



Mobile Rock Climbing Wall

Standard Operating Procedure
Baden-Powell Scout Centre



Location

The mobile rock climbing wall can be set up on any strong, firm, hard packed (gravel or tarred road preferably), flat surface that is clear of overhead wires and obstructions as per Extreme Engineering set up manual. The Bottom Carpark is usually the best area to have the climbing wall set up at.

Pre-Activity Checks

- Check weather forecast.
- Complete usage log (Date, User (*Instructor Initials*), Group Name, Number of Participants, Weather Notes, Observations/Operations (*How the equipment was used, quality of infrastructure, any notes or comments on condition of Equipment or Infrastructure, Maintenance or cleaning needed etc.*) in black folder labelled Pioneering in Pioneer Hut.
- Ensure all equipment is present and accounted for (*Checklist in folder*).
- Check all equipment before the activity begins to ensure that it is safe, clean and in working order.
- Check the activity site for hazards (Fallen trees, branches, excessive leaves, snakes, etc.). If hazards are detected a hazard report form will need to be filled out and handed to the Manager.
- Check ground areas around the Pioneering area for debris, and move any out of the area.
- Ensure **liability forms** have been signed and participants are present during the Activity Briefing.

Weather conditions appropriate

- A BOM Weather check should be done first thing in the morning, and last thing before the activity is commenced.
- Activity cannot be conducted in the event of a bushfire at the north western tip of Lane Cove National Park.
- Activity cannot be conducted during storms, heavy rain, lightning or heavy winds at a Beaufort Scale of 6 (= 41-50km winds – large branches sway, umbrella used with difficulty).
- Specific consideration must be given to:
 - Water on climbing surfaces making them slippery.
 - Mud/sand/softfall causing damage to equipment.
 - General health and wellbeing of the group.
 - It is extremely important to consider the affects of the weather on the participants, as well as the infrastructure and equipment.

Medical

- Obtain briefing from Camp Management on particular medical needs for each group.
- Instructor must have access to First-Aid kit at all times (one located in Pioneer Hut and one located in Office).
- Instructor must have current first-aid qualifications.

Supervision

1 Qualified Activity Instructor (managing climbers)
1 Assisting Instructor (managing harnessing and helmets)
1 Supervising Adult/Visiting Teacher

Per 20 Participants

Staff member must have current Apply 1st Aid qualification

Equipment

Note: Climbing wall equipment is normally kept in crates in the workshop. It is separate from the other equipment.

- 8 x Vertical gym classic tape (blue) harnesses
- 8 x Orange climbing wall helmets
- 4 x Carabiners (normally already attached to the wall)
- 1 x Climbing wall manual
- 1 x Portable gazebo (if necessary)
- 3 x Witches hats (kept on wall trailer)
- 1 x Controller plug

Instructor Personal Protection Equipment (PPE)

- 1 x Helmet
- 1 x Harness

Activity Setup

Climbing Wall Set-Up

- Make sure all equipment is in good working condition and accounted for.
- Set-up the climbing wall as per Extreme Engineering set-up manual;
- Block the wheels of the trailer.
- Climbing wall must be set up on a flat, even, firm hard packed surface only, without any overhead obstacles such as trees, building roof eaves or electrical power lines (Bottom Carpark). Do not lower jacks on soft ground.
- Check the auto-belay air pressure to verify there are at the proper amount. Air pressure should be between 60 and 65psi (even up to 70psi) with the cables extended and attached to the eye-bolts at the bottom of the climbing surface.
- Verify all auto-belays are securely fastened to the tower frame.
- Inspect all auto-belay davit pulleys for abnormal wear, ease or rotation and that they are securely fastened to the tower davit arms.

Prepare the Wall for Raising

- Place a jack in the operational middle jack position below the lockdown pin.
- Remove the front jack.
- Move the 2 rear jacks from their inboard travel position on the inside of the trailer, to their operational position (parallel with the wheels).
- Remove the tower lockdown pin located above the midpoint jack location. The lockdown pin can hang from it's lanyard while not in use. **Warning:** Severe damage will occur if the wall is raised without removing the lockdown pin.
- Retract the auto-belay cables and attach to the eye-bolts at the bottom of the climbing surface. Be sure to lower the cables before raising the wall.
- Inspect the auto-belay cable, swivels and carabiners for damage.
- Check the auto-belay units. Check and remove any debris in and around the auto-belays, cables and davit pulleys. Verify there is no oil leakage at all the fittings, gauges, fill valves, breather caps and hoses on the outside of the auto-belays.
- Raise all tires of the mobile wall off the ground. Using the 3 jacks, raise the mobile wall until all 4 tyres are roughly 10cm (4 inches) of the ground. Rotating the jack handle clockwise raises the trailer (counter clockwise lowers the trailer). Ensure the wall is level from both the side view as well as the rear view. During this process the rear axel may drop down if it doesn't push one of the rear wheels of the trailer with your foot.

Raising the Wall

- Attach the hydraulic lift pump controller. Insert the metal plug attached to the controller to the controller socket attached to the pan (located at the rear of the base on the left side) of the trailer base. Raise the protective cover of the socket and fully insert the controller plug.
- Raise the wall with the controller. Press up on the controller toggle switch to raise the wall. While wall is raising, listen for any abnormal sounds and watch the wall to make sure it is raising at its normal speed.
- Raise the wall until it is fully upright in the vertical position, in one continuous motion. Try to avoid pressing the up button multiple times during the raise cycle. Watch the base frame of the climbing tower frame to ensure that it will clear the ground when approaching and completing its final vertical position. If the frame is not going to clear the ground, raise all 3 jacks evenly, a small amount at a time to prevent the wall from leaning too far to the left or right side. If it gets tilted too far with one jack, there is a possibility of the wall falling. Raise the jacks enough that the tower frame will clear the ground.
- If the wall is raising slower than the normal or the pump sounds like it is labouring to raise the wall, this could be a sign of a weak charge on the battery.
- Remove the controller from the mobile wall once the wall has been fully raised into its operational position. Store the controller in a safe place that will guarantee it cannot be reattached and/or activated during the climbing event for the wall.
- Lower the jacks as evenly as possible until the base of the tower sits firmly on the ground. Turn all 3 jack handles clockwise a small amount at a time to lower the wall, keeping the wall as close to vertical as possible.
- Continue to leave the jack foot pads in firm contact with the ground as an additional stability measure. The weight of the tower, however, should be held by the tower frame not the jacks.
- Push on the climbing panel both sideways and front to back to ensure that the wall is settled completely down on its resting location. If the wall can be rocked, the wall will either need to be relocated to a more level surface, or, minimal shims (wooden) can be used to stop the rocking.
- The wall should ideally be at exactly 90 degrees vertical, when viewed from the front/back view and left/right side to side view.

Priming the Auto-Belay Cables

- Exercise all auto-belays, “prime before you climb”! After the wall has been raised, exercise the auto-belay cables to ensure proper operation. Release each auto-belay from its eye-bolt holding point. Pull the cable out until it is fully extended. Perform a pumping action with the cable 90 to 120cm (3 to 4 feet) in and out several times. Perform this pumping motion until the proper resistance level is felt when pulling on the cable. If the proper resistance is not felt, do not use that climbing run and auto-belay until normal and proper operation is achieved.
- If proper resistance is felt when extending the auto-belay cable, you can now perform a test climb. Put on a climbing harness and connect the cable to the harness with the carabiner. Climb up the wall no more than 90cm (3 feet) off of the ground. Let go and ensure the auto-belay cable safely lowers you to the ground versus an unrestricted drop to the ground. If auto-belay operates properly, the auto-belay test climb can now be completed. Climb to the top of the wall. DO NOT let go until you once again exercise the auto-belay for proper resistance when the cable is extended out. Perform several pull up and down motions with your hands and feet still holding on to the climbing surface. If proper resistance is felt you may now let go and ensure the auto-belay slowly lowers you to the ground. If you do not feel the proper resistance, do not use the auto-belay to lower you to the ground. You must climb down the wall using your hands and feet on the handholds. Repeat the process. Do not use the auto-belay if it doesn't pass the prime before you climb operation.
- DO NOT allow anyone to climb the wall until all auto-belays have been exercised and demonstrate proper cable retraction and proper resistance for extending the cable.
- Notify Assistant Manager should there be any issues or problems regarding equipment at any stage during the set-up and prior to activity commencing.
- Set-up helmets and harnesses and use witches hats to demarcate climbing zone and waiting area.

Qualified Activity Instructor's Role

- You need to be signed off on induction and competent in operating the Mobile Climbing Wall including rescue procedures before having the responsibility of the session.
- The qualified activity instructor needs to be in the climbing area, attaching and unhooking participants to the wall and monitoring climbers at all times.
- Instructors must wear a helmet and harness at all times during the session.
- A head to toe check must be performed before the participant can climb. If the participant fails the head to toe check because their harness or helmet is incorrect they must return to the safe area to fix the problem.
- Visually check the climbing route before setting each participant off.
- All rescues are to be carried out by the qualified activity instructor.
- In the case of a rescue situation, it may be appropriate to partially or completely discontinue the activity. This decision is to be made by the qualified activity instructor.
- Make sure that everyone who wants to have a climb has a climb.
- Never leave the mobile climbing wall unattended while climbing is in progress.
- Instructor is also not to stand directly underneath a climber while climbing is in progress.
- Don't climb on the back side of the wall or its supports as well as don't stand on top of the wall.
- Do not leave the wall unattended (while not in use), make sure that the auto-belay cable is not accessible and/or that participants are aware that the wall while unattended is an out of bound area.

Assisting Instructor's Role

- You need to be signed off on induction and competent in assisting in operating the Mobile Climbing Wall; including rescue procedures.
- Visually inspect the set up prior to running the activity.
- Check the area for hazards and remove where practical.
- Provide assistance with putting on and removing harnesses and helmets on participants in the waiting area.
- The instructor is responsible for group management. Making sure that the participants are encouraging the climbers.
- Provide positive support and encouragement for **ALL** levels of achievement.

Supervising Adult's/Visiting Teacher's Role

- A Supervising Leader works in conjunction with a Qualified Activity Instructor and Assisting Activity Instructor and does not assume responsibility of technical aspects of the Adventurous Activity.
- Supervising Leaders are responsible for supervising participants waiting in designated area.
- Exercise a duty of care to dependant participants.
- Provide positive support and encouragement to all participants.

Aims

- *`Challenge by Choice`* To provide the necessary information and details so that all participants can make their own valued decision on whether they participate in the activity (Pushing personal 'comfort zones'). Participants should be encouraged no matter their decision.
- Support through encouragement from peers.
- Teamwork.
- Building a rapport with others.

Outcomes

- Achieving their set goals and aims.
- Problem Solving: Challenge of the equipment, decision making and overcoming perceived limitation of self.
- Communicating: Positive support and encouragement of others, safety.
- Values: Commitment, respect and trust for others, trust in instructor, self and equipment.
- Fun: Enjoying time in the outdoors doing different activities as well as building of friendships.

Activity Briefing

Participant Briefing

General

- Introduce yourself, the assist and the activity to the participants.
- Remind participant's headwear (caps, hats, beanie, scarves etc.), jewellery (rings, bracelets, watches, dangling earrings, necklaces etc.) all need to be removed and pockets need to be emptied.
- Long hair tied back in a low ponytail or plaited.
- Check that appropriate clothing and footwear is worn.
- Highlight activity boundaries for participants. Participants are to wait in the waiting area and with the help of the assisting instructor and supervising adult, to either put on or take off their harnesses and helmets. Participants will be called upon to make their way to the climbing zone by the qualified activity instructor once they are fully harnessed up and there is a free auto-belay. Explain that there will be no running during the session.
- Explain that there are 4 different routes/levels participants can take ranging from easier to harder.
- Explain that participants that will be called once fully harnessed up will make their way to the climbing zone and will be clipped on by the instructor using the carabiner (attached to harness loop) to their chosen climb.
- Only the instructor is allowed to touch the carabiner (tri-lock) when attaching and unclipping the climber from the climbing wall.
- Explain that once clipped on and given the all clear to climb, participants will use the hand/foot hold to make their way up the wall.
- Explain that participants should try using their legs and not just their arms for climbing or they will tire out much faster.
- Climbers must stay on the climbing route and are not to cross over to put themselves directly above or beneath other climbers.
- Climbers are not to climb beyond the wall top. They must not go beyond chest-height to the wall top.
- Once climbers have reached the top and are ready to come down, explain that the climbing wall is a hydraulic system and has auto-belays meaning that they automatically retract when you climb and gently lower you when you are ready to come down.
- Explain to climbers that they need to let go of the wall and extend their arms and legs out towards the wall and walk down the wall. Climbers can hold on to the plastic sheath above the swivel if they need but will need to extend their legs out to walk down the wall. Climbers can kick off slightly but no more than 120 to 180cm (4 to 6 feet). Avoid twisting. Climbers are not to swing too close to other climbers. Climbers should strive to rappel down facing the wall!
- Climbers will rappel straight down and land on their feet. Only the instructor is allowed to unclip climber from the climbing wall!
- Once unclipped participant will make their way to the waiting area to remove their harness and helmet with the help of the assistant instructor and give it to someone else.
- Outline aims and outcomes of the activity.
- Explain that the activity is "Challenge by Choice".

Harness

- Explain to the participants that they will be wearing a waist harness.
- Point out the key features of the waist harness: 1 waist loop, 2 leg loops and 3 silver buckles.
- Ask for a volunteer to demonstrate the correct fitting of the harness.
- Show how to correctly fit the harness – similar to putting on a pair of shorts.
- Mention that the harness loop needs to be at the level of their belly button, the waist loop needs to be over their hip bones.
- Tighten the waist strap first, then the leg loops. Ask the participant to create a flat hand and slide it down the side of the harness (down the waist loop), then to make a fist. If they can pull the fist back out of the harness without flattening their hand then they will need to tighten the waist loop more.
- Leg loops can be comfortably tight – depends on participant's comfort level.
- Explain how to tuck all the tails of the harness into their elastic keepers so they don't get in the way.

Helmet

- Hold a helmet up to the group and show the front (Edelrid) and the back (number).
- When putting the helmet on there should be 2 fingers distance between the participant's eyebrows and the lip of the helmet.
- Show where the rear adjustment is, and how to tighten/loosen the helmet by opening the clip and moving the tail through then closing the clip when it is at the correct tightness.
- Do a 'rock n roll' or clown – Shake their head around or hold their head upside down to show the helmet can stay on while the chin strap is not done up.
- Instruct the volunteer participant to do the chin strap up – just like a bike helmet. They should be able to run two fingers from ear to ear so the helmet is not too tight, not too loose and so the strap doesn't pass over the chin.

Debriefing

- Address aims and outcomes and discuss their successes and or challenges.
- Discuss overcoming a fear of heights, personal choices, and respect of others limits.
- What are their thoughts on the activity (before and after)? Would they do anything differently next time?

Rescue Procedures

And **Special Climber Situations**

Climbers Helmet gets Caught on Climbing Hold Whilst Rappelling Down

- Note: Instructor should already have harness and helmet on!
- Immediately stop adjacent climber and ask them to rappel down.
- Unclip them from the auto-belay cable and clip yourself on.
- Climb wall and detach climber from climbing hold.
- Rappel down with them.
- Administer 1st aid if necessary!

Climber Frozen at Top

- Ask the climber to stay calm. Inform them that you will climb up to them (Instructor should already have a harness and helmet on).
- As the climber next to the frozen climber finishes climbing, clip into the auto-belay cable and climb the wall.
- When you reach the frozen climber, show the participant the climbing holds to climb down.

Climber Reports Discomfort

- Ask the climber to stay calm. Ask if the climber is comfortable rappelling down. If so, then ask the climber to do so (if not, follow the procedure above for "Climber Frozen at Top").
- If there is a problem with harness comfort, then adjust the harness, and let the climber begin climbing again.
- If a climber is unable to resume for whatever reason, unhook and send the climber back to the harness area.

Climber is Intentionally Reckless

- Ask the climber to stop reckless behaviour. Choose one of the following options if he or she persists:
 - If you do not believe adjacent climbers would be endangered, tell the reckless climber to rappel down or climb down immediately; or
 - If you believe other climbers may be endangered, tell the reckless climber to freeze at their position, and ask the other adjacent climbers to rappel down first (you can let them restart once the reckless climber is off the wall), Then, tell the reckless climber to either rappel down or climb down.
- Unclip the climber and send them back to the waiting area.

Climber too Light to Rappel Down

- Ask the climber to stay calm (you should already have harness and helmet on).
- As the climber next to the light climber finishes climbing, clip into the auto-belay cable and climb the wall.
- When you reach the climber, grab the climber's auto-belay cable. Your weight and the climber's weight will cause both of you to safely rappel down.

Auto-Belay Cable Retracts to Top of Wall

- Clip into another available auto-belay cable and climb wall.
- Grab the loose auto-belay cable and bring it down. When you get to the bottom, attach it to a bolt hanger at the bottom of the wall.

Pack Up

- Participants are required to place all the equipment back to the starting position.

Lowering the Wall

- Clear the area of people, cars etc. During all steps of the lowering.
- Make sure there is nothing resting on the trailer base frame that might prevent the wall from completely lowering onto the trailer base.
- Attach the hydraulic lift pump controller. Insert the metal plug attached the controller to the controller socket at the pan of the trailer base. Raise the protective cover of the socket and fully insert the controller plug.
- Raise the base of the tower frame off the ground. Using the 3 jacks, raise the mobile wall until the base of the tower frame is above the ground enough that it will clear the ground during lowering. Rotating the jack handle clockwise raises the wall. Ensure the wall is level from both the side view as well as from the rear view during the lowering.
- Press down on the controller toggle switch to lower the wall. While the wall is lowering listen for any abnormal sounds. Watch all around the perimeter of the operational area to ensure individuals or objects will not be hit while lowering the wall.
- Lower the wall to the horizontal position in one continuous motion. Try to avoid pressing the down direction on the toggle switch multiple times during the lowering cycle. DO NOT continue to force the wall any further than its completed horizontal position with the tower frame resting on the tower rest. Never hold the down button for longer than 2 seconds after the tower frame has rested onto the tower rest of the base frame.
- Unplug the controller and store it safely away.
- Pack up any shims which were under the wall base and stow them in the wall trailer.
- Retract the auto-belay cables. Disconnect them from the bolt hangers near the base of the wall and walk the cables up the top of the wall. DO NOT allow the cables to retract by themselves when the wall is in the horizontal position.
- Reattach the front jack back on the tongue of the trailer. Raise the tongue jack and/or lower the centre jack until the centre jack can be removed from its operational location (if there aren't any more sessions with the wall). Place the centre jack in the wall trailer.
- If there are no more sessions for the day ensure the tower lockdown pin is put back in place
- Place witches hats back in the wall trailer.
- Place tarp on wall to protect it from the elements. Place shims on wheels.
- Ensure all equipment is returned to the Pioneering Hut and Workshop.
- Ensure Equipment Sign In – Sign Out sheets located in the Pioneer Hut are completed. Inform the Assistant Manager should there be any issues or problems regarding equipment as soon as possible.
- If necessary an Incident, Accident and Near Miss Report Form should be completed (located in office) and handed to the Assistant Manager or Centre Manager.
- If First Aid Kit was used the instructor needs to complete an Incident, Accident and Near Miss Report Form (located in office) and hand it to the Assistant or Centre Manager.

END OF ESSENTIAL SAFETY PROCEDURE

Venue Managers Signature: _____ **Date:** _____