ALTERATIONS & ADDITIONS

at: 138 PRINCE ALFRED PARADE, NEWPORT

for: JAMIE CALDER

Architect: CplusC ARCHITECTURAL WORKSHOP P/L

Prepared By:

Consulting Engineers STRUCTURAL • CIVIL • STORMWATER • REMEDIAL

A.C.N. 076 121 616 A.B.N. 24 076 121 616

Sydney: Ph: (02) 9984 7000

Suite 207, 30 Fisher Road Dee Why N.S.W. 2099

Gold Coast: Ph: (07) 5631 4744

Suite 1, 30B Griffith Street, Coolangatta QLD 4225

E: nb@nbconsulting.com.au W: www.nbconsulting.com.au The copyright of these drawings remains with Northern Beaches Consulting Engineers Pty Ltd. Trading as NB Consulting Engineers

DRAWING SCHEDULE:

DOI A STORMWATER DRAINAGE GENERAL NOTES

DO2 A LOWER GROUND FLOOR STORMWATER DRAINAGE PLAN

GROUND FLOOR STORMWATER DRAINAGE PLAN

DO4 A STUDIO LEVEL STORMWATER DRAINAGE PLAN

DO5 A GARAGE LEVEL STORMWATER DRAINAGE PLAN

ROOF STORMWATER DRAINAGE PLAN

DIO A STORMWATER DRAINAGE DETAILS SHEET

ISSUED FOR D.A. SUBMISSION ONLY NOT FOR CONSTRUCTION

IF IN DOUBT ASK

Engineel Consulting 2501017

REV. A - 03.04.2025

2. DO NOT SCALE FROM THESE DRAWING. 3. ALL DIMENSIONS ARE TO BE VERIFIED ON SITE BY THE BUILDER BEFORE COMMENCING WITH ASSOCIATED WORK.

STORMWATER NOTES:

AI. ALL WORKS SHALL BE CARRIED OUT IN ACCORDANCE WITH THE CURRENT NATIONAL CONSTRUCTION CODE (NCC), AUSTRALIAN STANDARDS (LATEST VERSION), THE REQUIREMENTS OF THE LOCAL COUNCIL AND ANY APPLICABLE AUTHORITIES.

A2. ALL LEVELS SHOWN ARE TO THE AUSTRALIAN HEIGHT DATUM (AHD) UNLESS NOTED OTHERWISE. A3. THE LOCATION OF ALL DRAINAGE ELEMENTS ARE SHOWN INDICATIVELY BASED ON AVAILABLE SURVEY OR OTHER INFORMATION. ALL DRAINAGE ELEMENTS ARE TO BE INSTALLED WITH CONSIDERATION TO SITE CONSTRAINTS AND THE INTENT OF THE DRAINAGE CONCEPT.

A4. ANY MATERIAL VARIATIONS TO THE DRAINAGE CONCEPT OR DETAILED STORMWATER ELEMENTS MUST BE APPROVED BY NORTHERN BEACHES CONSULTING ENGINEERS PTY LTD PRIOR TO COMMENCEMENT. A5. ANY EXCAVATION OR TRENCHING FOR SERVICES ADJACENT TO A STRUCTURE OR PROPERTY BOUNDARY MUST NOT ENCROACH ON THE 'ZONE OF INFLUENCE', REFER TO THE NCC FOR FURTHER

A6. ALL LEVELS SHOWN ON THIS PLAN MUST BE COORDINATED WITH ALL RELEVANT INFORMATION, INCLUDING THE ARCHITECTURAL, CIVIL & STRUCTURAL ENGINEERING PLANS. WHERE A LEVEL IS SHOWN WITHIN A RAMPED AREA (EG A PIT GRATE), THE LEVEL IS APPROXIMATE AND MAY NEED TO BE ADJUSTED TO ACCOMODATE THE SLOPE.

A7. ANY DESIGN CLASHES, INCLUDING WITH SERVICES, STRUCTURE CONFIGURATION OR FINISHED LEVELS MUST BE COMMUNICATED WITH THE PROJECT STORMWATER ENGINEER NOMINATED ON THIS PLAN PRIOR TO CONSTRUCTION.

GENERAL CONSTRUCTION NOTES:

BI. CONTRACTORS TO LOCATE ALL EXISTING SERVICES PRIOR TO EXCAVATION AND NOTIFY ENGINEER OF ANY POTENTIAL CLASHES WITH THE PROPOSED STORMWATER DRAINAGE SYSTEM.

B2. ANY ELEMENTS OF THE EXISTING STORMWATER SYSTEM WHICH ARE PROPOSED TO BE RETAINED MUST BE INSPECTED AND APPROVED BY AN ENGINEER PRIOR TO CONSTRUCTION AS BOTH HAVING ADEQUATE CAPACITY TO CATER FOR THE RUNOFF DIRECTED TO IT AND BEING IN ADEQUATE CONDITION FOR USE.

B3. EXISTING STORMWATER SYSTEM ALSO TO BE INSPECTED BY A SUITABLY QUALIFIED PLUMBER PRIOR TO CONSTRUCTION AND UPGRADED AS REQUIRED IN ACCORDANCE WITH AS3500.3.

B4. CARE SHOULD BE TAKEN WHEN UNDERTAKING WORKS IN THE VICINITY OF TREES NOT TO DISTURB THE TREE ROOT SYSTEM. HAND DIGGING OF TRENCHES MAY BE REQUIRED SUBJECT TO THE PROJECT ARBORISTS REQUIREMENTS. REFER TO THE ARBORIST REPORT FOR EXCAVATION REQUIREMENTS

SURROUNDING PROTECTED TREE ROOT ZONES B5. SWIMMING POOL SURCHARGE OVERFLOW TO BE CONNECTED VIA GRAVITY TO THE SEWER IN ACCORDANCE WITH AS3500. DETAILS AND CERTIFICATION BY OTHERS.

B6. EXTENT, ALIGNMENT, DEPTH AND CONDITION OF ANY COUNCIL STORMWATER PIPELINE WITHIN A DEVELOPMENT SITE MUST BE VERIFIED PRIOR TO CONSTRUCTION AND THE ENGINEER MUST BE NOTIFIED UPON VERIFICATION. ANY NEW CONNECTION TO A COUNCIL STORMWATER PIPELINE WILL BE SUBJECT TO COUNCIL APPROVAL AND MUST BE INSTALLED IN ACCORDANCE WITH THE LOCAL COUNCIL SPECIFICATIONS. B7. ALL UNDERGROUND CONFINED SPACES MUST PROVIDE SAFE AND SUFFICIENT MAINTENANCE ACCESS POINTS IN ACCORDANCE WITH WORK HEALTH AND SAFETY BILL 2011, WORK HEALTH AND SAFETY REGULATIONS 2011 AND AUSTRALIAN STANDARDS AS 2865-2009 CONFINED SPACES. ADEQUATE

VENTILATION POINTS MUST BE PROVIDED WHERE GAS BUILD UP IS LIKELY. B8. THE PROJECT ENGINEER MUST BE NOTIFIED IF ANY CHANGES ARE PROPOSED DURING CONSTRUCTION TO WHAT IS SHOWN ON THE LATEST STORMWATER MANAGEMENT PLAN PREPARED BY NBCE. THIS MUST BE CO-ORDINATED AND APPROVED BY NBCE. IF NBCE ARE NOT NOTIFIED OF ANY CHANGES DURING

CONSTRUCTION, THIS MAY HINDER FINAL CERTIFICATION. B9. NBCE MUST CONDUCT A FINAL INSPECTION OF ANY INSTALLED STORMWATER WORKS PRIOR TO ISSUE OF THE FINAL HYDRAULIC CERTIFICATION.

BIO. THE PROJECT BUILDER MUST CONTACT THE PROJECT STORMWATER ENGINEER FOR SITE INSPECTIONS IN ACCORDANCE WITH THE SITE INSPECTION SCHEDULE SHOWN ON THIS DRAWING, U.N.O. IF NBCE DO NOT INSPECT THE ITEMS DETAILED ON THE SITE INSPECTION SCHEDULE, THIS MAY AFFECT THE FINAL

HYDRAULIC CERTIFICATION. PIPEWORK INSTALLATION:

- CI. ALL PIPES TO BE MINIMUM 100mm & UNLESS NOTED OTHERWISE.
- C2. ALL PIPES TO BE UPVC SEWER GRADE TO AS 1254 UNLESS NOTED OTHERWISE. C3. ALL PIPES TO BE LAYED AT 1 % MINIMUM GRADE UNLESS NOTED OTHERWISE.
- C4. ALL CONNECTIONS INTO EXISTING PIPES MUST BE MADE IN THE DIRECTION OF FLOW
- C5. ANY NEW UPVC CONNECTIONS INTO EXISTING R.C. PIPES MUST BE MADE INTO THE TOP HALF OF THE PIPE USING A FLOWCON CONNECTION FITTING U.N.O.
- C6. ALL PIPES SHALL BE LAID ON A 75mm SAND BED, COMPACTED TO 100% S.M.D.D. BELOW PAVEMENTS. (NO COMPACTION REQUIRED BELOW LANDSCAPING) COVER TO SURFACE FROM TOP OF PIPE TO BE 300mm MINIMUM. BACKFILL TO BE ADEQUATELY CONSOLIDATED AROUND PIPES BY METHOD OF RAMMING AND WATERING IN. TRENCHES TO BE FILLED WITH NO-FINES GRANULAR MATERIAL AS SPECIFIED.
- C7. ALL EXISTING EARTHENWARE PIPES TO BE UPGRADED TO UPVC. C8. MINIMUM PIPE COVER TO ALL IN-GROUND PIPEWORK SHALL BE CARRIED OUT IN ACCORDANCE WITH TABLE 6.2.5 - AS3500.3 (2021).

C9. ALL SUSPENDED PIPE FIXINGS ARE TO BE CARRIED OUT IN ACCORDANCE WITH AS2032. CIO. ENSURE THAT ALL STORMWATER PITS AND PIPES ARE LOCATED CLEAR FROM TREE ROOT SYSTEMS.

CIL ALL PIPEWORK MUST BE INSTALLED WITHIN THE SITE BOUNDARY OF THE DEVELOPMENT SITE, ANY NEW OR EXISTING PIPEWORK EXTENDING THROUGH PRIVATE PROPERTY BEYOND THE BOUNDARY OF THE DEVELOPMENT SITE MUST BE CONTAINED SOLELY WITHIN A DRAINAGE EASEMENT. IF NO DRAINAGE EASEMENT EXISTS, A NEW DRAINAGE EASEMENT MUST BE SOUGHT AND REGISTERED PRIOR TO UTILISING OR INSTALLING PIPEWORK THROUGH NEIGHBOURING PROPERTIES. CONTACT THE ENGINEER IF A DRAINAGE EASEMENT CANNOT BE OBTAINED.

CI2. THE PROJECT STORMWATER ENGINEER MUST BE NOTIFIED AND INSPECT ALL IN-GROUND PIPEWORK AND CONNECTIONS PRIOR TO BACKFILLING. IF ENGINEER DOES NOT INSPECT THE IN-GROUND PIPEWORK, THIS MAY AFFECT THE FINAL HYDRAULIC CERTIFICATION. NBCE WILL NOT APPROVE PIPE GRADES. ALL

PIPE GRADES MUST BE VERIFIED BY A SUITABLY QUALIFIED PERSON. CI3. PIPE ANCHOR BLOCKS TO BE INSTALLED FOR ALL PVC PIPEWORK WHEN THE GRADIENT EXCEEDS 1:5 IN ACCORDANCE WITH AS 3500.3.

ROOF DRAINAGE:

SPECIFICATION.

- DI. ALL DOWN PIPES TO BE 100mm & UNLESS NOTED OTHERWISE
- D2. DOWN PIPE LOCATIONS ARE INDICATIVE ONLY. LOCATIONS TO BE CONFIRMED WITH ARCHITECT PRIOR TO COMMENCEMENT OF WORK.
- D3. PROVIDE CLEANING EYES AT ALL DOWNPIPES.
- D4. GUTTER GUARDS MUST BE INSTALLED ON ALL GUTTERS UNLESS NOTED OTHERWISE. D5. ALL EAVES GUTTER AND VALLEY GUTTER SYSTEMS MUST BE INSTALLED IN ACCORDANCE WITH

D6. ALL BOX GUTTER SYSTEMS MUST BE INSTALLED STRICTLY IN ACCORDANCE WITH THE DETAILS SHOWN ON THE APPROVED STORMWATER MANAGEMENT PLAN. IF NO DETAILS ARE SHOWN, THE BOX GUTTER SYSTEM MUST BE INSTALLED IN ACCORDANCE WITH AS3500.3. IF ANY CHANGE TO THE BOX GUTTER SYSTEM CONFIGURATION IS PROPOSED, THE ENGINEER MUST BE NOTIFIED FOR A RE-DESIGN. IF THE INSTALLED BOX GUTTER DOES NOT STRICTLY COMPLY WITH THE DESIGN DETAILED ON THE STORMWATER MANAGEMENT PLAN, CERTIFICATION OF THE HYDRAULIC SYSTEM MAY BE REFUSED. D7. ALL GREEN ROOFS, PEBBLED ROOFS AND PLANTERS WITH A CONCRETE BASE MUST BE WATERPROOFED AND HAVE DRAINAGE CELL INSTALLED IN ACCORDANCE WITH THE MANUFACTURERS



Consulting Engineers

STRUCTURAL • CIVIL • STORMWATER • REMEDIAL

D8. IF ANY VALLEY GUTTER SHOWN ON THIS PLAN IS BELOW A 12.5-DEGREE ROOF PITCH WITH A CATCHMENT AREA ABOVE 20m? A CUSTOM VALLEY GUTTER, OR BOX GUTTER WILL BE REQUIRED. IF THE ROOF PITCH REQUIREMENT CANNOT BE ACHIEVED, THE PROJECT ENGINEER MUST BE NOTIFIED FOR DESIGN DETAILS AND THE GUTTER SYSTEM MUST BE INSTALLED IN ACCORDANCE WITH AS3500.3 PRIOR

D9. ADEQUATE FLASHING WILL BE REQUIRED TO DIVERT FLOWS AROUND SKYLIGHTS. FLASHING WORKS TO BE CARRIED OUT BY A SUITABLY QUALIFIED PERSON AND BE INSTALLED IN ACCORDANCE WITH THE RELEVANT AUSTRALIAN STANDARDS AND NCC REQUIREMENTS.

DIO. ALL EAVES GUTTERS MUST BE MINIMUM 150 HALF ROUND GUTTERS (WITH A CROSS-SECTIONAL AREA OF 9200mm?) OR AN APPROVED EQUIVALENT, UNO. ALL EAVES GUTTER FALLS MUST BE DIRECTED TO THE NOMINATED DOWNPIPES AS SHOWN ON THE STORMWATER MANAGEMENT PLAN. THE PROJECT STORMWATER ENGINEER MUST BE NOTIFIED IF ANY CHANGES ARE PROPOSED OR THE ABOVE CANNOT BE ACHIEVED PRIOR TO CONSTRUCTION.

DII. ALL EAVES GUTTERS AND ASSOCIATED DOWNPIPES MUST BE INSTALLED IN ACCORDANCE WITH TABLE 3.5.2, AS3500.3 (2021), UNLESS NOTHED OTHERWISE.

DI2. NOTIFY THE PROJECT ENGINEER IF THE MINIMUM HEAD PRESSURE HEIGHT (AS SHOWN ON THIS PLAN) BETWEEN THE INVERT OF THE GUTTER AND INVERT OF THE CHARGED SYSTEM OUTLET CANNOT BE ACHIEVED.

EL ALL STORMWATER PITS MUST BE INSTALLED IN ACCORDANCE WITH AS3500.3.

NOT REQUIRE A SUMP.

E2 ALL CONCRETE PITS TO BE DESIGNED BY STRUCTURAL ENGINEER E3. MINIMUM INTERNAL DIMENSIONS FOR STORMWATER AND INLET PITS TO BE IN ACCORDANCE WITH TABLE 7.5.2.1, AS3500.3 (2021)

E4. ALL PITS GREATER THAN 1200mm DEEP SHALL HAVE STEP IRONS INSTALLED. STEP IRON INSTALLATION MUST BE IN ACCORDANCE WITH THE RELEVANT AUSTRALIAN STANDARDS E5. THE BOUNDARY OR SILT ARRESTOR PIT MUST INCORPORATE A SUMP OF MINIMUM 200mm DEPTH BELOW THE INVERT OF THE OUTLET PIPE AND A MAXI-MESH SCREEN AS PER LOCAL COUNCIL AND THE AUSTRALIAN STANDARD REQUIREMENTS. HOWEVER, UNLESS SPECIFICALLY REQUIRED BY COUNCILS POLICY OR IF THE SITE CONSISTS OF A CLAY OR ROCK SUBGRADE, ALL OTHER DRAINAGE PITS WILL

E6. ALL STORMWATER PITS TO BE LOCATED AT LOW POINTS TO PREVENT PONDED WATER. E7. FOR STORMWATER PITS LOCATED BELOW THE WATER TABLE, CUT INTO ROCK OR IN POORLY DRAINED SOILS, THE PIT SUMP MAY BE FILLED WITH MORTAR AND SCREEDED TOWARDS THE OUTLET AT MINIMUM 1% FALL, SUBJECT TO THE ENGINEERS APPROVAL.

E8. A STAINLESS STEEL OR GALVANISED MESH SCREEN (MAXI-MESH RH3030 OR APPROVED EQUIVALENT) MUST BE INSTALLED OVER OUTLETS WITHIN ALL SURFACE PITS AND ORIFICE PLATES, UNO. THE TRASH SCREEN AREA MUST BE A MINIMUM OF 50 TIMES THE ORIFICE AREA FOR ALL ORIFICES BELOW 150mm DIAMETER. IF ABOVE 150mm, TRASH SCREEN AREA MAY BE REDUCED TO 20 TIMES THE ORIFICE AREA. ALL TRASH SCREENS MUST REMAIN A DISTANCE OF 1.5 TIMES THE ORIFICE AREA AWAY FROM THE OUTLET STRUCTURE, OR 200mm, WHICHEVER IS GREATER.

E9. 20mm WEEP HOLES TO BE INSTALLED AT 200mm CENTRES AT THE BASE OF ALL SURFACE PITS UNLESS FOUNDED ON A ROCK FOUNDATION.

SUBSOIL DRAINAGE: FI. ALL SUBSOIL DRAINAGE TO BE INSTALLED AS REQUIRED IN ACCORDANCE WITH AS3500.3 (SPECIFICALLY SECTION 6, 7 AND APPENDIX L) AND THE NCC.

F2. INSTALLATION OF SUBSOIL DRAINAGE LINES IS GENERALLY REQUIRED WHERE SUBSURFACE WATER MOVEMENT COULD DAMAGE BUILDINGS OR CAUSE LOSS OF AMENITY THROUGH THE BUILD-UP OF EXCESSIVE MOISTURE OR LATERAL WATER PRESSURE. THIS INCLUDES ALONG WALLS THAT IMPEDE THE NATURAL FLOW OF GROUNDWATER, ON THE UPHILL SIDE OF CUT AND FILL SITES, ADJACENT TO DEEF FOOTINGS, BEHIND RETAINING WALLS AND ADJACENT TO BASEMENT WALLS. SUBSOIL DRAINAGE IS GENERALLY ALSO REQUIRED IN SHALLOW LANDSCAPED AREAS OVER ROCK OR POORLY DRAINED SOILS TO PREVENT OVERLY SATURATED LANDSCAPED AREAS.

F3. THE INSTALLATION OF SUBSOIL DRAINAGE MAY REQUIRE TRENCHING THROUGH ROCK. F4. ALL SUBSOIL LINES ARE TO BE 100mm uPVC SLOTTED PIPE (UNSOCKED), LAID AT (MIN.) 0.5% FALL

F5. THE SUBSOIL LINE IS TO BE SURROUNDED BY SELECT FILTER MATERIAL, GENERALLY 10-20mm DIAMETER AGGREGATE.

F6. THE TRENCH SHALL BE SIZED TO PROVIDE A MINIMUM 50mm BEDDING AND 100mm COVER ALL AROUND THE SUBSOIL LINE, GENERALLY MINIMUM 300mm WIDE X 300mm DEEP. THE TRENCH IS TO BE WRAPPED ALL-ROUND IN NON-WOVEN, GEOTEXTILE FABRIC OF STRENGTH CLASS A, WITH SUFFICIENT OVERLAP (LESSER OF TRENCH WIDTH OR 500mm)

F7. WHERE THE IN-SITU SOILS HAVE A GRAIN SIZE SMALLER THAN THE GEOTEXTILE FABRIC, COURSE WASHED-SAND SHOULD BE USED AS A FILTER TO PREVENT BLOCKAGE OF THE GEOFABRIC.

F8. THE BACKFILL LAYER OVER THE TRENCH SHALL BE NO-FINES COURSE WASHED-SAND. WHERE LANDSCAPED AREAS ARE PROPOSED OVER THE TRENCH, THE TOP 300mm OF BACKFILL MAY BE MIXED WITH UP TO 20% ORGANIC MATTER

THE PIT OUTLET UNO. THE PROJECT BUILDER IS TO IMPLEMENT APPROPRIATE MEASURES TO PREVENT SUBSOIL LINE BLOCKAGE OR INFESTATION OF VERMIN.

F9. ALL SUBSOIL LINES ARE TO DISCHARGE INTO A GRATED PIT, AT A LEVEL MINIMUM 50mm ABOVE

FIO. THE HIGH-END OF THE SUBSOIL LINE IS TO BE TURNED UP AT 45° AND TERMINATE AT GROUND LEVEL WITH AN INSPECTION CAP TO ENABLE FUTURE FLUSH OUT AND MAINTENANCE FII. 100mm \$\psi\$ x 3000mm LONG TAIL OUT SUBSOIL LINE TO BE PROVIDED ON THE UPSTREAM SIDE OF ALL LARGE PITS OR IN AREAS WITH HIGH SEEPAGE FLOWS. SUBSOIL LINE TO BE COVERED WITH GEOTEXTILE FILTER SOCK FOR THE FULL LENGTH AND END COVERED. BACKFILL MUST BE IN NO-FINES COARSE WASHED-SAND.

ISSUED FOR D.A.

SUBMISSION ONLY

CHARGED SYSTEM:

GI. ALL PIPEWORK IN A CHARGED SYSTEM TO BE 100mm \$\phi\$ uPVC PRESSURE OR SEWER GRADE PIPES WITH ALL JOINTS PRESSURE SEALED TO A MINIMUM OF 1,000mm (UNLESS NOTED OTHERWISE) ABOVE THE INLET OF THE DISCHARGE POINT. ALL JOINTS TO BE SOLVENT WELDED IN ACCORDANCE WITH THE

G2. ALL CHARGED SYSTEMS MUST HAVE A BLEED OUT LINE AT THE LOW POINT IN THE CHARGED SYSTEM WHICH MUST BE CONNECTED TO A FLUSH OUT PIT VIA GRAVITY. THE BLEED LINE MUST BE MAINTAINED AND REGULARLY FLUSHED OUT.

ON-SITE DETENTION NOTES:

HI. ORIFICE PLATE MUST BE INSTALLED PRIOR TO INSTALLATION OF THE ROOF DRAINAGE SYSTEM AND CONNECTION OF THE SITE STORMWATER SYSTEM TO THE ON-SITE DETENTION TANK.

H2. THE HEIGHT DIFFERENCE (H*) BETWEEN THE ORIFICE CENTRELINE AND THE TOP WATER LEVEL OF THE ON-SITE DETENTION TANK MUST BE CONSTRUCTED IN ACCORDANCE WITH THE STORMWATER MANAGEMENT PLAN. IF H* CHANGES DUE TO SITE CONDITIONS, THE ENGINEER MUST BE NOTIFIED FOR AN ORIFICE PLATE SIZE ADJUSTMENT.

H3. ANY PIPE FITTINGS FOR BELOW GROUND ON-SITE DETENTION TANKS MUST BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURERS SPECIFICATIONS.

H4. ACCESS HATCHES MUST BE INSTALLED AT BOTH ENDS OF THE ON-SITE DETENTION TANK. IF THE DEPTH OF THE TANK IS GREATER THAN 1200mm, STEPS IRONS MUST BE INSTALLED IN ACCORDANCE WITH THE RELEVANT AUSTRALIAN STANDARDS.

H5. ABOVE GROUND ON-SITE DETENTION BASINS MUST NOT EXCEED A PONDING DEPTH OF 300mm, UNLESS NOTED OTHERWISE. THE BUILDER MUST ENSURE THAT THE REQUIRED DETENTION VOLUME IS ACHIEVED DURING CONSTRUCTION. A WORK-AS-EXECUTED PLAN DETAILING THE FINISHED LEVELS AND VOLUME OF THE ON-SITE DETENTION BASIN MUST BE CARRIED OUT AT THE COMPLETION OF WORKS BY A REGISTERED SURVEYOR AND APPROVED BY THE ENGINEER PRIOR TO FINAL CERTIFICATION.

H6. IF ORIFICE HEIGHT (H*) IS SUBJECT TO CHANGE, THE PROJECT ENGINEER MUST BE NOTIFIED FOR AN ORIFICE PLATE ADJUSTMENT. H7. PONDING DEPTHS IN LANDSCAPED AREAS MUST NOT EXCEED 300mm UNDER THE DESIGN CONDITIONS

FOR ALL RESIDENTIAL DEVELOPMENTS. IF THE PONDING DEPTH EXCEEDS 300mm, POOL FENCING MUST BE DESIGN AND CONSTRUCTED IN ACCORDANCE WITH THE SWIMMING POOLS ACT 1992. H8. THE MAXIMUM SLOPE AND BATTERS SHOULD NOT EXCEED 1 IN 4, UNO. THE MINIMUM SLOPE IN

LANDSCAPED BASINS MUST BE 1.5%, WITH ABSOLUTE MINIMUM BEING 1%, UNO. NO PLANTING IS ALLOWED WITHIN THE LANDSCAPED BASIN AREA.

H9. SUB-SOIL DRAINAGE MUST BE INSTALLED WITHIN LANDSCAPED BASIN AREA IN ACCORDANCE WITH AS3500.3 AND DIRECTED TO THE SITE STORMWATER SYSTEM TO PREVENT PROLONGED SATURATED GROUND CONDITIONS.

SURFACE DRAINAGE:

JI. WHEN LAND FALLS TOWARDS A BUILDING, INCLUDING LAND UPSLOPE OF THE PROPERTY BOUNDARY, GROUND SURFACE LEVELS ADJACENT TO THE BUILDING ARE TO BE REGRADED SUCH THAT THE FIRST METRE HAS MINIMUM 50mm FALL AWAY FROM THE BUILDING, GENERALLY IN ACCORDANCE WITH THE NCC. J2. ANY NEW DEVELOPMENT WORKS MUST NOT CREATE ANY TRAPPED SURFACE AREAS. IN SUCH CASES WHERE TRAPPED AREAS EXIST, SWALE DRAINS OR GRATED PITS WITH PIPED OUTLETS OF ADEQUATE CAPACITY MAY BE REQUIRED TO ROUTE RUNOFF AROUND THE BUILDING TO AN APPROVED DISCHARGE POINT. IF THE TRAPPED AREA IS BELOW THE NATURAL SURFACE LEVEL, A PUMP OUT SYSTEM MAY BE REQUIRED. IN EITHER CASE, THE PROJECT ENGINEER MUST BE CONTACTED FOR DESIGN DETAILS (AS REQUIRED) PRIOR TO CONSTRUCTION.

J3. BUILDER TO PROVIDE A MINIMUM 100mm WIDE x 30mm HIGH OR 50mm DIA OVERFLOW FOR EVERY 6m OF EXPOSED AREA THAT IS TRAPPED OR SURROUNDED BY HOBS/BALUSTRADES/WALLS/ETC. THE FULL OVERFLOW DEPTH MUST BE LOCATED BELOW ANY ADJACENT INTERNAL FLOOR LEVELS OR OPENINGS TO PROTECT AGAINST WATER INGRESS DUE TO BLOCKAGE OF THE PRIMARY OUTLET(S). THE OVERFLOW MUST BE FREE DRAINING TO THE LEGAL POINT OF DISCHARGE.

J4. ALL INTERNAL FINISHED FLOOR LEVELS MUST BE A MINIMUM 50mm ABOVE ALL ADJACENT PAVED EXTERNAL LEVELS AND 150mm ABOVE ALL ADJACENT PERVIOUS EXTERNAL LEVELS, U.N.O. IMMEDIATELY ADJACENT EXTERNAL AREAS (WITHIN IM OF INTERNAL AREAS) MUST SLOPE AWAY FROM THE DWELLING AT A MINIMUM 2.5% FALL. IF ANY ASPECT IS UNACHIEVABLE, NBCE MUST BE NOTIFIED FOR ALTERNATIVE DRAINAGE DETAILING, IF APPLICABLE.

J5. ALL TRAPPED AREAS REQUIRE BOTH PRIMARY DISCHARGE & EMERGENCY (SECONDARY) DISCHARGE PROVISIONS IN CASE THE PRIMARY DISCHARGE BLOCKS. THIS MUST BE COORDINATED WITH THE PROJECT HYDRAULIC ENGINEER PRIOR TO CONSTRUCTION.

NORTHERN BEACHES COUNCIL - REGION 1 ON-SITE DETENTION SYSTEM CALCULATION SHEET

ADDRESS: 138 PRINCE ALFRED PARADE, NEWPORT

ALL WORKS IN ACCORDANCE WITH NORTHERN BEACHES COUNCIL'S WATER MANAGEMENT FOR DEVELOPMENT POLICY

DEVELOPMENT TYPE ALTERATIONS AND ADDITIONS REGION

SITE DETAILS

INCREASE

TOTAL SITE AREA

(48% OF SITE) PRE DEVELOPMENT IMPERVIOUS AREA (49% OF SITE) POST DEVELOPMENT IMPERVIOUS AREA

OSD REQUIREMENTS

DEVELOPMENT IS AN ALTERATIONS AND ADDITIONS DEVELOPMENT WITH A NEGLIGIBLE INCREASE IN IMPERVIOUS AREA AND AN ASSUMED EXISTING LEVEL SPREADER WHICH DISCHARGES TO PITTWATER BAY WATERWAY, THEREFORE NO OSD IS REQUIRED.

OSD STORAGE REQUIREMENT

NIL m (NIL m PROVIDED) OSD VOLUME REQUIRED

RAINWATER REUSE STORAGE REQUIREMENT

NIL m 3 (TBC m PROVIDED) RAINWATER 'BASIX' REQUIRED

OUTLET CONTROL

METHOD OF DISCHARGE LEVEL SPREADER TO WATER COURSE

BEFORE YOU DIG NOTE:

NO INVESTIGATION OF UNDERGROUND SERVICES HAS BEEN MADE. ALL RELEVANT AUTHORITIES SHOULD BE NOTIFIED PRIOR TO ANY EXCAVATION ON OR NEAR THE SITE DEVELOPERS # EXCAVATORS MAY BE HELD FINANCIALLY RESPONSIBLE BY THE ASSET OWNER SHOULD THEY DAMAGE UNDERGROUND NETWORKS.

CARELESS DIGGING CAN: - CAUSE DEATH OR SERIOUS INJURY TO WORKERS AND THE

IS REPAIRED

GENERAL PUBLIC

- DELAY PROJECT COMPLETION TIMES WHILE THE DAMAGE

- INCONVENIENCE USERS OF ELECTRICITY, GAS, WATER AND COMMUNICATIONS - LEAD TO CRIMINAL PROSECUTION AND DAMAGES CLAIMS

- CAUSE EXPENSIVE FINANCIAL LOSSES TO BUSINESS

- CUT OFF EMERGENCY SERVICES

STORMWATER INSPECTION SCHEDULE					
INSPECTION ITEMS	STAGE OF CONSTRUCTION				
IN-GROUND PIPEWORK	PRIOR TO BACKFILL				
IN-GROUND INFILTRATION/DISPERSION TRENCHES	PRIOR TO BACKFILL				
IN-GROUND PREFABRICATED TANKS	PRIOR TO CONCRETE POUR/BACKFILL				
PIPEWORK CAST-IN SLABS	PRIOR TO CONCRETE POUR				
BOX GUTTERS	POST INSTALLATION WITH SAFE ROOF ACCESS MADE AVAILABLE				
ABOVE GROUND PIPEWORK + FINISHED SURFACE LEVELS	FINAL CERTIFICATION				

STORMMATER INSPECTION SCHEDULE						
INSPECTION ITEMS	STAGE OF CONSTRUCTION					
IN-GROUND PIPEWORK	PRIOR TO BACKFILL					
IN-GROUND INFILTRATION/DISPERSION TRENCHES	PRIOR TO BACKFILL					
IN-GROUND PREFABRICATED TANKS	PRIOR TO CONCRETE POUR/BACKFILL					
PIPEWORK CAST-IN SLABS	PRIOR TO CONCRETE POUR					
BOX GUTTERS	POST INSTALLATION WITH SAFE ROOF ACCESS MADE AVAILABLE					
ABOVE GROUND PIPEWORK + FINISHED SURFACE LEVELS	FINAL CERTIFICATION					
	•					

NOT FOR IF IN DOUBT ASK CONSTRUCTION DOCUMENT CERTIFICATION Date: 03.04.2025 Michael Wachjo B.E.(Civil), MIEAust., PRE, DEP. 03.04.2025 ISSUED FOR DA SUBMISSION ONLY - NOT FOR CONSTRUCTION (Director NB Consulting Engineers) Description: The copyright of this drawing remains with Issue: NB Consulting Engineers

Consulting Engineers

STRUCTURAL • CIVIL • STORMWATER • REMEDIAL

Architect: A.C.N. 076 121 616 A.B.N. 24 076 121 616

Sydney: Ph: (02) 9984 7000 Unit 11, 1 Vuko Place, Warriewood NSW 2102 Gold Coast: Ph: (07) 5631 4744 Suite 1, 30B Griffith Street, Coolangatta QLD 4225 E: nb@nbconsulting.com.au W: www.nbconsulting.com.au

CplusC ARCHITECTURAL WORKSHOP P/L

Client:

JAMIE CALDER

ALTERATIONS & ADDITIONS 138 PRINCE ALFRED PARADE, NEWPORT

STORMWATER DRAINAGE

GENERAL NOTES

Design: SAR

Drawing No:

90

90

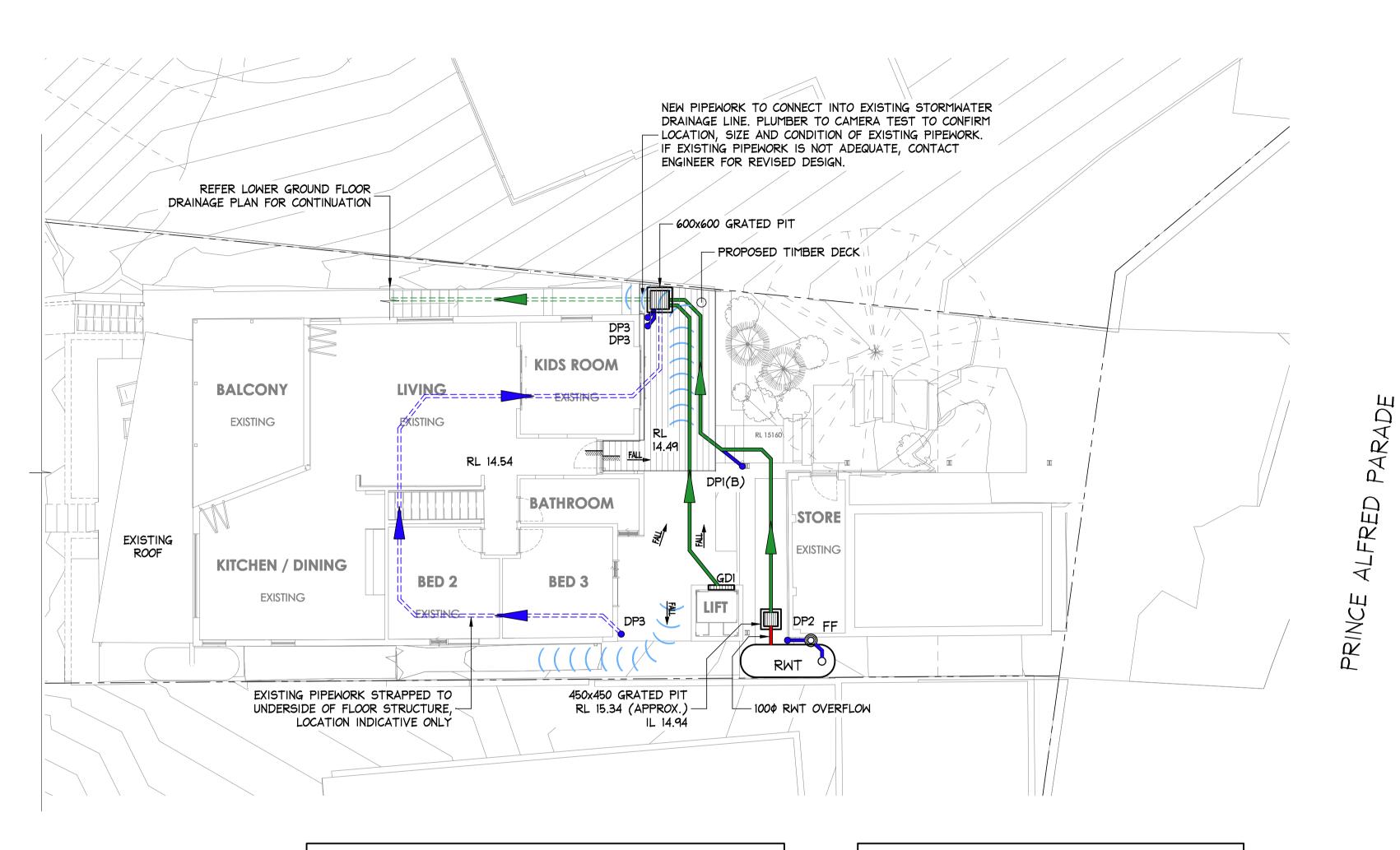
Drawn: LS

NOTES:

- 1. THIS DRAWING IS NOT TO BE USED FOR CONSTRUCTION IF THE ISSUE DATE PRECEDES THE ISSUE DATE ON THE ARCHITECTURAL DRAWINGS.
- 2. DO NOT SCALE FROM THIS DRAWING.
- COMMENCING WITH ASSOCIATED WORK



- 1. THIS DRAWING IS NOT TO BE USED FOR CONSTRUCTION IF THE ISSUE DATE PRECEDES THE ISSUE DATE ON THE ARCHITECTURAL DRAWINGS.
- 2. DO NOT SCALE FROM THIS DRAWING.
- 3. ALL DIMENSIONS ARE TO BE VERIFIED ON SITE BY THE BUILDER BEFORE COMMENCING WITH ASSOCIATED WORK.
- 4. FOR GENERAL NOTES REFER TO DRAWING NUMBER: DOI.



LEGEND 125mm \$\phi\$ CHS DOWNPIPE TO CONVERT TO 100mm \$\phi\$ PVC DPI • PIPE IN GROUND, TO DISCHARGE TO BOUNDARY PIT 100mm \$\phi\$ PVC DOWNPIPE TO DISCHARGE TO RWT VIA DP2 • A FIRST FLUSH DEVICE 100mm \$\phi\$ PVC DOWNPIPE TO DISCHARGE TO DP3 • BOUNDARY PIT NEW SURFACE DRAINAGE STORMWATER PIPE NEW OVERFLOW STORMWATER PIPE NEW ROOF DRAINAGE STORMWATER PIPE ======= EXISTING SURFACE DRAINAGE STORMWATER PIPE EXISTING ROOF DRAINAGE STORMWATER PIPE STORMWATER PIPE FLOW DIRECTION STORMWATER PIT RAINWATER TANKS TO COLLECT ALL DPI DOWNPIPES, RWT REFER TO DETAILS OVERLAND FLOW PATH VERTICAL FIRST FLUSH, REFER TO DETAILS GDI - 150 MIN DEPTH x 150 WIDE GRATED DRAIN

NOTE: EXISTING SURFACE DRAINAGE EXISTING SURFACE DRAINAGE TO REMAIN U.N.O. BUILDER TO INSPECT AND UPGRADE AS REQUIRED IN ACCORDANCE WITH AS 3500.3.

GROUND FLOOR STORMWATER DRAINAGE PLAN

NOTE: ALL DRAINAGE LINE LOCATIONS ARE INDICATIVE ONLY.

SCALE = 1 : 100

Suite 1, 30B Griffith Street, Coolangatta QLD 4225

E: nb@nbconsulting.com.au W: www.nbconsulting.com.au

ISSUED FOR D.A. SUBMISSION ONLY NOT FOR CONSTRUCTION



www.byda.com.au BEFORE YOU DIG.

IF IN DOUBT ASK

SAR

, ,,					
					DOCUMENT CERTIFICATION
					Date: 03.04.2025 Michael Wach jo
03.04.2025	А	ISSUED FOR DA SUBMISSION ONLY - NOT FOR CONSTRUCTION	LS	HS	B.E.(Civil), MIEAust., PRE, DEP. (Director NB Consulting Engineers)
Date:	Issue:	Description:	Ву:	Review:	The copyright of this drawing remains wit NB Consulting Engineers

TION	Consulting Engin STRUCTURAL • CIVIL • STORMWATER • F
	A.C.N. 076 121 616 A.B.N. 24 076 12 ⁻
	Sydney: Ph: (02) 9984 7000
	Unit 11, 1 Vuko Place, Warriewood NSW 2102

Gold Coast: Ph: (07) 5631 4744

LOCATION MAY VARY DUE TO CONSTRAINTS.

ineers	Architect: CplusC
R • REMEDIAL	ARCHITECTURAL WORKS
6 121 616	
	Ol' t

ARCHITECTURAL	P/L
Client:	

JAMIE CALDER

ALTERATIONS \$ ADDITIONS 138 PRINCE ALFRED PARADE, NEWPORT

GROUND FLOOR

STORMWATER DRAINAGE PLAN

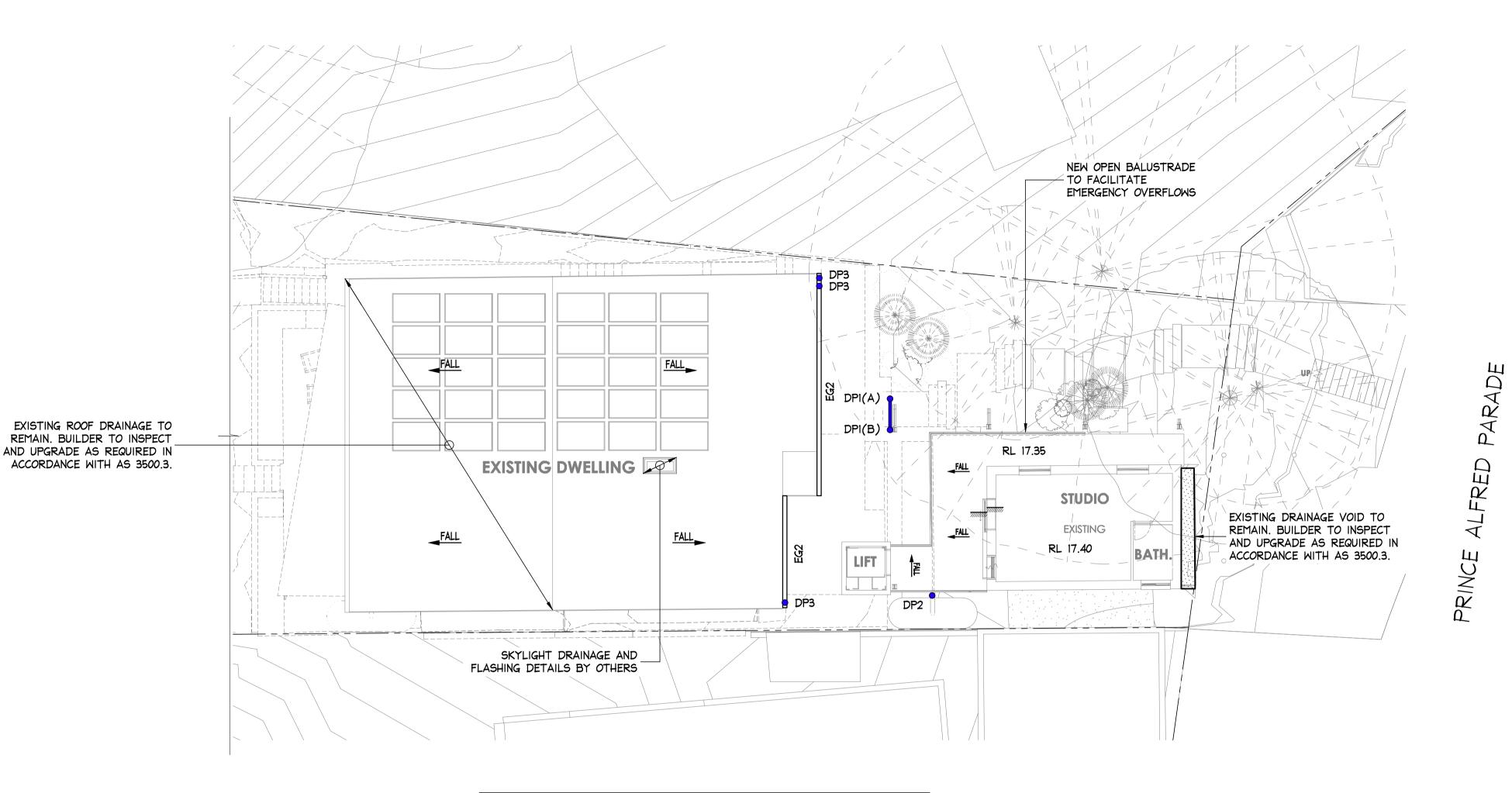
Drawing Title:

Job No:		
2501	\bigcirc 1	7
Z30		

Drawing No: D03

LS

- 1. THIS DRAWING IS NOT TO BE USED FOR CONSTRUCTION IF THE ISSUE DATE PRECEDES THE ISSUE DATE ON THE ARCHITECTURAL DRAWINGS.
- 2. DO NOT SCALE FROM THIS DRAWING.
- 3. ALL DIMENSIONS ARE TO BE VERIFIED ON SITE BY THE BUILDER BEFORE COMMENCING WITH ASSOCIATED WORK.
- 4. FOR GENERAL NOTES REFER TO DRAWING NUMBER: DOI.



LEGEND 125mm \$\phi\$ CHS DOWNPIPE TO CONVERT TO 100mm \$\phi\$ PVC DP1 • PIPE IN GROUND, TO DISCHARGE TO BOUNDARY PIT 100mm \$\phi\$ PVC DOWNPIPE TO DISCHARGE TO RWT VIA DP2 • A FIRST FLUSH DEVICE 100mm \$\phi\$ PVC DOWNPIPE TO DISCHARGE TO DP3 • BOUNDARY PIT CUSTOM EAVES GUTTER, 96(D)x100(W), MIN EFFECTIVE CROSS-SECTIONAL AREA OF 9600mm². TO BE DETAILED BY ARCHITECT AND COORDINATED AT CC STAGE WITH HYDRAULIC ENGINEER TO HAVE FREE FLOWING OUTER EDGE. REFER DETAIL. TYPICAL EAVES GUTTER, DETAILS TO BE COORDINATED DURING CC STAGE NEW ROOF DRAINAGE STORMWATER PIPE STORMWATER PIPE FLOW DIRECTION RECOMMENDED TO PROVIDE MINIMUM 50mm SET DOWN TO EXTERNAL AREAS, ALTERNATIVELY THRESHOLD DRAINAGE TO BE INCORPORATED INTO SUBSILL. DETAILS TO BE COORDINATED AT CC STAGE.

NOTE: EXISTING SURFACE DRAINAGE EXISTING SURFACE DRAINAGE TO REMAIN U.N.O.

BUILDER TO INSPECT AND UPGRADE AS REQUIRED IN ACCORDANCE WITH AS 3500.3.



STUDIO LEVEL STORMWATER DRAINAGE PLAN

NOTE: ALL DRAINAGE LINE LOCATIONS ARE INDICATIVE ONLY.

LOCATION MAY VARY DUE TO CONSTRAINTS.

SCALE = 1 : 100

ISSUED FOR D.A. SUBMISSION ONLY NOT FOR CONSTRUCTION



www.byda.com.au BEFORE YOU DIG.

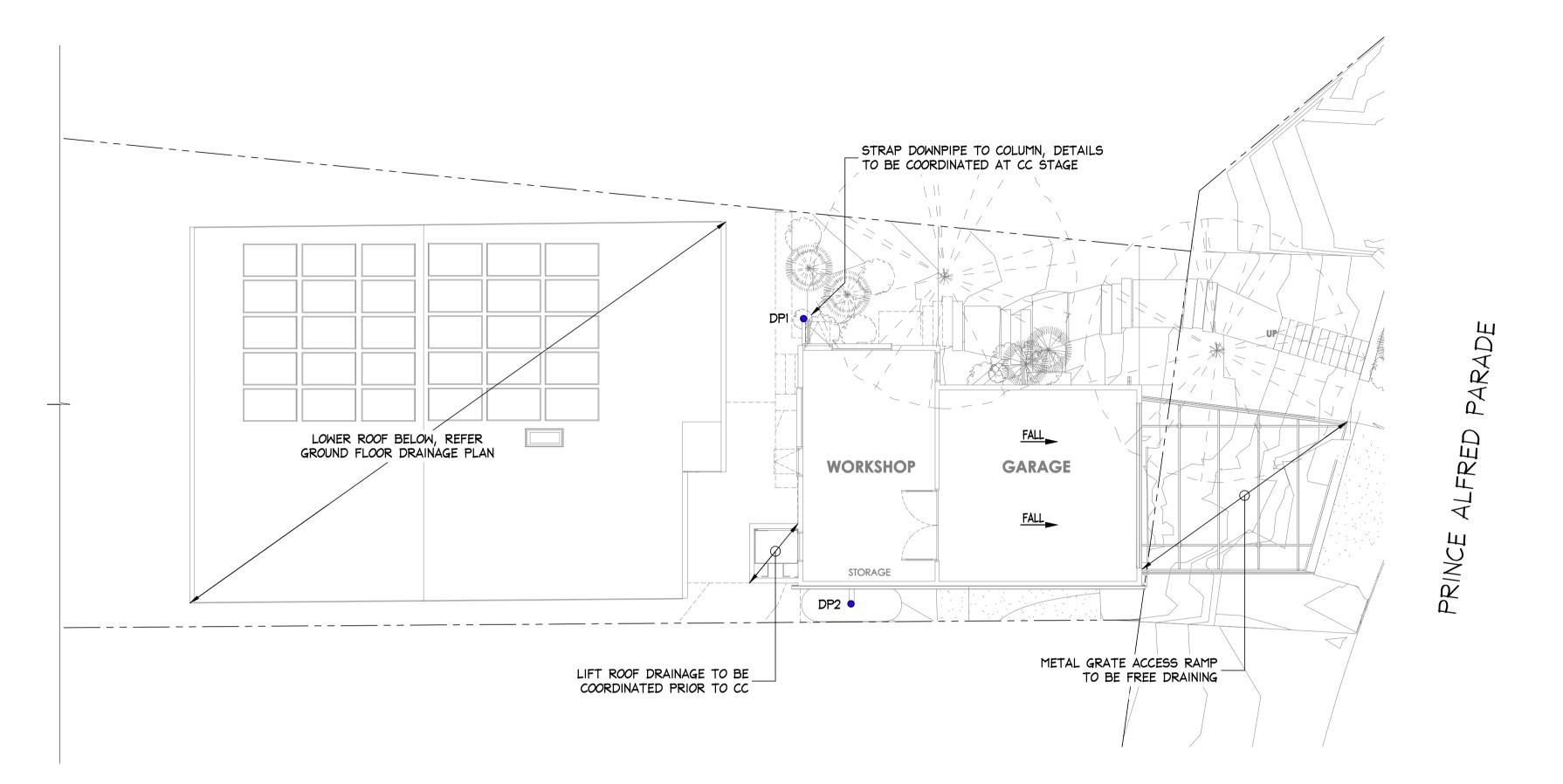
IF IN DOUBT ASK

4	

		DOCUMENT CERTIFICATION	Consulting Engineers STRUCTURAL • CIVIL • STORMWATER • REMEDIAL	Architect: CplusC ARCHITECTURAL WORKSHOP P/L	ALTERATIONS & ADDITIONS 138 PRINCE ALERED BARADE NEW		Design: SAR	Drawn:
		Date : 03.04.2025	A.C.N. 076 121 616 A.B.N. 24 076 121 616	ARCHITECTURAL MORNSHUP P/L	138 PRINCE ALFRED PARADE, NEW	NPORT	JAK	
03.04.2025 A		Michael Wachjo B.E.(Civil), MIEAust., PRE, DEP.	Sydney: Ph: (02) 9984 7000 Unit 11, 1 Vuko Place, Warriewood NSW 2102	Client:	Drawing Title: STUDIO LEVEL	Job No:		rawing No: Issue:
	Description: By: Review:	(Director NB Consulting Engineers) The copyright of this drawing remains with NB Consulting Engineers	Gold Coast: Ph: (07) 5631 4744 Suite 1, 30B Griffith Street, Coolangatta QLD 4225 E: nb@nbconsulting.com.au W: www.nbconsulting.com.au	JAMIE CALDER	STORMWATER DRAINAGE PLAN	25010	017 I	D04 A

NOTES:

- 1. THIS DRAWING IS NOT TO BE USED FOR CONSTRUCTION IF THE ISSUE DATE PRECEDES THE ISSUE DATE ON THE ARCHITECTURAL DRAWINGS.
- 2. DO NOT SCALE FROM THIS DRAWING.
- 3. ALL DIMENSIONS ARE TO BE VERIFIED ON SITE BY THE BUILDER BEFORE COMMENCING WITH ASSOCIATED WORK.
- 4. FOR GENERAL NOTES REFER TO DRAWING NUMBER: DOI.



LEGEND

125mm ϕ CHS DOWNPIPE TO CONVERT TO 100mm ϕ PVC PIPE IN GROUND, TO DISCHARGE TO BOUNDARY PIT

100mm ϕ PVC DOWNPIPE TO DISCHARGE TO RWT VIA A FIRST FLUSH DEVICE

NOTE: ALL DRAINAGE LINE LOCATIONS ARE INDICATIVE ONLY. LOCATION MAY VARY DUE TO CONSTRAINTS.

GARAGE LEVEL STORMWATER DRAINAGE PLAN

SCALE = 1 : 100

ISSUED FOR D.A. SUBMISSION ONLY NOT FOR CONSTRUCTION



MINIMISE YOUR RISK AND CONTACT www.byda.com.au BEFORE YOU DIG.

IF IN DOUBT ASK

SAR

		ı
l		

Consulting

U

All					
					DOCUMENT CERTIFICATION
					Date:03.04.2025 Michael Wachjo
03.04.2025	Α	ISSUED FOR DA SUBMISSION ONLY - NOT FOR CONSTRUCTION	LS	HS	B.E.(Civil), MIEAust.,PRE,DEP. (Director NB Consulting Engineers)
Date:	Issue:	Description:	Ву:	Review:	The copyright of this drawing remains with NB Consulting Engineers

ON	Consulting Engineers STRUCTURAL • CIVIL • STORMWATER • REMEDIAL
_	A.C.N. 076 121 616 A.B.N. 24 076 121 616
	Sydney : Ph: (02) 9984 7000
	Unit 11, 1 Vuko Place, Warriewood NSW 2102
	Gold Coast: Ph: (07) 5631 4744
with	Suite 1, 30B Griffith Street, Coolangatta QLD 4225
with	l .

E: nb@nbconsulting.com.au W: www.nbconsulting.com.au

Architect:	CplusC	
AF	RCHITECTURAL WORKSHOP	P
Client		

ARCHITECTURAL WORKSHOP P/L	
Client:	Drawi
JAMIE CALDER	

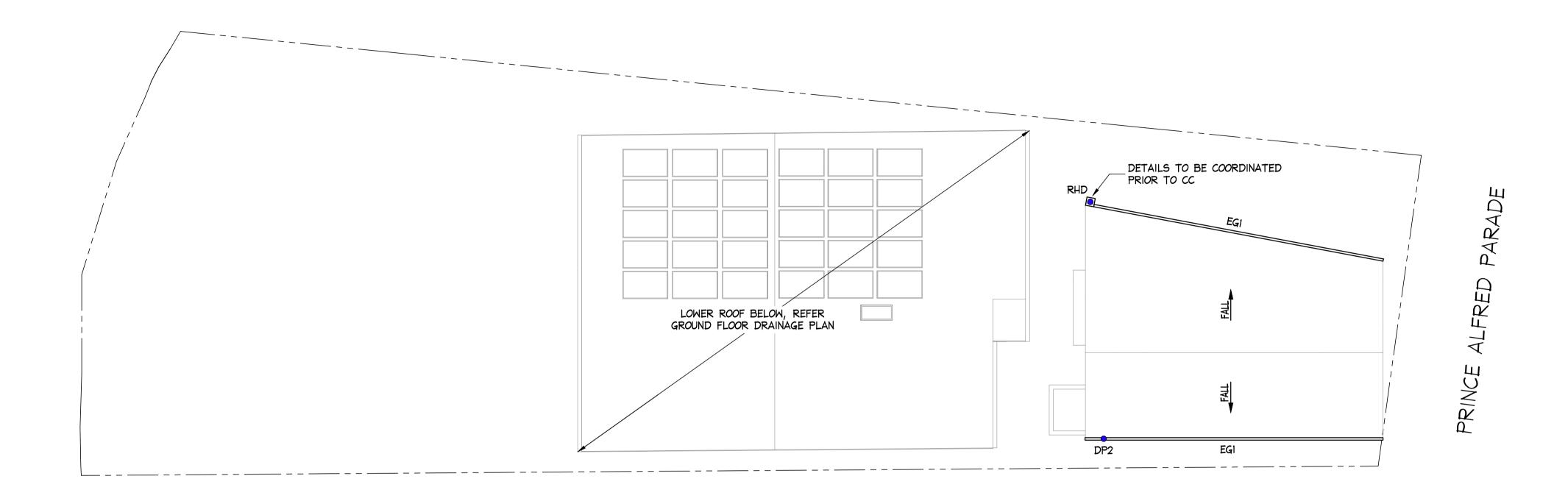
138	PRINCE	ALFRED	PARADE,	NEW	P
Drawing Title:	GAF	RAGE LEV	/EL		J

STORMWATER DRAINAGE PLAN

ALTERATIONS \$ ADDITIONS

Job No:	
25/1/17	
Z 50101 /	

- 1. THIS DRAWING IS NOT TO BE USED FOR CONSTRUCTION IF THE ISSUE DATE PRECEDES THE ISSUE DATE ON THE ARCHITECTURAL DRAWINGS.
- 2. DO NOT SCALE FROM THIS DRAWING.
- 3. ALL DIMENSIONS ARE TO BE VERIFIED ON SITE BY THE BUILDER BEFORE COMMENCING WITH ASSOCIATED WORK.
- 4. FOR GENERAL NOTES REFER TO DRAWING NUMBER: DOI.



<u>LEGEND</u>

125mm ϕ CHS DOWNPIPE TO CONVERT TO 100mm ϕ PVC PIPE IN GROUND, TO DISCHARGE TO BOUNDARY PIT

100mm ϕ PVC DOWNPIPE TO DISCHARGE TO RWT VIA A FIRST FLUSH DEVICE

CUSTOM EAVES GUTTER, $96(D) \times 100(W)$, MIN EFFECTIVE CROSS-SECTIONAL AREA OF 9600mm^2 . TO BE DETAILED BY ARCHITECT AND COORDINATED AT CC STAGE WITH HYDRAULIC ENGINEER TO HAVE FREE FLOWING OUTER EDGE. REFER DETAIL.

NOTE: ALL DRAINAGE LINE LOCATIONS ARE INDICATIVE ONLY. LOCATION MAY VARY DUE TO CONSTRAINTS.

ROOF STORMWATER DRAINAGE PLAN

SCALE = 1 : 100





CONSTRUCTION

MINIMISE YOUR R	RISK	AND	CON	IACT
www.byda.com.au	BEF	ORE	YOU	DIG.
				=

	IF	IN	DOUBT	ASK	7
- l	(**	111	DOODI	21011	

, ,,								
		DOCUMENT CERTIFICATION	Consulting Engineers	Architect: CplusC	Project: ALTERATIONS & ADDITIONS	Design:	Drawn	ſ:
		1/4	STRUCTURAL • CIVIL • STORMWATER • REMEDIAL			PORT SAF	, , _	÷
		Date :03.04.2025	A.C.N. 076 121 616 A.B.N. 24 076 121 616	ARCHITECTURAL WORKSHOP P/L	138 PRINCE ALFRED PARADE, NEW!	PUR I JAN		
		Michael Wachjo	Sydney: Ph: (02) 9984 7000	Client:	Drawing Title:	Joh No:	Drawing No:	lssu
03.04.2025	A ISSUED FOR DA SUBMISSION ONLY - NOT FOR CONSTRUCTION LS	HS B.E.(Civil), MIEAust., PRE, DEP.	Unit 11, 1 Vuko Place, Warriewood NSW 2102 Gold Coast: Ph: (07) 5631 4744	Onorit.	· ·		The brawning rvo.	10000
Date:	Issue: Description: By:	(Director NB Consulting Engineers) Review: The copyright of this drawing remains with	Suite 1, 30B Griffith Street, Coolangatta QLD 4225 E: nb@nbconsulting.com.au W: www.nbconsulting.com.au	JAMIE CALDER	STORMWATER DRAINAGE PLAN	250101	/ D06	, F

4. FOR GENERAL NOTES REFER TO DRAWING NUMBER: DOI

RAINWATER RE-USE TANKS:

KI. CONSIDERING THE ROOF CATCHMENT AREA, LOCATION OF PROPERTY, INTENDED USE OF RAINWATER AND GARDEN SIZE WE RECOMMEND PROVIDING A RAINWATER TANK FOR USE AS PER BASIX REQUIREMENTS, SYDNEY WATER AND NSW HEALTH REQUIREMENTS FOR NON DRINKING USE ONLY AS PER BASIX REPORT.

K2. THE TANKS PROVIDED WILL REDUCE PRESSURE ON COUNCIL'S STORMWATER INFRASTRUCTURE.

K3. REFERENCES: COOMBES P.J. \$ KUCZERA G. (2001), "RAINWATER TANK DESIGN FOR WATER SUPPLY AND STORMWATER MANAGEMENT." STORMWATER INDUSTRY ASSOCIATION REGIONAL CONFERENCE. PATRICK DUPONT \$ STEVE SHACKLE, "RAINWATER" AUSTRALIAN GOVERNMENT (2004), "GUIDANCE ON USE OF RAINWATER TANKS".

K4. ALL CONNECTIONS TO PLUMBING AND RAINWATER TANKS TO BE IN ACCORDANCE WITH SYDNEY WATERS' GUIDE "INSTALLING A RAINWATER TANK" AVAILABLE AT www.sydneywater.com.au

K5. PROVIDE A DUAL SUPPLY SYSTEM AND BACKFLOW PREVENTION SYSTEM IN ACCORDANCE WITH BASIX-DESIGN GUIDE FOR SINGLE

DWELLINGS' BY NSW DEPARTMENT OF INFRASTRUCTURE, PLANNING AND NATURAL RESOURCES.

K6. IF NOT SPECIFIED ON PLANS, THE FIRST FLUSH SYSTEM IS TO HAVE A MINIMUM SIZE OF 20L PER 100m2 OF ROOF CATCHMENT AREA PRIOR TO ENTERING THE RAINWATER TANK. INDIVIDUAL SITE ANALYSIS IS REQUIRED IN HEAVILY POLLUTED AREAS TO DETERMINE IF LARGER VOLUMES OF FIRST FLUSH RAINWATER ARE TO BE DIVERTED. IF IN DOUBT, CHECK WITH LOCAL HEALTH AUTHORITIES

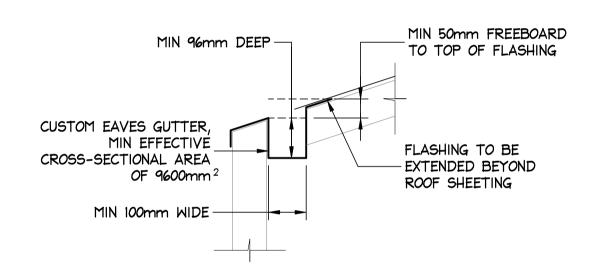
K7. SCREENED DOWNPIPE RAINWATER HEAD OR OTHER SUITABLE LEAF AND DEBRIS DEVICE TO BE INSTALLED ON EACH DOWNPIPE. SCREEN MESH TO BE 4-6mm AND DESIGNED TO BE SELF-CLEANING.

K8. FIRST FLUSH DEVICES, OR APPROVED ALTERNATIVE, TO BE INSTALLED WITH AN AUTOMATED DIVERSION AND DRAINAGE SYSTEM, THAT IS, NO MANUAL DIVERSION AND DRAINAGE VALVES. REFER TYPICAL FLUSH OUT PIT FOR DETAILS.

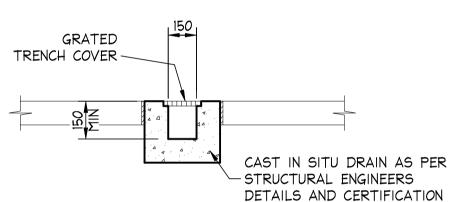
K9. BEFORE PURCHASING MATERIALS OR PAINT TO BE USED ON ROOF CATCHMENT AREAS, THE MANUFACTURER'S RECOMMENDATIONS ON LABELS AND BROCHURES FOR RAINWATER TANK SUITABILITY TO BE READ AND ADHERED TO.

KIO. PRE-STORAGE PITS FOR UNDERGROUND RAINWATER STORAGE TANKS AND FLUSH OUT PITS MAY ASSIST IN LIMITING SILT, AND PREVENT VERMIN, INSECTS (INCLUDING MOSQUITOES) AND DEBRIS FROM ENTERING THE RAINWATER STORAGE AREA

KII. BUILDER/PLUMBER TO ENSURE THE INSTALLATION OF THE RAINWATER TANK SYSTEM IS IN ACCORDANCE WITH THE RELEVANT AUSTRALIAN STANDARDS AND THE RAINWATER TANK DESIGN AND INSTALLATION HANDBOOK - HB 230-2008. IF IN DOUBT CONTACT ENGINEER. KI2. RAINWATER TANK TO BE WATER PROOFED IN ACCORDANCE WITH HB 230-200B

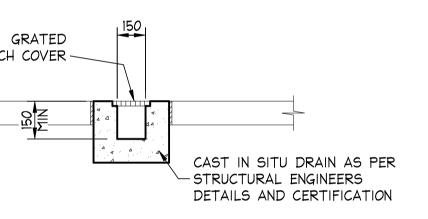


CUSTOM EAVES GUTTER DETAIL 'EGI' NOT TO SCALE



OR PRECAST GRATED DRAIN BY MANUFACTURER ALTERNATE POLYPROPYLENE DRAIN BY MANUFACTURER

> TYPE 'GDI' GRATED DRAIN SCALE = 1 : 20



PRECAST OR CAST INSITU PIT REFER STORMWATER NOTES ALTERNATE POLYPROPYLENE PIT BY MANUFACTURER

100mm \$\psi\$ uPVC OVERFLOW-

PIPE TO ADJACENT PIT

450x450 PIT DETAIL SCALE = 1 : 20

-20mm \$\phi\$ WEEP

HOLES AT 200 CTS

ROOF GUTTER WITH LEAF GUARD-

TWL

RAINWATER STORAGE

TANK RWT

/ANAEROBIC ZONE/

TYPICAL SECTION RAINWATER RE-USE TANK

NOT TO SCALE

450x450

FSL

SUB GRADE TO TANK

GRATED PIT COVER

MAXI MESH SCREEN

OUTLET PIPE

BIDIM A24 OR SIMILAR --

GEOTEXTILE FILTER FABRIC

RH3030 \$ HANDLE

AND RECOMMENDATIONS

MANUFACTURERS SPECIFICATION

TRASH SCREEN

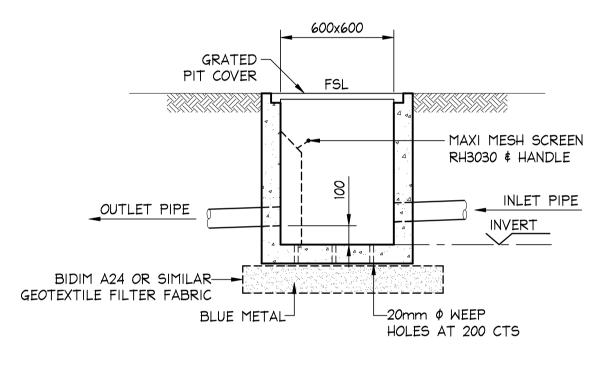
-

PROPRIETARY WALL MOUNTED FIRST

FLUSH SYSTEM TO BE INSTALLED

AND MAINTAINED AS PER - MANUFACTURERS DETAILS

- WEEP HOLE



PRECAST OR CAST INSITU PIT REFER STORMWATER NOTES ALTERNATE POLYPROPYLENE PIT BY MANUFACTURER

> 600x600 PIT DETAIL SCALE = 1 : 20

ISSUED FOR D.A. SUBMISSION ONLY NOT FOR CONSTRUCTION



MINIMISE YOUR RISK AND CONTACT www.byda.com.au BEFORE YOU DIG.

IF IN DOUBT ASK

SAR

ngineel

Consulting

ALTERATIONS \$ ADDITIONS

CplusC ARCHITECTURAL WORKSHOP P/L Client:

STORMWATER DRAINAGE

138 PRINCE ALFRED PARADE, NEWPORT

2501017

Drawing No: D10

LS

A1	A1							
					DOCUMENT CERTIFICATION Date: 03.04.2025 Michael Wachjo			
03.04.2025	А	ISSUED FOR DA SUBMISSION ONLY - NOT FOR CONSTRUCTION	LS	+	HS	B.E.(Civil), MIEAust.,PRE,DEP. (Director NB Consulting Engineers)		
Date:	Issue:	Description:	By:	Re	eview:	The copyright of this drawing remains with NB Consulting Engineers		

Consulting Engineers

STRUCTURAL • CIVIL • STORMWATER • REMEDIAL

Architect: A.C.N. 076 121 616 A.B.N. 24 076 121 616 **Sydney**: Ph: (02) 9984 7000 Unit 11, 1 Vuko Place, Warriewood NSW 2102 Gold Coast: Ph: (07) 5631 4744 Suite 1, 30B Griffith Street, Coolangatta QLD 4225

E: nb@nbconsulting.com.au W: www.nbconsulting.com.au

JAMIE CALDER

DETAILS AND SECTIONS SHEET