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Playground Location



118.591° -20.400°

Marie Marland Oval Reserve, Hudson Way, South Hedland WA 6722





Introduction

This report is a Comprehensive Inspection Audit Report on the Marie Marland Playground located at the Marie Marland Reserve, Hudson Rd which is owned and maintained by the Town of Port Hedland. The audit was completed in accordance with the current Australian Standards for Playground Equipment. This document and its attachments are designed as part of a 'Standard of Care' to identify the current condition of the playground equipment and the surrounding environment. The purpose is to identify any non-conforming conditions in accordance to the current AS Standards:

AS 4685:2016 Pts 1-6 & 11

AS 4422:2016

AS 4685.0:2017

Additionally where a potential hazard is observed that is not specifically described within the Safety Standards it is addressed within this report as a "Duty of Care".

Risk Assessment

Risk Matrix (Consequence x Likelihood)

			CONSEQUENCE		
LIKELIHOOD	Insignificant	Minor	Major	Critical	Extreme
Almost certain	Medium	Serious	Serious	High	High
Likely	Medium	Medium	Serious	Serious	High
Possible	Low	Medium	Medium	Serious	Serious
Unlikely	Low	Medium	Medium	Medium	Serious
Rare	Low	Low	Low	Medium	Serious

Priority Ratings

There are 4 priority ratings.

Low Minor problem, action should still be carried out in the next 12 months

Med Indicates attention required within 2-3 months

Serious Indicates urgent or immediate attention is required

High Isolate or remove unit or item prior to leaving the playground





Summary of Compliance

The playground was installed in April 2010 and is a poor condition.

- Free height of fall meets compliance of AS 4685.1 2014 Clause 4.2.8.5.3
- Free space meets compliance of AS4685.1 2014 Clause 4.2.8.2.3
- Soft-fall rubber requires testing under AS4422 2016 and is showing considerable cracking.
- Fall zones may NOT meet compliance with AS4685.1 Clause 4.2.8.4 due to a replacement panel has provided unintended access increasing the free height of fall.

The complete list of findings with the issues identified are listed below in the 'Summary of Findings'.

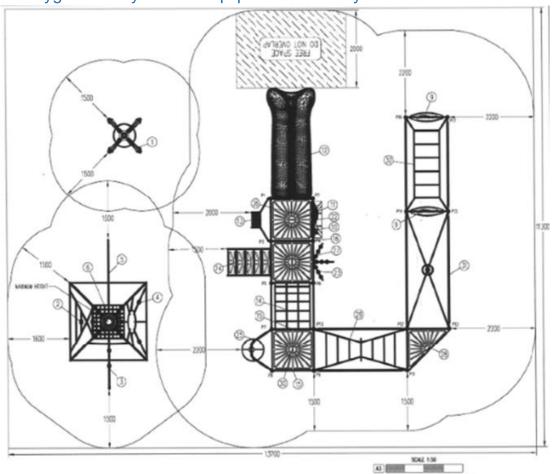




Playground Details & Background

70						
Park/Reserve Name:		Marie Marland Reserve				
Location:		Marie Marland Reserve				
Classification:		Active sports oval				
Date & Time Inspected	d: 02/11/19					
Non Conformances:	Yes X No □		Corrective A	ction Required: Yes	X No 🗆	
Inspectors Name:	Naomi Phill	ips	Sign:	Lys.		
Level of Competence:	Playground	Safety Inspector Level	III			
Playground Manufact			Contact Details: 08 9	9409 8321		
Date: 4/10			ID Number: M01095	61		
Playground Material:	Wood □	Plastic X	S/Steel X Fibregla	ass □ Painted X	Other	
Surfacing Material:	Sand □	Bark Chip □	Shredder Rubber □	Mulch □	Astro Turf □	
	Interlocking Ma	ts Rubber Tiles	Insitu/Wet pour Rubbe	r □ Other □		
Surfacing Containmen	nt: None		Size: 154m²			
Tools/Equipment to be	used:	 AS4685.1 2014 Toggle te 	od Set (8mm, 8.6mm, 12mm and 25 r and calipers			

Playground Layout and Equipment Inventory







Playground Equipment

Combination Unit

- Super dual slide (1500mm)
- Pygmy Climber
- Mural wall & Binoculars
- Roto wave Panel
- Moulded shop front
- Waterfall Climber (MISSING)
- Stairs (1200mm)
- Square Platforms X 3 (!200, 1400 & 1500mm)
- Tri platform
- Flexi Transfer Climber
- Tube ring X 2
- Chimp twist Senior Primary (MISSING)
- Cave Bridge
- Twist & Turn (MISSING)
- Pause & Recovery Step X 2

1x Crows Nest Climber

- Web pole Climber (MISSING)
- Ring Climber (MISSING)
- Spider Escape (MISSING)
- XClimber (MISSING)

1 X Starfish rocker (4-way)

Softfall Surfacing

Rubber

Playground Manufacturer

Megatoy Play Solutions Australia





Inventory

Equipmen	nt Inventory	
Item	Photo	Name and details
1.		Starfish rocker (4-way)
2.		1x Crows Nest Climber • Web pole Climber (MISSING) • Ring Climber (MISSING) • Spider Escape (MISSING) • XClimber (MISSING)





3.





Combination Unit

- Super dual slide (1500mm)
- Pygmy Climber
- Mural wall & Binoculars
- Roto wave Panel
- Moulded shop front
- Waterfall Climber (MISSING)
- Stairs (1200mm)
- Square Platforms X 3 (!200, 1400 & 1500mm)
- Tri platform
- Flexi Transfer Climber
- Tube ring X 2
- Chimp twist Senior Primary (MISSING)
- Cave Bridge
- Twist & Turn (MISSING)
- Pause & Recovery Step X 2





Summary of Findings

Issue number	Description/Risk	Photo	Risk	Risk		Recommendation
			Likelihood	Consequence	Risk Level	
1)	Rubber soft-fall showing extensive signs of cracking and pulling away at joins. There are a lot of patches where it has been replaced.		Possible	Major	Medium	As per AS 4685.0:2017 the soft fal surface will need to be tested for Impact attenuation as the certification is unknown. There is no containment around the soft fall area.





2)	Protective paint and surface is rusting and chipping, coming away from the surfaces. This may affect structural integrity.	Possible	Major	High	The sections that are affected need sanding/acid wash and repainting to prolong life and reduce risk of rust. Where the structural integrity may be affected further investigation is required.
3)	The panel is showing signs of rusting.	Possible	Minor	Medium	Order and replace the panel. Regular maintenance is required under AS 4685.0:2017





4)	No Signage	Unlikely	Minor	Medium	As per AS4685.0 Clause 6.3.10 a public playground is required to have signage detailing location and contact number for operator. A sign will need to be manufactured.
5)	Entrapment (Partially bound openings) Waterfall climber has been removed and replaced with a panel which has created a potential head/neck entrapment.	Possible	Major	High	Order suitable replacement panel to attach. Regular maintenance is required under AS 4685.0:2017
6)	Unintended Access/increase in free height of fall. Waterfall climber was removed and replaced with a panel from a different supplier	Possible	Major	High	The panel in located above 1200mm, and allows unintended access that increases free height of fall. The softfall needs to be tested for this new height. The panel should be replaced with an item that will suit the requirements. Regular maintenance is required under AS 4685.0:2017





7	')	Potential Entrapment (Clothing/toggles) on Left hand slide.	Possible	Minor	Medium	Re-inspect with new toggle test device as the new AS only requires shorter toggle length of 400mm to confirm fail. Under AS 4685.1:2014 the toggle was obstructed and remained entrapped when the test device was moved in the direction of forced movement.
8	3)	Entrapment (finger 8mm & 25mm) on panel above 1200mm	Possible	Minor	ГОМ	There is no forced movement in the area with finger entrapment, however as a duty of care the holes in the panel should be plugged to prevent entrapment.
9	9)	Entrapment (fingers 8.6mm & 12mm) in the Crows nest where the plastic chain sleeve is cracked and exposing the chain above 1000mm	Possible	Minor	Medium	Replace plastic sleeve over chain if possible.





10)	Protruding parts	Possible	Minor	Medium	Replace bolts with ones that do not allow protrusion in the next two weeks. Regular maintenance is required under AS 4685.0:2017
11)	Equipment/components have been removed and not replaced.				Seven items have been removed from the main structure and the crows nest climbing structure. This highly decreases the play value of the playground and will create issues with compliance. The manufacturer is no longer operating which makes replacing infrastructure difficult. Replacing components with alternative parts can cause potential hazards and/or risks to users.





APPENDIX 1- Inspection Checklist

INSPECTION	Yes	No	N/A	COMMENTS	ACTIONS	Risk Rating	Date risk removed
AMENITIES AS4685.1 2014		ı					
Toilets- All facilities kept tidy, accessible& regularly cleaned? Are there adequate handwashing facilities.			Х				
Drinking water/fountains- facilities accessible and clean?	Х						
Seating- in good ergonomic working order, and maintenance?			Х				
Rubbish Bins- are they regularly emptied and cleaned?			Х				
First Aid Training-do staff have a current first aid certificate (valid two years)?		X					
		P	LAY	EQUIPMENT-GENERAL AS4685.1 2	014	•	•
Equipment installation- Installed as per manufactures recommendation and/or as per Australian Standards?			x	No standard listed No signage for who to call in case of an incident See picture ##	Check what standard was applicable when it was installed. Order signage with all necessary information	3	
Maximum heights- No greater than: SEC-1800mm Other Settings- 3000mm? Upper body (Other) 2200mm? Climbing- 3000mm foot support to surface below? 4000mm minus 1000mm hand support to surface below?	х						
Fall zone requirements-Compliant with Australian Standard-list/show on 2d plan equipment, FHOF& Fall zone	х						
Free space- Is provided with no overlapping spaces? Standing-1000mm radius & 1800mm height? Sitting- 1000mm radius & 1500mm height? Hanging 500mm radius & 300mm above & 1800mm below grip position?	х						





Handrails- single or two handrails are provided on all access ways-ramps, stairways, ladders (except rung ladders) and bridges. Grip Requirements- between 16mm-45mm diameter?	X			
Grasp Requirements- <60mm?	Х			
Entrapment(head completely bound openings)? Use probes or entrapment of clothing/body accessible position above 600mm?		Х		
Entrapment (Partially bound openings)- no partially bound entrapments above 600mm?	X		A panel/section of the infrastructure has been removed and replaced with a panel from a different manufacturer. The panel has also allowed for unintentional access and increased the free height of fall from that platform. See picture ##	2
Entrapment (Clothing/toggles)-no entrapment of clothing or body?	x		LH Slide failed using toggle. Need to test again with toggle. As per AS4685.1 the toggle needs to be 400mm. See picture ##	3





Entrapment (finger 8mm & 25mm)- general equipment no finger entrapments accessible position above 1000mm?	х			Panel that has been put in to replace a part the infrastructure (1200mm from ground) has three potential finger entrapments. As per AS4685.1 with both the 8mm and 25mm rods been able to all three holes in the panel. See picture ##	Need to remove panel for reasons listed above in Entrapment (partially bound). Alternatively there needs to some plugs to cap up the holes. The holes in the frame need to be capped.	2	
Entrapment (fingers 8.6mm & 12mm)- chains-no finger entrapments accessible between ≥ 8.6-12mm?	x			The Crows nest has rubber casing over the chain which is split and exposing the chain. The 8.6mm probe was able to go through. See picture ##		3	
Entrapment (fingers 8.6mm & 12mm)- chain connectors-no finger entrapments accessible between ≥ 8.6-12mm?		Х					
Soft-fall areas- Loose-fill minimum depth of 30cm with suitable stable edges, free from plants/roots, debris, foreign objects and checked daily for hazards?		x		Softfall shows a lot of signs of failing. There is a number of cracks showing the underlay of rubber. See picture ##	Cracks can be filled. The softfall needs to be independently tested for the HIC value and compliance as per AS4422:2016	2	
Protruding parts- are rust, bolt ends, nuts, sharps or loose fittings eliminated, rounded, recessed or covered with protective caps, and no sharps as per AS?		x		There are a number of protruding bolts that need to be capped or replaced. See picture ##	Replace broken caps and replace bolts for shorter ones that do not protrude	3	
Timber Parts- fittings and joints secure, free from excess warping and splinters?			Х				





Protective paint covering- In good condition?		X		There are several areas of that have rusting and wear. See picture ##	Need to investigate whether the rusting is surface or may have affected the structural integrity.	3	
Plastic and fiberglass-free of cracks, damage or wear?		x		Cracking and splitting in some areas See picture ##	Replace sections that have splitting or cracking.	2	
Equipment/components-is all equipment/components present, secure and maintained?		х		Several items have been removed and/or replaced. See picture ##	This can affect the integrity and play value of the unit.	2	
Tyres- free from exposed wires, and have effective drain holes, pest free?			Х				
Crushing or shearing points-eliminated between all parts of the equipment?			Х				
Buffers/stoppers- present and in good condition?			Х				
Vandalism & Graffiti?- Free?	Χ						
SWINGS AS4685.2 2014	ı	1	1				
Swing seats-are of impact absorbing type (rubberized)?			Х				
Seat ground clearance-Is at least 350mm? Tyre seat (type 1,2 & 3 swing) 400mm? Contact Type 5 tyre seat min 100mm?			х				
Fall zone & Soft-fall is provided? In the swing extension adequate? h _E x 0.867= plus 1750mm rubber & 2250mm loose			X				
SLIDES AS4685.3 2014	,	•	•			•	
Fall zone requirements- comply with AS? Starting FHOF (apply table radius) Sliding- @600mm high 1500mm radius Run out- type 1=2000mm, Type 2=1000mm beyond run-	х						





Springs/bearings & moving parts-Working & condition?		x		Movement in the base of the four way rocker. See photo ##	Need to check the base plate to see if the U-bolt is defective.	2	
Ground clearance- min of 230mm?	Х						
Fall Zone- min of 1000mm (types 1-4) Types 5& 6 as per manufactures instructions	Х						
Hand/foot holds- do not turn/move without use of tool?	Х						
ROTATING EQUIPMENT AS4685.5 2014	1	<u> </u>	1	,		l .	l
Maximum fall height – 1000mm?			Х				
Fall zone- min 2000mm from outside edge of equipment.			X				
TREE SHADE & SHADE STRUCTURE AS	S4685	5.1 20	14			I	
Trees overhanging equipment -Visually in good health? -2.5m clear of equipment -free from noticeable pests (bees, wasps etc)	X						
Shade Structure- free from rips, tears, holes etc?	Х						
Shade Structure- turn buckle attached to pole with 'hook' attached to shade cloth via a snap lock clip?	X						
SURROUNDS AS4685.1 2014	•	•	•				
Plants- Have all the plants been assessed to determine hazardous plant species?	X						
Trees/shrubs- grounds free of dead trees/branches. Branches lopped to a reasonable height to allow safe access around base for uses?	X						
Fences and gates- In good condition, checked for hazards and appropriately maintained, self-closing & latches working?	X						
Landscaping- Stable and free from obvious hazards?	Х						
Pathways- slip free and adequately drained at all times?			Х				
Drains- adequately covered with grates?			Х				





Sports area- are all surfaces in good condition, and maintained?	X			
Garden maintenance- grass mowed and trees maintained when children are not present?	X			
Collison hazards- sprinklers, tap raisers etc clearly marked and in good condition?	X			
Unwanted materials- are removed asap?	X			

Further Comments and Actions:

- 1. All footings need to be comprehensively tested by a structural engineer
- 2. There is a considerable amount of splitting and brittle softfall- this needs independent testing as per AS 4422:2016
- 3. Several items of the combination unit and climbing component have been removed due to been damaged. The panel that has replaced a removed item has created potential hazards by allowing unintentional access and increasing the free height of fall can mean the requirements for HIC/gmax of the softfall may be insufficient.
- 4. Replacement of any missing/removed infrastructure needs to be investigated. The playground supplier, Megatoy Play Solutions are no longer in business and therefore sourcing the required pieces removed for replacement is not an option. The missing elements affect the play value of the equipment, and may affect the integrity which would need to be investigated.





APPENDIX 2- Risk Management Tables and Ratings

Risk Rating

RATING	DESCRIPTION
A- Almost certain	Event expected to occur most times during normal operations
L- Likely	Will probably occur at some stage based on evidence of previous incidents
P- Possible	Not generally expected to occur but may under specific circumstances
U- Unlikely	Conceivable but not likely to occur under normal operations; no evidence of previous incidents
R- Rare	Only ever occurs under exceptional circumstances.

Risk Management Tables Consequence (most credible consequence)

Descriptor	WHS	Environment	Quality-Production	Quality-Financial
Extreme	Multiple fatalities or permanent injuries.	Extensive physical or environmental impact extending off site; managed by external services; long term remediation required.	Work stopped for an extended period of time	Extensive financial loss (*\$1M+); loss of program or business operation.
Critical	Single fatality or permanent injury.	Major physical or environmental impact; hazard extending off- site; external services required to manage.	Work stopped.	Major financial loss (\$500,000-\$1M); sever impact on program or business operations.
Major	Medical treatment or lost time injury or hospitalization.	Significant physical or environmental impact; hazards contained with assistance of external resources.	Major effect on schedule.	Significant financial loss (\$50,000-\$500,000) considerable impact on program or business operations
Minor	First aid treatment	Minor physical or environmental impact; hazards immediately controlled with local resources.	Significant effect on schedule.	Minor Financial loss (\$10,000-\$50,000) minimal impact on programs or business operations
Insignificant	Incident or near-miss – No treatment	Minimal physical or environmental impact; isolated hazards only; dealt with through normal operations.	Minor schedule adjustment.	Negligible financial loss (<\$10,000); no impact on program or business operations.





Hierarchy of Control (WHS Risks)

Risk Level	Management Action Required							
High Risk (Not	 Stop work – Report immediately to Divisional Manager and/or relevant Director 							
Acceptable)	- Report to Risk and Compliance							
	- Consider alternative activity unless appropriate controls are implemented							
	- Develop specific controls for immediate implementation							
	- Report to EMT on effectiveness of controls							
Serious Risk	- Develop and implement specific controls for serious risks. Allocate actions and budget for implementation.							
	- Consider alternative activity unless appropriate controls are implemented.							
	- Monitor implementation to ensure effective							
Medium Risk	- Develop and implement specific controls for medium risks							
	- Allocate actions and budget to minimize risk where existing controls deemed inadequate and monitor implementation							
	- Management to consider additional controls							
Low Risk	- Accept and monitor low-priority risks.							
	- Manage via routine procedures where possible and monitor via normal internal reporting mechanisms.							





APPENDIX 3 – Cost for Replacement of Playground

Option 1- Replacing with similar equipment and components (Foot print of playground under existing shade structure)

1.	Demolition and disposal of existing infrastructure including softfall (in-house)	\$10,000
2.	Mobilisation/demobilisation	\$5,000
3.	Temporary fence & site toilet	\$6,750
4.	Supply, delivery and Installation of playground infrastructure	
	a. Main Structure	\$28,000
	b. Minor element 1	\$16,000
	c. Minor element 2	\$12,000
5.	Supply, delivery and installation of 160 m ² of rubber in-situ softfall as per fall zone requirements	\$40,000
6.	Supply, delivery and installation of 50 LM of reinforced concreate edge	\$5,000
7.	Removal and disposal of spoil excavated for footings (landfill charges)	\$3,500
8.	Approvals and permits	\$500
		\$126,750











Option 2- Proposal for replacing with Alternative Playground equipment (Foot print of playground under existing shade structure)

1.	Demolition and disposal of existing infrastructure including softfall (in-house)	\$10,000
2.	Mobilisation/demobilisation	\$5,000
3.	Temporary fence & site toilet	\$6,750
4.	Supply, delivery and Installation of playground infrastructure	
	a. Main Structure	\$50,000
	b. Minor inclusive element 1	\$28,000
	c. Minor inclusive element 2	\$18,000
5.	Supply, delivery and installation of 160 m ² of rubber in-situ softfall as per fall zone requirements	\$40,000
6.	Supply, delivery and installation of 50 LM of reinforced concreate edge	\$5,000
7.	Replace drink fountain with accessible unit and linkage footpath	\$10,000
8.	Removal and disposal of spoil excavated for footings (landfill charges)	\$3,500
9.	Approvals and permits	\$500
		\$176,750











Option 3- Proposal for Alternative Playground equipment (Foot print of playground to extend outside shade structure)

1.	Demolition and disposal of existing infrastructure including softfall (in-house)	\$10,000
2.	Mobilisation/demobilisation	\$5,000
3.	Temporary fence & site toilet	\$6,750
4.	Supply, delivery and Installation of playground infrastructure	
	a. Main Structure	\$65,000
	b. Major element 1 (Sky Rider/flying fox)	\$50,000
	c. Minor inclusive element 2	\$28,000
	d. Minor inclusive element 3	\$18,000
	e. Minor inclusive element 4	\$12,000
5.	Supply, delivery and installation of 240 m ² of rubber in-situ softfall as per fall zone requirements	\$60,000
6.	Supply, delivery and installation of 50 LM of reinforced concreate edge	\$5,000
7.	Replace drink fountain with accessible unit and linkage footpath	\$10,000
8.	2m Footpath 100LM from Carpark to playground encompassing playground (le Scooter path)	\$20,000
9.	Removal and disposal of spoil excavated for footings (landfill charges)	\$3,500
10	. Approvals and permits	\$500
		\$293,750



