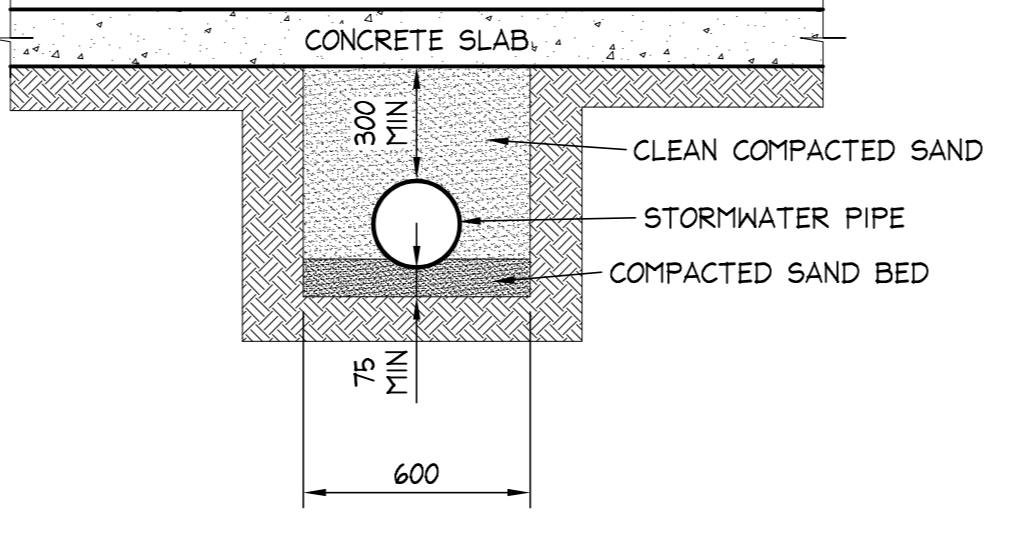


CONCEPT STORMWATER MANAGEMENT PLAN

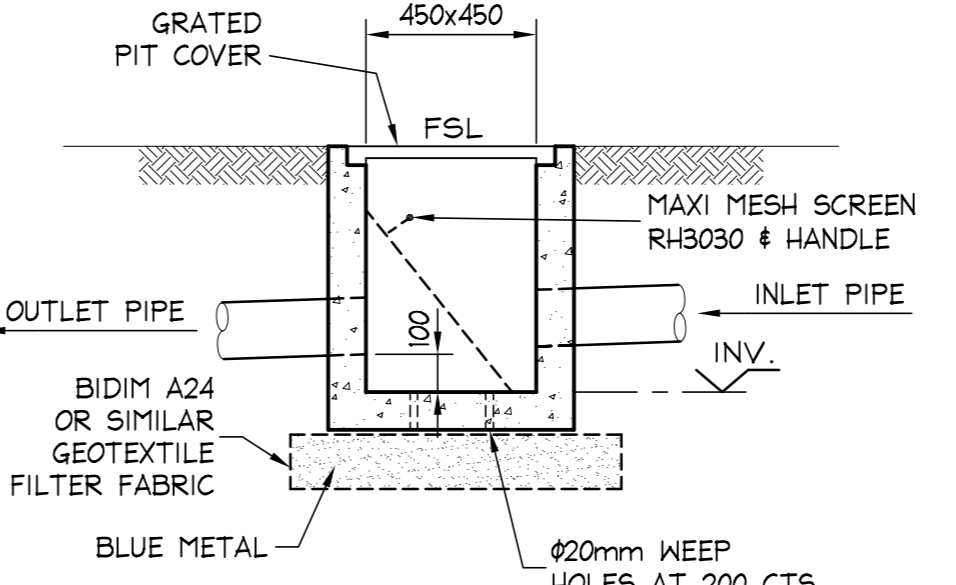
LEVELS TAKEN FROM SURVEY BY CMS SURVEYORS P/L, REF:510A, DATED 27-08-2019
ALL DRAINAGE LOCATIONS ARE INDICATIVE ONLY. LOCATION MAY VARY TO SUIT SITE CONSTRAINTS.
REFER TO LEVEL 1 LAYOUT PLAN FOR PIPE ROUTES

RAINWATER RE-USE TANK:

- 1. CONSIDERING THE ROOF CATCHMENT AREA, LOCATION OF PROPERTY, INTENDED USE OF RAINWATER AND GARDEN SIZE WE RECOMMEND PROVIDING A 3000 L CAPACITY RAINWATER TANK FOR THE FOLLOWING USES: - 2500L FOR BASIX TO A TAP WITHIN 10 METRES OF THE SWIMMING POOL, & TO WATER GARDEN AREAS
- 2. THE TANK PROVIDED WILL REDUCE PRESSURE ON COUNCIL'S STORMWATER INFRASTRUCTURE.
- 3. REFERENCES:
 - COOMBS P.J. & KUCZERA G. (2001). "RAINWATER TANK DESIGN FOR WATER SUPPLY & STORMWATER MANAGEMENT" STORMWATER INDUSTRY ASSOCIATION REGIONAL CONFERENCE.
 - PATRICK DUPONT & STEVE SHACKEL, "RAINWATER" AUSTRALIAN GOVERNMENT (2004), "GUIDANCE ON USE OF RAINWATER TANKS" AVAILABLE AT www.sydneywater.com.au
- 4. ALL CONNECTIONS TO PLUMBING AND RAINWATER TANKS TO BE IN ACCORDANCE WITH SYDNEY WATERS' GUIDE "INSTALLING A RAINWATER TANK"
- 5. 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.
- 6. PROVIDE A PROPRIETARY FIRST FLUSH DIVERTER UPSTREAM OF THE RAINWATER TANK.



TYPICAL TRENCHING DETAIL



450x450 PIT DETAIL

ONSITE DETENTION CALCULATIONS - NORTHERN BEACHES COUNCIL ACCORDING TO "WATER MANAGEMENT FOR DEVELOPMENT POLICY"

REFER 9.3 - REGIONAL REQUIREMENTS - REGION 1. NORTHERN CATCHMENTS APPLICABLE

TOTAL SITE AREA	=	702.9 m ²
PROPOSED IMPERVIOUS AREA	=	345.6 m ² (49.2 %)
PRE DEVELOPED IMPERVIOUS AREA	=	271.9 m ² (38.7%)
INCREASE IN IMPERVIOUS AREA	=	73.7 m ²

NEW RESIDENCE

OSD PROVIDED - 4500LITRE TANK UNDER DECK PICKING UP DPI ONLY
OF CONTRIBUTING AREA 79.25QM - ORIFICE 26mm - FLOW 2L/SEC
SUBJECT LAND DOES HAVE ACCESS TO PUBLIC DRAINAGE SYSTEM - STREET THROUGH EASEMENT TO CALVERT PARADE

DESIGN OF STORMWATER MANAGEMENT SYSTEM COMPLIES WITH 9.3.1 & 5.1 OF 'WATER MANAGEMENT FOR DEVELOPMENT POLICY'
REFER SIGNATURE BELOW.

STORMWATER NOTES:

- 2 - ALL PIPES TO BE uPVC TO AS 1254-2002 UNLESS NOTED OTHERWISE.
- 3 - ALL PIPES TO BE LAID AT 1 % MINIMUM GRADE UNLESS NOTED OTHERWISE.
- 4 - 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 AS PER AS3500.
BACKFILL TO BE ADEQUATELY CONSOLIDATED AROUND PIPES BY METHOD OF RAMMING AND WATERING IN. TRENCHES TO BE FILLED WITH GRANULAR MATERIAL AS SPECIFIED.
- 5 - DOWN PIPE LOCATIONS ARE INDICATIVE ONLY. LOCATIONS TO BE CONFIRMED WITH ARCHITECT PRIOR TO COMMENCEMENT WITH WORK.
- 6 - PROVIDE CLEANING EYES AT ALL DOWNPIPES.
- 7 - ALL PITS TO BE PRECAST, PREFORMED OR HDPE, IN ACCORDANCE WITH LOCAL COUNCIL SPECIFICATIONS.
- 8 - ALL PITS GREATER THAN 1000mm DEEP SHALL HAVE STEP IRONS AS PER COUNCIL STANDARDS.
- 9 - ALL WORK TO BE IN ACCORDANCE WITH LOCAL COUNCIL STANDARDS AND SPECIFICATIONS.
- 10 - PRIOR TO COMMENCING ANY SITE WORKS THE CONTRACTOR SHALL IMPLEMENT EROSION CONTROL MEASURES TO EPA GUIDELINES AND COUNCIL SPECIFICATIONS. ALL MEASURES TO REMAIN IN PLACE UNTIL COMPLETION AND STABILIZATION OF THE SITE TO COUNCIL SATISFACTION.
- 11 - ALL LEVELS SHOWN ARE TO AHD
- 12 - ENSURE THAT ALL PITS AND STORMWATER PIPES ARE LOCATED CLEAR FROM TREE ROOT SYSTEMS.
- 13 - ALL EXISTING EARTHENWARE PIPES TO BE UPGRADED TO uPVC.
- 14 - ALL WORKS TO BE IN ACCORDANCE WITH AS 3500-2015 NATIONAL PLUMBING DRAINAGE CODE PART 3 - STORMWATER DRAINAGE.
AND ALL WORKS TO BE IN ACCORDANCE WITH AS 3500-2012 NATIONAL PLUMBING DRAINAGE CODE PART 5 - HOUSING INSTALLATIONS.

EAST PARADE QUEENS

39 CALVERT PARADE LOT A, DP 395094

41 CALVERT PARADE LOT 3, DP 395093

SECOND SCHEDULE (3 NOTIFICATIONS)

1	RESERVATIONS AND CONDITIONS IN THE CROWN GRANT(S)
2	G451475 EASEMENT APPURTENANT TO THE LAND WITHIN DESCRIBED AFFECTING THE LAND SHOWN AS EASEMENT 6' WIDE IN DP395093

EXTRACT FROM DEALING G451475

County	Parish	Reference to Title (s)	Description of Land (s) part only.
CHISHOLM	NARRABERN	PART 5698 101 300	Part being Lot 2 in plan of subdivision annexed hereto and marked with the letter "A".

ENCUMBRANCES, &c., REFERRED TO: 395093

PROVIDE 450 SQUARE PIT AT BOUNDARY. PROVIDE 200x100x6 HD GALV RHS TO STREET. PROVIDE CONCRETE KERB LOCALLY FOR OUTLET INTO EXISTING ROCK LINED V DRAIN

CALVERT PARADE

NOTES:

- 1. ALL DIMENSIONS TO BE VERIFIED ON SITE BEFORE COMMENCING WITH WORK.
- 2. FOR GENERAL NOTES AND DRAWING SCHEDULE REFER TO DRAWING NUMBER: S01.

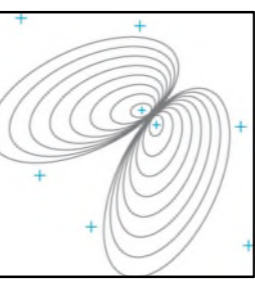
DOCUMENT CERTIFICATION

Date : APRIL 2022
Bruce Lewis
(Principal : Peninsula Consulting Engineers)
BE(Civil), CPEng, MIEAust., NPER
Institute of Engineers Membership No. 879131

12-04-2022	A	FOR COUNCIL SUBMISSION
23-09-2021	PI	DRAFT
Date:	Rev:	Amendment:

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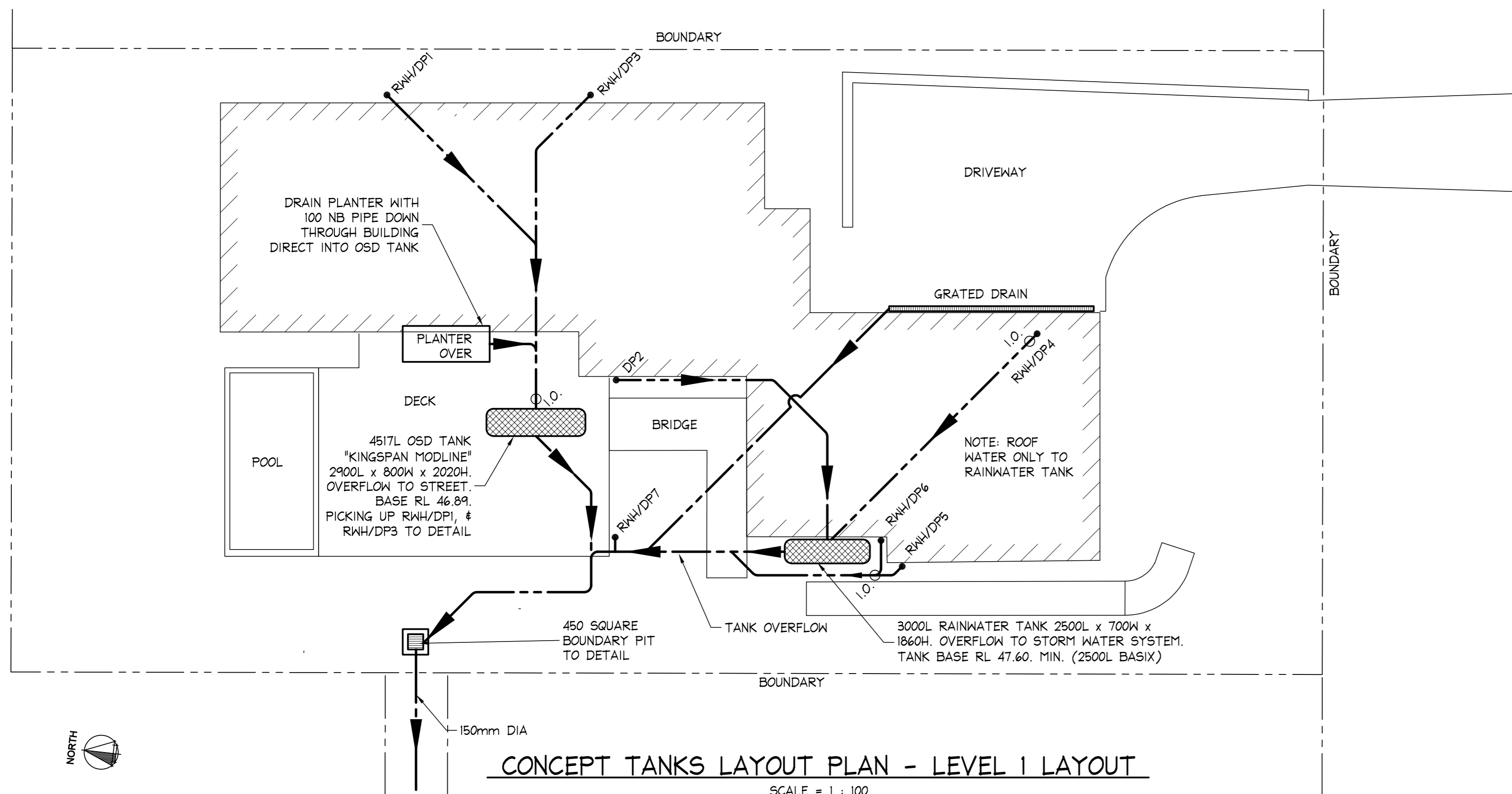
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Project:
PROPOSED WORKS
at: 132A QUEENS PARADE EAST
NEWPORT
for: MR & MRS LOVE

Drawing Title:

CONCEPT STORMWATER MANAGEMENT PLAN & DETAILS

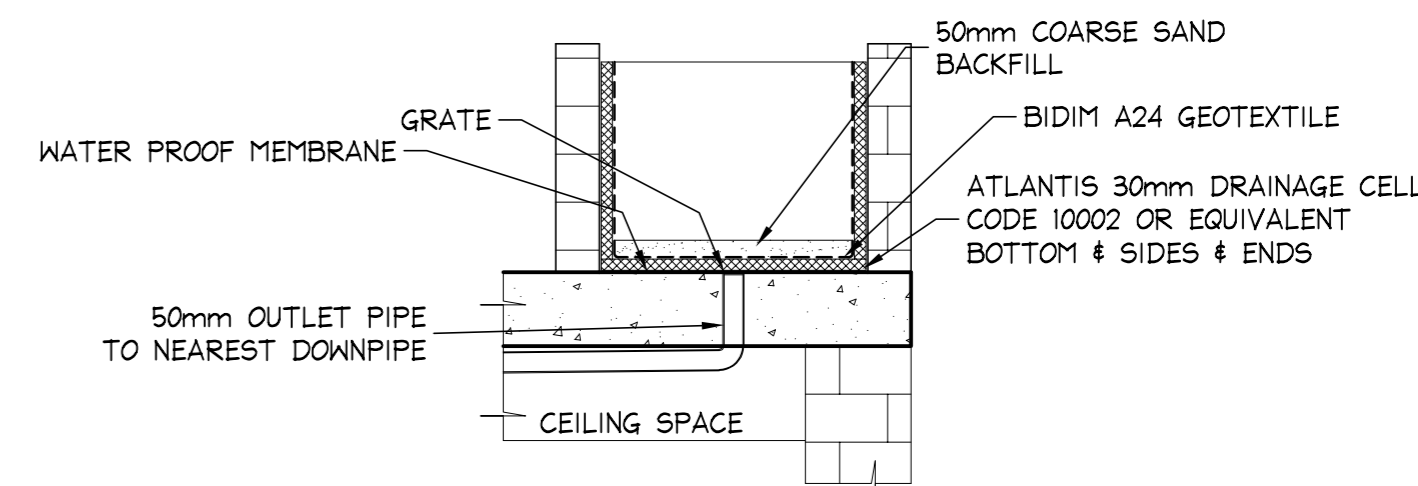
Job No:	Drawing No:	Rev:
21-0806	H01	A



CONCEPT TANKS LAYOUT PLAN - LEVEL 1 LAYOUT

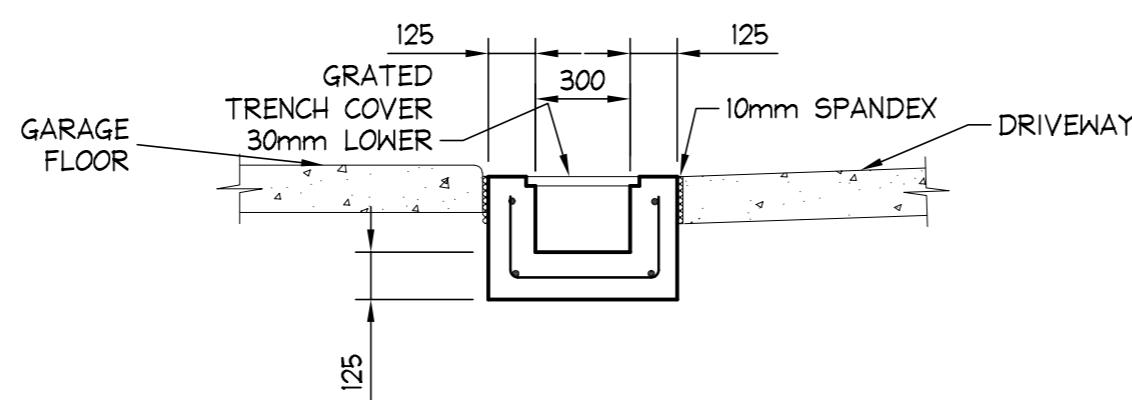
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LEVELS TAKEN FROM SURVEY BY GMS SURVEYORS P/L, REF:510A, DATED 27-08-2019
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PLANTER CROSS SECTION

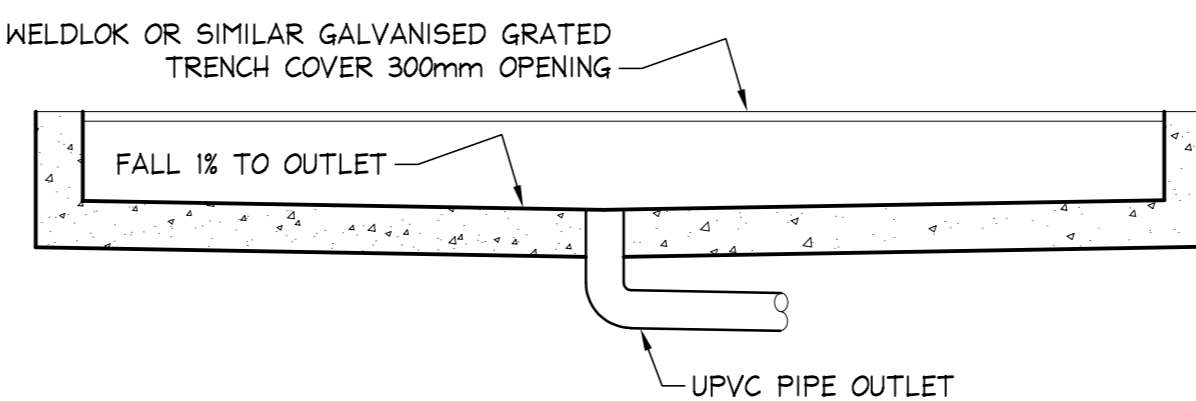
NOT TO SCALE



GRATED DRAIN

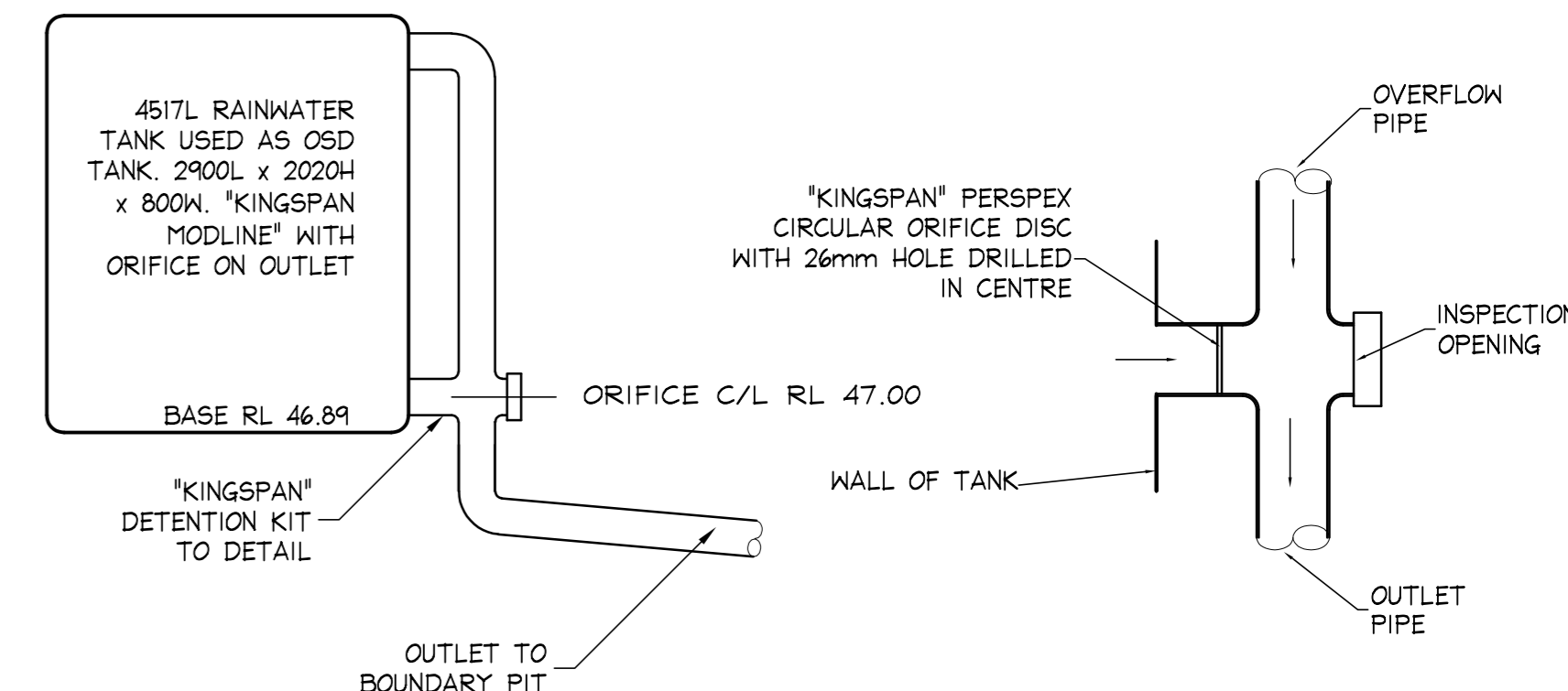
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PRECAST OR HDPE GRATED DRAIN
ALTERNATIVE



LONGITUDINAL SECTION GRATED DRAIN

SCALE = 1 : 20

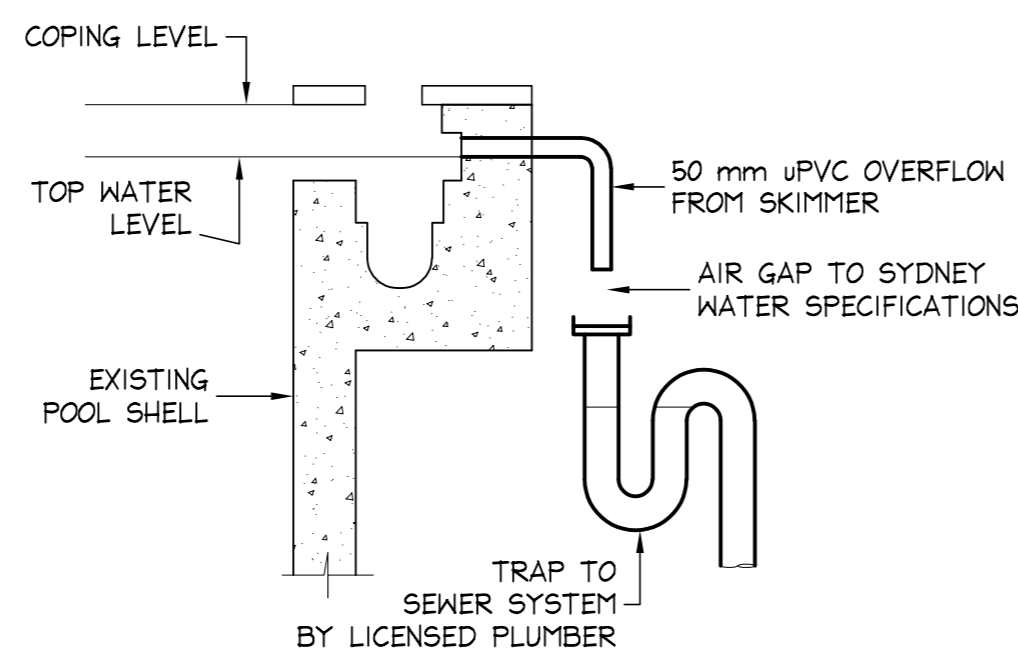


"KINGSPAN" DETENTION KIT

SCALE 1:10

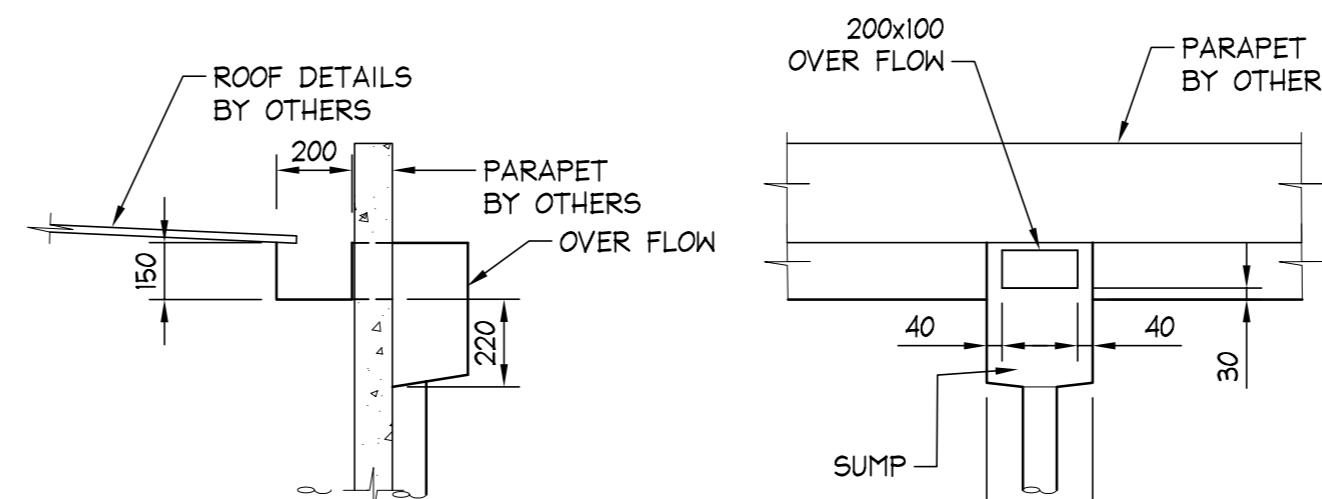
DIAGRAMMATIC "KINGSPAN" TANK LAYOUT

NOT TO SCALE



**POOL OVERFLOW
SECTION AT SKIMMER**

SCALE = 1 : 20

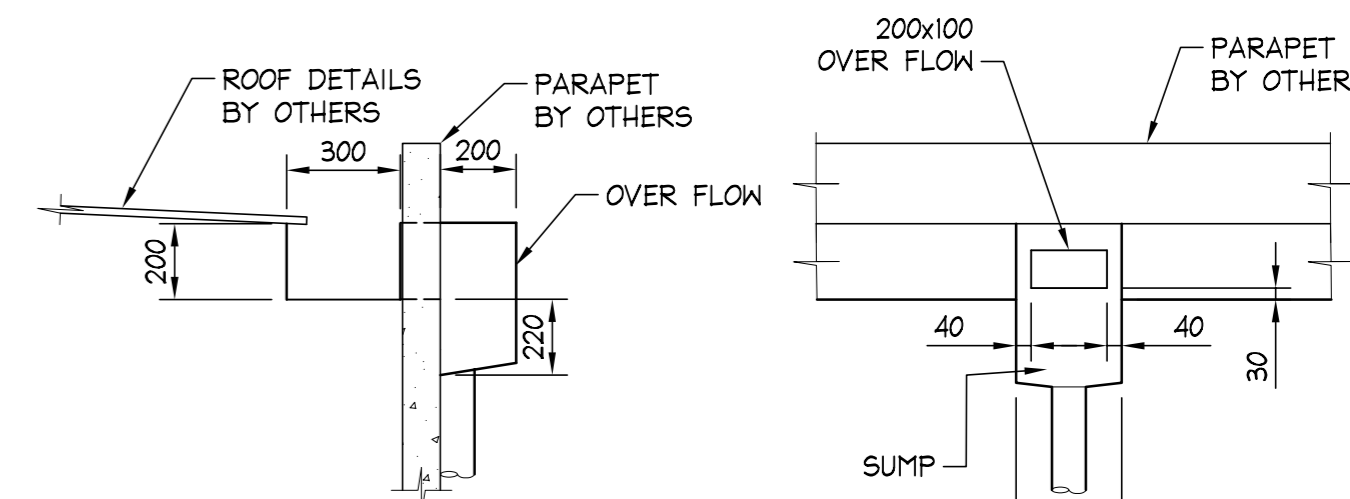


CROSS SECTION

LONG SECTION

RAIN HEAD TYPE A DETAIL

SCALE = 1 : 20



CROSS SECTION

LONG SECTION

RAIN HEAD TYPE B DETAIL

SCALE = 1 : 20

Northern Beaches Council - Region 1

132a Queens Parade East Newport

New Residence & Pool

On Site Drainage Calculations

Area Calculation - Existing	m ²	Area Calculation - Proposed	m ²
Block	702.9	Main Roof	261
Main Roof	196.8	Driveway	46.3
Front Steps & Driveway	16.6	West Side Path	16.8
Balcony	15.8	Rear Timber Decks -50% Imp	19.4
Rear Steps & Paving	42.7	Pool Surround	2.1
		All Impervious	345.6
All Impervious	271.9	Pervious	357.3
Pervious	431.0	Percent Impervious Existing	49.2
Percent Impervious Existing	38.7	Percent Impervious Proposed	
Impervious Area Increase	73.7		

Technical Requirements from Council - " Water Management for Development Policy" - August 2020

9.3.1 Onsite Stormwater Disposal Requirements for Region 1 Northern Catchments

All development creating additional hard [impervious] area of more than 50m²

must provide an onsite detention system [for additions only]

Applicable - extensions will increase hard surface area by 73.7m²

But 5.5.1.2.1 - Interallotment Drainage Easement is available

6.6.4 Minimum pipe size through easement is 150mm

to cater for 5%AEP Storm

Refer Table 7 for 50-75m² additional impervious

Tank Size - 4500Litres

Discharge Rate - for additional impervious

From Appendix 9 page 72 - Orifice Size

Will run RWH/DP1 through OSD Tank only - catchment area 79.2m²

OSD Tank under Entertainment Area as shown

ON SITE DRAINAGE CALCULATIONS

NOTES:

- ALL DIMENSIONS TO BE VERIFIED ON SITE BEFORE COMMENCING WITH WORK.
- FOR GENERAL NOTES AND DRAWING SCHEDULE REFER TO DRAWING NUMBER: S01.



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12-04-2022 A FOR COUNCIL SUBMISSION

24-08-2021 PI DRAFT

Date: Rev: Amendment:

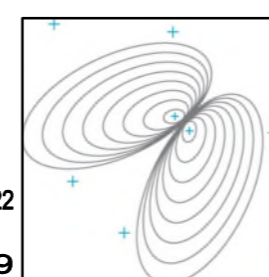
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Drawing No:

H02

Rev:

A