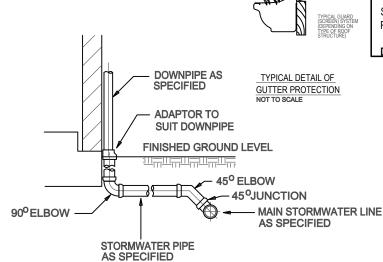
## STORMWATER MANAGEMENT PLANS PROPOSED NEW RESIDENTIAL DEVELOPMENT No.34 ROOSEVELT AVE, ALLAMBIE HEIGHTS NSW 2100

#### **LEGEND GRATED INLET PIT** 450x450 450mm SQUARE INTERNAL GRT 75.54 GRATE LEVEL = RL 75.54 IL 75.12 **INVERT LEVEL = RL 75.12** o 10 INSPECTION OPENING CAP o DP PROPOSED DOWNPIPE 90mm dia or 100mm x 50mm RECTANGULAR UNO **EXISTING TREE GRATED TRENCH DRAIN GRATED ROUND OUTLET 100mm DIAMETER** PROPOSED DOWNPIPE SPREADER ᇴ 100mm DIA CHARGED/1% MIN-ROOF AREA ONLY STORMWATER DRAINAGE $\Rightarrow$ OVERLAND FLOW OR BASIN OVERFLOW PATH



#### TYPICAL DETAIL - DOWNPIPE CONNECTION

**NOT TO SCALE** 

#### ARCHITECT/BUILDER ALLCASTLE HOMES CLIENT 27.06.25 DA ISSUE Mr. P KELAHER ISS DATE **AMENDMENT**

## NORTHERN BEACHES DRAINAGE CALCULATIONS

RELEVANT DESIGN CODE: WARRINGAH COUNCIL "ON-SITE STORMWATER DETENTION TECHNICAL SPECIFICATION". REVISED AUGUST 2012.

SITE AREA = 645.800 m2

#### DETENTION REQUIREMENT:

YES: COUNCIL'S CONDITION OF CONSENT ENFORCES ONSITE DETENTION TABLE 1: MINIMUM SITE STORAGE REQUIRED AND MAXIMUM PERMISSIBLE SITE DISCHARGE: SSR: 200m3/Ha

PSD: 400 L/s per Ha

SITE AREA= 696.70m2 , THEREFORE OSD VOLUME = 0.0645 x 200 = 12.90 m3  $PSD = .0645 \times 400 = 25.80 L/s$ 

BASIX APPLICABLE AND 2000 LITRE ABOVE GROUND TANK PROPOSED. ONSITE DETENTION TANKS PROPOSED

EACH DWELLING IS TO HAVE THE FOLLOWING OSD PARAMETERS:

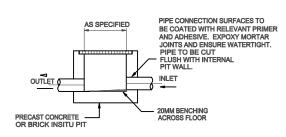
OSD = 7.00m3PSD = 12.90 L/s **ORIFICE PLATE DIA = 83mm** 

#### STORMWATER MANAGEMENT METHODOLOGY

COLLECT ALL OF THE ROOF AREA OF THE PROPOSED DWELLING AND DISCHARGE INTO ABOVE GROUND 2000 LITRE RAINWATER TANK LOCATED AT THE SIDES EACH DWELLING WITH THE OVERFLOW AND PART OF THE IMPERVIOUS & PERVIOUS SURFACES DRAINING INTO THE OSD TANKS LOCATED WITHIN THE FRONT SETRACK OF THE PROPERTY REFER TO SHEET D2 FOR DESIGN

DESIGN BASED ON AR & R . AS 3500 AND RELEVANT COUNCIL STORMWATER MANAGEMENT GUIDELINE

## **CONCEPT ONLY** NOT FOR CONSTRUCTION



TYPICAL DETAIL - CHARGED SYSTEM CLEANOUT PIT

## **GENERAL NOTES**

- 1. FINAL LOCATION OF NEW DOWNPIPES TO BE DETERMINED BY BUILDER/ARCHITECT AT TIME OF CONSTRUCTION.
- 2. THESE DRAWINGS TO BE READ IN CONJUNCTION WITH ARCHITECTS AND OTHER CONSULTANTS DRAWINGS ANY DISCREPANCIES TO BE REFERRED TO THE ENGINEER BEFORE PROCEEDING WITH WORK.
- 3. ALL MATERIALS AND WORKMANSHIP TO BE IN ACCORDANCE WITH AS/NZS 3500.3:2021 STORMWATER DRAINAGE, BCA AND LOCAL COUNCIL POLICY/CONSENT/REQUIREMENTS.
- 4. ALL DIMENSIONS AND LEVELS TO BE VERIFIED BY BUILDER ON-SITE PRIOR TO COMMENCEMENT OF WORKS. THESE DRAWINGS ARE NOT TO BE SCALED FOR DIMENSIONS NOR TO BE USED FOR SETOUT PURPOSES.
- 5. ALL SURVEY INFORMATION AND PROPOSED BUILDING AND FINISHED SURFACE LEVELS SHOWN IN THESE DRAWINGS ARE BASED ON LEVELS OBTAINED FROM DRAWINGS BY OTHERS.
- 6. THESE DRAWINGS DEPICT THE DESIGN OF SURFACE STORMWATER RUNOFF DRAINAGE SYSTEMS ONLY AND DO NOT DEPICT ROOF DRAINAGE OR SUBSOIL DRAINAGE SYSTEMS UNLESS NOTED OTHERWISE. THE DESIGN OF ROOF AND SUBSOIL DRAINAGE SYSTEMS IS THE RESPONSIBILITY OF OTHERS.
- 7. ALL STORMWATER DRAINAGE PIPES ARE TO BE 100mm DIAMETER uPVC AT MINIMUM 1% GRADE UNLESS NOTED OTHERWISE.
- 8. IT IS THE CONTRACTORS RESPONSIBILITY TO LOCATE AND LEVEL ALL EXISTING SERVICES OR OTHER STRUCTURES WHICH MAY AFFECT/BE AFFECTED BY THIS DESIGN PRIOR TO COMMENCEMENT
- 9. ALL PITS WITHIN DRIVEWAYS TO BE 150mm THICK CONCRETE OR EQUAL. 10. THIS PLAN IS THE PROPERTY OF EZE DRAINAGE DESIGNS PTY LTD AND MAY NOT BE USED OR REPRODUCED WITHOUT WRITTEN PERMISSION FROM EZE DRAINAGE DESIGNS PTY LTD



TYPICAL DETAIL - STANDARD PIT

NOT TO SCALE

Pty Ltd ACN 656 950 793

**CONSULTING ENGINEERS** CIVIL & STORMWATER MANAGEMENT

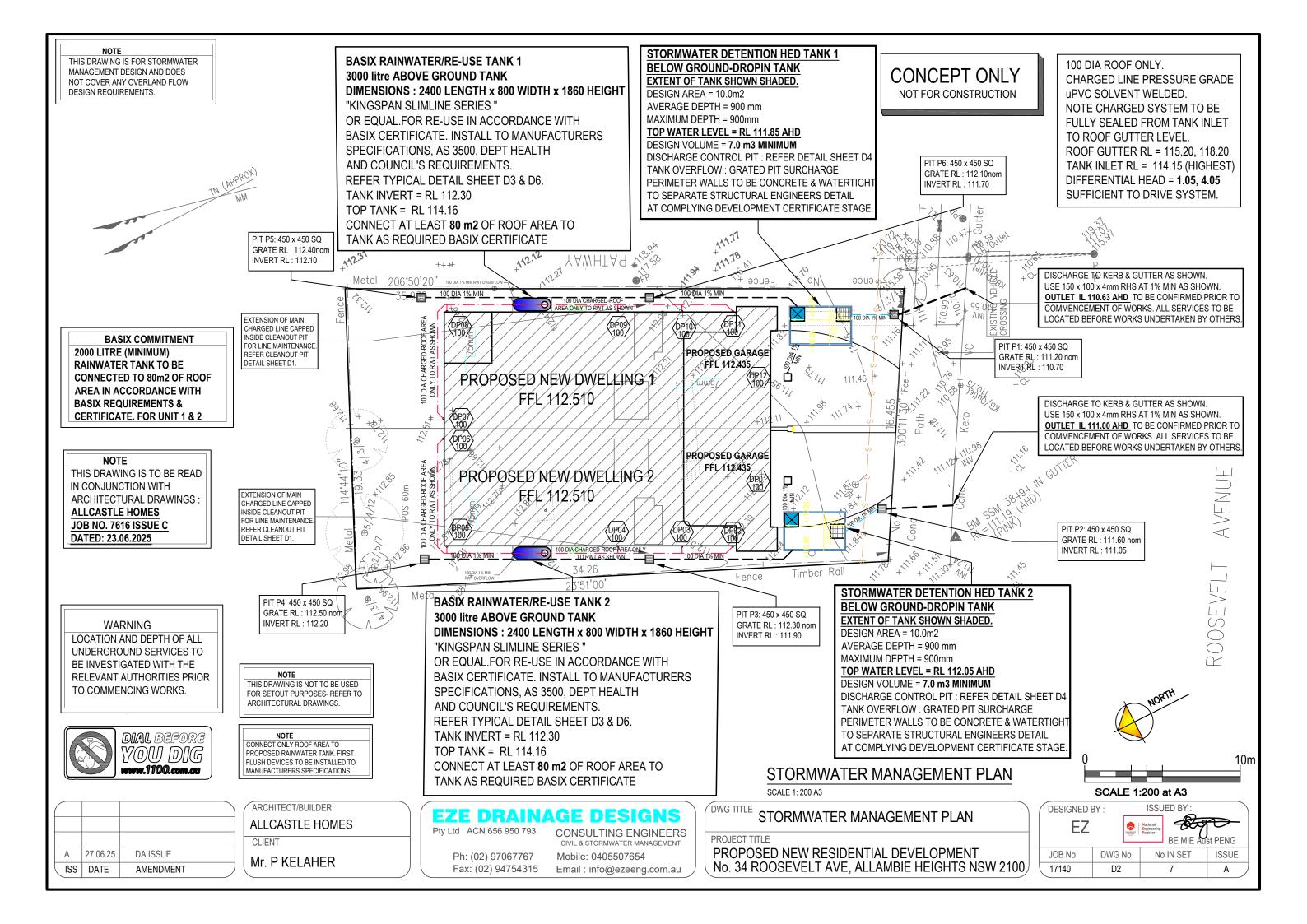
Ph: (02) 97067767 Fax: (02) 94754315

Mobile: 0405507654 Email: info@ezeeng.com.au **COVER SHEET & DESIGN STATEMENT** 

PROJECT TITLE

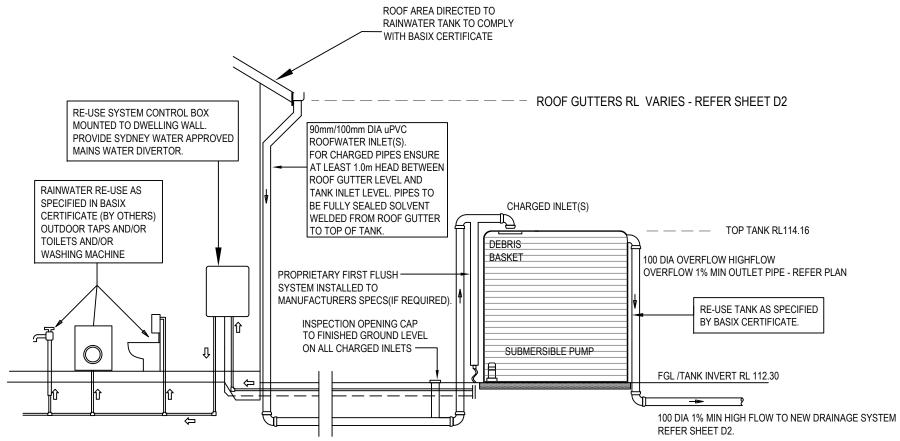
PROPOSED NEW RESIDENTIAL DEVELOPMENT No. 34 ROOSEVELT AVE, ALLAMBIE HEIGHTS NSW 2100

DESIGNED BY:		ISSUED BY:			
EZ			National Engineering Register		<b>₹</b>
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JOB No	DWG No		No	IN SET	ISSUE
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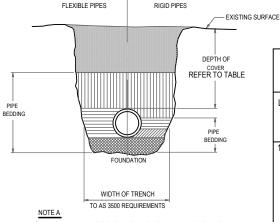
#### RAINWATER RE-USE SYSTEM NOTES

- TOWNWATER CONNECTION TO RAINWATER TANK TO BE TO THE SATISFACTION OF SYDNEY WATER. THIS MAY REQUIRE PROVISION OF:
  - a. PERMANENT AIR GAP.
- b. A BACKFLOW PREVENTION DEVICE.
- c. NO DIRECT CONNECTION BETWEEN TOWN WATER SUPPLY AND THE RAIN WATER SUPPLY.
- d. AN APPROVED STOP VALVE AND/OR PRESSURE LIMITING VALVE AT THE RAINWATER TANK.
- 2. PROVIDE AT LEAST ONE (1) EXTERNAL HOSE COCK ON THE TOWN WATER SUPPLY FOR FIRE FIGHTING.
- 3. PROVIDE APPROPRIATE FLOAT VALVES AND/OR SOLENOID VALVES
- ALL PLUMBING WORKS ARE TO BE CARRIED OUT BY LICENSED PLUMBERS IN ACCORDANCE WITH AS3500.1 NATIONAL PLUMBING AND DRAINAGE CODE.
- 5. PRESSURE PUMP ELECTRICAL CONNECTION TO BE CARRIED OUT BY LICENSED ELECTRICIAN.
- 6. ONLY ROOF RUN-OFF IS TO BE DIRECTED TO THE RAINWATER TANK. SURFACE WATER INLETS ARE NOT TO BE CONNECTED.
- 7. PIPE MATERIALS FOR RAINWATER SUPPLY PLUMBING ARE TO BE APPROVED MATERIALS TO AS 3500 PART 1 SECTION 2 AND TO BE CLEARLY AND PERMANENTLY IDENTIFIED "RAINWATER". THIS MAY BE ACHIEVED FOR BELOW GROUND PIPES USING IDENTIFICATION TAPE (MADE IN ACCORDANCE WITH AS 2648) OR FOR ABOVE GROUND PIPES BY USING ADHESIVE PIPE MARKERS (MADE IN ACCORDANCE WITH AS1345).
- 8. EVERY RAINWATER SUPPLY OUTLET POINT AND THE RAINWATER TANK ARE TO BE LABELLED "RAINWATER" ON A METALLIC SIGN IN ACCORDANCE WITH AS 1319.
- 9. ALL INLETS AND OUTLETS TO THE RAINWATER TANK ARE TO HAVE SUITABLE MEASURES PROVIDED TO PREVENT MOSQUITO AND VERMIN ENTRY.
- 10. SYSTEM TO COMPLY WITH SYDNEY WATER REQUIREMENTS AND ANY CONDITIONS OF LOCAL COUNCIL DEVELOPMENT CONSENT.



TYPICAL DETAIL - RAINWATER RE-USE TANK 1 & 2

**NOT TO SCALE** 



NOTE A
STORMWATER DRAINS CONSTRUCTED OF OTHER THAN CAST IRON,
DUCTILE IRON OR GALVANISED STEEL HAVING COVER LESS THAN
THAT SPECIFIED IN TABLE SHALL BE COVERED WITH AT LEAST 50mm
OVERLAY AND SHALL BE PAYED WITH AT LEAST.

(a) 100mm THICKNESS OF REINFORCED CONCRETE WHERE SUBJECT TO HEAVY VEHICULAR LOADING

#### LEGEND - TRENCH BACKFILL

SYMBOL		FLEXIBLE RIGID PIPES PIPES	
		BACI	KFILL
		PIPE (	OVERLAY
		PIPE SIDE SUPPORT	SIDE ZONE
		_	HAUNCH ZONE
	<b>*****</b>	PIPE UNDERLAY	BED ZONE

#### LOCATION MINIMUM COVER (mm) CAST/DUCTILE IRON OTHER GAL STEEL AUTHORISED PRODUCTS (\* 1. NOT SUBJECT TO VEHICULAR LOADING: A. WITHOUT PAVEMENT: i. FOR SINGLE DWELLINGS ii. OTHER THAN SINGLE DWELLINGS -300 R WITH PAVEMENT OF BRICK/UNREINFORCED CONCRETE -0 (\*\*) 50 (\*\*) 2. SUBJECT TO VEHICULAR LOADING: A. OTHER THAN ROADS: i. WITHOUT PAVEMENT 300 450 ii WITH PAVEMENT OF - REINE CONC. FOR HEAVY VEHICLES. - BRICK/UNREINF. CONC LIGHT VEHICLES 0 (\*\* #) 75 (\*\* #) B. ROADS i. SEALED 300 500 (#)

MINIMUM PIPE COVER

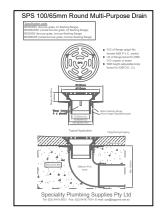
(FROM FINISHED SURFACE TO TOP OF PIPE)

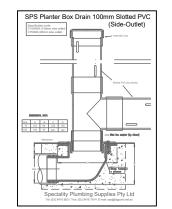
- (\* ) INCLUDES OVERLAY ABOVE THE TOP OF THE PIPE OF NOT LESS THAN  $50 \mathrm{mm}$  THICK
- (\*\*) BELOW THE UNDERSIDE OF THE PAVEMENT

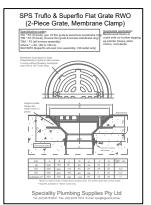
3. SUBJECT TO CONSTRUCTION VEHICLES OR IN EMBANKMENT CONDITIONS

(#) SUBJECT TO COMPLIANCE WITH AS1762, AS2033, AS/NZS 2566.1, AS3725 OR AS 4060

CONCEPT ONLY
NOT FOR CONSTRUCTION

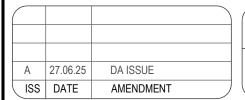






## TYPICAL DETAILS- PLANTER BOX, ROOF DRAIN & TERRACE GRATE

NTS



ARCHITECT/BUILDER
ALLCASTLE HOMES

ii. UNSEALED

CLIENT

Mr. P KELAHER

## **EZE DRAINAGE DESIGNS**

500 (#)

500 (#)

Pty Ltd ACN 656 950 793

300

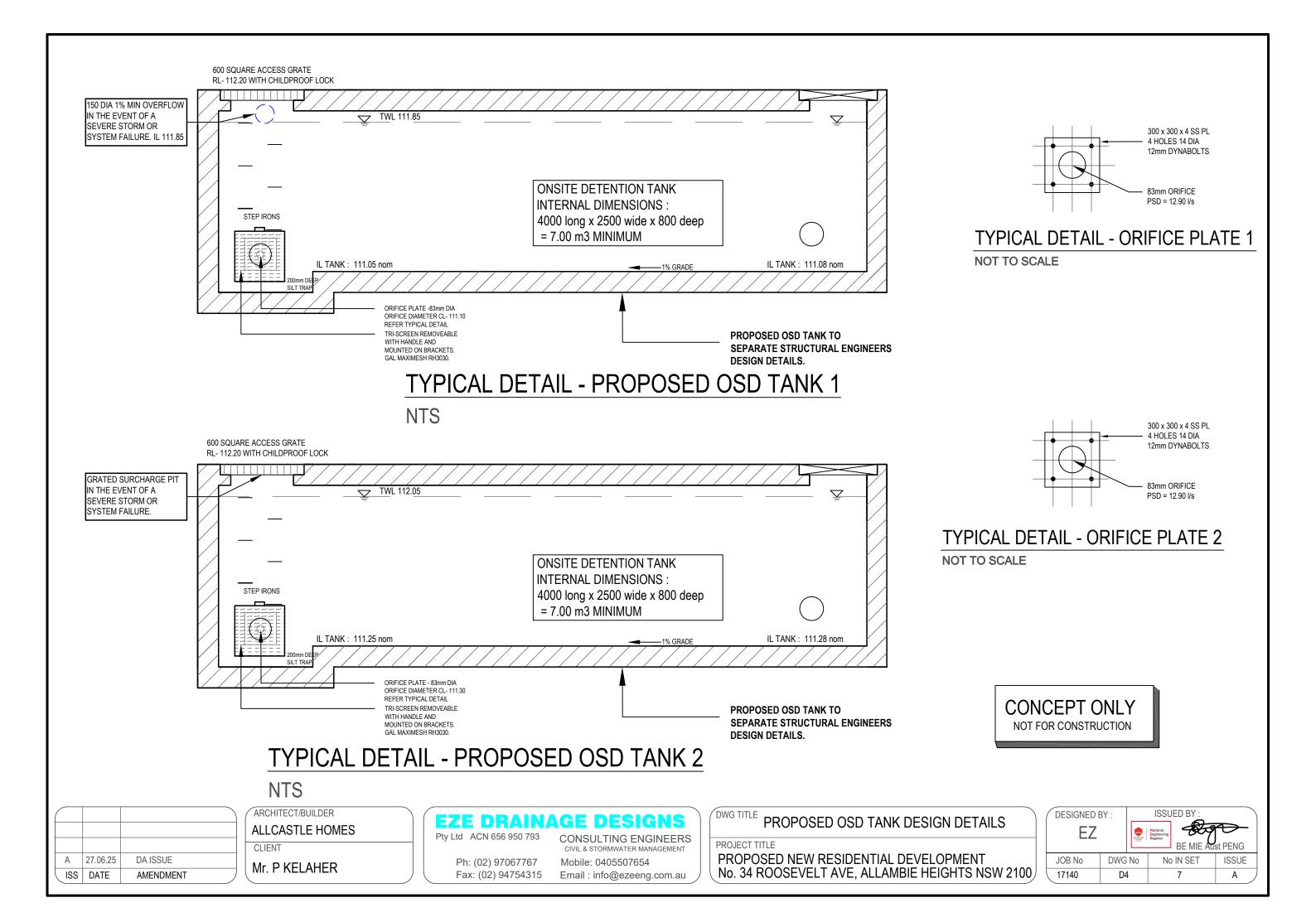
300

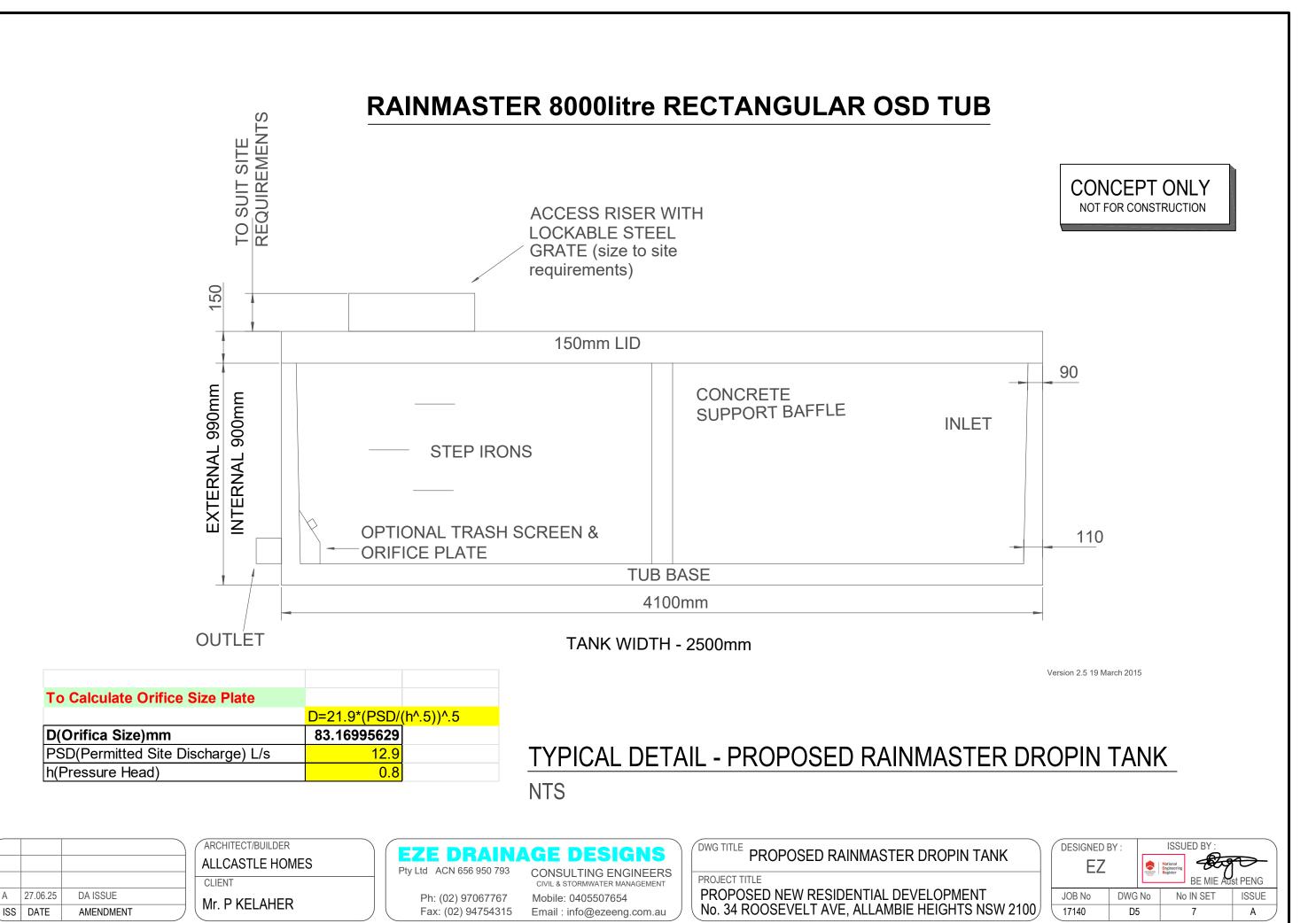
CONSULTING ENGINEERS
CIVIL & STORMWATER MANAGEMENT

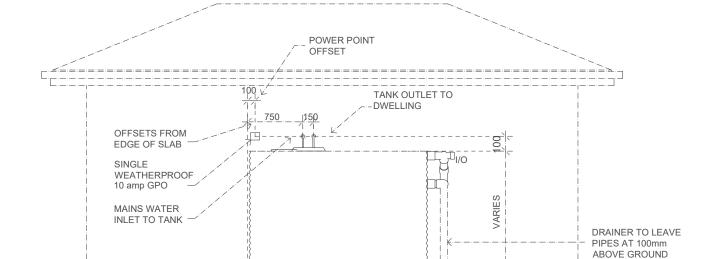
Ph: (02) 97067767 Fax: (02) 94754315 Mobile: 0405507654 Email : info@ezeeng.com.au

TYPICAL DETAILS
PROJECT TITLE
PROPOSED NEW RESIDENTIAL DEVELOPMENT No. 34 ROOSEVELT AVE, ALLAMBIE HEIGHTS NSW 2100,

DESIGNED I	3Y :	ISSUED BY:			
EZ	ENGUEERA ANTONA ANTONA	National Engineering Register  BE MIE A	ust PENG		
JOB No	DWG No	No IN SET	ISSUE		
17140	D3	7	A )		







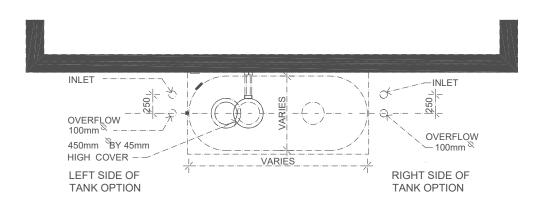
CONCEPT ONLY
NOT FOR CONSTRUCTION

Tank can be rotated 180° to have charge lines on the right hand side so High-Flow can be installed right. Evo MkIII Pump and strainer is interchangable.

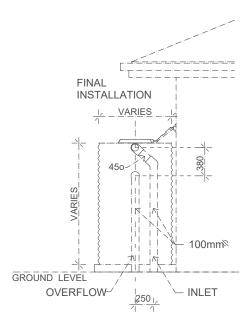
**DWELLING** 

## FRONT ELEVATION OPTION A

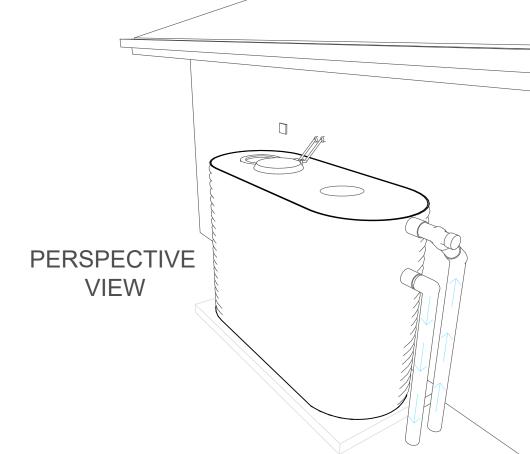
VARIES



PLAN VIEW TYPICAL



SIDE ELEVATION TYPICAL





GROUND LEVEL

EVOLUTION AND HIGH-FLOW ROUGH-IN - SLIMLINE TANK

CONCRETE SLAB

RAINWATER TANK

## TYPICAL DETAILS- HIGHFLOW RAINWATER TANK

NOT TO SCALE

Α	27.06.25	DA ISSUE
ISS	DATE	AMENDMENT

ARCHITECT/BUILDER	
ALLCASTLE HOMES	
CLIENT	
Mr PKFLAHER	

## **EZE DRAINAGE DESIGNS**

Pty Ltd ACN 656 950 793

CONSULTING ENGINEERS
CIVIL & STORMWATER MANAGEMENT

Ph: (02) 97067767 Fax: (02) 94754315 Mobile: 0405507654 Email : info@ezeeng.com.au

DWG TITLE	PROPOSED HIGHFLOW RAINWATER TANK
DWO IIILL	
	PROPOSED HIGHFLOW RAINWATER TANK

PROJECT TITLE

PROPOSED NEW RESIDENTIAL DEVELOPMENT No. 34 ROOSEVELT AVE, ALLAMBIE HEIGHTS NSW 2100

DESIGNED BY:			ISSUED BY:			
EZ		ENGUEERS AUTHARA AUTHARA AUTHARA	National Engineering Register	BE MIE AU	st PENG	
JOB No	DWG No		No	IN SET	ISSUE	
17140	D6			7	A )	

#### FIRST FLOOR & ROOF NOTES:

NSTALL 50mm uPVC SPITTER PIPES 20mm ABOVE SURFACE LEVEL FOR SALCONY AND CONCRETE ROOF AREAS TO ALLOW FOR EMERGENCY OVERFLOW INCASE OF BLOCKAGES DURING HEAVY STORMS. PLUMBER TO CONSTRIM LOCATION DURING CONSTRUCTION.

ALL BUILDING AND HYDRAULIC SERVICES TO BE PROPERLY CO-ORDINATED WITH STORMWATER PIPES AND ENSURE NO CLASHES ARE PRESENT DURING CONSTRUCTION (TYP).

STORMWATER PIPE ARRANGEMENT TO BE CO-ORDINTED WITH STRUCTURAL SLAB AND BEAMS WHERE REQUIRED (TYP).

BALCONY, TERRACE & CONCRETE ROOF AREAS TO SLOPE TOWARDS RAINWATER OUTLETS WHERE REQUIRED (TYP).

RROW DENOTES THE SLOPE OF FINISHED SURFACE LEVEL (TYP).

DOWNPIPES SHOWN ON PLAN ARE TO BE Ø100mm uPVC U.N.O. (TYP).

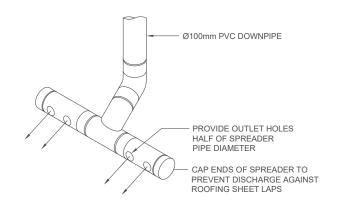
ALL EAVES GUTTERS SHALL BE 145mm WIDE x 75mm DEEP (OR EQUIVALENT)
AND LAID AT MIN. 1:500 SLOPE.

ALL GUTTERS TO BE FITTED WITH ADEQUATE OVERFLOW MEASURES IN ACCORDANCE WITH AS3500.3:2021.

PROPOSED DOWNPIPE LOCATIONS ARE NOMINAL AND TO BE CONFIRMED DURING CONSTRUCTION (TYP).

INSTALL DOWNPIPE WITH SPREADER (IF REQUIRED) TO DISPERSE STORMWATER ONTO LOWER ROOF AREAS EFFECTIVELY.

PROVIDE SURFACE DRAINAGE FOR ALL CONCRETE AND BALCONY ROOF AREAS WHERE REQUIRED.

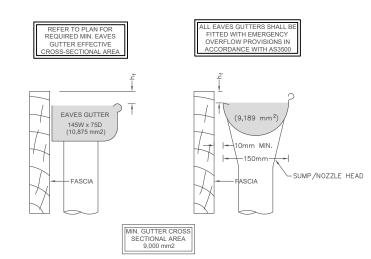


#### SPREADER PIPE DETAIL

NOT SCALE

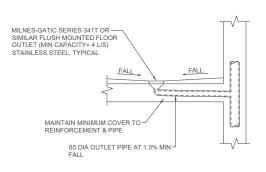
#### NOTES:

- OUTLET HOLES POSITIONS SHALL BE POSITIONED TO AVOID JOINTS IN ROOFING
- WHEN DOWNPIPE IS LOCATED IN CORNER, SPREADER PIPE TO BE L-SHAPED OR SIMILAR



## TYPICAL BALCONY FLOOR OUTLET DETAIL NOT TO SCALE

(SPS)



## TYPICAL PLANTER DRAINAGE DETAIL

- WATERPROOFING TO BE DESIGNED AND DETAILED BY OTHERS

-DRAINAGE CELL (ATLANTIS OR SIMILAR)

PERMEABLE SOIL

PODIUM/TERRACE

NOT TO SCALE

#### EAVES GUTTER TYPE 'EG1' NOTES:

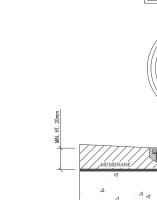
- GUTTERING TO BE LAID AT MIN. 1:500mm FALL TO OUTLETS
- OUTLETS TO BE PROVIDED TO THE SOLE OF THE GUTTER
   PROVIDE SUITABLE NOZZLE ADAPTOR FITTINGS TO MATCH THE NOMINAL DOWNPIPE DIAMETER (WHERE REQUIRED)

TYPICAL EAVES GUTTER DETAIL (EG1)

- ALL DOWNPIPES TO BE MIN. 100mm uPVC U.N.O.
- ALL GUTTERS TO BE PROVIDED WITH LINEAR OVERFLOW MEASURES IN ACCORDANCE WITH THE NCC 2022 AND AS3500:2018

**CONCEPT ONLY** 

NOT FOR CONSTRUCTION

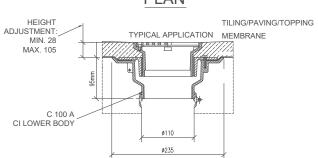


STRUCTURAL SLAB

**BALCONY DRAIN (BD)** 

R100S2(ROUND 316 STAINLESS STEEL GRATE) Q100S2(SQUARE 316 STAINLESS STEEL GRATE)

# PLAN



## SECTION - SPS TRUFLO Ø150 OR EQUIVALENT FLOOR DRAIN (FD) INLET IN SUSPENDED SLAB

NOT TO SCALE

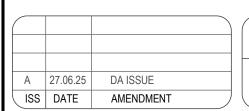
SPECIFICATION CODE: R150 G/C (BRONZE GRATE, CI LOWER BODY) R150N/C (NICKEL - BRONZE GRATE, CI LOWER BODY) R150 S/C (316 STAINLESS STEEL GRATE, CI LOWER BODY)

# REINFORCEMENT TO STRUCTURAL ENGINEER'S DETAILS BOND BREAKER TAPE & APPROVED SEALANT STOP REINFORCEMENT 50 CLEAR OF JOINT

KEY JOINT-K.J.

## **SECTION - TYPICAL GRATED DRAIN**

NOT TO SCALE



ARCHITECT/BUILDER
ALLCASTLE HOMES
CLIENT
Mr. P KELAHER

## **EZE DRAINAGE DESIGNS**

Pty Ltd ACN 656 950 793

CONSULTING ENGINEERS
CIVIL & STORMWATER MANAGEMENT

NOT TO SCALE

Ph: (02) 97067767 Fax: (02) 94754315 Mobile: 0405507654 Email : info@ezeeng.com.au



PROJECT TITLE

SPS 100 x 50mm SPECIAL DROP-IN

PROPOSED NEW RESIDENTIAL DEVELOPMENT No. 34 ROOSEVELT AVE, ALLAMBIE HEIGHTS NSW 2100/

DESIGNED BY:			ISSL	JED BY :	
EZ		ENCOVIERS AUTOLIA Outmat	National Engineering Register	BE MIE AU	st PENG
JOB No	DWG No		No	IN SET	ISSUE
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