7

Walsh Bay Arts Precinct

Operational Plan of Management

NSW GOVERNMENT | Create NSW
Arts, Screen & Culture

Security management

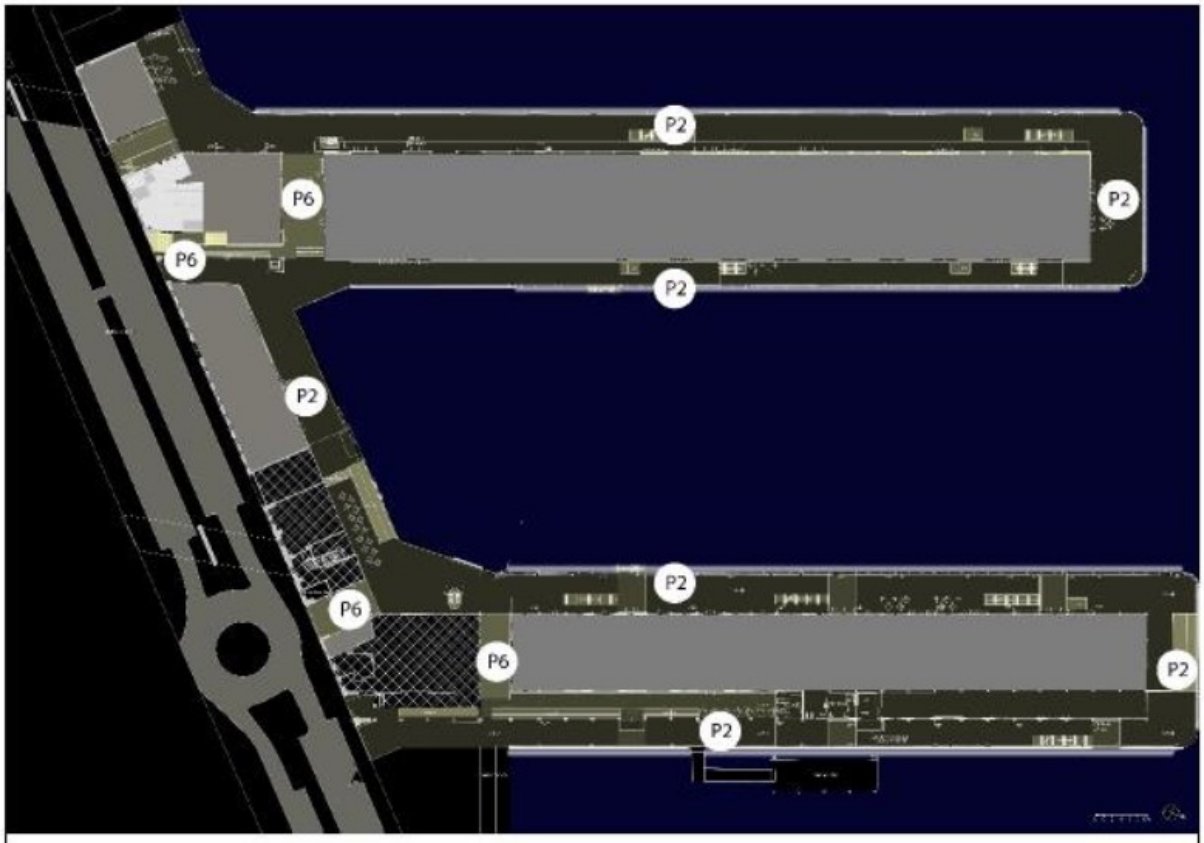
Version control

Version	Issue date	Content contributors	Nature of change(s)
1.0	25/06/2020	DN/PL	Draft issued to INSW for comments
1.1	02/07/2020	INSW	Review and minor edits

CONTENTS

8.2.2 Key Technical design parameters;

Area location	P category	Required min horizontal lux level	Required min vertical
Covered entry and walkthroughs	P6	21lux	7 lux
Exterior piers and wharfs	P2	3.5 lux	0.7 lux



Exterior P categories

12

Vision Lighting report 13

1 GLOSSARY OF TERMS

Abbreviations

Interpretation: For the purposes of this document, the following apply:

- **CCTV**: Closed circuit television.
- **WBAP**: Walsh Bay Arts Precinct

Definitions

Interpretation: For the purposes of this document, the following apply:

- **Precinct Manager**: The Create NSW representative who ensures that operations for the precinct are approved, safe, efficient and compliant.

2 INTRODUCTION

Objective of this plan

This **Security management plan** outlines the proposed measures for ensuring the precinct is safe and secure for staff, tenants and visitors. It aims to provide a strategic approach to security management, which is essential for effective protection, prevention and emergency response to harm. This document addresses requirements associated with the monitoring and operation of the installed security system, including the following:

- Authorised access and unauthorised access.
- Alarm monitoring.
- Security audits.
- Provision of CCTV.
- Other relevant protection measures in conformance with Create NSW's objectives and processes for on-site emergency response and business continuity.

Relationship to other documents

Read this plan in conjunction with:

- Other sections of the Operational Plan of Management (OPM).
- Current building codes, regulations and standards cited in this document.
- Tenancy agreements.
- Any other document cited in this plan.

3 BACKGROUND

Risk review system

The National Terrorism Threat Advisory System (NTTAS) is a scale of five levels to provide advice about the likelihood of an act of terrorism occurring in Australia in line with the security environment and intelligence. When the threat level changes, the Australian Government provides advice on what the threat level means, where the threat is coming from, potential targets and how a terrorist act may be carried out. The system enables authorities, businesses/organisations and individuals to take appropriate measures for their own safety and security as well as that of their family, friends and associates.

The five threat levels are as follows:

- Certain
- Expected
- Probable
- Possible
- Not expected

Likely terrorist threats

The most likely form for a terrorist attack in Australia would be an attack by an individual or a small group of like-minded individuals. However, a larger, more coordinated attack cannot be ruled out. Threats can develop quickly, moving to an act of violence with little preparation or planning. It is highly likely that a terrorist attack in Australia would use weapons and tactics that are low-cost and relatively simple, including basic weapons, explosives and/or firearms.

Weapons likely to be used include:

- Basic weapons that are readily available such as everyday objects that do not require specialist skills. Terrorists have used basic weapons such as knives, machetes and cars to conduct lethal attacks.
- Explosives remain a favoured terrorist weapon globally. Homemade explosives can be manufactured from readily available materials. Improvised explosive devices do not need to be large to be effective and can be easily concealed.
- Firearms can be sourced through legal and illicit channels.

Response to threats

Commonwealth agencies and Federal/State Police have generally disrupted terrorism incidents within Australia. However, as shown by the attack at the Lindt Café in Martin Place, it can be very easy for an individual to enter a facility and carry out an attack. The fatal attack upon an NSW Police Force employee at Parramatta in October 2015 is another example of a low-tech attack. As the incident occurred in the vicinity of a police building, armed officers were able to respond and neutralise the attacker quickly.

Systems like access control, CCTV surveillance, intrusion detection, asset monitoring and patrols are tools that can make security operations more efficient. It may not be possible to provide staff at each door to screen people entering the building/precinct, but systems can provide identity verification in a quick and efficient manner. They can also be used to monitor the precinct remotely. This can be used to manage all crimes, including property theft or those of a more organised and serious in nature.

Aligning with Create NSW's portfolio objectives

There is an aim to optimise security activities/functions for all properties managed by Create NSW, which was determined through a site assessment/risk management process for each property's facilities. It was identified that there should be a move towards a physical security operations centre/security services operational centre/failover security operations centre that ensures:

- Tenants (and staff) are trained appropriately, including for scenario/exercising in relation to terrorism/security incidents to develop a well-drilled team of responders, with a responsive security force.
- A single security contractor organisation can manage all Create NSW sites, including for alarm response, random patrols, or on-site security during events. This will provide a level of consistency, specialised knowledge and sense of ownership across all Create NSW properties.
- All sites move to a standard digital CCTV capability, conforming to current ISO standards that provide live video access, high levels of quality imagery, central control room monitoring and output commands.
- Centralised control of access to and uniformity of operations for all Create NSW sites.
- Ongoing monitoring of unusual or anti-social behaviour, potential threats/terrorist and intruders, and the ability to provide appropriate early response measures to mitigate harm.
- Lockdown procedures and hostage controls to each property.

4 MANAGEMENT SYSTEM

Possible risks for the precinct and consequences

Active shooter

It needs to be considered that it is potentially possible for an active shooter to target the Walsh Bay Arts Precinct. If this was to occur, initial response considerations include the following:

- Lockdown or evacuation procedures, where to evacuate.
- Communication with authorities.
- Coordination between other Create NSW facilities and the surrounding properties. Do procedures need to be applied to other sites?
- What are the risks to the precinct and how is this transferred to all staff and public within the precinct?
- How many people are within the buildings and the precinct as a whole?
- How staff can assist authorities during the incident and post-event evidence gathering, e.g. CCTV footage and witness statements.

Suspicious package

For any suspicious package located within the precinct, the following needs to be verified/considered:

- How was it discovered? What actions did the finder take?
- Communication of information to staff and visitors.
- Security response, including evacuations and involvement of any emergency services authorities.
- Accounting for all personnel (and visitors) within the precinct.

Direct threats to the precinct

The following needs to be verified/considered:

- Communication of information to staff/other services/agencies.
- Coordination with other Create NSW facilities, whether they need to act simultaneously and the ability to provide support.
- Understand Create NSW's responsibilities.

Other threats

Other threats and considerations include:

- Vehicle driving into pedestrians outside or inside theatres.
- Explosions in the street from a car bomb or other threats.

Coordination with other Walsh Bay facilities

Considerations in response to threats

As the Walsh Bay precinct operate events concurrently, the mass gatherings could be defined as a potential target for terrorists. Therefore, it is important that there be a level of collaboration between the Walsh Bay Arts Precinct, tenants and adjacent facilities to ensure the mutual support for each other and do not conflict or counteract each other, including for evacuation plans, communication, command and control arrangements, resource deployment.

A key consideration is the evacuation sites for each facility so that each facility is not evacuating to the same location or if they are that the evacuation point is appropriately sized

for the number of evacuees anticipated. Other considerations include ensuring that in event of evacuation services or resources are available, e.g. along the evacuation routes and at assembly sites, triage sites are available to treat injuries or death.

Water evacuation

There is the possibility that an attack (on the precinct) could come from the southern end of the wharves from the road. This may mean that the only option for evacuation of staff, tenants and visitors is by water. Evacuation by water evacuation will be initiated by contacting the NSW Police Force Marine Area Command to initiate vessel support for evacuation. With a potential combined capacity of Pier 2/3 and Wharf 4/5 exceeding 4000 people, significant coordination would be required.

Precinct management model

A site assessment of possible risks and the level of coordination required with other Walsh Bay Wharf facilities confirmed that adopting a technologically supported random patrol model managed by a centralised physical security operations centre (PSOC), security services operational centre (SSOC) and failover security operations centre (FSOC) is a viable approach for the precinct. Centralised monitoring, using enhanced technology, supported by guard patrol where required, allows better coordination/situational awareness from a command, control and communication perspective. For major properties in the CBD, this allows for an expedited security response where information can be quickly and efficiently disseminated to precinct occupants and visitors, law enforcement authorities, and other emergency personnel in event of a security incident/terrorist attack.

This approach adopts the Commonwealth/State policing, military and government coordination models with increased technology and centralised command and control centres to maximise deployable staff that enhances situational awareness at the command level. It requires bollards (that rise out of the ground) to be installed at the pedestrian median strip so that vehicles are prevented from mounting kerbs and injuring people at the median strip or within the theatre foyer.

Site overview

Precinct features that affect security management for the site include:

- The buildings are multi-levelled.
- There are performance venues, rehearsal studios and function rooms.
- The main entrance is from Hickson Road.
- Vehicle access is from Hickson Road to the loading docks and back of house facilities.
- Frequent and concurrent performances seven days a week
- Street number and venue names are clearly visible from the street.
- There are large spaces for public attendance.
- Visitors can be left unattended throughout buildings.
- There are a number of internal signs.
- All internal signage, alarms, CCTV and security arrangements are the tenant's responsibility as per the lease agreement.

Access control

The access control arrangement for the precinct will be as follows:

- The public areas are open to the public with timed access controls.

- ID cards will be issued to staff and contractors to access back-of-house areas or tenancies.
- A record of cards distributed is maintained and if not returned they are deactivated so that they cannot gain access to the precinct/building.
- The number of staff may increase up to 6 times in theatres and other areas when performances are held.

Safes and cash handling

The following arrangement will be implemented for the precinct:

- Minimal cash will be held on-site.
- The tenants/event organisers will manage cash for their operations, as appropriate.

Alarm systems

The alarm systems will be managed as follows:

- The buildings area alarmed at external entry points.
- Random on-site security patrols with reliance on mobile alarm response.
- The central command centre for security is based at Waterloo.
- When events are held, there will be minimum one nominated security guard on-site to suit event operations.
- Any security personnel deployed will be provided venue awareness training.

CCTV

The CCTV systems will be managed as follows:

- Fixed CCTV cameras have been installed to provide coverage of external spaces including entry points and the wharf aprons.
- Recorded footage is stored for 30 days.
- CCTV control room and server is located onsite.
- Cameras are monitored by an external security contractor.

Information management and communication

Information dissemination and procedural information will be communicated as follows:

- All staff and building occupants will be inducted and trained on-premise to ensure they are fully aware of all security related procedures, this includes procedures for shows.
- Security responsibilities/roles and procedures will be defined in the precinct evacuation plan.
- Public address (PA) systems are installed in foyer areas so announcements can be made to inform building occupants and visitors.

Bomb threat response

The responses to bomb threats will be as follows:

- Evacuation procedures have been developed by TRIMEVAC for Create NSW.
- Cast and crew will evacuate by the slip dock.
- The general public will evacuate by the main exits.
- The roles and responsibilities for ushers and security personnel will be defined in the evacuation plan.

Fire safety

Fire safety and responses to fire incidents will be as described in **Section 9: Fire safety, emergency management and WHS** of the Operational Plan of Management and the following:

- Fire extinguishers located in appropriate locations.
- Evacuation plans in place.
- Staff will be trained in evacuation procedures and roles are appropriately defined and allocated.
- Staff wardens will be nominated to assist evacuation of performance venues and spaces occupied by members of the public.

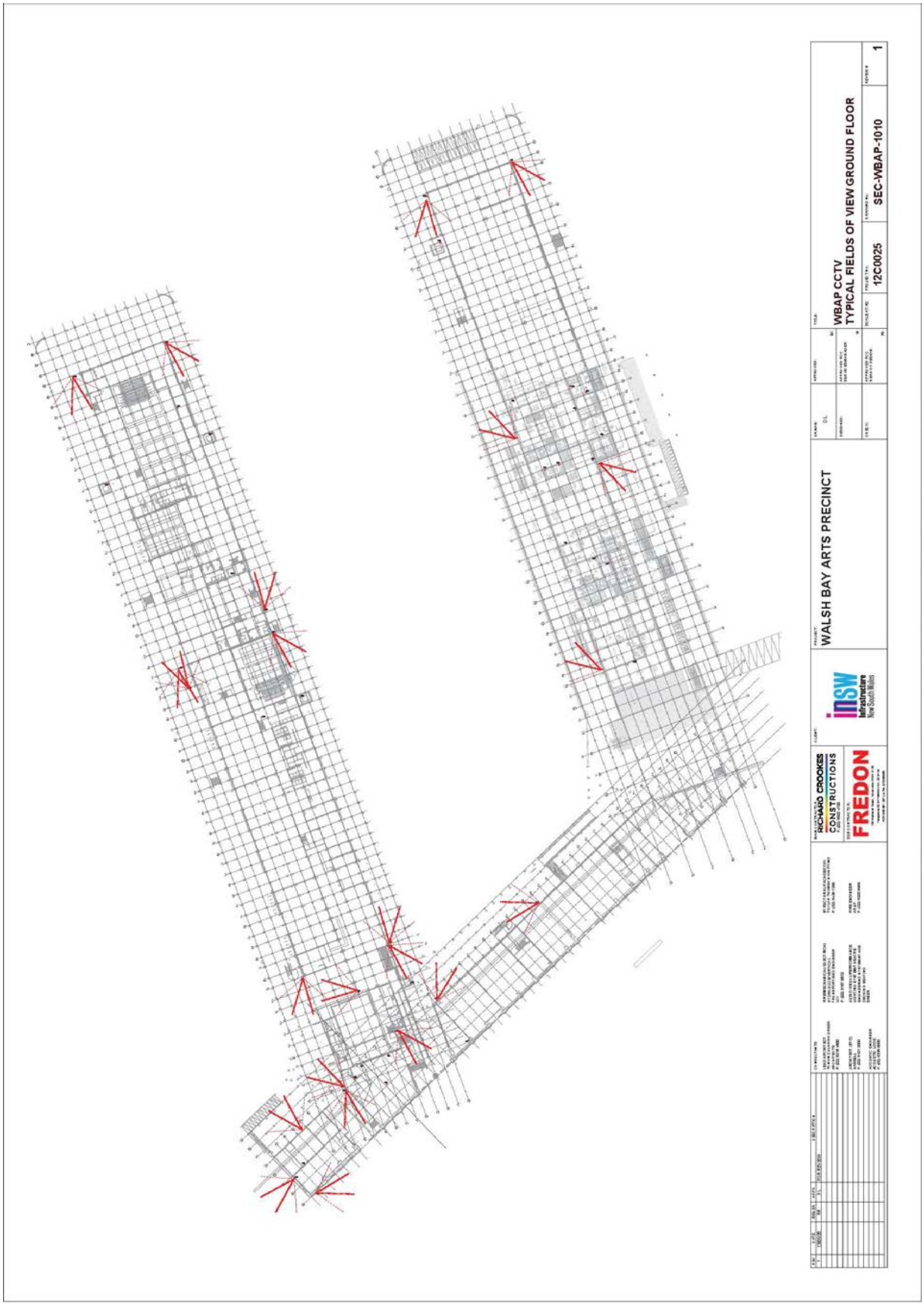
Crowd risk analysis

A risk analysis was conducted for the precinct, looking at the pedestrian access around the buildings, ingress and egress routes and likely densities. The following assessment was determined:

- There is no furniture directly outside the buildings that would impede pedestrian movements.
- The stair widths are suitable for visitors accessing the theatres.
- Evacuation plans are in place in event of an incident requiring evacuation.

Event organisers will be required to address crowd management requirements for the proposed event for the precinct as part of the event management plan requiring the Precinct Manager's approval. Issues that will be addressed in the plan include crowd management techniques and additional security resources demand for the event and how these will be provided.

5 CAMERA LOCATIONS



6 EXTERNAL LIGHTING

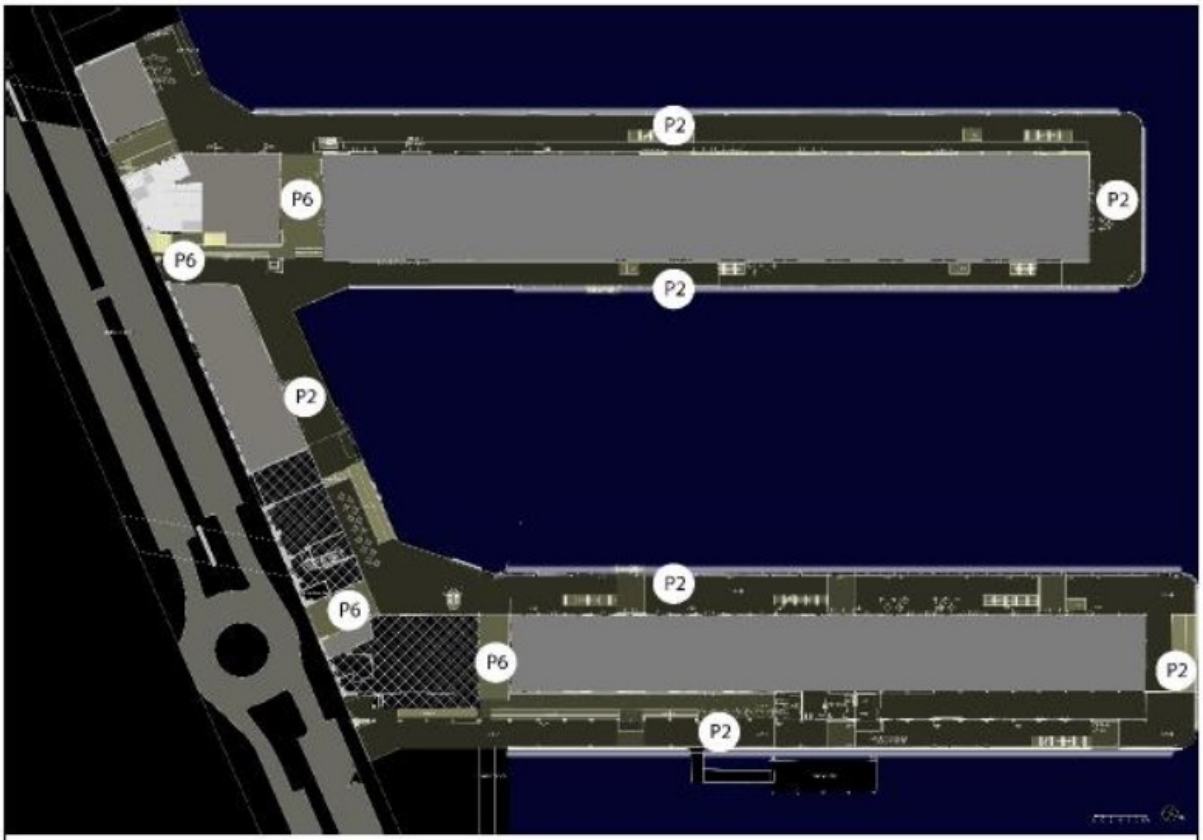
Designed lighting conditions and precinct activities

External lighting has been assessed to comply with levels appropriate for the activities of the precinct. The activities considered, include conditions required for security, general access and comfort for visitors. The following report has been prepared to represent the work undertaken in achieving the designed lighting required.

P Level Criteria

8.2.2 Key Technical design parameters;

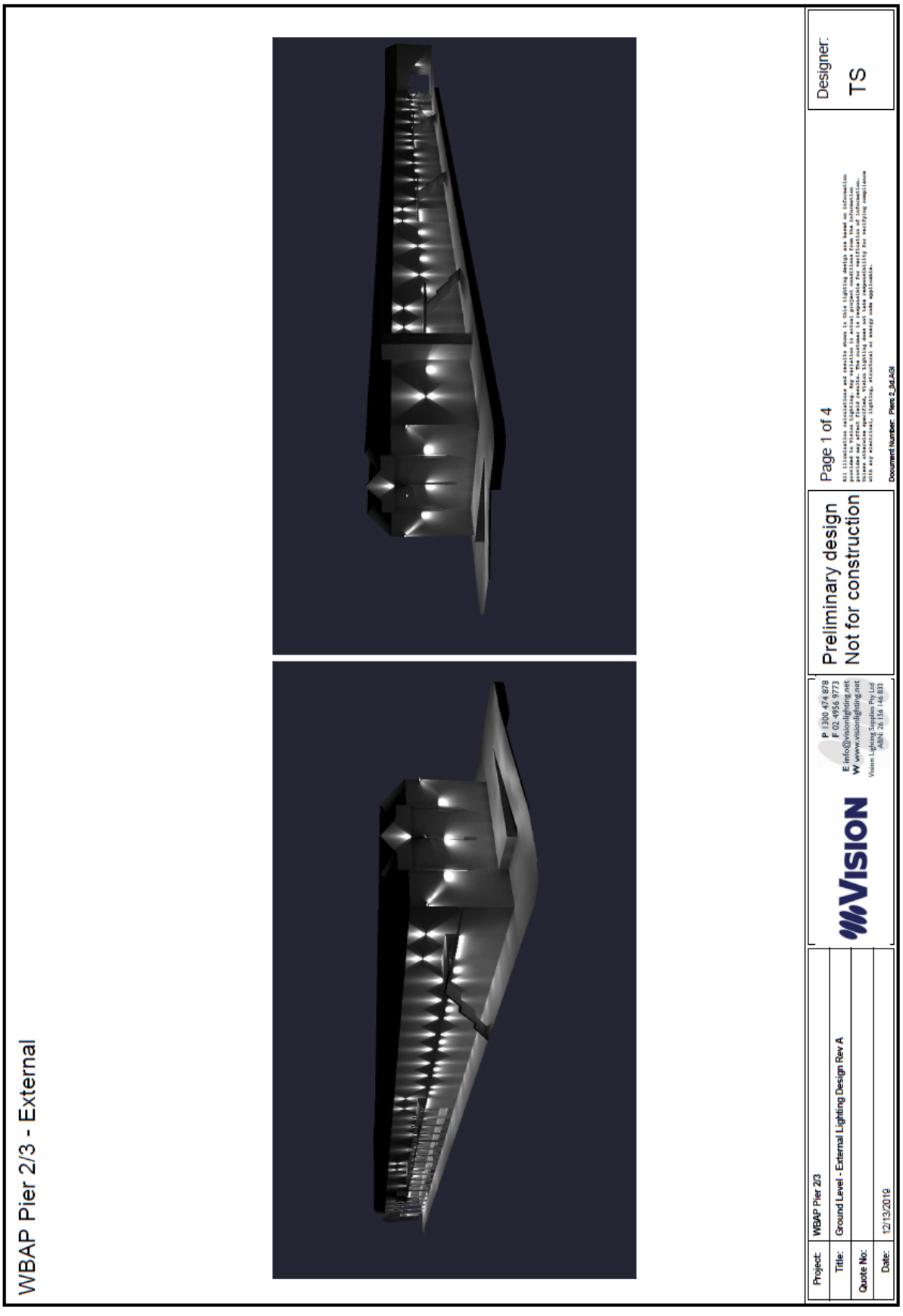
Area location	P category	Required min horizontal lux level	Required min vertical
Covered entry and walkthroughs	P6	21lux	7 lux
Exterior piers and wharfs	P2	3.5 lux	0.7 lux



Exterior P categories

Vision Lighting report

Vision Lighting has prepared the following documents in their assessment and design to achieve the P Levels across the precinct.



Luminaire Schedule

Symbol	Qty	Label	LLF	Description	Tag
	3	VLE66 - 45W 3K 60Degrees (ID	0.700	VLE66-45-3K-60D	WL1
	43	SL5_SL6_VLE88-10W-CRI90 (ID 8	0.700	VLE8810-3K-IP65	SL6
	3	VLE66 - 60W 3K 10×70Degrees	0.700	VLE66-60-3K-EL	WL1b
	6	WL17 40W Up_down (ID 47051)	0.700	WL1740	XL2b
	71	XL2_XL2_B_WL17 20W Down Only	0.700	WL1720A	XL2
	17	XL3_WL17 40W Up_down (ID 4705	0.700	WL1740	XL3
	36	XL4_DL61 - 15W (ID 87373)	0.700	DL61-15W-4K	XL4
	24	XL6 50W (ID 48683)	0.700	FLE95-50	XL6

Calculation Summary

Label	CalcType	Units	Avg	Max	Min	Max/Avg
Colonade	Illuminance	Lux	58.10	132	30	2.27
Ev Pier 2-3 breezeway 1 high S	Illuminance	Lux	N.A.	29.2	15.6	N.A.
Ev Pier 2-3 breezeway 1 low S	Illuminance	Lux	N.A.	52.2	11.8	N.A.
Ev Pier 2-3 breezeway 2 N	Illuminance	Lux	N.A.	16.3	6.5	N.A.
Ev Pier 2-3 breezeway 3 S	Illuminance	Lux	N.A.	107.3	15.8	N.A.
Ev Pier 2-3 breezeway 3 W	Illuminance	Lux	N.A.	76.6	10.5	N.A.
Ev Pier 2-3 Colonnade S	Illuminance	Lux	N.A.	50.6	8.7	N.A.
Ev Pier 2-3 east and north_S	Illuminance	Lux	N.A.	39.4	3.7	N.A.
Ev Pier 2-3 east and north_W	Illuminance	Lux	N.A.	41.3	3.5	N.A.
Ev Pier 2-3 East ramp N	Illuminance	Lux	N.A.	42.7	16.4	N.A.
Ev Pier 2-3 East Stair A-03	Illuminance	Lux	N.A.	18.8	14.4	N.A.
Ev Pier 2-3 north ramp A-01 S	Illuminance	Lux	N.A.	79.3	20.1	N.A.
Ev Pier 2-3 north ramp A-01 W	Illuminance	Lux	N.A.	37.6	2.9	N.A.
Ev Pier 2-3 north ramp E	Illuminance	Lux	N.A.	38.0	7.1	N.A.
Ev Pier 2-3 north ramp S	Illuminance	Lux	N.A.	80	23	N.A.
Ev Pier 2-3 Stair A-01 bwy entry	Illuminance	Lux	N.A.	100	20	N.A.
Ev Pier 2-3 Stair A-01 bwy S	Illuminance	Lux	N.A.	120	13	N.A.
Ev Pier 2-3 Stair A-01 step 4	Illuminance	Lux	N.A.	23.4	20.9	N.A.
Ev Pier 2-3 west and north_S	Illuminance	Lux	N.A.	70.6	1.5	N.A.
Ev Pier 2-3 west and north_W	Illuminance	Lux	N.A.	88.7	1.9	N.A.
Pier 2 3 east_Planar_1	Illuminance	Lux	31.38	65	8	2.07
Pier 2-3 breezeway_1_Top	Illuminance	Lux	66.30	110.6	48.9	1.67
Pier 2-3 Stair A-02 bwy entry	Illuminance	Lux	80.02	292	36	3.65
Pier 2_3 breezeway 1_Planar	Illuminance	Lux	57.82	126.7	18.8	2.19
Pier 2_3 breezeway 2 ramp	Illuminance	Lux	26.20	43.0	13.9	1.64
Pier 2_3 breezeway 3_Top_1	Illuminance	Lux	67.81	159.8	39.8	2.36
Pier 2_3 east entry_Planar	Illuminance	Lux	36.75	115.9	4.4	3.15
Pier 2_3 north ramp_A-01	Illuminance	Lux	45.28	73	24	1.61
Pier 2_3 west and north_Top	Illuminance	Lux	19.77	48	5	2.43
Pier 2_3 west shore sheds_Planar	Illuminance	Lux	17.50	93.1	2.8	5.32
Ramp east side_Top_1_1	Illuminance	Lux	71.61	102	40	1.42
Stair A-02 step 4_Top_1	Illuminance	Lux	42.18	45	38	1.07
Stair A03 - step 3_Top_1	Illuminance	Lux	34.69	44.4	24.8	1.28

Design generally complies with Category P2 and P6 where P6 is within breezeways as required by WBAP_SP_E-01, page 98, Section 8.2.2.

P2:
Eh uniformity max/ave less than or equal to 10
Average maintained Horizontal Illuminance - 3.5 Lux
Min point Horizontal Illuminance - 0.7 Lux
Point Vertical Illuminance - 0.7 Lux

P6:
Eh uniformity max/ave less than or equal to 10
Average maintained Horizontal Illuminance - 21 Lux
Min point Horizontal Illuminance - 7 Lux
Point Vertical Illuminance - 7 Lux
Note that Pier 2/3 breezeway 2 has a minimum value of 6.9 lux Ev at a point.

The ramp at the north end connecting two different pedestrian levels, each level lit to P2, is lit to P9 requirements, in this case P6 as requested (AS/NZS 1158.3.1: 2005, Table 2.8), however, it could be reduced to P8 minimising light spill and reducing bright light directed towards the harbour.
P8 Average maintained Horizontal Illuminance - 7 Lux
Min point Horizontal Illuminance - 2.0 Lux
Point Vertical Illuminance - 2.0 Lux

The colonnade is lit to AS1680 part 0 - safe movement minimum 20 lux at any point on the horizontal at floor level and also achieves P6.

External stairs create some shadowing from the wall mounted luminaires and require a luminaire under landings similar to existing to negate those effects.

All heights are relative to the wharf section with pier 2/3 west taken as zero. There is a change in height with east side being lower than the west side.

Project:	WBAP Pier 2/3
Title:	Ground Level - External Lighting Design Rev A
Quote No:	
Date:	12/13/2019

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Preliminary design
Not for construction

Document Number: Piers 2_3d.AGI

Designer:
TS

TABLE 2.6

VALUES OF LIGHT TECHNICAL PARAMETERS AND PERMISSIBLE LUMINAIRE TYPES FOR ROADS IN LOCAL AREAS AND FOR PATHWAYS

1	2	3	4	5	6
Lighting subcategory	Light technical parameters				Permissible luminaire type (see Table 2.10)
	Average horizontal illuminance[a,b] ($\overline{E}_h$) lux	Point horizontal illuminance[a,b] (E_{Ph}) lux	Illuminance (horizontal) uniformity[c] Cat. P (U_{E2})	Point vertical illuminance[a,b] (E_{Pv}) lux	
P1	7	2	10	2	Type 4 where part of a road reserve or Types 2, 3, 4 or 6 elsewhere
P2	3.5	0.7	10	0.7	
P3[d]	1.75	0.3	10	0.3[d]	
P4[d]	0.85	0.14	10	N/A	
P5[d]	0.5	0.07	10	N/A	

a) These values are maintained.

b) Compliance is achieved by being greater than or equal to the applicable table value.

c) Compliance is achieved by being less than or equal to the applicable table value.

d) The vertical illuminance requirement only applies when subcategory P3 is selected for application to pathways, i.e. it does not apply for local roads.

TABLE 2.7

VALUES OF LIGHT TECHNICAL PARAMETERS AND PERMISSIBLE LUMINAIRE TYPES FOR PUBLIC ACTIVITY AREAS (EXCLUDING CAR PARKS)

1	2	3	4	5	6
Lighting subcategory	Light technical parameters				Permissible luminaire type (see Table 2.10)
	Average horizontal illuminance[a,b] ($\overline{E}_h$) lux	Point horizontal illuminance[a,b] (E_{Ph}) lux	Illuminance (horizontal) uniformity[c] Cat. P (U_{E2})	Point vertical illuminance[a,b] (E_{Pv}) lux	
P6	21	7	10	7	Types 2, 3, 4, 5 or 6
P7	14	4	10	4	
P8	7	2	10	2	

a) These values are maintained.

b) Compliance is achieved by being greater than or equal to the applicable table value.

c) Compliance is achieved by being less than or equal to the applicable value.

Project:	WBAP Pier 2/3
Title:	Ground Level - External Lighting Design Rev A
Quote No:	
Date:	12/13/2019

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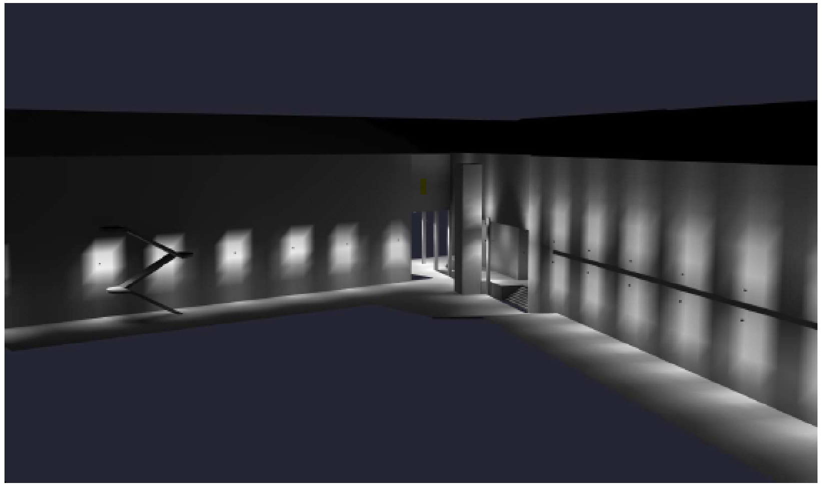
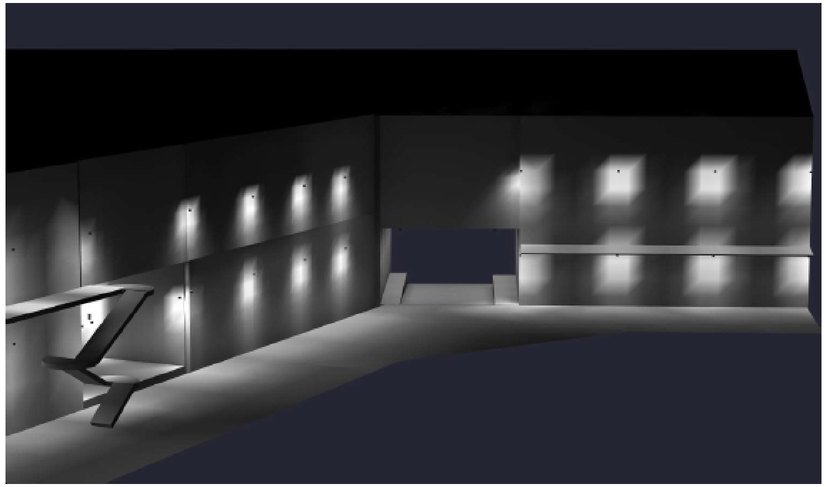
Preliminary design
Not for construction

Document Number: Piers 2_3d.AGI

Designer:
TS

WBAP Shore Sheds - External





Project:	WBAP Shore Sheds
Title:	Ground Level - External Lighting Design
Quote No:	
Date:	12/5/2019

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Preliminary design
Not for construction

Page 1 of 4

All illumination calculations and results shown in this lighting design are based on information provided to Vision Lighting. Any variation in actual project conditions from the information provided may affect field results. The customer is responsible for verification of information. Unless otherwise specified, Vision Lighting does not take responsibility for verifying compliance with any electrical, lighting, structural or energy code applicable.

Document Number: Shore sheds 2.AGI

Designer:
TS

Luminaire Schedule					
Symbol	Qty	Label	LLF	Description	Tag
	97	XL2_XL2_B_WL17 20W Down Only	0.700	WL1720A	XL2
	3	XL3_WL17 40W Up_down (ID 4705	0.700	WL1740	XL3
	33	XL4_DL61 - 15W (ID 87373)	0.700	DL61-15W-4K	XL4

Calculation Summary						
Label	CalcType	Units	Avg	Max	Min	Max/Avg
B-02 Step_4_Top	Illuminance	Lux	22.73	32	15	1.41
B-02 Step_7_Top	Illuminance	Lux	15.73	24	5	1.53
B-20 Step_1_Top	Illuminance	Lux	26.18	56	12	2.14
Breezeway 1 ramp_Top_Top_1	Illuminance	Lux	124.95	185	89	1.48
Breezeway 1 step 1_Top_Top_1	Illuminance	Lux	57.89	82	35	1.42
Breezeway 1 step 4_Top_Top_1	Illuminance	Lux	59.44	86	37	1.45
Breezeway 1 step 7_Top_Top_1	Illuminance	Lux	63.56	96	38	1.51
Breezeway 2 path 1_Top	Illuminance	Lux	35.13	40	29	1.14
Breezeway 2 path 2_Top_Top_1_1	Illuminance	Lux	47.72	149	28	3.12
Breezeway 2 ramp_Top_Top_1	Illuminance	Lux	38.13	60	22	1.57
Breezeway 3_Top	Illuminance	Lux	49.07	185	12	3.77
Eh Shore Sheds b	Illuminance	Lux	19.60	116.8	1.4	5.96
Eh Shore Sheds breezeway 1	Illuminance	Lux	89.95	163	31	1.81
Eh Shore Sheds c	Illuminance	Lux	12.83	80.8	0.7	6.30
Eh Shore Sheds d	Illuminance	Lux	64.08	92	34	N.A.
Ev Breezeway 1 high level	Illuminance	Lux	23.16	71	12	N.A.
Ev Breezeway 1 low level	Illuminance	Lux	27.27	101	5	N.A.
Ev Breezeway 1 ramp	Illuminance	Lux	38.43	76	17	N.A.
Ev Breezeway 2 path 1	Illuminance	Lux	13.46	17	9	N.A.
Ev Breezeway 2 ramp	Illuminance	Lux	12.29	18	7	N.A.
Ev Breezeway 2 ramp_293deg	Illuminance	Lux	13.35	22	7	N.A.
Ev Breezeway 3	Illuminance	Lux	14.85	57	6	N.A.
Ev Breezeway 3 B-20 step 4	Illuminance	Lux	6.00	8	4	N.A.
Ev Breezeway 3 meter S	Illuminance	Lux	17.03	86	6	N.A.
Ev ShoreSheds area B_203deg SE	Illuminance	Lux	12.81	79	4	N.A.
Ev ShoreSheds area B_293deg NE	Illuminance	Lux	8.10	35	3	N.A.
Ev ShoreSheds area C_113deg SW	Illuminance	Lux	6.22	33	2	N.A.
Ev ShoreSheds area C_203deg SE	Illuminance	Lux	9.29	38	2	N.A.

Design generally complies with Category P2 and P6 where P6 is within breezeways as required by WBAP_SP_E-01, page 98, Section 8.2.2.

P2:
Eh uniformity max/ave less than or equal to 10
Average maintained Horizontal Illuminance - 3.5 Lux
Min point Horizontal Illuminance - 0.7 Lux
Point Vertical Illuminance - 0.7 Lux

P6:
Eh uniformity max/ave less than or equal to 10
Average maintained Horizontal Illuminance - 21 Lux
Min point Horizontal Illuminance - 7 Lux
Point Vertical Illuminance - 7 Lux

The steps (B-02) in breezeway 3 are transition from P6 to P2.

The stairs create some shadowing from the wall mounted luminaires and require a luminaire under landings similar to existing to negate those effects.

All heights are relative to the wharf section between 4/5 and pier 2/3 as there is a change in height between 4/5 and 2/3.

Project:	WBAP Shore Sheds
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Quote No:	
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Preliminary design
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Document Number: Shore sheds 2.AGI

Designer:
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TABLE 2.6

VALUES OF LIGHT TECHNICAL PARAMETERS AND PERMISSIBLE LUMINAIRE TYPES FOR ROADS IN LOCAL AREAS AND FOR PATHWAYS

1	2	3	4	5	6
Lighting subcategory	Light technical parameters				Permissible luminaire type (see Table 2.10)
	Average horizontal illuminance[a,b] ($\overline{E}_h$) lux	Point horizontal illuminance[a,b] (E_{Ph}) lux	Illuminance (horizontal) uniformity[c] Cat. P (U_{E2})	Point vertical illuminance[a,b] (E_{Pv}) lux	
P1	7	2	10	2	Type 4 where part of a road reserve or Types 2, 3, 4 or 6 elsewhere
P2	3.5	0.7	10	0.7	
P3[e]	1.75	0.3	10	0.3[d]	
P4[e]	0.85	0.14	10	N/A	
P5[e]	0.5	0.07	10	N/A	

a) These values are maintained.

b) Compliance is achieved by being greater than or equal to the applicable table value.

c) Compliance is achieved by being less than or equal to the applicable table value.

d) The vertical illuminance requirement only applies when subcategory P3 is selected for application to pathways, i.e. it does not apply for local roads.

TABLE 2.7

VALUES OF LIGHT TECHNICAL PARAMETERS AND PERMISSIBLE LUMINAIRE TYPES FOR PUBLIC ACTIVITY AREAS (EXCLUDING CAR PARKS)

1	2	3	4	5	6
Lighting subcategory	Light technical parameters				Permissible luminaire type (see Table 2.10)
	Average horizontal illuminance[a,b] ($\overline{E}_h$) lux	Point horizontal illuminance[a,b] (E_{Ph}) lux	Illuminance (horizontal) uniformity[c] Cat. P (U_{E2})	Point vertical illuminance[a,b] (E_{Pv}) lux	
P6	21	7	10	7	Types 2, 3, 4, 5 or 6
P7	14	4	10	4	
P8	7	2	10	2	

a) These values are maintained.

b) Compliance is achieved by being greater than or equal to the applicable table value.

c) Compliance is achieved by being less than or equal to the applicable value.

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