Consulting Engineers

STRUCTURAL - CIVIL - STORMWATER - REMEDIAL

GENERAL NOTES:

1. THESE DRAWING IS NOT TO BE USED FOR CONSTRUCTION IF THE ISSUE DATE PRECEDES THE ISSUE DATE ON THE LATEST ARCHITECTURAL DRAWINGS.
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:

A: GENERAL:

A1. ALL WORKS SHALL BE CARRIED OUT IN ACCORDANCE WITH AUSTRALIAN STANDARDS (LATEST VERSION) AND 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.

B: GENERAL CONSTRUCTION NOTES:

B1. 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.

C: PIPEWORK INSTALLATION:

C1. ALL PIPES TO BE MINIMUM 100mm ϕ 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 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.
C5. ALL EXISTING EARTHENWARE PIPES TO BE UPGRADED TO uPVC.
C6. MINIMUM PIPE COVER TO ALL IN-GROUND PIPEWORK SHALL BE CARRIED OUT IN ACCORDANCE WITH TABLE 7.1 - AS3500.3.
C7. ALL SUSPENDED PIPE FIXINGS ARE TO BE CARRIED OUT IN ACCORDANCE WITH AS2032.
C8. ENSURE THAT ALL STORMWATER PITS AND PIPES ARE LOCATED CLEAR FROM TREE ROOT SYSTEMS.
C9. 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.

D: ROOF DRAINAGE:

D1. ALL DOWN PIPES TO BE 100mm ϕ 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 AS3500.3 REQUIREMENTS.
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 SPECIFICATION.

Scale check - 100mm when printed to scale

A1

STORMWATER NOTES (CONT'D)

E: SURFACE DRAINAGE:

E1. ALL STORMWATER PITS MUST BE INSTALLED IN ACCORDANCE WITH AS3500.3.
E2. ALL CONCRETE PITS TO BE CAST INSITU OR, IF PRECAST, APPROVED BY ENGINEER. CAST INSITU PITS TO HAVE 150mm THICK CONCRETE WALLS AND BASE. WALLS TO BE REINFORCED WITH 1 N12 TOP TIE UNLESS NOTED OTHERWISE. CAST INSITU PITS GREATER THAN 900 DEEP TO BE MINIMUM 900x600 AND TO HAVE 150mm THICK CONCRETE WALLS AND BASE. WALLS TO BE REINFORCED WITH N12 AT 300 EACH WAY UNLESS NOTED OTHERWISE.
E3. MINIMUM INTERNAL DIMENSIONS FOR STORMWATER AND INLET PITS TO BE IN ACCORDANCE WITH TABLE 8.2, AS3500.3.
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 NOT REQUIRE A SUMP.
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.

F: SUB-SOIL DRAINAGE:

F1. ALL SUB-SOIL DRAINAGE TO BE INSTALLED AS REQUIRED IN ACCORDANCE WITH AS3500.3 REQUIREMENTS, SPECIFICALLY SECTION 6, 7 AND APPENDIX M.
F2. UNLESS NOTED OTHERWISE, SUB-SOIL DRAINS ARE TO BE INSTALLED IN ACCORDANCE WITH AS3500.3 ALONGSIDE WALLS THAT IMPEDE THE NATURAL FLOW OF GROUNDWATER. THIS MAY ALSO INVOLVE TRENCHING INTO THE CLAY OR ROCK SUBGRADE TO DIRECT GROUNDWATER AWAY FROM STRUCTURES. SUB-SOIL DRAINAGE MUST ALSO BE INSTALLED IN SHALLOW LANDSCAPED AREAS OVER ROCK OR POORLY DRAINED SOILS TO PREVENT OVERLY SATURATED LANDSCAPING AREAS.
F3. 100mm ϕ x 3000 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.

RAINWATER RE-USE TANKS:

RWT1: 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.

RWT2: THE TANKS PROVIDED WILL REDUCE PRESSURE ON COUNCIL'S STORMWATER INFRASTRUCTURE.

RWT3: REFERENCES: COOMBES P.J. & KUCZERA G. (2001), "RAINWATER TANK DESIGN FOR WATER SUPPLY & STORMWATER MANAGEMENT." STORMWATER INDUSTRY ASSOCIATION REGIONAL CONFERENCE. PATRICK DUPONT & STEVE SHACKLE, "RAINWATER" AUSTRALIAN GOVERNMENT (2004), "GUIDANCE ON USE OF RAINWATER TANKS".

RWT4: 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

RWT5: PROVIDE A DUAL SUPPLY SYSTEM AND BACKFLOW PREVENTION SYSTEM IN ACCORDANCE WITH 'BASIX-DESIGN GUIDE FOR SINGLE DWELLINGS' BY NSW DEPARTMENT OF INFRASTRUCTURE, PLANING AND NATURAL RESOURCES.

RWT6: 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.

RWT7: 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.

RWT8: 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.

RWT9: 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.

RWT10: 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.

RWT11: 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.

RWT12: RAINWATER TANK TO BE WATER PROOFED IN ACCORDANCE WITH HB 230-200B

DIAL 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 GENERAL PUBLIC
- 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
- DELAY PROJECT COMPLETION TIMES WHILE THE DAMAGE IS REPAIRED

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STORMWATER SYSTEM SUMMARY NOTES

TOTAL SITE AREA	947.5 m^2
DEVELOPMENT TYPE	NEW SINGLE DWELLING
GENERAL FALL DIRECTION OF SITE	TO THE REAR
STORMWATER DISPOSAL	
STEP 1 - OBTAIN DRAINAGE EASEMENT	REFUSED BY LOWER PROPERTY OWNER(S)
STEP 2 - ONSITE ABSORPTION	ADEQUATE (REFER TO GEOTECH REPORT)

IN ACCORDANCE WITH COUNCIL'S DCP, WHERE AN EASEMENT IS REFUSED, ALL ROOF WATER IS TO BE DRAINED TO A RAINWATER TANK (RWT). THE RWT HAS BEEN SIZED ABOVE COUNCIL'S ADVICE; OF 50,000L.

NOTE: THE OSD AND RAINGARDEN RWT OFFSET REQUIREMENT PER COUNCIL'S DCP OF 1.5 X 25m^3 / 1000m^2 = 36m^3 HAS BEEN EXCEEDED BY THE 50m^3 RWT PROVIDED

PRE DEVELOPMENT IMPERVIOUS AREA	255 m^2 (27%)
POST DEVELOPMENT IMPERVIOUS AREA	335 m^2 (35%)
ROOF AREA TO RAINWATER TANK	328 m^2 (ENTIRE ROOF AREA)

RWT TO OVERFLOW TO THE KERB+GUTTER ON OLPHERT AVENUE, STCA
NOTE: THIS WILL REDUCE THE RUNOFF DIRECTED TO THE ABSORPTION SYSTEM

RAINWATER TANK VOLUME REQUIRED	50,000L (EXCEEDS ADVICE FROM COUNCIL)
RAINWATER TANK REUSE CONNECTIONS	ALL TOILETS, LAUNDRY, GARDEN IRRIGATION, POOL TOP UP AND CAR WASHING
MAXIMUM CONCENTRATED DISCHARGE TO KERB	21 l/s (RWT ASSUMED FULL AT START) OF 1% AEP EVENT
BALANCE OF SITE AREA DIRECTED TO THE ABSORPTION SYSTEM	499.5 m^2 (APPROX.)
SITE AREA BYPASSING ABSORPTION SYSTEM	65 m^2 (POOL - GRAVITY OVERFLOW) TO SEWER - REFER DETAIL 55 m^2 (REAR LANDSCAPING & STAIRS)

DETAILED GEOTECHNICAL INVESTIGATION UNDERTAKEN BY JK GEOTECHNICS. THE REPORT FINDS THAT GENERALLY SILTY SAND IS FOUND TO APPROX 2.5M BELOW GROUND LEVEL

UNFACTORED ABSORPTION RATE	0.73 L/s/m^2 (GEOTECH REPORT)

A DESIGN FACTOR OF 2 HAS BEEN USED IN SIZING THE ABSORPTION SYSTEM

FACTORED ABSORPTION RATE	0.365 L/s/m^2 (USED IN DRAINS MODELLING)

NOTE: THE ABSORPTION PITS HAVE BEEN SIZED TO CATER FOR THE 1% AEP STORM EVENT. THIS EXCEEDS COUNCIL'S DCP REQUIREMENT

DESIGN METHOD	DRAINS
PRE DEVELOPMENT SITE DISCHARGE (TOWARDS REAR NEIGHBOUR)	
20 YR	42 l/s
100 YR	54 l/s
POST DEVELOPMENT SITE DISCHARGE (TOWARDS REAR NEIGHBOUR)	
20 YR	3 l/s
100 YR	4 l/s
PORTION OF SITE DIRECTED TO ABSORPTION	56 %
TOTAL ABSORPTION VOLUME	17 m^3 (3x ABSORPTION AREAS MODELLED)
PROPOSED RWT VOLUME	50 m^3

DRAWING SCHEDULE:

STORMWATER DRAWINGS

D01 - GENERAL NOTES
D02 - SITE /ROOF DRAINAGE (CONCEPT) PLAN
D03 - DRAINAGE DETAILS

IF IN DOUBT ASK

NB Consulting Engineers

Date:	Issue:	Description:	By:	Review:
29/06/2022	C	REVISED TO SUIT UPDATED ARCHITECTURALS	SR	MW
17/12/2020	B	REVISED STORMWATER FOR DA SUBMISSION ONLY	HO	MW
14/12/2020	A	ISSUE FOR DA SUBMISSION ONLY	HO	MW

DOCUMENT CERTIFICATION

Date : 29 JUN '22
Rick G Wray per
BE(Civil),CPEng,MIEAust.,NER.,RPEQ: 08293.
(Director NB Consulting Engineers)

NB 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
Unit 8, 1726 Gold Coast Highway Burleigh Heads QLD 4220
E : nb@nbconsulting.com.au W : www.nbconsulting.com.au

Designer: LOUISE ST J KENNEDY	Project: 18 OLPHERT AVE VAUCLUSE	Date: DEC. '20	Design: H.O.	Drawn: H.O.
Client: CAMPBELL D TAYLOR & SARAH J CURTIS	Drawing Title: STORMWATER GENERAL NOTES	Job No: 201199	Drawing No: D01	Issue: C

NB Consulting Engineers

NOTE: AGG DRAINAGE LINE
AGG DRAINAGE DESIGN TO FUTURE DETIALS PRIOR TO CONSTRUCTION.

NOTE: TERRACE DRAINAGE
ADDITIONAL TERRACE DRAINAGE TO FUTURE DETIALS. ALL TERRACE AREAS TO DRAIN VIA GRAVITY TO THE ABSORPTION SYSTEMS TO FUTURE DETAILS

NOTE: ABSORPTION TRENCH
STRUCTURAL/GEOTECH ENGINEER TO VERIFY ABSORBTION TRENCH LOCATION PRIOR TO CONSTRUCTION

NOTE: PIPEWORK
LOCATION OF STORMWATER PIPES AND ANCILLIARY COMPONENTS TO BE CONFIRMED DURING CONSTRUCTION

NOTE: ROOF DRAINAGE
ALL ROOF RUNOFF TO BE DIRECTED INTO THE RAINWATER TANK VIA FIRST FLUSH TO FUTURE DETAILS

NOTES:

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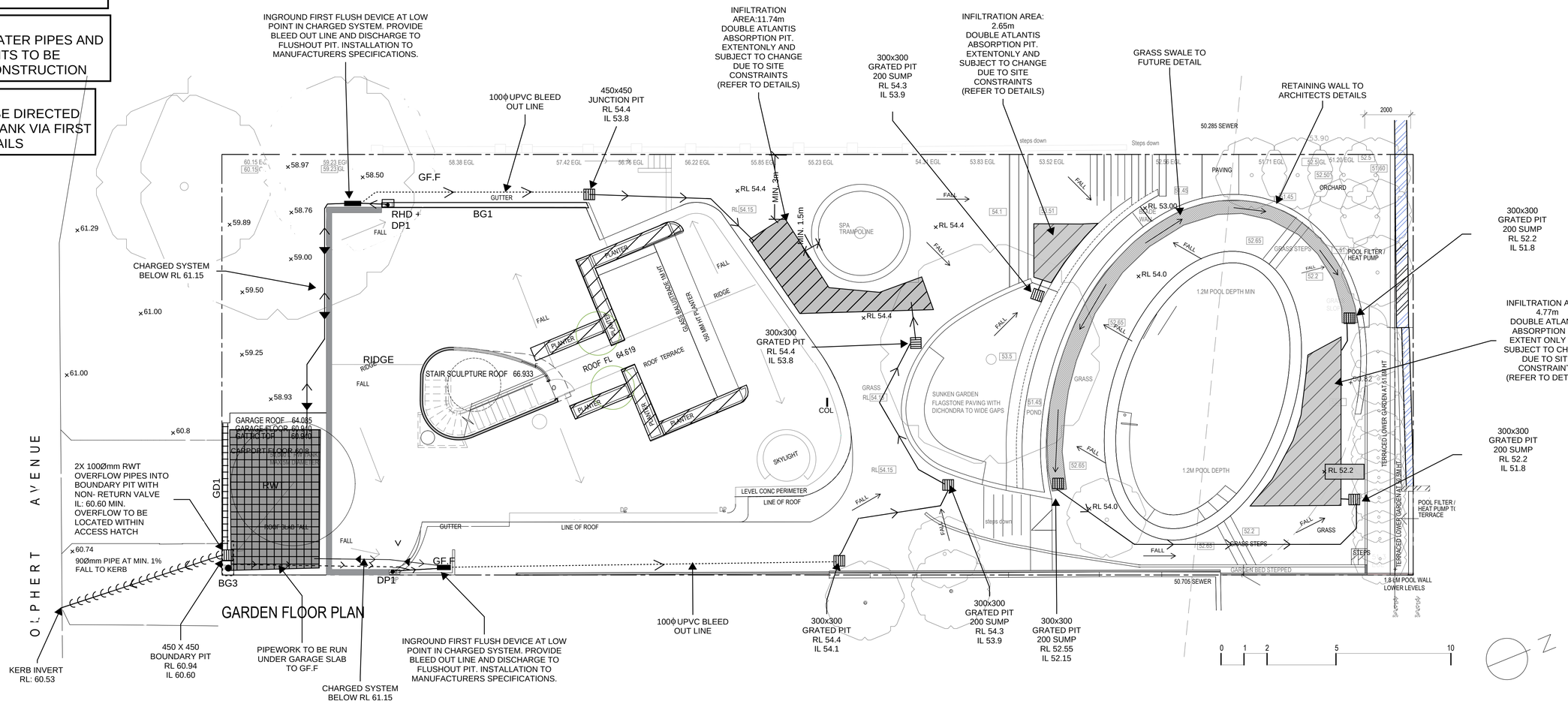

LEGEND

RHD + DP1	RAINHEAD AND 100Ømm DOWNPIPE, DISCHARGE TO RWT
DP1	100Ømm DOWNPIPE, DISCHARGE TO RWT
DP2	150Ømm DOWNPIPE, DISCHARGE TO RWT
DP3	100Ømm DOWNPIPE, DISCHARGE TO ABSORPTION PIT
BG1, BG2, BG3	BOX GUTTER, REFER TO DETAILS
GD1	150x150 GRATED DRAIN, REFER TO DETAIL
GD2	STORMTECH LINEAR SLOT DRAIN, REFER TO DETAIL
RWT	IN GROUND RAINWATER RE-USE TANK, REFER TO DETIAL
GF.F	IN GROUND FIRST FLUSH DEVICE TO MANUFACTURERS SPECIFICATIONS
	STORMWATER PIPE FLOW DIRECTION IN CHARGED SYSTEM
	STORMWATER PIPE FALL DIRECTION IN CHARGED SYSTEM
	OVERLAND FLOW PATH
	HATCHED AREA DENOTES PROPOSED PLANTERS. INSTALL WITH ATLANTIS DRAINAGE CELLS TO MANUFACTUERES SPECIFICATION.

Scale check - 100mm when printed to scale

A1

IF IN DOUBT ASK

Date:	Issue:	Description:	By:	Review:
29/06/2022	E	REVISED TO SUIT UPDATED ARCHITECTURALS	SR	MW
09/03/2021	D	REVISED STORMWATER OUTLET FOR DA SUBMISSION ONLY	HO	MW
09/03/2021	C	REVISED STORMWATER OUTLET FOR DA SUBMISSION ONLY	HO	MW
15/12/2020	B	REVISED STORMWATER FOR DA SUBMISSION ONLY	HO	MW
14/12/2020	A	ISSUE FOR DA SUBMISSION ONLY	HO	MW

DOCUMENT CERTIFICATION
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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
Unit 8, 1726 Gold Coast Highway Burleigh Heads QLD 4220
E : nb@nbconsulting.com.au W : www.nbconsulting.com.au

Designer: LOUISE ST J KENNEDY	Project: 18 OLPHERT AVE VAUCLUSE	Date: DEC. '20	Design: H.O. / Drawn: H.O.
Client: CAMPBELL D TAYLOR & SARAH J CURTIS	Drawing Title: SITE / ROOF DRAINAGE (CONCEPT) PLAN	Job No: 201199	Drawing No: D02 / Issue: E

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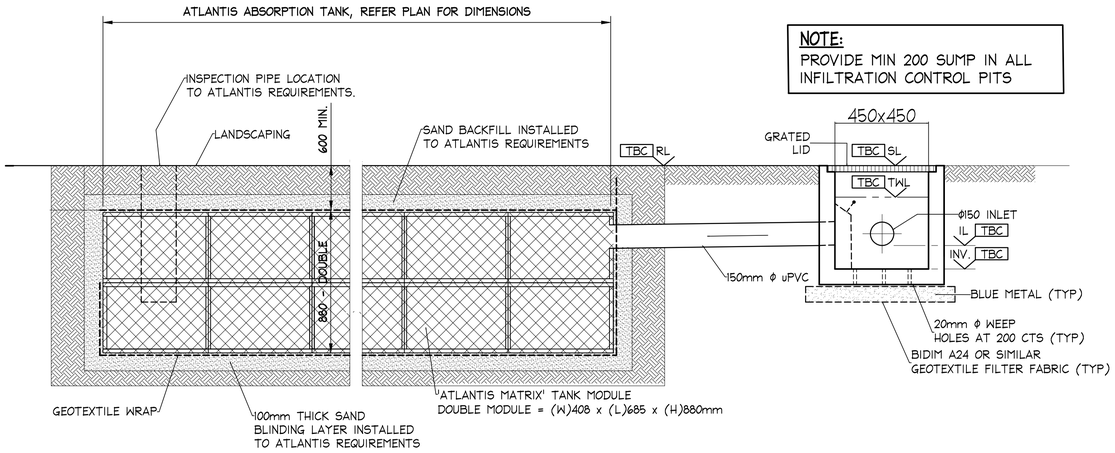
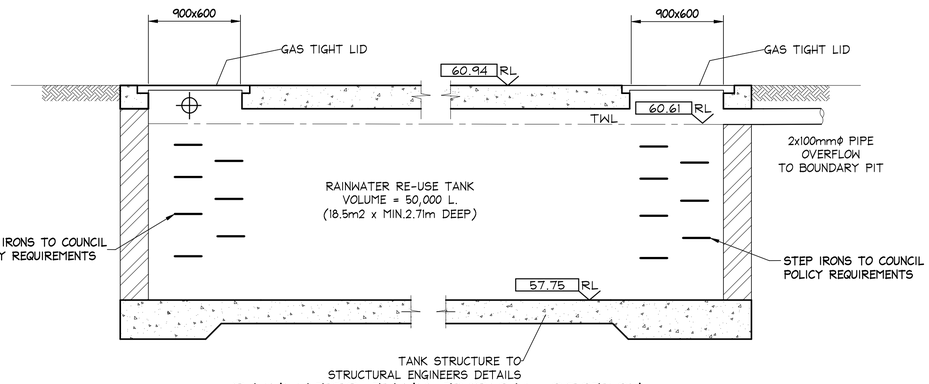


NOTE:
PROVIDE MIN 200 SUMP IN ALL INFILTRATION CONTROL PITS

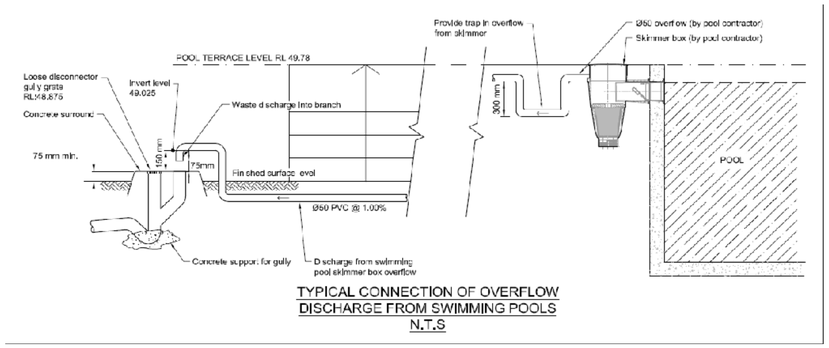
ATLANTIS ABSORPTION PIT TYPICAL SECTION

NOT TO SCALE

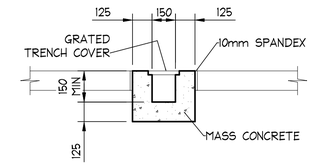


RAINWATER TANK TYPICAL SECTION

NOT TO SCALE



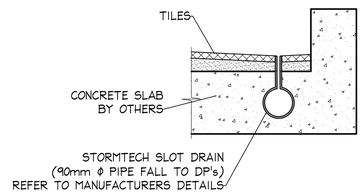
TYPICAL CONNECTION OF OVERFLOW DISCHARGE FROM SWIMMING POOLS N.T.S



OR PRECAST GRATED DRAIN
ALTERNATE POLYPROPYLENE DRAIN BY MANUFACTURER

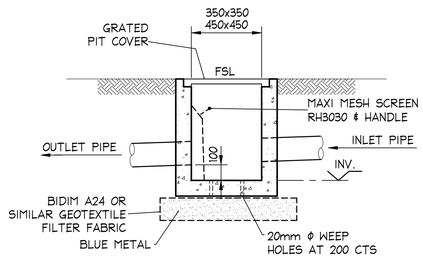
TYPE 'GD1' GRATED DRAIN

SCALE = NTS



STORMTECH SLOT DRAIN DETAIL

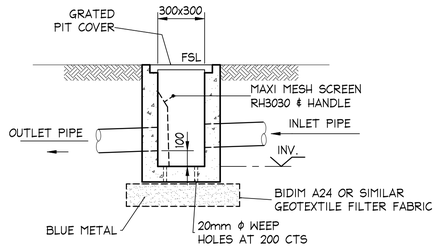
SCALE = 1 : 10



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

450x450 PIT DETAIL

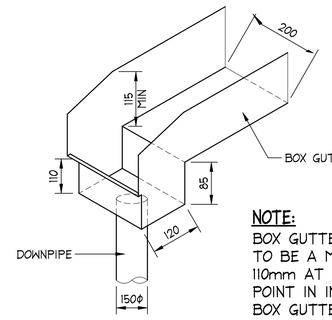
SCALE = NTS



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

300x300 PIT DETAIL

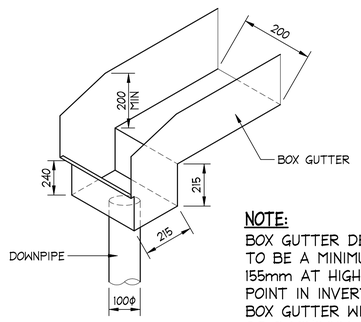
SCALE = NTS



NOTE:
BOX GUTTER DEPTH TO BE A MINIMUM OF 110mm AT HIGHEST POINT IN INVERT OF BOX GUTTER WITH 0.5 % MINIMUM FALL TO RAINHEAD.

BOX GUTTER BG3 AND RAINHEAD DETAIL

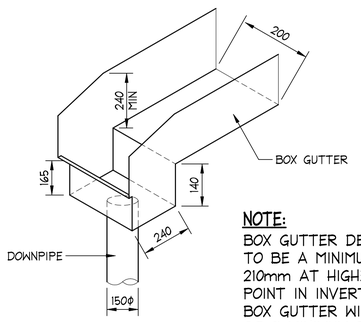
SCALE = NTS



NOTE:
BOX GUTTER DEPTH TO BE A MINIMUM OF 155mm AT HIGHEST POINT IN INVERT OF BOX GUTTER WITH 0.5 % MINIMUM FALL TO RAINHEAD.

BOX GUTTER BG1 AND RAINHEAD DETAIL

SCALE = NTS



NOTE:
BOX GUTTER DEPTH TO BE A MINIMUM OF 210mm AT HIGHEST POINT IN INVERT OF BOX GUTTER WITH 0.5 % MINIMUM FALL TO RAINHEAD.

BOX GUTTER BG2 AND RAINHEAD DETAIL

SCALE = NTS

Scale check - 100mm when printed to scale

A1

IF IN DOUBT ASK

Date:	Issue:	Description:	By:	Review:
29/06/2022	C	REVISED TO SUIT UPDATED ARCHITECTURALS	SR	MW
17/12/2020	B	REVISED STORMWATER FOR DA SUBMISSION ONLY	HO	MW
14/12/2020	A	ISSUE FOR DA SUBMISSION ONLY	HO	MW

DOCUMENT CERTIFICATION
Date : 29 JUN '22
Rick G Wray REF:
BE(Civil),CPEng,MIEAust.,NER.,RPEQ: 08293.
(Director NB Consulting Engineers)

NB 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
Unit 8, 1726 Gold Coast Highway Burleigh Heads QLD 4220
E : nb@nbconsulting.com.au W : www.nbconsulting.com.au

Designer:	LOUISE ST J KENNEDY
Client:	CAMPBELL D TAYLOR & SARAH J CURTIS
Project:	18 OLPHERT AVE VAUCLUSE
Drawing Title:	DRAINAGE DETAILS
Date:	DEC. '20
Design:	H.O.
Drawn:	LFC
Job No:	201199
Drawing No:	D03
Issue:	C

NB Consulting Engineers