

MULTI DWELLING DEVELOPMENT

8 LINKSVIEW AVE., LEONAY STORMWATER CONCEPT PLAN

STORMWATER CONCEPT
NOT FOR CONSTRUCTION

PIPELINE SYMBOL LEGEND

HYDRAULIC SERVICES NOTES & PROJECT REQUIREMENTS

- THE CONTRACTOR SHALL READ AND FULLY FAMILIARISE THEMSELVES WITH THE HYDRAULIC PLANS, HYDRAULIC SPECIFICATION DOCUMENTS, AUSTRALIAN STANDARDS, AND AUTHORITY REQUIREMENTS APPLICABLE TO THE WORKS. CLAIMS DUE TO IGNORANCE OF THE CONTENTS OF HYDRAULIC SERVICES DOCUMENTS AND / OR REQUIREMENTS OF AUSTRALIAN STANDARDS / AUTHORITY REQUIREMENTS WILL NOT BE ENTERED INTO.
- THE CONTRACTOR IS REQUIRED TO VISIT AND INSPECT EXISTING SITE STRUCTURES, SERVICES AND CONDITIONS OF THE SITE PRIOR TO SUBMITTING THEIR TENDER AND FAMILIARISE THEMSELVES WITH THE VISIBLE NATURE AND CONDITIONS OF THE SITE RELATIVE TO THE WORKS TO BE CARRIED OUT. CLAIMS DUE TO IGNORANCE OF EXISTING SITE CONDITIONS WILL NOT BE ENTERED INTO.
- THE HYDRAULIC SERVICES DRAWINGS AND SPECIFICATION SET OUT THE PROJECT REQUIREMENTS TO BE MET OVER AND ABOVE THE MINIMUM STANDARDS AS SET OUT BY THE RELEVANT AUSTRALIAN STANDARD APPLICABLE TO THAT SERVICE. THE CONTRACTOR SHALL MAKE DUE ALLOWANCE IN THEIR TENDER AND WARRANTIES THAT THEY HAVE MADE DUE ALLOWANCE FOR ALL REQUIREMENTS NECESSARY FOR THE EXECUTION OF THE WORKS IN ACCORDANCE WITH THE STANDARDS AS SET OUT BY THE RELEVANT AUSTRALIAN STANDARD APPLICABLE TO THAT SERVICE. THE RELEVANT LOCAL AUTHORITY REQUIREMENTS AND STANDARDS FOR THOSE REQUIREMENTS AS SET OUT IN THE HYDRAULIC SERVICES DRAWINGS AND THE ACCOMPANYING SPECIFICATION.
- HYDRAULIC SERVICES DRAWINGS ARE TO BE READ IN CONJUNCTION WITH HYDRAULIC SERVICES SPECIFICATION AND DRAWINGS OF ALL OTHER DISCIPLINES FOR THIS PROJECT. IGNORANCE OF THE CONTENTS OF ANY DOCUMENT RELATIVE TO THE PROJECT SHALL NOT PROVIDE A BASIS FOR ANY VARIATION TO THE CONTRACT.
- ALLOW TO OBTAIN ALL APPROVALS AND PAY ALL FEES AND CHARGES TO ALL AUTHORITIES IN RELATION TO THE PROPOSED SERVICE INSTALLATIONS INDICATED ON THE DRAWINGS.
- ALLOW TO DISCONNECT & SEAL ALL REDUNDANT HYDRAULIC SERVICES RELATED TO THE INSTALLATION OF THE PROPOSED WORKS TO THE REQUIREMENTS OF THE RELEVANT AUTHORITY.
- ALL WORK BE CARRIED OUT IN ACCORDANCE WITH WATER & SEWER AUTHORITY REGULATIONS, SUPERINTENDENTS APPROVAL & HYDRAULIC SPECIFICATION.
- LOCATION OF FIXTURES SHALL BE IN ACCORDANCE WITH LATEST ARCHITECTURAL DRAWINGS.
- WIRING OF HWWS AND GPO/S FOR BOILING / CHILLED WATER UNIT BY ELECTRICAL CONTRACTOR.
- LIAISE WITH BUILDING SUPERINTENDENT TO ARRANGE SHUTDOWN AND ASSOCIATED WORKS.
- ALL PIPES FIXTURES & FITTINGS ARE TO BE FIRST QUALITY AND OF ONE MANUFACTURER. WRITTEN WARRANTIES ON WORKMANSHIP AND MATERIALS OF AT LEAST 1 YEAR REQUIRED FOR EACH UNIT. ALL UNITS SHALL BE SUBJECT TO AN INSPECTION BY THE SUPERINTENDENT. ALL TO BE VANDAL PROOF.
- ALL FIXTURES ARE TO BE SUPPLIED AND INSTALLED BY THE HYDRAULICS SERVICES CONTRACTOR UNLESS SPECIFIED OTHERWISE.
- ON COMPLETION OF THE INSTALLATION ALLOW TO TEST THE FIXTURES FOR NORMAL OPERATION AND ADJUST NECESSARY.
- ALL FIXINGS SHALL BE PLUMB AND LEVEL AND NEATLY FINISHED IN A TRADESMAN LIKE MANNER AND WITHOUT DAMAGE.
- PROVIDE ALL MATERIALS AND LABOUR NECESSARY TO PROVIDE A COMPLETE, WORKING AND SERVICEABLE INSTALLATION BASED ON THE DRAWINGS, SPECIFICATION COORDINATION WITH THE STRUCTURE AND OTHER SERVICES PLUS ANY RELEVANT AUSTRALIAN STANDARDS.
- ALL MATERIALS USED IN THE WORK SHALL BE NEW AND OF THE BEST QUALITY AND TYPE AVAILABLE TO CONFORM WITH THE RELEVANT AUSTRALIAN STANDARDS AND BEAR THE REQUIRED STANDARDS MARK.
- FOR ALL PLUMBING AND DRAINAGE WORKS, AN APPLICATION SHALL BE LODGED AS REQUIRED BY THE SYDNEY WATER REGULATION 2000 SECTION 7 UNDER THE SYDNEY WATER ACT 1994. UPON COMPLETION, THE PLUMBER CARRYING OUT THE WORK SHALL SUBMIT TO THE PROJECT MANAGER THE SIGNED ORIGINAL OWNER'S COPY OF THE CERTIFICATE OF COMPLIANCE.
- ANY DAMAGE TO SERVICES DURING CONSTRUCTION SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTORS OWN EXPENSE.
- REFER TO SPECIFICATION FOR ADDITIONAL SPECIFICATION NOTES, WORK INSTRUCTIONS, MATERIAL SPECIFICATIONS & STANDARDS.
- PIPE WORK SHALL BE CAPPED OFF AS WORK PROCEEDS TO PREVENT INGRESS OF DIRT, CONCRETE ETC. TO PROPRIETARY CAPS / PLUGS.
- ALLOW TO MAKE APPLICATION & PAY ALL FEES TO SYDNEY WATER TO OBTAIN A PERMIT TO UNDERTAKE PLUMBING DRAINAGE WORKS AND FOR ALL SYDNEY WATER INSPECTIONS.
- PIPING SHOWN FOR CLARITY ONLY, ACTUAL POSITION TO BE DETERMINED AND COORDINATED ON SITE.
- ALL LEVELS AND DIMENSIONS SHOWN TO BE CHECKED ON SITE PRIOR TO COMMENCING ANY WORKS. REPORT ANY DISCREPANCIES TO THE SUPERINTENDENT.
- HYDRAULIC DRAWINGS TO BE READ IN CONJUNCTION WITH ARCHITECTURAL AND ENGINEERING DRAWINGS.
- COORDINATE SERVICES WITH ALL OTHER TRADES AND WORKS ON SITE. THOROUGHLY INVESTIGATE THE EXTENT OF EXISTING SERVICES PRIOR TO COMMENCING WORKS ON SITE.
- DURING THE INSTALLATION, RECORD ALL CHANGES TO THE DESIGN DRAWINGS AND DIMENSION OF HIDDEN SERVICES FROM PERMANENT, VISIBLE LANDMARKS. AT THE COMPLETION OF THE WORKS PROVIDE THREE (3) SETS OF AS INSTALLED DRAWINGS AND ELECTRONIC FILES IN AUTOCAD DWG FORMAT ON CD.
- PROVIDE THREE (3) SETS OF OPERATION AND MAINTENANCE MANUALS FOR ALL SYSTEMS. THE MANUALS SHALL INCLUDE A BRIEF DESCRIPTION OF EACH SERVICE AND DETAILS OF ALL EQUIPMENT WARRANTIES AND MAINTENANCE PROCEDURES ASSOCIATED WITH THAT SERVICE. THE AS INSTALLED DRAWINGS AND ELECTRONIC FILES ARE TO BE INCLUDED IN THE MANUALS.
- ALL PIPEWORK AND ASSOCIATED VALVES AND EQUIPMENT WHICH ARE TO BE INSTALLED IN EXISTING BUILDING/S AND PENETRATING THROUGH EXISTING STRUCTURE ARE TO BE APPROVED BY THE SUPERINTENDENT PRIOR TO COMMENCEMENT OF WORKS.
- FIT ALL SLEEVES AND FIRE COLLARS WHERE NECESSARY FOR PIPES PASSING THROUGH FIRE RATED STRUCTURE. PIPEWORK SHALL BE HIDDEN FROM VIEW BY INSTALLATION IN WALLS, CEILINGS OR BURYING IN GROUND, WHERE PIPEWORK CANNOT BE HIDDEN FROM VIEW, OBTAIN APPROVAL FROM THE SUPERINTENDENT PRIOR TO INSTALLATION.
- EXPOSED PIPEWORK SHALL BE PAINTED AND LABELLED WITH PIPE MARKERS IN ACCORDANCE WITH AS 1345. PIPEWORK IN GROUND SHALL BE PROVIDED WITH MARKING TAPE IN THE TRENCH INDICATING THE SERVICE AND DIRECTION OF FLOW IN ACCORDANCE WITH AS 2648.
- TEST ALL SYSTEMS AS REQUIRED BY THE LOCAL AUTHORITIES AND RELEVANT AUSTRALIAN STANDARDS.
- ALLOW TO CO-ORDINATE FINAL LOCATIONS OF ALL PIPEWORK & EQUIPMENT WITH STRUCTURE & OTHER SERVICES PRIOR TO MANUFACTURE & INSTALLATION.
- ALLOW TO ACOUSTICALLY INSULATE ALL SANITARY & STORM WATER DRAINAGE INSTALLED IN ABOVE SOUND SENSITIVE AREAS ie. BEDROOMS, LIVING AREAS IN ACCORDANCE WITH THE BCA OR THE ACOUSTIC REPORT IF AVAILABLE.
- UNLESS OTHERWISE SPECIFIED, CORE HOLES ARE TO BE SLAB SEAL OR SIMILAR.
- WHERE PASSING THROUGH ROOF THE PIPES SHALL BE FLASHED IN AN APPROVED MANNER LEAVING THE ROOF WATER TIGHT, UNLESS OTHERWISE SPECIFIED ON NON-TRAFFICABLE ROOFS THE VENT SHALL TERMINATE A MINIMUM OF 300mm ABOVE ROOF AND ON TRAFFICABLE ROOFS THE VENTS SHALL TERMINATE 3000mm ABOVE ROOF.
- REFER TO ARCHITECTS PLANS FOR EXACT LOCATION & SET OUT OF PLUMBING FIXTURES & FITTINGS.
- ALL WORK SHALL BE CARRIED OUT BY AND UNDER THE SUPERVISION OF A LICENSED PLUMBER IN STRICT CONFORMITY WITH THE ARCHITECTURAL PLANS, HYDRAULIC DRAWINGS AND SPECIFICATIONS AND IN ACCORDANCE WITH THE REQUIREMENTS OF THE BUILDING CODE OF AUSTRALIA, LOCAL AUTHORITIES, AS 3600 AND OTHER RELEVANT AUSTRALIAN STANDARDS.
- WORK IS TO BE CARRIED OUT TO THE SATISFACTION OF THE PROJECT MANAGER.
- EXISTING SERVICES HAVE BEEN PLOTTED FROM SUPPLIED DATA, THE SUPERINTENDENT DOES NOT GUARANTEE THEIR ACCURACY. IT IS THE CONTRACTORS RESPONSIBILITY TO ESTABLISH THE LOCATION OF ALL EXISTING SERVICES PRIOR TO COMMENCING WORK.
- UPON SIGNING THE CONTRACT, THE CONTRACTOR IS DEEMED TO HAVE VISITED SITE AND FAMILIARISED THEMSELVES WITH THE SITE, THE LOCATIONS & SIZES OF ALL EXISTING SERVICES AND THE EXTENT OF WORKS REQUIRED TO PROVIDE A COMPLETE, WORKING AND SERVICEABLE INSTALLATION BASED ON THE DRAWINGS, AND SITE CONSTRAINTS. VARIATIONS DUE TO OBVIOUS SITE CONSTRAINTS WILL NOT BE APPROVED.
- HYDRAULIC SERVICES CONTRACTOR SHALL PROVIDE A CERTIFICATE OF COMPLIANCE UPON COMPLETION OF WORKS FOR ALL SERVICES INSTALLED.
- THE CONTRACTOR SHALL ALLOW FOR AND PAY ALL FEES AND OBTAIN ALL AUTHORITY CLEARANCES INCLUDING SYDNEY WATER, COUNCIL AND GAS COMPANY.
- ALL PIPE PENETRATIONS AT WALLS SHALL BE FITTED WITH A PUDDLE FLANGE AND ALL WALL PENETRATIONS SHALL BE MADE GOOD AND WATER TIGHT.
- PRESSURE PIPE 'BLUE BRUTE' CLASS 20 TO AS 2977 WITH RUBBER RING JOINTS AND DUCTILE IRON FITTINGS EXCEPT WHERE PIPEWORK RUNS UNDERSIDE OF THE BUILDING.
- CAP OFF ALL REDUNDANT SERVICES AT THE AUTHORITY MAIN. ARRANGE INSPECTION WITH THE AUTHORITY PRIOR TO BACK FILLING AND MAKING GOOD THE SURFACE. PAY ALL ASSOCIATED FEES AND CHARGES.
- PROVIDE APPROVED FIRE STOP COLLARS TO THE REQUIREMENTS OF THE BCA AND RELEVANT AUSTRALIAN STANDARDS.
- DRAINS TO BE SUPPORTED ON OR FROM SOLID GROUND. LOCATION & DEPTH / INVERT LEVEL OF BRANCH SHALL BE VERIFIED ON SITE PRIOR TO COMMENCEMENT OF WORK.
- REUSED DRAINS UNDER BUILDINGS SHALL BE RETESTED WHERE DIRECTED BY SUPERINTENDENT.
- INSPECTION OPENINGS SHALL BE PROVIDED AT:
49.1. THE PROPERTY BOUNDARY
49.2. ON EACH WC OR BRANCH
49.3. AT MAX. 30m INTERVALS SPREAD EQUIDISTANT WHERE POSSIBLE
49.4. IMMEDIATELY UPSTREAM & DOWNSTREAM OF ALL JUMP-UPS
49.5. AS REQUIRED BY THE AUTHORITY FOR INSPECTION & MAINTENANCE
- ALL SERVICES THAT CROSS PAVEMENTS, FOOTING ETC SHALL BE BACKFILLED WITH GRANULAR MATERIAL TO SUBGRADE LEVEL & COMPACTED TO 95% M.M.D.D.
- PROVIDE 80mm COMPRESSIBLE MATERIAL OVER PIPEWORK WHERE CLEARANCE TO UNDERSIDE OF FOOTING IS LESS THAN 150mm UNLESS NOTED OTHERWISE.
- ON COMPLETION OF PIPE INSTALLATION, ALL DISTURBED AREAS MUST BE RESTORED TO ORIGINAL CONDITION INCLUDING KERBS, FOOTPATH CONCRETE AREAS, GRAVEL AREAS & ROAD PAVEMENTS.
- CARE SHALL BE TAKEN WHEN EXCAVATING NEAR EXISTING SERVICES. NO MECHANICAL EXCAVATION SHALL BE MADE OVER AUTHORITY SERVICES, TELSTRA OR ELECTRICAL SERVICES. EXCAVATE BY HAND IN THESE AREAS.
- THE PLUMBING CONTRACTOR SHALL OBTAIN ALL AUTHORITY APPROVALS & PAY ALL FEES.
- INVERT LEVELS SHOWN ARE INDICATIVE ONLY. CONFIRM ALL LEVELS ON SITE BEFORE COMMENCING INSTALLATION WORK.
- ACCESS PANEL ARE TO BE INSTALLED WHERE REQUIRED TO ACCESS CONTROL VALVES IN WATER LINES AS REQUIRED & INSPECTION OPENINGS ON STORMWATER & SEWER RISERS. ACCESS PANELS SHALL MATCH PROPOSED FINISH. REFER TO ARCHITECTURAL DRAWING FOR FINISHES.

PIPELINE SYMBOL LEGEND

- LOOSE JUMPER CONTROL VALVE
- CHECK VALVE OR NON RETURN VALVE
- VALVE AND CAST IRON SURFACE BOX
- BALANCING VALVE
- BALL VALVE
- BALANCING VALVE
- FLOAT VALVE
- SOLENOID VALVE
- STRAINER
- EXPANSION JOINT
- FIRE HOSEREEL
- EXISTING STREET HYDRANT
- EXTERNAL FIRE HYDRANT
- YARD GULLY / OVERFLOW GULLY
- CLEAROUT
- BOUNDARY TRAP
- INDUCT PIPE MICA FLAP
- REFLUX VALVE
- FLOW DIRECTION
- CAPPED PIPE
- FLOOR WASTE
- BASKET ARRESTOR
- INSPECTION / COVERED PIT
- GRATED PIT
- KERB INLET PIT
- GRATED DRAIN
- MANHOLE
- HYDRANT BOOSTER VALVE
- CONTROL PANEL
- CONTINUATION OF SERVICE
- OVERFLOW RELIEF GULLY
- TUNDISH
- CHECK VALVE/REFLUX VALVE OR NON RETURN VALVE
- TRAP PRIMING VALVE

- AIR ADMITTANCE VALVE
- FLOOR WASTE
- ENWARE CSQ343 SHROUDED HOSETAP
- RECESSED IN WALL TRAPPED TUNDISH
- RAINWATER OUTLET
- WINDOW DRENCHER HEAD - 53°C TEMPERATURE RATING
- CIRCULATING PUMP
- BACKFLOW PREVENTION DEVICE
- PRESSURE REDUCING VALVE
- PRESSURE LIMITING VALVE
- THERMOSTATIC MIXING VALVE
- WATER METER
- HOT WATER METER
- GAS METER
- SERVICE RISER / DROPPER
- HOSE TAP
- WWM
- HWM
- GM
- GM

SERVICE LEGEND

- EXISTING STORMWATER DRAINAGE
- EXISTING SEWER DRAINAGE/SANITARY PLUMBING
- EXISTING COLD WATER SERVICE
- EXISTING HOT WATER SUPPLY
- EXISTING GAS SERVICE
- EXISTING FIRE HYDRANT SERVICE
- EXISTING FIRE HOSEREEL SERVICE
- STORMWATER DRAINAGE
- SEWER DRAINAGE/SANITARY PLUMBING
- COLD WATER SERVICE
- RAINWATER / RECYCLED WATER REUSE SERVICE WATER SERVICE
- HOT WATER SUPPLY
- HOT WATER RETURN
- WARM WATER SERVICE
- GAS SERVICE
- FIRE HYDRANT SERVICE
- FIRE HOSEREEL SERVICE
- VENT PIPING
- TUNDISH DRAINAGE SERVICE
- SILT FENCE
- DENOTES EXISTING PAVED AREA TO BE SAWCUT AND REINSTATED

EXISTING SERVICES NOTES

- SERVICES SHOWN ON HYDRAULIC PLANS HAVE BEEN PLOTTED FROM PLANS AND BY FIELD INSPECTION. THESE SERVICES AND OTHERS MAY NOT BE SITUATED WITHIN REGISTERED EASEMENTS OR WITHIN STANDARD FOOTPATH ALLOCATIONS. IT IS THE CONTRACTORS RESPONSIBILITY TO IDENTIFY THE LOCATIONS OF ALL SERVICES PRIOR TO CONSTRUCTION WORKS AND TO AVOID DISTURBANCE OF THESE SERVICES. THE CONTRACTOR IS ADVISED TO CONTACT THE 'DIAL BEFORE YOU DIG' SERVICE TO ASCERTAIN THE LOCATIONS OF ANY EXISTING AUTHORITY SERVICES.
- THE HYDRAULIC SUBCONTRACTOR SHALL ENSURE THAT AT ALL TIMES SERVICES TO ALL BUILDINGS NOT AFFECTED BY THE WORKS ARE NOT DISRUPTED. PRIOR TO COMMENCEMENT OF ANY WORKS THE CONTRACTOR SHALL GAIN APPROVAL OF THEIR PROGRAMME FOR THE RELOCATION/CONSTRUCTION OF TEMPORARY SERVICES.
- HYDRAULIC SUBCONTRACTOR SHALL ALLOW TO CONSTRUCT NECESSARY SERVICES TO MAINTAIN SUPPLY TO EXISTING BUILDINGS REQUIRED TO REMAIN IN OPERATION TO THE SATISFACTION AND APPROVAL OF THE SUPERINTENDENT. ONCE DIVERSION IS IS COMPLETE AND COMMISSIONED THE CONTRACTOR SHALL ALLOW TO REMOVE ALL TEMPORARY SERVICES AND MAKE GOOD TO THE SATISFACTION OF THE SUPERINTENDENT.
- INTERRUPTION TO SUPPLY OF EXISTING SERVICES SHALL BE DONE SO AS NOT TO CAUSE ANY INCONVENIENCE TO THE PRINCIPAL. CONTRACTOR TO GAIN APPROVAL OF SUPERINTENDENT FOR TIME OF INTERRUPTION.

Note
Hydraulic design plans
to be read in conjunction
with architectural plans.

Note
Allow to obtain approval and pay all fees and charges to all authorities in relation to the proposed service installations as indicated on the drawings.
Allow to provide "as-built" drawings on Autocad dwg compatible file format together with 2-off paper copies before final payment.
Existing services are located within the site for which documentation is not available.
Services shown on this plan have been plotted from plans and by field these services and others that may exist may not be situated within registered easements or within standard footpath allocations.
It is the contractors responsibility to identify the locations of all services via electronic pipe locating prior to ANY construction works and to avoid disturbance of these services.
Allow to disconnect & cap off obsolete services at authority mains.
Contractor to provide work as executed plan prepared by a registered surveyor & provide certification that the stormwater drainage & detention system has been installed as per approved plans.

E	Apr. 19	DA Issue
D	Feb. 19	DA Issue
C	Dec. 18	DA Issue
G	May. 20	DA Issue
F	Oct. 19	DA Issue
REV	DATE	NOTATION/AMENDMENT
DO NOT SCALE DRAWINGS. CHECK ALL DIMENSIONS ON SITE. FIGURED DIMENSIONS TAKE PRECEDENCE.		

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A&B
CIVIL
HYDRAULIC
FIRE

CLIENT:
GLENSTONE GROUP

PROJECT:
PROPOSED MULTI UNIT DEVELOPMENT
at
**8 LINKSVIEW AVENUE,
LEONAY**

TITLE:
**STORMWATER CONCEPT PLAN
LEGEND & SERVICE NOTES**

STATUS:
DA ISSUE

DATE: DEC.18	SCALE: nts@A1	PROJ: 2918
NO IN SET: 5	DRAWN: SB	CHECKED: RB
SHEET: H-01	APPROVED: NB	REV: G

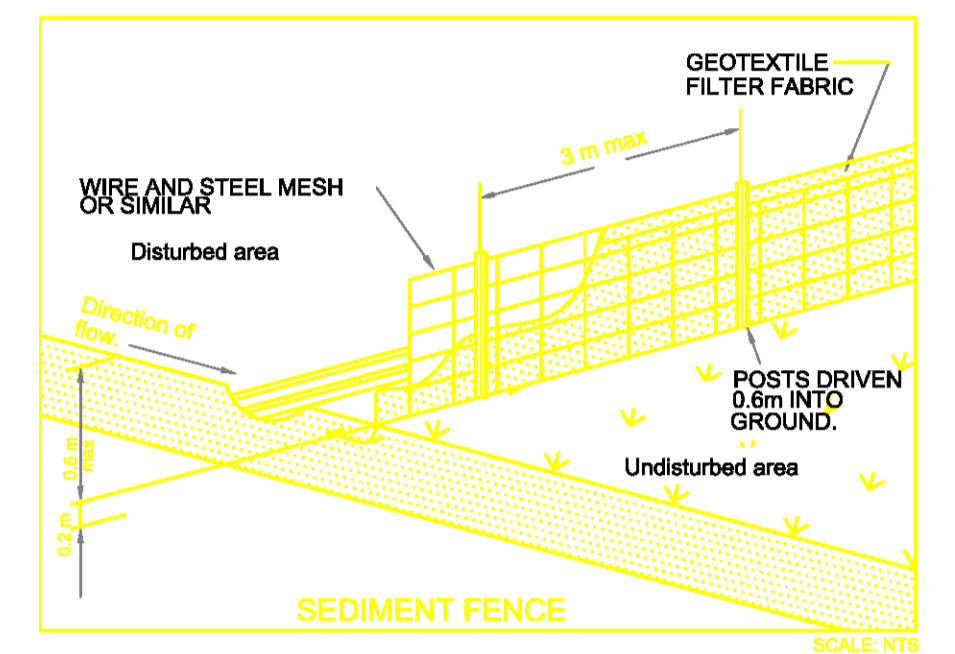
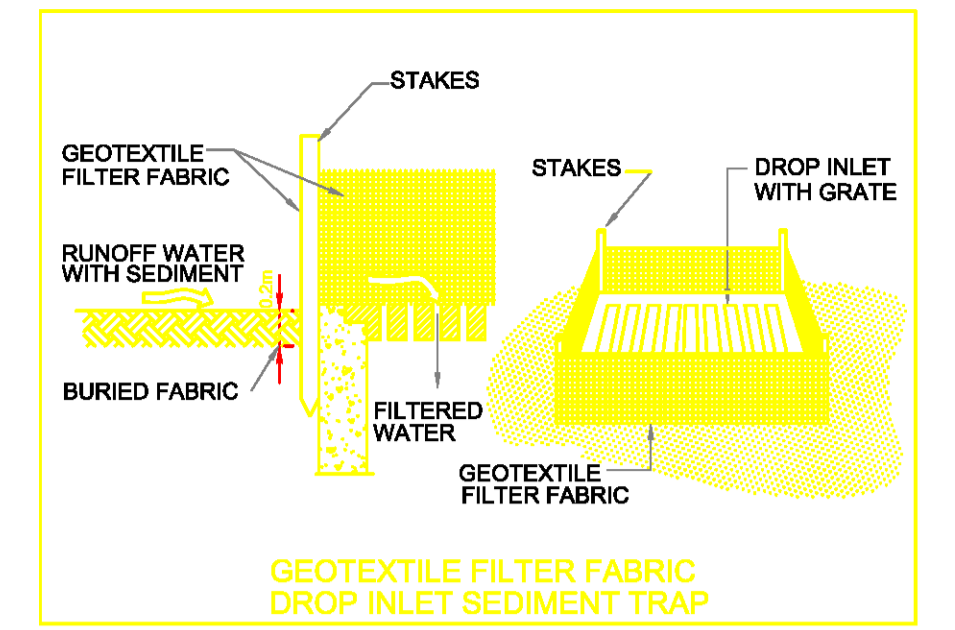
FAIRWAYS

AVENUE

LINKSVIEW AVENUE

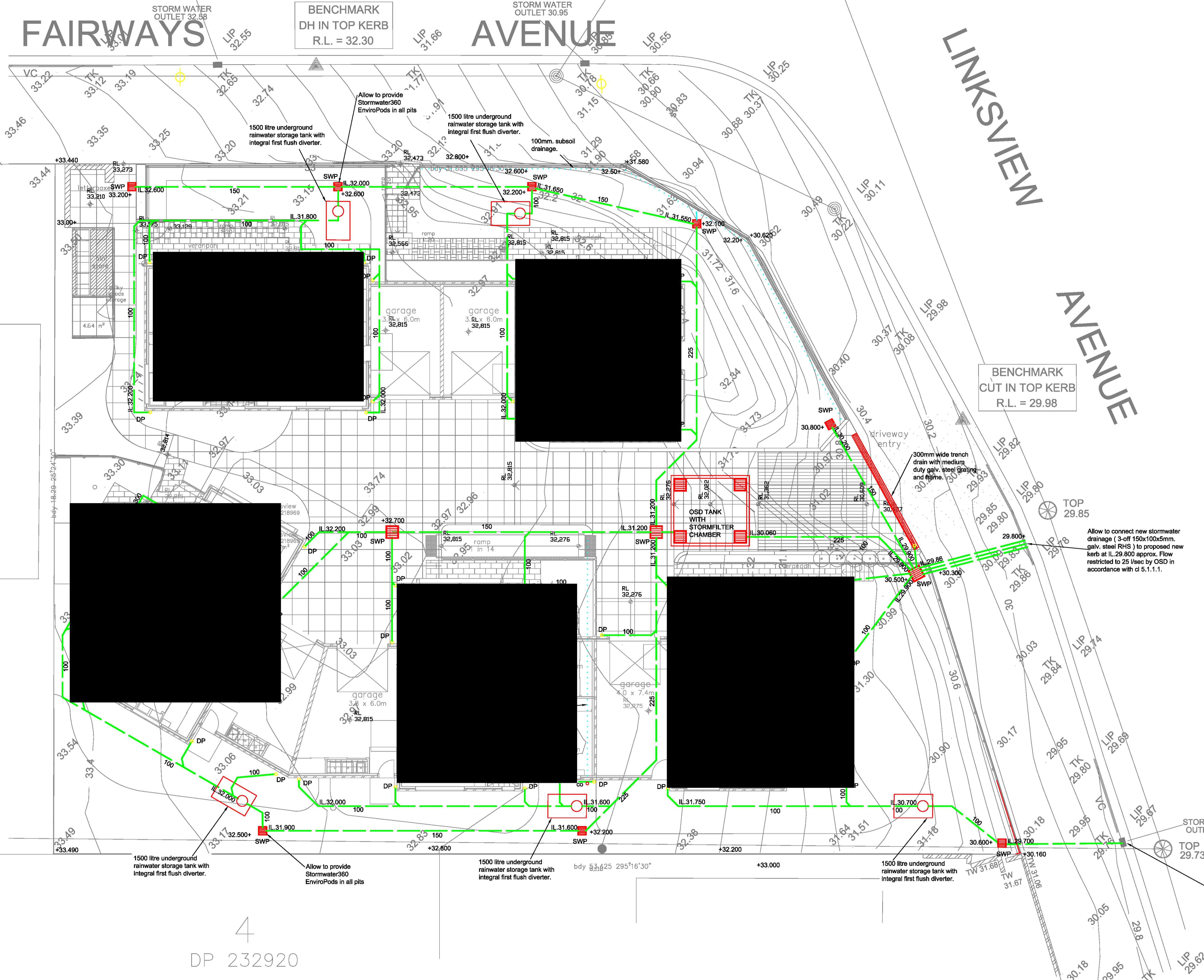
BENCHMARK
DH IN TOP KERB
R.L. = 32.30

BENCHMARK
CUT IN TOP KERB
R.L. = 29.98



Sediment & Erosion Control Notes

- The contractor shall implement all soil erosion and sediment control measures relating to a particular upstream catchment prior to stripping of topsoil from that catchment. Where it is necessary to undertake stripping in order to construct a sediment control device only sufficient ground shall be stripped to allow construction.
- All soil erosion and sediment control measures shall be constructed and maintained as indicated on these drawings. Location and extent of soil and water management devices is diagrammatic only.
- Conformity with this plan shall in no way reduce the responsibility of the contractor to protect against water damage during the course of the contract. It shall be the contractors responsibility to ensure that any necessary control is in place even though such control may not be shown on the plan.
- The contractor shall inform all subcontractors and all employees of their responsibility in minimising the potential for soil erosion and pollution to downstream areas.
- The contractor shall regularly maintain sediment and erosion control structures and desilt such structures prior to the reduction in capacity of 30% due to accumulated silt. The sediment shall be disposed of on site in a manner approved by the Penrith Council Erosion and Sediment Control Policy.
- Topsoil and spoil shall be stockpiled in non hazardous areas and protected from surface runoff by diversion drains or similar. Stockpiles shall be surrounded on downstream sides by silt fencing. Stockpiles shall be suitable compacted to inhibit erosion. Where the stockpiling period exceeds four(4) weeks, the stockpile shall be seeded to encourage vegetation growth.
- Topsoil shall be respread and stabilised as soon as possible.
- The contractor shall temporarily rehabilitate within 40 days any disturbed areas. Where final shaping has occurred the contractor shall provide final rehabilitation within 20 days.
- The contractor shall provide a turf strip behind all kerb and gutter at completion of footpath formation.
- The contractor shall maintain grass cover until all works have been completed, including the maintenance period, by frequent watering and mowing where required. Plant machinery and vehicles shall not be driven over grassed areas unless on an approved haulage route.
- Seed mixtures and stabilisation procedures shall be in accordance with the NSW department of housing "Soil and water management for Urban Development", January 1993 and construction specification.
- The contractor shall provide inlet sediment traps at all pits during construction.
- All drainage works shall be constructed and stabilised as quickly as possible to minimise risk of erosion.
- Vehicular traffic shall be controlled during construction confining access where possible to proposed or existing road alignments plus 3 metres where necessary areas to be left undisturbed shall be marked off.
- Site access shall be restricted to a nominated point. The construction of a shake down area may be required depending upon soil conditions.
- The contractor shall maintain dust control throughout the duration of the project.



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DP 232920

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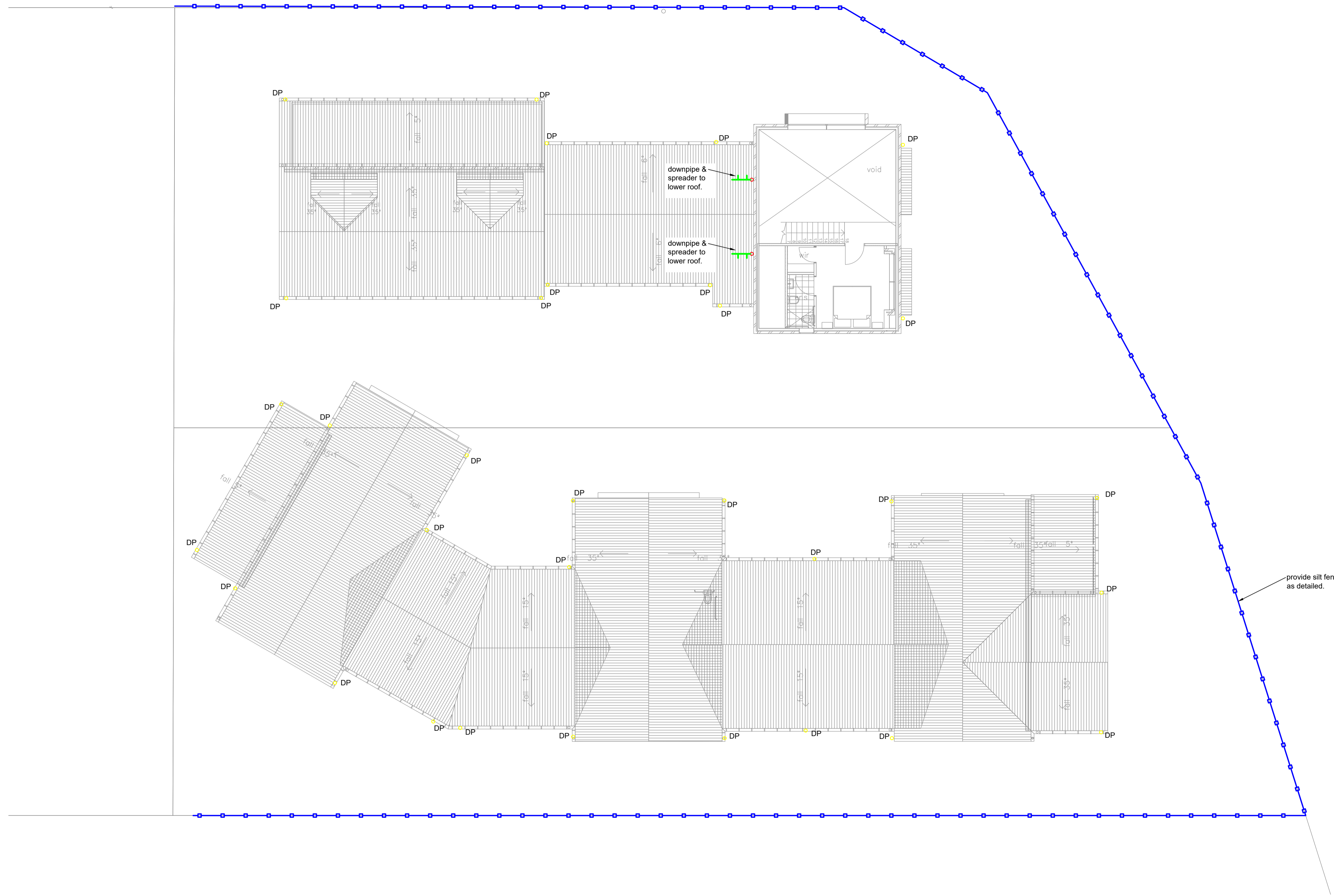
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CLIENT:
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PROJECT:
PROPOSED MULTI UNIT DEVELOPMENT
at
8 LINKSVIEW AVENUE, LEONAY

TITLE:
STORMWATER CONCEPT PLAN
SITE/GROUND FLOOR PLAN

STATUS: **DA ISSUE**
DATE: **DEC. 18**
SCALE: **1:100@A1**
PROJECT: **2918**
DRAWN: **SB**
CHECKED: **RB**
APPROVED: **NB**



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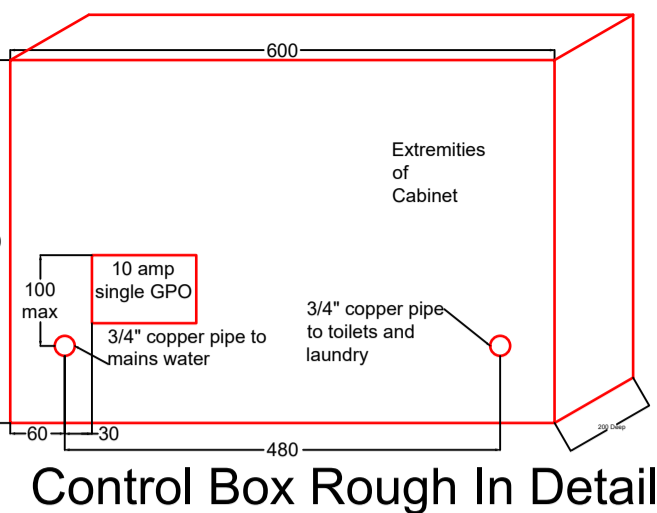
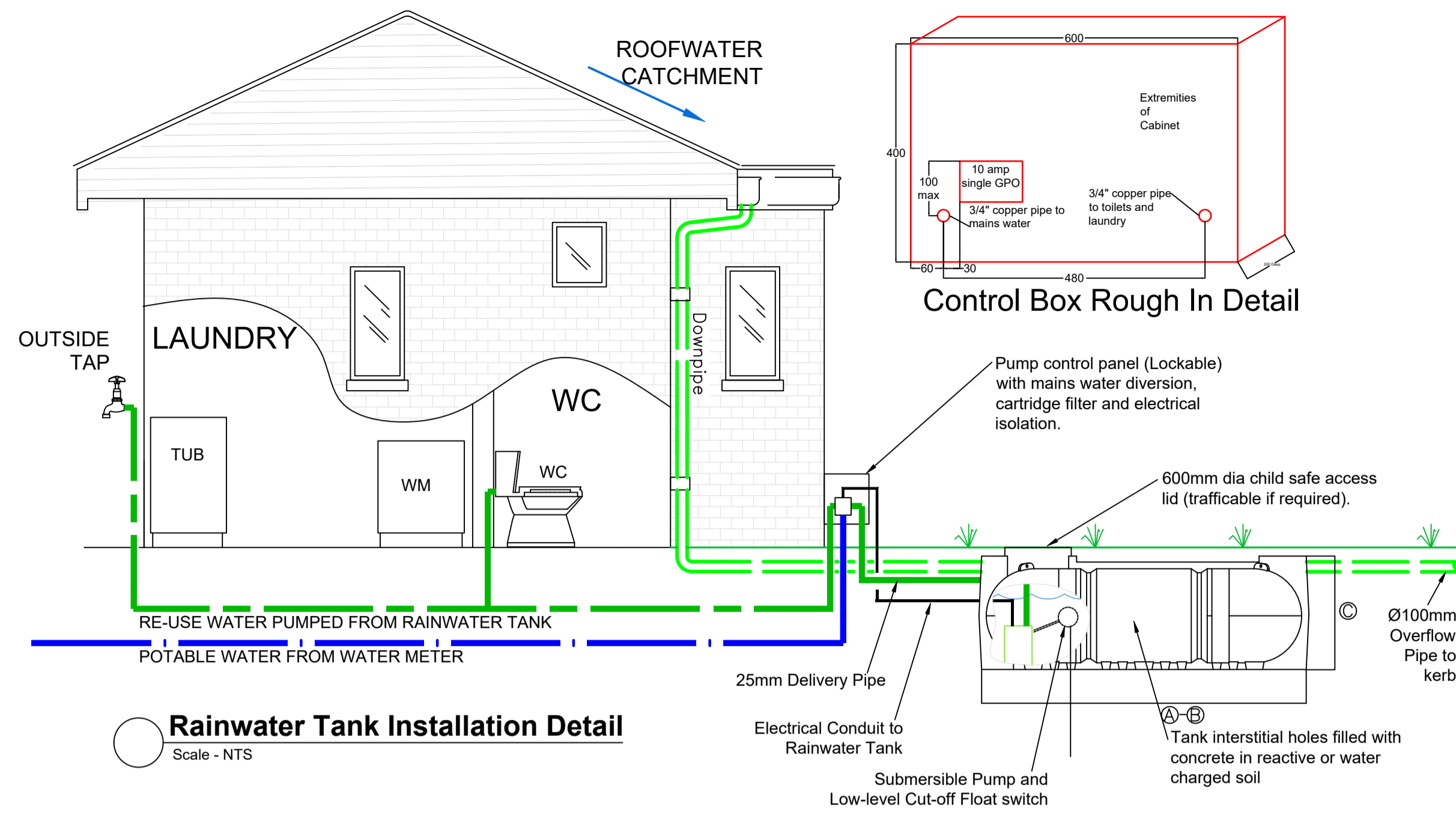
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 HYDRAULIC
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CLIENT:
GLENSTONE GROUP

PROJECT:
**PROPOSED MULTI UNIT DEVELOPMENT
 at
 8 LINKSVIEW AVENUE,
 LEONAY**

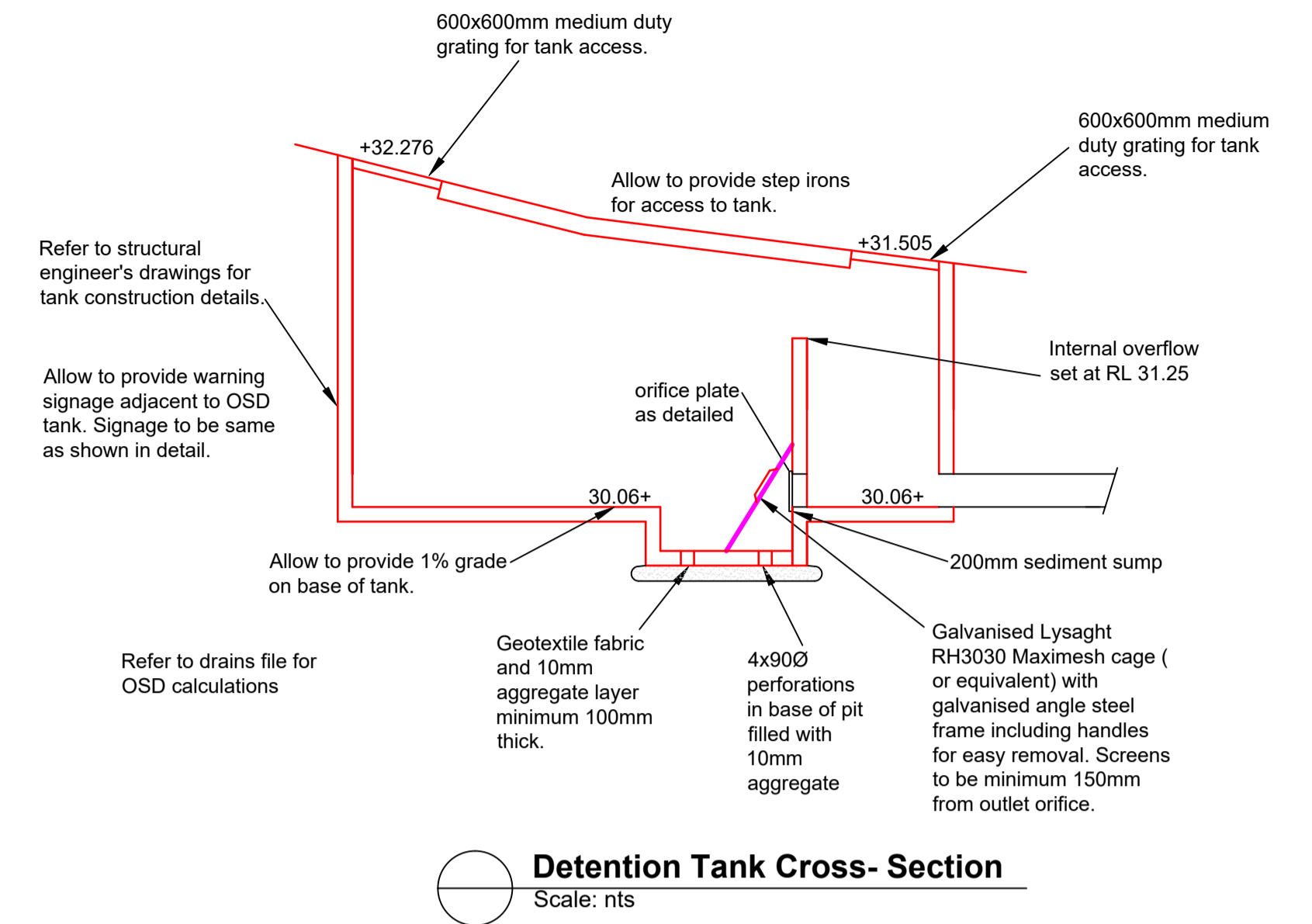
TITLE:
**STORMWATER CONCEPT PLAN
 DETAIL SHEET**

STATUS: DA ISSUE		PROJ: 2918
DATE: DEC. 18	SCALE: 1:100@A1	
NO. IN SET: 5	DRAWN: SB	CHECKED: RB
SHEET: H-02	APPROVED: NB	REV: G



OSD Maintenance Requirements

Maintenance Action	Frequency	Responsibility	Procedure
Discharge Control Pit			
Inspect D walls for cracks or spalling	Annually	Maintenance Contractor	Remove grate to inspect internal walls. Repair as required. Clear vegetation from external walls and repair as required.
Inspect D sump & remove any sediment	Six monthly	Owner	Remove grate and screen. Remove sediment and check orifice and flap valve are clear.
Inspect grate for damage or blockage	Six monthly	Owner	Check both sides of the grate for corrosion, damage or blockage.
Inspect return pipe from storage & remove any blockage.	Six monthly	Owner	Remove grate and screen. Ventilate underground storage if present. Open flap valve and remove any blockages in return line. Check for any sediment on upstream side of return line.
Inspect outlet pipe & remove any blockage	Six monthly	Maintenance Contractor	Remove grate and screen. Ventilate underground storage if present. Check orifice and remove any blockages in outlet pipe. Flush outlet pipe to confirm it drains freely. Check for sludge on upstream side of outlet pipe.
Check step irons for corrosion	Annually	Maintenance Contractor	Remove grate. Examine step irons and repair any corrosion or damage.
Check fixing of step irons is secure	Six monthly	Maintenance Contractor	remove grate and ensure fixings are secure prior to placing weight on step irons.
Storage			
Inspect return pit & remove any sediment in pit.	Annually	Maintenance Contractor	Remove Grate. Remove built up sediment.
Inspect internal return pit walls for cracks or spalling	Annually	Maintenance Contractor	Remove grate to inspect internal walls. Repair as required. Clear vegetation from external walls and repair as required.
Inspect and remove any debris blocking grates of pits.	Six monthly	Owner	Remove blockages from grate and check if pit is blocked.



Rainwater Tank Installation requirements

Administrative requirements
The plumber is required to apply to Sydney Water for a permit to do the work as they would when connecting any house service plumbing.

Sydney Water's plumbing inspector must be contacted when work is completed to carry out a final inspection of the property before the Certificate of Compliance is submitted to Sydney Water and the customer.

Rainwater tank plumbing regulatory requirements
All plumbing work is to be done or supervised by a licensed plumber in compliance with these guidelines and the NSW Code of Practice: Plumbing and Drainage.

Under no circumstances is there to be direct connection between the rainwater service and the drinking water service.

Approved materials
Materials used in the rainwater tank plumbing must comply with AS/NZS 3500 Part 1 Water Supply Section 2 Materials and Products

Pipes and labelling
Pipe materials to be used for rainwater need to be approved products and be clearly and permanently identified 'RAINWATER' continuously along the length. This can be done for below ground pipes by using identification tape (made in accordance with A52648) or for above ground pipes by using adhesive pipe markers (made in accordance with A51345).

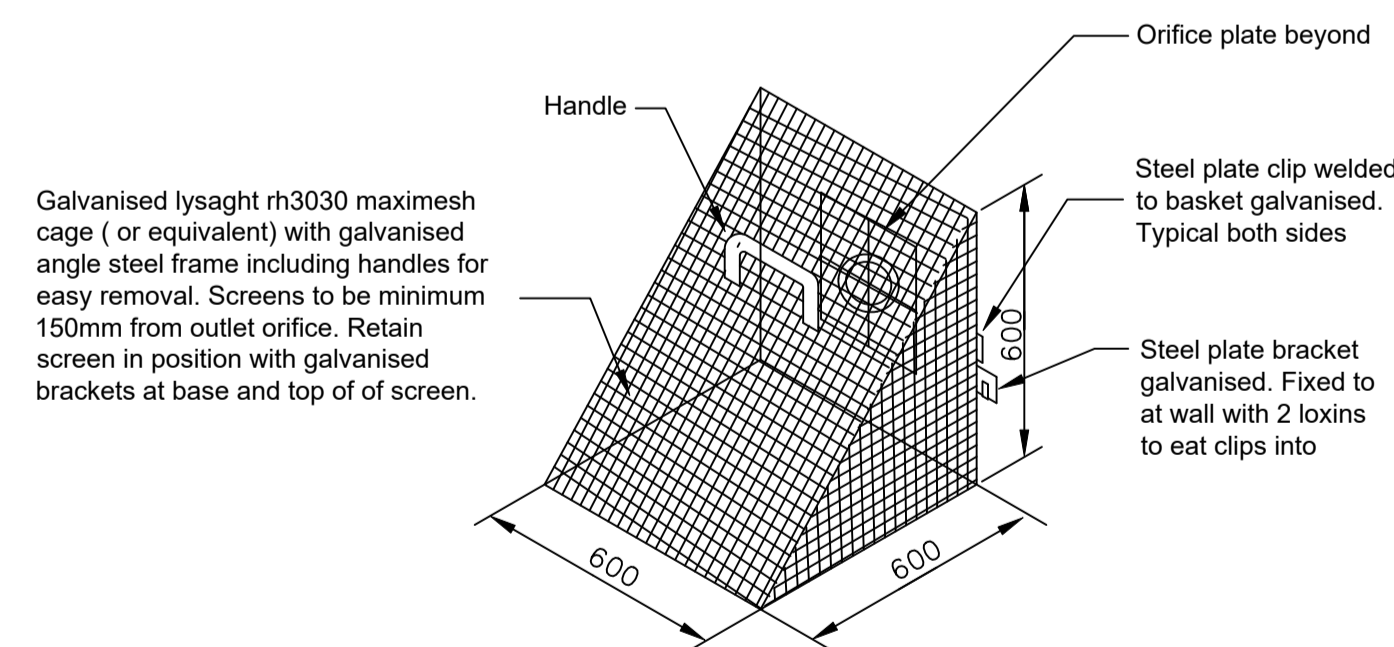
Identification tape marked 'RAINWATER' must be at least 75mm wide. The identification tape is to be installed on top of the rainwater pipeline, running longitudinally, and fastened to the pipe at not more than 3 metre intervals.

Every rainwater tank outlet must be labelled 'RAINWATER' on a permanent sign. An example is shown in Figure 2. A51319 provides direction as to appropriate layout, size and face materials for signs.

Proximity to other services
Rainwater pipes must be separated from any parallel drinking water service.

Above ground pipes
Any rainwater pipe installed above ground must be a minimum of 100mm away from any drinking water pipe.

Below ground pipes
Any rainwater pipe installed below ground must be a minimum of 300mm away from any drinking water pipe.

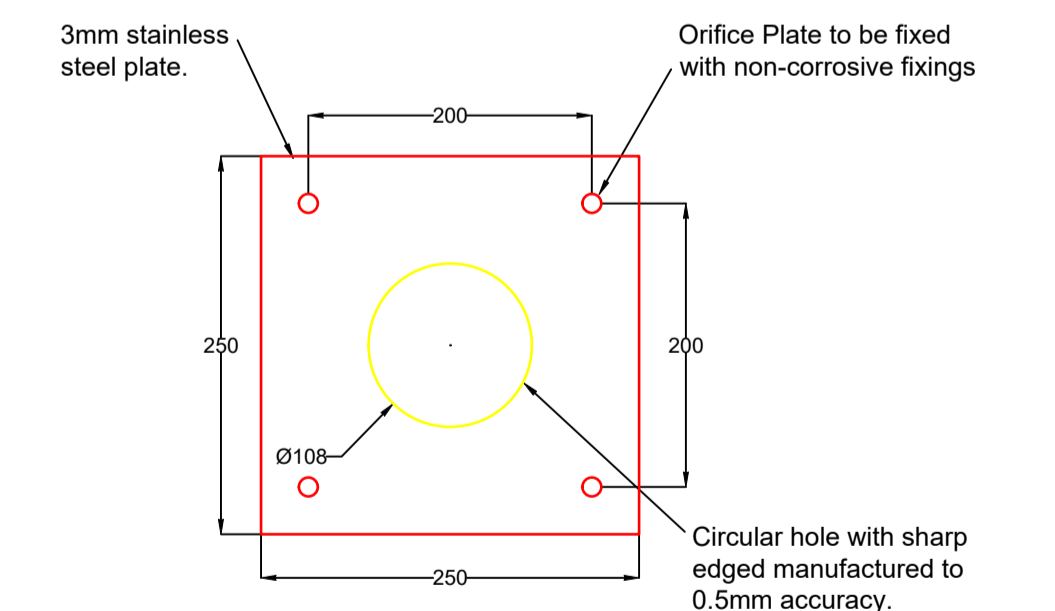


OSD Tank Signage



Colours
"DANGER" and background - White
Elliptical area - Red
Rectangle containing ellipse - Black
Other lettering and border - Black

Minimum Size - 187.5 mm x 250mm



E	Apr. 19	DA Issue
D	Feb. 19	DA Issue
C	Dec. 18	DA Issue
G	May. 20	DA Issue
F	Oct. 19	DA Issue
REV	DATE	NOTATION/AMENDMENT
DO NOT SCALE DRAWINGS. CHECK ALL DIMENSIONS ON SITE. FIGURED DIMENSIONS TAKE PRECEDENCE.		

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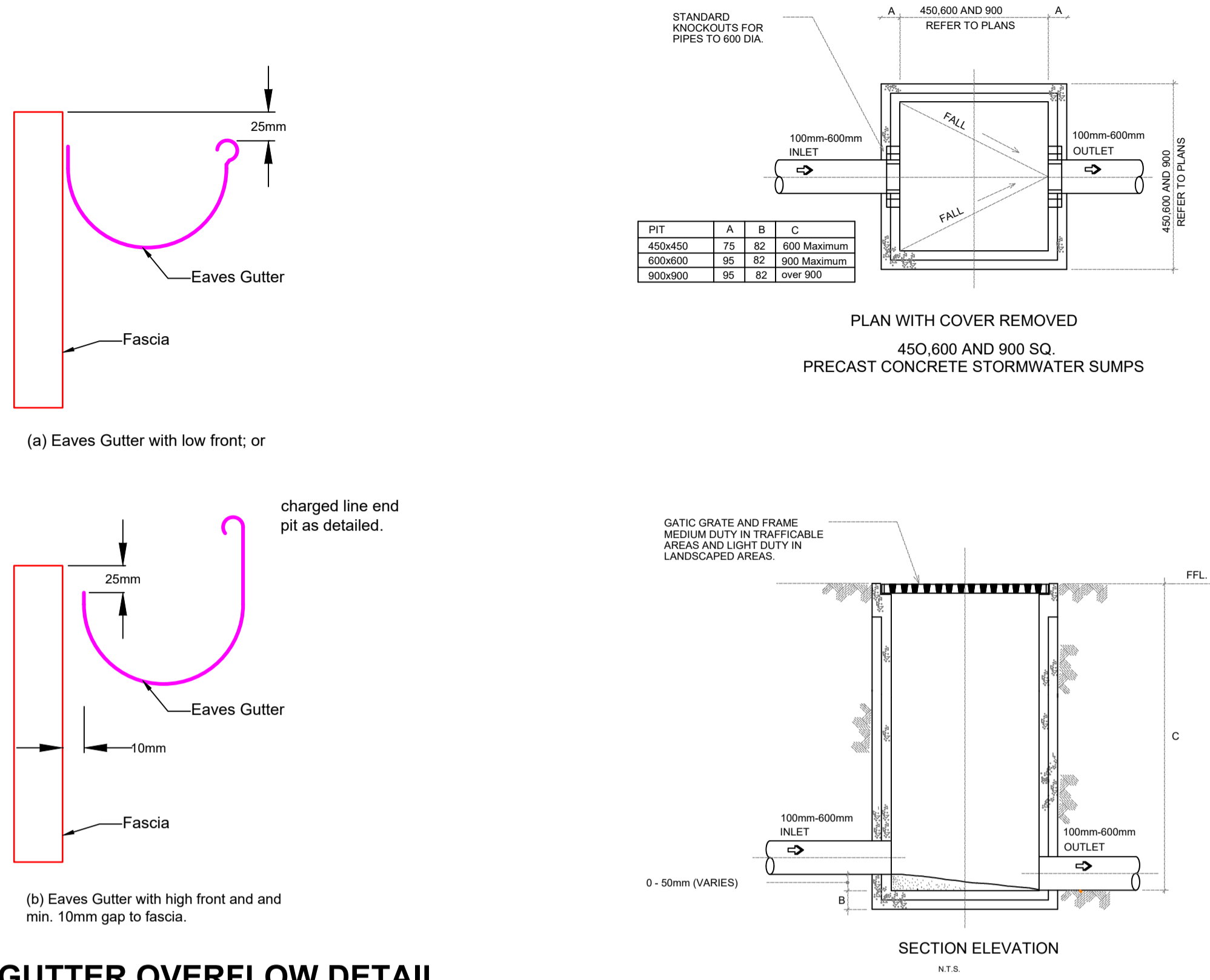
PROJECT:
PROPOSED MULTI UNIT DELOPMENT
at
**8 LINKSVIEW AVENUE,
LEONAY**

TITLE:
**STORMWATER CONCEPT PLAN
DETAIL SHEET**

STATUS:
DA ISSUE

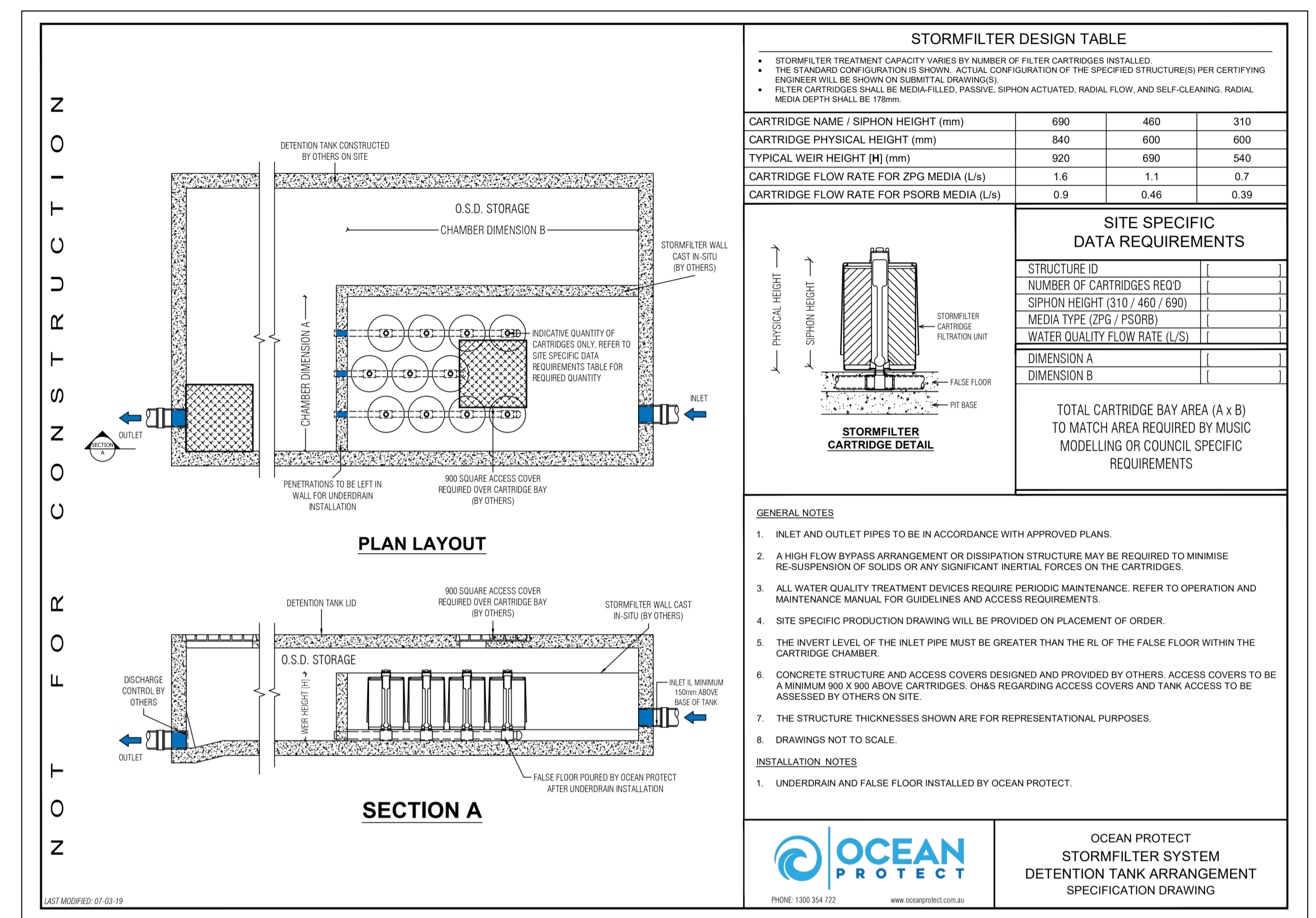
DATE: DEC.18	SCALE: nts@A1	PROJ: 2918
NO IN SET: 5	DRAWN: SB	CHECKED: RB
		APPROVED: NB

FILE: PLOTTED: SHEET: **H-04** REV: **G**



EAVES GUTTER OVERFLOW DETAIL
Scale - NTS

Stormwater Pit Detail
Scale: NTS



Stormfilter in OSD Tank Detail
Scale: nts

PENRITH CITY COUNCIL **music@link**

MUSIC-link Report

Project Details	Company Details
Project: 8 Linksview Rd, Leony	Company: Abel & Brown Pty. Ltd.
Report Report Date: 19/12/2018	Contact: Stuart Brown
Catchment Name: 8 Linksview Rd	Address: 21 Warung Street, Yagoona, N.S.W. 2199
Catchment Area: 0.179ha	Phone: 02 9709-5705
Impervious Area: 82.85%	Email: mail@abelandbrown.com.au
Rainfall Station: 67113 PENRITH	
Modeling Time-step: 6 Minutes	
Modeling Period: 1/01/1999 - 31/12/2008 11:54:00 PM	
Mean Annual Rainfall: 60mm	
Evapotranspiration: 1158mm	
MUSIC Version: 6.3.0	
MUSIC-link data Version: 6.31	
Study Area: Penrith	
Scenario: Penrith Development	

Treatment Train Effectiveness - Receiving Node

Node	Retention	Node Type	Number	Node Type	Number
Flow	16.5%	Rain Water Tank Node	2	Urban Source Node	8
TSS	87.6%	Sedimentation Basin Node	1		
TP	60.7%	Generic Node	1		
TN	50.0%	GPT Node	2		
GP	98.6%				

NOTE: A successful self-validation check of your model does not constitute an approved model by Penrith City Council. MUSIC-link now in MUSIC by eWater - leading software for modelling stormwater solutions.

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Passing Parameters

Node Type	Node Name	Parameter	Min	Max	Actual
GPT	EnviroPod 200 (O-Eqv)	H-Flow bypass rate (cum/med)	None	99	0.04
GPT	EnviroPod 200 (O-Eqv)	H-Flow bypass rate (cum/med)	None	99	0.04
Receiving	Receiving Node	% Load Reduction	None	16.5	
Receiving	Receiving Node	GP % Load Reduction	90	None	98.6
Receiving	Receiving Node	TN % Load Reduction	45	None	50.8
Receiving	Receiving Node	TP % Load Reduction	60	None	60.7
Receiving	Receiving Node	TSS % Load Reduction	85	None	87.6
Sedimentation	SF Chamber 6m	High Flow Bypass Out (ML/yr)	None	None	0
Urban	Driveway - 225m ² (100% Imp.)	Area Impervious (ha)	None	None	0.023
Urban	Driveway - 225m ² (100% Imp.)	Area Penurious (ha)	None	None	0.023
Urban	Driveway - 225m ² (100% Imp.)	Total Area (ha)	None	None	0.023
Urban	Driveway - 225m ² (100% Imp.)	Area Impervious (ha)	None	None	0.024
Urban	Driveway - 225m ² (100% Imp.)	Area Penurious (ha)	None	None	0.024
Urban	Driveway - 225m ² (100% Imp.)	Total Area (ha)	None	None	0.024
Urban	Landscape - 190m ² (100% Imp.)	Area Impervious (ha)	None	None	0.019
Urban	Landscape - 190m ² (100% Imp.)	Area Penurious (ha)	None	None	0.019
Urban	Landscape - 190m ² (100% Imp.)	Total Area (ha)	None	None	0.019
Urban	Landscape - 299m ² (100% Perv.)	Area Impervious (ha)	None	None	0
Urban	Landscape - 299m ² (100% Perv.)	Area Penurious (ha)	None	None	0.03
Urban	Landscape - 299m ² (100% Perv.)	Total Area (ha)	None	None	0.03
Urban	Roof - 121m ² (100% Imp.)	Area Impervious (ha)	None	None	0.012
Urban	Roof - 121m ² (100% Imp.)	Area Penurious (ha)	None	None	0
Urban	Roof - 121m ² (100% Imp.)	Total Area (ha)	None	None	0
Urban	Roof - 121m ² (100% Imp.)	Area Impervious (ha)	None	None	0.012
Urban	Roof - 22m ² (100% Imp.)	Area Impervious (ha)	None	None	0.002
Urban	Roof - 22m ² (100% Imp.)	Area Penurious (ha)	None	None	0.002
Urban	Roof - 22m ² (100% Imp.)	Total Area (ha)	None	None	0.002
Urban	Roof - 22m ² (100% Imp.)	Area Impervious (ha)	None	None	0.002
Urban	Roof - 22m ² (100% Imp.)	Area Penurious (ha)	None	None	0.002
Urban	Roof - 22m ² (100% Imp.)	Total Area (ha)	None	None	0.002
Urban	Roof - 627m ² (100% Imp.)	Area Impervious (ha)	None	None	0.063
Urban	Roof - 627m ² (100% Imp.)	Area Penurious (ha)	None	None	0
Urban	Roof - 627m ² (100% Imp.)	Total Area (ha)	None	None	0.063

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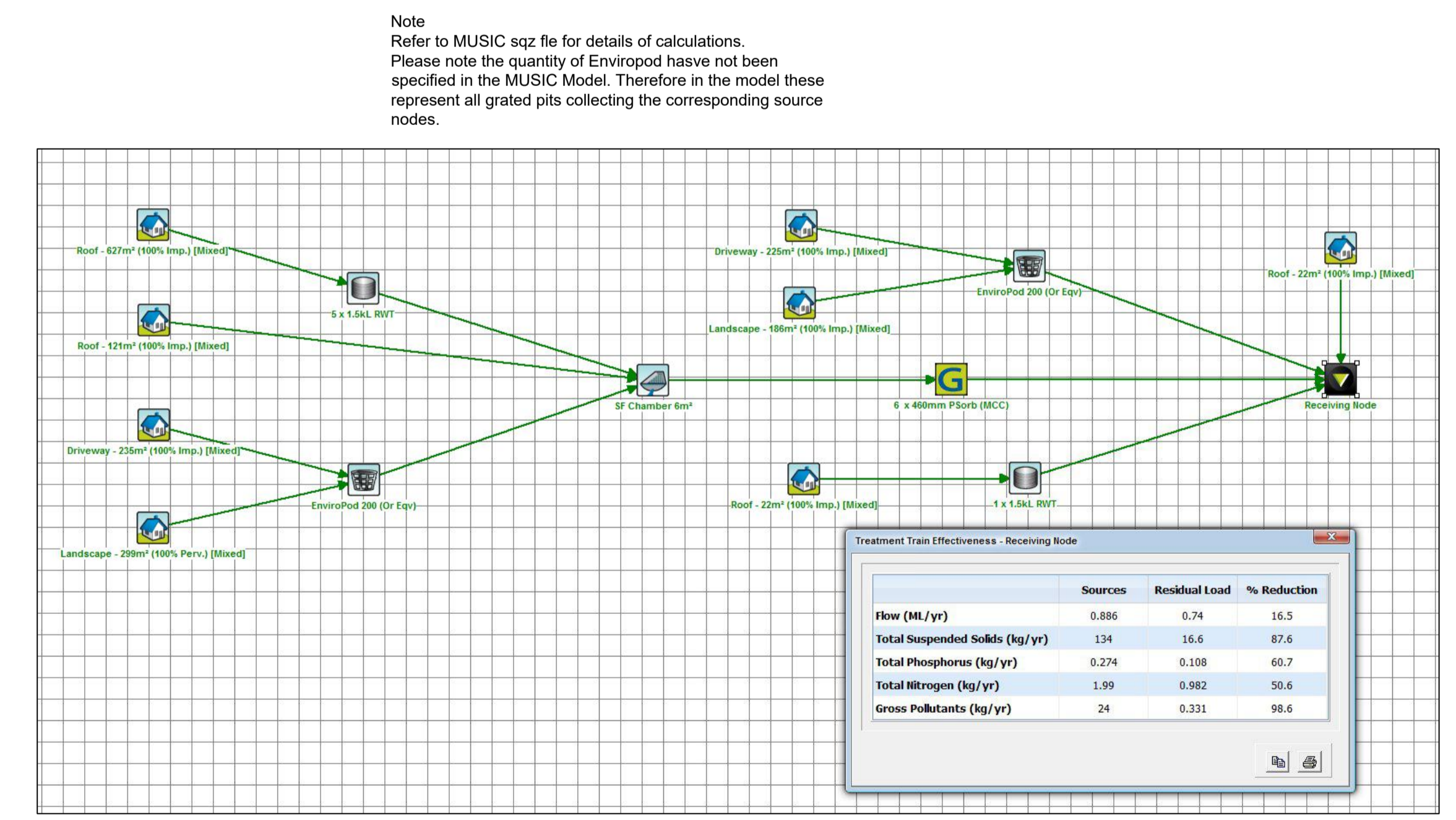
PENRITH CITY COUNCIL **music@link**

Falling Parameters

Node Type	Node Name	Parameter	Min	Max	Actual
Rain	1 x 1.5L RVT	% Reuse Demand Met	80	None	20.27
Rain	5 x 1.5L RVT	% Reuse Demand Met	80	None	50.27
Sedimentation	SF Chamber 6m	Notional Detention Time (hrs)	8	12	0.314
Sedimentation	SF Chamber 6m	Total Nitrogen - k (mg/l)	500	500	1
Sedimentation	SF Chamber 6m	Total Phosphorus - k (mg/l)	6000	6000	1
Sedimentation	SF Chamber 6m	Total Suspended Solids - k (mg/l)	8000	8000	1
Urban	Roof - 121m ² (100% Imp.)	Baseflow Total Nitrogen Mean (log mg/L)	0.11	0.11	0
Urban	Roof - 121m ² (100% Imp.)	Baseflow Total Nitrogen Standard Deviation (log mg/L)	0.12	0.12	0
Urban	Roof - 121m ² (100% Imp.)	Baseflow Total Phosphorus Mean (log mg/L)	-0.85	-0.85	0
Urban	Roof - 121m ² (100% Imp.)	Baseflow Total Phosphorus Standard Deviation (log mg/L)	0.19	0.19	0
Urban	Roof - 121m ² (100% Imp.)	Baseflow Total Suspended Solids Mean (log mg/L)	1.2	1.2	0
Urban	Roof - 121m ² (100% Imp.)	Baseflow Total Suspended Solids Standard Deviation (log mg/L)	0.17	0.17	0
Urban	Roof - 22m ² (100% Imp.)	Baseflow Total Nitrogen Mean (log mg/L)	0.11	0.11	0
Urban	Roof - 22m ² (100% Imp.)	Baseflow Total Nitrogen Standard Deviation (log mg/L)	0.12	0.12	0
Urban	Roof - 22m ² (100% Imp.)	Baseflow Total Phosphorus Mean (log mg/L)	-0.85	-0.85	0
Urban	Roof - 22m ² (100% Imp.)	Baseflow Total Phosphorus Standard Deviation (log mg/L)	0.19	0.19	0
Urban	Roof - 22m ² (100% Imp.)	Baseflow Total Suspended Solids Mean (log mg/L)	1.2	1.2	0
Urban	Roof - 22m ² (100% Imp.)	Baseflow Total Suspended Solids Standard Deviation (log mg/L)	0.17	0.17	0
Urban	Roof - 627m ² (100% Imp.)	Baseflow Total Nitrogen Mean (log mg/L)	0.11	0.11	0
Urban	Roof - 627m ² (100% Imp.)	Baseflow Total Nitrogen Standard Deviation (log mg/L)	0.12	0.12	0
Urban	Roof - 627m ² (100% Imp.)	Baseflow Total Phosphorus Mean (log mg/L)	-0.85	-0.85	0
Urban	Roof - 627m ² (100% Imp.)	Baseflow Total Phosphorus Standard Deviation (log mg/L)	0.19	0.19	0
Urban	Roof - 627m ² (100% Imp.)	Baseflow Total Suspended Solids Mean (log mg/L)	1.2	1.2	0
Urban	Roof - 627m ² (100% Imp.)	Baseflow Total Suspended Solids Standard Deviation (log mg/L)	0.17	0.17	0

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MUSIC Model
Scale: nts

MUSIC Link Report
Scale: nts

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