

Risk Profile

The following risks have been identified through PGL's risk assessment process:

All Ground up

- a. Injury due to participating in an active, physical based activity,
- b. Extreme Weather
- c. Equipment Failure
- d. Injury due to incorrect set-up and operation/ belaying
- e. Collision/entanglement with elements / structures / equipment/ people
- f. Entrapment of hair, fingers, loose clothing, etc. in element or operating structure
- g. Splinter injury from pole.
- h. Injury cables & cable clamps
- i. Tear/ de-gloving injuries from rings and other jewellery
- j. Slips/Trips/low to ground falls
- k. Danger of ground fall whilst in ascent or being lowered
- l. Rope burn injury

Specific additions for Crate Stack

- m. Entrapment injury to fingers/hands/feet between crates.
- n. Impact injury due to crates scattering on collapse.
- o. Injury to instructor when pushing crate stack over
- p. Injury from falling crates

Implementation of the following operating procedures reduces the residual risk to a level as low as reasonably practicable given the intended purpose of the activity.

Control Measures

Deployment Requirements

Instructor Qualifications:	Centre based training by Approved Ropes Trainer and assessment by PGL Approved Assessor
Instructor - Participants ratio:	1:15
Total group size:	15
Active participation:	ALF Ground up 1 –1:4. One active rope at a time – Two participants belaying, one rope tidier and one climber. ALF Ground up 2 –1:8 Two simultaneous active ropes. 2 x two participants belaying, 2 x one rope tidier and 2 x climbers. ALF Ground up 3 –1:12 Three simultaneous active ropes. 3 x two participants belaying, 2 x one rope tidier and 3 x climbers.

1. **Equipment Requirements:**

Per belay point

- 2 x Steel triplock karabiners
- 2 x Alloy triplock forged eye karabiners
- 1 x ISC ALF
- 1 x ISC pulley
- 1 x Dynamic Rope (11mm rope Tendon Trust)
- 1 x Protective matt
- 1 x Belay bucket
- 1 x Brush

2. **Participants & Instructor equipment requirements:**

- 1 x Full Body Harness
- or
- 1 x DMM Sit Harness & 1 x DMM Top Harness

Crate Challenge:

- 1x Helmet for all active participants excluding belayers

3. **Specific Clothing Requirements**

- Trousers or shorts that prevent harness contact onto skin
- Flat soled shoes or boots unable to slip off
- Long hair tied back and made safe
- Jewellery removed where possible, or made safe.
- A top or t-shirt must be worn that covers the individuals shoulders
- Loose items removed from pockets
- Any items constituting a risk of entanglement removed

4. **Session Preparation:**

- a) Instructor to carry out a routine visually inspection of the element and activity area, checking the integrity of the whole element as per 'Daily rope inspection Checks ACOP'.
- b) If built in a wooded area, check for fallen branches or unsafe trees.
- c) If the Instructor has any concerns about the integrity and safe use of the element and activity area, then they should raise this with the appropriate Senior staff member, prior to any activity taking place.
- d) For outdoor elements, check the expected weather conditions, focusing on expected wind strength. Elements must not be used in wind conditions above Force 5, (29-38kmh) or during any storm that breaches the 30/30 rule in respect of lightening.
- e) All set-ups must be rigged in accordance with PGL Technical Advisor approved methods/policy.
- f) Instructor to visually & physically check the integrity and setup of all PPE to be used, including twists in any straps and amount of PPE for the group.

- g) Instructors should prepare themselves for the session ahead by ensuring they are aware of relevant group information and have a broad session plan which can be finalised when meeting the group.
- h) Instructors may only supervise in line with the ratio for the element they are instructing and their assessed qualification level, either ALF Ground up 1, 2 or 3.
- i) All multiple rope elements must have the height of 2 metres above ground clearly and permanently marked on their structures (5 crates high on crate stack)
- j) Development and adaptation of the session should be appropriate to the group's wants and needs and must be in line with the approved safe practises of the activity.

5. Activity: Instruction:

- a) Participants must receive a safety briefing as outlined in the ACOP .
- b) The correct fitting of harnesses (and helmets where necessary) should be both demonstrated and explained to participants.
- c) Where possible the instructor should seek ways to increase the Participants' awareness of risk and to involve them in its identification and management.
- d) Elements / bases may only be used under supervision of qualified PGL staff.
- e) An instructor must check all of the Participants' PPE before attaching them to the safety rope once satisfied it is fitted correctly.
- f) Participants must face the instructor for a last check of equipment and to allow the instructor to carry out final departure checks of the safety chain. The safety rope must have no slack before climbing commences.
- g) Visual and physical Final Departure checks must be carried out by or under the supervision of the instructor prior to the Participants being given the 'OK' to commence the activity. 'FDC' s are detailed in the 'Off Ground FDC's ACOP.
- h) Whilst supervising and instructing, instructors must be aware of their own positioning and sight lines, ensuring they can see all the participants they are directly supervising at all times, this is best achieved from behind anchors and belayers looking toward the elements and climbers. Instructors must be in a position where they can physically intervene on any safety issues immediately if required.
- i) Instructors should remain vigilant at all times and make ongoing dynamic risk assessments of the environment, people and the activity.
- j) The instructor should ensure that maximum inclusion is aimed for by involving participants in the activity. This must be balanced against maintaining the safety of participants.
- k) The stop procedure should be reinforced before the first dispatch.
- l) A demonstration of correct belaying technique with an ISC ALF must be shown. This can be done during the first dispatch. Belayers must then belay under the direct supervision of the instructor.
- m) The instructor must belay the first 2/2.5 metres of every climbers ascent to ensure no slack and minimal stretch is in the system when climbers are low to ground.
- n) Instructors must only allow participants to belay a climber if they have shown an ability to do so responsibly and effectively. This is monitored in the initial stages and throughout the session.
- o) If a belay team requires more training in belaying, then this must be given prior to them belaying anyone. The importance of belayer/climber communication should be emphasised and encouraged throughout.
- p) Only one climber per belay point is allowed.
- q) Instructors must be positioned where they could assist with belaying immediately if required, this is best achieved from behind the anchors and belayers looking toward the elements and climbers.

- r) Instructor must ensure that the safety ropes do not become snagged whilst the participants are climbing up to the element.
- s) Whenever a participant wishes to rest on the rope the Instructor should manually lock the ALF before allowing them to do so.
- t) Climbing Participants should not pull on their own ropes as this can make it hard for belayers to ensure their rope remains tight and can create slack in the system.
- u) It must be enforced through the safety brief and throughout the session that the instructor must directly supervise the lower and the belay team may not lower without permission from the instructor.
- v) When waiting to lower, or if the instructor cannot fully supervise the belayers, the climbing participants rope must be manually locked.
- w) The instructor must ensure the ALF is manually locked and maintained in the locked position by pulling up on the live rope, before the participants can transfer their weight off the element & onto the rope.
- x) The instructor must watch the climber throughout the lower to ensure they use the correct position at all times and maintain a safe distance from the elements or wall to ensure they do not become entangled, or hooked up by their limbs, PPE, or clothing.
- y) When lowering somebody to the ground the instructor MUST ensure the approved method is used. Under no circumstances should a dynamic lower be used.
- z) Any games or challenges set on the element must be in line with PGL Technical Advisor approved methods/policy
- aa) Challenges involving timing or encouraging any kind of racing, should be discouraged - speed increases the likelihood of mistakes in the safety chain and safety framework.

Multiple ropes supervision

- 1) On multiple roped elements, all belay teams must be supervised one on one until the climbers feet are at a height of 2-2.5 metres off the ground, manually locked and the ALF weighted. They must wait here whilst each rope is belayed on a one on one supervised ratio until all other climbers reach the 2-2.5m height. Once all climbers have arrived at the 2-2.5 m mark and only if the Instructor is happy with the competence of the belayers, may multiple ropes be supervised simultaneously.
- 2) The instructor must make sure to keep clear sightlines of the other belay teams whilst locking the ALF.
- 3) When supervising multiple ropes, instructors must ensure participants stands in a position to avoid entanglement in each other, the element and all safety ropes.
- 4) Whilst supervising multiple ropes, instructors must be aware of their own positioning and sight lines, ensuring they can see all the belayers they are supervising at all times. If one belay team requires extra help which may mean the instructor does not have full vision of other belay teams, the stop climbing command must be used and **appropriate control established**.
- 5) If all the climbers stop on the element at the same time, the instructor should use their judgement to decide what order to lock off the climbers in. Consideration must be taken to keep clear sightlines of all belayers when locking the ALFs.
- 6) If a climber wants to stop on the element and go no further whilst the other climbers want to carry on climbing, the instructor will need to lock off the stopped climbers ALF. The other climbers need to stop climbing and the ALF locked off for the initial stopped climber. The climber then needs to weight their rope. The climbers who want to carry on can continue to climb.
- 7) Whilst climbers are locked off and weighted, the instructor must remind them not to get back onto the element, this could introduce slack into the system and potentially unlock the ALF.

Element specifics:

GU1

Leap of Faith

- a. The instructor must ensure that when the participants has reached the top of the platform and are ready to jump, the participants must stand as close to the edge of the platform as possible with toes over the edge and all slack must be removed from the system. The ALF must then be manually locked and the live rope held with upward pressure by the Instructor (to prevent accidental release of ALF) until the their weight is fully taken by the rope.
- b. The participants must be instructed not to grab either of the ropes when jumping.
- c. Instructors should be aware of participants who wish to descend, as opposed to jumping/swinging from the pole or platform. In many cases a participant jumping from the ladder will swing back into the ladder, in this case it may be more appropriate for the participants to down climb.
- d. If participants down climb from the tree, the ALF belay rope should be kept tight and the feeding out of rope directly supervised by the Instructor.
- e. Participants should not be encouraged to down climb from height, if the participants slip, the surprise pendulum could be frightening. Participants should therefore be encouraged to swing from the pole; however, instructors should be aware of the options and reasons for these.
- f. If the participants leaves the tree before the top, they must be warned they could potentially swing back into the tree, if necessary they should use their feet to fend off from the pole.

GU2

Climbing Wall

- a. This wall can be relatively quick to climb, the stop procedure should be reinforced before participants leave the ground and the no racing rule is very important for this element.
- b. Bouldering and climbing games should be used. The techniques should be instructed, including spotting technique. A low maximum height must be set, no one to boulder without spotter.
- c. Reaching games and exercises should be used when participants are just a few metres off the ground. They will have very positive outcome on their climbing technique, before they become affected by the exposure of additional height.
- d. Instructors must be vigilant during lowering to ensure Participants do not hook their clothing on holds or other obstructions on the wall.
- e. Instructors should be aware of an increased entrapment risk.

Crate Stack

- a. All climbers and those passing crates must wear helmets
- b. The instructor must ensure the waiting area is clearly defined to reduce the likelihood of spectators being hit by falling crates.

- c. At the end of a climb, the instructor must ensure all Participants are in a safe area, the climbers' ALFs must be manually locked and they can then be instructed to lean back to weight their ropes.
- d. The participants may then knock over the stack, trying to direct it into an appropriate space.
- e. The instructor must remain aware of all crates and must not lower Participants onto a crate.
- f. If a participant falls off the crates before the ALF is locked, they can regain the crate stack if possible, or the instructor should directly supervise the lower as above.

GU3

Jacobs Ladder

- a. Jacobs' ladder have side wire stays between logs; these should not be used or pulled upon by the climbers.
- b. Only 'mobile assist ropes' may be used.
- c. Before climbing, participants must understand how to safely help each other whilst climbing and understand that the activity is a team exercise to get the team of three as high as they can.
- d. The Jacobs ladder must not be deliberately swung whilst participants are on or near the element.
- e. When lowering off, participant ropes should remain on their side of the Jacobs ladder.
- f. The climbers must not pull on other climbers ropes as they climb. This can introduce slack into the system and make it hard for the belayers to keep the rope tight. They should instead use other teamwork methods to reach the top.

8. Problem solving and rescues

Participant may become entrapped within elements either by limbs, clothing, or they may become emotionally frozen

- a. Problems should be solved with the least complicated solution/rescue and in the way most sympathetic to the 'victim'
- b. If "rescues" are needed which are outside of the instructors assessed qualification level, a supervisor's assistance must be called for using either a radio, via other staff, an accompanying adult or a minimum of two participants.
- c. Emotionally frozen participant should be encouraged to weight the rope via soft skills at the same time the Instructors should take in the rope as tight as possible to give the participant a sense of support from the rope and thus to be prepared to lower off.
- d. If a participant becomes physically entrapped, but is not in immediate danger then the Instructor should tighten the rope as much as possible and then send for a supervisor..
- e. If the highly unlikely event that a participant becomes physically entrapped in a way that constricts their breathing – i.e. suspended by their clothing, then the Instructor must send somebody to raise the alarm and then they must try the following solutions in order of simplicity, but without delay endangering the stuck participant:
 - i. Ask Participant to get their weight back on their feet and hands to take the weight off.
 - ii. If it is being caused by clothing ask them remove or loosen the clothing upwards to ease the constriction.
 - iii. Raise the participant by taking in the belay rope.

Activity: Conclusion

- a. Positive active reviewing should be used to revisit aims and objectives and allow participant to share/reflect on achievements
 - b. The activity base must be left so that unauthorised people cannot access the element.
 - c. Any tracer cords must be rethreaded correctly and secured before leaving the base.
 - d. All harnesses should be left extended to the limit.
 - e. Any dirty equipment must be washed in clean water.
 - f. Any activity base or equipment faults must be communicated immediately to the appropriate senior/s and where items / bases should not be used, the instructor must take initial steps to ensure this does not happen.
 - g. All incidents, near misses and rescues should be recorded in the centre log book
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