

TWO NEW DWELLING HOUSES AND SUBDIVISION

11B HILL STREET, WARRIEWOOD NSW 2102

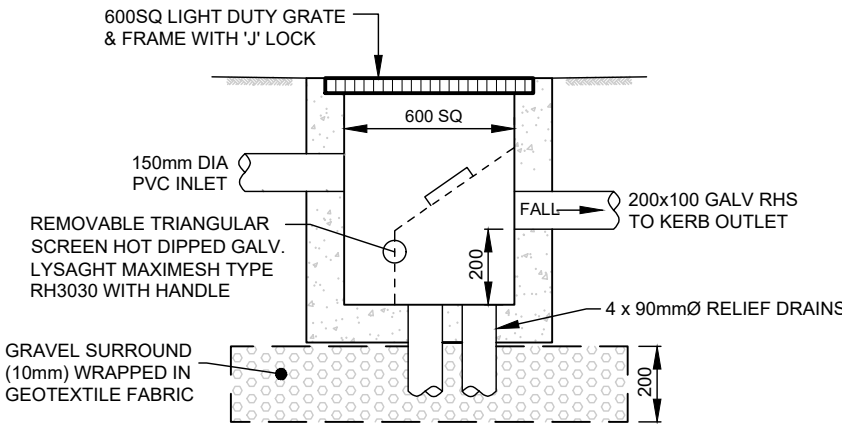
STORMWATER MANAGEMENT DESIGN

GENERAL DRAINAGE NOTES

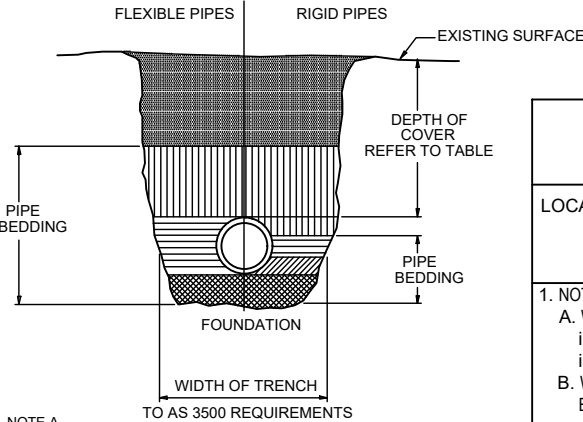
1. ALL WORK SHALL BE CARRIED OUT IN ACCORDANCE WITH THE LOCAL COUNCIL'S RELEVANT SPECIFICATIONS AND/OR STORMWATER CODE. ANY DISCREPANCY VARIATION OR ADDITIONAL WORK SHALL BE APPROVED BY THE PRINCIPAL CERTIFIER.
2. ALL SERVICES SHALL BE VERIFIED ON SITE PRIOR TO COMMENCEMENT OF WORK.
3. DIAL BEFORE YOU DIG SHALL BE CONTACTED PRIOR TO COMMENCEMENT.
4. ALL DRAINAGE PIPEWORK AND PLUMBING SHALL BE INSTALLED BY A CERTIFIED PLUMBER IN ACCORDANCE WITH THE AUSTRALIAN STANDARDS AS3500 AND COUNCIL REQUIREMENTS.
5. ALL DRAINAGE PIPES ARE TO BE SEWER GRADE UNLESS NOTED OTHERWISE.
6. ALL COVERS, GRATES AND FRAMES ARE TO BE CLASS C HEAVY DUTY WHERE SUBJECT TO VEHICULAR TRAFFIC.
7. ALL COVERS, GRATES AND FRAMES ARE TO BE CLASS A MEDIUM DUTY WHERE SUBJECT TO PEDESTRIAN TRAFFIC OR IN LANDSCAPE AREAS.
8. COUNCIL PERMIT/APPROVAL SHALL BE OBTAINED PRIOR TO WORKS ON COUNCIL LAND AND CONNECTION TO COUNCIL SYSTEM.
9. ALL PIPE BENDS TO BE FITTED WITH AN INSPECTION OPENING.

RAINWATER TANK NOTES

1. THE TANK SHALL NOT BE LOCATED OVER A WATER OR SEWER MAIN UNLESS IT IS INSTALLED IN ACCORDANCE WITH THE REGULATORY AUTHORITY REQUIREMENTS
2. ABOVE GROUND TANKS SHALL BE LOCATED AT LEAST 100 MM FROM ANY POTABLE WATER SUPPLY PIPE AND AT LEAST 300 MM FOR BELOW GROUND TANKS.
3. ALL PLUMBING WORK SHALL BE CARRIED OUT BY A LICENSED PLUMBER IN ACCORDANCE WITH SYDNEY WATER REQUIREMENTS AND COUNCIL REGULATIONS.
4. ALL INLETS SHALL BE SCREENED OR FILTERED TO PREVENT THE ENTRY OF FOREIGN MATTER OR CREATURES.
5. REUSE PUMP TO BE INSTALLED BY A LICENSED PLUMBER AND ELECTRICIAN TO SYDNEY WATER REQUIREMENTS
6. A SIGN SHALL BE AFFIXED TO THE RAINWATER TANK AND ALL APERTURES CLEARLY STATING THAT THE WATER IN THE TANK IS RAINWATER
7. NOISE EMISSIONS FROM ANY PUMP SHALL MEET COUNCIL'S REQUIREMENTS.
8. WATER RETAINED FOR INDOOR HOUSEHOLD USE SHALL BE AUGMENTED BY MAINS WATER SUPPLY AND APPROVAL OBTAINED BY SYDNEY WATER.
9. WHERE RETAINED WATER IS AUGMENTED BY MAINS WATER SUPPLY A BACKFLOW PREVENTION DEVICE AND FLOW RESTRICTOR SHALL BE INSTALLED IN ACCORDANCE WITH AS 3500 AND SYDNEY WATER REQUIREMENTS.
10. ALL INLETS SHALL BE FITTED WITH A FIRST FLUSH DEVICE PRIOR TO DISCHARGING TO THE RAINWATER TANK.
11. THE INDIRECT CONNECTION TO MAINS WATER SUPPLY SHALL HAVE A VISIBLE AIR GAP IN ACCORDANCE WITH AS 3500.



POLLUTION CONTROL PIT DETAIL
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 PAVED WITH AT LEAST (a) 100mm THICKNESS OF REINFORCED CONCRETE WHERE SUBJECT TO HEAVY VEHICULAR LOADING

LEGEND - TRENCH BACKFILL			
SYMBOL	FLEXIBLE PIPES	RIGID PIPES	
	BACKFILL		
	PIPE OVERLAY		
	PIPE SIDE SUPPORT	SIDE ZONE	
	—	HAUNCH ZONE	
	PIPE UNDERLAY	BED ZONE	

MINIMUM PIPE COVER (FROM FINISHED SURFACE TO TOP OF PIPE)

LOCATION	MINIMUM COVER (mm)	
	CAST / DUCTILE IRON OR GALV STEEL	AUTHORISED PRODUCTS (*)
1. NOT SUBJECT TO VEHICULAR LOADING: A. WITHOUT PAVEMENT: i. FOR SINGLE DWELLINGS - ii. OTHER THAN SINGLE DWELLINGS - B. WITH PAVEMENT OF BRICK/UNREINFORCED CONCRETE -	0 0 0 (**)	100 300 50 (**)
2. SUBJECT TO VEHICULAR LOADING: A. OTHER THAN ROADS: i. WITHOUT PAVEMENT - ii. WITH PAVEMENT OF: - REINF. CONC. FOR HEAVY VEHICLES - - BRICK/UNREINF. CONC LIGHT VEHICLES - B. ROADS i. SEALED ii. UNSEALED	300 0 (** #) 0 (** #) 300 300	450 100 (** #) 75 (** #) 500 (#) 500 (#)
3. SUBJECT TO CONSTRUCTION VEHICLES OR IN EMBANKMENT CONDITIONS	300	500 (#)

(*) INCLUDES OVERLAY ABOVE THE TOP OF THE PIPE OF NOT LESS THAN 50mm THICK
(**) BELOW THE UNDERSIDE OF THE PAVEMENT
(#) SUBJECT TO COMPLIANCE WITH AS1762, AS2033, AS/NZS 2566.1, AS3725 OR AS 4060

NORTHERN BEACHES COUNCIL REQUIREMENTS

THE STORMWATER DRAINAGE SYSTEM HAS BEEN DESIGNED IN ACCORDANCE WITH NORTHERN BEACHES COUNCIL WATER MANAGEMENT FOR DEVELOPMENT POLICY REGION 1 - NORTHERN CATCHMENT AND AUSTRALIAN STANDARDS AS3500.3

DESIGN PARAMETERS

SITE AREA (m2)	1,333
PRE-DEVELOPMENT TOTAL IMPERVIOUS AREA (m2)	743.2
POST-DEVELOPMENT IMPERVIOUS AREA (m2)	673.0
INCREASE IN IMPERVIOUS AREA (m2)	- 70.2

ON-SITE DETENTION IS NOT REQUIRED AS THE PROPOSED DEVELOPMENT DOES NOT RESULT IN AN INCREASE TO THE TOTAL IMPERVIOUS AREA

BASIX CERTIFICATE REQUIREMENTS

	LOT 1	LOT 2
MINIMUM RAINWATER TANK STORAGE REQUIRED	BASIX	BASIX
MINIMUM ROOF AREA TO BE COLLECTED	BASIX	BASIX
CONNECTED FRO REUSE IN ACCORDANCE WITH BASIX CERTIFICATE		

LEGEND

	DENOTES RAINWATER REUSE TANK
SW - 100	DENOTES 100mm DIA. STORMWATER PIPE AT 1% MIN. GRADE U.N.O
RW - 100 (CH)	DENOTES 100mm DIA. CHARGED STORMWATER PIPE TO RAINWATER TANK
IAD - 150	DENOTES 150mm DIA. INTER-ALLOTMENT DRAINAGE PIPE AT 1% MIN. GRADE U.N.O
DP	DENOTES DOWNPIPE
	STORMWATER PIT - SOLID COVER
	STORMWATER PIT - GRATED INLET
	DENOTES GRATED DRAIN

SHEET INDEX

COVER SHEET AND NOTES	SHEET SW1
STORMWATER MANAGEMENT PLAN	SHEET SW2
INTER-ALLOTMENT DRAINAGE PLAN	SHEET SW3
SECTIONS AND DETAILS	SHEET SW4

WATERDESIGN
CIVIL ENGINEERS

1 FLAME TREE PLACE
CHERRYBROOK NSW 2126
MOBILE: 0417 671646
EMAIL: waterdes@bigpond.net.au
ABN: 77 928 166 729

CLIENT NAME:

WAYNE BARDWELL

PROJECT TITLE:

**NEW DWELLINGS & SUBDIVISION
11B HILL STREET,
WARRIEWOOD NSW 2102**

DRAWING TITLE:

COVER SHEET AND NOTES

DRAWN: A.L

DATE: 11.03.2021

JOB No: 2021-018

APPROVED BY:

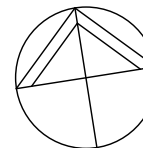
ANDREW LAM
MIEAust B.E. Civil (Hons)

DWG NO: SW1
no. IN SET: 4

No. REVISION / ISSUE DESCRIPTION

DATE

© All design and drawings are the property of Waterdesign Civil Engineers. This drawing must not be used, reproduced or copied without the written approval of Waterdesign Civil Engineers.

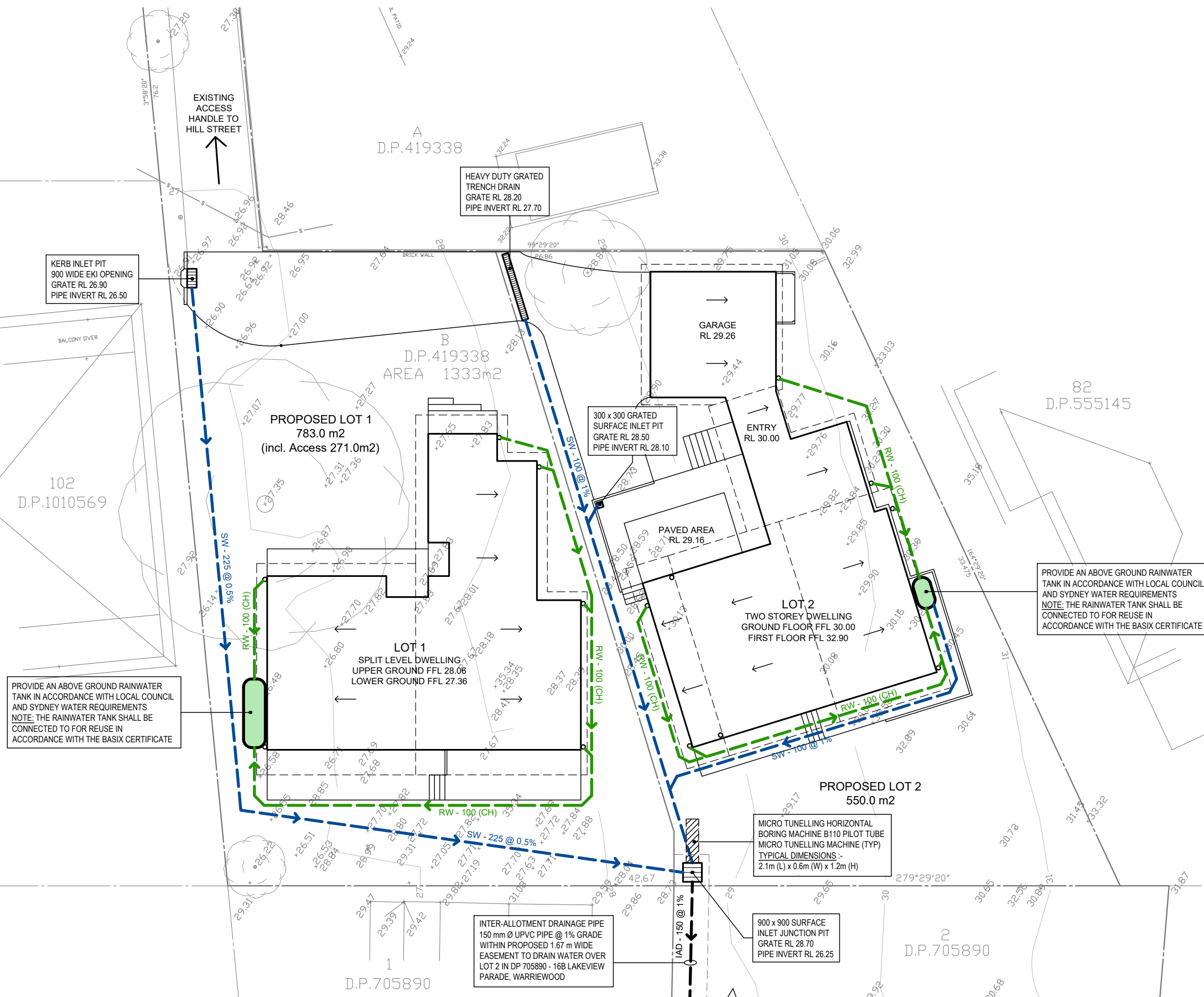


101
D.P.1010569

A
D.P.419338

82
D.P.555145

2
D.P.705890



PROVIDE AN ABOVE GROUND RAINWATER TANK IN ACCORDANCE WITH LOCAL COUNCIL AND SYDNEY WATER REQUIREMENTS
NOTE: THE RAINWATER TANK SHALL BE CONNECTED TO FOR REUSE IN ACCORDANCE WITH THE BASIX CERTIFICATE

PROVIDE AN ABOVE GROUND RAINWATER TANK IN ACCORDANCE WITH LOCAL COUNCIL AND SYDNEY WATER REQUIREMENTS
NOTE: THE RAINWATER TANK SHALL BE CONNECTED TO FOR REUSE IN ACCORDANCE WITH THE BASIX CERTIFICATE



**WATERDESIGN
CIVIL ENGINEERS**

1 FLAME TREE PLACE
CHERRYBROOK NSW 2126
MOBILE: 0417 671646
EMAIL: waterdes@bigpond.net.au
ABN: 77 928 166 729

CLIENT NAME:
WAYNE BARDWELL

PROJECT TITLE:
**NEW DWELLINGS & SUBDIVISION
11B HILL STREET,
WARRIEWOOD NSW 2102**

DRAWING TITLE:
**STORMWATER
MANAGEMENT PLAN**

DRAWN: A.L.
DATE: 11.03.2021
JOB No: 2021-018

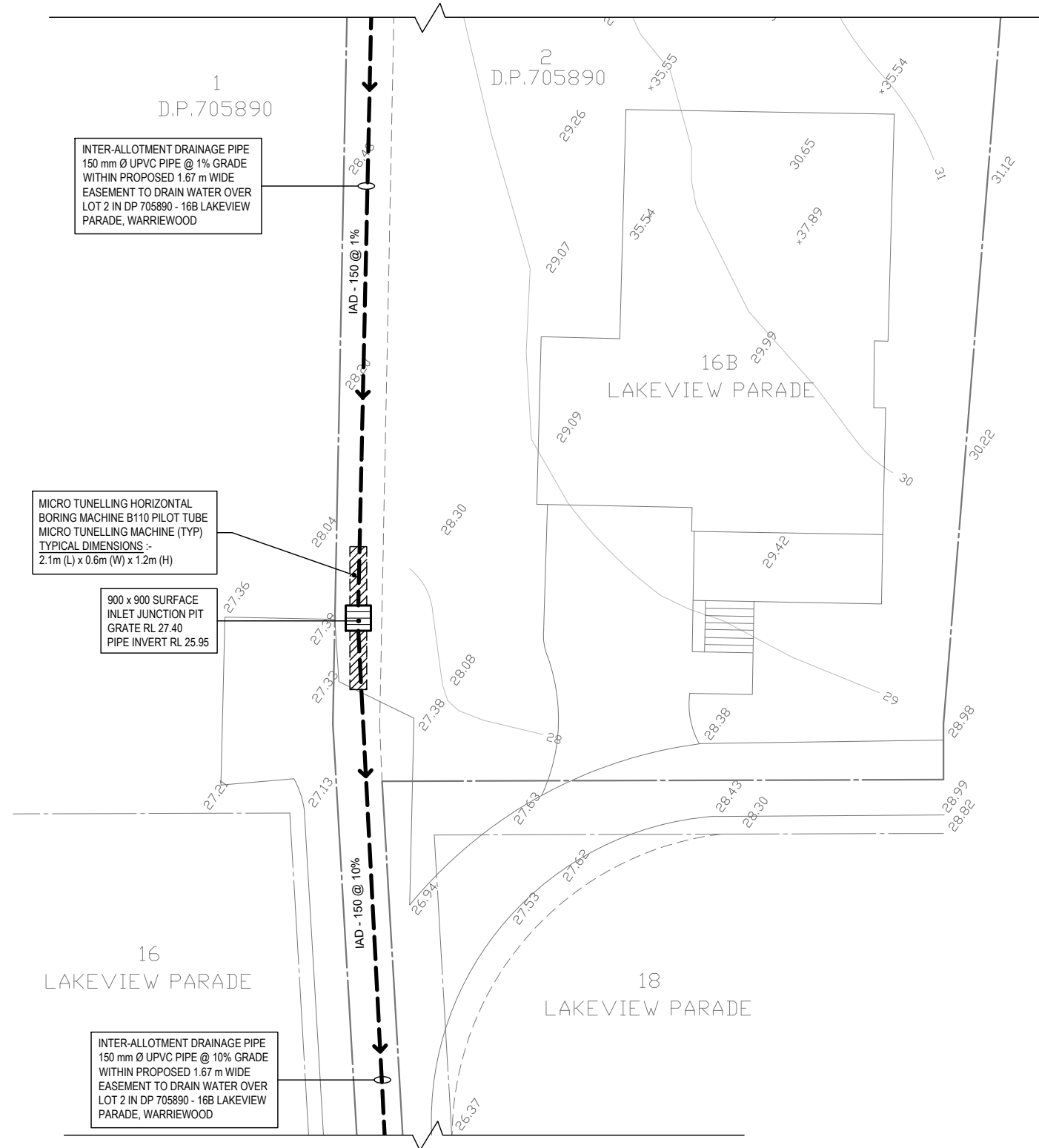
APPROVED BY:

ANDREW LAM
MIEAust B.E. Civil (Hons)
DWG NO: SW2
no. IN SET: 4

No.	REVISION / ISSUE DESCRIPTION	DATE

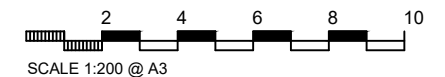
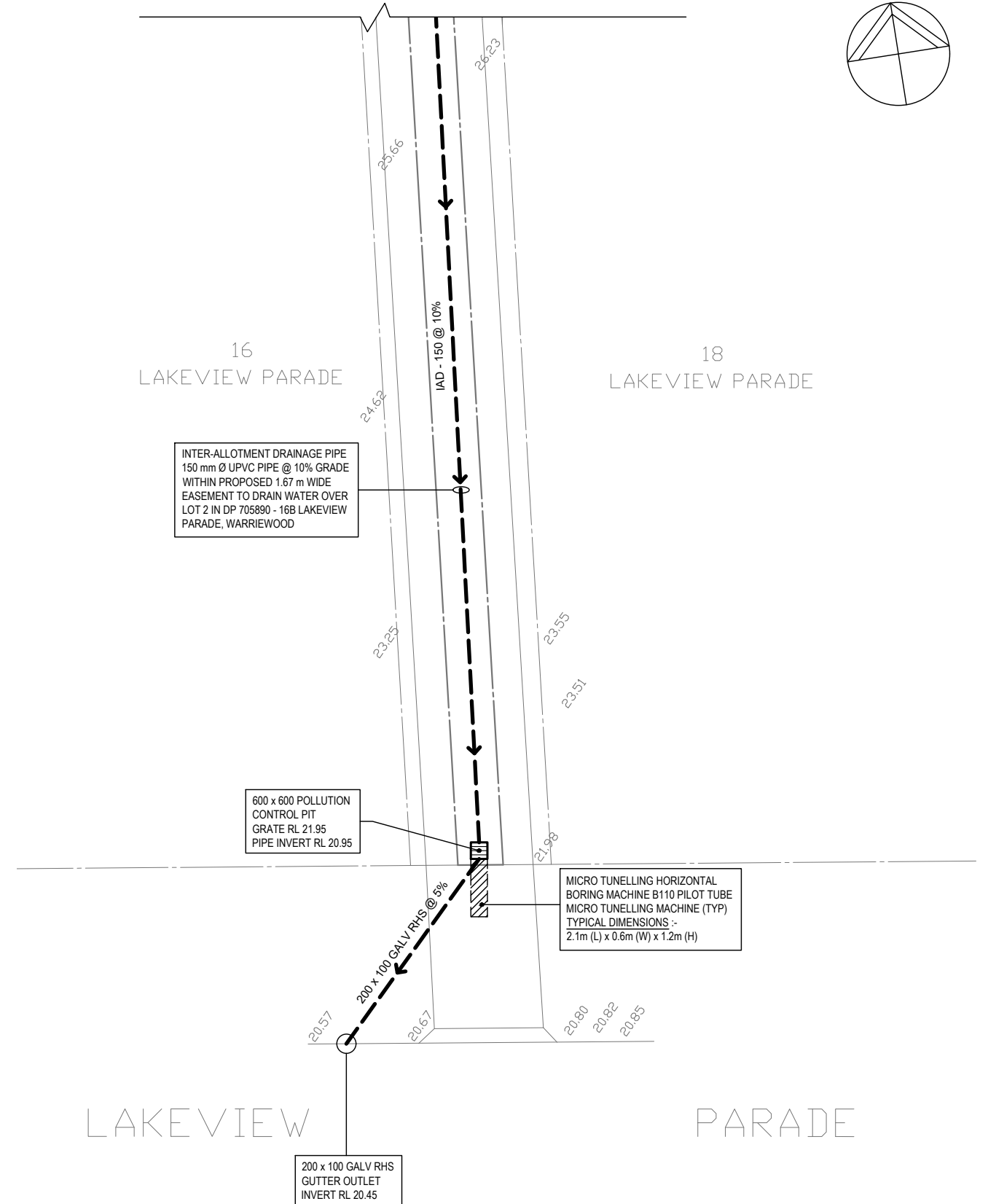
© All design and drawings are the property of Waterdesign Civil Engineers. This drawing must not be used, reproduced or copied without the written approval of Waterdesign Civil Engineers.

REFER TO DWG No. SW2 FOR CONTINUATION



REFER TO DIAGRAM TO THE RIGHT FOR CONTINUATION

REFER TO DIAGRAM TO THE LEFT FOR CONTINUATION



**WATERDESIGN
CIVIL ENGINEERS**

1 FLAME TREE PLACE
CHERRYBROOK NSW 2126
MOBILE: 0417 671646
EMAIL: waterdes@bigpond.net.au
ABN: 77 928 166 729

CLIENT NAME:
WAYNE BARDWELL

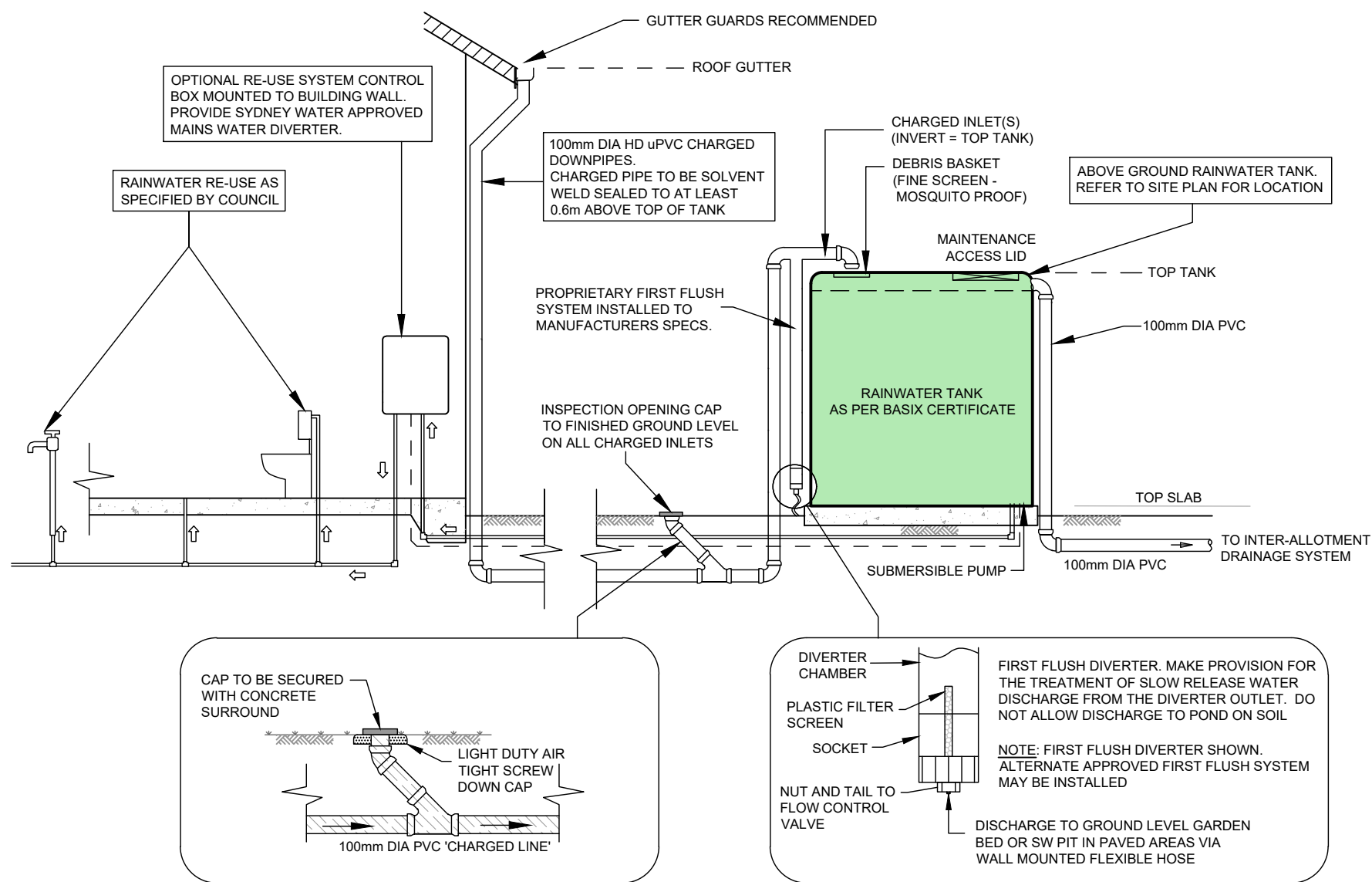
PROJECT TITLE:
**NEW DWELLINGS & SUBDIVISION
11B HILL STREET,
WARRIEWOOD NSW 2102**

DRAWING TITLE:
**INTER-ALLOTMENT
DRAINAGE PLAN**

DRAWN: A.L.
DATE: 11.03.2021
JOB No: 2021-018

APPROVED BY:
ANDREW LAM
MIEAust B.E. Civil (Hons)
DWG NO: SW3
no. IN SET: 4

No.	REVISION / ISSUE DESCRIPTION	DATE



ABOVE GROUND RAINWATER TANK SCHEMATIC DETAIL (EACH DWELLING)
NOT TO SCALE

**WATERDESIGN
CIVIL ENGINEERS**

1 FLAME TREE PLACE
CHERRYBROOK NSW 2126
MOBILE: 0417 671646
EMAIL: waterdes@bigpond.net.au
ABN: 77 928 166 729

CLIENT NAME:
WAYNE BARDWELL

PROJECT TITLE:
**NEW DWELLINGS & SUBDIVISION
11B HILL STREET,
WARRIEWOOD NSW 2102**

DRAWING TITLE:
SECTIONS AND DETAILS

DRAWN: A.L.
DATE: 11.03.2021
JOB No: 2021-018

APPROVED BY:
ANDREW LAM
MIEAust B.E. Civil (Hons)
DWG NO: SW4
no. IN SET: 4

No.	REVISION / ISSUE DESCRIPTION	DATE

© All design and drawings are the property of Waterdesign Civil Engineers. This drawing must not be used, reproduced or copied without the written approval of Waterdesign Civil Engineers.