

SUMMARY AND RESPONSE TO ASSESSABLE RULES:  
RELEVANT CODE AND ELEMENT: R22 MULTI UNIT HOUSING DEVELOPMENT CODE  
RULES:  
R86 COMPLIANT. 40% REDUCTION IN POTABLE WATER DEMAND ACHIEVED.  
R87 COMPLIANT. 1 in 3 MONTH PEAK FLOWS REDUCED. (1.4kL/100m²)  
R88 NOT APPLICABLE. SITE AREA IS LESS THAN 5,000m² (2,105m²)  
R89 COMPLIANT. 1-IN-5 YEAR AND 1-IN-100 YEAR RUNOFF DOES NOT EXCEED PREDEVELOPMENT LEVELS BY MEANS OF AN ON SITE DETENTION SYSTEM HAVING BEEN PROVIDED

OSD VOLUMES  
OSD REQUIRED = 11.2m³  
OSD PROVIDED = 20.0m³

TOTAL DEVELOPMENT WATER REDUCTION			
INDUSTRIAL ZONES DEVELOPMENT CODE	PROPOSED	PRE2003	REDUCTION
	2,048	3,429	46%

FIGURES FROM ACTPLA WATER CALCULATION SPREADSHEETS FOR COMMERCIAL DEVELOPMENTS

MINIMUM INTERNAL DIMENSIONS FOR STORMWATER INLET PITS			
DEPTH TO INVERT OF OUTLET	MINIMUM INTERNAL DIMENSIONS		DIAMETER
	RECTANGULAR	CIRCULAR	
WIDTH	LENGTH		
≤600	450	450	600
>600-900	600	600	900
>900-1200	600	900	1000
>1200	900	900	1000

AS3500.3.2 TABLE 8.2

## WATER SENSITIVE URBAN DESIGN CHECKLIST

REFERENCE: WATERWAYS, WATER SENSITIVE URBAN DESIGN GENERAL CODE.  
ACT PLANNING & LAND AUTHORITY (ACTPLA), JULY 2007.

### MAINS WATER USE

PLUMBING FITTING	RATING (★ ★ ★ min.)
TAPS	★★★★
SHOWER HEADS	★★★★
TOILETS	★★★★

### LANDSCAPING

AREA OF IRRIGATED LAWN	409m²
AREA OF NON-IRRIGATED GARDEN BEDS	145m²
TOTAL IRRIGATED AREA	554m²

AREA OF NON-IRRIGATED LAWN	0m²
AREA OF NON-IRRIGATED GARDEN BEDS	0m²
TOTAL NON-IRRIGATED AREA	0m²

### RAINWATER STORAGE & USE PROPOSED

USES FOR STORED WATER	
GARDEN	YES
TOILET FLUSHING	YES
OTHER	NO

### STORMWATER MANAGEMENT

DEVELOPMENT AREA	2105m²
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IMPERVIOUS AREA - ROOF	
ROOF AREA CONNECTED TO RAINWATER STORAGE	534m²
ROOF AREA NOT CONNECTED TO RAINWATER STORAGE	534m²
TOTAL	1068m²

IMPERVIOUS AREA - PAVING	
HARD PAVED AREAS	483m²
PERMEABLE/POROUS PAVING	0m²
TOTAL	483m²

TOTAL IMPERVIOUS AREAS WITH 50% REDUCTION OF PERMEABLE/POROUS PAVING	1551.0m²
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### STORMWATER SITE STORAGE

RESIDENTIAL REQUIREMENT	21.714m³(kL)
COMMERCIAL REQUIREMENT	0.00m³(kL)

TYPE OF STORAGE PROPOSED	BELOW GROUND TANK
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VOLUME OF RAINWATER STORAGE	48m³(kL)
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EXTENDED STORAGE DETENTION PROPOSED	YES
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STORMWATER SITE STORAGE ACHIEVED (50% OF RAINWATER STORAGE PLUS 100% OF EXTENDED DETENTION STORAGE).	48m³(kL)
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WASTE WATER REUSE PROPOSED	0m³(kL)
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### SUMMARY OF WSUD TARGETS AND ACHIEVEMENTS

	TARGET	ACHIEVED
MAINS WATER USE REDUCTION	40%	46%
STORMWATER SITE STORAGE	32.57m³(kL)	48m³(kL)

Water Reduction Spreadsheet - Multi Unit 24/12/2019

This spread sheet is an online tool for individuals, designers and developers to gauge possible methods of reducing mains water consumption on Multi-unit developments. Please enter ALL the relevant information for your development before using the reduction percentage.

Percentage Reduction	=	46%
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Indoor information	
Number of bedrooms in the entire complex	21
What is the water rating of the shower heads?	4 Star
What is the water rating of the clothes washing machines?	4 Star
What is the water rating of the dishwashers?	4 Star
What is the water rating of the toilets?	4 Star

Site information	
Site area (m²)?	2,105
Total Roof area (m²)?	1,068
Lawn area (m²)?	409
Irrigated garden area (m²)?	500
Impervious pavement or driveway (m²)?	483

Rain water tank information	
Are there going to be water tanks installed?	Yes
What is the total size of all the tanks (L)?	48,000
What is the total roof area flowing into the tanks (m²)?	534
What will be the use for the water in the tanks?	Garden and Toilet

Grey Water information	
What type of grey water system is installed?	None
What is the size of the grey water storage tank (L)?	0
Where will the grey water be collected from?	
What will be the use for the grey water?	

Pool, Spa or Pond information	
Is there going to be a pool, spa, or pond?	No
Is there going to be a cover on the pool or spa?	No
Average depth of the pool, spa or pond (m)?	0
Average length of the pool, spa or pond (m)?	0
Average width of the pool, spa or pond (m)?	0
The volume of the pool, spa or pond is (L) =	0

Main sheet

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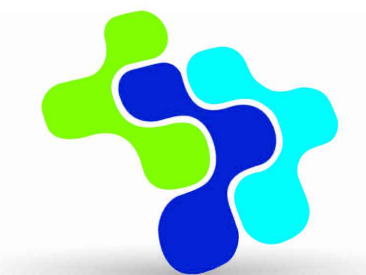
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### GENERAL DRAWING NOTES

- DIMENSIONS SHALL NOT BE OBTAINED BY SCALING OFF THE DRAWING.
- SETTING OUT DIMENSIONS SHALL BE VERIFIED BY THE CONTRACTOR ON SITE.
- ALL LEVELS TO BE CHECKED AND VERIFIED BY THE CONTRACTOR ON SITE.
- CONSTRUCTION FROM THESE DRAWINGS IS NOT TO COMMENCE UNTIL APPROVAL FROM LOCAL AUTHORITIES IS OBTAINED.
- ALL WORK TO BE CARRIED OUT IN ACCORDANCE WITH THE RELEVANT AS CODES, BUILDING CODE OF AUSTRALIA AND LOCAL GOVERNMENT AUTHORITIES.

A	FOR DEVELOPMENT APPROVAL	NT	23.12.19
REV	AMENDMENT	BY	DATE

## DEVELOPMENT APPROVAL



RossardenDesign

CLIENT	MR. ROBERT PASTRELLO		
ARCHITECT	THURSDAY ARCHITECTURE		
LOCATION	BLOCK 19 SECTION 64 YARRALUMLA ACT		
DWG TITLE	STORMWATER MANAGEMENT PLAN		
SCALE	0m 2 4 6 8 10 1:200 @A1 1:400 @A3		
NORTH	DATE		
DEC 2019	DESIGNED	NGT	DRAWN
JOB NO.	DRAWING NO.	REVISION	
190096	C005		A