

Date: Friday, 20 February 2015

Northrop Consulting Engineers
PO Box 180
CHARLESTOWN NSW 2290

Re: DESIGN PERFORMANCE STATEMENT

Project Address: Glass Parade, North Singleton, NSW
Project Name: Woolworths Singleton

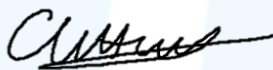
Pursuant to the provisions of Environmental Planning and Assessment Act in respect of the above project –

I, Courtney Hunt,
of Electrical Projects Australia
at 386, Maitland Road, Newcastle

Hereby certify that;

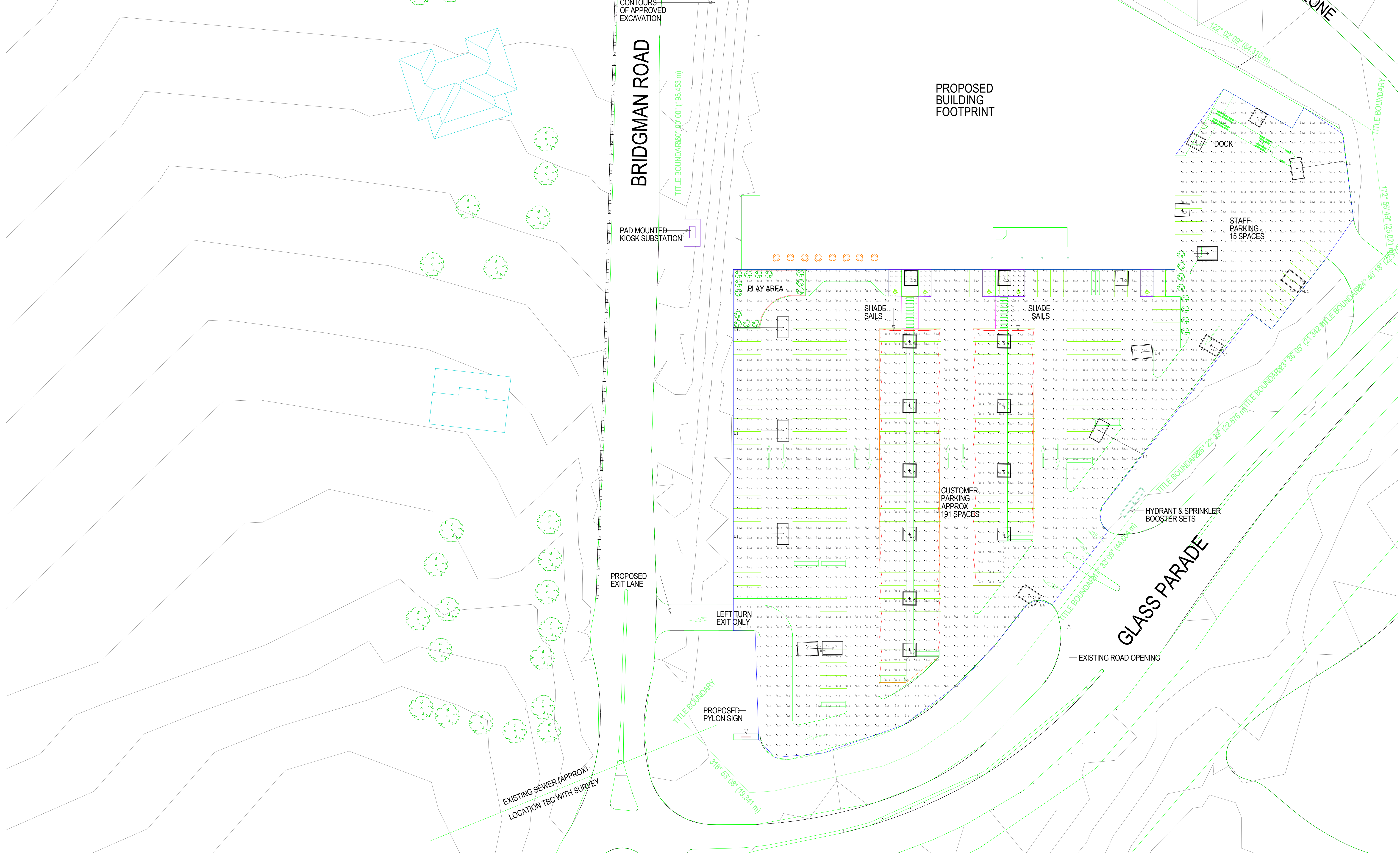
- I am a practicing electrical engineer.
- The electrical elements of the carpark have been designed in accordance with;
 - AS1158.3.1 Lighting for Public Spaces (Category P)
 - AS4282-1997 Control of Effects of Obtrusive lighting

Signed:



Date: **20/02/2015**

On behalf of Electrical Projects Australia



WOOLWORTHS SINGLETON

Luminaire Schedule					
Symbol	Qty	Label	Arrangement	Total Lamp Lumens LLF	Description
	7	22NB-70-T3	SINGLE	5783	0.900 22NB-65-T3-SK BEACON VIPER
	6	VP-S-22NB-50-T2	SINGLE	4447	0.900 VP-S-22NB-50-T2
	10	XPG-S-180-50-CW-UE	SINGLE	N.A.	0.900 XPG-S-180-50-CW-UE
	5	80NB-180-T4	SINGLE	16887	0.900 80NB-180-T4-5K

Calculation Summary							
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
Disabled Car Park 1	Illuminance	Lux	28.69	48.8	12.3	2.33	3.97
Disabled Car Park 2	Illuminance	Lux	28.52	47.3	11.6	2.46	4.08
Disabled Car Park 3	Illuminance	Lux	25.92	47.8	13.8	1.88	3.46
Main Car Park	Illuminance	Lux	35.52	57.4	1.6	10.33	35.88
ObtrusiveLight - Cd_Seg1	Obtrusive Light - Cd	N.A.	313.92	588	143	2.20	4.11
ObtrusiveLight - T11_Seg1	Obtrusive Light - T11	Lux	0.49	1.5	0.6	N.A.	N.A.
Pedestrian Crossing 1	Illuminance	Lux	16.46	27.1	12.4	1.33	2.19
Pedestrian Crossing 2	Illuminance	Lux	15.48	23.6	12.4	1.25	1.90
Shade Sail 1	Illuminance	Lux	19.10	31.6	9.9	1.95	3.19
Shade Sail 2	Illuminance	Lux	18.76	31.9	6.8	2.76	4.69

Obtrusive Light - Compliance Report

AS 4282-1997, Post-Curfew, Residential - Light Surrounds

Filename: Lighting Calcs

19/02/2015 2:16:08 PM

Illuminance

Maximum Allowable Value: 2 Lux

Calculations Tested (1):

Calculation Label	Test Results	Max. Illum.	
ObtrusiveLight_1_Ill_Seg1		PASS	1.5

Luminous Intensity (Cd) At Vertical Planes

Maximum Allowable Value: 1000 Cd

Calculations Tested (1):

Calculation Label	Test Results
ObtrusiveLight_1_Cd_Seg1	PASS

Obtrusive Light - Compliance Report

AS 4282-1997, Pre-Curfew, Residential - Light Surrounds

Filename: Lighting Calcs

19/02/2015 2:15:27 PM

Illuminance

Maximum Allowable Value: 10 Lux

Calculations Tested (1):

Calculation Label	Test Results	Max. Illum.	
ObtrusiveLight_1_Ill_Seg1		PASS	1.5

Luminous Intensity (Cd) Per Luminaire

Maximum Allowable Value: 7500 Cd

Control Angle: 83 Degrees

Luminaire Locations Tested (28)

Test Results: **PASS**