Safety in Design Report

Project Name: Hamilton Botanic Gardens – Children's Garden and Play Space

Project address: French Street, Hamilton VIC 3300

Client: Southern Grampians Shire Council

Southern Grampians
SHIRE COUNCIL

Date: Issued: 18/10/2021

Prepared: based on Preliminary P3 Issue.

Change to Grade since last assessment			
NEW	New risk	↓	Grading decreased
–	No change to Grade	↑	Grading increased

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Safety in Design Report

Id	Description of Risk	Impact on Project	Assessment of likelihood	Assessment of Seriousness	Grade (combined Likelihood and Seriousness)	Date of Review	Mitigation Actions	Assessment of likelihood	Assessment of Seriousness	Grade (combined Likelihood and Seriousness)	Responsibility
1	Risk of child drowning in water channel.	High	B	1	1B		All surfaces to fall a minimum of 1:100. Grated inlet to be sufficiently cleaned. Ensure a maximum water depth of 20mm. No ponding of water.				OSLA Main Contractor
2	Risk of child getting foot stuck in rocks and other elements	Medium	B	3	3B		Ensure rocks are spaced apart ensure no foot entrapments min 80mm. Refer to AS4568.				OSLA Main Contractor
3	Children falling off proprietary play elements – Fireman's pole	High	B	2	2B		Add guard rails. Ensure height of drop conforms to play standards. Provide rubber surface surface – impact attenuation to base. Fall zones to confirm with suppliers recommendations.				OSLA Main Contractor
4	Finger entrapment						No gaps between elements more 8mm less than 23mm. Conforms to standards.				OSLA Main Contractor

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5	Children falling from retaining and rock wall	High	B	3	3B		Ensure that the materiality adjacent the retaining and rock walls are contrasting in their colour. Provide a balustrade where wall height exceeds 600mm. Design to comply with Australian Standards AS 4685.1Avoid placing any objects within 500mm of the wall.				OSLA Main Contractor
6	Risk of children's getting splinters						Use pre-weathered timber where possible. Oil timber surface regularly – every 2 years. Balustrade to be steel.				OSLA Southern Grampians Main Contractor
7	Children getting choked in the gaps in the boundary fence	Medium	B	2	2B		Fence to be timber and wire fence to match Thompson Street.				OSLA Main Contractor
8	Children head entrapments in the gaps in the custom balustrade	Medium	B	2	2B		Design to comply with Australian Standards AS 4685.1 to ensure no head entrapment and n V shaped opening. Openings width less than 45mm				OSLA Main Contractor
9	Children running into signage	High	B	2	2B		Locate signs outside of paths of travel.				OSLA

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											Southern Grampians Shire Council Main Contractor
10	Users' foot striking furniture and fixtures while moving	Medium	C	3	3C		Contrasting colours to fittings				
11	Children's feet getting stuck in between rocks	Medium	D	3	3D		All surfaces designed to avoid all foot entrapment. 80mm min.				
12	Slipping on the water channel and hitting head on rocks	Medium					Slip resistance No ponding of water. Roughened stone finish. Channel should be thoroughly cleaned.				OSLA Southern Grampians Shire Council
13	Slip and trip hazards	Medium	C	3	3C		Slip resistance compliant with AS4586 rating W- V				OSLA Southern Grampians Shire Council
14	Sharp edges of rocks	Medium	C	4	3C		Rocks to have all sharp edges removed by stone mason, detailed by landscape architect, (remove by hand localised bush hammering)				OSLA Southern Grampians Shire Council
15	Risk of children running down steep slope between retaining walls and hurting themselves	High	A	2	2A		Strategically place rocks to prevent the desire line.				OSLA Southern Grampians Shire Council
16	Fingers entrapment	Medium	C	2	2C		Ensure that all the specified play elements meet the necessary				OSLA

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							finger entrapment Australian Standards				Southern Grampians Shire Council Main Contractor
17	Water pooling on surfaces and becoming stagnate and making the surface slippery	High	B	2	B2		Ensure paving materials meet Australian Standards for slip resistance. Ensure surface slopes towards water outlets to avoid any water pooling.				OSLA Southern Grampians Shire Council Main Contractor
18	Hazardous plant species and materials could cause irritation or allergy	High	B	1	1B		Ensure all plan species are non-toxic and materials selected contain non – toxic or natural products where possible.				OSLA Southern Grampians Shire Council Main Contractor
19	Large loose material can be thrown and cause injury or property damage	High	D	3	3D		Fine grain mineral mulch. Ask Frank.				OSLA Southern Grampians Shire Council Main Contractor
18	Tree stakes can be used as weapons	High	C	2	2C		If required, ensure tree stakes are secure and large enough so to reduce risk of being thrown. Remove stakes at Handover.				OSLA Southern Grampians Shire Council Main Contractor
19	Vandalism / skateboarding and scooter injuries	Medium	D	3	3D		Ensure no element is skateable height and signages. Timber to top of seats. Ensure handrails are not skateable. Provide skate deterrent notches.				OSLA Southern Grampians Shire Council Main Contractor

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20	Pedestrian conflict with the maintenance vehicles access	Medium	D	4	4D		SWMMS – temporary signage.				Southern Grampians Shire Council
21	Graffiti	Medium	C	4	4C		Apply graffiti coating to walls.				OSLA Main Contractor
22	Paving stains from vomit.						Apply sealant to stone paving.				
23	Rubbish collection in playground areas	Low	A	4	4A		Bins have been located at the top and the bottom areas of the Clear rubbish frequently				Southern Grampians Shire Council
24	Leaf litter causing slippage and blockages to the water channel.	Low	A	4	4A		Clear rubbish frequently – maintenance. Reduced the likely of mulch getting into the water channel. Heel guard over on the water inlet.				OSLA Southern Grampians Shire Council WSP
25	Planting blocking sightlines and creating hiding places	Medium	D	3	3D		Ensure planting is of varying heights and allows sightlines and access is clear Perceived as feature not issue.				OSLA Southern Grampians Shire Council Main Contractor
26	Risks of limbs dropping and causing injury	Low	C	3	3D		Selection of low-risk species. Formative pruning and arboriculture monitoring and management. Arborists ongoing assessment				OSLA Southern Grampians Shire Council Main Contractor

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27	Tree falling in high winds and causing injury or damage	High	D	1	1D		Formative pruning and arboriculture monitoring and management to ensure trees are not lopsided or top heavy Arborists ongoing assessment Maintenance				Southern Grampians Shire Council
28	Trips from lips in paving units.	Low	D	3	3D		Landscape specifications Experience of supplier/contractor – Samples units and samples area aid for approval.				OSLA Southern Grampians Shire Council Main Contractor
29	Slips and trips, damage from leaks from water permeating through retaining walls	Medium	C	3	3C		Wall to be engineered by WSP Engineer				OSLA Southern Grampians Shire Council Main Contractor
30	Risk of insect and reptile bites	Medium	D	2	2D		Warning signs				OSLA Southern Grampians Shire Council Main Contractor
31	Slips and falls while climbing timber logs	Medium	D	2	2D		Anchor logs securely and ensure no sharp or slippery surfaces				OSLA Southern Grampians Shire Council Main Contractor
32	Risk of electrocution.	High	B	1	1B		Locate power outlets away from water… WSP to conform locations and height requirement for the power supply points.				WSP Engineers

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33	Contamination of water.	Medium	B	1	1B		Add a backflow prevention.				WSP Engineers

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HAZARD RISK ASSESSMENT MATRIX

Frequency of Occurrence	Hazard Categories 1 Catastrophic	2 Critical	3 Serious	4 Minor
(A) Frequent	1A	2A	3A	4A
(B) Probable	1B	2B	3B	4B
(C) Occasional	1C	2C	3C	4C
(D) Remote	1D	2D	3D	4D
(E) Improbable	1E	2E	3E	4E

Unacceptable High Medium Low

Recommended actions for grades of risk	
Grade	**Risk mitigation actions**
1A - 1C 2A - 2B 3A	Mitigation actions, to reduce the likelihood and seriousness, to be identified and implemented as soon as the project commences as a priority.
1D 2C - 2D 3B - 3C	Mitigation actions, to reduce the likelihood and seriousness, to be identified and appropriate actions implemented during project execution.
4A - 4B	Mitigation actions, to reduce the likelihood and seriousness, to be identified and costed for possible actions if funds permit.
1E; 2E 3D - 3E 4C - 4E	To be noted – no action is needed unless grading increases over time.

This safety in design report is in response to the Safe Design of Structures code of practice, Safe Work Australia July 2012 which sets out statutory requirements under Section 274 of the Work Health and Safety Act.

A structure means 'anything that is constructed, whether fixed or moveable, temporary or permanent' and also includes the design of part of a structure, modification or redesign of a structure that are used as workplaces. The architectural and landscape architectural industry have adopted this to mean anything designed that is not normally covered by existing Australian Standards and Codes of Practice.

Safe design means the integration of control measures early in the design phase to eliminate, or if not reasonably practical, mitigate safety risks throughout the life of the structure designed.

Each project or component of a project will have its own design risks. The aim is to identify possible risks, record and monitor these throughout the life of the project. The Safety in Design report should be developed with the client and responsibility passed on to the client at the completion of the contracted works.

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