# Risk Assessment – Ground Belay

| Baseline | X | Site Specific | | Vulnerable Person | | Temporary | |
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**Operating notes:**

- Ground belay should be understood to refer to activities within Kingswood whereby a participant is belayed on a climbing related activity using a top rope ground belay anchor system. Examples of such activities are climbing & high ropes course elements.
- This risk assessment does not cover Kingswood staff accessing the structure for routine inspection and maintenance. Please see the 'Work at Height inspections / maintenance' risk assessment.
- Structure and equipment must be managed as per the Kingswood Equipment Management Standards.
- **Participants –** Ground Belay activities should not be used by anyone that is/has:
  - Weight over 120kg (285lbs)
  - Pregnant (unless doctor's advice has been sought)
  - Any type of heart condition or heart-related issues (unless doctor's advice has been sought)
  - Any type of spinal injury or weak spine condition (unless doctor's advice has been sought)

**Minimum supervision Ratios for one group (max 15):**

| | | Traditional Belay | Peer Belay | Hydraulic Auto belay |
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| Active Ropes | 1 | 1 Activity Leader<br>1 Assistant Activity Leader<br>1 Additional Adult | 1 Activity Leader<br>1 Assistant Activity Leader<br>1 Additional Adult | 1 Activity Leader<br>1 Additional Adult |
| | 2 | 2 Activity Leaders<br>1 Additional Adult | | |
| | 3 | N/A | 2 Activity Leaders<br>1 Additional Adult | |
| | 4 | | | |

**Qualifications/ Competence:**

- Activity Leaders must be in-house assessed by an MIA or ERCA trainer; or have a relevant NGB qualification plus approval from the internal advisor; or be a Kingswood Ropes Trainer as approved by the internal technical advisor.
- Assistant Activity Leaders must be Ground Assistant trained.
- The Nominated Chief Instructor must be onsite during all roped activity operations; they must hold a relevant NGB award.
- All Activity Leaders must have their first session observed and then every 6 weeks as per the observation standards.
- All Activity Leaders are required to maintain their skill level and must attend refresher training after a maximum of 12 months of service and after lengthy periods of absence.

**Risk – Benefit Statement:**

There is a low 'real' risk of injury during Ground Belay activities but a high 'perceived' risk allowing a greater basis for learning.

| Hazard Description and activities giving rise to risk | Who may be harmed | Control Measures | Risk Rating |
|---|---|---|---|
| Adverse weather – Lightning or High Winds | All | • When working on external structures all staff must follow the ROSPA 30/30 rule for lightning.<br>• If lightning occurs suddenly then the group should vacate the area immediately.<br>• If the facility is within a woodland environment then the activity should be cancelled during high winds to prevent falling branches becoming a risk.<br>• Advice should be sought from the competent person carrying out the annual inspection of trees for guidance on type of trees and effects of wind on them. | Low |
| Unauthorised access | All | • Access points to roped activity structures must be secured against casual or unauthorised access when the equipment is not in use for extended periods e.g. in the evening and overnight.<br>• Where such restriction is not possible, the climbing faces must have warning signs displayed.<br>• Brief groups to stay off all activity equipment unless supervised by a Kingswood Activity Leader. | Low` |
| Incorrect Belay Setup | Participants | • Check your belay setup is correct and in line with the system you have been trained and assessed to use.<br>• The second Activity Leader must see this check and be able to confirm a check was carried out. | Low |
| Cross loading participant karabiners due to shock load on “Leap of Faith” activity | Participants | • All participants must be attached to the safety rope via a re-threaded figure of eight with a stopper knot.<br>• Karabiner attachment is not permitted on this activity. | Low |
| Entrapment | All | • Brief and check the participant has tucked away and secured any loose or baggy clothing.<br>• Brief and check the participant has removed any large or dangly jewelry.<br>• Brief and check the participant has tied back / secured long hair<br>• The Activity Leader must check themselves for the above as well<br>• Climbing walls utilising auto belay systems and indoor walls will operate without helmets. | Low |
| Impact with ‘Dry-tool’ | Participants | • Brief participants that when pulling up on the ‘Dry-tool’ there is a greater risk of impact to the face<br>• Participants must wear a helmet plus visor when using the ‘Dry-tool’ equipment. | Low |

| Hazard Description and activities giving rise to risk | Who may be harmed | Control Measures | Risk Rating |
|---|---|---|---|
| Incorrectly fitted helmet | All | • Indoor Climbing and Hydraulic Wall Climbing ~ Helmets must not be worn due to the lack of hazards falling from above the climbers and to prevent the risk of snagging on the climbing holds during a descent.<br>• Tree Climbing ~ Active climbers must wear helmets with visors must be worn correctly as per the manufacturers guidelines<br>• Outdoor climbing ~ Helmets must be worn correctly as per the manufacturers guidelines by all persons within the designated area<br>• Where an activity specifies that a helmet must be worn, every effort must be made to get participants to wear one. However, this may present difficulties for those who wear a turban or other similar head covering. Participants in this activity who are wearing a full 'pagri' turban are exempt from wearing a helmet, as the turban should control sufficiently the risks that the helmet would otherwise guard against. This exemption does not apply to participants who are wearing a 'patka' or lighter cloth head covering, with or without a top-knot. These individuals must wear a helmet, and provision should be made for a private area where these participants can remove or adjust their patka in order to fit the helmet.<br>• Where a turban is worn in place of a helmet, special care must be taken to ensure that there is no risk of any loose cloth getting entangled in equipment or apparatus. | Low |
| Unsecure attachment to safety rope or Incorrectly fitted harness | All | • Sit harnesses are to be correctly fitted (waist loop tight above the hips and legs loops tight)<br>• A chest harness must be worn when:<br>  ○ On Leap of Faith<br>  ○ The participant does not have defined hips<br>  ○ The participant has a fairly prominent upper body/stomach and no hip definition (disability or over-weight)<br>  ○ When large clothing has been tucked into the harness preventing defined hips to be seen<br>  ○ There is a medical reason that suggests the participant may faint/collapse<br>  ○ Very top heavy, so inversion is likely<br>• The use of a DMM Bridge and DMM Ultra O Lock karabiners is the only approved method of connecting a chest and sit harness<br>• Check the active participant's PPE and roped attachment twice, a) when attaching the safety rope b) before the climber is allowed to leave the ground. This final check should be visual and verbal for all group members to observe. | Low |

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|---|---|---|---|
| Impact with ground or other obstacle | Participants | • Belay correctly as trained and keep the rope snug to the climber whilst they ascend.<br>• Activity Leaders must always have the GRIGRI + set to 'Top-Rope' mode and locked and this must form part of the pre-use check of the equipment.<br>• Descent / Lowering can only be completed by a qualified member of Kingswood staff.<br>• To lower the handle can assist with braking, but the descent rate is controlled by the hand gripping the brake side of the rope. This must be slow and controlled<br>• The GRIGRI + has an anti-panic handle to control a lower. If the belayer pulls too hard on the handle, the anti-panic mechanism triggers and stops the descent<br>• The GRIGRI + anti-panic function is not a failsafe mechanism – the belayer must always hold the brake side of the rope to stop the descent<br>• In certain cases, the GRIGRI + anti-panic mechanism can trigger inconveniently and may be too subtle for the belayer to even notice (if there is rope drag, with a lightweight climber, on reaching the ground...). To continue the descent, the belayer releases the handle completely, then resumes lowering normally.<br>• If you are peer belaying ensure you are supervising and maintaining control of the group and the safety of the climber and are in a position to intervene immediately with all ropes you are supervising. | Low |

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|---|---|---|---|
| Stuck Climber / refusal to lower | | • REFUSAL<br>o To minimize the chance of a refusal to lower the instructor should approach the session in a progressive manner and consider practice lower offs near the ground.<br>o Select appropriate routes for the group in question.<br>o Use friends, teachers or another instructor to climb (belayed) to the climber to talk them down.<br>• STUCK / SUSPENDED<br>o Belayer to take as much weight as possible on the rope and attempt to talk the climber out of the situation.<br>o If above does not work then assistance should be sought via the second instructor. (each center must ensure adequate communication is available to attain assistance, this could be via phone radio or having other instructors programmed nearby) When assistance arrives a suitable person should be belayed by a qualified instructor as trained to the participant to offer assistance and free them form there position.<br>o All Activity Leaders must remain under a weight of 120kg (285lbs) in order to be able to be belayed to a stuck climber<br>o If assistance from a 2nd Instructor fails an ERCA Rescuer / SPA holder may access the structure and complete a Working at Height rescue as per their training.<br>o In the event of a Work at Height rescue failing or being unsuitable, the Emergency Services are to be contacted for external assistance. | Low |