

Luminaire Schedule				
Scene	Initial	Qty	Description	Total Lamp Lumens
1	BVP527 OUT 130 50K A354NB +LD	7	Apex Optivision LED Gen3 3 modA: 5700 K BVP527 OUT 130 50K A354NB +LD	212461
2	BVP527 OUT 130 50K A354NB +BL	22	Apex Optivision LED Gen3 3 modA: 5700 K	212461

Luminaire Location Summary 1				
Scene	Initial	Z	TH	LLF
1	BVP527 OUT 130 50K A354NB +BL	25.25	66	1.00
2	BVP527 OUT 130 50K A354NB +BL	25.25	66	1.00

Luminaire Location Summary 5				
Scene	Initial	Z	TH	LLF
16	BVP527 OUT 130 50K A354NB +BL	25.25	66	1.00
18	BVP527 OUT 130 50K A354NB +BL	25.25	66	1.00

Luminaire Location Summary 2				
Scene	Initial	Z	TH	LLF
3	BVP527 OUT 130 50K A354NB +BL	25.25	66	1.00
4	BVP527 OUT 130 50K A354NB +BL	25.25	66	1.00

Luminaire Location Summary 6				
Scene	Initial	Z	TH	LLF
17	BVP527 OUT 130 50K A354NB +LD	25.25	66	1.00
18	BVP527 OUT 130 50K A354NB +LD	25.25	66	1.00

Luminaire Location Summary 3				
Scene	Initial	Z	TH	LLF
5	BVP527 OUT 130 50K A354NB +BL	30.25	67	1.00
6	BVP527 OUT 130 50K A354NB +BL	30.25	67	1.00

Luminaire Location Summary 7				
Scene	Initial	Z	TH	LLF
20	BVP527 OUT 130 50K A354NB +LD	30.25	69	1.00
21	BVP527 OUT 130 50K A354NB +LD	30.25	69	1.00

Luminaire Location Summary 4				
Scene	Initial	Z	TH	LLF
10	BVP527 OUT 130 50K A354NB +BL	26.7	69	1.00
11	BVP527 OUT 130 50K A354NB +BL	30.25	69	1.00

Luminaire Location Summary 8				
Scene	Initial	Z	TH	LLF
22	BVP527 OUT 130 50K A354NB +BL	30.25	69	1.00
23	BVP527 OUT 130 50K A354NB +BL	30.25	69	1.00

Luminaire Location Summary 4				
Scene	Initial	Z	TH	LLF
10	BVP527 OUT 130 50K A354NB +BL	26.7	69	1.00
11	BVP527 OUT 130 50K A354NB +BL	30.25	69	1.00

Luminaire Location Summary 8				
Scene	Initial	Z	TH	LLF
24	BVP527 OUT 130 50K A354NB +BL	26.7	69	1.00
25	BVP527 OUT 130 50K A354NB +BL	26.7	69	1.00

Obtrusive Light - Compliance Report
 AS/NZS 4282:2019 A3 - Medium Discrete Brightness, Non-Curfew L1
 File Name: 19078-06-A Passmore Reserve_LA+5 - revised 202225
 25/02/2020 11:15:35 AM

Illuminance
 Maximum Allowable Value: 10 Lux

Calculations Tested (11):

Calculation Label	Test Results	Max. Illum.
ObtrusiveLight_Campbell Pd 2A_1_III_Seg1	PASS	0.09
ObtrusiveLight_Campbell Pd_1_S_III_Seg1	PASS	0.5
ObtrusiveLight_Campbell Pd_N_III_Seg1	PASS	0.2
ObtrusiveLight_Campbell Pd_N_III_Seg2	PASS	0.4
ObtrusiveLight_Campbell Pd 2A_2_III_Seg1	PASS	0.6
ObtrusiveLight_Campbell Pd 2A_2_III_Seg2	PASS	0.8
ObtrusiveLight_Campbell Pd 2A_2_III_Seg3	PASS	0.4
ObtrusiveLight_Campbell Pd 2A_2_III_Seg4	PASS	0.1
ObtrusiveLight_Campbell Pd_Mack_IL_Seg1	PASS	0.5
ObtrusiveLight_Mantly Bowling_III_Seg1	PASS	0.2
ObtrusiveLight_Mantly Bowling_III_Seg2	PASS	0.1

Threshold Increment (TI)
 Maximum Allowable Value: 20 %

Calculations Tested (4):

Calculation Label	Adaptation Test Luminaire Results
ObtrusiveLight_TI_Campbell Pd_E	1 PASS
ObtrusiveLight_TI_Campbell Pd_W	1 PASS
ObtrusiveLight_TI_Quirk Rd_N	1 PASS
ObtrusiveLight_TI_Quirk Rd_S	1 PASS

Upward Waste Light Ratio (UWLR)
 Maximum Allowable Value: 2.0 %

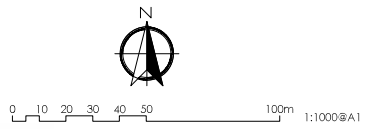
Calculated UWLR: 0.0%
 Test Results: PASS

Luminous Intensity (Cd) At Vertical Planes
 Maximum Allowable Value: 12500 Cd

Calculations Tested (11):

Calculation Label	Test Results
ObtrusiveLight_Campbell Pd 2A_1_Cd_Seg1	PASS
ObtrusiveLight_Campbell Pd_S_Cd_Seg1	PASS
ObtrusiveLight_Campbell Pd_N_Cd_Seg1	PASS
ObtrusiveLight_Campbell Pd_N_Cd_Seg2	PASS
ObtrusiveLight_Campbell Pd 2A_2_Cd_Seg1	PASS
ObtrusiveLight_Campbell Pd 2A_2_Cd_Seg2	PASS
ObtrusiveLight_Campbell Pd 2A_2_Cd_Seg3	PASS
ObtrusiveLight_Campbell Pd 2A_2_Cd_Seg4	PASS
ObtrusiveLight_Campbell Pd_Mack_Cd_Seg1	PASS
ObtrusiveLight_Mantly Bowling_Cd_Seg1	PASS
ObtrusiveLight_Mantly Bowling_Cd_Seg2	PASS

Issue	Amendment	Date
P1	PRELIMINARY ISSUE	25-09-19
P2	PRELIMINARY ISSUE	01-11-19
P3	PRELIMINARY ISSUE	27-02-20

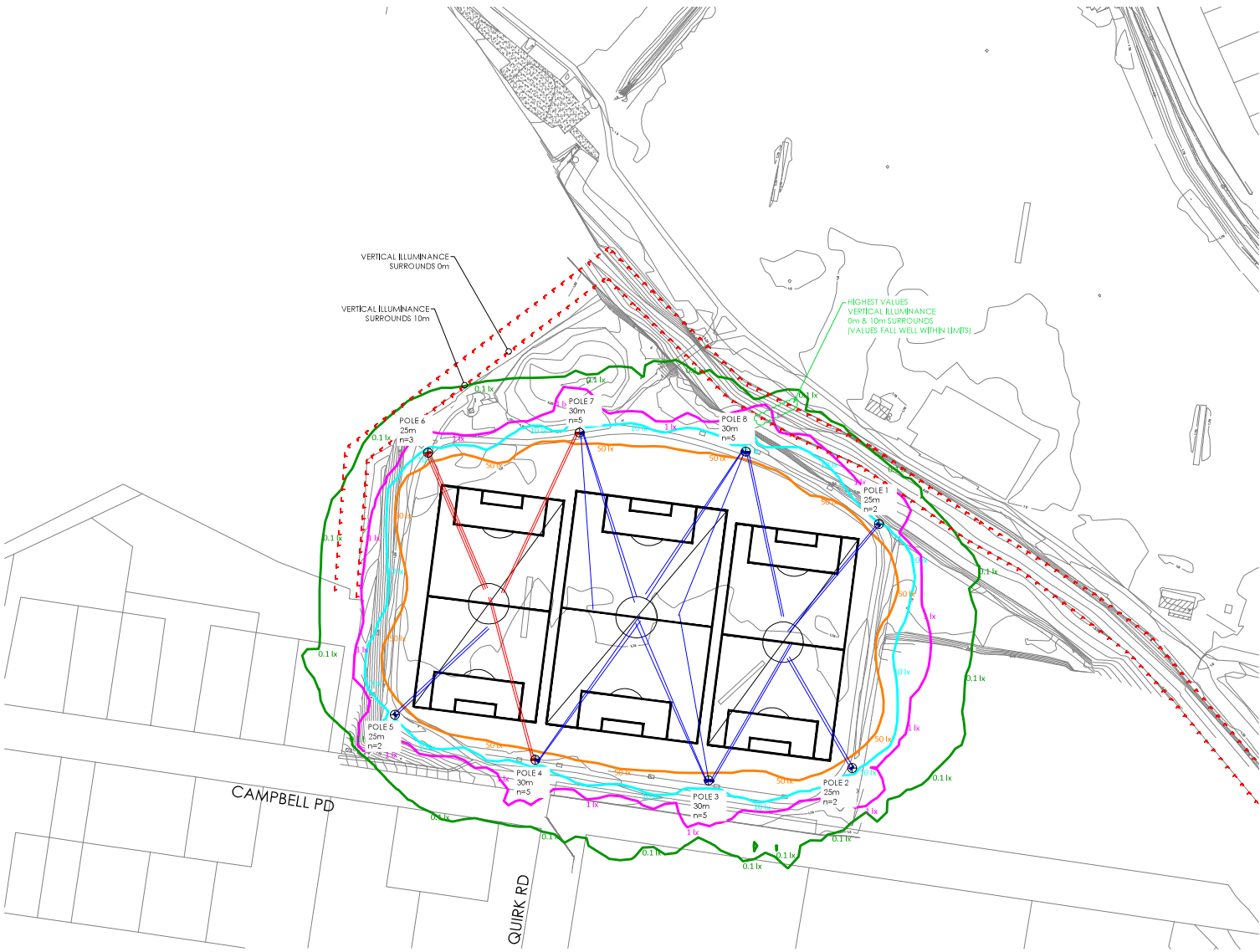


- Notes:
- Drawings are based on site plan, converted PDF from APEX lighting design for pole locations, and aerial imagery. Locations are indicative only.
 - Vertical Illuminance & Luminous Intensity calculation grid heights: 1.5 - 30m.
 - Threshold Increment calculations height: 1.5m.
 - Windscreen cutoff angle: 20° above horizontal.
 - A light loss factor of 1.0 is used to show initial light values.
 - Floodlight reference fill is noted as 'fill'. Subtract 30° from fill value to get the fill of the visor.
 - All luminaires are tilted with visor at 37°.

Lead Consultant
 BBF TOWN PLANNERS
 Client
 NBC

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Project NBC SPORTSFIELDS
 PASSMORE RESERVE, BALGOWLAH HEIGHTS
 Drawing OBTRUSIVE LIGHTING ASSESSMENT
 AS/NZS 4282:2019 CALCULATIONS
 Drawn CVZ Approv. RM Date SEP 2019 Scale 1:1,000@A1
 Project No Drawing No Rev
 L160P CL-02 STD P3



Luminaire Schedule				
Scene	Initial	Qty	Description	Total Lamp Lumens
1	BVP527 OUT 130 50K A354B +L0	7	Apex OptVision LED Gen3 3 moduA 5700K BVP527 OUT 130 50K A354B +L0	212461
2	BVP527 OUT 130 50K A354B +BL	22	Apex OptVision LED Gen3 3 moduB 5700K	212461

Luminaire Location Summary 1					
Project	Scene	Initial	Z	TH	LLF
1	BVP527 OUT 130 50K A354B +BL	2	25.25	66	1.00

Luminaire Location Summary 5					
Project	Scene	Initial	Z	TH	LLF
16	BVP527 OUT 130 50K A354B +BL	2	25.25	66	1.00

Luminaire Location Summary 2					
Project	Scene	Initial	Z	TH	LLF
3	BVP527 OUT 130 50K A354B +BL	25.25	66	1.00	1.00

Luminaire Location Summary 6					
Project	Scene	Initial	Z	TH	LLF
17	BVP527 OUT 130 50K A354B +L0	25.25	66	1.00	1.00

Luminaire Location Summary 3					
Project	Scene	Initial	Z	TH	LLF
5	BVP527 OUT 130 50K A354B +BL	30.25	67	1.00	1.00

Luminaire Location Summary 7					
Project	Scene	Initial	Z	TH	LLF
20	BVP527 OUT 130 50K A354B +L0	30.25	69	1.00	1.00

Luminaire Location Summary 4					
Project	Scene	Initial	Z	TH	LLF
11	BVP527 OUT 130 50K A354B +BL	30.25	69	1.00	1.00

Luminaire Location Summary 8					
Project	Scene	Initial	Z	TH	LLF
29	BVP527 OUT 130 50K A354B +BL	28.7	69	1.00	1.00

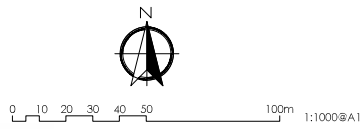
Obtrusive Light - Compliance Report
 AS/NZS 4222:2019, A3 - Medium District Brightness Non-Curfew L1
 Filename: 18076-06-A-Passmore Reserve, LA+S - revised 200225
 25/02/2020 11:24:04 AM

Illuminance
 Maximum Allowable Value: 10 Lux

Calculations Tested (23):

Calculation Label	Test Results	Max. Illum.
ObtrusiveLight_Site_Surrounds_10_III_Seg1	PASS	0.3
ObtrusiveLight_Site_Surrounds_10_III_Seg2	PASS	0.3
ObtrusiveLight_Site_Surrounds_10_III_Seg3	PASS	0.1
ObtrusiveLight_Site_Surrounds_10_III_Seg4	PASS	0.3
ObtrusiveLight_Site_Surrounds_10_III_Seg5	PASS	0.9
ObtrusiveLight_Site_Surrounds_10_III_Seg6	PASS	0.3
ObtrusiveLight_Site_Surrounds_10_III_Seg7	PASS	0.1
ObtrusiveLight_Site_Surrounds_10_III_Seg8	PASS	0.0
ObtrusiveLight_Site_Surrounds_10_III_Seg9	PASS	0.1
ObtrusiveLight_Site_Surrounds_0m_III_Seg1	PASS	1.1
ObtrusiveLight_Site_Surrounds_0m_III_Seg2	PASS	0.6
ObtrusiveLight_Site_Surrounds_0m_III_Seg3	PASS	0.2
ObtrusiveLight_Site_Surrounds_0m_III_Seg4	PASS	0.6
ObtrusiveLight_Site_Surrounds_0m_III_Seg5	PASS	2.4
ObtrusiveLight_Site_Surrounds_0m_III_Seg6	PASS	1.2
ObtrusiveLight_Site_Surrounds_0m_III_Seg7	PASS	2.1
ObtrusiveLight_Site_Surrounds_0m_III_Seg8	PASS	0.3
ObtrusiveLight_Site_Surrounds_0m_III_Seg9	PASS	0.2
ObtrusiveLight_Site_Surrounds_0m_III_Seg10	PASS	0.1
ObtrusiveLight_Site_Surrounds_0m_III_Seg11	PASS	0.1
ObtrusiveLight_Site_Surrounds_0m_III_Seg12	PASS	0.1
ObtrusiveLight_Site_Surrounds_0m_III_Seg13	PASS	0.1
ObtrusiveLight_Site_Surrounds_0m_III_Seg14	PASS	0.0

Issue	Amendment	Date
P1	PRELIMINARY ISSUE	25-09-19
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P3	PRELIMINARY ISSUE	27-02-20



Notes:
 1. Drawings are based on site plan, converted PDF from APEX lighting design for pole locations, and aerial imagery. Locations are indicative only.
 2. Vertical Illuminance calculation grid heights: 1.5 - 30m.
 3. A light loss factor of 1.0 is used to show initial light values.
 4. Floodlight reference I(1) is noted as 'I(1)', Substrate 30° from I(1) value to get the I(1) of the visor. All luminaires are tilted with visor at 37°.

Lead Consultant
 BBF TOWN PLANNERS
 Client
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Project NBC SPORTSFIELDS
 PASSMORE RESERVE, BALGOLAH HEIGHTS
 Drawing OBTRUSIVE LIGHTING ASSESSMENT
 SURROUNDINGS CALCULATIONS
 Drawn CVZ
 Project No L160P
 Date SEP 2019
 Scale 1:1000@A1
 Rev P3