Normal Operating Procedure (Including Risk Assessment) ALF Belayed Ground Up

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 and 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.

Specific additions for Trapeze

q. Injury due to shock loading of body on grabbing trapeze bar.

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:	MIA approved PGL Ground up Level 1, 2 or 3 Holder.
Instructor/Guests ratio:	1:15 (+1)
Total group size:	15 (+1 accompanying adult)
Active participation:	ALF Belay Level 1 –1:4. One active rope at a time – two guests belaying, one rope tidier and one climber. ALF Belay Level 2 –1:8. Two simultaneous active ropes. 2 x two guests belaying, 2 x one rope tidier and 2 x climber. ALF Belay Level 3 –1:12. Three simultaneous active ropes. 3 x two guests belaying, 2 x one rope tidier and 3 x climber.

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1. Equipment Requirements:

Per belay point

- 3 x Steel HMS karabiners
- 1 x Alloy HMS karabiner
- 1 x ISC ALF
- 1 x ISC one way locking pulley
- 1 x 11mm Dynamic rope compatible with ALF (does not exceed 12.5mm)
- 1 x Protective matt
- 1 x Belay bucket

2. Guests & Instructor equipment requirements:

If off ground:

- 1 x Chest harness
- 1 x Combi sling
- 1 x HMS karabiner

Crate stack and All Aboard only:

- 1 x Helmet for all active guests excluding belayers

3. Specific Clothing Requirements (instructors & guests)

- Trousers or long shorts
- Flat soled shoes or boots unable to slip off
- Long hair tied back/controlled to prevent entrapment or entanglement
- Jewellery removed where possible, or made safe.
- A top or t-shirt must be worn that covers the individual's shoulders
- Loose items removed from pockets
- Any items constituting a risk of entanglement removed

4. Activity 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.doc'.
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 duty senior, 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, (17-21 knots/19-24 mph/29-38 kmh) 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/MIA Technical Advisor approved methods/policy.
f. If ladders are used they must be secured in line with PGL ladder policy.
g. 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.

h. 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.
i. Instructors may only supervise in line with the ratio for the element they are instructing and their assessed qualification level, either MIA approved PGL ALF belay Level 1, 2 or 3.
j. If the element did not form part of the instructors' external assessment, they must have received on site training and assessment delivered by Ropes Supervisor or Trainer who is also qualified as a PGL ALF belay Level 3.
k. All multiple rope elements must have the height of 2- 2.5 metres (or as specified by the Technical Advisor) above ground clearly and permanently marked on their structures.
l. The instructor must ensure they know whether the session they are running is intended to be guest or instructor belayed as requested by the party leader.
m. 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. Guests 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 guests.
c. Where possible the instructor should seek ways to increase the guests' awareness of risk and to involve them in its identification and management.
d. Elements/bases may only be used under supervision of PGL staff.
e. An instructor must check all of the guests' PPE before attaching them to the safety rope once satisfied it is fitted and adjusted for optimum safety.
f. Guests must face the instructor for a last check of equipment and to allow the instructor to carry out final departure checks on the safety chain. The safety rope must be tightened before climbing commences**.**
g. Visual and where possible physical final departure checks must be carried out by the qualified session instructor prior to the guests 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 guests they are directly supervising at all times, this is best achieved from behind anchors and belayers looking toward the elements and climbers.
i. Instructors must be in a position where they can physically intervene on any safety issues immediately if required, this is best achieved from behind anchors and belayers looking toward the elements and climbers.
j. Instructors should remain vigilant at all times and make ongoing dynamic risk assessments of the environment, people and the activity.
k. The instructor should ensure that maximum inclusion is aimed for by involving guests in the activity. This must be balanced against maintaining the safety of guests.
l. A demonstration of correct belaying technique with an ISC ALF must be shown. Belayers must then practise and belay under the direct supervision of the instructor.
m. Instructors must only allow guests to belay a climber if they have proven their competence at belaying. Competent belaying is measured as: 4 x double hand actions of taking in safely.
n. If a belayer 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.

o. Only one climbing guests per belay point is allowed.
p. Instructors must be positioned where they could assist with belaying immediately if required, this is best achieved from behind anchors and belayers looking toward the elements and climbers.
q. Instructor must ensure that the safety ropes do not become snagged whilst the guests are climbing up to the element.
r. Whenever a guest wishes to rest on the rope the instructor should manually lock the ALF before allowing them to rest on the rope.
s. Climbing guests should not pull on their own ropes as this can make it hard for belayers to ensure their rope remains tight.
t. It must be enforced through the safety brief and throughout the session that the instructor directly supervises lower and guests may not lower without permission and direct instructor supervision.
u. When waiting to lower, or if the instructor cannot fully supervise the belayers, the climbing guest rope must be manually locked.
v. The instructor must ensure the ALF is manually locked and maintained in the locked position by pulling up on the live rope, before the guests can transfer their weight off the element and onto the rope.
w. The instructor must watch the guests 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.
x. When lowering somebody to the ground the instructor MUST ensure the approved method is used. Under no circumstances should a dynamic lower be used.
y. Any games or challenges set on the element must be in line with PGL/MIC Technical Advisor approved methods/policy.
z. 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

aa. On multiple ropes elements all belayers must be supervised one to one until the climber's feet are at a height of 2-2.8 metres off the ground, manually locked and the ALF weighted. They must wait here whilst each rope is belayed on a one to one supervised ratio until all other climbers reach the 2-2.8m height. Once all climbers have arrived at the 2.8m mark and only if the instructor is happy with the competence of the belayers, may multiple ropes be supervised simultaneously.
bb. When supervising multiple ropes, instructors must ensure guests stand in a position to avoid entanglement in each other, the element and all safety ropes.
cc. 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 belayer requires extra help which may mean the instructor does not have full vision of other belayers, the stop climbing command must be used and the other ropes tied off before assistance is given.

Element specifics:

GU1

Trapeze

a. The trapeze bar distance from the jump point should be set and secured before the guests jumps.
b. The instructor must ensure that when the guest has reached the top of the trap pole and is ready to jump, the guest must stand as close to the edge of the platform as possible 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).
c. The guest must be instructed not to grab either of the ropes when jumping.
d. Where a bar is fitted, guests must be encouraged to attempt to catch the bar with both hands, to reduce muscle strain.
e. Instructors should be aware of guests who wish to descend, as opposed to jumping/swinging from the pole or platform. In many cases a guest jumping from the ladder will swing back into the ladder, in this case it may be more appropriate for the guest to down climb.
f. Guests should not be encouraged to down climb from height, if the guest slips, the surprise pendulum could be frightening. Guests should therefore be encouraged to swing from the pole; however, instructors should be aware of the options and reasons for these.
g. If the guest leaves the pole before the top, they must be warned if they will swing back into the pole, if necessary they should use their feet to fend off from the pole.

Traverse

a. The instructor must ensure that each guest is belayed until they are ready to move sideways.
b. When moving sideways it may be necessary to take in or pay out rope through the ALF to allow the guests to reach the end of the traverse and/or return.
c. The guest must always commence lowering off from the middle of a span.

Tree Climb

a. Instructors should be aware of an increased entrapment risk.
b. Some tree climbs can be relatively quick to climb, the stop procedure should be reinforced before guests leave the ground. The no racing rule is very important for this element.

GU2

Climbing Wall

a. Some walls can be relatively quick to climb, the stop procedure should be reinforced before guests 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 guests 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 guests do not hook their clothing on holds or other obstructions on the wall.

Vertical Challenge (can be GU3)

a. Instructors should be aware of an increased entrapment risk. In particular cargo nets and lowering past this should be carefully supervised.
b. Some vertical challenges/tree climbs can be relatively quick to climb, the stop procedure should be reinforced before guests leave the ground. The no racing rule is very important for this element.
c. The element must not be deliberately swung whilst guests are on or near the element.

GU3

All Aboard

a. All climbers must wear helmets.
b. Whenever a guest reaches the platform, their ALF must be manually locked and backed up with a tie-off.
c. Where belay points are situated apart, each rope must be supervised separately with one guest ascending at a time. Each belay point must manually be locked and backed up with a tie-off before the instructor moves on to supervise the next belayer.
d. Instructors must maintain awareness and regular visual contact of all locked and tied off off belay devices and ropes whilst supervising throughout the session, including whilst lowering.
e. For All Aboard where multiple guests climb at the same time the safety briefing must include how to climb the pole and safely help each other.
f. There is a higher likelihood of safety rope entanglement on simultaneous ascents. To avoid this, each climber should climb directly beneath their own sheer reduction block. Before anyone leans off at the top the instructor should ensure guests are not tangled around each other.
g. What to do when reaching the final platform must be discussed before climbers leave the ground.

Crate Stack

a. All climbers and those passing crates must wear helmets.
b. The instructor must ensure that local systems for securing crates are used (bungee, clips etc) throughout the climb and that 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 guests 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. They may then knock over the stack, trying to direct it into an appropriate space.
e. If the guests are unable to knock the crate stack over, then the instructor may us the “pushing pole” to knock over the crate stack.
f. The instructor must remain aware of all crates and must not lower guests onto a crate.

g. If a guest falls off the crates before the ALF is locked then they should be held by the belayers and not lowered, then the instructor should take over the rope and make a clean release to lock the ALF**.**
h. They can then either regain the crate stack if possible, or the crates can be moved out of the way and a release and lower performed as normal.

Jacob's Ladder

a. Jacob's Ladder has 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, guests 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, not an individual.
d. The Jacob's Ladder must not be deliberately swung whilst guests are on or near the element.
e. When lowering off, guest ropes should remain on their side of the Jacob's Ladder.

8. Problem solving and rescues

Guests 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 'guest'.
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 guests.
c. Emotionally frozen guests 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 guests a sense of support from the rope and thus to be prepared to lower off.
d. If a guest 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 a supervisor has been called, they will need to execute either a parallel rope rescue or a snatch rescue depending on the circumstances.
f. If the highly unlikely event that a guest 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 guests:
    i. Ask guests to get their weight back on their feet and hands to take the weight off their neck.
    ii. If it is being caused by clothing, ask them remove or loosen the clothing upwards to ease the constriction.

9. Activity Conclusion

a. Positive active reviewing should be used to revisit aims and objectives and allow guests 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.