

CHARLESTOWN LEISURE CENTRE - AQUATIC REDEVELOPMENT
SAFETY RISK MATRIX

Rev: A

Date: OCT 2015

File Ref: 33-00107/Z12

PEDDLE THORP

Risk Assessment Matrix					
Likelihood Rating	Consequence Rating				
	Very High	High	Medium	Low	Very Low
Very High	Very High	Very High	High	Medium	Medium
High	Very High	High	High	Medium	Low
Medium	High	High	Medium	Medium	Low
Low	High	Medium	Medium	Low	Low
Very Low	Medium	Medium	Low	Low	Very Low

Risk Assessment Definitions					
Likelihood					
Classification	Very High	High	Medium	Low	Very Low
	Is expected to occur in most circumstances	Greater than 50% chance it will occur in most circumstances	Could occur at some stage	Is not expected in most circumstances	May only occur in exceptional circumstances
Consequence					
Classification	Very High	High	Medium	Low	Very Low
Schedule	Significant impact on the overall objectives of the project.	Potential major exposure to impact on the overall objectives of the project.	Moderate exposure to impact on the objectives of the project.	Minor exposure to impact on the overall objectives of the project.	Minimal exposure to impact on the overall objectives of the project.
Scope	Significant impact on the overall scope of the project due to very high uncertainty in requirements or scope.	Potential major impact on the overall scope of the project due to high uncertainty in requirements or scope.	Moderate impact on the overall scope of the project due to medium uncertainty in requirements or scope.	Minor impact on the overall scope of the project due to low uncertainty in requirements or scope.	
Budget		Event would cause an increase on the budget	Event would cause an increase on the budget	Event would cause an increase on the budget	Event would cause an increase on the budget.
Occupational Health and Safety	One or more fatalities or life threatening injuries or illness.	One or more major injuries or illness requiring major surgery or resulting in permanent disablement.	On or more injuries or illness requiring treatment by a physician or hospitalisation.	One or more injuries or illness requiring treatment by a qualified first aid person.	Minor injuries or ailment that does NOT require medical treatment by a qualified first aid person.
Legislative Compliance	Potential exposure to significant damage involving on or more persons, and/or prosecution with maximum penalty imposed.	Potential exposure to large damage or awards and/or prosecution with 50% to maximum penalty imposed.	Some legal constraints imposed with up to half of maximum fine imposed or Non compliance with Victorian Police Policy.	Minor technical legal challenge or legal breach and/or minor damage or monetary penalty.	Minor technical breach but no damage and/or no monetary penalty.
Environment and Heritage	Irreversible and extensive damage is caused.	Irreversible and extensive damage is caused requiring referral to Environmental Manager.	Moderate negative effect on staff morale, affecting less than half the staff associated with the structure, with some loss of productivity.	Minor damage to the environment that is immediately contained on-site requiring referral to Project manager.	Negligible damage that is contained on-site.
Personnel	Serious negative effect on staff morale affecting all staff associated with the structure with significant loss of productivity.	Major negative effect on staff morale, affecting more than half associated with the structure with major loss of productivity.	Moderate negative effect on staff morale, affecting less than half associated with the structure with major loss of productivity.	Minimal affect on staff morale, affecting a small number (<25%) of staff associated with the structure with possible minor productivity loss.	Little or no impact on personnel in any area.
Reputation	Ministerial / National / State Media coverage.	Sustained detrimental national or state media reports.	Limited detrimental national or state media reports.	High profile detrimental local media reports.	Low profile detrimental local media reports.
Capability	Normal operations ceases to continue.	Normal operations cannot continue until the issue is resolved.	Normal operations continues at less than optimum levels.	Normal operations continue but are affected.	No impact on normal operations.

Item No.	Description of Risk		Raw Risk			Before Mitigation		Revised Risk Score		After Mitigation	Entity Responsible
			Type	Likelihood	Consequence			Likelihood	Consequence		
		Consequence	Type	Likelihood	Consequence	Mitigation	Mitigation Response to this Risk	Likelihood	Consequence		
A	Maintenance / Cleaning										
A1	Access to roof for plant /roof maintenance	Falling from height causing serious injury/fatality	OHS	M	VH	High	Consultant with Safya Roof Access Systems and adopt recommendation into Design documentation. Correct training and procedures to be a implemented.	VL	VH	Medium	LMCC/PTA/FDG
A2	Cleaning and maintenance of façade	Falling from height causing serious injury/death	OHS	M	VH	High	All areas can be maintenance from scissor lift unit. Correct training and procedures to be a implemented.	VL	VH	Medium	LMCC/PTA/FDG
A3	Tripping and slipping hazards	Falling causing serious injury	OHS	M	M	Medium	Selection of flooring finishes with regards correct slip resistance levels Develop appropriate cleaning and maintenance procedures for all floor coverings.	L	M	Medium	LMCC/PTA/FDG
A4	Maintenance of internal ceiling mounted services including lighting	Falling from height causing serious injury.	OHS	M	H	High	Where access via the ceiling is essential (for example maintenance of fire dampers, smoke detectors) LMCC will provide for use of a scissor lift/platforms. Specification of long life globes to increase replacement periods	L	H	Medium	LMCC/PTA/FDG
A5	Equipment replacement and installation	Injury caused by inadequate access/lifting provisions	OHS	M	M	Medium	Where access is required to service dampers etc platform lifts will be provided	L	M	Medium	PTA/FDG
A6	Maintenance of external lighting	Falling from height causing serious injury/fatality	OHS	M	VH	High	All areas can be maintenance from scissor lift unit Specification of long life globes to increase replacement periods. Correct training and procedures to be a implemented.	VL	VH	Medium	LMCC/PTA/FDG
A7	Maintenance of essential services during Construction	Risk of personnel injury/fatality during life threatening event	Scope	M	VH	High	Design documentation to cover maintenance of Existing Services as part of Contract. Interim Fire evacuation procedures to be developed	L	VH	Medium	PTA/FDG
B	Building User Safety										
B1	Door Swings	Injury caused by inappropriate location of door/swing	OHS	M	L	Low	Ongoing review of public zones, reduce number of doors where possible, or, sliding doors. Provide vision panels where appropriate. Commission B4Croup DDA report to review door swings and adopted recommendations into design.	L	L	Very Low	PTA/FDG/B4C
B2	Hot Water (scalding)	Sever burns potentially requiring Hospitalisation	OHS	L	M	Medium	Tempered water controlled through mixing valves	VL	M	Very Low	PTA/FDG/BC
B3	DDA compliance issues	Not achieved or onerous requirements	Scope	M	H	Medium	Commission B4Croup DDA compliance report and adopted recommendations into design.	L	H	Very Low	PTA/FDG/LMCC
B4	Personnel exposed to Live Electrical sources	Potential Electrocution	OHS	M	VH	High	Electrical services shall all be designed and documented to code which will negate this risk	VL	VH	Medium	PTA/FDG
B5	Injury caused by incorrect use of Domestic Dishwashers	Potential back type injury requiring medical attention	OHS	L	L	Low	Correct staff training	VL	L	Very Low	LMCC
B6	Security - Personnel safety	Risk of physical assault to Staff/Public	OHS	M	H	High	Provision of adequate lighting and security cameras to external areas elimination of potential hiding areas. Staff training, adequate lighting and camera coverage.	L	H	Medium	ALL
B7	Risk of Fire	Potential injuries /Fatalities	OHS	L	VH	High	Rectify non-conforming fire hazards, equipment and detection, signage and egress design to be in accordance with latest codes.	VL	VH	Medium	ALL

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B8	Exposure to gas	Potential injuries /Fatalities	OHS	L	VH	High	All gas installation to be installed to code by registered gas fitter	VL	VH	Medium	PTA/FDG/BC
B9	Workstation Ergonomics	Potential RSI type injury	OHS	M	L	Low	Design and selection of workstations to be developed in conjunction with client requirements to be ergonomically compliant	L	L	Very Low	LMCC/PTA/FDG
B10	Lighting design levels for work Environments	Inadequate working environment leading to inefficiencies, and medical issues	OHS	M	M	Medium	Lighting design shall be designed and documented to comply with BCA	L	M	Medium	
B11	Presence of Asbestos	Potential hazard to staff/public and site workers	Scope	M	H	High	Asbestos audit to be carried out to identify all present asbestos risk.	VL	H	Medium	LMCC/PTA/FDG
B12	Presence of inground contaminants	Potential hazard to staff/public and site workers	Scope	M	M	Medium	Geotechnical report will identify presence of Contaminates and procedure for safe removal	VL	M	Low	LMCC/PTA/FDG
B13	Proposed stair/balustrade design inadequate	Potential hazard to staff/public and possible DDA claim	Scope	M	M	Medium	Commission B4Croup DDA compliance report and adopted recommendations into design. Stair to be designed in accordance with BCA including Balustrade heights DDA etc	VL	M	Low	LMCC/PTA/FDG/ B4C
C	General										
C1	External vandalism	Graffiti and other damaged done to external finishes	Environment	M	M	Medium	Minimise external building finishes at base of building that can be permanently damaged, or , easily cleaned, External Lighting	L	M	Medium	PTA/FDG
C2	Internal vandalism	Damage to internal equipment and finishes	Environment	L	M	Medium	Correct selection of finishes fit for purpose -Staff Training	VL	M	Low	LMCC/PTA/FDG
C3	Potential to uncover Historical Artefacts during Construction	Delay to Construction	Scope	M	H	High	Commission Cultural heritage report to identify how best to mitigate risk	VL	H	Medium	LMCC
C4	Security of mobile equipment	Equipment stolen/broken	Environment	M	M	Medium	Where required provide secure areas lockers to secure equipment/property as part of fit out joinery	L	M	Medium	LMCC/PTA/FDG
C5	Poorly Defined Brief	Brief does not accurately reflect client requirements leading to client end user dissatisfaction	Scope	M	H	High	Ongoing consultation with Client and Stakeholders including presentation at end of critical stages	L	H	Medium	LMCC
C6	Delays due to Client approvals	Program implications	Schedule	M	M	Medium	Ongoing Client Meeting and staged sign off in a timely manner to reduce risk.	L	M	Medium	LMCC
C7	Failure to engage with Special interest groups	User Group Dissatisfaction	Scope	M	M	Medium	User group workshops to refine brief and design	L	M	Medium	LMCC/ /PTA/FDG
C80	Brief does not align with Project budget	Unable to document to satisfy brief	Scope	M	M	Medium	Formulate value management approach to brief /budget alignment	L	M	Medium	LMCC/ /PTA/FDG
D	Existing Services										
D1	Provision of permanent Power	Required power load not available within project timeframe	Scope	M	H	High	Early application & fee payment, for discussions with authorities to obtain detail of authority offers.	L	H	Medium	PTA/FDG/

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D2	Water pressures in for & future fire supply (new FHR's) with larger new built area	Required pressures not available within project timeframe	Scope	M	H	High	Early application & fee payment, for discussions with authorities to obtain confirmed information of authority offers.	L	H	Medium	PTA/FDG/BC
D3	Adequacy of retained electrical services for reuse as part of revised design	Cost of replacement of existing Service which cannot be made code compliant	Scope	M	M	Medium	Assessment to be carried out and documentation to include integration as appropriate	L	M	Medium	PTA/FDG/
D4	Adequacy of retained Mechanical services for reuse as part of revised design	Cost of replacement of existing Service which cannot be made code compliant	Scope	M	M	Medium	Assessment to be carried out and documentation to include integration as appropriate	L	M	Medium	PTA/FDG/
D5	Sizing/location of Existing Sewer to serve enlarged facility	Cost of providing adequate Sewer with consequential delays	Scope	M	M	Medium	Early assessment of site conditions and discussions with relevant authority	M	M	Medium	PTA/FDG/BC
D6	Obtaining MFB Approval	Potential delays to Building Permit	Scope	M	M	Medium	Early discussion with MFB and agreement on critical issues such Truck access boosters etc	L	M	Medium	PTA/FDG/
E	Budget										
E1	Budget allowances in Contract not sufficient	Tender Price comes in higher that estimate	Budget	M	M	Medium	Limit number of allowances and have QS verify value of allowances prior to tender	L	H	Medium	LMCC/ /PTA/FDG
E2	Conditions of Contract Unclear/Incomplete	Increased Risk of Variations	Budget	M	M	Medium	Pre Tender check of all Documents	L	M	Medium	LMCC/ /PTA/FDG
E3	Poor design coordination between key disciplines	Additional costs delays to rectify post contract award	Budget	M	M	Medium	Hold Point review during documentation	L	M	Medium	LMCC/ /PTA/FDG
E4	Significant negotiation/value engineering required post tender to achieve budget	Project delay	Budget	M	M	Medium	Value Management workshop to be undertaken pre tender to identify potential overruns against cost plan and re design as required	VL	M	Low	LMCC/ /PTA/FDG
E5	High operating cost of new facility due to functional layout or system inefficiency	Increased operational costs	Budget	M	M	Medium	Whole of life consideration to be undertaken. Operational costs issued to be reviewed	VL	M	Low	LMCC/ /PTA/FDG
E6	Final product is constructed poorly	Ongoing maintenance issues, user dissatisfaction.Delays to rectify	Scope	M	M	Medium	Appropriate conditions included in Contract. Quality of workmanship defined in Specification	VL	M	Low	LMCC/ /PTA/FDG
E7	Sub Contractor Selection	Use of inexperienced sub contractors may result in poor quality product	Schedule	M	M	Medium	Contract documents to require List of proposed Sub Contractors to be submitted for approval at Tender	VL	M	Low	LMCC/ /PTA/FDG
E8	Disruption to neighbours and businesses in vicinity of site	Negative feedback from neighbours and businesses	Environment	M	M	Medium	Prepare a Communications plan to inform neighbours and businesses of work on site in advance Council to continue with support with production of news letters as necessary	VL	M	Low	LMCC
E9	Delays to Construction due to weather and latent conditions	Increase in cost impact on delivery programme	Schedule	M	M	Medium	Allow for provisional delay days. Ensure inclement weather not allowable cause of delay with costs	VL	M	Low	LMCC/
E10	Alternate systems proposed by Contractor do not meet acceptable quality standards	Reduced quality product	Scope	M	M	Medium	Procedures be established for review of alternatives and written into Contract requirements	VL	M	Low	/PTA/FDG

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E11	Tight or shortened Construction timeframes	Compromised quality installation and increased future costs	Schedule	M	M	Medium	Ensure programme has sufficient float in timelines to ensure works are not compromised	VL	M	Low	LMCC/ /PTA/FDG
E12	Inadequate supervision of Construction Works by Contractor	Errors misunderstood instruction or compromise to design and structural integrity	Scope	M	M	Medium	Regular onsite inspections by PM/Arch On site Meetings	VL	M	Low	/PTA/FDG
E13	Unapproved downgrading of Construction materials by Contractor	Inferior product delivered to Client	Scope	M	M	Medium	Regular onsite inspections by PM/Arch On site Meetings	VL	M	Low	/PTA/FDG
F	Crime Provention through Environmental Design (CPTED)										
F1	Surveillance	Clear Sightlines between Public and Private Spaces	Scope	M	L	Medium	Keep forecourt and open space to Dickinson Street and Mulbinga Street open to maximise sightlines. Treat retaining walls to minimise potential hiding locations or entrapment.	M	H	Medium	PTA/FDG
F2	Surveillance	Placement of Physioal Features to maximise visibility and positive interactions	Scope	M	M	Medium	Minimise physical barriers as best as is possible to the forecourt on Dickinson Street and Mulbinga Street. The exisiting electrical substation is an impediment that cannot be moved.	L	H	Medium	PTA/FDG
F3	Surveillance	Attractive Landscaping - Remove places for hiding and entrapment	Scope	M	H	High	Treat retaining walls and access along the northern edge of the Childcare to minimise potential hiding locations or entrapment.	L	H	Medium	PTA/FDG
F3	Surveillance	Community Activities generating effective use of space	Facility Management	M	M	Low	The forecourt to the entry of the proposed leisure centre has been developedso that markets can be run in the forecourt to ensure an efficient use of space.	L	L	Low	PTA/FDG
F4	Access Control	Design landscapes and physical locations e.g. footpaths that direct pedestrians into target areas	Scope	M	L	Low	Footpaths have been designed to extend the Charlstown Streetscpe along Dickinson Street and direct patrons to wards the entry from the on street parking andMulbinga Street Carpark.	L	L	Low	LMCC/ /PTA/FDG
F4	Access Control	Provide clearly marked transitional zones that indicate movement from public to semi-public to private space	Scope	M	L	Low	Landscape and Architectural features are to be employed to minimise the understanding of public to semi public to private transition spaces.	L	M	Medium	LMCC/ /PTA/FDG
F5	Access Control	Public spaces which attract people into the area and discourage intruders	Budget	M	M	Medium	Forecourt to the Dickinson Street entry is to encourage and attract patrons. Tranistion zones between Mulbinga Street Carparka nd Childcare to encourage transition.	L	M	Medium	LMCC/ /PTA/FDG
F6	Access Control	Restricted access to internal areas or high risk areas like car parks or other rarely visited areas (e.g. by having doors, shrubs, fences and gates)	Budget	M	H	High	Fence lines have been added to the eastern side of the proposed scheme t oaddress intruders illegally accessing pools from adjoining residences. This by conseqesce has created a zone between the adjacent properties and the Lesiure centre that will require some level of treatment.	L	H	High	LMCC/ /PTA/FDG
F7	Access Control	Selectively placed entrances and exits, fencing, lighting and landscaping to control the flow of access or to limit access	Budget	M	M	Medium	The entrance is to be maintained to Dickinson Street but has been enhanced both Archtecturally and contextually to integrate patrons and public into the building in a safe and integrated way.	L	M	Medium	LMCC/ /PTA/FDG
F8	Territorial Reinforcement	Design with a clear distinction between public and private spaces by using physical barriers (e.g. fences) and symbolic barriers (e.g. vegetation)	Budget	M	M	Medium	This issue is addressed by the blurring of Public paid and public recreational facilities and is to be developed in conjuntion with the LMCC.	L	M	Medium	LMCC/ /PTA/FDG

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F9	Territorial Reinforcement	Design that encourages people to gather in a public space and to feel some responsibility for its use and condition	Budget	M	M	Medium	See above	L	M	Medium	LMCC/ /PTA/FDG
F10	Territorial Reinforcement	Environmental markers (e.g. signage, walkways, pavers, lighting, bollards and fencing) which define intended use and ownership	Budget	M	M	Medium	External Way finding and Building Identification Signage is to be designed to match and integrate with the LMCC strategies for the extension of the Charlestown Streetscape Strategy.	L	M	Medium	LMCC/ /PTA/FDG
F11	Territorial Reinforcement	The location of lighting fixtures illuminates pedestrian routes, entrapment areas or other areas requiring visibility	Budget	M	M	High	Lighting design shall be designed and documented to comply with BCA and address the technological evolution of LED lighting while paying careful attention to issues of direction and light intensity.	L	M	Medium	LMCC/ /PTA/FDG
F11	Territorial Reinforcement	Lighting provides uniform spread and reduces contrast between shadow and illuminated areas	Budget	M	M	High	See above	L	M	Medium	LMCC/ /PTA/FDG
F12	Space Management / Maintenance	Site cleanliness	Budget	L	L	Low	Site Cleanliness is to be addressed through effective facility management.	L	M	Medium	LMCC/ /PTA/FDG
F13	Space Management / Maintenance	Vandal resistant materials and fixtures	Maintenance	M	M	Medium	Refer to detailed selection of material as the building is documented in the Construction Contract Phase. Materials are to be designed and documented in such a way as to be easy to maintain at the completion of the construction phase.	L	M	Medium	LMCC/PTA/FDG
F14	Space Management / Maintenance	Rapid repair of vandalism and graffiti	Maintenance	M	M	Low	Facility management to be informed during the commissioning phase about the material selection of the facades and methods for removing graffiti if it occurs.	L	M	Medium	LMCC
F15	Space Management / Maintenance	Well maintained landscaping	Maintenance	L	L	Medium	Facility management to be informed during the commissioning phase about the maintenance of landscaping.	L	M	Medium	LMCC
F16	Space Management / Maintenance	Well maintained pedestrian and car park lighting	Maintenance	M	H	High	Facility management to be informed during the commissioning phase about the maintenance of landscaping, car parking and lighting.	L	M	Medium	LMCC
F17	Space Management / Maintenance	Well maintained public infrastructure (e.g. seats, signs, bollards, etc)	Maintenance	M	M	Medium	Facility management to be informed during the commissioning phase about the maintenance of seats, signs, bollards, etc.	L	M	Medium	LMCC