



Safety in Design Review

Pride Centre
79-81 Fitzroy Street, St Kilda

Client: City of Port Phillip

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Rev.: 2

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Revision History

Date	Rev. No.	No. of Pages	Issue or Description	Checked By	Approved By	Date Approved
02/08/18	1	11	Safety in Design review	S Branca	-	02/08/18
13/08/18	2	15	Inclusion of additional crime data	S Branca	-	13/08/18

Executive Summary

The City of Port Phillip has engaged Salus Risk Consulting to review the design for the proposed Pride Centre. The design is proceeding in accordance with the obligations of section 28 of the Victorian OH&S Act 2004.

This report forms part of the compliance with Section 28 of the *Victorian Occupational Health & Safety Act 2004*. Reference is also made to the Victorian Work Safe publication *Designing Safer Buildings and Structures, 1st Edition, December 2005*.

It is clear that a key OH&S principle that needs to be addressed is *Crime Prevention through Environmental Design* (CPTED). This is used to identify and minimise the opportunity for criminal activities by using preventative design measures. CPTED uses the behaviour of people, knowledge of crime generators, the local physical environment and the management of an area to improve the safety for users of the facilities and the local community.

1. Introduction

This report has been prepared specifically in support of Proposed Amendment C149, as requested by City of Port Phillip officers. It takes into account the particular characteristics of the site, the proposed use, and social factors that apply in this area.

The Pride Centre is a new multi-purpose facility to support the LGBTI community. After demolition of existing buildings a five-level building will be constructed at 79-81 Fitzroy Street, St Kilda.

Salus Risk Consulting undertook a site inspection on 16 July 2018. After site inspection and review of the design drawings and renders, CPTED issues were identified that given certain controls, will provide limited opportunity for criminal activities.

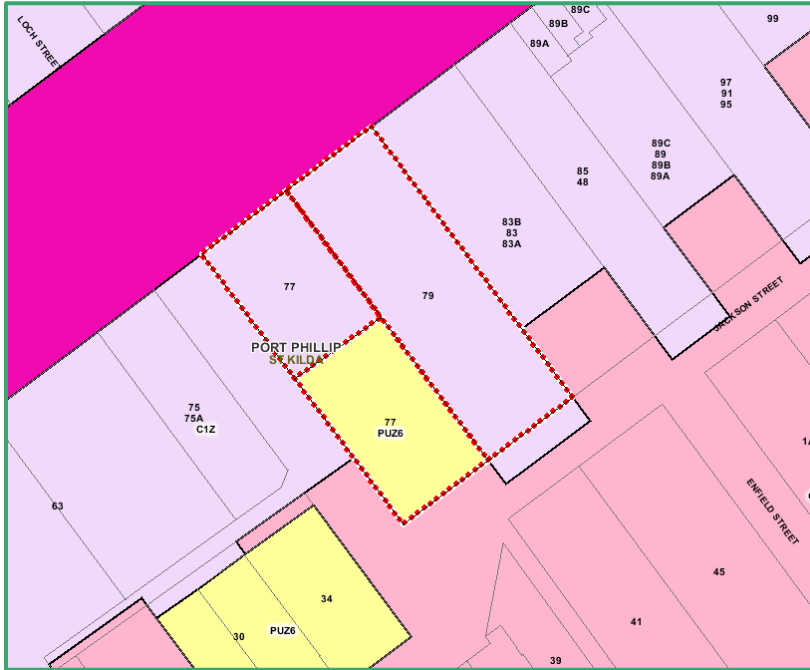
The site context is an area of diverse uses. Jackson Street is largely residential to the south, and along Fitzroy Street itself commercial retail dominates. There are a few licenced premises nearby that would trade until late night hours along Fitzroy Street. The Pride Centre itself will host late-night functions on an occasional basis.

Any proposal of this nature must consider the context of the area. St Kilda is well-known as a busy, vibrant and desirable destination for Victorians and tourists. City of Port Phillip crime statistics, however, indicate that there are significant problems in the area that affect the design and use of such a proposal.

Offence type is dominated by theft. There is also a significant occurrence of homelessness in the area, and prevention of use of the building for sleeping is considered in the building design.

Crime rates per 100 000: Port Phillip and neighbouring LGAs, year to March 2018

Local Government area	Crime against the person	Theft	Overall offence rate
Port Phillip	1415	4454	11140
Stonnington	940	3608	10179
Bayside	596	1670	4566



2. Statutory Requirements

It is the responsibility of people involved in the design of a structure to comply with the Victorian Occupational Health and Safety Act 2004.

The Victorian OH&S Act 2004 obliges all designers to ensure, so far as is reasonably practicable, that the plant, substance or structure is designed to be without risks to the health and safety of persons who, at the workplace, use the plant, substance or structure for a purpose for which it was designed. This obligation includes protection for those who manufacture, store, handle or dispose of substances or plant and people who are at or in the vicinity of a workplace and are exposed to the substance or plant or whose health or safety may be affected by a use or activity related to the substance or plant. The designer must also ensure that the design allows for the safe construction of the structure.

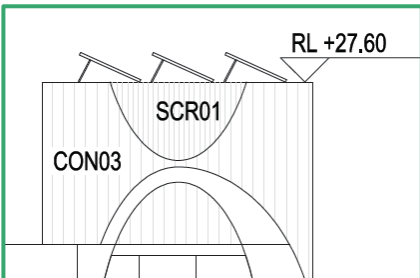
The OH&S Act 2004 also obliges designers to carry out or arrange the carrying out of, any calculations, analysis, testing or examination that may be necessary for the performance of the imposed duty; and give adequate information to each person who is provided with the design for the purpose of giving effect to it concerning each purpose for which the substance is being used and any conditions necessary to ensure that the plant, substance or structure is without risks to health and safety when used for a purpose for which it was designed.

The designer must, upon request, give current relevant information to a person who carries out, or is to carry out, any of the activities at the workplace including use of the plant, substance or structure for the purpose for which it was designed, handling of a substance, storage of the plant or substance, or any reasonably foreseeable activity in relation to the manufacture or assembly of plant, the manufacture or use of substances, and the manufacture, assembly or use of structures.

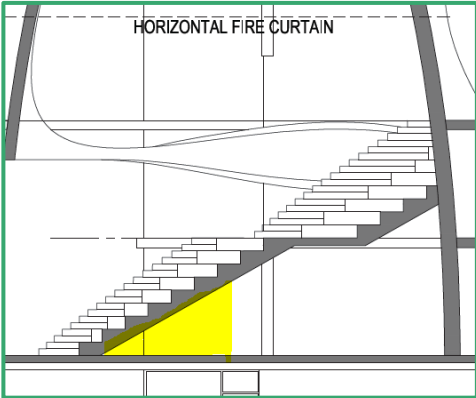
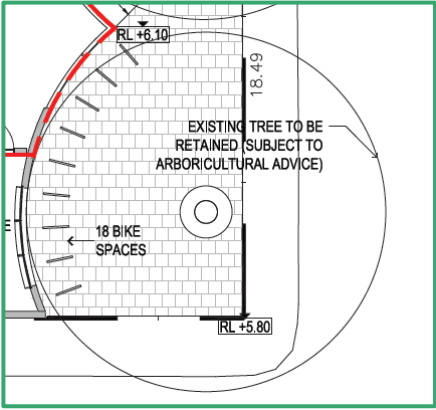
For instance, information related to the design must be provided to allow for the safe inspection, operation, cleaning, maintenance or repair of plant.

3. OH&S Review

The below lists potential OH&S considerations to enable treatment of such items thoroughly and effectively by the design team. Review comments also include options that may be considered as the design progresses, to ensure that the finished design meets the requirements of the OH&S Act.

Issue / Hazard	Reference	Recommendations Review Comments
Roof access (1)	AS 1657 Drawing A105	<p>Steep sections of roof are not trafficable; consider a fall restraint system and/or ladder brackets.</p> <p>There appear to be no items on steep sections of roof that require regular maintenance or access.</p> <p>PV (photovoltaic) solar panels will be included.</p> 
Roof Access (2)	AS 1657	<p>The detailed design is still under review. The ability to abseil on surfaces to clean them should be considered.</p> <p>Provide a safe system of access to the roof. Ensure that ladders and equipment for access at height conform to AS 1657.</p> <p>It is recommended that fall protection be provided for workers on roofs. One possible method would be to provide harness anchor bolts located 2 m in from edges of the roofs where there could be a fall of greater than 3 m.</p> <p>A proprietary system may be selected when the roof design is confirmed.</p>

Issue / Hazard	Reference	Recommendations
Access at height		<p>Review Comments</p> <p>Light fittings and other items at height need to be accessed for maintenance. Inside, consider access from a scissor lift, or mount light fittings low enough that they may be accessed by ladder (≤ 3 metres). Outside, if light fittings or other items are high mounted, ensure there is a clear, flat area below to facilitate access.</p> <p>For lights in high areas, e.g. above voids, ensure that there is safe access available – for example, using assisted lifts such as scissor lifts with rubber wheels (or similar).</p>
Cleaning / Hygiene		<p>Provide cleaner's cupboard/room with trough.</p> <p>TBC – adequate space exists for this in the Waste area in the basement car park.</p>
Kitchens: Ergonomics		<p>Kitchen bench heights and depths for the kitchen users are to provide for the variety of shapes and sizes of people working in the kitchen (e.g. cut-outs in the benches to minimise stretching across to serve customers, height adjustable sections of work benches, etc.).</p> <p>It is intended that DDA-compliant facilities are provided in this building.</p>
Kitchens: Head Strike		<p>Design range hoods & other low items (e.g. sprinkler heads) to reduce head strike, i.e. keep them out of paths of travel.</p> <p>No need to install range hoods – normal ventilation and specific exhaust fans to be included.</p>

Issue / Hazard	Reference	Recommendations Review Comments
Head Strike	Drawing A401 Section	<p>Where stair structure or stringers cross paths of travel - as in the example highlighted at left - consider adding a bulkhead or planter box to prevent persons hitting their heads on the underside.</p> <p>This may apply to raking columns or other angled structure if included.</p>  <p>This can be addressed satisfactorily in detailed design and/or in the fitout of the building, e.g. in design and installation of joinery.</p>
Injury on Structure: Exterior	Near "Project East" Drawing A100	<p>Avoid sharp corners in the design, e.g. acute-angled walls or handrails, which persons could bump into when crowding. Where pathways and handrails intersect, give corners a chamfer or radius where appropriate. This may be particularly relevant with some of the acute angles (e.g. of garden beds) being adjacent to public spaces (such as the Jackson Street public realm).</p> 
Injury on Structure: Interior (Joinery or Walls)		<p>As with the above item, consider areas where there are acute angles in stud walls, windows or joinery. Again, chamfering or changing the corner profile are options to reduce this risk.</p>

Issue / Hazard	Reference	Recommendations Review Comments
Injury due to broken fittings	Handbooks HB197, HB198 (Standards Australia)	Light fixtures are recommended to have protective covers and be vandal resistant. In some cases, cages may be used to avoid diffusers gradually filling with dust/insects.
Slip	HB197, HB198 (Standards Australia)	Use a slip-resistant floor material (not highly polished surface). If carpet is used, choose a pattern that does not cause vertigo or alter depth perception. Carpet should be short pile to reduce the chance of tripping.
Slip	HB197, HB198 (Standards Australia)	For wet areas, it is recommended that floors are sealed, non-slip with minimum of penetrations and covered edges. Slip resistance of the flooring should comply with AS3661.2.
Trip Hazard		The location and number of power outlets should be designed to eliminate the use of power boards, data cables and extension leads wherever possible. Dedicated charging stations may help to reduce this risk. This will partly be addressed by electrical design, which will ensure compliance with relevant codes.
Vehicle drop-off and pick-up		A safe area to drop off and pick up groups may need to be considered, especially for buses as there is no on-site vehicle access. This will need to account for the arrival and departure of large vehicles such as buses. While “heavy rigid” coaches may not be able to access Jackson Street directly, they could achieve safe drop-off at a nearby location, with no need for visitors/users to cross a busy road.
Ventilation	AS 1668.2	Outdoor air exchange rates should be sufficient to ensure comfort for users and reduce the opportunity for mildew growth and prevent excessive condensation of moisture on walls, mirrors and other articles. Air should vent directly to outside the building and not be recirculated into any other parts of the building or other buildings. The ventilation should comply with AS1668.2. Ventilation design will be as per the requirements of the Mechanical Engineer.

4. Methodology

The Code of Practice for *Safe Design of Structures* issued by Safework Australia, July 2012 is applied as the basis for hazard identification and risk control. The Code identifies the use of a risk management

approach as *a systematic way of making a workplace as safe as possible* and it should be used as part of the design process.

The risk management process is undertaken in accordance with the design framework of AS/NZS 31000-2009 Risk Management – Principles and guidelines. It is intended for a broad stakeholder group and the Safety in Design process makes use of the relevant risk assessment parts of this Standard.

Hazards are identified for the design as it progresses through the design phases with strategies to mitigate these risks developed and agreed by the design team. Risk mitigation strategies are considered in terms of their role as determined using the hierarchy of risk controls – see section below for a description of this hierarchy.

Risk Matrix

			Probability				
			A	B	C	D	E
			Almost Certain	Likely	Possible	Unlikely	Rare
			Possibility of Repeated Incidents	Possibility of isolated incidents	Possibility of occurring sometime	Not likely to occur	Practically impossible
Consequences	1	Catastrophic	Extreme	Extreme	Extreme	High	High
	2	Major	Extreme	Extreme	High	High	Medium
	3	Moderate	Extreme	High	Medium	Medium	Medium
	4	Minor	High	Medium	Medium	Low	Low
	5	Negligible	Medium	Low	Low	Low	Low

	Health & Safety	Assets	Reputation	Financial	Environmental
Catastrophic	Many Fatalities	\$10 Million	International Media	Corporate	Large Community
Major	Single Fatality	\$1 Million	National Media	Region / Affiliate	Small Community
Moderate	Many Injuries	\$100 thousand	Local Media	Division / Site	Minor
Minor	Single Injury	\$10 thousand	Some Media	Other	Minimal to None
Negligible	LTI	\$1 thousand	No Media	Negligible	None

Hierarchy of Risk Controls

Consideration is given to the risks identified and implementing the highest level of control in a set hierarchy of controls, which are: -

- Eliminate the hazard
- Substitute or isolate the hazard

- Implement an engineered solution

The above 3 controls are the proactive, preventive controls to manage hazards. The next 2 controls are the weakest in the hierarchy, only to be used when the 3 controls above are found to be not reasonably practicable

- Implement an administrative solution
- Provide personal protective equipment (PPE)

Depending upon the level of risk for each hazard the Standards make recommendations for the most appropriate method for mitigation of the risk. There will be occasions where local conditions or usages could work against the implementation of these recommendations. Under such conditions alternative solutions may be implemented so long as it can be demonstrated that these solutions provide at least an equivalent level of safety.

What is Reasonably Practicable

In the Victorian OH&S Act, *reasonably practicable*, in relation to a duty to ensure health and safety, means that which is, or was at a particular time, reasonably able to be done in relation to ensuring health and safety, taking into account and weighing up all relevant matters including:

- (a) the likelihood of the hazard or the risk concerned occurring; and
- (b) the degree of harm that might result from the hazard or the risk; and
- (c) what the person concerned knows, or ought reasonably to know, about:
 - (i) the hazard or the risk; and
 - (ii) ways of eliminating or minimising the risk; and
- (d) the availability and suitability of ways to eliminate or minimise the risk; and
- (e) after assessing the extent of the risk and the available ways of eliminating or minimising the risk, the cost associated with available ways of eliminating or minimising the risk, including whether the cost is grossly disproportionate to the risk.

5. CPTED review

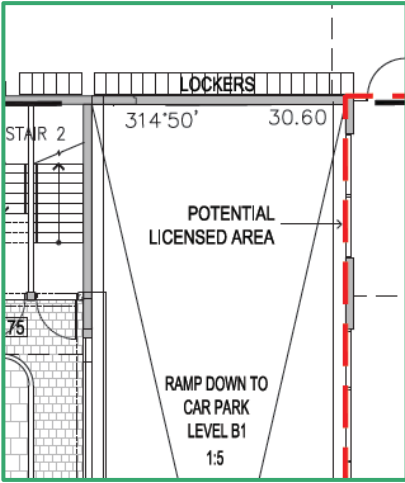
Certain locations and facilities are identified as crime “hot spots” that can impact upon a nearby development. These can include areas of high car theft such as underground car parks; sites of pickpocketing such as bus terminals; or specific pubs experiencing fights at closing time. Consideration must be given to the proximity of such locations and how to provide for public safety at the proposed development.

The City of Port Phillip is aware that busier parts of St Kilda including Fitzroy Street are areas of increased likelihood of crime, as noted in the Introduction. In this context, particular attention is paid to the Pride Centre to introduce controls where necessary. This necessitates CPTED analysis, and the associated recommendations in the below table.

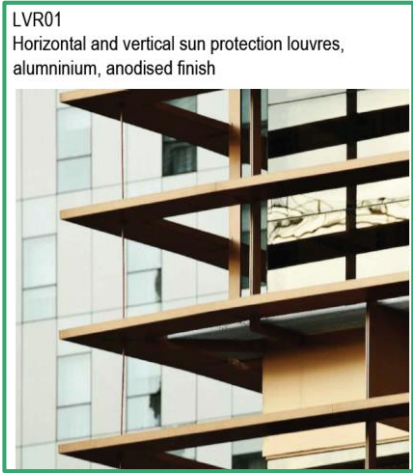
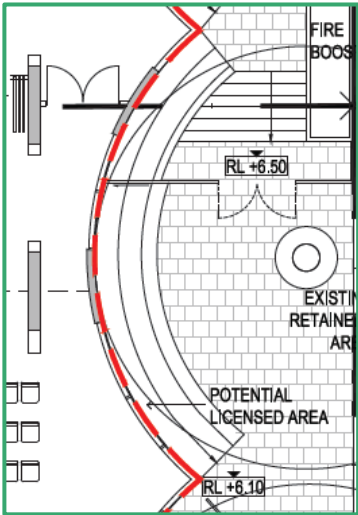
Key concepts of CPTED include:

Lighting	Natural Surveillance and Sightlines
Clear Ownership of Space	Entrapment Locations
Building Design	Land Use Mix / Activities
Safe Routes	Signage
Movement Predictors	Escape Routes
Landscaping	Management and Maintenance
Encouraging Use of Space & Facilities	


Issue / Hazard	Reference	Recommendations Review Comments
Portico – Climbing hazard		<p>Canopies and porticos can provide climbing opportunities. This can create two main hazards:</p> <ul style="list-style-type: none"> (1) compromise the security of the building by allowing climbers to enter another floor (2) fall risk from the portico or associated canopy. <p>The portico will not afford climbing. The cast in-situ concrete faces will not provide climbing points.</p>
Portico – Line of Sight		<p>Sight lines could be interrupted, affording hiding places.</p> <p>The portico will not be planted with dense creeper or other vegetation that would provide hiding places. There are no “inside corners” that could provide hiding places. Gaps between the portico elements are visible from at least two sides, such as from motor traffic and tram traffic on the roadway, and from the footpath itself.</p>

Issue / Hazard	Reference	Recommendations Review Comments
Ramp Access	A100	<p>The ramp vehicle access to Jackson Street could be a vulnerable location.</p> <p>The first and most robust option is to provide a gate and fence to prevent unauthorised access. For example a palisade-style design cannot be climbed.</p> <p>Further deterrence can be achieved by the creation of clear sightlines, effective lighting and landscaping that makes places attractive, but does not provide offenders with a place to hide or entrap victims.</p>  <p>Management is to ensure that space is appropriately utilised and well cared for. Glazing and lighting, both to the east and west of the ramp, could give a greater impression of surveillance, thereby deterring potential crime. Putting the lighting on a motion sensor may assist.</p>
Lighting	A100	<p>The perimeter on the Jackson Street facades should be well-lit with vandal resistant lighting. Automatic motion-sensor lighting will assist in reducing crime if it tends to actuate as a person approaches a secluded area.</p> <p>Lighting should not be so bright as to:-</p> <ul style="list-style-type: none"> • prevent users from observing people approaching from the dark. • Cause nuisance to neighbouring residential properties compared to existing conditions. <p>This outcome can easily be achieved in conjunction with lighting (and/or electrical) consultant.</p>

Issue / Hazard	Reference	Recommendations Review Comments
Seating	Drawing A100	<p>Seating should be designed to be adequate for short-term use only and should not be so comfortable as to encourage long-term occupation and sleeping.</p> <p>Seats and associated street furniture should be located with unobstructed sightlines to the footpath, street and any nearby buildings. Along the seating area there should be enough space for a mobility impaired person (e.g. wheelchair user) or with a child's pram to wait comfortably, undercover if possible.</p>
Climbing (1)	Finishes Schedule A600	<p>Façade design can encourage break-ins if climbing is possible. Indicative louvre design below.</p>



These louvres will not continue to within 3 metres of the ground level, so climbing aid is negligible.

Issue / Hazard	Reference	Recommendations Review Comments
Climbing (2)	A100; A501; Amendment C149 part 5.0	<p>Vegetation can facilitate climbing and may therefore enable risky behaviour and/or break-ins.</p>  <p>These trees will be trimmed in accordance with arboricultural advice.</p> <p>Low level landscaping (below a height of 0.5 m) may be appropriate adjacent to the Pride Centre; space is limited and therefore it will not be a significant risk.</p>

6. References

- Proposed Amendment C149, City of Port Phillip.
- Crime Statistics – Port Phillip, Bayside, and Stonnington LGAs – extracted from the Victorian Crime Statistics Agency available at <https://www.crimestatistics.vic.gov.au/>
- Crime Prevention Through Environmental Design, Guidelines for Queensland, Part A: Essential features of safer places, 2007.
- CPTED Guidelines, Kempsey Shire Council, 2008
- Morell J - <http://hercanberra.com.au/cpnews/crime-rates-in-canberra/>
- ABS 1345.4 – SA Stats, Nov 2009, Feature Article: Crime and Safety

