Australian Government

Department of Education, Employment and Workplace Relations

SISOABN407A Establish ropes for multi pitch abseiling on natural surfaces

Release: 2

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Modification History

Not Applicable

Unit Descriptor

This unit describes the performance outcomes, skills and knowledge required to independently select anchors and rig ropes for multi pitch abseiling on natural surfaces. These anchors are to be used in establishing belay systems and rope pitches, and must be able to accommodate different belayer and abseiler abilities in multi pitch contexts.

Application of the Unit

This unit applies to those required to establish ropes for multi pitch abseiling activities.

This unit may also apply to leaders working for outdoor education or adventure providers; volunteer groups; not-for-profit organisations or government agencies.

Licensing/Regulatory Information

No licensing, regulatory or certification requirements apply to this unit at the time of endorsement.

Pre-Requisites

Nil

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
1. Select suitable equipment for belay system.	1.1. Select an *abseiling and* ***belay system*** according to ***contextual issues*** and to minimise ***environmental impact***. 1.2. Identify and select ***equipment*** according to ***relevant legislation*** and ***organisational policies and procedures***. 1.3. Select ***anchors*** that meet the requirements of the abseil and abilities of the ***participants***. 1.4. Assess ***condition of the anchors***, including performance under ***likely load***. 1.5. Choose a ***belay device*** that is suitable to the ***natural surface conditions*** and belayer's ability. 1.6. Complete all necessary equipment ***safety checks***, according to organisational policies and procedures.
2. Set up belay system.	2.1. Rig multiple anchors, ensuring equalisation and minimal shock loading. 2.2. Tie ***knots*** and rig ropes suitable for the type of belay system established. 2.3. Establish a belay from which the belayer is able to escape and safely perform a rescue. 2.4. Avoid or remove belay ***hazards*** to maintain ***safety of belayer***. 2.5. Determine the need for, and establish, back up belay systems.
3. Rig rope pitches.	3.1. Identify safe access to and egress from the site according to relevant legislation. 3.2. Identify ascent and descent route appropriate to context. 3.3. Select and tie knots suitable for the type of system established and for potential retrieval or rescue situations.

Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

Required skills

- language and literacy skills to:
  - implement organisational policies and procedures
  - comply with legislative requirements
- problem-solving skills to select appropriate anchors and belay systems for the context and conditions
- rope handling, retrieval and knot tying skills to rig ropes and anchors adequately and safely
- first aid and emergency response skills appropriate to the location to enable initial response to emergencies and personal health care.

Required knowledge

- relevant legislation and organisational policies and procedures to enable safe conduct of all activities
- minimal impact codes to enable protection of the environment
- equipment types, characteristics and technology used to establish belays for multi pitch abseiling on natural surfaces
- care and maintenance of equipment to ensure prolonged life span and safety requirements, as advised by the manufacturer's specifications and recommendations for equipment use
- belay and anchor systems appropriate for multi pitch natural abseiling surfaces
- technical abseiling and equipment knowledge to establish top, self belay and bottom belays
- types of knots, their advantages and disadvantages and their impact on roping activities
- emergency procedures, potential hazards and obstacles relevant to the location to ensure safety of self and others.

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

Critical aspects for assessment and evidence required to demonstrate competency in this unit	Evidence of the following is essential: • independently selects appropriate equipment and carries out safety checks to ensure effective working order • uses discretion and judgement to determine belay system required for abseiling in multi pitch contexts • differentiates between the types of belay systems, anchors and knots and their suitability to different rigging situations • determines the need for, and establishes belay systems to ensure safety of self and other participants.
Context of and specific resources for assessment	Assessment must ensure participation in rigging of anchors and equipment for different situations to demonstrate competency and consistency of performance. Assessment must also include access to: • resources and information regarding abseiling and belaying equipment • suitable natural multi pitch abseiling sites with varying qualities and features that allow participant to demonstrate rigging skills • other abseiling participants, to assist in belaying and rigging • equipment such as anchors, harnesses, belay systems, descending devices, slings, ropes, karabiners and first aid equipment.
Method of assessment	A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit: • oral or written questioning to assess knowledge of relevant legislation and organisational policies and procedures to ensure safe and appropriate use of all abseiling equipment • observation of safe participation and demonstration of setting up belay systems suitable to different contexts and participants

- observation of dealing with contingencies, such as equipment failure
- third-party reports from a supervisor detailing performance.

Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:

- SISOABN406A Apply multi pitch abseiling skills on natural surfaces.

Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Abseiling and Belay system may include:	• twin rope • single rope • top belay • self belay • bottom brake.
Contextual issues may include:	• weather conditions, including times • season • transport • location • trip distance and duration • group objectives • group size.
Environmental impact may include:	• rock dislodgement • compacting of soil • damage to flora, fauna, and the environment • effect on other users of the site.
Equipment may include:	• ropes • tape slings • rope protectors • karabiners • belay devices.
Relevant legislation may include:	• occupational health and safety • permits or permission for access • environmental regulations • marine regulations.
Organisational policies and procedures may include:	• occupational health and safety • use and maintenance of equipment • emergency procedures • code of ethics.
Anchors may include:	• trees • threads • bolts • chains • bollards

- boulders
- pitons.

Participants may include:	• experienced • inexperienced • adults • children
Condition of the anchors may include:	• age • location • wear • decay • corrosion • environmental stress • insect damage.
Likely load may include:	• group size • set up • type of abseil conducted • abseiler ability • possible forces generated during a fall.
Belay device may include:	• A - anchors - secure and suitable to application • B - buckles - locked as per manufacturers recommendations • C - connectors - locked, secured and orientated • D - devices - threaded correctly and secured • E - everything else including end of rope knots, friction hitches, belayer ready, helmet chin strap, clothing, jewellery and hair secured • F - friend - cross check.
Natural surface conditions may include:	• cliffs • boulders
Safety checks may include:	• corrosion • abrasion • impact • aging • cracks • deformities • fissures.
Knots may include:	• end-of-rope knots • mid-rope knots • rope joining knots • tape knot.
Hazards may include:	• temperature extremes • slippery or unstable terrain • dangerous animals and insects

	• stinging trees and nettles • dense vegetation • group management hazards.
Safety of belayer may include:	• attachment to anchor or alternate safety system • positioning out of direct line of rock or equipment fall.

Unit Sector(s)

Outdoor Recreation

Competency Field

Abseiling natural surface