

Activity Tower Risk Assessment

This is split into General, Climbing, High Ropes and zip line

Assessment No: LCA15/19

General

RISK	To who	ACTION or CONTROL
Failure of equipment	All	Regular checks of the tower made 1 prior to each opening (by instructors) 2 Routine inspection every three months (nominated persons) 3 annual inspection each calendar year at no more that 15 month interval (JMA appointed inspection body) (See operating procedures for inspection list) Any unsafe defects corrected`
Injuries due to falling off	All	Activity must be run by competent instructors. Helmets must be worn by all inside the activity area. All instructors and participants should be attached to an appropriate safety lanyard before leaving the gated area on the platform See individual sections for appropriate safeguards for each element Gates at top padlocked when not in use Gates closed behind participants Only one participant beyond gated area
Unsupervised use could result in injury	All	Locked gate and high fence in place to prevent entry when not in use. Warning signs erected. Tower to be locked when not in use Wall curtains in place after last session Ropes stored out of reach when not in use Equipment locked away when not in use Warning signs placed
Slips trips and falls	All	No running inside fenced area Ground covering free of debris Stairs free of debris Participant briefing Anti slip edging to stair case Appropriate working light Appropriate footwear worn (fastenable/close fitting not flip flops)

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Significant hazards	People affected	Existing controls
Anchor failure. Abseil rope failure.	Participant	<ul style="list-style-type: none"> - Multiple anchors. - Safety rope in use on all occasions. - Protect against wear points. - Check prior to use - Protect ropes against wear points. - Log of rope use.
Safety rope failure	Participant	<ul style="list-style-type: none"> - Log of rope use - Rope inspection by instructor before and after each session.
Debris from above	Participant & instructor	<ul style="list-style-type: none"> - Helmets to be worn at all times - participants pockets emptied
Harness connection failure	Participant	<ul style="list-style-type: none"> - Harness checked prior to climb - Connect safety rope to belay loop on harness - Check equipment life span not exceeded <p>Use a double check principal where participant is shown the attachment No false loops through poor stopper knot position or taping of dead rope</p>
Climber falling sideways	Participant	<ul style="list-style-type: none"> - Helmet worn - Instructors to ensure appropriate routes used
Hair caught or other jamming abseil device	Participant	<ul style="list-style-type: none"> - Clear clothing & hair prior to climb. - Employ releasable abseil rope technique
Getting caught in loose rope	Participant & instructor	<ul style="list-style-type: none"> - Make sure ropes are tied properly - Make sure loose ropes are neatly coiled out of way
Cut feet	Participant	<ul style="list-style-type: none"> - Participants must wear shoes or trainers
Infection	Participant & Instructor	<ul style="list-style-type: none"> - Waterproof plasters to be worn and participants told to wash hands after climbing
Environmental factors	Participant & instructor	<ul style="list-style-type: none"> - Sun cream if necessary appropriate clothing to be worn monitor participants for signs of hypothermia/sun stroke
Falling from tower	Instructor & participant	<ul style="list-style-type: none"> - Harness and safety line to be worn when working on the top platform. Participants on safety line when at top. Ensure gates are closed behind participants One participant through per instructor through the gate Only one participant waiting on the top platform at a time Gates padlocked when not in use
Loss of control due to distraction	Participant & instructor	<ul style="list-style-type: none"> - Groups to be kept to a manageable size - Non active participants to be kept away from belay area - Second person present to supervise group

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		- If youth belaying, ensure rope tails held by 3 rd person Only one participant waiting on the top platform at a time
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High Rope elements

Potential Hazards	Potential Outcome	Risk Level Prior to Controls (High, Med, Low)	Preventative Measures	Risk Level After Controls (High, Med, Low)
General Risks				
Un-authorized use of high rope elements	Falling – broken limbs/injury/death	H	No unsupervised access to tower. Warning signs –‘Do not use without instructors’ If outside, Course enclosed with a 6ft fence. Lower elements locked away in compound	L
Equipment Failure	Falling – broken limbs/injury/death	M	No smoking in the area or when wearing ppe. Equipment checked regularly for wear & tear. Damaged equipment to be removed & destroyed.	L
Objects falling	Broken limbs/injury/death	H	Use of helmets at all times. Clients to remove all objects from pockets prior to climbing. surrounding area checked for dead wood.	L
Harness Failure	Falling – broken limbs/injury/death	M	Instructional procedure. Instructor checks all participants ppe prior to climbing. Use of full body harness for all users.	L
Entanglement or holding of moving ropes	Rope burn, damaged limbs, death	H	Instructional procedure. Participants briefed on holding their own knot & no other ropes.	L
Loss of belayer concentration, incorrect belay technique	Falling – broken limbs/injury/death	H	Instructional procedure. All lower offs managed by instructors. Instructor holding dead rope or overhand knots tied in dead rope when clients belaying.	L
Holding wire cables & clamps	Cuts & Abrasions	M	Participants not allowed to touch any part of cables.	L
Entrapment in moving parts of course.	Damaged limbs	H	Participants not allowed to hold onto any areas with joining/moving parts Trapeze should be locked in position with participants on the ground	L
Poor Instruction	Falling – broken limbs/injury/death	M	All trainers to complete training with vertex or an ERCA approved training provider. Thorough teaching progressions backed up by Operating Procedures & Risk	L

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			Assessments. All site run courses to be assessed by 2 ERCA trained instructors and moderated by the County Training Team	
Instructor Injuries when accessing	Falling – broken limbs/injury/death	M	All staff to be trained in accessing the tower. Only trained and competent staff to access the tower for inspection and maintainance As second person should accompany the member of staff accessing the tower for inspection and be capable of performing a recue if necessary	L
Participant hitting objects on decent	Bruising/Broken Limbs	H	Instructional technique. Tight rope at all times. Slow & controlled lowering by the instructor. Participant briefed on using hands & feet to fend off objects whilst being lowered.	L
Structural Failure of the tower	Broken limbs/injury/death	M	Regular visual checks by instructors & on site management. Inspections & maintenance by JMA approved inspector. Structure designed by qualified engineer.	L
Jacobs Ladder & All Aboard				L
Twisted Ropes	Bruising/Broken Limbs	H	Instructional technique. Ropes checked throughout activities.	L
Colliding with other participants	Bruising/Broken Limbs/Unconsciousness	H	Instructional Technique. Well managed ropes.	L
Traversing Elements				
Tripping on belay cables	Bruising/Broken Limbs	H	Instructional Technique. Participants to be made aware of cables & associated risks.	L
The Elements				
Heat	Heat Exhaustion	M	Participants advised to bring/drink fluids.	L
	Dehydration	M	Participants advised to bring/drink fluids.	L
Sunshine	Sunburn/sunstroke	M	Participants advised to bring/wear sunblock.	L
Cold/Wet	Hypothermia	H	Participants advised to bring waterproofs. Participants advised to wear warm clothes if the weather looks to be cold.	L
Strong Winds - Falling trees/wood	Broken limbs/injury/death	M	Tower visually inspected during daily set up. Not to be used during high winds (40mph)	
Electric Storms - Lightening strike	Electrocution/broken limbs/injury/death	M	Tower not to be used during electrical storm. There must be a 20 minute wait after lightening has been sighted before use.	L

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Zip Line

Potential Hazards	Potential Outcome	Risk Level Prior to Controls (High, Med, Low)	Preventative Measures	Risk Level After Controls (High, Med, Low)
General Risks				
Un-authorized use of zip line	Falling – broken limbs/injury/death	H	No unsupervised access to tower. Warning signs –‘Do not use without instructors’ Course enclosed with a 6ft fence. Top gates padlocked shut when not in use. Shut gate principal when operating	L
Equipment Failure	Falling – broken limbs/injury/death	M	No smoking in the area or when wearing ppe. Equipment checked regularly for wear & tear. Damaged equipment to be removed & destroyed. Instructors trained to recover participants for who equipment failures leaves them at height	L
Objects falling	Broken limbs/injury/death	H	Use of helmets at all times. Clients to remove all objects from pockets prior to climbing. surrounding area checked for dead wood. Safety net in place at take off area Line should be clear of obstacles and route of rider should be clear before releasing rider to go Visual signal with ground instructor that landing area is clear before releasing rider to go	L
Harness Failure	Falling – broken limbs/injury/death	M	Instructional procedure. Instructor checks all participants ppe prior to riding. Use of full body harness for all users.	L
Entanglement or holding of moving parts	Rope burn, damaged limbs, death	H	Instructional procedure. Participants briefed on holding their own knot & no other ropes/cables Participant should not be able to reach trolley when riding Participants reminded about not putting head through ropes	L
Loss of instructor concentration/incorrect belay technique	Falling – broken limbs/injury/death	H	Instructional procedure. All lower offs managed by instructors/assistants holding dead rope as soon as trolley stops Instructor verbally confirms 5 squeeze checks with client	L
Holding wire cables & clamps	Cuts & Abrasions	M	Participants not allowed to touch any part of cables.	L
Entrapment in moving parts of course.	Damaged limbs	H	Participants not allowed to hold onto any areas with joining/moving parts	L

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Poor Instruction	Falling – broken limbs/injury/death	M	All trainers to complete training with vertex or an ERCA approved training provider. Thorough teaching progressions backed up by Operating Procedures & Risk Assessments. All site run courses to be assessed by 2 ERCA trained instructors and moderated by the County Training Team	L
Instructor Injuries when accessing	Falling – broken limbs/injury/death	M	All staff to be trained in accessing the tower. Only trained and competent staff to access the tower for inspection and maintainance A second person should accompany the member of staff accessing the tower for inspection and be capable of performing a recue if necessary Means of communication should be held either mobile phone or radio	L
Participant hitting objects on decent	Bruising/Broken Limbs	H	Instructional technique. Tight rope at all times. Slow & controlled lowering by the instructor holding dead rope Participant briefed on using Petzle rig and holding dead rope while lowering.	L
Structural Failure of the tower	Broken limbs/injury/death	M	Regular visual checks by instructors & on site management. Inspections & maintenance by JMA approved inspector. Structure designed by qualified engineer.	L
Twisted Ropes	Bruising/Broken Limbs/entrapment	H	Instructional technique. Ropes checked throughout activities. Participant briefed as not to put body parts between ropes	L
Colliding with other participants	Bruising/Broken Limbs/Unconsciousness	H	Only one person may travel on the zip line at a time Instructional Technique. Well managed landing zone	L
Connection failure	Broken limbs/injury/death		Client briefing as to what and when to disconnect Locking Karabiners used Clearly identifiable Karabiner that needs to be disconnected Staff trained to deal with lowering before removing back up line No false attachment loops through correct fastening of stopper knots and not taping dead rope Knots regularly checked and retied Safety net in take off area	
The Elements				
Heat	Heat Exhaustion	M	Participants advised to bring/drink fluids.	L
	Dehydration	M	Participants advised to bring/drink fluids.	L
Sunshine	Sunburn/sunstroke	M	Participants advised to bring/wear sunblock.	L
Cold/Wet	Hypothermia	H	Participants advised to bring waterproofs. Participants advised to wear warm clothes if the weather looks to be cold.	L
Strong Winds - Falling trees/wood	Broken limbs/injury/death	M	Tower visually inspected during daily set up. Not to be used during high winds (40mph)	
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