# 17 MARETIMO STREET, BALGOWLAH STORMWATER MANAGEMENT PLAN

DRAWING NUMBER	REVISION	DRAWING TITLE
DR-000	2	LEGEND
DR-001	3	PIPE LAYOUT & DETAILS
DR-002	2	CATCHMENT PLAN & PUMP SUMP DETAIL

#### NOTES:

- 1. ALL DIMENSIONS TO BE CONFIRMED ON SITE PRIOR TO CONSTRUCTION.
- 2. SITE LAYOUT BASED ON ARCHITECTURAL PLANS BY ROBERT URSINO DESIGN (SEPTEMBER 2017).
- 3. LOCATION OF ALL SERVICES MUST BE CONFIRMED ON SITE PRIOR TO COMMENCEMENT OF EXCAVATION WORKS.
- 4. ALL STORMWATER DRAINAGE PIPES AND ASSOCIATED

  DEVICES ARE TO BE INSTALLED IN ACCORDANCE WITH THE

  RELEVANT STANDARDS, THE BUILDING CODE OF

  AUSTRALIA, MANUFACTURER'S RECOMMENDATIONS, SYDNEY

  CATCHMENT AUTHORITY RECOMMENDED PRACTICE, AND

  LOCAL COUNCIL, AS APPLICABLE.
- 5. ALL INVERT LEVELS PROVIDED ON THIS DRAWING ARE
  REDUCED TO AHD AND BASED ON INTERPOLATED SURFACE
  LEVELS AND SYSTEM REQUIREMENTS

- 6. WHERE POSSIBLE, PIPEWORK SHALL BE LOCATED EXTERNAL TO THE BUILDING.
- 7. DOWNPIPES AND STORMWATER LINES TO BE SEALED DN100 uPVC UNLESS OTHERWISE NOTED.
- 8. STORMWATER PIPES TO BE GRADED AT A MINIMUM 1% UNLESS NOTED OTHERWISE.
- 9. ALTERNATIVE GUTTER AND DOWNPIPE CONFIGURATION MAY BE INSTALLED PROVIDED IT COMPLIES WITH AS3500.
- 10. ALL PIPE AND CONDUITS TO BE MARKED IN ACCORDANCE WITH AS1345 1995.
- 11. TRENCHES AND SERVICE SEPARATIONS IN ACCORDANCE WITH AS/NZS 5601, AS/NZS 3500, AND AS/CA S009.

#### LEGEND:



DOWNPIPE



STORMWATER PIPE



RAINWATER PIPE



DRAINAGE PIT



INSPECTION OPENING

### NOT FOR CONSTRUCTION

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2						
NS.						
REVISIONS	2	MAI	06/08/2019	COUNCIL COMMENTS 2	IRW	
2	1	MAI	02/07/2019	COUNCIL COMMENTS	IRW	
	0	MAI	24/05/2018	FOR DA	IRW	
	No.	BY	DATE	DESCRIPTION	APPD	

NA

DO NOT SCALE. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE SPECIFIED

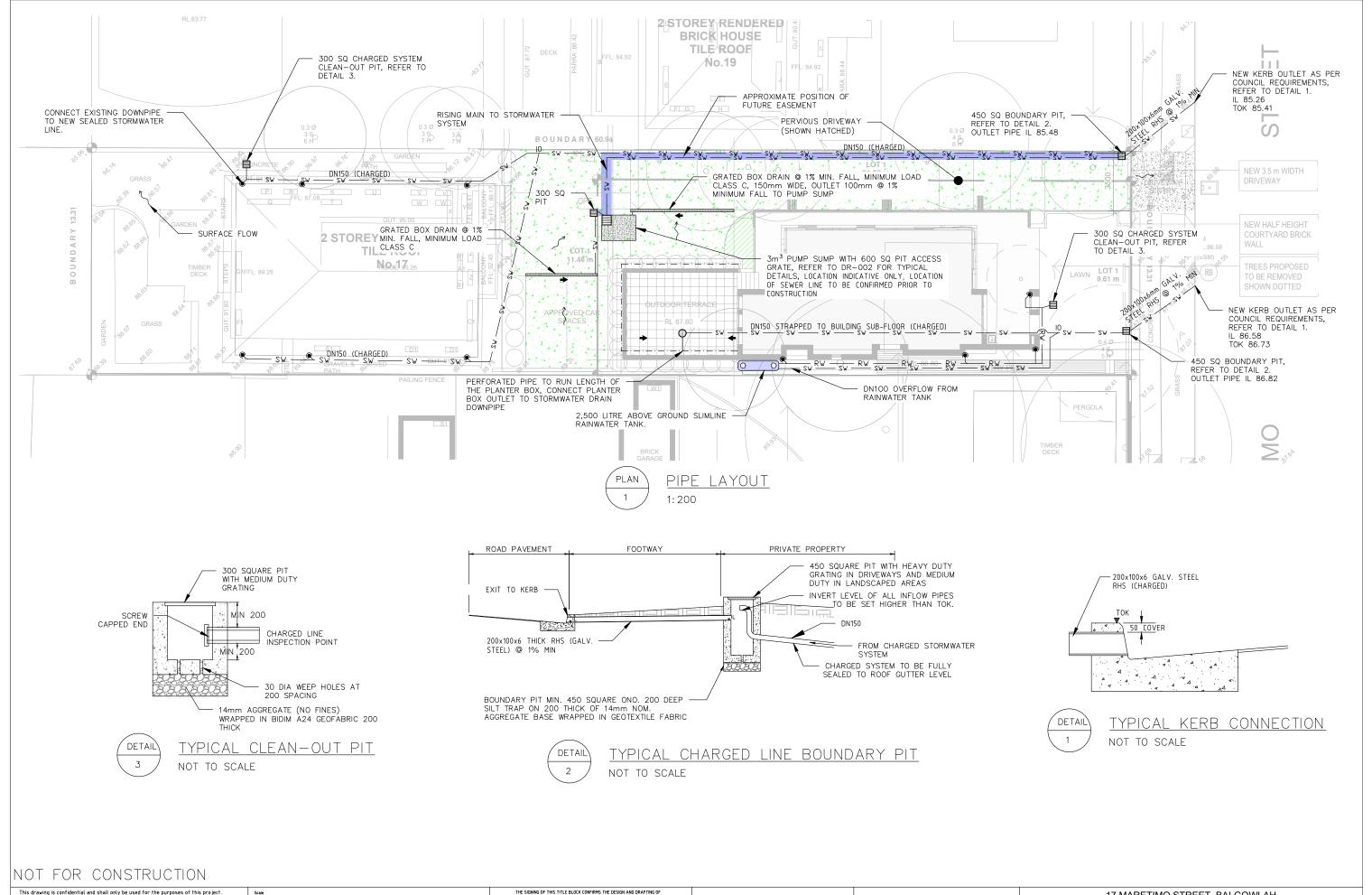
THE SIGNING OF THIS TITLE BLOCK CONFIRMS THE DESIGN AND DRAFTING OF THIS PROJECT HAVE BEEN PREPARED AND CHECKED IN ACCORDANCE WITH THE STELLEN QUALITY ASSURANCE SYSTEM				
DESIGNED	MAI	CHECKED	IRW	
DRAWN	MAI	CHECKED	IRW	
APPROVED	IRW	DATE	06/08/2019	



Stellen Consulting ABN 61 149 095 189

This design complies with: AS3500.3:2018

17 MARETIMO STREET, E	BALGOWLAH	
LEGEND		
Size A3 SECTION 455	DR-000	Rev.



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VISIONS	3	MAI	08/08/2019	CLIENT COMMENTS	IRW
SIN	2	MAI	06/08/2019	COUNCIL COMMENTS 2	IRW
RE	1	MAI	07/02/2019	COUNCIL COMMENTS	IRW
	0	MAI	24/05/2018	FOR DA	IRW
	No.	BY	DATE	DESCRIPTION	APPD

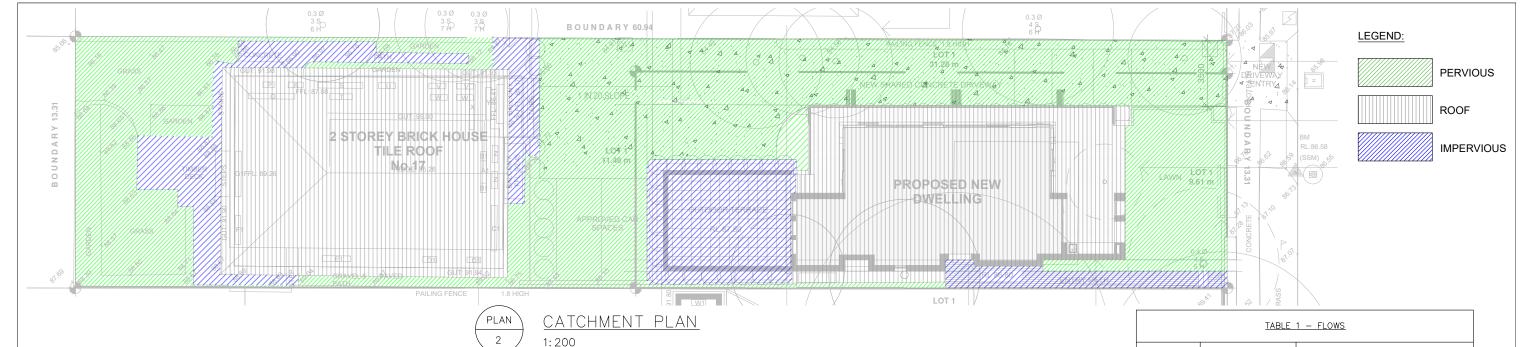
## **AS NOTED**

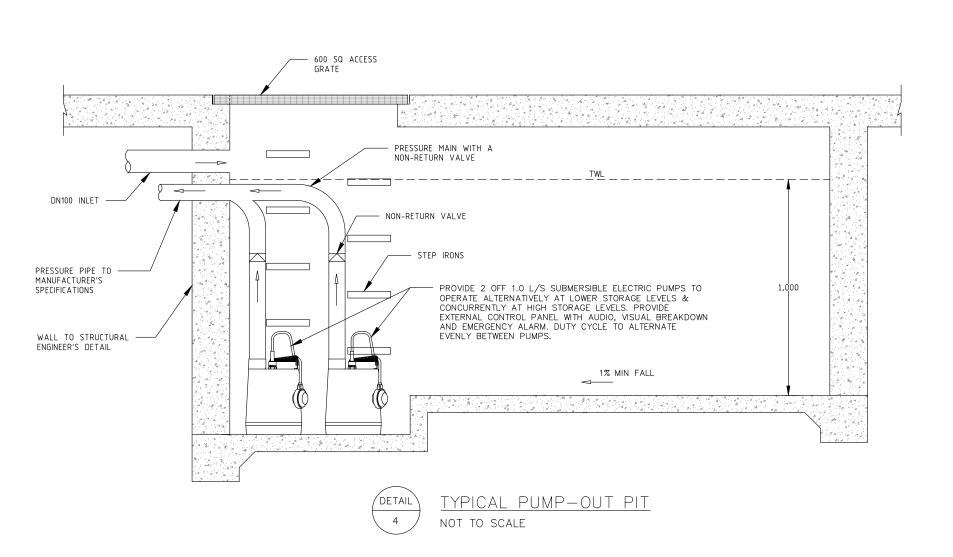
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This design complies with:		17 M	ARETIMO STREET, B	ALGOWLAH	
AS3500.3:2018			PIPE LAYOUT & DE	TAILS	
	Size A3	SECTION 455		DR-001	Rev.





#### STATE OF NATURE POST-DEVELOPMENT SURFACE FLOW TO ADJOINING PROPERTY (I/s) <u>ARI</u> 100% PERVIOUS 804.80 m<sup>2</sup> IMPERVIOUS 65.20 m<sup>2</sup> PERVIOUS 301.2 m<sup>2</sup> 12.3<sup>(NOTE 3)</sup> 5 YEAR 22 16.6<sup>(NOTE 3)</sup> 20 YEAR 35 21.7<sup>(NOTE 3)</sup> 100 YEAR 45

#### OSD TECHNICAL REQUIREMENTS FOR FLOWS

- 1. REFER TO PLAN 2 FOR CATCHMENT AREAS.
- 2. OSD IS REQUIRED AS PER MANLY COUNCIL'S ON-SITE STORMWATER MANAGEMENT 2003. HOWEVER, OSD IS NOT RECOMMENDED FOR THIS SITE AS IT FALLS AWAY FROM THE KERB AND A CHARGED SYSTEM IS PROPOSED.
- 3. RUNOFF FROM THE DEVELOPED SITE (EXCLUDING THE ROOFS & OTHER AREAS WHICH ARE DISCHARGED TO THE KERB) IS LESS THAN STATE
- 4. THE COEFFICIENT OF RUNOFF FOR PERMEABLE PAVEMENT IS CONSERVATIVELY ASSUMED AS 0.75.

TABLE 2 - PUMP DESIGN TO AS3500				
AREA TO PUMP	68	3.7 m <sup>2</sup>		
DESIGN ARI	10	) Year		
STORM PERIOD (T)	12	20 min		
RAINFALL INTENSITY (I)	32.4	mm/hr		
RUNOFF COEF. (C)	0.80			
ADJUSTED INTENSITY Q = C x I	25.92 mm/hr			
VOLUME $V = Q \times T \times I$	3.	56 m <sup>3</sup>		
PUMP CAF	PACITY CHECK			
PUMP CAPACITY (I/s)	VOLUME (m³) IN 30 min.	REQUIRED STORAGE VOLUME (m³)		
0.50	0.90	2.66		
1.00	1.80	1.76		
1.50	2.70	0.86		

- NOTES:

  1. FLOW RATE PER PUMP TO BE MINIMUM 1.0 L/s @ 3m HEAD.
- 2. PUMP SIZED TO ACCOMMODATE FOR A 10 YR, 2 HR STORM DURATION.
- ALL PITS TO BE FITTED WITH HEAVY DUTY GRATE & FRAME (MINIMUM CLASS C).

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DRAWN	MAI	CHECKED	IRW				
APPROVED	IRW	DATE	06/08/2019				
APPROVED	APPROVED IRW DATE 06/08/2019						

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This design complies with: AS3500.3:2015

## 17 MARETIMO STREET, BALGOWLAH CATCHMENT PLAN & PUMP SUMP DETAIL A3 SECTION 455 DR-002