

DCP
S.L 27.37
C.L 26.35
I.L 26.30
600x900

DETENTION TANK

LENGTH = 9610mm
WIDTH = 3490mm
AVERAGE DEPTH = 770mm
VOLUME STORED = 25.8 m3

BELOW GROUND DETENTION TANK

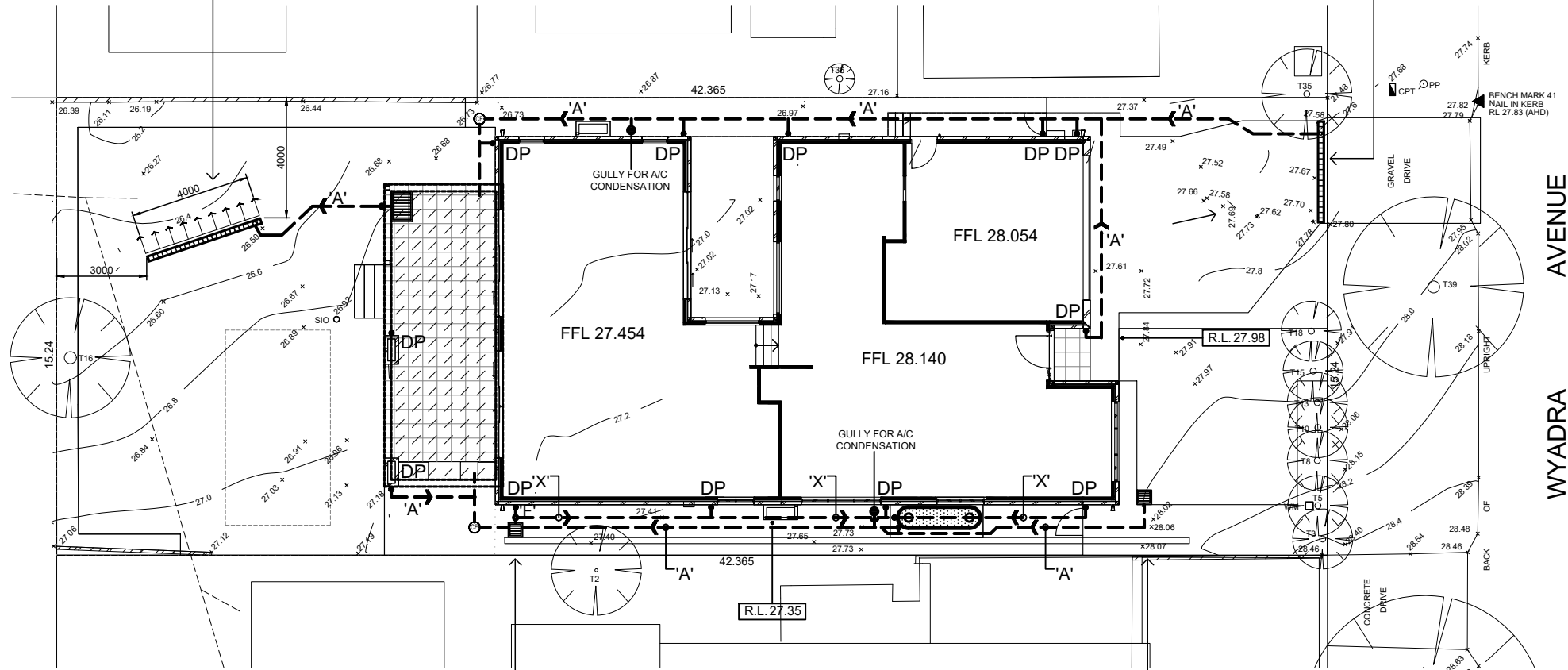
SHOWN HATCHED
MAX POOL RL = 27.17
MAX DEPTH = 820mm
VOLUME STORED = 25.8 m3

GRATED DRAIN

S.L 26.42
I.L 26.22
200 WIDE

PROVIDE A LEVEL SPREADER
TO ENSURE ALL OVERFLOWS
ARE EVENLY DISPERSED

200 WIDE x 100 DEEP
GRATED DRAIN



EASEMENTS REQUESTS FROM 2 DOWNSTREAM PROPERTIES HAVE BEEN DENIED. PLEASE REFER TO THE COMPLETED STATUTORY DECLARATION DETAILING THE REFUSAL OF BOTH PROPERTY OWNERS AT
23 WARATAH STREET, FRESHWATER NSW &
25 WARATAH STREET, FRESHWATER NSW
HENCE, A DETAILED ANALYSIS OF THE SITE HAS BEEN CONDUCTED TO MODEL THE SITE FLOWS TO BE LIMITED TO THE UNDEVELOPED STATE-OF-NATURE CONDITIONS. OUR DESIGN SHOWS THAT THE MAJORITY OF THE ROOF AREA IS DIRECTED TO A RAINWATER TANK SYSTEM CONTAINING STORAGE FOR RE-USE AND THE OVERFLOW IS DIRECTED TO AN ON SITE DETENTION SYSTEM ALONG WITH THE UPPER LEVEL SURFACE RUN-OFF. THE CONTROLLED DISCHARGE IS DIRECTED TO A LEVEL SPREADER LOCATED IN THE REAR YARD. THE DESIGN SOLUTION HAS BEEN PROVIDED IN ACCORDANCE WITH THE REQUIREMENTS OF NORTHERN BEACHES COUNCIL'S WATER MANAGEMENT FOR DEVELOPMENT; SPECIFICALLY PART 5.5 STORMWATER DRAINAGE FROM LOW LEVEL PROPERTIES.

PIT CO1
S.L 27.25
I.L 26.85
350x350

PIT P1
S.L 27.90
I.L 27.60
350x350

RAINWATER TANK
AS SHOWN ON PLAN

PROVIDE A RAINWATER TANK
3000L IN CAPACITY TO SUIT
ALL BASIX REQUIREMENTS.
TANK TO BE CONNECTED AS
SPECIFIED IN BASIX REPORT.

ENSURE ALL CONNECTIONS
WITHIN CHARGED SYSTEM
ARE SOLVENT WELDED

ALL DOWNPIPES ARE TO BE
ENTIRELY PVC. PIPES ARE TO
BE SEALED UPTO U/S OF
ROOF GUTTERS

ROOF GUTTERS I.L. 33.20
TANK INLET I.L. 29.99
HEAD PRESSURE - 3710mm

DRAINAGE REQUIREMENT TO NBC POLICY
SITE AREA = 646 m2
SITE COVERAGE AREA = 327 m2
SITE COVERAGE = 51 %

ON-SITE DETENTION IS REQUIRED

AREA ROUTED THROUGH OSD
IMPERVIOUS AREA = 327 m2
PERVIOUS AREA = 113 m2
AREA BYPASSING OSD
IMPERVIOUS AREA = 0 m2
PERVIOUS AREA = 206 m2

OSD VOLUME REQUIRED = 25.8 m3
RAINWATER TANK (PER BASIX) = 3.00 m3
OSD TANK VOLUME STORAGE = 25.8 m3
TOTAL VOLUME STORAGE = 28.8 m3

PRE-DEVELOPED DISCHARGE (S.O.N) = 17.0 L/s
PROPOSED ST. STEEL ORIFICE Ø = 58 mm
LIMITED DISCHARGE THRU OSD = 6.00 L/s
UNCONTROLLED FLOW = 11.0 L/s

OSD PARAMETERS DETERMINED
WITH 'DRAINS'. FILE IS AVAILABLE
FOR REVIEW. EMAIL REQUESTED TO:
admin@alwdesign.com.au

PIPE SCHEDULE

TAG	SIZE	MATERIAL	GRADE	DESCRIPTION
'A'	100 Ø	P.V.C	1% MIN	REGULAR GRAVITY PIPE
'B'	150 Ø	P.V.C	1% MIN	REGULAR GRAVITY PIPE
'X'	100 Ø	P.V.C	CHARGED	TO FEED RAINWATER TANK
'F'	100 Ø	P.V.C	1% MIN	FLUSHING LINE - CAPPED END

NOTE. ALL PIT & PIPELINE LOCATIONS SHOWN ON PLAN ARE INDICATIVE. BUILDER TO DETERMINE BEST POSITION FOR PLACEMENT WITHIN A 1m TOLERANCE OF WHAT IS SHOWN ON PLAN

LEGEND

P1	PIT LABEL	G.F.L.	GARAGE FLOOR LEVEL
	SUMP PIT - PIT SIZE REFERS TO GRATE DIMENSIONS	• 0.00	EXISTING REDUCED LEVEL
	300x300 FLOOR GULLY	• R.L. 157.00	PROPOSED REDUCED LEVEL
	100/150 Ø GARDEN GULLY	■ DP	DOWNPIPE
	DRAINAGE PIPE	└ SP	SPITTER/SPREADER
	AERIAL PIPE	○	CLEANING EYE
S.L.	SURFACE LEVEL	—	SEDIMENT FENCE
I.L.	INVERT LEVEL	—	AG LINE
F.F.L.	FINISHED FLOOR LEVEL	→	OVERLAND FLOW

SITE STORMWATER MANAGEMENT LAYOUT

SCALE 1:200/A3

STORMWATER LAYOUT NOTES

- 1) PITS DEEPER THAN 600mm TO BE 600 X 900 W, ELSE 375 SQ U.N.O.
- 2) ALL PIPES TO HAVE 1% MIN. GRADE U.N.O.
- 3) ALL DOWNPIPES TO BE 100 X 50 BOX or 90 Ø.
- 4) PIPES TO BE U.P.V.C. OR STORMWATER PIPE TO A.S.1254.
- 5) PITS TO BE STANDARD PRECAST CONCRETE PITS OR BRICK RENDERED WITH CONCRETE HEAVY DUTY GRATES SIZED AS PITS PER PLAN.
- 6) NO SEWER VENTS, GULLY PITS OR SIMILAR TO BE LOCATED BELOW THE MAXIMUM WATER SURFACE LEVEL IN DETENTION BASINS.
- 7) PERSONS UTILISING THIS PLAN FOR ANY PURPOSES SHALL VERIFY THE DATUM & RESPECTIVE LEVELS PRIOR TO

- COMMENCING ANY WORKS & NOTIFY THE ENGINEER OF ANY DISCREPANCIES.
- 8) DRIVEWAY LEVELS PROVIDED FOR DRAINAGE DESIGN PURPOSES ONLY. LEVELS MAY BE ADJUSTED TO SUIT FINAL HOUSE CUT/FILL CONDITIONS BUT NEED TO MAINTAIN INTENT OF DRAINAGE SYSTEM. ENGINEER TO BE CONSULTED PRIOR TO CONSTRUCTION TO ENSURE INTENT MAINTAINED.
 - 9) END OF EXISTING DRAINAGE LINE TO BE EXPOSED & LEVELS CONFIRMED BY BUILDER PRIOR TO COMMENCEMENT OF WORKS.
 - 10) BUILDERS TO ENSURE SERVICES CONNECTIONS TO HOUSE DO NOT CONFLICT WITH DRAINAGE DESIGN REQUIREMENTS.
 - 11) ALL WORKS TO BE CONSTRUCTED TO GOOD BUILDING PRACTICE & MATERIALS TO MEET ACCEPTED SPECIFICATIONS.

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CIVIL ENGINEERING CONSULTANTS

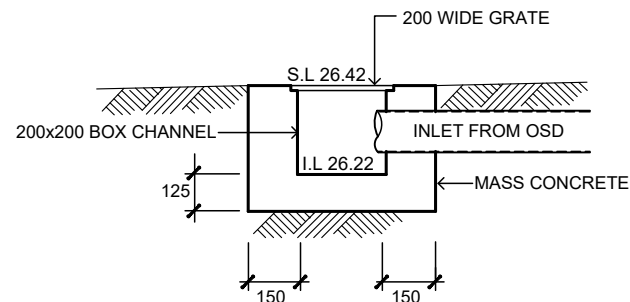
P: 02 9802 5509 E: admin@alwdesign.com.au
M: 0413 763 432 69 DELANGE ROAD, PUTNEY NSW 2112

JOB NUMBER:
SW25045
DRAWING NUMBER:
SW25045 - S1

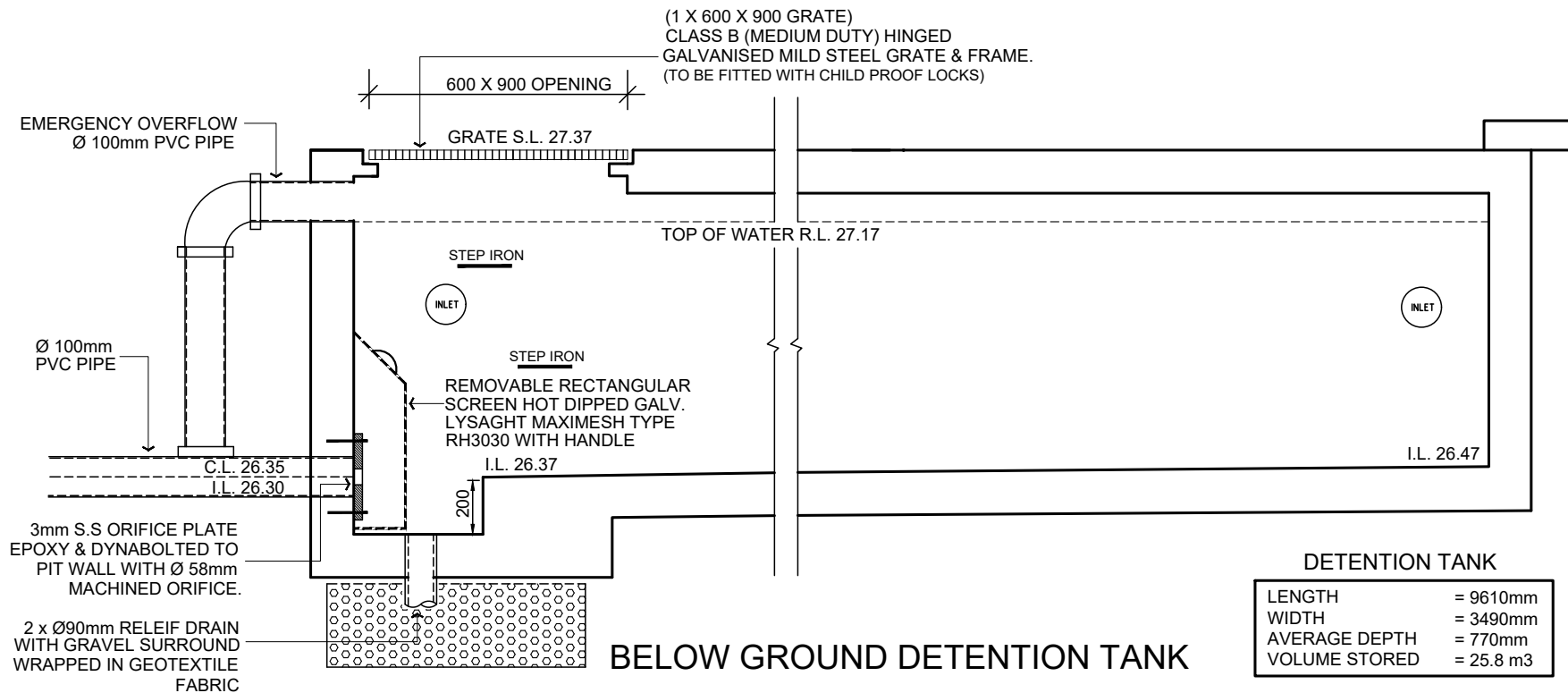
PROJECT:	PROPOSED RESIDENTIAL DWELLING AT LOT 65, # 41 WYADRA AVENUE, FRESHWATER NSW		
DRAWING:	SITE STORMWATER MANAGEMENT LAYOUT		
DESIGNED	DRAWN	CHECKED:	ANDREW L WAHBE - BE (CIVIL) MIEAUST PENG
A.W	N.W	DRAWINGS NOT TO BE USED FOR CONSTRUCTION UNLESS SIGNED BY DESIGNING ENGINEER	
B	ISSUED FOR DEVELOPMENT APPLICATION		23/06/25
ISSUE	REVISION	DESCRIPTION	APPR. DATE

DANGER
CONFINED SPACE
NO ENTRY WITHOUT
CONFINED SPACE
TRAINING

TO BE PLACED AT ALL
TANK ACCESS GRATES

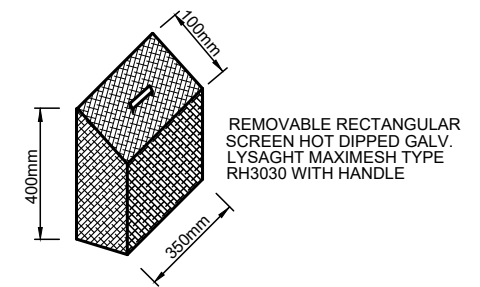


LEVEL SPREADER

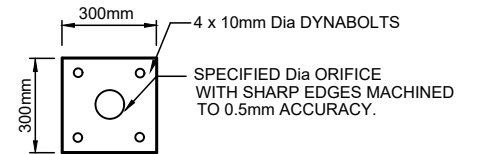


BELOW GROUND DETENTION TANK

DETENTION TANK	
LENGTH	= 9610mm
WIDTH	= 3490mm
AVERAGE DEPTH	= 770mm
VOLUME STORED	= 25.8 m3

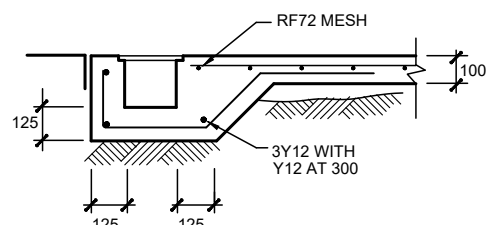


MAXIMESH SCREEN

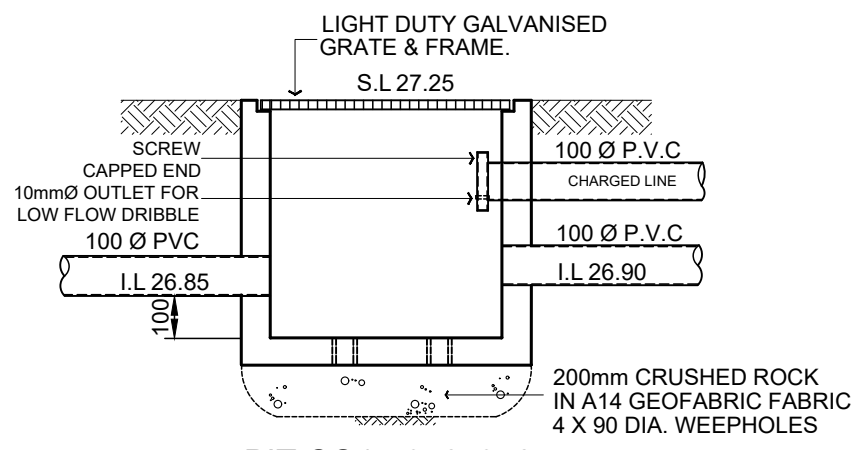


3mm THICK STAINLESS
STEEL PLATE (OR 6mm THICK
FOR DIA GREATER THAN 150mm)

ORIFICE PLATE DETAIL



GRATED DRAIN

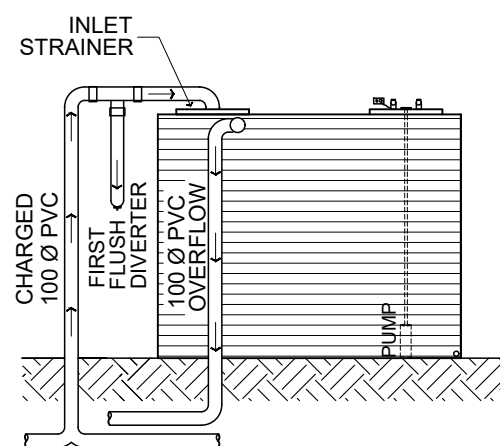


PIT CO1 - 350x350
CLEAN-OUT PIT
FOR CHARGED LINE SYSTEMS

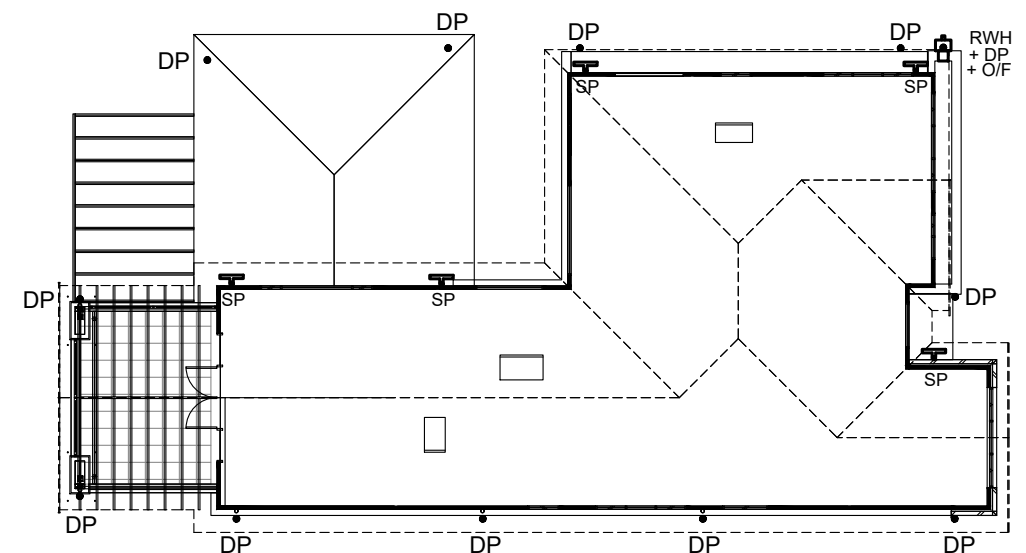
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ROOF GUTTERS

ROOF GUTTERS I.L. 33.20
TANK INLET I.L. 29.99
HEAD PRESSURE - 3710mm



EVOLUTION MkIII RAINWATER TANK
CONFIGURATION BY KINGSPAN



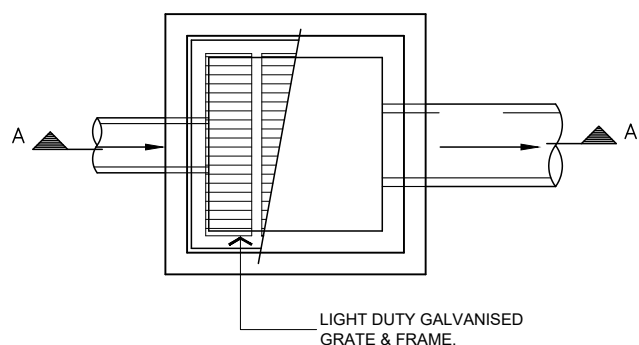
GUTTER SELECTED: LYSAGHT QUAD 115 HI FRONT NSW SLOTTED;
AREA = 5225 SQ.MM

ALL DOWNPIPES TO BE 90 Ø MIN

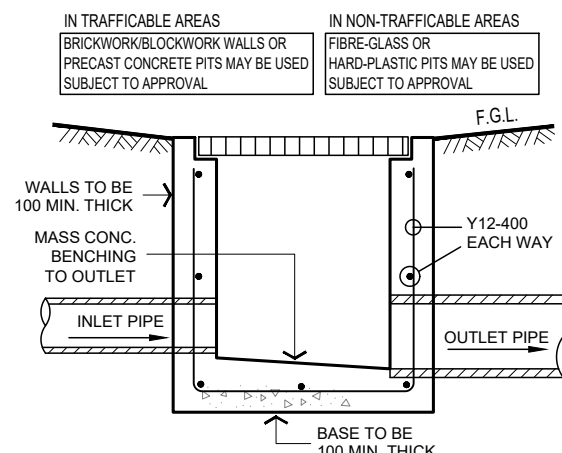
ROOF & FIRST FLOOR LAYOUT

SCALE 1:200/A3

NOTE, ALL PIT SIZES SHOWN ON PLAN
REFLECT THE REQUIRED GRATE DIMENSION



TYPICAL PIT DETAIL



TYPICAL SECTION A

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CIVIL ENGINEERING CONSULTANTS

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JOB NUMBER:
SW25045
DRAWING NUMBER:
SW25045 - S2

PROJECT: PROPOSED RESIDENTIAL DWELLING AT LOT 65, # 41 WYADRA AVENUE, FRESHWATER NSW	
DRAWING: ROOF LAYOUT & GENERAL DETAILS	
DESIGNED: A.W	DRAWN: N.W
CHECKED: ANDREW L WAHBE - BE (CIVIL) MIEAUST PENG	
DRAWINGS NOT TO BE USED FOR CONSTRUCTION UNLESS SIGNED BY DESIGNING ENGINEER	
B	ISSUED FOR DEVELOPMENT APPLICATION
ISSUE	REVISION DESCRIPTION
23/06/25	
APPR. DATE	