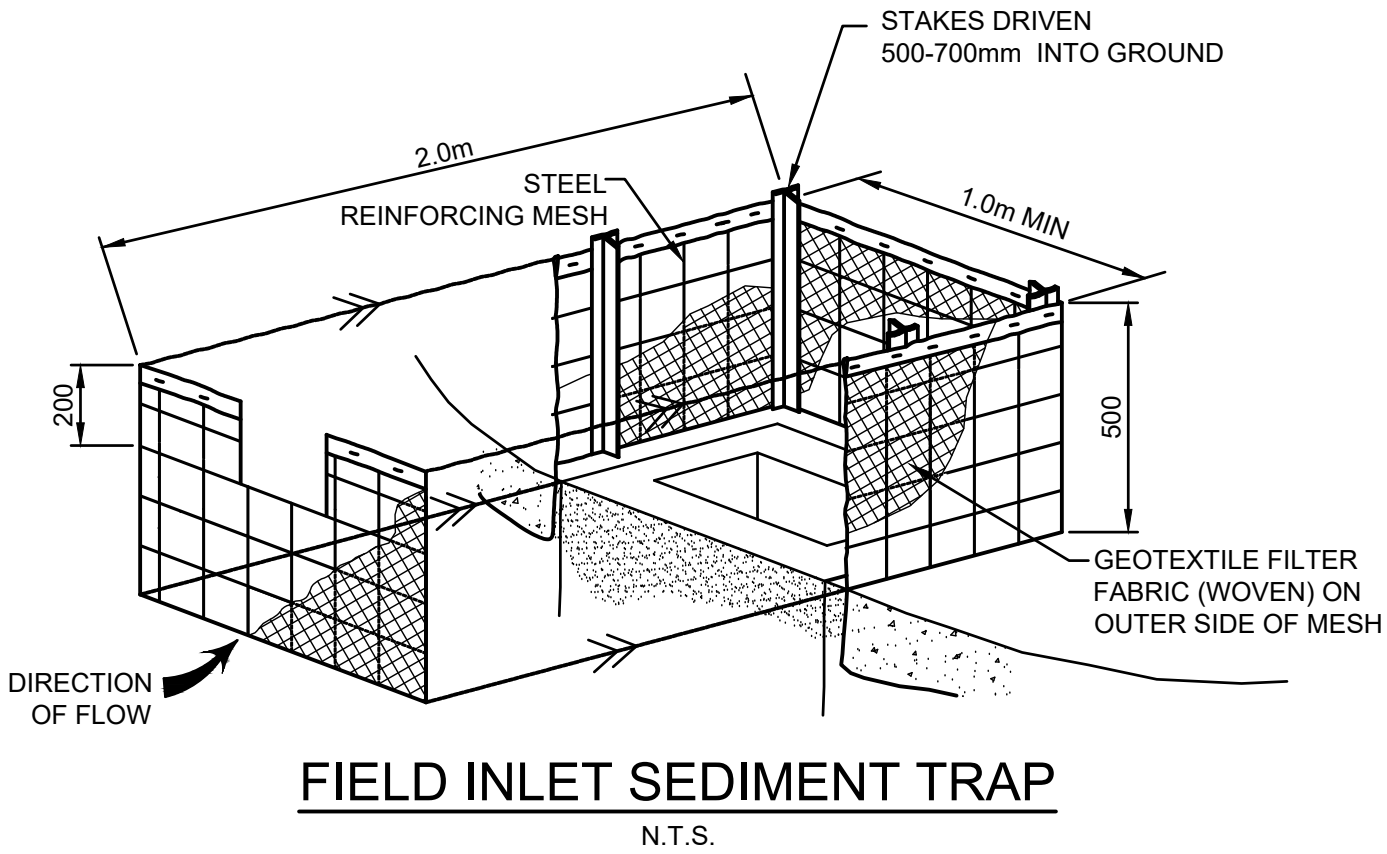
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Project
**51 ARTHUR STREET, FORESTVILLE
PROPOSED MIXED USE DEVELOPMENT
STORMWATER CONCEPT PLANS
DEVELOPMENT APPLICATION**

Drawing Title
STORMWATER CONCEPT PLAN
Scale
1:100
Project No.
200706
Dwg. No.
103
Issue
B

SEDIMENT & EROSION NOTES

1. IMMEDIATELY FOLLOWING SETTING OUT OF THE WORKS, BUT PRIOR TO COMMENCEMENT OF ANY CLEARING OR EARTHWORKS, THE CONTRACTOR AND SUPERINTENDENT SHALL WALK THE SITE TO NOMINATE THE LOCATIONS AND TYPES OF SEDIMENT AND EROSION CONTROL MEASURES TO BE ADOPTED. THESE MEASURES SHALL BE IMPLEMENTED PRIOR TO ANY CLEARING OR EARTHWORKS AND MAINTAINED UNTIL THE WORKS ARE COMPLETED AND NO LONGER POSE AN EROSION HAZARD, UNLESS OTHERWISE APPROVED BY THE SUPERINTENDENT.
2. IMMEDIATELY FOLLOWING SETTING OUT OF THE WORKS, BUT PRIOR TO COMMENCEMENT OF ANY CLEARING OR EARTHWORKS, THE CONTRACTOR AND SUPERINTENDENT SHALL WALK THE SITE TO IDENTIFY AND MARK TREES WHICH ARE TO BE PRESERVED. NOTWITHSTANDING THE ABOVE, THE CONTRACTOR SHALL TAKE ALL REASONABLE PRECAUTIONS TO MINIMISE DISTURBANCE TO EXISTING VEGETATION AND GROUND COVER OUTSIDE THE MINIMUM AREAS REQUIRED TO COMPLETE THE WORKS AND SHALL BE RESPONSIBLE FOR RECTIFICATION, AT ITS OWN COST, OF ANY DISTURBANCE BEYOND THOSE AREAS.
3. PROVIDE GULLY GRATE INLET SEDIMENT TRAPS AT ALL GULLY PITS.
4. PROVIDE SILT FENCING ALONG PROPERTY LINE AS DIRECTED BY SUPERINTENDENT.
5. ADDITIONAL CONTROL DEVICES TO BE PLACED WHERE DIRECTED BY THE PRINCIPLE.
6. ALTERNATIVE DESIGNS TO BE APPROVED BY SUPERINTENDENT PRIOR TO CONSTRUCTION.
7. WASH DOWN/RUMBLE AREA TO BE CONSTRUCTED WITH PROVISIONS RESTRICTING ALL SILT AND TRAFFICKED DEBRIS FROM ENTERING THE STORMWATER SYSTEM.
8. NO WORK OR STOCKPILING OF MATERIALS TO BE PLACED OUTSIDE OF SITE WORK BOUNDARY.
9. APPROPRIATE EROSION AND SEDIMENT CONTROLS TO BE USED TO PROTECT STOCKPILES AND MAINTAINED THROUGH OUT CONSTRUCTION.
10. IT IS THE CONTRACTORS RESPONSIBILITY TO TAKE DUE CARE OF NATURAL VEGETATION. NO CLEARING IS TO BE UNDERTAKEN WITHOUT PRIOR APPROVAL FROM THE SUPERINTENDENT.
11. TO AVOID DISTURBANCE TO EXISTING TREES, EARTHWORKS WILL BE MODIFIED AS DIRECTED ON-SITE BY THE SUPERINTENDENT.
12. THE LOCATION OF EROSION AND SEDIMENTATION CONTROLS WILL BE DETERMINED ON SITE BY THE SUPERINTENDENT.
13. ACCESS TRACKS THROUGH THE SITE WILL BE LIMITED TO THOSE DETERMINED BY THE SUPERINTENDENT AND THE CONTRACTOR PRIOR TO ANY WORK COMMENCING.
14. ALL SETTING OUT IS THE RESPONSIBILITY OF THE CONTRACTOR PRIOR TO WORKS COMMENCING ON SITE. THE SUPERINTENDENT'S SURVEYOR SHALL PEG ALL ALLOTMENT BOUNDARIES, PROVIDE COORDINATE INFORMATION TO THESE PEGS AND PLACE BENCH MARKS. THE CONTRACTOR SHALL SET OUT THE WORKS FROM AND MAINTAIN THESE PEGS.
15. PLANS ARE MINIMUM REQUIREMENTS AND ARE TO BE USED AS A GUIDE ONLY. EXACT MEASURES USED SHALL BE DETERMINED ON SITE IN CONJUNCTION WITH PROGRAM OF CONTRACTORS WORKS etc.



SILT FENCE NOTES:

1. FILTER CLOTH TO BE FASTENED SECURELY TO POSTS WITH GALVANISED WIRE TIES, STAPLES OR ATTACHMENT BELTS.
2. POSTS SHOULD NOT BE SPACED MORE THAN 3.0m APART.
3. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED BY 150mm AND FOLDED.
4. FOR EXTRA STRENGTH TO SILT FENCE, WOVEN WIRE (14mm GAUGE, 150mm MESH SPACING) TO BE FASTENED SECURELY BETWEEN FILTER CLOTH AND POSTS BY WIRE TIES OR STAPLES
5. INSPECTIONS SHALL BE PROVIDED ON A REGULAR BASIS, ESPECIALLY AFTER RAINFALL AND EXCESSIVE SILT DEPOSITS REMOVED WHEN "BULGES" DEVELOP IN SILT FENCE
6. SEDIMENT FENCES SHALL BE CONSTRUCTED WITH SEDIMENT TRAPS AND EMERGENCY SPILLWAYS AT SPACINGS NO GREATER THAN 40m ON FLAT TERRAIN DECREASING TO 20m SPACINGS ON STEEP TERRAIN.

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0 200 400 600mm
SCALE 1:10 @ A1

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Drawing Title	MISCELLANEOUS DETAILS SHEET			
Scale	A1 As Shown	Project No.	200706	Dwg. No.
			104	Issue
				B