GENERAL NOTES

- THESE THE PLANS SHALL BE READ IN CONJUCTION 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
- 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
- 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:

- 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
- 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
- THE MINIMUM GRADIENT OF STORMWATER DRAINS SHALL BE 1%, UNLESS NOTED OTHERWISE
- COUNCIL'S TREE PRESERVATION ORDER IS TO BE STRICTLY ADHERED TO . NO TREES SHALL BE REMOVED UNTIL
- PUBLIC UTILITY SERVICES ARE TO BE ADJUSTED AS NECESSARY AT THE CLIENT'S EXPENSE
- ALL PITS TO BE BENCHED AND STREAMLINED. PROVIDE STEP IRONS FOR ALL PITS OVER 1.2m DEEP
- MAKE SMOOTH JUNCTION WITH ALL EXISTING WORK
- VEHICULAR ACCESS AND ALL SERVICES TO BE MAINTAINED AT ALL TIMES TO ADJOINING PROPERTIES AFFECTED
- SERVICES SHOWN ON THESE PLANS HAVE BEEN LOCATED FROM INFORMATION SUPPLED 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
- 10. ANY VARIATION TO THE WORKS AS SHOWN ON THE APPROVED DRAWINGS ARE TO BE CONFIRMED BY NASTASI

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- RAINWATER SUPPLY PLUMBING TO BE CONNECTED TO OUTLETS WHERE REQUIRED BY BASIX CERTIFICATE (BY
- TOWN WATER CONNECTION TO RAINWATER TANK TO THE SATISFACTION OF THE REGULATORY AUTHORITY. THIS WAY REQUIRE PROVISION OF:
- 2.2. BACKFLOW PREVENTION DEVICE
- NO DIRECT CONNECTION BETWEEN TOWN WATER SUPPLY AND THE RAINWATER SUPPLY
- AN APPROVED STOP VALVE AND/OR PRESSURE LIMITING VALVE AT THE RAINWATER TANK
- PROVIDE AT LEAST ONE EXTERNAL HOSE COCK ON THE TOWN WATER SUPPLY FOR FIRE FIGHTING
- 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
- ALL PLUMBING WORKS ARE TO BE CARRIED OUT BY LICENSED PLUMBERS IN ACCORDANCE WITH AS/NZS3500.1
- 8. PRESSURE PUMP ELECTRICAL CONNECTION TO BE CARRIED OUT BY A LICENSED ELECTRICIAN
- ONLY ROOF RUN-OFF IS TO BE DIRECTED TO THE RAINWATER TANK. SURFACE WATER INLETS ARE NOT BE CONNECTED
- 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)
- EVERY RAINWATER SUPPLY OUTLET POINT AND THE RAINWATER TANK ARE TO BE LABELED 'RAINWATER' ON A METALLIC SIGN IN ACCORDANCE WITH AS131619
- 12. ALL INLETS AND OUTLETS TO THE RAINWATER TANK ARE TO HAVE SUITABLE MEASURES PROVIDED TO

EROSION AND SEDIMENT NOTES:

- THESE THE PLANS SHALL BE READ IN CONJUCTION WITH EROSION AND SEDIMENT CONTROL DETAILS AS ATTACHED $\,$
- THE CONTRACTOR SHALL IMPLEMENT ALL SOIL EROSION AND SEDIMENT CONTROL MEASURE AS NECESSARY THE CURTINAL IN STALL IMPLEMENT ALL DIE ROUDAN AND SUPPLIENT CONTINUE THE ADDRESS AND STORE 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 FERSION AND SEDMENT CONTROL DEVICES TO BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH STANDARDS DUTLINED IN NSW DEPARTMENT OF HOUSING'S "MANAGING URBAN STORMMATER - SOILS AND CONSTRUCTIONS"
- TUP-SUL SHALL BE STRIPPED AND STUKENED DUTSUE HAZARD AREA SULH A STANDARDE LINES. HIS TOPSOLI SHALL BE ESPERGA LATER ON AREA STO BE REVEET AT EACH STANDLESS OF TOPSOLISHALL 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 ENDSION BY COVERING THEM MITH A MUCH AND HYPORSEDMS AND, IF NECESSARY, BY LOCATING BANKS OR DRAINS DOWNSTREAM OF A STOCKPILE TO RETARD SILT LADEN RUNOFF

TOPSOIL SHALL BE STRIPPED AND STOCKPILED OUTSIDE HAZARD AREA SUCH AS DRAINAGE LINES. THIS

- THE CONTRACTOR SHALL REGIJI ARLY MAINTAIN ALL EROSION AND SEDIMENT CONTROL DEVICES AND REMOVE THE CONTINUE OF STREET ADDICARLY THAN BLEE CHASSIAN AND SUDMINIST VARIENCE THAN SUCH DEVELOPMENT OF THE 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 JUIN, LLD LISTSUBBED AREAS ARE REVEGETATED AND FURTHER AS MAY BE DIRECTED BY SUPERINTENDENT. OR COUNCIL
- VEHICULAR TRAFFIC SHALL BE CONTROLLED DURING CONSTRUCTION CONFINING ACCESS WHERE POSSIBLE TO
- THE CONTRACTOR SHALL IMPLEMENT DUST CONTROL BY REGULAR WETTING DOWN DISTURBED AREA
- 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

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

<u>LEGEND</u>									
	DENOTES BELOW GROUND ON-SITE DETENTION TANK								
* + + + + + + + + + + + + + + + + + + +	DENOTES ON-SITE DETENTION BASIN								
_o DP	DENOTES Ø150 DOWNPIPE (U.N.O)								
, IP	DENOTES INSPECTION OPENING WITH SCREW DOWN LID AT FINISHED SURFACE LEVEL								
● ^{PB}	DENOTED PLANTER BOX DRAINS								
● ^{FD}	DENOTED FLOOR DRAINS								
©	DENOTED CLEANING EYE								
	STORMWATER PIT - SOLID COVER								
	STORMWATER PIT - GRATED INLET								
	DENOTES GRATED DRAIN								
23030000000	DENOTES ABSORPTION TRENCH								
И	DENOTES NON RETURN VALVE								
>>>>	DENOTES OVERLAND FLOW PATH								
IL	INVERT LEVEL								
TK	TOP OF KERB								
RL	REDUCED LEVEL/SURFACE LEVEL								
RL 17.09 +	PROPOSED FINISH SURFACE LEVEL								
100	DENOTED Ø100mm PVC (SEWER GRADE) @1% MIN. FALL U.N.O								
150	DENOTED Ø150mm PVC (SEWER GRADE) @1% MIN. FALL U.N.O								
225	DENOTED Ø100mm PVC (SEWER GRADE) @0.5% MIN. FALL U.N.O								
— G —	DENOTE AGG PIPE								
	DENOTE RAINWATER TANK								

SCHEDULE OF DR.	<u>A WING</u>
DESCRIPTION	SHEET NUMBER
COVER SHEET & NOTES	C1
DRAINAGE PLANS	C2
OSD/RWT 1 PLAN & DETAILS	G
OSD/RWT 2 PLAN & DETAILS	C4
OSD/RWT 3 PLAN & DETAILS	CS
ABSORPTION SYSTEM DETAILS	C6
SPREADER SYSTEM DETAILS	СТ

NORTHERN BEACH COUNCIL - WARRINGAH DCP STORMWATER DRAINAGE FROM LOW LEVEL PROPERTIES

SITE AREA = 1114.70 m^2

EXISTING IMPERVIOUS AREA = 130.24 m² (12.00%)

THE PROPOSED DEVELOPMENT IS SINGLE DWELLING AND GRANNY FLAT. DUE TO THE SITE IS SLOPED TOWARD THE REAR AND DOWNSTREAM EASEMENT CANNOT BE ACHIEVED THEREFORE COMBINATION BETWEEN OSD SYSTEM. ABSORPTION SYSTEM AND LEVEL SPREADER HAS BEEN PROPOSED.

SITE DISCHARGE ASSESSMENT BY DRAINS ILSAX MODEL

- MAIN HOUSE ROOF AREA = 135 m² TO RWT 1
 WORKSHOP ROOF AREA = 77.00 m² TO RWT 2
 GRANNY FLAT AREA = 62.00 m² TO RWT 3

- RWT 1 AND RWT 2 CONNECT TO ABSORPTION SYSTEM
 DRIVEWAY & FRONT LANDSCAPE AREA = 670.52 m² TO ABSORPTION SYSTEM ABSORPTION SYSTEM HYDRAULIC CONDUCTIVITY K = 4.5x10⁻⁵

	PRE DEV	POST DEV					
ARI	Q _{PRE} (l/s)	Q _{ABSORPTION} (l/s)	Q _{RWT 3} (l/s)	Q _{BYPASS} (l/s)	Q _{TOTAL} (l/s)		
5	25	0	2.0	5.0	7		
100	47	11.00	2.0	10.0	23		

OSD/RWT 1 VOLUME REQUIRED = 1.95m³ AT 1% AEP 14min STORM OSD/RWT 2 VOLUME REQUIRED = 0.51m³ AT 1% AEP 11min STORM OSD/RWT 3 VOLUME REQUIRED = 0.57m³ AT 1% AEP 14min STORM ORIFICE DIAMETER = 50mm



ISSUE FOR APPROVAL

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	REFERENCE COORDINATION	DRAWING		GENERAL NOTES:		QUALITY CONTROL	APPROVED:	CLIENT:	ADDRESS:	DRAWING STATUS		
		• THIS DRAWING IS THE COPPRIGHT OF INSTASI & ASSOCIATES CONSULTING CIVIL & STRUCTURE, DISINIEERS, Unit 5,1-3 Mingolia Pioce, Presidons, 2170. PO Box 6046, Hommondelle, 1804, 2170. NASTASI & ASSOCIATES	DESIGNED DATE		WOHL	51 REDMAN ROAD, DEE WHY CONCEPT PI		EPT PLAN FOR A	AN FOR APPROVAL			
	DISCIPLINE DRAWING TITLE AND NUMBER ARCH. GJGN090 - 230250	DATE REV.	DRAWING TITLE AND NUMBER DATE REV	. * IT IS NOT ALLOWED TO COPY OR REPRODUCE IT'S CONTENTS IN ANY FORM EXCEPT FOR THE PURPOSE WHICH IT IS INTENDED WITHOUT THE ABOVE CONSULTANT'S AUTHORITY. * DO NOT SCALE THIS DRAWING, ONLY STATED DIMENSIONS ARE TO BE	CONSULTING CIVIL & STRUCTURAL ENGINEERS B.E., M.I.E. AUST. CPENG NPER-3 ABN-45 S53 226 008 UNIT 5. 1-3 WHYALLA PLACE PRESTORS NSW 2170	MD 04.12.2019	9 Sam	ARCHITECT:	TITLE:	SCALE (AT OR	IGINAL SIZE)	AS NOTED
B UPDATED ARCHITECTURAL PLAN 04 A ISSUED FOR REVIEW 08 ISSUE REVISION	.2019 STRUCT	CIVIL	S EY	* DO NOT SCALE HIS DIRWING, ORLY STATED DIRECTIONS ARE TO BE CONSIDERED. * CONTRACTOR TO VERIFY THE DETAIL / INFORMATION OVEN IN THIS PROMINE, ANY DISCREPANCIES SHALL BE BROUGHT TO ENGINEERS ATTENTION PRIOR TO COMMENCIAMENT OF WORK, FAILURE TO COMPLY WITH THE ABOVE WILL BE CONTRACTORS LUBBLITY.		CHECKED DATE	S. NASTASI B.E., M.LE, CPEng, Nper-3	COVER SHEET & NOTES	PROJECT NO. 18177	drawing no.	revision no B	

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