

Green, Amber, Red zones for traversing	Severity	Severity	Severity	Severity	Severity	
Likelihood	1	2	3	4	5	
<b>1 (very unlikely)</b>	1	2	3	4	5	Ongoing management and vigilance required to move '5' to '4' or lower
<b>2 (unlikely)</b>	2	4	6	8	10	Ongoing management and vigilance required to move always to green
<b>3 (realistic possibility)</b>	3	6	9	12	15	Ongoing management and vigilance required to move always to green
<b>4 (likely)</b>	4	8	12	16	20	Ongoing management and vigilance required to move always to green
<b>5 (very likely)</b>	5	10	15	20	25	Ongoing management and vigilance required to move always to green

Likelihood;	Severity	
1=highly unlikely	1=minor bump, bruise, graze, upset, pride	(basic first aid)
2=unlikely	2=minor body fluid, strain, tears	(basic first aid + clean wound, apply dressing)
3=possible	3=sprain, heavy bump, twisted limb, major upset	(first aid, advise hospital to visit to get checked out)
4=likely	4=recoverable severe injury	(first aid whilst awaiting emergency services)
5=very likely	5=severe life changing injury or death	(first aid whilst awaiting emergency services)

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## Participants

Area at Risk	Cause	Likelihood	Severity	Total	Control Measure	Likelihood	Severity	Total	Notes
Fall from height	Misuse of safety system	5	5	25	Participant briefing before accessing course. Demonstration, practice and assessment before entering the course. Instructors can refuse entry if participants cannot demonstrate safe use of equipment. Instructor supervision throughout. Re-iteration of safety points.	1	5	5	
	Equipment failure	5	5	25	Ensure equipment if appropriate for the course and fit for purpose. Purchase from reputable retailers. Pre-use checks completed daily by competent instructors. Inspection regime in place during peak operating times, conducted by a competent, trained or experienced PPE inspector and in line with manufacturer and EN guidance. Use of PPE trained to user. Annual inspection completed by Type C inspector. Zaza connectors must be function tested before each use and before entry onto course. Maillons must be secured to both harness attachment points with a spanner before accessing the course.	1	5	5	
	Incorrect PPE	5	5	25	Correctly sized harness/helmet selected for each participant selected by competently trained instructors. If deemed incorrect, harness/helmet must be changed for an appropriately sized harness/helmet. Participants briefed not to alter harness/helmet after checks completed by instructors or speak to instructor if adjustments need to be made. Lanyard selected for use is an appropriate length for the height of the participants.	1	5	5	
	Incorrect height / weight	5	5	25	Height: min 130cm, max 193cm. Weight: min N/A, max 120kg All participants briefed and checked that they fall within min/max height and weight parameters. Listed at entrance to ropes course and available to visitors online.	1	5	5	

	Structural failure	5	5	25	<p>Course built and inspected in accordance with correct EN15567pt.1.</p> <p>Routine visual checks completed daily.</p> <p>Operational inspections completed as recommended by manufacturer. Completed by competent, experienced, or trained staff.</p> <p>Findings for routine and operational inspections are recorded and monitored. If required, advise can be sought from inspector and/or technical advisors.</p> <p>Periodic inspections completed annually by external inspection body.</p>	1	5	5	
	Primary Safety System failure	5	5	25	<p>Safety system installed by ropes course manufacturer in accordance with safety system's manufacturers requirements.</p> <p>Routine visual checks completed daily when course is in use.</p> <p>Operational inspections completed as recommended by manufacturers guidance.</p> <p>Findings for routine and operational inspections are recorded and monitored. If required, advise can be sought from inspector and/or technical advisors.</p> <p>Periodic inspections completed as per manufacturers guidelines by external inspection body.</p>	1	5	5	
	Unauthorised access	5	5	25	<p>Ropes course is supervised during operating hours by appropriately trained staff.</p> <p>Fencing and signage located around the course to limit access.</p> <p>Ropes course entry point enclosed in tower and locked during park closing hours.</p> <p>Ladders, ropes and equipment stored in locked tower overnight.</p> <p>Site secured by perimeter fence, locked gates and security alarms.</p> <p>Course may require additional inspection if unauthorised access is suspected. The course may need to remain closed until this is completed.</p>	1	5	5	
Entrapment	Finger or hand caught in safety system	4	4	16	<p>Briefing given to all participants prior to use. Cables and connectors not to be held by participants. Briefing to include safe hand positioning on ropes or lanyard.</p> <p>Supervision whilst on the course and reminders given for safe hand positioning on element ropes or lanyard.</p>	2	4	8	
	Entrapment in activity element	4	3	12	<p>Elements are designed to reduce entrapment issues.</p> <p>Loose clothing removed prior to course access.</p> <p>Suitable footwear checked prior to accessing course.</p> <p>Hair tied back securely.</p> <p>Correct height and weight limits adhered to.</p> <p>Supervision and coaching by instructors whilst on the course.</p>	1	3	3	
	Incorrect clothing	4	3	12	<p>Loose clothing removed prior to course access.</p> <p>Suitable footwear checked prior to accessing course.</p> <p>Hair tied back securely.</p> <p>Correct height and weight limits adhered to.</p>	1	3	3	
Slips, trips, falls	Access on the stairs	3	3	9	<p>Briefed not to run on the course.</p> <p>Checked during routine inspection for damage.</p> <p>Cleaned as required.</p>	1	3	3	
	Kit up area	3	3	9	<p>Area kept clean and free from objects such as gravel, litter or unused PPE.</p> <p>Area checked during routine visual inspections.</p>	1	3	3	
	Slippery surfaces	3	3	9	<p>Activity elements, platforms and tower can become slippery in wet weather. Additional information included in briefing as required.</p>	1	3	3	

					Assessed by supervisor on day-to-day basis and brush/sweep to resolve the issue. If unresolved, course may need to be closed.				
	Impact with activity elements and platforms	4	3	12	Height/weight of participants checked prior to course entry. Participants issued with a suitable length of lanyard. Participants briefed to walk across each element carefully rather than slide along the wires and only one participant to access each element at a time. Briefed not to slide or swing on lanyards. Ongoing supervision during activity by instructors.	2	3	6	
Weather	High winds	3	3	9	Max. wind speed 35mph. If exceeding this limit, the course may need to be closed until wind speed reduced. Anemometer available to check wind speed. Additional inspection may be required after a period of high winds.	3	2	6	
	Thunder and lightning	3	5	15	In the event of forecast thunder and lightning, course should remain closed until threat has passed. In the event of sudden storm, evacuate the course as quickly and carefully as possible. Do not re-open the course until a minimum of 30 minutes has passed since last thunder strike. If suspected or potential damage to course following lightning strike, course must be inspected by competent persons prior to use.	3	3	9	
Human Error	Excessive fear	5	3	15	Minimum age 6 years old. Participants briefed about challenge by choice and opportunities given to opt-out prior to course if needed. Must complete practice course prior to course entry. Must complete lower level of course prior to high level. Opportunity given at end of the low level to return to the ground.	2	2	4	
	Injury caused by poor behaviour and etiquette	5	3	15	Refer to Mission Out terms and conditions of use, safety information and acknowledgement of risk. Instructors can refuse entry to any participant who is not following suitable behaviour guidelines. Course supervised by instructors at all times. Parent/guardian of under 18's must be present at all times during participation.	2	1	2	
	Injury from collision with another participant	4	3	12	Briefed that only one participant per element and per platform. Ongoing supervision throughout the activity.	1	1	1	
	Injured spectators	5	3	15	Equipment and clothing secured/removed before course entry. Access to area underneath course restricted by roped off areas and signage. Monitored/supervised by instructors.	1	2	2	
	Pre-existing medical conditions	5	4	20	All participants informed of risk during park disclaimers, briefing and medical acknowledgment forms. Doctor note may be required for some pre-existing conditions. Instructors can refuse entry to participants that might cause themselves harm by accessing the course. Parents/guardians must be present during the activity briefing and for the duration of the activity.	1	2	2	

	Inability to maintain adequate course supervision at all times.	5	4	20	Instructors must be given regular breaks to ensure that they can remain alert and focused on supervising participants. All aspects of the course must be supervised by an instructor. This should include supervision from the ground, low level course and upper course level (if the supervisor deems there to be adequate supervision of participants on the upper level, this instructor can return to the ground to assist with ground supervision). If an instructor is required to perform a rescue, another instructor must take over their supervision duties.	1	2	2	
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## Instructor

Area at Risk	Cause	Likelihood	Severity	Total	Control Measure	Likelihood	Severity	Total	Notes
Instructor accessing	Improper use of safety system	5	5	25	Instructor must be attached to safety system before approaching exiting the staircase. Instructor must be stationary when bypassing between safety cables. Work positioning device only to be used when stationary and must be tight to maintain position. Buddy checks should be completed before accessing may be required. Function check must be completed on all safety systems before use. Shock absorbing lanyards should be used if not using participant equipment to access the course and must be attached to appropriate harness anchor. Karabiners should be checked when attached to safety system, checked in the correct location and checked prior to removing previous lanyard.	1	5	5	
	Equipment failure	5	5	25	Ensure equipment is appropriate for the course and fit for purpose. Purchase from reputable retailers. Pre-use checks completed daily by competent instructors. Inspection regime in place during peak operating times, conducted by a competent, trained or experienced PPE inspector and in line with manufacturer and EN guidance. Quarantine location available for equipment deemed defective to remove from active use. Use of PPE trained to user. Annual inspection completed by Type C inspector. Working at height harness with a work positioning and fall arrest attachment should be used when accessing the course. Buddy checks must be completed before accessing the course.	1	5	5	
	Bypassing participants	5	5	25	Ensure adequate supervision is maintained for other participants. Ask participants that require bypassing to make their way to the nearest platform. Instructor must be stationary on the platform before attempting to bypass a participant.	1	5	5	
	Accessing during inspection and checks.	5	5	25	No lone working. If only one rescuer available, they must not be the person at height. Rescue equipment must be checked and ready to go before anyone enters the course.	1	5	5	

					Two-way radios available in case of emergency and/or mobile phone. Working at height equipment to be used for inspections, not participant equipment. All equipment checked prior to use. Course must be closed during inspections.				
Instructor competency complacency	Inadequate training	5	5	25	All instructors must have completed a minimum of 16 hours of training and be assessed in accordance with central operating procedures by technical advisors. Rescue training must be a minimum of 16 hours and all attending must have previously completed instructor training.	1	5	5	
	Out of practice	5	5	25	Instructors who have not worked on the high ropes course for over a month, must have their competency reviewed by a senior member of the team. Refresher or retraining may be required and will be observed, logged and reviewed as appropriate. Periodic refresher training will be required after an extended period of time away from high ropes instruction.	1	5	5	
	Working outside operating procedures.	5	5	25	Supervisors should shadow/observe instructors delivering high ropes activities and record findings. These should be completed regularly to ensure compliance with operating standards and as frequently as deemed necessary by senior staff.	1	5	5	
	Dehydration/Exhaustion/Tiredness	5	5	25	Instructors must ensure when they are working, that they are fit and able to complete their duties. Regular breaks should be taken throughout the day. Water bottles are encouraged to be carried by all instructors and stored safely in the activity tower/shed.	1	5	5	
	Influence of drugs/alcohol	5	5	25	Instructors must ensure when they are working, that they are fit and able to complete their duties. Anyone under or suspected to be under the influence of drugs or alcohol will not be permitted onto the course. This includes the suspicion of alcohol/drug use from the previous day/night.	1	5	5	
	Ongoing medical issues	5	5	25	Instructors must ensure when they are working, that they are fit and able to complete their duties. Management/HR should be aware of any ongoing issues so that support can be offered.	1	5	5	
Rescue	Improper use	5	5	25	Instructor must be attached to safety system before approaching exiting the staircase. Buddy checks should be completed before accessing may be required. When using work positioning device, instructor must be stationary and must be tight to maintain position. Instructor must be stationary when attaching all rescue equipment. All karabiners should be squeeze tested to ensure functioning correctly and ensure all karabiners are loaded correctly. Function check must be completed on all safety systems before use. Regular refresher training should be completed to ensure safe working practices adhered to.	1	5	5	
	Failure of lowering line	5	5	25	Regular equipment checks must be completed to ensure all equipment is fit for purpose. Function tests should be completed on all lowering equipment before use to ensure correct loading of rope.	1	5	5	

					Backup system must be in place prior to weight loading to lowering line. All karabiners must be squeeze tested and loaded correctly before weight loading the lowering line.				
Inability to hoist due to weight difference		4	4	16	Ensure weight restrictions for facility are adhered to at all times. Participant or ground instructor may assist (if able) by pulling on the rope of the hoist. If required, a foot loop may be tied into the rope of the hoist and used to apply pressure to the hoist.	2	2	4	
Entrapment/entanglement within activity elements		4	4	16	Prior to lowering, ensure participants are clear of activity elements. Ensure all lowering ropes run cleanly away from all activity elements. Brief participant to push away from approaching elements if they are able. Use tag line as necessary to reduce risk of collision with elements. Lower participants in a controlled manner, maintaining an appropriate speed.	1	4	4	
ASAP jams during a lower		4	3	12	Ascender device must be available to be used in conjunction with Jag hoist to release weight from jammed ASAP line. ASAP reset prior to continued descent of participant. Check and monitor descent speed and a clear descent path.	1	2	2	
First aid required for participant		2	3	6	First aid trained staff member must be available for the high ropes facility at all times. First aid kit must be available in the high ropes facility tower at all times. Radio/telephone contact with base must be operational and available at all times.	2	1	2	
Suspected airway issues		5	5	25	Ensure head is in open airway position and unrestricted by PPE. Assisted lower to be conducted in line with instructor rescue training. First aid trained staff member must be available for the high ropes facility at all times. Radio/telephone contact with base must be available at all times.	1	5	5	

### Additional Information for Operational Inspections

Area at Risk	Cause	Likelihood	Severity	Total	Control Measure	Likelihood	Severity	Total	Notes
Instructor accessing	Improper use of safety system	5	5	25	If detaching from the main safety cable, suitable alternative attachment points must be used. Inspector should maintain work positioning and fall arrest attachment. Fall arrest device must be used and appropriately attached to the instructors harness. Inspectors should position their equipment and themselves to minimise the risk of creating a fall factor greater than one.	1	5	5	
	Accessing during inspection and checks.	5	5	25	PPE should conform to EN working at height regulation when conducting operational inspections. Any additional equipment carried for inspection purposes, should be secure so not to fall from the course. Access to the area beneath the course is restricted.	1	5	5	

	Equipment failure	5	5	25	Operational inspections completed in accordance with manufacturers guidance. Repairs, replacements and components that require monitoring are logged and recorded. The course may need to be closed if course components raise a cause for concern or are considered to be within the discard criteria stated by the manufacturer. Additional inspection required following major incidents or critical failures of equipment.	1	5	5	
Instructor competency / complacency	Inadequate training	5	5	25	To conduct an operational inspection, inspectors must be experienced, competent and completed appropriate inspectors training.	1	5	5	