

PROPOSED RESIDENTIAL DEVELOPMENT
LOT 4 NO 22 HUXLEY STREET, WEST RYDE
STORMWATER MANAGEMENT PLANS

GENERAL NOTES:

1. THESE THE PLANS SHALL BE READ IN CONJUNCTION WITH OTHER RELEVANT CONSULTANTS'S PLANS, SPECIFICATIONS, CONDITIONS OF DEVELOPMENT CONCEST AND CONSTRUCTION CERTIFICATE REQUIREMENTS. WHERE DISCREPANCIES ARE FOUND NASTASI & ASSOCIATES MUST BE CONTACTED IMMEDIATELY FOR VERIFICATION.
2. WHERE THESE PLANS ARE NOTED FOR DEVELOPMENT APPLICATION PURPOSES ONLY, THEY SHALL NOT BE USED FOR OBTAINING A CONSTRUCTION CERTIFICATE NOR USED FOR CONSTRUCTION PURPOSES.
3. SUBSOIL DRAINAGE SHALL BE DESIGNED AND DETAILED BY THE STRUCTURAL ENGINEER. SUBSOIL DRAINAGE SHALL NOT BE CONNECTED INTO THE STORMWATER SYSTEM IDENTIFIED ON THESE PLAN UNLESS APPROVED BY NASTASI & ASSOCIATES ENGINEERS.

STORMWATER CONSTRUCTION NOTES:

1. ALL WORK SHALL BE CARRIED OUT IN ACCORDANCE WITH AS/NZS 3500 (CURRENT EDITION) AND THE REQUIREMENTS OF THE LOCAL COUNCIL'S POLICIES AND CODES
2. THE MINIMUM SIZE OF THE STORMWATER DRAINS SHALL NOT BE LESS THAN DN 90 FOR CLASS 1 BUILDINGS AND DN100 FOR OTHER CLASSES OF BUILDING OR AS REQUIRED BY REGULATORY AUTHORITY
3. THE MINIMUM GRADIENT OF STORMWATER DRAINS SHALL BE 1%, UNLESS NOTED OTHERWISE
4. COUNCIL'S TREE PRESERVATION ORDER IS TO BE STRICTLY ADHERED TO. NO TREES SHALL BE REMOVED UNTIL PERMIT IS OBTAINED
5. PUBLIC UTILITY SERVICES ARE TO BE ADJUSTED AS NECESSARY AT THE CLIENT'S EXPENSE
6. ALL PITS TO BE BENCHED AND STREAMLINED. PROVIDE STEP IRONS FOR ALL PITS OVER 1.2m DEEP
7. ALL PITS IN AN EASEMENT OR TRAFFICABLE AREA ARE TO BE PRE-CAST OR CAST-IN-SITU OR APPROVED EQUIVALENT
8. MAKE SMOOTH JUNCTION WITH ALL EXISTING WORK
9. VEHICULAR ACCESS AND ALL SERVICES TO BE MAINTAINED AT ALL TIMES TO ADJOINING PROPERTIES AFFECTED BY CONSTRUCTION
10. SERVICES SHOWN ON THESE PLANS HAVE BEEN LOCATED FROM INFORMATION SUPPLIED BY THE RELEVANT AUTHORITIES AND FIELD INVESTIGATIONS AND ARE NOT GUARANTEED COMPLETE NOR CORRECT. IT IS THE CLIENT & CONTRACTOR'S RESPONSIBILITY TO LOCATE ALL PRIOR TO CONSTRUCTION
11. ANY VARIATION TO THE WORKS AS SHOWN ON THE APPROVED DRAWINGS ARE TO BE CONFIRMED BY NASTASI & ASSOCIATES PRIOR TO THEIR COMMENCEMENT

RAINWATER RE-USE NOTES:

1. RAINWATER SUPPLY PLUMBING TO BE CONNECTED TO OUTLETS WHERE REQUIRED BY BASIX CERTIFICATE (BY OTHERS)
2. TOWN WATER CONNECTION TO RAINWATER TANK TO THE SATISFACTION OF THE REGULATORY AUTHORITY. THIS WAY REQUIRE PROVISION OF:
2.1. PERMANENT AIR GAP
2.2. BACKFLOW PREVENTION DEVICE
3. NO DIRECT CONNECTION BETWEEN TOWN WATER SUPPLY AND THE RAINWATER SUPPLY
4. AN APPROVED STOP VALVE AND/OR PRESSURE LIMITING VALVE AT THE RAINWATER TANK
5. PROVIDE AT LEAST ONE EXTERNAL HOSE COCK ON THE TOWN WATER SUPPLY FOR FIRE FIGHTING
6. PROVIDE APPROPRIATE FLOAT VALVES AND/OR SOLENOID VALVES TO CONTROL TOWN WATER SUPPLY INLET TO TANK IN ORDER TO ACHIEVE THE TOP-UP INDICATED ON THE TYPICAL DETAIL
7. ALL PLUMBING WORKS ARE TO BE CARRIED OUT BY LICENSED PLUMBERS IN ACCORDANCE WITH AS/NZS3500.1 NATIONAL PLUMBING AND DRAINAGE CODE
8. PRESSURE PUMP ELECTRICAL CONNECTION TO BE CARRIED OUT BY A LICENSED ELECTRICIAN
9. ONLY ROOF RUN-OFF IS TO BE DIRECTED TO THE RAINWATER TANK. SURFACE WATER INLETS ARE NOT BE CONNECTED
10. PIPE MATERIALS FOR RAINWATER SUPPLY PLUMBING ARE TO BE APPROVED MATERIALS TO AS/NZE3500 PART 1 SECTION 2 AND TO BE CLEARLY AND PERMANENTLY IDENTIFIED AS 'RAINWATER'. THIS MAY BE ACHIEVED FOR BELOW GROUND PIPES USING IDENTIFICATION TAPE (MADE IN ACCORDANCE WITH AS2648) OR FOR ABOVE FROUND PIPES BY USING ADHESIVE PIPE MARKERS (MAKE IN ACCORDANCE WITH AS1345)
11. EVERY RAINWATER SUPPLY OUTLET POINT AND THE RAINWATER TANK ARE TO BE LABELED 'RAINWATER' ON A METALLIC SIGN IN ACCORDANCE WITH AS1316V9
12. ALL INLETS AND OUTLETS TO THE RAINWATER TANK ARE TO HAVE SUITABLE MEASURES PROVIDED TO PREVENT MOSQUITO AND VERMIN ENTRY.

EROSION AND SEDIMENT NOTES:

1. THESE THE PLANS SHALL BE READ IN CONJUNCTION WITH EROSION AND SEDIMENT CONTROL DETAILS AS ATTACHED
2. THE CONTRACTOR SHALL IMPLEMENT ALL SOIL EROSION AND SEDIMENT CONTROL MEASURE AS NECESSARY AND TO THE SATISFACTION OF THE RELEVANT LOCAL AUTHORITY PRIOR TO THE COMMENCEMENT ANY DURING CONSTRUCTION. NO DISTURBANCE TO THE SITE SHALL BE PERMITTED OTHER THAN IN THE IMMEDIATE AREA OF THE WORKS AND NO MATERIAL SHALL BE REMOVED FROM THE SITE WITHOUT THE RELEVANT LOCAL AUTHORITY APPROVAL. ALL EROSION AND SEDIMENT CONTROL DEVICES TO BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH STANDARDS OUTLINED IN NSW DEPARTMENT OF HOUSING'S "MANAGING URBAN STORMWATER - SOILS AND CONSTRUCTIONS"
3. TOPSOIL SHALL BE STRIPPED AND STOCKPILED OUTSIDE HAZARD AREA SUCH AS DRAINAGE LINES. THIS TOPSOIL SHALL BE RESPREAD LATER ON AREAS TO BE REVEGETATED AND STABILIZED ONLY. TOPSOIL SHALL NOT BE RESPREAD ON ANY OTHER AREA UNLESS SPECIFICALLY INSTRUCTED BY THE SUPERINTENDENT. IF THEY ARE TO REMAIN LONGER THAN ONE MONTH STOCK PILES SHALL BE PROTECTED FROM EROSION BY COVERING THEM WITH A MULCH AND HYDROSEEDING AND, IF NECESSARY, BY LOCATING BANKS OR DRAINS DOWNSTREAM OF A STOCKPILE TO RETARD SILT LADEN RUNOFF
4. THE CONTRACTOR SHALL REGULARLY MAINTAIN ALL EROSION AND SEDIMENT CONTROL DEVICES AND REMOVE ACCUMULATED SILT FROM SUCH DEVICES SUCH THAT MORE THAN 60% OF THEIR CAPACITY IS LOST. ALL THE SILT IS TO BE PLACED OUTSIDE THE LIMIT OF WORKS. THE PERIOD FOR MAINTAINING THESE DEVICES SHALL BE AT LEAST UNTIL ALL DRISTURBED AREAS ARE REVEGETATED AND FURTHER AS MAY BE DIRECTED BY SUPERINTENDENT. OR COUNCIL
5. VEHICULAR TRAFFIC SHALL BE CONTROLLED DURING CONSTRUCTION CONFINING ACCESS WHERE POSSIBLE TO NOMINATED STABILISED ACCESS POINTS
6. THE CONTRACTOR SHALL IMPLEMENT DUST CONTROL BY REGULAR WETTING DOWN DISTURBED AREA
7. ALL DRAINAGE PIPE INLETS TO BE CAPPED UNTIL
- DOWNPIPES CONNECTED
- PITS CONSTRUCTED AND PROTECTED WITH SILT BARRIER

MINIMUM PIPE COVER NOTES:

LOCATION	MINIMUM COVER
NO SUBJECT TO VEHICLE LOADING	100mm SINGLE RESIDENTIAL
SUBJECT TO VEHICLE LOADING	450mm WHERE NOT IN A ROAD
UNDER A SEALED ROAD	600mm
UNSEALED ROAD	750mm
PAVED DRIVEWAY	100mm PLUS DEPTH OF CONCRETE

SEE AS2032 INSTALLATION OF UPVC PIPES FOR FURTHER INFORMATION.

CONCRETE PIPE COVER SHALL BE IN ACCORDANCE WITH AS3725-1989 LOADS ON BURIED CONCRETE PIPES, HOWEVER A MINIMUM COVER OF 450mm WILL APPLY.

WHERE INSUFFICIENT COVER IS PROVIDED, THE PIPE SHALL BE COVERED AT LEAST 50mm THICK OVERLAY AND SHALL BE PAVED WITH AT LEAST:

- 150 mm REINFORCED CONCRETE WHERE SUBJECT TO HEAVY VEHICLE TRAFFIC
- 75mm THICKNESS OF BRICK OR 100mm OF CONCRETE PAVING WHERE SUBJECT TO LIGHT VEHICLE TRAFFIC; OR
- 50mm THICK BRICK OR CONCRETE PAVING WHERE NOT SUBJECT TO VEHICLE TRAFFIC

SURFACE STORMWATER PIT NOTES:

PIT DEPTH (mm)	MINIMUM PIT SIZE (mm)
UP TO 600 mm	450 x 450
FROM 600mm TO LESS THAN 900mm	600 x 600
FROM 900mm	900 x 900

ALL BASEMENT PIT TO BE FITTED WITH HEAVY DUTY CLASS C GRATE & FRAME

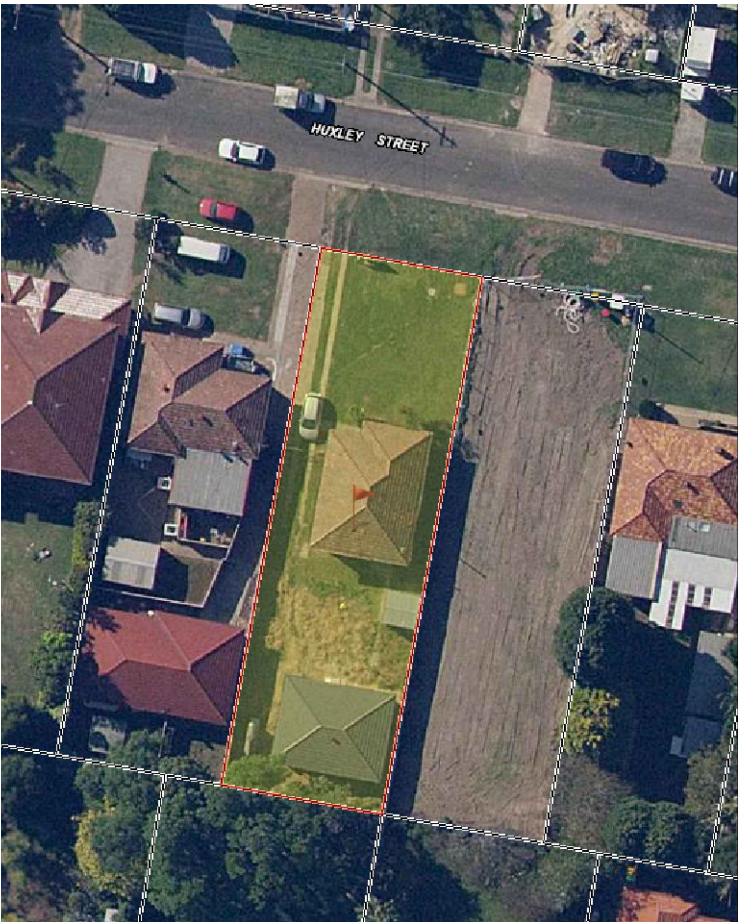
LEGEND

	DENOTES BELOW GROUND ON-SITE DETENTION TANK
	DENOTES ON-SITE DETENTION BASIN
	DENOTES Ø100 DOWNPIPE (U.N.O)
	DENOTES INSPECTION OPENING WITH SCREW DOWN LID AT FINISHED SURFACE LEVEL
	DENOTED PLANTER BOX DRAINS
	DENOTED SURFACE DRAINAGE GRATES
	DENOTED CLEANING EYE
	STORMWATER PIT - SOLID COVER
	STORMWATER PIT - GRATED INLET
	DENOTES GRATED DRAIN
	DENOTES ABSORPTION TRENCH
	DENOTES NON RETURN VALVE
	DENOTES OVERLAND FLOW PATH
	INVERT LEVEL
	TOP OF KERB
	REDUCED LEVEL/SURFACE LEVEL
	PROPOSED FINISH SURFACE LEVEL
	DENOTED Ø100mm PVC (SEWER GRADE) @1% MIN. FALL U.N.O FOR RAINWATER RE-USE
	DENOTED Ø100mm PVC (SEWER GRADE) @1% MIN. FALL U.N.O
	DENOTED Ø150mm PVC (SEWER GRADE) @1% MIN. FALL U.N.O
	DENOTED Ø225mm PVC (SEWER GRADE) @0.5% MIN. FALL U.N.O
	DENOTE AGG PIPE
	DENOTE RAINWATER TANK

SCHEDULE OF DRAWING


DESCRIPTION	SHEET NUMBER
COVER SHEET & NOTES	C1
DRAINAGE PLANS	C2
STORMWATER DETAILS	C3
STORMWATER DETAILS	C4

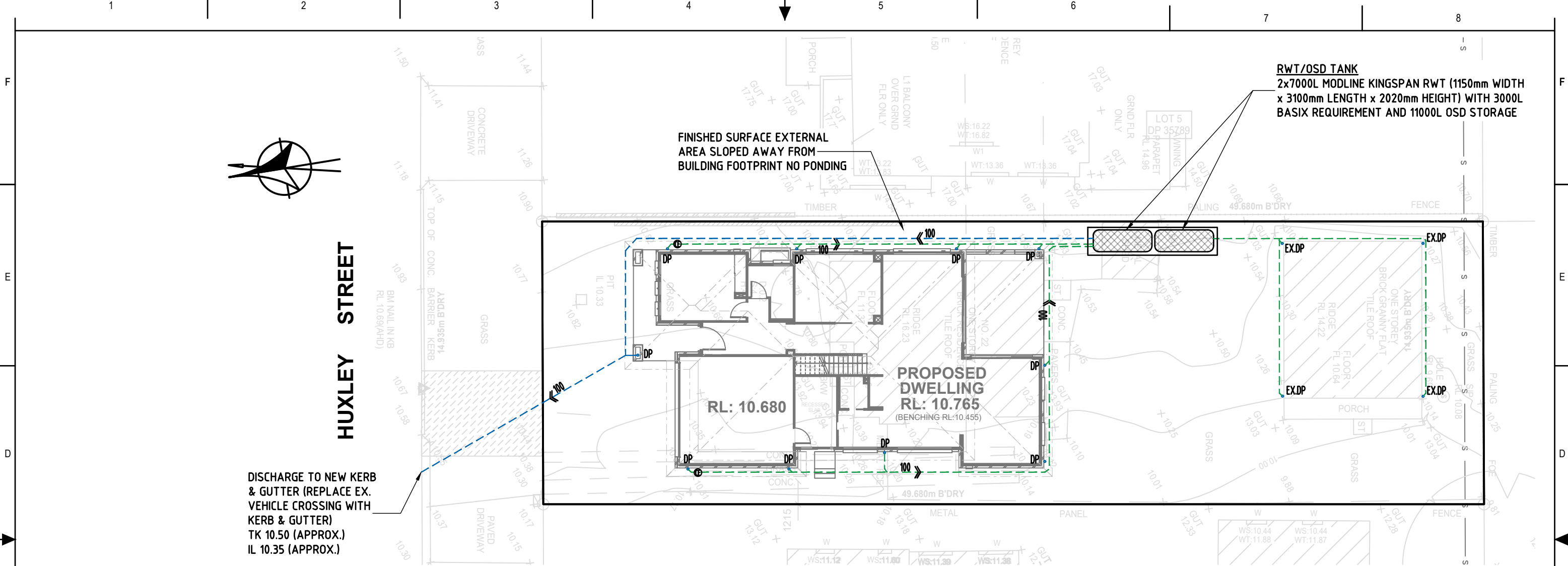
LOCATION MAP



ISSUE FOR APPROVAL



		REFERENCE COORDINATION DRAWING				GENERAL NOTES:				NASTASI & ASSOCIATES				QUALITY CONTROL		APPROVED:		ADDRESS: LOT 4 NO 22 HUXLEY STREET, WEST RYDE		DRAWING STATUS CONCEPT PLAN FOR APPROVAL		
														DESIGNED DATE MD 19.10.2022								
														CHECKED DATE								
C	UPDATE AS PER MARK UP	19.10.2022	ARCH.															SCALE (AT ORIGINAL SIZE)		AS NOTED		
B	UPDATE AS PER MARK UP	18.10.2022	STRUCT.																			
A	ISSUED FOR REVIEW	02.09.2022	MEN.															PROJECT NO.		DRAWING NO.		
ISSUE		REVISION	DATE	ENG.														29674		C1		
				HYD.																REVISION NO.		
																				C		



DESIGN SUMMARY

CITY OF RYDE COUNCIL

SINGLE DWELLING DEVELOPMENT

SITE AREA = 752.5 m²

ROOF AREA DRAIN TO OSD = 260.22 m²

EXISTING ROOF AREA DRAIN TO OSD = 68.28 m²

IMPERVIOUS AREA BYPASS OSD = 82.90 m²

PROPOSED IMPERVIOUS AREA = 414.4m² (54.7%)

1:100 ARI 5MIN. = 227 mm/hr

1:20 ARI 5MIN. = 176 mm/hr

DUE TO IMPERVIOUS AREA IS MORE THAN 40% OF THE TOTAL SITE, OSD IS REQUIRED.

1. DOWNPIPE SIZE MIN. Ø90, GUTTER SIZE MIN.115 HI FRONT.

2. ROOF AREA WILL BE COLLECTED INTO RAINWATER TANK, OVERFLOW FROM RAINWATER TANK WILL DISCHARGED TO KERB & GUTTER VIA GRATED PIT.

3. ALL CHARGED LINES MUST BE OF PRESSURE GRADE AND JOINTS ARE TO BE SOLVENT WELDED

4. THE PIPE SYSTEM INCLUDING DOWNPIPES MUST BE CONSTRUCTED FROM SUITABLY DURABLE MATERIALS.

5. SEALED CLEANING EYES ARE TO BE PROVIDED AT LOWEST POINTS IN THE SYSTEM AND AT FRONT BOUNDARY PRIOR TO COUNCIL LAND AND SHOULD BE EASE TO ACCESS.

DRAINAGE PLAN

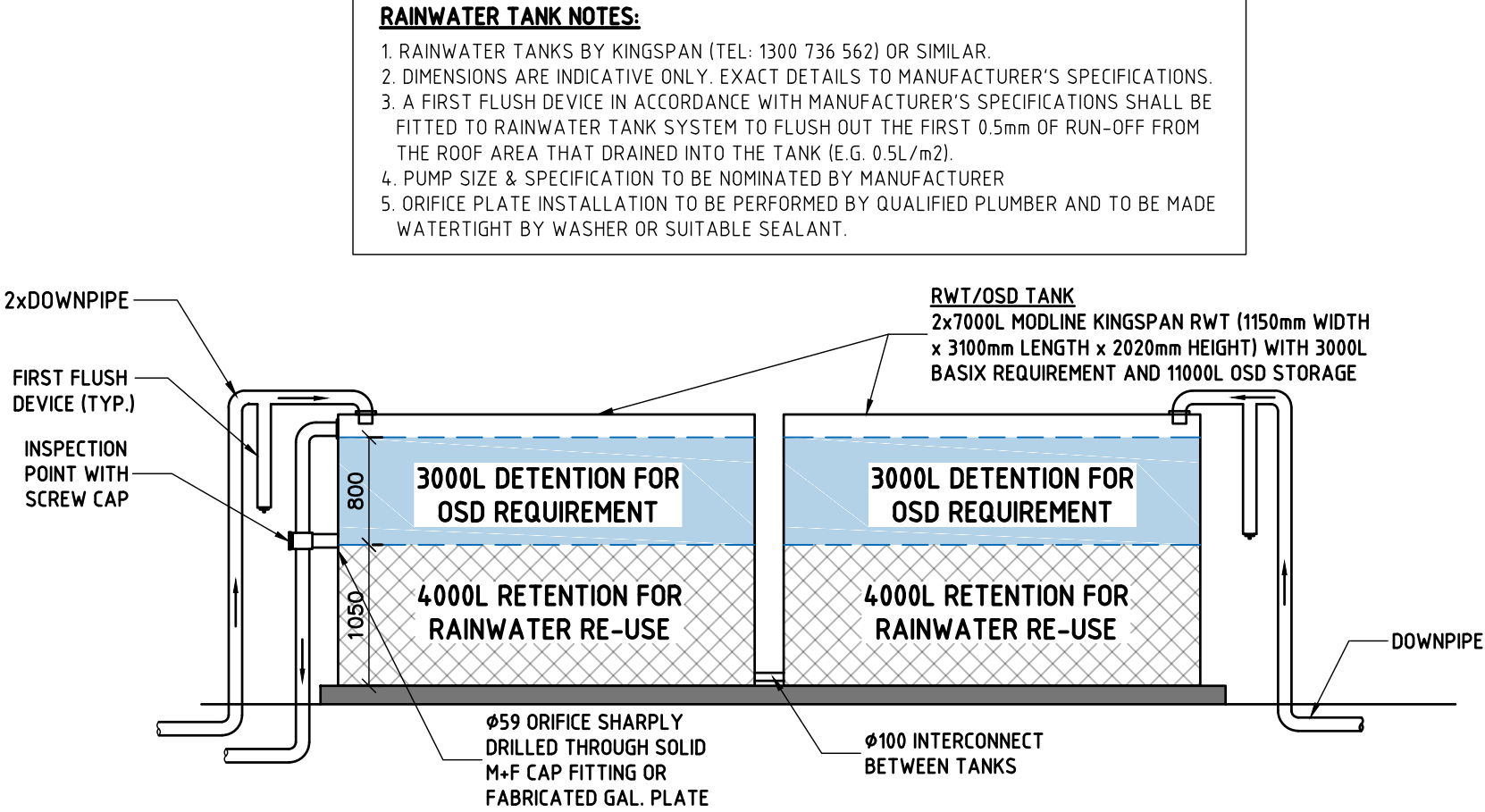
SCALE 1:200

- LOCATION OF PITS AND PIPES SHOWN ON PLAN ARE INDICATIVE ONLY.

REFERENCE COORDINATION DRAWING		GENERAL NOTES:		QUALITY CONTROL		APPROVED:		ADDRESS:		DRAWING STATUS	
DISCIPLINE DRAWING TITLE AND NUMBER DATE REV.		DRAWING TITLE AND NUMBER DATE REV.		DESIGNED DATE		MD 19.10.2022		LOT 4 NO 22 HUXLEY STREET, WEST RYDE		CONCEPT PLAN FOR APPROVAL	
C UPDATE AS PER MARK UP 19.10.2022		ARCH.		CHECKED DATE				TITLE:		SCALE (AT ORIGINAL SIZE) AS NOTED	
B UPDATE AS PER MARK UP 18.10.2022		SURV.						DRAINAGE PLAN		PROJECT NO. 29674	
A ISSUED FOR REVIEW 02.09.2022		MECH.								DRAWING NO. C2	
ISSUE REVISION DATE		ELEC.								REVISION NO. C	
		HYD.									

1 2 3 4 5 6 7 8

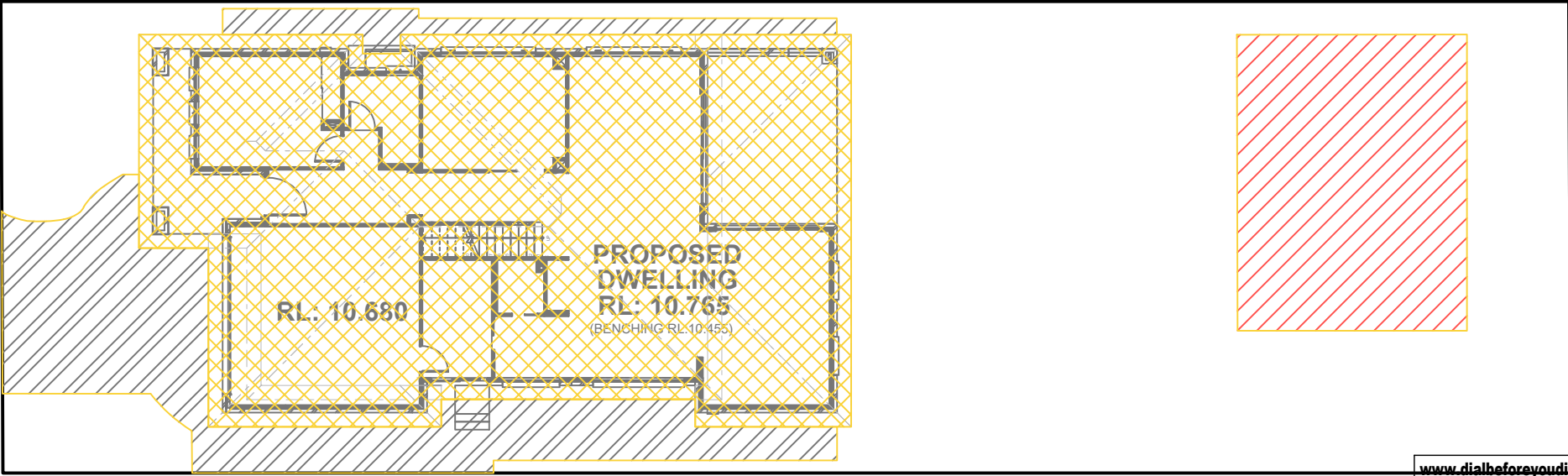
NASTASI & ASSOCIATES CONSULTING CIVIL & STRUCTURAL ENGINEERS			
ON-SITE DETENTION CALCULATION SHEET			
Development Type:	Proposed New Dwelling		
Address:	1 Fisher Avenue, Ryde		
Project number:	29674		
Catchment Zone:	2		
Site area:	752.50 m ²	(A)	
65% Site area:	489.13 m ²		
Total Proposed Impervious Area (roof, driveways, hardstands etc):	411.40 m ²	(B)	
% of site impervious:	0.55 %		
Impervious are draining to the storage facility:	328.5 m ²	(C)	
Pervious area draining to the storage facility:	0.00 m ²	(D)	
Total area draining to the storage facility (Impervious + pervious):	328.5 m ²	(E)	
Pervious area bypassing the storage facility:	424 m ²	(F)	
Impervious area bypassing the storage facility:	82.9 m ²	(G)	
[(C) + (G)] / (C) (must not be greater than 1.25)	1.25	(L)	
Permitted Site Discharge			
Permitted Site Discharge (PSD) rate per m2	0.0195 l/s/m ²	(J)	
Permitted Site Discharge (E) x (J)	6.40 l/s		
Storage volume rate per m2	0.0255 m ³	(K)	
Site Storage Requirement [(E)+(G)]x(K)	10.49 m ³		
Is OSD provided in a landscaped surface basin?	No		
If yes, then Site Storage Requirement (increased by 20%)			
Allowance for Rainwater Tank offset (5000L max.)	5000		
Total OSD volume required after RWT offset	5.49 m ³		
OSD volume provided	6.00 m ³	109%	
Outlet Control (sharp edged orifice plate)			
Height difference between top water level and centre of orifice	0.8 m	(H)	
Orifice diameter (mm)	59 mm		



OSD & RWT DETAILS
1:50

LEGEND

- ROOF AREA DRAIN TO OSD = 260.22 m²
- EXISTING ROOF AREA DRAIN TO OSD = 68.28 m²
- IMPERVIOUS AREA BYPASS OSD = 82.90 m²

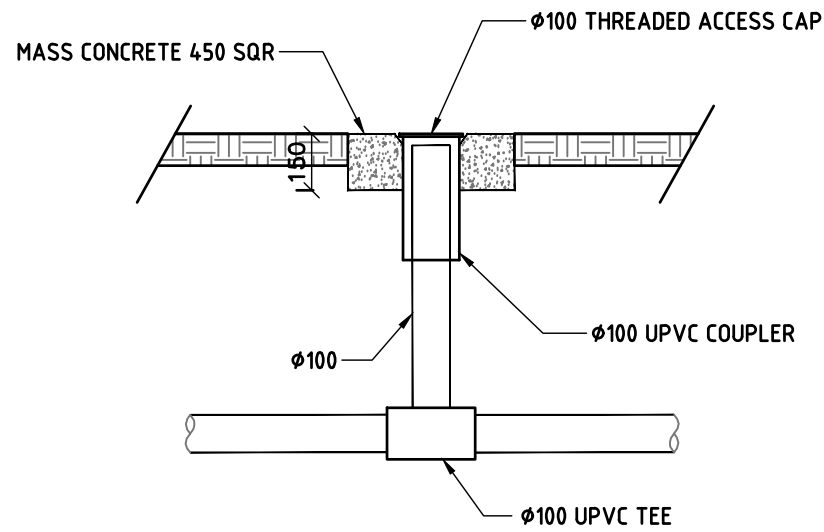


CATCHMENTS AREA PLAN
SCALE 1:200

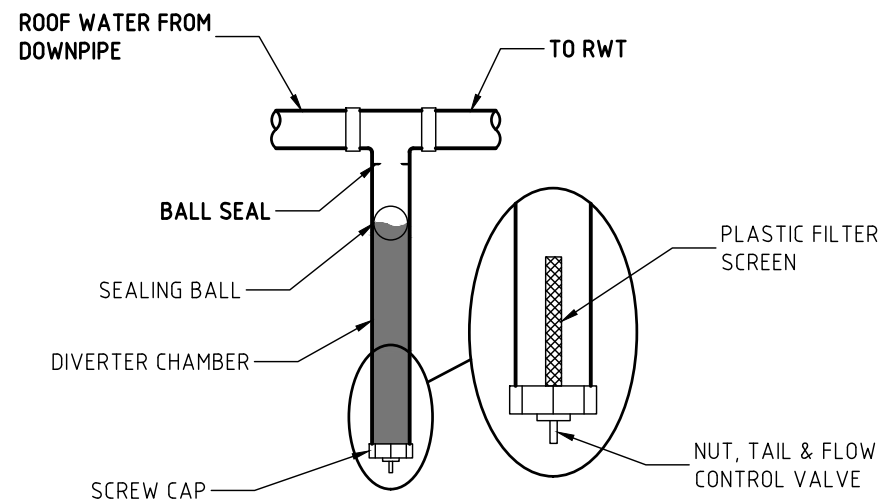
ISSUE FOR APPROVAL



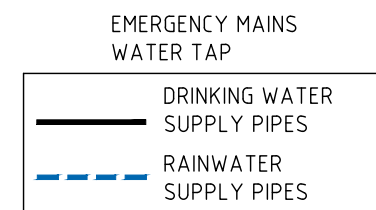
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DISCIPLINE	DRAWING TITLE AND NUMBER	DATE	REV.	DRAWING TITLE AND NUMBER	DATE	DESIGNED	DATE	LOT 4 NO 22 HUXLEY STREET, WEST RYDE		CONCEPT PLAN FOR APPROVAL	
ARCH.						MD	19.10.2022			SCALE (AT ORIGINAL SIZE) AS NOTED	
STRUCT.						CHECKED	DATE			PROJECT NO. 29674	
Mech.										DRAWING NO. C3	
ELEC.										REVISION NO. C	
HYD.											
ISSUE	REVISION	DATE									



CLEANNING EYE DETAILS
SCALE 1:20



FIRST FLUSH DEVICE DETAIL
1:20



BACK FLOW PREVENTION
DEVICE AT WATER METER

SYDNEY WATER
SUPPLY MAIN

HOT WATER
TANK

RAINWATER TO
WASHING MACHINE
AND TOILET

BYPASS OF
PUMP

DUAL FEED
TO TOILET

FIRST FLUSH DEVICE
TRICKLE TOP-UP

ROOF WATER TO
RAINWATER TANK

PRESSURE
PUMP

TAP

RAINWATER TANK RE-USE DIAGRAM
NTS

REVISION		DATE	REV.	DATE	REV.
A		02.09.2022	1		
B		18.10.2022	2		
C		19.10.2022	3		

REFERENCE COORDINATION DRAWING		DISCIPLINE	DRAWING TITLE AND NUMBER	DATE	REV.	DRAWING TITLE AND NUMBER	DATE	REV.
		ARCH.						
		STRUCT.						
		Mech.						
		ELEC.						
		HYD.						

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QUALITY CONTROL	
DESIGNED	DATE
MD	19.10.2022
CHECKED	DATE

APPROVED:



ADDRESS: LOT 4 NO 22 HUXLEY STREET, WEST RYDE
TITLE: STORMWATER DETAILS

DRAWING STATUS CONCEPT PLAN FOR APPROVAL		
SCALE (AT ORIGINAL SIZE)		AS NOTED
PROJECT NO. 29674	DRAWING NO. C4	REVISION NO. C

ISSUE FOR APPROVAL

