

Land use/surface type	Total area (ha)	Impervio	ous Area	Pervious Area		
	()	(ha)	(%)	(ha)	(%)	
Pre-development Scenario						
Business area - B2	0.0913	0.0212	23	0.0701	77	
Roof area	0.0569	0.0569	100	0.0000	0	
Pavement area	0.0538	0.0338	63	0.0199	37	
TOTAL	0.2019	0.1119	55	0.0901	45	
Post-development Scenario						
Business area - B2	0.0508	0.0101	20	0.0407	80	
Roof area	0.0942	0.0942	100	0.0000	0	
Pavement area	0.0569	0.0342	60	0.0227	40	
TOTAL	0.2019	0.1385	69	0.0634	31	

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	Average Recurrance Interval (years)						
	5	10	20	50	100		
Catchment 1 - Pre-development Scenario							
Qpre (m³/s) - PSD	0.090	0.108	0.133	0.154	0.178		
Catchment 2 - Post-devevelop	ment Scer	nario					
Qpost _{no OSD} (m³/s)	0.094	0.112	0.137	0.157	0.181		
Qpost _{OSD} (m3/s) - PSD	0.072	0.093	0.121	0.139	0.161		
Peak OSD storage (m³) - SSR	3.5	4.4	<mark>6.0</mark>	7.2	8.8		





CLIENT STEVE CHOWDHURY



lep.planning@gmail.com

	65 HODDLE STREET, ROBERTSON								
_	DRAWING TITLE SITE CATCHMENT AREA PLAN AND 'DRAINS' MODEL SUMMARY								
	PROJECT No. SUB-PROJECT No. DRAWING No. ISSUE SHEET SIZE								
	19051	01	DA01	02	A1				



TABLE '3' - STORMWATER PIT SCHEDULE								
PIT I.D.	PIT SIZE	PIT TYPE ¹	SURFACE R.L.	INVERT R.L.	DEPTH (m)			
1	600 X 600	SIP	733.100	732.600	0.500			
2	600 X 600	SIP	733.425	732.800	0.625			
3	600 X 600	SIP	733.500	732.925	0.575			
4	600 X 600	SIP	733.625	733.000	0.625			
5	600 X 600	SIP	733.685	733.225	0.460			
NOTE:	NOTE:							

1. DCP = DISCHARGE CONTROL PIT, JP = JUNCTION PIT, KIP = KERB INLET PIT, SIP = SURFACE INLET PIT, SP = SURCHARGE PIT. 2. ALL PITS ARE TO BE FITTED WITH A FINE MESH IN-PIT FILTRATION BASKET SUCH AS 'ENVIROPOD 200' OR AN APPROVED EQUIVALENT. CAD File Name: N:\(B) Projects\19XXX\19051 65 Hoddle Street, Robertson\(E) Drawings\19051_DA02_Concept Stormwater Drainage Plan.dwg

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MMARY RATIONS AND ADDITIONS TO EXISTING LDING INCLUDING A SIX (6) UNIT DWELLING, A BOVE THE EXISTING MOTEL, THREE (3) RETAIL DFFICE AND A CAFE.	LEGEND	CATCHMENT BOUNDARY CATCHMENT I.D.
HE SITE CATCHMENT AREAS IS AS FOLLOWS: E AREA = 2019 m ² LOPMENT - ERVIOUS AREA = 1119 m ² RVIOUS AREA = 901 m ² ELOPMENT - ERVIOUS AREA = 1385 m ² RVIOUS AREA = 634 m ² IN IMPERVIOUS AREA = 266 m ² (REFER TO	× RL 100.000 FALL FFL 1	PROPOSED REDUCED LEVEL GENERAL SURFACE FALL FINISHED FLOOR LEVEL PROPOSED STORMWATER PIT I.D. - REFER TO TABLE '3' PROPOSED ON-SITE
QUIRED FOR ON-SITE STORMWATER DETENTION JLATED IN ACCORDANCE WITH COUNCIL'S DCP, THE ESIGNED TO ENSURE THAT THE ENT FLOWS DO NOT EXCEED THE NT FLOWS FOR ALL STORM EVENTS. ICIL'S CRITERIA ABOVE, THE SITE REQUIRES A ³ ON-SITE STORMWATER DETENTION STORAGE	OSD / RWT	STORMWATER DETENTION OR RAINWATER TANK PROPOSED STORMWATER PIT EXISTING STORMWATER PIT PROPOSED HEADWALL WITH RIP-RAP
DA01 FOR CALCULATIONS). THE OSD STORAGE IS WITHIN THE OSD TANKS AS SHOWN ON THIS PLAN. OF AREA FROM THE BUILDINGS ARE TO DRAIN TO OSD TANKS. E RAINWATER TANKS IS TO BE USED FOR TOILET		EXISTING STORMWATER PIPE PROPOSED STORMWATER PIPE PROPOSED PIPE TO RAINWATER TANK
LL PROPOSED TOILETS WITHIN THE ND IRRIGATION PURPOSES.	RW	PROPOSED RETAINING WALL EXTENT OF BIORETENTION BASIN EXTENT OF PROPOSED GRAVEL PAVEMENT AREA PROPERTY BOUNDARY
	· ·	ADJOINING PROPERTY BOUNDARY

EROSION AND SEDIMENT CONTROL NOTES

1. EROSION AND SEDIMENT CONTROL MEASURES AS REQUIRED BY COUNCIL ARE TO BE PROVIDED ON-SITE.

2. TOTAL AREA OF DISTURBANCE TO BE KEPT TO A MINIMUM. 'NO-GO' AREAS FOR WORKERS ARE TO BE SET OUT TO ENSURE DISTURBED AREAS ARE KEPT AT A MINIMUM.

3. SITE WORKS WILL NOT START UNTIL THE EROSION AND SEDIMENT CONTROL WORKS OUTLINED IN CLAUSES 2 TO 4 BELOW, ARE INSTALLED AND FUNCTIONAL.

4. THE INGRESS TO AND EGRESS FROM THE SITE WILL BE CONFINED TO ONE STABILISED POINT. SEDIMENT OR BARRIER FENCING WILL BE USED TO RESTRICT ALL VEHICULAR MOVEMENTS TO THAT POINT. STABILISATION • CONSTRUCTING A SEALED (e.g. CONCRETE OR ASPHALT) DRIVEWAY TO THE STREET; OR

• CONSTRUCTING A STABILISED SITE ACCESS, ACCORDING TO STANDARD DRAWING SD 6-14 OR OTHER SUITABLE TECHNIQUE APPROVED BY THE COUNCIL.

4. SEDIMENT (SD 6-8) AND BARRIER FENCES TO BE INSTALLED.

5. MESH AND GRAVEL "SAUSAGE" PROTECTION (SD 6-11) TO BE PROVIDED TO PROTECT GUTTER INLETS NEAR

6. TOPSOIL TO BE STRIPPED AND STOCKPILED (SD 4-11) FOR LATER USE IN LANDSCAPING THE SITE.

7. ALL STOCKPILES TO BE PLACED IN THE LOCATION SHOWN ON THE ESCP AND AT LEAST 2 METRES CLEAR OF ALL AREAS OF POSSIBLE AREAS OF CONCENTRATED WATER FLOW, INCLUDING DRIVEWAYS.

8. LANDS TO THE REAR AND SIDES OF THE ALLOTMENT AND ON THE FOOTPATH WILL NOT BE DISTURBED DURING WORKS EXCEPT WHERE ESSENTIALS, e.g. DRAINAGE WORKS ACROSS THE FOOTPATH. WHERE WORKS ARE NECESSARY, THEY WILL BE UNDERTAKEN IN SUCH A WAY TO LEAVE THE LANDS IN A CONDITION OF HIGH EROSION HAZARDS FOR AS SHORT A PERIOD AS PRACTICABLE. THEY WILL BE REHABILITATED AS SOON AS POSSIBLE. STOCKPILES WILL NOT BE PLACED ON THESE LANDS AND THEY WILL NOT BE USED AS VEHICLE

9. ALL PIPE TRENCHES TO BE BACKFILLED AS QUICKLY AS POSSIBLE. IF TRENCH IS TO REMAIN OPEN WHILE SITE IS UNATTENDED/AFTER THE END OF A SHIFT, CONTRACTOR IS TO ENSURE THAT THE TRENCH IS APPROPRIATELY COVERED TO NOT ALLOW THE INGRESS OF WATER.

10. APPROVED BINS FOR BUILDING WASTE, CONCRETE AND MORTAR SLURRIES, PAINTS, ACID WASHINGS AND LITTER WILL BE PROVIDED AND ARRANGEMENTS MADE FOR REGULAR COLLECTION AND DISPOSAL.

11. TOPSOIL WILL BE RE-SPREAD AND ALL DISTURBED AREAS TO BE REHABILITATED WITHIN 20 WORKING DAYS OF

12. COUNCIL'S PERMISSION WILL BE SOUGHT IF ANY MATERIALS NEED TO BE PLACED ON FOOTPATHS OR NATURE STRIPS. SUCH MATERIALS WILL BE PLACED ON PLASTIC AND COVERED.

> ALL DESIGN MEASURES SHOWN ON THIS DRAWING HAVE BEEN PREPARED FOR DEVELOPMENT APPLICATION PURPOSES TO DEMONSTRATE FEASIBILITY. ALL DESIGN MEASURES WILL BE SUBJECT TO DETAIL DESIGN AT THE CONSTRUCTION CERTIFICATE STAGE AND MAY BE SUBJECT TO VARIATION PROVIDED THAT THE DESIGN INTENT IS MAINTAINED.

NorBE Asse	essment						NorBE Assessment			s3qm
Assessment Su							Assessment Summary			General Details
General Information	-								Project Name:	65 Hoddle Street, F
			Lot	Section	Plan		Area to be disturbed		Project No.: Author:	19051 cnovati@ncengined
Consultancy	Novati Consulting Engi	leers	1	13	75888	2	Development site slope > 20%? No			Location Details
Consultant	tbennett@ncengineers.	com.au	I	15	73000	2	Development site within 1% AEP flood level flood prone land? No		Site Address:	65 Hoddle Street, F
Consultant reference number	19051_NorBE01						Other site constraints? No		Council Area:	Water NSW
DA number	-						(if yes) Have appropriate management measures been – proposed?		Rainfall Region:	SCA Zone8
Assessing officer Council	- Wingecarribee Shire								Total Area (m2):	2019
	_						Required NorBE conditions of consent			Output Summary
Development class	Retail/office – sewered						Condition Assign	ed At		
Date of assessment	12/10/2019 1:48:35 P	М					The applicant is to submit, to the satisfaction of council, an Erosion and Sediment Control Plan in	12/9/2019 4:29:44 PM	Catchment Characteristic:	Imperviousness(%)
Assessment Sumn	nary						accordance with Chapter 2 of the NSW Landcom's Soils and Construction: Managing Urban Stormwater (2004) manual – the 'Blue Book", outlining the controls that will be used to prevent		Water Usage:	
NorBE status	Lodged						sediment entering dams, drainage depressions and watercourses and/or street stormwater			Storage Capacity (kL)
System outcome	Satisfied	User outcome					drainage systems. The applicant is to implement the proposed management measures identified on the Small-Scale	12/9/2019 4:29:44 PM		Demand (kL/yr) Utilisation (%)
SCA concurrence outcome	e						Stormwater Quality Model (SSSQM) certificate to prevent stormwater from having an adverse	12/3/2013 4.23.44 FM		Efficiency (%)
Determination outcome	Pending	Determination date					impact on water quality of nearby dams, drainage depressions and watercourses.			Tank Spills
Determination outcome	Pending	Determination date					Assessment notes		Catchment 1	Urban
Pre-Assessment							No notes			Agriculture
Located within Sydney dri	nking water catchment?	Yes								Forest
	t with any existing SCA S88	N/A							Treatment Train:	
Crown perpetual leasehold	d land?	No								
Water quality impact ?		Yes								
Concentration of flow o	of water?	Yes								
Flow of water impeded	?	No								
Discharge of pollutants	?	Yes							Treated Loads / Flows	
Any other matter?		No								
Documentation is complet	te?	Yes								Flow(ML)
	ement Study meet SCA/Coun									TSS(kg/yr)
Description		Proposed alt	erations and additio	ns to existing bui	ilding on site including	,				TP (kg/yr) TN (kg/yr)
		kitchen, mar	he post-office, additi nagers office, toilet fa	acilities and mote	el rooms/units each					
		with bathroo each with ba	oms. Addition of a ne athrooms on the west	w building for 6 r	motel rooms/units ite. Existing on-site					Gross Pollutants (kg/yr)
		car parking a	area to be amended t	to accommodate f	for additional spaces.					Note:
Module 1										
Development risks	6									
Impervious area(m2)		1385								
Construction area(m2)		2019								
Adequate SSSQM certif	ficate provided?	Yes								
. •	-				Motochicy	v		Malachiciu		
					WaterNSV	*		WaterNSW		
					•					

NorBE ASSESSMENT SUMMARY

CAD File Name: N:\(B) Projects\19XXX\19051 65 Hoddle Street, Robertson\(E) Drawings\19051_DA03_NorBE Assessment and S3QM Certificate.dwg

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SMALL SCALE STORMWATER QUALITY MODEL CERTIFICATE



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obert	son	Lot/DP N	lo.:	1/13/758882	
		Dominar			
		Soil Text	ture:	Clay	
		Design			
		Mode an	ld	Design/NorBE	
		WQOs:			
		No. Catchme	ents:	1	
E	xisti	ng	D	eveloped	
2.95	%		72.3	6%	
0.0 kL			20.0		
	5 kL/y	/r	35.5 kL/yr		
0.0%			100.		
laN%			99.0		
0.0 pe	er Yea	r	130.	35 per Year	
019.0	0		2019.0		
0.0			0.0		
0.0			0.0		
			Trac	h Rack:	
			Rem		
				=50.0	
			Biofi	ltration:	
			Surfa		
				=25.0, Ed	
				h=0.1, F h=0.4	
	Train		- cpt	Train	
		tiveness	Load	Effectiveness	
	(%)			(%)	
7	0.0		1.9	4.5	
.50.0	0.0		63.0	54.5	
.33	0.0		0.26	26.0	
.3	0.0		3.2	20.3	
20.0	0.0		5.5	70.0	

S3QM DESIGN SUMMARY

A SUMMARY OF THE SITE CATCHMENT AREAS IS AS FOLLOWS:

TOTAL SITE AREA = 2019m²

EXISTING CASE CAT

ТСНМЕ	ENT 1:
-	AREA = 2019 m ²
-	ROOF AREA = 569 m ²
-	ROAD AREA = 288 m ²
-	OTHER IMPERVIOUS AREA = 212 m ²
-	No. OF DWELLINGS = 1
-	AVERAGE No. BEDROOMS = N/A
-	LAND USE FOR EXTERNAL WATERING = N/A
-	ROOF AREA TO RAINWATER TANK = N/A
-	AVERAGE TANK VOLUME PER DWELLING = N/A
-	TANK WATER USE = N/A
-	TREAT ROOF RUNOFF = N/A
-	TREAT TANK OVERFLOW = N/A
-	TREAT DCIA + PERVIOUS AREA = N/A
-	TREAT ROAD AREA = N/A
-	RUNOFF BYPASSING TREATMENT = N/A
EATME	NT TRAIN FOR CATCHMENT 1: NONE

TREATMENT TRAIN FOR CATCHMENT 1: NONE

DEVELOPED CASE CATCHMENT 1:

- AREA = 2019 m²
- ROOF AREA = 942 m²
- ROAD AREA = 570 m²
- OTHER IMPERVIOUS AREA = 80 m²
- NO. OF DWELLINGS = 2 AVERAGE NO. BEDROOMS = 6
- LAND USE FOR EXTERNAL WATERING =
- INDUSTRIAL/COMMERCIAL
- ROOF AREA TO RAINWATER TANK = 85%
- AVERAGE TANK VOLUME PER DWELLING = 10 kL
- TANK WATER USE = TOILET TREAT ROOF RUNOFF = NO
- TREAT TANK OVERFLOW = NO
- TREAT DCIA + PERVIOUS AREA = YES
- TREAT ROAD AREA = YES

RUNOFF BYPASSING TREATMENT = 30%

TREATMENT TRAIN FOR CATCHMENT 1:

- BIOFILTRATION AS FOLLOWS: SURFACE AREA = 30m²/ EXTENDED DETENTION DEPTH = 0.1m/ FILTER DEPTH = 0.4m
- ALL SURFACE INLET PIPES ARE TO BE FITTED WITH A FILTRATION BASKET/TRASH RACK.

PROJECT

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DRAWING SHEET 03 OF 04 65 HODDLE STREET, ROBERTSON

NorBE ASSESSMENT AND S3QM CERTIFICATE

PROJECT No.	SUB-PROJECT No.	DRAWING No.
40054		
19051	01	DA03

SHEET SIZE ISSUE 02

A1



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B85 ENTRY/EXIT TURNING PATH SCALE 1:200

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