Beaudesert Outdoor Adventures

Standard Operating Procedure (SOP) & Risk Assessment:
Quarry Zipwire

Document ID: SOP-BOA-QZIP-001

Effective Date: February 2026

Review Date: January 2027

1.0 Purpose

To outline the standardized and safe procedure for conducting the Quarry Zipwire activity. This document ensures a high-quality experience while maintaining paramount safety standards in the unique Quarry environment.

2.0 Scope & Instructor Competence

This SOP applies to all staff involved in the Quarry Zipwire.

- **Technical Advisor (TA):** Joby Davis (Winter Mountaineering and Climbing Instructor).
- **Authorisation:** Instructors must be authorized by the TA and signed off locally by **Martin Kirby, Luke Chance** or **Richard Irvine**
- **Roles:**
  - **Lead Instructor (Top):** Manages the dispatch platform. Must be competent in working at height using specific Zipwire Setup, Lanyards work positioning (Petzl Adjust).
  - **Ground Instructor (Bottom):** Manages the bottom, un-clipping, and lowering of participants.

3.0 Location & Ratios

3.1 Location

- **The Quarry:** The activity takes place on the designated 35m Zipwire.
- **Access Control:**
  - The **Gate** at the top of the Zipwire must be locked when unattended.

- **Safety Lanyards:** There are two safety lanyards located at the gate. Anyone passing through the gate must be wearing a harness/helmet and be clipped into one of these lanyards immediately.
- **Zones:** Everyone in the Quarry area (including those waiting for Via Ferrata) must wear a helmet due to object fall risk.

3.2 Ratios

- **Standard Ratio:** 1:12.
- **Maximum Ratio:** 1:15 (Session duration can be extended to 1.5 hours).

4.0 Equipment

4.1 Personal Protective Equipment (PPE)

- **Helmets:** Mandatory for ALL participants, instructors, and spectators in the Quarry.
- **Harnesses:**
  - **Sit Harness:** DMM sit harness.
  - **Chest Harness: MUST** be worn in conjunction with the sit harness.
  - **Instructor PPE:** Lead Instructor must wear a sit harness with appropriate safety cowstails and a **Petzl Adjust** for work positioning.

4.2 System Equipment

- **Trolley:** Petzl Trac (or similar approved).
- **Lanyards:** Petzl Adjust lanyard connecting the participant to the trolley.
- **Lowering System:** Petzl **RIG** device attached to the trolley to allow lowering of participants (due to the raised line height).
- **Braking:** A spring brake is fitted at the end of the line.

5.0 Safety Briefing & Rules

Mandatory briefing before entering the activity zone.

1. **Helmet Zone:** Helmets must be on before entering the Quarry gate.
2. **Gate Procedure:** Do not open the gate until instructed. You must be clipped into the safety line immediately upon entering.
3. **Hands:** Keep hands on the designated lanyard/rope only. Never touch the steel cable or the trolley (finger entrapment risk).
4. **Coiled Rope –** Lower Rope will be coiled and put over shoulder – dropped when requested by assistant instructor at the bottom of the wire.

5. **Finish:** When stopped, ground instructor will brief you to drop the rope, unclip the top carabiner (Backup) and pull the handle of the rig so the ground instructor can lower you safely.
6. **Movement:** Return the line to the top instructor as directed by the assistant instructor. Walk carefully on the uneven quarry ground.

6.0 Session Procedure

6.1 Pre-Session Checks

- **Lead Instructor (Top):**
  - Check the Gate Lanyards and tree / ground anchors.
  - Inspect the Dispatch Platform and Work Positioning anchors.
  - Check the Trolley, Petzl Rig, and ropes for wear.
- **Ground Instructor (Bottom):**
  - Check the **Woodchip** depth (approx. 10cm) in the landing zone.
  - Visual Check the Spring Brake and gravity stop.
  - Ensure the Rescue Ladder is present and accessible.

6.2 Setup & Work Positioning

- **Top Instructor:** Must attach themselves to the tree/anchor using the cows tails and **Petzl Adjust** work positioning lanyard to ensure they are safe while managing students at the edge.
- **Ground Instructor:** clear the landing zone.

6.3 Activity Flow

1. **Access:** Participant enters via the gate and clips onto the **Sideways Access Lanyard** (Steel carabiner/Triple lock).
2. **Transfer:** Participant moves to the dispatch point.
3. **Connection:**
   - Instructor connects the **Zip Safety Lanyard** (Petzl Adjust) to the participant's harness.
   - Instructor connects the **Petzl RIG** system (static rope) to the participant.
   - *Note:* The RIG carabiner sits best **under** the Zip Wire safety lanyard.
4. **Checks:** Final **C.H.E.C.K.** (Clothing, Harness, Environment, Connections, Knowledge).
5. **Dispatch:**
   - Coil the spare Rig rope and place it over the participant's shoulder/elbow.
   - Unclip the participant from the Sideways Access Lanyard.
   - Instruct participant to sit in the harness and lift feet. Send.

6.4 Landing & Lowering

- **Arrival:** Participant hits the spring brake.
- **Lowering:**
  - The Ground Instructor asks participant to "drop the rope" and takes hold of the Rig rope.
  - Participant instructed to unclip the backup safety from top chest harness loop.
  - Participant gently pulls the handle of the **Petzl RIG** to lower the participant to the ground. Instructor to aid where necessary and practical.
  - *Caution:* Ensure hair/fingers are kept away from the Rig device.
- **Release:** Unclip participant and direct them to return the rope to the lead instructor and then to the safe waiting area.

7.0 Emergency & Rescue Procedure

1. **Stuck on Line:**
   - The gravity system usually brings participants to the low point.
   - If stuck high/mid-line: Ground Instructor uses the rope to tow them in.
2. **Medical Emergency (Top):**
   - Lead Instructor secures the participant to the anchor.
   - Call for assistance (Radio).
3. **Lowering Failure (Bottom):**
   - If the Rig jams or participant cannot reach the ground:
   - **Option A:** Use the **Rescue Ladder** to allow the participant to unweight the safety and climb down.
   - **Option B:** Cut-away rescue (Senior Staff only).

8.0 Risk Assessment

Activity: Quarry Zipwire

Review Date: January 2027

Assessment by: Martin Kirby – Operations Manager

What are the hazards?	Who might be harmed?	Controls: What are you doing to control hazards?	Risk Rating (with controls)
Falls from Height (Top Platform)	Participants, Lead Instructor	• **Gate Protocol:** Locked gate; Safety lanyards for all entrants. • **Instructor Safety:** Lead Instructor uses Cows tails and **Petzl Adjust** for work positioning. • **Connection:** Participant remains clipped to Sideways Access Lanyard until attached to the Zip.	**Trivial**
Finger Entrapment (Trolley/Cable)	Participants	• **Briefing:** Strict instruction not to touch the cable/trolley. • **Equipment:** Use of Petzl Trac trolleys (guarded). • **Positioning:** Hands placed on the static rope/lanyard.	**Tolerable**
Landing Injuries (Impact)	Participants	• **Dampening:** Spring brake fitted to the cable end. • **Surface:** 10cm depth of woodchip in the landing zone. • **Lowering:** Petzl Rig system used to gently lower participants from the raised line.	**Trivial**
Rockfall / Head Injury	Everyone in Quarry	• **PPE:** Helmets mandatory for **everyone** in the Quarry (Zip and Via Ferrata areas). • **Checks:** Daily visual check of quarry walls.	**Trivial**

What are the hazards?	Who might be harmed?	Controls: What are you doing to control hazards?	Risk Rating (with controls)
Unauthorized Access	Public	• **Security:** Gate locked when activity is not running. • **Signage:** "No Entry" signs on the gate and bottom fence. • **Instructor Vigilance**: Instructor to maintain control of people in the quarry – Children and adults.	**Trivial**
Equipment Failure	Participants	• **Checks:** Daily pre-use check of Lanyards, Rigs, and Carabiners. • **Maintenance:** Trees and Cable staples inspected periodically.	**Trivial**

10.0 Document Control & Review History

Document Creation

Action	Name / Role	Date
Created By	Martin Kirby – Operations Manager	February 2026
Approved By	Martin Kirby, Luke Chance & Oliver Tombs (OM / SI / AOM)	February 2026
Technical Auth.	Joby Davis (Technical Advisor)	February 2026

Review Log

This document is to be reviewed annually or following any significant incident or change to the activity.

Date of Review	Reviewed By	Comments / Changes Made	Next Review Due
February 2026	MKirby / OTombs / LChance	Document Created (V1.0). Updated to include raised line, Rig lowering, Rescue Ladder, and Gate Lanyard protocols.	January 2027